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CSP 25-061AL (BP013) – ADDENDUM No.04
Kitchen Renovations ES

FOR

Fort Bend Independent School District
2023 Bond Program

To access the complete Addendum:

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ADDENDUM #4
September 5, 2025

FBISD - BP013
Kitchen Remodel ES

Fort Bend Independent School District

MWA Architects, Inc.
11767 Katy Freeway, Ste. 430
Houston, TX 77079

Total of 307 full size drawings and 391 ~ 8 ½ x 11 pages including cover

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To the Plans and Specifications for the FBISD BP013, Kitchen Renovation, this addendum forms a part of the Contract Documents and modifies said documents as follows:

I. GENERAL:

A. None

II. MANUFACTURER / PRODUCTS APPROVED AS EQUALS:

A. None

III. SPECIFICATIONS: The following Specifications are issued as part of this addendum.

A. **Section 00 01 05 - Table of Contents**, ADD the following sections to the Table of Contents:

1. 04 22 00 Concrete Unit Masonry.
2. 10 22 26 Operable Partitions

B. **Section 00 31 26 Existing Hazardous Materials Information**. Total of 303 pages

1. ADD specification section in its entirety.

C. **Section 01 77 00 – Closeout Procedures**

1. Original General Contractor Closeout Checklist was pixelated and hard to read. Re-issued (3) pages with better resolution.

D. **Section 04 22 00 – Concrete Unit Masonry,** total of 17 pages:

1. ADD specification section in its entirety.

E. **Section 08 80 00 – Glazing:**

1. Under Paragraph 2.2 Glass Products, Item B.1 Basis of Design Product, DELETE PPG Solarban R100 (2). REPLACE with Basis of Design Product: Guardian Industries Corp. Other approved manufacturers: Oldcastle Building Envelope, Viracon and Pilkington North America.

F. **Section 10 22 26 – Operable Partitions**, total of 5 pages.

1. ADD specification section in its entirety,

G. **Section 11 40 00 Foodservice Equipment**:

1. Section 11 40 00 FOODSERVICE EQUIPMENT: Renumber incorrect item lists.

H. **Section 10 51 13 Metal Lockers**

1. ADD specification section in its entirety,

I. **Division 27 – Technology and Division 28 - Electronic Safety and Security**

1. All Division 27 sections numbered higher than 27 05 00 have been updated to refer back to Section 27 05 00 for detailed requirements.
2. All Division 28 sections following 28 01 00 now reference Section 28 01 00 for further detail.

J. **Section 27 05 00-1.05-F,105-I-2**: Installer was changed to partner

K. **Section 27 05 00-1.06-B-2**: This section was added, requiring the contractor to submit key personnel resumes with preconstruction submittals.

L. **Section 27 05 00-1.07-A**: Part 3 was added to this section, which reads “Coordinate quantities and lengths with FBISD IT”.

M. **Section 27 05 00-3.03-B, 3.03-C 3.03-D**: The warranty period was changed from 15 years to 25 years.

N. **Section 27 05 00-3.08-B-1-a**: Rack numbering was changed from alpha-numeric to numeric.

O. **Section 27 05 00-3.08-B-8-f-i**: Labeling scheme was changed from “fiber optic cable number, direction, and fiber count” to “destination and fiber count”.

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P. **Section 27 05 00-3.08-B-9-a**: “a” was added which reads “label grounds at busbar with the destination of each ground”.

Q. **Section 27 05 00-3.09-H**: Subsection H was removed and now reads “N/A”, previously described backbone voice cable testing requirements in a manner that is not applicable to the current FBISD standards. Backbone voice cables will be terminated on a patch panel and will be held to the same standard as other category cables.

R. **Section 27 05 28-2.02-B**: Text was added to specify that cable tray is required for a minimum of 20 feet in all directions after the pathway leaves the MDF/IDF room.

S. **Section 27 05 28-2.03-N**: Text was added to include structural members as a viable mounting option for cable hooks when using all thread.

T. **Section 27 05 28-2.03-P**: Cable hook manufacturer was changed from B-line to Panduit

U. **Section 27 05 28-2.08-F-2**: Subsection 2 requires an “in ceiling bracket with drop ceiling clip, Quickport 49223-CBC” in place of a “surface mount box”.

V. **Section 27 05 28-2.08-G**: This subsection was not relevant to this project and was replaced with N/A.

W. **Section 27 15 00-1.05-F,105-I-2**; Installer was changed to partner.

X. **Section 27 15 00-1.05-G-3**: The first part of this subsection was changed from “All installing personnel shall have completed and be certified in manufacturer training or BICSI installation training” to “All installing personnel shall have completed and be certified in Panduit training and BICSI installation training”

Y. **Section 27 15 00-1.05-G-**4: The manufacturer was included in this section to be more specific.

Z. **Section 27 15 00-1.05-G-5**: The manufacturer was included and BICSI trained were added to training requirements.

AA. **Section 27 15 00-2.04-A-3**: Intercoms were removed from the list of cables that are Orange.

BB. **Section 27 15 00-2.05-B-1**: Data jacks were changed from a performance spec to Panduit Minicom.

CC. **Section 27 15 00-2.05-B-16**: Subsection was changed from “Jacks shall be marked as either T568A or T568B wiring” to “Jacks shall be T568B wiring.”

DD. **Section 27 15 00-2.05-B-17-a**: Data jacks were changed from “Panduit NetKey” to “Panduit MiniCom”.

EE. **Section 27 15 00-2.05-C-1-a**: Data outlet color was changed from white to blue

FF. **Section 27 15 00-2.05-C-1-c**: Intercoms were removed from the list of security cable colors, and the color was changed from yellow to orange.

GG. **Section 27 15 00-2.05-D-7, E-6,2.06-H**: Faceplate, surface mount boxes and the patch cords manufacturer were specified as Panduit.

HH. **Section 27 15 00-2.06-I**: All manufacturers except Panduit were removed.

II. **Section 27 15 00-2.06-K-1**: Patch cable length and quantity table was removed from this subsection.

JJ. **Section 27 15 00-3.06-C**: Text was changed from “Slack at the outlet location shall be in a U-shaped configuration” to “Slack at the MDF/IDF shall be in a U-shaped configuration”, changing the requirement from the station end of the cable to the MDF/IDF end of the cable.

KK. **Section 27 15 00-3.06-E-4**: This subsection was added with reads “Patch panels shall be Panduit 48-port angled patch panels”

LL. **Section 27 16 00-2.02-E**: Panduit was specified as the manufacturer.

MM. **Section 27 16 00-2.02-H**: Patch cable length and quantity table was removed from this subsection.

NN. **Section 27 18 00-3.03-C**: Cable pairs were removed from labeling example.

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OO. **Section 27 18 00-3.05-A**: Text was added to specify that port labeling should be manufacturer labeled.

PP. **Section 27 51 13-2.02-M**: This subsection was added which read " All paging equipment cables shall have a white jacket.", moving the previous subsection labeled as "M" to "N".

QQ. **Section 28 01 00-1.08-A-5:** Text was added to include connection to structure via all thread and an acceptable cable hook hanging method.

RR. **Section 28 13 00-1.07-E**: This subsection was added to include the requirement

SS. **Section 28 23 00**: The header and footer for this section were corrected.

TT. **Section 28 23 00-1.11-C**: The contractor supplying cables and patch cords for the surveillance cameras was changed from the security contractor to the structured cabling contractor.

IV. DRAWINGS

A. a-Austin Parkway ES

1. Sheet a-A000 Index was modified.
2. Sheet a-A302 : Revised detail 1
3. Sheet a-A401: Revised plan
4. Sheet A-QF1.0 Foodservice Equipment Plan: Revised plan to accommodate washer / dryer. commercial washer/dryer. Relocated Item No. 124 Worktable between holding cabinets per drawings. Relocated Item No. 615 Menu Boards to match Architectural Drawings
5. .Sheet A-QF1.3 Foodservice Special Conditions Plan:
   a. Revised plan to accommodate washer / dryer.
6. Sheet A-QF1.4 Foodservice Plumbing Plan:
   a. Revised plan.
7. Sheet A-QF1.5 Foodservice Electrical Plan:
   a. Revised plan to accommodate washer / dryer. commercial washer/dryer. . Revised location of remote fire pull stations. Relocated #E615 and #E615A to above counter.
8. A-QF4.1: Revised to accommodate washer dryer.
9. A-QF4.2: Revised to accommodate washer dryer.
10. A-QF4.3: Revised to accommodate washer dryer
11. Sheet A-M-1.01:
    a. Revised ductwork on plans to accommodate new plan; revised air flows in dry storage, and custodial rooms. Note added for BAS monitoring and removed radiation damper notes on air device schedule. Motor EF-15's size revised. Existing t-stats were indicated on plans. Added BAS monitoring for Cooler/Freezer. Updated wind rating on exhaust fan schedule.
12. Sheet A-M-2.01:
    a. Revised general notes, removed radiation damper requirement and added note to conform to SMACNA standards. .
13. Sheet A-M-2.02:
    a. Revised make-up air unit detail, curb mount detail added.
14. Sheet A-ED.100:
    a. Keynotes added to floor plans, temporary food storage unit added to service yard, fed from temporary kitchen panel.. .
15. Sheet A-E100:

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a. Background has been updated..

16. Sheet A-E2.00:
    a. Background has been updated for commercial washer / dryer and menu boards relocated to service line.
17. Sheet A-E3.00:
    a. Background revised.
18. Sheet A-E4.00:
    a. Panels HK, LK changed to 84 circuit panelboard, notes and circuits revised.
19. Sheet a -P-0.01:
    a. Updated Drain and Gas PRV schedule, ;general plumbing notes, and detail references.
20. Sheet a-P-0.02:
    a. Flush Valve Trap Priming Detail number updated.
21. Sheet a-P-1.01:
    a. Floor plan updated for revised layout and commercial washer and dryer.
22. Sheet a-P-1.02:
    a. Sheet Added.
23. Sheet a-P-2.00:
    a. New Sheet Added with updated riser diagram matching new layout..
24. Sheet a-T201 Technology New / Renovation Plan
    a. Added wireless access point data drops, and above ceiling surveillance camera, added notation about ceiling installation and deleted detail 5.
25. Sheet a-T.400: Removed detail.
26. Sheet a-T500 Technology Typical Details:
    a. On detail 1, change face plate designation.
27. Sheets a-TN.500:
    a. Changed detail 1, added note about colored dots, patch panel notation and location of biscuit boxes and service loops
28. Sheets a-TN.600:
    a. A junction box was added to access control detail 2 with a note specifying the junction box to be inset in the wall above ceiling.

B. b-Burton Elementary School

1. Sheet b-TN.500:
    a. Changed detail 1, added note about colored dots, patch panel notation and location of biscuit boxes and service loops.
2. Sheets a-TN.600:
    a. Added junction box to detail 2.

C. c-Colony Bend Elementary School

1. Sheet c-TN.500:
    a. Changed detail 1, added note about colored dots, patch panel notation and location of biscuit boxes and service loops.

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2. Sheet c-TN.600:
    a. Added above ceiling inset junction box to detail 2,

D. d-Commonwealth Elementary School

1. Sheet d-TN.500:
    a. Changed detail 1, added note about colored dots, patch panel notation and location of biscuit boxes and service loops.
2. Sheets d-TN.600,:
    a. Added above ceiling inset junction box to detail 2.

E. e-Cornerstone ES

1. Sheet e-A000 Index was modified.
2. Sheet e-A301: Revised plan for larger opening.
3. Sheet e-A501: Revised ceiling plan for larger opening.
4. Sheet e-A601: Elevations revised for larger opening.
5. Sheet E-E2.00:
    a. Existing devices are shown renovation and existing panel schedule and partition circuit added.
6. Sheet e-TN.500:
    a. Changed detail 1, added note about colored dots, patch panel notation and location of biscuit boxes and service loops.
7. Sheets e-TN.600:
    a. Added above ceiling inset junction box to detail 2.

F. f-Dulles Elementary School

1. Sheet f-TN.500:
    a. Changed detail 1, added note about colored dots, patch panel notation and location of biscuit boxes and service loops..
2. Sheets e-TN.600:
    a. Added above ceiling inset junction box to detail 2.

G. g-Fleming Elementary School

1. Sheet g-TN.100:
    a. Keynote 2 was removed from the IDF room. The room designated as the IDF room was changed.
2. Sheet g-TN.500:
    a. Changed detail 1, added note about colored dots, patch panel notation and location of biscuit boxes and service loops..
3. Sheets g-TN.600:
    a. Added above ceiling inset junction box to detail 2.

H. h-Glover Elementary School

1. Sheet h-TN.500:
    a. Changed detail 1, added note about colored dots, patch panel notation and location of biscuit boxes and service loops.
2. Sheet h-TN.600:

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a. Added above ceiling inset junction box to detail 2.

I. i-Heritage Rose ES

1. Sheet i-P-1.01:
   a. Floor plan updated with Key Note #6 tagged on drawing.

J. j-Highlands ES

1. Index j-A000 was modified.
2. Sheet J-QF1.0 Foodservice Equipment Plan:
   a. Revised janitor's closet / dry storage to reflect addition of the commercial washer/dryer Item 129 Worktable changed length and relocated menu boards.
3. Sheet J-QF1.3 Foodservice Special Conditions Plan:
   a. Revised janitor's closet / dry storage to reflect room the addition of commercial washer/dryer. size changes.
4. Sheet J-QF1.4 Foodservice Plumbing Plan:
   a. Revised janitor's closet / dry storage to reflect room the addition of commercial washer/dryer. size changes.
5. Sheet J-QF1.5 Foodservice Electrical Plan:
   a. Revised janitor's closet / dry storage to reflect room the addition of commercial washer/dryer. size changes.
6. Sheets J-M-1.01
   a. Revised ductwork on plans to accommodate new plan; revised air flows in dry storage, and custodial rooms. Note added for BAS monitoring of cooler/freezer and removed radiation damper notes on air device schedule. Motor EF-14's size revised.
7. Sheets J-M-2.01
   a. Revised General Notes, referenced SMACMA standards and remove Radiation damper notations. .
8. Sheet J-M-2.02:
   a. Detail 4-Detail updated for commercial type dryer.
   b. Detail 5-Curb Mounted Equipment Anchoring Detail added.
9. Sheet J-ED.100:
   a. Keynotes added to floor plans, temporary cooler added to service yard tied into temporary kitchen panela.
10. Sheet J-E.100:
    a. Sheet reissued with revised background.
11. Sheet J-E.200:
    a. Sheet reissued with revised background, Commercial style washer and dryer added and menu-boards relocated.
12. Sheet J-E.300:
    a. Background revised.
13. Sheet J-E.400:
    a. Panels HK, LK changed to 84 circuit boards and circuits were revised..
14. Sheet j-P-0.01:

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a. Updated Gas PRV Schedule, general plumbing notes, added notes and updated the plumbing drain schedule

15. Sheet j-P-0.02:
    a. Flush Valve Trap Priming Detail number updated to correct sequence.
16. Sheet j-P-1.01:
    a. Added sheet with updated floor plan, revised notation for grease trap,
17. .Sheet j-P-1.02:
    a. New Sheet Added.
18. Sheet j -P-2.00:
    a. New Sheet Added with updated riser diagram matching new layout. .
19. Sheet j-T201 Technology New / Renovation Plan:
    a. Added (2) above ceiling wireless access point data drops and one above ceiling camera data drop.
20. Sheet j-T300 Technology Enlarged Views:
    a. Updated notes regarding existing panels on rack elevation
21. Sheet j-T400 Technology Typical Details:
    a. Detail 1- added language regarding installation relative to the ceiling, deleted detail 5.
22. Sheet j-T500 Technology Typical Details:
    a. Detail 1- modified face plate designation for Rack number
23. Sheet j-TN.500:
    b. Detail 1 was changed to include a j-hook supporting service loop and a note was added to specify a service loop be located above a biscuit box. An additional item was added to the ceiling grid labeling scheme specifying a colored dot be added to ceiling labels. Port numbers were added to patch panels in detail 4. A note specifying the service loop for above ceiling outlets (details 6, 7, and 8) is to be located above the biscuit box, a minimum and preferred height were also added to the same details.
24. Sheets j-TN.600:
    a. A junction box was added to access control detail 2 with a note specifying the junction box to be inset in the wall above ceiling.

K. k-Hunters Glen ES

1. Index k-A000 was modified:
2. Sheet k-A.302: Detail 1 modified.
3. Sheet K-QF1.0 Foodservice Equipment Plan:
    a. Revised janitor’s closet / dry storage to reflect commercial washer/dryer and resized rooms. Reduced Item No. 129 Worktable in front of office per drawings. Relocated Item No. 615 Menu Boards to match Architectural Drawings.
4. Sheet K-QF1.3 Foodservice Special Conditions Plan:
    a. Revised janitor’s closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements.
5. Sheet K-QF1.4 Foodservice Plumbing Plan:
    a. Revised janitor’s closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements

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6. Sheet K-QF1.5 Foodservice Electrical Plan:
    a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements. Revised location of remote fire pull stations. Relocated #E615 and #E615A to above counter.
7. Sheet K-M-1.01
    a. Revised ductwork on plans to accommodate new plan; revised air flows in dry storage, and custodial rooms. Note added for BAS monitoring and removed radiation damper notes on air device schedule. Motor EF-15's size revised.
8. Sheet K-M-2.01
    a. Revised Mechanical notes, added SMACMA notation and removed radiation damper requirement.
9. Sheet K-M-2.02:
    a. Details 4 and 5 revised for commercial dryer and curb mounted equipment anchor detail added..
10. Sheet K-ED.100:
    a. Keynotes added, temporary cooler unit added in service yard fed from temporary kitchen panel. .
11. Sheet K-E.100:
    a. Sheet reissued with revised background.
12. Sheet K-E.200:
    a. Sheet reissued with revised background, Commercial style washer and dryer added and menu-boards relocated..
13. Sheet K-E.300:
    a. Background revised.
14. Sheet K-E.400:
    a. Panel HK and LK circuits revised, these boards changed to 84 circuit panels, revised layouts, notes and standby power circuits.
15. Sheet k-P-0.01
    a. Updated Gas PRV Schedule, general plumbing notes, added notes and updated the plumbing drain schedule.
16. Sheet k-P-0.02
    a. Flush Valve Trap Priming Detail number updated to correct sequence.
17. Sheet k-P-1.01:
    a. Add sheet with updated Gas PRV Schedule, gas is shown on roof, keyed notes were revised. , Revised general plumbing notes, and updated the plumbing drain schedule.
18. Sheet k-P-1.02:
    a. Sheet Added.
19. Sheet k -P-2.00:
    a. New Sheet Added with updated riser diagram matching new layout..
20. Sheet k-T201 Technology New / Renovation Plan:

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a. Added (2) above ceiling wireless access point data drops. Added one above ceiling surveillance camera data drop.

21. Sheet k-T300 Technology Enlarged Views:
    a. Updated notes regarding existing panels on rack elevation
22. Sheet k-T400 Technology Typical Details:
    a. Detail 1- added language regarding installation relative to the ceiling, deleted detail 5.
23. Sheet k-T500 Technology Typical Details:
    a. Detail 1- modified face plate designation for Rack number
24. Sheet TN.100: Issued new sheet.
25. Sheet kTN.500:
    a. Detail 1 was changed to include a j-hook supporting service loop and a note was added to specify service loop be located above a biscuit box. An additional item was added to the ceiling grid labeling scheme specifying a colored dot be added to ceiling labels. Port numbers were added to patch panels in detail 4. A note specifying the service loop for above ceiling outlets (details 6, 7, and 8) is to be located above the biscuit box, a minimum and preferred height were also added to the same details.
26. Sheets k-TN.600:
    a. A junction box was added to access control detail 2 with a note specifying the junction box to be inset in the wall above ceiling.
27. Sheet K-TN.100:
    a. Keynote 1 was added to the IDF room.

L. o-Palmer ES

1. Index o-A000 was modified.
2. Sheet m-A302: Revised detail 1.
3. Sheet O-QF1.0 Foodservice Equipment Plan:
    a. Revised janitor's closet / dry storage to reflect commercial washer/dryer and resized rooms. Reduced Item No. 129 Worktable in front of office per drawings. Relocated Item No. 615 Menu Boards to match Architectural Drawings.
4. Sheet O-QF1.3 Foodservice Special Conditions Plan:
    a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements.
5. Sheet O-QF1.4 Foodservice Plumbing Plan:
    a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements.
6. Sheet O-QF1.5 Foodservice Electrical Plan:
    a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements. Revised location of remote fire pull stations. Relocated #E615 and #E615A to above counter.
7. Sheet O-QF1.9: Revised background information.
8. Sheet O-QF2.0: Revised background information
9. Sheet O-QF2.1: Revised background information
10. Sheet O-QF3.1: Revised background information

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11. Sheet O-QF4.1: Revised background information
12. Sheet O-QF4.2: Revised background information
13. Sheet O-QE4.3: Revised background information
14. Sheet O-M-1.01
    a. Revised ductwork on plans to accommodate new plan; revised air flows in dry storage, and custodial rooms. Note added for BAS monitoring and removed radiation damper notes on air device schedule. Motor EF-15's size revised. Existing t-stats were indicated on plans. Added BAS monitoring for Cooler/Freezer. Updated wind rating on exhaust fan schedule
15. Sheet O-M-2.01
    a. Revised General Notes, referenced SMACMA standards and remove Radiation damper notations..
16. Sheet O-M-2.02:
    a. Detail 4-Detail updated for commercial type dryer, and a Curb Mounted Equipment Anchoring Detail was added.
17. Sheets O-ED.100:
    a. Keynotes added to floor plans and temporary cooler added to service yard fed from temporary kitchen panel..
18. Sheet O-E.100:
    a. Revised background.
19. Sheet O-E2.00:
    a. Revised background with Commercial style washer and dryer, menu-boards relocated.
20. Sheet O-E3.00:
    a. Background Revised.
21. Sheet O-E4.00:
    a. Panel HK and LK circuits revised, these boards changed to 84 circuit panels panels, ,revised layouts, notes and standby power circuits.
22. Sheet o-P-0.01:
    a. Updated Gas PRV Schedule, general plumbing notes, added notes and updated the plumbing drain schedule.
23. Sheet o-P-0.02:
    a. Added new sheet.
24. Sheet o-P-1.01:
    a. New Sheet Added with updated floor plan revised for commercial washer/dryer, grease trap notation revised, keyed notes were updated and gas service shown on roof.
25. Sheet o-P-1.02:
    a. New Sheet Added, missing from bid set.
26. Sheet o -P-2.00:
    a. New Sheet Added with updated riser diagram matching new layout..
27. Sheet o-T201 Technology New / Renovation Plan:

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a. Added (2) above ceiling wireless access point data drops. Added one above ceiling surveillance camera data drop.

28. Sheet o-T300 Technology Enlarged Views:
    a. Updated notes regarding existing panels on rack elevation
29. Sheet o-T400 Technology Typical Details:
    a. Detail 1- added language regarding installation relative to the ceiling, deleted detail 5.
30. Sheet o-T500 Technology Typical Details:
    a. Detail 1- modified face plate designation for Rack number
31. Sheet o-TN.500:
    a. Detail 1 was changed to include a j-hook supporting service loop and a note was added to specify service loop be located above a biscuit box. An additional item was added to the ceiling grid labeling scheme specifying a colored dot be added to ceiling labels. Port numbers were added to patch panels in detail 4. A note specifying the service loop for above ceiling outlets (details 6, 7, and 8) is to be located above the biscuit box, a minimum and preferred height were also added to the same details.
32. Sheets o-TN.600:
    a. A junction box was added to access control detail 2 with a note specifying the junction box to be inset in the wall above ceiling.

M. p-Pecan Grove

1. Index p-A000 was modified.
2. Sheet p-A302: Revised detail 1
3. Sheet p-A401: Revised ceiling layout.`
4. Sheet P-QF1.0 Foodservice Equipment Plan:
    a. Revised janitor's closet / dry storage to reflect commercial washer/dryer and resized rooms. Reduced Item No. 129 Worktable in front of office per drawings. Relocated Item No. 615 Menu Boards to match Architectural Drawings.
5. Sheet P-QF1.3 Foodservice Special Conditions Plan:
    a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements.
6. Sheet P-QF1.4 Foodservice Plumbing Plan:
    a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements.
7. Sheet P-QF1.5 Foodservice Electrical Plan:
    a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements. Revised location of remote fire pull stations. Relocated #E615 and #E615A to above counter.
8. Sheet p-M-1.01
    a. Revised ductwork on plans to accommodate new plan; revised air flows in dry storage, and custodial rooms. Note added for BAS monitoring and removed radiation damper notes on air device schedule. Motor EF-15's size revised. Existing t-stats were indicated on plans. Added BAS monitoring for Cooler/Freezer. Updated wind rating on exhaust fan schedule
9. Sheets p-M-2.01
    a. Revised General Notes, referenced SMACMA standards and removed radiation damper notations..

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10. Sheet p-M-2.02:
    a. Details updated for commercial type dryer and added a Curb Mounted Equipment Anchoring detail was added.
11. Sheet P-E.000:
    a. New Sheet Added, missing from bid set.
12. Sheet P-E.001:
    a. New Sheet Added, missing from bid set.
13. Sheet P-E.010:
    a. New Sheet Added, missing from bid set.
14. Sheet P-E.011:
    a. New Sheet Added, missing from bid set.
15. Sheet P-E.012:
    a. New Sheet Added, missing from bid set.
16. Sheet P-E.013:
    a. New Sheet Added, missing from bid set.
17. Sheet P-E.060:
    a. New Sheet Added, missing from bid set.
18. Sheet P-ED.100:
    a. New Sheet Added, missing from bid set.
19. Sheet P-E.100:
    a. New Sheet Added, missing from bid set.
20. Sheet P-E.200:
    a. New Sheet Added, missing from bid set.
21. Sheet P-E.300:
    a. New Sheet Added, missing from bid set.
22. Sheet P-E.400:
    a. New Sheet Added, missing from bid set.
23. Sheet p-P-0.01:
    a. Updated Gas PRV Schedule, general plumbing notes, added notes and updated the plumbing drain schedule.
24. Sheet p-P-0.02:
    a. New Sheet Added
25. Sheet p-P-1.01:
    a. New Sheet Added with updated floor plan revised for commercial washer/dryer, grease trap notation revised, keyed notes were updated and gas service shown on roof.
26. Sheet p-P-1.02:
    a. New Sheet Added, missing from bid set.
27. Sheet p-P-2.00:
    a. New Sheet Added with updated riser diagram matching new layout.

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28. Sheet p-T201 Technology New / Renovation Plan:
    a. Added (2) above ceiling wireless access point data drops. Added one above ceiling surveillance camera data drop.
29. Sheet p-T300 Technology Enlarged Views:
    a. Updated notes regarding existing panels on rack elevation
30. Sheet p-T400 Technology Typical Details:
    a. Detail 1- added language regarding installation relative to the ceiling, deleted detail 5.
31. Sheet p-T500 Technology Typical Details:
    a. Detail 1- modified face plate designation for Rack number
32. Sheet p-TN.500:
    a. Detail 1 was changed to include a j-hook supporting service loop and a not was added to specify service loop be located above a biscuit box. An additional item was added to the ceiling grid labeling scheme specifying a colored dot be added to ceiling labels. Port numbers were added to patch panels in detail 4. A note specifying the service loop for above ceiling outlets (details 6, 7, and 8) is to be located above the biscuit box, a minimum and preferred height were also added to the same details.
33. Sheets p-TN.600:
    a. A junction box was added to access control detail 2 with a note specifying the junction box to be inset in the wall above ceiling.

N. q-Ridgegate Elementary School

1. Sheet q-TN.500:
    a. Detail 1 was changed to include a j-hook supporting service loop and a note was added to specify service loop be located above a biscuit box. An additional item was added to the ceiling grid labeling scheme specifying a colored dot be added to ceiling labels. Port numbers were added to patch panels in detail 4. A note specifying the service loop for above ceiling outlets (details 6, 7, and 8) is to be located above the biscuit box, a minimum and preferred height were also added to the same details.
2. Sheets q-TN.600:
    a. A junction box was added to access control detail 2 with a note specifying the junction box to be inset in the wall above ceiling.

O. r-Ridgemont Elementary School

1. Sheet r-TN.500:
    a. Detail 1 was changed to include a j-hook supporting service loop and a note was added to specify service loop be located above a biscuit box. An additional item was added to the ceiling grid labeling scheme specifying a colored dot be added to ceiling labels. Port numbers were added to patch panels in detail 4. A note specifying the service loop for above ceiling outlets (details 6, 7, and 8) is to be located above the biscuit box, a minimum and preferred height were also added to the same details.
2. Sheets r-TN.600:
    a. A junction box was added to access control detail 2 with a note specifying the junction box to be inset in the wall above ceiling.

P. s-Settlers Way ES

1. Index s-A000 was modified, see below:
    a. Modified the sheet number of sheet s-QF1 to s-QF0.0 in the index. The sheet was included in the bid package. No change to sheets.

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b. Added sheets s-QF1.6, s-QF1.7, s-QF1.8, s-QF1.9, s-QF2.0, s-QF2.1, s-QF3.1, s-QF4.1, s-QF4.2, and s- QF4.3 to index. The sheets were not included in the bid package and are added to this addendum.

2. Sheet s-A302: Revised detail 1
3. Sheet s-A401: Revised ceiling layout.`
4. Sheet S-QF1.0 Foodservice Equipment Plan:
   a. Revised janitor's closet / dry storage to reflect commercial washer/dryer and resized rooms. Reduced Item No. 129 Worktable in front of office per drawings. Relocated Item No. 615 Menu Boards to match Architectural Drawings.
5. Sheet S-QF1.3 Foodservice Special Conditions Plan:
   a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements.
6. Sheet S-QF1.4 Foodservice Plumbing Plan:
   a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements
7. Sheet S-QF1.5 Foodservice Electrical Plan:
   a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements. Revised location of remote fire pull stations. Relocated #E615 and #E615A to above counter.
   c. Added the sheet s-M2.02 to index. The sheet was included in the bid package.
8. Sheet S-M-1.01
   a. Revised ductwork on plans per new layout; revised air flows in dry storage, and custodial rooms. Note added for BAS monitoring and removed radiation damper notes on air device schedule. Motor EF-15's size revised. Existing t-stats were indicated on plans. Added BAS monitoring for Cooler/Freezer. Updated wind rating on exhaust fan schedule.
9. Sheet S-M-2.01
   a. Revised General Notes, referenced SMACMA standards and remove Radiation damper notations.
10. Sheet S-M-2.02:
    a. Details updated for commercial type dryer and added a Curb Mounted Equipment Anchoring detail. Detail 6-Kitchen Plenum unit is not applicable.
11. Sheet S-ED.100:
    a. Keynotes added to floor plans and a temporary food storage unit added in service yard fed from the temporary kitchen panel.
    b. Sheet reissued.
12. Sheet S-E.100:
    a. Sheet reissued with revised background.
13. Sheet S-E2.00:
    a. Sheet reissued with revised background, Commercial style washer and dryer added, menu-boards relocated, panel layout revised and standby power circuits revised.
14. Sheet S-E3.00:
    a. Background revised.
15. Sheet S-E4.00:

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a. Panel HK and LK circuits revised, these boards changed to 84 circuit panels, revised layouts, notes and standby power circuits. The electrical riser and panel schedules were replaced.

16. Sheet s-PD1.01:
    a. New Sheet Added, missing from bid set.
17. Sheet s-P-0.01:
    a. Updated Gas PRV Schedule, general plumbing notes, added notes and updated the plumbing drain schedule.
18. Sheet s-P-0.02:
    a. Flush Valve Trap Priming Detail number updated to correct sequence.
19. Sheet s-P-1.01:
    a. New Sheet Added with updated floor plan revised for commercial washer/dryer, grease trap notation revised, keyed notes were updated and gas service shown on roof.
20. Sheet s-P-1.02:
    a. New Sheet Added, missing from bid set.
21. Sheet s -P-2.00:
    a. New Sheet Added with updated riser diagram matching new layout..
22. Settlers Way ES Sheet s-T201 Technology New / Renovation Plan :
    a. – Added (2) above ceiling wireless access point data drops and one above ceiling surveillance camera data drop.
23. Settlers Way ES Sheet s-T300 Technology Enlarged Views:
    a. – updated notes regarding existing panels on rack elevation.
24. Settlers Way ES Sheet s-T400 Technology Typical Details:
    a. Detail 1- added language regarding installation relative to the ceiling, deleted detail 5.
25. Settlers Way ES Sheet s-T500 Technology Typical Details:
    a. Detail 1- modified face plate designation for Rack number.
26. Sheet s-TN.500:
    a. Detail 1 was changed to include a j-hook supporting service loop and a note was added to specify service loop be located above a biscuit box. An additional item was added to the ceiling grid labeling scheme specifying a colored dot be added to ceiling labels. Port numbers were added to patch panels in detail 4. A note specifying the service loop for above ceiling outlets (details 6, 7, and 8) is to be located above the biscuit box, a minimum and preferred height were also added to the same details.
27. Sheets s-TN.600:
    a. A junction box was added to access control detail 2 with a note specifying the junction box to be inset in the wall above ceiling.

Q. t-Sienna Crossing Elementary School

1. Sheet E-200: Re-issued sheet.
2. Sheet t-TN.500:
    a. Detail 1 was changed to include a j-hook supporting service loop and a note was added to specify service loop be located above a biscuit box. An additional item was added to the ceiling grid labeling scheme specifying a colored dot be added to ceiling labels. Port numbers were added to patch panels in detail 4. A note specifying the service loop for above ceiling

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outlets (details 6, 7, and 8) is to be located above the biscuit box, a minimum and preferred height were also added to the same details.

3. Sheets t-TN.600:
    a. A junction box was added to access control detail 2 with a note specifying the junction box to be inset in the wall above ceiling.
4. Sheet T-TN.100:
    a. Keynote 2 was removed from the IDF room.

R. u- Sugar Mill ES

1. Index u-A000 was modified:.
2. Sheet p-A302: Revised detail 1
3. Sheet p-A401: Revised ceiling layout.`
4. Sheet U-QF1.0 Foodservice Equipment Plan:
    a. Revised janitor's closet / dry storage to reflect commercial washer/dryer and resized rooms. Reduced Item No. 129 Worktable in front of office per drawings. Relocated Item No. 615 Menu Boards to match Architectural Drawings.
5. Sheet U-QF1.3 Foodservice Special Conditions Plan:
    a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements.
6. Sheet U-QF1.4 Foodservice Plumbing Plan:
    a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements
7. Sheet u-A.401: Re-issued sheet.
8. Sheet U-QF1.5 Foodservice Electrical Plan:
    a. Revised janitor's closet / dry storage to reflect room size changes. Refer to Engineering drawings for washer/dryer utility requirements. Revised location of remote fire pull stations. Relocated #E615 and #E615A to above counter.
9. Sheet U-M-1.01
    a. Revised ductwork on plans to accommodate new plan; revised air flows in dry storage, and custodial rooms. Note added for BAS monitoring and removed radiation damper notes on air device schedule. Motor EF-15's size revised. Existing t-stats were indicated on plans. Added BAS monitoring for Cooler/Freezer. Updated wind rating on exhaust fan schedule
10. Sheet U-M-2.01
    a. Revised General Notes, referenced SMACMA standards and remove Radiation damper notations.
11. Sheet U-M-2.02:
    a. Details updated for commercial type dryer with a Curb Mounted Equipment Anchoring detail.
12. Sheet U-ED.100:
    a. Added keynotes to the plans, and added a temporary cooler unit to the service yard, powered by the temporary kitchen panel..
13. Sheet U-E.100:
    a. Sheet reissued with revised background.
14. Sheets U-E2.00:

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a. Sheet reissued with revised background, Commercial style washer and dryer added menu-boards relocated and existing electrical panel layout revised.

15. Sheet U-E3.00:
    a. Background revised.
16. Sheet U-E4.00:
    a. Panel HK and LK circuits revised, these boards changed to 84 circuit panels panels, ,revised layouts, notes and standby power circuits revised.
17. Sheet u-P-0.01
    a. Updated Gas PRV Schedule, general plumbing notes, added notes and updated the plumbing drain schedule
18. Sheet u-P-0.02
    a. Flush Valve Trap Priming Detail number updated to correct sequence.
19. Sheet u-P-1.01:
    a. New Sheet Added with updated floor plan revised for commercial washer/dryer, grease trap notation revised, keyed notes were updated and gas service shown on roof.
20. Sheet u-P-2.00:
    a. New Sheet Added with updated riser diagram matching new layout..
21. Sugar Mill ES Sheet u-TD201 Technology Demolition Floor Plan:
    a. Added new sheet in its entirety.
22. Sugar Mill ES Sheet u-T201 Technology New / Renovation Plan
    a. Added (2) above ceiling wireless access point data drops. Added one above ceiling surveillance camera data drop.
23. Sugar Mill ES Sheet u-T300 Technology Enlarged Views:
    a. Updated notes regarding existing panels on rack elevation
24. Sugar Mill ES Sheet u-T400 Technology Typical Details:
    a. Detail 1- added language regarding installation relative to the ceiling, deleted detail 5.
25. Sugar Mill ES Sheet u-T500 Technology Typical Details:
    a. Detail 1- modified face plate designation for Rack number
26. Sheet u-TN.500:
    a. Detail 1 was changed to include a j-hook supporting service loop and a note was added to specify service loop be located above a biscuit box. An additional item was added to the ceiling grid labeling scheme specifying a colored dot be added to ceiling labels. Port numbers were added to patch panels in detail 4. A note specifying the service loop for above ceiling outlets (details 6, 7, and 8) is to be located above the biscuit box, a minimum and preferred height were also added to the same details.
27. Sheets u-TN.600:
    a. A junction box was added to access control detail 2 with a note specifying the junction box to be inset in the wall above ceiling.

S. v- Sullivan Elementary School

1. Index v-A000 was modified, see below:
    a. removed sheets v-E.000 and v-E.001 from the index.
2. Sheets included in the addendum:

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b. v-A000, replaces the sheet in bid package.

3. Sheet v-TN.500:

a. Detail 1 was changed to include a j-hook supporting service loop and a note was added to specify service loop be located above a biscuit box. An additional item was added to the ceiling grid labeling scheme specifying a colored dot be added to ceiling labels. Port numbers were added to patch panels in detail 4. A note specifying the service loop for above ceiling outlets (details 6, 7, and 8) is to be located above the biscuit box, a minimum and preferred height were also added to the same details.

4. Sheets v-TN.600:

a. A junction box was added to access control detail 2 with a note specifying the junction box to be inset in the wall above ceiling.

T. w-Townewest Elementary School

1. Sheet w-TN.500:

a. Detail 1 was changed to include a j-hook supporting service loop and a note was added to specify service loop be located above a a biscuit box. An additional item was added to the ceiling grid labeling scheme specifying a colored dot be added to ceiling labels. Port numbers were added to patch panels in detail 4. A note specifying the service loop for above ceiling outlets (details 6, 7, and 8) is to be located above the biscuit box, a minimum and preferred height were also added to the same details.

2. Sheets w-TN.600:

a. A junction box was added to access control detail 2 with a note specifying the junction box to be inset in the wall above ceiling.

V. QUESTIONS:

A. See “Vendor Discussions: Following;

Vendor Discussions

Please Clarify the Quantity of Locations for the CSP (12 or 13)

Missing Plumbing Pages

Please provide: 1. Plumbing layouts for Highlands and Hunters Glen. 2. Plumbing sheets for Palmer and Pecan Grove 3. Plumbing demolition drawing for Settlers Way *INCLUDED IN ADDENDUM 4*

Pecan Grove Elementary missing drawings

.

Can you please Provide Mechanical, Electrical, HVAC drawings for p. Pecan Grove?

INCLUDED IN ADDENDUM 4

Water Softening System Clarification

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Is this scope on drawing i-P1.01 for the Highlands project or the Heritage Rose. Please clarify title block listed as Highlands. Plan j on the sheet and i-P1.01 page name. Reference page 135 of 556 of the combined drawings.

Revised in Addendum No.4

Reference j-A.302 Temporary Kitchen layout

The kitchen equipment schedule does not reflect equipment: 805,806,808, 809,810,811 Additionally 804 appears to be a rack but is listed as splash guard on the schedule

On the Foodservice Specifications for the temporary serving area the specification item numbers were incorrectly labeled starting with Item No. 805 through 810. Item No. 805 should have been the three compartment sink, 806 should have read Transport Cart, Item No. 807 to read Hand Lav., Item No. 808 to read Reach-in Heated Cabinet, Item No. 809 to read Reach-in Refrigeration and Item No. 810 to read Dry Storage Shelving per the equipment schedules on each of the temporary serving areas.

A corrected chart is provided below.

FOOD SERVICE EQUIPMENT SCHEDULE - TEMPORARY SERVING					
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH DEPARTMENT COORDINATION NOTES					
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS	MANUFACTURER	MODEL
209	2	DROP FRONT MILK COOLER - 8 CASE		TRAULSEN	RMC34D4
804	2	S/S SPLASH GUARDS		CUSTOM FABRIACTED	
805	1	THREE COMPARTMENT SINK NO DISPOSER	EXISTING		
806	4	TRANSPORT CART	EXISTING		
807	2	HAND LAV	EXISTING		
808	2	REACH IN HEATED CABINET - 1DR	EXISTING		
809	2	REACH IN REFRIGERATOR - 1DR.	EXISTING		
810	1	DRY STORAGE SHELVING	EXISTING		
811	1	CASH REGISTER	OWNER FURNISHED		
812	1	SERVING COUNTER	EXISTING		

Reference j-A.302 Temporary Kitchen layout

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Questions 4, 5:

4. Will HVAC be required in the Temporary kitchen area?

5. Will fire protection be required in the temporary kitchen area? 6. Flooring requirements for patch and or repair due to hand sinks This request applies to plan sets a,j,k,o,p,s,u.

4. HVAC will NOT be required in the temporary serving area.

5. Fire protection will NOT be required in the temporary serving line.

Reference j-A.302 Temporary Kitchen layout

Keyed Note 01 - Do we need to provide a cleanable floor surface other than Ram Board for the project duration? Or do we change the Ram Board as required? What duration should we replace the Ram Board?

Price with RAM Board as a single installation to protect the existing cafeteria floor finishes during construction of the temporary kitchen/serving line. Once the temporary serving line has been completed, remove the ramboard and discard. The cafeteria's existing flooring will be exposed during the temporary serving line operations.

Plumbing

What is the availability and condition of existing water main valves for kitchen?

All kitchens are served from the existing water softener for both cold and hot water. There are multiple isolation valves upstream of the kitchen. Functionality of the valves is unknown.

Kitchen Equipment

Do we need to provide temporary walk-in coolers during the temporary kitchen period?

*Yes, temporary coolers are shown on the site plans for **receiving schools** that are scheduled for*

.

*major remodels. Temporary freezers are required for the **cooking schools** contributing meals to the receiving schools undergoing major remodel work. These temporary freezers and coolers will be rental units located in the yards of the receiving and cooking schools and powered temporarily via connection to existing electrical panels as shown in the electrical drawings. These units are described in the plans. The duration of the rental is noted in the plan, **but may vary based on the start of construction**. The coolers must remain at the receiving schools beginning when the kitchen can no longer produce food (start of construction) and be removed once the kitchen can produce food. (substantial completion)*

*Receiving Schools: The intent is to provide temporary storage of prepared meals and/or beverages and produce for the **receiving schools** while that school's existing walk-in cooler and freezer is off line..*

*Cooking Schools: Freezers will be needed at the **cooking schools** that will provide meals for the approximate duration stated in the plans for the individual schools. The intent is to provide freezer storage for additional food being prepared for the receiving schools.*

Groupings: Cooler and Freezer Rental is dependent upon the grouping sequence planned for the construction. See each campus' drawings, sheet A00-01 for groupings and sheet A.101 for **estimated** periods of rental required. See also sheets A.101 sheets for additional notes and basis of design for rental units.

Communications & AV
Plumbing

There are no riser diagrams for Plumbing.

Riser diagrams are issued in (this) Addendum No. 4 See "P-200" series for each campus.

Missing Documents

The following are missing from the Plans:

Addendum No. 04 Disposition of These Drawings and Specifications – Red indicates the action this addendum takes on these items.

(Austin Pkwy ES) (A-QF4.1, A-QF4.2, A-QF4.3): ADDED; A-T300: DELETED;
(Cornerstone ES) (E-E.000 and E-E.001): ADDED;
(Highlands ES) J-C1.0: DELETED, J-QF2.0, J-P1.01, and J-P1.02): ADDED;
(Hunters Glen ES) K-C1.0: DELETED, (K-QF4.1, K-QF4.2, K-QF4.3): ADDED;
(Palmer ES) (O-QF2.0, O-P1.01, O-P1.02): ADDED
(Pecan Grove ES) (P-M1.01, P-M2.01, P-E.000, P-E.001, P-E.010, P-E.011, P-E.012, P-E.013, P-

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E.060, P-E.100, P-E.200, P-E.300, P-E.400, P-P0.01, P-P0.02, P-P1.01, P-P1.02) ADDED
(Settlers Way ES) (S-PD1.01, S-P1.02): ADDED;
(Sugar Mill ES) U-TD2.01: DELETED, U-QF2.0: ADDED;
(Sullivan ES): (v-E.001, v-E.200): DELETED

The following are missing from the specs:
02 26 23 :DELETED
10 51 13: ADDED.

END OF ADDENDUM #4 NARRATIVE

PART 1 GENERAL

The following facilities School have been identified as asbestos free campuses.

A. Asbestos Free Letters for Multiple Campus Elementary School
   1. Austin Parkway Elementary School
   2. Commonwealth Elementary School
   3. Cornerstone Elementary School
   4. Sienna Crossing Elementary School
   5. Heritage Rose Elementary School
   6. Burton Elementary School
   7. Fleming Elementary School
   8. Glover Elementary School
   9. Lantern Lane Elementary School (Kitchen Renovation Completed In 2022)
   10. Colony Bend Elementary School (Kitchen Renovation Completed In 2022)
   11. Dulles Elementary School (Kitchen Renovation Completed In 2022)
   12. Ridgegate Elementary School (Kitchen Renovations Completed In 2022)
   13. Ridgemont Elementary School (Kitchen Renovations Completed In 2022)
   14. Townewest Elementary School (Kitchen Renovations Completed In 2022)

B. Asbestos Reports Linked Below for the following campuses:
   1. Highlands Elementary School – UES Report N250486 dated June 10, 2025
   2. Hunters Glen Elementary School – UES Report N250486 dated June 10, 2025
   3. Palmer Elementary School – UES Report N250486 dated June 10, 2025
   4. Pecan Grove Elementary School – UES Report N250486 dated June 10, 2025
   5. Settlers Way Elementary School – UES Report N100608 dated June 10, 2025
   6. Sugar Mill Elementary School – UES Report N250486 dated June 10, 2025
   7. Sullivan Elementary School – UES Report N250486 dated June 10, 2025

PART 2 PRODUCTS (Not used)

PART 3 EXECUTION (Not used)

End of Section 00 31 26.01

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MARSHALL CONSTRUCTION COMPANY

I N C O R P O R A T E D

POST OFFICE BOX 7538 • 190 T. C. JESTER

FAX (713) 861-4212

HOUSTON, TEXAS 77270—7538

TELEPHONE (713) 861-8163

March 9, 1990

Fort Bend Independent School District
P. O. Box 1004
Sugar Land, Texas 77478

Attn: Mr. John Manthei

#21
Re: Austin Parkway Elementary School

Gentlemen:

We hereby certify that no materials containing asbestos were installed during construction of the above referenced project.

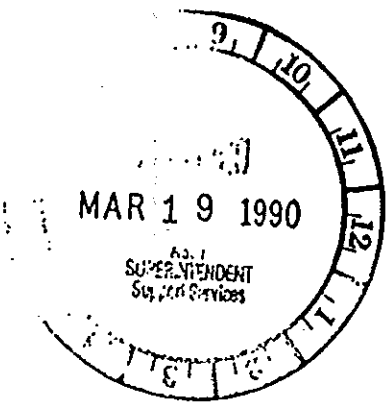
Yours very truly,

MARSHALL CONSTRUCTIN CO., INC.

David G. Marshall

DGM/mh

File - Austin Parkway Elem - Asbestos
cc: Mr. Ruffino
mr. McDonald



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A F F I D A V I T

To Whom It May Concern:

Re: Elementary #30 - Fort Bend ISD Common Wealth

WHEREAS, WE, the undersigned do hereby certify, in accordance with Section 0800, Article 3, that no materials used in the above referenced project contain Asbestos.

PURCELL CONSTRUCTION INC.
(Subcontractor/Supplier)

By: Larry E. Purcell

Title: President

STATE OF TEXAS
COUNTY OF HARRIS

Larry E. Purcell, personally appeared before me and first being duly sworn declared that, he signed his application in the capacity designated if any and further states that, he has read the above application, and the statements therein contained are true.

Subscribed and sworn to before me this 20th day of Nov 1997.

Brenda J. Marshall
Notary Public

BRENDA J. MARSHALL
NOTARY PUBLIC
State of Texas
Comm. Exp. 03/18/99

Stantec Architecture Inc.
20 East Greenway Plaza Suite 200
Houston TX 77046-2012
Tel: (713) 548-5700
Fax: (713) 548-5701

January 20, 2016

Jimmy Bell – FBISD Safety Engineering Specialist
Fort Bend Independent School District
13600 Murphy Road
Stafford, TX 77477

RE: Asbestos Free Notice
Cornerstone Elementary School (Elementary School #42)
1800 Chatham Avenue, Sugar Land, TX 77479
Fort Bend Independent School District

To Whom It May Concern,

This letter is to inform you that our plans and specifications for the aforementioned project, which opened in 2007, did not allow for asbestos, and we have reviewed the shop drawings and MSDS provided by the contractor during construction, which to the best of our knowledge, further indicate that no measurable asbestos has been incorporated into your new facility.

If you have any further questions, please do not hesitate to give me a call.

Sincerely,
Stantec Architecture (formerly SHW Group)

Jennifer S. Henrikson, AIA, NCARB, LEED AP
Senior Associate I Project Director

Attachments: None

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GENERAL CONTRACTOR'S HAZARDOUS MATERIAL CERTIFICATE - ASBESTOS

PROJECT: FT. BEND ELEMENTARY #32 Sienna Crossing
10011 STEEPBANK TRACE
SIENNA PLANTATION, TEXAS 77459
OWNER: FORT BEND INDEPENDENT SCHOOL DISTRICT
ARCHITECT: MOLINA WALKER ARCHITECTS, INC.
SECTION (S): GENERAL CONSTRUCTION

KNOW ALL MEN BY THESE PRESENTS:

JON PRUITT, being first duly sworn, disposes and says that he is the PM of GAMMA CONSTRUCTION COMPANY, the GENERAL CONTRACTOR who constructed or provided the section (s) of work referenced above, and that he is duly authorized to certify to the best of his information, knowledge, and belief no asbestos or asbestos containing materials have been incorporated into the project.

GAMMA CONSTRUCTION COMPANY
Name of GENERAL CONTRACTOR

Jon Pruitt
(By) JON PRUITT — PROJECT MANAGER (Title)

JURAT

THE STATE OF TEXAS

COUNTY OF HARRIS

Sworn to and subscribed before me on this 13TH day of NOVEMBER, 1998.

(Personalized Seal)

Paula G. Burruss
(Notary Public Signature)

PAULA G. BURRUSS
Notary Public, State of Texas
My Commission Expires 10/22/2001

BROOKSTONE
CONSTRUCTION MANAGERS | GENERAL CONTRACTORS

Contractor's
Certificate of Asbestos-Free Construction

Project Name: Fort Bend ISD Elementary School #45

Project Location: 636 Glendale Lake Drive Rosharon, Texas 77583 (Heritage Rose ES)

We, the undersigned, pursuant to Article 10.7 of the General and Supplementary Conditions of the Contract for Construction, hereby certify that to the best of our knowledge, information and belief, the materials incorporated into the above named project and identified herein are 100% free of any form of asbestos material.

The attached subcontractor's Certificate of Asbestos-Free construction refer to Article 9 of the contract in lieu of Article 10.7. We certify that to the best of our knowledge, the attached certificates conform to Article 10.7 of the General and Supplementary Conditions of the Contract for Construction.

Company Name: **Brookstone, L.P.**

Name Justin Henderson
Title Project Manager

February 12, 2010
Date

STATE OF TEXAS
COUNTY OF HARRIS

SUBSCRIBED AND SWORN TO BEFORE ME THIS 12th DAY OF February 2010

NOTARY PUBLIC: Melinda Peters

MY COMMISSION EXPIRES: 10-18-10
(Notary seal underneath)

MELINDA PETERS
Notary Public, State of Texas
My Commission Expires
October 18, 2010

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MOLINA WALKER ARCHITECTS, INC.

February 23, 2007

Fort Bend Independent School District
16431 Lexington Blvd., Suite 314
Sugar Land, Texas 77479

Attn: Margaret Manley

Re: Elementary School #29
Walter Moses Burton Elementary School

CERTIFICATE OF ASBESTOS FREE CONSTRUCTION

Fort Bend Independent School District
Walter Moses Burton Elementary School #29
1625 Hunter Green Lane
Fresno, Texas 77545

The undersigned hereby certifies that to the best of her knowledge, information, and belief, the materials specified and incorporated into the project and used during the construction of the project are free of any type of asbestos material.

Sincerely,

MOLINA WALKER ARCHITECTS, INC.

Mary J. Walker, A.I.A.
President

Registered Architect #7126

6161 SAVOY, #810 HOUSTON, TEXAS 77036 (713)782-8188 FAX(713)782-2031

E. E. Reed Construction Company

SEPTEMBER 7, 1994

TO: Fort Bend Independent School District
16431 Lexington Blvd.
Sugar Land, TX 77479

ATTN: Margaret Manley

PROJECT: Fort Bend Independent School District
Elementary School #28 Fleming
14850 Bissonnet
Houston, TX

Date of Substantial Completion: August 11, 1994

Gentlemen:

E. E. REED CONSTRUCTION COMPANY certifies that no asbestos or asbestos-containing materials have been incorporated into any work performed directly by E. E. Reed Construction Company forces.

Nothing herein implies acceptance of liability for any subcontract work or materials that may be found to contain asbestos, or for any improvements made subsequent to the date of Substantial Completion.

E. E. REED CONSTRUCTION COMPANY

E. E. Reed
President

STATE OF: TEXAS

This instrument was acknowledged before me on the 7th day of September, 1994 by E. E. Reed on behalf of E. E. REED CONSTRUCTION COMPANY.

E. JEANETTE BRIDGES
NOTARY PUBLIC
State of Texas
Comm. Exp. 07-02-96

Notary Public: E. Jeanette Bridges
My Commission expires: 7-2-96

Arizona Fleming

11001 S. Wilcrest, Suite 130/P.O. Box 36967, Houston, Texas 77236-6967, (713) 933-4000, Fax (713) 933-4852

MATRIX SPENCER

March 10, 2011

Refer:
Ed Glover Elementary School No. 26 and
Lexington Creek Elementary School 27

Margaret Manley- Project Manager
Fort Bend I.S.D.

Margaret,

The undersigned hereby certifies that to the best of our knowledge, information and belief, the materials specified and incorporated into the project and used during construction of the project are free of any type of asbestos material.

Sincerely,

Gordon Spencer A.I.A.

GM\02100 Tech\Project Files\DOCS\LETTERS

6213 SKYLINE DRIVE, SUITE 100 HOUSTON, TX 77057 PHONE: 713.522.1666 FAX: 713.522.6260 MATRIXSPENCER.COM

BROOKSTONE
CONSTRUCTION MANAGERS | GENERAL CONTRACTORS

Contractor's
Certificate of Asbestos-Free Construction

Project Name: Fort Bend ISD Elementary School #45

Project Location: 636 Glendale Lake Drive Rosharon, Texas 77583

We, the undersigned, pursuant to Article 10.7 of the General and Supplementary Conditions of the Contract for Construction, hereby certify that to the best of our knowledge, information and belief, the materials incorporated into the above named project and identified herein are 100% free of any form of asbestos material.

The attached subcontractor's Certificate of Asbestos-Free construction refer to Article 9 of the contract in lieu of Article 10.7. We certify that to the best of our knowledge, the attached certificates conform to Article 10.7 of the General and Supplementary Conditions of the Contract for Construction.

Company Name: **Brookstone, L.P.**

Name Justin Henderson
Title Project Manager

February 12, 2010
Date

STATE OF TEXAS
COUNTY OF HARRIS

SUBSCRIBED AND SWORN TO BEFORE ME THIS 12th DAY OF February 2010

NOTARY PUBLIC: Melinda Peters

MY COMMISSION EXPIRES: 10-18-10
(Notary seal underneath)

MELINDA PETERS
Notary Public, State of Texas
My Commission Expires
October 18, 2010

Subcontractor's
Certificate of Asbestos-Free Construction

Project Name: Fort Bend ISD Elementary School #41

Project Location: 19101 Chimney Rock Road
Fresno, TX 77545

We, the undersigned, pursuant to Article 9 of the General and Supplementary Conditions of the Contract for Construction, hereby certify that to the best of our knowledge, information and belief, the materials incorporated into the above named project and identified herein are 100% free of any form of asbestos material:

Division 16 Specification Section(s).

_____ Specification Section(s).

_____ Specification Section(s).

Company Name: **Adrian Enterprises, Inc.**

_____ 8-29-07
Date

Name Martin Adrian
Title President

STATE OF TEXAS
COUNTY OF HARRIS

SUBSCRIBED AND SWORN TO BEFORE ME THIS 29 DAY OF August, 2007

NOTARY PUBLIC: _____

MY COMMISSION EXPIRES: July 11, 2011
(Notary seal underneath)

KIMBERLY THOMPSON
Notary Public, State of Texas
My Commission Expires
July 17, 2011

September 22, 2022

Fort Bend Independent School District
Design and Construction Department
2323 Texas Parkway Missouri City, TX 77489

Attn: Ashley Dixon, Director Construction D&C Bond
Re: FBISD Bond 2018 PKG013 Kitchen Renovations
Asbestos Hazard Emergency Response Act (AHERA)

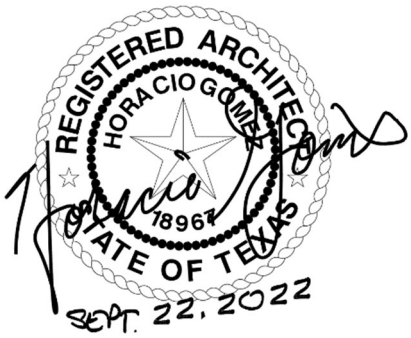
Dear Ashley Dixon,

I am the Architect responsible for the kitchen renovations for the schools listed, located, and completed as shown below. After review of all building documents and to the best of my knowledge, no asbestos containing building materials were specified or used in the construction of the schools referenced below.

School Name	School Address	Project completion
Briargate ES	15817 Blue Ridge Road, Missouri City, Texas 77489	February 5, 2021
Blue Ridge ES	6241 McHard Road, Houston, Texas 77053	December 30, 2020
Colony Bend ES	2720 Planters Street, Sugar Land, Texas 77479	December 30, 2020
Dulles ES	630 Dulles Avenue, Sugar Land, Texas 77478	December 30, 2020
Lake Olympia MS	3100 Lake Olympia Parkway, Missouri City, Texas 77459	December 30, 2020
Lantern Lane ES	3323 Mission Valley Drive, Missouri City, Texas 77459	April 19, 2021
Mission Bend ES	16200 Beechnut, Houston, Texas 77083	February 5, 2021
Ridgegate ES	6015 West Ridgecreek Drive, Houston, Texas 77053	February 5, 2021
Ridgemont ES	4910 Raven Ridge Drive, Houston, Texas 77053	February 5, 2021
Townewest ES	13927 Old Richmond Road, Sugar Land, Texas 77498	February 5, 2021

Sincerely,

Horacio Gomez, AIA
MWA Architects



ASBESTOS CONTAINING MATERIALS
INSPECTION REPORT

Fort Bend ISD – BP013 Renovations – Highlands ES
2022 Colonist Park Drive
Sugar Land, Texas
UES Project No. N250486

Prepared for:
Fort Bend ISD
16431 Lexington Boulevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Prepared by:
UES
2209 Wisconsin Street
Dallas, TX 75229
972-620-8911
www.TeamUES.com

TDSHS Asbestos Consultant Agency License No.: 100608

June 10, 2025

Fort Bend ISD
16431 Lexington Bouevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Re: Asbestos Containing Materials Inspection Report
Fort Bend ISD – BP013 Renovations – Highlands ES
2022 Colonist Park Drive
Sugar Land, Texas
UES Report No. N250486

Dear Mrs. Pentrala:

On behalf of Fort Bend ISD (the "Client"), UES Professional Solutions 44, LLC (hereinafter "UES") has completed this Asbestos Containing Materials Inspection Report for the above-referenced property (the "subject property"). This inspection was conducted in general accordance with Title 25 of the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296) the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP). UES performed this ACM inspection on April 16, 2025, to categorize and assess readily available suspect homogeneous material for Highlands Elementary School. UES collected twenty-nine (29) bulk samples from nine (9) homogeneous materials. The bulk samples were transported to a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and Texas Department of Safety and Health Services (TDSHS) licensed laboratory for analysis using Polarized Light Microscopy (PLM) for the presence of asbestos fibers.

Asbestos Containing Materials (ACMs) are classified as materials that contain 1.0% or more asbestos in any of the homogeneous materials sampled. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The laboratory analyses indicated that asbestos fibers were not detected in the homogeneous materials analyzed from the building. Refer to Section 6.0 of this report. Additional details regarding the ACM Inspection conducted by UES are presented in the attached report.

We appreciate the opportunity to perform these services for Fort Bend ISD. Please contact the undersigned if you have questions regarding the information provided in the report.

Respectfully submitted,
UES

Kristopher Girton
Asbestos Project Manager
Asbestos Consultant License No.: 105894

Michael Nibert, CHMM, C.E.M.
Director of Environmental Services-North Texas
Asbestos Consultant License No.: 105931

TDSHS Asbestos Consultant Agency License No.: 100608

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APPENDIX A

Bulk Sample Location Map and Photograph Log

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PLM Analytical Report & Chain-of-Custody Documentation

APPENDIX C

Inspector(s) License and Firm License

1.0 INTRODUCTION

UES Professional Solutions 44, LLC (hereinafter "UES") conducted a pre-renovation (limited) Asbestos Containing Materials (ACM) Inspection of Highlands Elementary School located at 2022 Colonist Park Drive in Sugar Land, Texas. The purpose of this inspection was to identify and sample accessible suspect ACM and provide information regarding the identity, location, and condition in anticipation of a renovation and/or demolition of the building.

This service was completed in general accordance with UES Proposal No. 109625Rev4 dated February 10, 2025, and authorized by Fort Bend ISD Purchasing Department, Purchase Order 501107 on March 28, 2025.

This asbestos inspection was limited to the kitchen of Highlands Elementary School. During the survey two locations could not be accessed; the dry storage room and walk-in cooler. If materials in these areas do not match those sampled during this survey, they are assumed to be asbestos containing until such a time as they can be sampled and proven negative of asbestos content. Certain materials were not sampled, these materials are assumed to be asbestos containing.

This inspection was conducted in accordance with the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296), the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP).

A map or photographic log illustrating the sample locations is included as Appendix A of this report. The bulk sample laboratory report and associated chain-of-custody documentation is presented in Appendix B. A copy of the inspector's license that performed the building inspection and a copy of UES's Texas Department of Safety and Health Services (TDSHS) firm license are provided in Appendix C.

1.1 Limitations and Exclusions

This inspection report is not intended to be used as a specification, project design or work plan. The indicated material quantities of ACM (if documented) are estimates based on UES's field observations on the date(s) of the inspection(s) and should be considered preliminary in nature. All parties utilizing this report for proposal, estimation or contract negotiations are required to field verify the quantities of material prior to submission of proposal. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor. The asbestos abatement contractor should ascertain for themselves, by site measurements and inspection, the exact nature and extent of the work to be done.

Inspection and collection of bulk samples of suspect ACMs were limited to those materials readily accessible at the time of inspection. Destructive sampling techniques (such as wall and ceiling testing, and carpet cuts to expose underlying flooring) were employed in limited measures in the areas inspected and

completed in a way to minimize disruption to operations and damage to building components. Extensive destructive sampling methods were not used, and exploratory demolition of walls and/or removal of fixed items were not conducted. No attempt was made by UES to observe conditions in spaces not generally accessible, including but not limited to crawlspaces, pipe chases, plenums, or confined spaces. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls.

Although every effort is made to locate all suspected ACMs, it is impossible to rule out the possibility that undiscovered asbestos materials may be present. If the building is to undergo major refurbishment or demolition, it is recommended that the persons carrying out the work are made aware of this and take sufficient precautions, as may be appropriate, to ensure the health and safety of their own employees and any other parties who may be affected by the works. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed.

Asbestos has not been banned from use in building products in the United States. Newer buildings are not exempt. Certain uses of asbestos have been banned: such as spray applied fireproofing, pipe and boiler insulation and asbestos cardboard.

1.2 Purpose and Scope of Work

The purpose of this study was to perform an evaluation of the above-referenced facility for the presence of ACMs, specifically those building materials which may be present or impacted during potential demolition or renovation activities. The activities and procedures used to accomplish this task were as follows:

1) A review of available building documents to identify potential locations of suspect ACMs;
2) Visual building inspection of accessible areas by a EPA Asbestos Hazard Emergency Response Act (AHERA) accredited and Texas Department of Safety and Health Services (TDSHS) licensed Asbestos Building Inspector to identify suspect ACMs;
3) Once identified, homogeneous materials (materials which are uniform in color, texture, construction/application date, and general appearance) were determined;
4) Determine whether the suspect ACM is Friable (a material that when dry, may be crumbled, pulverized or reduced to powder by hand pressure) or Non-Friable;
5) Collection of bulk samples of each homogeneous suspect ACM. Record sample information on Asbestos Bulk Sample Forms (chain-of-custody sheets), which were signed, dated, and sent with the samples to the laboratory;
6) Analysis of the collected bulk samples at a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and TDSHS licensed laboratory using Polarized Light Microscopy (PLM) for the presence of asbestos fibers;

7) Approximate locations of the bulk samples were defined. Computer Assisted Drafting and Design (CADD) drawings were developed indicating sample locations. In addition, approximate quantities of identified ACM were also determined; and,
8) Prepare and submit a report.

2.0 CHARACTERISTICS AND INFORMATION

2.1 General

A summary of Highlands Elementary School characteristics is outlined in the table below. Information on the buildings was obtained by UES through our field inspection, review of available building documents and/or property appraiser records.

FORT BEND ISD - HIGHLANDS ELEMENTARY SCHOOL		
General	Facility Type	Elementary School
	Construction Date	1986
	Building Size	69,115 Square Feet
	Number of Stories	1
Structural	Foundation	Slab-on-Grade
	Wall Support	Concrete Block, Steel and Glass
	Wall Finish	Brick
	Roof Support	Bar Joist w/ Metal Deck
	Roof System Type	Built-up Roofing
Mechanical/ Plumbing	HVAC Type	Central (Rooftop Units)
	Duct Type	Fiberglass (Flex or Ridged)
	Pipe Insulation	Paper Wrap with Fiberglass Insulation
Interior	Wall Substrates	Wood/Steel Studs, or Furring Strips
	Wall Finishes	CMU, Ceramic Tile
	Floor Substrates	Concrete
	Floor Finishes	Ceramic Tiles, Terrazzo Flooring
	Ceiling Systems	Suspended
	Ceiling Finishes	Gypsum Ceiling Tiles
	Other	None

2.2 Building Information Available

UES was provided with demolition plan drawings dated December 4, 2024. No previous asbestos inspection report(s) were provided and no other material information was provided in reference to Highlands Elementary School.

2.3 Current Building Use

At the time of UES's ACM inspection, Highlands Elementary School was an occupied elementary school.

3.0 INSPECTION PROTOCOL

Three forms of ACMs are typically found on structures. These materials are classified as follows:

- *Surfacing Material* – material that is sprayed-on, troweled-on, or otherwise applied to interior and exterior structural and architectural surfaces. Surfacing material includes acoustical plaster on ceilings, fireproofing on structural members, textured paint and exterior stucco, and other materials applied to surfaces for acoustical, decorative, fireproofing, and other purposes.

- *Thermal System Insulation* — material which is applied to interior and exterior mechanical components to reduce heat gain or loss. Thermal system insulation includes insulation on pipes, fittings, boilers, breeching, tanks, ducts, and other mechanical components.

- *Miscellaneous Materials* — material, other than surfacing material and thermal system insulation, on interior and exterior structural, mechanical, electrical, or architectural components, and surfaces. Miscellaneous material includes but is not limited to ceiling tiles, gaskets, floor coverings and mastics, wallboard joint compound, roofing materials, and cementitious products.

An inspection of Highlands Elementary School was conducted to identify these, and other materials present within the building which are suspected of containing asbestos.

3.1 Inspection Procedures

UES's field inspection was performed on April 16, 2025, by Ethan Grigg, an inspector accredited according to Federal Regulation 40 CFR, Part 763 (AHERA), and a TDSHS Licensed Asbestos Inspector (TDSHS License No. 60-3778).

After a preliminary walk-through of the building, an inspection was conducted to evaluate the location and extent of the suspected ACMs. Once identified, these materials were categorized into homogeneous areas containing materials of the same type, age, visual appearance, texture, composition, etc.

This type of inspection is designed to be used as a basis for tendering the removal of ACMs from the subject building(s) prior to demolition or renovation. The present condition of each ACM was evaluated by UES and classified as one of three categories: "good", "damaged" and "significantly damaged." As defined by AHERA. "Poor condition, for NESHAP Category I and II nonfriable materials, is synonymous to "damaged" and/or "significantly damaged," depending on the percentage of damaged.

Federal regulations also require inspectors to determine the potential for disturbance (or damage). This potential for disturbance is based on the presumption that the building will not be demolished. The classifications for potential for disturbance ranges from low, to moderate, to high, and is based on vibration, contact and air erosion.

The TAHPR utilizes NESHAP and AHERA regulations depending on the type of building that is being surveyed. Public buildings and facilities utilize TAHPR per NESHAP regulations and school buildings utilize the AHERA regulations. TAHPR requires a minimum of three (3) samples of each Homogenous Area to be collected and analyzed by a NVLAP accredited and TDSHS licensed laboratory. The number of bulk samples collected was based on the type of facility (public building and facility or school) and category of Homogeneous Area and the quantity of the material present, as follows:

AHERA GUIDELINES FOR DETERMINING THE NUMBER OF SAMPLES TO COLLECT

HSA CATEGORY	HSA QUANTITY	SAMPLES REQUIRED
Surfacing Materials	<1,000 Square Feet	3
	1,000 – 5,000 Square Feet	5
	>5,000 Square Feet	7 or more
Thermal System Insulation	No Stipulation	3+ (All repair patches must be sampled)
Miscellaneous Materials	No Stipulation	Per AHERA Guidelines, these materials must be sampled "in a manner sufficient to determine whether or not they contain asbestos" typically two or more samples based upon the inspector's judgement (a minimum of three (3) samples are required by TAHPR).

HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)

UES's inspector(s) employed wet methods as applicable during bulk sample collection to reduce the potential for fiber release. Each sample was documented by labeling the container with a unique sample number, entering the sample material on a bulk sample log or chain-of-custody form, and noting the location of each sample on a floor plan. Throughout the sampling process, care was taken to prevent cross-contamination of the collected bulk samples. Sampling equipment was cleaned following the collection of each sample.

Random, and in some cases judgmental, samples of each homogeneous area of material were then collected. The physical condition of each material was assessed. In addition, a tactile inspection of the material was performed to evaluate its friability. If the material, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure, it is considered friable. Samples from any homogeneous area

where the inspector determined that the material was non-ACM (such as thermal insulation that obviously fibrous glass, foam glass, or rubber) were not collected.

3.2 Suspected Asbestos Containing Materials

Based on UES's review of the available building system information and thorough visual inspection of the subject building, nine (9) Homogeneous Areas were identified at Highlands Elementary School commonly suspected of containing asbestos. The Homogeneous Areas are detailed on the List of suspect ACMs.

3.3 TAHPR Classification

The materials assessed are classified as either: Regulated Asbestos Containing Material (RACM), Category I non-friable ACM, or Category II non-friable ACM.

Friable materials are "Any ACM that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure."

Non-friable materials are "ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

Category I non-friable ACM is "Asbestos-containing packings, gaskets, resilient floor-covering material, and asphalt roofing products determined to be ACM."

Category II non-friable ACM is – "Any material determined to be ACM, excluding Category I non-friable ACM, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

RACM means "Friable asbestos material; Category I non-friable ACM that has become friable; Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations."

ACM materials are subject to the TAHPR notification requirements, refer to Section 7.0 for Regulatory Information.

4.0 LABORATORY ANALYSIS

4.1 Polarized Light Microscopy Analysis

The samples of the suspected ACMs collected during the field inspection were transported with chain-of-custody documentation to UES Laboratories located in Pineville, North Carolina. UES Laboratories is a

NVLAP accredited laboratory (NVLAP Accreditation No. 600344-0) and TDSHS licensed (TDSHS License No. 300520) laboratory for bulk sample analysis.

Bulk samples were analyzed for the presence of asbestos fibers using PLM. The analyses were performed according to EPA Method 600/R-93/116 July 1993 "Method for the Determination of Asbestos in Bulk Building Materials." This analytical method can be used for qualitative identification of six morphologically different types of asbestos fibers: chrysotile, amosite, crocidolite, tremolite, actinolite and anthophyllite. PLM analysis requires the microscopist to take a portion of the sample and treat it with an oil of specific refractive index. The prepared slide is then subjected to a variety of tests while being viewed under varying polarizations of light. Each type of asbestos displays unique characteristics when subjected to these tests.

The method specifies that the asbestos content in a bulk sample shall be estimated and reported as a finite percentage within the range of 0 to 100. Minute quantities of asbestos in bulk samples may be reported as "trace" or less than one percent (<1.0%). The analytical method determines the asbestos percentage by means of visual estimation technique. If analysis of the sample of a suspect ACM reveals a negative result, UES considers the material to be non-Asbestos containing. If at any time during the analytical process a sample tests positive, that material must be treated as ACM.

5.0 FINDINGS

Nine (9) suspect homogeneous materials were identified at the subject building. Following TAHPR and AHERA guidelines, the appropriate number of bulk samples were collected from the identified homogeneous material and submitted for laboratory analysis.

The laboratory analyses indicated that asbestos fibers were not detected in the homogeneous materials analyzed from the building.

The following table presents the analytical results of the suspect ACMs and general information regarding the suspect ACMs.

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
PEF – 1 - 5	1	CMU with Texture	Misc.	Good	low	NAD	*Category II – Non-Friable*	3,000 SF	No
PEF – 6 - 8	2	Terrazzo Flooring	Misc.	Good	low	NAD	*Category I – Non-Friable*	1,300 SF	No
PEF – 9 - 11	3	2' x 2' Sheetrock Ceiling Tile	Misc.	Good	low	NAD	*Category II – Non-Friable*	1,600 LF	No
PEF – 12 - 14	4	4" Black Cove Base with Mastic	Misc.	Good	low	NAD	*Category II – Non-Friable*	200 LF	No

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
PEF – 15 - 17	5	4" Brown Cove Base with Mastic	Misc.	Good	low	NAD	*Category II – Non-Friable*	30 LF	No
PEF – 18 - 20	6	HVAC Duct Insulation with Mastic	Misc.	Good	low	NAD	*Friable*	100 LF	No
PEF – 21 - 23	7	TSI Pipe Insulation	TSI	Good	low	NAD	*Friable*	300 LF	No
PEF – 24 - 26	8	24" x 12" Ceramic Floor Tile	Misc.	Good	low	NAD	*Category I – Non-Friable*	100 SF	No
PEF – 27 - 29	9	12" x 4" Ceramic Wall Tile	Misc.	Good	low	NAD	*Category II – Non-Friable*	400 SF	No
		Mirror Mastic	***Misc.***	***Good***	***low***	****Assumed***	***Category II – Non-Friable***	***5 SF***	***No***

Table Notes and Definitions:
HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)
NESHAPs = National Emission Standards for Hazardous Air Pollutants
SF = Square Feet
LF = Linear Feet
EA = Each
NF = Non-Friable
NAD = No Asbestos Detected
Surf = Surfacing
TSI = Thermal System Insulation
Misc. = Miscellaneous
Note - The indicated material quantities are estimates based on UES' field observations and should be considered preliminary in nature. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor.
Note - Damaged and Significantly Damaged Non-Friable Materials are classified as RACM per NESHAP.
***This material was assumed to contain asbestos.**

6.0 SUMMARY OF ASBESTOS CONTAINING MATERIALS

Inspection of the subject building, located at 2022 Colonist Park Drive, Sugar Land, Texas, identified nine (9) materials suspected of containing asbestos fibers. Bulk samples of each material were collected and submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The results indicated that the nine (9) suspect materials did not contain 1.0% or more asbestos.

The *Mirror Mastic*, is assumed to be located in the Kitchen Staff Bathroom and is assumed to be in good condition and is assumed to contain 1.0% or more asbestos. This material would be classified as Category II nonfriable ACM according to the current TAHPR and NESHAP regulations. This material was assumed to contain asbestos.

7.0 REGULATORY INFORMATION

The State of Texas has established the TAHPR which requires asbestos related activity to be performed by an individual licensed by TDSHS. An asbestos related activity consists of the disturbance (whether intentional or unintentional), removal, encapsulation, or enclosure of asbestos, including preparations or final clearance, the performance of asbestos surveys, the development of management plans and response actions, asbestos project design, the collection or analysis of asbestos samples, monitoring for airborne asbestos, bidding for a contract for any of these activities, or any other activity required to be licensed under TAHPR.

Abatement must be performed by a TDSHS licensed asbestos abatement contractor in accordance with a project design prepared by a TDSHS Licensed Asbestos Consultant. In addition, third party air monitoring must be conducted by a TDSHS licensed Air Monitoring Technician or Project Manager during the abatement activities.

Demolition under the TAHPR regulation is defined as the wrecking or removal of any load-supporting structural member of a public building or facility for the purpose of razing the building or portion of the building to the ground, or the intentional burning of any public building or facility. The removal of load-supporting structural members followed by resupport of the structure is considered renovation, not demolition. Moving a building from its foundation is considered demolition. We recommend you contact the Controlling Agency (TDSHS) requiring the notification and other requirements which may be applicable. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified.

Renovation or demolition of Highlands Elementary School should be conducted in strict compliance with the aforementioned federal statutes, TAHPR, NESHAP, and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

There are federal and state statutes and regulations which govern the abatement and disposal of ACMs. The renovation or demolition of buildings and roofs containing ACMs is regulated under the TAHPR and NESHAP statutes. The TAHPR and NESHAP regulations require notification to the Controlling Agency (TDSHS) and ACM prior to renovation or demolition. We strongly recommend that you contact the Controlling Agency (TDSHS) prior to renovation or demolition regarding the proper disposition of the ACMs. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified. It is important to note that even though an activity may be exempt from the EPA NESHAP regulations, such exemption does not extend to OSHA standards or other state and federal statutes.

Renovation or demolition activities in buildings and on roofs that contain ACM or Presumed Asbestos Containing Material (PACM) are regulated under the OSHA Asbestos Construction Standard (29 CFR 1926.1101). The OSHA standard requires the building owner to inform their employees who will work in or adjacent to areas containing ACM or PACM, perspective employers applying or bidding for work whose employees reasonably can be expected to work in or adjacent to areas containing ACM or PACM, all employers of employees on multi-employer work sites who will be performing work with or adjacent to areas containing asbestos and tenants who will occupy areas containing ACM or PACM, of the presence, location, and quantity of ACM or PACM at the work sites in their building and facilities. Further, the OSHA standard (29 CFR 1926.1101) requires employers who discover ACM or PACM to convey information concerning the presence, location, and quantity of such newly discovered ACM or PACM to other employers of employees working at the work site within 24 hours of discovery. While OSHA says the notification can be written or personal communication, there are many advantages to written communication.

The OSHA construction standard (29 CFR 1926.1101) also contains specific training, work practices, procedures, engineering controls, notifications, permissible exposure limits, personal protection, record keeping and a multitude of other requirements for the demolition, renovation, construction, alterations, repair, maintenance of structures, substrates, or portions thereof that contain asbestos. It should be noted that recent court rulings have exempted roofing cement from the OSHA Construction Industry Asbestos Standard.

Renovation or demolition of the structures and roofs that could potentially disturbed the ACM located within the subject property should be conducted in strict compliance with the aforementioned federal statutes and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

The renovation and demolition of buildings is regulated under the TAHPR and NESHAP statutes. Even if asbestos is not detected at 1.0% or more, the TAHPR and NESHAP regulations require a ten-day notification to the Controlling Agency (TDSHS) prior to renovation and demolition.

8.0 CONTROLLNG AGENCY

The Controlling Agency for the coordination of projects involving asbestos removal or demolition is the TDSHS Asbestos Program. The owner or operator shall provide the above-referenced department with a ten-day notice of the asbestos removal project or demolition by timely submittal of a completed "Asbestos Abatement/Demolition Notification" form, as promulgated under TAHPR. The notification can be submitted on Texas Department of State Health Services, located online at https://www.dshs.texas.gov/asbestos-program/notifications-asbestos-program.

9.0 CONDITIONS AND LIMITATIONS OF THIS INPECTION

A representative of UES obtained samples of building materials which were observed during an inspection of the building at the subject site that are typically suspected of containing asbestos as a constituent. The bulk samples were submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis using EPA approved methods for industry-accepted standards. UES makes no warranties, express or implied.

In general, inspection and sampling procedures were incorporated which allowed assessment of reasonably accessible building materials. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls. Though every effort was made to examine wall cavities and other areas for thermal system insulation, spray-applied or trowel applied surfacing material or other miscellaneous materials and other PACM, this survey and report only deals with accessible areas of the building. There may be additional inaccessible areas above the ceiling, behind walls and below floors that become evident during demolition or renovation activities. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed. The building's equipment fixtures, or stored materials were not inspected or sampled as part of this evaluation.

Bidders are responsible for their own calculations and estimates of quantities. Actual quantities may be more or less than indicated.

Federal OSHA Standard 26 CFR 1926.1101 has specific requirements relating to employee protection and notification during construction projects (including demolition and renovation projects) involving ACM as well as materials containing trace levels of asbestos which apply to this project. UES recommends complying with applicable OSHA regulations, which would include notifying the demolition contractor of the presence of asbestos.

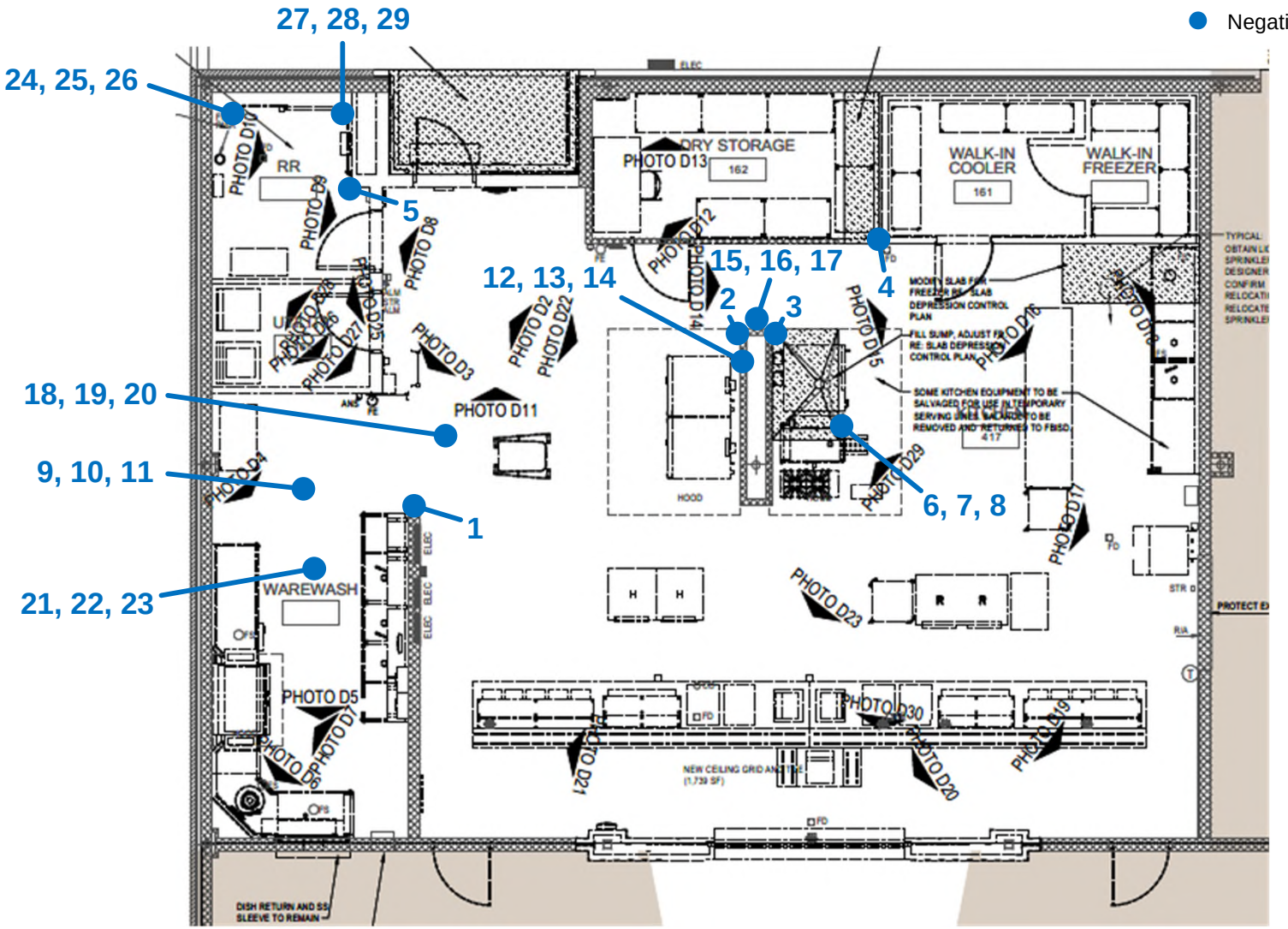
All conclusions and recommendations in this report represent the professional opinions of the personnel involved with the project. The results, findings, conclusions and recommendations expressed in this report are based on access provided and conditions observed, and samples taken during the survey of the building. The information contained in this report is relevant as of the date on which the field work was performed and should not be relied upon to represent Site's conditions at a later date. This study and report were prepared on behalf of and for the exclusive use of the Client solely for its use and reliance in determining the presence of asbestos in identified areas of the site. The results of this report are not intended or to be construed as legal interpretation of existing federal, state, or local environmental, health and safety laws or regulations. UES assumes no responsibility or liability for errors in information or data provided to UES by the Client or any third party or developments resulting from activities or situations outside the scope of this project.

Appendix A
Bulk Sample Location Map and Photograph Log

Sample Locations

Legend:

Negative ACM Sample Location



Floor Plans are not to scale

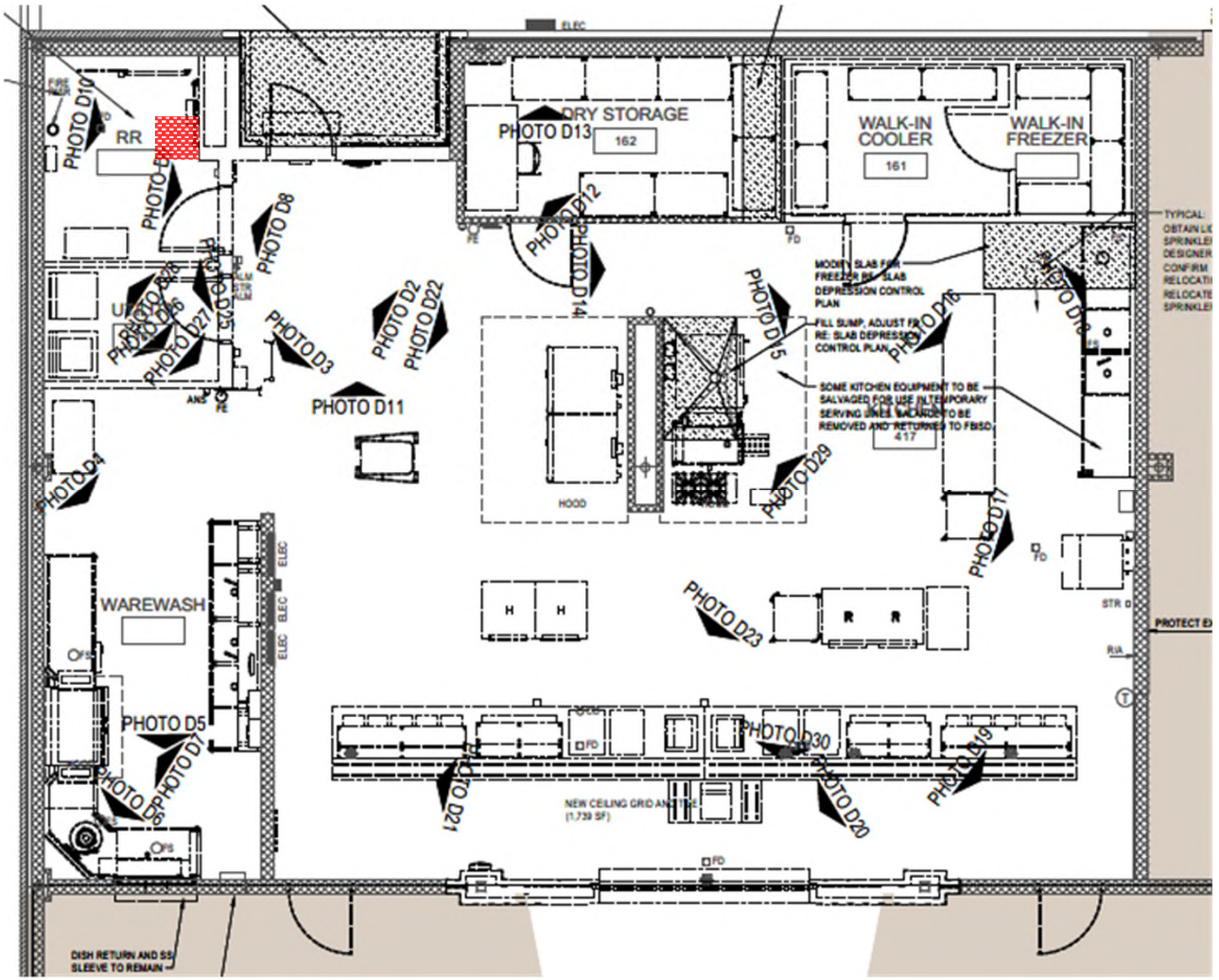
First Floor

UES	**FBISD – BP013 Renovations** **Highlands ES** 2022 Colonist Park Drive, Sugar Land, Texas	**Fort Bend ISD** 16431 Lexington Boulevard, Sugar Land, Texas 77479	N	**Proj. Mgr: KAG** **Date: 4/30/2025** **Drawn By: EDG** **Project # N250486**

Assumed ACM Locations

Legend:

Mirror Mastic



Floor Plans are not to scale

First Floor

UES

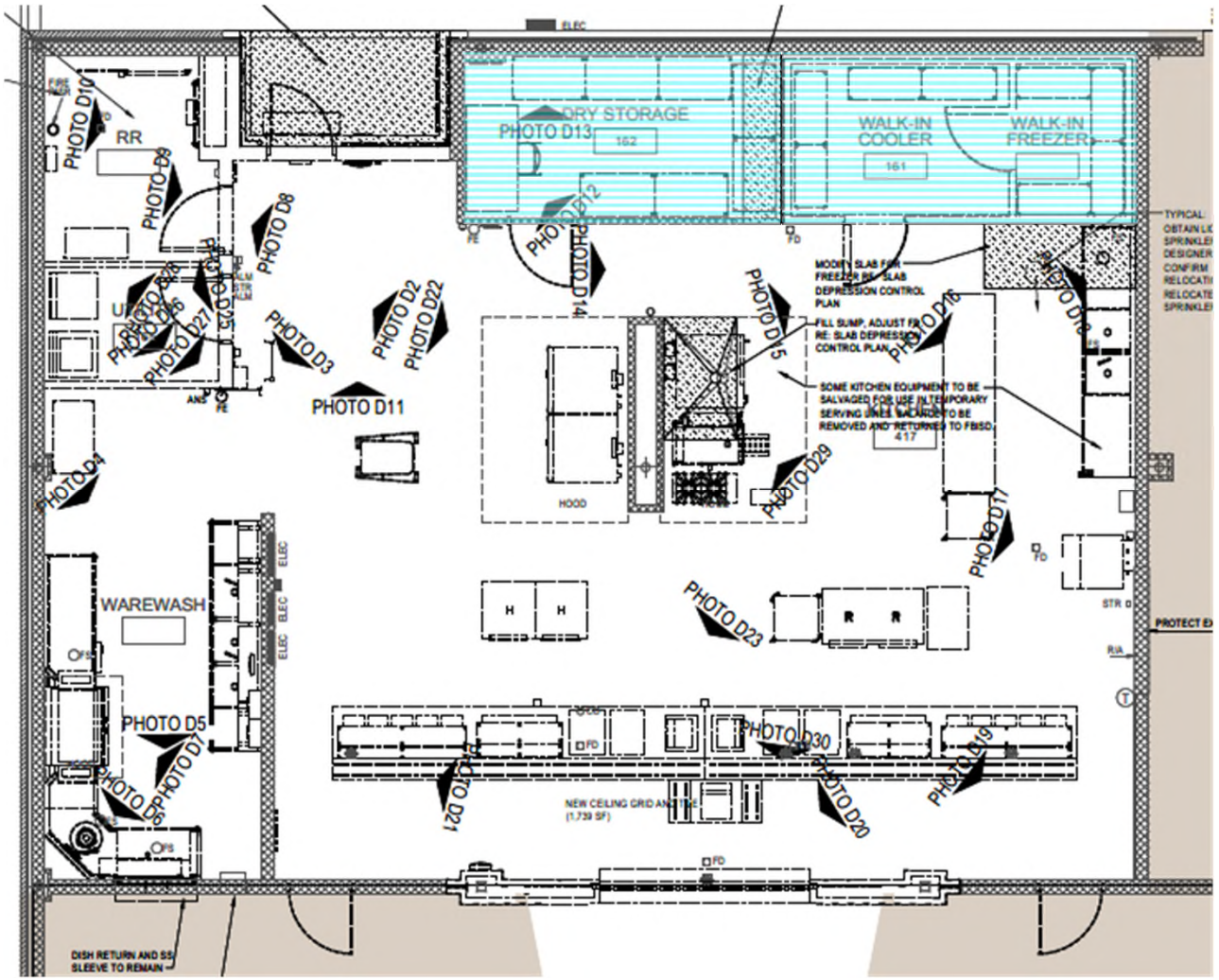
FBISD – BP013 Renovations
Highlands ES
2022 Colonist Park Drive,
Sugar Land, Texas

Fort Bend ISD
16431 Lexington Boulevard,
Sugar Land, Texas 77479

N

Proj. Mgr: KAG
Date: 4/30/2025
Drawn By: EDG
Project # N250486

Inaccessible Locations



Legend:

- Inaccessible Area

Notes:

These areas were inaccessible, all materials within that differ from materials that were sampled are assumed to be asbestos containing until such a time as they can be sampled and proven negative of asbestos content

First Floor

Floor Plans are not to scale

UES	**FBISD – BP013 Renovations** **Highlands ES** 2022 Colonist Park Drive, Sugar Land, Texas	**Fort Bend ISD** 16431 Lexington Boulevard, Sugar Land, Texas 77479	N	**Proj. Mgr: KAG** **Date: 4/30/2025** **Drawn By: EDG** **Project # N250486**

HA 1: CMU with Texture

HA 2: Terrazzo Flooring

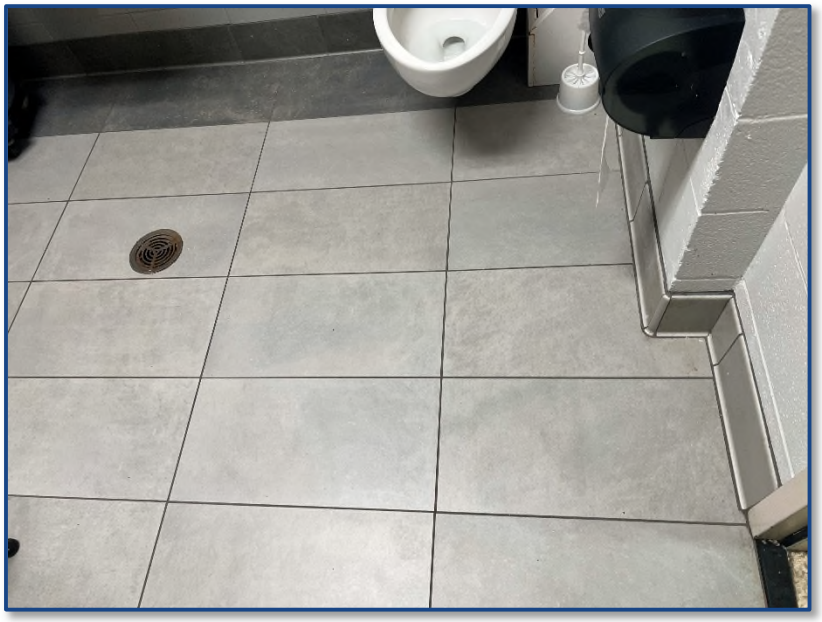
HA 3: 2’ x 2’ Sheetrock Ceiling Tile

HA 4: 4” Black Cove Base with Mastic

HA 5: 4” Brown Cove Base with Mastic

HA 6: HVAC Duct Insulation with Mastic

HA 7: TSI Pipe Insulation



HA 8: 24” x 12” Ceramic Floor Tile

HA 9: 12” x 4” Ceramic Wall Tile

Appendix B
PLM Analytical Report & Chain-of-Custody Documentation

Asbestos Laboratory Report

Prepared for

UES Dallas

Project: FBISD - BP013 Renovations - Highlands ES

UES No.: A25117.00812.000

Date Received: 4/21/2025

Date Analyzed: 4/25/2025

Date Reported: 4/25/2025

Total Samples Analyzed: 57

 # Samples >1% Asbestos: 0

Method of Analysis: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00812.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/25/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Highlands ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
HEF-1-Filler A25117.00812.000-1	CMU with Filler	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-1-CMU A25117.00812.000-1A	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-1-Mortar A25117.00812.000-1B	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-2-Filler A25117.00812.000-2	CMU with Filler	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-2-CMU A25117.00812.000-2A	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-2-Mortar A25117.00812.000-2B	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-3-Filler A25117.00812.000-3	CMU with Filler	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-3-CMU A25117.00812.000-3A	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-3-Mortar A25117.00812.000-3B	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-4-Filler A25117.00812.000-4	CMU with Filler	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-4-CMU A25117.00812.000-4A	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-4-Mortar A25117.00812.000-4B	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-5-Filler A25117.00812.000-5	CMU with Filler	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-5-CMU A25117.00812.000-5A	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00812.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
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Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Highlands ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
HEF-5-Mortar A25117.00812.000-5B	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-6 A25117.00812.000-6	Terrazzo Flooring	White, Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-7 A25117.00812.000-7	Terrazzo Flooring	White, Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-8 A25117.00812.000-8	Terrazzo Flooring	White, Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-9 A25117.00812.000-9	2x2 Sheetrock Ceiling Tile	Brown, White Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
HEF-10 A25117.00812.000-10	2x2 Sheetrock Ceiling Tile	Brown, White Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
HEF-11 A25117.00812.000-11	2x2 Sheetrock Ceiling Tile	Brown, White Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
HEF-12-Cove Base A25117.00812.000-12	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-12-Mastic A25117.00812.000-12A	4 Black Cove Base with Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-13-Cove Base A25117.00812.000-13	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-13-Mastic A25117.00812.000-13A	4 Black Cove Base with Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-14-Cove Base A25117.00812.000-14	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-14-Mastic A25117.00812.000-14A	4 Black Cove Base with Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-15-Cove Base A25117.00812.000-15	4 Brown Cove Base with Mastic	Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00812.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/25/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Highlands ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
HEF-15-Mastic A25117.00812.000-15A	4 Brown Cove Base with Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-16-Cove Base A25117.00812.000-16	4 Brown Cove Base with Mastic	Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-16-Mastic A25117.00812.000-16A	4 Brown Cove Base with Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-17-Cove Base A25117.00812.000-17	4 Brown Cove Base with Mastic	Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-17-Mastic A25117.00812.000-17A	4 Brown Cove Base with Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-18-Mastic A25117.00812.000-18	HVAC Duct Insulation w/Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-18-Wrap A25117.00812.000-18A	HVAC Duct Insulation w/Mastic	Brown, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
HEF-18-Insulation A25117.00812.000-18B	HVAC Duct Insulation w/Mastic	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
HEF-19-Mastic A25117.00812.000-19	HVAC Duct Insulation w/Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-19-Wrap A25117.00812.000-19A	HVAC Duct Insulation w/Mastic	Brown, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
HEF-19-Insulation A25117.00812.000-19B	HVAC Duct Insulation w/Mastic	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
HEF-20-Mastic A25117.00812.000-20	HVAC Duct Insulation w/Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-20-Wrap A25117.00812.000-20A	HVAC Duct Insulation w/Mastic	Brown, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
HEF-20-Insulation A25117.00812.000-20B	HVAC Duct Insulation w/Mastic	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00812.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/25/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Highlands ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
HEF-21-Wrap A25117.00812.000-21	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
HEF-21-Insulation A25117.00812.000-21A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
HEF-22-Wrap A25117.00812.000-22	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
HEF-22-Insulation A25117.00812.000-22A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
HEF-23-Wrap A25117.00812.000-23	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
HEF-23-Insulation A25117.00812.000-23A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
HEF-24 A25117.00812.000-24	24x12 Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-25 A25117.00812.000-25	24x12 Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-26 A25117.00812.000-26	24x12 Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-27- Ceramic Tile A25117.00812.000-27	13x4 Ceramic Wall Tile	Gray, White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-27-Grout A25117.00812.000-27A	13x4 Ceramic Wall Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-28- Ceramic Tile A25117.00812.000-28	13x4 Ceramic Wall Tile	Gray, White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-28-Grout A25117.00812.000-28A	13x4 Ceramic Wall Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HEF-29- Ceramic Tile A25117.00812.000-29	13x4 Ceramic Wall Tile	Gray, White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00812.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/25/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Highlands ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
HEF-29- Grout A25117.00812.000-29A	13x4 Ceramic Wall Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

METHOD: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

For samples easily separated into homogeneous layers, each component will be analyzed separately. The sample may not be representative of the larger material in question. Interpretation and use of test results are the responsibility of the client. Due to the limitations of the EPA 600 Method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles, mastic and roofing can be difficult to analyze by PLM. Reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or None Detect for these materials is recommended. The percentage of asbestos reported is a midpoint within an acceptable range. The estimated measurement of uncertainty is available upon request. Results relate only to the items received by the laboratory as noted on the Chain of Custody provided by the client.

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Analysis is determined by Calibrated Visual Estimate (CVE).
Temperature at the time of analysis (°C) : 22

NVLAP Code: 600344

Texas License Number : 300520

Analyst(s): Brant Alyea

Approved By: Cass Rupert
Approved Signatory

UES Laboratories, 10121 Pineville Distribution St., Pineville, NC Phone: (704) 504-1717

UNIVERSAL ENGINEERING SCIENCES

CHAIN OF CUSTODY

LAB USE ONLY:	A25117.0082.000
UES Order Number:	45495

10121 Pineville Distribution Street,
Pineville, North Carolina 28143
Tel: 704-504-1717; Fax: 704-504-1125

COMPANY CONTACT INFORMATION			
Company:	UES Dallas	Job Contact:	Ethan Grigg, Kristopher Girton
Address:	2209 Wisconsin Street,	Email:	egrigg@teamues.com
	Dallas, Texas 75229		kgirton@teamues.com
		Tel:	817-966-6636
Project Name:	FBISD - BP013 Renovations	Fax:	
Project ID #:	N250486	State Collected In:	Intact

Bill to: ☑ Same ☐ Different – If Bill to is different please notate in the comments section.

ASBESTOS	METHOD	TURN AROUND TIME						
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY	2 Week
PLM BULK	EPA 600	☐	☐	☐	☐	☐	☑	☐
PLM Point Count (400)	EPA 600	☐	☐	☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐	☐
TEM BULK	EPA NOB / Chatfield			☐	☐	☐	☐	☐
TEM AIR	AHERA 40 CFR, Part 763	☐	☐	☐	☐	☐	☐	☐
TEM Dust Wipe	ASTM D6480	☐	☐	☐	☐	☐	☐	☐

POSITIVE STOP ANALYSIS: ☑

IF TURNAROUND TIME IS NOT MARKED STANDARD 5 DAY APPLIES

By submitting samples, you are agreeing to UES Terms and Conditions

COMMENTS: Highlands ES
SEE ATTACHED - Use Sampling Log Name

☑ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
Ethan Grigg	4/18/2025		4.21.25

Samples will be disposed of 60 days after analysis

A25117.00812.000

UES

PO #: 45495

Date: 4/16/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD-BP013Renovations - Highlands ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
HEF-	1	CMU with Filler	Kitchen	NF II	G	3,000SF
"	2	"	"	"	"	"
"	3	"	"	"	"	"
"	4	"	"	"	"	"
"	5	"	"	"	"	"
"	6	Terrazzo Flooring	Kitchen	NF II	G	1,300SF
"	7	"	"	"	"	"
"	8	"	"	"	"	"
"	9	2'x2' Sheetrock Ceiling Tile	Kitchen	NF II	G	1,600SF
"	10	"	"	"	"	"
"	11	"	"	"	"	"
"	12	4" Black Cove Base with mastic	Kitchen	NF II	G	200LF
"	13	"	"	"	"	"
"	14	"	"	"	"	"
"	15	4" Brown Cove Base with mastic	Kitchen	NF II	G	30LF

A25-117.00812.000

UES

PO #: 45495

Date: 4/16/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD-BP013 Renovations - Highlands ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
HEF -	16	4" Brown Cove Base with Mastic	Kitchen	NF II	G	30LF
"	17	"	"	"	"	"
"	18	HVAC Duct Insulation w/ Mastic	Kitchen	F	G	100LF
"	19	"	"	"	"	"
"	20	"	"	"	"	"
"	21	TSI Pipe Insulation	Kitchen	F	G	300LF
"	22	"	"	"	"	"
"	23	"	"	"	"	"
"	24	24"x12" Ceramic Floor Tile	Kitchen	NF II	G	100SF
"	25	"	"	"	"	"
"	26	"	"	"	"	"
"	27	13"x4" Ceramic Wall Tile	Kitchen	NF II	G	400SF
"	28	"	"	"	"	"
"	29	"	"	"	"	"

Appendix C
Inspector(s) License and Firm License

GEBCO Associates certifies that

Ethan D. Grigg

25056 1127

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS INSPECTOR REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25056

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Ethan D. Grigg

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Inspector Refresher Course

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25056 1127

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

GEBCO Associates, LP * 815 Trailwood Dr, Suite 200 * Hurst, TX 76053 * (817)268-4006

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Inspector

ETHAN D GRIGG

License Number: 603778

Control Number: 101162

Expiration Date: 10-Apr-2027

GEBCO Associates certifies that

Kristopher A. Girton

25003 0358

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 01/08/2025 Certificate No: 25003

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

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GEBCO ASSOCIATES

certifies that

Kristopher A. Girton

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on January 8, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

Owner

Instructor: Joseph Londt

Date of Issue 01/08/2025

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Exam Date: 01/08/2025

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Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

KRISTOPHER A GIRTON

License Number: 105894

Control Number: 98431

Expiration Date: 7-Jun-2026

GEBCO Associates certifies that

Michael K. Nibert

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ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25021

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

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Asbestos Management Planner Refresher

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25021 5548

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

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Expiration Date: 8-May-2026

Texas Department of State Health Services

UES PROFESSIONAL SOLUTIONS 44 LLC

is certified to perform as an

Asbestos Consultant Agency

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1954 and Title 12, Texas Administrative Code, Chapter 295 relating to Texas Asbestos Health Protection, as long as this license is not suspended or revoked.

License Number: 100608

Expiration Date: 05/12/2026

Jennifer Shuford, MD, MPH,
Commissioner of Health

Control Number: 97663

(Void After Expiration Date)

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SEE BACK

ASBESTOS CONTAINING MATERIALS
INSPECTION REPORT

Fort Bend ISD – BP013 Renovations – Hunters Glen ES
695 Independence Boulevard
Missouri City, Texas
UES Project No. N250486

Prepared for:
Fort Bend ISD
16431 Lexington Boulevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Prepared by:
UES
2209 Wisconsin Street
Dallas, TX 75229
972-620-8911
www.TeamUES.com

TDSHS Asbestos Consultant Agency License No.: 100608

June 10, 2025

Fort Bend ISD
16431 Lexington Bouevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Re: Asbestos Containing Materials Inspection Report
Fort Bend ISD – BP013 Renovations – Hunters Glen ES
695 Independence Boulevard
Missouri City, Texas
UES Report No. N250486

Dear Mrs. Pentrala:

On behalf of Fort Bend ISD (the "Client"), UES Professional Solutions 44, LLC (hereinafter "UES") has completed this Asbestos Containing Materials Inspection Report for Hunters Glen Elementary School. This inspection was conducted in general accordance with Title 25 of the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296) the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP). UES performed this ACM inspection on April 14, 2025, to categorize and assess readily available suspect homogeneous material for Hunters Glen Elementary School. UES collected twenty-three (23) bulk samples from seven (7) homogeneous materials. The bulk samples were transported to a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and Texas Department of Safety and Health Services (TDSHS) licensed laboratory for analysis using Polarized Light Microscopy (PLM) for the presence of asbestos fibers.

Asbestos Containing Materials (ACMs) are classified as materials that contain 1.0% or more asbestos in any of the homogeneous materials sampled. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The laboratory analyses indicated that one (1) of the homogeneous materials contain 1.0% or more asbestos. Refer to Section 6.0 of this report. Additional details regarding the ACM Inspection conducted by UES are presented in the attached report.

We appreciate the opportunity to perform these services for Fort Bend ISD. Please contact the undersigned if you have questions regarding the information provided in the report.

Respectfully submitted,
UES

Kristopher Girton
Asbestos Project Manager
Asbestos Consultant License No.: 105894

Michael Nibert, CHMM, C.E.M.
Director of Environmental Services-North Texas
Asbestos Consultant License No.: 105931

TDSHS Asbestos Consultant Agency License No.: 100608

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1.0 INTRODUCTION

UES Professional Solutions 44, LLC (hereinafter "UES") conducted a pre-renovation (limited) Asbestos Containing Materials (ACM) Inspection at Hunters Glen Elementary School located at 695 Independence Boulevard in Missouri City, Texas. The purpose of this inspection was to identify and sample accessible suspect ACM and provide information regarding the identity, location, and condition in anticipation of a renovation and/or demolition of the building.

This service was completed in general accordance with UES Proposal No. 109625Rev4 dated February 10, 2025, and authorized by Fort Bend ISD Purchasing Department, Purchase Order 501107 on March 28, 2025.

This asbestos inspection was limited to the kitchen of the Hunters Glen Elementary School. During the survey two locations could not be accessed; the dry storage room and walk-in cooler. If materials in these areas do not match those sampled during this survey, they are assumed to be asbestos containing until such a time as they can be sampled and proven negative of asbestos content. Certain materials were not sampled, these materials are assumed to be asbestos containing.

This inspection was conducted in accordance with the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296), the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP).

A map or photographic log illustrating the sample locations is included as Appendix A of this report. The bulk sample laboratory report and associated chain-of-custody documentation is presented in Appendix B. A copy of the inspector's license that performed the building inspection and a copy of UES's Texas Department of Safety and Health Services (TDSHS) firm license are provided in Appendix C.

1.1 Limitations and Exclusions

This inspection report is not intended to be used as a specification, project design or work plan. The indicated material quantities of ACM (if documented) are estimates based on UES's field observations on the date(s) of the inspection(s) and should be considered preliminary in nature. All parties utilizing this report for proposal, estimation or contract negotiations are required to field verify the quantities of material prior to submission of proposal. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor. The asbestos abatement contractor should ascertain for themselves, by site measurements and inspection, the exact nature and extent of the work to be done.

Inspection and collection of bulk samples of suspect ACMs were limited to those materials readily accessible at the time of inspection. Destructive sampling techniques (such as wall and ceiling testing, and

carpet cuts to expose underlying flooring) were employed in limited measures in the areas inspected and completed in a way to minimize disruption to operations and damage to building components. Extensive destructive sampling methods were not used, and exploratory demolition of walls and/or removal of fixed items were not conducted. No attempt was made by UES to observe conditions in spaces not generally accessible, including but not limited to crawlspaces, pipe chases, plenums, or confined spaces. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls.

Although every effort is made to locate all suspected ACMs, it is impossible to rule out the possibility that undiscovered asbestos materials may be present. If the building is to undergo major refurbishment or demolition, it is recommended that the persons carrying out the work are made aware of this and take sufficient precautions, as may be appropriate, to ensure the health and safety of their own employees and any other parties who may be affected by the works. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed.

Asbestos has not been banned from use in building products in the United States. Newer buildings are not exempt. Certain uses of asbestos have been banned: such as spray applied fireproofing, pipe and boiler insulation and asbestos cardboard.

1.2 Purpose and Scope of Work

The purpose of this study was to perform an evaluation of the above-referenced facility for the presence of ACMs, specifically those building materials which may be present or impacted during potential demolition or renovation activities. The activities and procedures used to accomplish this task were as follows:

1) A review of available building documents to identify potential locations of suspect ACMs;
2) Visual building inspection of accessible areas by a EPA Asbestos Hazard Emergency Response Act (AHERA) accredited and Texas Department of Safety and Health Services (TDSHS) licensed Asbestos Building Inspector to identify suspect ACMs;
3) Once identified, homogeneous materials (materials which are uniform in color, texture, construction/application date, and general appearance) were determined;
4) Determine whether the suspect ACM is Friable (a material that when dry, may be crumbled, pulverized or reduced to powder by hand pressure) or Non-Friable;
5) Collection of bulk samples of each homogeneous suspect ACM. Record sample information on Asbestos Bulk Sample Forms (chain-of-custody sheets), which were signed, dated, and sent with the samples to the laboratory;
6) Analysis of the collected bulk samples at a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and TDSHS licensed laboratory using Polarized Light Microscopy (PLM) for the presence of asbestos fibers;

7) Approximate locations of the bulk samples were defined. Computer Assisted Drafting and Design (CADD) drawings were developed indicating sample locations. In addition, approximate quantities of identified ACM were also determined; and,
8) Prepare and submit a report.

2.0 CHARACTERISTICS AND INFORMATION

2.1 General

A summary of the subject structure characteristics is outlined in the table below. Information on the buildings was obtained by UES through our field inspection, review of available building documents and/or property appraiser records.

FORT BEND ISD - HUNTERS GLEN ELEMENTARY SCHOOL		
General	Facility Type	Elementary School
	Construction Date	1985
	Building Size	71,306 Square Feet
	Number of Stories	1
Structural	Foundation	Slab-on-Grade
	Wall Support	Concrete Block, Steel and Glass
	Wall Finish	Brick
	Roof Support	Bar Joist w/ Metal Deck
	Roof System Type	Built-up Roofing
Mechanical/ Plumbing	HVAC Type	Central (Rooftop Units)
	Duct Type	Fiberglass (Flex or Ridged)
	Pipe Insulation	Paper Wrap with Fiberglass Insulation
Interior	Wall Substrates	Wood/Steel Studs, or Furring Strips
	Wall Finishes	Drywall, CMU, Ceramic Tile
	Floor Substrates	Concrete
	Floor Finishes	Ceramic Tiles, Vinyl Floor Tile
	Ceiling Systems	Suspended
	Ceiling Finishes	Gypsum Ceiling Tiles
	Other	None

2.2 Building Information Available

UES was provided with demolition plan drawings dated December 4, 2024. No previous asbestos inspection report(s) were provided and no other material information was provided in relation to Hunters Glen Elementary School.

2.3 Current Building Use

At the time of UES's ACM inspection, Hunters Glen Elementary School was an occupied elementary school.

3.0 INSPECTION PROTOCOL

Three forms of ACMs are typically found on structures. These materials are classified as follows:

- *Surfacing Material* – material that is sprayed-on, troweled-on, or otherwise applied to interior and exterior structural and architectural surfaces. Surfacing material includes acoustical plaster on ceilings, fireproofing on structural members, textured paint and exterior stucco, and other materials applied to surfaces for acoustical, decorative, fireproofing, and other purposes.

- *Thermal System Insulation* — material which is applied to interior and exterior mechanical components to reduce heat gain or loss. Thermal system insulation includes insulation on pipes, fittings, boilers, breeching, tanks, ducts, and other mechanical components.

- *Miscellaneous Materials* — material, other than surfacing material and thermal system insulation, on interior and exterior structural, mechanical, electrical, or architectural components, and surfaces. Miscellaneous material includes but is not limited to ceiling tiles, gaskets, floor coverings and mastics, wallboard joint compound, roofing materials, and cementitious products.

An inspection of Hunters Glen Elementary School was conducted to identify these, and other materials present within the building which are suspected of containing asbestos.

3.1 Inspection Procedures

UES's field inspection was performed on April 14, 2025, by Ethan Grigg, an inspector accredited according to Federal Regulation 40 CFR, Part 763 (AHERA), and a TDSHS Licensed Asbestos Inspector (TDSHS License No. 60-3778).

After a preliminary walk-through of the building, an inspection was conducted to evaluate the location and extent of the suspected ACMs. Once identified, these materials were categorized into homogeneous areas containing materials of the same type, age, visual appearance, texture, composition, etc.

This type of inspection is designed to be used as a basis for tendering the removal of ACMs from the subject building(s) prior to demolition or renovation. The present condition of each ACM was evaluated by UES and classified as one of three categories: "good", "damaged" and "significantly damaged." As defined by AHERA. "Poor condition, for NESHAP Category I and II nonfriable materials, is synonymous to "damaged" and/or "significantly damaged," depending on the percentage of damaged.

Federal regulations also require inspectors to determine the potential for disturbance (or damage). This potential for disturbance is based on the presumption that the building will not be demolished. The classifications for potential for disturbance ranges from low, to moderate, to high, and is based on vibration, contact and air erosion.

The TAHPR utilizes NESHAP and AHERA regulations depending on the type of building that is being surveyed. Public buildings and facilities utilize TAHPR per NESHAP regulations and school buildings utilize the AHERA regulations. TAHPR requires a minimum of three (3) samples of each Homogenous Area to be collected and analyzed by a NVLAP accredited and TDSHS licensed laboratory. The number of bulk samples collected was based on the type of facility (public building and facility or school) and category of Homogeneous Area and the quantity of the material present, as follows:

AHERA GUIDELINES FOR DETERMINING THE NUMBER OF SAMPLES TO COLLECT

HSA CATEGORY	HSA QUANTITY	SAMPLES REQUIRED
Surfacing Materials	<1,000 Square Feet	3
	1,000 – 5,000 Square Feet	5
	>5,000 Square Feet	7 or more
Thermal System Insulation	No Stipulation	3+ (All repair patches must be sampled)
Miscellaneous Materials	No Stipulation	Per AHERA Guidelines, these materials must be sampled "in a manner sufficient to determine whether or not they contain asbestos" typically two or more samples based upon the inspector's judgement (a minimum of three (3) samples are required by TAHPR).

HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)

UES's inspector(s) employed wet methods as applicable during bulk sample collection to reduce the potential for fiber release. Each sample was documented by labeling the container with a unique sample number, entering the sample material on a bulk sample log or chain-of-custody form, and noting the location of each sample on a floor plan. Throughout the sampling process, care was taken to prevent cross-contamination of the collected bulk samples. Sampling equipment was cleaned following the collection of each sample.

Random, and in some cases judgmental, samples of each homogeneous area of material were then collected. The physical condition of each material was assessed. In addition, a tactile inspection of the material was performed to evaluate its friability. If the material, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure, it is considered friable. Samples from any homogeneous area

where the inspector determined that the material was non-ACM (such as thermal insulation that obviously fibrous glass, foam glass, or rubber) were not collected.

3.2 Suspected Asbestos Containing Materials

Based on UES's review of the available building system information and thorough visual inspection of the subject building, seven (7) Homogeneous Areas were identified at Hunters Glen Elementary School commonly suspected of containing asbestos. The Homogeneous Areas are detailed on the List of suspect ACMs.

3.3 TAHPR Classification

The materials assessed are classified as either: Regulated Asbestos Containing Material (RACM), Category I non-friable ACM, or Category II non-friable ACM.

Friable materials are "Any ACM that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure."

Non-friable materials are "ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

Category I non-friable ACM is "Asbestos-containing packings, gaskets, resilient floor-covering material, and asphalt roofing products determined to be ACM."

Category II non-friable ACM is – "Any material determined to be ACM, excluding Category I non-friable ACM, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

RACM means "Friable asbestos material; Category I non-friable ACM that has become friable; Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations."

ACM materials are subject to the TAHPR notification requirements, refer to Section 7.0 for Regulatory Information.

4.0 LABORATORY ANALYSIS

4.1 Polarized Light Microscopy Analysis

The samples of the suspected ACMs collected during the field inspection were transported with chain-of-custody documentation to UES Laboratories located in Pineville, North Carolina. UES Laboratories is a NVLAP accredited laboratory (NVLAP Accreditation No. 600344-0) and TDSHS licensed (TDSHS License No. 300520) laboratory for bulk sample analysis.

Bulk samples were analyzed for the presence of asbestos fibers using PLM. The analyses were performed according to EPA Method 600/R-93/116 July 1993 "Method for the Determination of Asbestos in Bulk Building Materials." This analytical method can be used for qualitative identification of six morphologically different types of asbestos fibers: chrysotile, amosite, crocidolite, tremolite, actinolite and anthophyllite. PLM analysis requires the microscopist to take a portion of the sample and treat it with an oil of specific refractive index. The prepared slide is then subjected to a variety of tests while being viewed under varying polarizations of light. Each type of asbestos displays unique characteristics when subjected to these tests.

The method specifies that the asbestos content in a bulk sample shall be estimated and reported as a finite percentage within the range of 0 to 100. Minute quantities of asbestos in bulk samples may be reported as "trace" or less than one percent (<1.0%). The analytical method determines the asbestos percentage by means of visual estimation technique. If analysis of the sample of a suspect ACM reveals a negative result, UES considers the material to be non-Asbestos containing. If at any time during the analytical process a sample tests positive, that material must be treated as ACM.

5.0 FINDINGS

Seven (7) suspect homogeneous materials were identified at the subject building. Following TAHPR and AHERA guidelines, the appropriate number of bulk samples were collected from the identified homogeneous material and submitted for laboratory analysis.

The laboratory analyses indicated that one (1) of the homogeneous materials contain 1.0% or more asbestos.

The following table presents the analytical results of the suspect ACMs and general information regarding the suspect ACMs.

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
HGF – 1 - 5	1	CMU with Texture	Misc.	Good	low	NAD	*Category II – Non-Friable*	3,000 SF	No

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
HGF – 6 - 8	2	2' x 2' Sheetrock Ceiling Tile	Misc.	Good	low	NAD	*Category II – Non-Friable*	1,600 SF	No
HGF – 9 - 11	3	TSI Pipe Insulation	TSI	Good	low	NAD	*Friable*	300 LF	No
HGF – 12 - 14	4	Terrazzo Flooring	Misc.	Good	low	NAD	*Category I – Non-Friable*	1,300 SF	No
HGF – 15 - 17	5	12" x 12" Beige Ceramic Floor Tile	Misc.	Good	low	NAD	*Category I – Non-Friable*	90 SF	No
HGF – 18 - 20	***6***	***Vinyl Floor Tile***	***Misc.***	***Good***	***low***	***5% Chrysotile – Black Mastic***	***Category I – Non-Friable***	***75 SF***	***No***
HGF – 21 - 23	7	HVAC Duct Insulation	Misc.	Good	low	NAD	*Friable*	100 LF	No
		Mirror Mastic	***Misc.***	***Good***	***low***	****Assumed***	***Category II – Non-Friable***	***5 SF***	***No***

Table Notes and Definitions:
HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)
NESHAPs = National Emission Standards for Hazardous Air Pollutants
SF = Square Feet
LF = Linear Feet
EA = Each
NF = Non-Friable
NAD = No Asbestos Detected
Surf = Surfacing
TSI = Thermal System Insulation
Misc. = Miscellaneous
Note - The indicated material quantities are estimates based on UES' field observations and should be considered preliminary in nature. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor.
Note - Damaged and Significantly Damaged Non-Friable Materials are classified as RACM per NESHAP.
***This material was assumed to contain asbestos.**

6.0 SUMMARY OF ASBESTOS CONTAINING MATERIALS

Inspection of the subject building, located at 695 Independence Boulevard, Missouri City, Texas, identified seven (7) materials suspected of containing asbestos fibers. Bulk samples of each material were collected and submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The laboratory analyses indicated that one (1) of the homogeneous materials contain 1.0% or more asbestos.

The *Vinyl Floor Tile*, located in the dry food storage room was in good condition and contains 1.0% or more asbestos. This material would be classified as Category I nonfriable ACM according to the current TAHPR and NESHAP regulations.

The *Mirror Mastic*, is assumed to be located in the Kitchen Staff Bathroom and is assumed to be in good condition and is assumed to contain 1.0% or more asbestos. This material would be classified as Category II nonfriable ACM according to the current TAHPR and NESHAP regulations. This material was assumed to contain asbestos.

7.0 REGULATORY INFORMATION

The State of Texas has established the TAHPR which requires asbestos related activity to be performed by an individual licensed by TDSHS. An asbestos related activity consists of the disturbance (whether intentional or unintentional), removal, encapsulation, or enclosure of asbestos, including preparations or final clearance, the performance of asbestos surveys, the development of management plans and response actions, asbestos project design, the collection or analysis of asbestos samples, monitoring for airborne asbestos, bidding for a contract for any of these activities, or any other activity required to be licensed under TAHPR.

Abatement must be performed by a TDSHS licensed asbestos abatement contractor in accordance with a project design prepared by a TDSHS Licensed Asbestos Consultant. In addition, third party air monitoring must be conducted by a TDSHS licensed Air Monitoring Technician or Project Manager during the abatement activities.

Demolition under the TAHPR regulation is defined as the wrecking or removal of any load-supporting structural member of a public building or facility for the purpose of razing the building or portion of the building to the ground, or the intentional burning of any public building or facility. The removal of load-supporting structural members followed by resupport of the structure is considered renovation, not demolition. Moving a building from its foundation is considered demolition. We recommend you contact the Controlling Agency (TDSHS) requiring the notification and other requirements which may be applicable. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified.

Renovation or demolition of Hunters Glen Elementary School should be conducted in strict compliance with the aforementioned federal statutes, TAHPR, NESHAP, and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

There are federal and state statutes and regulations which govern the abatement and disposal of ACMs. The renovation or demolition of buildings and roofs containing ACMs is regulated under the TAHPR and

NESHAP statutes. The TAHPR and NESHAP regulations require notification to the Controlling Agency (TDSHS) and ACM prior to renovation or demolition. We strongly recommend that you contact the Controlling Agency (TDSHS) prior to renovation or demolition regarding the proper disposition of the ACMs. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified. It is important to note that even though an activity may be exempt from the EPA NESHAP regulations, such exemption does not extend to OSHA standards or other state and federal statutes.

Renovation or demolition activities in buildings and on roofs that contain ACM or Presumed Asbestos Containing Material (PACM) are regulated under the OSHA Asbestos Construction Standard (29 CFR 1926.1101). The OSHA standard requires the building owner to inform their employees who will work in or adjacent to areas containing ACM or PACM, perspective employers applying or bidding for work whose employees reasonably can be expected to work in or adjacent to areas containing ACM or PACM, all employers of employees on multi-employer work sites who will be performing work with or adjacent to areas containing asbestos and tenants who will occupy areas containing ACM or PACM, of the presence, location, and quantity of ACM or PACM at the work sites in their building and facilities. Further, the OSHA standard (29 CFR 1926.1101) requires employers who discover ACM or PACM to convey information concerning the presence, location, and quantity of such newly discovered ACM or PACM to other employers of employees working at the work site within 24 hours of discovery. While OSHA says the notification can be written or personal communication, there are many advantages to written communication.

The OSHA construction standard (29 CFR 1926.1101) also contains specific training, work practices, procedures, engineering controls, notifications, permissible exposure limits, personal protection, record keeping and a multitude of other requirements for the demolition, renovation, construction, alterations, repair, maintenance of structures, substrates, or portions thereof that contain asbestos. It should be noted that recent court rulings have exempted roofing cement from the OSHA Construction Industry Asbestos Standard.

Renovation or demolition of the structures and roofs that could potentially disturbed the ACM located within the subject property should be conducted in strict compliance with the aforementioned federal statutes and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

The renovation and demolition of buildings is regulated under the TAHPR and NESHAP statutes. Even if asbestos is not detected at 1.0% or more, the TAHPR and NESHAP regulations require a ten-day notification to the Controlling Agency (TDSHS) prior to renovation and demolition.

8.0 CONTROLLNG AGENCY

The Controlling Agency for the coordination of projects involving asbestos removal or demolition is the TDSHS Asbestos Program. The owner or operator shall provide the above-referenced department with a ten-day notice of the asbestos removal project or demolition by timely submittal of a completed "Asbestos Abatement/Demolition Notification" form, as promulgated under TAHPR. The notification can be submitted on Texas Department of State Health Services, located online at https://www.dshs.texas.gov/asbestos-program/notifications-asbestos-program.

9.0 CONDITIONS AND LIMITATIONS OF THIS INPECTION

A representative of UES obtained samples of building materials which were observed during an inspection of the building at the subject site that are typically suspected of containing asbestos as a constituent. The bulk samples were submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis using EPA approved methods for industry-accepted standards. UES makes no warranties, express or implied.

In general, inspection and sampling procedures were incorporated which allowed assessment of reasonably accessible building materials. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls. Though every effort was made to examine wall cavities and other areas for thermal system insulation, spray-applied or trowel applied surfacing material or other miscellaneous materials and other PACM, this survey and report only deals with accessible areas of the building. There may be additional inaccessible areas above the ceiling, behind walls and below floors that become evident during demolition or renovation activities. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed. The building's equipment fixtures, or stored materials were not inspected or sampled as part of this evaluation.

Bidders are responsible for their own calculations and estimates of quantities. Actual quantities may be more or less than indicated.

Federal OSHA Standard 26 CFR 1926.1101 has specific requirements relating to employee protection and notification during construction projects (including demolition and renovation projects) involving ACM as well as materials containing trace levels of asbestos which apply to this project. UES recommends complying with applicable OSHA regulations, which would include notifying the demolition contractor of the presence of asbestos.

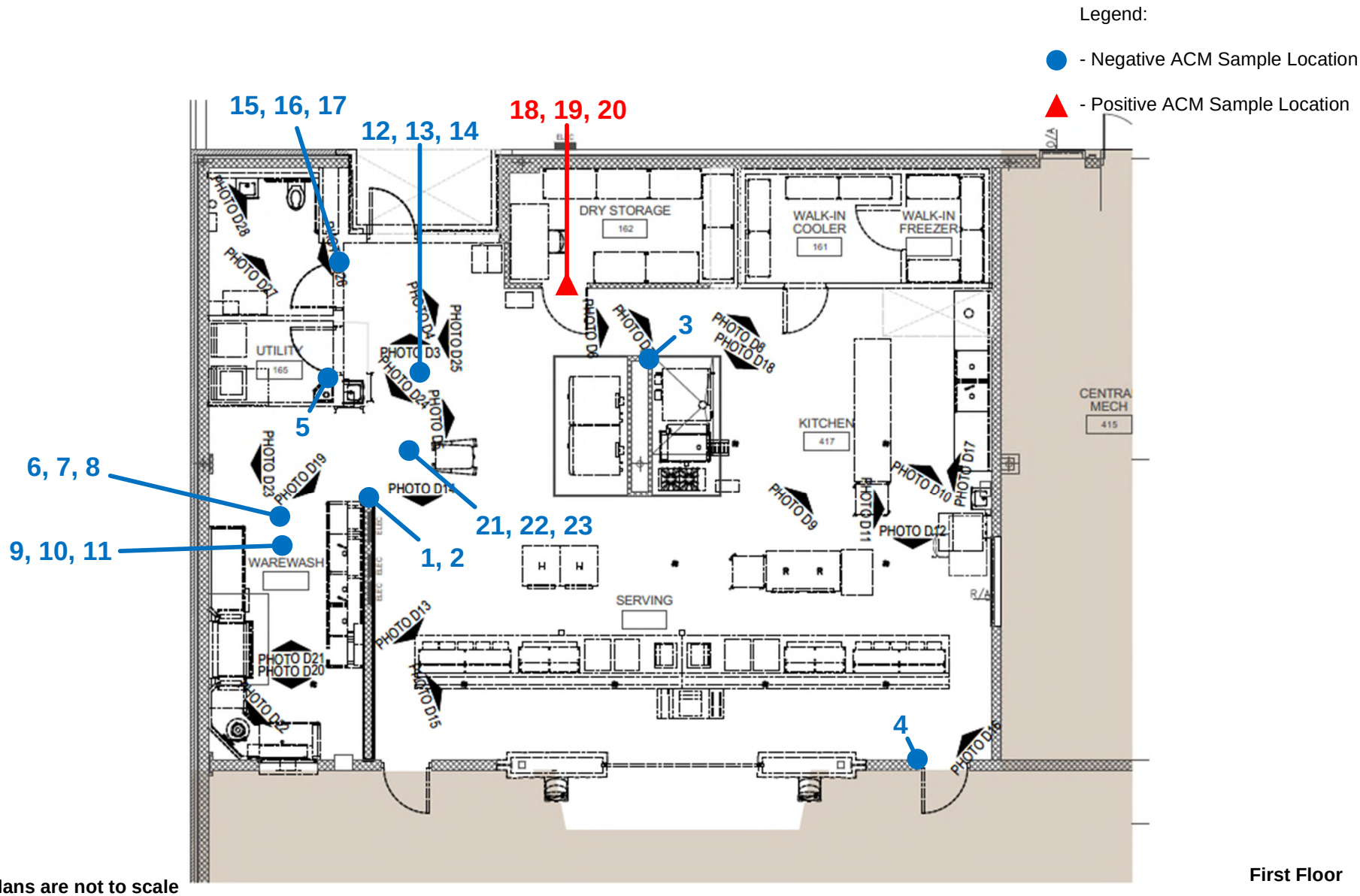
This inspection report is not intended to be used as an asbestos abatement specification or work plan. The indicated material quantities of ACM (if documented) are estimates based on UES field observations on the date(s) of the inspection and should be considered preliminary in nature. All parties utilizing this report for proposal, estimation or contract negotiations are required to field verify the quantities of material prior to submission of proposal. These estimates should not be used for bidding purposes without

verification by the asbestos abatement contractor. The asbestos abatement contractor should ascertain for themselves, by site measurements and inspection, the exact nature and extent of the work to be done.

All conclusions and recommendations in this report represent the professional opinions of the personnel involved with the project. The results, findings, conclusions and recommendations expressed in this report are based on access provided and conditions observed, and samples taken during the survey of the building. The information contained in this report is relevant as of the date on which the field work was performed and should not be relied upon to represent Site's conditions at a later date. This study and report were prepared on behalf of and for the exclusive use of the Client solely for its use and reliance in determining the presence of asbestos in identified areas of the site. The results of this report are not intended or to be construed as legal interpretation of existing federal, state, or local environmental, health and safety laws or regulations. UES assumes no responsibility or liability for errors in information or data provided to UES by the Client or any third party or developments resulting from activities or situations outside the scope of this project.

Appendix A
Bulk Sample Location Map and Photograph Log

Sample Locations



Floor Plans are not to scale

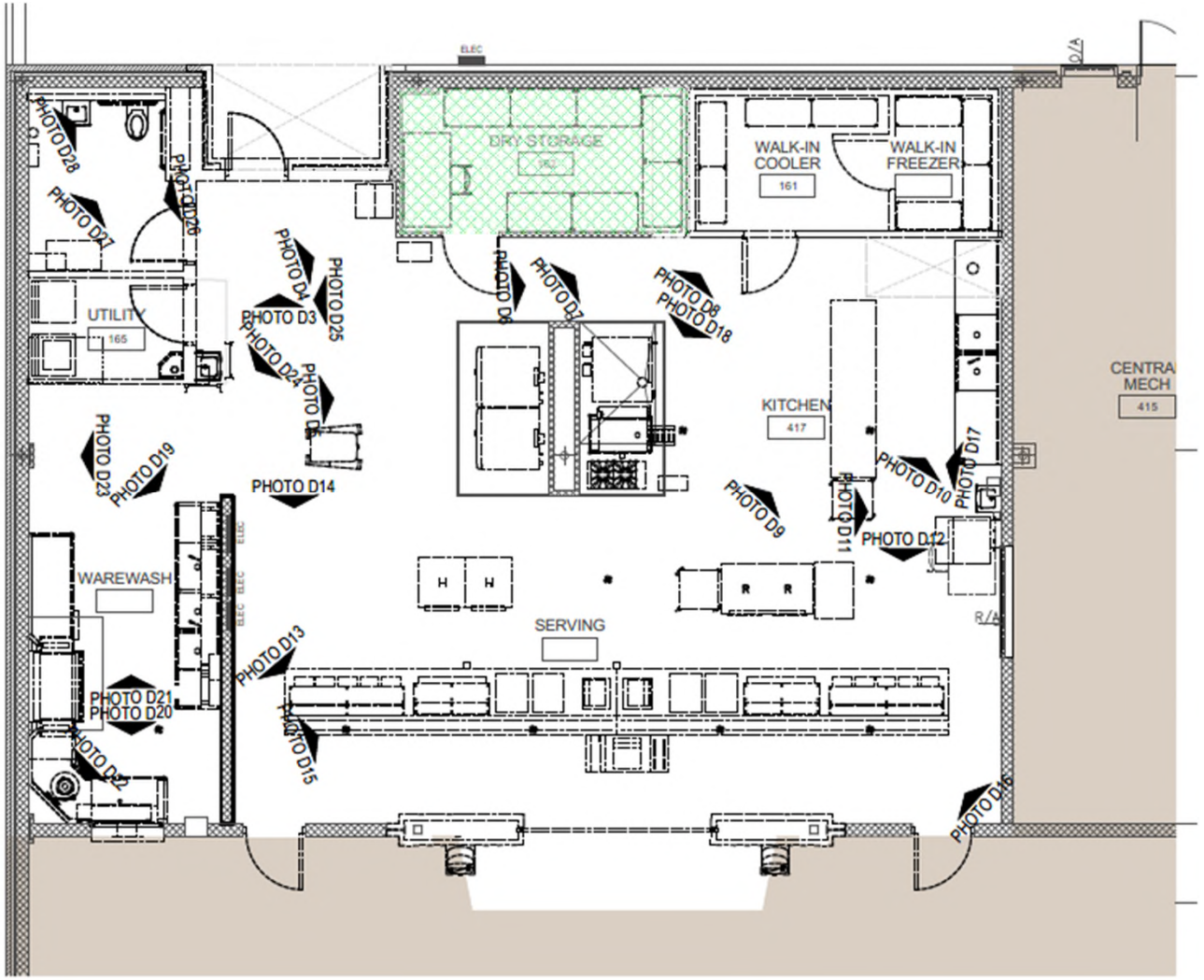
First Floor

UES	**FBISD – BP013 Renovations** **Hunters Glen ES** 695 Independence Boulevard, Missouri City, Texas	**Fort Bend ISD** 16431 Lexington Boulevard, Sugar Land, Texas 77479	N	**Proj. Mgr: KAG** **Date: 4/30/2025** **Drawn By: EDG** **Project # N250486**

ACM Locations

Legend:

Vinyl Floor Tile



First Floor

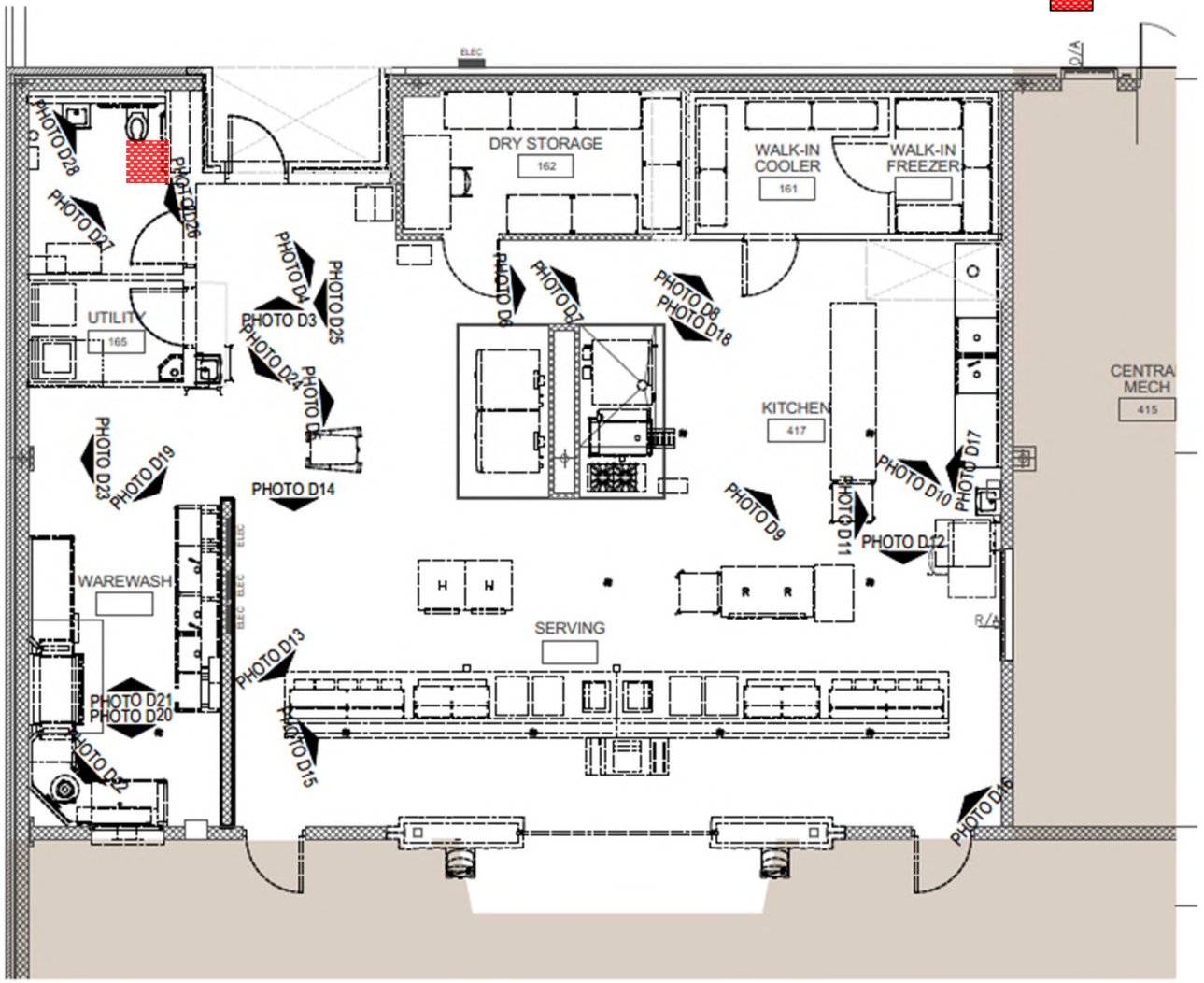
Floor Plans are not to scale

UES	**FBISD – BP013 Renovations** **Hunters Glen ES** 695 Independence Boulevard, Missouri City, Texas	**Fort Bend ISD** 16431 Lexington Boulevard, Sugar Land, Texas 77479	N	**Proj. Mgr: KAG** **Date: 4/30/2025** **Drawn By: EDG** **Project # N250486**

Assumed ACM Locations

Legend:

Mirror Mastic

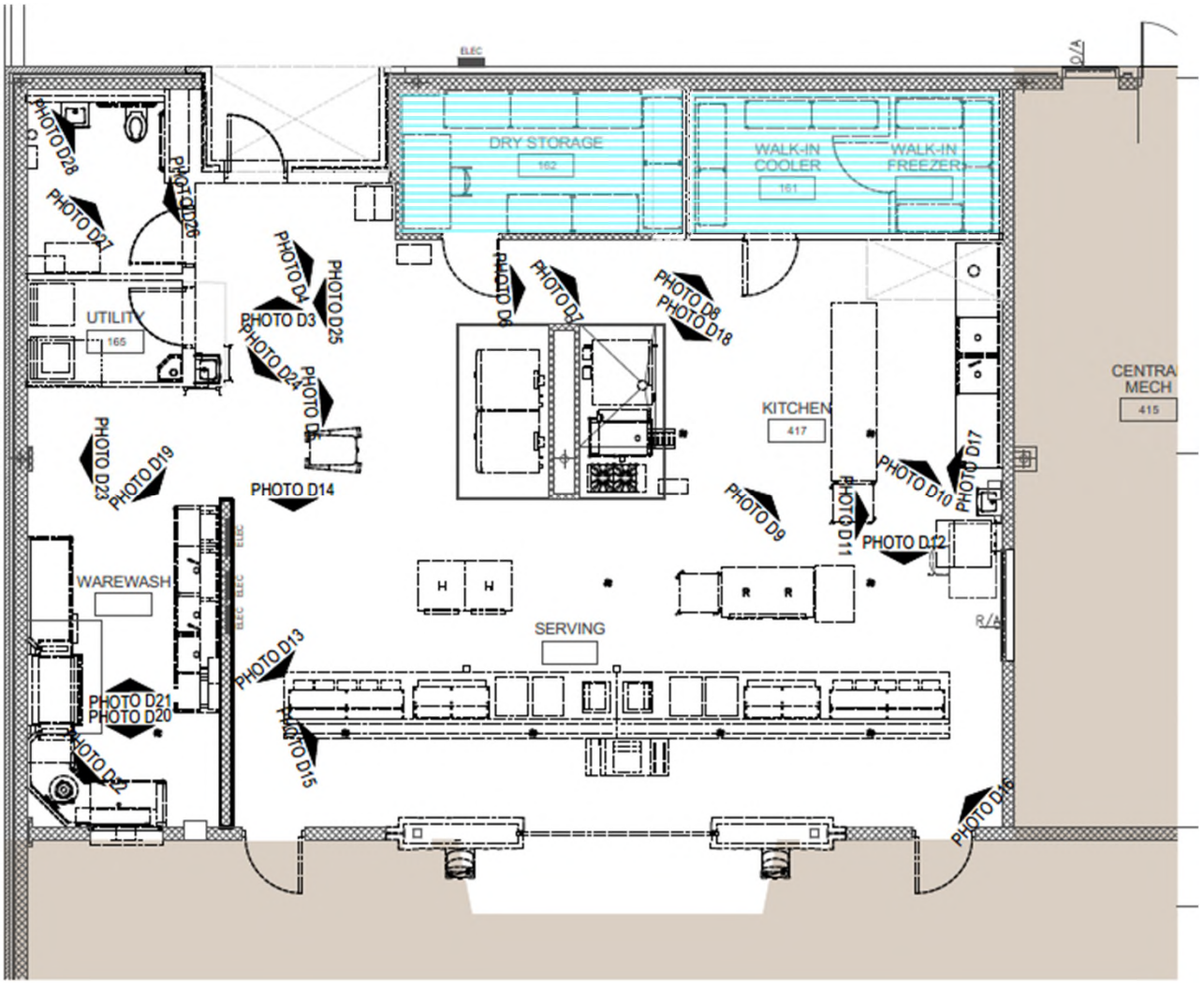


First Floor

Floor Plans are not to scale

UES	**FBISD – BP013 Renovations** **Hunters Glen ES** 695 Independence Boulevard, Missouri City, Texas	**Fort Bend ISD** 16431 Lexington Boulevard, Sugar Land, Texas 77479	N	**Proj. Mgr: KAG** **Date: 4/30/2025** **Drawn By: EDG** **Project # N250486**

Inaccessible Locations



Legend:

- Inaccessible Area

Notes:

These areas were inaccessible, all materials within that differ from materials that were sampled are assumed to be asbestos containing until such a time as they can be sampled and proven negative of asbestos content

Floor Plans are not to scale

First Floor

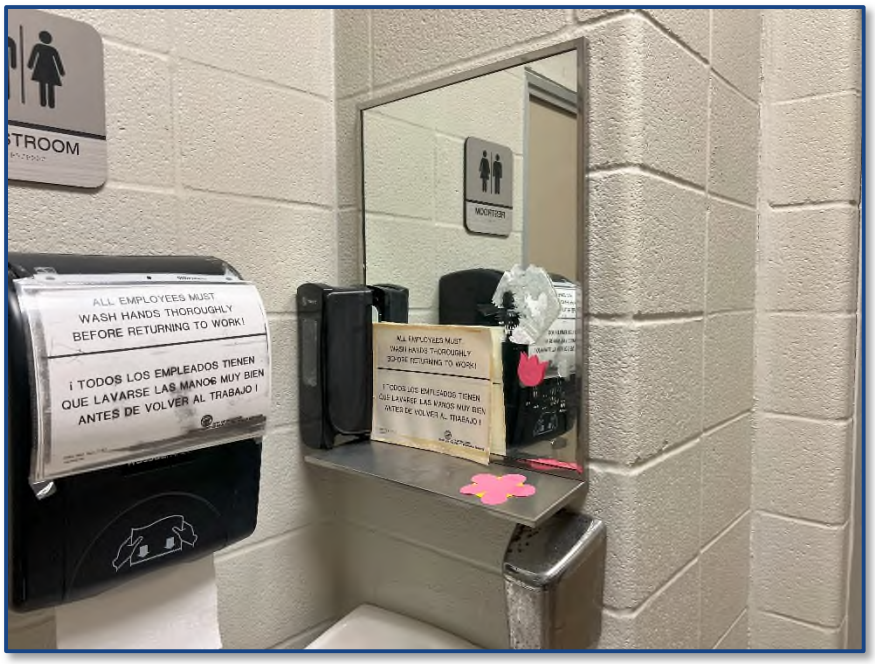
UES

FBISD – BP013 Renovations
Hunters Glen ES
695 Independence Boulevard,
Missouri City, Texas

Fort Bend ISD
16431 Lexington Boulevard,
Sugar Land, Texas 77479

N

Proj. Mgr: KAG
Date: 4/30/2025
Drawn By: EDG
Project # N250486



HA 1: CMU with Texture

HA 2: 2’ x 2’ Sheetrock Ceiling Tile

HA 3: TSI Pipe Insulation

HA 4: Terrazzo Flooring

HA 5: 12” x 12” Beige Ceramic Floor Tile

HA 6: Vinyl Floor Tile **(5% Chrysotile)**

HA 7: HVAC Duct Mastic

Appendix B
PLM Analytical Report & Chain-of-Custody Documentation

Asbestos Laboratory Report

Prepared for

UES Dallas

Project: FBISD - BP013 Renovations - Hunters Glen

UES No.: A25117.00814.000

Date Received: 4/21/2025

Date Analyzed: 4/24/2025

Date Reported: 4/25/2025

Total Samples Analyzed: 41

 # Samples >1% Asbestos: 1

Method of Analysis: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00814.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/24/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Hunters Glen

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
HGF-1-Texture A25117.00814.000-1	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-1-CMU A25117.00814.000-1A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-1-Mortar A25117.00814.000-1B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-2-Texture A25117.00814.000-2	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-2-CMU A25117.00814.000-2A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-2-Mortar A25117.00814.000-2B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-3-Texture A25117.00814.000-3	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-3-CMU A25117.00814.000-3A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-3-Mortar A25117.00814.000-3B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-4-Texture A25117.00814.000-4	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-4-CMU A25117.00814.000-4A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-4-Mortar A25117.00814.000-4B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-5-Texture A25117.00814.000-5	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-5-CMU A25117.00814.000-5A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00814.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/24/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Hunters Glen

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
HGF-5-Mortar A25117.00814.000-5B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-6 A25117.00814.000-6	2x2 Ceiling Tile	White, Gray Homogeneous Fibrous	60% Cellulose, 15% Mineral Wool	25% Non-fibrous (Other)	None Detected
HGF-7 A25117.00814.000-7	2x2 Ceiling Tile	White, Gray Homogeneous Fibrous	60% Cellulose, 15% Mineral Wool	25% Non-fibrous (Other)	None Detected
HGF-8 A25117.00814.000-8	2x2 Ceiling Tile	White, Gray Homogeneous Fibrous	60% Cellulose, 15% Mineral Wool	25% Non-fibrous (Other)	None Detected
HGF-9-Wrap A25117.00814.000-9	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
HGF-9-Insulation A25117.00814.000-9A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
HGF-10-Wrap A25117.00814.000-10	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
HGF-10-Insulation A25117.00814.000-10A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
HGF-11-Wrap A25117.00814.000-11	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
HGF-11-Insulation A25117.00814.000-11A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
HGF-12 A25117.00814.000-12	Terrazzo Flooring	White, Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-13 A25117.00814.000-13	Terrazzo Flooring	White, Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-14 A25117.00814.000-14	Terrazzo Flooring	White, Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-15-Ceramic Tile A25117.00814.000-15	12x12 Beige Ceramic Floor Tile	Beige, Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00814.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/24/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Hunters Glen

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
HGF-15-Grout A25117.00814.000-15A	12x12 Beige Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-16-Ceramic Tile A25117.00814.000-16	12x12 Beige Ceramic Floor Tile	Beige, Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-16-Grout A25117.00814.000-16A	12x12 Beige Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-16-Ceramic Tile A25117.00814.000-17	12x12 Beige Ceramic Floor Tile	Beige, Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-17-Grout A25117.00814.000-17A	12x12 Beige Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-18-Floor Tile A25117.00814.000-18	Vinyl Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
HGF-18-Mastic A25117.00814.000-18A	Vinyl Floor Tile	Black Homogeneous Non-fibrous		95% Non-fibrous (Other)	**5% Chrysotile**
HGF-19 A25117.00814.000-19	Vinyl Floor Tile				Positive Stop (Not Analyzed)
HGF-20 A25117.00814.000-20	Vinyl Floor Tile				Positive Stop (Not Analyzed)
HGF-21-Wrap A25117.00814.000-21	HVAC Duct Insulation	Silver, Brown Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
HGF-21-Insulation A25117.00814.000-21A		Pink Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
HGF-22-Wrap A25117.00814.000-22	HVAC Duct Insulation	Silver, Brown Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
HGF-22-Insulation A25117.00814.000-22A		Pink Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
HGF-23-Wrap A25117.00814.000-23	HVAC Duct Insulation	Silver, Brown Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00814.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/24/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Hunters Glen

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
HGF-23-Insulation A25117.00814.000-23A		Pink Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected

METHOD: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

For samples easily separated into homogeneous layers, each component will be analyzed separately. The sample may not be representative of the larger material in question. Interpretation and use of test results are the responsibility of the client. Due to the limitations of the EPA 600 Method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles, mastic and roofing can be difficult to analyze by PLM. Reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or None Detect for these materials is recommended. The percentage of asbestos reported is a midpoint within an acceptable range. The estimated measurement of uncertainty is available upon request. Results relate only to the items received by the laboratory as noted on the Chain of Custody provided by the client.

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Analysis is determined by Calibrated Visual Estimate (CVE).
Temperature at the time of analysis (°C) : 22

NVLAP Code: 600344

Texas License Number : 300520

Analyst(s): Brant Alyea

Approved By: Cass Rupert
Approved Signatory

UES Laboratories, 10121 Pineville Distribution St., Pineville, NC Phone: (704) 504-1717

UNIVERSAL ENGINEERING SCIENCES

CHAIN OF CUSTODY

LAB USE ONLY:	A25117.00814.000
UES Order Number:	45495

10121 Pineville Distribution Street,
Pineville, North Carolina 28143
Tel: 704-504-1717; Fax: 704-504-1125

COMPANY CONTACT INFORMATION			
Company:	UES Dallas	Job Contact:	Ethan Grigg, Kristopher Girton
Address:	2209 Wisconsin Street,	Email:	egrigg@teamues.com
	Dallas, Texas 75229		kgirton@teamues.com
		Tel:	817-966-6636
Project Name:	FBISD - BP013 Renovations	Fax:	
Project ID #:	N250486	State Collected In:	Intact

Bill to: ☑ Same ☐ Different – If Bill to is different please notate in the comments section.

ASBESTOS	METHOD	TURN AROUND TIME						
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY	2 Week
PLM BULK	EPA 600	☐	☐	☐	☐	☐	☑	☐
PLM Point Count (400)	EPA 600	☐	☐	☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐	☐
TEM BULK	EPA NOB / Chatfield			☐	☐	☐	☐	☐
TEM AIR	AHERA 40 CFR, Part 763	☐	☐	☐	☐	☐	☐	☐
TEM Dust Wipe	ASTM D6480	☐	☐	☐	☐	☐	☐	☐

POSITIVE STOP ANALYSIS: ☑

IF TURNAROUND TIME IS NOT MARKED STANDARD 5 DAY APPLIES

By submitting samples, you are agreeing to UES Terms and Conditions

COMMENTS: Hunters Glen ES
SEE ATTACHED – Use Sampling Log Name

☑ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
Ethan Grigg	4/18/25		4.21.25

Samples will be disposed of 60 days after analysis

A25117.00814.000

UES

PO #: 45495

Date: 4/14/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD-BP013 - Renovations - Hunters Glen ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
HGF -	1	CMU with Filler Texture	Kitchen	NFII	G	3,000SF
〃	2	〃	〃	〃	〃	〃
〃	3	〃	〃	〃	〃	〃
〃	4	〃	〃	〃	〃	〃
〃	5	〃	〃	〃	〃	〃
〃	6	2'x2' Ceiling Tile	Kitchen	NFII	G	1,600SF
〃	7	〃	〃	〃	〃	〃
〃	8	〃	〃	〃	〃	〃
〃	9	TSI Pipe Insulation	Kitchen	F	G	300 LF
〃	10	〃	〃	〃	〃	〃
〃	11	〃	〃	〃	〃	〃
〃	12	Terrazzo Flooring	Kitchen	NFII	G	1,300SF
〃	13	〃	〃	〃	〃	〃
〃	14	〃	〃	〃	〃	〃
〃	15	12"x12" Beige Ceramic Floor Tile	Kitchen	NFII	G	90SF

UES

PO#: 45495

Date: 4/14/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD - BP013 - Renovations - Hunters Glen ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
HGF-	16	12"x12" Beige Ceramic Floor Tile	Kitchen	NF II	G	90SF
"	17	"	"	"	"	"
"	18	Vinyl Floor Tile	Kitchen	NF I	G	75SF
"	19	"	"	"	"	"
"	20	"	"	"	"	"
"	21	HVAC Duct Insulation	Kitchen	NF II	G	100LF
"	22	"	"	"	"	"
"	23	"	"	"	"	"

Appendix C
Inspector(s) License and Firm License

GEBCO Associates certifies that

Ethan D. Grigg

25056 1127

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS INSPECTOR REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25056

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Ethan D. Grigg

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Inspector Refresher Course

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25056 1127

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

GEBCO Associates, LP * 815 Trailwood Dr, Suite 200 * Hurst, TX 76053 * (817)268-4006

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Inspector

ETHAN D GRIGG

License Number: 603778

Control Number: 101162

Expiration Date: 10-Apr-2027

GEBCO Associates certifies that

Kristopher A. Girton

25003 0358

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 01/08/2025 Certificate No: 25003

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053
Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Kristopher A. Girton

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on January 8, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

Owner

Instructor: Joseph Londt

Date of Issue 01/08/2025

Certificate Number: 25003 0358

Exam Date: 01/08/2025

Certificate Expires 01/08/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

KRISTOPHER A GIRTON

License Number: 105894

Control Number: 98431

Expiration Date: 7-Jun-2026

GEBCO Associates certifies that

Michael K. Nibert

25021 5548

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25021

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP

815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Michael K. Nibert

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25021 5548

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

GEBCO Associates, LP * 815 Trailwood Dr, Suite 200 * Hurst, TX 76053 * (817)268-4006

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

MICHAEL K NIBERT

License Number: 105931

Control Number: 98417

Expiration Date: 8-May-2026

Texas Department of State Health Services

UES PROFESSIONAL SOLUTIONS 44 LLC

is certified to perform as an

Asbestos Consultant Agency

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1954 and Title 12, Texas Administrative Code, Chapter 295 relating to Texas Asbestos Health Protection, as long as this license is not suspended or revoked.

License Number: 100608

Expiration Date: 05/12/2026

Jennifer Shuford, MD, MPH,
Commissioner of Health

Control Number: 97663

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

SEE BACK

ASBESTOS CONTAINING MATERIALS INSPECTION REPORT

Fort Bend ISD – BP013 Renovations – Palmer ES
4208 Crow Valley Drive
Missouri City, Texas
UES Project No. N250486

Prepared for:
Fort Bend ISD
16431 Lexington Boulevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Prepared by:
UES
2209 Wisconsin Street
Dallas, TX 75229
972-620-8911
www.TeamUES.com

TDSHS Asbestos Consultant Agency License No.: 100608

June 10, 2025

Fort Bend ISD
16431 Lexington Bouevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Re: Asbestos Containing Materials Inspection Report
Fort Bend ISD – BP013 Renovations – Palmer ES
4208 Crow Valley Drive
Missouri City, Texas
UES Report No. N250486

Dear Mrs. Pentrala:

On behalf of Fort Bend ISD (the "Client"), UES Professional Solutions 44, LLC (hereinafter "UES") has completed this Asbestos Containing Materials Inspection Report for Palmer Elementary School. This inspection was conducted in general accordance with Title 25 of the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296) the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP). UES performed this ACM inspection on April 14, 2025, to categorize and assess readily available suspect homogeneous material for the structure. UES collected twenty-six (26) bulk samples from eight (8) homogeneous materials. The bulk samples were transported to a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and Texas Department of Safety and Health Services (TDSHS) licensed laboratory for analysis using Polarized Light Microscopy (PLM) for the presence of asbestos fibers.

Asbestos Containing Materials (ACMs) are classified as materials that contain 1.0% or more asbestos in any of the homogeneous materials sampled. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The laboratory analyses indicated that asbestos fibers were not detected in the homogeneous materials analyzed from the building. Refer to Section 6.0 of this report. Additional details regarding the ACM Inspection conducted by UES are presented in the attached report.

We appreciate the opportunity to perform these services for Fort Bend ISD. Please contact the undersigned if you have questions regarding the information provided in the report.

Respectfully submitted,
UES

Kristopher Girton
Asbestos Project Manager
Asbestos Consultant License No.: 105894

Michael Nibert, CHMM, C.E.M.
Director of Environmental Services-North Texas
Asbestos Consultant License No.: 105931

TDSHS Asbestos Consultant Agency License No.: 100608

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1.0 INTRODUCTION

UES Professional Solutions 44, LLC (hereinafter "UES") conducted a pre-renovation (limited) Asbestos Containing Materials (ACM) Inspection in Palmer Elementary School located at 4208 Crow Valley Drive in Missouri City, Texas. The purpose of this inspection was to identify and sample accessible suspect ACM and provide information regarding the identity, location, and condition in anticipation of a renovation and/or demolition of the building.

This service was completed in general accordance with UES Proposal No. 109625Rev4 dated February 10, 2025, and authorized by Fort Bend ISD Purchasing Department, Purchase Order 501107 on March 28, 2025.

This asbestos inspection was limited to the kitchen of Palmer Elementary School. During the survey two locations could not be accessed; the dry storage room and walk-in cooler. If materials in these areas do not match those sampled during this survey, they are assumed to be asbestos containing until such a time as they can be sampled and proven negative of asbestos content. Certain materials were not sampled, these materials are assumed to be asbestos containing.

This inspection was conducted in accordance with the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296), the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP).

A map or photographic log illustrating the sample locations is included as Appendix A of this report. The bulk sample laboratory report and associated chain-of-custody documentation is presented in Appendix B. A copy of the inspector's license that performed the building inspection and a copy of UES's Texas Department of Safety and Health Services (TDSHS) firm license are provided in Appendix C.

1.1 Limitations and Exclusions

This inspection report is not intended to be used as a specification, project design or work plan. The indicated material quantities of ACM (if documented) are estimates based on UES's field observations on the date(s) of the inspection(s) and should be considered preliminary in nature. All parties utilizing this report for proposal, estimation or contract negotiations are required to field verify the quantities of material prior to submission of proposal. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor. The asbestos abatement contractor should ascertain for themselves, by site measurements and inspection, the exact nature and extent of the work to be done.

Inspection and collection of bulk samples of suspect ACMs were limited to those materials readily accessible at the time of inspection. Destructive sampling techniques (such as wall and ceiling testing, and carpet cuts to expose underlying flooring) were employed in limited measures in the areas inspected and

completed in a way to minimize disruption to operations and damage to building components. Extensive destructive sampling methods were not used, and exploratory demolition of walls and/or removal of fixed items were not conducted. No attempt was made by UES to observe conditions in spaces not generally accessible, including but not limited to crawlspaces, pipe chases, plenums, or confined spaces. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls.

Although every effort is made to locate all suspected ACMs, it is impossible to rule out the possibility that undiscovered asbestos materials may be present. If the building is to undergo major refurbishment or demolition, it is recommended that the persons carrying out the work are made aware of this and take sufficient precautions, as may be appropriate, to ensure the health and safety of their own employees and any other parties who may be affected by the works. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed.

Asbestos has not been banned from use in building products in the United States. Newer buildings are not exempt. Certain uses of asbestos have been banned: such as spray applied fireproofing, pipe and boiler insulation and asbestos cardboard.

1.2 Purpose and Scope of Work

The purpose of this study was to perform an evaluation of the above-referenced facility for the presence of ACMs, specifically those building materials which may be present or impacted during potential demolition or renovation activities. The activities and procedures used to accomplish this task were as follows:

1) A review of available building documents to identify potential locations of suspect ACMs;
2) Visual building inspection of accessible areas by a EPA Asbestos Hazard Emergency Response Act (AHERA) accredited and Texas Department of Safety and Health Services (TDSHS) licensed Asbestos Building Inspector to identify suspect ACMs;
3) Once identified, homogeneous materials (materials which are uniform in color, texture, construction/application date, and general appearance) were determined;
4) Determine whether the suspect ACM is Friable (a material that when dry, may be crumbled, pulverized or reduced to powder by hand pressure) or Non-Friable;
5) Collection of bulk samples of each homogeneous suspect ACM. Record sample information on Asbestos Bulk Sample Forms (chain-of-custody sheets), which were signed, dated, and sent with the samples to the laboratory;
6) Analysis of the collected bulk samples at a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and TDSHS licensed laboratory using Polarized Light Microscopy (PLM) for the presence of asbestos fibers;

7) Approximate locations of the bulk samples were defined. Computer Assisted Drafting and Design (CADD) drawings were developed indicating sample locations. In addition, approximate quantities of identified ACM were also determined; and,
8) Prepare and submit a report.

2.0 CHARACTERISTICS AND INFORMATION

2.1 General

A summary of Palmer Elementary School's characteristics is outlined in the table below. Information on the buildings was obtained by UES through our field inspection, review of available building documents and/or property appraiser records.

FORT BEND ISD - PALMER ELEMENTARY SCHOOL		
General	Facility Type	Elementary School
	Construction Date	1985
	Building Size	71,057 Square Feet
	Number of Stories	1
Structural	Foundation	Slab-on-Grade
	Wall Support	Concrete Block, Steel and Glass
	Wall Finish	Brick
	Roof Support	Bar Joist w/ Metal Deck
	Roof System Type	Built-up Roofing
Mechanical/ Plumbing	HVAC Type	Central (Rooftop Units)
	Duct Type	Fiberglass (Flex or Ridged)
	Pipe Insulation	Paper Wrap with Fiberglass Insulation
Interior	Wall Substrates	Wood/Steel Studs, or Furring Strips
	Wall Finishes	Drywall, CMU, Ceramic Tile
	Floor Substrates	Concrete
	Floor Finishes	Ceramic Tiles, Vinyl Floor Tile
	Ceiling Systems	Suspended
	Ceiling Finishes	Gypsum Ceiling Tiles
	Other	None

2.2 Building Information Available

UES was provided with demolition plan drawings dated December 4, 2024. No previous asbestos inspection report(s) were provided and no other material information was provided in reference to the structure located within Palmer Elementary School.

2.3 Current Building Use

At the time of UES's ACM inspection, Palmer Elementary School was an occupied elementary school.

3.0 INSPECTION PROTOCOL

Three forms of ACMs are typically found on structures. These materials are classified as follows:

- *Surfacing Material* – material that is sprayed-on, troweled-on, or otherwise applied to interior and exterior structural and architectural surfaces. Surfacing material includes acoustical plaster on ceilings, fireproofing on structural members, textured paint and exterior stucco, and other materials applied to surfaces for acoustical, decorative, fireproofing, and other purposes.

- *Thermal System Insulation* — material which is applied to interior and exterior mechanical components to reduce heat gain or loss. Thermal system insulation includes insulation on pipes, fittings, boilers, breeching, tanks, ducts, and other mechanical components.

- *Miscellaneous Materials* — material, other than surfacing material and thermal system insulation, on interior and exterior structural, mechanical, electrical, or architectural components, and surfaces. Miscellaneous material includes but is not limited to ceiling tiles, gaskets, floor coverings and mastics, wallboard joint compound, roofing materials, and cementitious products.

An inspection of the structure was conducted to identify these, and other materials present within the building which are suspected of containing asbestos.

3.1 Inspection Procedures

UES's field inspection was performed on April 14, 2025, by Ethan Grigg, an inspector accredited according to Federal Regulation 40 CFR, Part 763 (AHERA), and a TDSHS Licensed Asbestos Inspector (TDSHS License No. 60-3778).

After a preliminary walk-through of the building, an inspection was conducted to evaluate the location and extent of the suspected ACMs. Once identified, these materials were categorized into homogeneous areas containing materials of the same type, age, visual appearance, texture, composition, etc.

This type of inspection is designed to be used as a basis for tendering the removal of ACMs from Palmer Elementary School prior to demolition or renovation. The present condition of each ACM was evaluated by UES and classified as one of three categories: "good", "damaged" and "significantly damaged." As defined by AHERA. "Poor condition, for NESHAP Category I and II nonfriable materials, is synonymous to "damaged" and/or "significantly damaged," depending on the percentage of damaged.

Federal regulations also require inspectors to determine the potential for disturbance (or damage). This potential for disturbance is based on the presumption that the building will not be demolished. The classifications for potential for disturbance ranges from low, to moderate, to high, and is based on vibration, contact and air erosion.

The TAHPR utilizes NESHAP and AHERA regulations depending on the type of building that is being surveyed. Public buildings and facilities utilize TAHPR per NESHAP regulations and school buildings utilize the AHERA regulations. TAHPR requires a minimum of three (3) samples of each Homogenous Area to be collected and analyzed by a NVLAP accredited and TDSHS licensed laboratory. The number of bulk samples collected was based on the type of facility (public building and facility or school) and category of Homogeneous Area and the quantity of the material present, as follows:

AHERA GUIDELINES FOR DETERMINING THE NUMBER OF SAMPLES TO COLLECT

HSA CATEGORY	HSA QUANTITY	SAMPLES REQUIRED
Surfacing Materials	<1,000 Square Feet	3
	1,000 – 5,000 Square Feet	5
	>5,000 Square Feet	7 or more
Thermal System Insulation	No Stipulation	3+ (All repair patches must be sampled)
Miscellaneous Materials	No Stipulation	Per AHERA Guidelines, these materials must be sampled "in a manner sufficient to determine whether or not they contain asbestos" typically two or more samples based upon the inspector's judgement (a minimum of three (3) samples are required by TAHPR).

HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)

UES's inspector(s) employed wet methods as applicable during bulk sample collection to reduce the potential for fiber release. Each sample was documented by labeling the container with a unique sample number, entering the sample material on a bulk sample log or chain-of-custody form, and noting the location of each sample on a floor plan. Throughout the sampling process, care was taken to prevent cross-contamination of the collected bulk samples. Sampling equipment was cleaned following the collection of each sample.

Random, and in some cases judgmental, samples of each homogeneous area of material were then collected. The physical condition of each material was assessed. In addition, a tactile inspection of the material was performed to evaluate its friability. If the material, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure, it is considered friable. Samples from any homogeneous area

where the inspector determined that the material was non-ACM (such as thermal insulation that obviously fibrous glass, foam glass, or rubber) were not collected.

3.2 Suspected Asbestos Containing Materials

Based on UES's review of the available building system information and thorough visual inspection of Palmer Elementary School, eight (8) Homogeneous Areas were identified at the structure commonly suspected of containing asbestos. The Homogeneous Areas are detailed on the List of suspect ACMs.

3.3 TAHPR Classification

The materials assessed are classified as either: Regulated Asbestos Containing Material (RACM), Category I non-friable ACM, or Category II non-friable ACM.

Friable materials are "Any ACM that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure."

Non-friable materials are "ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

Category I non-friable ACM is "Asbestos-containing packings, gaskets, resilient floor-covering material, and asphalt roofing products determined to be ACM."

Category II non-friable ACM is – "Any material determined to be ACM, excluding Category I non-friable ACM, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

RACM means "Friable asbestos material; Category I non-friable ACM that has become friable; Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations."

ACM materials are subject to the TAHPR notification requirements, refer to Section 7.0 for Regulatory Information.

4.0 LABORATORY ANALYSIS

4.1 Polarized Light Microscopy Analysis

The samples of the suspected ACMs collected during the field inspection were transported with chain-of-custody documentation to UES Laboratories located in Pineville, North Carolina. UES Laboratories is a

NVLAP accredited laboratory (NVLAP Accreditation No. 600344-0) and TDSHS licensed (TDSHS License No. 300520) laboratory for bulk sample analysis.

Bulk samples were analyzed for the presence of asbestos fibers using PLM. The analyses were performed according to EPA Method 600/R-93/116 July 1993 "Method for the Determination of Asbestos in Bulk Building Materials." This analytical method can be used for qualitative identification of six morphologically different types of asbestos fibers: chrysotile, amosite, crocidolite, tremolite, actinolite and anthophyllite. PLM analysis requires the microscopist to take a portion of the sample and treat it with an oil of specific refractive index. The prepared slide is then subjected to a variety of tests while being viewed under varying polarizations of light. Each type of asbestos displays unique characteristics when subjected to these tests.

The method specifies that the asbestos content in a bulk sample shall be estimated and reported as a finite percentage within the range of 0 to 100. Minute quantities of asbestos in bulk samples may be reported as "trace" or less than one percent (<1.0%). The analytical method determines the asbestos percentage by means of visual estimation technique. If analysis of the sample of a suspect ACM reveals a negative result, UES considers the material to be non-Asbestos containing. If at any time during the analytical process a sample tests positive, that material must be treated as ACM.

5.0 FINDINGS

Eight (8) suspect homogeneous materials were identified at Palmer Elementary School. Following TAHPR and AHERA guidelines, the appropriate number of bulk samples were collected from the identified homogeneous material and submitted for laboratory analysis. The laboratory analyses indicated that asbestos fibers were not detected in the homogeneous materials analyzed from the building.

The following table presents the analytical results of the suspect ACMs and general information regarding the suspect ACMs.

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
PEF – 1 - 5	1	CMU with Texture	Misc.	Good	low	NAD	*Category II – Non-Friable*	3,000 SF	No
PEF – 6 - 8	2	2' x 2' Sheetrock Ceiling Tile	Misc.	Good	low	NAD	*Category II – Non-Friable*	1,600 SF	No
PEF – 9 - 11	3	TSI Pipe Insulation	TSI	Good	low	NAD	*Friable*	300 LF	No
PEF – 12 - 14	4	6" x 6" Red Ceramic Floor Tile	Misc.	Good	low	NAD	*Category I – Non-Friable*	1,300 SF	No
PEF – 15 - 17	5	12" x 12" Beige Ceramic Floor Tile	Misc.	Good	low	NAD	*Category I – Non-Friable*	90 SF	No

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
PEF – 18 - 20	6	12" x 12" Beige Floor Tile with Black Mastic	Misc.	Good	low	NAD	*Category I – Non-Friable*	50 SF	No
PEF – 21 - 23	7	4" Black Cove Base with Mastic	Misc.	Good	low	NAD	*Category II – Non-Friable*	30 LF	No
PEF – 24 - 26	8	HVAC Duct Insulation	Misc.	Good	low	NAD	*Friable*	100 LF	No
		Mirror Mastic	***Misc.***	***Good***	***low***	****Assumed***	***Category II – Non-Friable***	***5 SF***	***No***

Table Notes and Definitions:
HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)
NESHAPs = National Emission Standards for Hazardous Air Pollutants
SF = Square Feet
LF = Linear Feet
EA = Each
NF = Non-Friable
NAD = No Asbestos Detected
Surf = Surfacing
TSI = Thermal System Insulation
Misc. = Miscellaneous
Note - The indicated material quantities are estimates based on UES' field observations and should be considered preliminary in nature. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor.
Note - Damaged and Significantly Damaged Non-Friable Materials are classified as RACM per NESHAP.
***This material was assumed to contain asbestos.**

6.0 SUMMARY OF ASBESTOS CONTAINING MATERIALS

Inspection of Palmer Elementary School, located at 4208 Crow Valley Drive, Missouri City, Texas, identified eight (8) materials suspected of containing asbestos fibers. Bulk samples of each material were collected and submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The results indicated that the eight (8) suspect materials did not contain 1.0% or more asbestos.

The *Mirror Mastic*, is assumed to be located in the Kitchen Staff Bathroom and is assumed to be in good condition and is assumed to contain 1.0% or more asbestos. This material would be classified as Category II nonfriable ACM according to the current TAHPR and NESHAP regulations. This material was assumed to contain asbestos.

7.0 REGULATORY INFORMATION

The State of Texas has established the TAHPR which requires asbestos related activity to be performed by an individual licensed by TDSHS. An asbestos related activity consists of the disturbance (whether intentional or unintentional), removal, encapsulation, or enclosure of asbestos, including preparations or final clearance, the performance of asbestos surveys, the development of management plans and response actions, asbestos project design, the collection or analysis of asbestos samples, monitoring for airborne asbestos, bidding for a contract for any of these activities, or any other activity required to be licensed under TAHPR.

Abatement must be performed by a TDSHS licensed asbestos abatement contractor in accordance with a project design prepared by a TDSHS Licensed Asbestos Consultant. In addition, third party air monitoring must be conducted by a TDSHS licensed Air Monitoring Technician or Project Manager during the abatement activities.

Demolition under the TAHPR regulation is defined as the wrecking or removal of any load-supporting structural member of a public building or facility for the purpose of razing the building or portion of the building to the ground, or the intentional burning of any public building or facility. The removal of load-supporting structural members followed by resupport of the structure is considered renovation, not demolition. Moving a building from its foundation is considered demolition. We recommend you contact the Controlling Agency (TDSHS) requiring the notification and other requirements which may be applicable. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified.

Renovation or demolition of this structure should be conducted in strict compliance with the aforementioned federal statutes, TAHPR, NESHAP, and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

There are federal and state statutes and regulations which govern the abatement and disposal of ACMs. The renovation or demolition of buildings and roofs containing ACMs is regulated under the TAHPR and NESHAP statutes. The TAHPR and NESHAP regulations require notification to the Controlling Agency (TDSHS) and ACM prior to renovation or demolition. We strongly recommend that you contact the Controlling Agency (TDSHS) prior to renovation or demolition regarding the proper disposition of the ACMs. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified. It is important to note that even though an activity may be exempt from the EPA NESHAP regulations, such exemption does not extend to OSHA standards or other state and federal statutes.

Renovation or demolition activities in buildings and on roofs that contain ACM or Presumed Asbestos Containing Material (PACM) are regulated under the OSHA Asbestos Construction Standard (29 CFR 1926.1101). The OSHA standard requires the building owner to inform their employees who will work in or adjacent to areas containing ACM or PACM, perspective employers applying or bidding for work whose employees reasonably can be expected to work in or adjacent to areas containing ACM or PACM, all employers of employees on multi-employer work sites who will be performing work with or adjacent to areas containing asbestos and tenants who will occupy areas containing ACM or PACM, of the presence, location, and quantity of ACM or PACM at the work sites in their building and facilities. Further, the OSHA standard (29 CFR 1926.1101) requires employers who discover ACM or PACM to convey information concerning the presence, location, and quantity of such newly discovered ACM or PACM to other employers of employees working at the work site within 24 hours of discovery. While OSHA says the notification can be written or personal communication, there are many advantages to written communication.

The OSHA construction standard (29 CFR 1926.1101) also contains specific training, work practices, procedures, engineering controls, notifications, permissible exposure limits, personal protection, record keeping and a multitude of other requirements for the demolition, renovation, construction, alterations, repair, maintenance of structures, substrates, or portions thereof that contain asbestos. It should be noted that recent court rulings have exempted roofing cement from the OSHA Construction Industry Asbestos Standard.

Renovation or demolition of the structures and roofs that could potentially disturbed the ACM located within Palmer Elementary School should be conducted in strict compliance with the aforementioned federal statutes and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

The renovation and demolition of buildings is regulated under the TAHPR and NESHAP statutes. Even if asbestos is not detected at 1.0% or more, the TAHPR and NESHAP regulations require a ten-day notification to the Controlling Agency (TDSHS) prior to renovation and demolition.

8.0 CONTROLLNG AGENCY

The Controlling Agency for the coordination of projects involving asbestos removal or demolition is the TDSHS Asbestos Program. The owner or operator shall provide the above-referenced department with a ten-day notice of the asbestos removal project or demolition by timely submittal of a completed "Asbestos Abatement/Demolition Notification" form, as promulgated under TAHPR. The notification can be submitted on Texas Department of State Health Services, located online at https://www.dshs.texas.gov/asbestos-program/notifications-asbestos-program.

9.0 CONDITIONS AND LIMITATIONS OF THIS INPECTION

A representative of UES obtained samples of building materials which were observed during an inspection of Palmer Elementary School that are typically suspected of containing asbestos as a constituent. The bulk samples were submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis using EPA approved methods for industry-accepted standards. UES makes no warranties, express or implied.

In general, inspection and sampling procedures were incorporated which allowed assessment of reasonably accessible building materials. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls. Though every effort was made to examine wall cavities and other areas for thermal system insulation, spray-applied or trowel applied surfacing material or other miscellaneous materials and other PACM, this survey and report only deals with accessible areas of the building. There may be additional inaccessible areas above the ceiling, behind walls and below floors that become evident during demolition or renovation activities. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed. The building's equipment fixtures, or stored materials were not inspected or sampled as part of this evaluation.

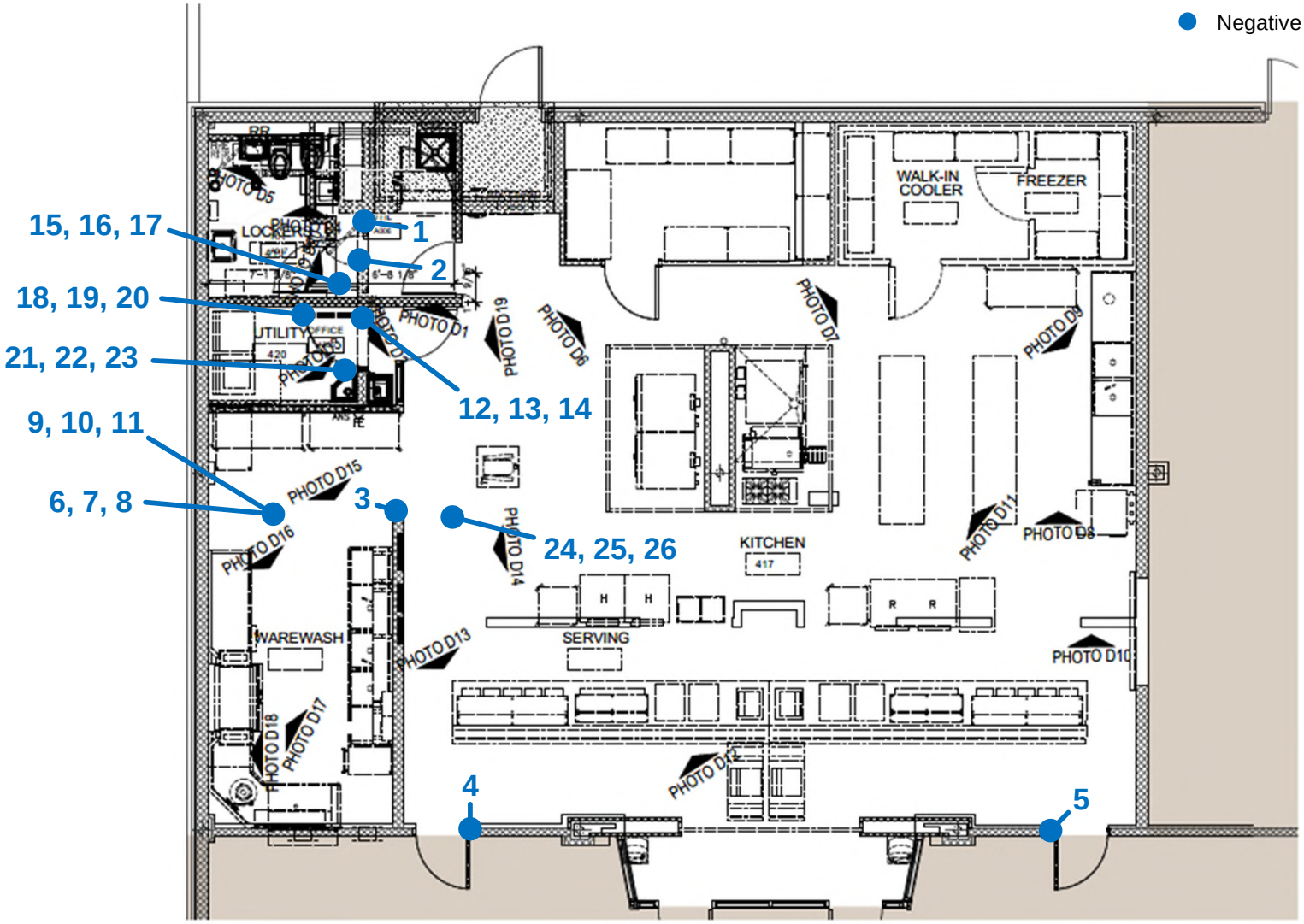
Bidders are responsible for their own calculations and estimates of quantities. Actual quantities may be more or less than indicated.

Federal OSHA Standard 26 CFR 1926.1101 has specific requirements relating to employee protection and notification during construction projects (including demolition and renovation projects) involving ACM as well as materials containing trace levels of asbestos which apply to this project. UES recommends complying with applicable OSHA regulations, which would include notifying the demolition contractor of the presence of asbestos.

All conclusions and recommendations in this report represent the professional opinions of the personnel involved with the project. The results, findings, conclusions and recommendations expressed in this report are based on access provided and conditions observed, and samples taken during the survey of the building. The information contained in this report is relevant as of the date on which the field work was performed and should not be relied upon to represent Site's conditions at a later date. This study and report were prepared on behalf of and for the exclusive use of the Client solely for its use and reliance in determining the presence of asbestos in identified areas of the site. The results of this report are not intended or to be construed as legal interpretation of existing federal, state, or local environmental, health and safety laws or regulations. UES assumes no responsibility or liability for errors in information or data provided to UES by the Client or any third party or developments resulting from activities or situations outside the scope of this project.

Appendix A
Bulk Sample Location Map and Photograph Log

Sample Locations



Floor Plans are not to scale

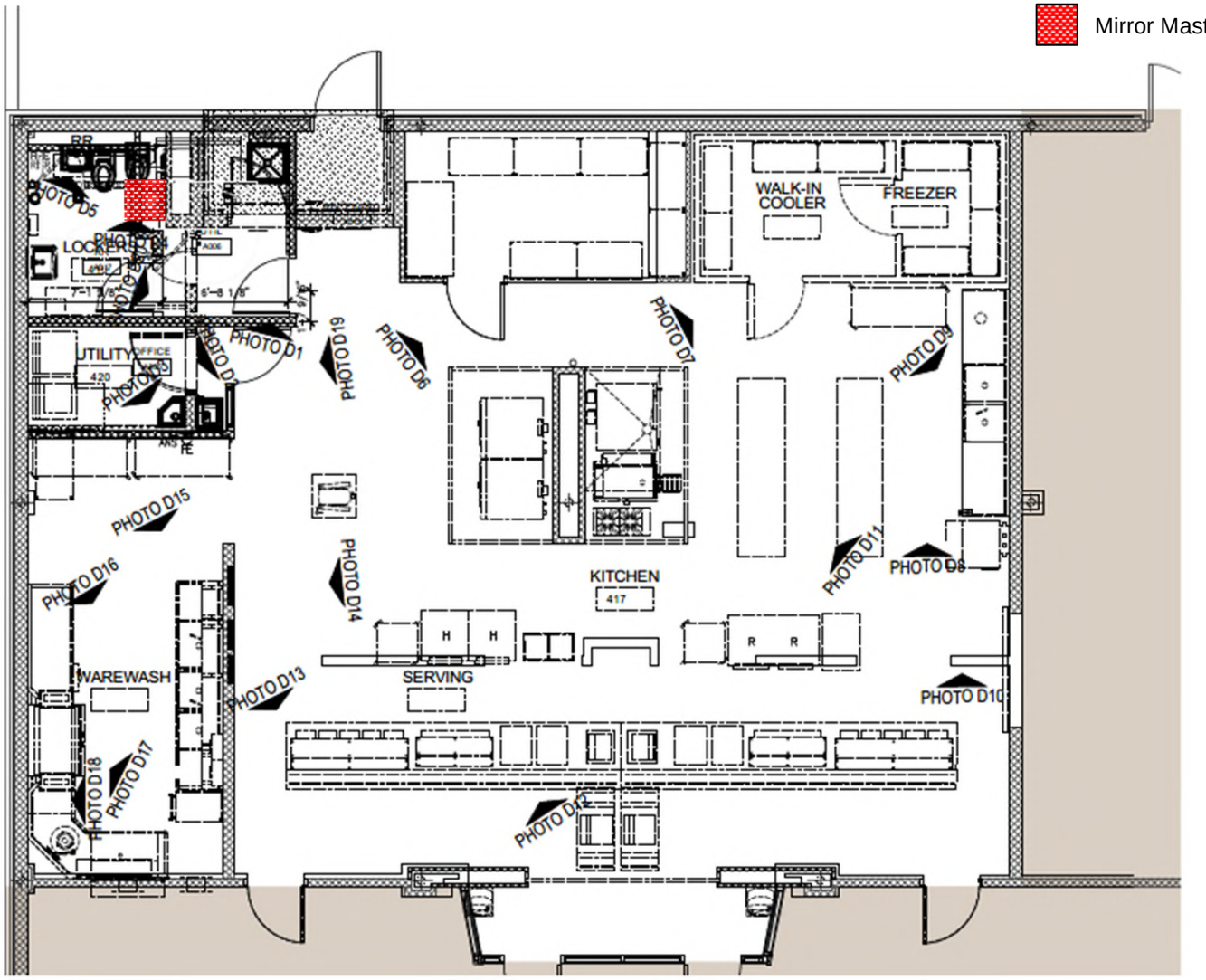
First Floor

UES	**FBISD – BP013 Renovations** **Palmer ES** 4208 Crow Valley Drive, Missouri City, Texas	**Fort Bend ISD** 16431 Lexington Boulevard, Sugar Land, Texas 77479	N	**Proj. Mgr: KAG** **Date: 4/30/2025** **Drawn By: EDG** **Project # N250486**

Assumed ACM Locations

Legend:

Mirror Mastic



Floor Plans are not to scale

First Floor

UES

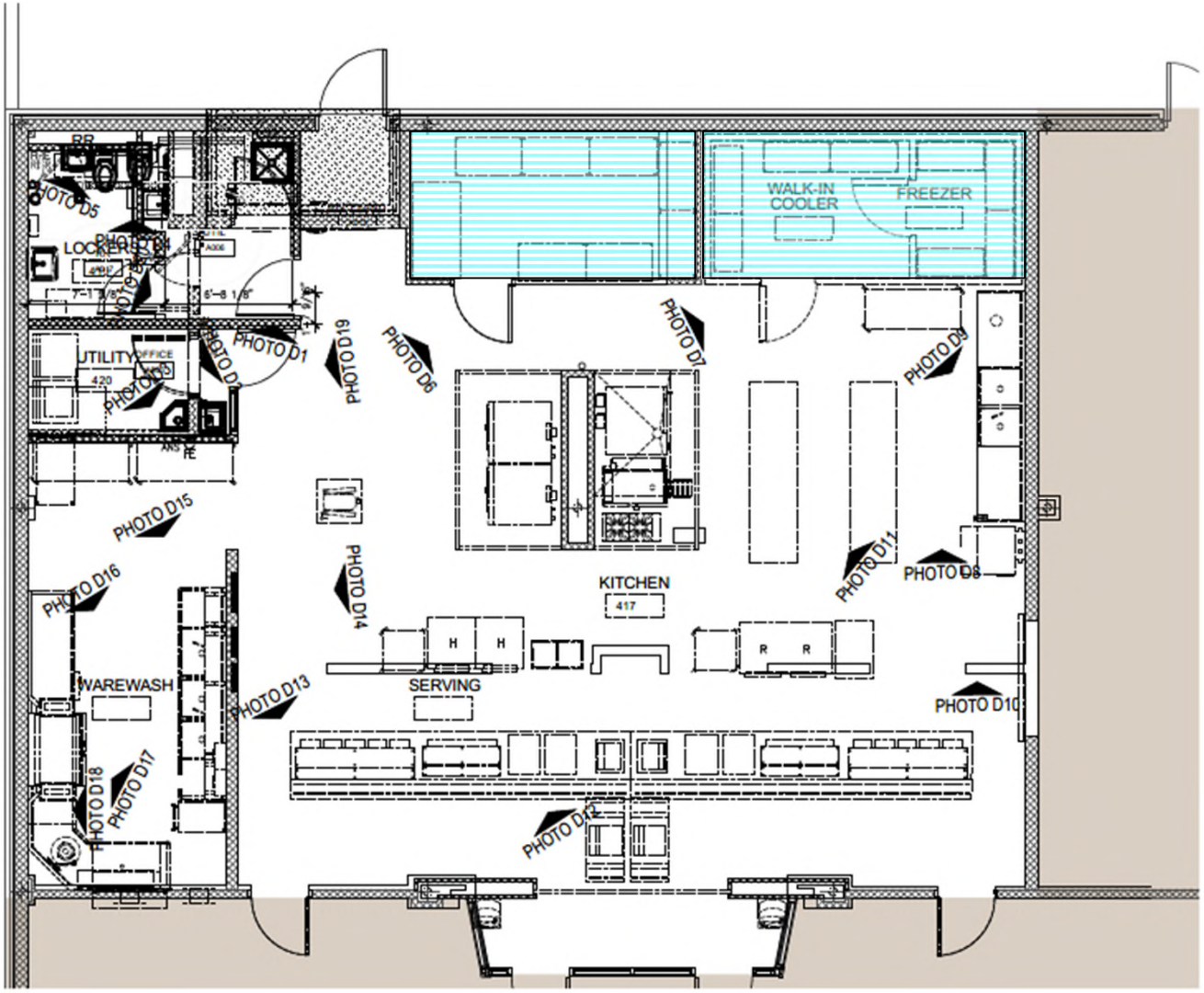
FBISD – BP013 Renovations
Palmer ES
4208 Crow Valley Drive,
Missouri City, Texas

Fort Bend ISD
16431 Lexington Boulevard,
Sugar Land, Texas 77479

N

Proj. Mgr: KAG
Date: 4/30/2025
Drawn By: EDG
Project # N250486

Inaccessible Locations



Legend:

- Inaccessible Area

Notes:

These areas were inaccessible, all materials within that differ from materials that were sampled are assumed to be asbestos containing until such a time as they can be sampled and proven negative of asbestos content

Floor Plans are not to scale

First Floor

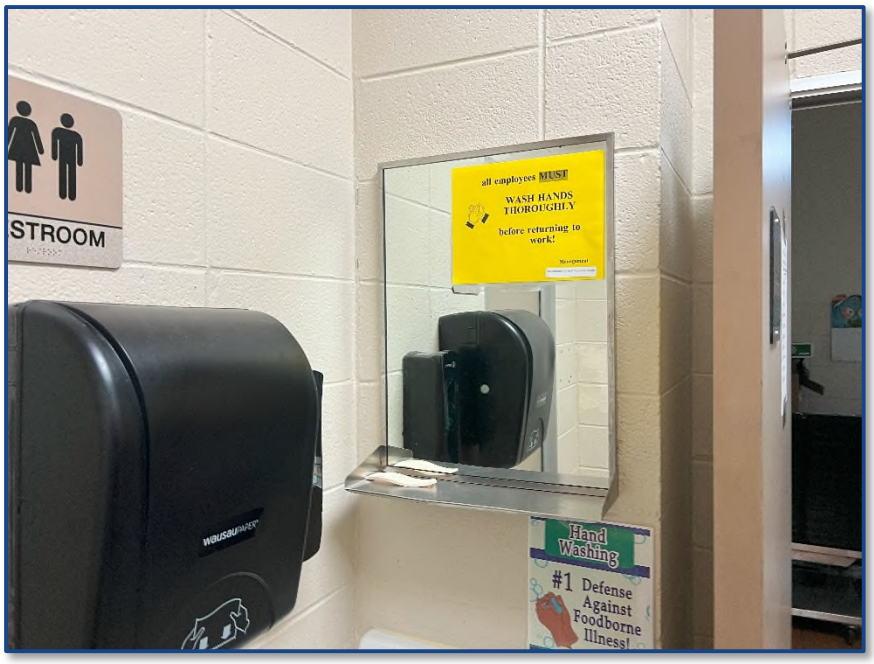
UES

FBISD – BP013 Renovations
Palmer ES
4208 Crow Valley Drive,
Missouri City, Texas

Fort Bend ISD
16431 Lexington Boulevard,
Sugar Land, Texas 77479

N

Proj. Mgr: KAG
Date: 4/30/2025
Drawn By: EDG
Project # N250486



HA 1: CMU with Texture

HA 2: 2’ x 2’ Sheetrock Ceiling Tile

HA 3: TSI Pipe Insulation

HA 4: 6” x 6” Red Ceramic Floor Tile

HA 5: 12” x 12” Beige Ceramic Floor Tile

HA 6: 12” x 12” Beige Floor Tile with Black Mastic

HA 7: 4” Black Cove Base with Mastic

HA 8: HVAC Duct Mastic

Appendix B
PLM Analytical Report & Chain-of-Custody Documentation

Asbestos Laboratory Report

Prepared for

UES Dallas

Project: FBISD - BP013 Renovations - Palmer ES

UES No.: A25117.00815.000

Date Received: 4/21/2025

Date Analyzed: 4/23/2025

Date Reported: 4/25/2025

Total Samples Analyzed: 51

 # Samples >1% Asbestos: 0

Method of Analysis: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00815.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/23/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Palmer ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
PEF-1-Texture A25117.00815.000-1	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-1-CMU A25117.00815.000-1A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-1-Mortar A25117.00815.000-1B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-2-Texture A25117.00815.000-2	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-2-CMU A25117.00815.000-2A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-2-Mortar A25117.00815.000-2B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-3-Texture A25117.00815.000-3	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-3-CMU A25117.00815.000-3A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-3-Mortar A25117.00815.000-3B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-4-Texture A25117.00815.000-4	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-4-CMU A25117.00815.000-4A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-4-Mortar A25117.00815.000-4B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-5-Texture A25117.00815.000-5	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-5-CMU A25117.00815.000-5A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00815.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/23/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Palmer ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
PEF-5-Mortar A25117.00815.000-5B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-6 A25117.00815.000-6	2x2 Sheetrock Ceiling Tile	Brown, Gray Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
PEF-7 A25117.00815.000-7	2x2 Sheetrock Ceiling Tile	Brown, Gray Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
PEF-8 A25117.00815.000-8	2x2 Sheetrock Ceiling Tile	Brown, Gray Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
PEF-9-Wrap A25117.00815.000-9	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
PEF-9-Insulation A25117.00815.000-9A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Cellulose	1% Non-fibrous (Other)	None Detected
PEF-10-Wrap A25117.00815.000-10	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
PEF-10-Insulation A25117.00815.000-10A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Cellulose	1% Non-fibrous (Other)	None Detected
PEF-11-Wrap A25117.00815.000-11	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
PEF-11-Insulation A25117.00815.000-11A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Cellulose	1% Non-fibrous (Other)	None Detected
PEF-12-Ceramic Tile A25117.00815.000-12	6x6 Red Ceramic Floor Tile	Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-12-Grout A25117.00815.000-12A	6x6 Red Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-13-Ceramic Tile A25117.00815.000-13	6x6 Red Ceramic Floor Tile	Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-13-Grout A25117.00815.000-13A	6x6 Red Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00815.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/23/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Palmer ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
PEF-14-Ceramic Tile A25117.00815.000-14	6x6 Red Ceramic Floor Tile	Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-14-Grout A25117.00815.000-14A	6x6 Red Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-15 A25117.00815.000-15	12x12 Beige Ceramic Floor Tile	Gray, Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-16 A25117.00815.000-16	12x12 Beige Ceramic Floor Tile	Gray, Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-17 A25117.00815.000-17	12x12 Beige Ceramic Floor Tile	Gray, Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-18-Floor Tile A25117.00815.000-18	12x12 Beige Vinyl Floor Tile with Black Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-18-Mastic A25117.00815.000-18A	12x12 Beige Vinyl Floor Tile with Black Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-19-Floor Tile A25117.00815.000-19	12x12 Beige Vinyl Floor Tile with Black Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-19-Mastic A25117.00815.000-19A	12x12 Beige Vinyl Floor Tile with Black Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-20-Floor Tile A25117.00815.000-20	12x12 Beige Vinyl Floor Tile with Black Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-20-Mastic A25117.00815.000-20A	12x12 Beige Vinyl Floor Tile with Black Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-21-Cove Base A25117.00815.000-21	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-21-Mastic A25117.00815.000-21A	4 Black Cove Base with Mastic	Tan Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-22-Cove Base A25117.00815.000-22	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00815.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/23/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Palmer ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
PEF-22-Mastic A25117.00815.000-22A	4 Black Cove Base with Mastic	Tan Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-23-Cove Base A25117.00815.000-23	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-23-Mastic A25117.00815.000-23A	4 Black Cove Base with Mastic	Tan Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PEF-24-Wrap A25117.00815.000-24	HVAC Duct Insulation	Silver, Brown Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
PEF-24-Insulation A25117.00815.000-24A	HVAC Duct Insulation	Pink Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
PEF-25-Wrap A25117.00815.000-25	HVAC Duct Insulation	Silver, Brown Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
PEF-25-Insulation A25117.00815.000-25A	HVAC Duct Insulation	Pink Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
PEF-26-Wrap A25117.00815.000-26	HVAC Duct Insulation	Silver, Brown Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
PEF-26-Insulation A25117.00815.000-26A	HVAC Duct Insulation	Pink Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

METHOD: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

For samples easily separated into homogeneous layers, each component will be analyzed separately. The sample may not be representative of the larger material in question. Interpretation and use of test results are the responsibility of the client. Due to the limitations of the EPA 600 Method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles, mastic and roofing can be difficult to analyze by PLM. Reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or None Detect for these materials is recommended. The percentage of asbestos reported is a midpoint within an acceptable range. The estimated measurement of uncertainty is available upon request. Results relate only to the items received by the laboratory as noted on the Chain of Custody provided by the client.

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Analysis is determined by Calibrated Visual Estimate (CVE).
Temperature at the time of analysis (°C) : 22

NVLAP Code: 600344

Texas License Number : 300520

Analyst(s): Brant Alyea

Approved By: Cass Rupert
Approved Signatory

UES Laboratories, 10121 Pineville Distribution St., Pineville, NC Phone: (704) 504-1717

UNIVERSAL ENGINEERING SCIENCES

CHAIN OF CUSTODY

LAB USE ONLY:	A25117.00815.006
UES Order Number:	45495

10121 Pineville Distribution Street,
Pineville, North Carolina 28143
Tel: 704-504-1717; Fax: 704-504-1125

COMPANY CONTACT INFORMATION			
Company:	UES Dallas	Job Contact:	Ethan Grigg, Kristopher Girton
Address:	2209 Wisconsin Street,	Email:	egrigg@teamues.com
	Dallas, Texas 75229		kgirton@teamues.com
		Tel:	817-966-6636
Project Name:	FBISD - BP013 Renovations	Fax:	
Project ID #:	N250486	State Collected In:	Intact

Bill to: ☑ Same ☐ Different – If Bill to is different please notate in the comments section.

ASBESTOS	METHOD	TURN AROUND TIME						
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY	2 Week
PLM BULK	EPA 600	☐	☐	☐	☐	☐	☑	☐
PLM Point Count (400)	EPA 600	☐	☐	☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐	☐
TEM BULK	EPA NOB / Chatfield			☐	☐	☐	☐	☐
TEM AIR	AHERA 40 CFR, Part 763	☐	☐	☐	☐	☐	☐	☐
TEM Dust Wipe	ASTM D6480	☐	☐	☐	☐	☐	☐	☐

POSITIVE STOP ANALYSIS: ☑

IF TURNAROUND TIME IS NOT MARKED STANDARD 5 DAY APPLIES

By submitting samples, you are agreeing to UES Terms and Conditions

COMMENTS: Palmer ES
SEE ATTACHED - Use name from Sampling log

☑ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
Ethan Grigg	4/18/2025		4.21.25

Samples will be disposed of 60 days after analysis

A25117.00815.000

UES

PO #: 45495

Date: 4/14/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD - BP013 - Renovations - Palmer ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
PEF	1	CMU with Filler Texture	Kitchen	NFII	G	3,000 SF
"	2	"	"	"	"	"
"	3	"	"	"	"	"
"	4	"	"	"	"	"
"	5	"	"	"	"	"
"	6	2'X2' Sheetrock Ceiling Tile	Kitchen	NFII	G	1,600 SF
"	7	"	"	"	"	"
"	8	"	"	"	"	"
"	9	TSI Pipe Insulation	Kitchen	F	G	300 LF
"	10	"	"	"	"	"
"	11	"	"	"	"	"
"	12	6"x6" Red Ceramic Floor Tile	Kitchen	NFII	G	1,300 SF
"	13	"	"	"	"	"
"	14	"	"	"	"	"
"	15	12"x12" Beige Ceramic Floor Tile	Kitchen	NFII	G	90 SF

UES

PO #: 45495

Date: 4/14/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD-BP013-Renovations-Palmer ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
PEF	16	12"x 12" Beige Ceramic Floor Tile	Kitchen	NF II	G	90SF
"	17	"	"	"	"	"
"	18	12"x12" Beige Vinyl Floor Tile with Black Mastic	Kitchen	NF I	F	50SF
"	19	"	"	"	"	"
"	20	"	"	"	"	"
"	21	4" Black Cove Base with Mastic	Kitchen	NF II	G	30LF
"	22	"	"	"	"	"
"	23	"	"	"	"	"
"	24	HVAC Duct Insulation	Kitchen	F	G	100LF
"	25	"	"	"	"	"
"	26	"	"	"	"	"

Appendix C
Inspector(s) License and Firm License

GEBCO Associates certifies that

Ethan D. Grigg

25056 1127

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS INSPECTOR REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25056

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Ethan D. Grigg

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Inspector Refresher Course

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25056 1127

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

GEBCO Associates, LP * 815 Trailwood Dr, Suite 200 * Hurst, TX 76053 * (817)268-4006

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Inspector

ETHAN D GRIGG

License Number: 603778

Control Number: 101162

Expiration Date: 10-Apr-2027

GEBCO Associates certifies that

Kristopher A. Girton

25003 0358

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 01/08/2025 Certificate No: 25003

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053
Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Kristopher A. Girton

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on January 8, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

Owner

Instructor: Joseph Londt

Date of Issue 01/08/2025

Certificate Number: 25003 0358

Exam Date: 01/08/2025

Certificate Expires 01/08/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

KRISTOPHER A GIRTON

License Number: 105894

Control Number: 98431

Expiration Date: 7-Jun-2026

GEBCO Associates certifies that

Michael K. Nibert

25021 5548

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25021

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP

815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Michael K. Nibert

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25021 5548

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

GEBCO Associates, LP * 815 Trailwood Dr, Suite 200 * Hurst, TX 76053 * (817)268-4006

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

MICHAEL K NIBERT

License Number: 105931

Control Number: 98417

Expiration Date: 8-May-2026

Texas Department of State Health Services

UES PROFESSIONAL SOLUTIONS 44 LLC

is certified to perform as an

Asbestos Consultant Agency

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1954 and Title 12, Texas Administrative Code, Chapter 295 relating to Texas Asbestos Health Protection, as long as this license is not suspended or revoked.

License Number: 100608

Expiration Date: 05/12/2026

Jennifer Shuford, MD, MPH,
Commissioner of Health

Control Number: 97663

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

SEE BACK

ASBESTOS CONTAINING MATERIALS
INSPECTION REPORT

Fort Bend ISD – BP013 Renovations – Pecan Grove ES
3330 Old S. Drive
Richmond, Texas
UES Project No. N250486

Prepared for:
Fort Bend ISD
16431 Lexington Boulevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Prepared by:
UES
2209 Wisconsin Street
Dallas, TX 75229
972-620-8911
www.TeamUES.com

TDSHS Asbestos Consultant Agency License No.: 100608

June 10, 2025

Fort Bend ISD
16431 Lexington Bouevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Re: Asbestos Containing Materials Inspection Report
Fort Bend ISD – BP013 Renovations – Pecan Grove ES
3330 Old S. Drive
Richmond, Texas
UES Report No. N250486

Dear Mrs. Pentrala:

On behalf of Fort Bend ISD (the "Client"), UES Professional Solutions 44, LLC (hereinafter "UES") has completed this Asbestos Containing Materials Inspection Report for Pecan Grove Elementary School (the "subject property"). This inspection was conducted in general accordance with Title 25 of the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296) the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP). UES performed this ACM inspection on April 17, 2025, to categorize and assess readily available suspect homogeneous material for the structure. UES collected twenty-nine (29) bulk samples from nine (9) homogeneous materials. The bulk samples were transported to a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and Texas Department of Safety and Health Services (TDSHS) licensed laboratory for analysis using Polarized Light Microscopy (PLM) for the presence of asbestos fibers.

Asbestos Containing Materials (ACMs) are classified as materials that contain 1.0% or more asbestos in any of the homogeneous materials sampled. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The laboratory analyses indicated that asbestos fibers were not detected in the homogeneous materials analyzed from the building. Refer to Section 6.0 of this report. Additional details regarding the ACM Inspection conducted by UES are presented in the attached report.

We appreciate the opportunity to perform these services for Fort Bend ISD. Please contact the undersigned if you have questions regarding the information provided in the report.

Respectfully submitted,
UES

Kristopher Girton
Asbestos Project Manager
Asbestos Consultant License No.: 105894

Michael Nibert, CHMM, C.E.M.
Director of Environmental Services-North Texas
Asbestos Consultant License No.: 105931

TDSHS Asbestos Consultant Agency License No.: 100608

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1.0 INTRODUCTION

UES Professional Solutions 44, LLC (hereinafter "UES") conducted a pre-renovation (limited) Asbestos Containing Materials (ACM) Inspection for Pecan Grove Elementary School located at 3330 Old S. Drive in Richmond, Texas. The purpose of this inspection was to identify and sample accessible suspect ACM and provide information regarding the identity, location, and condition in anticipation of a renovation and/or demolition of the building.

This service was completed in general accordance with UES Proposal No. 109625Rev4 dated February 10, 2025, and authorized by Fort Bend ISD Purchasing Department, Purchase Order 501107 on March 28, 2025.

This asbestos inspection was limited to the kitchen of Pecan Grove Elementary School. During the survey two locations could not be accessed; the dry storage room and walk-in cooler. If materials in these areas do not match those sampled during this survey, they are assumed to be asbestos containing until such a time as they can be sampled and proven negative of asbestos content. Certain materials were not sampled, these materials are assumed to be asbestos containing.

This inspection was conducted in accordance with the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296), the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP).

A map or photographic log illustrating the sample locations is included as Appendix A of this report. The bulk sample laboratory report and associated chain-of-custody documentation is presented in Appendix B. A copy of the inspector's license that performed the building inspection and a copy of UES's Texas Department of Safety and Health Services (TDSHS) firm license are provided in Appendix C.

1.1 Limitations and Exclusions

This inspection report is not intended to be used as a specification, project design or work plan. The indicated material quantities of ACM (if documented) are estimates based on UES's field observations on the date(s) of the inspection(s) and should be considered preliminary in nature. All parties utilizing this report for proposal, estimation or contract negotiations are required to field verify the quantities of material prior to submission of proposal. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor. The asbestos abatement contractor should ascertain for themselves, by site measurements and inspection, the exact nature and extent of the work to be done.

Inspection and collection of bulk samples of suspect ACMs were limited to those materials readily accessible at the time of inspection. Destructive sampling techniques (such as wall and ceiling testing, and carpet cuts to expose underlying flooring) were employed in limited measures in the areas inspected and

completed in a way to minimize disruption to operations and damage to building components. Extensive destructive sampling methods were not used, and exploratory demolition of walls and/or removal of fixed items were not conducted. No attempt was made by UES to observe conditions in spaces not generally accessible, including but not limited to crawlspaces, pipe chases, plenums, or confined spaces. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls.

Although every effort is made to locate all suspected ACMs, it is impossible to rule out the possibility that undiscovered asbestos materials may be present. If the building is to undergo major refurbishment or demolition, it is recommended that the persons carrying out the work are made aware of this and take sufficient precautions, as may be appropriate, to ensure the health and safety of their own employees and any other parties who may be affected by the works. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed.

Asbestos has not been banned from use in building products in the United States. Newer buildings are not exempt. Certain uses of asbestos have been banned: such as spray applied fireproofing, pipe and boiler insulation and asbestos cardboard.

1.2 Purpose and Scope of Work

The purpose of this study was to perform an evaluation of the above-referenced facility for the presence of ACMs, specifically those building materials which may be present or impacted during potential demolition or renovation activities. The activities and procedures used to accomplish this task were as follows:

1) A review of available building documents to identify potential locations of suspect ACMs;
2) Visual building inspection of accessible areas by a EPA Asbestos Hazard Emergency Response Act (AHERA) accredited and Texas Department of Safety and Health Services (TDSHS) licensed Asbestos Building Inspector to identify suspect ACMs;
3) Once identified, homogeneous materials (materials which are uniform in color, texture, construction/application date, and general appearance) were determined;
4) Determine whether the suspect ACM is Friable (a material that when dry, may be crumbled, pulverized or reduced to powder by hand pressure) or Non-Friable;
5) Collection of bulk samples of each homogeneous suspect ACM. Record sample information on Asbestos Bulk Sample Forms (chain-of-custody sheets), which were signed, dated, and sent with the samples to the laboratory;
6) Analysis of the collected bulk samples at a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and TDSHS licensed laboratory using Polarized Light Microscopy (PLM) for the presence of asbestos fibers;

7) Approximate locations of the bulk samples were defined. Computer Assisted Drafting and Design (CADD) drawings were developed indicating sample locations. In addition, approximate quantities of identified ACM were also determined; and,
8) Prepare and submit a report.

2.0 CHARACTERISTICS AND INFORMATION

2.1 General

A summary of Pecan Grove Elementary School's characteristics is outlined in the table below. Information on the buildings was obtained by UES through our field inspection, review of available building documents and/or property appraiser records.

FORT BEND ISD - PECAN GROVE ELEMENTARY SCHOOL		
General	Facility Type	Elementary School
	Construction Date	1988
	Building Size	69,206 Square Feet
	Number of Stories	1
Structural	Foundation	Slab-on-Grade
	Wall Support	Concrete Block, Steel and Glass
	Wall Finish	Brick
	Roof Support	Bar Joist w/ Metal Deck
	Roof System Type	Built-up Roofing
Mechanical/ Plumbing	HVAC Type	Central (Rooftop Units)
	Duct Type	Fiberglass (Flex or Ridged)
	Pipe Insulation	Paper Wrap with Fiberglass Insulation
Interior	Wall Substrates	Wood/Steel Studs, or Furring Strips
	Wall Finishes	Drywall, CMU, Ceramic Tile
	Floor Substrates	Concrete
	Floor Finishes	Ceramic Tiles, Vinyl Floor Tile, Terrazzo Flooring
	Ceiling Systems	Suspended
	Ceiling Finishes	Gypsum Ceiling Tiles
	Other	None

2.2 Building Information Available

UES was provided with demolition plan drawings dated December 4, 2024. No previous asbestos inspection report(s) were provided and no other material information was provided in reference to Pecan Grove Elementary School.

2.3 Current Building Use

At the time of UES's ACM inspection, Pecan Grove Elementary School was an occupied elementary school.

3.0 INSPECTION PROTOCOL

Three forms of ACMs are typically found on structures. These materials are classified as follows:

- *Surfacing Material* – material that is sprayed-on, troweled-on, or otherwise applied to interior and exterior structural and architectural surfaces. Surfacing material includes acoustical plaster on ceilings, fireproofing on structural members, textured paint and exterior stucco, and other materials applied to surfaces for acoustical, decorative, fireproofing, and other purposes.

- *Thermal System Insulation* — material which is applied to interior and exterior mechanical components to reduce heat gain or loss. Thermal system insulation includes insulation on pipes, fittings, boilers, breeching, tanks, ducts, and other mechanical components.

- *Miscellaneous Materials* — material, other than surfacing material and thermal system insulation, on interior and exterior structural, mechanical, electrical, or architectural components, and surfaces. Miscellaneous material includes but is not limited to ceiling tiles, gaskets, floor coverings and mastics, wallboard joint compound, roofing materials, and cementitious products.

An inspection of Pecan Grove Elementary School was conducted to identify these, and other materials present within the building which are suspected of containing asbestos.

3.1 Inspection Procedures

UES's field inspection was performed on April 17, 2025, by Ethan Grigg, an inspector accredited according to Federal Regulation 40 CFR, Part 763 (AHERA), and a TDSHS Licensed Asbestos Inspector (TDSHS License No. 60-3778).

After a preliminary walk-through of the building, an inspection was conducted to evaluate the location and extent of the suspected ACMs. Once identified, these materials were categorized into homogeneous areas containing materials of the same type, age, visual appearance, texture, composition, etc.

This type of inspection is designed to be used as a basis for tendering the removal of ACMs from the subject building(s) prior to demolition or renovation. The present condition of each ACM was evaluated by UES and classified as one of three categories: "good", "damaged" and "significantly damaged." As defined by AHERA. "Poor condition, for NESHAP Category I and II nonfriable materials, is synonymous to "damaged" and/or "significantly damaged," depending on the percentage of damaged.

Federal regulations also require inspectors to determine the potential for disturbance (or damage). This potential for disturbance is based on the presumption that the building will not be demolished. The classifications for potential for disturbance ranges from low, to moderate, to high, and is based on vibration, contact and air erosion.

The TAHPR utilizes NESHAP and AHERA regulations depending on the type of building that is being surveyed. Public buildings and facilities utilize TAHPR per NESHAP regulations and school buildings utilize the AHERA regulations. TAHPR requires a minimum of three (3) samples of each Homogenous Area to be collected and analyzed by a NVLAP accredited and TDSHS licensed laboratory. The number of bulk samples collected was based on the type of facility (public building and facility or school) and category of Homogeneous Area and the quantity of the material present, as follows:

AHERA GUIDELINES FOR DETERMINING THE NUMBER OF SAMPLES TO COLLECT

HSA CATEGORY	HSA QUANTITY	SAMPLES REQUIRED
Surfacing Materials	<1,000 Square Feet	3
	1,000 – 5,000 Square Feet	5
	>5,000 Square Feet	7 or more
Thermal System Insulation	No Stipulation	3+ (All repair patches must be sampled)
Miscellaneous Materials	No Stipulation	Per AHERA Guidelines, these materials must be sampled "in a manner sufficient to determine whether or not they contain asbestos" typically two or more samples based upon the inspector's judgement (a minimum of three (3) samples are required by TAHPR).

HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)

UES's inspector(s) employed wet methods as applicable during bulk sample collection to reduce the potential for fiber release. Each sample was documented by labeling the container with a unique sample number, entering the sample material on a bulk sample log or chain-of-custody form, and noting the location of each sample on a floor plan. Throughout the sampling process, care was taken to prevent cross-contamination of the collected bulk samples. Sampling equipment was cleaned following the collection of each sample.

Random, and in some cases judgmental, samples of each homogeneous area of material were then collected. The physical condition of each material was assessed. In addition, a tactile inspection of the material was performed to evaluate its friability. If the material, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure, it is considered friable. Samples from any homogeneous area

where the inspector determined that the material was non-ACM (such as thermal insulation that obviously fibrous glass, foam glass, or rubber) were not collected.

3.2 Suspected Asbestos Containing Materials

Based on UES's review of the available building system information and thorough visual inspection of the subject building, nine (9) Homogeneous Areas were identified at Pecan Grove Elementary School commonly suspected of containing asbestos. The Homogeneous Areas are detailed on the List of suspect ACMs.

3.3 TAHPR Classification

The materials assessed are classified as either: Regulated Asbestos Containing Material (RACM), Category I non-friable ACM, or Category II non-friable ACM.

Friable materials are "Any ACM that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure."

Non-friable materials are "ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

Category I non-friable ACM is "Asbestos-containing packings, gaskets, resilient floor-covering material, and asphalt roofing products determined to be ACM."

Category II non-friable ACM is – "Any material determined to be ACM, excluding Category I non-friable ACM, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

RACM means "Friable asbestos material; Category I non-friable ACM that has become friable; Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations."

ACM materials are subject to the TAHPR notification requirements, refer to Section 7.0 for Regulatory Information.

4.0 LABORATORY ANALYSIS

4.1 Polarized Light Microscopy Analysis

The samples of the suspected ACMs collected during the field inspection were transported with chain-of-custody documentation to UES Laboratories located in Pineville, North Carolina. UES Laboratories is a NVLAP accredited laboratory (NVLAP Accreditation No. 600344-0) and TDSHS licensed (TDSHS License No. 300520) laboratory for bulk sample analysis.

Bulk samples were analyzed for the presence of asbestos fibers using PLM. The analyses were performed according to EPA Method 600/R-93/116 July 1993 "Method for the Determination of Asbestos in Bulk Building Materials." This analytical method can be used for qualitative identification of six morphologically different types of asbestos fibers: chrysotile, amosite, crocidolite, tremolite, actinolite and anthophyllite. PLM analysis requires the microscopist to take a portion of the sample and treat it with an oil of specific refractive index. The prepared slide is then subjected to a variety of tests while being viewed under varying polarizations of light. Each type of asbestos displays unique characteristics when subjected to these tests.

The method specifies that the asbestos content in a bulk sample shall be estimated and reported as a finite percentage within the range of 0 to 100. Minute quantities of asbestos in bulk samples may be reported as "trace" or less than one percent (<1.0%). The analytical method determines the asbestos percentage by means of visual estimation technique. If analysis of the sample of a suspect ACM reveals a negative result, UES considers the material to be non-Asbestos containing. If at any time during the analytical process a sample tests positive, that material must be treated as ACM.

5.0 FINDINGS

Nine (9) suspect homogeneous materials were identified at the subject building. Following TAHPR and AHERA guidelines, the appropriate number of bulk samples were collected from the identified homogeneous material and submitted for laboratory analysis. The laboratory analyses indicated that asbestos fibers were not detected in the homogeneous materials analyzed from the building.

The following table presents the analytical results of the suspect ACMs and general information regarding the suspect ACMs.

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
PGF – 1 - 3	1	Terrazzo Flooring	Misc.	Good	low	NAD	*Category II – Non-Friable*	1,300 SF	No
PGF – 4 - 6	2	2' x 2' Sheetrock Ceiling Tile	Misc.	Good	low	NAD	*Category II – Non-Friable*	1,600 SF	No

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
PGF – 6 - 9	3	12" x 12" White Vinyl Floor Tile with Blue Specks	Misc.	Good	low	NAD	*Category I – Non-Friable*	100 SF	No
PGF – 10 - 12	4	4" Black Cove Base with Mastic	Misc.	Good	low	NAD	*Category II – Non-Friable*	200 LF	No
PGF – 12 - 15	5	24" x 12" Ceramic Floor Tile	Misc.	Good	low	NAD	*Category II – Non-Friable*	100 SF	No
PGF – 16 - 18	6	13" x 4" Ceramic Floor Tile	Misc.	Good	low	NAD	*Category II – Non-Friable*	400 SF	No
PGF – 19 - 21	7	HVAC Duct Insulation	Misc.	Good	low	NAD	*Friable*	100 LF	No
PGF – 22 - 24	8	TSI Pipe Insulation	Misc.	Good	low	NAD	*Friable*	300 LF	No
PGF – 25 - 29	9	CMU with Texture	Misc.	Good	low	NAD	*Category II – Non-Friable*	3,000 LF	No
		Mirror Mastic	***Misc.***	***Good***	***low***	****Assumed***	***Category II – Non-Friable***	***5 SF***	***No***

Table Notes and Definitions:
HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)
NESHAPs = National Emission Standards for Hazardous Air Pollutants
SF = Square Feet
LF = Linear Feet
EA = Each
NF = Non-Friable
NAD = No Asbestos Detected
Surf = Surfacing
TSI = Thermal System Insulation
Misc. = Miscellaneous
Note - The indicated material quantities are estimates based on UES' field observations and should be considered preliminary in nature. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor.
Note - Damaged and Significantly Damaged Non-Friable Materials are classified as RACM per NESHAP.

6.0 SUMMARY OF ASBESTOS CONTAINING MATERIALS

Inspection of the subject building, located at 3330 Old S. Drive, Richmond, Texas, identified nine (9) materials suspected of containing asbestos fibers. Bulk samples of each material were collected and submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The results indicated that the nine (9) suspect materials did not contain 1.0% or more asbestos.

The *Mirror Mastic* is assumed to be located in the Kitchen Staff Bathroom and is assumed to be in good condition and is assumed to contain 1.0% or more asbestos. This material would be classified as Category II nonfriable ACM according to the current TAHPR and NESHAP regulations. This material was assumed to contain asbestos.

7.0 REGULATORY INFORMATION

The State of Texas has established the TAHPR which requires asbestos related activity to be performed by an individual licensed by TDSHS. An asbestos related activity consists of the disturbance (whether intentional or unintentional), removal, encapsulation, or enclosure of asbestos, including preparations or final clearance, the performance of asbestos surveys, the development of management plans and response actions, asbestos project design, the collection or analysis of asbestos samples, monitoring for airborne asbestos, bidding for a contract for any of these activities, or any other activity required to be licensed under TAHPR.

Abatement must be performed by a TDSHS licensed asbestos abatement contractor in accordance with a project design prepared by a TDSHS Licensed Asbestos Consultant. In addition, third party air monitoring must be conducted by a TDSHS licensed Air Monitoring Technician or Project Manager during the abatement activities.

Demolition under the TAHPR regulation is defined as the wrecking or removal of any load-supporting structural member of a public building or facility for the purpose of razing the building or portion of the building to the ground, or the intentional burning of any public building or facility. The removal of load-supporting structural members followed by resupport of the structure is considered renovation, not demolition. Moving a building from its foundation is considered demolition. We recommend you contact the Controlling Agency (TDSHS) requiring the notification and other requirements which may be applicable. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified.

Renovation or demolition of Pecan Grove Elementary School should be conducted in strict compliance with the aforementioned federal statutes, TAHPR, NESHAP, and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

There are federal and state statutes and regulations which govern the abatement and disposal of ACMs. The renovation or demolition of buildings and roofs containing ACMs is regulated under the TAHPR and NESHAP statutes. The TAHPR and NESHAP regulations require notification to the Controlling Agency (TDSHS) and ACM prior to renovation or demolition. We strongly recommend that you contact the Controlling Agency (TDSHS) prior to renovation or demolition regarding the proper disposition of the ACMs. TDSHS notification is required for any demolition of a facility or public building, whether or not

asbestos has been identified. It is important to note that even though an activity may be exempt from the EPA NESHAP regulations, such exemption does not extend to OSHA standards or other state and federal statutes.

Renovation or demolition activities in buildings and on roofs that contain ACM or Presumed Asbestos Containing Material (PACM) are regulated under the OSHA Asbestos Construction Standard (29 CFR 1926.1101). The OSHA standard requires the building owner to inform their employees who will work in or adjacent to areas containing ACM or PACM, perspective employers applying or bidding for work whose employees reasonably can be expected to work in or adjacent to areas containing ACM or PACM, all employers of employees on multi-employer work sites who will be performing work with or adjacent to areas containing asbestos and tenants who will occupy areas containing ACM or PACM, of the presence, location, and quantity of ACM or PACM at the work sites in their building and facilities. Further, the OSHA standard (29 CFR 1926.1101) requires employers who discover ACM or PACM to convey information concerning the presence, location, and quantity of such newly discovered ACM or PACM to other employers of employees working at the work site within 24 hours of discovery. While OSHA says the notification can be written or personal communication, there are many advantages to written communication.

The OSHA construction standard (29 CFR 1926.1101) also contains specific training, work practices, procedures, engineering controls, notifications, permissible exposure limits, personal protection, record keeping and a multitude of other requirements for the demolition, renovation, construction, alterations, repair, maintenance of structures, substrates, or portions thereof that contain asbestos. It should be noted that recent court rulings have exempted roofing cement from the OSHA Construction Industry Asbestos Standard.

Renovation or demolition of the structures and roofs that could potentially disturbed the ACM located within the subject property should be conducted in strict compliance with the aforementioned federal statutes and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

The renovation and demolition of buildings is regulated under the TAHPR and NESHAP statutes. Even if asbestos is not detected at 1.0% or more, the TAHPR and NESHAP regulations require a ten-day notification to the Controlling Agency (TDSHS) prior to renovation and demolition.

8.0 CONTROLLNG AGENCY

The Controlling Agency for the coordination of projects involving asbestos removal or demolition is the TDSHS Asbestos Program. The owner or operator shall provide the above-referenced department with a ten-day notice of the asbestos removal project or demolition by timely submittal of a completed "Asbestos

Abatement/Demolition Notification" form, as promulgated under TAHPR. The notification can be submitted on Texas Department of State Health Services, located online at https://www.dshs.texas.gov/asbestos-program/notifications-asbestos-program.

9.0 CONDITIONS AND LIMITATIONS OF THIS INPECTION

A representative of UES obtained samples of building materials which were observed during an inspection of the building at the subject site that are typically suspected of containing asbestos as a constituent. The bulk samples were submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis using EPA approved methods for industry-accepted standards. UES makes no warranties, express or implied.

In general, inspection and sampling procedures were incorporated which allowed assessment of reasonably accessible building materials. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls. Though every effort was made to examine wall cavities and other areas for thermal system insulation, spray-applied or trowel applied surfacing material or other miscellaneous materials and other PACM, this survey and report only deals with accessible areas of the building. There may be additional inaccessible areas above the ceiling, behind walls and below floors that become evident during demolition or renovation activities. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed. The building's equipment fixtures, or stored materials were not inspected or sampled as part of this evaluation.

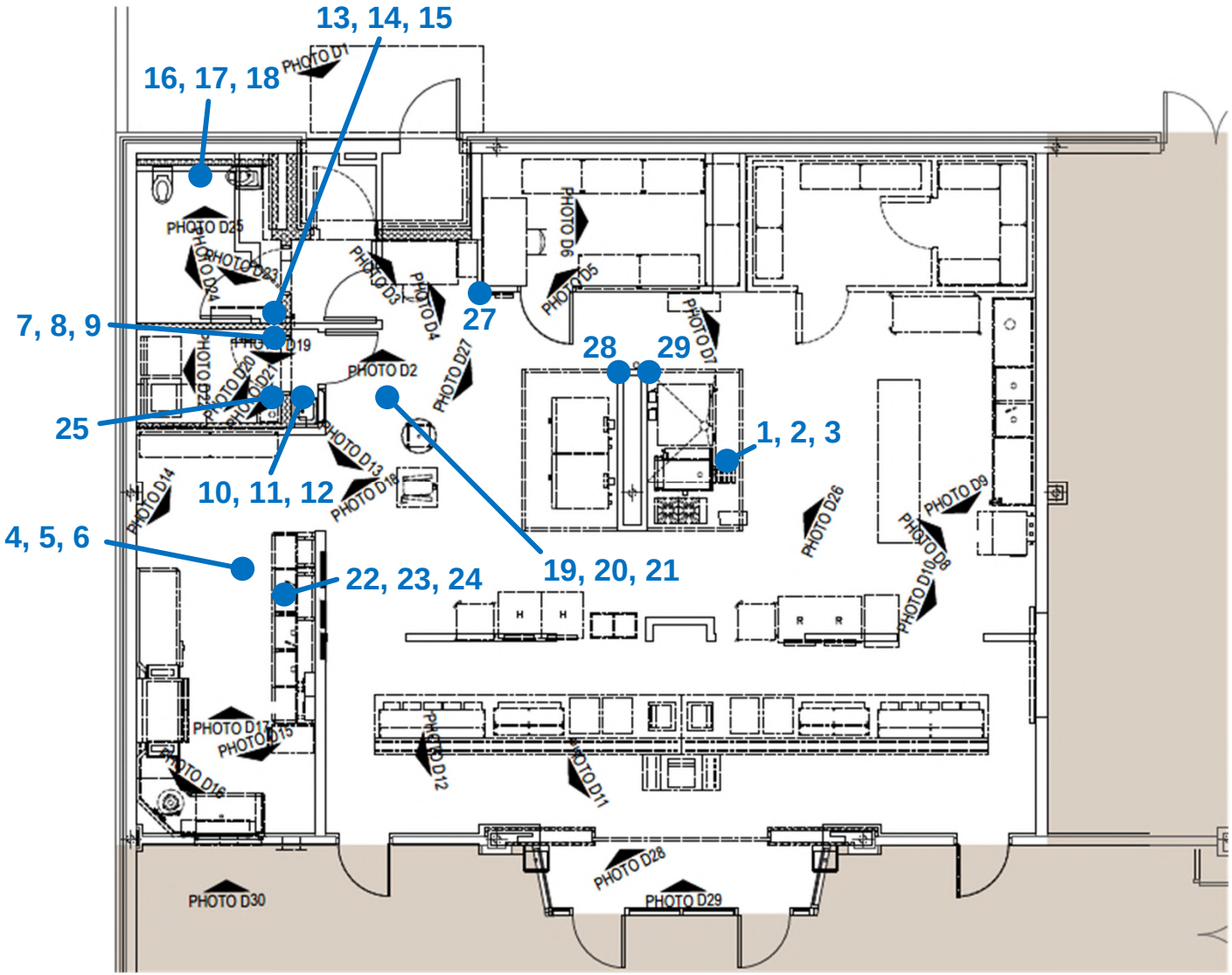
Bidders are responsible for their own calculations and estimates of quantities. Actual quantities may be more or less than indicated.

Federal OSHA Standard 26 CFR 1926.1101 has specific requirements relating to employee protection and notification during construction projects (including demolition and renovation projects) involving ACM as well as materials containing trace levels of asbestos which apply to this project. UES recommends complying with applicable OSHA regulations, which would include notifying the demolition contractor of the presence of asbestos.

All conclusions and recommendations in this report represent the professional opinions of the personnel involved with the project. The results, findings, conclusions and recommendations expressed in this report are based on access provided and conditions observed, and samples taken during the survey of the building. The information contained in this report is relevant as of the date on which the field work was performed and should not be relied upon to represent Site's conditions at a later date. This study and report were prepared on behalf of and for the exclusive use of the Client solely for its use and reliance in determining the presence of asbestos in identified areas of the site. The results of this report are not intended or to be construed as legal interpretation of existing federal, state, or local environmental, health and safety laws or regulations. UES assumes no responsibility or liability for errors in information or data provided to UES by the Client or any third party or developments resulting from activities or situations outside the scope of this project.

Appendix A
Bulk Sample Location Map and Photograph Log

Sample Locations



Legend:

- Negative ACM Sample Location

Floor Plans are not to scale

First Floor

UES

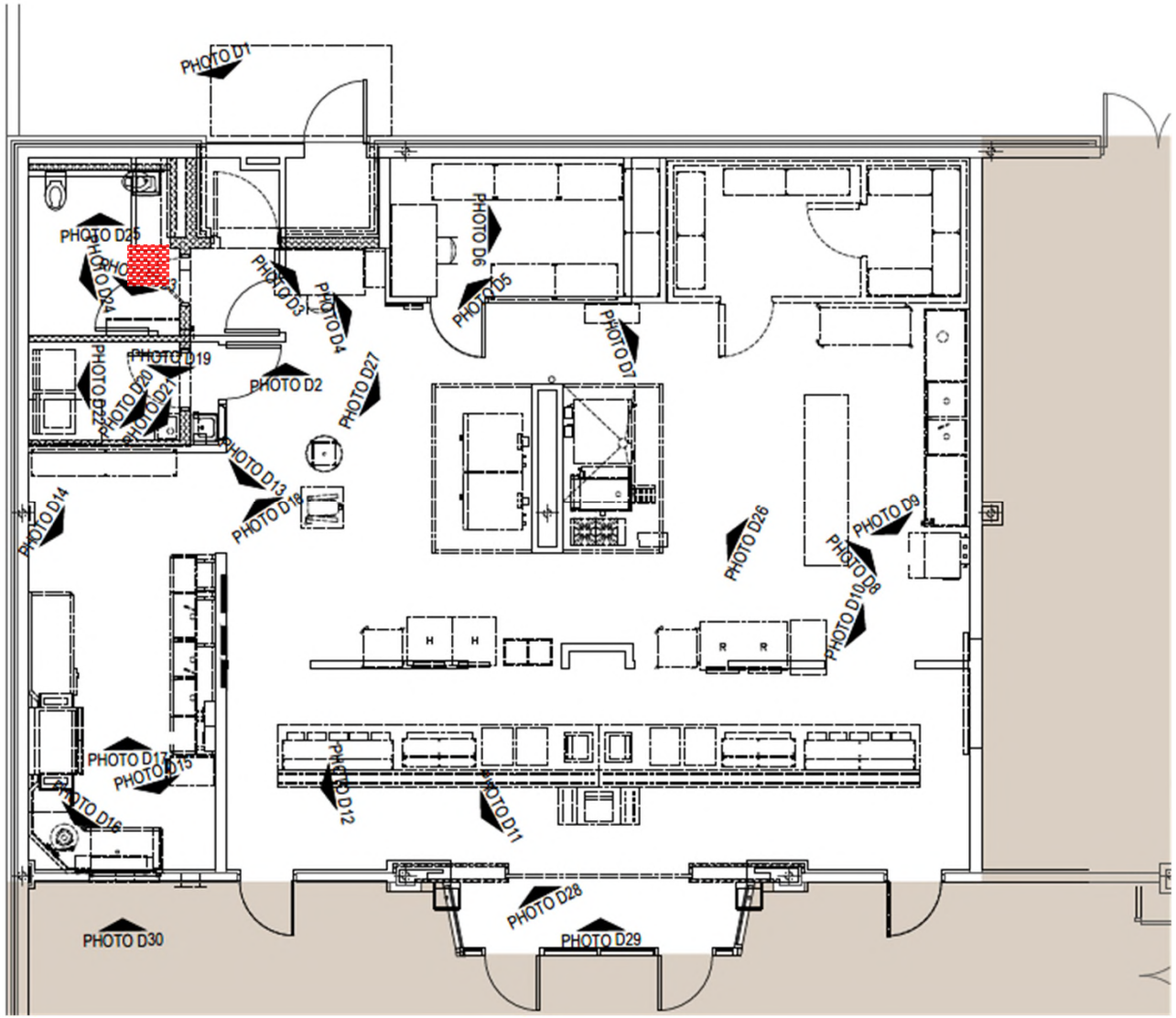
FBISD – BP013 Renovations
Pecan Grove ES
3330 Old S. Drive,
Richmond, Texas

Fort Bend ISD
16431 Lexington Boulevard,
Sugar Land, Texas 77479

N

Proj. Mgr: KAG
Date: 4/30/2025
Drawn By: EDG
Project # N250486

Assumed ACM Locations

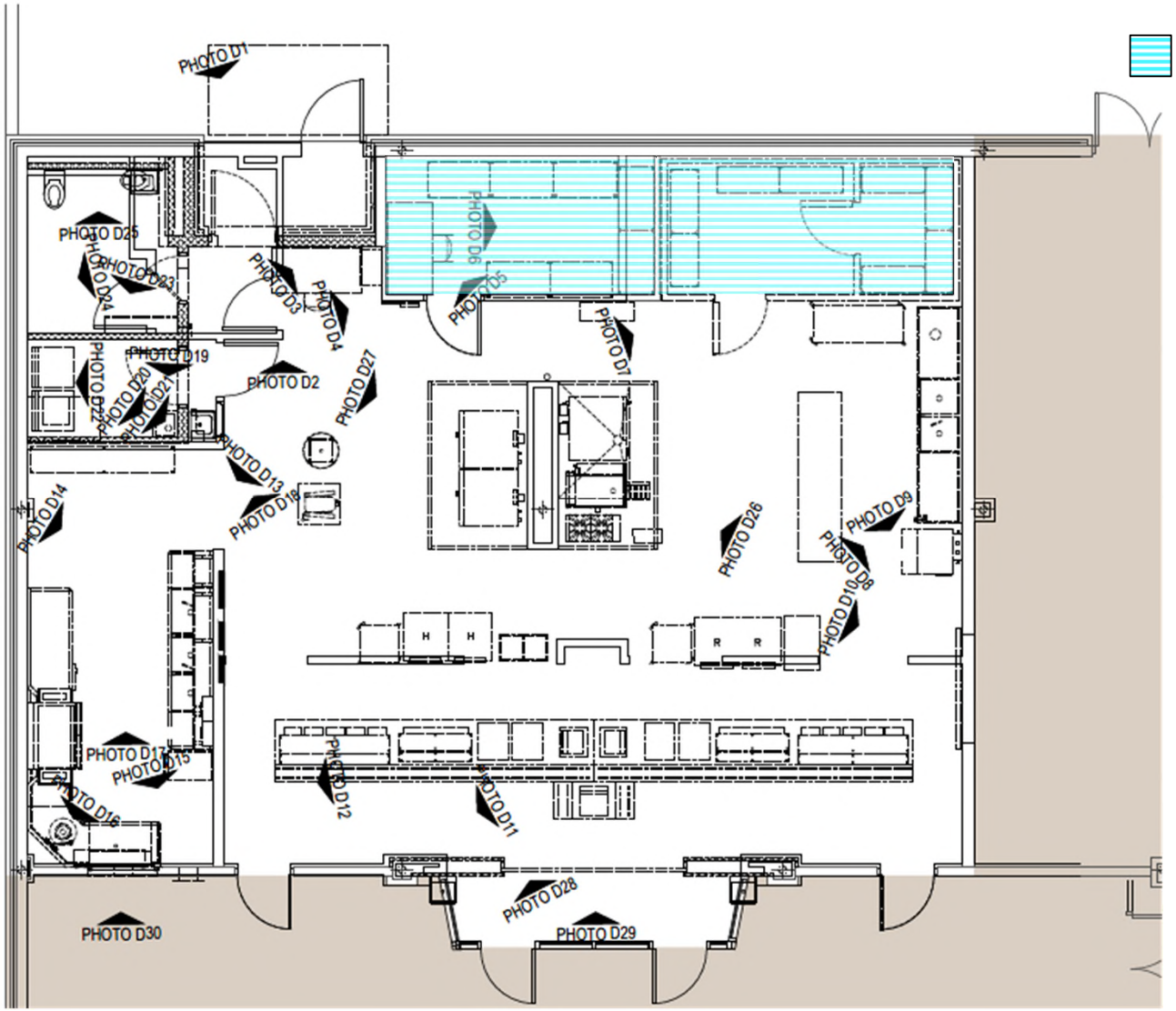


Floor Plans are not to scale

First Floor

UES	**FBISD – BP013 Renovations** **Pecan Grove ES** 3330 Old S. Drive, Richmond, Texas	**Fort Bend ISD** 16431 Lexington Boulevard, Sugar Land, Texas 77479	N	**Proj. Mgr: KAG** **Date: 4/30/2025** **Drawn By: EDG** **Project # N250486**

Inaccessible Locations



Legend:

- Inaccessible Area

Notes:

These areas were inaccessible, all materials within that differ from materials that were sampled are assumed to be asbestos containing until such a time as they can be sampled and proven negative of asbestos content

Floor Plans are not to scale

First Floor

UES

FBISD – BP013 Renovations
Pecan Grove ES
3330 Old S. Drive,
Richmond, Texas

Fort Bend ISD
16431 Lexington Boulevard,
Sugar Land, Texas 77479

N

Proj. Mgr: KAG
Date: 4/30/2025
Drawn By: EDG
Project # N250486

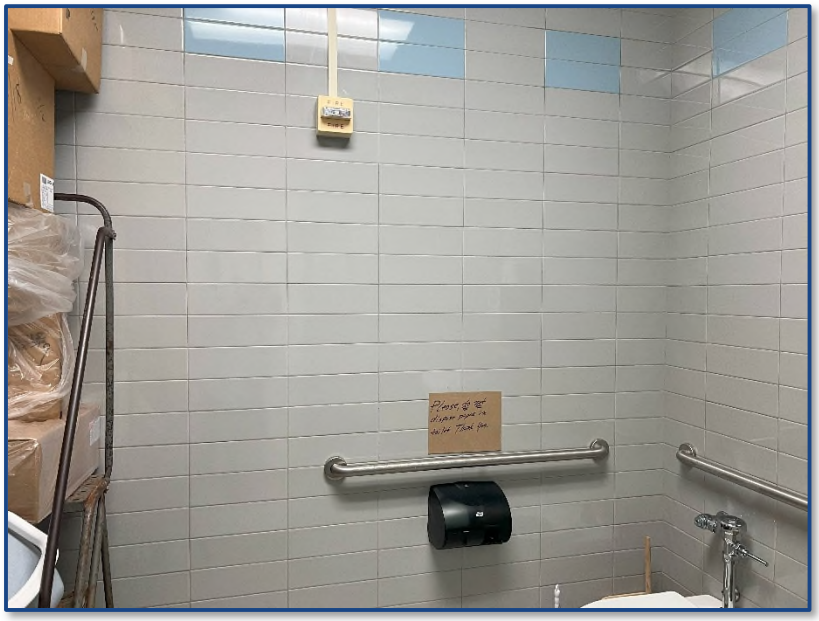
HA 1: Terrazzo Flooring

HA 2: 2’ x 2’ Sheetrock Ceiling Tile

HA 3: 12” x 12” White Vinyl Floor Tile with Blue Specks

HA 4: 4” Black Cove Base with Mastic

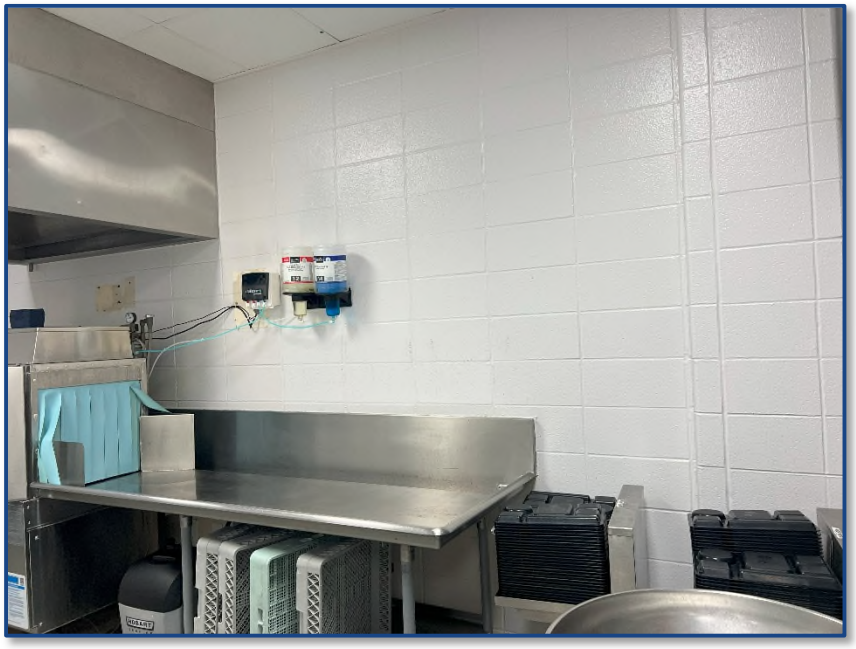
HA 5: 24” x 12” Ceramic Floor Tile



HA 6: 13” x 4” Ceramic Wall Tile

HA 7: HVAC Duct Insulation

HA 8: TSI Pipe Insulation



HA 9: CMU with Filler Texture

Appendix B
PLM Analytical Report & Chain-of-Custody Documentation

Asbestos Laboratory Report

Prepared for

UES Dallas

Project: FBISD - BP013 Renovations - Pecan Grove

UES No.: A25117.00817.000

Date Received: 4/21/2025

Date Analyzed: 4/24/2025

Date Reported: 4/25/2025

Total Samples Analyzed: 54

 # Samples >1% Asbestos: 0

Method of Analysis: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00817.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/24/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Pecan Grove

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
PGF-1 A25117.00817.000-1	Terrazzo Flooring	Black, White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-2 A25117.00817.000-2	Terrazzo Flooring	Black, White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-3 A25117.00817.000-3	Terrazzo Flooring	Black, White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-4 A25117.00817.000-4	2x2 Sheetrock Ceiling Tile	White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
PGF-5 A25117.00817.000-5	2x2 Sheetrock Ceiling Tile	White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
PGF-6 A25117.00817.000-6	2x2 Sheetrock Ceiling Tile	White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
PGF-7-Floor Tile A25117.00817.000-7	12x12 White Vinyl Floor Tile with Blue Specks	Blue, White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-7-Mastic A25117.00817.000-7A	12x12 White Vinyl Floor Tile with Blue Specks	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-8-Floor Tile A25117.00817.000-8	12x12 White Vinyl Floor Tile with Blue Specks	Blue, White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-8-Mastic A25117.00817.000-8A	12x12 White Vinyl Floor Tile with Blue Specks	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-9-Floor Tile A25117.00817.000-9	12x12 White Vinyl Floor Tile with Blue Specks	Blue, White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-9-Mastic A25117.00817.000-9A	12x12 White Vinyl Floor Tile with Blue Specks	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-10-Cove Base A25117.00817.000-10	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-10-Mastic A25117.00817.000-10A	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

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UES Dallas
2209 Wisconsin St
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Date Received: 4/21/2025
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Project: FBISD - BP013 Renovations - Pecan Grove

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
PGF-11-Cove Base A25117.00817.000-11	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-11-Mastic A25117.00817.000-11A	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-12-Cove Base A25117.00817.000-12	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-12-Mastic A25117.00817.000-12A	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-13 A25117.00817.000-13	24x12 Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-14 A25117.00817.000-14	24x12 Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-15 A25117.00817.000-15	24x12 Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-16-Ceramic Tile A25117.00817.000-16	13x4 Ceramic Wall Tile	White, Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-16-Grout A25117.00817.000-16A	13x4 Ceramic Wall Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-17-Ceramic Tile A25117.00817.000-17	13x4 Ceramic Wall Tile	White, Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-17-Grout A25117.00817.000-17A	13x4 Ceramic Wall Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-18-Ceramic Tile A25117.00817.000-18	13x4 Ceramic Wall Tile	White, Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-18-Grout A25117.00817.000-18A	13x4 Ceramic Wall Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-19-Wrap A25117.00817.000-19	HVAC Duct Insulation	Silver, Brown Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

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Date Received: 4/21/2025
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Project: FBISD - BP013 Renovations - Pecan Grove

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
PGF-19-Insulation A25117.00817.000-19A	HVAC Duct Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
PGF-20-Wrap A25117.00817.000-20	HVAC Duct Insulation	Silver, Brown Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
PGF-20-Insulation A25117.00817.000-20A	HVAC Duct Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
PGF-21-Wrap A25117.00817.000-21	HVAC Duct Insulation	Silver, Brown Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
PGF-21-Insulation A25117.00817.000-21A	HVAC Duct Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
PGF-22-Wrap A25117.00817.000-22	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
PGF-22-Insulation A25117.00817.000-22A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
PGF-23-Wrap A25117.00817.000-23	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
PGF-23-Insulation A25117.00817.000-23A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
PGF-24-Wrap A25117.00817.000-24	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
PGF-24-Insulation A25117.00817.000-24A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
PGF-25-Texture A25117.00817.000-25	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-25-CMU A25117.00817.000-25A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-25-Mortar A25117.00817.000-25B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

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Date Received: 4/21/2025
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Project: FBISD - BP013 Renovations - Pecan Grove

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
PGF-26-Texture A25117.00817.000-26	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-26-CMU A25117.00817.000-26A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-26-Mortar A25117.00817.000-26B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-27-Texture A25117.00817.000-27	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-27-CMU A25117.00817.000-27A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-27-Mortar A25117.00817.000-27B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-28-Texture A25117.00817.000-28	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-28-CMU A25117.00817.000-28A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-28-Mortar A25117.00817.000-28B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-29-Texture A25117.00817.000-29	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-29-CMU A25117.00817.000-29A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
PGF-29-Mortar A25117.00817.000-29B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

METHOD: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

For samples easily separated into homogeneous layers, each component will be analyzed separately. The sample may not be representative of the larger material in question. Interpretation and use of test results are the responsibility of the client. Due to the limitations of the EPA 600 Method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles, mastic and roofing can be difficult to analyze by PLM. Reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or None Detect for these materials is recommended. The percentage of asbestos reported is a midpoint within an acceptable range. The estimated measurement of uncertainty is available upon request. Results relate only to the items received by the laboratory as noted on the Chain of Custody provided by the client.

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Analysis is determined by Calibrated Visual Estimate (CVE).
Temperature at the time of analysis (°C) : 22

NVLAP Code: 600344

Texas License Number : 300520

Analyst(s): Brant Alyea

Approved By: Cass Rupert
Approved Signatory

UES Laboratories, 10121 Pineville Distribution St., Pineville, NC Phone: (704) 504-1717

UNIVERSAL ENGINEERING SCIENCES

CHAIN OF CUSTODY

LAB USE ONLY:	A25117.00817.000
UES Order Number:	45495

10121 Pineville Distribution Street,
Pineville, North Carolina 28143
Tel: 704-504-1717; Fax: 704-504-1125

COMPANY CONTACT INFORMATION			
Company:	UES Dallas	Job Contact:	Ethan Grigg, Kristopher Girton
Address:	2209 Wisconsin Street,	Email:	egrigg@teamues.com
	Dallas, Texas 75229		kgirton@teamues.com
		Tel:	817-966-6636
Project Name:	FBISD - BP013 Renovations	Fax:	
Project ID #:	N250486	State Collected In:	Intact

Bill to: ☑ Same ☐ Different – If Bill to is different please notate in the comments section.

ASBESTOS	METHOD	TURN AROUND TIME						
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY	2 Week
PLM BULK	EPA 600	☐	☐	☐	☐	☐	☑	☐
PLM Point Count (400)	EPA 600	☐	☐	☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐	☐
TEM BULK	EPA NOB / Chatfield			☐	☐	☐	☐	☐
TEM AIR	AHERA 40 CFR, Part 763	☐	☐	☐	☐	☐	☐	☐
TEM Dust Wipe	ASTM D6480	☐	☐	☐	☐	☐	☐	☐

POSITIVE STOP ANALYSIS: ☑

IF TURNAROUND TIME IS NOT MARKED STANDARD 5 DAY APPLIES

By submitting samples, you are agreeing to UES Terms and Conditions

COMMENTS: Pecan Grove ES
SEE ATTACHED – Use Sampling Log Name

☑ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
Ethan Grigg	4/18/2025		4.21.25

Samples will be disposed of 60 days after analysis

A25117.008|7.000

UES

PO#: 45495

Date: 4/17/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD- BP013 Renovations - Pecan Grove ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
PGF-	1	Terrazzo Flooring	Kitchen	NF II	G	1,300SF
"	2	"	"	"	"	"
"	3	"	"	"	"	"
"	4	2'x2' Sheetrock Ceiling Tile	Kitchen	NF II	G	1,600SF
"	5	"	"	"	"	"
"	6	"	"	"	"	"
"	7	12"x12" White vinyl Floor Tile with Blue Specks	Kitchen	NF I	G	100SF
"	8	"	"	"	"	"
"	9	"	"	"	"	"
"	10	4" Black Cove Base with Mastic	Kitchen	NF II	G	200 LF
"	11	"	"	"	"	"
"	12	"	"	"	"	"
"	13	24"x12" Ceramic Floor Tile	Kitchen	NF II	G	100 SF
"	14	"	"	"	"	"
"	15	"	"	"	"	"

A2517.00817.000

UES

PO#: 45495

Date: 4/17/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD- BP013 Renovations - Pecan Grove ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
PGF	16	13"x4" Ceramic Wall Tile	Kitchen	NF II	G	400SF
	17	〃	〃	〃	〃	〃
	18	〃	〃	〃	〃	〃
	19	HVAC Duct Insulation	Kitchen	F	G	100LF
	20	〃	〃	〃	〃	〃
	21	〃	〃	〃	〃	〃
	22	TSI Pipe Insulation	Kitchen	F	G	300LF
	23	〃	〃	〃	〃	〃
	24	〃	〃	〃	〃	〃
	25	CMU with Filler Texture	Kitchen	NF II	G	3,000SF
	26	〃	〃	〃	〃	〃
	27	〃	〃	〃	〃	〃
	28	〃	〃	〃	〃	〃
〃	29	〃	〃	〃	〃	〃

Appendix C
Inspector(s) License and Firm License

GEBCO Associates certifies that

Ethan D. Grigg

25056 1127

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS INSPECTOR REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25056

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Ethan D. Grigg

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Inspector Refresher Course

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25056 1127

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

GEBCO Associates, LP * 815 Trailwood Dr, Suite 200 * Hurst, TX 76053 * (817)268-4006

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Inspector

ETHAN D GRIGG

License Number: 603778

Control Number: 101162

Expiration Date: 10-Apr-2027

GEBCO Associates certifies that

Kristopher A. Girton

25003 0358

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 01/08/2025 Certificate No: 25003

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053
Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Kristopher A. Girton

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on January 8, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

Owner

Instructor: Joseph Londt

Date of Issue 01/08/2025

Certificate Number: 25003 0358

Exam Date: 01/08/2025

Certificate Expires 01/08/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

KRISTOPHER A GIRTON

License Number: 105894

Control Number: 98431

Expiration Date: 7-Jun-2026

GEBCO Associates certifies that

Michael K. Nibert

25021 5548

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25021

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP

815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Michael K. Nibert

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25021 5548

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

MICHAEL K NIBERT

License Number: 105931

Control Number: 98417

Expiration Date: 8-May-2026

Texas Department of State Health Services

UES PROFESSIONAL SOLUTIONS 44 LLC

is certified to perform as an

Asbestos Consultant Agency

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1954 and Title 12, Texas Administrative Code, Chapter 295 relating to Texas Asbestos Health Protection, as long as this license is not suspended or revoked.

License Number: 100608

Expiration Date: 05/12/2026

Jennifer Shuford, MD, MPH,
Commissioner of Health

Control Number: 97663

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

SEE BACK

ASBESTOS CONTAINING MATERIALS INSPECTION REPORT

FBISD – BP013 Renovations – Settlers Way ES
3015 Settlers Way Boulevard
Sugar Land, Texas
UES Project No. N250486

Prepared for:
Fort Bend ISD
16431 Lexington Boulevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Prepared by:
UES
2209 Wisconsin Street
Dallas, TX 75229
972-620-8911
www.TeamUES.com

TDSHS Asbestos Consultant Agency License No.: 100608

June 10, 2025

Fort Bend ISD
16431 Lexington Bouevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Re: Asbestos Containing Materials Inspection Report
FBISD – BP013 Renovations – Settlers Way ES
3015 Settlers Way Boulevard
Sugar Land, Texas
UES Report No. N250486

Dear Mrs. Pentrala:

On behalf of Fort Bend ISD (the "Client"), UES Professional Solutions 44, LLC (hereinafter "UES") has completed this Asbestos Containing Materials Inspection Report for Settlers Way Elementary School (the "subject property"). This inspection was conducted in general accordance with Title 25 of the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296) the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP). UES performed this ACM inspection on April 15, 2025, to categorize and assess readily available suspect homogeneous material for Settlers Way Elementary School. UES collected twenty-three (23) bulk samples from seven (7) homogeneous materials. The bulk samples were transported to a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and Texas Department of Safety and Health Services (TDSHS) licensed laboratory for analysis using Polarized Light Microscopy (PLM) for the presence of asbestos fibers.

Asbestos Containing Materials (ACMs) are classified as materials that contain 1.0% or more asbestos in any of the homogeneous materials sampled. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The laboratory analyses indicated that asbestos fibers were not detected in the homogeneous materials analyzed from the building. Refer to Section 6.0 of this report. Additional details regarding the ACM Inspection conducted by UES are presented in the attached report.

We appreciate the opportunity to perform these services for Fort Bend ISD. Please contact the undersigned if you have questions regarding the information provided in the report.

Respectfully submitted,
UES

Kristopher Girton
Asbestos Project Manager
Asbestos Consultant License No.: 105894

Michael Nibert, CHMM, C.E.M.
Director of Environmental Services-North Texas
Asbestos Consultant License No.: 105931

TDSHS Asbestos Consultant Agency License No.: 100608

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APPENDICES

APPENDIX A

Bulk Sample Location Map and Photograph Log

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PLM Analytical Report & Chain-of-Custody Documentation

APPENDIX C

Inspector(s) License and Firm License

1.0 INTRODUCTION

UES Professional Solutions 44, LLC (hereinafter "UES") conducted a pre-renovation (limited) Asbestos Containing Materials (ACM) Inspection of Settlers Way Elementary School located at 3015 Settlers Way Boulevard in Sugar Land, Texas. The purpose of this inspection was to identify and sample accessible suspect ACM and provide information regarding the identity, location, and condition in anticipation of a renovation and/or demolition of the building.

This service was completed in general accordance with UES Proposal No. 109625Rev4 dated February 10, 2025, and authorized by Fort Bend ISD Purchasing Department, Purchase Order 501107 on March 28, 2025.

This asbestos inspection was limited to the kitchen of Settlers Way Elementary School. During the survey two locations could not be accessed; the dry storage room and walk-in cooler. If materials in these areas do not match those sampled during this survey, they are assumed to be asbestos containing until they can be sampled and proven negative of asbestos content. Certain materials were not sampled, these materials are assumed to be asbestos containing.

This inspection was conducted in accordance with the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296), the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP).

A map or photographic log illustrating the sample locations is included as Appendix A of this report. The bulk sample laboratory report and associated chain-of-custody documentation is presented in Appendix B. A copy of the inspector's license that performed the building inspection and a copy of UES's Texas Department of Safety and Health Services (TDSHS) firm license are provided in Appendix C.

1.1 Limitations and Exclusions

This inspection report is not intended to be used as a specification, project design or work plan. The indicated material quantities of ACM (if documented) are estimates based on UES's field observations on the date(s) of the inspection(s) and should be considered preliminary in nature. All parties utilizing this report for proposal, estimation or contract negotiations are required to field verify the quantities of material prior to submission of proposal. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor. The asbestos abatement contractor should ascertain for themselves, by site measurements and inspection, the exact nature and extent of the work to be done.

Inspection and collection of bulk samples of suspect ACMs were limited to those materials readily accessible at the time of inspection. Destructive sampling techniques (such as wall and ceiling testing, and carpet cuts to expose underlying flooring) were employed in limited measures in the areas inspected and

completed in a way to minimize disruption to operations and damage to building components. Extensive destructive sampling methods were not used, and exploratory demolition of walls and/or removal of fixed items were not conducted. No attempt was made by UES to observe conditions in spaces not generally accessible, including but not limited to crawlspaces, pipe chases, plenums, or confined spaces. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls.

Although every effort is made to locate all suspected ACMs, it is impossible to rule out the possibility that undiscovered asbestos materials may be present. If the building is to undergo major refurbishment or demolition, it is recommended that the persons carrying out the work are made aware of this and take sufficient precautions, as may be appropriate, to ensure the health and safety of their own employees and any other parties who may be affected by the works. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed.

Asbestos has not been banned from use in building products in the United States. Newer buildings are not exempt. Certain uses of asbestos have been banned: such as spray applied fireproofing, pipe and boiler insulation and asbestos cardboard.

1.2 Purpose and Scope of Work

The purpose of this study was to perform an evaluation of the above-referenced facility for the presence of ACMs, specifically those building materials which may be present or impacted during potential demolition or renovation activities. The activities and procedures used to accomplish this task were as follows:

1) A review of available building documents to identify potential locations of suspect ACMs;
2) Visual building inspection of accessible areas by a EPA Asbestos Hazard Emergency Response Act (AHERA) accredited and Texas Department of Safety and Health Services (TDSHS) licensed Asbestos Building Inspector to identify suspect ACMs;
3) Once identified, homogeneous materials (materials which are uniform in color, texture, construction/application date, and general appearance) were determined;
4) Determine whether the suspect ACM is Friable (a material that when dry, may be crumbled, pulverized or reduced to powder by hand pressure) or Non-Friable;
5) Collection of bulk samples of each homogeneous suspect ACM. Record sample information on Asbestos Bulk Sample Forms (chain-of-custody sheets), which were signed, dated, and sent with the samples to the laboratory;
6) Analysis of the collected bulk samples at a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and TDSHS licensed laboratory using Polarized Light Microscopy (PLM) for the presence of asbestos fibers;

7) Approximate locations of the bulk samples were defined. Computer Assisted Drafting and Design (CADD) drawings were developed indicating sample locations. In addition, approximate quantities of identified ACM were also determined; and,
8) Prepare and submit a report.

2.0 CHARACTERISTICS AND INFORMATION

2.1 General

A summary of Settlers Way Elementary School's characteristics is outlined in the table below. Information on the buildings was obtained by UES through our field inspection, review of available building documents and/or property appraiser records.

FORT BEND ISD - SETTLERS WAY ELEMENTARY SCHOOL		
General	Facility Type	Elementary School
	Construction Date	1984
	Building Size	71,057 Square Feet
	Number of Stories	1
Structural	Foundation	Slab-on-Grade
	Wall Support	Concrete Block, Steel and Glass
	Wall Finish	Brick
	Roof Support	Bar Joist w/ Metal Deck
	Roof System Type	Built-up Roofing
Mechanical/ Plumbing	HVAC Type	Central (Rooftop Units)
	Duct Type	Fiberglass (Flex or Ridged)
	Pipe Insulation	Paper Wrap with Fiberglass Insulation
Interior	Wall Substrates	Wood/Steel Studs, or Furring Strips
	Wall Finishes	Drywall, CMU
	Floor Substrates	Concrete
	Floor Finishes	Ceramic Tiles, Vinyl Floor Tile
	Ceiling Systems	Suspended
	Ceiling Finishes	Gypsum Ceiling Tiles
	Other	None

2.2 Building Information Available

UES was provided with demolition plan drawings dated December 4, 2024. No previous asbestos inspection report(s) were provided and no other material information was provided in reference to Settlers Way Elementary School located within the subject building.

2.3 Current Building Use

At the time of UES's ACM inspection, Settlers Way Elementary School was an occupied elementary school.

3.0 INSPECTION PROTOCOL

Three forms of ACMs are typically found on structures. These materials are classified as follows:

- *Surfacing Material* – material that is sprayed-on, troweled-on, or otherwise applied to interior and exterior structural and architectural surfaces. Surfacing material includes acoustical plaster on ceilings, fireproofing on structural members, textured paint and exterior stucco, and other materials applied to surfaces for acoustical, decorative, fireproofing, and other purposes.

- *Thermal System Insulation* — material which is applied to interior and exterior mechanical components to reduce heat gain or loss. Thermal system insulation includes insulation on pipes, fittings, boilers, breeching, tanks, ducts, and other mechanical components.

- *Miscellaneous Materials* — material, other than surfacing material and thermal system insulation, on interior and exterior structural, mechanical, electrical, or architectural components, and surfaces. Miscellaneous material includes but is not limited to ceiling tiles, gaskets, floor coverings and mastics, wallboard joint compound, roofing materials, and cementitious products.

An inspection of Settlers Way Elementary School was conducted to identify these, and other materials present within the building which are suspected of containing asbestos.

3.1 Inspection Procedures

UES's field inspection was performed on April 15, 2025, by Ethan Grigg, an inspector accredited according to Federal Regulation 40 CFR, Part 763 (AHERA), and a TDSHS Licensed Asbestos Inspector (TDSHS License No. 60-3778).

After a preliminary walk-through of the building, an inspection was conducted to evaluate the location and extent of the suspected ACMs. Once identified, these materials were categorized into homogeneous areas containing materials of the same type, age, visual appearance, texture, composition, etc.

This type of inspection is designed to be used as a basis for tendering the removal of ACMs from the subject building(s) prior to demolition or renovation. The present condition of each ACM was evaluated by UES and classified as one of three categories: "good", "damaged" and "significantly damaged." As defined by AHERA. "Poor condition, for NESHAP Category I and II nonfriable materials, is synonymous to "damaged" and/or "significantly damaged," depending on the percentage of damaged.

Federal regulations also require inspectors to determine the potential for disturbance (or damage). This potential for disturbance is based on the presumption that the building will not be demolished. The classifications for potential for disturbance ranges from low, to moderate, to high, and is based on vibration, contact and air erosion.

The TAHPR utilizes NESHAP and AHERA regulations depending on the type of building that is being surveyed. Public buildings and facilities utilize TAHPR per NESHAP regulations and school buildings utilize the AHERA regulations. TAHPR requires a minimum of three (3) samples of each Homogenous Area to be collected and analyzed by a NVLAP accredited and TDSHS licensed laboratory. The number of bulk samples collected was based on the type of facility (public building and facility or school) and category of Homogeneous Area and the quantity of the material present, as follows:

AHERA GUIDELINES FOR DETERMINING THE NUMBER OF SAMPLES TO COLLECT

HSA CATEGORY	HSA QUANTITY	SAMPLES REQUIRED
Surfacing Materials	<1,000 Square Feet	3
	1,000 – 5,000 Square Feet	5
	>5,000 Square Feet	7 or more
Thermal System Insulation	No Stipulation	3+ (All repair patches must be sampled)
Miscellaneous Materials	No Stipulation	Per AHERA Guidelines, these materials must be sampled "in a manner sufficient to determine whether or not they contain asbestos" typically two or more samples based upon the inspector's judgement (a minimum of three (3) samples are required by TAHPR).

HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)

UES's inspector(s) employed wet methods as applicable during bulk sample collection to reduce the potential for fiber release. Each sample was documented by labeling the container with a unique sample number, entering the sample material on a bulk sample log or chain-of-custody form, and noting the location of each sample on a floor plan. Throughout the sampling process, care was taken to prevent cross-contamination of the collected bulk samples. Sampling equipment was cleaned following the collection of each sample.

Random, and in some cases judgmental, samples of each homogeneous area of material were then collected. The physical condition of each material was assessed. In addition, a tactile inspection of the material was performed to evaluate its friability. If the material, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure, it is considered friable. Samples from any homogeneous area

where the inspector determined that the material was non-ACM (such as thermal insulation that obviously fibrous glass, foam glass, or rubber) were not collected.

3.2 Suspected Asbestos Containing Materials

Based on UES's review of the available building system information and thorough visual inspection of the subject building, seven (7) Homogeneous Areas were identified at Settlers Way Elementary School commonly suspected of containing asbestos. The Homogeneous Areas are detailed on the List of suspect ACMs.

3.3 TAHPR Classification

The materials assessed are classified as either: Regulated Asbestos Containing Material (RACM), Category I non-friable ACM, or Category II non-friable ACM.

Friable materials are "Any ACM that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure."

Non-friable materials are "ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

Category I non-friable ACM is "Asbestos-containing packings, gaskets, resilient floor-covering material, and asphalt roofing products determined to be ACM."

Category II non-friable ACM is – "Any material determined to be ACM, excluding Category I non-friable ACM, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

RACM means "Friable asbestos material; Category I non-friable ACM that has become friable; Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations."

ACM materials are subject to the TAHPR notification requirements, refer to Section 7.0 for Regulatory Information.

4.0 LABORATORY ANALYSIS

4.1 Polarized Light Microscopy Analysis

The samples of the suspected ACMs collected during the field inspection were transported with chain-of-custody documentation to UES Laboratories located in Pineville, North Carolina. UES Laboratories is a NVLAP accredited laboratory (NVLAP Accreditation No. 600344-0) and TDSHS licensed (TDSHS License No. 300520) laboratory for bulk sample analysis.

Bulk samples were analyzed for the presence of asbestos fibers using PLM. The analyses were performed according to EPA Method 600/R-93/116 July 1993 "Method for the Determination of Asbestos in Bulk Building Materials." This analytical method can be used for qualitative identification of six morphologically different types of asbestos fibers: chrysotile, amosite, crocidolite, tremolite, actinolite and anthophyllite. PLM analysis requires the microscopist to take a portion of the sample and treat it with an oil of specific refractive index. The prepared slide is then subjected to a variety of tests while being viewed under varying polarizations of light. Each type of asbestos displays unique characteristics when subjected to these tests.

The method specifies that the asbestos content in a bulk sample shall be estimated and reported as a finite percentage within the range of 0 to 100. Minute quantities of asbestos in bulk samples may be reported as "trace" or less than one percent (<1.0%). The analytical method determines the asbestos percentage by means of visual estimation technique. If analysis of the sample of a suspect ACM reveals a negative result, UES considers the material to be non-Asbestos containing. If at any time during the analytical process a sample tests positive, that material must be treated as ACM.

5.0 FINDINGS

Seven (7) suspect homogeneous materials were identified at the subject building. Following TAHPR and AHERA guidelines, the appropriate number of bulk samples were collected from the identified homogeneous material and submitted for laboratory analysis.

The laboratory analyses indicated that asbestos fibers were not detected in the homogeneous materials analyzed from the building.

The following table presents the analytical results of the suspect ACMs and general information regarding the suspect ACMs.

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
SWF – 1 - 5	1	CMU with Texture	Misc.	Good	low	NAD	*Category II – Non-Friable*	3,000 SF	No

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
SWF – 6 - 8	2	6" x 6" Brown Ceramic Floor Tile	Misc.	Good	low	NAD	*Category I – Non-Friable*	1,300 SF	No
SWF – 9 - 11	3	2' x 2' Sheetrock Ceiling Tile	Misc.	Good	low	NAD	*Category II – Non-Friable*	1,600 SF	No
SWF – 12 - 14	4	12" x 12" Marble Style Vinyl Floor Tile	Misc.	Good	low	NAD	*Category I – Non-Friable*	100 SF	No
SWF – 15 - 17	5	4" Black Cove Base with Mastic	Misc.	Good	low	NAD	*Category II – Non-Friable*	200 LF	No
SWF – 18 - 20	6	HVAC Duct Insulation	Misc.	Good	low	NAD	*Friable*	100 LF	No
SWF – 21 - 23	7	TSI Pipe Insulation with Mastic	TSI	Good	low	NAD	*Friable*	300 LF	No
		Mirror Mastic	***Misc.***	***Good***	***low***	****Assumed***	***Category II – Non-Friable***	***5 SF***	***No***

Table Notes and Definitions:
HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)
NESHAPs = National Emission Standards for Hazardous Air Pollutants
SF = Square Feet
LF = Linear Feet
EA = Each
NF = Non-Friable
NAD = No Asbestos Detected
Surf = Surfacing
TSI = Thermal System Insulation
Misc. = Miscellaneous
Note - The indicated material quantities are estimates based on UES' field observations and should be considered preliminary in nature. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor.
Note - Damaged and Significantly Damaged Non-Friable Materials are classified as RACM per NESHAP.
***This material was assumed to contain asbestos.**

6.0 SUMMARY OF ASBESTOS CONTAINING MATERIALS

Inspection of the subject building, located at 3015 Settlers Way Boulevard, Sugar Land, Texas, identified seven (7) materials suspected of containing asbestos fibers. Bulk samples of each material were collected and submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The results indicated that the seven (7) suspect materials did not contain 1.0% or more asbestos.

The *Mirror Mastic*, is assumed to be located in the Kitchen Staff Bathroom and is assumed to be in good condition and is assumed to contain 1.0% or more asbestos. This material would be classified as Category II nonfriable ACM according to the current TAHPR and NESHAP regulations. This material was assumed to contain asbestos.

7.0 REGULATORY INFORMATION

The State of Texas has established the TAHPR which requires asbestos related activity to be performed by an individual licensed by TDSHS. An asbestos related activity consists of the disturbance (whether intentional or unintentional), removal, encapsulation, or enclosure of asbestos, including preparations or final clearance, the performance of asbestos surveys, the development of management plans and response actions, asbestos project design, the collection or analysis of asbestos samples, monitoring for airborne asbestos, bidding for a contract for any of these activities, or any other activity required to be licensed under TAHPR.

Abatement must be performed by a TDSHS licensed asbestos abatement contractor in accordance with a project design prepared by a TDSHS Licensed Asbestos Consultant. In addition, third party air monitoring must be conducted by a TDSHS licensed Air Monitoring Technician or Project Manager during the abatement activities.

Demolition under the TAHPR regulation is defined as the wrecking or removal of any load-supporting structural member of a public building or facility for the purpose of razing the building or portion of the building to the ground, or the intentional burning of any public building or facility. The removal of load-supporting structural members followed by resupport of the structure is considered renovation, not demolition. Moving a building from its foundation is considered demolition. We recommend you contact the Controlling Agency (TDSHS) requiring the notification and other requirements which may be applicable. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified.

Renovation or demolition of Settlers Way Elementary School should be conducted in strict compliance with the aforementioned federal statutes, TAHPR, NESHAP, and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

There are federal and state statutes and regulations which govern the abatement and disposal of ACMs. The renovation or demolition of buildings and roofs containing ACMs is regulated under the TAHPR and NESHAP statutes. The TAHPR and NESHAP regulations require notification to the Controlling Agency (TDSHS) and ACM prior to renovation or demolition. We strongly recommend that you contact the Controlling Agency (TDSHS) prior to renovation or demolition regarding the proper disposition of the

ACMs. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified. It is important to note that even though an activity may be exempt from the EPA NESHAP regulations, such exemption does not extend to OSHA standards or other state and federal statutes.

Renovation or demolition activities in buildings and on roofs that contain ACM or Presumed Asbestos Containing Material (PACM) are regulated under the OSHA Asbestos Construction Standard (29 CFR 1926.1101). The OSHA standard requires the building owner to inform their employees who will work in or adjacent to areas containing ACM or PACM, perspective employers applying or bidding for work whose employees reasonably can be expected to work in or adjacent to areas containing ACM or PACM, all employers of employees on multi-employer work sites who will be performing work with or adjacent to areas containing asbestos and tenants who will occupy areas containing ACM or PACM, of the presence, location, and quantity of ACM or PACM at the work sites in their building and facilities. Further, the OSHA standard (29 CFR 1926.1101) requires employers who discover ACM or PACM to convey information concerning the presence, location, and quantity of such newly discovered ACM or PACM to other employers of employees working at the work site within 24 hours of discovery. While OSHA says the notification can be written or personal communication, there are many advantages to written communication.

The OSHA construction standard (29 CFR 1926.1101) also contains specific training, work practices, procedures, engineering controls, notifications, permissible exposure limits, personal protection, record keeping and a multitude of other requirements for the demolition, renovation, construction, alterations, repair, maintenance of structures, substrates, or portions thereof that contain asbestos. It should be noted that recent court rulings have exempted roofing cement from the OSHA Construction Industry Asbestos Standard.

Renovation or demolition of the structures and roofs that could potentially disturbed the ACM located within Settlers Way Elementary School should be conducted in strict compliance with the aforementioned federal statutes and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

The renovation and demolition of buildings is regulated under the TAHPR and NESHAP statutes. Even if asbestos is not detected at 1.0% or more, the TAHPR and NESHAP regulations require a ten-day notification to the Controlling Agency (TDSHS) prior to renovation and demolition.

8.0 CONTROLLNG AGENCY

The Controlling Agency for the coordination of projects involving asbestos removal or demolition is the TDSHS Asbestos Program. The owner or operator shall provide the above-referenced department with a

ten-day notice of the asbestos removal project or demolition by timely submittal of a completed "Asbestos Abatement/Demolition Notification" form, as promulgated under TAHPR. The notification can be submitted on Texas Department of State Health Services, located online at https://www.dshs.texas.gov/asbestos-program/notifications-asbestos-program.

9.0 CONDITIONS AND LIMITATIONS OF THIS INPECTION

A representative of UES obtained samples of building materials which were observed during an inspection of the building at the subject site that are typically suspected of containing asbestos as a constituent. The bulk samples were submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis using EPA approved methods for industry-accepted standards. UES makes no warranties, express or implied.

In general, inspection and sampling procedures were incorporated which allowed assessment of reasonably accessible building materials. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls. Though every effort was made to examine wall cavities and other areas for thermal system insulation, spray-applied or trowel applied surfacing material or other miscellaneous materials and other PACM, this survey and report only deals with accessible areas of the building. There may be additional inaccessible areas above the ceiling, behind walls and below floors that become evident during demolition or renovation activities. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed. The building's equipment fixtures, or stored materials were not inspected or sampled as part of this evaluation.

Bidders are responsible for their own calculations and estimates of quantities. Actual quantities may be more or less than indicated.

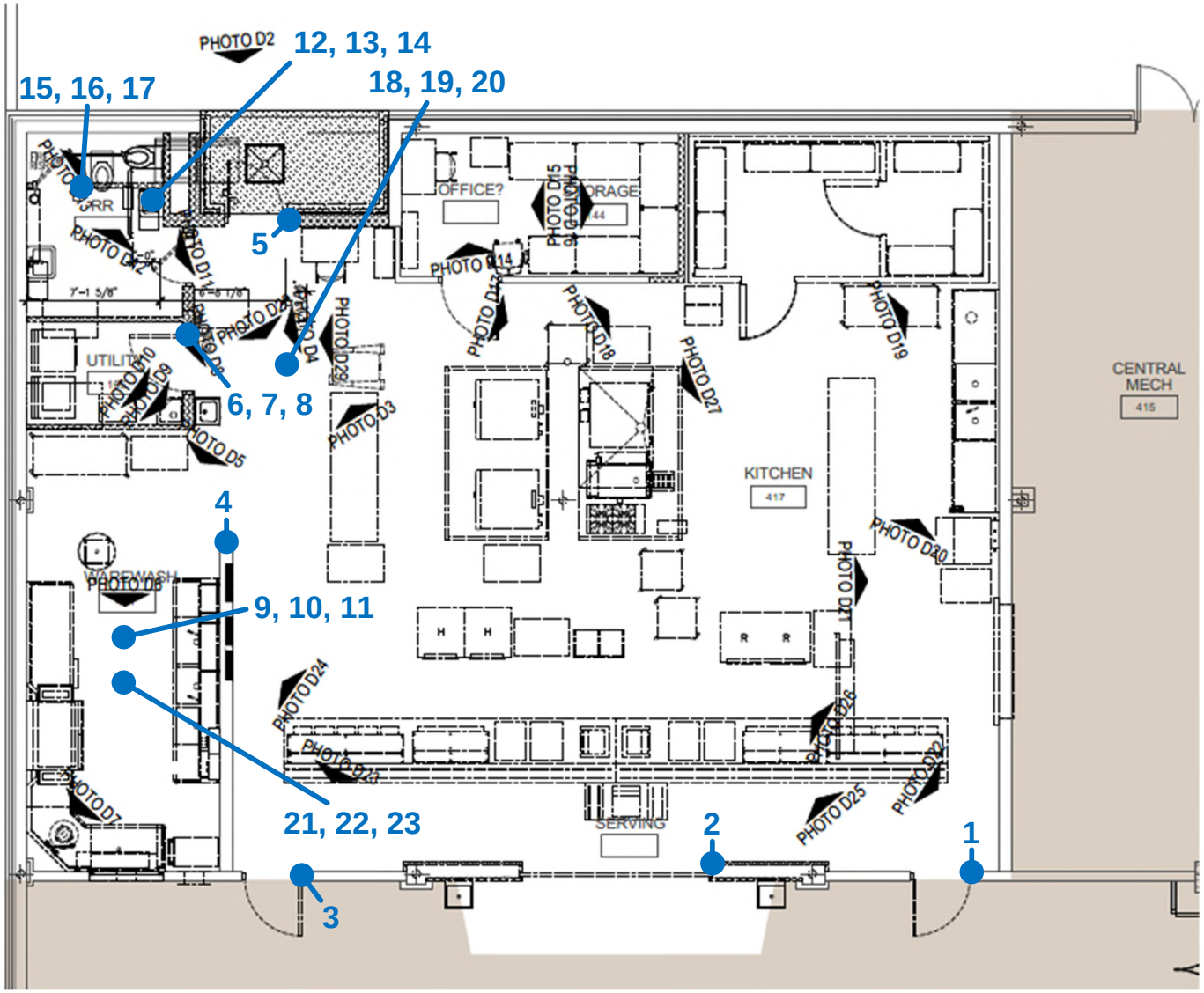
Federal OSHA Standard 26 CFR 1926.1101 has specific requirements relating to employee protection and notification during construction projects (including demolition and renovation projects) involving ACM as well as materials containing trace levels of asbestos which apply to this project. UES recommends complying with applicable OSHA regulations, which would include notifying the demolition contractor of the presence of asbestos.

All conclusions and recommendations in this report represent the professional opinions of the personnel involved with the project. The results, findings, conclusions and recommendations expressed in this report are based on access provided and conditions observed, and samples taken during the survey of the building. The information contained in this report is relevant as of the date on which the field work was performed and should not be relied upon to represent Site's conditions at a later date. This study and report were prepared on behalf of and for the exclusive use of the Client solely for its use and reliance in determining the presence of asbestos in identified areas of the site. The results of this report are not intended or to be construed as legal interpretation of existing federal, state, or local environmental, health and safety laws or regulations. UES assumes no responsibility or liability for errors in information or data

provided to UES by the Client or any third party or developments resulting from activities or situations outside the scope of this project.

Appendix A
Bulk Sample Location Map and Photograph Log

Sample Locations



Legend:

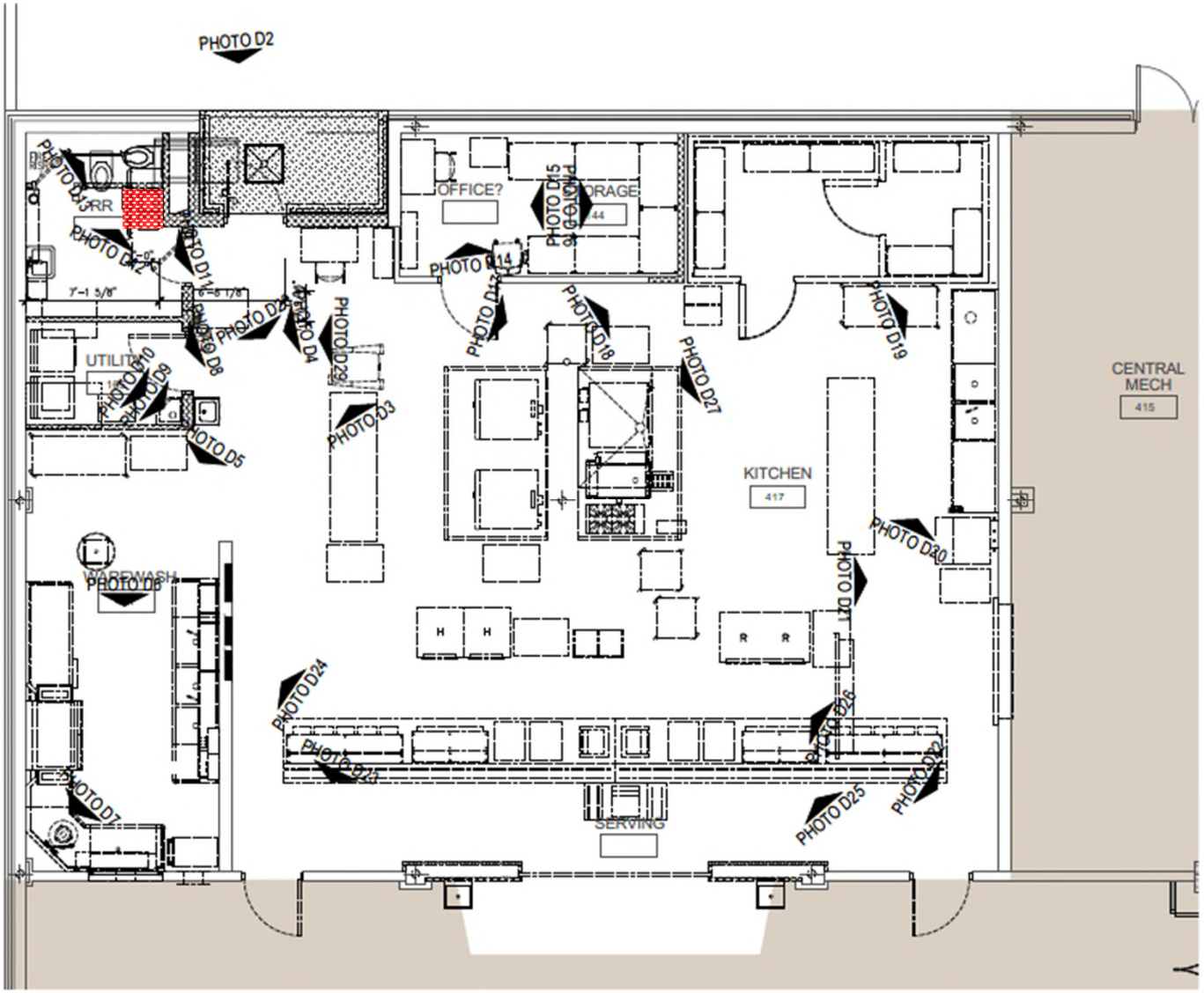
- Negative ACM Sample Location

Floor Plans are not to scale

First Floor

UES	**FBISD – BP013 Renovations** **Settlers Way ES** 3015 Settlers Way Blvd, Sugar Land, Texas	**Fort Bend ISD** 16431 Lexington Boulevard, Sugar Land, Texas 77479	N	**Proj. Mgr: KAG** **Date: 4/30/2025** **Drawn By: EDG** **Project # N250486**

Assumed ACM Locations



Legend:

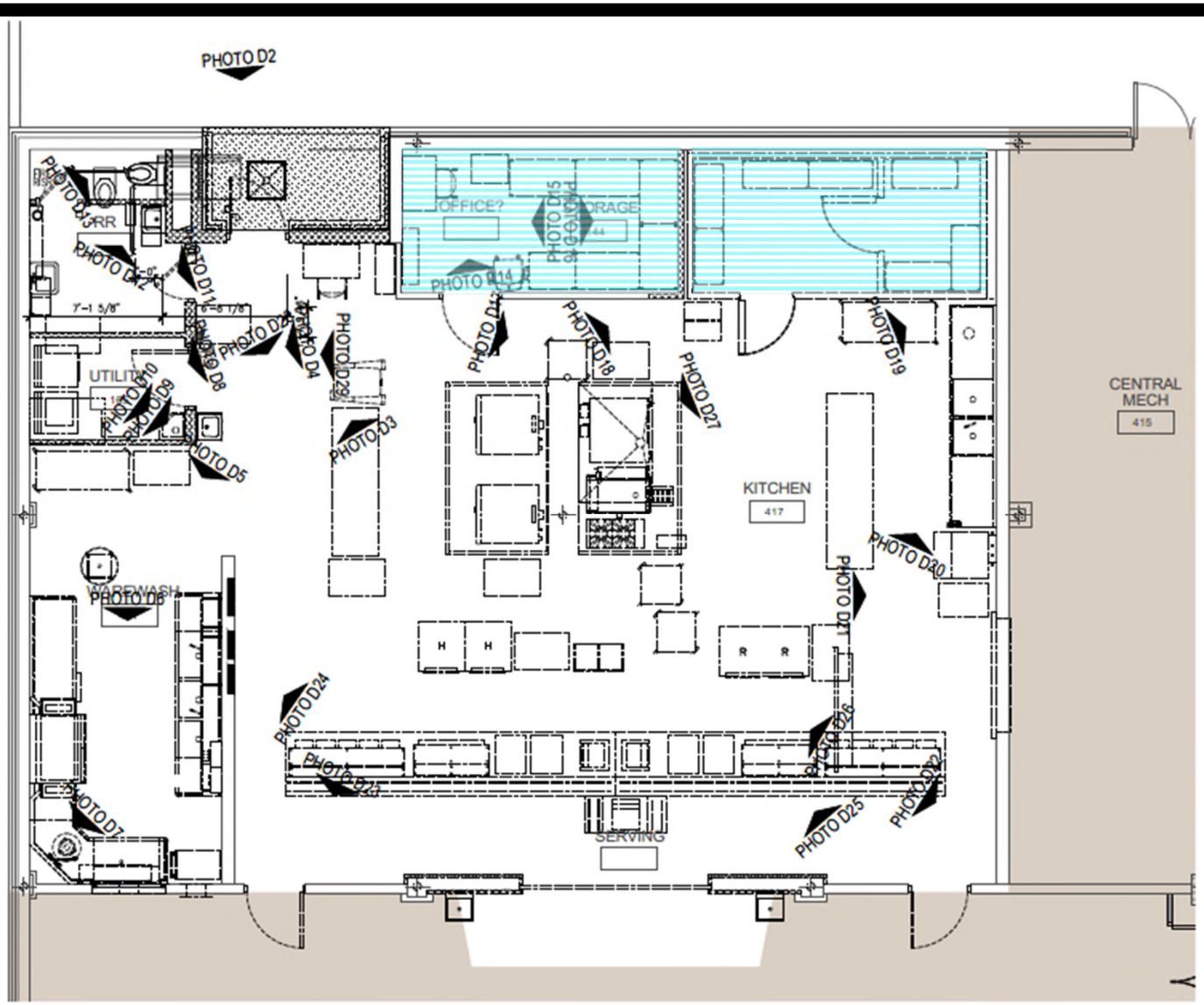
Mirror Mastic

Floor Plans are not to scale

First Floor

UES	**FBISD – BP013 Renovations** **Settlers Way ES** 3015 Settlers Way Blvd, Sugar Land, Texas	**Fort Bend ISD** 16431 Lexington Boulevard, Sugar Land, Texas 77479	N	**Proj. Mgr: KAG** **Date: 4/30/2025** **Drawn By: EDG** **Project # N250486**

Inaccessible Locations



Legend:

- Inaccessible Area

Notes:

These areas were inaccessible, all materials within that differ from materials that were sampled are assumed to be asbestos containing until such a time as they can be sampled and proven negative of asbestos content

Floor Plans are not to scale

First Floor

UES

FBISD – BP013 Renovations
Settlers Way ES
3015 Settlers Way Blvd,
Sugar Land, Texas

Fort Bend ISD
16431 Lexington Boulevard,
Sugar Land, Texas 77479

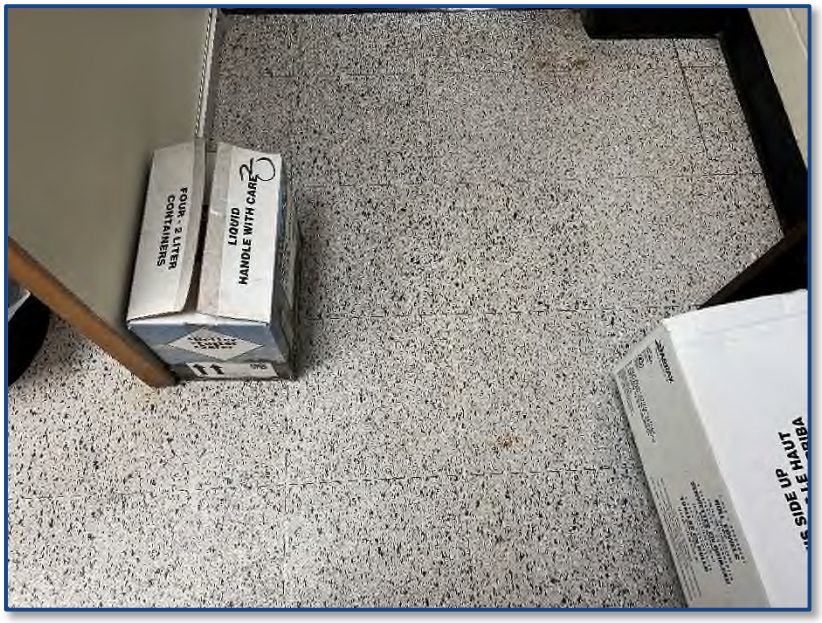
N

Proj. Mgr: KAG
Date: 4/30/2025
Drawn By: EDG
Project # N250486

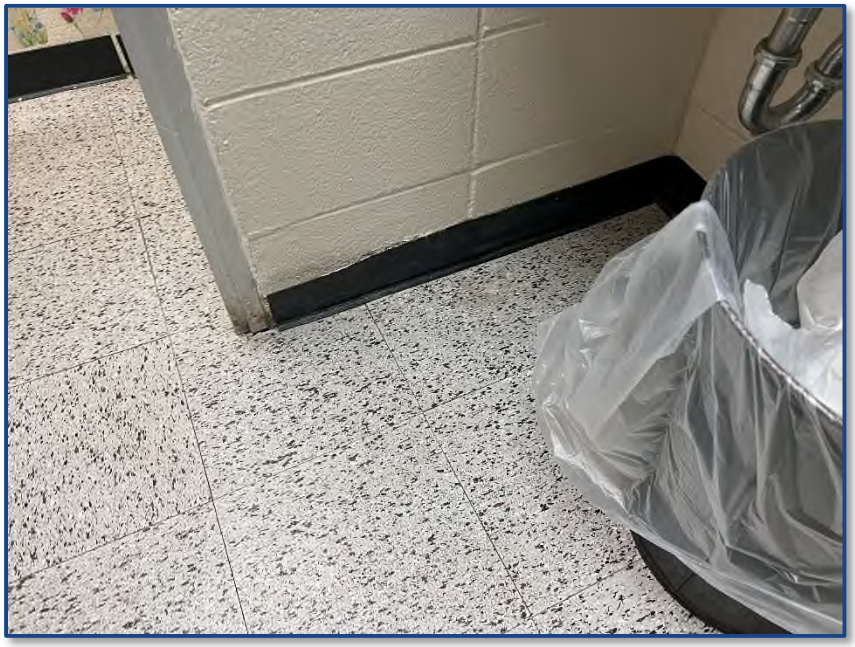
HA 1: CMU with Texture

HA 2: 6” x 6” Brown Ceramic Floor Tile

HA 3: 2’ x 2’ Sheetrock Ceiling Tile



HA 4: 12” x 12” Marble Style Vinyl Floor Tile



HA 5: 4” Black Cove Base with Mastic

HA 6: HVAC Duct Insulation with Mastic

HA 7: TSI Pipe Insulation

Appendix B
PLM Analytical Report & Chain-of-Custody Documentation

Asbestos Laboratory Report

Prepared for

UES Dallas

Project: FBISD - BP013 Renovations - Settlers Way

UES No.: A25117.00818.000

Date Received: 4/21/2025

Date Analyzed: 4/21/2025

Date Reported: 4/25/2025

Total Samples Analyzed: 51

 # Samples >1% Asbestos: 0

Method of Analysis: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00818.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/21/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Settlers Way

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
SWF-1-Filler A25117.00818.000-1	CMU with Filler	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-1-CMU A25117.00818.000-1A	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-1-Mortar A25117.00818.000-1B	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-2-Filler A25117.00818.000-2	CMU with Filler	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-2-CMU A25117.00818.000-2A	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-2-Mortar A25117.00818.000-2B	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-3-Filler A25117.00818.000-3	CMU with Filler	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-3-CMU A25117.00818.000-3A	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-3-Mortar A25117.00818.000-3B	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-4-Filler A25117.00818.000-4	CMU with Filler	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-4-CMU A25117.00818.000-4A	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-4-Mortar A25117.00818.000-4B	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-5-Filler A25117.00818.000-5	CMU with Filler	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-5-CMU A25117.00818.000-5A	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00818.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/21/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Settlers Way

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
SWF-5-Mortar A25117.00818.000-5B	CMU with Filler	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-6-Ceramic Tile A25117.00818.000-6	6x6 Brown Ceramic Floor Tile	Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-6-Grout A25117.00818.000-6A	6x6 Brown Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-7-Ceramic Tile A25117.00818.000-7	6x6 Brown Ceramic Floor Tile	Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-7-Grout A25117.00818.000-7A	6x6 Brown Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-8-Ceramic Tile A25117.00818.000-8	6x6 Brown Ceramic Floor Tile	Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-8-Grout A25117.00818.000-8A	6x6 Brown Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-9 A25117.00818.000-9	2x2 Sheetrock Ceiling Tile	Brown, White Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
SWF-10 A25117.00818.000-10	2x2 Sheetrock Ceiling Tile	Brown, White Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
SWF-11 A25117.00818.000-11	2x2 Sheetrock Ceiling Tile	Brown, White Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
SWF-12-Floor Tile A25117.00818.000-12	12x12 Marble Style Vinyl Floor Tile	White, Black, Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-12-Mastic A25117.00818.000-12A	12x12 Marble Style Vinyl Floor Tile	White, Black, Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-13-Floor Tile A25117.00818.000-13	12x12 Marble Style Vinyl Floor Tile	White, Black, Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-13-Mastic A25117.00818.000-13A	12x12 Marble Style Vinyl Floor Tile	White, Black, Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00818.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/21/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Settlers Way

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
SWF-14-Floor Tile A25117.00818.000-14	12x12 Marble Style Vinyl Floor Tile	White, Black, Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-14-Mastic A25117.00818.000-14A	12x12 Marble Style Vinyl Floor Tile	White, Black, Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-15-Cove Base A25117.00818.000-15	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-15-Mastic A25117.00818.000-15A	4 Black Cove Base with Mastic	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-16-Cove Base A25117.00818.000-16	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-16-Mastic A25117.00818.000-16A	4 Black Cove Base with Mastic	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-17-Cove Base A25117.00818.000-17	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-17-Mastic A25117.00818.000-17A	4 Black Cove Base with Mastic	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-18-Mastic A25117.00818.000-18	HVAC Duct Insulation w/Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-18-Wrap A25117.00818.000-18A	HVAC Duct Insulation w/Mastic	Brown, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
SWF-18-Insulation A25117.00818.000-18B	HVAC Duct Insulation w/Mastic	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
SWF-19-Mastic A25117.00818.000-19	HVAC Duct Insulation w/Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-19-Wrap A25117.00818.000-19A	HVAC Duct Insulation w/Mastic	Brown, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
SWF-19-Insulation A25117.00818.000-19B	HVAC Duct Insulation w/Mastic	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00818.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/21/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Settlers Way

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
SWF-20-Mastic A25117.00818.000-20	HVAC Duct Insulation w/Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SWF-20-Wrap A25117.00818.000-20A	HVAC Duct Insulation w/Mastic	Brown, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
SWF-20-Insulation A25117.00818.000-20B	HVAC Duct Insulation w/Mastic	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
SWF-21-Wrap A25117.00818.000-21	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
SWF-21-Insulation A25117.00818.000-21A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
SWF-22-Wrap A25117.00818.000-22	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
SWF-22-Insulation A25117.00818.000-22A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
SWF-23-Wrap A25117.00818.000-23	TSI Pipe Insulation	White, Silver Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
SWF-23-Insulation A25117.00818.000-23A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

METHOD: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

For samples easily separated into homogeneous layers, each component will be analyzed separately. The sample may not be representative of the larger material in question. Interpretation and use of test results are the responsibility of the client. Due to the limitations of the EPA 600 Method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles, mastic and roofing can be difficult to analyze by PLM. Reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or None Detect for these materials is recommended. The percentage of asbestos reported is a midpoint within an acceptable range. The estimated measurement of uncertainty is available upon request. Results relate only to the items received by the laboratory as noted on the Chain of Custody provided by the client.

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Analysis is determined by Calibrated Visual Estimate (CVE).
Temperature at the time of analysis (°C) : 22

NVLAP Code: 600344

Texas License Number : 300520

Analyst(s): Brant Alyea

Approved By: Cass Rupert
Approved Signatory

UES Laboratories, 10121 Pineville Distribution St., Pineville, NC Phone: (704) 504-1717

A25

CHAIN OF CUSTODY

LAB USE ONLY:	A2517.00818.000
UES Order Number:	45495

10121 Pineville Distribution Street,

Pineville, North Carolina 28143

Tel: 704-504-1717; Fax: 704-504-1125

COMPANY CONTACT INFORMATION			
Company:	UES Dallas	Job Contact:	Ethan Grigg, Kristopher Girton
Address:	2209 Wisconsin Street,	Email:	egrigg@teamues.com
	Dallas, Texas 75229		kgirton@teamues.com
		Tel:	817-966-6636
Project Name:	FBISD - BP013 Renovations	Fax:	
Project ID #:	N250486	State Collected In:	Intact

Bill to: ☑ Same ☐ Different – If Bill to is different please notate in the comments section.

ASBESTOS	METHOD	TURN AROUND TIME						
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY	2 Week
PLM BULK	EPA 600	☐	☐	☐	☐	☐	☑	☐
PLM Point Count (400)	EPA 600	☐	☐	☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐	☐
TEM BULK	EPA NOB / Chatfield			☐	☐	☐	☐	☐
TEM AIR	AHERA 40 CFR, Part 763	☐	☐	☐	☐	☐	☐	☐
TEM Dust Wipe	ASTM D6480	☐	☐	☐	☐	☐	☐	☐

POSITIVE STOP ANALYSIS: ☑

IF TURNAROUND TIME IS NOT MARKED STANDARD 5 DAY APPLIES

By submitting samples, you are agreeing to UES Terms and Conditions

COMMENTS: Settlers Way ES

SEE ATTACHED – Use Sampling Log Name

☑ Accept Samples

☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
Ethan Grigg	4/18/2025		4.25.25
			21

Samples will be disposed of 60 days after analysis

A25IC.00818.000

UES

PO#: 45495

Date: 4/15/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD-BPO 13 Renovations - Settlers Way ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
SWF-	1	CMU with Filler	Kitchen	NFII	G	3,000SF
"	2	"	"	"	"	"
"	3	"	"	"	"	"
"	4	"	"	"	"	"
"	5	"	"	"	"	"
"	6	6"x6" Brown Ceramic Floor Tile	Kitchen	NFII	G	1,300SF
"	7	"	"	"	"	"
"	8	"	"	"	"	"
"	9	2'x2' Sheetrock Ceiling Tile	Kitchen	F	G	1,600SF
"	10	"	"	"	"	"
"	11	"	"	"	"	"
"	12	12"x12" Marble Style Vinyl Floor Tile	Kitchen	NFI	G	100SF
"	13	"	"	"	"	"
"	14	"	"	"	"	"
"	15	4" Black Cove Base with Mastic	Kitchen	NFII	G	200LF

A25117.00818.000

UES

PO #: 45495

Date: 4/15/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD - BP013 Renovations - Settlers Way ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
SWF-	16	4" Black Cove Base with Mastic	Kitchen	NFII	G	200LF
1	17	1	1	1	1	1
1	18	HVAC Duct Insulation w/ Mastic	Kitchen	F	G	100LF
1	19	1	1	1	1	1
1	20	1	1	1	1	1
1	21	TSI Pipe Insulation	Kitchen	F	G	300LF
1	22	1	1	1	1	1
1	23	1	1	1	1	1

Appendix C
Inspector(s) License and Firm License

GEBCO Associates certifies that

Ethan D. Grigg

25056 1127

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS INSPECTOR REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25056

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Ethan D. Grigg

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Inspector Refresher Course

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25056 1127

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

GEBCO Associates, LP * 815 Trailwood Dr, Suite 200 * Hurst, TX 76053 * (817)268-4006

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Inspector

ETHAN D GRIGG

License Number: 603778

Control Number: 101162

Expiration Date: 10-Apr-2027

GEBCO Associates certifies that

Kristopher A. Girton

25003 0358

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 01/08/2025 Certificate No: 25003

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053
Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Kristopher A. Girton

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on January 8, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

Owner

Instructor: Joseph Londt

Date of Issue 01/08/2025

Certificate Number: 25003 0358

Exam Date: 01/08/2025

Certificate Expires 01/08/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

KRISTOPHER A GIRTON

License Number: 105894

Control Number: 98431

Expiration Date: 7-Jun-2026

GEBCO Associates certifies that

Michael K. Nibert

25021 5548

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25021

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP

815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Michael K. Nibert

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25021 5548

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

MICHAEL K NIBERT

License Number: 105931

Control Number: 98417

Expiration Date: 8-May-2026

Texas Department of State Health Services

UES PROFESSIONAL SOLUTIONS 44 LLC

is certified to perform as an

Asbestos Consultant Agency

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1954 and Title 12, Texas Administrative Code, Chapter 295 relating to Texas Asbestos Health Protection, as long as this license is not suspended or revoked.

License Number: 100608

Expiration Date: 05/12/2026

Jennifer Shuford, MD, MPH,
Commissioner of Health

Control Number: 97663

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

SEE BACK

ASBESTOS CONTAINING MATERIALS INSPECTION REPORT

FBISD – BP013 Renovations – Sugar Mill ES
13707 Jess Pirtle Boulevard
Sugar Land, Texas
UES Project No. N250486

Prepared for:
Fort Bend ISD
16431 Lexington Boulevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Prepared by:
UES
2209 Wisconsin Street
Dallas, TX 75229
972-620-8911
www.TeamUES.com

TDSHS Asbestos Consultant Agency License No.: 100608

June 10, 2025

Fort Bend ISD
16431 Lexington Bouevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Re: Asbestos Containing Materials Inspection Report
FBISD – BP013 Renovations – Sugar Mill ES
13707 Jess Pirtle Boulevard
Sugar Land, Texas
UES Report No. N250486

Dear Mrs. Pentrala:

On behalf of Fort Bend ISD (the "Client"), UES Professional Solutions 44, LLC (hereinafter "UES") has completed this Asbestos Containing Materials Inspection Report for Sugar Mill Elementary School (the "subject property"). This inspection was conducted in general accordance with Title 25 of the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296) the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP). UES performed this ACM inspection on April 16, 2025, to categorize and assess readily available suspect homogeneous material for Sugar Mill Elementary School. UES collected twenty-six (26) bulk samples from eight (8) homogeneous materials. The bulk samples were transported to a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and Texas Department of Safety and Health Services (TDSHS) licensed laboratory for analysis using Polarized Light Microscopy (PLM) for the presence of asbestos fibers.

Asbestos Containing Materials (ACMs) are classified as materials that contain 1.0% or more asbestos in any of the homogeneous materials sampled. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The laboratory analyses indicated that asbestos fibers were not detected in the homogeneous materials analyzed from the building. Refer to Section 6.0 of this report. Additional details regarding the ACM Inspection conducted by UES are presented in the attached report.

We appreciate the opportunity to perform these services for Fort Bend ISD. Please contact the undersigned if you have questions regarding the information provided in the report.

Respectfully submitted,
UES

Kristopher Girton
Asbestos Project Manager
Asbestos Consultant License No.: 105894

Michael Nibert, CHMM, C.E.M.
Director of Environmental Services-North Texas
Asbestos Consultant License No.: 105931

TDSHS Asbestos Consultant Agency License No.: 100608

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APPENDIX A

Bulk Sample Location Map and Photograph Log

APPENDIX B

PLM Analytical Report & Chain-of-Custody Documentation

APPENDIX C

Inspector(s) License and Firm License

1.0 INTRODUCTION

UES Professional Solutions 44, LLC (hereinafter "UES") conducted a pre-renovation (limited) Asbestos Containing Materials (ACM) Inspection of Sugar Mill Elementary School located at 13707 Jess Pirtle Boulevard in Sugar Land, Texas. The purpose of this inspection was to identify and sample accessible suspect ACM and provide information regarding the identity, location, and condition in anticipation of a renovation and/or demolition of the building.

This service was completed in general accordance with UES Proposal No. 109625Rev4 dated February 10, 2025, and authorized by Fort Bend ISD Purchasing Department, on March 28, 2025.

This asbestos inspection was limited to the kitchen of Sugar Mill Elementary School. During the survey two locations could not be accessed; the dry storage room and walk-in cooler. If materials in these areas do not match those sampled during this survey, they are assumed to be asbestos containing until such a time as they can be sampled and proven negative of asbestos content. Certain materials were not sampled, these materials are assumed to be asbestos containing.

This inspection was conducted in accordance with the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296), the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP).

A map or photographic log illustrating the sample locations is included as Appendix A of this report. The bulk sample laboratory report and associated chain-of-custody documentation is presented in Appendix B. A copy of the inspector's license that performed the building inspection and a copy of UES's Texas Department of Safety and Health Services (TDSHS) firm license are provided in Appendix C.

1.1 Limitations and Exclusions

This inspection report is not intended to be used as a specification, project design or work plan. The indicated material quantities of ACM (if documented) are estimates based on UES's field observations on the date(s) of the inspection(s) and should be considered preliminary in nature. All parties utilizing this report for proposal, estimation or contract negotiations are required to field verify the quantities of material prior to submission of proposal. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor. The asbestos abatement contractor should ascertain for themselves, by site measurements and inspection, the exact nature and extent of the work to be done.

Inspection and collection of bulk samples of suspect ACMs were limited to those materials readily accessible at the time of inspection. Destructive sampling techniques (such as wall and ceiling testing, and carpet cuts to expose underlying flooring) were employed in limited measures in the areas inspected and completed in a way to minimize disruption to operations and damage to building components. Extensive

destructive sampling methods were not used, and exploratory demolition of walls and/or removal of fixed items were not conducted. No attempt was made by UES to observe conditions in spaces not generally accessible, including but not limited to crawlspaces, pipe chases, plenums, or confined spaces. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls.

Although every effort is made to locate all suspected ACMs, it is impossible to rule out the possibility that undiscovered asbestos materials may be present. If the building is to undergo major refurbishment or demolition, it is recommended that the persons carrying out the work are made aware of this and take sufficient precautions, as may be appropriate, to ensure the health and safety of their own employees and any other parties who may be affected by the works. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed.

Asbestos has not been banned from use in building products in the United States. Newer buildings are not exempt. Certain uses of asbestos have been banned: such as spray applied fireproofing, pipe and boiler insulation and asbestos cardboard.

1.2 Purpose and Scope of Work

The purpose of this study was to perform an evaluation of the above-referenced facility for the presence of ACMs, specifically those building materials which may be present or impacted during potential demolition or renovation activities. The activities and procedures used to accomplish this task were as follows:

1) A review of available building documents to identify potential locations of suspect ACMs;
2) Visual building inspection of accessible areas by a EPA Asbestos Hazard Emergency Response Act (AHERA) accredited and Texas Department of Safety and Health Services (TDSHS) licensed Asbestos Building Inspector to identify suspect ACMs;
3) Once identified, homogeneous materials (materials which are uniform in color, texture, construction/application date, and general appearance) were determined;
4) Determine whether the suspect ACM is Friable (a material that when dry, may be crumbled, pulverized or reduced to powder by hand pressure) or Non-Friable;
5) Collection of bulk samples of each homogeneous suspect ACM. Record sample information on Asbestos Bulk Sample Forms (chain-of-custody sheets), which were signed, dated, and sent with the samples to the laboratory;
6) Analysis of the collected bulk samples at a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and TDSHS licensed laboratory using Polarized Light Microscopy (PLM) for the presence of asbestos fibers;
7) Approximate locations of the bulk samples were defined. Computer Assisted Drafting and Design (CADD) drawings were developed indicating sample locations. In addition, approximate quantities of identified ACM were also determined; and,

8) Prepare and submit a report.

2.0 CHARACTERISTICS AND INFORMATION

2.1 General

A summary of Sugar Mill Elementary School's characteristics is outlined in the table below. Information on the buildings was obtained by UES through our field inspection, review of available building documents and/or property appraiser records.

FORT BEND ISD - SUGAR MILL ELEMENTARY SCHOOL		
General	Facility Type	Elementary School
	Construction Date	1984
	Building Size	71,057 Square Feet
	Number of Stories	1
Structural	Foundation	Slab-on-Grade
	Wall Support	Concrete Block, Steel and Glass
	Wall Finish	Brick
	Roof Support	Bar Joist w/ Metal Deck
	Roof System Type	Built-up Roofing
Mechanical/ Plumbing	HVAC Type	Central (Rooftop Units)
	Duct Type	Fiberglass (Flex or Ridged)
	Pipe Insulation	Paper Wrap with Fiberglass Insulation
Interior	Wall Substrates	Wood/Steel Studs, or Furring Strips
	Wall Finishes	CMU, Ceramic Tile
	Floor Substrates	Concrete
	Floor Finishes	Ceramic Tiles, Vinyl Floor Tile
	Ceiling Systems	Suspended
	Ceiling Finishes	Gypsum Ceiling Tiles
	Other	None

2.2 Building Information Available

UES was provided with demolition plan drawings dated December 4, 2024. No previous asbestos inspection report(s) were provided and no other material information was provided in reference to Sugar Mill Elementary School.

2.3 Current Building Use

At the time of UES's ACM inspection, Sugar Mill Elementary School was an occupied elementary school.

3.0 INSPECTION PROTOCOL

Three forms of ACMs are typically found on structures. These materials are classified as follows:

- *Surfacing Material* – material that is sprayed-on, troweled-on, or otherwise applied to interior and exterior structural and architectural surfaces. Surfacing material includes acoustical plaster on ceilings, fireproofing on structural members, textured paint and exterior stucco, and other materials applied to surfaces for acoustical, decorative, fireproofing, and other purposes.

- *Thermal System Insulation* — material which is applied to interior and exterior mechanical components to reduce heat gain or loss. Thermal system insulation includes insulation on pipes, fittings, boilers, breeching, tanks, ducts, and other mechanical components.

- *Miscellaneous Materials* — material, other than surfacing material and thermal system insulation, on interior and exterior structural, mechanical, electrical, or architectural components, and surfaces. Miscellaneous material includes but is not limited to ceiling tiles, gaskets, floor coverings and mastics, wallboard joint compound, roofing materials, and cementitious products.

An inspection of Sugar Mill Elementary School was conducted to identify these, and other materials present within the building which are suspected of containing asbestos.

3.1 Inspection Procedures

UES's field inspection was performed on April 16, 2025, by Ethan Grigg, an inspector accredited according to Federal Regulation 40 CFR, Part 763 (AHERA), and a TDSHS Licensed Asbestos Inspector (TDSHS License No. 60-3778).

After a preliminary walk-through of the building, an inspection was conducted to evaluate the location and extent of the suspected ACMs. Once identified, these materials were categorized into homogeneous areas containing materials of the same type, age, visual appearance, texture, composition, etc.

This type of inspection is designed to be used as a basis for tendering the removal of ACMs from the subject building(s) prior to demolition or renovation. The present condition of each ACM was evaluated by UES and classified as one of three categories: "good", "damaged" and "significantly damaged." As defined by AHERA. "Poor condition, for NESHAP Category I and II nonfriable materials, is synonymous to "damaged" and/or "significantly damaged," depending on the percentage of damaged.

Federal regulations also require inspectors to determine the potential for disturbance (or damage). This potential for disturbance is based on the presumption that the building will not be demolished. The classifications for potential for disturbance ranges from low, to moderate, to high, and is based on vibration, contact and air erosion.

The TAHPR utilizes NESHAP and AHERA regulations depending on the type of building that is being surveyed. Public buildings and facilities utilize TAHPR per NESHAP regulations and school buildings utilize the AHERA regulations. TAHPR requires a minimum of three (3) samples of each Homogenous Area to be collected and analyzed by a NVLAP accredited and TDSHS licensed laboratory. The number of bulk samples collected was based on the type of facility (public building and facility or school) and category of Homogeneous Area and the quantity of the material present, as follows:

AHERA GUIDELINES FOR DETERMINING THE NUMBER OF SAMPLES TO COLLECT

HSA CATEGORY	HSA QUANTITY	SAMPLES REQUIRED
Surfacing Materials	<1,000 Square Feet	3
	1,000 – 5,000 Square Feet	5
	>5,000 Square Feet	7 or more
Thermal System Insulation	No Stipulation	3+ (All repair patches must be sampled)
Miscellaneous Materials	No Stipulation	Per AHERA Guidelines, these materials must be sampled "in a manner sufficient to determine whether or not they contain asbestos" typically two or more samples based upon the inspector's judgement (a minimum of three (3) samples are required by TAHPR).

HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)

UES's inspector(s) employed wet methods as applicable during bulk sample collection to reduce the potential for fiber release. Each sample was documented by labeling the container with a unique sample number, entering the sample material on a bulk sample log or chain-of-custody form, and noting the location of each sample on a floor plan. Throughout the sampling process, care was taken to prevent cross-contamination of the collected bulk samples. Sampling equipment was cleaned following the collection of each sample.

Random, and in some cases judgmental, samples of each homogeneous area of material were then collected. The physical condition of each material was assessed. In addition, a tactile inspection of the material was performed to evaluate its friability. If the material, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure, it is considered friable. Samples from any homogeneous area where the inspector determined that the material was non-ACM (such as thermal insulation that obviously fibrous glass, foam glass, or rubber) were not collected.

3.2 Suspected Asbestos Containing Materials

Based on UES's review of the available building system information and thorough visual inspection of the subject building, eight (8) Homogeneous Areas were identified at Sugar Mill Elementary School commonly suspected of containing asbestos. The Homogeneous Areas are detailed on the List of suspect ACMs.

3.3 TAHPR Classification

The materials assessed are classified as either: Regulated Asbestos Containing Material (RACM), Category I non-friable ACM, or Category II non-friable ACM.

Friable materials are "Any ACM that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure."

Non-friable materials are "ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

Category I non-friable ACM is "Asbestos-containing packings, gaskets, resilient floor-covering material, and asphalt roofing products determined to be ACM."

Category II non-friable ACM is – "Any material determined to be ACM, excluding Category I non-friable ACM, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

RACM means "Friable asbestos material; Category I non-friable ACM that has become friable; Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations."

ACM materials are subject to the TAHPR notification requirements, refer to Section 7.0 for Regulatory Information.

4.0 LABORATORY ANALYSIS

4.1 Polarized Light Microscopy Analysis

The samples of the suspected ACMs collected during the field inspection were transported with chain-of-custody documentation to UES Laboratories located in Pineville, North Carolina. UES Laboratories is a NVLAP accredited laboratory (NVLAP Accreditation No. 600344-0) and TDSHS licensed (TDSHS License No. 300520) laboratory for bulk sample analysis.

Bulk samples were analyzed for the presence of asbestos fibers using PLM. The analyses were performed according to EPA Method 600/R-93/116 July 1993 "Method for the Determination of Asbestos in Bulk Building Materials." This analytical method can be used for qualitative identification of six morphologically different types of asbestos fibers: chrysotile, amosite, crocidolite, tremolite, actinolite and anthophyllite. PLM analysis requires the microscopist to take a portion of the sample and treat it with an oil of specific refractive index. The prepared slide is then subjected to a variety of tests while being viewed under varying polarizations of light. Each type of asbestos displays unique characteristics when subjected to these tests.

The method specifies that the asbestos content in a bulk sample shall be estimated and reported as a finite percentage within the range of 0 to 100. Minute quantities of asbestos in bulk samples may be reported as "trace" or less than one percent (<1.0%). The analytical method determines the asbestos percentage by means of visual estimation technique. If analysis of the sample of a suspect ACM reveals a negative result, UES considers the material to be non-Asbestos containing. If at any time during the analytical process a sample tests positive, that material must be treated as ACM.

5.0 FINDINGS

Eight (8) suspect homogeneous materials were identified at the subject building. Following TAHPR and AHERA guidelines, the appropriate number of bulk samples were collected from the identified homogeneous material and submitted for laboratory analysis.

The laboratory analyses indicated that asbestos fibers were not detected in the homogeneous materials analyzed from the building.

The following table presents the analytical results of the suspect ACMs and general information regarding the suspect ACMs.

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
SMF – 1 - 3	1	6" x 6" Brown Ceramic Floor Tile	Misc.	Good	low	NAD	*Category II – Non-Friable*	1,300 SF	No
SMF – 4 - 6	2	2' x 2' Sheetrock Ceiling Tile	Misc.	Good	low	NAD	*Category II – Non-Friable*	1,600 SF	No
SMF – 7 - 9	3	12" x 12" White Vinyl Floor tile with Blue Specks	Misc.	Good	low	NAD	*Category I – Non-Friable*	100 SF	No
SMF – 10 - 12	4	12" x 12" Beige Ceramic Floor Tile	Misc.	Good	low	NAD	*Category II – Non-Friable*	100 SF	No
SMF – 13 - 15	5	4" Black Cove Base	Misc.	Good	low	NAD	*Category II – Non-Friable*	200 LF	No

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
SMF – 16 - 18	6	HVAC Duct Insulation	TSI.	Good	low	NAD	*Friable*	100 LF	No
SMF – 19 – 21	7	TSI Pipe Insulation	TSI.	Good	low	NAD	*Friable*	300 LF	No
SMF – 22 - 26	8	CMU with Filler Texture	Misc.	Good	low	NAD	*Category II – Non-Friable*	3,000 SF	No
		Mirror Mastic	***Misc.***	***Good***	***low***	****Assumed***	***Category II – Non-Friable***	***5 SF***	***No***

Table Notes and Definitions:
HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)
NESHAPs = National Emission Standards for Hazardous Air Pollutants
SF = Square Feet
LF = Linear Feet
EA = Each
NF = Non-Friable
NAD = No Asbestos Detected
Surf = Surfacing
TSI = Thermal System Insulation
Misc. = Miscellaneous
Note - The indicated material quantities are estimates based on UES' field observations and should be considered preliminary in nature. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor.
Note - Damaged and Significantly Damaged Non-Friable Materials are classified as RACM per NESHAP.
***This material was assumed to contain asbestos.**

6.0 SUMMARY OF ASBESTOS CONTAINING MATERIALS

Inspection of the subject building, located at 13707 Jess Pirtle Boulevard, Sugar Land, Texas, identified eight (8) materials suspected of containing asbestos fibers. Bulk samples of each material were collected and submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The results indicated that the eight (8) suspect materials did not contain 1.0% or more asbestos.

The *Mirror Mastic*, is assumed to be located in the Kitchen Staff Bathroom and is assumed to be in good condition and is assumed to contain 1.0% or more asbestos. This material would be classified as Category II nonfriable ACM according to the current TAHPR and NESHAP regulations. This material was assumed to contain asbestos.

7.0 REGULATORY INFORMATION

The State of Texas has established the TAHPR which requires asbestos related activity to be performed by an individual licensed by TDSHS. An asbestos related activity consists of the disturbance (whether intentional or unintentional), removal, encapsulation, or enclosure of asbestos, including preparations or

final clearance, the performance of asbestos surveys, the development of management plans and response actions, asbestos project design, the collection or analysis of asbestos samples, monitoring for airborne asbestos, bidding for a contract for any of these activities, or any other activity required to be licensed under TAHPR.

Abatement must be performed by a TDSHS licensed asbestos abatement contractor in accordance with a project design prepared by a TDSHS Licensed Asbestos Consultant. In addition, third party air monitoring must be conducted by a TDSHS licensed Air Monitoring Technician or Project Manager during the abatement activities.

Demolition under the TAHPR regulation is defined as the wrecking or removal of any load-supporting structural member of a public building or facility for the purpose of razing the building or portion of the building to the ground, or the intentional burning of any public building or facility. The removal of load-supporting structural members followed by resupport of the structure is considered renovation, not demolition. Moving a building from its foundation is considered demolition. We recommend you contact the Controlling Agency (TDSHS) requiring the notification and other requirements which may be applicable. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified.

Renovation or demolition of Sugar Mill Elementary School should be conducted in strict compliance with the aforementioned federal statutes, TAHPR, NESHAP, and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

There are federal and state statutes and regulations which govern the abatement and disposal of ACMs. The renovation or demolition of buildings and roofs containing ACMs is regulated under the TAHPR and NESHAP statutes. The TAHPR and NESHAP regulations require notification to the Controlling Agency (TDSHS) and ACM prior to renovation or demolition. We strongly recommend that you contact the Controlling Agency (TDSHS) prior to renovation or demolition regarding the proper disposition of the ACMs. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified. It is important to note that even though an activity may be exempt from the EPA NESHAP regulations, such exemption does not extend to OSHA standards or other state and federal statutes.

Renovation or demolition activities in buildings and on roofs that contain ACM or Presumed Asbestos Containing Material (PACM) are regulated under the OSHA Asbestos Construction Standard (29 CFR 1926.1101). The OSHA standard requires the building owner to inform their employees who will work in or adjacent to areas containing ACM or PACM, perspective employers applying or bidding for work whose employees reasonably can be expected to work in or adjacent to areas containing ACM or PACM, all employers of employees on multi-employer work sites who will be performing work with or adjacent to

areas containing asbestos and tenants who will occupy areas containing ACM or PACM, of the presence, location, and quantity of ACM or PACM at the work sites in their building and facilities. Further, the OSHA standard (29 CFR 1926.1101) requires employers who discover ACM or PACM to convey information concerning the presence, location, and quantity of such newly discovered ACM or PACM to other employers of employees working at the work site within 24 hours of discovery. While OSHA says the notification can be written or personal communication, there are many advantages to written communication.

The OSHA construction standard (29 CFR 1926.1101) also contains specific training, work practices, procedures, engineering controls, notifications, permissible exposure limits, personal protection, record keeping and a multitude of other requirements for the demolition, renovation, construction, alterations, repair, maintenance of structures, substrates, or portions thereof that contain asbestos. It should be noted that recent court rulings have exempted roofing cement from the OSHA Construction Industry Asbestos Standard.

Renovation or demolition of the structures and roofs that could potentially disturbed the ACM located within the subject property should be conducted in strict compliance with the aforementioned federal statutes and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

The renovation and demolition of buildings is regulated under the TAHPR and NESHAP statutes. Even if asbestos is not detected at 1.0% or more, the TAHPR and NESHAP regulations require a ten-day notification to the Controlling Agency (TDSHS) prior to renovation and demolition.

8.0 CONTROLLNG AGENCY

The Controlling Agency for the coordination of projects involving asbestos removal or demolition is the TDSHS Asbestos Program. The owner or operator shall provide the above-referenced department with a ten-day notice of the asbestos removal project or demolition by timely submittal of a completed "Asbestos Abatement/Demolition Notification" form, as promulgated under TAHPR. The notification can be submitted on Texas Department of State Health Services, located online at https://www.dshs.texas.gov/asbestos-program/notifications-asbestos-program.

9.0 CONDITIONS AND LIMITATIONS OF THIS INPECTION

A representative of UES obtained samples of building materials which were observed during an inspection of the building at the subject site that are typically suspected of containing asbestos as a constituent. The bulk samples were submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis using EPA approved methods for industry-accepted standards. UES makes no warranties, express or implied.

In general, inspection and sampling procedures were incorporated which allowed assessment of reasonably accessible building materials. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls. Though every effort was made to examine wall cavities and other areas for thermal system insulation, spray-applied or trowel applied surfacing material or other miscellaneous materials and other PACM, this survey and report only deals with accessible areas of the building. There may be additional inaccessible areas above the ceiling, behind walls and below floors that become evident during demolition or renovation activities. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed. The building's equipment fixtures, or stored materials were not inspected or sampled as part of this evaluation.

Bidders are responsible for their own calculations and estimates of quantities. Actual quantities may be more or less than indicated.

Federal OSHA Standard 26 CFR 1926.1101 has specific requirements relating to employee protection and notification during construction projects (including demolition and renovation projects) involving ACM as well as materials containing trace levels of asbestos which apply to this project. UES recommends complying with applicable OSHA regulations, which would include notifying the demolition contractor of the presence of asbestos.

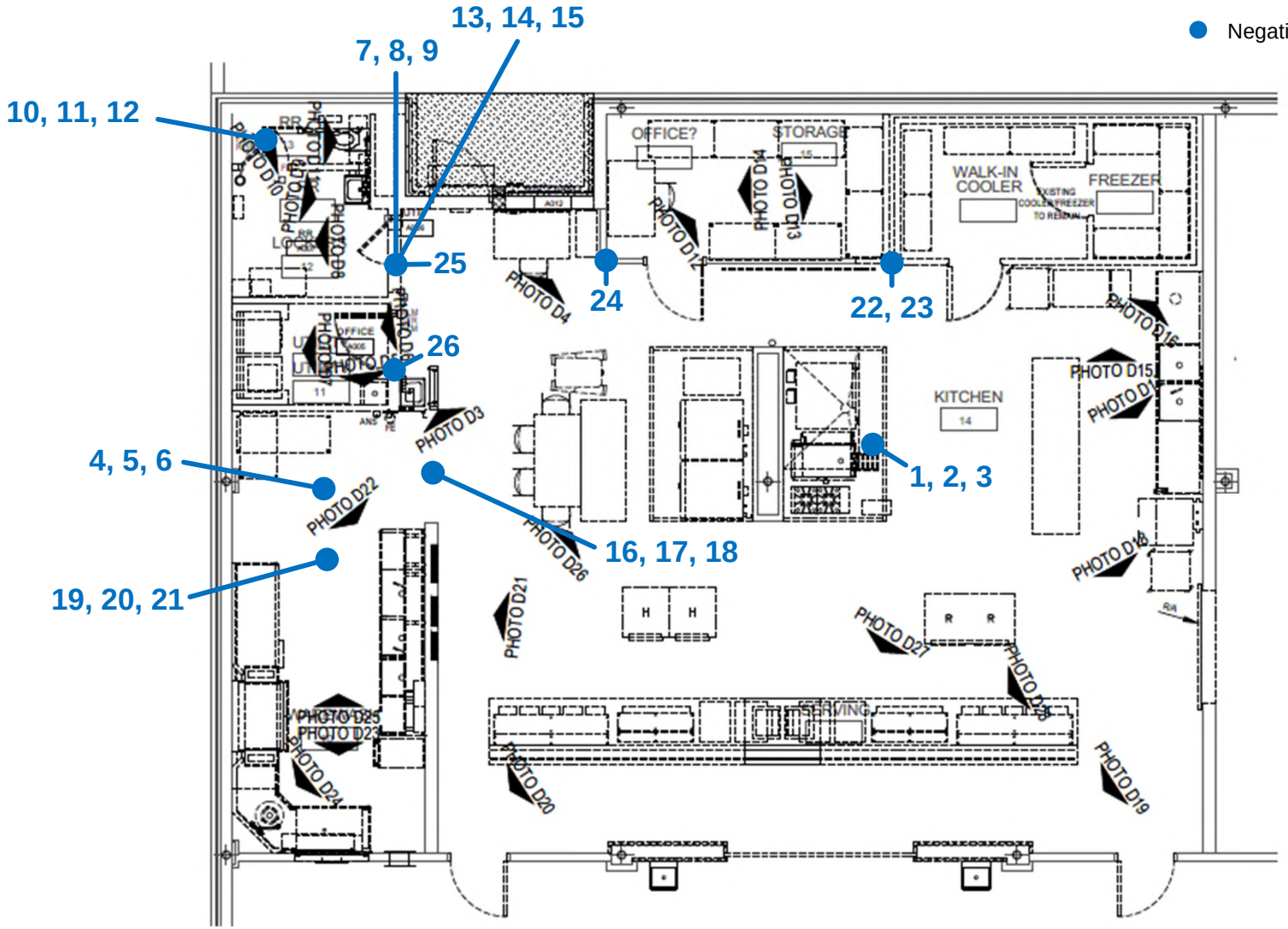
All conclusions and recommendations in this report represent the professional opinions of the personnel involved with the project. The results, findings, conclusions and recommendations expressed in this report are based on access provided and conditions observed, and samples taken during the survey of the building. The information contained in this report is relevant as of the date on which the field work was performed and should not be relied upon to represent Site's conditions at a later date. This study and report were prepared on behalf of and for the exclusive use of the Client solely for its use and reliance in determining the presence of asbestos in identified areas of the site. The results of this report are not intended or to be construed as legal interpretation of existing federal, state, or local environmental, health and safety laws or regulations. UES assumes no responsibility or liability for errors in information or data provided to UES by the Client or any third party or developments resulting from activities or situations outside the scope of this project.

Appendix A
Bulk Sample Location Map and Photograph Log

Sample Locations

Legend:

● Negative ACM Sample Location



Floor Plans are not to scale

First Floor

UES

FBISD – BP013 Renovations
Sugar Mill ES
13707 Jess Pirtle Boulevard
Sugar Land, Texas

Fort Bend ISD
16431 Lexington Boulevard
Sugar Land, Texas 77479

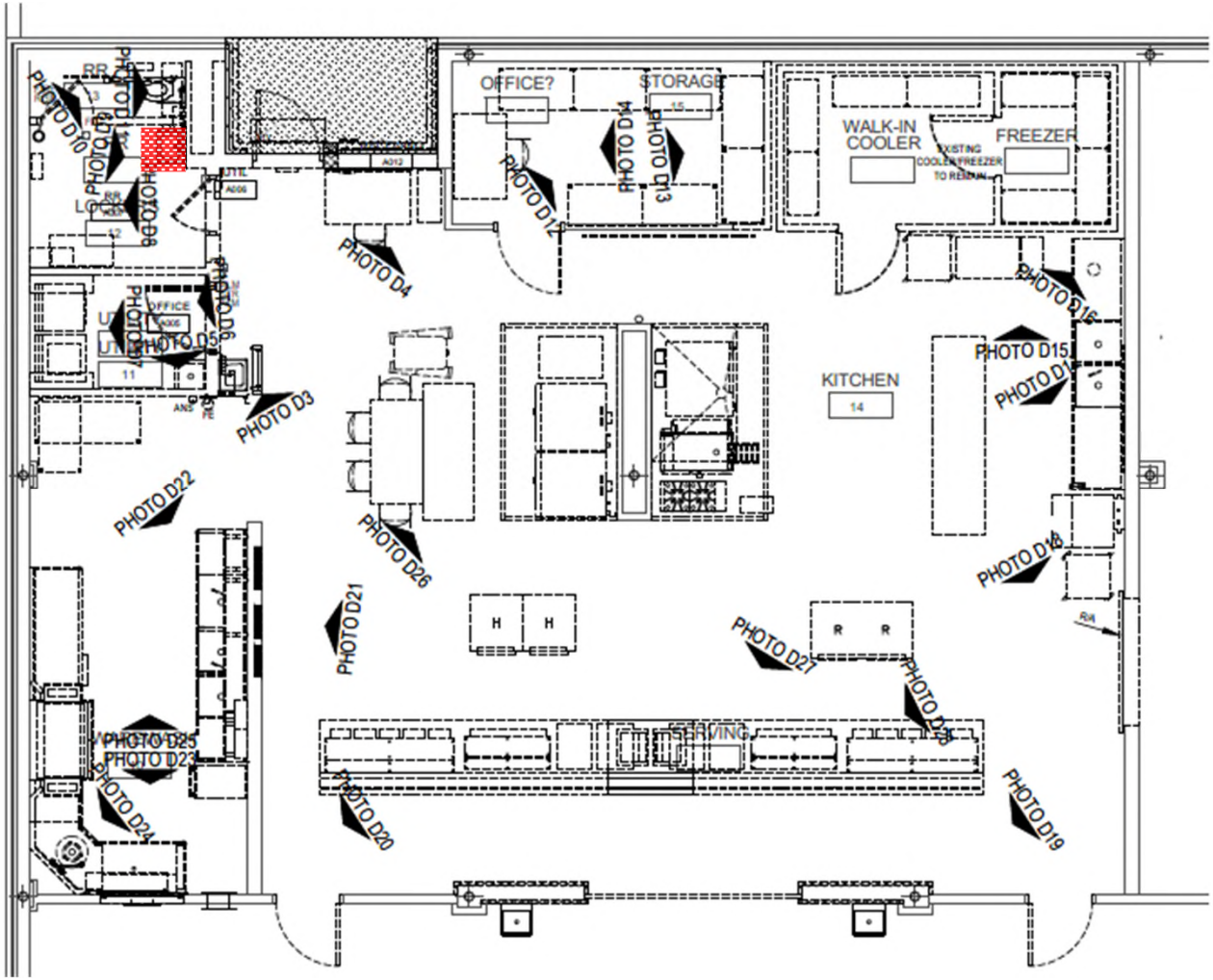
N

Proj. Mgr: KAG
Date: 4/30/2025
Drawn By: EDG
Project # N250486

Assumed ACM Locations

Legend:

Mirror Mastic



Floor Plans are not to scale

First Floor

UES

FBISD – BP013 Renovations
Sugar Mill ES
13707 Jess Pirtle Boulevard
Sugar Land, Texas

Fort Bend ISD
16431 Lexington Boulevard
Sugar Land, Texas 77479

N

Proj. Mgr: KAG
Date: 4/30/2025
Drawn By: EDG
Project # N250486

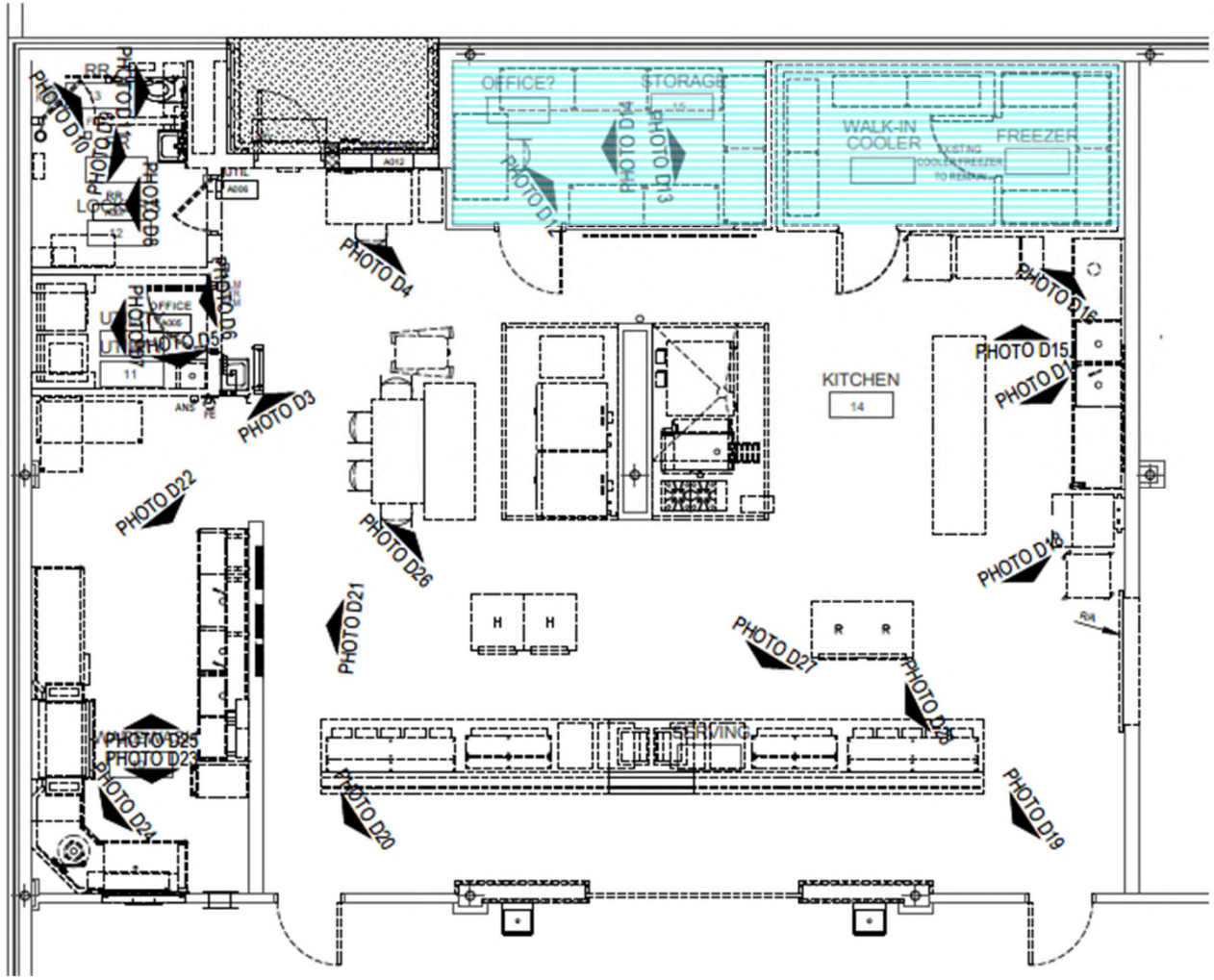
Inaccessible Locations

Legend:

- Inaccessible Area

Notes:

These areas were inaccessible, all materials within that differ from materials that were sampled are assumed to be asbestos containing until such a time as they can be sampled and proven negative of asbestos content



Floor Plans are not to scale

First Floor

UES	**FBISD – BP013 Renovations** **Sugar Mill ES** 13707 Jess Pirtle Boulevard Sugar Land, Texas	**Fort Bend ISD** 16431 Lexington Boulevard Sugar Land, Texas 77479	N	**Proj. Mgr: KAG** **Date: 4/30/2025** **Drawn By: EDG** **Project # N250486**

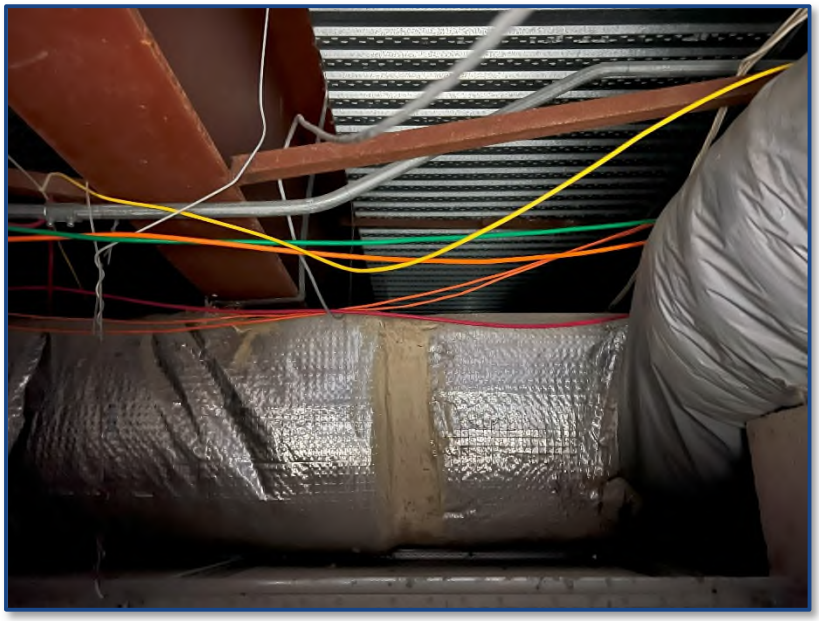
HA 1: 6” x 6” Brown Ceramic Floor Tile

HA 2: 2’ x 2’ Sheetrock Ceiling Tile

HA 3: 12” x 12” White Vinyl Floor tile with Blue Specks

HA 4: 12” x 12” Beige Ceramic Floor Tile

HA 5: 4” Black Cove Base



HA 6: HVAC Duct Insulation

HA 7: TSI Pipe Insulation

HA 8: CMU with Filler Texture

Appendix B
PLM Analytical Report & Chain-of-Custody Documentation

Asbestos Laboratory Report

Prepared for

UES Dallas

Project: FBISD - BP013 Renovations - Sugar Mill ES

UES No.: A25117.00813.000

Date Received: 4/21/2025

Date Analyzed: 4/23/2025

Date Reported: 4/25/2025

Total Samples Analyzed: 57

 # Samples >1% Asbestos: 0

Method of Analysis: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00813.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/23/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Sugar Mill ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
SMF-1-Ceramic Tile A25117.00813.000-1	6x6 Brown Ceramic Floor Tile	Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-1-Grout A25117.00813.000-1A	6x6 Brown Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-2-Ceramic Tile A25117.00813.000-2	6x6 Brown Ceramic Floor Tile	Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-2-Grout A25117.00813.000-2A	6x6 Brown Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-3-Ceramic Tile A25117.00813.000-3	6x6 Brown Ceramic Floor Tile	Brown Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-3-Grout A25117.00813.000-3A	6x6 Brown Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-4 A25117.00813.000-4	2x2 Sheetrock Ceiling Tile	Gray, White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
SMF-5 A25117.00813.000-5	2x2 Sheetrock Ceiling Tile	Gray, White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
SMF-6 A25117.00813.000-6	2x2 Sheetrock Ceiling Tile	Gray, White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
SMF-7-Floor Tile A25117.00813.000-7	12x12 White Vinyl Floor Tile with Blue Specks	Blue, White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-7-Mastic A25117.00813.000-7A	12x12 White Vinyl Floor Tile with Blue Specks	Tan Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-8-Floor Tile A25117.00813.000-8	12x12 White Vinyl Floor Tile with Blue Specks	Blue, White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-8-Mastic A25117.00813.000-8A	12x12 White Vinyl Floor Tile with Blue Specks	Tan Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00813.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/23/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Sugar Mill ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
SMF-9-Floor Tile A25117.00813.000-9	12x12 White Vinyl Floor Tile with Blue Specks	Blue, White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-9-Mastic A25117.00813.000-9A	12x12 White Vinyl Floor Tile with Blue Specks	Tan Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-10-Ceramic Tile A25117.00813.000-10	12x12 Beige Ceramic Floor Tile	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-10-Grout A25117.00813.000-10A	12x12 Beige Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-11-Ceramic Tile A25117.00813.000-11	12x12 Beige Ceramic Floor Tile	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-11-Grout A25117.00813.000-11A	12x12 Beige Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-12-Ceramic Tile A25117.00813.000-12	12x12 Beige Ceramic Floor Tile	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-12-Grout A25117.00813.000-12A	12x12 Beige Ceramic Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-13-Cove Base A25117.00813.000-13	4 Black Cove Base	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-13-Mastic A25117.00813.000-13A	4 Black Cove Base	Tan Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-14-Cove Base A25117.00813.000-14	4 Black Cove Base	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-14-Mastic A25117.00813.000-14A	4 Black Cove Base	Tan Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-15-Cove Base A25117.00813.000-15	4 Black Cove Base	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-15-Mastic A25117.00813.000-15A	4 Black Cove Base	Tan Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00813.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/23/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Sugar Mill ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
SMF-16-Mastic A25117.00813.000-16	HVAC Duct Insulation	Off White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-16-Wrap A25117.00813.000-16A	HVAC Duct Insulation	Silver, Brown Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
SMF-16-Insulation A25117.00813.000-16B	HVAC Duct Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
SMF-17-Mastic A25117.00813.000-17	HVAC Duct Insulation	Off White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-17-Wrap A25117.00813.000-17A	HVAC Duct Insulation	Silver, Brown Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
SMF-17-Insulation A25117.00813.000-17B	HVAC Duct Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
SMF-18-Mastic A25117.00813.000-18	HVAC Duct Insulation	Off White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-18-Wrap A25117.00813.000-18A	HVAC Duct Insulation	Silver, Brown Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
SMF-18-Insulation A25117.00813.000-18B	HVAC Duct Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
SMF-19-Wrap A25117.00813.000-19	TSI Pipe Insulation	Silver, White Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
SMF-19-Insulation A25117.00813.000-19A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
SMF-20-Wrap A25117.00813.000-20	TSI Pipe Insulation	Silver, White Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected
SMF-20-Insulation A25117.00813.000-20A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
SMF-21-Wrap A25117.00813.000-21	TSI Pipe Insulation	Silver, White Homogeneous Fibrous	50% Cellulose	50% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00813.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/23/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Sugar Mill ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
SMF-21-Insulation A25117.00813.000-21A	TSI Pipe Insulation	Yellow Homogeneous Fibrous	99% Glass	1% Non-fibrous (Other)	None Detected
SMF-22-Texture A25117.00813.000-22	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-22-CMU A25117.00813.000-22A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-22-Mortar A25117.00813.000-22B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-23-Texture A25117.00813.000-23	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-23-CMU A25117.00813.000-23A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-23-Mortar A25117.00813.000-23B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-24-Texture A25117.00813.000-24	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-24-CMU A25117.00813.000-24A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-24-Mortar A25117.00813.000-24B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-25-Texture A25117.00813.000-25	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-25-CMU A25117.00813.000-25A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-25-Mortar A25117.00813.000-25B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-26-Texture A25117.00813.000-26	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00813.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/23/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Sugar Mill ES

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
SMF-26-CMU A25117.00813.000-26A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
SMF-26-Mortar A25117.00813.000-26B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

METHOD: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

For samples easily separated into homogeneous layers, each component will be analyzed separately. The sample may not be representative of the larger material in question. Interpretation and use of test results are the responsibility of the client. Due to the limitations of the EPA 600 Method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles, mastic and roofing can be difficult to analyze by PLM. Reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or None Detect for these materials is recommended. The percentage of asbestos reported is a midpoint within an acceptable range. The estimated measurement of uncertainty is available upon request. Results relate only to the items received by the laboratory as noted on the Chain of Custody provided by the client.

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Analysis is determined by Calibrated Visual Estimate (CVE).
Temperature at the time of analysis (°C) : 22

NVLAP Code: 600344

Texas License Number : 300520

Analyst(s): Brant Alyea

Approved By: Cass Rupert
Approved Signatory

UES Laboratories, 10121 Pineville Distribution St., Pineville, NC Phone: (704) 504-1717

CHAIN OF CUSTODY

UNIVERSAL ENGINEERING SCIENCES

LAB USE ONLY:	A25117.00813.000
UES Order Number:	45495

10121 Pineville Distribution Street,
Pineville, North Carolina 28143
Tel: 704-504-1717; Fax: 704-504-1125

COMPANY CONTACT INFORMATION	
Company: UES Dallas	Job Contact: Ethan Grigg, Kristopher Girton
Address: 2209 Wisconsin Street,	Email: egrigg@teamues.com
Dallas, Texas 75229	kgirton@teamues.com
	Tel: 817-966-6636
Project Name: FBISD - BP013 Renovations	Fax:
Project ID #: N250486	State Collected In: Intact

Bill to: ☑ Same ☐ Different – If Bill to is different please notate in the comments section.

ASBESTOS	METHOD	TURN AROUND TIME						
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY	2 Week
PLM BULK	EPA 600	☐	☐	☐	☐	☐	☑	☐
PLM Point Count (400)	EPA 600	☐	☐	☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐	☐
TEM BULK	EPA NOB / Chatfield			☐	☐	☐	☐	☐
TEM AIR	AHERA 40 CFR, Part 763	☐	☐	☐	☐	☐	☐	☐
TEM Dust Wipe	ASTM D6480	☐	☐	☐	☐	☐	☐	☐

POSITIVE STOP ANALYSIS: ☑

IF TURNAROUND TIME IS NOT MARKED STANDARD 5 DAY APPLIES

By submitting samples, you are agreeing to UES Terms and Conditions

COMMENTS: Sugar Mill ES
SEE ATTACHED - Use Sampling Log Name

☑ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
Ethan Grigg	4/18/2025		4.21.25

Samples will be disposed of 60 days after analysis

A25117.00813.000

UES

PO#: 45495

Date: 4/16/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD-BP013 Renovations - Sugar Mills ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
SMF-	1	6"x6" Brown Ceramic Floor Tile	Kitchen	NFII	G	1,300SF
1	2	1	1	1	1	1
1	3	1	1	1	1	1
1	4	2'x2' Sheetrock Ceiling Tile	Kitchen	NFII	G	1,600SF
1	5	1	1	1	1	1
1	6	1	1	1	1	1
1	7	12"x12" White Vinyl Floor Tile with Blue Specks	Kitchen	NFI	G	100SF
1	8	1	1	1	1	1
1	9	1	1	1	1	1
1	10	12"x12" Beige Ceramic Floor Tile	Kitchen	NFII	G	100SF
1	11	1	1	1	1	1
1	12	1	1	1	1	1
1	13	4" Black Cove Base	Kitchen	NFII	G	200LF
1	14	1	1	1	1	1
1	15	1	1	1	1	1

A25117.00813.000

UES

PO #: 145495

Date: 4/16/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD-BP013 Renovations - Sugar Mill ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
SM F-	16	HVAC Duct Insulation	Kitchen	F	G	100LF
"	17	"	"	"	"	"
"	18	"	"	"	"	"
"	19	TSI Pipe Insulation	Kitchen	F	G	300LF
"	20	"	"	"	"	"
"	21	"	"	"	"	"
"	22	CMU with Filler Texture	Kitchen	NF II	G	3,000SF
"	23	"	"	"	"	"
"	24	"	"	"	"	"
"	25	"	"	"	"	"
"	26	"	"	"	"	"

Appendix C
Inspector(s) License and Firm License

GEBCO Associates certifies that

Ethan D. Grigg

25056 1127

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS INSPECTOR REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25056

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Ethan D. Grigg

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Inspector Refresher Course

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25056 1127

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

GEBCO Associates, LP * 815 Trailwood Dr, Suite 200 * Hurst, TX 76053 * (817)268-4006

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Inspector

ETHAN D GRIGG

License Number: 603778

Control Number: 101162

Expiration Date: 10-Apr-2027

GEBCO Associates certifies that

Kristopher A. Girton

25003 0358

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 01/08/2025 Certificate No: 25003

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053
Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Kristopher A. Girton

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on January 8, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

Owner

Instructor: Joseph Londt

Date of Issue 01/08/2025

Certificate Number: 25003 0358

Exam Date: 01/08/2025

Certificate Expires 01/08/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

KRISTOPHER A GIRTON

License Number: 105894

Control Number: 98431

Expiration Date: 7-Jun-2026

GEBCO Associates certifies that

Michael K. Nibert

25021 5548

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25021

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP

815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Michael K. Nibert

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25021 5548

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

GEBCO Associates, LP * 815 Trailwood Dr, Suite 200 * Hurst, TX 76053 * (817)268-4006

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

MICHAEL K NIBERT

License Number: 105931

Control Number: 98417

Expiration Date: 8-May-2026

Texas Department of State Health Services

UES PROFESSIONAL SOLUTIONS 44 LLC

is certified to perform as an

Asbestos Consultant Agency

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1954 and Title 12, Texas Administrative Code, Chapter 295 relating to Texas Asbestos Health Protection, as long as this license is not suspended or revoked.

License Number: 100608

Expiration Date: 05/12/2026

Jennifer Shuford, MD, MPH,
Commissioner of Health

Control Number: 97663

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

SEE BACK

ASBESTOS CONTAINING MATERIALS
INSPECTION REPORT

Fort Bend ISD – BP013 Renovations – Anne Sullivan ES
17828 Winding Waters Lane
Sugar Land, Texas
UES Project No. N250486

Prepared for:
Fort Bend ISD
16431 Lexington Boulevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Prepared by:
UES
2209 Wisconsin Street
Dallas, TX 75229
972-620-8911
www.TeamUES.com

TDSHS Asbestos Consultant Agency License No.: 100608

June 10, 2025

Fort Bend ISD
16431 Lexington Bouevard, Room 314
Sugar Land, Texas 77479
Attention: Akhila Pentrala

Re: Asbestos Containing Materials Inspection Report
Fort Bend ISD – BP013 Renovations – Anne Sullivan ES
17828 Winding Waters Lane
Sugar Land, Texas
UES Report No. N250486

Dear Mrs. Pentrala:

On behalf of Fort Bend ISD (the "Client"), UES Professional Solutions 44, LLC (hereinafter "UES") has completed this Asbestos Containing Materials Inspection Report for Anne Sullivan Elementary School. This inspection was conducted in general accordance with Title 25 of the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296) the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP). UES performed this ACM inspection on April 15, 2025, to categorize and assess readily available suspect homogeneous material for Anne Sullivan Elementary School. UES collected thirty-six (36) bulk samples from ten (10) homogeneous materials. The bulk samples were transported to a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and Texas Department of Safety and Health Services (TDSHS) licensed laboratory for analysis using Polarized Light Microscopy (PLM) for the presence of asbestos fibers.

Asbestos Containing Materials (ACMs) are classified as materials that contain 1.0% or more asbestos in any of the homogeneous materials sampled. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The laboratory analyses indicated that asbestos fibers were not detected in the homogeneous materials analyzed from the building. Refer to Section 6.0 of this report. Additional details regarding the ACM Inspection conducted by UES are presented in the attached report.

We appreciate the opportunity to perform these services for Fort Bend ISD. Please contact the undersigned if you have questions regarding the information provided in the report.

Respectfully submitted,
UES

Kristopher Girton
Asbestos Project Manager
Asbestos Consultant License No.: 105894

Michael Nibert, CHMM, C.E.M.
Director of Environmental Services-North Texas
Asbestos Consultant License No.: 105931

TDSHS Asbestos Consultant Agency License No.: 100608

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APPENDIX A

Bulk Sample Location Map and Photograph Log

APPENDIX B

PLM Analytical Report & Chain-of-Custody Documentation

APPENDIX C

Inspector(s) License and Firm License

1.0 INTRODUCTION

UES Professional Solutions 44, LLC (hereinafter "UES") conducted a pre-renovation (limited) Asbestos Containing Materials (ACM) Inspection on Anne Sullivan Elementary School located at 17828 Winding Waters Lane in Sugar Land, Texas. The purpose of this inspection was to identify and sample accessible suspect ACM and provide information regarding the identity, location, and condition in anticipation of a renovation and/or demolition of the building.

This service was completed in general accordance with UES Proposal No. 109625Rev4 dated February 10, 2025, and authorized by Fort Bend ISD Purchasing Department, Purchase Order 501107 on March 28, 2025.

This asbestos inspection of Anne Sullivan Elementary School was limited to the Stage, Stage Storage, Student Dining Area, Chair Storage, Storage Room E123, Custodial Room E124, Custodial Office, IDF Room, Exterior Storage Room E117, and the exterior overhang. During the survey one location could not be accessed; Custodial Room E124. If materials in this area does not match those sampled during this survey, they are assumed to be asbestos containing .

This inspection was conducted in accordance with the Texas Administrative Code (TAC), Chapter 296 (25 TAC §296), the Texas Asbestos Health and Protection Rules (TAHPR) and the Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter C, Part 61, Subpart M of the Environmental Protection Agency (EPA) National Emissions Standard for Hazardous Air Pollutants (NESHAP).

A map or photographic log illustrating the sample locations is included as Appendix A of this report. The bulk sample laboratory report and associated chain-of-custody documentation is presented in Appendix B. A copy of the inspector's license that performed the building inspection and a copy of UES's Texas Department of Safety and Health Services (TDSHS) firm license are provided in Appendix C.

1.1 Limitations and Exclusions

This inspection report is not intended to be used as a specification, project design or work plan. The indicated material quantities of ACM (if documented) are estimates based on UES's field observations on the date(s) of the inspection(s) and should be considered preliminary in nature. All parties utilizing this report for proposal, estimation or contract negotiations are required to field verify the quantities of material prior to submission of proposal. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor. The asbestos abatement contractor should ascertain for themselves, by site measurements and inspection, the exact nature and extent of the work to be done.

Inspection and collection of bulk samples of suspect ACMs were limited to those materials readily accessible at the time of inspection. Destructive sampling techniques (such as wall and ceiling testing, and carpet cuts to expose underlying flooring) were employed in limited measures in the areas inspected and

completed in a way to minimize disruption to operations and damage to building components. Extensive destructive sampling methods were not used, and exploratory demolition of walls and/or removal of fixed items were not conducted. No attempt was made by UES to observe conditions in spaces not generally accessible, including but not limited to crawlspaces, pipe chases, plenums, or confined spaces. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls.

Although every effort is made to locate all suspected ACMs, it is impossible to rule out the possibility that undiscovered asbestos materials may be present. If the building is to undergo major refurbishment or demolition, it is recommended that the persons carrying out the work are made aware of this and take sufficient precautions, as may be appropriate, to ensure the health and safety of their own employees and any other parties who may be affected by the works. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed.

Asbestos has not been banned from use in building products in the United States. Newer buildings are not exempt. Certain uses of asbestos have been banned: such as spray applied fireproofing, pipe and boiler insulation and asbestos cardboard.

1.2 Purpose and Scope of Work

The purpose of this study was to perform an evaluation of the above-referenced facility for the presence of ACMs, specifically those building materials which may be present or impacted during potential demolition or renovation activities. The activities and procedures used to accomplish this task were as follows:

1) A review of available building documents to identify potential locations of suspect ACMs;
2) Visual building inspection of accessible areas by a EPA Asbestos Hazard Emergency Response Act (AHERA) accredited and Texas Department of Safety and Health Services (TDSHS) licensed Asbestos Building Inspector to identify suspect ACMs;
3) Once identified, homogeneous materials (materials which are uniform in color, texture, construction/application date, and general appearance) were determined;
4) Determine whether the suspect ACM is Friable (a material that when dry, may be crumbled, pulverized or reduced to powder by hand pressure) or Non-Friable;
5) Collection of bulk samples of each homogeneous suspect ACM. Record sample information on Asbestos Bulk Sample Forms (chain-of-custody sheets), which were signed, dated, and sent with the samples to the laboratory;
6) Analysis of the collected bulk samples at a National Voluntary Laboratory Accreditation Program (NVLAP) accredited and TDSHS licensed laboratory using Polarized Light Microscopy (PLM) for the presence of asbestos fibers;

7) Approximate locations of the bulk samples were defined. Computer Assisted Drafting and Design (CADD) drawings were developed indicating sample locations. In addition, approximate quantities of identified ACM were also determined; and,
8) Prepare and submit a report.

2.0 CHARACTERISTICS AND INFORMATION

2.1 General

A summary of Anne Sullivan Elementary School's characteristics is outlined in the table below. Information on the buildings was obtained by UES through our field inspection, review of available building documents and/or property appraiser records.

FORT BEND ISD - ANNE SULLIVAN ELEMENTARY SCHOOL		
General	Facility Type	Elementary School
	Construction Date	2016
	Building Size	88,255 Square Feet
	Number of Stories	1
Structural	Foundation	Slab-on-Grade
	Wall Support	Concrete Block, Steel and Glass
	Wall Finish	Brick
	Roof Support	Bar Joist w/ Metal Deck
	Roof System Type	Built-up Roofing
Mechanical/ Plumbing	HVAC Type	Central (Rooftop Units)
	Duct Type	Fiberglass (Flex or Ridged)
	Pipe Insulation	Paper Wrap with Fiberglass Insulation
Interior	Wall Substrates	Wood/Steel Studs, or Furring Strips
	Wall Finishes	Drywall, CMU, Ceramic Tile, Partition
	Floor Substrates	Concrete
	Floor Finishes	Ceramic Tiles, Vinyl Floor Tile, Carpet, Vinyl Plank Flooring
	Ceiling Systems	Suspended, Enclosed
	Ceiling Finishes	Ceiling Tiles, Plaster
	Other	None

2.2 Building Information Available

UES was provided with demolition plan drawings dated December 4, 2024. No previous asbestos inspection report(s) were provided and no other material information was provided in reference to Anne Sullivan Elementary School located within the subject building.

2.3 Current Building Use

At the time of UES's ACM inspection, the Anne Sullivan Elementary School was an occupied elementary school.

3.0 INSPECTION PROTOCOL

Three forms of ACMs are typically found on structures. These materials are classified as follows:

- *Surfacing Material* – material that is sprayed-on, troweled-on, or otherwise applied to interior and exterior structural and architectural surfaces. Surfacing material includes acoustical plaster on ceilings, fireproofing on structural members, textured paint and exterior stucco, and other materials applied to surfaces for acoustical, decorative, fireproofing, and other purposes.

- *Thermal System Insulation* — material which is applied to interior and exterior mechanical components to reduce heat gain or loss. Thermal system insulation includes insulation on pipes, fittings, boilers, breeching, tanks, ducts, and other mechanical components.

- *Miscellaneous Materials* — material, other than surfacing material and thermal system insulation, on interior and exterior structural, mechanical, electrical, or architectural components, and surfaces. Miscellaneous material includes but is not limited to ceiling tiles, gaskets, floor coverings and mastics, wallboard joint compound, roofing materials, and cementitious products.

An inspection of Anne Sullivan Elementary School was conducted to identify these, and other materials present within the building which are suspected of containing asbestos.

3.1 Inspection Procedures

UES's field inspection was performed on April 15, 2025, by Ethan Grigg, an inspector accredited according to Federal Regulation 40 CFR, Part 763 (AHERA), and a TDSHS Licensed Asbestos Inspector (TDSHS License No. 60-3778).

After a preliminary walk-through of the building, an inspection was conducted to evaluate the location and extent of the suspected ACMs. Once identified, these materials were categorized into homogeneous areas containing materials of the same type, age, visual appearance, texture, composition, etc.

This type of inspection is designed to be used as a basis for tendering the removal of ACMs from the subject building(s) prior to demolition or renovation. The present condition of each ACM was evaluated by UES and classified as one of three categories: "good", "damaged" and "significantly damaged." As defined by AHERA. "Poor condition, for NESHAP Category I and II nonfriable materials, is synonymous to "damaged" and/or "significantly damaged," depending on the percentage of damaged.

Federal regulations also require inspectors to determine the potential for disturbance (or damage). This potential for disturbance is based on the presumption that the building will not be demolished. The classifications for potential for disturbance ranges from low, to moderate, to high, and is based on vibration, contact and air erosion.

The TAHPR utilizes NESHAP and AHERA regulations depending on the type of building that is being surveyed. Public buildings and facilities utilize TAHPR per NESHAP regulations and school buildings utilize the AHERA regulations. TAHPR requires a minimum of three (3) samples of each Homogenous Area to be collected and analyzed by a NVLAP accredited and TDSHS licensed laboratory. The number of bulk samples collected was based on the type of facility (public building and facility or school) and category of Homogeneous Area and the quantity of the material present, as follows:

AHERA GUIDELINES FOR DETERMINING THE NUMBER OF SAMPLES TO COLLECT

HSA CATEGORY	HSA QUANTITY	SAMPLES REQUIRED
Surfacing Materials	<1,000 Square Feet	3
	1,000 – 5,000 Square Feet	5
	>5,000 Square Feet	7 or more
Thermal System Insulation	No Stipulation	3+ (All repair patches must be sampled)
Miscellaneous Materials	No Stipulation	Per AHERA Guidelines, these materials must be sampled "in a manner sufficient to determine whether or not they contain asbestos" typically two or more samples based upon the inspector's judgement (a minimum of three (3) samples are required by TAHPR).

HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)

UES's inspector(s) employed wet methods as applicable during bulk sample collection to reduce the potential for fiber release. Each sample was documented by labeling the container with a unique sample number, entering the sample material on a bulk sample log or chain-of-custody form, and noting the location of each sample on a floor plan. Throughout the sampling process, care was taken to prevent cross-contamination of the collected bulk samples. Sampling equipment was cleaned following the collection of each sample.

Random, and in some cases judgmental, samples of each homogeneous area of material were then collected. The physical condition of each material was assessed. In addition, a tactile inspection of the material was performed to evaluate its friability. If the material, when dry, can be crumbled, pulverized,

or reduced to powder by hand pressure, it is considered friable. Samples from any homogeneous area where the inspector determined that the material was non-ACM (such as thermal insulation that obviously fibrous glass, foam glass, or rubber) were not collected.

3.2 Suspected Asbestos Containing Materials

Based on UES's review of the available building system information and thorough visual inspection of the subject building, ten (10) Homogeneous Areas were identified at Anne Sullivan Elementary School commonly suspected of containing asbestos. The Homogeneous Areas are detailed on the List of suspect ACMs.

3.3 TAHPR Classification

The materials assessed are classified as either: Regulated Asbestos Containing Material (RACM), Category I non-friable ACM, or Category II non-friable ACM.

Friable materials are "Any ACM that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure."

Non-friable materials are "ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

Category I non-friable ACM is "Asbestos-containing packings, gaskets, resilient floor-covering material, and asphalt roofing products determined to be ACM."

Category II non-friable ACM is – "Any material determined to be ACM, excluding Category I non-friable ACM, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure."

RACM means "Friable asbestos material; Category I non-friable ACM that has become friable; Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations."

ACM materials are subject to the TAHPR notification requirements, refer to Section 7.0 for Regulatory Information.

4.0 LABORATORY ANALYSIS

4.1 Polarized Light Microscopy Analysis

The samples of the suspected ACMs collected during the field inspection were transported with chain-of-custody documentation to UES Laboratories located in Pineville, North Carolina. UES Laboratories is a NVLAP accredited laboratory (NVLAP Accreditation No. 600344-0) and TDSHS licensed (TDSHS License No. 300520) laboratory for bulk sample analysis.

Bulk samples were analyzed for the presence of asbestos fibers using PLM. The analyses were performed according to EPA Method 600/R-93/116 July 1993 "Method for the Determination of Asbestos in Bulk Building Materials." This analytical method can be used for qualitative identification of six morphologically different types of asbestos fibers: chrysotile, amosite, crocidolite, tremolite, actinolite and anthophyllite. PLM analysis requires the microscopist to take a portion of the sample and treat it with an oil of specific refractive index. The prepared slide is then subjected to a variety of tests while being viewed under varying polarizations of light. Each type of asbestos displays unique characteristics when subjected to these tests.

The method specifies that the asbestos content in a bulk sample shall be estimated and reported as a finite percentage within the range of 0 to 100. Minute quantities of asbestos in bulk samples may be reported as "trace" or less than one percent (<1.0%). The analytical method determines the asbestos percentage by means of visual estimation technique. If analysis of the sample of a suspect ACM reveals a negative result, UES considers the material to be non-Asbestos containing. If at any time during the analytical process a sample tests positive, that material must be treated as ACM.

5.0 FINDINGS

Ten (10) suspect homogeneous materials were identified at the subject building. Following TAHPR and AHERA guidelines, the appropriate number of bulk samples were collected from the identified homogeneous material and submitted for laboratory analysis.

The laboratory analyses indicated that asbestos fibers were not detected in the homogeneous materials analyzed from the building.

The following table presents the analytical results of the suspect ACMs and general information regarding the suspect ACMs.

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
ASF – 1 - 7	1	Sheetrock Wall System	Misc.	Good	low	NAD	*Category II – Non-Friable*	8,000 SF	No

Sample Number/ Name	HSA	Material	Classification	Current Condition	Potential for Disturbance	Asbestos Analytical Results	NESHAP Category	Estimated Quantity	RACM
ASF – 8 - 12	2	CMU with Filler Texture	Misc.	Good	low	NAD	*Category II – Non-Friable*	1,800 SF	No
ASF – 13 - 15	3	2' x 2' Ceiling Tile	Misc.	Good	low	NAD	*Friable*	400 SF	No
ASF – 16 - 18	4	4" Beige Cove Base with Mastic	Misc.	Good	low	NAD	*Category II – Non-Friable*	400 LF	No
ASF – 19 - 21	5	4" Black Cove Base with Mastic	Misc.	Good	low	NAD	*Category II – Non-Friable*	60 LF	No
ASF – 22 - 24	6	18" x 18" Beige Vinyl Floor Tile	Misc.	Good	low	NAD	*Category I – Non-Friable*	300 SF	No
ASF – 25 - 27	7	Wood Style Vinyl Flooring	Misc.	Good	low	NAD	*Category I – Non-Friable*	2,000 SF	No
ASF – 28 - 30	8	Brown Carpet Mastic	Misc.	Good	low	NAD	*Category II – Non-Friable*	100 SF	No
ASF – 31 - 33	9	Partition Wall Covering	Misc.	Good	low	NAD	*Category II – Non-Friable*	915 SF	No
ASF – 34 - 36	10	Plaster Ceiling System	Surf.	Good	low	NAD	*Friable*	800 SF	No

Table Notes and Definitions:
HSA: Homogeneous Sampling Area (materials which are uniform in color, texture, construction/application date, and general appearance)
NESHAPs = National Emission Standards for Hazardous Air Pollutants
SF = Square Feet
LF = Linear Feet
EA = Each
NF = Non-Friable
NAD = No Asbestos Detected
Surf = Surfacing
TSI = Thermal System Insulation
Misc. = Miscellaneous
Note - The indicated material quantities are estimates based on UES' field observations and should be considered preliminary in nature. These estimates should not be used for bidding purposes without verification by the asbestos abatement contractor.
Note - Damaged and Significantly Damaged Non-Friable Materials are classified as RACM per NESHAP.

6.0 SUMMARY OF ASBESTOS CONTAINING MATERIALS

Inspection of the subject building, located at 17828 Winding Waters Lane, Sugar Land, Texas, identified ten (10) materials suspected of containing asbestos fibers. Bulk samples of each material were collected and submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis. Suspect materials not sampled should be assumed to contain asbestos until sampling indicates otherwise. The results indicated that the ten (10) suspect materials did not contain 1.0% or more asbestos.

7.0 REGULATORY INFORMATION

The State of Texas has established the TAHPR which requires asbestos related activity to be performed by an individual licensed by TDSHS. An asbestos related activity consists of the disturbance (whether intentional or unintentional), removal, encapsulation, or enclosure of asbestos, including preparations or final clearance, the performance of asbestos surveys, the development of management plans and response actions, asbestos project design, the collection or analysis of asbestos samples, monitoring for airborne asbestos, bidding for a contract for any of these activities, or any other activity required to be licensed under TAHPR.

Abatement must be performed by a TDSHS licensed asbestos abatement contractor in accordance with a project design prepared by a TDSHS Licensed Asbestos Consultant. In addition, third party air monitoring must be conducted by a TDSHS licensed Air Monitoring Technician or Project Manager during the abatement activities.

Demolition under the TAHPR regulation is defined as the wrecking or removal of any load-supporting structural member of a public building or facility for the purpose of razing the building or portion of the building to the ground, or the intentional burning of any public building or facility. The removal of load-supporting structural members followed by resupport of the structure is considered renovation, not demolition. Moving a building from its foundation is considered demolition. We recommend you contact the Controlling Agency (TDSHS) requiring the notification and other requirements which may be applicable. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified.

Renovation or demolition of Anne Sullivan Elementary School should be conducted in strict compliance with the aforementioned federal statutes, TAHPR, NESHAP, and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

There are federal and state statutes and regulations which govern the abatement and disposal of ACMs. The renovation or demolition of buildings and roofs containing ACMs is regulated under the TAHPR and NESHAP statutes. The TAHPR and NESHAP regulations require notification to the Controlling Agency (TDSHS) and ACM prior to renovation or demolition. We strongly recommend that you contact the Controlling Agency (TDSHS) prior to renovation or demolition regarding the proper disposition of the ACMs. TDSHS notification is required for any demolition of a facility or public building, whether or not asbestos has been identified. It is important to note that even though an activity may be exempt from the EPA NESHAP regulations, such exemption does not extend to OSHA standards or other state and federal statutes.

Renovation or demolition activities in buildings and on roofs that contain ACM or Presumed Asbestos Containing Material (PACM) are regulated under the OSHA Asbestos Construction Standard (29 CFR 1926.1101). The OSHA standard requires the building owner to inform their employees who will work in or adjacent to areas containing ACM or PACM, perspective employers applying or bidding for work whose employees reasonably can be expected to work in or adjacent to areas containing ACM or PACM, all employers of employees on multi-employer work sites who will be performing work with or adjacent to areas containing asbestos and tenants who will occupy areas containing ACM or PACM, of the presence, location, and quantity of ACM or PACM at the work sites in their building and facilities. Further, the OSHA standard (29 CFR 1926.1101) requires employers who discover ACM or PACM to convey information concerning the presence, location, and quantity of such newly discovered ACM or PACM to other employers of employees working at the work site within 24 hours of discovery. While OSHA says the notification can be written or personal communication, there are many advantages to written communication.

The OSHA construction standard (29 CFR 1926.1101) also contains specific training, work practices, procedures, engineering controls, notifications, permissible exposure limits, personal protection, record keeping and a multitude of other requirements for the demolition, renovation, construction, alterations, repair, maintenance of structures, substrates, or portions thereof that contain asbestos. It should be noted that recent court rulings have exempted roofing cement from the OSHA Construction Industry Asbestos Standard.

Renovation or demolition of the structures and roofs that could potentially disturbed the ACM located within the subject property should be conducted in strict compliance with the aforementioned federal statutes and other applicable regulations, and good health and safety practices. All procedures, methods and documentation should be accomplished by and be the responsibility of appropriately licensed professionals (asbestos consultants and contractors). Any material identified as non-friable ACM must be treated as friable ACM when the material is about to become friable as a result of activities performed within the building.

The renovation and demolition of buildings is regulated under the TAHPR and NESHAP statutes. Even if asbestos is not detected at 1.0% or more, the TAHPR and NESHAP regulations require a ten-day notification to the Controlling Agency (TDSHS) prior to renovation and demolition.

8.0 CONTROLLNG AGENCY

The Controlling Agency for the coordination of projects involving asbestos removal or demolition is the TDSHS Asbestos Program. The owner or operator shall provide the above-referenced department with a ten-day notice of the asbestos removal project or demolition by timely submittal of a completed "Asbestos Abatement/Demolition Notification" form, as promulgated under TAHPR. The notification can be submitted on Texas Department of State Health Services, located online at https://www.dshs.texas.gov/asbestos-program/notifications-asbestos-program.

9.0 CONDITIONS AND LIMITATIONS OF THIS INPECTION

A representative of UES obtained samples of building materials which were observed during an inspection of the building at the subject site that are typically suspected of containing asbestos as a constituent. The bulk samples were submitted to an NVLAP accredited and TDSHS licensed laboratory for analysis using EPA approved methods for industry-accepted standards. UES makes no warranties, express or implied.

In general, inspection and sampling procedures were incorporated which allowed assessment of reasonably accessible building materials. Some materials may be hidden or masked by overlying materials such as flooring, carpeting, or concealed walls. Though every effort was made to examine wall cavities and other areas for thermal system insulation, spray-applied or trowel applied surfacing material or other miscellaneous materials and other PACM, this survey and report only deals with accessible areas of the building. There may be additional inaccessible areas above the ceiling, behind walls and below floors that become evident during demolition or renovation activities. Any suspected building materials not addressed in this report, which are encountered during demolition or renovation should be analyzed for asbestos content prior to being damaged and/or removed. The building's equipment fixtures, or stored materials were not inspected or sampled as part of this evaluation.

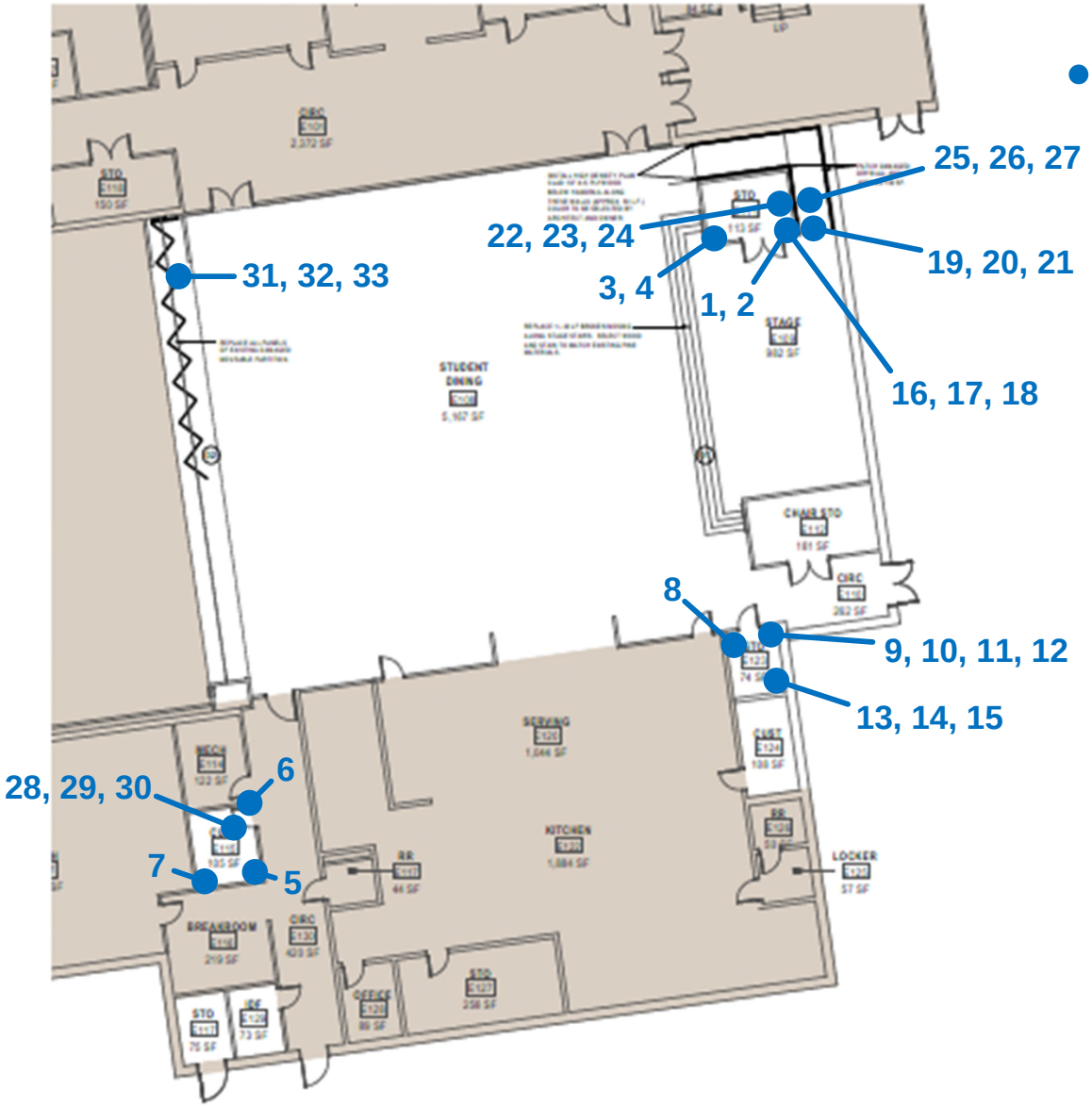
Bidders are responsible for their own calculations and estimates of quantities. Actual quantities may be more or less than indicated.

Federal OSHA Standard 26 CFR 1926.1101 has specific requirements relating to employee protection and notification during construction projects (including demolition and renovation projects) involving ACM as well as materials containing trace levels of asbestos which apply to this project. UES recommends complying with applicable OSHA regulations, which would include notifying the demolition contractor of the presence of asbestos.

All conclusions and recommendations in this report represent the professional opinions of the personnel involved with the project. The results, findings, conclusions and recommendations expressed in this report are based on access provided and conditions observed, and samples taken during the survey of the building. The information contained in this report is relevant as of the date on which the field work was performed and should not be relied upon to represent Site's conditions at a later date. This study and report were prepared on behalf of and for the exclusive use of the Client solely for its use and reliance in determining the presence of asbestos in identified areas of the site. The results of this report are not intended or to be construed as legal interpretation of existing federal, state, or local environmental, health and safety laws or regulations. UES assumes no responsibility or liability for errors in information or data provided to UES by the Client or any third party or developments resulting from activities or situations outside the scope of this project.

Appendix A
Bulk Sample Location Map and Photograph Log

Sample Locations



Floor Plans are not to scale

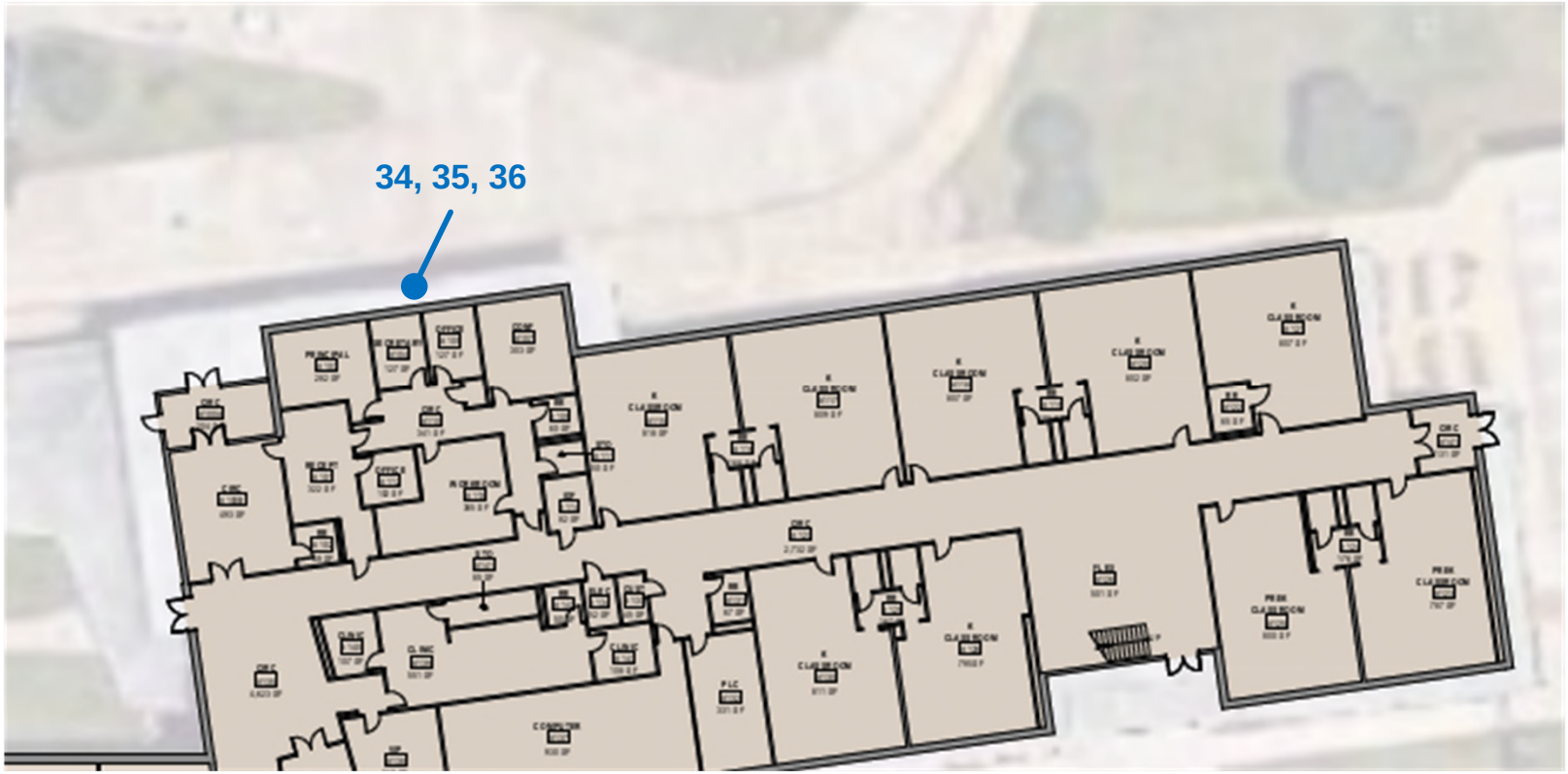
First Floor

UES	**FBISD – BP013 Renovations** **Anne Sullivan ES** 17828 Winding Waters Lane, Sugar Land, Texas	**Fort Bend ISD** 16431 Lexington Boulevard, Sugar Land, Texas 77479	N	**Proj. Mgr: KAG** **Date: 4/30/2025** **Drawn By: EDG** **Project # N250486**

Sample Locations

Legend:

Negative ACM Sample Location



Floor Plans are not to scale

First Floor

UES

FBISD – BP013 Renovations
Anne Sullivan ES
17828 Winding Waters Lane,
Sugar Land, Texas

Fort Bend ISD
16431 Lexington Boulevard,
Sugar Land, Texas 77479

N

Proj. Mgr: KAG
Date: 4/30/2025
Drawn By: EDG
Project # N250486

Inaccessible Location(s)

Legend:

- Inaccessible Area

Notes:

This area was inaccessible, all materials within that differ from materials that were sampled are assumed to be asbestos containing until such a time as they can be sampled and proven negative of asbestos content

Floor Plans are not to scale

First Floor

UES

FBISD – BP013 Renovations
Anne Sullivan ES
17828 Winding Waters Lane,
Sugar Land, Texas

Fort Bend ISD
16431 Lexington Boulevard,
Sugar Land, Texas 77479

N

Proj. Mgr: KAG
Date: 4/30/2025
Drawn By: EDG
Project # N250486

HA 1: Sheetrock Wall System

HA 2: CMU with Filler Texture

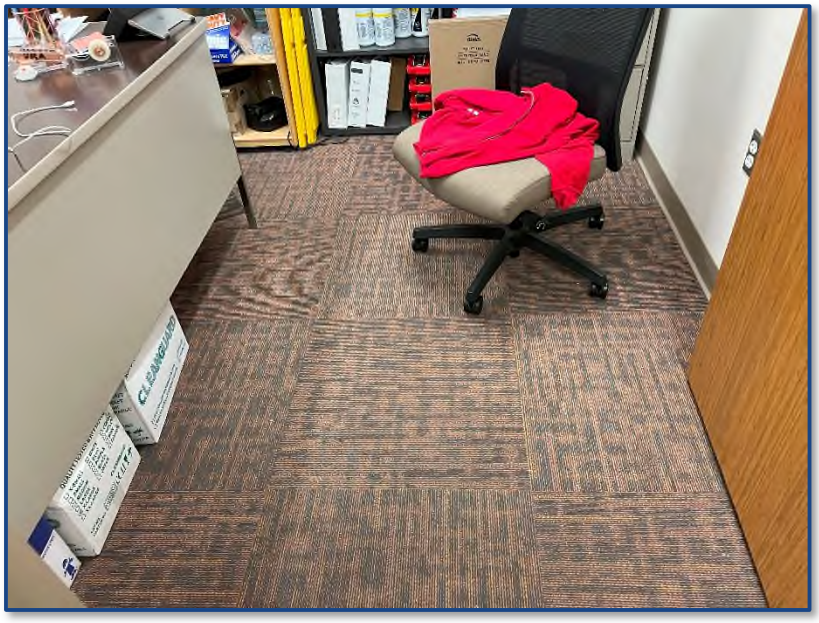
HA 3: 2’ x 2’ Ceiling Tile

HA 4: 4” Beige Cove Base with Mastic

HA 5: 4” Black Cove Base with Mastic

HA 6: 18” x 18” Beige Vinyl Floor Tile

HA 7: Wood Style Vinyl Flooring



HA 8: Brown Carpet Mastic

HA 9: Partition Wall Covering

HA 10: Plaster Ceiling System

Appendix B
PLM Analytical Report & Chain-of-Custody Documentation

Asbestos Laboratory Report

Prepared for

UES Dallas

Project: FBISD - BP013 Renovations - Sullivan

UES No.: A25117.00816.000

Date Received: 4/21/2025

Date Analyzed: 4/24/2025

Date Reported: 4/25/2025

Total Samples Analyzed: 75

 # Samples >1% Asbestos: 0

Method of Analysis: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00816.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/24/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Sullivan

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
ASF-1-Sheetrock A25117.00816.000-1	Sheetrock Wall System	White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASF-1-Joint Compound A25117.00816.000-1A	Sheetrock Wall System	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-1-Tape A25117.00816.000-1B	Sheetrock Wall System	White Homogeneous Fibrous	99% Cellulose	1% Non-fibrous (Other)	None Detected
ASF-2-Sheetrock A25117.00816.000-2	Sheetrock Wall System	White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASF-2-Joint Compound A25117.00816.000-2A	Sheetrock Wall System	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-2-Tape A25117.00816.000-2B	Sheetrock Wall System	White Homogeneous Fibrous	99% Cellulose	1% Non-fibrous (Other)	None Detected
ASF-3-Sheetrock A25117.00816.000-3	Sheetrock Wall System	White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASF-3-Joint Compound A25117.00816.000-3A	Sheetrock Wall System	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-3-Tape A25117.00816.000-3B	Sheetrock Wall System	White Homogeneous Fibrous	99% Cellulose	1% Non-fibrous (Other)	None Detected
ASF-4-Sheetrock A25117.00816.000-4	Sheetrock Wall System	White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASF-4-Joint Compound A25117.00816.000-4A	Sheetrock Wall System	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-4-Tape A25117.00816.000-4B	Sheetrock Wall System	White Homogeneous Fibrous	99% Cellulose	1% Non-fibrous (Other)	None Detected
ASF-5-Sheetrock A25117.00816.000-5	Sheetrock Wall System	White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASF-5-Joint Compound A25117.00816.000-5A	Sheetrock Wall System	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00816.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/24/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Sullivan

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
ASF-5-Tape A25117.00816.000-5B	Sheetrock Wall System	White Homogeneous Fibrous	99% Cellulose	1% Non-fibrous (Other)	None Detected
ASF-6-Sheetrock A25117.00816.000-6	Sheetrock Wall System	White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASF-6-Joint Compound A25117.00816.000-6A	Sheetrock Wall System	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-6-Tape A25117.00816.000-6B	Sheetrock Wall System	White Homogeneous Fibrous	99% Cellulose	1% Non-fibrous (Other)	None Detected
ASF-7-Sheetrock A25117.00816.000-7	Sheetrock Wall System	White, Brown Homogeneous Fibrous	10% Cellulose	90% Non-fibrous (Other)	None Detected
ASF-7-Joint Compound A25117.00816.000-7A	Sheetrock Wall System	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-7-Tape A25117.00816.000-7B	Sheetrock Wall System	White Homogeneous Fibrous	99% Cellulose	1% Non-fibrous (Other)	None Detected
ASF-8-Texture A25117.00816.000-8	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-8-CMU A25117.00816.000-8A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-8-Mortar A25117.00816.000-8B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-9-Texture A25117.00816.000-9	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-9-CMU A25117.00816.000-9A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-9-Mortar A25117.00816.000-9B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-10-Texture A25117.00816.000-10	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00816.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/24/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Sullivan

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
ASF-10-CMU A25117.00816.000-10A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-10-Mortar A25117.00816.000-10B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-11-Texture A25117.00816.000-11	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-11-CMU A25117.00816.000-11A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-11-Mortar A25117.00816.000-11B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-12-Texture A25117.00816.000-12	CMU with Filler Texture	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-12-CMU A25117.00816.000-12A	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-12-Mortar A25117.00816.000-12B	CMU with Filler Texture	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-13 A25117.00816.000-13	2x2 Ceiling Tile	White, Gray Homogeneous Fibrous	60% Cellulose, 15% Mineral Wool	25% Non-fibrous (Other)	None Detected
ASF-14 A25117.00816.000-14	2x2 Ceiling Tile	White, Gray Homogeneous Fibrous	60% Cellulose, 15% Mineral Wool	25% Non-fibrous (Other)	None Detected
ASF-15 A25117.00816.000-15	2x2 Ceiling Tile	White, Gray Homogeneous Fibrous	60% Cellulose, 15% Mineral Wool	25% Non-fibrous (Other)	None Detected
ASF-16-Cove Base A25117.00816.000-16	4 Beige Cove Base with Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-16-Mastic A25117.00816.000-16A	4 Beige Cove Base with Mastic	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-17-Cove Base A25117.00816.000-17	4 Beige Cove Base with Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00816.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/24/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Sullivan

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
ASF-17-Mastic A25117.00816.000-17A	4 Beige Cove Base with Mastic	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-18-Cove Base A25117.00816.000-18	4 Beige Cove Base with Mastic	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-18-Mastic A25117.00816.000-18A	4 Beige Cove Base with Mastic	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-19-Cove Base A25117.00816.000-19	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-19-Mastic A25117.00816.000-19A	4 Black Cove Base with Mastic	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-20-Cove Base A25117.00816.000-20	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-20-Mastic A25117.00816.000-20A	4 Black Cove Base with Mastic	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-21-Cove Base A25117.00816.000-21	4 Black Cove Base with Mastic	Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-21-Mastic A25117.00816.000-21A	4 Black Cove Base with Mastic	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-22-Floor Tile A25117.00816.000-22	18x18 Beige Vinyl Floor Tile	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-22-Leveler A25117.00816.000-22A	18x18 Beige Vinyl Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-23-Floor Tile A25117.00816.000-23	18x18 Beige Vinyl Floor Tile	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-23-Leveler A25117.00816.000-23A	18x18 Beige Vinyl Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-24-Floor Tile A25117.00816.000-24	18x18 Beige Vinyl Floor Tile	Beige Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00816.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/24/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Sullivan

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
ASF-24-Leveler A25117.00816.000-24A	18x18 Beige Vinyl Floor Tile	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-25-Flooring A25117.00816.000-25	Wood Style Vinyl Flooring	Brown, Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-25-Leveler A25117.00816.000-25A	Wood Style Vinyl Flooring	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-26-Flooring A25117.00816.000-26	Wood Style Vinyl Flooring	Brown, Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-26-Leveler A25117.00816.000-26A	Wood Style Vinyl Flooring	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-27-Flooring A25117.00816.000-27	Wood Style Vinyl Flooring	Brown, Black Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-27-Leveler A25117.00816.000-27A	Wood Style Vinyl Flooring	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-28 A25117.00816.000-28	Brown Carpet Mastic	Tan Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-29 A25117.00816.000-29	Brown Carpet Mastic	Tan Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-30 A25117.00816.000-30	Brown Carpet Mastic	Tan Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-31 A25117.00816.000-31	Partition Wall Covering	White Homogeneous Fibrous	80% Synthetic	20% Non-fibrous (Other)	None Detected
ASF-32 A25117.00816.000-32	Partition Wall Covering	White Homogeneous Fibrous	80% Synthetic	20% Non-fibrous (Other)	None Detected
ASF-33 A25117.00816.000-33	Partition Wall Covering	White Homogeneous Fibrous	80% Synthetic	20% Non-fibrous (Other)	None Detected
ASF-34-Skim Coat A25117.00816.000-34	Plaster Ceiling System	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

UES Laboratories
10121 Pineville Distribution St.
Pineville, NC 28134
Phone: (704) 504.1717

UES Order No.: A25117.00816.000

UES Dallas
2209 Wisconsin St
Dallas, Texas 75229

Date Received: 4/21/2025
Date Analyzed: 4/24/2025
Date Reported: 4/25/2025

Project: FBISD - BP013 Renovations - Sullivan

Test Report: Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method using Polarized Light Microscopy

				Non-Asbestos	Asbestos
Sample ID	Description	Appearance	% Fibrous	% Non-Fibrous	% Asbestos
ASF-34-Rough Coat A25117.00816.000-34A	Plaster Ceiling System	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-35-Skim Coat A25117.00816.000-35	Plaster Ceiling System	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-35-Rough Coat A25117.00816.000-35A	Plaster Ceiling System	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-36-Skim Coat A25117.00816.000-36	Plaster Ceiling System	White Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected
ASF-36-Rough Coat A25117.00816.000-36A	Plaster Ceiling System	Gray Homogeneous Non-fibrous		100% Non-fibrous (Other)	None Detected

Analyst(s): Brant Alyea

METHOD: App E to Sub E. of 40 CFR Part 763 and EPA/600/R-93/116

For samples easily separated into homogeneous layers, each component will be analyzed separately. The sample may not be representative of the larger material in question. Interpretation and use of test results are the responsibility of the client. Due to the limitations of the EPA 600 Method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles, mastic and roofing can be difficult to analyze by PLM. Reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or None Detect for these materials is recommended. The percentage of asbestos reported is a midpoint within an acceptable range. The estimated measurement of uncertainty is available upon request. Results relate only to the items received by the laboratory as noted on the Chain of Custody provided by the client.

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Analysis is determined by Calibrated Visual Estimate (CVE).
Temperature at the time of analysis (°C) : 22

NVLAP Code: 600344

Texas License Number : 300520

Analyst(s): Brant Alyea

Approved By: Cass Rupert
Approved Signatory

UES Laboratories, 10121 Pineville Distribution St., Pineville, NC Phone: (704) 504-1717

CHAIN OF CUSTODY

UNIVERSAL ENGINEERING SCIENCES

LAB USE ONLY:	A25117.008.16.000
UES Order Number:	45495

10121 Pineville Distribution Street,
Pineville, North Carolina 28143
Tel: 704-504-1717; Fax: 704-504-1125

COMPANY CONTACT INFORMATION	
Company: UES Dallas	Job Contact: Ethan Grigg, Kristopher Girton
Address: 2209 Wisconsin Street,	Email: egrigg@teamues.com
Dallas, Texas 75229	kgirton@teamues.com
	Tel: 817-966-6636
Project Name: FBISD - BP013 Renovations	Fax:
Project ID #: N250486	State Collected In: Intact

Bill to: ☑ Same ☐ Different – If Bill to is different please notate in the comments section.

ASBESTOS	METHOD	TURN AROUND TIME						
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY	2 Week
PLM BULK	EPA 600	☐	☐	☐	☐	☐	☑	☐
PLM Point Count (400)	EPA 600	☐	☐	☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐	☐
TEM BULK	EPA NOB / Chatfield			☐	☐	☐	☐	☐
TEM AIR	AHERA 40 CFR, Part 763	☐	☐	☐	☐	☐	☐	☐
TEM Dust Wipe	ASTM D6480	☐	☐	☐	☐	☐	☐	☐

POSITIVE STOP ANALYSIS: ☑

IF TURNAROUND TIME IS NOT MARKED STANDARD 5 DAY APPLIES

By submitting samples, you are agreeing to UES Terms and Conditions

COMMENTS: Sullivan ES
SEE ATTACHED – Usc Sampling Log Name

☑ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
Ethan Grigg	4/18/2025		4-21-25

Samples will be disposed of 60 days after analysis

A2547.00816.000

UES

PO #: 45495

Date: 4/15/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD-BP013 Renovations - Sullivan ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
ASF-	1	Sheetrock Wall System	Stage	NFII	G	8,000SF
	2					
	3					
	4					
	5		Custodial Office			
	6					
	7					
	8	CMU with Filler Texture	Storage	NFII	G	1,800SF
	9					
	10					
	11					
	12					
	13	2'x2' Ceiling Tile	Storage	F	G	400 SF
	14					
	15					

UES

PO #: 45495

Date: 4/15/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD-BP013-Renovations-Sullivan ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
ASF-	16	4" Beige Cove Base with Mastic	Stage	NF II	G	400LF
"	17	"	"	"	"	"
"	18	"	"	"	"	"
"	19	4" Black Cove Base with Mastic	Stage	NF II	G	60LF
"	20	"	"	"	"	"
"	21	"	"	"	"	"
"	22	18"x18" Beige Vinyl Floor Tile	Stage	NF II	G	300 SF
"	23	"	"	"	"	"
"	24	"	"	"	"	"
"	25	Wood style vinyl Flooring	Stage	NF II	G	2,000SF
"	26	"	"	"	"	"
"	27	"	"	"	"	"
"	28	Brown Carpet Mastic	Custodial office	NF II	G	100 SF
"	29	"	"	"	"	"
"	30	"	"	"	"	"

UES

PO#: 45495

Date: 4/15/2025	Inspector (s): Ethan Grigg
Project Name/Address: FBISD - BP013 Renovations - Sullivan ES	Project #: N250486

Sample Name	Sample #	Material	Location	F/NF I-II	Cond. G, D, SD	Quantity
ASF -	31	Partition Wall Covering	Cafetorium	NF II	G	915SF
"	32	"	"	"	"	"
"	33	"	"	"	"	"
"	34	Plaster Ceiling System	Exterior	NF II	G	800SF
"	35	"	"	"	"	"
"	36	"	"	"	"	"

Appendix C
Inspector(s) License and Firm License

GEBCO Associates certifies that

Ethan D. Grigg

25056 1127

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS INSPECTOR REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25056

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Ethan D. Grigg

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Inspector Refresher Course

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25056 1127

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

GEBCO Associates, LP * 815 Trailwood Dr, Suite 200 * Hurst, TX 76053 * (817)268-4006

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Inspector

ETHAN D GRIGG

License Number: 603778

Control Number: 101162

Expiration Date: 10-Apr-2027

GEBCO Associates certifies that

Kristopher A. Girton

25003 0358

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 01/08/2025 Certificate No: 25003

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP
815 Trailwood Dr, Suite 200
Hurst, TX 76053
Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Kristopher A. Girton

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on January 8, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

Owner

Instructor: Joseph Londt

Date of Issue 01/08/2025

Certificate Number: 25003 0358

Exam Date: 01/08/2025

Certificate Expires 01/08/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

KRISTOPHER A GIRTON

License Number: 105894

Control Number: 98431

Expiration Date: 7-Jun-2026

GEBCO Associates certifies that

Michael K. Nibert

25021 5548

has successfully completed the Texas Department of State Health Services approved course entitled:

ASBESTOS MANAGEMENT PLANNER REFRESHER

Date of Issue: 02/05/2025 Certificate No: 25021

Certificate expires one year from date of issue.

Course schedule anytime @ www.gebco.org

GEBCO Associates, LP

815 Trailwood Dr, Suite 200
Hurst, TX 76053

GEBCO

Phone: 817-268-4006
Fax: Fax: 817-282-9886

GEBCO ASSOCIATES

certifies that

Michael K. Nibert

has successfully completed and passed the exam given on the final day for the Environmental Training Program entitled

Asbestos Management Planner Refresher

Conducted at Hurst, Texas on February 5, 2025

This is an EPA fully approved course for purpose of accreditation under Section 206 of TSCA, Title II. It covers topics listed in the NESHAP training requirement of 40 CFR, Part 61, subpart M.

GEBCO

Owner

Instructor: Joseph Londt

Date of Issue 02/05/2025

Certificate Number: 25021 5548

Exam Date: 02/05/2025

Certificate Expires 02/05/2026

GEBCO's Training Programs are provided in cooperation with federal and state regulatory agencies, and fulfill all applicable requirements for accreditation. GEBCO is licensed for Asbestos Training under the Texas Asbestos Health Protection Rules.

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TEXAS
Health and Human Services

Texas Department of State Health Services

Asbestos Individual Consultant

MICHAEL K NIBERT

License Number: 105931

Control Number: 98417

Expiration Date: 8-May-2026

Texas Department of State Health Services

UES PROFESSIONAL SOLUTIONS 44 LLC

is certified to perform as an

Asbestos Consultant Agency

in the State of Texas and is hereby governed by the rights, privileges and responsibilities set forth in Texas Occupations Code, Chapter 1954 and Title 12, Texas Administrative Code, Chapter 295 relating to Texas Asbestos Health Protection, as long as this license is not suspended or revoked.

License Number: 100608

Expiration Date: 05/12/2026

Jennifer Shuford, MD, MPH,
Commissioner of Health

Control Number: 97663

(Void After Expiration Date)

VOID IF ALTERED NON-TRANSFERABLE

SEE BACK

The following three pages are to replace the pixelated checklists in this Section.

General Contractor - Closeout Checklist

Not Applicable Items are to be Noted in the Remarks Column

Template Revised
8/10/2022

To: <<Name>>, Director of Design and Construction **Date:**
GC: **A/E Firm:**
BP#: **PM:**
School Name:

Project Type: ☐ Addition ☐ Renovations ☐ New Construction

Item #	Document Description	Primary Responsibility	Date Received by PM	Remarks	Req'd of JOC under $50K
	SUBSTANTIAL COMPLETION REQUIREMENTS - Closeout and Punch List Items are NOT to be billed at Substantial Completion				
a.	Fire Alarm System Components Completed	GC			X
b.	Local Fire Marshal Approval Certificate	GC			X
c.	HVAC Air and Water Balancing Completed	GC			X
d.	Energy Management Systems Completed	GC			X
e.	Communications Equipment and Telephone Systems Completed	GC			X
f.	Final Lockset Cores Installed	GC			X
g.	Room Plaques and Exterior Signage Completed	GC			X
h.	Owner Demonstrations and Training Completed	GC			X
i.	Exterior Clean-up and Landscaping Completed	GC			X
j.	Final Interior Clean-up Completed	GC			X
k.	Certificate of Occupancy	GC			X
l.	Punch List Report	GC, A/E			X
	FINAL COMPLETION REQUIREMENTS: CLOSEOUT ITEMS TO BE SUBMITTED WITH FINAL PAYMENT - Allowed billable amount on G702: 100% of contract amount minus retaina				
1	**SUBSTANTIAL COMPLETION**				
a.	Certificate of Substantial Completion	PM			X
b.	Signed Off Punchlist	GC			X
2	**WARRANTIES**				
a.	List of Subcontractors and Suppliers	GC		Include Name, Address, Phone Number and Discipline	X
b.	Contractor's 1 year Warranty	GC			X
c.	Subcontractors' 1 year Warranties	GC			
d.	Manufacturers' Warranties	GC		A separate "Warranties" manual should be provided for guarantees, warranties, etc.	X
3	**EVIDENCE OF PAYMENT OF DEBTS AND CLAIMS**				

Item #	Document Description	Primary Responsibility	Date Received by PM	Remarks	Req'd of JOC under $50K
a.	"Contractor's Affidavit of Payment of Debts and Claims" (Confirm GC and Sub Lien Waivers are attached to form.)	GC			
b.	"Contractor's Final Affidavit of Release of Liens"; (Confirm GC and Sub Lien Waivers are attached to form.)	GC			
c.	"Consent of Surety Company to Final Payment"; (Confirm that Power of Attorney is attached to form.)	GC			X
4	**INSURANCE**				
a.	Certificate(s) of Insurance, All insurance must be maintained for one year following substantial completion	GC			X
b.	Written Statement that the Contractor Knows of no Substantial Reason that the Insurance will not be Renewable to Cover the Required Period	GC			
5	**OPERATIONS AND MAINTENANCE MANUALS AND EVIDENCE OF TRAINING**				
a.	O&M Manuals submitted by GC to A/E	GC		Per detailed list developed by GC and reviewed by A/E and PM. One Manual per each school to be split by CSI Divisions. Electronic Copy and 1 Hard Copy.	X
b.	Training Matrix, Sign-In sheet(s) and Videos.	GC		GC is to provide a sign-in sheet for each system for which training has been provided to indicate the person, title and date of completion of the training. 1 digital copy of Training Videos.	
6	**ATTIC STOCK / SPARE MATERIAL / KEY TRANSFER**				
a.	Signed off Transmittal of Extra (Attic) Stock	GC		Provided by GC and received by Principal or Campus Facilities Supervisor or Maintenance, as applicable	X
b.	Signed off Transmittal Key transfer (Accessory keys)	GC		Provided by GC and received by Principal or Campus Facilities Supervisor, as applicable.	X
7	**LOCAL AGENCIES APPROVALS (as applicable)**				
a.	Certificate of Occupancy	GC			X
b.	Final Building Inspections/Closed Construction Permits	GC		Green tags colored copies	X
c.	State Fire Marshal's Fire Alarm Inspection Certificate & Testing	GC			X
d.	Storm Water Prevention Pollution Plan (SWPPP)	GC			X
e.	Elevator Inspection Certificate	GC			X
f.	Boiler Inspection Certificate	GC			X
g.	Health Department Inspection Certificate	GC			X
8	**RECORD DOCUMENTS (DRAWINGS, SPECIFICATIONS, ETC.)**				
a.	Record Documents, Submit 1 Hard Copies and 1 PDF Copy	GC			
9	**GC DESIGNED DOCUMENTS (as applicable)**				
a.	Fire Alarm drawings	GC		Need AHJ approved documents.	X
b.	Security drawings	GC		Need AHJ approved documents (if applicable)	X
c.	HVAC Controls drawings	GC			X
d.	Fire Sprinkler System drawings	GC		Need AHJ approved documents.	X

Item #	Document Description	Primary Responsibility	Date Received by PM	Remarks	Req'd of JOC under $50K
e.	Data Cabling drawings	GC			X
10	**CERTIFICATIONS**				
a.	Certification of Asbestos Free Project: Letter from GC and **A/E**, Letters from Subs	GC, A/E			X
b.	Certification of Lead-Free Potable Water System: Letters from GC and Subs	GC			X
c.	Certification of PCB-Free Project: Letters from GC and Subs	GC			X
11	**FINAL SYSTEM REPORTS**				
a.	Final Test & Balance Report	T&B			
b.	Final Roof Inspection Report	Roof Inspector			
12	**LEED CONSTRUCTION SUBMITTAL**				
a.	Sustainable Sites *SSp1* - Construction Activity Pollution Prevention: **Erosion & Sedimentation Control Plan**	GC			
b.	Materials and Resources *MRp2 & MRc5* - Construction Waste Management: **Const. Waste Mgmt. Plan**	GC			
c.	Materials and Resources *MRc3* - Sourcing of Raw Materials: **Building Product Disclosure & Optimization Calculator (BPDO)**	GC			
d.	Environmental Quality *EQc3* - **IAQ Management Plan for Construction and Preoccupancy Phases**	GC			
e.	Environmental Quality *EQc2* - Low Emitting Materials: **Low Emitting Materials Calculator**	GC			
13	**FINAL COMPLETION**				
a.	Copy of Final Change Order	A/E, GC, PM			X
b.	TEA - Certification of Project Compliance	A/E, GC, FBISD, PM			
c.	TAS/TDLR Certification (if applicable)	AE			
d.	Complete Set of Approved Submittals Log from Prolog	GC		Include Prolog Summary Log in Binder	
e.	Final Completion Certificate	A/E, GC, PM			X
	RETAINAGE				
a.	FBISD Retention Release Reduction Worksheet	PM			X
b.	Purchase Order Closure	PC			X
	WARRANTY INSPECTIONS				
a.	11 month inspection after Date of Substantial Completion	PM			

SECTION 04 22 00 - CONCRETE UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Concrete masonry units.
2. Mortar and grout.
3. Steel reinforcing bars.
4. Masonry joint reinforcement.
5. Ties and anchors.
6. Embedded flashing.
7. Miscellaneous masonry accessories.

B. Related Sections:

1. Division 03 Section "Cast-in-Place Concrete" for[**installing**] dovetail slots for masonry anchors.
2. Division 07 Section "Water Repellents" for water repellents applied to concrete unit masonry.
3. Division 07 Section "Sheet Metal Flashing and Trim" for exposed sheet metal flashing and for furnishing manufactured reglets installed in masonry joints.

1.3 DEFINITIONS

A. CMU(s): Concrete masonry unit(s).

B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.4 PERFORMANCE REQUIREMENTS

A. Provide structural unit masonry that develops indicated net-area compressive strengths at 28 days.
1. Determine net-area compressive strength of masonry by testing masonry prisms according to ASTM C 1314.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For the following:

1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.
2. Reinforcing Steel: Detail bending and placement of unit masonry reinforcing bars. Comply with ACI 315, "Details and Detailing of Concrete Reinforcement."
3. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.

C. Samples for Initial Selection:

1. Decorative CMUs, in the form of small-scale units.
2. Weep holes/vents.

D. Samples for Verification: For each type and color of the following:

1. Exposed CMUs.
2. Accessories embedded in masonry.

E. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, model numbers, lot numbers, batch numbers, source of supply, and other information as required to identify materials used. Include mix proportions for mortar and grout and source of aggregates.

1. Submittal is for information only. Neither receipt of list nor approval of mockup constitutes approval of deviations from the Contract Documents unless such deviations are specifically brought to the attention of Architect and approved in writing.

F. Qualification Data: For testing agency.

G. Material Certificates: For each type and size of the following:

1. Masonry units.

a. Include material test reports substantiating compliance with requirements.
b. For masonry units used in structural masonry, include data and calculations establishing average net-area compressive strength of units.

2. Cementitious materials. Include brand, type, and name of manufacturer.
3. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
4. Grout mixes. Include description of type and proportions of ingredients.
5. Reinforcing bars.
6. Joint reinforcement.
7. Anchors, ties, and metal accessories.

H. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C 109/C 109M for compressive strength, ASTM C 1506 for water retention, and ASTM C 91 for air content.
2. Include test reports, according to ASTM C 1019, for grout mixes required to comply with compressive strength requirement.

I. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined according to Tables 1 and 2 in ACI 530.1/ASCE 6/TMS 602.

J. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

1.6 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to ASTM C 1093 for testing indicated.

B. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.

C. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

D. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.

E. Sample Panels: Build sample panels to verify selections made under sample submittals and to demonstrate aesthetic effects. Comply with requirements in Division 01 Section "Quality Requirements" for mockups.

1. Build sample panels for typical exterior wall in sizes approximately 60 inches long by 48 inches high by full thickness.
2. Protect approved sample panels from the elements with weather-resistant membrane.
3. Approval of sample panels is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; aesthetic qualities of workmanship; and other material and construction qualities specifically approved by Architect in writing.

    a. Approval of sample panels does not constitute approval of deviations from the Contract Documents contained in sample panels unless such deviations are specifically approved by Architect in writing.

F. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.

B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for use with dispensing silos. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in covered weatherproof dispensing silos.

E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.8 PROJECT CONDITIONS

A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.

1. Extend cover a minimum of 24 inches down both sides of walls and hold cover securely in place.

B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.

C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
2. Protect sills, ledges, and projections from mortar droppings.
3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and higher and will remain so until masonry has dried, but not less than 7 days after completing cleaning.

E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 MASONRY UNITS, GENERAL

A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed Work.

B. Fire-Resistance Ratings: Where indicated, provide units that comply with requirements for fire-resistance ratings indicated as determined by testing according to ASTM E 119, by equivalent masonry thickness, or by other means, as acceptable to authorities having jurisdiction.

2.2 CONCRETE MASONRY UNITS

A. Regional Materials: Provide CMUs that have been manufactured within 500 miles of Project site from aggregates and cement that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.

B. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.

1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
2. Provide bullnose units for outside corners unless otherwise indicated.

C. Integral Water Repellent: Provide units made with integral water repellent for exposed units and where indicated.

1. Integral Water Repellent: Liquid polymeric, integral water-repellent admixture that does not reduce flexural bond strength. Units made with integral water repellent, when tested according to ASTM E 514 as a wall assembly made with mortar containing integral water-repellent manufacturer's mortar additive, with test period extended to 24 hours, shall show no visible water or leaks on the back of test specimen.

a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
1) Featherlite Building Products
2) Texas Buildings Products, Inc.
3) Revels Block & Brick Co., Inc.
4) Best Block Construction Materials

D. CMUs: ASTM C 90.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2150 psi .
2. Density Classification: Lightweight .
3. Size (Width): Manufactured to dimensions 3/8 inch less than nominal dimensions.

4. Exposed Faces: Provide color and texture matching the range represented by Architect's sample.
5. Faces to Receive Plaster: Where units are indicated to receive a direct application of plaster, provide textured-face units made with gap-graded aggregates.
6. Provide bull not corners at all exposed exterior CMU corners in building interior, except where ceramic wall tile is scheduled.

2.3 MASONRY LINTELS

A. General: Provide one of the following:

B. Masonry Lintels: Prefabricated or built-in-place masonry lintels made from bond beam CMUs with reinforcing bars placed as indicated and filled with coarse grout. Cure precast lintels before handling and installing. Temporarily support built-in-place lintels until cured.

2.4 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.

B. Hydrated Lime: ASTM C 207, Type S.

C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.

D. Aggregate for Mortar: ASTM C 144.

E. Aggregate for Grout: ASTM C 404.

F. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Euclid Chemical Company (The); Accelguard 80.
b. Grace Construction Products, W. R. Grace & Co. - Conn.; Morset.
c. Sonneborn Products, BASF Aktiengesellschaft; Trimix-NCA.

G. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with CMUs, containing integral water repellent by same manufacturer.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. ACM Chemistries, Inc.; RainBloc for Mortar.
b. BASF Aktiengesellschaft; Rheopel Mortar Admixture.
c. Grace Construction Products, W. R. Grace & Co. - Conn.; Dry-Block Mortar Admixture.

H. Water: Potable.

2.5 REINFORCEMENT

A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60 (Grade 420).

B. Masonry Joint Reinforcement, General: ASTM A 951/A 951M.

1. Interior Walls: Mill- galvanized, carbon steel.
2. Exterior Walls: Hot-dip galvanized, carbon steel.
3. Wire Size for Side Rods: 0.148-inch 0.187-inch diameter.
4. Wire Size for Cross Rods: 0.148-inch 0.187-inch diameter.
5. Wire Size for Veneer Ties: 0.148-inch 0.187-inch diameter.
6. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than 16 inches (407 mm) o.c.
7. Provide in lengths of not less than 10 feet , with prefabricated corner and tee units.

C. Masonry Joint Reinforcement for Single-Wythe Masonry: Either ladder or truss type with single pair of side rods.

2.6 TIES AND ANCHORS

A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated.
   1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2 coating.
   2. Galvanized Steel Sheet: ASTM A 653/A 653M, Commercial Steel, G60 zinc coating.
   3. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.
   4. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Adjustable Anchors for Connecting to Structural Steel Framing: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.

   1. Anchor Section for Welding to Steel Frame: Crimped 1/4-inch- diameter, hot-dip galvanized steel wire.
   2. Tie Section: Triangular-shaped wire tie, sized to extend within 1 inch of masonry face, made from 0.25-inch- (6.35-mm-) diameter, hot-dip galvanized steel stainless-steel wire

C. Partition Top anchors: 0.105-inch- thick metal plate with 3/8-inch- diameter metal rod 6 inches long welded to plate and with closed-end plastic tube fitted over rod that allows rod to move in and out of tube. Fabricate from steel, hot-dip galvanized after fabrication stainless steel.

D. Rigid Anchors: Fabricate from steel bars 1-1/2 inches wide by 1/4 inch thick by 24 inches long, with ends turned up 2 inches or with cross pins unless otherwise indicated.

   1. Corrosion Protection: Hot-dip galvanized to comply with ASTM A 153/A 153M.

2.7 MISCELLANEOUS ANCHORS

A. Dovetail Slots in Concrete: Furnish dovetail slots with filler strips, of slot size indicated, fabricated from 0.034-inch (0.86-mm), galvanized steel sheet.

B. Anchor Bolts: Headed or L-shaped steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers; hot-dip galvanized to comply with ASTM A 153/A 153M, Class C; of dimensions indicated.

C. Postinstalled Anchors: Torque-controlled expansion anchors or chemical anchors.

   1. Load Capacity: Capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.
   2. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B 633 or ASTM F 1941, Class Fe/Zn 5 unless otherwise indicated.
   3. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 stainless-steel bolts, ASTM F 593, and nuts, ASTM F 594.

2.8 EMBEDDED FLASHING MATERIALS

A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual" and as follows:

1. Stainless Steel: ASTM A 240/A 240M, Type 304, 0.016 inch thick.
2. Fabricate continuous flashings in sections 96 inches long minimum, but not exceeding 12 feet. Provide splice plates at joints of formed, smooth metal flashing.
3. Fabricate through-wall metal flashing embedded in masonry from stainless steel, with ribs at 3-inch intervals along length of flashing to provide an integral mortar bond.

    a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

        1) Cheney Flashing Company; Cheney Flashing (Dovetail) or Cheney 3-Way Flashing (Sawtooth).
        2) Keystone Flashing Company, Inc.; Keystone 3-Way Interlocking Thruwall Flashing.
        3) Sandell Manufacturing Co., Inc.; Mechanically Keyed Flashing.

4. Fabricate through-wall flashing with snaplock receiver on exterior face where indicated to receive counterflashing.
5. Fabricate through-wall flashing with drip edge where indicated. Fabricate by extending flashing 1/2 inch out from wall, with outer edge bent down 30 degrees and hemmed.
6. Fabricate through-wall flashing with sealant stop where indicated. Fabricate by bending metal back on itself 3/4 inch at exterior face of wall and down into joint 1/4 inch to form a stop for retaining sealant backer rod.
7. Fabricate metal drip edges and sealant stops for ribbed metal flashing from plain metal flashing of same metal as ribbed flashing and extending at least 3 inches into wall with hemmed inner edge to receive ribbed flashing and form a hooked seam. Form hem on upper surface of metal so that completed seam will shed water.
8. Metal Drip Edge: Fabricate from stainless steel. Extend at least 3 inches into wall and 1/2 inch out from wall, with outer edge bent down 30 degrees and hemmed.
9. Metal Sealant Stop: Fabricate from stainless steel. Extend at least 3 inches into wall and out to exterior face of wall. At exterior face of wall, bend metal back on itself for 3/4 inch and down into joint 1/4 inch to form a stop for retaining sealant backer rod.
10. Metal Expansion-Joint Strips: Fabricate from stainless steel to shapes indicated.

B. Flexible Flashing: Use one of the following unless otherwise indicated:

1. Asphalt-Coated Copper Flashing: 7-oz./sq. ft.. copper sheet coated with flexible asphalt. Use only where flashing is fully concealed in masonry.

    a. Products: Subject to compliance with requirements, provide the following provide one of the following available products that may be incorporated into the Work include, but are not limited to, the following:

        1) Advanced Building Products Inc.; Cop-R-Cote.
        2) Dayton Superior Corporation, Dur-O-Wal Division; Copper Coated Thru-Wall Flashing.
        3) Hohmann & Barnard, Inc.; H & B C-Coat Flashing.
        4) Phoenix Building Products; Type ACC-Asphalt Bituminous Coated.
        5) Sandell Manufacturing Co., Inc.; Coated Copper Flashing.

2. Rubberized-Asphalt Flashing: Composite flashing product consisting of a pliable, adhesive rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than 0.040 inch

    a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

        1) Advanced Building Products Inc.; Peel-N-Seal.
        2) Carlisle Coatings & Waterproofing; CCW-705-TWF Thru-Wall Flashing.
        3) Dayton Superior Corporation, Dur-O-Wal Division; Dur-O-Barrier Thru-Wall Flashing.
        4) Fiberweb, Clark Hammerbeam Corp.; Aquaflash 500.
        5) Grace Construction Products, W. R. Grace & Co. - Conn.; Perm-A-Barrier Wall Flashing.
        6) Heckmann Building Products Inc.; No. 82 Rubberized-Asphalt Thru-Wall Flashing.
        7) Hohmann & Barnard, Inc.; Textroflash.
        8) W. R. Meadows, Inc.; Air-Shield Thru-Wall Flashing.
        9) Polyguard Products, Inc.; Polyguard 300 Polyguard 400.
        10) Sandell Manufacturing Co., Inc.; Sando-Seal.
        11) Williams Products, Inc.; Everlastic MF-40.

    b. Accessories: Provide preformed corners, end dams, other special shapes, and seaming materials produced by flashing manufacturer.

C. Application: Unless otherwise indicated, use the following:

1. Where flashing is indicated to receive counterflashing, use metal flashing.
2. Where flashing is indicated to be turned down at or beyond the wall face, use metal flashing.
3. Where flashing is partly exposed and is indicated to terminate at the wall face, use metal flashing with a drip edge with a sealant stop .
4. Where flashing is fully concealed, use metal flashing .

D. Single-Wythe CMU Flashing System: System of CMU cell flashing pans and interlocking CMU web covers made from high-density polyethylene incorporating chemical stabilizers that prevent UV degradation. Cell flashing pans have integral weep spouts that are designed to be built into mortar bed joints and weep collected moisture to the exterior of CMU walls and that extend into the cell to prevent clogging with mortar.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

    a. Sandell Manufacturing Co., Inc.; Blok-Flash.

E. Solder and Sealants for Sheet Metal Flashings: As specified in Division 07 Section "Sheet Metal Flashing and Trim."

1. Solder for Stainless Steel: ASTM B 32, Grade Sn60, with acid flux of type recommended by stainless-steel sheet manufacturer.
2. Solder for Copper: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead.
3. Elastomeric Sealant: ASTM C 920, chemically curing urethane sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

F. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

2.9 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene or PVC.

B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 or PVC, complying with ASTM D 2287, Type PVC-65406 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).

1. Provide continuous bond break where CMU bonds to brick masonry; see Drawing 11/A9-1.

D. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and hold reinforcing bars in center of cells. Units are formed from 0.148-inch steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Dayton Superior Corporation, Dur-O-Wal Division; D/A 810, D/A 812 or D/A 817.
b. Heckmann Building Products Inc.; No. 376 Rebar Positioner.
c. Hohmann & Barnard, Inc.; #RB or #RB-Twin Rebar Positioner.
d. Wire-Bond; O-Ring or Double O-Ring Rebar Positioner.

2.10 MORTAR AND GROUT MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.

1. Do not use calcium chloride in mortar or grout.
2. Use portland cement-lime masonry cement or mortar cement mortar unless otherwise indicated.
3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated or needed to provide required compressive strength of masonry.See structural drawings

1. For masonry below grade or in contact with earth, use Type M Type S.
2. For reinforced masonry, use Type N.
3. For mortar parge coats, use Type S or Type N.
4. For exterior, above-grade, load-bearing and non-load-bearing walls and parapet walls; for interior load-bearing walls; for interior non-load-bearing partitions; and for other applications where another type is not indicated, use Type N.
5. For interior non-load-bearing partitions, Type O may be used instead of Type N.

D. Grout for Unit Masonry: Comply with ASTM C 476.

1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
2. Proportion grout in accordance with ASTM C 476, . See structural drawings
3. Provide grout with a slump of 8 to 11 inches 10 to 11 inches as measured according to ASTM C 143/C 143M.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
2. Verify that foundations are within tolerances specified.
3. Verify that reinforcing dowels are properly placed.

B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. Build chases and recesses to accommodate items specified in this and other Sections.

B. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match the construction immediately adjacent to opening.

C. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

3.3 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation do not vary by more than plus 1/2 inch or minus 1/4 inch.
2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch.
3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls do not vary from level by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet , or 1/2 inch maximum.
3. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet , 3/8 inch in 20 feet, or 1/2 inch maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet (3, 1/4 inch in 20 feet, or 1/2 inch maximum.
5. For lines and surfaces do not vary from straight by more than 1/4 inch in 10 feet , 3/8 inch in 20 feet, or 1/2 inch maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, or 1/2 inch maximum.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch with a maximum thickness limited to 1/2 inch
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch
3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch

3.4 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in bond pattern indicated on Drawings; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.

C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 2 inches 4-inches Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.

D. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar before laying fresh masonry.

E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

F. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.

G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below and rod mortar or grout into core.

H. Fill cores in hollow CMUs with grout 24 inches under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.

I. Build non-load-bearing interior partitions full height of story to underside of solid floor or roof structure above unless otherwise indicated.

1. Install compressible filler in joint between top of partition and underside of structure above.
2. Fasten partition top anchors to structure above and build into top of partition. Grout cells of CMUs solidly around plastic tubes of anchors and push tubes down into grout to provide 1/2-inch clearance between end of anchor rod and end of tube. Space anchors 48 inches o.c. unless otherwise indicated.
3. Wedge non-load-bearing partitions against structure above with small pieces of tile, slate, or metal. Fill joint with mortar after dead-load deflection of structure above approaches final position.
4. At fire-rated partitions, treat joint between top of partition and underside of structure above to comply with Division 07 Section "Fire-Resistive Joint Systems."

3.5 MORTAR BEDDING AND JOINTING

A. Lay hollow CMUs as follows:

1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
4. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.

B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

C. Set cast-stone trim units in full bed of mortar with full vertical joints. Fill dowel, anchor, and similar holes.

1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
2. Allow cleaned surfaces to dry before setting.
3. Wet joint surfaces thoroughly before applying mortar.

D. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

E. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint) unless otherwise indicated.

3.6 MASONRY JOINT REINFORCEMENT

A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches

1. Space reinforcement not more than 16 inches o.c.
2. Space reinforcement not more than 8 inches o.c. in foundation walls and parapet walls.
3. Provide reinforcement not more than 8 inches above and below wall openings and extending 12 inches beyond openings in addition to continuous reinforcement.

B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.

C. Provide continuity at wall intersections by using prefabricated T-shaped units.

D. Provide continuity at corners by using prefabricated L-shaped units.

E. Cut and bend reinforcing units as directed by manufacturer for continuity at corners, returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

3.7 ANCHORING MASONRY TO STRUCTURAL STEEL

A. Anchor masonry to structural steel where masonry abuts or faces structural steel or concrete to comply with the following:

1. Provide an open space not less than 1/2 inch wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
2. Anchor masonry with anchors embedded in masonry joints and attached to structure.
3. Space anchors as indicated, but not more than 24 inches o.c. vertically and 36 inches o.c. horizontally.

3.8 CONTROL AND EXPANSION JOINTS

A. General: Install control and expansion joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.

B. Form control joints in concrete masonry using one of the following methods:

1. Fit bond-breaker strips into hollow contour in ends of CMUs on one side of control joint. Fill resultant core with grout and rake out joints in exposed faces for application of sealant.
2. Install preformed control-joint gaskets designed to fit standard sash block.
3. Install interlocking units designed for control joints. Install bond-breaker strips at joint. Keep head joints free and clear of mortar or rake out joint for application of sealant.
4. Install temporary foam-plastic filler in head joints and remove filler when unit masonry is complete for application of sealant.

3.9 LINTELS

A. Provide masonry lintels where shown and where openings of more than 12 inches (305 mm) for brick-size units and 24 inches for block-size units are shown without structural steel or other supporting lintels.

B. Provide minimum bearing of 8 inches at each jamb unless otherwise indicated.

3.10 FLASHING

A. General: Install embedded flashing in masonry at lintels, ledges, other obstructions to downward flow of water in wall, and where indicated.

B. Install flashing as follows unless otherwise indicated:

1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
2. At lintels, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inches to form end dams.
3. Interlock end joints of ribbed sheet metal flashing by overlapping ribs not less than 1-1/2 inches or as recommended by flashing manufacturer, and seal lap with elastomeric sealant complying with requirements in Division 07 Section "Joint Sealants" for application indicated.
4. Install metal drip edges and sealant stops with ribbed sheet metal flashing by interlocking hemmed edges to form hooked seam. Seal seam with elastomeric sealant complying with requirements in Division 07 Section "Joint Sealants" for application indicated.
5. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal drip edge.
6. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal flashing termination.
7. Cut flexible flashing off flush with face of wall after masonry wall construction is completed.

C. Install single-wythe CMU flashing system in bed joints of CMU walls where indicated to comply with manufacturer's written instructions. Install CMU cell pans with upturned edges located below face shells and webs of CMUs above and with weep spouts aligned with face of wall. Install CMU web covers so that they cover upturned edges of CMU cell pans at CMU webs and extend from face shell to face shell.

D. Install reglets and nailers for flashing and other related construction where they are shown to be built into masonry.

3.11 REINFORCED UNIT MASONRY INSTALLATION

A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.

1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other loads that may be placed on them during construction.

B. Placing Reinforcement: Comply with requirements in ACI 530.1/ASCE 6/TMS 602.

C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.

1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
2. Limit height of vertical grout pours to not more than 60 inches

3.12 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas, as needed to perform tests and inspections. Retesting of materials that fail to meet specified requirements shall be done at Contractor's expense.

B. Testing Frequency: One set of tests for each 5000 sq. ft. of wall area or portion thereof.

C. Concrete Masonry Unit Test: For each type of unit provided, according to ASTM C 140 for compressive strength.

D. Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, according to ASTM C 780.

E. Mortar Test (ProportionSpecification): For each mix provided, according to ASTM C 780. Test mortar for mortar air content and compressive strength.

F. Grout Test (Compressive Strength): For each mix provided, according to ASTM C 1019.

G. Prism Test: For each type of construction provided, according to ASTM C 1314 at 28 days.

3.13 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
3. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
4. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

3.14 MASONRY WASTE DISPOSAL

A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

END OF SECTION 04 2200

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Electrically operated, continuously hinged partitions.
B. Related Sections include the following:
   1. Division 03 Sections for concrete tolerances required.
   2. Division 05 Sections for primary structural support, including pre-punching of support members by structural steel supplier per operable partition supplier's template.
   3. Division 06 Sections for wood framing & supports, and all blocking at head and jambs as required.
   4. Division 09 Sections for wall and ceiling framing at head and jambs.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who is certified in writing by the operable partition manufacturer, as qualified to install the manufacturer's partition systems for work similar in material, design, and extent to that indicated for this Project.
B. Acoustical Performance: Test operable partitions in an independent acoustical laboratory in accordance with ASTM E90 test procedure and classified in accordance with ASTM E413 to attain no less than the STC rating specified. Provide a complete and unedited written test report by the testing laboratory upon request.
C. Preparation of the opening shall conform to the criteria set forth per ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions.
D. The operable wall must be manufactured by a certified ISO-9001-2015 company or an equivalent quality control system.
E. Indoor Air Quality: Operable partition, movable wall manufacturer’s non-wood products must meet the SCS Indoor Advantage™ Gold Certification or equivalent. This approval guarantees conformance to indoor air concentrations meeting Indoor Advantage Gold Indoor Air Quality Certified to SCS-105 v4.2-2023 Conforms to ANSI/BIFMA M7.1 and X7.1 and the CDPH/EHLB Standard Method (CA 01350) v1.2-2017 conducted in an independent third-party air quality testing laboratory.

1.4 REFERENCE STANDARDS

A. ASTM International
   1. ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions.
   2. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
   3. ASTM C1036 - Standard Specification for Flat Glass.
   4. ASTM C1048 - Heat-Treated Flat Glass—Kind HS, Kind FT Coated and Uncoated Glass.
   5. ASTM E84 - Surface Burning Characteristics of Building Materials.
   6. ASTM E413 - Classification for Rating Sound Insulation
B. Health Product Declaration Collaborative
   1. Health Product Declaration Open Standard v2.1
C. International Standards Organization
   1. ISO 14021 - Environmental Labels and Declarations - Self-Declared Environmental Claims (Type II Environmental Labeling).

2. ISO 14025:2011-10, Environmental Labels and Declarations - Type III Environmental Declarations - Principles and Procedures.
3. ISO 14040:2009-11, Environmental Management - Life Cycle Assessment - Principles and Framework.
4. ISO 14044:2006-10, Environmental Management - Life Cycle Assessment - Requirements and Guidelines.
5. ISO 21930 – Sustainability in Buildings and Civil Engineering Works — Core Rules for Environmental Product Declarations of Construction Products and Services.

D. Other Standards
1. ADA – Americans with Disabilities Act.
2. UL 508A – Standard for Industrial Control Panels
3. NFPA 70 – National Electrical Code
4. ANSI Z97.1 - Safety Glazing Materials Used in Buildings.
5. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
6. NEMA LD3 - High Pressure Decorative Laminates.

1.5 SUBMITTALS

A. Product Data: Material descriptions, construction details, finishes, installation details, and operating instructions for each type of operable partition, component, and accessory specified.
B. Shop Drawings: Show location and extent of operable partitions. Include plans, elevations, sections, details, attachments to other construction, and accessories. Indicate dimensions, weights, conditions at openings, and at storage areas, and required installation, storage, and operating clearances. Indicate location and installation requirements for hardware and track, including floor tolerances required and direction of travel. Indicate blocking to be provided by others.
C. Setting Drawings: Show imbedded items and cutouts required in other work, including support beam punching template.
D. Samples: Color samples demonstrating full range of finishes available by architect. Verification samples will be available in same thickness and material indicated for the work.
E. Reports: Provide a complete and unedited written sound test report indicating test specimen matches product as submitted.
F. Create spaces that are healthy for occupants.
1. Furnish products and materials with Health Product Declaration (HPD), Manufacturer Inventory, or other material health disclosure documentation. Products without an HPD or other disclosure documentation are not acceptable.
G. Furnish materials that generate the least amount of pollution.
1. Furnish products and materials that have third party verified environmental product declarations (EPD's). Consider products and materials that have optimized environmental performance (reduced life cycle impacts). Products without an EPD or other disclosure documentation are not acceptable.
H. Buy American: Folding door to be manufactured in the United States in compliance with applicable U.S. Federal Trade Commission (FTC) and U.S. Customs Service and Border Protections regulations and be labeled "Made in America".

1.6 DELIVERY, STORAGE, AND HANDLING

A. Clearly mark packages and panels with numbering systems used on Shop Drawings. Do not use permanent markings on panels.
B. Protect panels during delivery, storage, and handling to comply with manufacturer's direction and as required to prevent damage.

1.7 WARRANTY

A. Provide written warranty by manufacturer of operable partitions agreeing to repair or replace any components with manufacturing defects.
B. Student Dining/Gym: Warranty period: Eight (8) years.

PART 2 – PRODUCTS

2.1 MANUFACTURERS, PRODUCTS, AND OPERATION

A. Manufacturers: Subject to compliance with requirements, provide product by the following:
   1. Modernfold, Inc. Basis of Design: Acousti-Seal®
   2. Moderco, Inc.
   3. Comparable product approved by FBISD Design Manager
B. Doors to be manufactured in the U.S.A.
C. Products: Subject to compliance with the requirements, provide the following product:
   1. Student Dining/Gym: Acousti-Seal Legacy – Electric Partition (933E) electrically operated continuously hinged operable partition.

2.2 OPERATION

A. Student Dining/Gym: Acousti-Seal Legacy – Electric Partition (933E): Series of continuously hinged flat panels, electrically operated, top supported with operable floor seals.
B. Final Closure:
   1. Student Dining/Gym: Side Jamb with overlapping trail panel.
C. Partition shall be operated by:
   1. Student Dining/Gym: Two key control stations wired in series and located on opposite sides and opposite ends of the partition. Control stations shall be activated by key switch at each ends of partition.
   2. Motor unit shall be reversible, continuous duty, and class A insulated. Motor unit shall have NEMA MG 1 service factor, high starting torque, thermal overload protection, and open/drip proof enclosure. Motor assembly shall have wiring compliant with NFPA 70, 24-volt controls, compliant with UL 508A, and speed of 28 feet/minute. The drive unit motor shall be equipped with outboard limit switches to prevent over-extension. A positive chain drive attached to the lead panel shall pull the partition across the opening. Cable, belt, or other friction type drives will not be accepted.
D. Electric motor shall consist of:
   1. Student Dining/Gym: A 208-volt, 3-phase

2.3 PANEL CONSTRUCTION

A. Student Dining/Gym: Nominal 3-inch (76mm) thick panels in manufacturer's standard 48-inch (1220mm) widths. All panel horizontal and vertical framing members fabricated from minimum 16-gage formed steel with overlapped and welded corners for rigidity. Top channel is reinforced to support suspension system components. Frame is designed so that full vertical edges of panels are of formed steel and provide concealed protection of the edges of the panel skin.
B. Panel skin shall be:
   1. Student Dining/Gym: Roll-formed steel wrapping around panel edge. Panel skins shall be lock formed and welded directly to the frame for unitized construction. Acoustical ratings of panels with this construction minimum:
      a. 52 STC
C. Hinges for Panels, Closure Panels, Pass Doors, and Pocket Doors shall be:
   1. Student Dining/Gym: Full leaf butt hinges, attached directly to the panel frame with welded hinge anchor plates within panel to further support hinge mounting to frame. Lifetime warranty on hinges. Hinges mounted into panel edge or vertical astragal are not acceptable.

1. Student Dining/Gym: Markerboard: White enamel on steel, bonded to the face of the panel with horizontal trim without exposed fasteners. Trim is not acceptable on vertical edges to provide uninterrupted work surface.

PART 3 – EXECUTION

3.1 INSTALLATION

A. General: Comply with ASTM E557, operable partition manufacturer's written installation instructions, Drawings and approved Shop Drawings.
B. Install operable partitions and accessories after other finishing operations, including painting have been completed.
C. Match operable partitions by installing panels from marked packages in numbered sequence indicated on Shop Drawings.
D. Broken, cracked, chipped, deformed or unmatched panels are not acceptable.

3.2 CLEANING AND PROTECTION

A. Clean partition surfaces upon completing installation of operable partitions to remove dust, dirt, adhesives, and other foreign materials according to manufacturer’s written instructions.
B. Provide final protection and maintain conditions in a manner acceptable to the manufacturer and Installer that ensure operable partitions are without damage or deterioration at time of Substantial Completion.

3.3 ADJUSTING

A. Adjust operable partitions to operate smoothly, easily, and quietly, free from binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Lubricate hardware and other moving parts.

3.4 EXAMINATION

A. Examine flooring, structural support, and opening, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of operable partitions. Proceed with installation only after unsatisfactory conditions have been corrected.

3.5 DEMONSTRATION

A. Demonstrate proper operation and maintenance procedures to Owner's representative.
B. Provide Operation and Maintenance Manual to Owner's representative.

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SECTION 105113 - METAL LOCKERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

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1. Welded corridor lockers.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at [**Project site**] <**Insert location**>.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of metal locker[**and bench**].

B. Shop Drawings: For metal lockers.

1. Include plans, elevations, sections, and attachment details.
2. Show locker trim and accessories.
3. Include locker identification system and numbering sequence.

C. Samples: For each color specified, in manufacturer's standard size.

D. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available.

E. Samples for Verification: For the following products, in manufacturer's standard size:

1. Lockers and equipment.

1.5 INFORMATIONAL SUBMITTALS

A. Sample Warranty: For special warranty.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For adjusting, repairing, and replacing locker doors and latching mechanisms to include in maintenance manuals.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver metal lockers until spaces to receive them are clean, dry, and ready for their installation.

B. Deliver master and control keys combination control charts to Owner and obtain receipt

1.8 FIELD CONDITIONS

A. Field Measurements: Verify actual dimensions of recessed openings by field measurements before fabrication.

1.9 COORDINATION

A. Coordinate sizes and locations of concrete bases for metal lockers.

B. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of work specified in other Sections to ensure that metal lockers can be supported and installed as indicated.

1.10 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of metal lockers that fail in materials or workmanship, excluding finish, within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Structural failures.
b. Faulty operation of latches and other door hardware.

2. Damage from deliberate destruction and vandalism is excluded.
3. Warranty Period for Knocked-Down Metal Lockers: [**Two**] <**Insert number**> years from date of Substantial Completion.
4. Warranty Period for Welded Metal Lockers: [**Lifetime**] [**10 years**] <**Insert years**> from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain metal lockers and accessories from single source from single locker manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Accessibility Standard: For lockers indicated to be accessible, comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design requirement.

2.3 WELDED CORRIDOR LOCKERS <**Insert designation**>

A. Doors: One piece; fabricated from 16ga nominal-thickness steel sheet; formed into channel shape with double bend at vertical edges and with right-angle single bend at horizontal edges.

1. Reinforcement: Manufacturer's standard reinforcing angles, channels, or stiffeners for doors more than 15 inches (381 mm) wide; welded to inner face of doors.
2. Door Style: Vented panel as follows**:**

B. Body: Assembled by welding body components together. Fabricate from unperforated steel sheet with thicknesses as follows:

1. Tops, Bottoms, and Sides: 20ga nominal thickness.
2. Backs: 20ga nominal thickness.
3. Shelves: 20 ga nominal thickness, with double bend at front and single bend at sides and back.

C. Hinges: Welded to door and attached to door frame with no fewer than two factory-installed rivets per hinge that are completely concealed and tamper resistant when door is closed; fabricated to swing 180 degrees[**; self-closing**].
1. Continuous Hinges: Manufacturer's standard, steel, full height.

D. Recessed Door Handle and Latch: Stainless-steel cup with integral door pull, recessed so locking device does not protrude beyond door face; pry and vandal resistant.

1. Multipoint Latching: Finger-lift latch control designed for use with built-in combination locks or padlocks; positive automatic latching and prelocking.
a. Latching Mechanism: Manufacturer's standard, rattle-free latching mechanism and moving components isolated to prevent metal-to-metal contact, and incorporating a prelocking device that allows locker door to be locked while door is open and then closed without unlocking or damaging lock or latching mechanism.

E. Door Handle and Latch for [**Box**] [**16-Person**] Lockers: Stainless-steel strike plate with integral pull; with steel padlock loop that projects through metal locker door.

F. Locks: Built-in combination locks with five setups, with school master key. Provide control chart to District in both hard-copy and electronic format.

G. Identification Plates: Manufacturer's standard, etched, embossed, or stamped [**aluminum**] plates, with numbers and letters at least 3/8 inch (9 mm) high.

H. Hooks: Manufacturer's standard ball-pointed, aluminum or steel; zinc plated.

I. Coat Rods: Manufacturer's standard.

J. Coat Rods: [**3/4-inch- (19-mm-)**] diameter steel, [**chrome finished**]

K. Continuous Sloping Tops: Fabricated from 0.048-inch (1.21-mm) nominal-thickness steel sheet, with a pitch of approximately 20 degrees.

1. Closures: Vertical -end type.

L. Recess Trim: Fabricated from 0.048-inch (1.21-mm) nominal-thickness steel sheet.

M. Filler Panels: Fabricated from 0.048-inch (1.21-mm) nominal-thickness steel sheet.

N. Finished End Panels: Fabricated from 0.024-inch (0.61-mm) nominal-thickness steel sheet to cover unused penetrations and fasteners, except for perimeter fasteners, at exposed ends of nonrecessed metal lockers; finished to match lockers.

O. Materials:

1. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B, suitable for exposed applications.

P. Finish: Baked enamel or powder coat.

1. Color: Match Architect's sample as selected by Architect from manufacturer's full range

2.4 ACCESSORIES

A. Fasteners: Zinc- or nickel-plated steel, slotless-type, exposed bolt heads; with self-locking nuts or lock washers for nuts on moving parts.

B. Anchors: Material, type, and size required for secure anchorage to each substrate.
1. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine walls and floors or support bases, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install lockers level, plumb, and true; shim as required, using concealed shims.

1. Anchor locker runs at ends and at intervals recommended by manufacturer, but not more than 36 inches (910 mm) o.c. Using concealed fasteners, install anchors through backup reinforcing plates, channels, or blocking as required to prevent metal distortion.

B. Welded Lockers: Connect groups together with manufacturer's standard fasteners, with no exposed fasteners on face frames.

C. Equipment:

1. Attach hooks with at least two fasteners.
2. Attach door locks on doors using security-type fasteners.

3. Identification Plates: Identify metal lockers with identification indicated on Drawings.

    a. Attach plates to each locker door, near top, centered, with at least two aluminum rivets.
    b. Attach plates to upper shelf of each open-front metal locker, centered, with a least two aluminum rivets.

D. Trim: Fit exposed connections of trim, fillers, and closures accurately together to form tight, hairline joints, with concealed fasteners and splice plates.

1. Attach recess trim to recessed metal lockers with concealed clips.
2. Attach filler panels with concealed fasteners. Locate filler panels where indicated on Drawings.
3. Attach sloping-top units to metal lockers, with closures at exposed ends.
4. Attach boxed end panels using concealed fasteners to conceal exposed ends of nonrecessed metal lockers.
5. Attach finished end panels using fasteners only at perimeter to conceal exposed ends of nonrecessed metal lockers.

3.3 ADJUSTING

A. Clean, lubricate, and adjust hardware. Adjust doors and latches to operate easily without binding.[**Verify that integral locking devices operate properly.**]

3.4 PROTECTION

A. Protect metal lockers from damage, abuse, dust, dirt, stain, or paint. Do not permit use during construction.

B. Touch up marred finishes, or replace metal lockers that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by locker manufacturer.

END OF SECTION 105113

I. ANSI/TIA-598-C-2005 – Optical Fiber Cable Color Coding

J. ANSI/TIA 606-C: Administration Standard for Telecommunications Infrastructure

K. ANSI/TIA 942-B: Telecommunications Infrastructure Standard for Data Centers

L. ANSI/TIA 607-D: Generic Telecommunications Grounding (Earthing) and Bonding for Customer Premises

M. IEEE: National Electrical Safety Code® (NESC®)
standards.ieee.org/about/nesc

1.05 Qualifications

A. Refer to Section 27 00 00 for additional requirements.

B. The contractor shall have a minimum of 5-years' experience.

C. The contractor shall have a minimum of (2) certified BICSI Installers in good standing and a full-time employee of the company and on-site at all times.

D. The Contractor project manager shall be an RCDD (Registered Communication Distribution Designer) in good standing and a fulltime employee of the company and be present at all on site coordination meetings.

E. All structured cabling systems shall be installed by an authorized and registered Panduit Gold Certified Partner in good standing.

F. RCDD and BICSI Certified Technicians will be present at the following meetings:

1. Low Voltage Preinstallation Meeting
2. Cabling System Pathway Mockup
3. Owner walks / System inspections
4. Coordination Meetings
5. And Other events as requested by the Owner

G. Premises Distribution System: Written certification that the premises distribution system complies with the ANSI/TIA 568.0-E, ANSI/TIA 568.1-E, ANSI/TIA 568.1-E, ANSI/TIA 568.2-D, ANSI/TIA 568.3-D, ANSI/TIA 568.4-D, EIA ANSI/TIA/EIA-569-E, and ANSI/TIA/EIA-606-C.

H. Materials and Equipment: Where materials or equipment are specified to conform, be constructed, or be tested to meet specific requirements, Contractor shall supply, upon request by Consultant or Owner, certification that the items provided conforms to such requirements. Certification by a nationally recognized testing laboratory that a representative sample has been tested to meet the requirements, or a published catalog specification statement to the effect that the item meets the referenced standard, will be acceptable as evidence that the item conforms. Compliance with

these requirements does not relieve the Contractor from compliance with other requirements of the specifications.

I. Certifications

1. Documented proof that the contractors project manager is an RCDD shall accompany the proposal response.

2. Certificates of attendance will be submitted for attendance in manufacturer's installation/ maintenance training by the Contractor's directly employed personnel. All structured cabling systems shall be installed by an authorized and registered Panduit Gold Certified Partner in good standing.

3. All installing personnel shall have completed and be certified in manufacturer training or BICSI (Building Industry Consulting Service International) installation training for UTP infrastructure systems, or the Contractor shall contract with manufacturers for installation of all proposed components. Company Certifications shall accompany the proposal response.

4. The Contractor's technicians shall be certified and trained in the connectivity hardware which is being installed.

5. The Contractor shall submit certification that installers are factory certified to install and test the provided products. No less than half of the crew to be used for the telecommunications installation shall be trained by that manufacturer for the work.

1.06 Pre-Construction Submittals

A. The following items shall be provided in a single, combined, comprehensive submittal package for all Communications work, including sections 27 05 26 Grounding and Bonding for Technology Systems, 27 11 00 Communications Equipment Rooms, 27 13 00 Communications Backbone Cabling, and 27 15 00 Communications Horizontal Cabling. Partial submittals will only be considered in special circumstances, such as getting early approval of long-lead-time items or products requiring additional coordination with other trades.

B. Qualifications

1. Provide certificates for employees working on this project that show they meet the necessary qualifications described in the section above, including RCDD, Panduit Gold, BICSI, and manufacturer/connectivity-specific training, as well as any other certifications necessary to purchase and install the specified products.

2. Resumes for key personnel working on the project must be submitted with contractor qualifications.

C. Equipment Schedules

1. Provide a complete schedule of significant materials for the project, with columns for the following items: Manufacturer, Part Number, Description, Quantity, and Unit Pricing.

1. XpressTags TG-2109
2. Panduit PST-FOBLNK
3. VIP Products' "Caution Write-On Coverall Tag"
4. Or approved equal

Part 3 - EXECUTION

3.01 Testing

A. Refer to Section 27 00 00 for additional requirements.

3.02 Training

A. Refer to Section 27 00 00 for additional requirements.

3.03 Warranty

A. Refer to Section 27 00 00 for additional requirements.

B. The Contractor shall provide to the Owner a manufacturer's 25-year minimum warranty certificate for all materials, equipment, etc. Upon successful completion of the installation and subsequent inspection, the Owner shall receive the numbered certificate from the manufacturing connectivity hardware (patch panels, jacks, patch cords, 110 blocks, etc.) company registering the installation. This warranty shall include all labor, materials, and travel time.

C. The warranty shall ensure against product defects and guarantee that all approved cabling components exceed the specifications of TIA/EIA-568 and ISO/IEC IS 11801 for cabling links/channels, and that the installation will exceed the loss and bandwidth requirements of TIA/EIA 568 ISO/IEC IS 11801 for fiber links/channels for a twenty-five (25) year period. The warranty shall apply to all passive structured cabling system components.

D. The warranty shall cover the failure of the wiring system to support the application that it was designed to support, as well as additional application(s) introduced in the future by recognized standards or user forums that use the TIA/EIA 568 or ISO/IEC IS 11801 component and link/channel specifications for cabling. Such warranty shall apply for a minimum of a twenty-five (25) year period.

E. The warranty shall cover the replacement or repair of defective product(s) and labor for the replacement or repair of such defective products(s), labeling of the new components, and testing of the circuit(s) at no cost to the Owner.

3.04 Examination

A. Verification of Conditions: Contractor shall examine areas and conditions under which work is to be performed and identify conditions detrimental to proper and timely completion.

B. Contractor shall verify that cable lengths comply with published standards.

C. Contractor shall notify Owner of any proposed installation which is expected to exceed maximum lengths prior to installation of cable.

D. Contactor shall consult with Owner regarding alternative routing or location of cable.

E. Contractor shall not proceed until unsatisfactory conditions have been corrected.

3.05 Spare Parts

A. Suggested List: Contractor is requested to submit a list of suggested spare parts with an offered price, allowing Owner to select appropriate parts.

B. Means of Obtainment: Contractor shall state where spare parts can be obtained after the installation.

3.06 Installation Requirements

A. Refer to Section 27 00 00 for additional requirements.

3.07 Cooperation

A. The Contractor shall cooperate with other trades and General Contractor's personnel in locating work in a proper manner.

B. Should it be necessary to raise, lower, or move longitudinally any part of the work to better fit the general installation, such work shall be done at no extra cost to the Owner, provided such decision is reached prior to actual installation. The Contractor shall check location of electrical outlets with respect to other installations before installing.

3.08 Labeling

A. General

1. The Contractor shall match the Owner's standard labeling scheme.

2. Clean surfaces before attaching labels.

3. Install all labels firmly and permanently. Labels attached to terminating equipment such as backboards, faceplates, 110 blocks, and patch panels shall be installed plumb and neatly on all equipment.

B. Labeling of Cabling and Termination Components

1. Backboard and Equipment Racks

a. Backboards and equipment racks shall be labeled by the Contractor identifying the telecommunication room. Additionally, equipment racks shall have an alpha character after the room number unique to that particular communications closet. For example, TR1-1 would be the first rack in TR1.

e. Each cable is to be labeled within 18 inches from the end of the conduits. In addition, labels shall be affixed to conduit at every transition of a vault, hand hole, riser closet, or major pull box. Labels will be in the form of “HUB Location one-Location two- fiber strands#”. For example, cable sheath from the Campus MDF to Manhole 8C would be labeled as "Campus MDF-MH8C-12.” For example, in the assist handholes/manholes, the cables shall be labeled as “HH South to MH08 North for Veterans.”

f. The following provisions shall apply to labeling Fiber Distribution Components:

i. Label the front of the patch panels with the destination and fiber count.

ii. Each fiber optic strand shall be labeled with a unique identifier at the LC coupler in the fiber optic patch panel. Connectors shall be labeled on the identifying sheets on the front of the fiber optic patch panel.

iii. Label the front of the splice panels with the fiber optic cable number, direction, and fiber count.

iv. Label splice trays/splice wheels with the cable ID and fiber numbers contained in the tray/wheel.

9. Ground System Labeling

a. Label grounds at busbar with the destination of each ground.

10. All grounds shall be labeled as close as practical to the point of termination (for ease of access to read the label). Labels shall be nonmetallic and include the following statement: “WARNING: If this connector or cable is loose or must be removed, please call the building telecommunications manger.” Refer to ANSI/TIA/EIA 606 for additional labeling requirements.

3.09 Testing and Acceptance

A. The Contractor shall perform acceptance tests as indicated below for each subsystem (backbone, station, etc.) as it is completed.

B. The Contractor shall supply all equipment and personnel necessary to conduct the acceptance tests. Prior to testing, the Contractor shall provide a summary of the proposed test plan for each cable type, including equipment to use, setup, test frequencies or wavelengths, results format, etc. The Consultant will approve the method of testing.

C. The Contractor shall visually inspect all cabling and termination points to ensure that they are complete and conform to the wiring pattern defined herein. The Contractor shall provide the Consultant with a written certification that this inspection has been made.

D. The Contractor shall conduct acceptance testing according to a schedule coordinated with the Consultant. Representatives of the Owner may be in attendance to witness the test procedures. The Contractor shall provide a minimum of one (1) week advance notice to the Consultant and Owner to allow for such participation.

The notification shall include a written description of the proposed conduct of the tests, including copies of blank test result sheets to be used.

E. Tests related to connected equipment of others shall be done only with the permission and presence of Contractor involved. The Contractor shall ascertain that testing only as required to prove the wiring connections are correct.

F. The Contractor shall provide Consultant with test results and descriptions of the testing methodology, including the date of the tests, the equipment used, and the procedures followed. At the request of the Consultant, the Contractor shall provide copies of the original test results.

G. All cabling shall be 100% fault free unless noted otherwise. If any cable is found to be outside the specification defined herein, that cable and the associated termination(s) shall be replaced at the Contractor's expense. The applicable tests shall then be repeated.

H. N/A

I. The Consultant or Owner may request that a 10% random field re-test be conducted on the cable system to verify documented findings.

1. If requested, the Contractor shall test up to 10% of cable links at no cost to the Owner.

2. Tests shall be a repeat of those defined above and under Testing and Acceptance. If findings contradict the documentation submitted by the Contractor, additional testing shall be performed to the extent determined necessary by the Consultant, including a 100% re-test. This re-test shall be at no additional cost to the Owner.

3.10 Fire Stopping

A. Contractor shall seal any openings created for cable pass-through between floors or through fire rated walls. Sealing material and application of this material shall be accomplished in such a manner that is acceptable to the local fire and building authorities having jurisdiction over this work.

B. Creation of such openings as are necessary for cable passage between locations as shown on the Drawings shall be the responsibility of the Contractor. Any openings created by or for the Contractor and left unused shall also be sealed as part of this work.

End of Section 27 05 00

J. Section 27 41 00 – Audio Visual Systems

K. Section 27 51 00 – Distributed Communications Systems

L. Section 28 01 00 – Physical Security General Requirements

M. Section 28 13 00 – Electronic Access Control System

N. Section 28 16 00 – Intrusion Detection System

O. Section 28 23 00 – Video Surveillance System

1.03 Definitions

A. Refer to Section 27 00 00 for additional definitions.

1.04 Reference Standards and Codes

A. IEEE C2 - National Electrical Safely Code

B. IEEE Std. 837-2002, or latest version – Standard for Qualifying Permanent Connections Used in Substation Grounding

C. ANSI/TIA-607 - Commercial Building Grounding and Bonding Requirements for Telecommunications

D. NFPA 70E - Standard for Electrical Safely in the Workplace

E. ANSI/NECA/BICSI-607 - Telecommunications Bonding and Grounding Planning and Installation methods for Commercial Buildings

F. UL 467 - Standard for Grounding and Bonding Equipment

G. Refer to Section 27 00 00 for additional requirements.

1.05 Qualifications

A. Refer to Section 27 05 00 for additional requirements.

1.06 Pre-Construction Submittals

A. Provide a comprehensive Communications submittal package; refer to 27 05 00 Communications General Requirements for detailed requirements. Do not provide a separate submittal for this section on its own.

1.07 Construction Progress Submittals

A. Refer to Section 27 00 00 for additional requirements.

1.08 Closeout Submittals

A. Refer to Section 27 00 00 for additional requirements.

K. Section 28 13 00 – Electronic Access Control System

L. Section 28 16 00 – Intrusion Detection System

M. Section 28 23 00 – Video Surveillance System

1.03 Definitions

A. Refer to Section 27 00 00 for additional definitions.

1.04 Reference Standards and Codes

A. Refer to Section 27 00 00 for additional requirements.

1.05 Qualifications

A. Refer to Section 27 05 00 for additional requirements.

1.06 Pre-Construction Submittals

A. Refer to Section 27 05 00 for additional requirements.

1.07 Construction Progress Submittals

A. Refer to Section 27 00 00 for additional requirements.

1.08 Closeout Submittals

A. Refer to Section 27 00 00 for additional requirements.

Part 2 - PRODUCTS

2.01 Substitutions

A. Unless noted otherwise, products in this section are intended as a basis of design and are open to substitutions per the product substitution procedures defined in Section 27 00 00.

2.02 Wire Basket Tray Runway

A. Pathways and cable trays shall be sized according to the manufacturer specifications and provide for 30% growth without exceeding the 40% fill ratio.

1. Cable tray should not be higher than 12-feet A.F.F.

B. Main cable pathways shall be wire basket cable tray from the MDF and IDF rooms for a minimum of 20-feet in all directions before transitioning to cable hooks.

C. Cable tray shall have a 3-inch minimum clearance from the ceiling tile to the bottom of the cable tray and 8-inch minimum clearance from the top of the cable tray to HVAC units, HVAC duct, heating ducts, and heating equipment, etc.

J. No grid wire shall be utilized for support. Cable hooks shall be mounted to the structure.

K. Cable hooks shall:

1. Have a flat bottom and provide a minimum of 1 5/8" cable bearing surface.
2. Have 90-degree radiused edges to prevent damage while installing cables.
3. Be designed so the mounting hardware is recessed to prevent cable damage.
4. Have a steel cable latch retainer to provide containment of cables within the hook.
5. Have a retainer that shall be removable and reusable.
6. Be factory assembled for direct attachment to walls, hanger rods, beam flanges, purlins, strut, and floor posts, to meet job conditions.

L. Factory assembled multi-tiered cable hooks shall be used where required to provide separate cabling compartments, or where additional capacity is needed.

M. Cable hooks for non-corrosive areas shall be pre-galvanized steel, ASTM A653 G90. Where additional strength is required, cable hooks shall be spring steel with a zinc-plated finish, ASTM B633, SC3.

N. Preferred method of supporting cable hooks is to anchor cable hooks to above ceiling walls or from other structure via all thread.

O. Cable hooks for corrosive areas shall be stainless steel, AISI type 304.

P. Cable hooks shall Panduit J-hooks.

2.04 Surface Raceway

A. In areas where surface raceway will be used as a cable path, no exposed cable shall be permitted.

B. With the agreement of the Consultant and Owner, where telecommunications outlets are to be located in areas where the walls cannot be fished, the station wire serving these outlets shall be covered with raceways. No exposed wire shall be permitted within offices, laboratories, conference rooms, or like facilities. Contractor shall attempt to fish hollow walls, use existing conduit, or exhaust all other options to conceal cabling prior to installing surface raceway.

C. When power is provided in the surface mounted raceway a dual-channel surface mounted raceway shall be provided to separate the power from the structured cabling.

D. The use of surface mounted raceway shall only be considered when no option is available to install the workstation outlets flush in the wall and shall be approved by the FBISD Design Manager during the design.

B. All metal conduits must have nylon bushings installed and be supplied with pull string.

2.08 Outlet Boxes

A. General Requirements for Outlet Boxes

1. Comply with TIA-569-E.

B. Metallic outlet boxes and device covers shall be galvanized steel not less than 1/16" thick.

C. Flush Wall Mounted Workstations (Typ.)

1. Provide a 4 11/16” by 4 11/16” by 2-1/8” double-gang back box with single-gang mud ring at 18 inches above the finished floor and at appropriate height for wall mounted phones and above-counter and millwork locations.

2. Provide a minimum of (1) 1-inch conduit from the double-gang box to above accessible ceiling in the room where double-gang box is located. If ceiling is not accessible, install conduit to nearest accessible ceiling.

3. Terminate the conduit above accessible ceiling and install nylon bushing and pull string.

D. Floor Mounted Workstations

1. Provide a floor box or poke-thru specifically designed for the application and environment adequately sized to accommodate the quantity of installed horizontal data cables.

2. Provide a minimum of a (2) 1-inch conduits from the floor box to above accessible ceiling.

3. When cabling is going below grade, the appropriate OSP rated cable shall be utilized with an industry standard transition to plenum rated cable made overhead at the appropriate location with identification label attached to the ceiling grid.

E. Modular Furniture Workstations

1. Provide a rough-in pathway designed according to the furniture type, quantity of cables, and location as required for each furniture system.

F. Above Accessible Ceiling

1. For ceiling-mounted outlets above accessible ceiling such as Wireless Access Points or IP Cameras, no rough-in is required.

2. The data cable will terminate into an in-ceiling bracket with drop ceiling clip (QuickPort 49223-CBC) secured to the structure above the accessible ceiling. No higher than 3 feet above ceiling grid preferred is 1 foot.

3. No outlets shall be provided above an accessible ceiling that is greater than 12-ft above finished floor. If the accessible ceiling is greater than 12-ft above finished

floor, the outlet shall be provided on the wall at 12-ft above finished floor, so it remains easily accessible from a standard ladder.

4. Consultant/designer to provide detail showing coordination with architectural model.

G. N/A

H. Metallic outlet boxes shall be equipped with single device cover (or two-device cover where needed).

I. Where installed in plaster, gypsum board, etc., covers shall be raised to compensate the thickness of the wall.

J. Box extensions used to accommodate new building finishes shall be of same material as recessed box.

K. Where metallic outlet boxes are to be empty for future use, blank covers shall be used.

2.09 Painting

A. The Contractor is responsible for painting all exposed pathway, boxes, fittings, etc. The paint shall match the surrounding conditions and may change mid-run.

Part 3 - EXECUTION

3.01 Testing

A. Refer to Section 27 00 00 for additional requirements.

3.02 Training

A. Refer to Section 27 00 00 for additional requirements.

3.03 Warranty

A. Refer to Section 27 00 00 for additional requirements.

3.04 Wire Basket Tray Runway

A. Basket tray shall be installed in accordance with recognized industry practices, to ensure that the cable tray equipment complies with requirements of NEC, applicable portions of NFPA 70B and NECA's "Standards of Installation" pertaining to general electrical installation practices.

B. Coordinate installation of wire basket runway with other electrical work as necessary to properly interface installation of wire basket runway with other work.

C. Provide sufficient space encompassing wire basket runways to permit access for installing and maintaining cables.

1.04 Reference Standards and Codes

A. ANSI/TIA-EIA-569-D “Telecommunications Pathways and Spaces”

B. ASTM E90, “Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements”.

C. ASTM E814, “Fire Tests of Through Penetration Firestops”.

D. ASTM E1725, “Standard Test Methods for Fire Tests of Fire-Resistive Barrier Systems for Electrical System Components”.

E. CAN/ULC S115, "Standard Method of Fire Tests of Firestops Systems."

F. UL 1479, “Fire Tests of Through Penetration Firestops”.

G. National Fire Protection Association (NFPA) – NFPA 101: Life Safety Code.

H. National Fire Protection Association (NFPA) – NFPA 70: National Electrical Code.

I. Underwriters Laboratories Inc. (UL) – Fire Resistance Directory

J. Refer to Section 27 00 00 for additional requirements.

1.05 Qualifications

A. Refer to Section 27 05 00 for additional requirements.

1.06 Pre-Construction Submittals

A. Refer to Section 27 05 00 for additional requirements.

1.07 Construction Progress Submittals

A. Refer to Section 27 00 00 for additional requirements.

1.08 Closeout Submittals

A. Refer to Section 27 00 00 for additional requirements.

Part 2 - PRODUCTS

2.01 Substitutions

A. Unless noted otherwise, products in this section are intended as a basis of design and are open to substitutions per the product substitution procedures defined in Section 27 00 00.

2.02 General Performance Requirements

A. Fire rated cable pathway devices shall be used in fire-rated construction for all low-voltage or optical fiber raceways. Such devices shall:

I. Section 28 01 00 – Physical Security General Requirements

J. Section 28 13 00 – Electronic Access Control System

K. Section 28 16 00 – Intrusion Detection System

L. Section 28 23 00 – Video Surveillance System

1.03 Definitions

A. Refer to Section 27 00 00 for additional definitions.

1.04 Reference Standards and Codes

A. Refer to Section 27 00 00 for additional requirements.

1.05 Qualifications

A. Refer to Section 27 05 00 for additional requirements.

B. The contractor shall have a minimum of 5-years' experience.

C. The contractor shall have a minimum of (2) certified BICSI Installers in good standing and a full-time employee of the company and on-site at all times.

D. The Contractor project manager shall be an RCDD (Registered Communication Distribution Designer) in good standing and a fulltime employee of the company and be present at all on site coordination meetings.

E. All structured cabling systems shall be installed by an authorized and registered Panduit Gold Certified Partner in good standing.

F. RCDD and BICSI Certified Technicians will be present at the following meetings:

1. Low Voltage Preinstallation Meeting
2. Cabling System Pathway Mockup
3. Owner walks / System inspections
4. Coordination Meetings
5. And Other events as requested by the Owner

G. Certifications

1. Documented proof that the contractors project manager is an RCDD shall accompany the proposal response.
2. Certificates of attendance will be submitted for attendance in manufacturer's installation/ maintenance training by the Contractor's directly employed personnel. All structured cabling systems shall be installed by an authorized and registered Panduit Gold Certified Partner in good standing.

3. All installing personnel shall have completed and be certified in Panduit training and BICSI (Building Industry Consulting Service International) installation training for UTP infrastructure systems, or the Contractor shall contract with manufacturers for installation of all proposed components. Company Certifications shall accompany the proposal response.

4. The Contractor's technicians shall be certified and trained in Panduit connectivity hardware.

5. The Contractor shall submit certification that installers are factory certified to install and test the provided products. No less than half of the crew to be used for the telecommunications installation shall be Panduit and BICSI trained for the work.

1.06 Pre-Construction Submittals

A. Provide a comprehensive Communications submittal package; refer to 27 05 00 Communications General Requirements for detailed requirements. Do not provide a separate submittal for this section on its own.

B. Refer to Section 27 05 00 for additional requirements.

1.07 Construction Progress Submittals

A. Refer to Section 27 00 00 for additional requirements.

1.08 Closeout Submittals

A. As-Built Documentation

1. Provide drawings depicting the condition of the Structured Cabling System as installed produced in AutoCAD 2013 or higher and provided in hardcopy, electronically in .DWG and .PDF format. Drawings shall be sealed by a current BICSI certified RCDD and shall include but not be limited to the following:

a. Region lines identifying exactly which data drops are served from which MDF / IDF

b. Exact locations of MDF and IDF Rooms.

c. MDF and IDF Room layouts with exact dimensions.

d. MDF and IDF Room wall elevations.

e. MDF and IDF Room equipment rack elevations.

f. Cable pathways, including cable runways, cable tray, sleeves, backbone and horizontal cable pathways.

g. Data drop locations for all data drops (data, voice, wireless, security, etc.)

h. Correct room numbers identified.

i. Correct labeling scheme with all data drops labeled.

2. A laminated half-size hard copy of the as-built drawings for the applicable region served by the MDF and/or IDFs shall be provided in MDF and each IDF for reference.

3. At the time of network installation install, complete Communication As-Built Documentation to be provide to FBISD.

B. Refer to Section 27 00 00 for additional requirements.

Part 2 - PRODUCTS

2.01 Substitutions

A. Unless noted otherwise, products in this section are intended as a basis of design and are open to substitutions per the product substitution procedures defined in Section 27 00 00.

2.02 General

A. Wall phone workstations shall be equipped with a studded wall phone faceplate capable of accepting a modular jack insert.

B. All faceplate colors shall be coordinated with FBISD Design Manager and the Architect during the design.

C. When a data outlet is installed above the accessible ceiling (i.e., IP camera, WAP, etc.) the modular jack shall be inserted in surface mounted box and secured to the building structure. No higher than 3 feet above ceiling grid preferred is 1 foot.

2.03 Category 6 Horizontal Copper Cables

A. All cables and equipment shall be furnished, tested, installed and wired by the Contractor.

B. All horizontal data cables shall terminate on modular patch panels in the telecommunications closet as specified on the Drawings.

C. Horizontal Data Cabling shall be Category 6 plenum rated UTP installed from the patch panel in the MDF or IDF to the workstation location not to exceed 295 feet for the permanent link

D. This specification defines the requirements for commercially available high performance Category 6 cable.

E. This cable shall be utilized and suitable for installation free-air, in building risers, in conduit, and/or in cable tray and shall carry CMP rating.

F. The cable design described herein shall exceed transmission performance of Category 6 cables.

G. Cables shall be Underwriters Laboratory (UL) listed, comply with Article 800 (Communications Circuits) of the National Electrical Code, and meet the

specifications of NEMA (low loss), UL 444, and ICEA. Conductor shall also conform to the requirements for solid annealed copper wire in accordance with ASTM B 3.

H. All cables, termination components, and support hardware shall be furnished, tested, installed, and wired by the Contractor.

I. IMPORTANT: Cable and termination components (jack, patch panel, wiring blocks) are specified to function as a system. The compatibility of the cable to be installed with the proposed termination components shall be recognized and documented by the termination component manufacturer.

J. Manufacturers:

1. Panduit
2. Berk-Tek Lanmark 1000
3. General Cable Genspeed 6000
4. Commscope Uniprise Ultramedia 6
5. Belden
6. Or FBISD approved equal

K. Acceptable manufacturers for horizontal cabling shall be a manufacturer certified and authorized to offer the required Panduit 25-year warranty or FBISD IT approved equal.

2.04 Data Cabling Colors

A. The jacket color for data cables shall be:

1. Standard Data Outlets – BLUE
2. Wireless Access Points – GREEN
3. IP Security Devices (Cameras, Access Control Panels, Intrusion Detection Panels, Vape Detectors, etc.) – ORANGE

2.05 Information Outlet

A. General

1. Station cables shall each be terminated at their designated workstation location in the connector types described in the subsections below. Included are modular jacks, faceplates, and surface mount raceway. The combined assembly is referred to as the Standard Information Outlet (SIO). These connector assemblies shall snap into a mounting frame.
2. SIOs shall be mounted in new outlet boxes, where existing boxes are in place, on surface mount raceway typically in surface raceway with barrier, in floor mount interface boxes, or on power poles either currently owned or new.

3. The telecommunications outlet frame shall accommodate or incorporate the following:
    a. A minimum of four (4) modular jacks, when installed on a wall-mounted assembly.
    b. A mechanism for adjusting the surface plate to a plumb position.
4. When multiple jacks are identified in close proximity on the Drawings. The Contractor shall determine the optimum compliant configuration based on the products proposed.
5. The same orientation and positioning of jacks and connectors shall be utilized throughout the installation. Prior to installation, the Contractor shall submit the proposed configuration for each SIO type for review by the Consultant.

B. Modular Jack

1. Data jacks shall be Panduit Minicom.
2. Termination components shall be designed to maintain the cable's pair twists as closely as possible to the point of mechanical termination.
3. Jacks shall utilize a four-layer printed circuit board to control NEXT.
4. Jack housings shall fully encase and protect printed circuit boards and IDC fields.
5. Modular jack contacts shall accept 2500 plug insertions.
6. Modular jack contacts shall be formed flat for increased surface contact with mated plugs. These contacts shall be arranged on the PC board in two staggered arrays of four to maximize contact spacing and minimize crosstalk.
7. Modular jack contacts shall be constructed of Beryllium copper for maximum spring force and resilience.
8. Contact Plating shall be a minimum of 50 micro inches of gold in the contact area over 50 micro-inch of nickel, compliant with FCC part 68.5.
9. Jack termination shall be 110 IDC, integral to the jack housing, laid out in two arrays of four contacts.
10. Jacks shall utilize a paired punch down sequence. Cable pairs shall be maintained up to the IDC, terminating all conductors adjacent to its pair mate to better maintain pair characteristics designed by the cable manufacturer.
11. Jacks shall utilize tin lead plated (60% tin/40%lead) phosphor bronze 110 insulation displacement contacts.
12. Jacks shall terminate 22-26 AWG stranded or solid conductors.
13. Jacks shall terminate insulated conductors with outside diameters up to .050".
14. Jacks shall be compatible with single conductor 110 impact termination tools.

15. Jacks shall be compatible with EIA/TIA 606 color code labeling and accept snap on icons for identification or designation of applications.

16. Jacks shall be T568B wiring.

17. Category 6 jacks shall be manufactured by:

    a. Panduit NetKey

    b. Or FBISD approved equal

18. Category 6a jacks shall be manufactured by:

    a. Panduit Mini-Com

    b. Or FBISD approved equal

C. Data Jack Colors

1. The color for data jacks shall be:

    a. Standard Data Outlets – BLUE

    b. Wireless Access Points – GREEN

    c. IP Security Devices (Cameras, Access Control Panels, Intrusion Detection Panels, Vape Detectors, etc.) – ORANGE

D. Outlet Faceplates

1. Faceplates shall match the electrical outlets for material type and color and may vary by location.

2. Faceplates shall incorporate recessed designation strips at the top and bottom of the frame for identifying labels. Designation strips shall be fitted with clear plastic covers.

3. Any unused jack positions shall be fitted with a removable blank inserted into the opening.

4. Modular jacks shall have capability to incorporate a dust cover that fits over and/or into the jack opening. The dust cover shall be designed to remain with the jack assembly when the jack is in use. No damage to the jack pinning shall result from insertion or removal of these covers. Dust covers that result in deformation of the jack pinning shall not be accepted.

5. Wall-mounted “voice only” outlets shall be installed where identified on the floor plan Drawings to accommodate wall-mounted telephone sets. The wall plate shall be of stainless steel construction, accommodate one RJ-45 jack, mount on a standard single gang outlet box or bracket, and include mating lugs for wall phone mounting. Some types of phones may require a horizontal mounting.

6. All standard information outlets and the associated jacks shall be of the same manufacturer throughout each/the building. An allowable exception, however, is the wall-mounted “voice only” outlet described above.

7. Faceplates shall be manufactured by Panduit.

E. Surface Mount Interface Box

1. Low profile, surface mount boxes shall incorporate recessed designation strips at the top for identifying labels. Designation strips shall be fitted with clear plastic covers.

2. The box shall feature built-in cable management for both fiber and copper applications.

3. Any unused jack positions shall be fitted with a removable blank inserted into the opening.

4. Modular jacks shall have capability to incorporate spring-loaded shutter door for added protection from dust and other airborne contaminants. The dust cover shall be designed to remain with the jack assembly when the jack is in use.

5. The box shall have the capability to incorporate optional magnets that can be internally mounted.

6. Surface mount box shall be manufactured by Panduit.

2.06 Communications Patch Cords

A. The Owner has the right to determine the final length of the patch cords after the contract is awarded.

B. All patch cords shall be round and consist of eight insulated 24 AWG, stranded copper conductors, arranged in four color-coded twisted pairs within a flame retardant jacket and be backwards compatible with lower performing categories. Modular patch cords shall utilize ISO termination method that is designed to reduce and control near-end cross talk (NEXT) and far end cross talk (FEXT) without compromising signal impedance.

C. Both ends of the cord shall be equipped with modular 8-position (RJ45 style) plugs wired straight through with standards compliant wiring. All modular plugs shall exceed FCC CFR 47 part 68 subpart F and IEC 603.7 specifications, and have 50 micro inches of gold plating over nickel contacts. Cable shall be label-verifiable. Cable jacket shall be factory marked at regular intervals indicating verifying organization and performance level. Patch cords shall have color-coded insert molded strain relief boot with a latch guard to protect against snagging. Additional color-coding shall be available by the use of snap-in icons.

D. Patch cords shall be wired straight through. Pin numbers shall be identical at each end and shall be paired to match T568B patch panel jack wiring per ANSI/TIA/EIA-568-B. Patch cords shall be unkeyed.

E. The patch cords shall match the Category rating of the jack and cable it will be connecting to.

F. Prior to ordering patch cords the Contractor shall schedule meeting with Owner and Consultant to verify patch cord lengths, colors and quantities.

G. Contractor shall coordinate delivery of patch cords with Owner. Contractor shall have list of delivered cords and shall have Owner sign delivery sheet at time of delivery.

H. The manufacturer of the cords shall be Panduit for UTP termination hardware (jacks & patch panels) for a complete system. Cords shall be highest quality patch cords available by connectivity manufacturer and match the performance grade of the utilized horizontal cable solution. Exceptions may be acceptable in special circumstances such as OSP or shielded applications and should be included in the submittals for review.

I. Manufacturers:

1. Panduit

J. Patch Cable Colors

1. The jacket color for patch cables shall be:
   a. Standard Data Outlets – BLUE
   b. Wireless Access Points – GREEN
   c. IP Security Devices (Cameras, Access Control Panels, Intercoms, Intrusion Detection Panels, Vape Detectors, etc.) – ORENGE

K. Locations and types of patch cords:

1. At IDF/MDF, 1 per data cable installed, for each system type, plus 25% spare:
   a. Patch cable length is determined as needed per MDF and IDF Room layout and shall be coordinated with FBISD Technology Department
   b. Patch cords at the rack shall be non-plenum.
2. Installed network devices
   a. At station outlet, 1 per data outlet, for each system type, plus 25% spare:

Color	Length
BLUE	10 feet
GREEN	10 feet
ORANGE	10 feet
Exterior	OSP- rated

   b. Outdoor-mounted devices shall receive a shielded patch cord.
   c. Patch cords for installed network devices shall be plenum rated.

Part 3 - EXECUTION

3.01 Testing

A. Refer to Section 27 00 00 for additional requirements.

1. Standard Voice & Data Outlet (SIO) shall match adjacent electrical outlets.
2. Wall-Mounted Telephone Outlet (Standard Voice only) shall meet ADA requirements for both front and side reach access.

C. The Contractor shall coordinate the style of the telecommunication outlets to be installed in the floor mount boxes and surface mount raceways with the Owner.

3.06 Cable Termination

A. At the telecommunication closet, all data and voice cables shall be positioned on termination hardware in sequence of the outlet ID, starting with the lowest number.

B. Termination hardware (blocks and patch panels) positioning and layout will be reviewed and approved by the Consultant prior to construction. The review does not exempt the Contractor from meeting any of the requirements stated in this document.

C. Provide a 10’ service loop in the MDF or IDF and 10-foot of slack at the conduit stub-up above the outlet. Slack at the MDF/IDF shall be in a U-shaped configuration, not a true loop.

D. Cable bundles shall be secured with Hook-and-loop tie-wraps.

E. Cable Termination – Data/Voice UTP

1. Data/voice patch panels shall be designed and installed in a fashion as to allow future station cabling to be terminated on the panel without disruption to existing connections.
2. Data patch panels shall be sized to accommodate a minimum of 20% growth in the quantity of stations relative to the initial installation.
3. At information outlets and data/voice patch panels, the installer shall ensure that the twists in each cable pair are preserved to within 0.5 inch of the termination for data/voice cables. The cable jacket shall be removed only to the extent required to make the termination.
4. Patch panels shall be Panduit 48-port angled patch panels”

F. Cable Termination – Fiber Optic

1. All fibers shall be terminated using the specified connector type.
2. All terminated fibers at the telecommunications closets shall be mated to couplings mounted on patch panels. Couplings shall be mounted on a panel that, in turn, snaps into the housing assembly. Any unused panel positions shall be fitted with a blank panel inhibiting access to the fiber optic cable from the front of the housing.
3. All couplings shall be fitted with a dust cap.
4. Fibers from multiple locations may share a common enclosure, but they shall be segregated on the connector panels and clearly identified. Fibers from multiple

Section 27 16 00 – Communications Connecting Cords

Part 1 - GENERAL

1.01 Scope

A. This section describes the products relating to high quality Category 6/6A voice and data patch cords.

B. In this section the term patch cords refers to the cords that connect Owner provided data network electronics to the horizontal cable infrastructure.

C. It is important that the horizontal cable system and the provided patch cords work as one complete system for guaranteed channel performance. Patch cords shall be manufactured by the same manufacturer as the jack and patch panels.

D. The Contractor shall provide and deliver all cords as listed in this section. The Owner will be responsible for installation of cords.

1.02 Related Work

A. Section 27 00 00 – General Technology Requirements

B. Section 27 05 00 – Communications General Requirements

C. Section 27 05 26 – Grounding and Bonding for Technology Systems

D. Section 27 05 28 – Pathways for Technology Systems

E. Section 27 05 37 – Firestopping for Technology Systems

F. Section 27 15 00 – Communications Horizontal Cabling

G. Section 27 18 00 – Communications Labeling and Identification

H. Section 27 40 00 – AV/Multimedia General Requirements

I. Section 27 41 00 – Audio Visual Systems

J. Section 27 51 13 – Distributed Communications Systems

K. Section 28 01 00 – Physical Security General Requirements

L. Section 28 23 00 – Video Surveillance System

1.03 Definitions

A. Refer to Section 27 00 00 for additional definitions.

1.04 Pre-Construction Submittals

A. Refer to Section 27 05 00 for additional requirements.

1.05 Construction Progress Submittals

A. Refer to Section 27 05 00 for additional requirements.

1.06 Closeout Submittals

A. Refer to Section 27 05 00 for additional requirements.

Part 2 - PRODUCTS

2.01 Substitutions

A. Unless noted otherwise, products in this section are intended as a basis of design and are open to substitutions per the product substitution procedures defined in Section 27 00 00.

2.02 Category 5E, 6 and 6A Patch Cords

A. The Owner has the right to determine the final length of the patch cords after the contract is awarded.

B. All patch cords shall be round and consist of eight insulated 23 AWG (24 AWG for Cat 5e), stranded copper conductors, arranged in four color-coded twisted pairs within a flame retardant jacket and be backwards compatible with lower performing categories. Modular patch cords shall utilize ISO termination method that is designed to reduce and control near-end cross talk (NEXT) and far end cross talk (FEXT) without compromising signal impedance.

C. Both ends of the cord shall be equipped with modular 8-position (RJ45 style) plugs wired straight through with standards compliant wiring. All modular plugs shall exceed FCC CFR 47 part 68 subpart F and IEC 603.7 specifications, and have 50 micro inches of gold plating over nickel contacts. Cable shall be label-verifiable. Cable jacket shall be factory marked at regular intervals indicating verifying organization and performance level. Patch cords shall have color-coded insert molded strain relief boot with a latch guard to protect against snagging. Additional color-coding shall be available by the use of snap-in icons.

D. Patch cords shall be wired straight through. Pin numbers shall be identical at each end and shall be paired to match T568B patch panel jack wiring per ANSI/TIA/EIA-568-B. Patch cords shall be unkeyed.

E. The manufacturer of the cords shall be Panduit for UTP termination hardware (jacks & patch panels). Cords shall be highest quality patch cords available by connectivity manufacturer.

F. The patch cords shall match the Category rating of the jack and cable it will be connecting to.

G. This Contractor shall provide the following patch cords:

H. At TR, 1 per data cable installed, for each system type, plus 25% spare:

1.05 Qualifications

A. Refer to Section 27 05 00 for additional requirements.

1.06 Pre-Construction Submittals

A. Refer to Section 27 05 00 for additional requirements.

1.07 Construction Progress Submittals

A. Refer to Section 27 05 00 for additional requirements.

Part 2 - PRODUCTS

2.01 Substitutions

A. Unless noted otherwise, products in this section are intended as a basis of design and are open to substitutions per the product substitution procedures defined in Section 27 00 00.

2.02 Labels

A. Coordination with and approval by the FBISD Design Manager and FBISD IT Department is required on the specific site labeling schema.

B. All labels shall be permanent and be machine generated (e.g., Brady or Panduit). No handwritten or non-permanent labels shall be allowed. Labels shall be Brady “I.D. Pro” or XC-Plus or equivalent. Labeling on backboards and/or equipment racks may be pre-cut adhesive type.

C. Characters on all labels shall be black printed on a white background.

D. Label size shall be appropriate to the cable size(s), outlet faceplate layout, patch panel design, or other related equipment sizes and layouts.

E. All labels to be used on cables shall be self-laminating, white/transparent vinyl, and be wrapped around the cable sheath. The labels shall be of adequate size to accommodate the circumference of the cable being labeled and properly self-laminated over the full extent of the printed area of the label.

Part 3 - EXECUTION

3.01 General

A. The Contractor shall match the Owner’s standard labeling scheme.

B. Clean surfaces before attaching labels.

C. Cables shall be labeled identically at both ends.

D. Install all labels firmly. Labels attached to terminating equipment such as backboards, faceplates, 110 blocks, and patch panels shall be installed plumb and neatly on all equipment.

E. MDFs and IDFs Room shall be labeled (signage) with the permanent room designations that match the final building signage for cable labeling.

F.

3.02 Labeling of Cabling and Terminations Components

A. Equipment racks in each MDF or IDF shall be labeled in sequential numeric order. Labels shall be centered on the top front of the equipment rack.

B. Character height shall be 1-inch (minimum).

3.03 Cabling

A. Horizontal cables shall have a machine generated wrap around cable label within 1" of termination point inside the MDF/IDF and withing 3" of the termination point at the workstations end. Label shall be clearly legible and meet TIA-EIA 606 standards. Character height shall be .25" (minimum). Label shall contain destination end, rack number, Patch panel number, and port number (i.e. IDFC126-R1-B5)

B. Horizontal cables shall be labeled identically at each end with the destination end and rack number, patch panel number, and port number. (i.e. IDFC126-R1 -B5).

C. Voice/data/video backbone cables shall have a machine generated wrap around cable label within 12" of each end of the cable. Label shall be clearly legible and meet TIA-EIA 606 standard. Character height shall be .5" (minimum). Label shall contain origin room number, and destination room number(i.e. MDFa150-IDFC126)

3.04 Standard Information Outlet (SIO) Faceplates

A. All faceplates shall be clearly labeled indicating the destination of the cable(s) (telecommunication room number), the data patch panel(s) letter designation, and the data port number(s) on the data patch panel(s).

B. Telecommunications outlets are to be labeled (1) on the cover of the assembly and (2) on each cable terminated at that location.

C. Station cables shall be labeled within 3" of the cable end.

3.05 Data Patch Panels

A. All data patch panels shall be clearly labeled indicating the telecommunication room number, the data patch panel letter designation (manufacturer labeled), and the data port number on the data patch panel (ports 1 through 48). Each telecommunication room shall start with data patch panel 'A' and continue through the alphabet, not repeating in the same TR.

30 Corporate Drive, Suite 400
Burlington, MA 01803

B. *AV Installation Handbook, Second Edition.*
InfoComm International, 2009.
11242 Waples Mill Road, Ste. 200
Fairfax, VA 22030

C. *Audiovisual Systems Performance Verification (ANSI/Infocomm 10:2013)*
InfoComm International, 2013.
11242 Waples Mill Road, Ste. 200
Fairfax, VA 22030
http://www.infocomm.org/cps/rde/xchg/infocomm/hs.xsl/35975.htm

D. *Dashboard for Controls Template, Design Reference, and Integrators Guide.*
InfoComm International.
www.infocomm.org/cps/rde/xchg/infocomm/hs.xsl/35324.htm

E. Copyright Act of 1976
U.S. Copyright Office
101 Independence Ave. S.E.
Washington, DC 20559
Phone: (202) 707-3000

1.06 Qualifications

A. Contractor shall have a minimum of 5 years of relevant experience

B. Contractor shall have completed three (3) successful installations of equivalent systems at different school district(s) buildings. To qualify as a valid installation, the projects must be similar in cost, scope, and complexity.

C. Contractor shall provide 24-hour support, 7 days a week, within 2 hours during regular business days and 4 hours during non-business hours during the warranty period. Contractor shall expect any corrective work to be performed during non-business hours or after school hours.

D. Refer to subsequent sections for section specific qualification requirements.

1.07 Pre-Construction Submittals

A. Refer to Section 27 05 00 for additional requirements

B. Structurally Mounted Elements: Including but not limited to monitors, projectors, projection screens, and loudspeakers.

C. Frequency Assignment Plans: Provide for all wireless microphones.

D. Custom Engraving: Layout and labeling/engraving of custom products including wall plates and interconnection panels. Provide engraving detail with material and finish detail.

1. ANSI/IEEE C2 – National Electrical Safety Code
2. NFPA 70 – National Electrical Code
3. TIA/EIA 568-C-1, 2, 3 Standards

Part 2 - PRODUCTS

2.01 Substitutions

A. Unless noted otherwise, products in this section are intended as a basis of design and are open to substitutions per the product substitution procedures defined in Section 27 00 00.

2.02 Cable

A. Cable shall be provided and installed that meets the manufacturer's recommendations for equipment and signal types that are being transmitted.

B. UTP cable (Cat6, Cat6A) shall meet the requirements identified in 27 15 00 Communications Horizontal Cabling.

C. 25v/70v speaker cable shall be a minimum of 16 AWG, 2-conductor, twisted cable.

D. 25v/70v speaker cable with volume control bypass trigger shall be a minimum of 16 AWG, 4-conductor, twisted cable.

E. All public address system cabling shall be plenum rated.

F. All public address system cabling shall be white in color.

G. All cables shall follow the same pathway requirements as stated in spec sections 27 05 28.

H. All cabling shall be properly supported from the structure using j-hooks.

I. J-hooks shall be installed every 4-5 feet on center starting at the end of the wire basket cable tray.

J. J-hooks shall be installed utilizing appropriate hardware to support, join and attach j-hooks to structures.

K. Provide spare conduits at bulk heads, furr downs and at hard ceiling areas separating sections of buildings. Intent is to provide a future cabling pathway through inaccessible areas.

L. No grid wire shall be utilized for support. J-Hooks shall be mounted to the structure.

M. All paging equipment cables shall have a white jacket.

N. Manufacturers:

1. Belden

system to meet the performance requirements of the systems. The following information shall be supplied as a minimum:

1. Server(s) processor(s), disk space and memory size
2. Workstation(s) processor(s), disk space and memory size
3. Operating System(s) Software, where software is provided or upgraded
4. Application Software, with Optional and Custom Software Modules supplied in this project
5. Integration Schemes: Proposed connectivity, software, development requirements, and SDK information, for inter-system communication.
6. Network reliability requirements
7. Number and location of LAN ports required
8. Number of IP addresses required.
9. Other specific network requirements, preferences, and constraints
10. Backup/archive system size and configuration
11. Start-up operations
12. Description of site (field) control equipment (Controllers/Field Panels) and their configuration
13. Access control power calculations.
14. Battery backup requirements

1.08 General requirements

A. Security cabling

1. All security system cabling shall be orange in color.
2. All security system cabling shall be plenum rated, unless installed in a wet or exterior environment. Cable shall be rated for the environment in which it is installed in.
3. All security system cabling shall be installed following the same pathway and support requirements as the Division 27 Communications.
4. If a wire basket tray is not present, then J-hooks shall be provided throughout the entire pathways.
5. No grid wire shall be utilized for support. J-Hooks shall be mounted to the structure or suspended from structure via all thread.

1.09 Construction Progress Submittals

A. Refer to Section 27 00 00 for additional requirements.

H. Section 28 01 00 – Physical Security General Requirements

I. Section 28 16 00 – Intrusion Detection System

1.04 Definitions

A. ACS – Access Control System

B. IDS – Intrusion Detection System

C. VMS – Video Management System

D. Refer to Section 27 05 00 for additional definitions.

1.05 Reference Standards and Codes

A. IEC 60839-11-5:2020 - Open Supervised Device Protocol (OSDP)

B. Refer to Section 27 00 00 for additional requirements.

1.06 Qualifications

A. Lock installers for fire rated doors are to be trained and certified by the manufacturer via Intertek Qualified Personnel (IQP) Raceway and Hardware Installer Program on the proper installation and adjustment of fire, life safety, and security products in compliance with NFPA 80 including: hanging devices; locking devices; closing devices; and seals.

1. Trained and qualified raceway installers are required to ensure modifications do not affect the integrity of fire doors. Doors must remain compliant with NFPA 80.

B. Refer to Section 28 01 00 for additional requirements.

1.07 Pre-Construction Submittals

A. The following items shall be provided in a single, combined, comprehensive submittal package. Partial submittals will only be considered in special circumstances, such as getting early approval of long-lead-time items or products requiring additional coordination with other trades.

B. Equipment Schedules

1. Provide a complete schedule of significant materials for the project, with columns for the following items: Manufacturer, Part Number, Description, Quantity, and Unit Pricing.

C. Product Cut Sheets

1. Provide basic product data sheets (1-2 pages per product) for all products listed in the equipment schedule. Do not include longer documents such as installation manuals.

substantial completion regardless of the status of the field devices such as door hardware, card readers, intercoms, etc.

D. The Contractor shall program the access control system no less than 2 weeks prior to substantial completion so when field devices are installed and terminated, associated door hardware and full system functionality can be tested. Programming shall include all doors, associated inputs, outputs, and interoperability regardless of final field device status.

E. The Contractor shall perform final connections and testing onsite when field devices such as electrified door hardware has been installed.

F. Refer to section 27 00 00 and 28 01 00 for additional requirements.

1.09 General requirements

A. Access Control manufacturer:

1. Win DSX
2. Or FBISD approved equal

B. The Basis of Design for the access control system shall be:

1. Intelligent 2 Door Package NV (Nonvolatile Memory) Processor DSX-1042PKGNV
2. Intelligent 8 Door Package DSX-1048PKG
3. Intelligent 2 Door Controller Package DSX-1042PKG
4. Two Door Controller DSX-1042
5. Power Distribution Panel DSX-1040PDP
6. 24V Lock Power Supply SP320-27
7. ThinLine II Low Profile Proximity Card Reader DSXID-TL5395
8. Latching Hold-up Switch HUSK20
9. Hold-up Button Momentary Panic HUB-2SA
10. Door position sensor shall monitor door status Amseco AMS-25B-G

C. Provide electric panic devices (quiet electric latch retraction) on all exterior doors with a card reader so loss of power will not leave doors unsecured.

D. Locks on interior security vestibule doors shall fail open in the event of a loss of power or in the event of a fire alarm.

E. Provide card readers at the following locations, final locations to be reviewed with FBISD Life Safety and Police Department and FBISD Design Manager:

1. Elementary Schools:

1.04 Reference Standards and Codes

A. National Electric Code, Article 760.

B. National Fire Alarm Code (NFPA 72).

C. Administrative Council for Terminal Attachments (ACTA):

1. ANSI/TIA-968-A-2002 Technical Requirements for Connection of Terminal Equipment to the Telephone Network.

D. American National Standards Institute (ANSI):

1. ANSI C63.4 Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

E. Federal Communications Commission (FCC):

1. Title 47 C.F.R. Part 15; Class B – Radiated and Conducted Emissions.

2. Title 47 C.F.R. Part 68; rules governing the connection of Terminal Equipment (TE) to the Public Switched Telephone Network (PSTN).

F. The National Institute of Standards and Technology of the United States of America (NIST):

1. Federal Information Processing Standards Publications 197 (FIPS 197) – Advanced Encryption Standard (AES).

G. Underwriters Laboratories, Inc. (UL):

1. UL 50 - Enclosures for Electrical Equipment.

2. UL 294 – Access Control System Units.

3. UL 365 - Police Station Connected Burglar Alarm Units and Systems.

4. UL 609 - Local Burglar Alarm Units and Systems.

5. UL 985 - Household Fire Warning System Units.

6. UL 1023 - Household Burglar Alarm System Units.

7. UL 1076 – Proprietary Burglar Alarm Units and Systems

8. UL 1610 - Central Station Burglar-Alarm Units.

9. UL 60950-1 - Information Technology Equipment - Safety.

10. UL 636 – Hold up alarms

H. Refer to Section 28 01 00 for additional requirements.

1.05 Qualifications

A. Refer to Section 28 01 00 for additional requirements.

required, battery backup including the quantities of batteries to meet requirements, PoE loads, fire alarm connection requirements, etc.

E. Refer to Section 27 05 00 for additional requirements.

1.07 Pre-installation Procedures

A. Prior to commencing any work in an existing building, the Contractor will be required to perform a system test to demonstrate the current state of the system. At substantial completion or when the system is ready to be tested, a demonstration is required by the Contractor to verify that the system is in the same condition prior to construction. If the system is not 100% functional, the Contractor shall make all necessary repairs to the system

B. For in-use, existing facilities or retrofit projects, the Contractor shall assign all applicable electronics IP addresses, passwords and pre-build out all the enclosures including the interconnects within the enclosure prior to being delivered to the project or installed.

C. The Contractor shall cable all monitored doors, detectors, etc. and terminate this cable in the control panels no less than 3 weeks prior to substantial completion regardless of the status of the field devices.

D. The Contractor shall program the intrusion detection system no less than 2 weeks prior to substantial completion so when field devices are installed and terminated, the full system functionality can be tested. Programming shall include all monitored doors, associated inputs, outputs, and interoperability regardless of final field device status.

E. The Contractor shall perform final connections and testing onsite when field devices has been installed.

F. Refer to section 27 05 00 for additional requirements.

1.08 General requirements

A. Acceptable manufacturers for intrusion detection system is Ademco or FBISD Design Manager approved equal.

B. The Basis of Design for the intrusion detection system shall be:

1. Main intrusion control panel, Honeywell (Resideo) VISTA-250BPT
2. Alpha Display Keypad, VISTA 6160
3. Eight input alarm module, VISTA 4208U
4. Panoramic 360 Ceiling 60’ motion, DS938Z
5. Panoramic 360 Ceiling 25’ motion, DS936
6. TriTech 60x60 PIR Microwave Detector, DS860

F. Section 27 15 00 – Communications Horizontal Cabling

G. Section 27 51 00 – Distributed Communications Systems

H. Section 28 01 00 – Physical Security General Requirements

1.04 Definitions

A. Refer to Section 27 00 00 for additional definitions.

1.05 Reference Standards and Codes

A. Refer to Section 27 00 00 for additional requirements.

1.06 Qualifications

A. Refer to Section 28 01 00 for additional requirements.

1.07 Pre-Construction Submittals

A. Refer to Section 28 01 00 for additional requirements.

B. The following items shall be provided in a single, combined, comprehensive submittal package. Partial submittals will only be considered in special circumstances, such as getting early approval of long-lead-time items or products requiring additional coordination with other trades.

C. Equipment Schedules

1. Provide a complete schedule of significant materials for the project, with columns for the following items: Manufacturer, Part Number, Description, Quantity, and Unit Pricing.

D. Product Cut Sheets

1. Provide basic product data sheets (1-2 pages per product) for all products listed in the equipment schedule. Do not include longer documents such as installation manuals.

2. Identify (highlight, arrow, etc.) the actual version and part number of the product that will be utilized on the project. This applies to mounting hardware, cabling, connectors, software, and power distribution equipment in addition to major system components.

E. Shop Drawings

1. Pre-construction submittals are intended to document the details of installation. Exact copies of the Consultant's drawings and specifications are not acceptable as pre-construction shop drawings. The Consultant's drawings are intended to outline the functional requirements, but do not provide install-level detail.

2. Exact requirements will vary depending on the project scope. Provide the following elements where applicable:

a. Floor Plans: Include device/equipment locations, installation notes, and electrical coordination notes (specific conduit routing, etc.).

b. System Drawings: Include functional diagrams for each system detailing system flow including all equipment, routing, inputs/outputs, wiring signal type, cable identification labels, connectors, adapters, intra/inter-rack power distribution, installation notes, and any other information required to convey the complete turnkey system design for an installer to complete the work.

c. Wall Equipment Elevations: Include placement of all wall-mounted equipment, drawn to scale.

d. Server Storage Calculations: Include each camera type, quantity, resolution, storage parameters, and storage duration, with the calculations showing the resulting server size or space requirements on an existing server.

1.08 Pre-installation Procedures

A. Prior to commencing any work in an existing building, the Contractor will be required to perform a system test to demonstrate the current state of the system. At substantial completion or when the system is ready to be tested, a demonstration is required by the Contractor to verify that the system is in the same condition prior to construction. If the system is not 100% functional, the Contractor shall make all necessary repairs to the system.

B. For in-use, existing facilities or retrofit projects, the Contractor shall assign all applicable electronics IP addresses and secure passwords prior to being delivered to the project or installed. Confirm password with Owner and Consultant prior to setting them.

1.09 Construction Progress Submittals

A. Refer to Section 28 01 00 for additional requirements.

1.10 Closeout Submittals

A. Refer to Section 28 01 00 for additional requirements.

1.11 General Summary

A. System shall include IP cameras and a server based NVR with client stations and storage as described in this section and on the drawings.

B. The Category 6 cabling to each camera shall be provided by the structured cabling Contractor.

C. Patch cords for the IP cameras to the network switches shall be furnished by the Structured Cabling Contractor and installed by the Contractor with participation by the Owner. Patch cords from the IP Camera to the data jack shall be furnished by the Structured Cabling Contractor and installed by this Contractor.

FBISD BP013 KITCHEN RENOVATIONS ES

FORT BEND INDEPENDENT SCHOOL DISTRICT

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

BOARD OF TRUSTEES

KRISTIN K. TASSIN	PRESIDENT
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ADAM SCHOOF	BOARD MEMBER
ANGIE WIERZBICKI	BOARD MEMBER

PROJECT DESIGN TEAM

PROGRAM MANAGEMENT
FBISD 2023 Bond Team
2323 Texas Parkway
Missouri City, TX 77489
Phone Number: 281-327-5481

ARCHITECT
MWA Architects
11767 Katy Freeway, Suite 430
Houston, Texas 77079
Phone Number: 713-782-8188

FOOD SERVICE
Food Design Professionals
26215 Oak Ridge Drive
The Woodlands, Texas 77380
Phone Number: 281-350-2323

MEP ENGINEERS
Stanton Engineering Group
1300 W. Sam Houston Pkwy South, Suite 121
Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

ADDENDUM NO. 4 - SEP 04, 2025

Sheet List Table

Sheet Number	Sheet Title
SHARED GENERAL NOTES AND DETAILS	
A.0000	FBISD BP013 OVERALL COVER SHEET
A.000	OVERALL INDEX SHEET
School: a Austin Pkwy ES	
a-A.000	COVER AND INDEX
a-A00-01	GENERAL NOTES AND ABBREVIATIONS
a-D.101	DEMO PLANS
a-D01-02	DEMO PLAN PHOTOS
a-D01-03	DEMO PLAN PHOTOS
a-ED.100	LIGHTING DEMOLITION & TEMPORARY KITCHEN
A-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
a-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
a-A.101	SITE PLAN
a-A.201	FLOOR PLAN
a-A.300	SLAB DIMENSION CONTROL PLAN
a-A.301	KITCHEN PLAN
a-A.302	TEMPORARY KITCHEN LAYOUT
a-A.401	REFLECTED CEILING PLAN
a-A.501	FINISH FLOOR PLAN
a-A.502	PARTITION SCHEDULE
a-S1	KITCHEN PLAN
a-S2	SECTIONS AND TYPICAL DETAILS
A-QF1	FS GENERAL COORDINATION NOTES
A-QF1.0	FS EQUIPMENT PLAN
A-QF1.1	FS FACILITY MODEL
A-QF1.2	FS EQUIPMENT MODEL
A-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
A-QF1.4	FS PLUMBING PLAN
A-QF1.5	FS ELECTRICAL PLAN
a-QF1.6	FS CONDENSING UNITS
a-QF1.7	FS WALK-INS
a-QF1.8	FS SERVING COUNTERS
a-QF1.9	FS SERVING COUNTERS
a-QF2.0	FS EQUIPMENT PLAN TEMPORARY SERVING AND MEP
a-QF2.1	FS EQUIPMENT PLAN - TEMPORARY SERVING & MEPS
a-QF3.1	FS ELEVATIONS
a-QF4.1	FS SECTIONS AND DETAILS
a-QF4.2	FS DETAILS
a-QF4.3	FS DETAILS
a-M1.01	LEVEL 1 KITCHEN MECHANICAL PLANS
a-M2.01	LEVEL 1 KITCHEN MECHANICAL PLANS
a-M2.02	MECHANICAL DETAILS (CONT.)
a-E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
a-E.010	ELECTRICAL DEVICE DETAILS
a-E.011	ELECTRICAL DETAILS
a-E.012	ELECTRICAL DETAILS
a-E.013	ELECTRICAL KITCHEN DETAILS
a-E.060	LIGHTING SCHEDULES
a-E.001	ELECTRICAL AND FIRE ALARM NOTES
a-E.100	ELECTRICAL PLANS
a-E.200	ELECTRICAL FLOOR PLAN
a-E.300	FIRE ALARM FLOOR PLANS
a-E.400	ELECTRICAL SCHEMATIC
a-P0.01	PLUMBING NOTES AND SCHEDULES
A-P0.02	PLUMBING SCHEDULES AND DETAILS
a-P1.01	PLUMBING FLOOR PLAN
a-P1.02	PLUMBING TEMPORARY KITCHEN PLAN
a-T000	TECHNOLOGY SYMBOLS & LEGEND
a-T200	TECHNOLOGY COMPOSITE FLOOR PLAN
a-T201	TECHNOLOGY NEW-RENOVATION KITCHEN PLAN
a-T202	TECHNOLOGY TEMPORARY KITCHEN PLAN
a-T400	TECHNOLOGY TYPICAL DETAILS
a-T401	TECHNOLOGY TYPICAL DETAILS
a-T500	TECHNOLOGY TYPICAL DETAILS
a-TN.000	TECHNOLOGY - INDEX SHEET
a-TN-001	TECHNOLOGY - KITCHEN DEMOLITION
a-TN-100	TECHNOLOGY - OVERALL
a-TN-101	TECHNOLOGY - KITCHEN
a-TN-500	TECHNOLOGY - DETAILS
a-TN-600	TECHNOLOGY - SECURITY DETAILS
a-TN-700	TECHNOLOGY - AV DETAILS
School: b-Burton ES	
b-A.000	COVER AND INDEX
b-TN-000	TECHNOLOGY - INDEX SHEET
b-TN-100	TECHNOLOGY - OVERALL
b-TN-101	TECHNOLOGY - KITCHEN
b-TN-500	TECHNOLOGY - DETAILS
b-TN-600	TECHNOLOGY - SECURITY DETAILS
School: c-Colony Bend-ES	
c-A.000	COVER AND INDEX
c-TN.000	TECHNOLOGY - INDEX SHEET
c-TN.100	TECHNOLOGY - OVERALL
c-TN-101	TECHNOLOGY - KITCHEN
c-TN-500	TECHNOLOGY - DETAILS
c-TN-600	TECHNOLOGY - SECURITY DETAILS
School: d-Commonwealth ES	
d-A.000	COVER AND INDEX
d-A00-01	GENERAL NOTES AND ABBREVIATIONS
d-D.101	DEMO PLAN, DEMO RCP
d-A.201	OVERALL FLOOR PLAN
d-A4.01	CAFETERIA ENLARGED RCP & PLAN
d-E.200	ELECTRICAL FLOOR PLAN AND SCHEDULES
d-TN-000	INDEX SHEET
d-TN-100	TECHNOLOGY - OVERALL
d-TN-101	TECHNOLOGY - KITCHEN
d-TN-500	TECHNOLOGY - DETAILS
d-TN-600	TECHNOLOGY - SECURITY DETAILS
School: e-Cornerstone ES	
e-A.000	COVER AND INDEX
e-A00-01	GENERAL NOTES AND ABBREVIATIONS
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e-A.201	FLOOR PLAN
e-A.301	STUDENT CAFETERIA AND GYM PLAN
e-A.501	FINISH FLOOR PLAN
e-A.601	INTERIOR ELEVATIONS
e-S1	GYMNASIUM PLAN
e-S2	SECTIONS AND TYPICAL DETAILS
e-E.200	ELECTRICAL FLOOR PLAN & SCHEDULES
e-TN-000	TECHNOLOGY - INDEX SHEET

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e-TN-101	TECHNOLOGY - KITCHEN
e-TN-500	TECHNOLOGY - DETAILS
e-TN-600	TECHNOLOGY - SECURITY DETAILS
School: f-Dulles ES	
f-A.000	COVER AND INDEX
f-A00-01	GENERAL NOTES AND ABBREVIATIONS
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f-A.101	SITE PLAN
f-A.201	OVERALL FLOOR PLAN
f-A.301	KITCHEN FLOOR PLAN
f-QF1	FS GENERAL COORDINATION NOTES
f-QF1.0	FS EQUIPMENT ELECTRICAL PLAN
f-E.200	ELECTRICAL FLOOR PLAN & SCHEDULES
f-TN.000	TECHNOLOGY - INDEX SHEET
f-TN-100	TECHNOLOGY - OVERALL
f-TN-101	TECHNOLOGY - KITCHEN
f-TN-500	TECHNOLOGY - DETAILS
f-TN-600	TECHNOLOGY - SECURITY DETAILS
School: g-Fleming ES	
g-A.000	COVER AND INDEX
g-TN-000	TECHNOLOGY - INDEX SHEET
g-TN-100	TECHNOLOGY - OVERALL
g-TN-101	TECHNOLOGY - KITCHEN
g-TN-500	TECHNOLOGY - DETAILS
g-TN-600	TECHNOLOGY - SECURITY DETAILS
School: h-GLOVER ES	
h-A.000	COVER AND INDEX
h-TN-000	TECHNOLOGY - INDEX SHEET
h-TN-100	TECHNOLOGY - OVERALL
h-TN-101	TECHNOLOGY - KITCHEN
h-TN-500	TECHNOLOGY - DETAILS
h-TN-600	TECHNOLOGY - SECURITY DETAILS
School: i-Heritage Rose ES	
i-A.000	COVER AND INDEX
i-A00-01	GENERAL NOTES AND ABBREVIATIONS
i-A.201	OVERALL FLOOR PLAN
i-A.301	KITCHEN PLAN
I-P.101	FILTER AND NEW WATER SOFTENER
School: j Highlands ES	
j-A.000	COVER AND INDEX
j-A00-01	GENERAL NOTES AND ABBREVIATIONS
j-D.101	DEMO PLAN
j-D.101-2	DEMO PLAN PHOTOS
j-D.101-3	DEMO PLAN PHOTOS
j-ED.100	ELECTRICAL DEMO AND TEMPORARY PLANS
j-PD.101	PLUMBING DEMOLITION FLOOR PLAN
p-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
j-A.101	SITE PLAN
j-A.200	SLAB DIMENSION CONTROL PLAN
j-A.201	OVERALL FLOOR PLAN
j-A.301	KITCHEN PLAN
j-A.302	TEMPORARY KITCHEN LAYOUT
j-A.401	REFLECTED CEILING PLAN
j-A.501	FINISH FLOOR PLAN
j-A.502	PARTITION SCHEDULE
j-QF0.0	FS GENERAL COORDINATION NOTES
j-QF1.0	FS EQUIPMENT PLAN
j-QF1.1	FS FACILITY MODEL
j-QF1.2	FS EQUIPMENT MODEL
j-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
j-QF1.4	FS PLUMBING PLAN
j-QF1.5	FS ELECTRICAL PLAN
j-QF1.6	FS CONDENSING UNITS
j-QF1.7	FS WALK-INS
j-QF1.8	FS SERVING COUNTERS
j-QF1.9	FS SERVING COUNTERS
j-QF2.0	FS DEMO PLAN
j-QF2.1	FS TEMPORARY SERVING
j-QF3.1	FS ELEVATIONS
j-QF4.1	FS SECTIONS & DETAILS
j-QF4.2	FS DETAILS
j-QF4.3	FS DETAILS
j-M1.01	MECHANICAL PLANS
M2.01	LEVEL 1 KITCHEN MECHANICAL PLANS
E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
E.001	ELECTRICAL AND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
E.013	ELECTRICAL KITCHEN DETAILS
E.060	LIGHTING SCHEDULES
j-E100	LIGHTING FLOOR PLAN
j-E200	ELECTRICAL PLANS
j-E300	FIRE ALARM FLOOR PLANS
j-E.400	ELECTRICAL SCHEMATIC
j-P1.01	PLUMBING FLOOR PLAN
j-T000	TECHNOLOGY SYMBOLS & LEGEND
j-T200	TECHNOLOGY COMPOSITE FLOOR
j-T201	TECHNOLOGY NEW_RENOVATION KITCHEN PLAN
j-T202	TECHNOLOGY TEMPORARY KITCHEN PLAN
j-T300	TECHNOLOGY ENLARGED VIEWS
j-T400	TECHNOLOGY TYPICAL DETAILS
j-T401	TECHNOLOGY TYPICAL DETAILS
j-T500	TECHNOLOGY TYPICAL LABELING SCHEME
j-TN-000	TECHNOLOGY - INDEX SHEET
j-TN-001	TECHNOLOGY - ELEVATIONS
j-TN-100	TECHNOLOGY - OVERALL
j-TN-101	TECHNOLOGY - KITCHEN
j-TN-500	TECHNOLOGY - DETAILS
j-TN-600	TECHNOLOGY - SECURITY DETAILS
J-TN-700	TECHNOLOGY - AV DETAILS
School: k-Hunters Glen ES	
k-A.000	COVER AND INDEX
k-A00-01	GENERAL NOTES AND ABBREVIATIONS
k-D.101	DEMO PLAN
k-D.101-2	DEMO PLAN PHOTOS
k-D.101-3	DEMO PLAN PHOTOS
k-ED.100	ELECTRICAL DEMOLITION AND TEMPORARY KITCHEN PLAN

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k-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
k-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
k-A.101	SITE PLAN
K-A.200	SLAB DEPRESSION PLAN
k-A.201	OVERALL FLOOR PLAN
k-A.300	SLAB DIMENSION CONTROL PLAN
k-A.301	KITCHEN PLAN
k-A.302	TEMPORARY KITCHEN LAYOUT
k-A.401	REFLECTED CEILING PLAN
k-A.501	FINISH FLOOR PLAN
k-A.502	PARTITION SCHEDULE
k-QF0.0	FS GENERAL COORDINATION NOTES
k-QF1.0	FS EQUIPMENT PLAN
k-QF1.1	FS FACILITY MODEL
K-QF1.2	FS EQUIPMENT MODEL
k-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
k-QF1.4	FS PLUMBING PLAN
k-QF1.5	FS ELECTRICAL PLAN
k-QF1.6	FS CONDENSING UNITS
k-QF1.7	FS WALK-INS
k-QF1.8	FS SERVING LINE
k-QF1.9	FS SERVING LINE
k-QF2.0	FS DEMO PLAN
k-QF2.1	FS TEMPORARY SERVING
k-QF3.1	FS ELEVATIONS
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k-QF4.2	FS DETAILS
k-QF4.3	FS DETAILS
k-M1.01	MECHANICAL PLANS
k-M2.01	KITCHEN MECHANICAL DETAILS
k-M2.02	MECHANICAL DETAILS (CONT.)
E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
E.001	ELECTRICALAND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
E.013	ELECTRICAL KITCHEN DETAILS
E.060	LIGHTING SCHEDULES
k-E.100	LIGHTING FLOOR PLANS
k-E.200	ELECTRICAL FLOOR PLANS
k-E.300	FIRE ALARM FLOOR PLANS
k-E.400	ELECTRICAL SCHEMATIC
k-P0.01	PLUMBING NOTES & SCHEDULES
k-P0.02	PLUMBING SCHEDULES & DETAILS
k-P1.01	PLUMBING FLOOR PLAN
k-P1.02	PLUMBING FLOOR PLAN TEMPORARY KITCHEN
k-P2.00	PLUMBING RISER DIAGRAMS
k-T000	TECHNOLOGY SYMBOLS & LEGEND
k-T200	TECHNOLOGY COMPOSITE FLOOR
k-T201	TECHNOLOGY NEW_RENOVATION KITCHEN PLAN
k-T300	TECHNOLOGY TEMPORARY KITCHEN PLAN
k-T202	TECHNOLOGY ENLARGED VIEWS
k-T400	TECHNOLOGY TYPICAL DETAILS
k-T401	TECHNOLOGY TYPICAL DETAILS
k-T500	TECHNOLOGY TYPICAL DETAILS
k-TN-000	TECHNOLOGY - INDEX SHEET
k-TN-001	TECHNOLOGY - DEMO
k-TN-100	TECHNOLOGY - OVERALL
k-TN-101	TECHNOLOGY - KITCHEN
k-TN-500	TECHNOLOGY - DETAILS
k-TN-600	TTECHNOLOGY - SECURITY DETAILS
k-TN-700	TECHNOLOGY - AV DETAILS
School: l-Lantern Lane	
i_A0.00	COVER AND INDEX
l-A.101	Site Plan
l-A.201	Overall Floor Plan
l-A.301	Kitchen Plan
l-A.501	Finish Floor Plan
l-TN-000	TECHNOLOGY - INDEX SHEET
l-TN-100	TECHNOLOGY - OVERALL
l-TN-101	TECHNOLOGY - KITCHEN
l-TN-500	TECHNOLOGY - DETAILS
l-TN-600	TECHNOLOGY - SECURITY DETAILS
School: o-Palmer ES	
o-A.000	COVER AND INDEX
o-A00-01	GENERAL NOTES AND ABBREVIATIONS
o-D.101	DEMO PLAN
o-D.101-2	DEMO PLAN PHOTOS
o-ED.100	ELECTRICAL DEMOLITION AND TEMP PLANS
o-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
o-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
o-A.101	SITE PLAN
o-A.200	SLAB DIMENSION CONTROL PLAN
o-A.201	FLOOR PLAN
o-A.301	KITCHEN PLAN
o-A.302	TEMPORARY KITCHEN LAYOUT
o-A.401	REFLECTED CEILING PLAN
o-A.501	FINISH FLOOR PLAN
o-A.502	PARTITION SCHEDULE
o-S1	KITCHEN PLAN
o-S2	SECTIONS AND TYPICAL DETAILS
o-QF0.0	FS GENERAL COORDINATION NOTES
o-QF1.0	FS EQUIPMENT PLAN
o-QF1.1	FS FACILITY MODEL
o-QF1.2	FS EQUIPMENT MODEL
o-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
o-QF1.4	FS PLUMBING PLAN
o-QF1.5	FS ELECTRICAL PLAN
o-QF1.6	FS CONDENSING UNITS
o-QF1.7	FS WALK-INS
o-QF1.8	FS SERVING LINE
o-QF1.9	FS SERVING LINE
o-QF2.0	FS DEMO PLAN
o-QF2.1	FS TEMPORARY SERVING
o-QF3.1	FS ELEVATIONS
o-QF4.1	FS SECTIONS & DETAILS
o-QF4.2	FS DETAILS
o-QF4.3	FS DETAILS
o-M1.01	MECHANICAL PLANS

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E.001	ELECTRICAL AND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
E.013	ELECTRICAL KITCHEN DETAILS
E.060	LIGHTING SCHEDULES
o-E.100	LIGHTING FLOOR PLAN
o-E.200	ELECTRICAL FLOOR PLANS
o-E.300	FIRE ALARM FLOOR PLANS
o-E.400	ELECTRICAL SCHEMATIC
o-P1.01	PLUMBING FLOOR PLAN
o-P1.02	PLUMBING TEMPORARY KITCHEN PLAN
o-T000	TECHNOLOGY SYMBOLS & LEGEND
o-T200	TECHNOLOGY COMPOSITE FLOOR PLAN
o-T201	TECHNOLOGY NEW_RENOVATION KITCHEN PLAN
o-T202	TECHNOLOGY TEMPORARY KITCHEN PLAN
o-T300	TECHNOLOGY ENLARGED VIEWS
o-T400	TECHNOLOGY TYPICAL DETAILS
o-T401	TECHNOLOGY TYPICAL DETAILS
o-T500	TECHNOLOGY TYPICAL DETAILS
o-TN-000	TECHNOLOGY - INDEX SHEET
o-TN-001	TECHNOLOGY - DEMO
o-TN-100	TECHNOLOGY - OVERALL
o-TN-101	TECHNOLOGY - KITCHEN
o-TN-500	TECHNOLOGY - DETAILS
o-TN-600	TTECHNOLOGY - SECURITY DETAILS
o-TN-700	TECHNOLOGY - AV DETAILS
School: p-Pecan Grove ES	
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p-A00-01	GENERAL NOTES AND ABBREVIATIONS
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p-D.101-2	DEMO PLAN PHOTOS
p-D.101-3	DEMO PLAN PHOTOS
p-ED.100	ELECTRICAL DEMOLITION AND TEMP PLANS
p-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
p-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
p-A.101	SITE PLAN
p-A.200	SLAB DIMENSION CONTROL PLAN
p-A.201	OVERALL FLOOR PLAN
p-A.301	KITCHEN PLAN
p-A.302	TEMPORARY KITCHEN LAYOUT
p-A.401	REFLECTED CEILING PLAN
p-A.501	FINISH FLOOR PLAN
p-A.502	PARTITION SCHEDULE
p-S1	KITCHEN PLAN
p-S2	SECTIONS AND TYPICAL DETAILS
p-QF1	FS GENERAL COORDINATION NOTES
p-QF1.0	FS EQUIPMENT PLAN
p-QF1.1	FS FACILITY MODEL
p-QF1.2	FS EQUIPMENT MODEL
p-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
p-QF1.4	FS PLUMBING PLAN
p-QF1.5	FS ELECTRICAL PLAN
p-QF1.6	CONDENSING UNITS
p-QF1.7	FS WALK-INS
p-QF1.8	FS SERVING LINE
p-QF1.9	FS SERVING LINE
p-QF2.0	FS DEMO PLAN
p-QF2.1	FS TEMPORARY SERVING
p-QF3.1	FS ELEVATIONS
p-QF4.1	FS SECTIONS & DETAILS
p-QF4.2	FS DETAILS
p-QF4.3	FS DETAILS
p-M1.01	MECHANICAL PLANS
p-M2.01	KITCHEN MECHANICAL DETAILS
E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
E.001	ELECTRICAL AND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
E.013	ELECTRICAL KITCHEN DETAILS
E.060	LIGHTING SCHEDULES
p-E100	LIGHTING FLOOR PLAN
p-E200	ELECTRICAL FLOOR PLANS
p-E.300	FIRE ALARM FLOOR PLANS
p-E.400	ELECTRICAL SCHEMATIC
p-P0.01	PLUMBING NOTES AND SCHEDULES
p-P0.02	PLUMBING SCHEDULES AND DETAILS
p-P1.01	PLUMBING FLOOR PLAN
p-P1.02	PLUMBING FLOOR PLAN - TEMPORARY KITCHEN PLAN
p-T000	TECHNOLOGY SYMBOLS & LEGEND
p-T200	TECHNOLOGY COMPOSITE FLOOR PLAN
p-T201	TECHNOLOGY NEW_RENOVATION KITCHEN PLAN
p-T202	TECHNOLOGY TEMPORARY KITCHEN PLAN
p-T300	TECHNOLOGY ENLARGED VIEWS
p-T400	TECHNOLOGY TYPICAL DETAILS
p-T401	TECHNOLOGY TYPICAL DETAILS
p-T500	TECHNOLOGY TYPICAL DETAILS
p-TN-000	TECHNOLOGY - INDEX SHEET
p-TN-001	TECHNOLOGY - KITCHEN DEMOLITION
p-TN-100	TECHNOLOGY - OVERALL
p-TN-101	TECHNOLOGY - KITCHEN
p-TN-500	TECHNOLOGY - DETAILS
p-TN-600	TECHNOLOGY - SECURITY DETAILS
p-TN-700	TECHNOLOGY - AV DETAILS
School: q-RIDGEGATE ES	
q-A.000	COVER AND INDEX
q-TN-000	TECHNOLOGY - INDEX SHEET
q-TN-100	TECHNOLOGY - OVERALL
q-TN-101	TECHNOLOGY - KITCHEN
q-TN-500	TECHNOLOGY - DETAILS
q-TN-600	TECHNOLOGY - SECURITY DETAILS
School: r-RIDGEMONT ES	
r-A.000	COVER AND INDEX
r-TN-000	TECHNOLOGY - INDEX SHEET
r-TN-100	TECHNOLOGY - OVERALL
r-TN-101	TECHNOLOGY - KITCHEN
r-TN-500	TECHNOLOGY - DETAILS

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School: s-Settlers Way ES	
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s-A00-01	GENERAL NOTES AND ABBREVIATIONS
s-D.101	DEMO PLAN
s-D.101-2	DEMO PLAN PHOTOS
s-D.101-3	DEMO PLAN PHOTOS
s-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
s-ED.100	ELECTRICAL DEMOLITION AND TEMPORARY PLANS
s-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
s-A.101	SITE PLAN
s-A.200	SLAB DIMENSION CONTROL PLAN
s-A.201	OVERALL FLOOR PLAN
s-A.301	KITCHEN PLAN
s-A.302	TEMPORARY KITCHEN LAYOUT
s-A.401	REFLECTED CEILING PLAN
s-A.501	FINISH FLOOR PLAN
s-A.502	PARTITION SCHEDULE
s-S1	KITCHEN PLAN
s-S2	SECTIONS AND TYPICAL DETAILS
s-QF0.0	FS GENERAL COORDINATION NOTES
s-QF1.0	FS EQUIPMENT PLAN
s-QF1.1	FS FACILITY MODEL
s-QF1.2	FS EQUIPMENT MODEL
s-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
s-QF1.4	FS PLUMBING PLAN
s-QF1.5	FS ELECTRICAL PLAN
s-QF1.6	FS CONDENSING UNITS
s-QF1.7	FS WALK-INS
s-QF1.8	FS SERVING LINE
s-QF1.9	FS SERVING LINE
s-QF2.0	FS DEMO PLAN
s-QF2.1	FS TEMPORARY SERVING
s-QF3.1	FS ELEVATIONS
s-QF4.1	FS SECTIONS & DETAILS
s-QF4.2	FS DETAILS
s-QF4.3	FS DETAILS
s-M1.01	MECHANICAL PLANS
s-M2.01	MECHANICAL NOTES AND DETAILS
s-M2.02	MECHANICAL DETAILS
s-E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
s-E.001	ELECTRICAL AND FIRE ALARM NOTES
s-E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
E.013	ELECTRICAL KITCHEN DETAILS
E.060	LIGHTING SCHEDULES
s-E.100	LIGHTING FLOOR PLANS
s-E.200	ELECTRICAL FLOOR PLANS
s-E.300	FIRE ALARM FLOOR PLANS
s-E.400	ELECTRICAL SCHEMATIC
s-P0.01	PLUMBING NOTES & SCHEDULES
s-P0.02	PLUMBING SCHEDULES & DETAILS
s-P1.01	PLUMBING FLOOR PLAN
s-P1.02	PLUMBING TEMPORARY KITCHEN PLAN
s-P2.00	PLUMBING RISER DIAGRAMS
s-T000	TECHNOLOGY SYMBOLS & LEGEND
s-T200	TECHNOLOGY COMPOSITE FLOOR PLAN
s-T201	TECHNOLOGY NEW RENOVATION KITCHEN PLAN
s-T202	TECHNOLOGY TEMPORARY KITCHEN FLOOR PLAN
s-T300	TECHNOLOGY ENLARGED VIEWS
s-T400	TECHNOLOGY TYPICAL DETAILS
s-T401	TECHNOLOGY TYPICAL DETAILS
s-T500	TECHNOLOGY TYPICAL DETAILS
s-TN-000	TECHNOLOGY - INDEX SHEET
s-TN-001	TECHNOLOGY - KITCHEN DEMOLITION
s-TN-100	TECHNOLOGY - OVERALL
s-TN-101	TECHNOLOGY - KITCHEN
s-TN-500	TECHNOLOGY - DETAILS
s-TN-600	TECHNOLOGY - SECURITY DETAILS
s-TN-700	TECHNOLOGY - AV DETAILS
School: t-Sienna Crossing ES	
t-A.000	COVER AND INDEX
t-A00-01	GENERAL NOTES AND ABBREVIATIONS
t-A.201	FLOOR PLAN
t-A.301	KITCHEN PLAN
t-A.401	REFLECTED CEILING PLAN
t-A.501	FINISH FLOOR PLAN
t-E.200	ELECTRICAL PLAN AND SCHEDULES
t-TN-000	TECHNOLOGY - INDEX SHEET
t-TN-100	TECHNOLOGY - OVERALL
t-TN-101	TECHNOLOGY - KITCHEN
t-TN-500	TECHNOLOGY - DETAILS
t-TN-600	TECHNOLOGY - SECURITY DETAILS
School: u-Sugar Mill ES	
u-A.000	COVER AND INDEX
u-A00-01	GENERAL NOTES AND ABBREVIATIONS
u-A.D.101	DEMO PLAN
u-D.101-2	REFERENCE PHOTOS FLOOR PLAN
u-D.101-3	DEMO PLAN PHOTOS
u-ED.100	ELECTRICAL DEMO AND TEMP PLANS
u-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
u-A.101	SITE PLAN
u-A.200	SLAB DIMENSION CONTROL PLAN
u-A.201	FLOOR PLAN
u-A.301	KITCHEN PLAN
u-A.302	TEMPORARY KITCHEN LAYOUT
u-A.401	REFLECTED CEILING PLAN
u-A.501	FINISH FLOOR PLAN
u-A.502	PARTITION SCHEDULE
u-S1	KITCHEN PLAN
u-S2	SECTIONS AND TYPICAL DETAILS
u-C1.0	GRADING & PAVING PLAN
u-QF0.0	FS GENERAL COORDINATION NOTES
u-QF1.0	FS EQUIPMENT PLAN
u-QF1.1	FS FACILITY MODEL
u-QF1.2	FS EQUIPMENT MODEL
u-QF1.3	QF SPECIAL CONDITIONS & MECHANICAL PLAN
u-QF1.4	FS PLUMBING PLAN

Sheet List Table

Sheet Number	Sheet Title
u-QF1.5	FS ELECTRICAL PLAN
u-QF1.6	FS CONDENSING UNITS
u-QF1.7	FS WALK-INS
u-QF1.8	FS SERVING COUNTERS
u-QF1.9	FS SERVING COUNTERS
u-QF2.0	FS DEMO PLAN
U-QF2.1	FS TEMPORARY SERVING
u-QF3.1	FS ELEVATIONS
u-QF4.1	FS SECTIONS & DETAILS
u-QF4.2	FS DETAILS
u-QF4.3	FS DETAILS
u-M1.01	MECHANICAL PLANS
M2.01	KITCHEN MECHANICAL DETAILS
u-M2.02	MECHANICAL DETAILS
E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
E.001	ELECTRICAL AND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
E.013	ELECTRICAL KITCHEN DETAILS
E.060	LIGHTING SCHEDULES
u-E.100	LIGHTING FLOOR PLAN
u-E.200	ELECTRICAL FLOOR PLAN
u-E.300	FIRE ALARM FLOOR PLANS
u-E.400	ELECTRICAL SCHEMATIC
u-P0.01	PLUMBING NOTES AND SCHEDULES
u-P0.02	PLUMBING SCHEDULES & DETAILS
u-P1.01	PLUMBING FLOOR PLAN
u-P1.02	PLUMBING FLOOR PLAN - TEMPORARY KITCHEN
u-T000	TECHNOLOGY SYMBOLS & LEGEND
u-T200	TECHNOLOGY COMPOSITE FLOOR PLAN
u-T201	TECHNOLOGY NEW_RENOVATION KITCHEN PLAN
u-T202	TECHNOLOGY TEMPORARY KITCHEN PLAN
u-T300	TECHNOLOGY ENLARGED VIEWS
u-T400	TECHNOLOGY TYPICAL DETAILS
u-T401	TECHNOLOGY TYPICAL DETAILS
u-T500	TECHNOLOGY TYPICAL DETAILS
u-TN000	TECHNOLOGY - TITLE SHEET
u-TN-001	TECHNOLOGY - SUGAR MILL DEMOLITION
u-TN-100	TECHNOLOGY - OVERALL
u-TN-101	TECHNOLOGY - KITCHEN
u-TN-500	TECHNOLOGY - DETAILS
u-TN-600	TECHNOLOGY - SECURITY DETAILS
u-TN-700	TECHNOLOGY - AV DETAILS
School: v-Sullivan ES	
v-A.000	COVER AND INDEX
v-A00-01	GENERAL NOTES AND ABBREVIATIONS
v-D.101	REFERENCE PHOTOS PLAN
v-A.101	SITE PLAN
v-A.201	OVERALL FLOOR PLAN
v-A.301	CAFETERIA PLAN
v-A.501	FINISH FLOOR PLAN
v-E.200	ELECTRICAL FLOOR PLAN & SCHEDULE
V-TN-000	TECHNOLOGY - INDEX SHEET
V-TN-100	TECHNOLOGY - OVERALL
V-TN-101	TECHNOLOGY - KITCHEN
V-TN-500	TECHNOLOGY - DETAILS
V-TN-600	TECHNOLOGY - SECURITY DETAILS
School: w-TOWNEWEST ES	
W-A.000	COVER AND INDEX
w-TN-000	TECHNOLOGY - INDEX SHEET
w-TN-100	TECHNOLOGY - OVERALL
w-TN-101	TECHNOLOGY - KITCHEN
w-TN-501	TECHNOLOGY - DETAILS
w-TN-600	TECHNOLOGY - SECURITY DETAILS
School: aa-First Colony MS	
aa-A.00	COVER AND INDEX
aa-A.101	TEMPORARY COOKING LOCATION SITE PLAN
aa-E.200	ELECTRICAL FLOOR PLAN & SCHEDULES
School: bb-Lakeview ES	
bb-A.000	COVER AND INDEX
bb-A.101	TEMPORARY COOKING LOCATION SITE PLAN
bb-E.200	ELECTRICAL FLOOR PLAN & SCHEDULES
School: cc-Lake Olympia MS	
cc-A.00	COVER AND INDEX
cc-A.101	TEMPORARY COOKING LOCATION SITE PLAN
cc-E.200	ELECTRICAL FLOOR PLAN & SCHEDULES
School: dd-Marshall HS	
dd-A.000	COVER AND INDEX
dd-A.101	TEMPORARY COOKING LOCATION SITE PLAN
dd-E.200	ELECTRICAL FLOOR PLAN & SCHEDULES
School: ee-Travis HS	
ee-A.000	COVER AND INDEX
ee-A.101	TEMPORARY COOKING LOCATION SITE PLAN
ee-E.200	ELECTRICAL FLOOR PLAN & SCHEDULES
School: ff-Dulles HS	
ff-A.000	COVER AND INDEX
ff-A.101	TEMPORARY COOKING LOCATION SITE PLAN
ff-E.200	ELECTRICAL FLOOR PLAN & SCHEDULES

ALTERNATE #3:
CORNERSTONE (E)
LEAVING EXISTING CONDITIONS AS-IS. DO NOT PREPARE AN OPENING IN THE CMU WALL, DO NOT INSTALL NEW POWER ACTUATED FOLDING PARTITION, OR ASSOCIATED ELECTRICAL WORK. OMIT UNDERGROUND FOUNDATION WORK, FINISH FLOORING IN THE CAFETERIA AND GYMNASIUM AND OMIT STEEL SUPERSTRUCTURE.

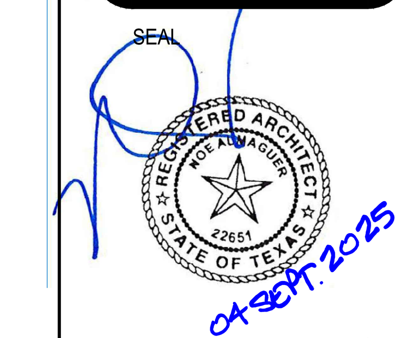
ALTERNATE #4:
SIENNA CROSSING (T)
OMIT CAFETERIA FLOORING.

ALTERNATE #5:
COMMONWEALTH (D) AND SULLIVAN (V)
LEAVE EXISTING CONDITIONS AS-IS. DO NOT REPLACE EXISTING MANUAL FOLDING PARTITION OR ASSOCIATED ELECTRICAL WORK.

ADDENDUM NO. 4 - SEP 04, 2025

ISSUE:
12/05/2024 DD PACKAGE
03/11/2025 50% CD PKG.
05/23/2025 90% CD PKG.
07/18/2025 ISSUED FOR BIDDING AND PERMITTING
09/04/2025 ISSUED FOR ADDENDUM 04

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT

SEAL


MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE:
ADDENDUM NO. 4 - SEP 04, 2025

OVERALL INDEX SHEET

A.000

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\a-A.000 COVER SHEET.dwg Sep 04, 2025 - 4:38pm

FBISD BP013 KITCHEN RENOVATIONS ES

AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PKWY, MISSOURI CITY, TX 77479

FORT BEND INDEPENDENT SCHOOL DISTRICT BOND 2023

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

BOARD OF TRUSTEES

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ANGIE WIERZBICKI	BOARD MEMBER

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Stanley Spurling & Hamilton
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Houston, Texas 77027
Phone Number: 713-776-9433

Sheet List Table	
Sheet Number	Sheet Title
School: a Austin Pkwy ES	
a-A.000	COVER AND INDEX
a-A00-01	GENERAL NOTES AND ABBREVIATIONS
a-D.101	DEMO PLANS
a-D01-02	DEMO PLAN PHOTOS
a-D01-03	DEMO PLAN PHOTOS
a-ED.100	LIGHTING DEMOLITION & TEMPORARY KITCHEN
A-P01.01	PLUMBING DEMOLITION FLOOR PLAN
a-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN 3
a-A.101	SITE PLAN
a-A.201	FLOOR PLAN
a-A.300	SLAB DIMENSION CONTROL PLAN
a-A.301	KITCHEN PLAN
a-A.302	TEMPORARY KITCHEN LAYOUT
a-A.401	REFLECTED CEILING PLAN 3
a-A.501	FINISH FLOOR PLAN
a-A.502	PARTITION SCHEDULE
a-S1	KITCHEN PLAN
a-S2	SECTIONS AND TYPICAL DETAILS
A-QF1	FS GENERAL COORDINATION NOTES
A-QF1.0	FS EQUIPMENT PLAN
A-QF1.1	FS FACILITY MODEL
A-QF1.2	FS EQUIPMENT MODEL
A-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
A-QF1.4	FS PLUMBING PLAN
A-QF1.5	FS ELECTRICAL PLAN
a-QF1.6	FS CONDENSING UNITS
a-QF1.7	FS WALK-INS
a-QF1.8	FS SERVING COUNTERS 3
a-QF1.9	FS SERVING COUNTERS
a-QF2.0	FS EQUIPMENT PLAN TEMPORARY SERVING AND MEP
a-QF2.1	FS EQUIPMENT PLAN - TEMPORARY SERVING & MEPS 3
a-QF3.1	FS ELEVATIONS
a-QF4.1	FS SECTIONS AND DETAILS
a-QF4.2	FS DETAILS
a-QF4.3	FS DETAILS
a-M1.01	LEVEL 1 KITCHEN MECHANICAL PLANS
a-M2.01	LEVEL 1 KITCHEN MECHANICAL PLANS
a-M2.02	MECHANICAL DETAILS (CONT.)
a-E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
a-E.010	ELECTRICAL DEVICE DETAILS
a-E.011	ELECTRICAL DETAILS
a-E.012	ELECTRICAL DETAILS
a-E.013	ELECTRICAL KITCHEN DETAILS
a-E.060	LIGHTING SCHEDULES
a-E.001	ELECTRICAL AND FIRE ALARM NOTES
a-E.100	ELECTRICAL PLANS
a-E.200	ELECTRICAL FLOOR PLAN
a-E.300	FIRE ALARM FLOOR PLANS
a-E.400	ELECTRICAL SCHEMATIC
a-P0.01	PLUMBING NOTES AND SCHEDULES
A-P0.02	PLUMBING SCHEDULES AND DETAILS
a-P1.01	PLUMBING FLOOR PLAN
a-P1.02	PLUMBING TEMPORARY KITCHEN PLAN
a-T000	TECHNOLOGY SYMBOLS & LEGEND
a-T200	TECHNOLOGY COMPOSITE FLOOR PLAN
a-T201	TECHNOLOGY NEW-RENOVATION KITCHEN PLAN
a-T202	TECHNOLOGY TEMPORARY KITCHEN PLAN
a-T400	TECHNOLOGY TYPICAL DETAILS
a-T401	TECHNOLOGY TYPICAL DETAILS
a-T500	TECHNOLOGY TYPICAL DETAILS
a-TN.000	TECHNOLOGY - INDEX SHEET
a-TN-001	TECHNOLOGY - KITCHEN DEMOLITION
a-TN-100	TECHNOLOGY - OVERALL
a-TN-101	TECHNOLOGY - KITCHEN
a-TN-500	TECHNOLOGY - DETAILS
a-TN-600	TECHNOLOGY - SECURITY DETAILS
a-TN-700	TECHNOLOGY - AV DETAILS

REGISTERED ARCHITECT
MICHAEL A. WAGNER
22651
STATE OF TEXAS
04 SEPT. 2025

ADDENDUM NO. 4 - SEP 04, 2025

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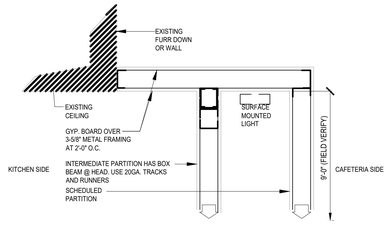


TEMPORARY KITCHEN FLOOR PLAN KEYED NOTES 04/a-A.302

01 PROVIDE & INSTALL 555 SF OF RAM BOARD TO PROTECT EXISTING FLOORING. REMOVE AFTER CONSTRUCTION IS COMPLETE. CONTRACTOR MUST REPAIR FLOORING DAMAGED DURING CONSTRUCTION.

02 PROVIDE SCHEDULED PARTITIONS. BUILD PARTITIONS ON TOP OF RAM BOARD. DO NOT ATTACH PARTITIONS TO FLOOR.

03 ATTACH PARTITIONS TO EXISTING WALL. REPAIR WALL TO MATCH EXISTING AFTER CONSTRUCTION IS COMPLETE.

TEMPORARY KITCHEN RCP KEYED NOTES 03/A-A03-02

04 ALL NEW SCHEDULED PARTITIONS AND CEILINGS FOR TEMPORARY STORAGE LAYOUT TO BE EPOXY PAINTED SW 7014 EIDER WHITE WITH SPECIFIED 4" RUBBER BASE. REMOVE WHEN CONSTRUCTION IS COMPLETED.

05 MOUNT TEMPORARY FLUORESCENT LIGHTS TO TEMPORARY CEILING.

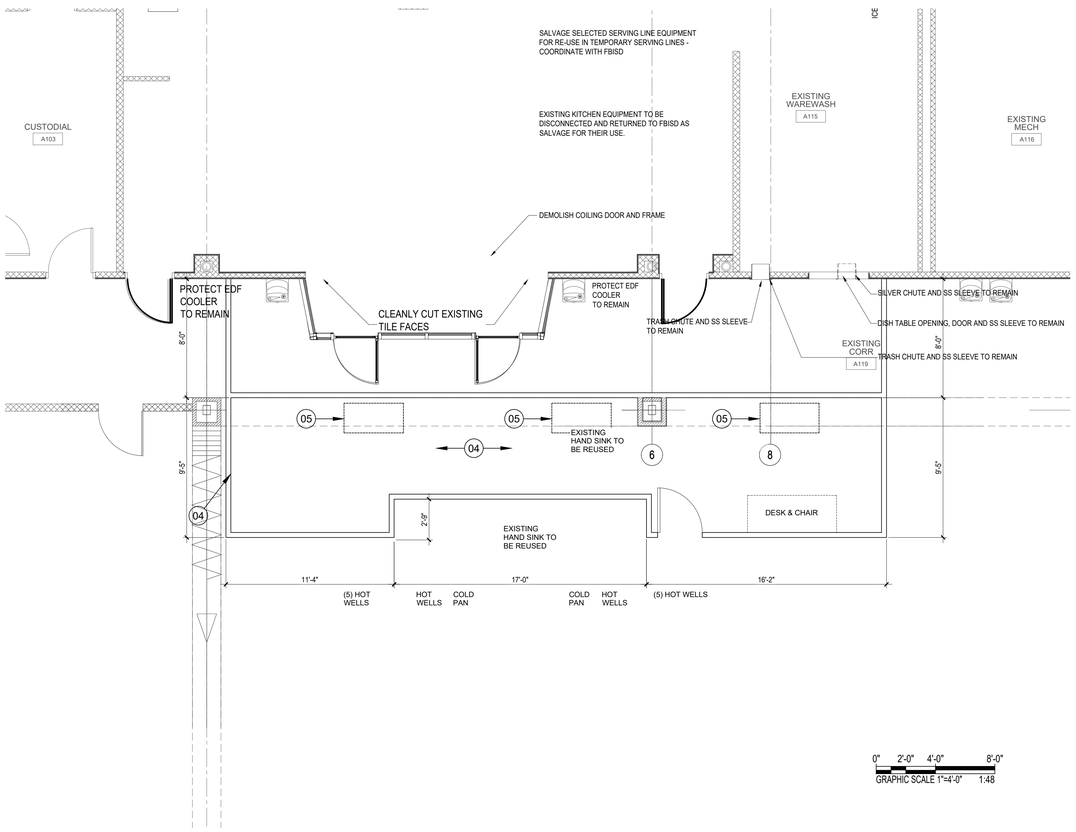
RCP DEVICE LEGEND

EXISTING TO REMAIN	NEW	DEMO	
S	S	S	CEILING MOUNTED SPEAKERS
			SECURITY CAMERA
W	W	W	WIRELESS ACCESS POINT
			CEILING MOUNTED FIRE ALARM AND STROBE
			SMOKE DETECTOR
			SPRINKLER HEAD (RECESSED)
			SPRINKLER HEAD (PENDANT)
			DRYER VENT
			EXIT
			CLOCK

3 TEMPORARY LAYOUT SECTION

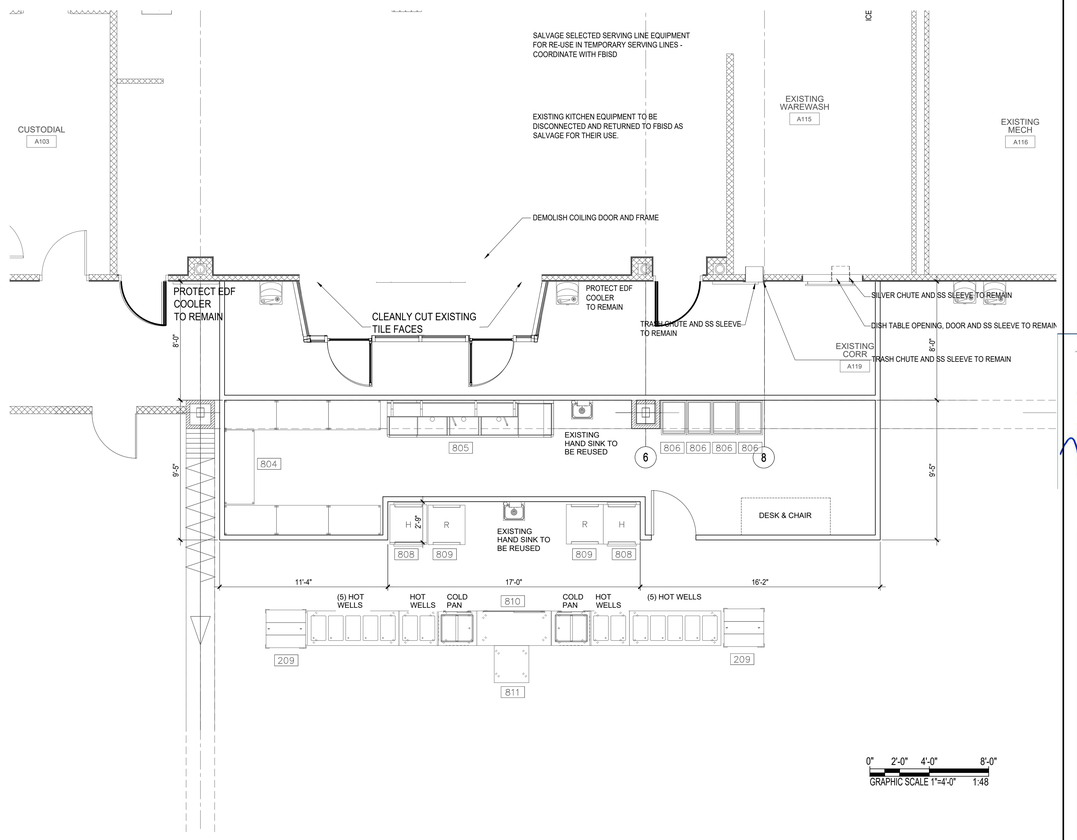
SCALE: 1"=1'-0"

4 KEYED NOTES



1 TEMPORARY KITCHEN RCP

1/4"=1'-0"



2 TEMPORARY KITCHEN FLOOR PLAN

1/4"=1'-0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ISSUED FOR ADDENDUM 04

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FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PARKWAY
SUGAR LAND, TX 77479

SEAL

REGISTERED ARCHITECT
MICHAEL K. MOORE
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STATE OF TEXAS

04 SEP 2025

MWA ARCHITECTS
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HOUSTON, TEXAS 77079

PROJ. NO.: 23-25

DATE: ADDENDUM NO. 4 - SEP 04, 2025

TEMPORARY KITCHEN LAYOUT

a-A.302

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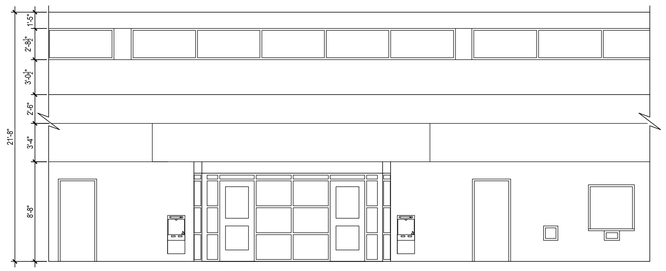
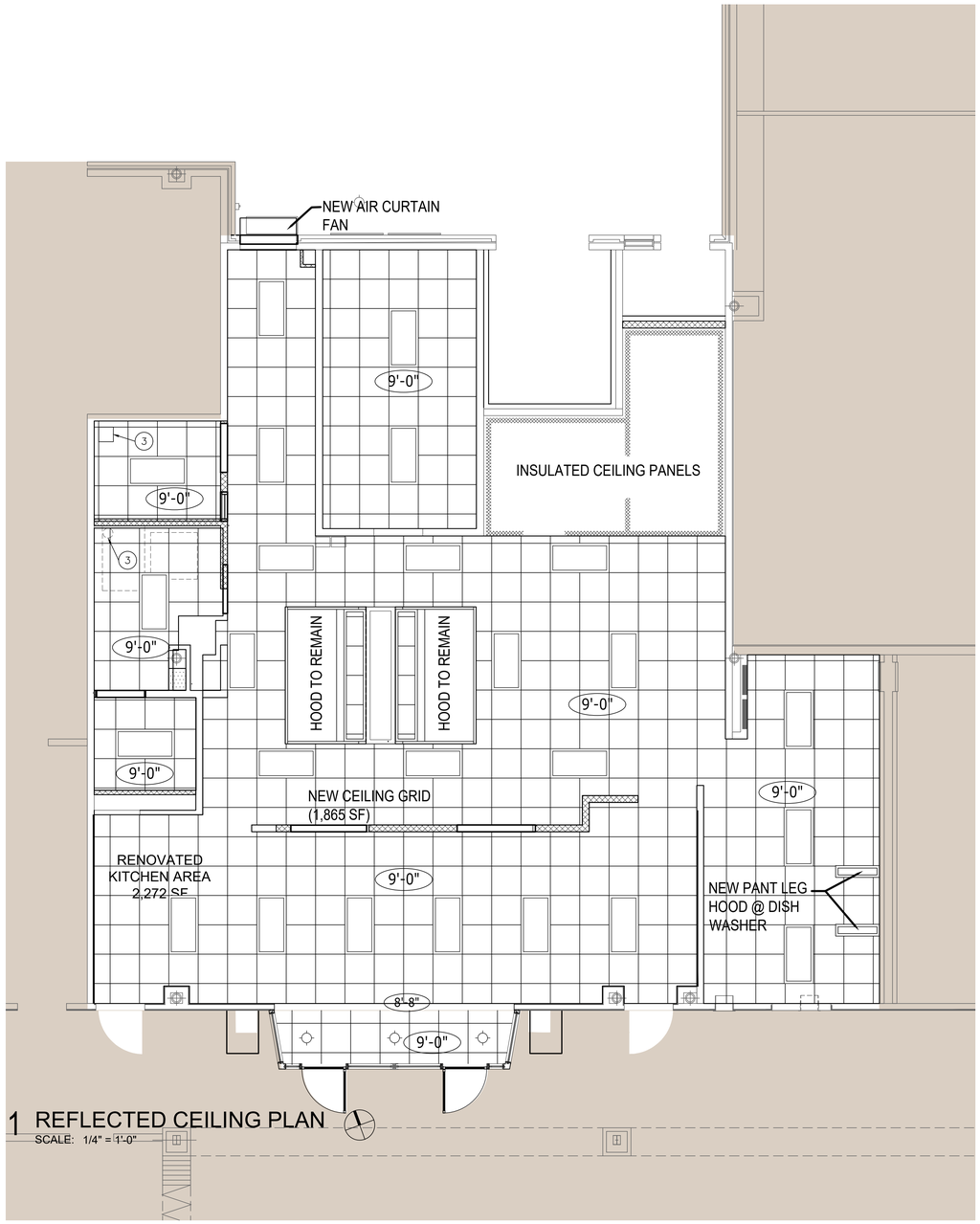


2 FOOD SERVICE AREA ELEVATION

SCALE: 3/16" = 1'-0"



1 REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

RCP - GENERAL NOTES

1. CEILING GRID SHALL BE INSTALLED TO MATCH EXISTING GRID'S POINT OF ORIGIN. THIS WILL REDUCE NEED TO RE-LOCATE ABOVE CEILING DUCTS, SPRINKLER PIPING AND OTHER SUPPORT SYSTEMS.
2. REFER TO SHEET A00-01 FOR GENERAL NOTES. GENERAL NOTES APPLY TO ALL SEVEN SCHOOL KITCHEN REMODELS.
3. LIGHTING LEVELS SHOULD BE 50 FC IN PREPARATION AREAS, WARE WASH AND SERVING LINES, OR MEET MINIMUM HEALTH CODE LEVELS, WHICHEVER ITS GREATER. SEE MEP PLANS
4. REPLACE HVAC DEVICES. REPLACE LIGHTING WITH 24"x24" LED LAY IN LIGHT AS SCHEDULED IN ELECTRICAL PLANS.
5. REFER TO MECHANICAL, ELECTRICAL SHEETS FOR DEVICE SCHEDULES.

RCP - NUMBERED NOTES

01 PROVIDE 30"x30" MIN. ACCESS HATCH IN SOFFIT CENTERED ON MOTOR.

02 AFTER LOWERING THE NEW POWER RETRACTION SYSTEM. REPAIR AND PAINT SOFFITS AND SIDWALLS OF FURR TO MATCH EXISTING.

03 SEE SHEET M2.02 FOR ROOF PENETRATION. MATCH EXISTING ROOF CONSTRUCITON AND MAINTAIN INTEGRITY OF WARRANTY CURRENTLY IN PLACE.

NEW RCP LEGEND

PROVIDE NEW VINYL FACED ACOUSTIC CEILING TILE AND GRID AS SPECIFIED (CLEAN ROOM VL NO. 868 BY ARMSTRONG) RE: SPEC 09 51 13 AND MEP DRAWINGS.

DEMOLISH EXISTING CEILING GRID AND ACOUSTIC TILES. SALVAGE OR REPLACE EXISTING DEVICES AND LIGHTS AS PER SCHEDULE AND NOTES.

9'-6" ACOUSTIC CEILING TILE CEILING HEIGHT - MATCH EXISTING.

MISC. DEVICE LEGEND

EXISTING TO REMAIN	NEW	DEMO	
(S)	(S)		CEILING MOUNTED SPEAKERS
			SECURITY CAMERA
(W)	(W)		WIRELESS ACCESS POINT
			CEILING MOUNTED FIRE ALARM AND STROBE
			SMOKE DETECTOR
			SPRINKLER HEAD (RECESSED)
			SPRINKLER HEAD (PENDANT)
			DRYER VENT
			EXIT

RCP HVAC LEGEND

EXISTING TO REMAIN	NEW	DEMO	
			LAY-IN CEILING DIFFUSER
			LAY-IN CEILING RETURN / FAN
			HARD CEILNG DIFFUSER
			HARD CEILNG RETURN / FAN

RCP LIGHT LEGEND

EXISTING TO REMAIN	NEW	DEMO	
			2x2 LAY IN LIGHT FIXTURE
			2x4 LAY IN LIGHT FIXTURE
			1X4 SURFACE MOUNTED UTILITY LIGHT FIXTURE WITH PROTECTIVE CAGE

ISSUE:

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05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING

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FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PARKWAY
SUGAR LAND, TX 77479

SEAL

REGISTERED ARCHITECT
STATE OF TEXAS
22651

28 AUG 2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
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HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/28/25
ADDENDUM NO. 3 - AUG 28, 2025

REFLECTED CEILING PLAN

a-A.401

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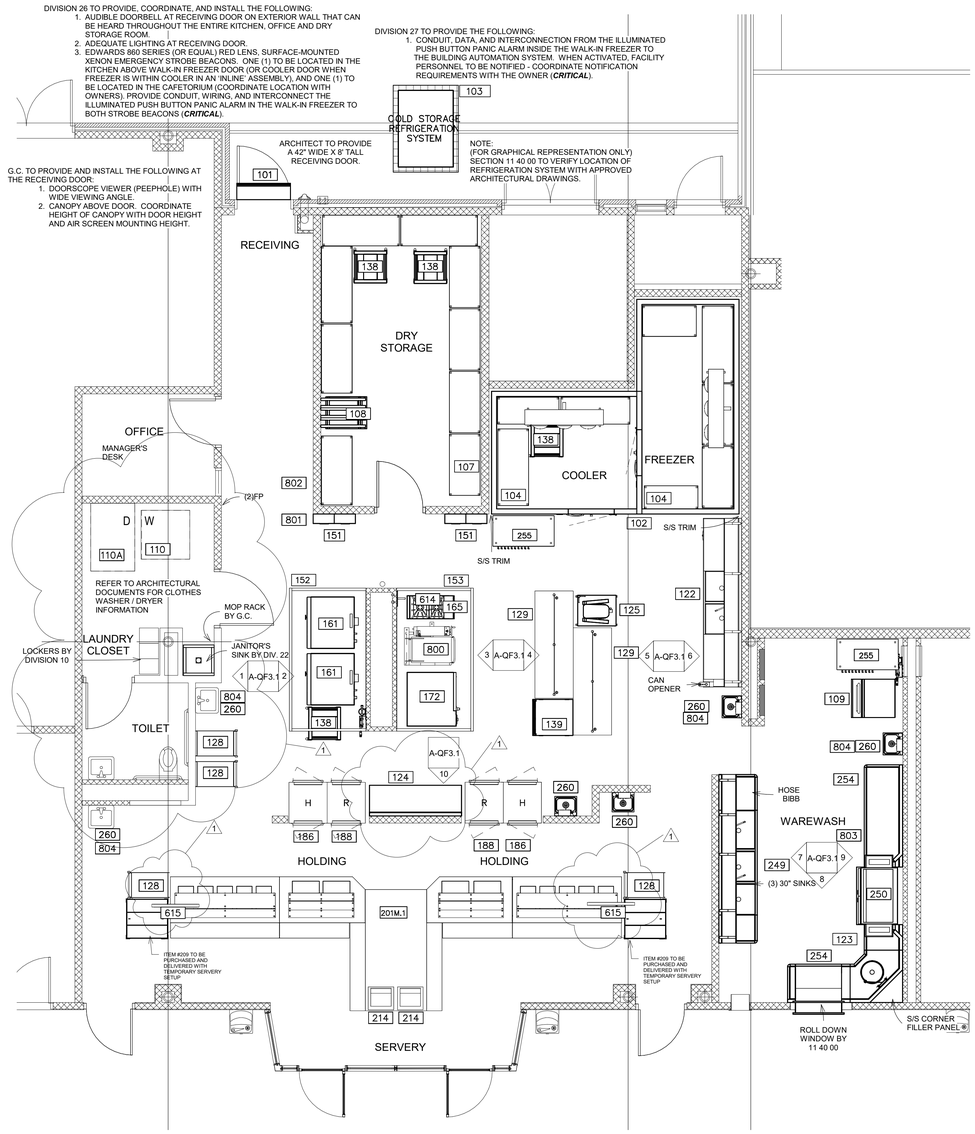
FOOD SERVICE DRAWING INDEX	
FDP SHEET NUMBER	FDP SHEET NAME
A-QF0.0	FS GENERAL COORDINATION NOTES
A-QF1.0	FS EQUIPMENT PLAN
A-QF1.1	FS FACILITY MODEL
A-QF1.2	FS EQUIPMENT MODEL
A-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
A-QF1.4	FS PLUMBING PLAN
A-QF1.5	FS ELECTRICAL PLAN
A-QF1.6	FS CONDENSING UNITS
A-QF1.7	FS WALK-INS
A-QF2.0	FS EXISTING EQUIPMENT PLAN
A-QF2.1	FS EQUIPMENT PLAN - TEMPORARY SERVING & MEPS



1 FOOD SERVICE EQUIPMENT PLAN
1/4" = 1'-0"

FOOD SERVICE EQUIPMENT SCHEDULE					
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH DEPARTMENT COORDINATION NOTES					
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS	MANUFACTURER	MODEL
101	1	AIR SCREEN		MARS	STD248-1UA-OB
102	1	COLD STORAGE ASSEMBLY		American Panel	
103	1	COLD STORAGE REFRIGERATION SYSTEM		RDT	ZS1-02Z-CT3-AST
104	2	COLD STORAGE SHELVING		METRO	METROMAX Q
107	1	DRY STORAGE SHELVING		METRO	METROMAX Q
108	1	CAN RACK		NEW AGE	1250CK
109	1	ICE MACHINE W/ BIN		MANITOWOC	UYF0310A
110	1	CLOTHES WASHER	BY G.C.		
110A	1	CLOTHES DRYER	BY G.C.		
122	1	TWO COMPARTMENT SINK WITHOUT DISPOSER		CUSTOM FABRICATED	
123	1	DISPOSER - 3HP		SALVAFOR	300-CA-18-ARSS-LD
124	1	WORKTABLE		CUSTOM FABRICATED	
125	1	20 QT. MIXER W/STAND		HOBART	HL200
128	4	UTILITY CART		LAKESIDE	522
129	2	WORKTABLE W/S.BAR UT.RACK		CUSTOM FABRICATED	
138	4	PAN RACK		CRES COR	207-UA-13A
139	1	INSUL MOBILE PROOFER		CRES COR	H-137-WSUA-12D
151	2	FIRE PROTECTION SYSTEM		ANSUL	R102
152	1	EXHAUST HOOD	EXISTING		
153	1	EXHAUST HOOD	EXISTING		
161	2	CONVECTION OVEN		BLODGETT	DFG-200 DBL
165	1	TWO BURNER RANGE		VULCAN	V2B18B
172	1	COMBI OVEN		RATIONAL	ICP 6-FULL/6-FULL N/G
186	2	PASS-THRU HEATED CABINET-1DR		TRAULSEN	AHF-132WP
188	2	PASS-THRU REFRIGERATOR-1DR		TRAULSEN	AHT-132WPUT
201M.1	1	SERVING COUNTER-MODULAR		COUNTERCRAFT	SCOL-408-MOD
209	2	DROP FRONT MILK COOLER - 8 CASE		TRAULSEN	RMC34D4
214	2	CASH REGISTER	OWNER FURNISHED		
249	1	THREE COMPARTMENT SINK NO DISPOSER		CUSTOM FABRICATED	
250	1	DISHMACHINE		HOBART	CL44-BAS
254	2	SOILED & CLEAN DISHTABLE		CUSTOM FABRICATED	
255	2	MOBILE DRYING RACK		METRO	PR48VX3
260	6	HAND SINK	FURNISHED & INSTALLED BY DIV. 22		
614	1	FILL FAUCET		T&S	B-0610
615	2	MENU MONITOR	BY OWNER		
800	1	15 GAL. BRAISING PAN		GROEN	BPM-15GA
801	1	S/S CORNER GUARDS	LOCATED ON EVERY EXPOSED CORNER THROUGHOUT KITCHEN	CUSTOM FABRICATED	
802	1	WALL BUMPERS	LOCATED ON ALL EXPOSED BUILDING WALLS	PAWLING	MD-1
803	1	WATER SOFTENER		HOBART	WA-40
804	6	S/S SPLASH GUARDS		CUSTOM FABRICATED	

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FDP
FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PARKWAY
SUGAR LAND, TX 77479

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOON
46854119
PROFESSIONAL MEMBER
Melissa Moon
7/15/2025
THIS ITEM IS RELEASED FOR PERMITTING PURPOSES ONLY
MELISSA MOORE, FCSI NO. 46854119
ON: 07/15/2025

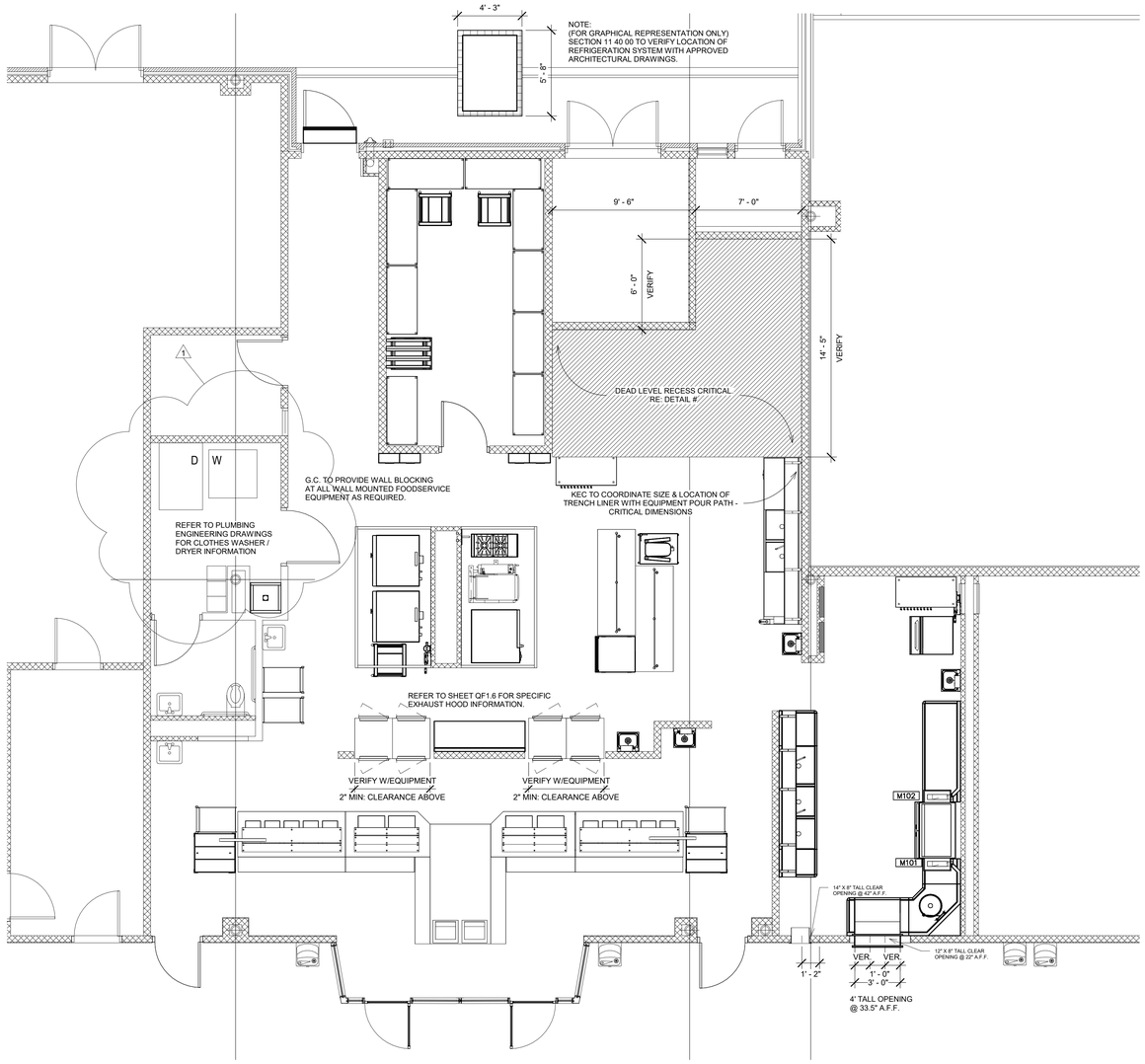
MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS EQUIPMENT PLAN

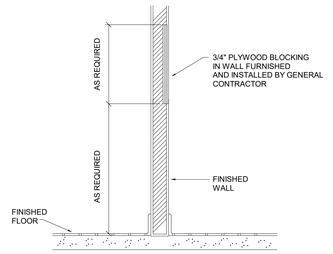
A-QF1.0

FOOD SERVICE MECHANICAL SCHEDULE						
REFER TO SHEET QF1 FOR MECHANICAL COORDINATION NOTES						
FDP NO.	FDP QTY	FDP TYPE	FDP SIZE	FDP LOC	FDP CFM	FDP S.P.
M101	1	EXHAUST	4" X 16"		1500	0.35"
M102	1	EXHAUST	4" X 16"		1500	0.35"



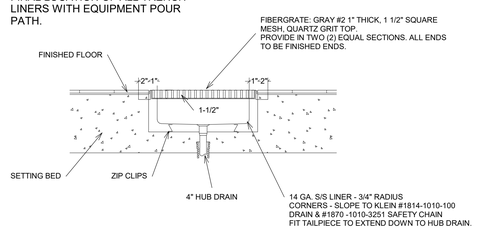
1 FOOD SERVICE SPECIAL CONDITIONS PLAN
1/4" = 1'-0"

NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION AND SIZE OF WALL BLOCKING.

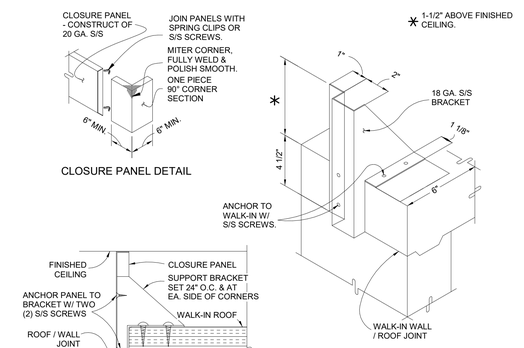


5 WALL BLOCKING DETAIL
NOT TO SCALE

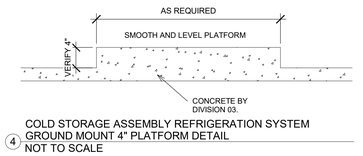
NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION OF ALL TRENCH LINERS WITH EQUIPMENT POUR PATH.



6 TRENCH LINER DETAIL
NOT TO SCALE

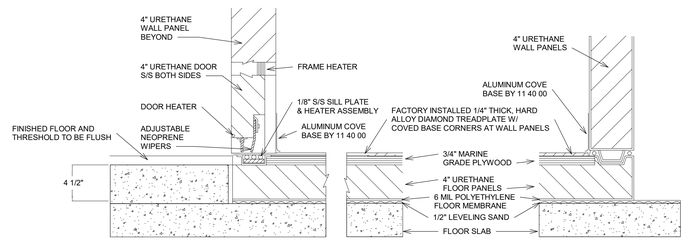


3 COLD STORAGE ASSEMBLY ENCLOSURE PANEL DETAIL
NOT TO SCALE



4 COLD STORAGE ASSEMBLY REFRIGERATION SYSTEM GROUND MOUNT 4" PLATFORM DETAIL
NOT TO SCALE

SLAB TO BE MODIFIED AS REQUIRED TO ALLOW FOR A 4 1/2" DEPRESSION SLAB. PROVIDE NEW LEVEL CONCRETE PAD FOR COLD STORAGE ASSEMBLY.



WALL SECTION @ EXTERIOR DOOR

2 COLD STORAGE ASSEMBLY 4 1/2" DEPRESSION DETAIL
NOT TO SCALE

ISSUE:

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03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
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09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PARKWAY
SUGAR LAND, TX 77479

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025 RELEASING ON THIS DATE FOR CONSTRUCTION MELISSA MOORE, FCSI NO. 48854119 ON: 07/18/2025

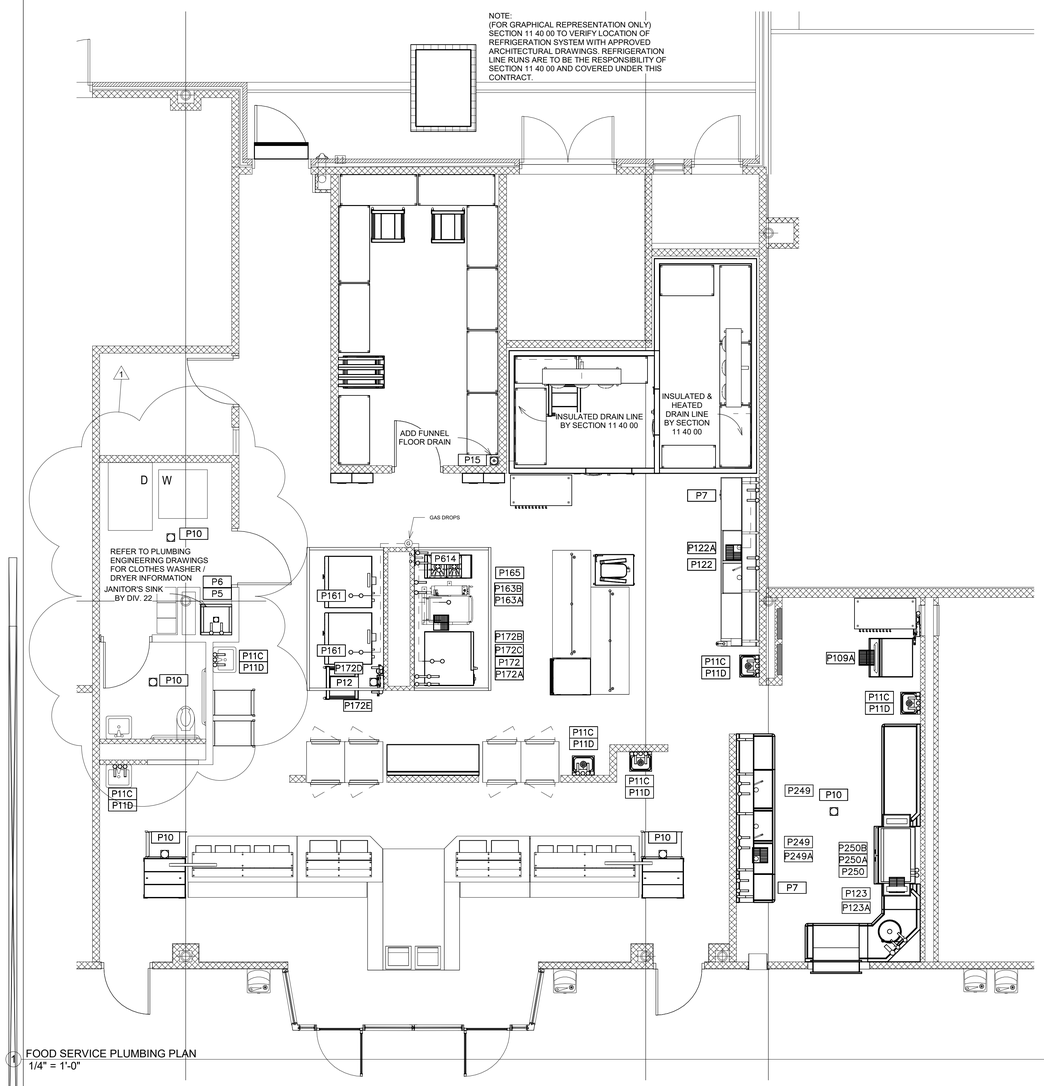
ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS SPECIAL CONDITIONS & MECHANICAL PLAN

A-QF1.3

FOOD SERVICE PLUMBING SCHEDULE						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P5	3/4"	H & C WATER	JANITOR SINK	WALL	48"	JANITOR SINK BY PLUMBER
P6	4"	FLOOR DRAIN	JANITOR SINK	FLOOR	VERIFY	JANITOR SINK BY PLUMBER
P7	3/4"	H & C WATER	HOSE BIBB	WALL	18"	BTC
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	---
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P12	VERIFY	FLOOR DRAIN	EQUIP. DRAIN	FLOOR	VERIFY	NO SLOPE
P15	4"	FLOOR DRAIN	FUNNEL FLOOR DRAIN	FLOOR	0"	---
P109	3/4"	COLD WATER	WATER/ ICE	WALL	60"	BTC
P109A	12" SQ.	FLOOR SINK	ICE MACHINE	FLOOR	0"	FULL GRATE
P122	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P122A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	3/4 GRATE
P123	3/4"	H & C WATER	FAUCET / DISPOSER	WALL	13"	BTC
P123A	2"	DIRECT DRAIN	DISPOSER	WALL	10"	BTC
P161	(2)3/4"	NATURAL GAS	CONVECTION OVEN	WALL	18"/36"	BTC - 60 MBTU/HR EACH
P163A	3/4"	NATURAL GAS	TILT BRAISING PAN	WALL	18"	BTC - 65 MBTU/HR
P163B	3/4"	H & C WATER	TILT BRAISING PAN	WALL	36"	BTC
P165	1"	NATURAL GAS	RANGE	WALL	18"	BTC - 70 MBTU/HR
P172	(2)3/4"	COLD WATER	COMBI OVEN	WALL	24"/48"	BTC - INTERCONNECT THRU FILTERS
P172A	3/4"	COLD WATER	COMBI OVEN	WALL	48"	BTC
P172B	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE
P172C	(2)3/4"	NATURAL GAS	COMBI OVEN	WALL	18"/36"	BTC - 105 MBTU/HR EACH
P172D	3/4"	COLD WATER	COMBI OVEN	WALL	66"	BTC; INTERCONNECT TO P172
P172E	3/4"	COLD WATER	COMBI OVEN WATER FILTER	WALL	66"	BTC
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P249A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	THREE QUARTER GRATE
P250	12" SQ.	FLOOR SINK	BOOSTER / DISHMACHINE	FLOOR	18"	BTC
P250A	3/4"	HOT WATER	DISHMACHINE	WALL	18"	EXT. THRU W.FILTER TO BOOSTER / DISH MACHINE - 140DEG.MIN.
P250B	3/4"	COLD WATER	DISHMACHINE	WALL	18"	BTC
P614	1/2"	H & C WATER	FILL FAUCET	WALL	42"	BTC



1 FOOD SERVICE PLUMBING PLAN
1/4" = 1'-0"

SECTION 11 40 00 TO PROVIDE LOOSE WITH FOOD SERVICE EQUIPMENT. INSTALLATION BY DIV. 22 & 26.

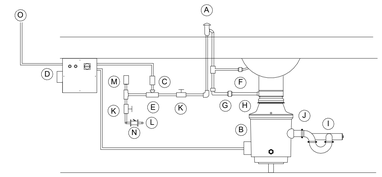
- (A) VACUUM BREAKER
- (B) DISPOSER
- (C) TIME DELAY
- (D) CONTROL PANEL
- (E) SOLENOID VALVE

DIVISION 22 TO PROVIDE AND INSTALL

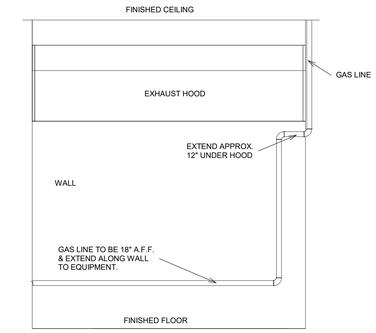
- (F) 1/2" CW INLET
- (G) FLOW CONTROL
- (H) 1/2" CW
- (I) 2" DRAIN LINE WITH P-TRAP & Y ADAPTOR
- (J) 1-1/2" TAILPIECE
- (K) GATE VALVE
- (L) 1/2" CW SUPPLY
- (M) SHOCK STOP
- (N) RPZ BACK FLOW PREVENTOR

DIVISION 26 TO PROVIDE AND INSTALL

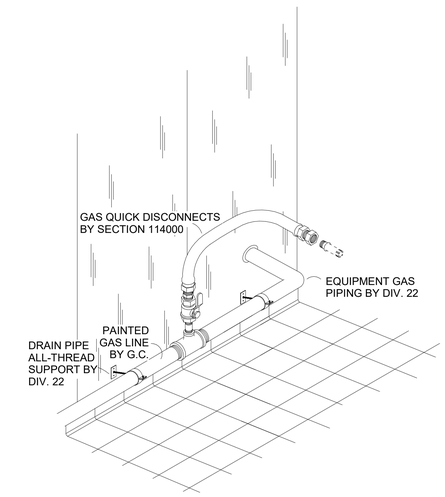
- (O) POWER SUPPLY



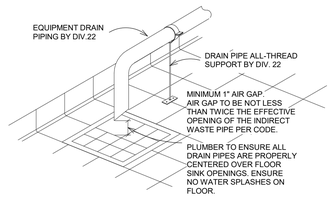
6 DISPOSER WITH VACUUM BREAKER DETAIL
NOT TO SCALE



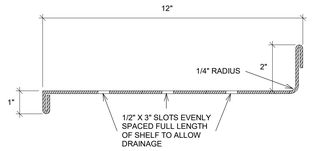
7 EXHAUST HOOD - GAS LINE ROUTING DETAIL
NOT TO SCALE



3 GAS DISCONNECT DETAIL
NOT TO SCALE



5 DRAIN PIPING FASTENER DETAIL
NOT TO SCALE



8 WAREWASH - PERFORATED OVER SHELF DETAIL
NOT TO SCALE

○	HW	HOT WATER	☑	FFD	FUNNEL FLOOR DRAIN
○	CW	COLD WATER	◣	EVC	EXHAUST VENT CONNECTION
○	HTW	180 F HOT WATER	◢	SVC	SUPPLY VENT CONNECTION
◎		CHILLED WATER	◐	FR	DIRECT-CONNECTED FLUE RISER
●	W	DIRECT WASTE	⊕	PS	PIPE SLEEVE
○	IW	INDIRECT WASTE	⊙		COMPRESSED AIR
⊙		GAS SUPPLY	♦		CO2
◕		STEAM SUPPLY		AFF	ABOVE FINISHED FLOOR
⊗	CR	CONDENSATE RETURN		BTC	BRANCH TO CONN. ON EQUIP
◉	DR	DRAIN		DFA	DROP FROM ABOVE
□	FD	FLOOR DRAIN		CLG	CEILING
▤	FST	FLOOR SINK 3/4 GRATE			
▥	FSH	FLOOR SINK 3/4 GRATE			

2 PLUMBING SYMBOLS
NOT TO SCALE

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FDP
FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
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4400 AUSTIN PARKWAY
SUGAR LAND, TX 77479

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
PRINTED COPIES BEARING ON THIS DOCUMENT ARE NOT AUTHORIZED BY MELISSA MOORE, FCSI NO: 48854119
ON: 07/15/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS PLUMBING PLAN

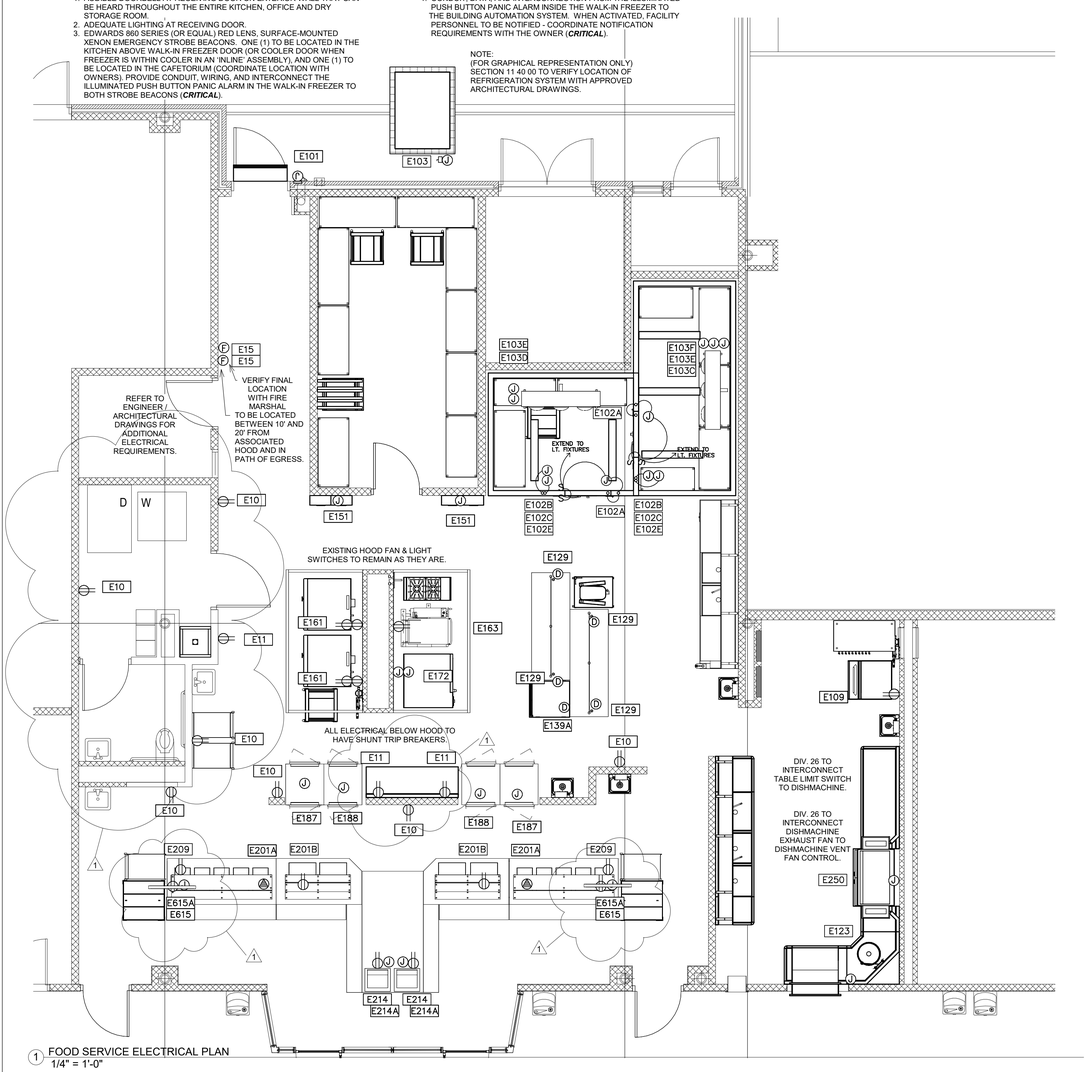
A-QF1.4

FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E10	DR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E11	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	47"	MOUNT HORIZONTAL
E15	JB	---	---	--	FIRE PULL	WALL	48"	BTC; RECESSED
E101	JB	5.1A	120	1	AIR SCREEN	WALL	82"	BTC; MAGNETIC REED SWITCH ON DOOR JAMB & DOOR
E102A	JB	16.0A	120	1	DOOR HEATER/LIGHTS	CLG	DFA	BTC
E102B	JB	5.0A	120	1	TEMP. ALARM	CLG	DFA	BTC
E102C	JB	5.0A	120	1	PRESSURE RELIEF PORT	CLG	DFA	BTC
E102E	JB	10.0A	120	1	PANIC ALARM BUTTON	CLG	DFA	BTC-INTERCONNECT TO STROBE LIGHT/HORN ABOVE FREEZER DOOR AND IN CAFETORIUM
E103	JB/DS	25.0A	208	3	REFRIGERATION SYSTEM	VERIFY	VERIFY	BTC
E103C	JB	16.0A	208	1	FREEZER COIL	CLG	DFA	BTC
E103D	JB	10.0A	120	1	COOLER COIL	CLG	DFA	BTC
E103E	JB	---	---	---	DATA CONNECTION	CLG	DFA	BTC; RUN TO NEAREST IDF / MDF ROOM
E103F	JB	16.0A	120	1	DRAIN LINE HEATER	CLG	DFA	BTC; DEDICATED CIRCUIT
E109	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E123	JB	3.0HP	208	3	DISPOSER	WALL	24"	BTC; CONNECT THRU C.P. TO DISPOSER
E129	DCR	16.0A	120	1	TABLE RECEPTACLE	CLG	84"	TWISTLOCK PLUG & RECEPTACLE
E139A	DCR	16.6A	120	1	HEATED CABINET	CEILING	DFA	BTC
E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC
E161	(2)DR	6.0A EA.	120	1	CONVECTION OVEN	WALL	24"/48"	SHUNT TRIP BREAKER
E163	DR	5.0A	120	1	TILT BRAISING PAN	WALL	24"	SHUNT TRIP BREAKER
E172	(2)JB	15.0A EA.	208	1	COMBI OVEN	WALL	24"/48"	BTC - SHUNT TRIP BREAKER
E187	JB	15.5A	120/208	1	HEATED CABINET	WALL	96"	BTC; MOUNT ON KITCHEN SIDE
E188	JB	7.2A	120	1	REFRIGERATOR	WALL	96"	BTC; MOUNT ON KITCHEN SIDE-OMIT PLUG, UNIT TO BE HARDWIRED
E201A	PMR	28.0A	208	1	HOT FOOD COUNTER	FLOOR	4.5"	BTC
E201B	PMR	16.0A	120	1	COLD FOOD COUNTER	FLR	4.5"	---
E209	PMR	8.0A	120	1	DROP FRONT MILK COOLER-8 CASE	FLR	4.5"	---
E214	PMR	16.0A	120	1	CASH REGISTER	FLR	4.5"	DEDICATED CIRCUIT
E214A	CS	---	---	---	POS	FLOOR	6"	BTC; CONDUIT W/DATA LINE TO RUN TO MANAGER'S OFFICE OR IDF ROOM-VERIFY
E250	JB/DS-JB	51.7A	480	3	DISHMACHINE	WALL	66"	BTC; EXTEND FROM JB/DS AT NEAREST WALL

DIVISION 26 TO PROVIDE, COORDINATE, AND INSTALL THE FOLLOWING:
1. AUDIBLE DOORBELL AT RECEIVING DOOR ON EXTERIOR WALL THAT CAN BE HEARD THROUGHOUT THE ENTIRE KITCHEN, OFFICE AND DRY STORAGE ROOM.
2. ADEQUATE LIGHTING AT RECEIVING DOOR.
3. EDWARDS 860 SERIES (OR EQUAL) RED LENS, SURFACE-MOUNTED XENON EMERGENCY STROBE BEACONS. ONE (1) TO BE LOCATED IN THE KITCHEN ABOVE WALK-IN FREEZER DOOR (OR COOLER DOOR WHEN FREEZER IS WITHIN COOLER IN AN 'INLINE' ASSEMBLY), AND ONE (1) TO BE LOCATED IN THE CAFETORIUM (COORDINATE LOCATION WITH OWNERS). PROVIDE CONDUIT, WIRING, AND INTERCONNECT THE ILLUMINATED PUSH BUTTON PANIC ALARM IN THE WALK-IN FREEZER TO BOTH STROBE BEACONS (***CRITICAL***).

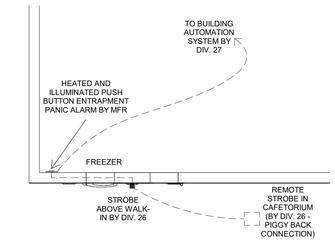
DIVISION 27 TO PROVIDE THE FOLLOWING:
1. CONDUIT, DATA, AND INTERCONNECTION FROM THE ILLUMINATED PUSH BUTTON PANIC ALARM INSIDE THE WALK-IN FREEZER TO THE BUILDING AUTOMATION SYSTEM. WHEN ACTIVATED, FACILITY PERSONNEL TO BE NOTIFIED - COORDINATE NOTIFICATION REQUIREMENTS WITH THE OWNER (***CRITICAL***).

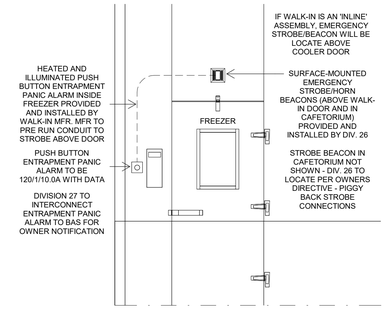
NOTE:
(FOR GRAPHICAL REPRESENTATION ONLY)
SECTION 11 40 00 TO VERIFY LOCATION OF REFRIGERATION SYSTEM WITH APPROVED ARCHITECTURAL DRAWINGS.



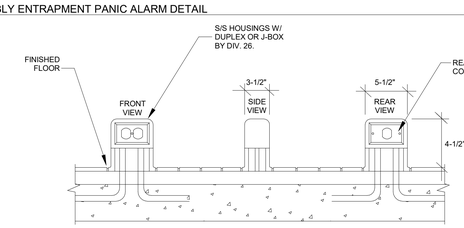
1 FOOD SERVICE ELECTRICAL PLAN
1/4" = 1'-0"

FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E615	DR	5.0A	120	1	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE DCO AT VIDEO LOCATION
E615A	JB	---	---	---	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE JB AT DATA LOCATION



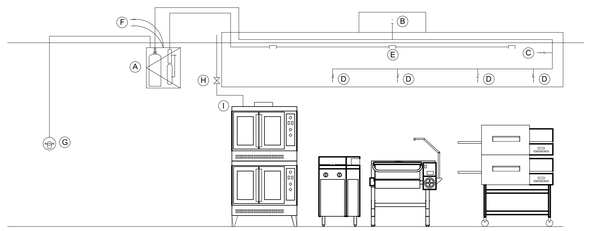


6 COLD STORAGE ASSEMBLY ENTRAPMENT PANIC ALARM DETAIL
NOT TO SCALE



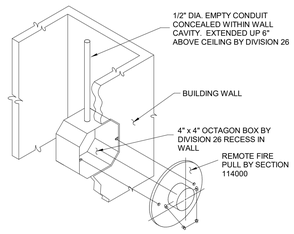
3 PEDESTAL MOUNTED RECEPTACLE DETAIL
NOT TO SCALE

NOTE:
REFER TO FDP EQUIPMENT PLAN FOR SPECIFIC COMPONENTS UNDER HOOD. ALL EQUIPMENT SHOWN HERE FOR GRAPHICAL REPRESENTATION ONLY.



A	S/S ENCLOSURE W/AGENT TANK AND NITROGEN CARTRIDGE
B	DUCT NOZZLE(S)
C	PLENUM NOZZLE(S)
D	SURFACE PROTECTION NOZZLE(S)
E	FUSIBLE LINK(S)
F	(2) WIRES FROM FIRE SYSTEM TO SHUNT TRIP BREAKERS FOR SHUT DOWN OF ELECTRICAL CONNECTIONS LOCATED BENEATH EXHAUST HOOD DURING FIRE MODE
G	REMOTE FIRE PULL
H	GAS VALVE
I	GAS SUPPLY (AS REQUIRED)

4 FIRE PROTECTION SYSTEM TYPICAL DETAIL
NOT TO SCALE



5 FIRE PROTECTION SYSTEM RECESSED FIRE PULL DETAIL
NOT TO SCALE

	SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES
•	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
	DR	DUPLEX RECEPTACLE		WPR	WATERPROOF RECEPTACLE (SPRING COVER)
	SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER
	SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT
	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
	PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR
	DCR	DROP CORD RECEPTACLE		CS/JB	JUNCTION BOX ON PEDESTAL
	JB	JUNCTION BOX ON CEILING		SW	SWITCH
	JB	JUNCTION BOX IN WALL		D	DATA
	JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26			

2 ELECTRICAL SYMBOLS
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PARKWAY
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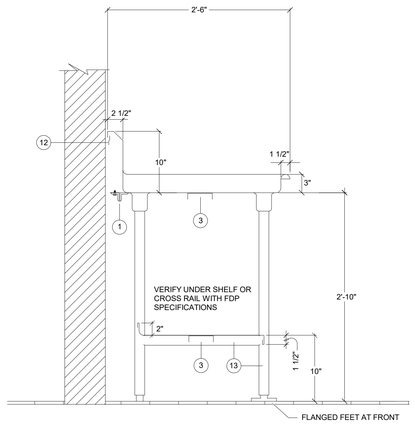
SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
ELECTRONICALLY APPEARING ON THIS DOCUMENT ARE TRUE AND CORRECT AS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/15/2025

ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

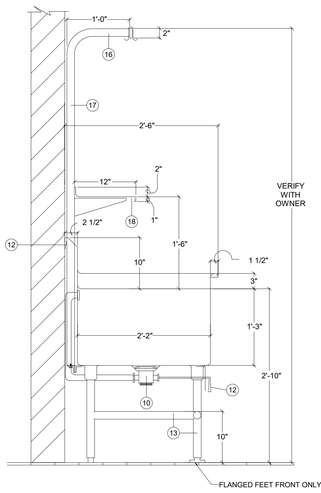
PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS ELECTRICAL PLAN

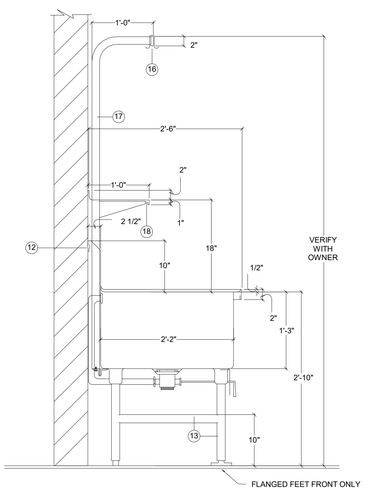
A-QF1.5



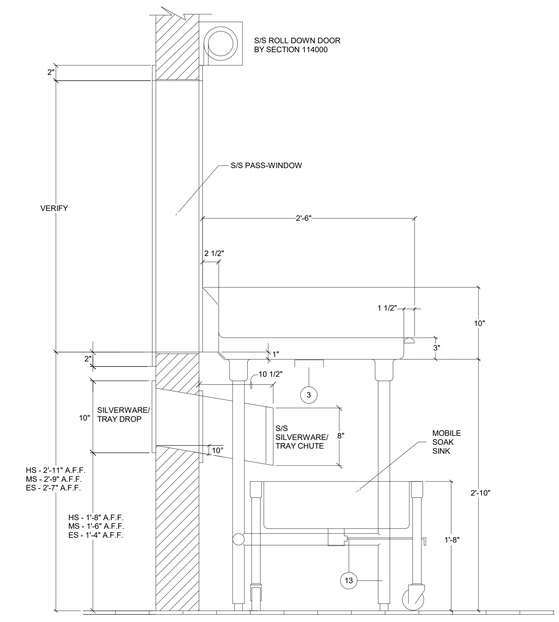
8 DRAINBOARD
NOT TO SCALE



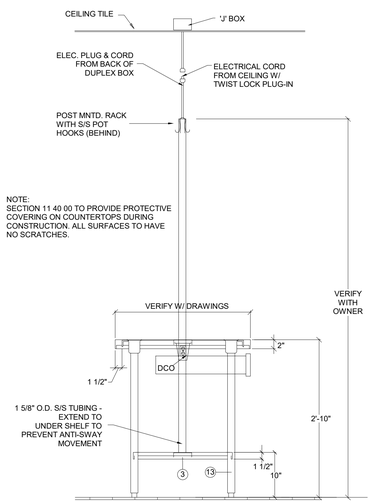
6 SINK - UTENSIL WASH SECTION
NOT TO SCALE



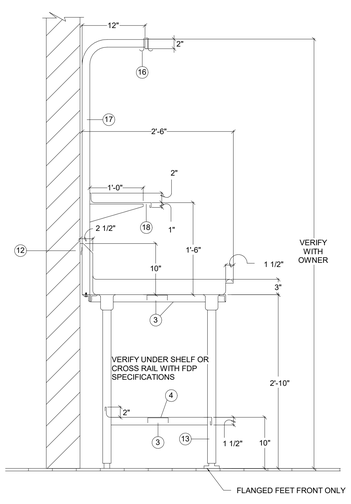
4 SINK - PREP TABLE SECTION
NOT TO SCALE



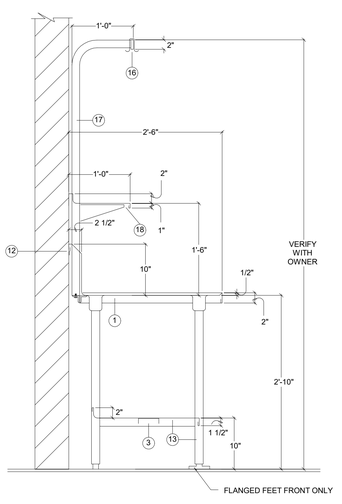
2 WAREWASH - TRAY DROP/SOAK SINK SECTION
NOT TO SCALE



7 WORKTABLE - ISLAND W/ POST MTD STRAIGHT POT RACK SECTION
NOT TO SCALE



5 DRAINBOARD - UTENSIL WASH SECTION
NOT TO SCALE



3 DRAINBOARD - PREP SINK SECTION
NOT TO SCALE

SECTION DETAIL NOTES:

1. 1 1/2" X 1 1/2" X 1/8" GALVANIZED ANGLE IRON.
2. 1" X 4" 14 GAUGE STAINLESS STEEL HAT CHANNEL.
3. 16 GAUGE STAINLESS STEEL C-CHANNEL.
4. 16 GAUGE STAINLESS STEEL UNDER SHELF, COVE UP REAR 2", TURN DOWN FRONT 1 1/2".
5. 1/2" CEMENT BACKERBOARD WITH TILE FRONT BY TRADE CONTRACTOR OR COUNTER MANUFACTURER. VERIFY FINISH WITH ARCHITECTURAL DRAWINGS.
6. COLD PAN - 2" RIGID INSULATION WITH 1" C.P. DRAIN - 16 GAUGE STAINLESS STEEL SECTION FALSE BOTTOM. PERFORATE FALSE BOTTOM WITH 1/4" DIA. HOLES AT 3" O.C.
7. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN DOOR WITH RECESSED PULL.
8. MANIFOLD DRAINS AT HOT FOOD UNITS WITH 1" TYPE 'K' COPPER AND EXTEND TO VALVE IN PLUMBING COMPARTMENT.
9. FINISHED TRUE AND LEVEL MASONRY BASE BY DIVISION 09. CLOSE COUNTER BODY AT BASE AND SEAL BY SECTION 11 40 00.
10. FISHER #22314 DRAIN WITH TAILPIECE AND OVERFLOW.
11. 14 GAUGE STAINLESS STEEL BRACKET WITH DRAIN HANDLE BUSHING.
12. 16 GAUGE STAINLESS STEEL 'Z' CLIP TO WALL AND SEAL.
13. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL LEGS AND CROSS RAILS.
14. 1/2" S/S TUBING DRAIN LINE - STRAP TO SHELF AND WALL - EXTEND DOWN TO TOP OF SPLASH.
15. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL TUBING - SUPPORT FRONT OF SHELF WITH 1/2" ALL-THREAD INSIDE TUBING EXTENDING TO STRUCTURE ABOVE.
16. 1/4" S/S BAR STOCK WELDED TO TOP OF EACH POST - POT HOOKS TO BE COMPONENT HARDWARE #J77-4401 SPACED 8" O.C.
17. 1 5/8" 16 GAUGE STAINLESS STEEL TUBING - BOLT TO ANGLE IRON AND EXTEND UP THRU SPLASH TO 7'-0" A.F.F.
18. OVER SHELF - 16 GAUGE STAINLESS STEEL, COVE UP REAR 2", TURN FRONT AND ENDS DOWN 1", ENDS TO BE CAPPED WITH EASED CORNERS WHERE ADJACENT TO WALL / FIXTURE.
19. 18 GAUGE STAINLESS STEEL LOUVERED PANEL.
20. 18 GAUGE STAINLESS STEEL LOUVERED DOUBLE PAN DOOR WITH RECESSED PULL.
21. NUMBER NOT USED.
22. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN SLIDING DOOR WITH COMPONENT HARDWARE COMPONENTS

    A. #B57 - (VERIFY LENGTH) EXTRUDED ALUMINUM TRACK.
    B. #B58-5511 & #B58-5521 FRONT & REAR DOOR SHEAVES.
    C. #B62-1093 DOOR GUIDE.
    D. #B60-1086 DOOR STOPS WHERE NEEDED.
    E. #P62-1010 RECESS PULLS.

1 SECTION DETAIL NOTES
NOT TO SCALE

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FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PARKWAY
SUGAR LAND, TX 77479

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
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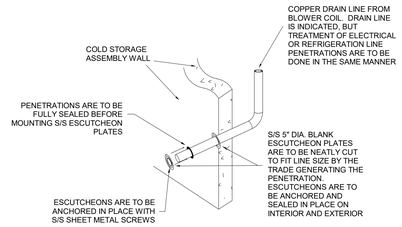
DN: 07/18/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

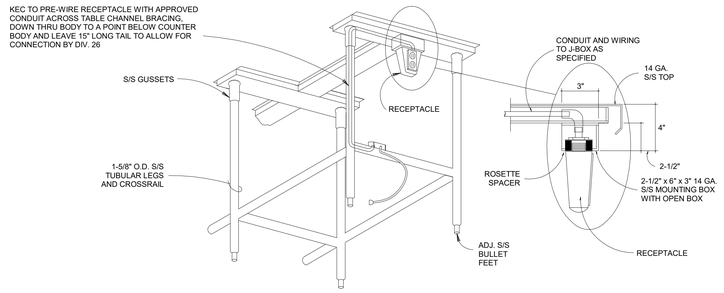
PROJ. NO.: 23-25
DATE: 07/18/25
ISSUED FOR BIDDING AND PERMITTING
FS SECTIONS & DETAILS

A-QF4.1



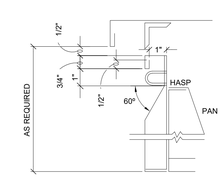
3 COLD STORAGE ASSEMBLY ESCUTCHEON & PENETRATION DETAIL
NOT TO SCALE

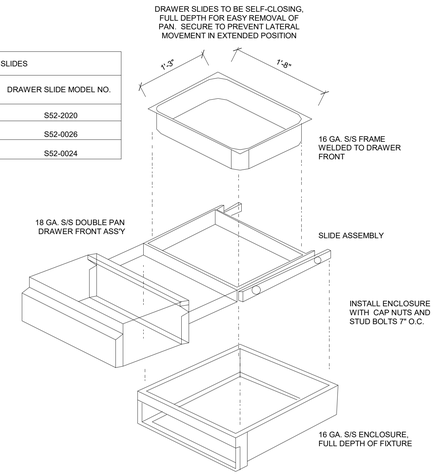
NOTE:
COORDINATE ALL RECEPTACLES WITH ELECTRICAL CONTRACT DRAWING REQUIREMENTS, REFER TO ELECTRICAL PLAN



5 WORKTABLE - ELECTRICAL RECEPTACLE MOUNTED UNDER TOP DETAIL
NOT TO SCALE

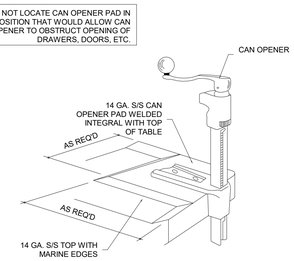
COMPONENT HARDWARE DRAWER PAN AND SLIDES		
TYPE	DRAWER PAN MODEL NO.	DRAWER SLIDE MODEL NO.
UTILITY	S80-2020	S52-2020
BREAD	S83-2020	S52-0026
REFRIGERATOR	S81-1520	S52-0024



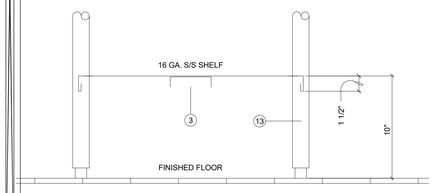


6 DRAWER ASSEMBLY DETAIL
NOT TO SCALE

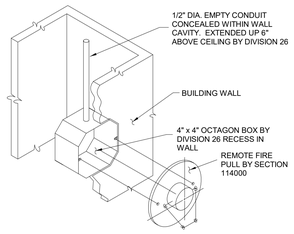
NOTE: DO NOT LOCATE CAN OPENER PAD IN A POSITION THAT WOULD ALLOW CAN OPENER TO OBSTRUCT OPENING OF DRAWERS, DOORS, ETC.



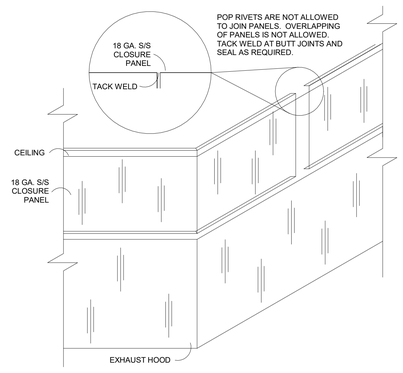
10 SINK - PREP MARINE EDGE CAN OPENER DETAIL
NOT TO SCALE



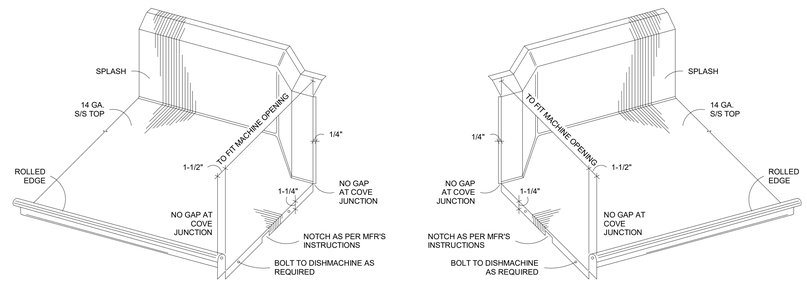
11 UNDER SHELF DETAIL
NOT TO SCALE



12 FIRE PROTECTION SYSTEM FIRE PULL DETAIL
NOT TO SCALE



13 EXHAUST HOOD CLOSURE PANEL DETAIL
NOT TO SCALE



14 DISHTABLE - SOILED & CLEAN CONNECTION DETAIL
NOT TO SCALE

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FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PARKWAY
SUGAR LAND, TX 77479

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THESE DOCUMENTS PREPARING ON THIS DATE WERE AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/15/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/25
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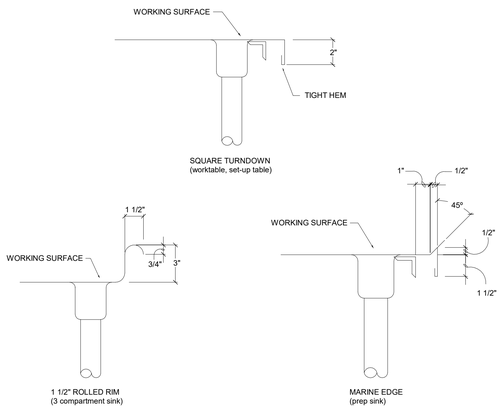
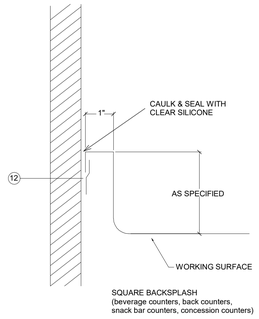
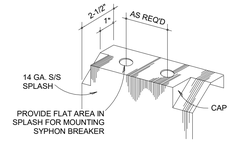
FS DETAILS

A-QF4.2

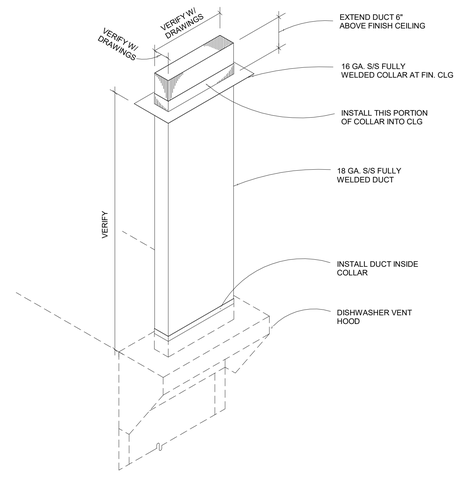


1 EDGE DETAILS
NOT TO SCALE

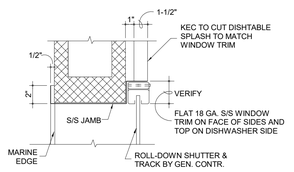




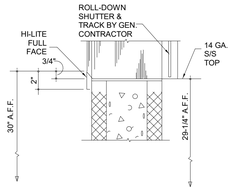
6 SPLASH @ SYPHON BREAKER
NOT TO SCALE



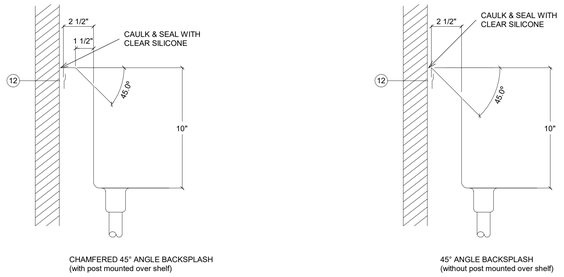
5 DISHMACHINE VENT RISER DETAIL
NOT TO SCALE



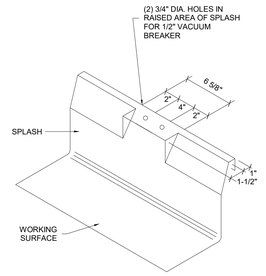
4 WAREWASH - TRAY DROP WINDOW SECTION
NOT TO SCALE



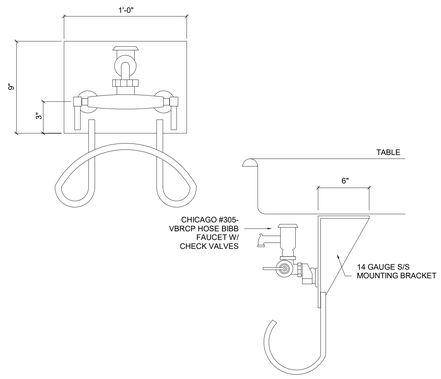
3 WAREWASH - TRAY DROP SECTION
NOT TO SCALE



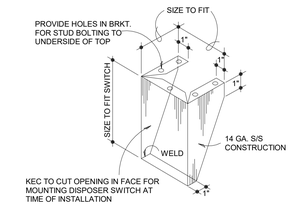
2 BACKSPLASH DETAILS
NOT TO SCALE



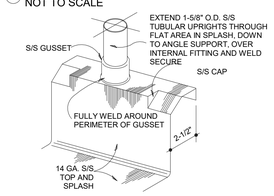
8 VACUUM BREAKER DETAIL
NOT TO SCALE



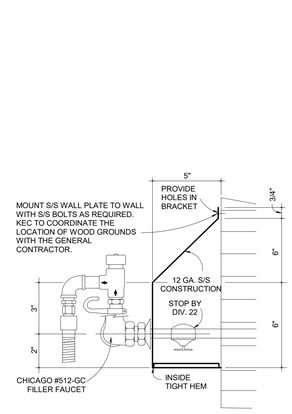
12 HOSE BIBB DETAIL
NOT TO SCALE

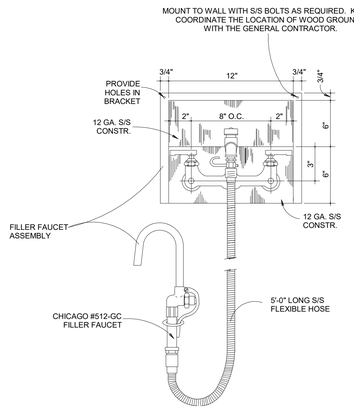


9 DISPOSER SWITCH BRACKET DETAIL
NOT TO SCALE

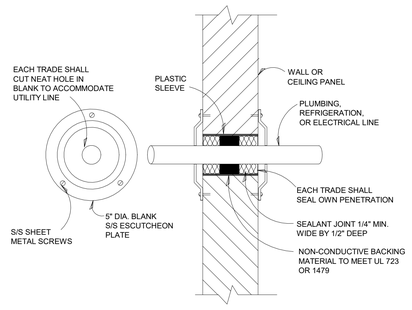


7 SPLASH @ UPRIGHT (DISH TABLE) DETAIL
NOT TO SCALE





14 FILL FAUCET DETAIL
NOT TO SCALE



15 COLD STORAGE ASSEMBLY WALL PENETRATION DETAIL
NOT TO SCALE

CUSTOM FABRICATION NOTES:

A. WORK SHALL BE DONE IN AN APPROVED WORKMANLIKE MANNER, TO COMPLETE SATISFACTION OF FOODSERVICE DESIGN PROFESSIONALS (FDP).

B. STAINLESS STEEL SHALL BE U.S. STANDARD GAUGES AS CALLED FOR. 18-8, TYPE 304, NOT OVER .012% MAXIMUM CARBON, NO. 4 FINISH.

C. GALVANIZED IRON SHALL BE ARMCO OR EQUAL. FRAMEWORK OF GALVANIZED IRON SHALL BE WELDED CONSTRUCTION, HAVING WELDS SMOOTH, AND WHERE GALVANIZING HAS BURNED OFF, TOUCHED UP WITH HIGH-GRADE ALUMINUM BRONZE.

D. LEGS AND CROSSRAIL SHALL BE CONTINUOUSLY WELDED, UNLESS OTHERWISE NOTED, AND GROUND SMOOTH.

E. BOTTOM OF LEGS AT FLOOR SHALL BE FITTED WITH SANITARY STAINLESS STEEL BULLET-TYPE FOOT, WITH NO LESS THAN 1/2" ADJUSTMENT.

F. LEGS SHALL BE FASTENED TO EQUIPMENT AS FOLLOWS:

01. TO SINKS BY MEANS OF CLOSED GUSSETS. GUSSETS SHALL BE S/S, REINFORCED WITH BUSHING, HAVING SET SCREWS FOR SECURING LEGS.

02. TO TABLES AND DRAINBOARDS WITH CLOSED GUSSETS WHICH SHALL BE WELDED TO GALVANIZED HAT SECTIONS OR CHANNELS, 14 GAUGE OR HEAVIER, EXPOSED HAT SECTIONS HAVING CLOSED ENDS. BRACING SHALL BE UNDERSIDE OF TOPS.

G. CLOSED GUSSETS SHALL BE 3" MINIMUM DIAMETER AT TOP, WELDED TO FRAME MEMBERS OR TO SINK BOTTOM.

H. ROLLS SHALL BE 1 1/2" DIAMETER, EXCEPT AS DETAILED TO THE CONTRARY, WITH CORNERS BULLNOSED, GROUND, AND POLISHED.

I. SEAMS AND JOINTS SHALL BE SHOP-WELDED WHERE POSSIBLE. WELDS TO BE GROUND AND POLISHED TO MATCH ORIGINAL FINISH. MATERIALS 18 GAUGE OR HEAVIER SHALL BE WELDED.

J. METAL TOPS SHALL BE ONE-PIECE WELDED CONSTRUCTION UNLESS SPECIFIED OTHERWISE, REINFORCED ON UNDERSIDE WITH GALVANIZED HAT SECTIONS OR CHANNELS WELDED IN PLACE. CROSSBRACE TO BE NOT MORE THAN 30" ON CENTERS.

K. HARDWARE SHALL BE SOLID MATERIALS AND EXCEPT WHERE EXPOSED OR SPECIFIED TO THE CONTRARY, OF CAST BRASS, CHROME-PLATED. IDENTIFY ALL HARDWARE WITH MANUFACTURER'S NAME AND NUMBER SO THAT BROKEN OR WORN PARTS MAY BE ORDERED AND REPLACED.

L. FABRICATE SINK COMPARTMENTS WITH 3/4" COVED VERTICAL AND HORIZONTAL CORNERS. MULTIPLE- COMPARTMENT PARTITIONS TO BE DOUBLE THICKNESS, CONTINUOUSLY WELDED WHERE SHEETS JOIN AT TOP. FRONT OF MULTIPLE-COMPARTMENT PARTITIONS TO BE CONTINUOUS ON EXTERIOR. BOTTOMS SHALL BE CREASED TO DRAIN.

M. ENDS OF FIXTURES, SPLASHBACKS, SHELVES, ETC., SHALL BE FINISHED FLUSH TO WALLS OR ADJOINING FIXTURES.

N. DISHTABLES, DRAINBOARDS, SPLASHBACKS, AND TURN-UP EDGES SHALL HAVE RADIUS BENDS IN ALL HORIZONTAL AND VERTICAL CORNERS, COVED AT INTERSECTIONS.

O. ROUNDED AND COVED CORNERS OR RADIUS BENDS SHALL BE 1/2" RADIUS OR LONGER.

P. UNDERSIDES OF TOPS TO BE COATED WITH HEAVY-BODIED RESINOUS MATERIAL COMPOUND FOR PERMANENT, NON-FLAKING ADHESION TO METAL, 1/8" THICK, APPLIED AFTER REINFORCING MEMBERS HAVE BEEN INSTALLED, DRYING WITHOUT DIRT-CATCHING CREVICES.

Q. SHELVES ARE TO BE TURNED UP 2" ON THE BACK EDGE. TURN OTHER EDGES DOWN 1 1/2" TO FORM OPEN CHANNELS. REINFORCE SHELF UNITS TO SUPPORT 40 LBS. PER SQUARE FOOT LOADING, PLUS 100% IMPACT LOADING.

R. TRIMWORK AND FRAMING AT MASONRY OPENINGS SHALL BE 18 GAUGE STAINLESS STEEL AND FORMED SO AS TO FIT SNUG TO WALLS AND ADJACENT SURFACES. FRAMING SHALL EXTEND A MINIMUM OF 2" ON EACH SURFACE. SEAL TRIMWORK TO WALLS. REFER TO DRAWINGS.

S. METAL COMPONENTS, UNLESS SPECIFIED OR NOTED OTHERWISE, TO BE THE FOLLOWING GAUGES:

TABLETOPS	14 GAUGE STAINLESS STEEL
WALL SHELVES	16 GAUGE STAINLESS STEEL
UNDER SHELVES	16 GAUGE STAINLESS STEEL
SINKS & DRAINBOARDS	14 GAUGE STAINLESS STEEL
EXHAUST DUCTS	18 GAUGE STAINLESS STEEL
LEGS - 1 5/8" DIA.	16 GAUGE STAINLESS STEEL

10 CUSTOM FAB NOTES
NOT TO SCALE

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FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PARKWAY
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SOCIETY INTERNATIONAL
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
DOCUMENTS BEARING ON THIS SEAL ARE AUTHORIZED BY MELISSA MOORE, FCSI ISO 48854119 ON: 07/18/2025

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AND PLANNING
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PROJ. NO.: 23-25
DATE: 07/18/25
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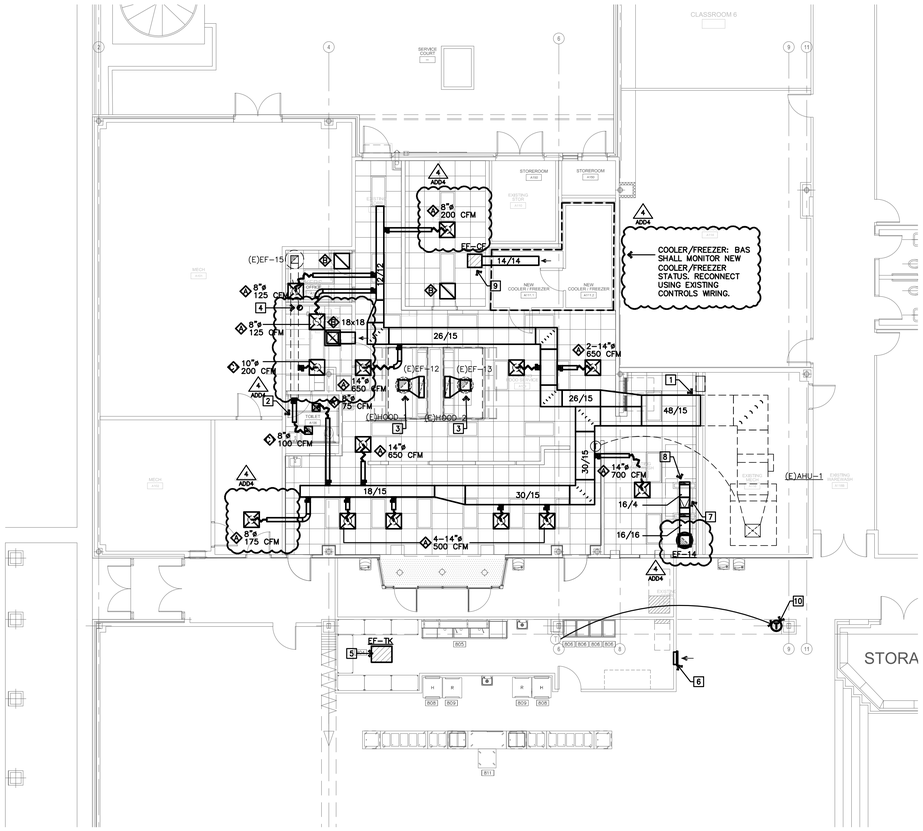
FS DETAILS

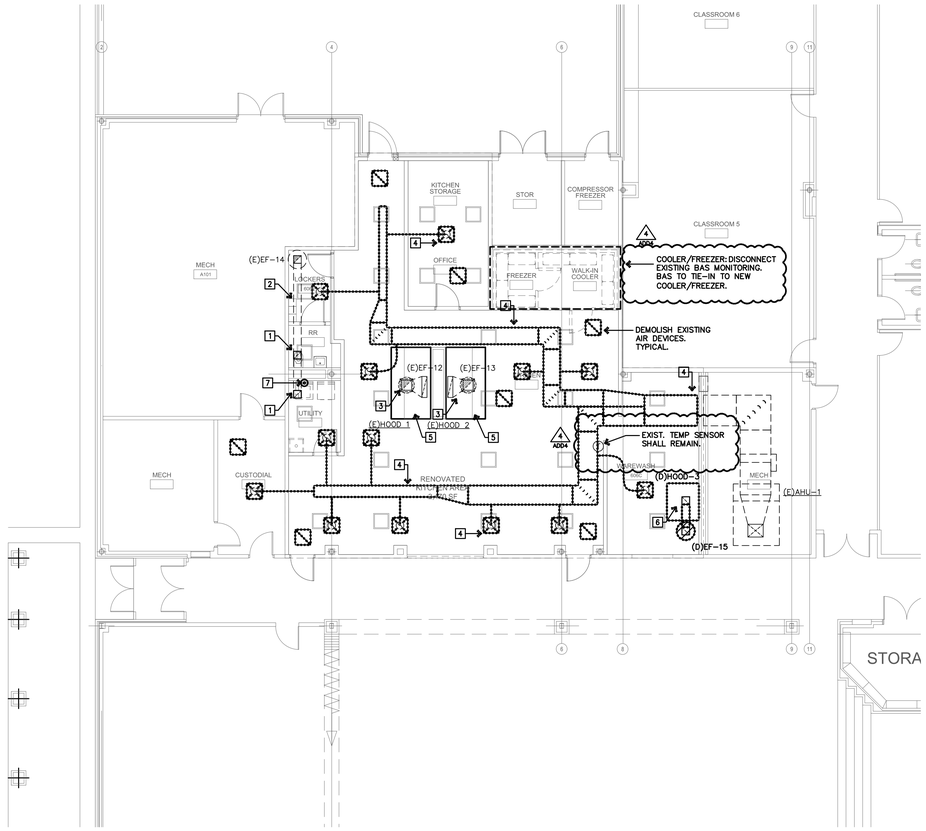
A-QF4.3



2 RENO MECHANICAL FLOOR PLAN - KITCHEN AREA

SCALE: 1/8" = 1'-0"

NORTH



1 EXIST/DEMO MECHANICAL FLOOR PLAN - KITCHEN AREA

SCALE: 1/8" = 1'-0"

NORTH

MECHANICAL RENO KEYED NOTES

1. TIE-IN NEW DUCTWORK TO EXISTING DUCTWORK AT WALL PENETRATION.
2. CONNECT NEW AIR DEVICE AND TAP TO EXISTING E/A TRUNK DUCT.
3. EXISTING KITCHEN HOOD AND ASSOCIATED EXHAUST DUCTWORK AND FAN SHALL REMAIN. VERIFY OPERATION AND REPORT ANY DEFICIENCIES TO THE A/E FOR REVIEW.
4. NEW 6" DRYER FLUE VENT DUCT AND TO VENT CAP. DETAIL 4/M2.02.
5. TEMP. KITCHEN – CEILING MOUNTED CABINET EXHAUST FAN. DETAIL 1/M2.02.
6. TEMP. KITCHEN – 24"X24" SIDE WALL GRILLE. SURFACE MOUNT OPTIONAL. AUXILIARY FRAME. TITUS CT-700.
7. NEW DISH MACHINE: TWO (2) 4"x16" EXHAUST DUCT CONNECTIONS. TRANSITION. PROVIDE NEW CONDENSATE EXHAUST DUCTWORK TO NEW ROOF MOUNTED EXHAUST FAN.
8. NEW ROOF MOUNTED EXHAUST FAN SERVING DISH MACHINE. INSTALL ON EXISTING ROOF OPENING. DETAIL 3/M2.02.
9. INLINE FAN INSTALLED ABOVE PLENUM. DETAIL 2/M2.02
10. TEMPORARILY RELOCATE THERMOSTAT (TIED TO CAFTETERIA AHU) TO COLUMN LOCATED OUTSIDE OF TEMPORARY KITCHEN AREA. THERMOSTAT TO BE MOVED BACK TO THE ORIGINAL LOCATION AFTER REMOVAL OF THE TEMPORARY KITCHEN. RELOCATION SHALL BE NON-DESTRUCTIVE, AS TO NOT DAMAGE EXISTING FINISHES WHEN REINSTALLED IN ORIGINAL LOCATION.

MECHANICAL DEMO KEYED NOTES

1. DEMOLISH EXISTING AIR DEVICE, BRANCH DUCT, DAMPER AND TAP BACK TO TRUNK DUCT. CAP AND SEAL RESULTING OPENING.
2. EXISTING E/A TRUNK DUCT TO REMAIN.
3. EXISTING E/A DUCTWORK AND EXHAUST FAN SERVING KITCHEN HOOD SHALL REMAIN FOR FUTURE USE. EXISTING HOOD FAN INTERLOCK/CONTROLS WIRING SHALL REMAIN FOR RE-USE.
4. DEMOLISH ALL EXISTING AIR DEVICES, DUCTWORK, AND DUCTWORK ACCESSORIES SERVING KITCHEN AREA BACK TO MECH. ROOM WALL PENETRATION. EXISTING FIRE DAMPER AT MECH. ROOM WALL TO REMAIN.
5. REFURBISH EXISTING KITCHEN HOOD. REFER TO "KITCHEN HOOD REFURBISHMENT NOTES".
6. DEMOLISH EXISTING CONDENSATE HOOD, ASSOCIATED DUCTWORK, AND ROOF EXHAUST FAN.
7. DEMO AND CAP EXISTING DRYER VENT AND FLUE.

EXHAUST FAN SCHEDULE

MARK	EF-TK	EF-CF	EF-14
SERVES	TEMPORARY KITCHEN	COOLER/FREEZER	DISH WASHER
TYPE	CEILING CABINET	INLINE FAN	ROOF UPBLAST
DRIVE	DIRECT	DIRECT	DIRECT
SPEED CONTROL	CONSTANT	CONSTANT	CONSTANT
CFM	1055	1000	1200
EXT. S.P. (IN. W.G.)	0.3	0.35	0.75
IMP. SIZE (IN.)	8.0	13.5	14
HORSEPOWER (WATTS)	1/3 HP	1/6 HP	1/3 HP
VOLTAGE	120V/1-PHASE	120V/1-PHASE	120V/1-PHASE
MANUFACTURER	COOK	COOK	COOK
MODEL	GC-862	135SQN10D	CUE-140-B
SONES (MAX.)	15.0	15.0	15.0
NOTES	1,2,3,4	1,2,3,4	1,2,3,4,5,6

NOTES

1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN. FANS SHALL BE CAPABLE OF 120% OF THE SCHEDULED CFM CAPACITY.
2. INTEGRAL DISCONNECT SWITCH.
3. RUBBER IN-SHEAR ISOLATORS.
4. BACKDRAFT DAMPER.
5. BIRD SCREEN AND NEW ROOF CURB.
6. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.
7. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH. (A/A004)

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A	CEILING DIFFUSER – 24" X 24" FACE, PATTERN TYPE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE SCD A1-12" X 12"
B	CEILING RETURN GRILLE – 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE PDFR B1-12" X 12"
C	CEILING EXHAUST GRILLE – 24" X 24" PERFORATED FACE, STEEL CONST., WHITE FINISH, NECK SIZE SHOWN, U.L. LISTED PRICE PDDR C1-12" X 12"

NOTES:

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPES FOR AIR DEVICES.

(A/A004)

KITCHEN HOOD REFURBISHMENT NOTES

HOOD REFURBISHMENT FOR KITCHEN HOODS (QUANTITY 2):

- STEAM WASH AND DEEP CLEAN STAINLESS STEEL HOOD ASSEMBLY, CASING, AND SUPPLY GRILLES WHERE APPLICABLE.
- REPLACE GREASE FILTER RACKS.
- CLEAN EXISTING MAKE-UP AIR AND GREASE EXHAUST DUCT.
- RELAMP EXISTING LIGHT FIXTURES WITH NEW 4000K BULBS LISTED FOR USE IN AN ENCLOSED KITCHEN HOOD FIXTURE.
- COORDINATE WITH DIVISION 11 FOR REPLACEMENT OF ANSUL FIRE SUPPRESSION SYSTEM.
- HOOD ASSEMBLIES SHALL BE CLEANED TO MEET THE STANDARDS ESTABLISHED IN NFPA STANDARD 96.

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09/04/2025 (A/A004)	ADDENDUM 04

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PROJ. NO.: 23-25
DATE: 07/18/2025
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LEVEL 1 KITCHEN MECHANICAL PLANS

A-M1.01

STANTON ENGINEERING GROUP
INFORMATION@STANTONENGINEERING.COM (713) 300-6056

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12300 W. SAM HOUSTON PARKWAY N., SUITE 121, HOUSTON, TX 77064

MECHANICAL SYMBOL SCHEDULE

CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
RS	REFRIGERANT SUPPLY
RR	REFRIGERANT RETURN
D	CONDENSATE LINE
	PETE'S PLUG
	ISOLATION VALVE
	ELECTRONIC CONTROL VALVE
	BUTTERFLY VALVE
	BALL VALVE
	UNION OR FLANGE
	STRAINER
	AUTOMATIC AIR VENT
T	LOCAL CONTROL THERMOSTAT
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	FIRE/SMOKE COMBINATION DAMPER
MD	MOTORIZED DAMPER
C	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST GRILLE
10	RETURN AIR OPENING IN WALL
VD	VOLUME DAMPERS
20	DUCT ELEVATION CHANGE
	90° DUCT ELBOW WITH TURNING VANES
	FLEXIBLE DUCT

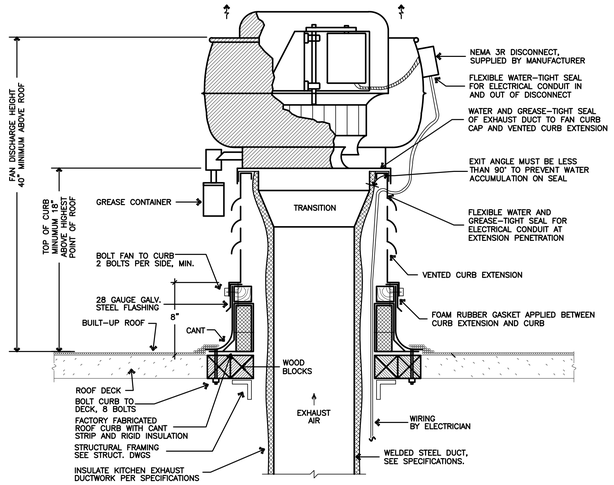
M	DAMPER MOTOR
T	TEMPERATURE TRANSMITTER
FS	FLOW SWITCH
P	DIFFERENTIAL PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
PS	STATIC PRESSURE SENSOR
PH	STATIC PRESSURE SENSOR HI-LIMIT
	ACCESS PANEL

A.P.	ACCESS PANEL
AHU	AIR HANDLING UNIT
B	BOILER
CH	CHILLER
CHP	CHILLED WATER PUMP
CVT	CONSTANT VOLUME TERMINAL
DH	DEHUMIDIFIER
E/A	EXHAUST AIR
EF	EXHAUST FAN
F&B	FACE & BYPASS
FF	FLY FAN
HDT	HORIZONTAL DRAW THROUGH
HWP	HOT WATER PUMP
KEF	KITCHEN EXHAUST FAN
KSF	KITCHEN SUPPLY FAN
O/A	OUTSIDE AIR
OBD	OPPOSED-BLADES DAMPER
PT	PRE-TREAT
R/A	RETURN AIR
RAHU	ROOF-MOUNTED AIR HANDLING UNIT
S/A	SUPPLY AIR
SA	SOUND ATTENUATOR
SF	SUPPLY FAN
SPD	SPILTER DAMPER
SZ	SINGLE ZONE
VAV	VARIABLE AIR VOLUME
VB	VAV BOX
VD	VOLUME DAMPER
VDT	VERTICAL DRAW THROUGH
VFD	VARIABLE FREQUENCY DRIVE
WH	WATER HEATER
⌀	DESIGNATION FOR "ROUND"
⬭	DESIGNATION FOR "OVAL"

GENERAL MECHANICAL NOTES

3

1. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION OF EQUIPMENT AND PIPING WITH THE ELECTRICAL CONTRACTOR TO INSURE NEC CLEARANCE (42 INCHES) IN FRONT OF ALL ELECTRICAL PANELS. DO NOT INSTALL DUCTWORK OR WATER PIPING OVER THE TOP OF ELECTRICAL PANELS SEE DETAIL 1/M2.01.
3. DUCT SIZES SHOWN ARE NET FREE AIR PASSAGE DIMENSIONS, DUCTS ARE NOT LINED, BUT ARE EXTERNALLY INSULATED. RUNOUTS TO CEILING OUTLETS SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET METAL WITH SPIN-IN V.D. AT TRUNK TAPS, SEE DETAIL 1 & 2/M2.01.
4. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR EXACT LOCATIONS OF CEILING OUTLETS IN RELATION TO OTHER CEILING ENTITIES. OUTLETS MUST BE COMPATIBLE WITH THE CEILING TYPES FOR THE VARIOUS AREAS.
5. IN AREAS WHERE SUPPLY AIR ENTERS CEILING CAVITY THRU RETURN AIR GRILLES AND FREE RETURNS TO AHU'S VIA CEILING CAVITY, PROVIDE RETURN AIR OPENING IN WALL-TO-DECK ABOVE CEILING THAT BLOCK PATH, REFER TO ARCHITECTURAL DRAWINGS. RETURN AIR ELBOWS SHALL BE SIZED AT 1 SQ. FT PER 400 CFM SUPPLY AIR.
6. ARRANGE PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EASY REMOVAL OF EQUIPMENT, SUB-ASSEMBLIES, COILS, FANS, MOTORS, FILTERS, ACCESS PANELS, ETC... PROVIDE UNIONS, FLANGES AND VALVES AT CONNECTIONS. PROVIDE AND INSTALL VICTAULIC JOINTS AT COILS, REF. SPECIFICATIONS. PLACE STOP VALVES ON SYSTEM SIDE OF REMOVABLE PIPE SECTIONS.
7. CONTRACTOR SHALL FIELD MEASURE STRUCTURAL ELEMENTS AND COORDINATE EQUIPMENT, PIPING AND DUCT ROUTING TO FIT EXISTING CONSTRUCTION. PROVIDE OFFSETS, BOOTS FOR ENVELOP OBSTRUCTIONS THAT CANNOT BE AVOIDED. CONSTRUCTION SHALL BE PER SMACNA STANDARDS.
8. FIELD VERFY EXISTING CONDITIONS PRIOR TO PROCUREMENT OF EQUIPMENT AND SYSTEMS.
9. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICIABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION
10. PROVIDE DUCTWORK INSULATION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF IECC.
11. PROVIDE LISTED FIRE DAMPER INSTALLATIONS AT DUCT AND RETURN AIR OPENINGS AT PENETRATIONS THROUGH THROUGH RATED PARTITIONS AND BARRIERS. – SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
12. PROTECT DUCTWORK AND MECHANICAL EQUIPMENT FROM CONSTRUCTION DUST AND DEBRIS DURING CONSTRUCTION. SEAL OPENINGS AS REQUIRED.
13. PROVIDE AND MAINTAIN TEMPORARY AIR FILTERS AT AIR HANDLERS USED DURING CONSTRUCTION.
14. PATCH AND REPAIR MECHANICAL SYSTEMS AND INSULATION DAMAGED DURING CONSTRUCTION.
15. SECURE ROOF MOUNTED EQUIPMENT TO WITHSTAND 142 MPH BASIC WIND SPEED, RISK CATEGORY III, EXPOSURE CATEGORY B, IN ACCORDANCE WITH IBC REQUIREMENTS.

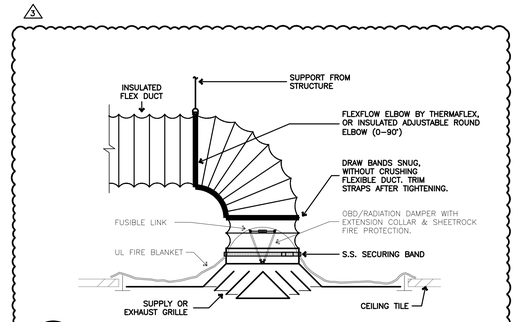


6 KITCHEN UPBLAST EXHAUST FAN DETAIL

NO SCALE

NOTES

1. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL.
2. INSTALL SHEETMETAL COVERING OVER WOOD BLOCKING IN THE AIRSTREAM OR OPEN TO THE CEILING CAVITY.

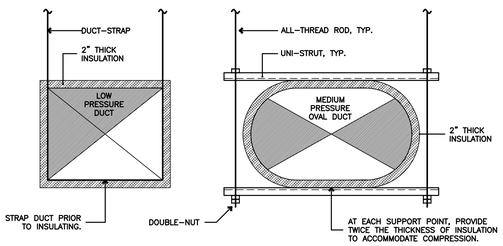


5 AIR DEVICE DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

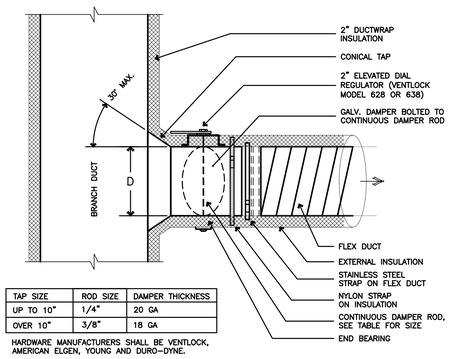


4 EXTERNALLY INSULATED DUCT SUPPORT DETAIL

NO SCALE

NOTES:

1. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT STRAPS.
2. DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



TAP SIZE	ROD SIZE	DAMPER THICKNESS
UP TO 10"	1/4"	20 GA
OVER 10"	3/8"	18 GA

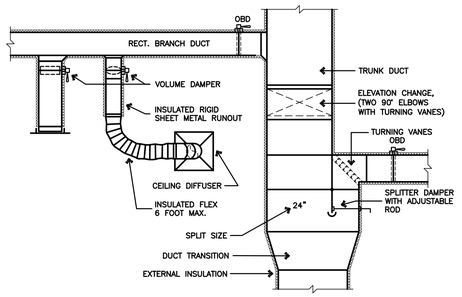
HARDWARE MANUFACTURERS SHALL BE VENTLOCK, AMERICAN ELGEN, YOUNG AND DURO-DYNE.

3 DUCT TAP CONNECTION DETAIL

NO SCALE

NOTES:

1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.
2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

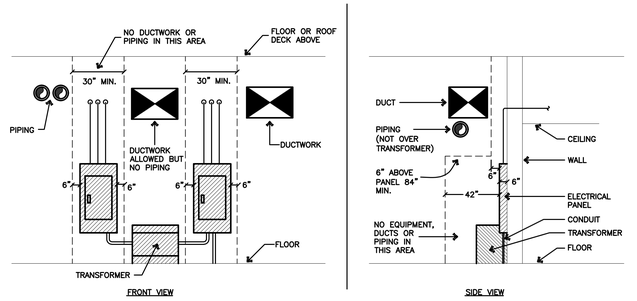


2 DUCTWORK DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

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4 09/04/2025 ADD4	ADDENDUM 04

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4400 AUSTIN PARKWAY
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MECHANICAL NOTES AND DETAILS
A-M2.01

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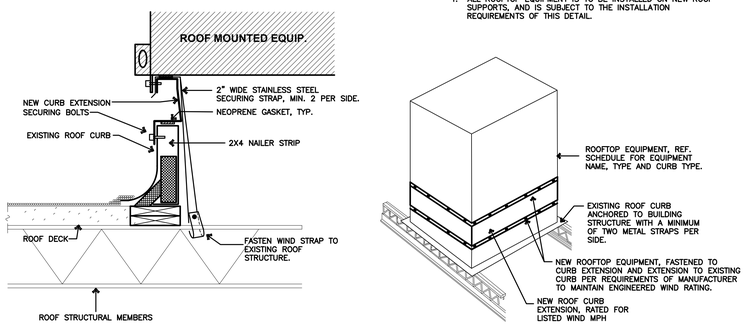
ROOF MOUNTED EQUIPMENT		
MARK	EQUIPMENT TYPE	CURB TYPE
EF-15	ROOF FAN	EXISTING PERIMETER

1. ALL ROOFTOP EQUIPMENT IS TO BE INSTALLED ON NEW ROOF SUPPORTS, AND IS SUBJECT TO THE INSTALLATION REQUIREMENTS OF THIS DETAIL.

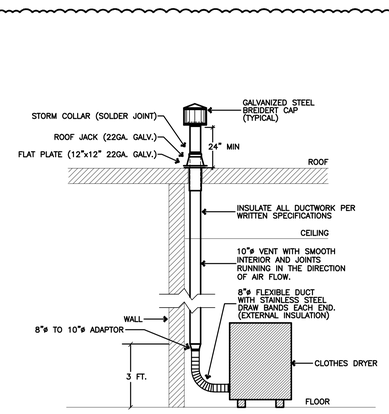


5 CURB MOUNTED EQUIPMENT ANCHORING

NO SCALE

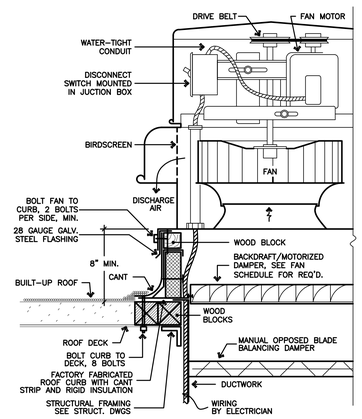
NOTES:

1. EQUIPMENT CURB AND EQUIPMENT ANCHORING BRACKETS SHALL BE DESIGNED TO WITHSTAND AN ASCE 7-22 WIND HAZARD RATING OF 147 MPH, FOR A CATEGORY III BUILDING AT THE PROJECT ADDRESS. THE CURB PROVIDER SHALL INCLUDE STAMPED DRAWINGS OF THE CURB AND ANCHORING DEMONSTRATING COMPLIANCE.



4 COMMERICAL CLOTHES DRYER VENT

NO SCALE

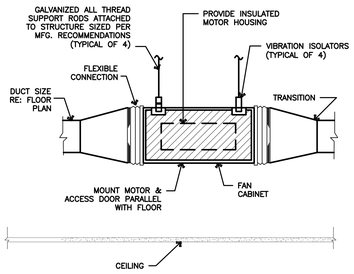


3 ROOF EXHAUST FAN AND VENT DETAIL

NO SCALE

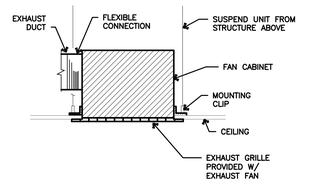
NOTES:

1. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.
2. ROOF VENT WILL NOT HAVE FAN/MOTOR ASSEMBLY, DISCONNECT SWITCH OR OBD.
3. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL WHERE APPLICABLE.
4. ALL FANS SCHEDULED TO BE PROVIDED WITH 140MPH WIND RATING, INCLUDING FACTORY PROVIDED CURB. CURB INSTALLATION SHALL FOLLOW MANUFACTURER'S REQUIREMENTS FOR SECURING TO ROOF AND EQUIPMENT WHERE IT DIFFERS FROM THE DETAIL.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 INLINE EXHAUST FAN DETAIL

NO SCALE



1 CABINET EXHAUST FAN

NO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
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a

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PARKWAY
SUGAR LAND, TX 77479

SEAL

TYLER W. HERRING
106052
LICENSED
PROFESSIONAL
ENGINEER
09.04.2025

MWA ARCHITECTS
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HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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MECHANICAL DETAILS (CONT'D.)

A-M2.02

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NEW PANEL

TEMP KITCHEN

PANEL LTK

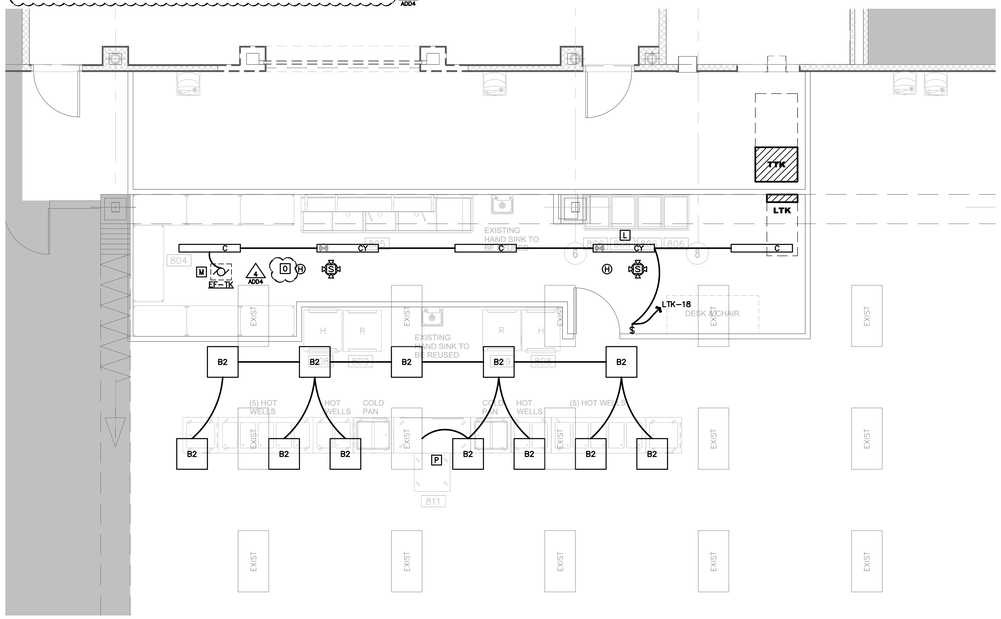
150A MCB
208Y/120V, 3ø, 4 WIRE

AVAILABLE FAULT: <10,000A
SCCR & AIC: 10,000A

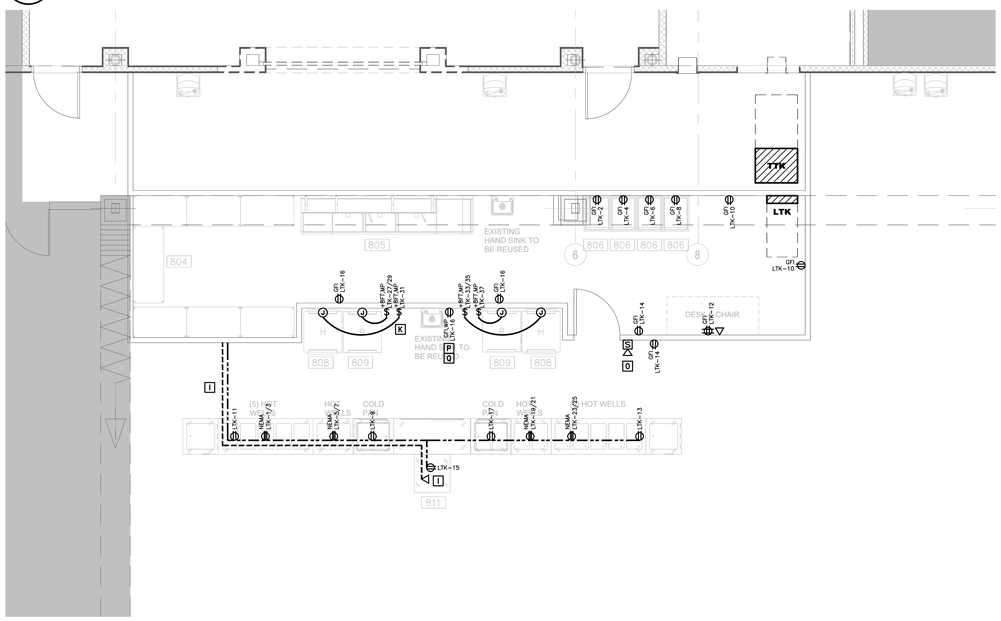
MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E810	2766	HOT WELLS	2–12	20/2GFI	1				2	20/1	3–12	TRANSPORT CART	1920	E806	
		–	–	+12G	–	3				4	20/1	3–12	TRANSPORT CART	1920	E806	
	E810A	1643	HOT WELLS	2–12	20/2GFI	5				6	20/1	3–12	TRANSPORT CART	1920	E806	
		–	–	+12G	–	7				8	20/1	3–12	TRANSPORT CART	1920	E806	
	E810B	600	COLD PAN	3–12	20/1GFI	9				10	20/1	3–12	2 REC	360	E800A	
	E810C	1200	BEVERAGE	3–12	20/1GFI	11				12	20/1	3–12	2 REC – DESK	360	E800B	
	E810C	1200	BEVERAGE	3–12	20/1GFI	13				14	20/1	3–12	2 REC	360	E800A	
	E811	180	CASH REGISTER	3–12	20/1GFI	15				16	20/1	3–12	3 REC	360	E800A	
	E810B	600	COLD PAN	3–12	20/1GFI	17				18	20/1	3–12	TEMP. KITCHEN LTS/FAN	566		
	E810A	1643	HOT WELLS	2–12	20/2GFI	19				20	20/1		SPARE			A/D04
		–	–	+12G	–	21				22	20/1		SPARE			A/D04
	E810	2766	HOT WELLS	2–12	20/2GFI	23				24	30/3	3–10	TEMP FOOD STORAGE UNIT	3100		4
		–	–	+12G	–	25				26	–	+10N+10G	–	–		
	E808	1622	HEATED CABINET	2–12	20/2	27				28	–	3/4"C	DUPLEX REC – SERVICE YARD	180		4
		–	–	+12N+12G	–	29				30	20/1	3–12	EXISTING CIRCUIT	500		3
	E809	984	REFRIGERATOR	3–12	20/1	31				32	20/1	3–12	EXISTING CIRCUIT	500		3
	E808	1622	HEATED CABINET	2–12	20/2	33				34	15/2	2–12	EXISTING CIRCUIT	1000		3
		–	–	+12N+12G	–	35				36	–	+12N+12G	–	–		
	E809	984	REFRIGERATOR	3–12	20/1	37				38	20/2	2–12	EXISTING CIRCUIT	1000		3
			SPARE		20/1	39				40	–	+12N+12G	–	–		
			SPARE		20/1	41				42	50/2	2–8	EXISTING CIRCUIT	5000		3
			SPARE		20/1	43				44	–	+8N+10G	–	–		
	TOTAL LOAD @ 100% = 38778VA						TOTAL LOAD @ 100% = 108A									

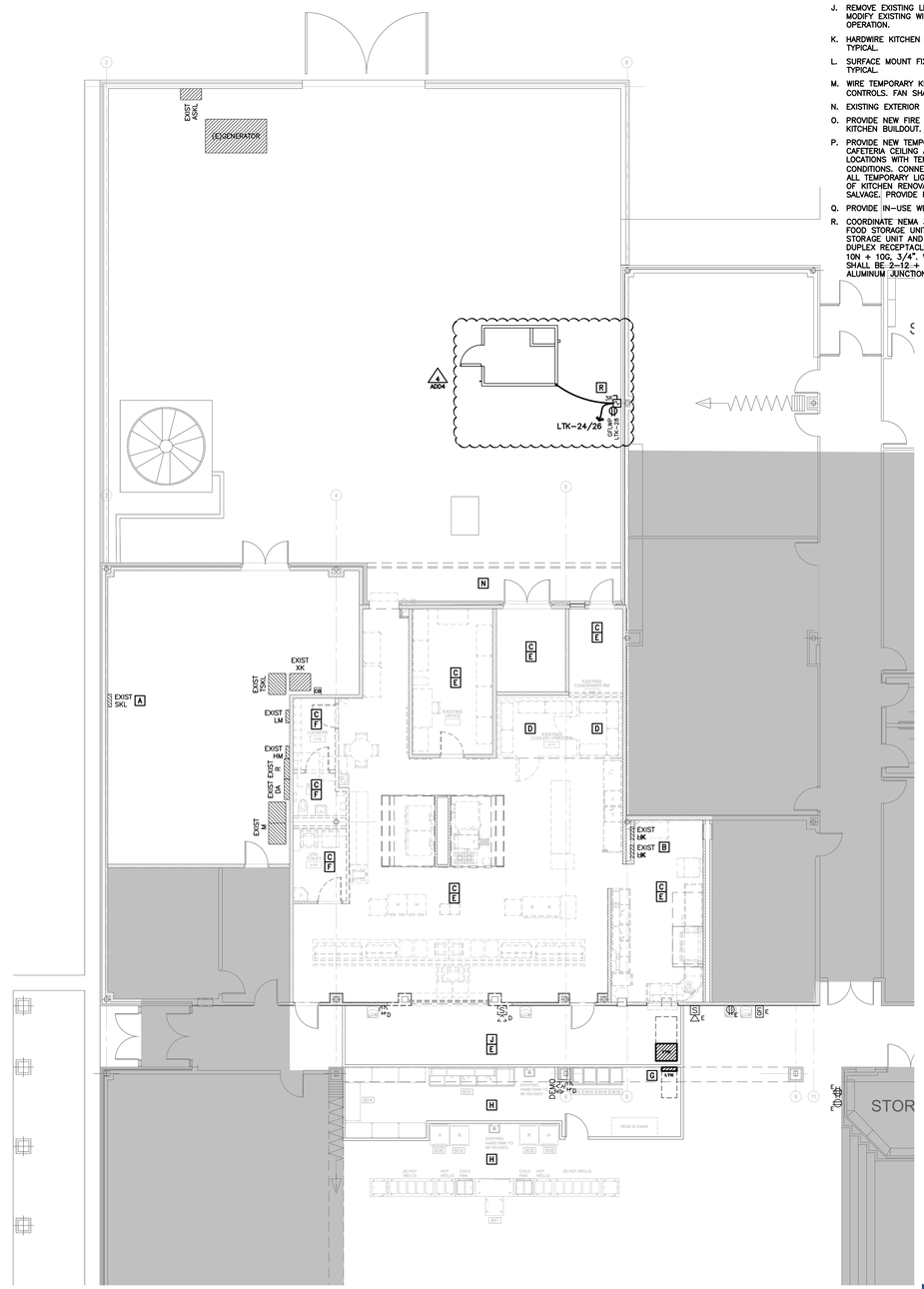
1. REF. KITCHEN CONSULTANT'S "FS" DRAWINGS FOR KITCHEN EQUIPMENT NUMBERS.
2. A DEMAND FACTOR PERCENT OF 65% HAS BEEN APPLIED TO THE KITCHEN EQUIPMENT LOAD PURSUANT TO NEC 220–20 AND NEC TABLE 220–20.
3. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AND REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION.
4. PROVIDE CIRCUIT FOR TEMPORARY FOOD STORAGE UNIT PRIOR TO BEGINNING DEMOLITION. A/D04



T1 **TEMPORARY KITCHEN - LIGHTING PLAN**
SCALE: 1/4" = 1'– 0"



T2 **TEMPORARY KITCHEN - ELECTRICAL PLAN**
SCALE: 1/4" = 1'– 0"



1 **DEMOLITION FLOOR PLAN**
SCALE: 1/8" = 1'– 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

A/D04

DEMOLITION NOTES:

A. EXISTING STANDBY GENERATOR PANEL TO REMAIN.

B. EXISTING KITCHEN PANELS TO BE REPLACED WITH NEW. MODIFY EXISTING WALLS TO MATCH NEW PANEL LAYOUTS AND DIMENSIONS.

C. EXISTING LIGHTING FIXTURES AND CEILING DEVICES TO BE REMOVED THROUGHOUT.

D. EXISTING WALK–IN COOLER/FREEZER AND ASSOCIATED EQUIPMENT TO BE REMOVED.

E. EXISTING WALL ELECTRICAL DEVICES TO BE REMOVED. EXISTING J–BOXES MAY BE REUSED WHERE NEW DEVICES ARE TO BE INSTALLED AT THE SAME LOCATIONS.

F. EXISTING ELECTRICAL DEVICES TO BE REMOVED.

G. NEW 208Y/120V PANEL AND TRANSFORMER FOR TEMPORARY KITCHEN TO BE INSTALLED PRIOR TO DEMOLITION. PANEL AND TRANSFORMER TO BE REMOVED AT END OF KITCHEN RENOVATION AND TURNED OVER TO THE DISTRICT. INSTALL TRANSFORMER ON PREMADE FIBERCRETE PAD AND WAFFLE TYPE VIBRATION ISOLATION PADS. DO NOT PROVIDE A POURED IN PLACE CONCRETE PAD AT THIS LOCATION.

H. PROVIDE RECEPTACLES AND LIGHT FIXTURES FOR TEMPORARY KITCHEN DURING RENOVATION. ALL TEMPORARY DEVICES AND EQUIPMENT TO BE REMOVED AT END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE.

I. CONDUITS ROUTED FROM TEMPORARY KITCHEN WALL AND BENEATH SERVING LINE. PROVIDE MULTICHANNEL ROLLOVER CABLE PROTECTOR FOR EXPOSED CONDUITS NOT UNDER THE SERVING LINE. ALL CONDUITS UNDER THE SERVING LINE SHALL BE SECURED TO/ROUTED ON TOP OF UNISTRUT AND NOT DIRECTLY ON THE FLOOR. DO NOT ANCHOR UNISTRUT TO THE EXISTING FLOORING. COORDINATE POWER AND DATA OUTLET LOCATIONS WITH OTHER TRADES.

J. REMOVE EXISTING LIGHT FIXTURES ABOVE NEW KITCHEN EXTENSION. MODIFY EXISTING WIRING TO MAINTAIN REMAINING FIXTURE OPERATION.

K. HARDWIRE KITCHEN EQUIPMENT TO LOCAL ON/OFF SWITCH. TYPICAL.

L. SURFACE MOUNT FIXTURES ON TEMPORARY KITCHEN CEILING. TYPICAL.

M. WIRE TEMPORARY KITCHEN FAN TO LOCAL LIGHTING CIRCUIT AND CONTROLS. FAN SHALL BE ON/OFF WITH LIGHTS.

N. EXISTING EXTERIOR LIGHT FIXTURES TO BE REMOVED.

O. PROVIDE NEW FIRE ALARM DEVICES AS PART OF THE TEMPORARY KITCHEN BUILDOUT.

P. PROVIDE NEW TEMPORARY LIGHT FIXTURES IN THE EXISTING CAFETERIA CEILING ABOVE THE SERVING LINE. COORDINATE LOCATIONS WITH TEMPORARY SERVING LINE AND EXISTING CONDITIONS. CONNECT TO EXISTING LIGHTING CONTROLS/CIRCUIT. ALL TEMPORARY LIGHT FIXTURES SHALL BE REMOVED AT THE END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE. PROVIDE REPLACEMENT CEILING TILES.

Q. PROVIDE IN–USE WEATHERPROOF COVER FOR RECEPTACLE.

R. COORDINATE NEMA 3R, FUSED SWITCH LOCATION WITH TEMPORARY FOOD STORAGE UNIT. INSTALL 2–25A FUSES TO SERVE FOOD STORAGE UNIT AND A 20A FUSE IN THIRD PHASE TO FEED DUPLEX RECEPTACLE. WIRING TO STORAGE UNIT SHALL BE 2–10 + 10N + 10G, 3/4". WIRING TO NEW 20A DUPLEX RECEPTACLE SHALL BE 2–12 + 12G. MOUNT RECEPTACLE IN NEMA 3R ALUMINUM JUNCTION BOX WITH WET LOCATION COVER.

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GEORGE L. STANTON
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09.04.2025

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ELECTRICAL DEMO AND TEMP PLANS

a-ED.100

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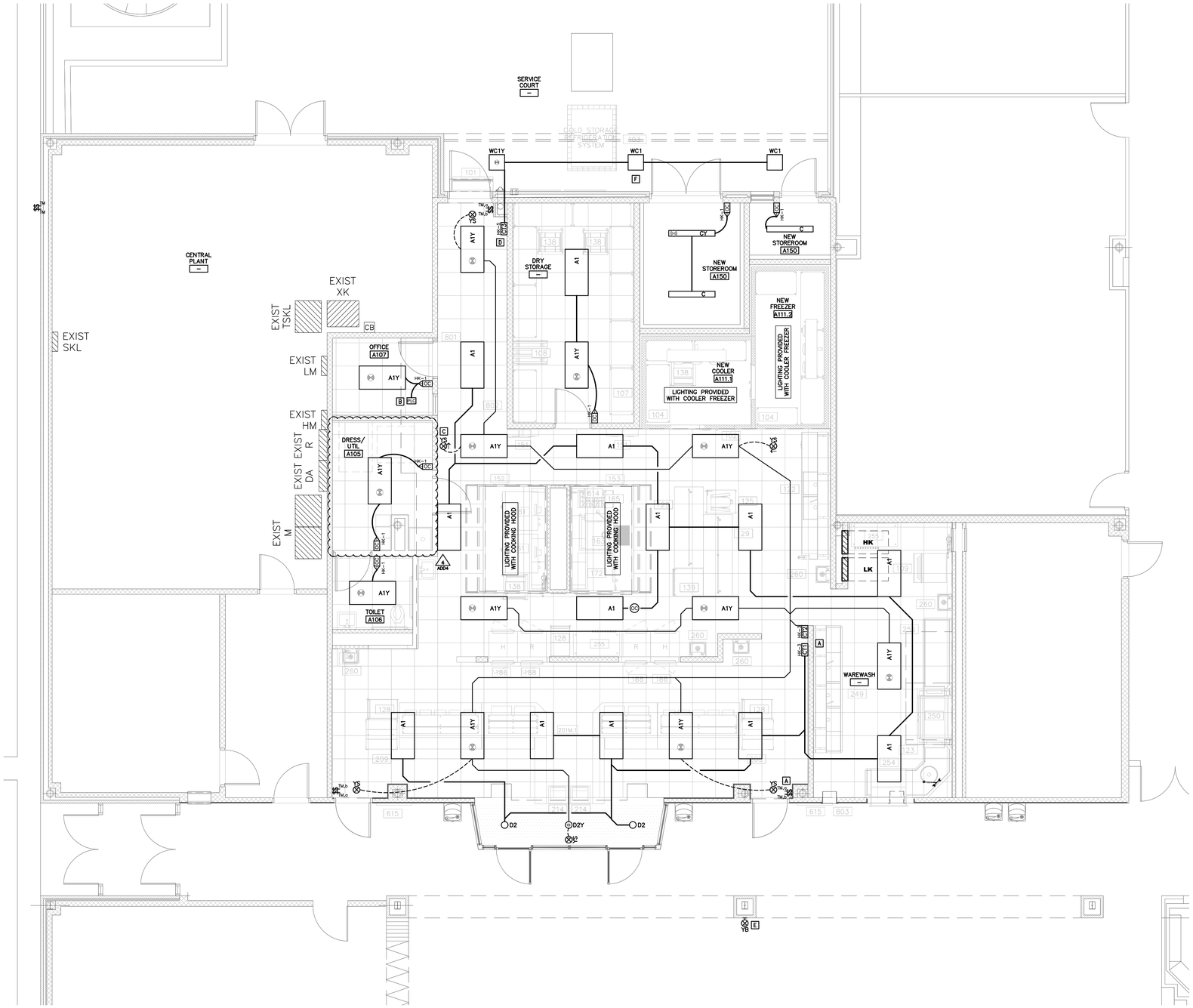

1 **LIGHTING RENOVATION PLAN**
SCALE: 1/4" = 1'-0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

LIGHTING RENOVATION NOTES:

A. KITCHEN LIGHTS TO BE CONTROLLED BY LOCAL MOMENTARY SWITCHES AND BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.
   LEFT SWITCH SHALL CONTROL ZONE 'a' NORMAL POWER LIGHTING FIXTURES.
   RIGHT SWITCH SHALL CONTROL ZONE 'b' EMERGENCY LIGHTING FIXTURES.

B. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

C. WIRE EXIT SIGNS UPSTREAM OF LIGHTING CONTROLS. TYPICAL.

D. EXTERIOR LIGHTS TO BE CONTROLLED BY BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.

E. AFTER REMOVAL OF THE TEMPORARY KITCHEN, PROVIDE NEW EXIT SIGN AT ORIGINAL LOCATION AND RECONNECT TO EXISTING CAFETERIAL LIGHTING CIRCUIT.

F. PATCH/REPAIR EXTERIOR SOFFIT TO ACCOMMODATE NEW SURFACE MOUNTED FIXTURES.

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AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PARKWAY
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LIGHTING FLOOR PLANS

a-E.100

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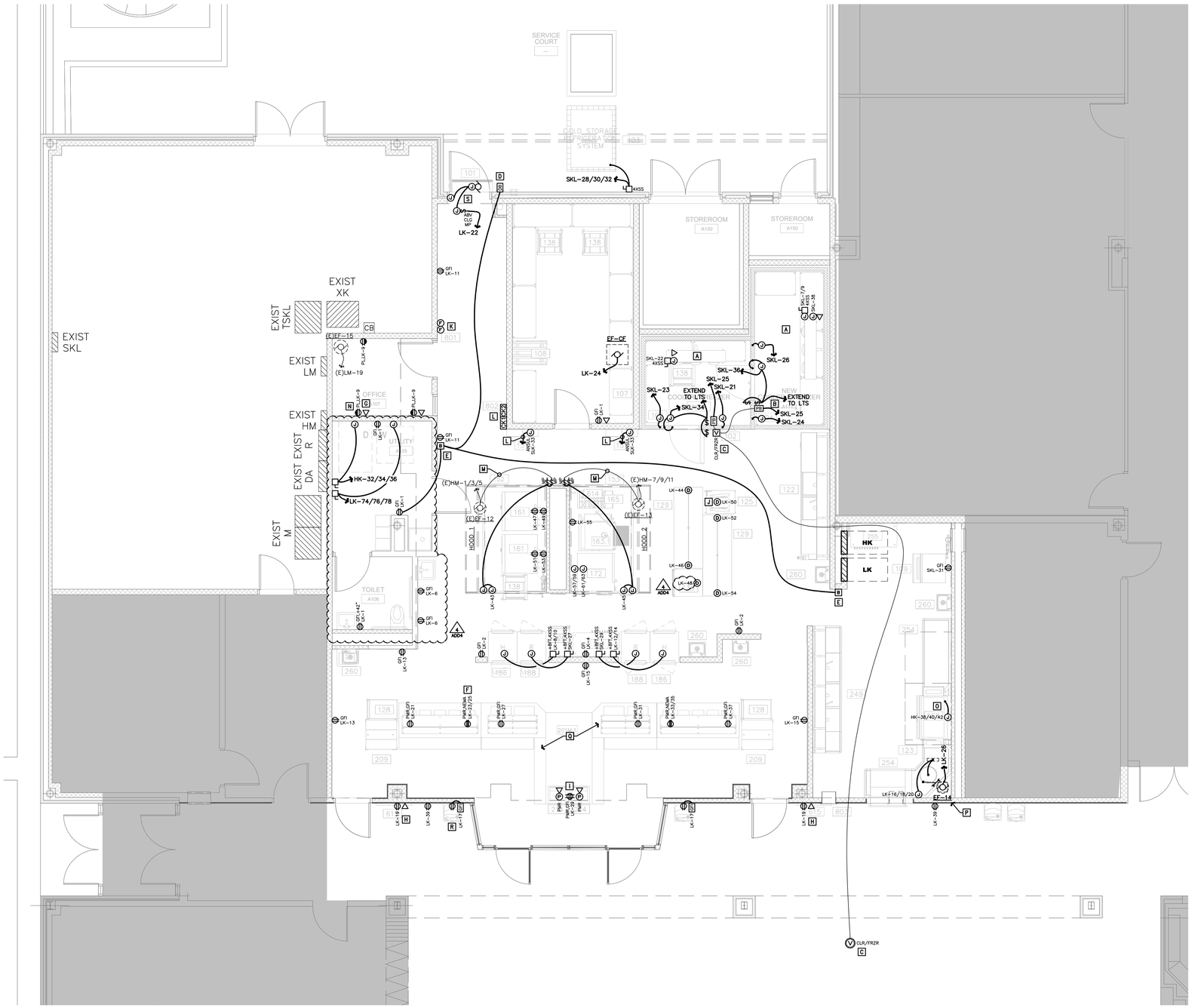

1 ELECTRICAL RENOVATION PLAN

SCALE: 1/4" = 1'- 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

ELECTRICAL RENOVATION NOTES:

A. CONNECT NEW FREEZER/COOLER AND CONDENSER TO EXISTING STANDBY GENERATOR.

B. PROVIDE ILLUMINATED PUSH BUTTON IN COOLER AND FREEZER. WHEN PRESSED RED STROBE DEVICES IN KITCHEN AND CAFETERIA SHALL ACTIVATE. TYPICAL.

C. PROVIDE HORN/STROBE DEVICE TIED TO PUSH BUTTONS IN FREEZER/COOLER.
(EDWARDS 860 SERIES OR EQUAL).

D. PROVIDE NEW DOORBELL BUTTON AT RECEIVING DOOR. DOORBELL BUTTON SHALL BE THE CLOSEST DEVICE TO THE DOOR FRAME.

E. PROVIDE NEW VIBRATING BUZZER TIED TO DOORBELL BUTTON AT RECEIVING DOOR. BUZZER TO BE WALL MOUNTED JUST BELOW THE CEILING.

F. PROVIDE NEW ELECTRICAL DEVICES MATCHING NEW KITCHEN EQUIPMENT AND ROOM LAYOUTS. REFERENCE FOOD SERVICE DRAWINGS. TYPICAL.

G. PROVIDE ROUGH-IN FOR LOW VOLTAGE DEVICES. REFERENCE TECHNOLOGY DRAWINGS, TYPICAL.

H. POWER AND DATA ROUGH-IN FOR KITCHEN MENU BOARD.

I. POWER AND DATA ROUGH-IN FOR POINT OF SALE (POS) LOCATION.

J. PROVIDE DROP CORD RECEPTACLE WITH HUBBELL KELLEMS LIQUIDTIGHT GRIPS FOR STRAIN RELIEF, TYPICAL OF ALL.

K. PROVIDE J-BOXES AND CONDUIT FOR REMOTE FIRE PULLS, SEE FOOD SERVICE DETAIL DRAWING FOR REQUIREMENTS, TYPICAL

L. WIRE ANSUL SYSTEM TO HOOD EQUIPMENT CONTROL CONTRACTOR. UPON ANSUL SYSTEM ACTIVATION ALL POWER TO EQUIPMENT BENEATH THE HOODS SHALL BE DEACTIVATED. MOUNT CONTACTOR CABINET(S) JUST BELOW THE CEILING.

M. PROVIDE SEPARATE SWITCHES TO TURN ON HOOD LIGHTS AND FANS. WIRE HOOD TEMP SENSOR AHEAD OF HOOD LIGHT SWITCH. USE 120V CIRCUIT TO CONTROL HOOD FANS THROUGH EXISTING STARTER. PROVIDE CONTROLS TRANSFORMER AS REQUIRED TO MATCH STARTER CONTROL INPUT VOLTAGE. TYPICAL.

N. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

O. INTERCONNECT DISH MACHINE TO VENT CONTROL. INTERCONNECT TABLE LIMIT SWITCH TO DISHMACHINE.

P. EXISTING MECHANICAL EQUIPMENT TO BE REPLACED. CONNECT TO CIRCUIT AS SHOWN. RECONNECT TO EXISTING STARTER/CONTACTORS, FIELD VERIFY.

Q. SAWCUT FLOOR TO INSTALL NEW PEDESTAL MOUNTED DEVICE BENEATH NEW SERVING LINES, DO NOT REUSE EXISTING STUB UPS OR DEVICES. POUR BACK SLAB AND PROVIDE NEW FINISHES, REFERENCE ARCHITECTURAL.

R. REFERENCE EDF GFI PROTECTION DETAIL FOR INSTALLATION REQUIREMENTS, TYPICAL.

S. WIRE MICRO SWITCH IN DOOR FRAME TO AIR SCREEN. COOR W/ FOOD SERVICE CONTRACTOR PRIOR TO ROUGH-IN. LOCATE LOCAL MOTOR RATED SWITCH ABOVE CEILING ADJACENT TO THE AIR SCREEN.

COOLER/FREEZER NOTES:

1. PROVIDE SEALING FOR CONDUIT IN COOLER AND FREEZER. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, CIRCULATION OF AIR FROM WARMER TO A COLDER SECTION SHALL BE PREVENTED PER N.E.C. ARTICLE 300.7 (A).
2. PROVIDE GROUND-FAULT PROTECTION OF EQUIPMENT FOR ELECTRIC HEAT TRACING AND HEATING PANELS IN THE FREEZER PER N.E.C. ARTICLE 427.22.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE LIQUID TIGHT CONDUIT AND WIRING FOR LIGHT FIXTURES AND LIGHT SWITCHES IN WALK-IN COOLER AND FREEZER, SEE FOODSERVICE CONSULTANT'S DRAWINGS.

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ELECTRICAL FLOOR PLANS

a-E.200

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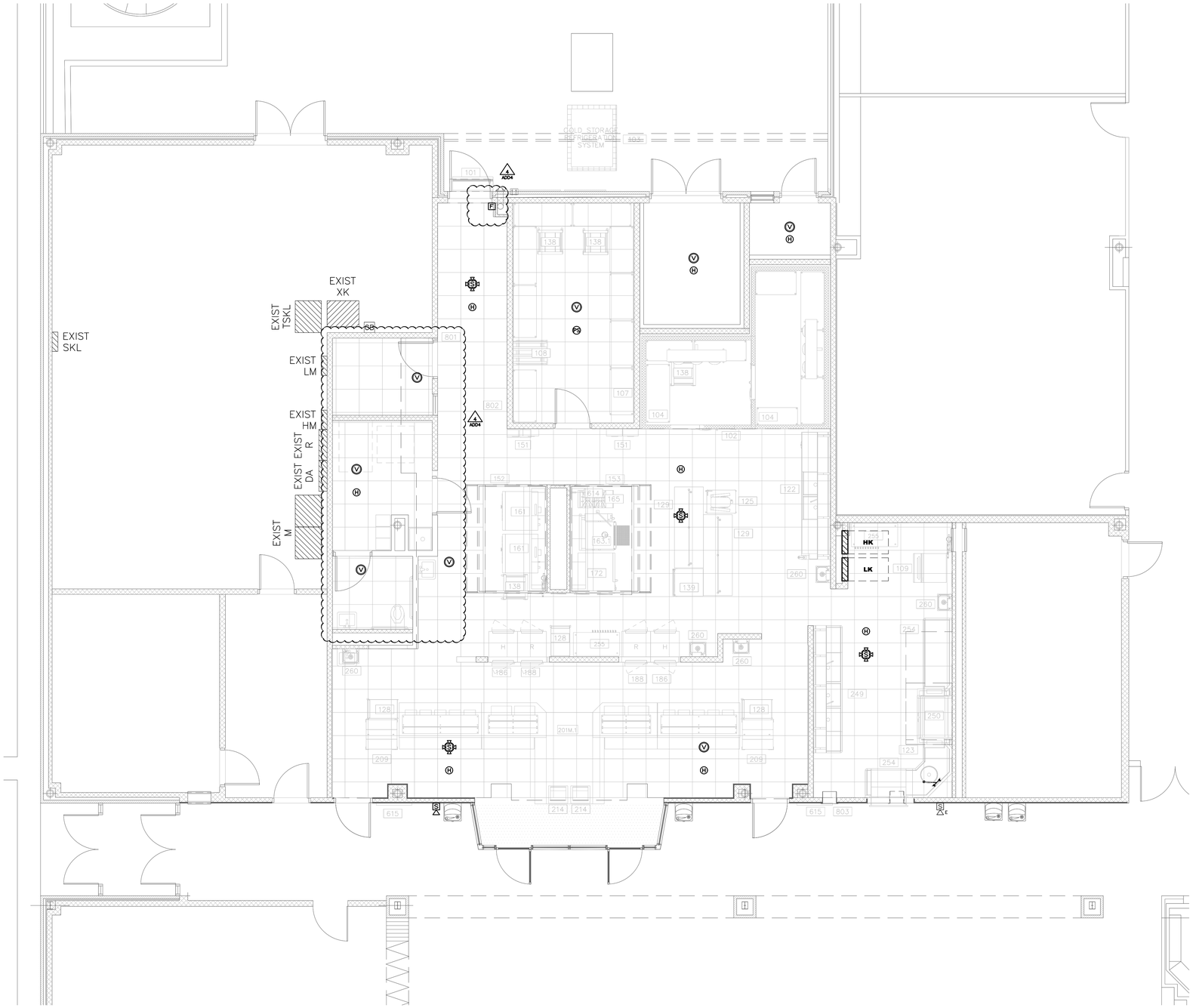

1 FIRE ALARM RENOVATION PLAN
SCALE: 1/4" = 1'- 0"

ISSUE:

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FIRE ALARM FLOOR PLANS

a-E.300

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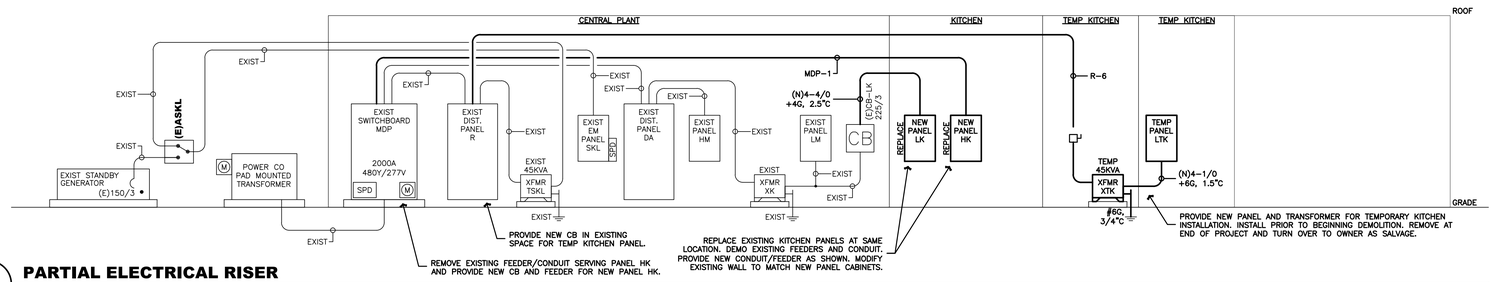

1 PARTIAL ELECTRICAL RISER

NO SCALE

NOTES:
1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED/CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.
5. REFERENCE PANEL SCHEDULES AND SHORT CIRCUIT TABLE FOR AIC AND SCCR VALUES.

NEW KITCHEN PANEL

PANEL HK — 225A MLO, 480Y/277V, 3ϕ, 4 WIRE — AVAILABLE FAULT: 20,250A — SCCR & AIC: 25,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
		325	KITCHEN ROOM LIGHTS	3–12	20/1	1				2			SPACE			
6		1041	KITCHEN LIGHTS	3–12	20/1	3				4			SPACE			
7		84	KITCHEN SOFFIT LIGHTS	3–12	20/1	5				6			SPACE			
			SPARE		20/1	7				8			SPACE			
			SPARE		20/1	9				10			SPACE			
			SPARE		20/1	11				12			SPACE			
			SPARE		20/1	13				14			SPACE			
			SPARE		20/1	15				16			SPACE			
			SPARE		20/1	17				18			SPACE			
			SPARE		20/1	19				20			SPACE			
			SPACE			21				22			SPACE			
			SPACE			23				24			SPACE			
			SPACE			25				26			SPACE			
			SPACE			27				28			SPACE			
			SPACE			29				30			SPACE			
			SPACE			31				32	45/3	3–8	COMMERCIAL DRYER	28254		
			SPACE			33				34	–	+10G	–	–		ADD4
			SPACE			35				36	–	3/4"C	–	–		
			SPACE			37				38	70/3	3–8	DISHMACHINE	42983	E250	
			SPACE			39				40	–	+8G	–	–		
			SPACE			41				42	–	3/4"C	–	–		
TOTAL LOAD @ 100% = 72667VA						TOTAL LOAD @ 100% = 87A							TOTAL LOAD @ 125% = 109A			

NEW KITCHEN PANEL

PANEL LK — 225A MLO, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E10	820	4 REC – RR/STOR/CUST & BELL	3–12	20/1	1				2	20/1	3–12	2 REC – KITCHEN	360	E10	
			SPARE		20/1GFI	3				4	20/1	3–12	1 REC – KITCHEN	180	E10	
			SPARE		30/2GFI	5				6	20/1	3–12	2 REC – KITCHEN	360	E11	
4 ADD4		–	–		–	7				8	20/2	2–10	HEATED CABINET	3224	E187	
		540	3 REC – OFFICE	3–12	20/1	9				10	3/4"C	+10G	–	–		
	E10	360	2 REC – KITCHEN	3–12	20/1	11				12	20/2	2–10	HEATED CABINET	3224	E187	
	E10	360	2 REC – SERVING LINE	3–12	20/1	13				14	3/4"C	+10G	–	–		
	E10	360	2 REC – SERVING LINE	3–12	20/1	15				16	20/3	3–12	DISPOSER	3960	E123	
		1000	2 EDF – CAFETERIA	3–12	20/1	17				18	–	+12G	(3 HP)	–		
	E615	500	2 MENU BOARDS	3–12	20/1	19				20	–	3/4"C	–	–		
	E209	960	MILK COOLER	3–12	20/1 ADD4	21				22	20/1	3–12	AIR SCREEN	612	E101	
	E201A	5824	HOT FOOD COUNTER	2–8	35/2GFI	23				24	15/1	3–12	EF–14 (1/3HP)	864		
		–	–	+10G	3/4"C	25				26	15/1	3–12	EF–14 (1/3HP)	528		
	E201B	1920	COLD FOOD COUNTER	3–12	20/1	27				28	20/1		SPARE			
	E214	360	CASH REGISTERS	3–12	20/1	29				30	20/1		SPARE			
	E201B	1920	COLD FOOD COUNTER	3–12	20/1 ADD4	31				32	20/1		SPARE			
	E201A	5824	HOT FOOD COUNTER	2–8	35/2GFI	33				34	20/1		SPARE			
		–	–	+10G	3/4"C	35				36	20/1		SPARE			
	E209	960	MILK COOLER	3–12	20/1	37				38	20/1		SPARE			
		360	2 REC – CAFETERIA	3–12	20/1	39				40	20/1		SPARE			
			SPARE		20/1	41				42	20/1		SPARE			
	E153/E153M	250	HOOD LTS & SENSOR	3–12	20/1	43				44	20/1GFI	3–12	DROP CORD	180	E129	
	E153/E153M	250	HOOD LTS & SENSOR	3–12	20/1	45				46	20/1GFI	3–12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	47				48	20/1GFI	3–12	MOBILE PROOFER	1800	E139	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	49				50	20/1GFI	3–12	20QT MIXER	960	E125	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	51				52	20/1GFI	3–12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	53				54	20/1GFI	3–12	DROP CORD	180	E129	
8	E163	600	TILT BRAISING PAN 4 ADD4	3–12	20/1GFI	55				56			SPACE			
8	E172	3120	COMBI OVEN	2–12	20/2	57				58	20/1	3–12	EXISTING CIRCUIT	500		5
		–	–	+12G	3/4"C	59				60	20/1	3–12	EXISTING CIRCUIT	500		5
8	E172	3120	COMBI OVEN	2–12	20/2	61				62	15/2	2–12	EXISTING CIRCUIT	1000		5
		–	–	+12G	3/4"C	63				64	–	+12N+12G	–	–		
			SPARE		20/1	65				66	20/2	2–12	EXISTING CIRCUIT	1000		5
			SPARE		20/1	67				68	–	+12N+12G	–	–		
			SPARE		20/1	69				70	30/2	2–10	EXISTING CIRCUIT	3000		5
			SPARE		20/1	71				72	–	+10N+10G	–	–		
			SPACE			73				74	20/3	3–12	WASHER	3408		
			SPACE			75				76	–	+12G	–	–		
			SPACE			77				78	–	3/4"C	–	–		
			SPACE			79				80			SPACE			
			SPACE			81				82			SPACE			
			SPACE			83				84			SPACE			
TOTAL LOAD @ 100% = 55080VA						TOTAL LOAD @ 100% = 153A							TOTAL LOAD @ 65% = 99A			

EXIST SQUARE D QED SWITCHBOARD — CENTRAL PLANT

(E)SWBD MDP — 2000A MCB, 480Y/277V, 3ϕ, 4 WIRE — AVAILABLE FAULT: 37,000A — SCCR & AIC: 100,000A — FREE STANDING

NOTES	CIRCUIT	DESCRIPTION	CB	FEEDER SIZE	AMPS
4	1	NEW PANEL HK	225/3	4–4/0 +4G, 2.5°C	87A
	2	EXIST PANEL HE	400/3	EXIST FEEDER	
	3	EXIST DISTRIBUTION PANEL DA	800/3	EXIST FEEDER	
	4	EXIST DISTRIBUTION PANEL DB	1200/3	EXIST FEEDER	
	5	EXIST DISTRIBUTION PANEL R	800/3	EXIST FEEDER	
2	6	EXIST PANEL HK	400/3	EXIST FEEDER	
	7	EXIST 180KVAR CAPACITOR	400/3	EXIST FEEDER	
	8	EXIST SPD	60/3	EXIST FEEDER	
				TOTAL LOAD @ 100% =	87A
				TOTAL LOAD @ 125% =	109A

1. THE EXISTING 2000A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE AND PROVIDE NEW LAMACOID LABELS TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST SQURE D I-LINE DIST PANELBOARD — CENTRAL PLANT

(E)DIST. PANEL R — 800A MLO, 480Y/277V, 3ϕ, 4 WIRE — AVAILABLE FAULT: 37,000A — SCCR & AIC: 65,000A — MOUNTING: SURFACE

NOTES	CIRCUIT	DESCRIPTION	CB	FEEDER SIZE	AMPS
	1	EXIST CHILLER CH–1	250/3	EXIST FEEDER	100A
	2	EXIST SPARE	200/3	–	0A
	3	EXIST CHILLER CH–2	250/3	EXIST FEEDER	100A
	4	EXIST SPARE	200/3	–	0A
	5	EXIST ATS ASKL	70/3	EXIST FEEDER	38A
4	6	TEMP KITCHEN PANEL LTK	70/3	3–6 +8G, 3/4"C	40A
				TOTAL LOAD @ 100% =	238A
				TOTAL LOAD @ 125% =	298A

1. THE EXISTING 800A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE AND PROVIDE NEW LAMACOID LABELS TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST EM STANDBY PANELBOARD — CENTRAL PLANT

(E)PANEL SKL — 150A MCB, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
		10000	PANEL SLE	EXIST	60/3	1				2	40/3		REFRIGERATION SYSTEM			2
		–	–		–	3				4	–	–	–	–		
		–	–	–	–	5				6	–	–	–	–		
2,3	E103C	3328	FREEZER COIL	2–10	20/2	7				8	20/1	EXIST	HEATER LIGHTS	1000		
		–	–	+10G	–	9				10	20/1		DOOR HEATER/LTS COOLER			2
2			COOLER COIL BLOWER		20/2	11				12	20/1		DOOR HEATER/LTS FREEZER			2
		–	–	–	–	13				14	20/1		EXIST SPARE			
2			REFRIGERATION SYSTEM		60/3	15				16	20/1	EXIST	GEN BATTERY CHARGER	500		
		–	–	–	–	17				18	20/1	EXIST	GENERATOR POWER	500		
		–	–	–	–	19				20	20/1		EXIST SPARE			
3	E102B	600	COOLER TEMP. ALARM	3–12	20/1	21				22	20/1	3–12	COOLER COIL	1200	E103D	3
3	E102C	600	COOLER PRESSURE PORT	3–12	20/1	23				24	20/1	3–12	FREEZER TEMP. ALARM	600	E102B	3
3	E102E	120	PANIC ALARM BUTTONS	3–12	20/1	25				26	20/1	3–12	FREEZER PRESSURE PORT	600	E102C	3
4	E188	864	REFRIGERATOR	3–12	20/1	27				28	35/3	3–8	REFRIGERATION SYSTEM	7344	E103	4
4	E188	864	REFRIGERATOR	3–12	20/1	29				30	–	+10G	–	–		
4	E109	1428	ICE MACHINE	3–12	20/1	31				32	–	3/4"C	–	–		
4	E151	240	HOOD ANSUL SYSTEMS	3–12	20/1	33				34	20/1EGF	3–12	COOLER DOOR HEATER/LTS	600	E102A	4
			SPACE			35				36	20/1EGF	3–12	FREEZER DOOR HEATER/LTS	600	E102A	4
			SPACE			37				38	20/1EGF	3–12	FREEZER DRAIN LINE HEATER	600	E103F	4
			SPACE			39				40			SPACE			
			SPACE			41				42			SPACE			
		–	MAIN CIRCUIT BREAKER	–	–	43				44			SPACE			
		–	–	–	–	45				46			SPACE			
		–	–	–	–	47				48			SPACE			
		–	–	–	–	49				50			SPACE			
		–	–	–	–	51				52			SPACE			
		–	–	–	–	53				54			SPACE			
TOTAL LOAD @ 100% = 31588VA						TOTAL LOAD @ 100% = 88A							TOTAL LOAD @ 125% = 110A			

1. THE EXISTING 150A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

KITCHEN HOOD CONTACTOR SCHEDULE

POLE	DESCRIPTION	NORMAL CKT	EM CKT	CONTROL ZONE	EQUIPMENT LOCATION	CONTACTOR TYPE
HOOD 1						
CK1–1	CONVECTION OVEN	LK–47	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–2	CONVECTION OVEN	LK–49	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–3	CONVECTION OVEN	LK–51	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–4	CONVECTION OVEN	LK–53	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–5	SPARE					ELECTRICALLY HELD – NO
CK1–6	SPARE					ELECTRICALLY HELD – NO
CK1–7	SPARE					ELECTRICALLY HELD – NO
CK1–8	SPARE					ELECTRICALLY HELD – NO
HOOD 2						
CK2–1	TILT BRAISING PAN	LK–55	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–2	COMBI–OVEN	LK–57/59	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–3	(2–POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2–4	COMBI–OVEN	LK–61/63	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–5	(2–POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2–6	SPARE					ELECTRICALLY HELD – NO
CK2–7	SPARE					ELECTRICALLY HELD – NO
CK2–8	SPARE					ELECTRICALLY HELD – NO

1. REFERENCE FLOOR PLANS FOR EQUIPMENT LOCATIONS AND ADDITIONAL INFORMATION.
2. EACH KITCHEN HOOD CONTACTOR HALL BE CONTROLLED ON/OFF BY THE APPROPRIATE HOOD ANSUL SYSTEM. WHEN ACTIVATED ALL POWER WITHIN THE COOKING HOOD SHALL BE DE–ENERGIZED.

GENERAL PANEL REQUIREMENTS:
A. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
B. FIELD VERIFY EXISTING CIRCUITS PRIOR TO BEGINNING WORK.
C. ALL OUTAGES SHALL BE SCHEDULED AND CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
D. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.

PANEL NOTES:
1. REVISE/REWORK WIRING/CONDUIT AS REQUIRED TO ADD/REMOVE DEVICES FROM EXISTING CIRCUIT.
2. EXISTING CIRCUIT TO BE DEMO.
3. REUSE EXISTING SPARE CB AND WIRE NEW CIRCUIT.
4. PROVIDE NEW CB & WIRE NEW CIRCUIT.
5. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AND REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION.
6. KITCHEN LIGHTS TO BE DUAL ZONES WIRED THROUGH LIGHTING CONTACTORS AND CONTROLLED ON/OFF BY THE BAS AND LOCAL LIGHTING SWITCHES.
7. EXTERIOR LIGHTS TO BE WIRED THROUGH LIGHTING CONTACTOR AND CONTROLLED ON/OFF BY THE BAS.
8. WIRE CIRCUITS THROUGH KITCHEN EQUIPMENT CONTROL CONTACTOR. CIRCUITS TO BE DE–ENERGIZED BY HOOD FIRE PROTECTION SYSTEM.
9. RECONNECT EXISTING TEMPORARY LOAD CENTER CIRCUIT TO NEW PANEL LK.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
4 09/04/2025 ADD4	ADDENDUM 04

a

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PARKWAY
SUGAR LAND, TX 77479

SEAL
STATE OF TEXAS — GEORGE L. STANTON — 38582 — REGISTERED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL SCHEMATIC

a-E.400

STANTON ENGINEERING GROUP
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PLUMBING SYMBOLS LEGEND

SYMBOL	DESCRIPTION
— — — — —	SANITARY WASTE BELOW SLAB
———————	SANITARY WASTE ABOVE SLAB
—— V ——	VENT PIPING ABOVE SLAB
— — — —	VENT PIPING
—— G ——	GAS PIPING, 4-8oz
—— G5 ——	GAS PIPING, 5LB
—·—·—	DOMESTIC COLD WATER PIPING
—··—··—	DOMESTIC HOT WATER PIPING
—— D ——	DRAIN/RELIEF VENT PIPING
—⋈—	STOP VALVE
2CO	DOUBLE SAN. CLEANOUT (2-WAY)
CO	SANITARY SEWER CLEANOUT
WCO	WALL CLEANOUT
EXIST.	EXISTING
(R)	REMOVE (DEMOLISH)
(D)	DEMOLISH (REMOVE)
(E)	EXISTING - NO WORK

ABBREVIATION	DESCRIPTION
SAN.	SANITARY
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
WC	WATER CLOSET
UR	URINAL
LAV	LAVATORY
SK	SINK
EDF	ELECTRIC DRINKING FOUNTAIN
WH	WALL HYDRANT
HB	HOSEBIBB
CP	HOT WATER CIRCULATOR PUMP
FD	FLOOR DRAIN
FSINK	FLOOR SINK

PLUMBING FIXTURE NOTES

1. ALL FIXTURES SHALL MEET WATER CONSERVATION PERFORMANCE STANDARDS MANDATED BY SENATE BILL 587. ALL FIXTURES SHALL HAVE FLOW RESTRICTION DEVICES (DRINKING FOUNTAINS SHALL BE SELF-CLOSING) TO COMPLY WITH THESE REQUIREMENTS.
2. ALL FIXTURES SHALL HAVE CONTROLS REQUIRING OPERATING FORCE NO GREATER THAN FIVE (5) POUNDS.
3. FOR LAVATORIES AND SINKS, ALL FAUCETS SHALL BE NO-LEAD SOLID BRASS, MEETING ALL REQUIREMENTS OF ANSI/NSF 61, SECTION 9 AND CERTIFIED AS SUCH. ALSO, INSTALL SYMMONS 7-210 MIXING VALVE ON HOT WATER SUPPLY SIDE OF ALL FAUCETS UNLESS HIGH TEMPERATURE LIMIT IS PROVIDED WITH FAUCET. MAXIMUM WATER TEMPERATURE FOR ALL FAUCETS THAT DELIVER HOT OR TEPID WATER SHALL BE 110°F. ALL METERING FAUCETS SHALL HAVE A MINIMUM TEN (10) SECONDS OF WATER FLOW. AND, INSTALL TRUEBRO HANDI LAV-GUARD VANDAL-PROOF INSULATION KITS OVER P-TRAP, SUPPLIES, STOPS AND ALL SHARP EDGES FOR ALL SINKS AND LAVATORIES (TRAP WRAP FROM BROCAR OR PROWRAP FROM McGUIRE SHALL BE ACCEPTABLE).
4. ALL PLUMBING FIXTURES REFERENCED AS "ADA", "TAS" OR "HANDICAP COMPLIANT" SHALL MEET ALL REQUIREMENTS OF THE ADA AND THE TEXAS ACCESSIBILITY STANDARDS. IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MEET THESE REQUIREMENTS.
5. IN MANY CASES, FIXTURES WITH THE SAME PLUMBING DESIGNATION HAVE DIFFERENT INSTALLATION HEIGHTS - REFERENCE ARCHITECTURAL DRAWINGS FOR ALL INSTALLATION HEIGHTS AND HANDICAP FIXTURE DESIGNATIONS. FIXTURES DESIGNATED AS ADULT HANDICAP SHALL MEET ALL REQUIREMENTS OF THE ADA. FIXTURES DESIGNATED AS CHILD HANDICAP SHALL MEET ALL REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS FOR THE APPROPRIATE CHILDREN'S AGE GROUP (REF. ARCH. DWGS. AND SPECIFICATIONS).

PLUMBING MATERIALS

SANITARY WASTE AND VENT

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

STORM DRAIN PIPING

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB, 8" AND UNDER: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

ABOVE SLAB, 10" AND ABOVE: SERVICE WEIGHT, CAST IRON, BELL & SPIGOT.

NATURAL GAS

BELOW GRADE (OUTSIDE): YELLOW POLYETHYLENE PIPE WITH COATED STEEL RISER AND TRACER WIRE.

ABOVE SLAB: SCHEDULE 40 BLACK STEEL. PIPING 2.5" AND LARGER SHALL BE WELDED. PIPING 2" AND SMALLER SHALL HAVE SCREWED FITTINGS.

DOMESTIC WATER

INTERIOR: TYPE L COPPER WITH SOLDER TYPE WROUGHT COPPER FITTINGS, MADE UP WITH LEAD-FREE SOLDER.

EXTERIOR: TYPE K COPPER WITH SWEAT FITTINGS AND LEAD-FREE SOLDER. BEYOND 5 FEET FROM BUILDING, SCHEDULE 40 PVC.

FIRE SPRINKLER SYSTEM NOTES

1. THE EXISTING FIRE SPRINKLER SYSTEM SHALL BE MODIFIED AND/OR EXPANDED TO COVER THE AREA OF RENOVATION IN ENTIRETY. ALL NEW AND REVISED PIPING SHALL BE ENGINEERED AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR.
2. REFERENCE THE SPECIFICATIONS, DIVISION 21, FOR MORE INFORMATION.

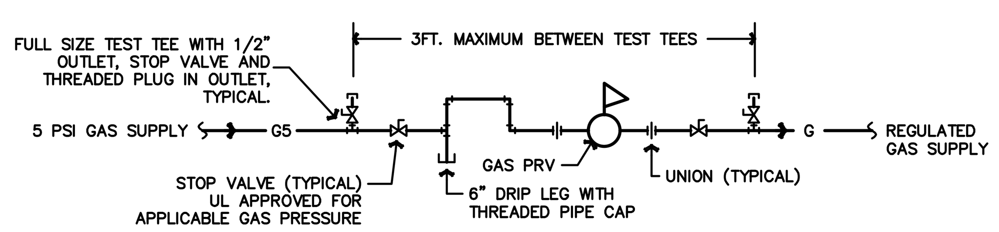
GENERAL PLUMBING NOTES

1. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL WORK DESCRIPTION. SEE THIS SHEET (P4.00) FOR PLUMBING SYMBOLS LEGEND.
2. COORDINATE PLUMBING SYSTEMS INSTALLATION WITH ARCHITECTURAL, STRUCTURAL, HVAC SYSTEMS, ELECTRICAL SYSTEMS, CONDUITS, ETC.... OFFSET PIPING AS REQUIRED TO PROVIDE A FUNCTIONING SYSTEM WITH ADEQUATE SPACE FOR SERVICING AND REPAIRS.
3. MAKE CONNECTIONS OF NEW PIPE SYSTEMS IN TO EXISTING PIPE SYSTEMS WITH THREADED OR SWEAT JOINTS. PROVIDE ELECTROLYSIS ISOLATING UNIONS AT CONNECTION OF DISSIMILAR MATERIALS. REFERENCE THE SPECIFICATIONS.
4. SITE SERVICES ARE SHOWN FOR REFERENCE ONLY. PLUMBING CONTRACTOR SHALL REFERENCE CIVIL DRAWINGS, INCLUDING LOCATIONS OF SERVICES, SIZES OF PIPES, FLOWLINE ELEVATIONS, ETC..
5. DO NOT INSTALL PLUMBING PIPING OVER ANY ELECTRICAL EQUIPMENT. REFERENCE ELECTRICAL DRAWINGS FOR LOCATIONS OF ELECTRICAL EQUIPMENT AND COORDINATE WITH ELECTRICAL SUBCONTRACTORS ACCORDINGLY. SEE DETAIL 1/P0.02. THIS INCLUDES FIRE SPRINKLER PIPING.
6. ALL PIPES THROUGH WALLS OR FLOORS SHALL BE SLEEVED AND SEALED PER DETAIL 5/P0.02. FIRE CAULK WHERE REQUIRED. THIS INCLUDES ALL WALLS, INTERIOR AND EXTERIOR. THIS INCLUDES FIRE SPRINKLER PIPING.
7. ALL CLEANOUTS SHALL BE CONNECTED TO SANITARY LINES USING WYES AND/OR LONG RADIUS ELLS. SANITARY TEES ARE NOT ACCEPTABLE. 2" MINIMUM SIZE. ALL WALL CLEAN OUTS IN VERTICAL RISERS, OR BANKS OF FIXTURES SHALL BE INSTALLED 4" ABOVE THE FLOOD RIM LEVEL OF THE LOWEST CONNECTED FIXTURE AND A MINIMUM OF 24" AFF.
8. ALL WASTE AND VENT PIPING BELOW SLAB SHALL BE 2" MINIMUM.
9. LOCATE PLUMBING VENTS THROUGH ROOF NOT NEARER THAN SIX (6) FEET AWAY FROM EDGE OF BUILDING AND TEN (10) FEET AWAY FROM ANY FRESH AIR INTAKES. OFFSET VENT PIPING, AS REQUIRED, IN CEILING SPACE BETWEEN CEILING AND ROOF TO MEET THESE REQUIREMENTS. SEE DETAIL 3/P0.02.
10. ALL DOMESTIC WATER PIPING (CW, HW AND HWR) SHALL BE INSULATED PER THE WRITTEN SPECIFICATIONS.
11. TOP OF FLOOR DRAINS IN MECHANICAL, AHU AND BOILER ROOMS SHALL BE SET 1-1/2" BELOW FINISHED FLOOR SURFACE. CONCRETE FLOOR SHALL BE SLOPED TO DRAIN, REFERENCE ARCHITECTURAL DRAWINGS. IN ALL OTHER LOCATIONS, FLOOR DRAINS SHALL BE SET FLUSH WITH FINISHED FLOOR, TAKING INTO ACCOUNT ANY FLOOR SLOPE OR FLOOR FINISH (TILE, TERRAZZO, ETC.) AS SHOWN ON ARCHITECTURAL DRAWINGS.
12. PROVIDE AN ISOLATING VALVE AT EACH WATER TAP OFF HOT AND COLD WATER MAINS TO ALLOW FOR SERVICING. VALVE SHALL BE BALL VALVE IF PIPE SIZE IS 2" OR LESS AND GATE VALVE OR BUTTERFLY VALVE IF LARGER THAN 2". SEE WRITTEN SPECIFICATIONS. VALVES SHALL BE EASILY ACCESSIBLE: PROVIDE 18" X 18", FIRE-RATED, STAINLESS STEEL ACCESS PANELS WITH HINGED, CYLINDER LOCK DOORS WHERE VALVES ARE INSTALLED ABOVE INACCESSIBLE CEILINGS OR IN WALL CHASES (MIFAB MODEL MPFR-SS-C). BALL VALVES AND BUTTERFLY VALVES INSTALLED ABOVE CEILINGS SHALL BE INSTALLED SUCH THAT HANDLE IS ON BOTTOM OF PIPE. ISOLATING WATER VALVES ABOVE CEILINGS SHALL BE INSTALLED NO MORE THAN 24" ABOVE CEILING. VALVES ABOVE INACCESSIBLE CEILINGS SHALL BE INSTALLED WITHIN REASONABLE REACH OF CEILING MOUNTED ACCESS PANEL.
13. WATER HAMMER ARRESTERS SHALL BE INSTALLED IN ADDITION TO AIR CHAMBERS PER THE RISER DIAGRAMS. SEE SPECIFICATIONS.
14. MECHANICALLY CLEAN ALL WASTE LINES WITH ROTARY MACHINE TO PROVE FREE FLOWING, SEE SPECIFICATIONS.
15. PROVIDE VENTED SLEEVE (2 PIPE SIZES LARGER THAN GAS PIPE UNLESS NOTED OTHERWISE) FOR ALL GAS PIPING IN GROUND BELOW PAVING OR SIDEWALKS AND INSIDE BUILDING IN WALLS AND IN UNVENTILATED CEILING SPACES, SEE SPECIFICATIONS.
16. GAS PIPING SHALL BE 1/2" MINIMUM. TAP GAS PIPING ON TOP OR SIDES ONLY. DO NOT INSTALL VALVES IN CEILING PLENUM OR IN ANY INACCESSIBLE LOCATION. ALL GAS VALVES SHALL BE EASILY ACCESSIBLE. REFER TO DETAIL 7/P0.01 FOR TYPICAL GAS CONNECTION INSTALLATION. REFER TO DETAIL 4/P0.01 FOR TYPICAL PRV INSTALLATION.
17. CENTER WALL HYDRANTS IN BRICK PATTERN OF EXTERIOR WALLS, REFERENCE THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
18. ALL REFRIGERATORS WITH ICE MAKERS, COMMERCIAL TYPE COFFEE MAKERS, ICE MAKERS, COFFEE VENDING MACHINES AND OTHER ITEMS PROVIDED BY OTHERS THAT REQUIRE A WATER CONNECTION SHALL HAVE A CW VALVE BOX, "VBOX", INSTALLED TO ALLOW EASY ACCESS AND REMOVAL OF MACHINE. ALSO, INSTALL IN-LINE FILTER IN WATER CONNECTION.
19. REFER TO CIVIL DRAWINGS FOR SITE SANITARY, SITE STORM SEWER, FIRE SERVICE AND DOMESTIC WATER SERVICE. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPING INSIDE BUILDING TO OUTSIDE LOCATIONS SHOWN ON PLUMBING DRAWINGS. PLUMBING CONTRACTOR SHALL INCLUDE COST OF FINAL TIE-INS TO SITE SERVICES.
20. PER THE DRAWINGS, ALL DRAINS (FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, KITCHEN DRAINS, SHOWER DRAINS, ETC.) SHALL BE VENTED AND TRAP PRIMED - NO EXCEPTIONS. TRAP PRIMING SHALL BE ACCOMPLISHED USING WATER CLOSET FLUSH VALVE TRAP PRIMING DEVICES OR PROSET SYSTEMS TRAP GUARD SEWER GAS EMISSION PROTECTION, AS SHOWN ON DRAWINGS. REFERENCE PLUMBING FLOOR PLANS AND RISER DIAGRAMS.
21. ALL PIPING LOCATED ON ROOF (GAS PIPING) SHALL BE INSTALLED ON ROOF PIPE SUPPORTS PER DETAIL 14/P0.02, 6-FOOT ON CENTER. INSTALL ROOF PIPE JACK PER DETAIL 9/P0.02 FOR ALL PIPING THROUGH ROOF.
22. COORDINATE LOCATIONS OF ALL ROOF DRAINS AND OVERFLOW ROOF DRAINS WITH ARCHITECTURAL DRAWINGS.
23. FOR COMBINATION WASTE AND VENT SYSTEMS (WHERE APPLICABLE ON DRAWINGS), DRAIN P-TRAPS SHALL BE SIZE OF PIPE SHOWN ON DRAWINGS (I.E. TWO PIPE SIZES LARGER THAN DRAIN SIZE). FOR EXAMPLE, A 4" FLOOR DRAIN SHALL HAVE A 6" P-TRAP.
24. FOR ALL PLUMBING FIXTURES, IF COPPER PIPING IS STUBBED THROUGH WALL FOR DRAIN CONNECTION, INSTALL MARVEL FITTING AT DRAIN CONNECTION FOR EASE OF SERVICING AND REPAIRS. COPPER DRAIN PIPING WILL ONLY BE ALLOWED FOR DIRECT/STRAIGHT STUB-OUT OF FIXTURE DRAIN PIPING THROUGH WALL.
25. DO NOT INSTALL ANY PIPING BENEATH CVT OR VAV BOXES. THIS INCLUDES FIRE SPRINKLER PIPING.
26. WHERE UNDERGROUND VENT PIPE SIZE IS NOT NOTATED, VENT SHALL BE 2" DIAMETER.
27. WHERE UNDERGROUND SANITARY PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR SIZE. NOT BELOW GRADE SANITARY PIPE SHALL BE SMALLER THAN 2". NO SANITARY LINE OR P-TRAP FOR A DRAIN/FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE DRAIN/FIXTURE SCHEDULE.
28. WHERE ABOVE GROUND VENT PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR VENT SIZE.
29. WHERE CW/HW PIPING SIZE TO THE FIXTURE IS NOT SHOWN ON THE FLOOR PLAN, REFER TO THE RISER DIAGRAMS FOR CW/HW PIPE SIZE. NO PIPING TO FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE FIXTURE SCHEDULE.
30. TO INSTALL NEW PLUMBING SYSTEMS BELOW EXISTING CONCRETE SLABS, FIRST PLUMBING CONTRACTOR SHALL LAY OUT CUT. THEN, DEMOLITION CONTRACTOR SHALL SAW CUT SLAB TO CONTROL CRACKING AND REMOVE ALL CONCRETE. PLUMBING CONTRACTOR SHALL THEN EXCAVATE FILL TO PROPER SLOPE, INSTALL NEW PIPING SYSTEMS AS REQUIRED, THEN BACKFILL AND COMPACT TO PROPER DENSITY. THE CONCRETE CONTRACTOR SHALL THEN INSTALL NEW SIX (6) MIL POLYETHYLENE VAPOR BARRIER AND SEAL, INSTALL NEW REINFORCING STEEL AND WELD ON TO EXISTING, THEN RE-POUR CONCRETE TO NEW LEVEL. DO NOT CUT THROUGH GRADE BEAMS WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
31. ALL ABANDONED FIXTURES, DRAINS AND PIPING (INCLUDING PIPING ABANDONED IN THE PAST) IN AREAS WHERE WORK IS BEING DONE SHALL BE COMPLETELY REMOVED FROM BUILDING (INCLUDING PIPING BELOW SLAB/GRADE - UNLESS SHOWN OTHERWISE ON DRAWINGS). EXISTING WATER PIPING SHALL BE CAPPED AT EXISTING WATER MAIN TAPS AND ALL ABANDONED PIPING REMOVED. ABANDONED VENT PIPING SHALL BE COMPLETELY REMOVED, INCLUDING EXISTING VTR's NOT RE-USED. PATCH AS REQUIRED. ONLY ACTIVE PIPING, FIXTURES AND DRAINS SHALL REMAIN IN BUILDING WHERE WORK IS BEING DONE.
32. FIELD VERIFY EXISTING CONDITIONS PRIOR PROCUREMENT OF EQUIPMENT AND SYSTEMS.
33. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION.
34. PROVIDE INSUALTION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF THE 2021-IECC. (4 ADD4)
35. SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.

GAS PRV SCHEDULE

MARK	PRV-K	PRV-K2
LOCATION	MECH. YARD	MECH. YARD
SERVES	KITCHEN	KITCHEN
GAS LOAD	585 CFH	585 CFH
DISTANCE FROM METER	150 FT	150 FT
DISTANCE TO LAST OUTLET	200 FT	200 FT
INLET (SIZE/PRESSURE)	1" / 5 PSI	1" / 5 PSI
OUTLET (SIZE/PRESSURE)	2" / 7-12 IN WC	2" / 7-12 IN WC

(4 ADD4)



4 GAS PRESSURE REGULATOR DETAIL (PRV)

NO SCALE

NOTES:
1. GAS REGULATOR SHALL BE ANSI Z21.80 CERTIFIED FOR LINE PRESSURE REGULATION BETWEEN THE SERVICE REGULATOR AND CONNECTED EQUIPMENT.
2. ALL GAS REGULATORS WITH INLET PRESSURE ABOVE 2 PSI SHALL BE EQUIPPED WITH A FACTORY INSTALLED OVERPRESSURE PROTECTION DEVICE, AS PART OF THE ANSI Z21.80 CERTIFICATION.
3. GAS REGULATOR SHALL BE EQUIPPED WITH A VENT LIMITING DEVICE, SIZED IN ACCORDANCE WITH THE REGULATOR OUTLET PRESSURE.
4. ALL REGULATORS INSTALLED OUTDOORS SHALL BE RATED FOR OUTDOOR INSTALLATION.
5. BASIS OF DESIGN IN THE MAXITROL 325-L SERIES OF REGULATORS

PLUMBING DRAINS, CLEANOUTS AND HYDRANTS

MARK	MIN. CONNECTION SIZES (IN.)				DESCRIPTION/SPECIFICATION FOR FIXTURE OR EQUIPMENT
	SAN	VENT	CW	HW	
FD	4	2	1/2	–	TOILET FLOOR DRAIN – TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 1/2" TRAP PRIMER TAP, 6" SQUARE, NICKEL BRONZE HSTRAINER AND SECURITY SCREWS JR SMITH MODEL 2005-03-K06PB-P050-U.
FD2	4	2	1/2	–	EQUIPMENT FLOOR DRAIN – CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, DUCTILE IRON TRUE-FIT SEDIMENT BUCKET WITH 12" STAINLESS STEEL RIM LESS GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS-540-LG-P. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD3	4	2	1/2	–	GRATED MECHANICAL ROOM FLOOR DRAIN – CAST IRON WITH FLANGE, SEEPAGE OPENINGS, 9" HEAVY-DUTY DUCTILE IRON GRATE WITH STAINLESS STEEL VENEER, CLAMPING DEVICE AND 1/2" TRAP PRIMER TAP ZURN MODEL ZS-550-C-P
FD4	4	2	1/2	–	CANWASH FLOOR DRAIN – ALL GALVANIZED CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, GALVANIZED SUR-SET SEDIMENT BUCKET WITH 12" GALVANIZED DUCTILE IRON RIM AND GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS-540-P-G-HD. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD5	4	2	1/2	–	KITCHEN FLOOR DRAINS SHALL BE SIMILAR EXCEPT WITH 7" SQUARE, BRONZE GRATE JR SMITH MODEL 2005-03-K07PB-P050-U. PROVIDE 4" DIAMETER STAINLESS STEEL FUNNEL WHERE SHOWN ON DRAWINGS. REFERENCE KITCHEN CONNECTION SCHEDULE ON PLUMBING RENOVATION FLOOR PLAN SHEET.
FS KITCHEN FS	4	2	1/2	–	FLOOR SINK – CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY STAINLESS STEEL TRACTOR DUTY FRAME WITH 3/4-TRACTOR GRATE AND 1/2" TRAP PRIMER TAP JR SMITH MODEL 3150Y-04-C-13.
FS2 (4 ADD4)	4	2	1/2	–	DEEP FLOOR SINK – FABRICATED STEEL RECEPTOR, 12" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, STAINLESS STEEL MESH LINED BUCKET AND 24X12 NICKEL BRONZE FRAME WITH 3/4 SOLID COVER. JR SMITH MODEL 3250Y-C-BS-43
CO	VARIES	–	–	–	FLOOR CLEANOUT – ADJUSTABLE EXTENSION HOUSING, CAST IRON FERRULE WITH FULL-LINE-SIZE BRASS PLUG (UP TO 4"), 5" DIAMETER STAINLESS STEEL ACCESS COVER WITH VANDAL-PROOF SECURITY SCREWS, ROUND FRAME AND TOP STYLE COMPATIBLE WITH FLOOR TYPE (REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR TYPES) ZURN MODEL ZS-1400-VP. PROVIDE CARPET FLANGE FOR CARPETED AREAS (CARPET MARKER SHALL NOT BE ACCEPTABLE) AND TERRAZZO RECESS FOR TERRAZZO FLOORS. OUTDOOR CLEANOUT – SAME AS TYPE "CO" EXCEPT WITH HEAVY-DUTY NICKEL BRONZE TOP ZURN MODEL ZN-1400-HD-VP. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
WCO	VARIES	–	–	–	WALL CLEANOUT – CAST IRON FERRULE WITH COUNTERSUNK HEAD (FULL-LINE-SIZE PVC PLUG UP TO 4") MI-FAB MODEL C1450. ACCESS COVER SHALL BE 8" SQUARE, SURFACE MOUNT, FLUSH INSTALLATION, 16-GAUGE STAINLESS STEEL ACCESS DOOR WITH FLANGED FRAME AND VANDAL-PROOF OPTION MI-FAB MODEL UA-SS-VP. ACID WASTE CLEANOUT (AWCO) SHALL BE SAME EXCEPT ACID WASTE PIPING. INSIDE CABINETWORK WHERE CLEANOUT IS NOT VISIBLE, ACCESS PANEL MAY BE ROUND STAINLESS STEEL TYPE WITH VANDAL-PROOF CENTER SCREW MI-FAB MODEL C1450-RD-3-6.
2CO	4	–	–	–	DOUBLE CLEANOUTS – SAME AS OUTDOOR CLEANOUTS. INSTALLED FOR TWO-WAY RODDING. SINGLE CLEANOUT WITH 2-WAY FITTING IS NOT ACCEPTABLE, PROVIDE TWO SEPARATE CLEANOUTS. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
HB	–	–	3/4	–	HOSEBIBB – 3/4" HOSE THREAD, INTEGRAL VACUUM BREAKER SPOUT, ROUGH CHROME FINISH WITH REMOVABLE KEYED HANDLE, WALL FLANGE CHICAGO MODEL 952.
WH	–	–	3/4	–	RESTROOM WALL HYDRANT – NARROW WALL, WARM CLIMATE TYPE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5518
WH2	–	–	3/4	–	EXTERIOR WALL HYDRANT – NON-FREEZE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5519
WH3	–	–	3/4	3/4	CANWASH WALL HYDRANT – NON-FREEZE HOSE BOX WITH STRAIGHT INLET CONNECTION, HOT AND COLD MIXING, REMOVABLE KEYED HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL BACKFLOW PREVENTER WITH 3/4" HOSE CONNECTION, HEAVY DUTY BRASS CASING, POLISHED BRONZE HYDRANT BOX WITH HINGED COVER, "WATER" CAST ON COVER, DRIP LIP AND WALL CLAMP J.R. SMITH MODEL 5560-QT-WC-H-W-PB.
WASH (4 ADD4)	–	–	3/4	3/4	CLOTHES WASHER HOSE CONNECTION – STUB OUT OF WALL WITH ELBOW TO LEAD FREE DOUBLE CHECK BACKFLOW PREVENTER WITH QUARTER TURN VALVES, WATTS LF007M3-QT-FZ 3/4; PROVIDE FEMALE NIPPLE WITH 3/4" HOSE CONNECTION FOR CONNECTION OF WASHER JUMPER HOSE. SUPPORT ASSEMBLY FROM WALL WITH UNISTRUT AND PIPE CLAMPS. ASSEMBLY SHALL BE PROVIDED FOR BOTH COLD AND HOT WATER OUTLETS. WASHER HAS INTEGRAL AIR GAP CERTIFIED TO EUROPEAN STANDARDS AND THUS REQURIES AN EXTERNAL MEANS OF BACKFLOW PREVENTION TO MEET US STANDARDS.

KITCHEN PLUMBING CONNECTION SCHEDULE

MARK	DESCRIPTION
P5	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO MOP BASIN ("MB") FAUCET. REFERENCE PLUMBING FIXTURE SCHEDULE.
P6	3" DRAIN IN FLOOR FOR MOP BASIN ("MB") DRAIN. REFERENCE PLUMBING FIXTURE SCHEDULE.
P7	3/4" CW AND 3/4" HW – IN WALL, 18" AFF, TO HOSE BIBB.
P10	FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" SQUARE HEAVY-DUTY POLISHED BRONZE GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 2005-03-K07PB-P050-U.
P11C	1/2" CW AND 1/2" HW – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P11D	2" DRAIN – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P12	FLOOR SINK – 4" OUTLET; FLUSH WITH FLOOR; CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY NICKEL BRONZE FRAME WITH 3/4-TRACTOR GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 3150Y-04-C-13.
P12A	EQUIPMENT FLOOR DRAIN – SIMILAR TO MARK P10, BUT WITH 4" OUTLET.
P15	FUNNEL FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" DIAMATER HEAVY-DUTY STAINLESS STEEL TRACTOR DUTY GRATE AND SECURITY SCREWS, 4" ROUND FUNNEL ASSEMBLY (MODEL 3580), 1/2" TRAP PRIMER TAP JR SMITH MODEL 2005-03-K07PB-P050-U
P109	3/4" CW – IN WALL, 60" AFF, TO ICE MAKER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO ICE MAKER FROM CHECK VALVE, THROUGH FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P109A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12, BUT WITH FULL GRATE. SEE DESCRIPTION ABOVE.
P110	1/2" CW AND 1/2" HW – IN WALL, 36" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO-CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P110A	2" DRAIN – IN WALL, 48" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO-CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P122	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET AT TWO COMPARTMENT SINK. INSTALL LEONARD 370-LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P122A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P123	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO PRE-RINSE. 1/2" CW TO DISPOSER.
P123A	2" DRAIN – IN WALL, 10" AFF, TO DISPOSER (BYPASS GREASE TRAP).
P161	(2)3/4" GAS CONNECTION – 18"/36" AFF, TO CONVECTION OVEN, 60 CFH (EACH).
P163A	3/4" GAS CONNECTION – 18" AFF, TO TILT BRAISING PAN, 104 CFH.
P163B	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO TILT BRAISING PAN.
P165	1" GAS CONNECTION – 18" AFF, TO RANGE, 70 CFH.
P172	(2) 3/4" CW – IN WALL, 24" AFF & 48" AFF, TO COMBI OVEN. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND OVEN. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO EQUIPMENT FROM CHECK VALVE, THROUGH FILTER BANK (REF P172D & E), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172A	SIMILAR TO PLUMBING CONNECTION P172, BUT ONLY ONE 3/4" CW – IN WALL, 48" AFF. SEE DESCRIPTION ABOVE.
P172B	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P172C	(2) 3/4" GAS CONNECTION – 18"/36" AFF, TO COMBI OVEN, 105 CFH (EACH).
P172D	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO INLET OF FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172E	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. EXTEND OUTLET OF FILTER BANK BACK INTO THE WALL. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PIPING WITHIN THE WALL SHALL EXTEND TO AND SERVE TWO (2) CONNECTIONS TAGGED P172.
P249	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET. INSTALL LEONARD 370-LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P249A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250A	3/4" HW – IN WALL, 18" AFF, TO BOOSTER HEATER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER AND CONNECT THROUGH FILTER (BY OTHERS) WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PROVIDE WATTS 9MD2 OR EQUAL – 140°F MINIMUM (INTERCONNECT WITH DISH MACHINE).
P250B	3/4" CW – IN WALL, 18" AFF, TO DISH MACHINE. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND DISH MACHINE. PROVIDE WATTS 9MD2 OR EQUAL (INTERCONNECT WITH DISH MACHINE).
P614	1/2" CW AND 1/2" HW – IN WALL, 42" AFF, TO FILL FAUCET.
P800	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.

KITCHEN PLUMBING CONNECTION NOTES
1. KITCHEN CONNECTION SCHEDULE IS APPLICABLE TO ALL SCHOOLS IN THIS DRAWING SET.
2. REFERENCE KITCHEN CONSULTANT'S DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL EQUIPMENT AND INSTALLATION REQUIREMENTS.
3. ALL WATER PIPING INSTALLED EXPOSED BENEATH KITCHEN EQUIPMENT, INCLUDING PIPING INSTALLED BY DIVISION 11 (I.E. UNDER SINK COUNTERTOPS, SERVING TABLES, ETC.) SHALL BE INSULATED BY THE PLUMBING CONTRACTOR PER THE SPECIFICATIONS (INCLUDE ALUMINUM JACKETING FOR ALL PIPE INSULATION, PER SPECIFICATIONS).
4. INDIRECT WASTE PIPING FROM KITCHEN EQUIPMENT IS NOT SHOWN; HOWEVER, PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THIS PIPING PER THE REQUIREMENTS OF THE KITCHEN CONSULTANT'S CONTRACT DOCUMENTS, PER THE REQUIREMENTS OF THE VARIOUS EQUIPMENT MANUFACTURERS PROVIDED AND PER THE IPC-2021, SECTION 802. ALL INDIRECT WASTE PIPING SHALL BE TYPE L COPPER. INSTALL 45°F ELBOW AT END OF EACH INDIRECT WASTE PIPE TO DIRECT FLOW OF WATER INTO FLOOR SINK.
   - 4.1. IPC 2015 – SECTION 802.1.1 FOOD HANDLING – EQUIPMENT AND FIXTURES UTILIZED FOR THE STORAGE, PREPARATION AND HANDLING OF FOOD SHALL DISCHARGE THROUGH AN INDIRECT WASTE PIPE BY MEANS OF AN AIR GAP. EACH WELL OF A MULTIPLE-COMPARTMENT SINK SHALL DISCHARGE INDEPENDENTLY TO A WASTE RECEPTOR. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P121, P122 AND P126.
   - 4.2. IPC 2015 – SECTION 8802.1.8 FOOD UTENSILS, DISHES, POTS AND PANS SINKS – SINKS, USED FOR THE WASHING, RINSING, OR SANITIZING OF UTENSILS, DISHES, POTS, PANS OR SERVICE WARE USED IN THE PREPARATION, SERVING OR EATING OF FOOD SHALL DISCHARGE INDIRECTLY THROUGH AN AIR GAP OR AN AIR BREAK TO THE DRAINAGE SYSTEM. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P249.

PLUMBING FIXTURES AND EQUIPMENT

MARK	MIN. CONNECTION SIZES (IN.)				DESCRIPTION/SPECIFICATION
	SAN	VENT	CW	HW	
WC	4	2	1	–	WATER CLOSET – WALL MOUNTED, WHITE VITREOUS CHINA, SIPHON JET ACTION, 1.28 GPF, ELONGATED BOWL, TOP SPUD, ADA/TAS COMPLIANT, AMERICAN STANDARD AFWALL; SLOAN ROYAL 111-1.28 FLUSH VALVE WITH VANDAL-PROOF FREE-SPINNING TOP CAP, 1.28 GPF, VANDAL-PROOF STOP AND ADA/TAS COMPLIANT LEVER ACTUATOR WITH LEVER INSTALLED ON LEFT SIDE (FOR FIXTURES DESIGNATED AS "HANDICAP", INSTALL LEVER ON "WIDE-SIDE" OF TOILET STALL); BEMIS 1655-SS/C EXTRA HEAVY DUTY, WHITE, OPEN FRONT SEAT LESS COVER WITH SELF-SUSTAINING, STAINLESS STEEL CHECK HINGE; AND, FLOOR MOUNTED CARRIER.
LV	1-1/4	1-1/4	1/2	1/2	LAVATORY GOOSENECK FAUCET – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; DECK MOUNTED FAUCET, 4" CENTERS, FIXED, CHROME PLATED, 5.25" GOOSENECK SPOUT, PRESSURE COMPENSATING LAMINAR FLOW NON-AERATING 0.5 GPM OUTLET, 4" WRISTBLADE HANDLES, REBUILDABLE COMPRESSION CARTRIDGES, CHICAGO 895-317GN2AE72ABCP; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170-LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
LV2	1-1/4	1-1/4	1/2	1/2	LAVATORY – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; CHROME PLATED, ALL CAST BRASS CONSTRUCTION, ADA/TAS COMPLIANT, VANDAL-PROOF FAUCET WITH 4" WRIST BLADE HANDLES, COMPRESSION STYLE CARTRIDGES, CHROME DECK PLATE, VANDAL-PROOF AERATOR, COPPER SUPPLIES AND CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9 CHICAGO MARATHON MODEL 802-E70-317ABCP; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170-LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
EDF	1-1/2	1-1/2	1/2	–	BI-LEVEL ELECTRIC DRINKING FOUNTAINS WITH BOTTLE FILLER – WALL MOUNTED, ALL STAINLESS STEEL, ADA AND TAS COMPLIANT FOR ALL AGES, 8 GPH AT ARI STANDARDS, 2-STREAM ALL METAL BUBBLER FITTING WITH VANDAL-RESISTANT KIT AND FRONT PUSH BUTTON ACTUATION, PUSH BUTTON ACTIVATED BOTTLE FILLER WITH 1.1GPM FILL RATE AND ANIT-MICROBIAL COATING, INTEGRAL WATER FILTER, LEAD-FREE (CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9), REFRIGERANT HFC-134a, MAINTENANCE ACCESS PANEL, HALSEY-TAYLOR MODEL HTHBHVR8BL; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; FLOOR MOUNTED CHAIR CARRIER; AND, STAINLESS STEEL ADA APRON FOR LOCATIONS REQUIRED BY ADA OR TAS.
MB	3	2	3/4	3/4	MOP BASIN – 24" X 24" X 12" DEEP TERRAZZO, TWO (2) STAINLESS STEEL SPLASH CATCHER PANELS, 6" DROP FRONT WITH STAINLESS STEEL CAP, CAST BRASS DRAIN WITH STAINLESS STEEL STRAINER STERN WILLIAMS HILOW MODEL HL-1800-BP; FAUCET SHALL BE POLISHED CHROME PLATED SERVICE SINK TYPE WITH VACUUM BREAKER, INTEGRAL SUPPLY CHECK STOPS, SPOUT WITH PAIL HOOK, HOSE END AND TOP BRACE CHICAGO MODEL 897-CCF (INSTALL BACKING/BRACING INSIDE WALL TO SUPPORT FAUCET AND TOP BRACE).
LP-1	3	2	3/4	3/4	LAVATORY PUMP – FACTORY BUILT, LIFT PUMP FOR GRAY WATER WASTE, TOP ACCESS TO INTERNAL 1/6HP PUMP AND FLOAT SWITCH, 1.5" TOP AND SIDE INLETS, 1.5" TOP OUTLET, INTEGRAL CHECK VALVE AT BOTTOM INLET CONNECTIONS, 9FT POWER CORD WITH GROUNDED PLUG; LIBERTY PUMPS MODEL 406

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FBISD BP 013 KITCHEN RENOVATIONS
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ARCHITECTS AND PLANNING CONSULTANTS
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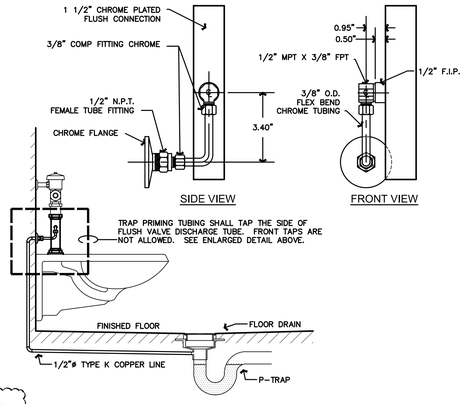
PLUMBING NOTES & SCHEDULES

a-P0.01

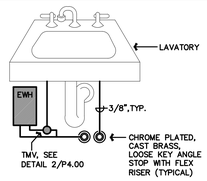


12 FLUSH VALVE TRAP PRIMING TUBE DETAIL

NO SCALE

MI-FAB MODEL MI-702-MOD FLUSH VALVE TRAP PRIMER, OR EQUAL

TANKLESS WATER HEATER SCHED.		
MARK	IEWH-1	
SERVES	LAVATORY	
LOCATION	BELOW COUNTER	
HEATER KW	1.8 KW	
TEMP RISE (@ 0.5 GPM)	25°F	
VOLTAGE/PHASE	120V/1PH	
EEMAX MODEL	SPEX1812T	

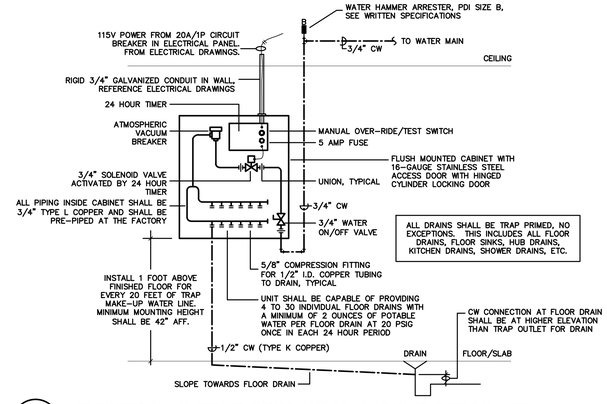


11 TANKLESS WATER HEATER

NO SCALE

NOTES:

1. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FURNISH & INSTALL 0.5-GPM AERATOR ON FAUCET COMPATIBLE WITH TANKLESS EWH REQUIREMENTS.
5. WATER HEATER SHALL HAVE INTEGRAL ASSE-1070 COMPLIANT TEMPERED MIXING VALVE.

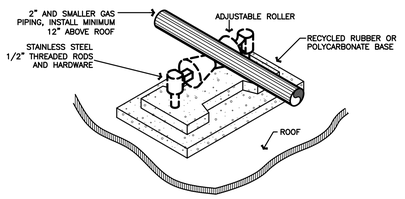


10 ELECTRONIC TRAP PRIMING MANIFOLD DETAIL (TP)

NO SCALE

NOTES:

1. REFERENCE SCHEDULE ON SHEET P3.00

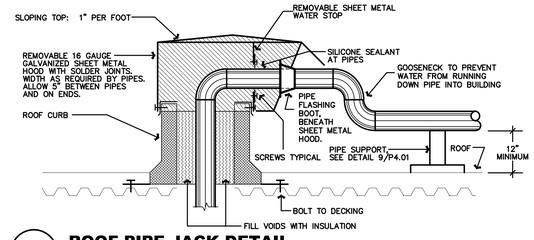


14 GAS PIPING ROOF SUPPORT DETAIL

NO SCALE

NOTES:

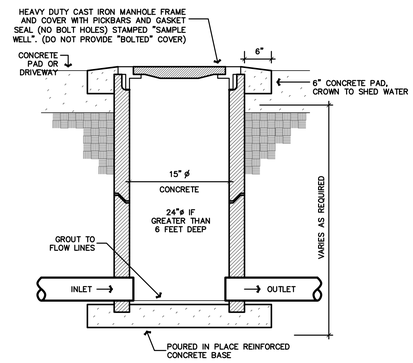
1. GAS PIPING SUPPORT SHALL BE PORTABLE PIPE HANGERS, INC. MODEL PP10-R. PIPING SHALL BE INSTALLED 12" ABOVE FINISHED ROOF. PROVIDE 18" X 18" CAREY TREAD-TYPE MATERIAL BENEATH EACH PIPE SUPPORT.
2. FIELD LOCATE ROOF STRUCTURAL SUPPORTS AND PLACE BASE OF PIPE SUPPORT OVER ROOF SUPPORTS ONLY. PROVIDE BASE OF ADEQUATE LENGTH TO SPAN ROOF JOIST TO PREVENT SUPPORTS SETTING ON ROOF DECK ONLY.
3. INSTALL SIX (6) FOOT-ON-CENTERS.
4. PIPE SUPPORT MANUFACTURER'S REPRESENTATIVE SHALL PERSONALLY INSPECT INSTALLATIONS OF PIPE SUPPORTS AND MAKE CORRECTIONS AND HEIGHT ADJUSTMENTS TO INSTALLATIONS, AS REQUIRED, DURING INSPECTION.



9 ROOF PIPE JACK DETAIL

NO SCALE

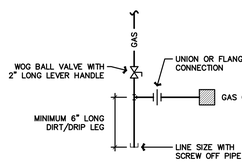
NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.



8 SAMPLE TEST WELL DETAIL (STW)

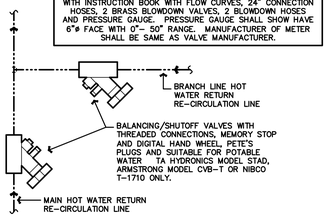
NO SCALE

NOTES:



7 TYPICAL GAS CONNECTION

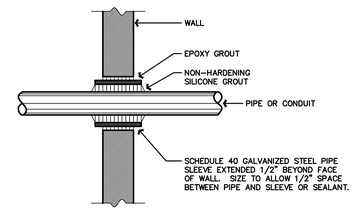
NO SCALE



6 HOT WATER BALANCING STATION

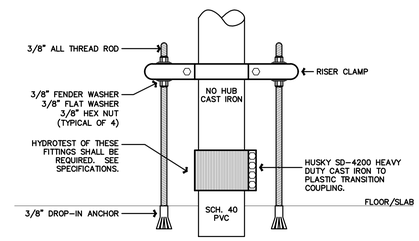
NO SCALE

PROVIDE AT EACH JUNCTION OF BRANCH HOT WATER RETURN LOOPS TO MAIN CIRCULATING HOT WATER LINE, SEE PLUMBING PLANS.



5 WALL PENETRATION DETAIL

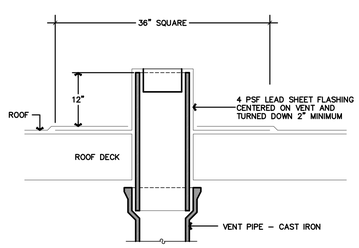
NO SCALE



4 PVC-TO-CAST IRON INSTALLATION DETAIL

NO SCALE

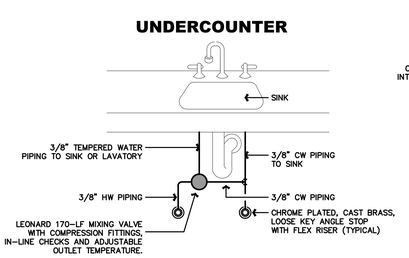
MISSION TRANSITION COUPLING DESIGNED AND CERTIFIED FOR THIS SPECIFIC APPLICATION SHALL BE ACCEPTABLE IN LIEU OF HUSKY COUPLING IN THIS DETAIL.



3 ROOF VENT DETAIL

NO SCALE

COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

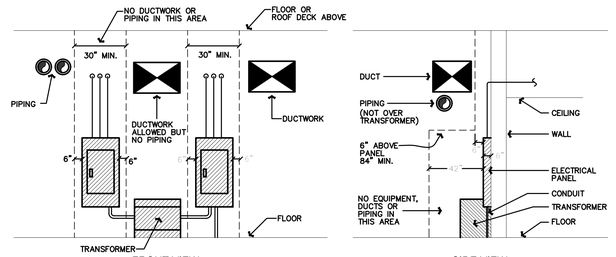


2 MIXING VALVE DETAIL

NO SCALE

NOTES

1. UNDERCOUNTER MIXING VALVE SHALL BE MOUNTED ON WALL IN FIXTURE KNEE-SPACE. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FOR ABOVE CEILING INSTALLATION, VALVE SHALL BE INSTALLED IN AN EASILY/READILY ACCESSIBLE LOCATION. SEE KITCHEN PLUMBING CONNECTION SCHEDULE FOR REQUIRED KITCHEN LOCATIONS.
5. LAVATORY MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 130°F. SINK MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 140°F.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

DO NOT INSTALL ANY PIPING BENEATH CVT BOXES. DO NOT INSTALL ANY PIPING (EXCEPT FIRE SPRINKLER PIPING AND OTHER PIPES SHOWN SPECIFICALLY ON THE PLUMBING FLOOR PLANS) OVER COMPUTER CLASSROOMS, BOOKROOMS, IDF/MDF/SERVER ROOMS OR OTHER ROOMS NOTED ON THE PLUMBING FLOOR PLANS.

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09/04/2025	ADDENDUM 04

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FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
4400 AUSTIN PARKWAY
SUGAR LAND, TX 77479

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PLUMBING SCHEDULES & DETAILS

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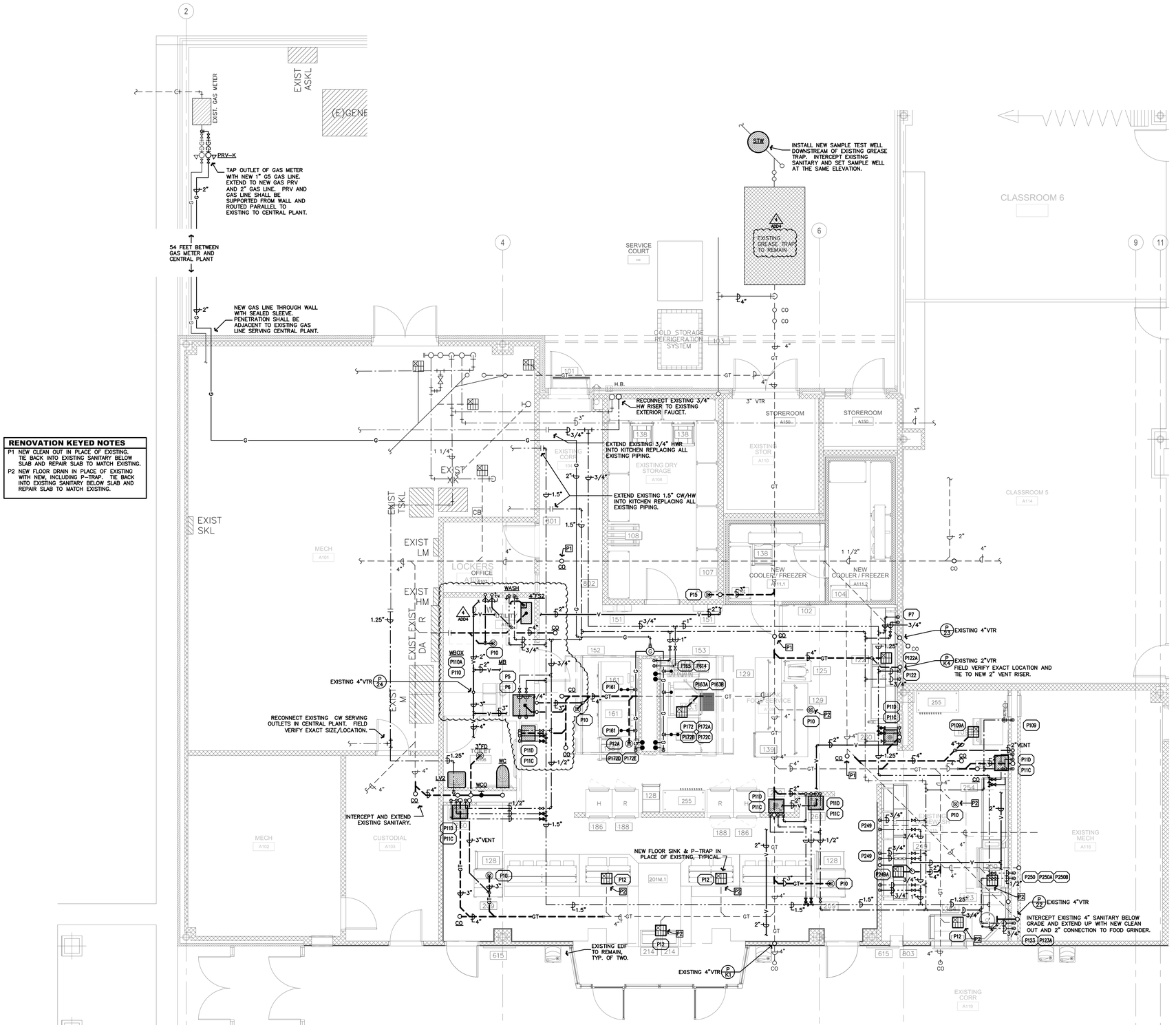

RENOVATION KEYED NOTES

P1 NEW CLEAN OUT IN PLACE OF EXISTING. TIE BACK INTO EXISTING SANITARY BELOW SLAB AND REPAIR SLAB TO MATCH EXISTING.

P2 NEW FLOOR DRAIN IN PLACE OF EXISTING WITH NEW, INCLUDING P-TRAP. TIE BACK INTO EXISTING SANITARY BELOW SLAB AND REPAIR SLAB TO MATCH EXISTING.

1 PLUMBING RENOVATION FLOOR PLAN

SCALE: 1/4" = 1'- 0"

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PLUMBING FLOOR PLAN

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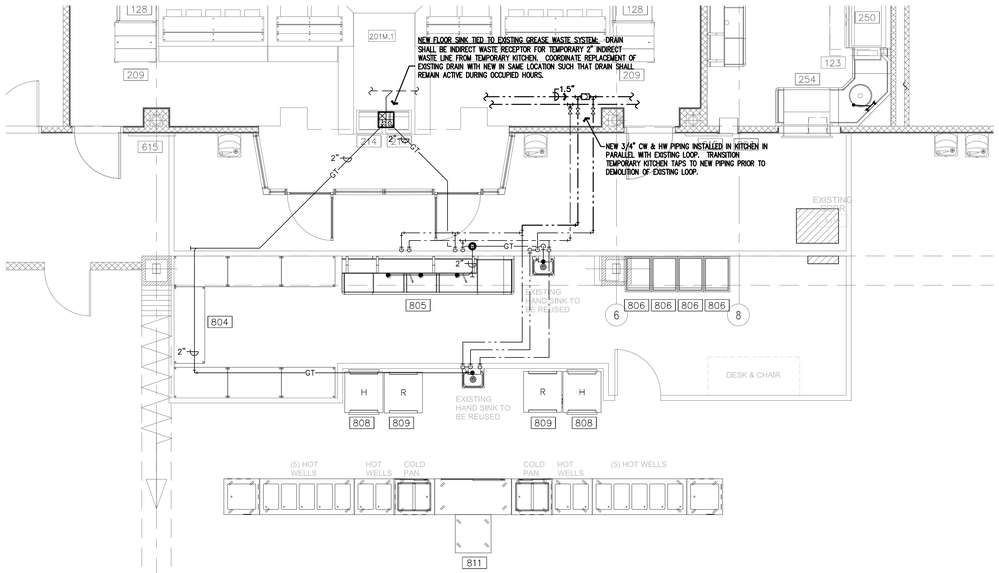


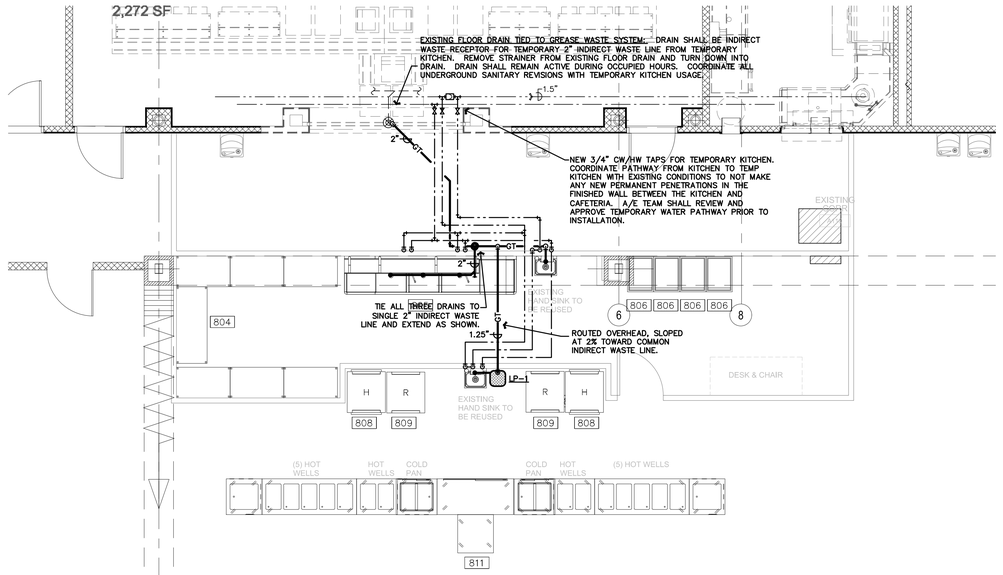
2 PLUMBING TEMPORARY KITCHEN PLAN - POST DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. AFTER DEMOLITION OF EXISTING KITCHEN AND DURING CONSTRUCTION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL REMAIN ACTIVE.
2. ALL SANITARY, CW AND HW CONNECTIONS SHALL REMAIN ACTIVE DURING ALL TIMES WHEN TEMPORARY KITCHEN IS ACTIVE.
3. UPON COMPLETION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL BE DEMOLISHED AND ALL TEMPORARILY UTILITIES SHALL BE REMOVED AND TEMPORARY WATER TAPS CAPPED AT MAIN LINE TAP.
4. ALL DEMOLISHED LAVATORIES AND FAUCETS SHALL BE PERMITTED TO BE RELOCATED ACROSS TEMPORARY KITCHENS WITHIN THE PROJECT BASED ON AVAILABILITY/PROJECT PHASING SCHEDULE. AT THE END OF THE PROJECT, REMOVE FIXTURES AND OFFER TO OWNER AS SALVAGE. IF NOT ACCEPTED, ALL FIXTURES SHALL BE DISPOSED OF BY THE CONTRACTOR.

NORTH



1 PLUMBING TEMPORARY KITCHEN PLAN - PRE DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. BEFORE DEMOLITION OF THE EXISTING KITCHEN BEGINS, INSTALL ALL NEW PLUMBING FIXTURES AND UTILITIES FOR TEMPORARY KITCHEN.

NORTH

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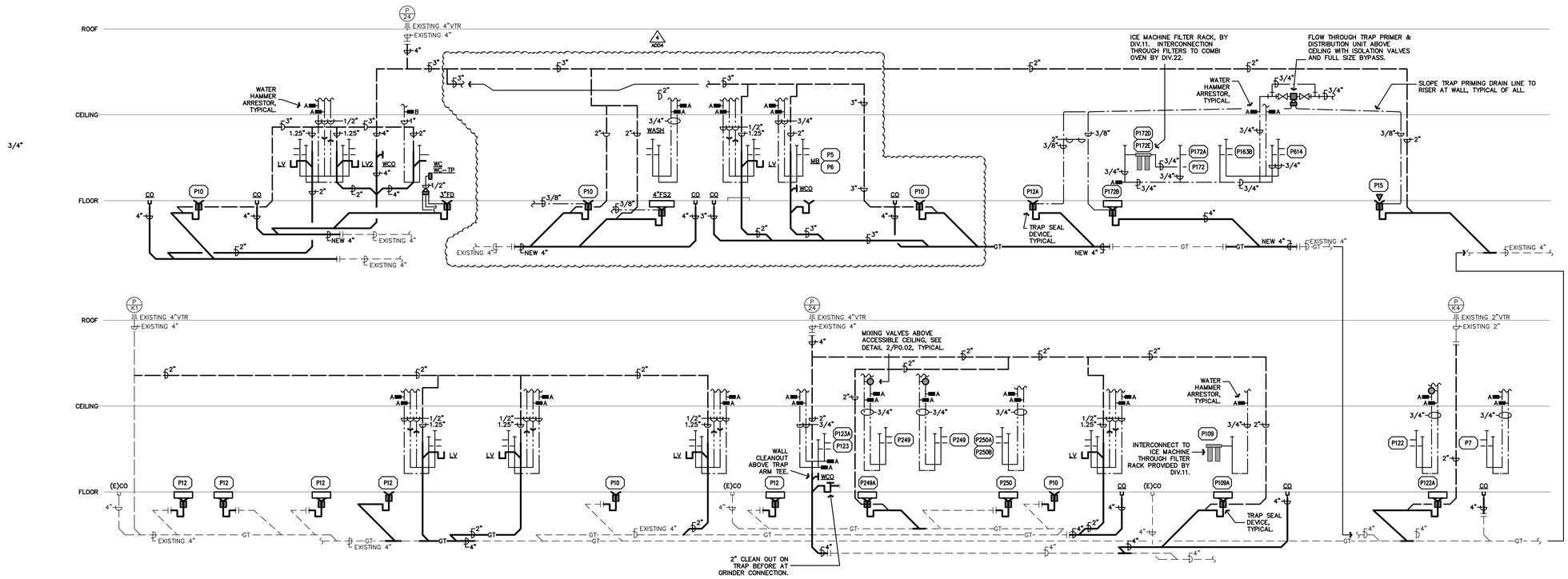
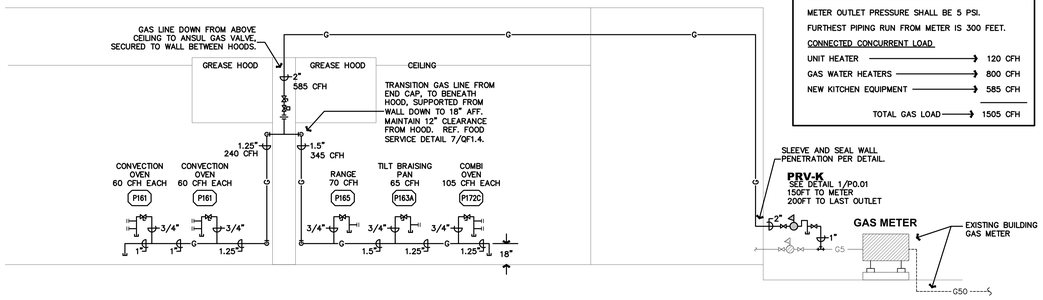
PLUMBING FLOOR PLAN - TEMP KITCHEN

a-P1.02



1 PLUMBING RISER DIAGRAMS

NO SCALE



BUILDING NATURAL GAS LOAD

METER OUTLET PRESSURE SHALL BE 5 PSI.
FURTHEST PIPING RUN FROM METER IS 300 FEET.
CONNECTED CONCURRENT LOAD

UNIT HEATER	120 CFH
GAS WATER HEATERS	800 CFH
NEW KITCHEN EQUIPMENT	585 CFH
TOTAL GAS LOAD	1505 CFH

2 NATURAL GAS RISER DIAGRAM

NO SCALE

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PLUMBING RISER DIAGRAMS

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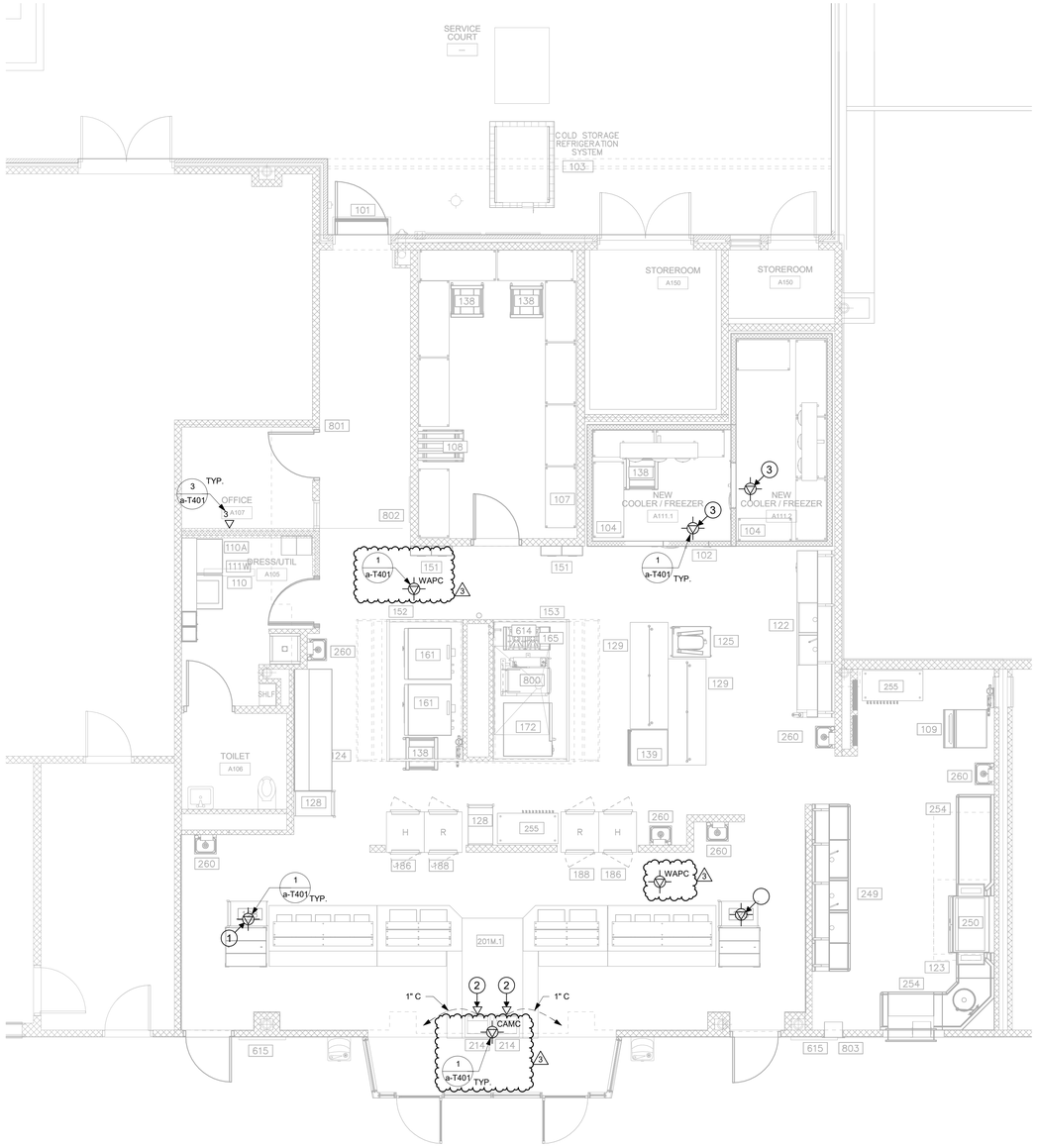


1 a-T201 TECHNOLOGY NEW/RENOVATION KITCHEN PLAN
1/4" = 1'-0"

TECHNOLOGY FLOOR PLANS GENRAL NOTES:

1. THE TECHNOLOGY REGION / WIRING BOUNDARIES ARE IDENTIFIED ON THE OVERALL SHEETS ONLY AND NOT ON THE ENLARGED SHEETS. CONTRACTOR SHALL REFER TO THE OVERALL SHEETS FOR ALL TECHNOLOGY REGIONS / WIRING BOUNDARIES.
2. ALL CONDUIT PATHWAYS, ROUGH-INS, BACKBOXES, FLOOR BOXES, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
6. TECHNOLOGY CABLING SHALL BE ROUTED IN SEPARATE PATHWAYS IN J-HOOKS, CONDUITS, CONDUIT SLEEVES, CORES, ETC. THROUGHOUT THE ENTIRE PATHWAY. DIFFERENT MEDIA TYPES (DATA, VIDEO, SECURITY, ETC.) SHALL NOT SHARE THE SAME J-HOOK, CONDUIT, CONDUIT SLEEVE, CORE, ETC.
7. UNLESS NOTED OTHERWISE, ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE AN ACCESSIBLE CEILING (AN OPEN CEILING OR CLOUD TYPE CEILING IS NOT CONSIDERED AN ACCESSIBLE CEILING) IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF / IDF ROOM TO MINIMIZE THE CABLE LENGTH ENSURING CABLE LENGTH DOES NOT EXCEED 275 FEET.
8. UNLESS NOTED OTHERWISE ALL CONDUITS SHALL BE HOMERUN FROM THE DEVICE LOCATION AND NO DAISY CHAINING OF DEVICES/ ROUGH-INS SHALL BE ALLOWED.
9. CONDUIT SEGMENTS SHALL BE NO MORE THAN 100-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
10. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
13. EQUIPMENT NOT RELATED TO THE SUPPORT OF THE TELECOMMUNICATIONS ROOM (E.G., PIPING, DUCTWORK, PNEUMATIC TUBING) SHALL NOT BE INSTALLED IN, PASS THROUGH, OR ENTER THE TELECOMMUNICATIONS ROOM.
14. ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE A LAY-IN TYPE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE A LAY- IN TYPE CEILING TO PREVENT THE CABLES FROM BEING EXPOSED, THE CONDUIT SHALL ROUTE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. THE CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE MAIN CORRIDOR OR NEAREST MDF/IDF TO MINIMIZE THE CABLE LENGTH ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. CONDUIT, CONNECTIONS, J-BOXES, SUSPENSION, ANCHORAGES, AND OTHER CONDUIT COMPONENTS EXPOSED TO VIEW IN PUBLIC SPACES SHALL BE ROUTED AND INSTALLED CAREFULLY TO MINIMIZE VISUAL IMPACT AND SHALL BE FULLY PAINTED TO MATCH UNLESS NOTED OTHERWISE.
15. CONDUIT(S) INSTALLED IN-SLAB OR UNDER-SLAB TO FLOOR BOXES, POKE-THURS, AND TO WORKAREA OUTLETS, ETC. SHALL BE INSTALLED WITH WET RATED CABLE(S).
16. NO GRID WIRE SHALL BE UTILIZED FOR SUPPORTS ONLY USE SOLID SUPPORTS (CLIPS, ALL-THREAD, ANCHORS, ETC.).

TECHNOLOGY PLAN KEYED NOTES

NOT ALL KEYED BELOW APPLY TO THIS SHEET

(1) DATA CABLE FOR CONTRACTOR FURNISHED / CONTRACTOR INSTALLED MENU BOARD. REFERENCE ARCHITECTURAL AND FOOD SERVICE DRAWINGS FOR MOUNTING HEIGHT AND ADDITIONAL INFORMATION. BUILDING POWER ADJACENT TO DATA RECEPTACLE IS REQUIRED.

(2) INDOOR / OUTDOOR RATED DATA CABLE FOR POINT OF SALE LOCATION. PROVIDE (1) 1-INCH CONDUIT FOR DATA TO THE WALL BEHIND POINT OF SALE LOCATION AND UP WALL TO ABOVE ACCESSIBLE CEILING. CONDUITS SHALL TERMINATE INSIDE A DOUBLE GANG BOX THAT IS SECURED TO THE POINT OF SALE LOCATION. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS.

(3) DATA CABLE FOR TEMPERATURE MONITORING OF FREEZER COOLER. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS AND TERMINATION POINT AND CONNECTIVITY NEEDS IN FREEZER / COOLER CONTROL UNIT.

(4) DATA CABLE FOR TEMPORARY POINT OF SALES CASH REGISTER. COORDINATE WITH OWNER, ARCHITECT, AND CONSULTANT FOR ROUTING OF CABLES TO POINT OF SALE CASH REGISTER PRIOR TO INSTALLATION

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025 3	ADDENDUM NO. 4

a

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
400 AUSTIN PARKWAY
SUGAR LAND, TX 77479

SEAL

BICSI REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 03-31-25
RCDD

07/18/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

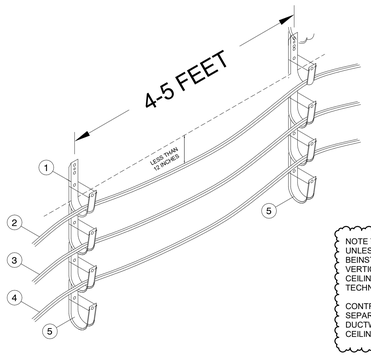
TECHNOLOGY NEW/RENOVATION KITCHEN PLAN

SHEET NO.
a-T201

NOTE TO CONTRACTOR:

UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BE INSTALLED WITHIN 6-INCHES OF THE CEILING AND ACCESSIBLE BY A TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPRATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPIING OR OTHER SYSTEMS IN THE CEILING PLENUM.



KEYED NOTES:

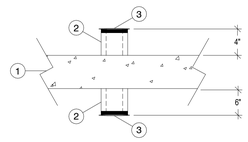
1. J-HOOK WITH RETAINER CLIP ABOVE ACCESSIBLE CEILING (BY DIV 27).
2. DATA CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
3. A/V CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
4. SECURITY CABLE ABOVE ACCESSIBLE CEILING (BY DIV 28).
5. SPARE J-HOOK (BY DIV 27).

3 NOTE TO CONTRACTOR:
UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BEINSTALLED WITHIN 6-INCHES OF THE CEILING AND LAST VERTICALLY SITUATED J-HOOK SHALL BE NO HIGHER THAN 18" OF CEILING. CABLES AND SUPPORTS SHLL BE ACCESSIBLE BYA TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPARATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPING OR OTHER SYSTEMS IN THE CEILING PLENUM

1 T400 TYPICAL J-HOOK CABLE PATHWAY

SCALE: N.T.S.

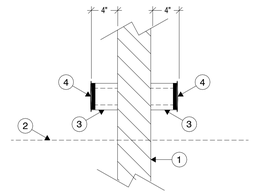


KEYED NOTES:

1. SCHEDULED FLOOR OR DECK.
2. CONDUIT SLEEVE (BY DIV 26).
3. NYLON BUSHING (BY DIV 26).

2 T400 TYPICAL CONDUIT SLEEVE THROUGH FLOOR OR DECK DETAIL

SCALE: N.T.S.

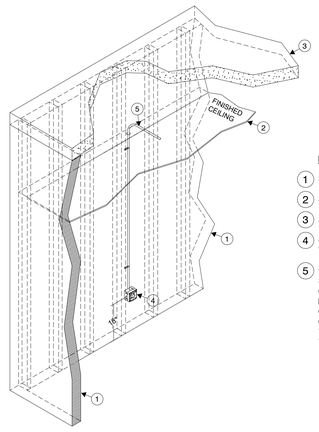


KEYED NOTES:

1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. CONDUIT SLEEVE (BY DIV 26).
4. NYLON BUSHING (BY DIV 26).

3 T400 TYPICAL CONDUIT SLEEVE GOING THROUGH WALL

SCALE: N.T.S.



KEYED NOTES:

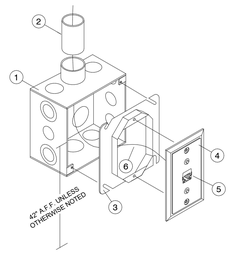
1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. SCHEDULED DECK ABOVE.
4. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX WITH DOUBLE GANG PLASTER RING (BY DIV 26).
5. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH. (BY DIV 26).

4 T400 TYPICAL TECHNOLOGY CONDUIT ROUGH-IN

SCALE: N.T.S.

DETAIL DELETED SPACE LEFT INTENTIONALLY BLANK

3



KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
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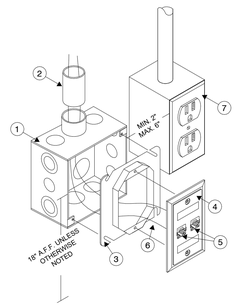
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH PHONE STUDS (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).

6 T400 TYPICAL WALL PHONE OUTLET CONFIGURATION

SCALE: N.T.S.

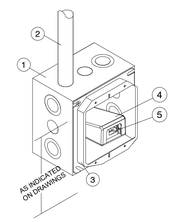


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).
7. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

7 T400 TYPICAL DUAL DATA OUTLET CONFIGURATION

SCALE: N.T.S.

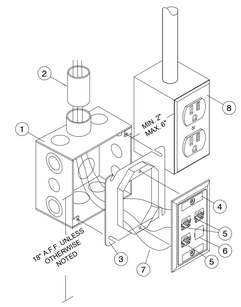


KEYED NOTES:

1. 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. DOUBLE GANG PLASTER RING (BY DIV 26).
4. SURFACE MOUNT BOX INSIDE THE 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH DOUBLE GANG BOX (BY DIV 27).
5. RJ-45 INSERT (BY DIV 27).

8 T400 TYPICAL WALL-MOUNTED WIRELESS ACCESS POINT

SCALE: N.T.S.



KEYED NOTES:

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2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. BLANK INSERT (BY DIV 27).
7. CABLE AS SPECIFIED (BY DIV 27).
8. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

9 T400 TYPICAL THREE DATA OUTLET CONFIGURATION

SCALE: N.T.S.

ISSUE:

12/05/2024	DD PACKAGE
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09/04/2025 3	ADDENDUM NO. 4

a

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
AUSTIN PARKWAY ELEMENTARY SCHOOL
400 AUSTIN PARKWAY
SUGAR LAND, TX 77479

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr.
BICSI ID # 564970
EXPIRES 12-31-25
RCDD

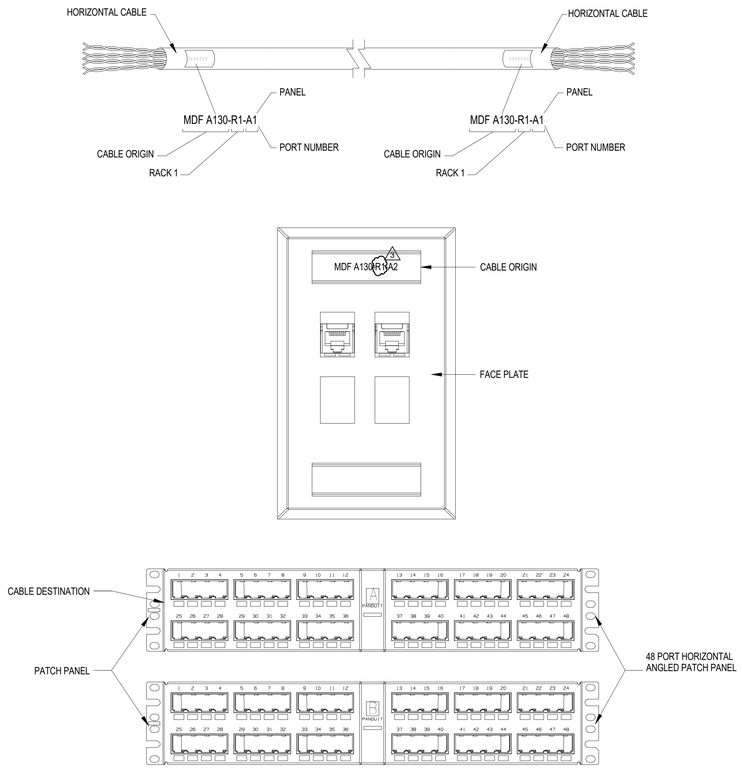
07/18/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

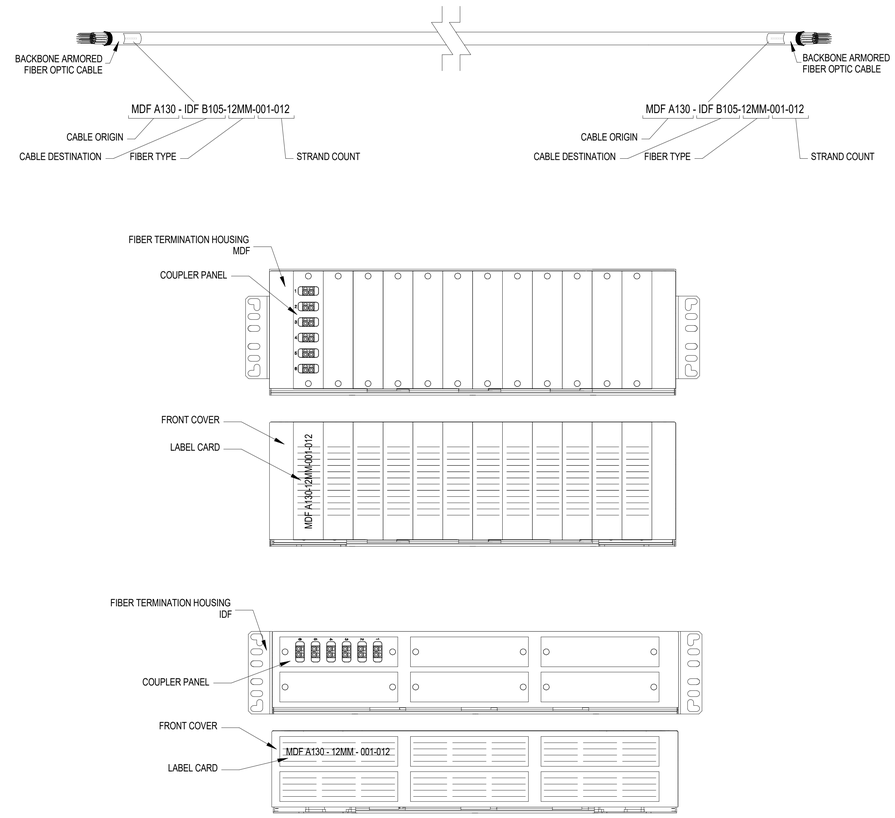
TECHNOLOGY TYPICAL DETAILS

SHEET NO.
a-T400



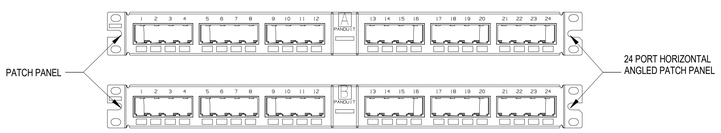
1 T500 TYPICAL HORIZONTAL DATA CABLE LABELING SCHEME

SCALE: N.T.S.



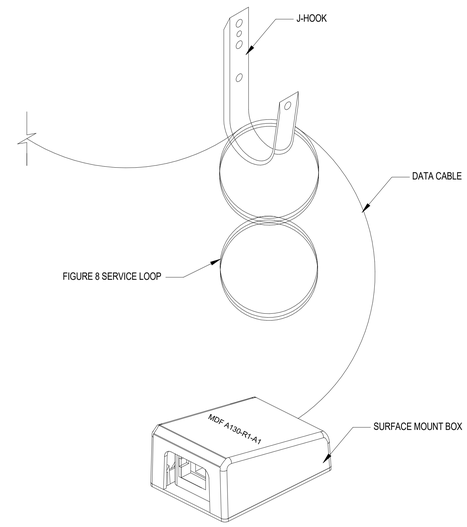
2 T500 TYPICAL FIBER BACKBONE LABELING SCHEME

SCALE: N.T.S.



3 T500 TYPICAL COPPER BACKBONE LABELING SCHEME

SCALE: N.T.S.



4 T500 ABOVE ASSESSIBLE CEILING LABELING SCHEME

SCALE: N.T.S.

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MWA ARCHITECTS
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CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
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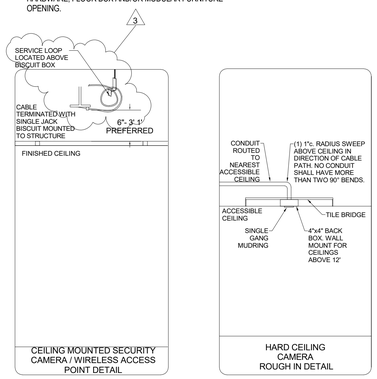
TECHNOLOGY TYPICAL DETAILS

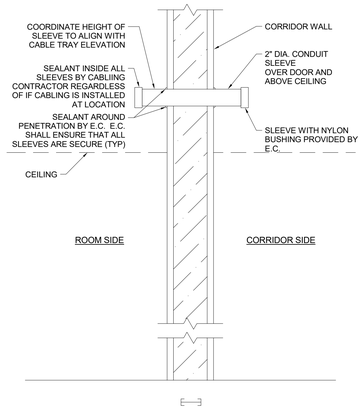
SHEET NO.
a-T500

GENERAL NOTE

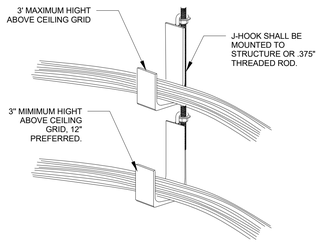
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



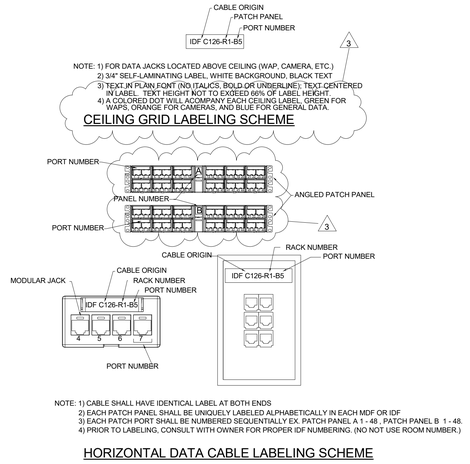
1 DATA ROUGH-IN DETAILS
SCALE: NS



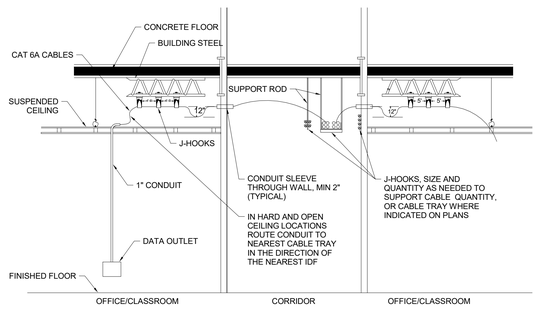
2 TYPICAL CABLING SLEEVE
SCALE: NTS



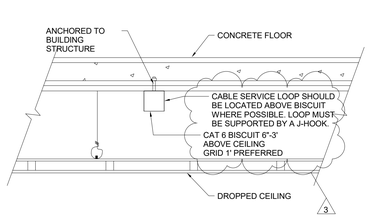
3 PANDUIT J-HOOK DETAIL
SCALE: NTS



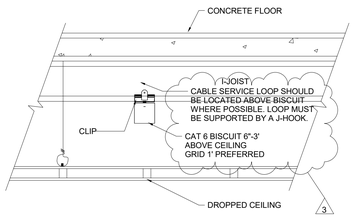
4 LABELING & CABLING SCHEMES
SCALE: NTS



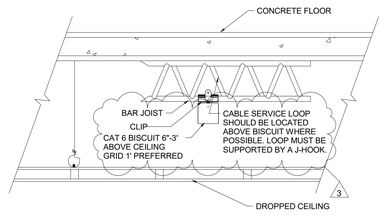
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PWY COMPANY

ISSUE:

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09/04/2025	3 ADDENDUM NO. 4

a

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Austin Parkway Elementary School
4400 Austin Pkwy, Sugar Land, TX 77479

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 258657
EXPIRES 12-31-27

07-18-25

AVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

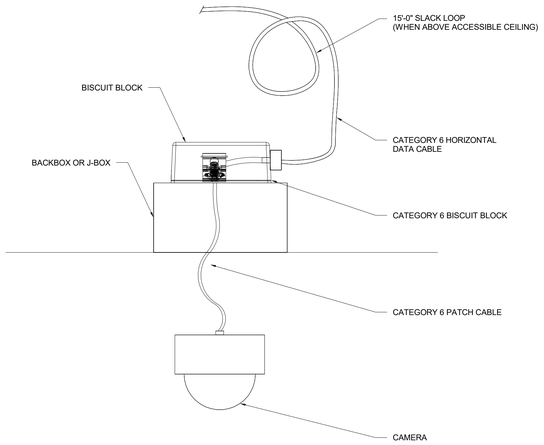
PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING

TECHNOLOGY - Austin Parkway ES - DETAILS

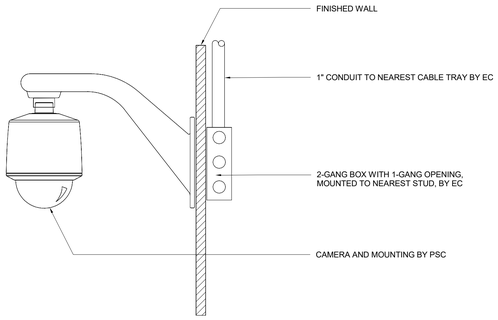
a-TN.500

GENERAL NOTES:

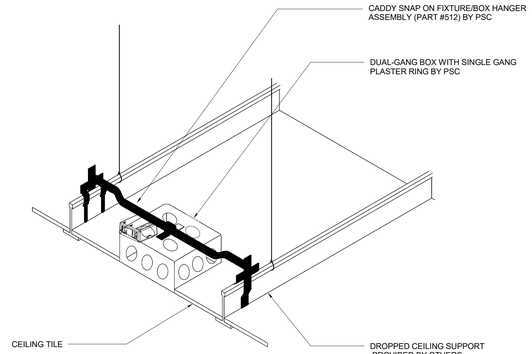
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



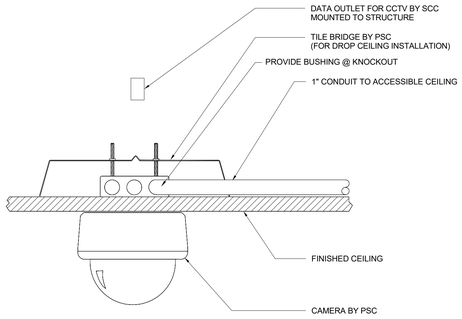
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS



5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

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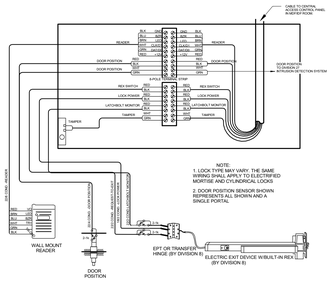
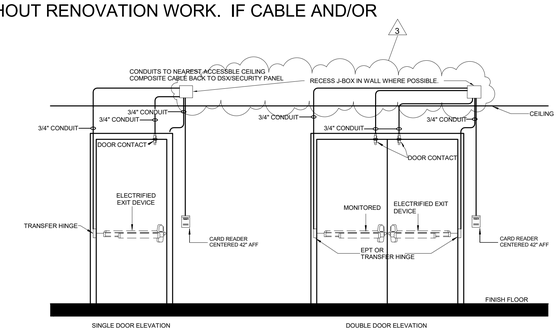
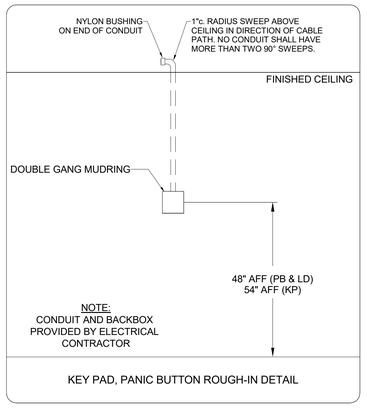


1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

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07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM NO. 4
3	

a

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Austin Parkway Elementary School
4400 Austin Pkwy, Sugar Land, TX 77479

SEAL

07-18-25

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING
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PERMITTING

TECHNOLOGY - Austin Parkway ES - SECURITY DETAILS

a-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

Sheet List Table	
Sheet Number	Sheet Title
School: b-Burton ES	
b-A-000	COVER AND INDEX
b-TN-000	TECHNOLOGY - INDEX SHEET
b-TN-100	TECHNOLOGY - OVERALL
b-TN-101	TECHNOLOGY - KITCHEN
b-TN-500	TECHNOLOGY - DETAILS
b-TN-600	TECHNOLOGY - SECURITY DETAILS

FORT BEND INDEPENDENT SCHOOL DISTRICT

WALTER MOSES BURTON ELEMENTARY SCHOOL
1625 HUNTER GREEN LANE, FRESNO, TX 77545

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PROJECT DESIGN TEAM

PROGRAM MANAGEMENT
FBISD 2023 Bond Team
2323 Texas Parkway
Missouri City, TX 77489
Phone Number: 281-327-5481

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Phone Number: 713-300-9292

STRUCTURAL ENGINEER
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3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

ADDENDUM NO. 4 - SEP 04, 2025

b

GENERAL NOTE

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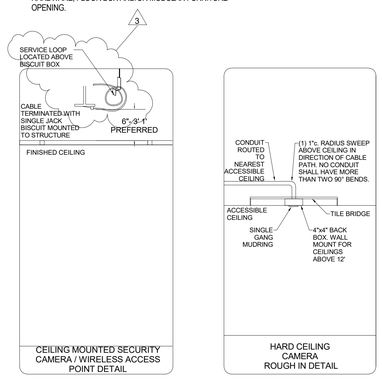

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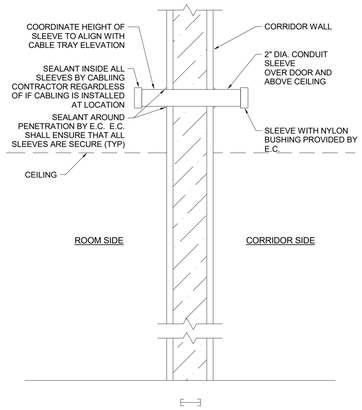
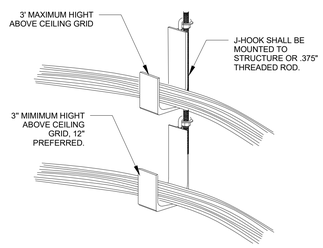
SCALE: NS



2 TYPICAL CABLING SLEEVE
SCALE: NTS



3 PANDUIT J-HOOK DETAIL
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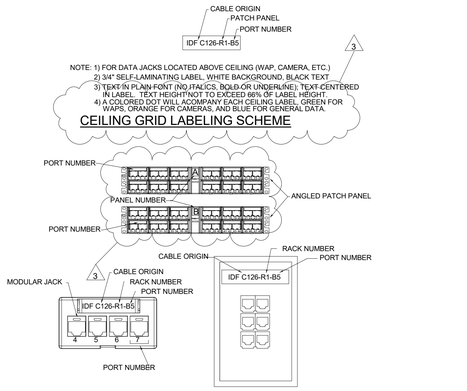
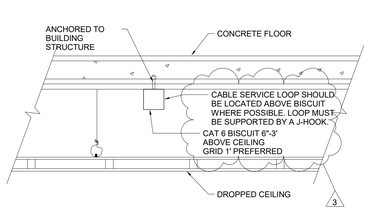
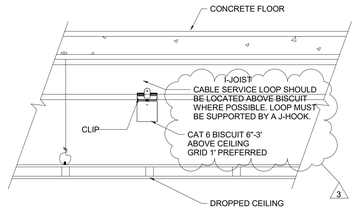


4 LABELING & CABLING SCHEMES
SCALE: NTS

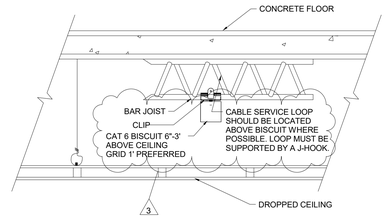
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



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9 CAMERA SCHEDULE
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09/042025 (3)	ADDENDUM NO. 4

b

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Burton Elementary School
1625 Hunter Green Ln, Fresno, TX 77545

SEAL

07-18-25

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - DETAILS

b-TN.500

GENERAL NOTES:

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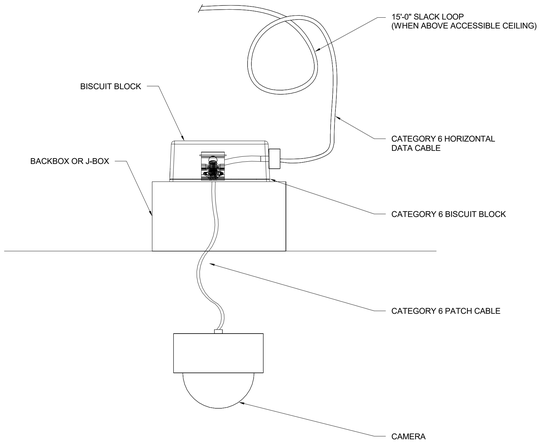

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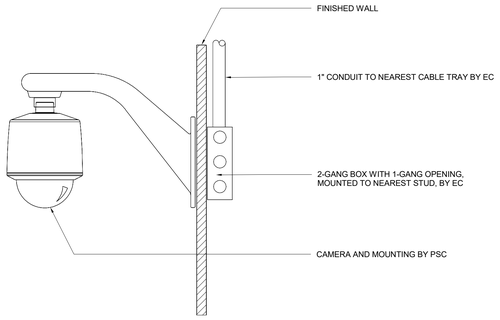
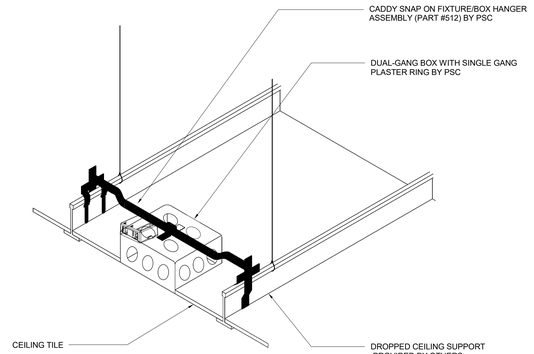


6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
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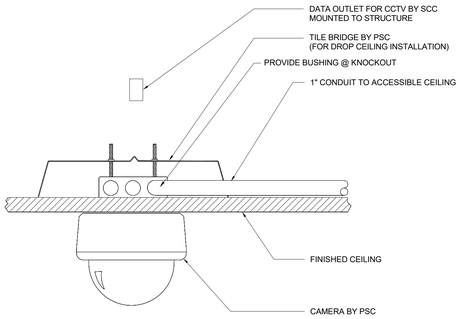

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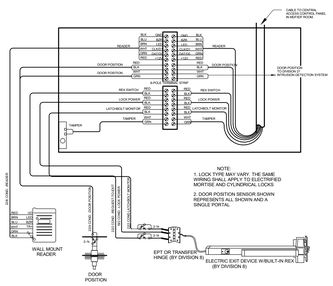

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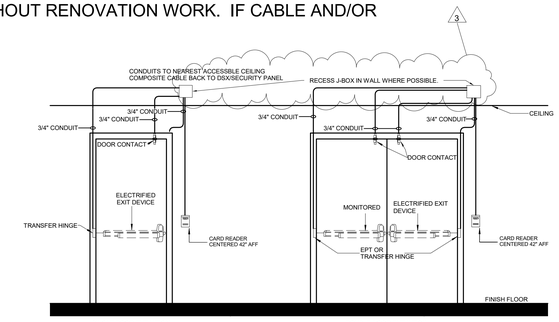

2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
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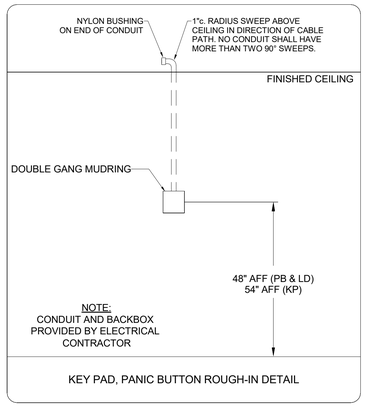

KP PB LD

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FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Burton Elementary School
1625 Hunter Green Ln, Fresno, TX 77545

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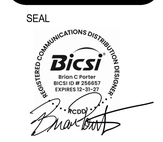

07-18-25

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PROJ. NO.: 23-25
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TECHNOLOGY - SECURITY DETAILS

b-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

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School: c-Colony Bend-ES	
c-A.000	COVER AND INDEX
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c-TN-101	TECHNOLOGY - KITCHEN
c-TN-500	TECHNOLOGY - DETAILS
c-TN-600	TECHNOLOGY - SECURITY DETAILS

FORT BEND INDEPENDENT SCHOOL DISTRICT

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ADDENDUM NO. 4 - SEP 04, 2025

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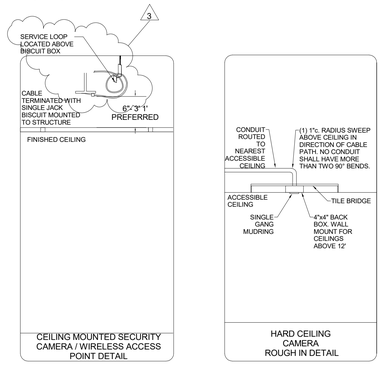

1 DATA ROUGH-IN DETAILS
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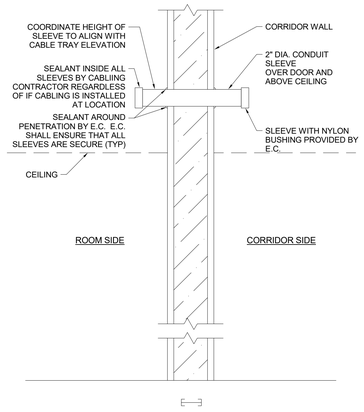

2 TYPICAL CABLING SLEEVE
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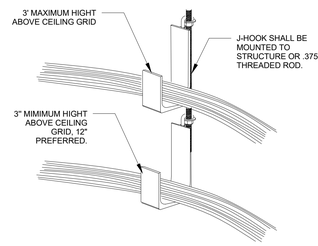

3 PANDUIT J-HOOK DETAIL
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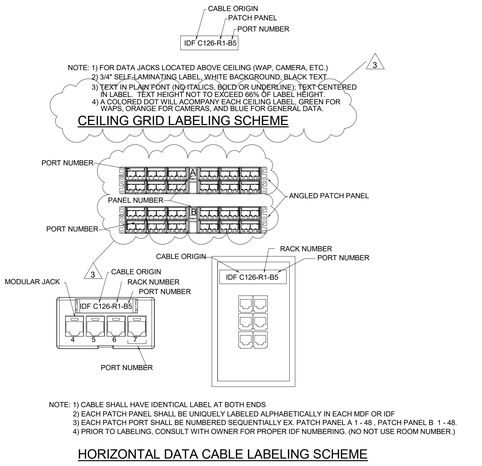

4 LABELING & CABLING SCHEMES
SCALE: NTS

5 CABLE PATHWAY CROSS SECTION
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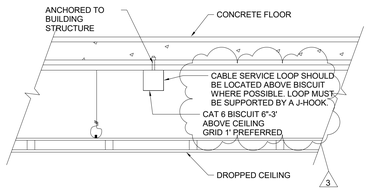

6 DROPPED CEILING MOUNTING DETAIL
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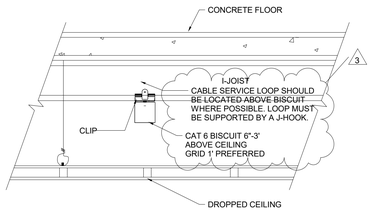

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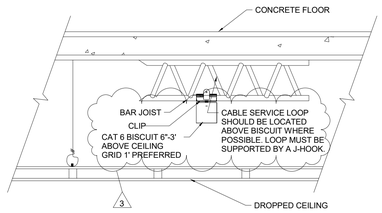


8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	3 ADDENDUM NO. 4

C

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Colony Bend Elementary School
2720 Planters St, Sugar Land, TX 77479

SEAL

Bicsi
REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Brian C Porter
BICSI ID # 256687
EXPIRES 12-31-27

07-18-25

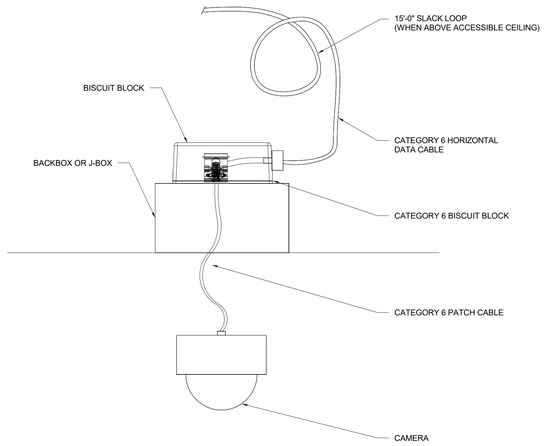
MVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Colony Bend ES - DETAILS

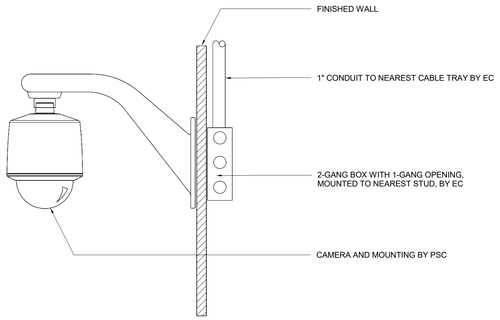
c-TN.500

GENERAL NOTES:

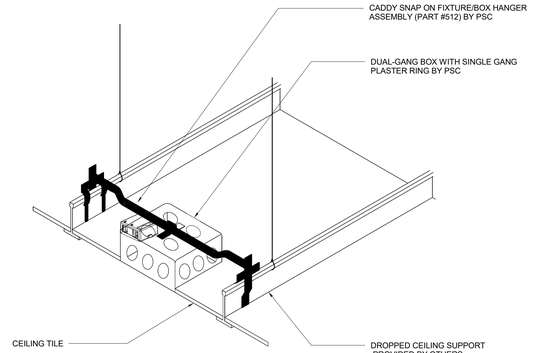
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



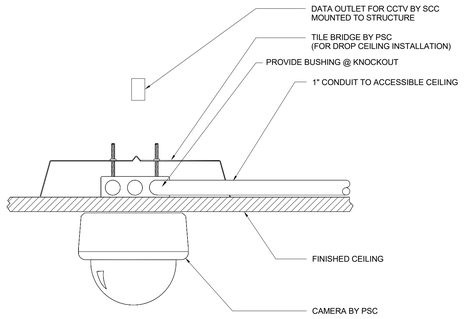
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS



5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

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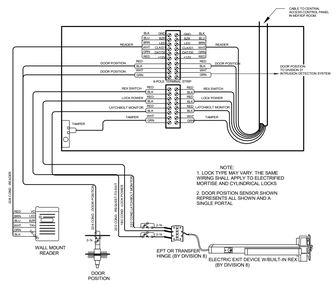
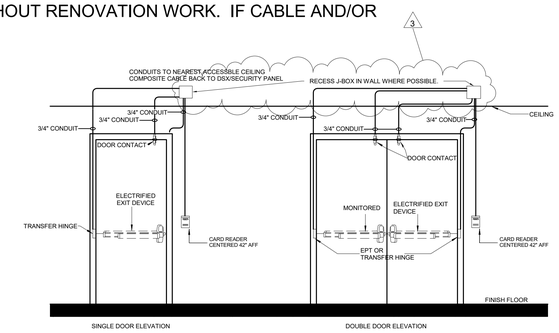
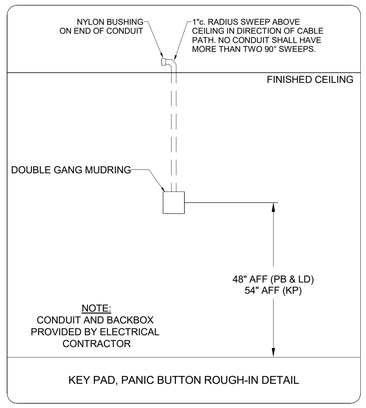


1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
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07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025 ③	ADDENDUM NO. 4

C

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Colony Bend Elementary School
2720 Planters St. Sugar Land, TX 77479

SEAL

Brian D Porter
BICSI ID # 258657
EXPIRES 12-31-27

07-18-25

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING
AND
PERMITTING

TECHNOLOGY - Colony Bend
ES - SECURITY DETAILS

c-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

COMMONWEALTH ELEMENTARY SCHOOL
4909 COMMONWEALTH BLVD, SUGAR LAND, TX 77479

Sheet List Table	
Sheet Number	Sheet Title
School: d-Commonwealth ES	
d-A.000	COVER AND INDEX
d-A00-01	GENERAL NOTES AND ABBREVIATIONS
d-D.101	DEMO PLAN, DEMO RCP
d-A.201	OVERALL FLOOR PLAN
d-A4.01	CAFETERIA ENLARGED RCP & PLAN
d-E.200	ELECTRICAL FLOOR PLAN AND SCHEDULES
d-TN-000	INDEX SHEET
d-TN-100	TECHNOLOGY - OVERALL
d-TN-101	TECHNOLOGY - KITCHEN
d-TN-500	TECHNOLOGY - DETAILS
d-TN-600	TECHNOLOGY - SECURITY DETAILS

FORT BEND INDEPENDENT SCHOOL DISTRICT 2023 BOND

ADDENDUM NO. 4 - SEP 04, 2025

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

BOARD OF TRUSTEES

KRISTIN K. TASSIN	PRESIDENT
ANGIE HANAN	VICE PRESIDENT
DR. SHIRLEY ROSE-GILLIAM	SECRETARY
AFSHI CHARANIA	BOARD MEMBER
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ANGIE WIERZBICKI	BOARD MEMBER

PROJECT DESIGN TEAM

PROGRAM MANAGEMENT
FBISD 2023 Bond Team
2323 Texas Parkway
Missouri City, TX 77489
Phone Number: 281-327-5481

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MWA Architects
11767 Katy Freeway, Suite 430
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26215 Oak Ridge Drive
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Phone Number: 281-350-2323

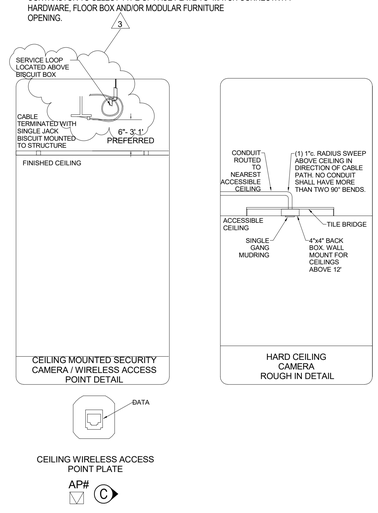
MEP ENGINEERS
Stanton Engineering Group
1300 W. Sam Houston Pkwy South, Suite 121
Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

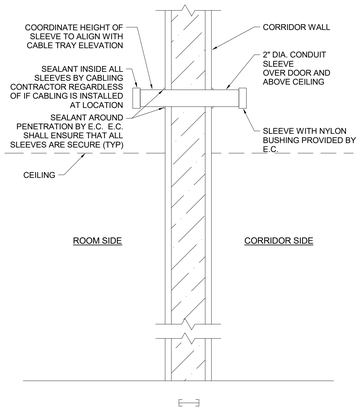
d

GENERAL NOTE

1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



1 DATA ROUGH-IN DETAILS
SCALE: NS



2 TYPICAL CABLING SLEEVE
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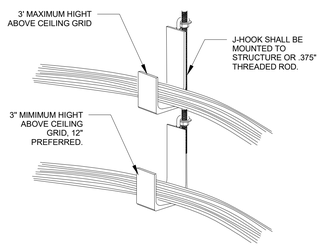

3 PANDUIT J-HOOK DETAIL
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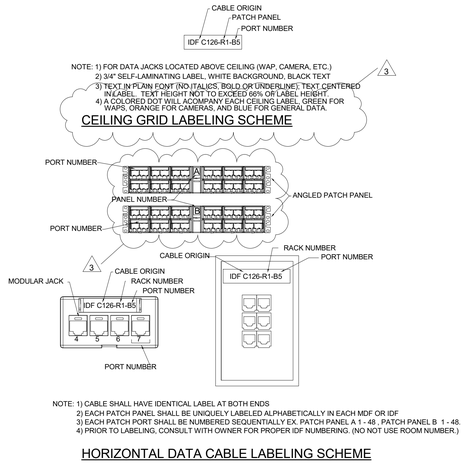
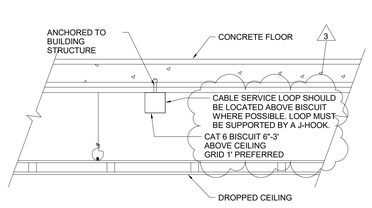
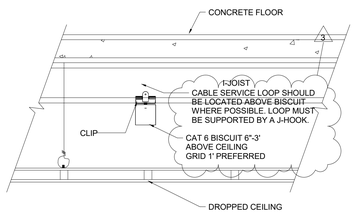


4 LABELING & CABLING SCHEMES
SCALE: NTS

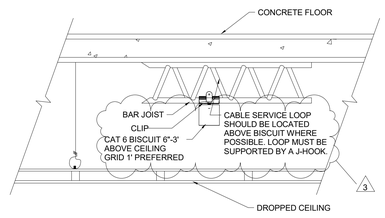
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
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C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

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TRUENORTH A PMY COMPANY

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3	

d

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Commonwealth Elementary School
4909 Commonwealth Blvd, Sugar Land, TX 77479

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 256657
EXPIRES 12-31-27
RCDD

07-18-25

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11767 KATY FREEWAY, SUITE 430
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PROJ. NO.: 23-25
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TECHNOLOGY - Commonwealth ES - DETAILS

d-TN.500

GENERAL NOTES:

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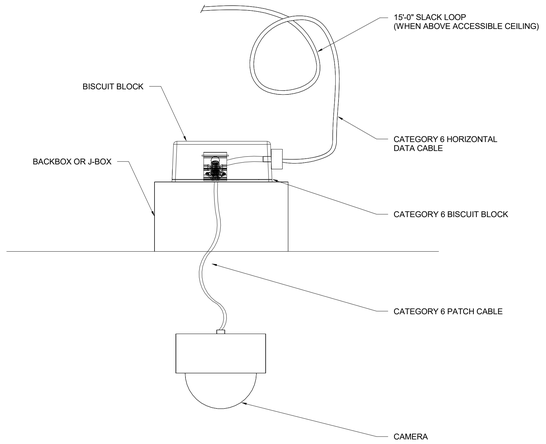
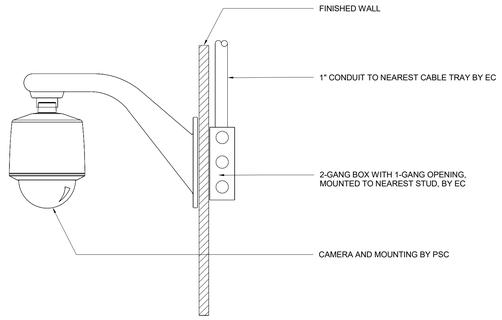
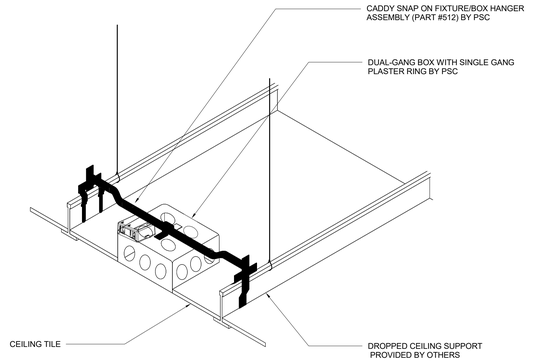


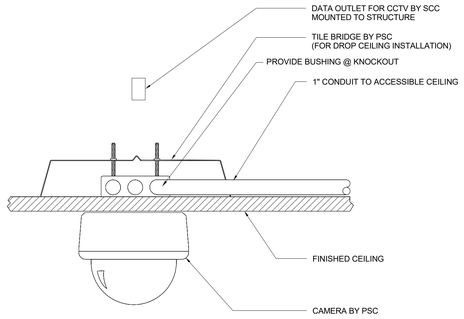
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS



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ACCESS CONROL DETAILS AND GENERAL NOTES:

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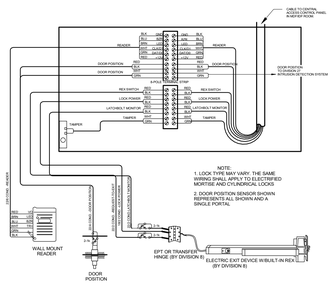
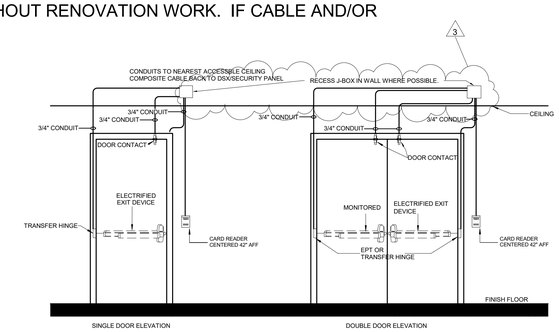
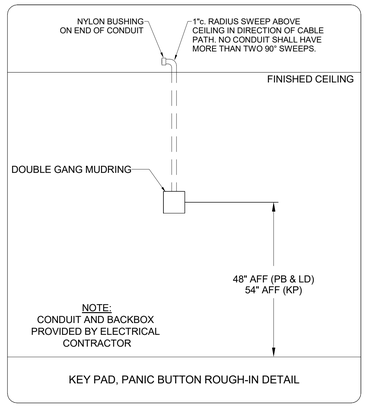


1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

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Commonwealth Elementary School
4909 Commonwealth Blvd, Sugar Land, TX 77479

SEAL

BICSI REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 265851
EXPIRES 10-25-27

07-18-25

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ARCHITECTS
AND PLANNING
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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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TECHNOLOGY -
Commonwealth ES -
SECURITY DETAILS

d-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

CORNERSTONE ELEMENTARY SCHOOL
1800 CHANTHAM AVE, SUGAR LAND, TX 77479

FORT BEND INDEPENDENT SCHOOL DISTRICT BOND 2023

Sheet List Table	
Sheet Number	Sheet Title
School: e-Cornerstone ES	
e-A.000	COVER AND INDEX
e-A00-01	GENERAL NOTES AND ABBREVIATIONS
e-D.101	DEMO PLAN PHOTOS
e-A.201	FLOOR PLAN
e-A.301	STUDENT CAFETERIA AND GYM PLAN
e-A.501	FINISH FLOOR PLAN
e-A.601	INTERIOR ELEVATIONS
e-S1	GYMNASIUM PLAN
e-S2	SECTIONS AND TYPICAL DETAILS
e-E.200	ELECTRICAL FLOOR PLAN & SCHEDULES
e-TN-000	TECHNOLOGY - INDEX SHEET
e-TN-100	TECHNOLOGY - OVERALL
e-TN-101	TECHNOLOGY - KITCHEN
e-TN-500	TECHNOLOGY - DETAILS
e-TN-600	TECHNOLOGY - SECURITY DETAILS

△3

REGISTERED ARCHITECT — MICHAEL A. MAGUIRE — 22651 — STATE OF TEXAS
04SEP.2025

ADDENDUM NO. 4 - SEP 04, 2025

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

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DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

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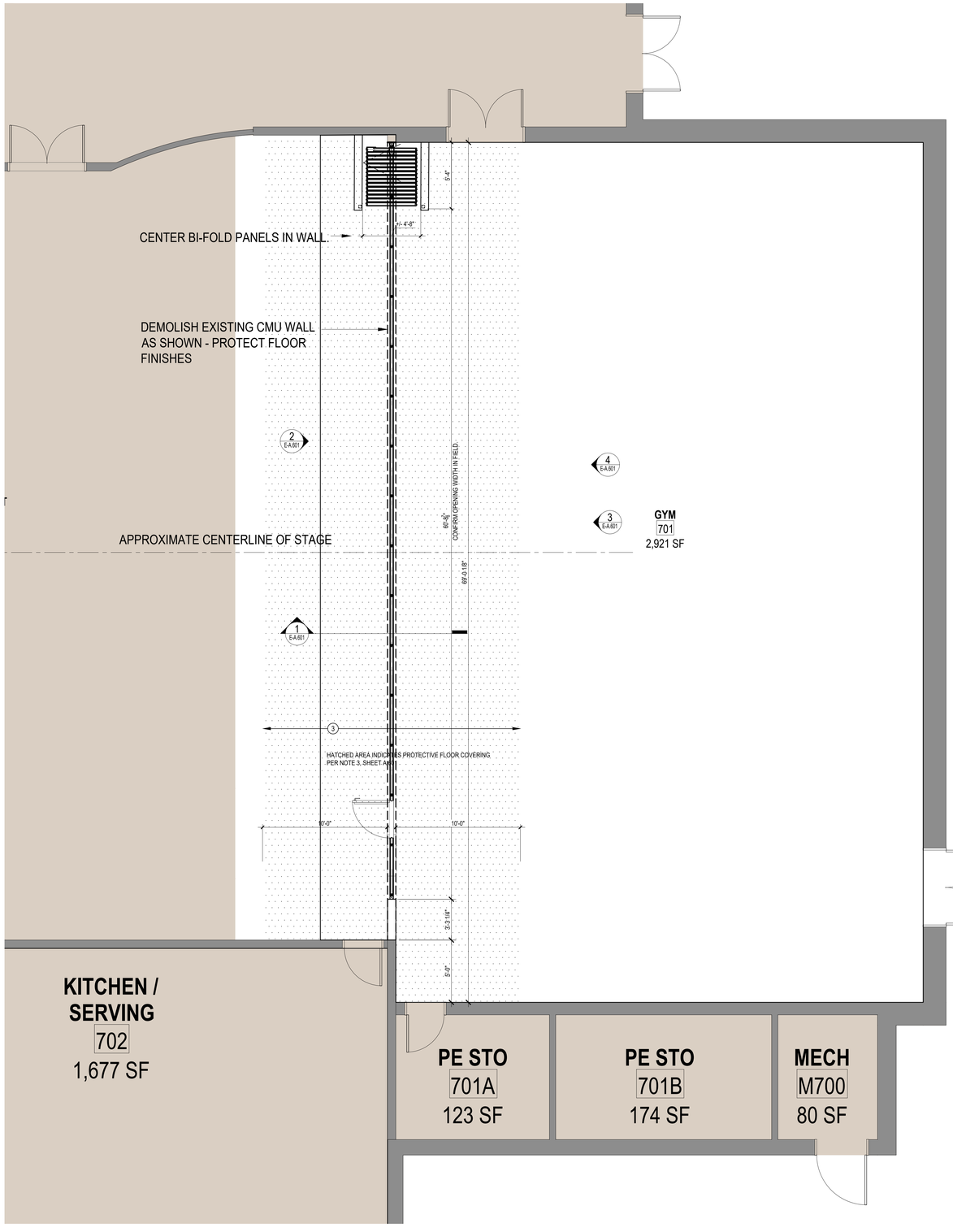
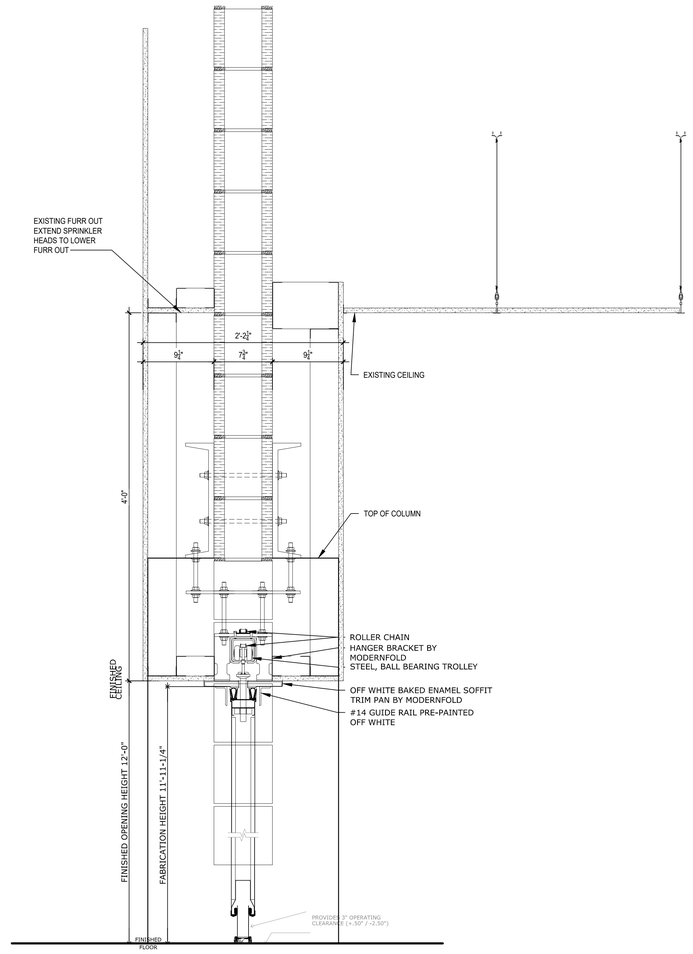
e



1 PLAN STUDENT DINING AND GYM
SCALE: 1/4" = 1'-0"



3 SECTION AT FOLDING PARTITION
SCALE: 1-1/2" = 1'-0"

FLOOR PLAN - GENERAL NOTES

1. REFER TO SHEET FOR GENERAL NOTES. GENERAL NOTES APPLY TO ALL SCHOOL KITCHENS.
2. REFER TO SHEET FOR PARTITION TYPES.
3. EXIXSTING EXPOSED CONDUITS AND DATA CABLING IN WIREMOLD TO BE ROUTED INSIDE WALLS (EXCEPT AT WAREWASH AREA BELOW TABLE HEIGHT AND DRY STORAGE ROOMS). PATCH AND REPAIR AS REQUIRED TO ACHIEVE SMOOTH CLEAN WALL SURFACE.

2 FLOOR PLAN NOTES

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CORNERSTONE ELEMENTARY SCHOOL
1800 CHATHAM AVE
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SEAL
REGISTERED ARCHITECT
STATE OF TEXAS
28 AUG 2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/28/25
ADDENDUM NO. 3 - AUG 28, 2025

KITCHEN FLOOR PLAN

e-A.301

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\E-Cornerstone ES\e-A.301 STUDENT CAFETERIA AND GYM PLAN.dwg Aug 29, 2025 - 8:29am

PAINT COLOR SCHEDULE

UNLESS OTHERWISE INDICATED FIELD COLOR IS PT-1 (SW 7014 EIDER WHITE)

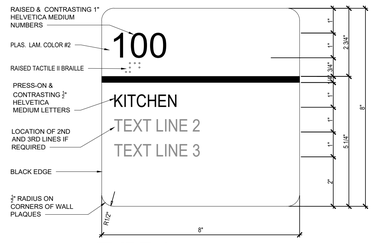
SW 7014 EIDER WHITE (EPOXY PAINT)

WALL TILE

CERAMIC WALL TILE (WT-1)
REFER TO TILE PATTERN AT SERVING AND RESTROOM
FIELD WALL TILE: DALTILE RITTENHOUSE SQUARE K175 BISCUIT (3X6)

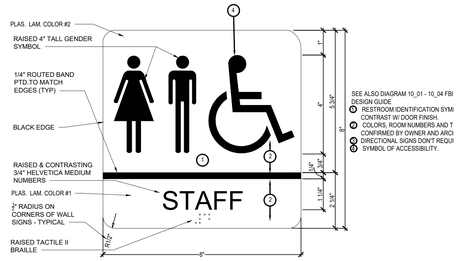
A — PROVIDE ROOM SIGN TO REPLACE EXISTING. SEE LAYOUT FOR TYPE A OR TYPE B SIGN LOCATIONS.

JOHNSONITE DURCOVE RB-1 BURNT UMBER - 6"



TYPE A

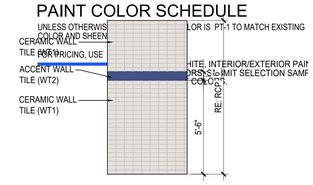
ROOM SIGNAGE - FIXED NAMES



TYPE B

KITCHEN RESTROOM SIGNAGE

PAINT COLOR SCHEDULE

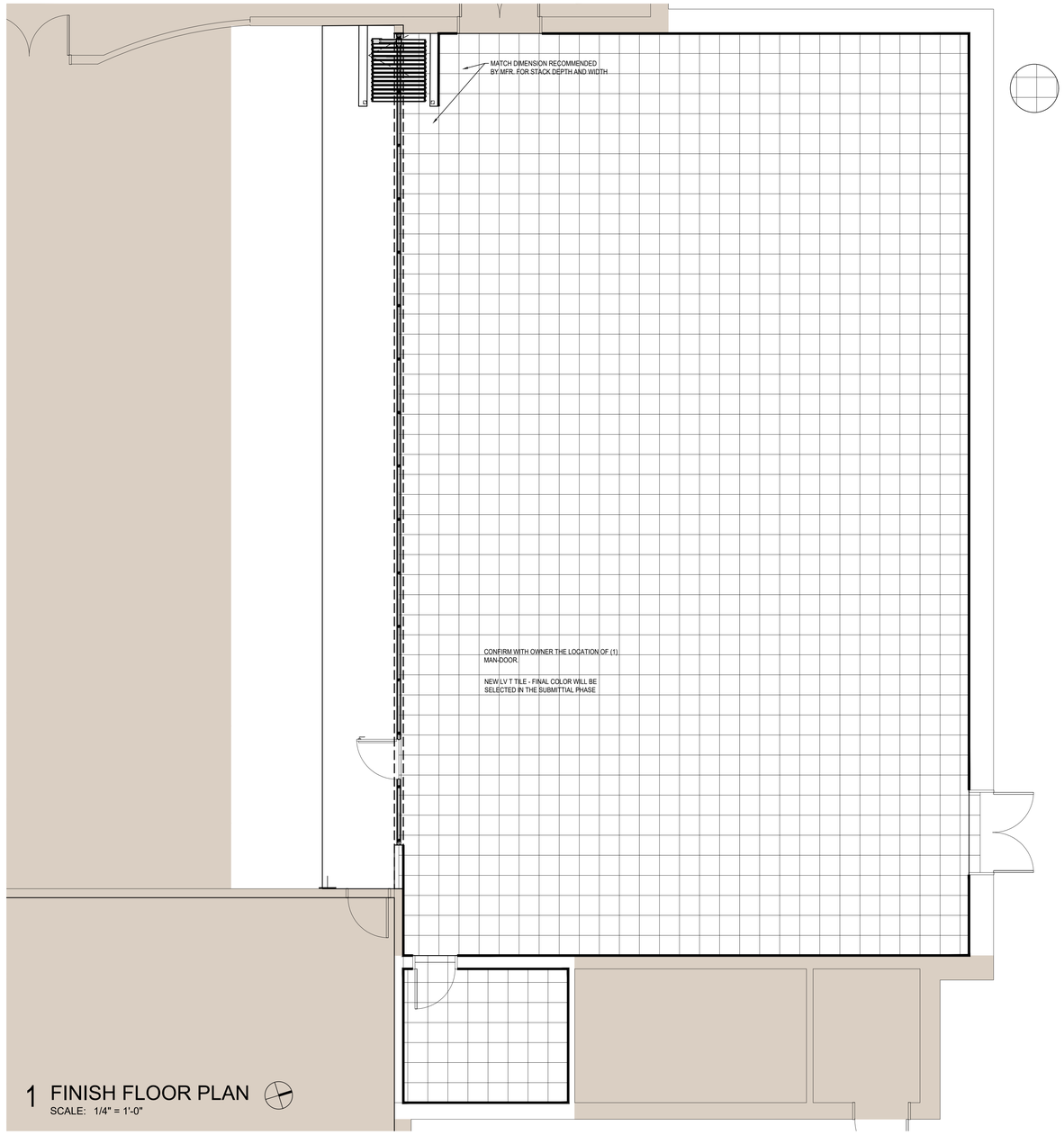


WALL TILE PATTERN - RESTROOM

2 FLOOR FINISH LEGEND

3 ROOM SIGNAGE

4 WALL TILE PATTERN



1 FINISH FLOOR PLAN

SCALE: 1/4" = 1'-0"

NEW FLOOR LEGEND

NEW LVT : TARKETT - EVENT ABSTRACT/ MELANGE - 18 X 18
(3,071 SF)

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING

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FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
CORNERSTONE ELEMENTARY SCHOOL
1800 CHATHAM AVE
SUGAR LAND, TX 77479

SEAL

REGISTERED ARCHITECT
MOC KIM MOCHON
23651
STATE OF TEXAS

28 Aug 2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/28/25
ADDENDUM NO. 3 - AUG 28, 2025

FINISH FLOOR PLAN

e-A.501

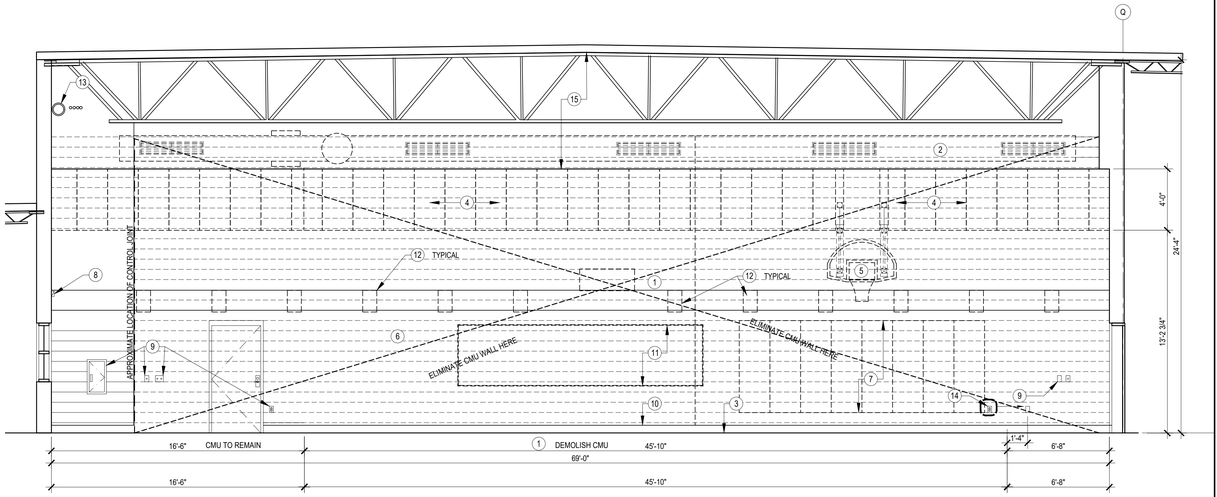
F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\E-Cornerstone ES\e-A.501 FINISH FLOOR PLAN.dwg Aug 29, 2025 - 9:27am

NUMBERED DEMOLITION NOTES - CORNERSTONE

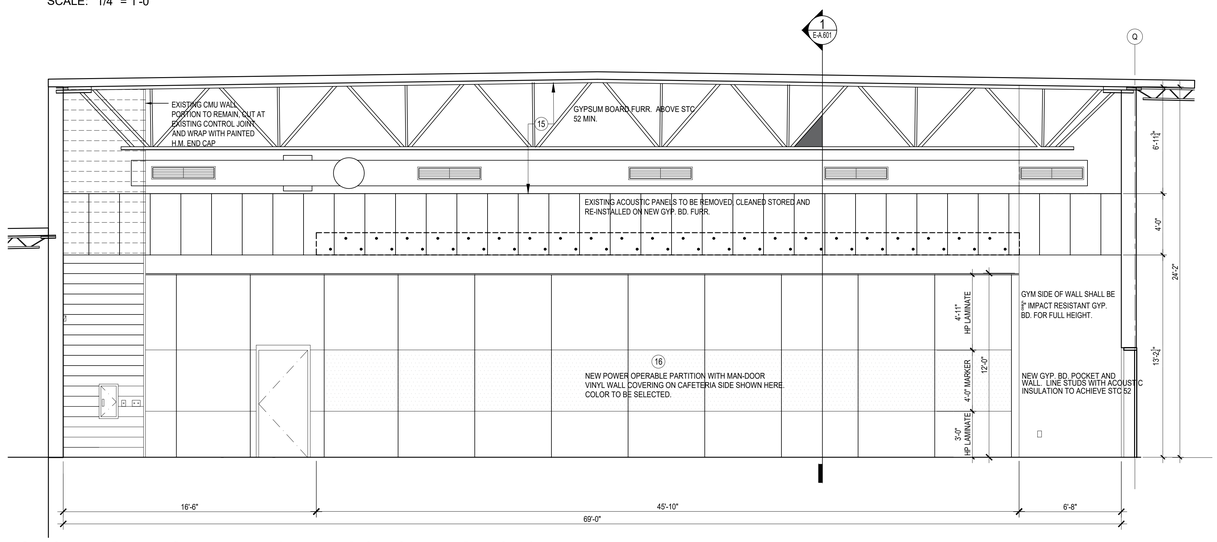
1. REMOVE 12" CMU WALL BETWEEN CONTROL JOINTS.
2. IF NEEDED FOR WORKING SPACE, CAREFULLY REMOVE CIRCULAR DUCTS, STORE AND PROTECT. RE-INSTALL DUCT AND DIFFUSERS, CLEAN AND RE-PAINT TO MATCH EXISTING.
3. PROTECT FLOOR FINISH ON BOTH SIDES OF WALL FROM DAMAGE BY INSTALLING MIN. 3/4" T&G PLYWOOD (STURDI-FLOOR) OR EQ. FOR A DISTANCE OF 10' OUTWARD FROM WALL. PLYWOOD SHALL BE UNTREASED AND BE PLACED ON NONSTAINING TEMPORARY FLOOR PROTECTION "RAM-BOARD".
4. SALVAGE, STORE AND PROTECT EXISTING ACOUSTIC PANELS. CLEAN AND RE-INSTALL ON NEW WALL FACE. USE PANELS FROM NEWLY RELOCATED BASKETBALL GOAL ON OPPOSITE SIDE OF GYM TO REPLACE THE GAPS LEFT IN THIS RUN OF PANELS.
5. RELOCATE EXISTING BASKETBALL GOAL TO OPPOSITE WALL. COORDINATE WITH PRINCIPAL AND COACH.
6. PHOTOGRAPH BOTH SIDES OF THIS WALL BEFORE WORK BEGINS. RESTORE NEW WALL TO LIKE CONDITIONS INCUDING SIGNAGE, ACCESSORIES, SECURITY ITEMS, POWER AND SWITCHES.
7. SALVAGE, STORE AND PROTECT EXISTING WALL PADS/PROTECTIVE PANELS. CLEAN AND REMOUNT BELOW RELOCATED BASKETBALL GOAL ON OPPOSITE WALL.
8. PROTECT EXISTING SECURITY DEVICE.
9. PROVIDE NEW FIRE EXTINGUISHER CABINET, DUPLEX RECEPTACLE AND KEYED SWITCHES
10. SOURCE, MATCH AND REPLACE BASE ON BOTH SIDES OF WALL.
11. SALVAGE MARKER BOARD. CLEAN AND RE-MOUNT AT COACH'S DIRECTION.
12. SALVAGE PAPER SIGNS, DELIVER TO COACH AND RE-MOUNT AT COACH'S DIRECTION.
13. EXISTING CONDUIT, LIGHTING, PLUMBING TO REMAIN IN PLACE.
14. RELOCATE EXISTING DUPLEX RECEPTACLE
15. GYP. BD. FURR OFF FACE OF CMU WALL IS BE REMOVED DURING DEMOLITION AND RE-BUILT BETWEEN TWO REMAINING SECTIONS OF CMU WALL WITH COLD FORMED METAL FRAMING SYSTEM. SPRINKLER PIPING INSIDE TO BE PROTECTED.
16. NEW MOVEABLE PARTITION AND SUPPORT BEAM.
17. MANUFACTURER STANDARD VINYL WALCOVERING FINISH. COLOR TO BE DECIDED.
18. GYPSUM BOARD WALL FINISH ON CFMF FRAMING SYSTEM

GENERAL DEMOLITION NOTES - CORNERSTONE

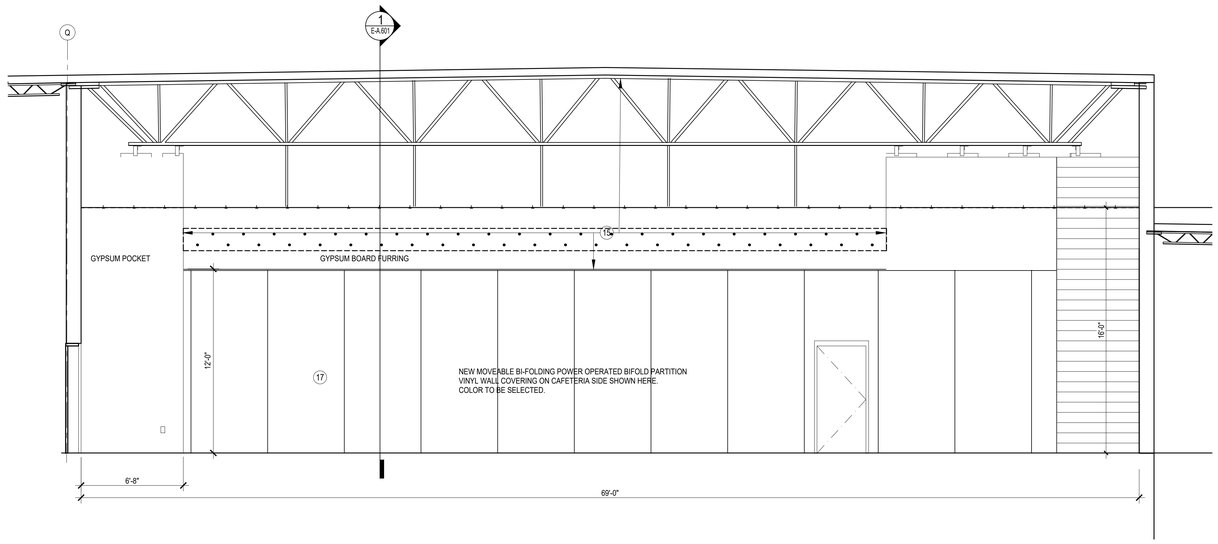
1. PROVIDE TEMPORARY DUST PROTECTION IN WORK AREA.
2. WORK SHALL BE PERFORMED WHEN SCHOOL IS NOT OCCUPIED BY STUDENTS.
3. PROVIDE SECURITY FOR THE PUBLIC AND FOR BUILDING OCCUPANTS TO PROVIDE MAXIMUM SAFETY IN THE WORK AREA.
4. THERE IS NO NEED TO OPEN THE BUILDING ENVELOPE TO ACCOMPLISH THIS WORK.
5. FILL AND PAINT NEW CMU AND PAINT EXISTING CMU COLORS AND SHEEN TO MATCH EXISTING CONDITION.



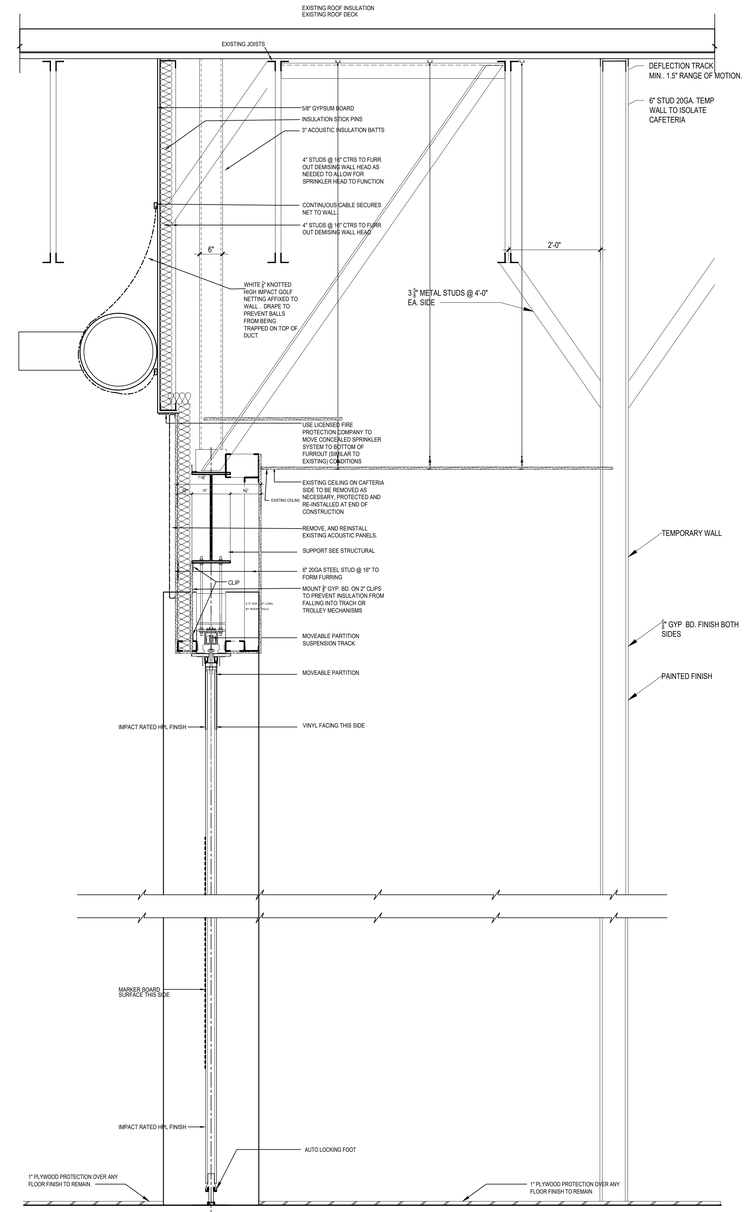
4 DEMOLITION (FROM GYM SIDE OF WALL)
SCALE: 1/4" = 1'-0"



3 GYM SIDE OF WALL (NEW CONSTRUCTION)
SCALE: 1/4" = 1'-0"



2 CAFETERIA SIDE OF WALL (NEW CONSTRUCTION)
SCALE: 1/4" = 1'-0"



6 SECTION THRU MOVEABLE PARTITION
3/4"=1'-0"

7 TEMPORARY CONTRUCTION WALL
3/4"=1'-0"

ISSUE:

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05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/04/2025	ISSUED FOR ADDENDUM 03
09/04/2025	ISSUED FOR ADDENDUM 04

FBISD BP 013 KITCHEN RENOVATIONS
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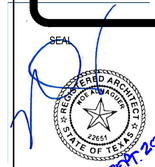
SEAL



ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE:
ADDENDUM NO. 4 - SEP 04, 2025

INTERIOR ELEVATIONS

e-A.601

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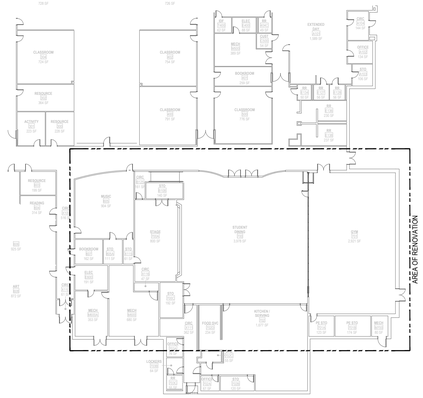


2 OVERALL FLOOR PLAN

SCALE: 1" = 30'- 0"

SYMBOL LEGEND

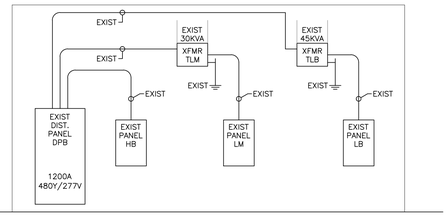
$/S/$/S$	2-POSITION/3-WAY/4-WAY KEY SWITCH
	SIMPLEX/DUPLEX/QUAD - 5361/2 REC
GFI	DUPLEX W/ GFCI PROTECTION-P&S 2097
J	J-BOX
	CEILING MOUNTED J-BOX
M	MOTOR
	HEAVY DUTY, NON-FUSED DISCONNECT. MIN RATING OF CIRCUIT OCPD/VOLTAGE.
	ELECTRICAL PANEL
	HOMERUN TO CIRCUIT NOTED
T	TEMPERATURE SENSOR
E	EXISTING DEVICES TO REMAIN
R	EXISTING DEVICES TO BE RELOCATED
D	EXISTING DEVICES TO BE DEMO/REMOVED
REP	EXISTING DEVICES TO BE REPLACED
S	INDICATES SURFACE MOUNTED
SR	INDICATES SURFACE RACEWAY
+	INDICATES ABOVE COUNTER DEVICE
-	INDICATES DEVICE AT +30-60"
++	INDICATES DEVICE AT +80-96"
CLG	INDICATES DEVICES MOUNTED IN CEILING
WP	INDICATES WEATHERPROOF COVER
3R	INDICATES 3R RATED DEVICE
(E)LA-X	CONNECT(ED) TO EXIST CIRCUIT LA-X
(D)LA-X	DEMO PORTION OF EXIST CIRCUIT LA-X
(N)LA-X	CONNECT(ED) TO NEW CIRCUIT LA-X

GENERAL ELECTRICAL NOTES:

1. INSTALL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION INCLUDING ALL AMENDMENTS.
2. PROVIDE CONDUIT FOR ALL DEVICES INSTALLED IN WALLS.
   - 2.A. 3/4"C FOR POWER AND 1"C FOR LOW VOLTAGE/DATA UNLESS NOTED OTHERWISE.
   - 2.B. PROVIDE PROTECTIVE BUSHING ON END OF ALL LOW VOLTAGE CONDUITS.
   - 2.C. ALL ELECTRICAL HOMERUNS SHALL BE IN CONDUIT, MIN 3/4"C.
   - 2.D. USE INSULATED THROAT FITTINGS FOR CONNECTIONS TO HOUSINGS, BOXES, ENCLOSURES, ETC.
   - 2.E. MAX LENGTH FOR FLEX CONDUIT SHALL BE 6FT AND MIN. SIZE SHALL BE 1/2". ALL FLEX CONDUIT SHALL BE LISTED FOR GROUNDING.
3. CONDUIT TYPES:
   - 3.A. INSIDE BUILDINGS: GALVANIZED STEEL EMT.
     - 3.A.A. ALL LOW VOLTAGE CABLING SHALL BE INSTALLED IN CONDUIT IN EXPOSED CEILING AREAS. ROUTE TO NEAREST ACCESSIBLE CEILING WITH CONTINUOUS PATHWAYS TO LOW VOLTAGE SOURCE/DEVICE.
     - 3.A.B. ALL LOW VOLTAGE CABLING SHALL BE INSTALLED IN CONDUIT ABOVE INACCESSIBLE CEILINGS. ROUTE TO NEAREST ACCESSIBLE CEILING WITH CONTINUOUS PATHWAYS TO LOW VOLTAGE SOURCE/DEVICE.
   - 3.B. NO MC CABLE SHALL BE ALLOWED.
   - 3.C. PROVIDE FLEXIBLE CONNECTIONS TO MOTORS, PUMPS, TRANSFORMERS, OR SIMILAR EQUIPMENT.
4. PROVIDE GALVANIZED STEEL, ONE-PIECE CONSTRUCTION, OUTLET BOXES IN ALL CASES SUITABLE FOR INTENDED USE.
   - 4.A. BOXES OUTSIDE SHALL BE STEEL NEMA 3 TYPE.
   - 4.B. PROVIDE CEILING BRACKET TO SUPPORT CEILING MOUNTED DEVICES FROM CEILING TEES.
5. 20 AMP, SINGLE PHASE BRANCH CIRCUITS SERVING LIGHTING AND GENERAL RECEPTACLES MAY BE GROUPED IN A SINGLE RACEWAY PROVIDED A NEUTRAL CONDUCTOR IS INSTALLED FOR EACH CIRCUIT REQUIRING A NEUTRAL.
   - 5.A. DO NOT INSTALL MORE THAN FOUR CURRENT CARRYING CONDUCTORS IN A CONDUIT EXCEPT SIX #12 OR #10 CURRENT CARRYING CONDUCTORS MAY BE INSTALLED IN 3/4" OR LARGER CONDUIT FOR 20A CIRCUITS.
   - 5.B. DO NOT INSTALL 480/277 VOLT CONDUCTORS IN THE SAME CONDUIT WITH 240/208/120 VOLT CONDUCTORS.
   - 5.C. DO NOT COMBINE NEUTRALS. PROVIDE DEDICATED NEUTRALS FOR EACH BRANCH CIRCUIT.
   - 5.D. MULTIPLE DEVICES ON A CIRCUIT SUCH AS RECEPTACLES SHALL BE WIRED WITH A PIGTAIL SO THE DEVICE DOES NOT PROVIDE THE CONTINUITY PATH. FEED THROUGH CONNECTIONS FOR GFCI RECEPTACLES SHALL NOT BE USED FOR PROTECTION OF DOWNSTREAM DEVICES.
6. PROVIDE GREEN GROUND WIRE WITH ALL CIRCUITS SIZED PER NEC. BOND GREEN GROUND WIRE TO EACH END OF CONDUIT.
7. PROVIDE J-BOXES, CONDUIT AND SLEEVES THRU ALL FIRE WALLS FOR DATA, TELEPHONE, SECURITY, FIRE ALARM, SOUND SYSTEM, LOW VOLTAGE WIRING, ETC. PROVIDE PROTECTIVE BUSHINGS ON ENDS OF ALL LOW VOLTAGE CONDUITS.
8. PROVIDE PULL BOXES, JUNCTION BOXES, WIRING TROUGHS AND CABINETS WHEREVER REQUIRED FOR PROPER INSTALLATION OF VARIOUS ELECTRICAL SYSTEMS. ALL JUNCTION/PULL BOXES INSTALLED ABOVE ACCESSIBLE CEILINGS SHALL BE MOUNTED SO THAT THE ACCESS PANEL IS NO HIGHER THAN 18" ABOVE THE CEILING.
9. PROVIDE CIRCUIT LABELS IN PERMANENT MARKER ON ALL NEW AND EXISTING J-BOX COVERS UTILIZED IN THE AREA OF RENOVATION.
10. PROVIDE CIRCUIT LABEL ON ALL ABOVE CEILING J-BOXES, EQUIPMENT, ETC. IDENTIFYING THE CIRCUITS CONTAINED/CONNECTED.
11. ALL WIRING SHALL BE 600 VOLT, SOFT DRAWN ANNEALED COPPER, 98% CONDUCTIVITY, CONTINUOUS FROM OUTLET TO OUTLET. MINIMUM WIRE SIZE #12.
    - 11.A. TYPICAL BUILDING WIRE SHALL BE STRANDED TYPE THHN, THWN-2 (WET RATED FOR 90°C), OR XHHW-2. MINIMUM WIRE SIZE SHALL BE #12.
    - 11.B. ALL BUILDING WIRE SHALL BE COLOR CODED WITH THE SAME COLOR CONNECTED TO THE SAME UNGROUNDED PHASE THROUGHOUT THE INSTALLATION MATCHING THE EXISTING BUILDING COLOR CODE SCHEME.
12. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, PROVIDE AIR SEAL PER NEC TO PREVENT CIRCULATION OF AIR FROM WARMER TO COOLER SECTIONS.
13. DRAWINGS, SCHEDULES, NOTES, AND DETAILS ARE INTENDED TO BE COMPLIMENTARY. ANY WORK DESCRIBED IN ANY OF THEM, WILL BE WORK REQUIRED UNDER THIS CONTRACT. WHERE THERE IS A CONFLICT BETWEEN DIFFERENT PORTIONS OF THE DESIGN DOCUMENTS IT SHALL BE CLARIFIED BY RFI. BARRING CLARIFICATION PRIOR TO BIDDING THE MOST EXPENSIVE OPTION SHALL BE INCLUDED AND CLARIFICATION SHALL BE MADE DURING CONSTRUCTION.
14. SHOULD ANY WORK REQUIRED BY THE DRAWINGS AND SPECIFICATIONS BE IN VIOLATION OF ANY FEDERAL, STATE, COUNTY OR CITY LAWS, ORDINANCE OR REGULATION, THOSE LAWS AND REGULATIONS SHALL PREVAIL, AND SHALL BE COMPLIED WITH BY THE CONTRACTOR AS A PART OF THIS WORK WITH NO EXTRA COMPENSATION.
15. ALL MATERIAL MUST BE NEW AND OF GOOD QUALITY AND SHALL BEAR THE STAMP OF APPROVAL OF THE UNDERWRITERS' LABORATORIES, INC. (U.L.).

GENERAL RENOVATION AND REMODELING NOTES:

1. THESE ELECTRICAL DRAWINGS ONLY SHOW SOME EXISTING ELECTRICAL PANELS, DEVICES AND LIGHT FIXTURES IN AREAS OF RENOVATION. ALL OTHER ELECTRICAL EQUIPMENT, WIRING DEVICES, LOW VOLTAGE SYSTEMS, J-BOXES AND CONDUITS SHALL BE LOCATED AND FIELD VERIFIED BY CONTRACTOR.
2. ALL REMOVED DEVICES SHALL BE OFFERED TO THE OWNER AS SALVAGE.
3. RELOCATE CONDUIT AS NECESSARY TO ALLOW NEW OR MODIFIED CONSTRUCTION. RESUPPORT EXISTING CABLING/CONDUIT TO REMAIN TO MEET CURRENTLY ADOPTED CODE REQUIREMENTS. REMOVE ALL ABANDONED CONDUIT AND WIRE. REPAIR EXISTING ELECTRICAL SYSTEMS DAMAGED BY CONSTRUCTION ACTIVITIES.
4. ANY DAMAGE TO EXISTING BUILDING, ELECTRICAL EQUIPMENT, WIRING DEVICES, CONDUIT, WIRING, ETC. SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER. ALL MATERIALS USED FOR THE REPLACEMENT MUST MEET RENOVATION PROJECT STANDARDS.
5. ELECTRICAL CONTRACTOR SHALL BEGIN FIELD VERIFYING ALL EXISTING BRANCH CIRCUITS FOR EXISTING AREAS TO BE RENOVATED IMMEDIATELY AFTER THE CONTRACT IS ISSUED.
6. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CIRCUITS WITH OWNER'S MAINTENANCE PERSONNEL AFTER NORMAL BUILDING HOURS AS REQUIRED.
7. ANY CIRCUIT OR PARTIAL CIRCUIT TO REMAIN OR BE REUSED SHALL REMAIN ACTIVE.
8. ELECTRICAL CONTRACTOR SHALL INCLUDE COST RELATED TO FIELD VERIFY EXISTING CIRCUITS IN BASE PROPOSAL.
9. FIND AND RECORD ALL EXISTING DEVICES IN CEILINGS, WALLS AND CASEWORK IN AREAS TO BE RENOVATED. PROVIDE A COPY OF THE FIELD VERIFIED DEVICE DRAWINGS TO OWNER PRIOR TO BEGINNING WORK.
10. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN AS-BUILT PANEL SCHEDULE FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT USING BUILDING ROOM NUMBERS.



3 PARTIAL ELECTRICAL RISER - CORNERSTONE ELEMENTARY

NO SCALE

NOTES:

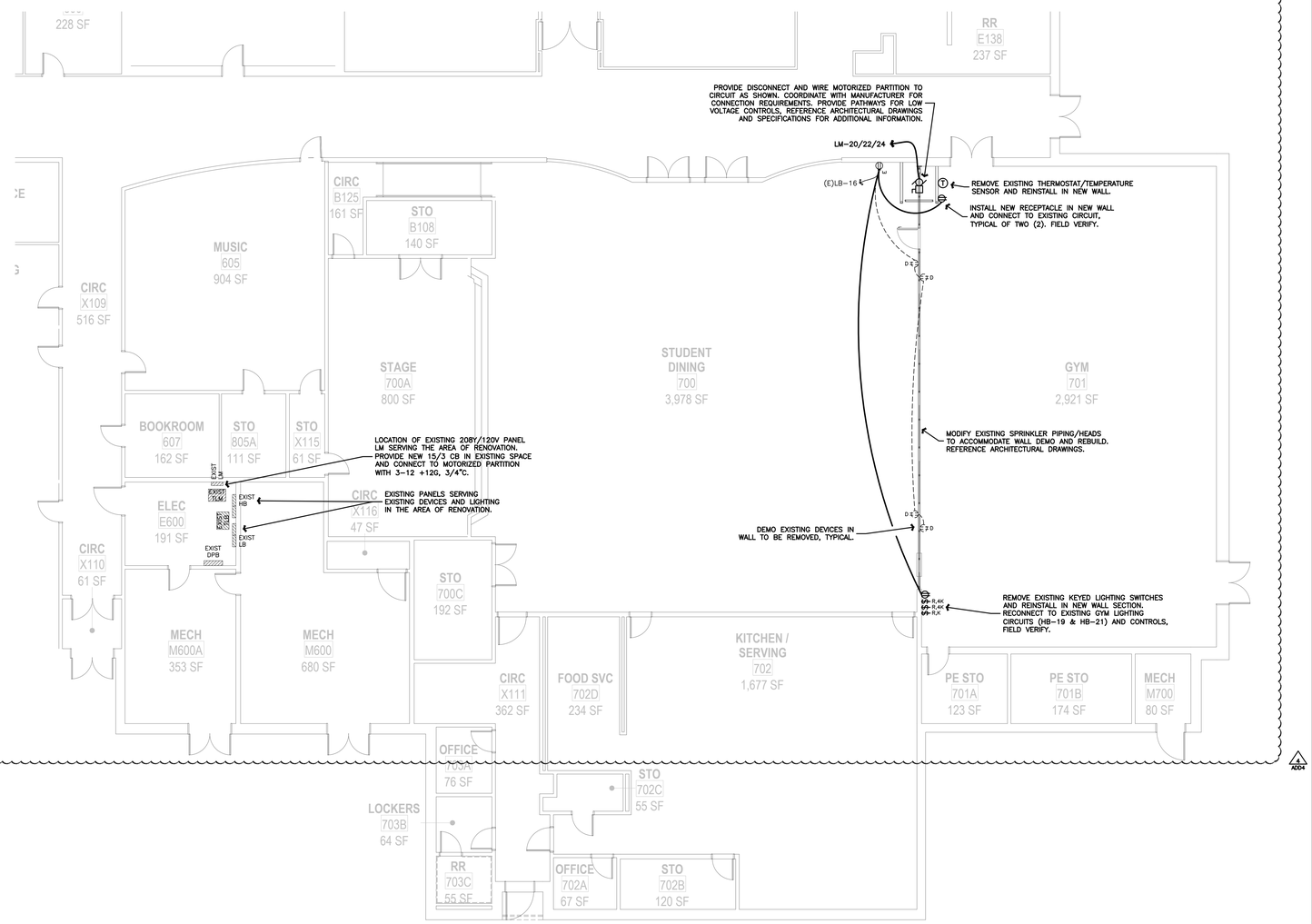
1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED/CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.
5. REFERENCE PANEL SCHEDULES AND SHORT CIRCUIT TABLE FOR A/C AND SCCR VALUES.

ELEC E600

(E)PANEL LM — 100A MCB, 208Y/120V, 3Φ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & A/C: 10,000A — MOUNTING: SURFACE

NOTES	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	NOTES
	250	WATER TREAT RM M600	EXIST	20/1	1				2	20/1	EXIST	REC & IRRIGATION RM M600	430	
	380	CP-1 RM M600A	EXIST	20/1	3				4	20/1	EXIST	GENERATOR ANTI COND HTR	200	
	250	B-1 CONTROLS RM M600A	EXIST	20/1	5				6	20/1	EXIST	GENERATOR JACKET HTR	2400	
	250	B-2 CONTROLS RM M600A	EXIST	20/1	7				8	20/1	EXIST	HVAC CTRL PANEL RM M600	250	
	250	GWH-1 CTRL RM M600A	EXIST	20/1	9				10	20/1	EXIST	CH-1 CTRL RM M600	3000	
	680	REC DAMPERS RM M600B	EXIST	20/1	11				12	20/1	EXIST	CH-2 CTRL RM M600	3000	
	300	CHEM FEEDER RM M600A	EXIST	20/1	13				14	20/1	EXIST	DDC CTRL RM M600B	250	
	300	CHEM FEEDER RM M600	EXIST	20/1	15				16	20/1		EXIST SPARE		
	1500	IDF T600	EXIST	30/2	17				18	20/1	EXIST	O/H COILING DOOR RM M600	1176	
	–	–		–	19				20	**15/3**	**3-12**	**MOTORIZED PARTITION – CAFE**	**1728**	**2**
	1500	IDF T600	EXIST	30/2	21				22	–	**+12G**	–	–	
	–	–		–	23				24	–	**3/4"C**	–	–	
	1500	IDF T600	EXIST	30/2	25				26			SPACE		
	–	–		–	27				28			SPACE		
	1500	IDF T600	EXIST	30/2	29				30			SPACE		
	–	–		–	31				32			SPACE		
		SPACE			33				34			SPACE		
		SPACE			35				36			SPACE		
		SPACE			37				38	30/2	EXIST	TVSS	50	
		SPACE			39				40	–	–	–	–	
		SPACE			41				42			SPACE		
	TOTAL LOAD @ 100% = 21144VA				TOTAL LOAD @ 100% =				59A			TOTAL LOAD @ 125% =	73A	

1. THE EXISTING 100A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE AND WIRE CIRCUIT AS SHOWN.



1 ELECTRICAL RENOVATION PLAN

SCALE: 1/8" = 1'- 0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
CORNERSTONE ELEMENTARY SCHOOL
1800 CHATHAM AVE
SUGAR LAND, TX 77479

SEAL

STATE OF TEXAS
GEORGE L. STANTON
38582
LICENSED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL FLOOR PLAN & SCHEDULES

e-E.200

STANTON ENGINEERING GROUP
INFO@STANTONENGR.COM (713) 305-6092

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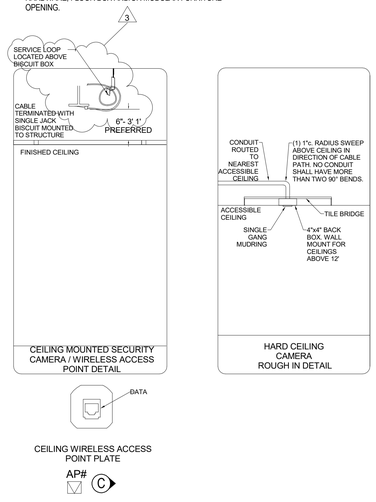
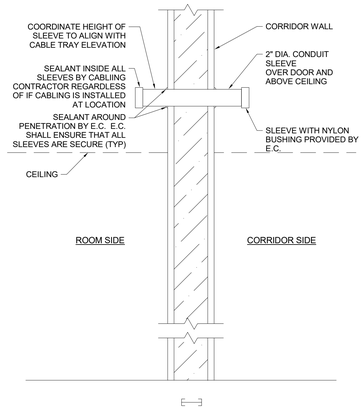
1300 W. SAM HOUSTON PARKWAY S., SUITE 125, HOUSTON, TX 77042

GENERAL NOTE

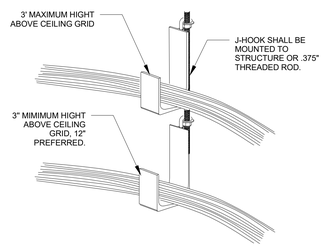
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



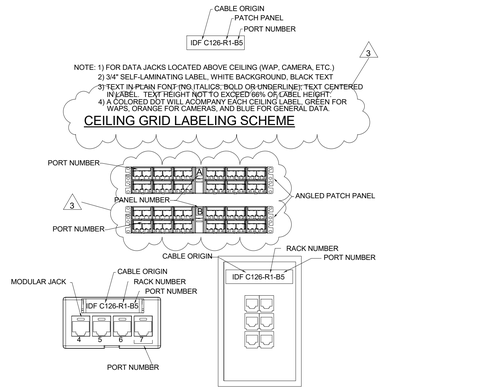
1 DATA ROUGH-IN DETAILS
SCALE: NS



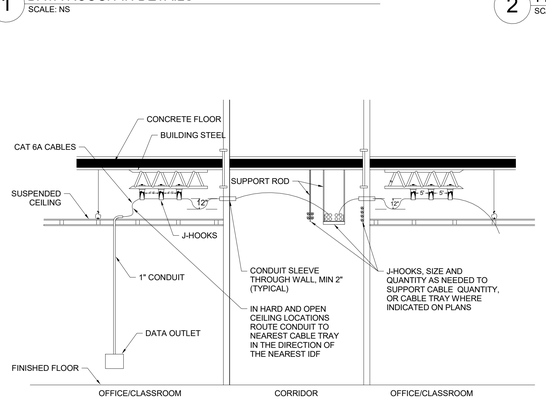
2 TYPICAL CABLING SLEEVE
SCALE: NTS



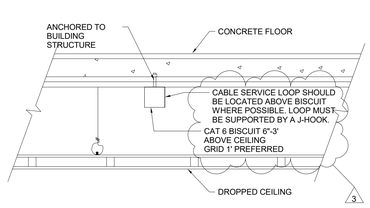
3 PANDUIT J-HOOK DETAIL
SCALE: NTS



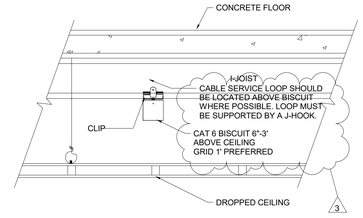
4 LABELING & CABLING SCHEMES
SCALE: NTS



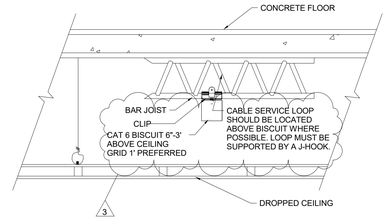
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH
A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
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05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	3 ADDENDUM NO. 4

e

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Cornerstone Elementary School
1800 Chatham Ave, Sugar Land, TX 77479

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 256587
EXPIRES 12-31-27

07-18-25

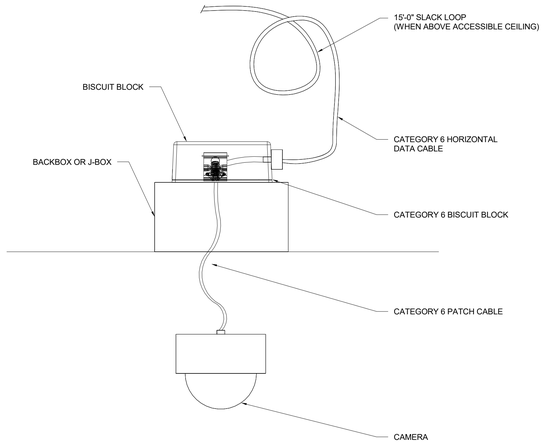
MVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Cornerstone ES - OVERALL - DETAILS

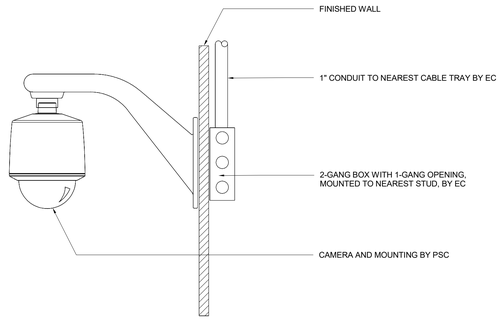
e-TN.500

GENERAL NOTES:

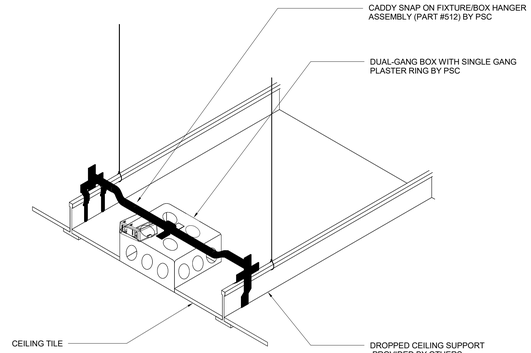
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



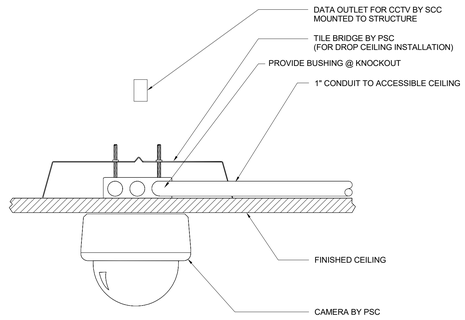
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

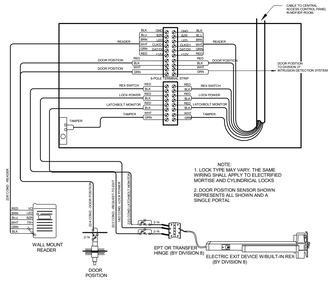


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

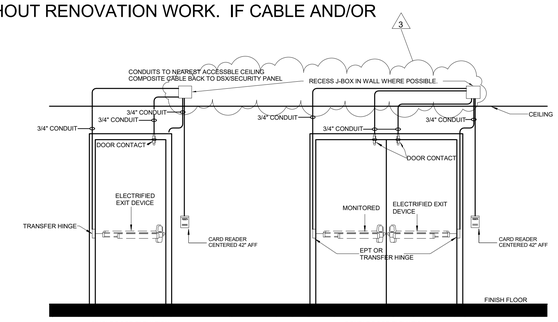
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

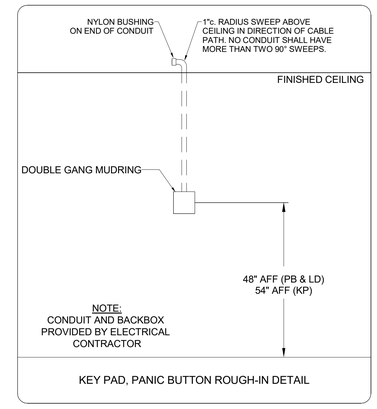
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025 (3)	ADDENDUM NO. 4

e

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Cornerstone Elementary School
1800 Chatham Ave, Sugar Land, TX 77479

SEAL

07-18-25

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING
AND
PERMITTING
TECHNOLOGY - Cornerstone
ES - SECURITY DETAILS

e-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

DULLES ELEMENTARY SCHOOL
630 DULLES AVE, SUGAR LAND, TX 77478

FORT BEND INDEPENDENT SCHOOL DISTRICT

Sheet List Table	
Sheet Number	Sheet Title
School: f-Dulles ES	
f-A.000	COVER AND INDEX
f-A00-01	GENERAL NOTES AND ABBREVIATIONS
f-D.101	DEMO PLAN
f-A.101	SITE PLAN
f-A.201	OVERALL FLOOR PLAN
f-A.301	KITCHEN FLOOR PLAN
f-QF1	FS GENERAL COORDINATION NOTES
f-QF1.0	FS EQUIPMENT ELECTRICAL PLAN
f-E.200	ELECTRICAL FLOOR PLAN & SCHEDULES
f-TN.000	TECHNOLOGY - INDEX SHEET
f-TN-100	TECHNOLOGY - OVERALL
f-TN-101	TECHNOLOGY - KITCHEN
f-TN-500	TECHNOLOGY - DETAILS
f-TN-600	TECHNOLOGY - SECURITY DETAILS

REGISTERED ARCHITECT
MICHAEL A. MCGUIRE
22651
STATE OF TEXAS
04SEP.2025

ADDENDUM NO. 4 - SEP 04, 2025

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

BOARD OF TRUSTEES

KRISTIN K. TASSIN	PRESIDENT
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DR. SHIRLEY ROSE-GILLIAM	SECRETARY
AFSHI CHARANIA	BOARD MEMBER
ADAM SCHOOF	BOARD MEMBER
ANGIE WIERZBICKI	BOARD MEMBER

PROJECT DESIGN TEAM

PROGRAM MANAGEMENT
FBISD 2023 Bond Team
2323 Texas Parkway
Missouri City, TX 77489
Phone Number: 281-327-5481

ARCHITECT
MWA Architects
11767 Katy Freeway, Suite 430
Houston, Texas 77079
Phone Number: 713-782-8188

FOOD SERVICE
Food Design Professionals
26215 Oak Ridge Drive
The Woodlands, Texas 77380
Phone Number: 281-350-2323

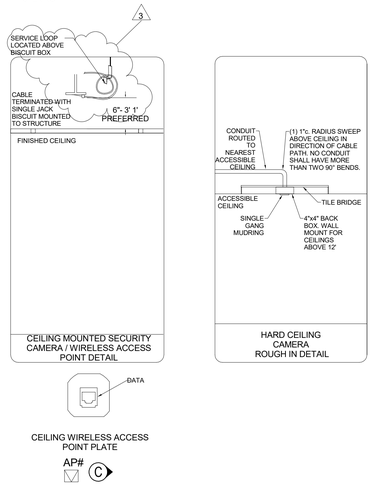
MEP ENGINEERS
Stanton Engineering Group
1300 W. Sam Houston Pkwy South, Suite 121
Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

f

GENERAL NOTE

1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



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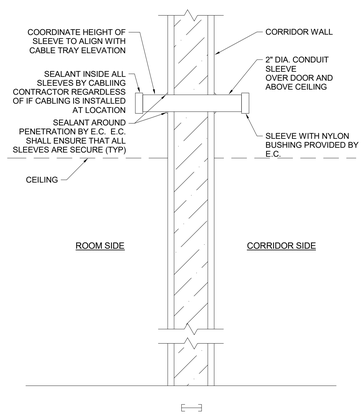

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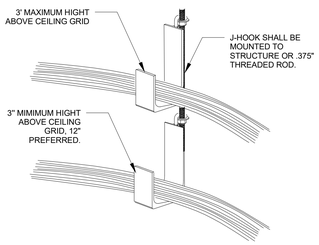
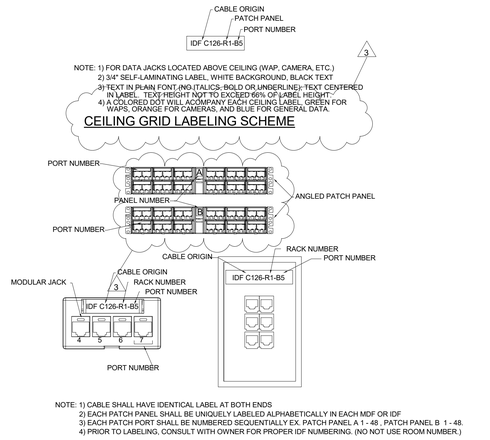
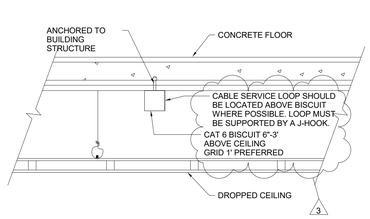


3 PANDUIT J-HOOK DETAIL
SCALE: NTS



4 LABELING & CABLING SCHEMES
SCALE: NTS

5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
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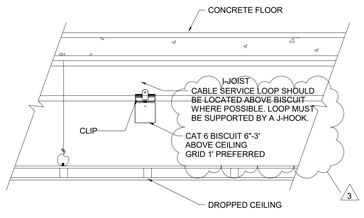
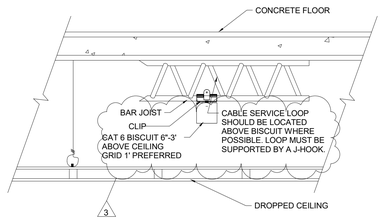


7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
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C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PWY COMPANY

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07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	3 ADDENDUM NO. 4

f

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Dulles Elementary School
630 Dulles Ave, Sugar Land, TX 77478

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 265587
EXPIRES 10-31-27

07-18-25

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Dulles ES - DETAILS

f-TN.500

GENERAL NOTES:

1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
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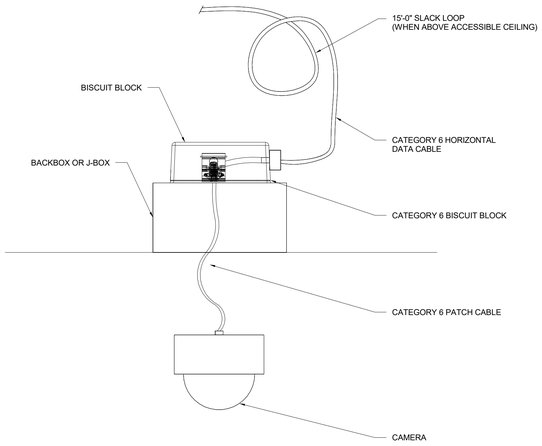
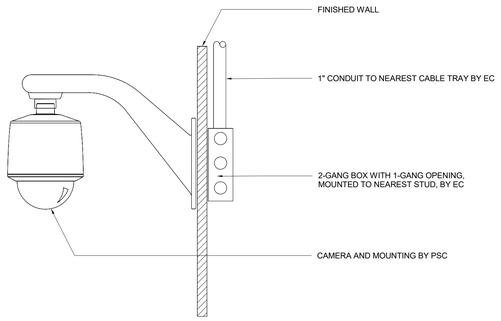
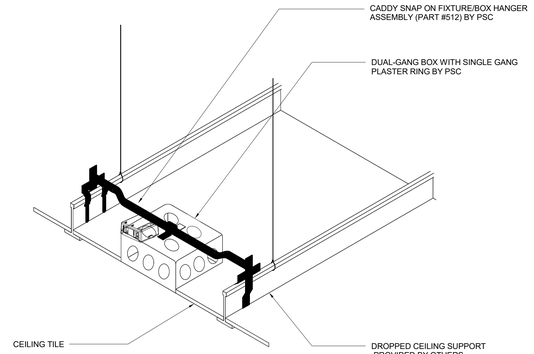


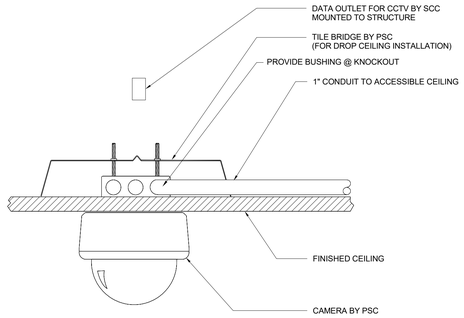
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS



5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

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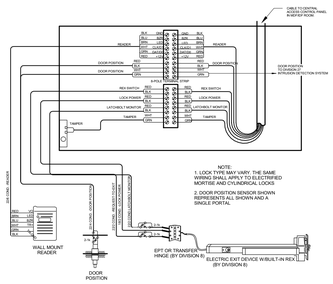
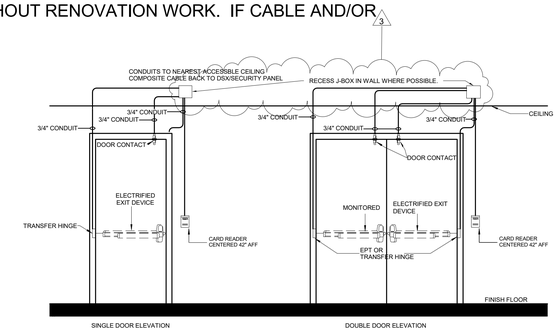
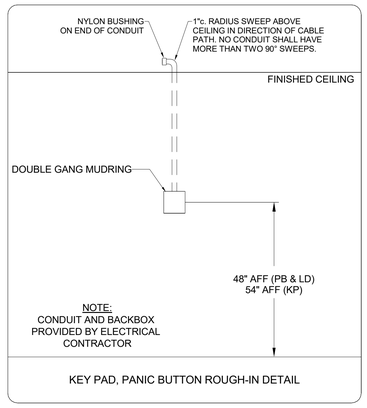


1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

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09/04/2025 ③	ADDENDUM NO. 4

f

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Dulles Elementary School
630 Dulles Ave. Sugar Land, TX 77478

SEAL

07-18-25

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING
AND
PERMITTING

TECHNOLOGY - Dulles ES - SECURITY DETAILS

f-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

Sheet List Table	
Sheet Number	Sheet Title
School: g-Fleming ES	
g-A-000	COVER AND INDEX
g-TN-000	TECHNOLOGY - INDEX SHEET
g-TN-100	TECHNOLOGY - OVERALL
g-TN-101	TECHNOLOGY - KITCHEN
g-TN-500	TECHNOLOGY - DETAILS
g-TN-600	TECHNOLOGY - SECURITY DETAILS

FORT BEND INDEPENDENT SCHOOL DISTRICT

ARIZONA FLEMING ELEMENTARY SCHOOL
14850 BISSONNET STREET, HOUSTON, TX 77083

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

BOARD OF TRUSTEES

KRISTIN K. TASSIN	PRESIDENT
ANGIE HANAN	VICE PRESIDENT
DR. SHIRLEY ROSE-GILLIAM	SECRETARY
AFSHI CHARANIA	BOARD MEMBER
ADAM SCHOOF	BOARD MEMBER
ANGIE WIERZBICKI	BOARD MEMBER

PROJECT DESIGN TEAM

PROGRAM MANAGEMENT
FBISD 2023 Bond Team
2323 Texas Parkway
Missouri City, TX 77489
Phone Number: 281-327-5481

ARCHITECT
MWA Architects
11767 Katy Freeway, Suite 430
Houston, Texas 77079
Phone Number: 713-782-8188

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Food Design Professionals
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MEP ENGINEERS
Stanton Engineering Group
1300 W. Sam Houston Pkwy South, Suite 121
Houston, Texas 77042
Phone Number: 713-300-9292

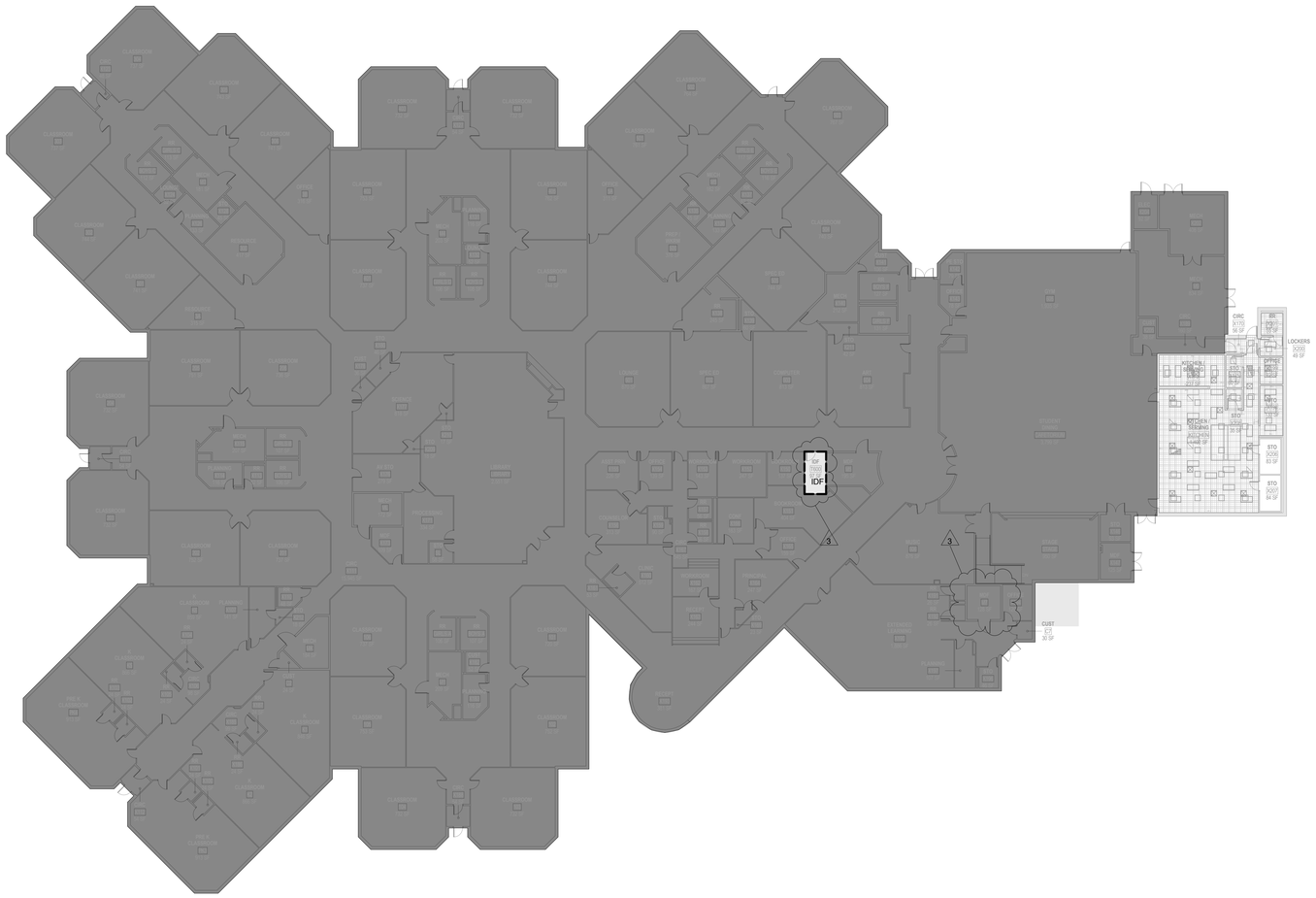
STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

ADDENDUM NO. 4 - SEP 04, 2025

g

TECHNOLOGY KEYNOTES

1. IDF WILL REQUIRE ADDITIONAL HARDWARE TO SUPPORT THE ADDED CAMERA CABLES.
2. CONTRACTOR TO VERIFY WEITHER ADDITIONAL HARDWARE WILL BE NEEDED TO SUPPORT ADDITIONAL CAMAERA CABLES.
3. CONTRACTOR TO COORDINATE FINAL DEVICE LOCATION AND POSITIONING WITH FBISD.



1 BACKGROUND G (FLEMING ES)
SCALE: 1" = 20'-0"

TRUENORTH A PMY COMPANY

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09/04//2025	ADDENDUM NO. 4

g

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Fleming Elementary School
630 Dulles Ave. Sugar Land, TX 77478

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 256957
EXPIRES 12-31-27

07-18-25

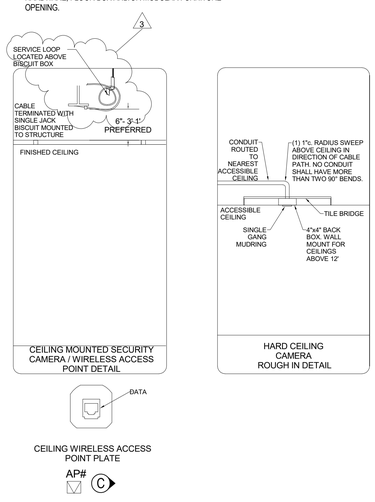
MVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Fleming ES - OVERALL

g-TN.100

GENERAL NOTE

1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



1 DATA ROUGH-IN DETAILS
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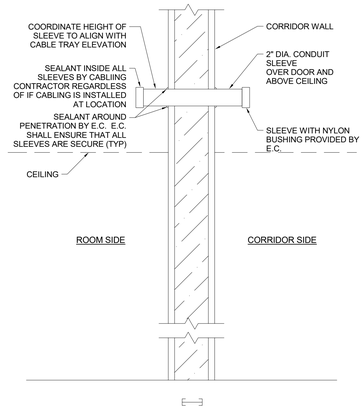

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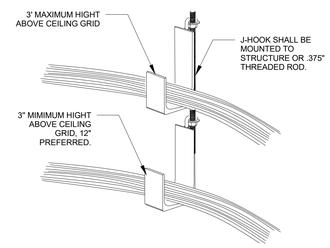
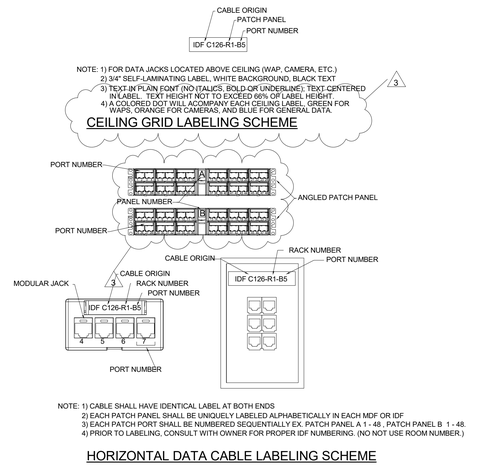
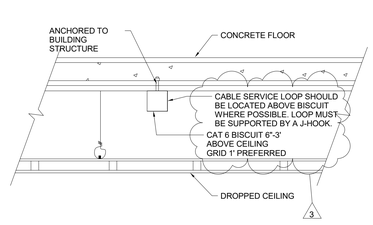


3 PANDUIT J-HOOK DETAIL
SCALE: NTS

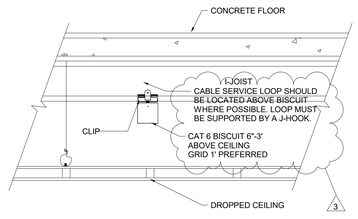


4 LABELING & CABLING SCHEMES
SCALE: NTS

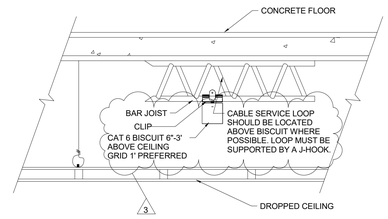
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH
A PWY COMPANY

ISSUE:

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g

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FORT BEND INDEPENDENT SCHOOL DISTRICT
Fleming Elementary School
630 Dulles Ave, Sugar Land, TX 77478

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EXPIRES 12-31-27

07-18-25

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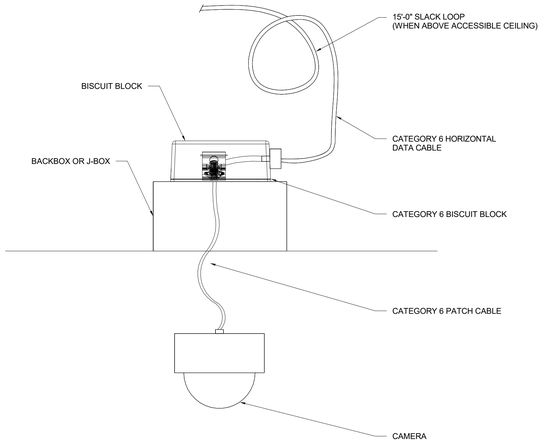
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Fleming ES - DETAILS

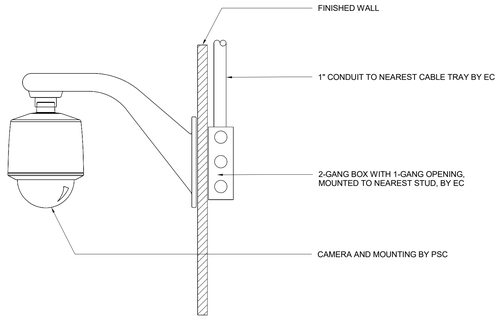
g-TN.500

GENERAL NOTES:

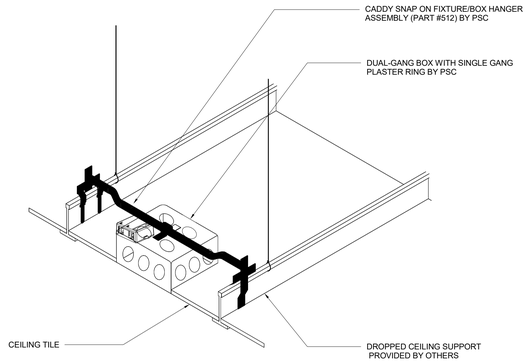
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



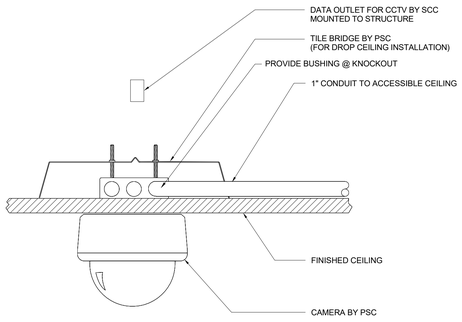
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS



5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

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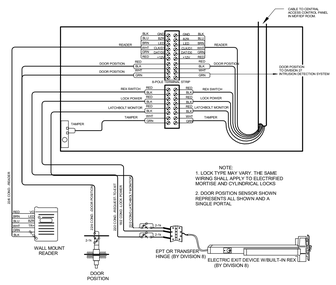

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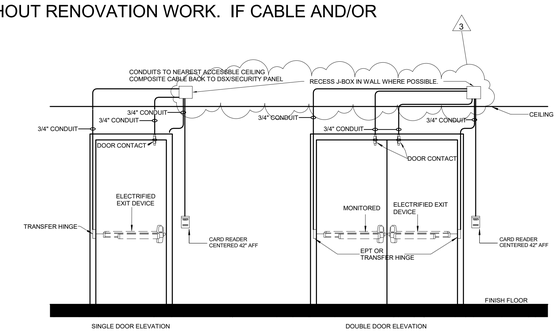
SCALE: NTS



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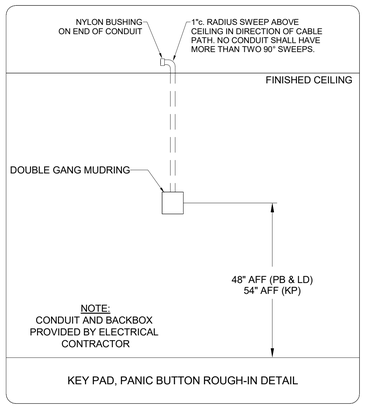

KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
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Fleming Elementary School
630 Dulles Ave, Sugar Land, TX 77478

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Bicsi
Brian C Porter
BICSI ID # 250657
EXPIRES 12-31-27
RCDD

07-18-25

MWA ARCHITECTS
ARCHITECTS
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CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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PERMITTING

TECHNOLOGY - Fleming ES - SECURITY DETAILS

g-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

Sheet List Table	
Sheet Number	Sheet Title
School: h-GLOVER ES	
h-A-000	COVER AND INDEX
h-TN-000	TECHNOLOGY - INDEX SHEET
h-TN-100	TECHNOLOGY - OVERALL
h-TN-101	TECHNOLOGY - KITCHEN
h-TN-500	TECHNOLOGY - DETAILS
h-TN-600	TECHNOLOGY - SECURITY DETAILS

FORT BEND INDEPENDENT SCHOOL DISTRICT

EDGAR GLOVER JR ELEMENTARY SCHOOL
1510 COLUMBIA BLUE DRIVE, MISSOURI CITY, TX 77489

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

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PROJECT DESIGN TEAM

PROGRAM MANAGEMENT
FBISD 2023 Bond Team
2323 Texas Parkway
Missouri City, TX 77489
Phone Number: 281-327-5481

ARCHITECT
MWA Architects
11767 Katy Freeway, Suite 430
Houston, Texas 77079
Phone Number: 713-782-8188

FOOD SERVICE
Food Design Professionals
26215 Oak Ridge Drive
The Woodlands, Texas 77380
Phone Number: 281-350-2323

MEP ENGINEERS
Stanton Engineering Group
1300 W. Sam Houston Pkwy South, Suite 121
Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

ADDENDUM NO. 4 - SEP 04, 2025

GENERAL NOTE

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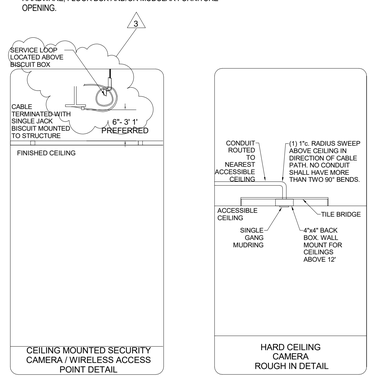
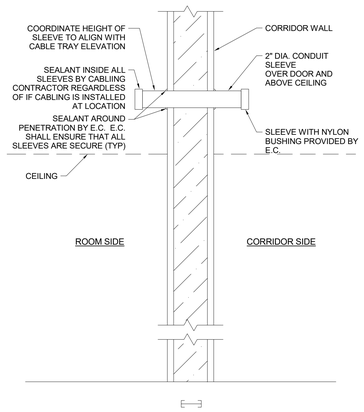
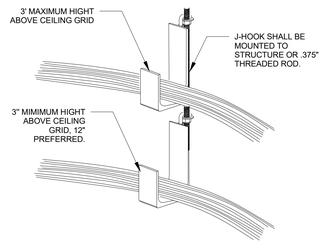


1 DATA ROUGH-IN DETAILS
SCALE: NS



2 TYPICAL CABLING SLEEVE
SCALE: NTS



3 PANDUIT J-HOOK DETAIL
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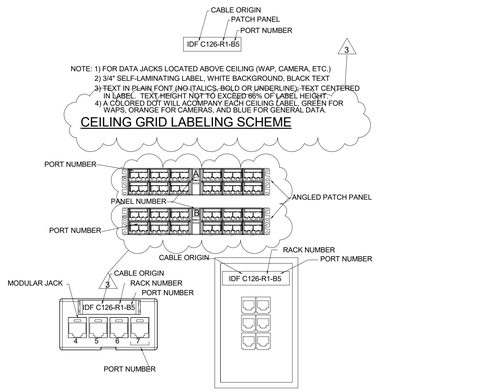

4 LABELING & CABLING SCHEMES
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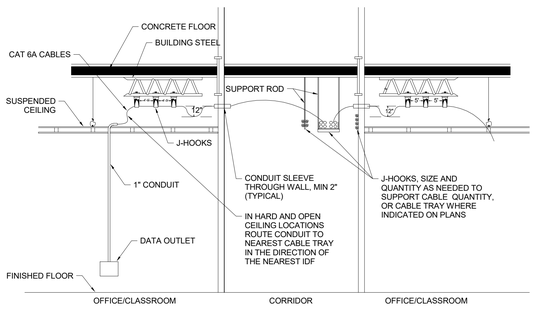

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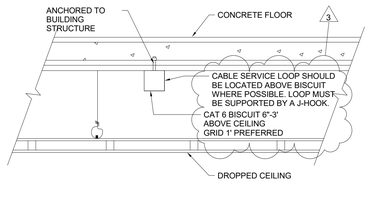

6 DROPPED CEILING MOUNTING DETAIL
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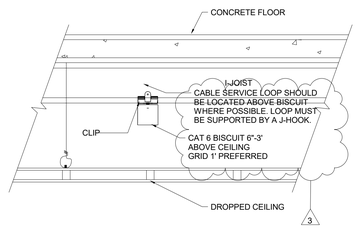

7 I-JOIST MOUNTING DETAIL
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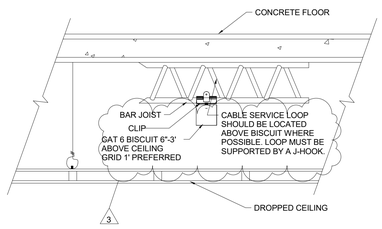

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Symbol	Purpose	Size	Mount	Backbox	Notes
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h

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Glover Elementary School
1510 Columbia Blue Dr, Missouri City, TX 77489

SEAL

07-18-25

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11767 KATY FREEWAY, SUITE 430
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TECHNOLOGY - Glover ES - DETAILS
h-TN.500

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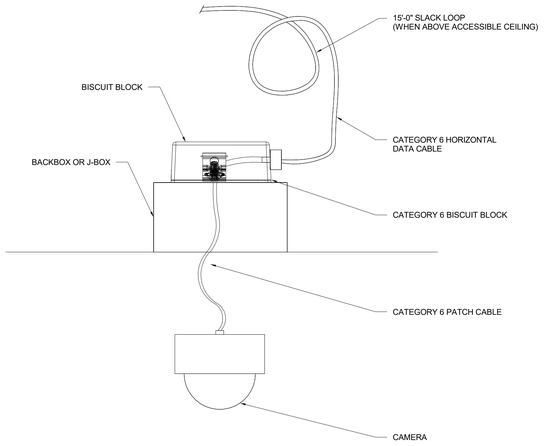

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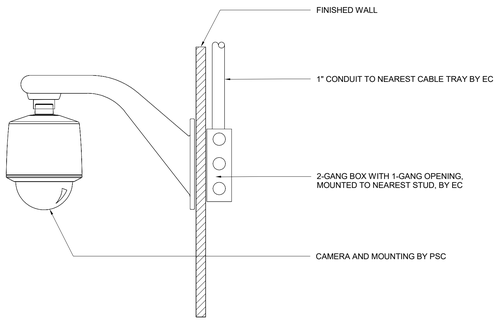
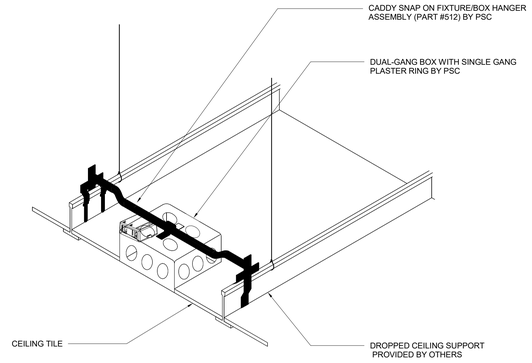


6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



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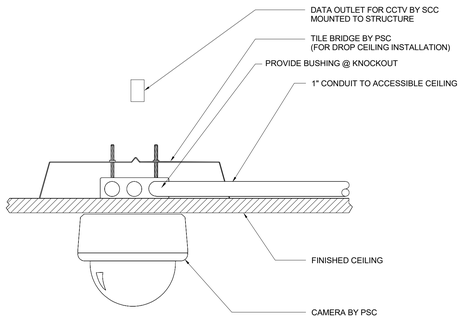

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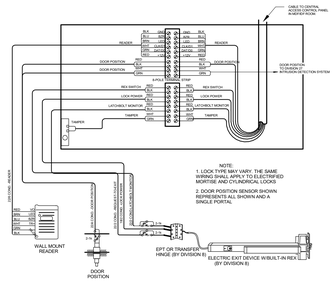

1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
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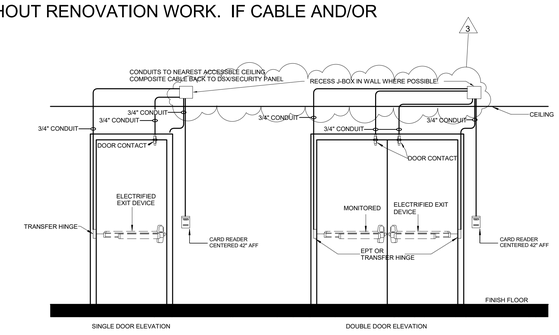

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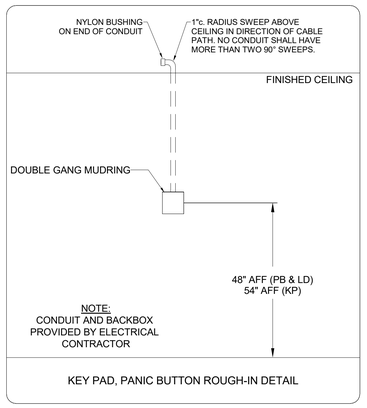

KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
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h-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

HERITAGE ROSE ELEMENTARY SCHOOL
636 GLENDALE LAKES DR, ROSHARON, TX 77583

FORT BEND INDEPENDENT SCHOOL DISTRICT

Sheet List Table	
Sheet Number	Sheet Title
School: I-Heritage Rose ES	
I-A.000	COVER AND INDEX
I-A00-01	GENERAL NOTES AND ABBREVIATIONS
I-A.201	OVERALL FLOOR PLAN
I-A.301	KITCHEN PLAN
I-P.101	FILTER AND NEW WATER SOFTENER

ADDENDUM NO. 4 - SEP 04, 2025

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

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DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

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FBISD 2023 Bond Team
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26215 Oak Ridge Drive
The Woodlands, Texas 77380
Phone Number: 281-350-2323

MEP ENGINEERS
Stanton Engineering Group
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Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

PLUMBING SYMBOLS LEGEND

----------	SANITARY WASTE BELOW SLAB	SAN.	SANITARY
————	SANITARY WASTE ABOVE SLAB	CW	DOMESTIC COLD WATER
—— V ——	VENT PIPING ABOVE SLAB	HW	DOMESTIC HOT WATER
- - - - - -	VENT PIPING	WC	WATER CLOSET
—— G ——	GAS PIPING, 4–8oz	UR	URINAL
—— G5 ——	GAS PIPING, 5LB	LAV	LAVATORY
—·—·—·—	DOMESTIC COLD WATER PIPING	SK	SINK
—·—·—·—	DOMESTIC HOT WATER PIPING	EDF	ELECTRIC DRINKING FOUNTAIN
—— D ——	DRAIN/RELIEF VENT PIPING	WH	WALL HYDRANT
——⋈——	STOP VALVE	HB	HOSEBIBB
2CO	DOUBLE SAN. CLEANOUT (2–WAY)	CP	HOT WATER CIRCULATOR PUMP
CO	SANITARY SEWER CLEANOUT	FD	FLOOR DRAIN
WCO	WALL CLEANOUT	FSINK	FLOOR SINK
EXIST.	EXISTING		
(R)	REMOVE (DEMOLISH)		
(D)	DEMOLISH (REMOVE)		
(E)	EXISTING – NO WORK		

PLUMBING FIXTURE NOTES

1. ALL FIXTURES SHALL MEET WATER CONSERVATION PERFORMANCE STANDARDS MANDATED BY SENATE BILL 587. ALL FIXTURES SHALL HAVE FLOW RESTRICTION DEVICES (DRINKING FOUNTAINS SHALL BE SELF–CLOSING) TO COMPLY WITH THESE REQUIREMENTS.
2. ALL FIXTURES SHALL HAVE CONTROLS REQUIRING OPERATING FORCE NO GREATER THAN FIVE (5) POUNDS.
3. FOR LAVATORIES AND SINKS, ALL FAUCETS SHALL BE NO–LEAD SOLID BRASS, MEETING ALL REQUIREMENTS OF ANSI/NSF 61, SECTION 9 AND CERTIFIED AS SUCH. ALSO, INSTALL SYMMONS 7–210 MIXING VALVE ON HOT WATER SUPPLY SIDE OF ALL FAUCETS UNLESS HIGH TEMPERATURE LIMIT IS PROVIDED WITH FAUCET. MAXIMUM WATER TEMPERATURE FOR ALL FAUCETS THAT DELIVER HOT OR TEPID WATER SHALL BE 110°F. ALL METERING FAUCETS SHALL HAVE A MINIMUM TEN (10) SECONDS OF WATER FLOW. AND, INSTALL TRUEBRO HANDI LAV–GUARD VANDAL–PROOF INSULATION KITS OVER P–TRAP, SUPPLIES, STOPS AND ALL SHARP EDGES FOR ALL SINKS AND LAVATORIES (TRAP WRAP FROM BRODAR OR PROWRAP FROM McGUIRE SHALL BE ACCEPTABLE).
4. ALL PLUMBING FIXTURES REFERENCED AS "ADA", "TAS" OR "HANDICAP COMPLIANT" SHALL MEET ALL REQUIREMENTS OF THE ADA AND THE TEXAS ACCESSIBILITY STANDARDS. IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MEET THESE REQUIREMENTS.
5. IN MANY CASES, FIXTURES WITH THE SAME PLUMBING DESIGNATION HAVE DIFFERENT INSTALLATION HEIGHTS – REFERENCE ARCHITECTURAL DRAWINGS FOR ALL INSTALLATION HEIGHTS AND HANDICAP FIXTURE DESIGNATIONS. FIXTURES DESIGNATED AS ADULT HANDICAP SHALL MEET ALL REQUIREMENTS OF THE ADA. FIXTURES DESIGNATED AS CHILD HANDICAP SHALL MEET ALL REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS FOR THE APPROPRIATE CHILDREN'S AGE GROUP (REF. ARCH. DWGS. AND SPECIFICATIONS).

PLUMBING MATERIALS

SANITARY WASTE AND VENT

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB: STANDARD WEIGHT, CAST IRON, NO–HUB PIPING.

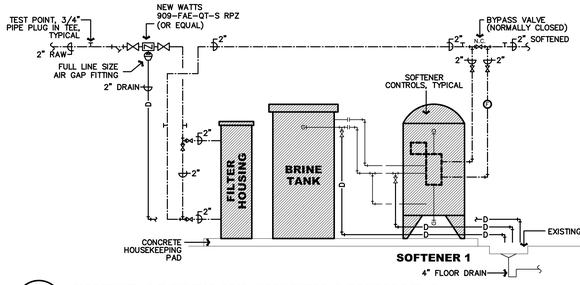
DOMESTIC WATER

INTERIOR: TYPE L COPPER WITH SOLDER TYPE WROUGHT COPPER FITTINGS, MADE UP WITH LEAD–FREE SOLDER.

EXTERIOR: TYPE K COPPER WITH SWEAT FITTINGS AND LEAD–FREE SOLDER. BEYOND 5 FEET FROM BUILDING, SCHEDULE 40 PVC.

GENERAL PLUMBING NOTES

1. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL WORK DESCRIPTION. SEE THIS SHEET (i–P1.01) FOR PLUMBING SYMBOLS LEGEND.
2. COORDINATE PLUMBING SYSTEMS INSTALLATION WITH ARCHITECTURAL, STRUCTURAL, HVAC SYSTEMS, ELECTRICAL SYSTEMS, CONDUITS, ETC.... OFFSET PIPING AS REQUIRED TO PROVIDE A FUNCTIONING SYSTEM WITH ADEQUATE SPACE FOR SERVICING AND REPAIRS.
3. MAKE CONNECTIONS OF NEW PIPE SYSTEMS IN TO EXISTING PIPE SYSTEMS WITH THREADED OR SWEAT JOINTS. PROVIDE ELECTROLYSIS ISOLATING UNIONS AT CONNECTION OF DISSIMILAR MATERIALS. REFERENCE THE SPECIFICATIONS.
4. SITE SERVICES ARE SHOWN FOR REFERENCE ONLY. PLUMBING CONTRACTOR SHALL REFERENCE CIVIL DRAWINGS, INCLUDING LOCATIONS OF SERVICES, SIZES OF PIPES, FLOWLINE ELEVATIONS, ETC..
5. DO NOT INSTALL PLUMBING PIPING OVER ANY ELECTRICAL EQUIPMENT.
6. ALL DOMESTIC WATER PIPING (CW, HW AND HWR) SHALL BE INSULATED PER THE WRITTEN SPECIFICATIONS.
7. FIELD VERIFY EXISTING CONDITIONS PRIOR PROCUREMENT OF EQUIPMENT AND SYSTEMS.
8. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION.
9. PROVIDE INSULATION WITH R–VALUES MEETING OR EXCEEDING REQUIREMENTS OF THE 2021–IECC.
10. SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.



WATER SOFTENER SCHEDULE

CONSTANT FLOW RATE PER TANK:	39 GPM @ 15 PSI
PEAK FLOW RATE PER TANK:	51 GPM @ 25 PSI
EXCHANGE CAPACITY PER TANK:	60,000 GRAINS
SOFTENER TANK SIZE (1 TANK):	14" DIA. X 65" TALL
BRINE TANK SIZE:	18" DIA. X 40" TALL
BASIS OF DESIGN:	WATERTECH WTS–F90 2
REFERENCE SPECIFICATIONS FOR ACCEPTABLE MANUFACTUERS	

WATER FILTER SCHEDULE

FILTER HOUSING CONNECTION SIZE	2" INLET/OUTLET
HOUSING CONSTRUCTION	GLASS REINFORCED PP
OVERALL DIMENSIONS	12" DIA. X 40" TALL
FILTER TYPE	PLEATED, 20 MICRON
MAXIMUM FILTER FLOW RATE	150 GPM
BASIS OF DESIGN:	WATTS BBH–150 WITH BBC–150–P20 CARTRIGE
REFERENCE SPECIFICATIONS FOR ACCEPTABLE MANUFACTUERS	

2 WATER SOFTENING SYSTEM SCHEMATIC

NO SCALE

SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

PLUMBING KEYED NOTES:

1 NEW SEDIMENT FILTER WITH ISOLATION VALVES ON INLET AND OUTLET AND FULL LINE SIZE BYPASS VALVE.

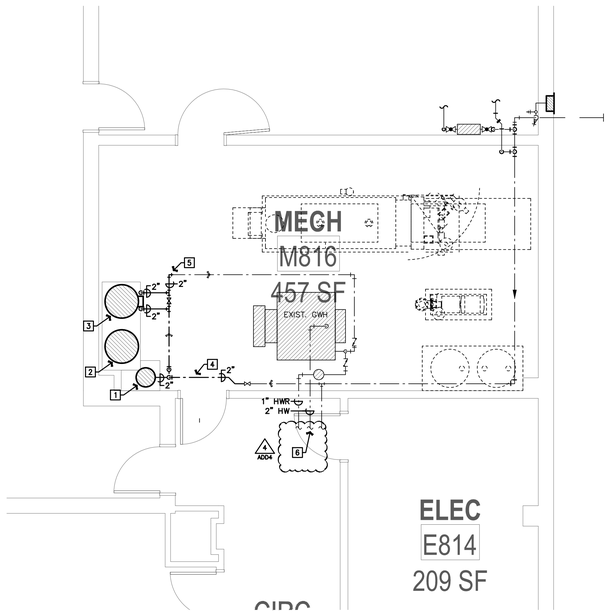
2 NEW WATER SOFTENER MINERAL TANK, IN PLACE OF EXISTING ON EXISTING CONCRETE PAD.

3 NEW WATER SOFTENER BRINE TANK WITH CONTROLLER IN PLACE OF EXISTING ON EXISTING CONCRETE PAD. EXTEND NEW 2" CW TO INLET/OUTLET CONNECTIONS WITH ISOLATION VALVES AND FULL LINE SIZE BY PASS VALVE.

4 NEW 2" CW, REROUTED FROM EXISTING. DEMOLISH ALL ABANDONED EXISTING PIPING.

5 NEW 2" CW, REROUTED FROM EXISTING AND TIED BACK TO CW FEED TO EXISTING GAS WATER HEATER.

6 EXISTING 2" HW FEED TO KITCHEN, SHOW FOR REFERENCE ONLY.



1 PLUMBING RENOVATION FLOOR PLAN

SCALE: 1/4" = 1'– 0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

i

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT

HERITAGE ROSE ELEMENTARY SCHOOL
636 GLENDALE LAKES DR
ROSHARON, TX 77583

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED
PROFESSIONAL
ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

PLUMBING FLOOR PLAN

i-P1.01

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INFORMATION@STANTONENGINEERING.COM (713) 300–8056
TEXAS ENG. FIRM REG. NO. F–01833 | 1300 W. SAM HOUSTON PARKWAY N., SUITE 125, HOUSTON, TX 77043

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FBISD BP013 KITCHEN RENOVATIONS ES

HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DR, SUGAR LAND, TX 77478

FORT BEND INDEPENDENT SCHOOL DISTRICT

2023 FORT BEND BOND

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH — SUPERINTENDENT OF FBISD

DR. ANDRIA SCHUR, Ed.D. — CHIEF OF SCHOOLS

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ADAM SCHOOF	BOARD MEMBER
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Sheet List Table	
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j-D.101-2	DEMO PLAN PHOTOS
j-D.101-3	DEMO PLAN PHOTOS
j-ED.100	ELECTRICAL DEMO AND TEMPORARY PLANS
j-PD.101	PLUMBING DEMOLITION FLOOR PLAN
p-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
j-A.101	SITE PLAN
j-A.200	SLAB DIMENSION CONTROL PLAN
j-A.201	OVERALL FLOOR PLAN
j-A.301	KITCHEN PLAN
j-A.302	TEMPORARY KITCHEN LAYOUT
j-A.401	REFLECTED CEILING PLAN
j-A.501	FINISH FLOOR PLAN
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j-QF1.2	FS EQUIPMENT MODEL
j-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
j-QF1.4	FS PLUMBING PLAN
j-QF1.5	FS ELECTRICAL PLAN
j-QF1.6	FS CONDENSING UNITS
j-QF1.7	FS WALK-INS
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j-QF2.0	FS DEMO PLAN
j-QF2.1	FS TEMPORARY SERVING
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j-QF4.2	FS DETAILS
j-QF4.3	FS DETAILS
j-M1.01	MECHANICAL PLANS
M2.01	LEVEL 1 KITCHEN MECHANICAL PLANS
E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
E.001	ELECTRICAL AND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
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E.012	ELECTRICAL DETAILS
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E.060	LIGHTING SCHEDULES
j-E100	LIGHTING FLOOR PLAN
j-E200	ELECTRICAL PLANS
j-E300	FIRE ALARM FLOOR PLANS
j-E.400	ELECTRICAL SCHEMATIC
j-P1.01	PLUMBING FLOOR PLAN
j-T000	TECHNOLOGY SYMBOLS & LEGEND
j-T200	TECHNOLOGY COMPOSITE FLOOR
j-T201	TECHNOLOGY NEW_RENOVATION KITCHEN PLAN
j-T202	TECHNOLOGY TEMPORARY KITCHEN PLAN
j-T300	TECHNOLOGY ENLARGED VIEWS
j-T400	TECHNOLOGY TYPICAL DETAILS
j-T401	TECHNOLOGY TYPICAL DETAILS
j-T500	TECHNOLOGY TYPICAL LABELING SCHEME
j-TN-000	TECHNOLOGY - INDEX SHEET
j-TN-001	TECHNOLOGY - ELEVATIONS
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j-TN-500	TECHNOLOGY - DETAILS
j-TN-600	TECHNOLOGY - SECURITY DETAILS
J-TN-700	TECHNOLOGY - AV DETAILS

REGISTERED ARCHITECT — MICHAEL A. WILLIAMS — 22651 — STATE OF TEXAS
04SEP.2025

ADDENDUM NO. 4 - SEP 04, 2025

j

FOOD SERVICE DRAWING INDEX	
FDP SHEET NUMBER	FDP SHEET NAME
J-QF0.0	FS GENERAL COORDINATION NOTES
J-QF1.0	FS EQUIPMENT PLAN
J-QF1.1	FS FACILITY MODEL
J-QF1.2	FS EQUIPMENT MODEL
J-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
J-QF1.4	FS PLUMBING PLAN
J-QF1.5	FS ELECTRICAL PLAN
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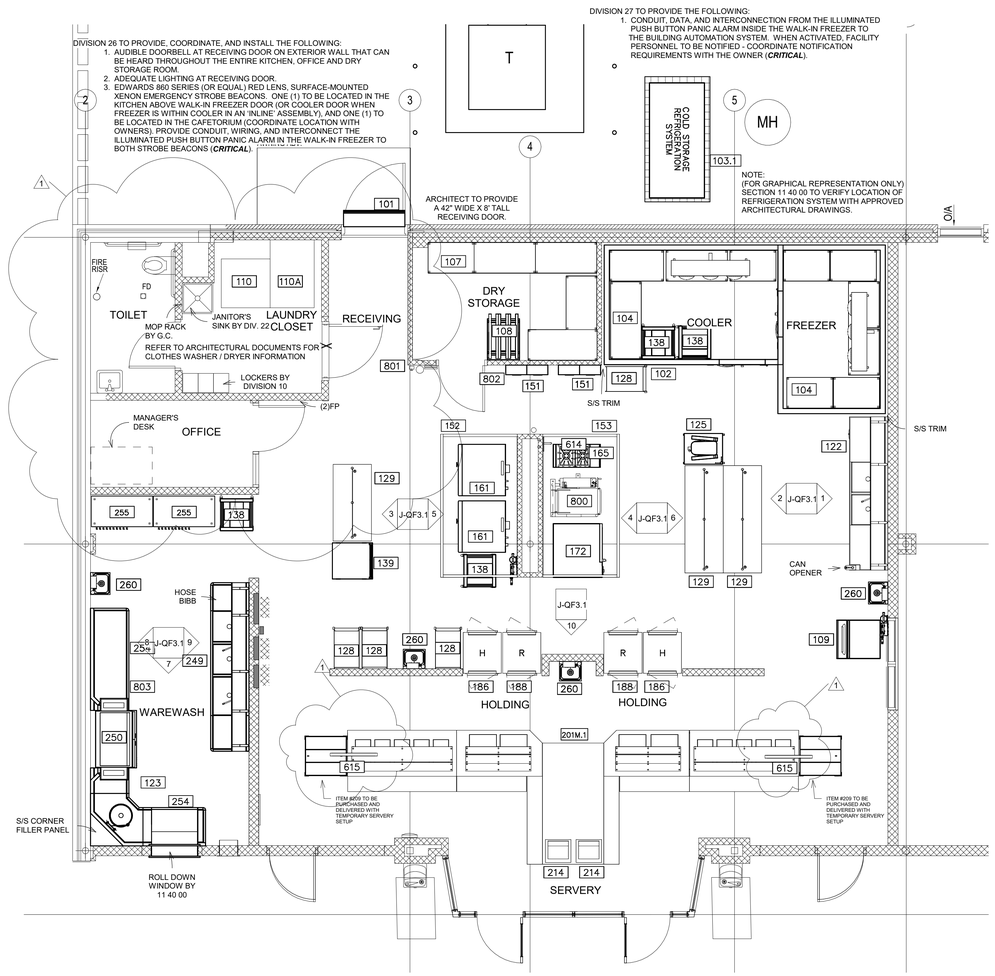
J-QF4.1	FS SECTIONS & DETAILS
J-QF4.2	FS DETAILS
J-QF4.3	FS DETAILS



1 FOOD SERVICE EQUIPMENT PLAN
1/4" = 1'-0"

FOOD SERVICE EQUIPMENT SCHEDULE					
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH DEPARTMENT COORDINATION NOTES					
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS	MANUFACTURER	MODEL
101	1	AIR SCREEN		MARS	STD248-1UA-OB
102	1	COLD STORAGE ASSEMBLY		AMERICAN PANEL	
103.1	1	COLD STORAGE REFRIGERATION SYSTEM		RDT	ZS1-02Z-CT3-AST
104	2	COLD STORAGE SHELVING		METRO	METROMAX Q
107	1	DRY STORAGE SHELVING		METRO	METROMAX Q
108	1	CAN RACK		NEW AGE	1250CK
109	1	ICE MACHINE W/ BIN		MANITOWOC	UYF0310A
110	1	CLOTHES WASHER	BY G.C.		
110A	1	CLOTHES DRYER	BY G.C.		
122	1	TWO COMPARTMENT SINK WITHOUT DISPOSER		CUSTOM FABRICATED	
123	1	DISPOSER - 3HP		SALAVHOR	300-CA-18-ARSS-LD
125	1	20 QT. MIXER W/STAND		CUSTOM FABRICATED	
128	4	UTILITY CART		LAKESIDE	522
129	3	WORKTABLE W/S.BAR UT.RACK		CUSTOM FABRICATED	
138	4	PAN RACK		CRES COR	207-UA-13A
139	1	INSUL MOBILE PROOFER		CRES COR	H-137-WSUA-12D
151	2	FIRE PROTECTION SYSTEM		ANSUL	R102
152	1	EXHAUST HOOD	EXISTING		
153	1	EXHAUST HOOD	EXISTING		
161	2	CONVECTION OVEN		BLODGETT	200-DFG DBL
165	1	TWO BURNER RANGE		VULCAN	V2B18B
172	1	COMBI OVEN		RATIONAL	ICP 6-FULL/6-FULL N/G
186	2	PASS-THRU HEATED CABINET-1DR		TRAULSEN	AHF132WP
188	2	PASS-THRU REFRIGERATOR-1DR		TRAULSEN	AHT132WPUT
201M.1	1	SERVING COUNTER-MODULAR		COUNTERCRAFT	SCOL-408-MOD
209	2	DROP FRONT MILK COOLER - 8 CASE		TRAULSEN	RMC34D4
214	2	CASH REGISTER	OWNER FURNISHED		
249	1	THREE COMPARTMENT SINK NO DISPOSER		CUSTOM FABRICATED	
250	1	DISHMACHINE		HOBART	CL44-BAS
254	2	SOILED & CLEAN DISHTABLE		CUSTOM FABRICATED	
255	2	MOBILE DRYING RACK		METRO	PR48VX3
260	4	HAND SINK	FURNISHED & INSTALLED BY DIV. 22		
614	1	FILL FAUCET		T&S	B-0610
615	2	MENU MONITOR	BY OWNER		
800	1	15 GAL. BRAISING PAN		GROEN	BPM-15GA
801	1	S/S CORNER GUARDS	LOCATED ON EVERY EXPOSED CORNER THROUGHOUT KITCHEN	CUSTOM FABRICATED	
802	1	WALL BUMPERS	LOCATED ON ALL EXPOSED BUILDING WALLS	PAWLING	MD-1
803	1	WATER SOFTENER		HOBART	WS-40
804	1	S/S SPLASH GUARDS		CUSTOM FABRICATED	

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/15/2025

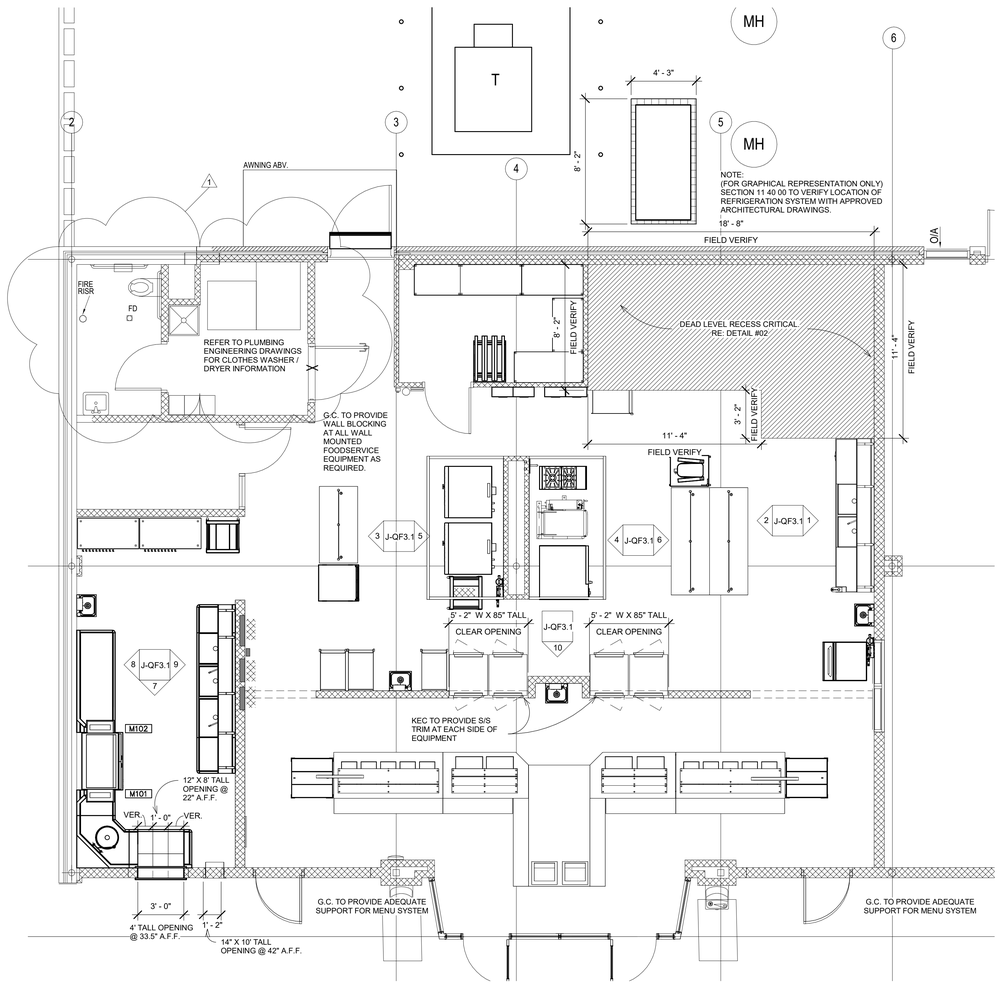
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS EQUIPMENT PLAN

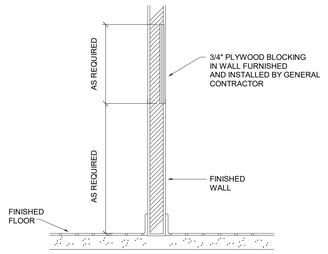
J-QF1.0

FOOD SERVICE MECHANICAL SCHEDULE						
REFER TO SHEET QF1 FOR MECHANICAL COORDINATION NOTES						
FDP NO.	FDP QTY	FDP TYPE	FDP SIZE	FDP LOC	FDP CFM	FDP S.P.
M101	1	EXHAUST	4" X 16"		400	0.30"
M102	1	EXHAUST	4" X 16"		800	0.30"



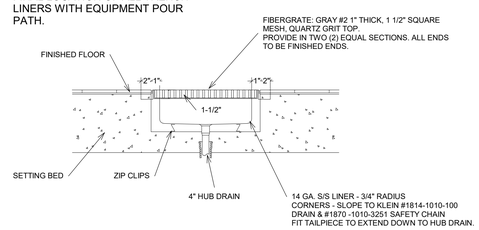
1 FOOD SERVICE SPECIAL CONDITIONS PLAN
1/4" = 1'-0"

NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION AND SIZE OF WALL BLOCKING.

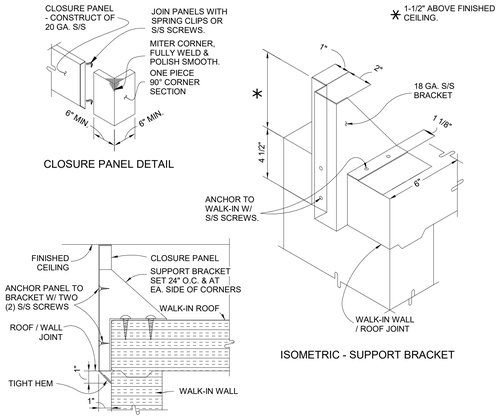


5 WALL BLOCKING DETAIL
NOT TO SCALE

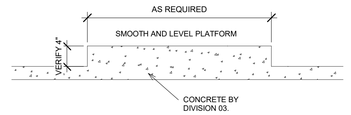
NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION OF ALL TRENCH LINERS WITH EQUIPMENT POUR PATH.



6 TRENCH LINER DETAIL
NOT TO SCALE

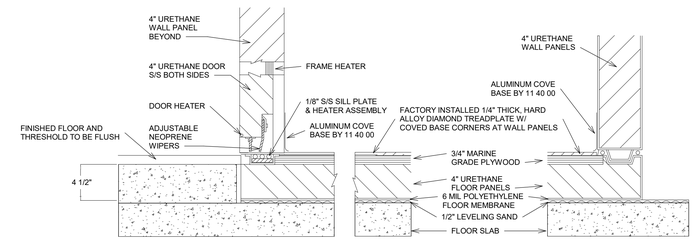


3 COLD STORAGE ASSEMBLY ENCLOSURE PANEL DETAIL
NOT TO SCALE



4 COLD STORAGE ASSEMBLY REFRIGERATION SYSTEM GROUND MOUNT 4" PLATFORM DETAIL
NOT TO SCALE

SLAB TO BE MODIFIED AS REQUIRED TO ALLOW FOR A 4 1/2" DEPRESSION SLAB. PROVIDE NEW LEVEL CONCRETE PAD FOR COLD STORAGE ASSEMBLY.



WALL SECTION @ EXTERIOR DOOR

2 COLD STORAGE ASSEMBLY 4 1/2" DEPRESSION DETAIL
NOT TO SCALE

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FDP
FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
FCSI
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/15/2025

ARCHITECTS AND PLANNING CONSULTANTS
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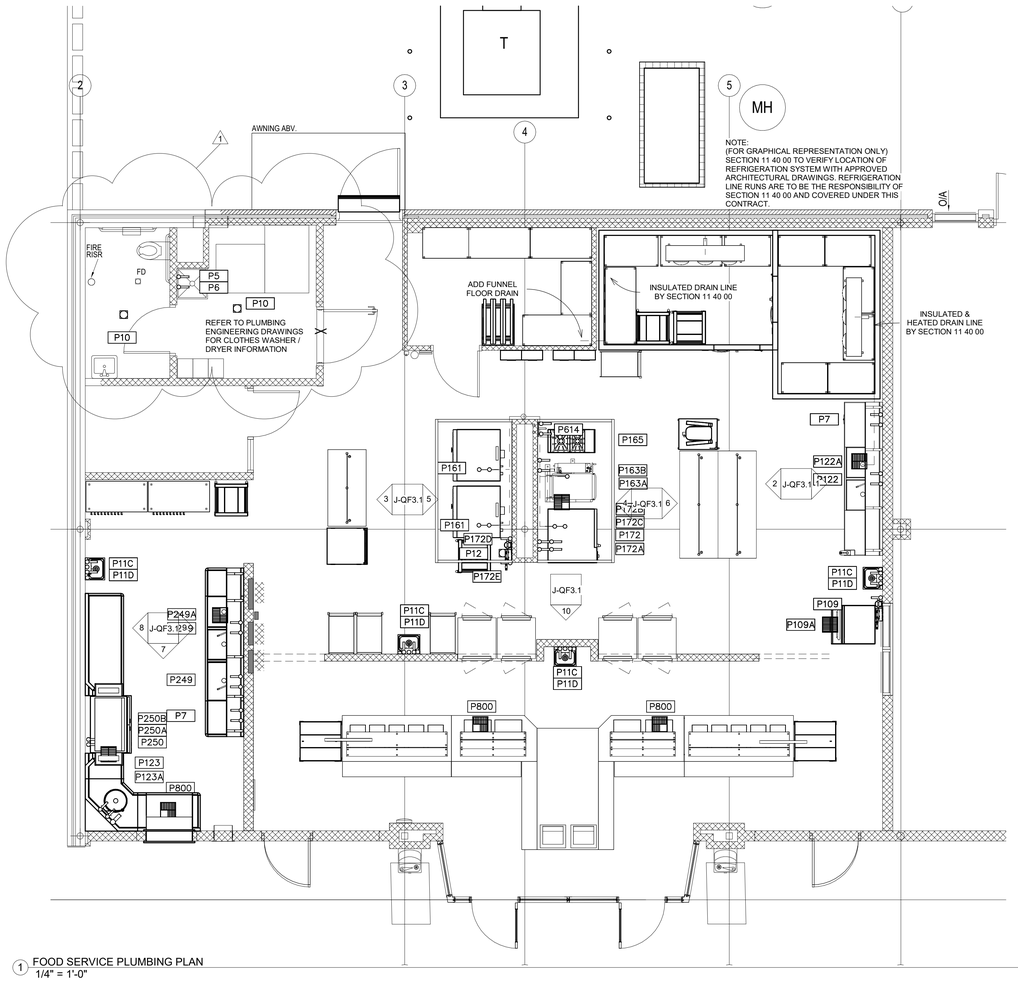
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS SPECIAL CONDITIONS & MECHANICAL PLAN

J-QF1.3

FOOD SERVICE PLUMBING SCHEDULE						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P5	3/4"	H & C WATER	JANITOR SINK	WALL	48"	JANITOR SINK BY PLUMBER
P6	4"	FLOOR DRAIN	JANITOR SINK	FLOOR	VERIFY	JANITOR SINK BY PLUMBER
P7	3/4"	H & C WATER	HOSE BIBB	WALL	18"	BTC
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	---
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P12	VERIFY	FLOOR DRAIN	EQUIP. DRAIN	FLOOR	VERIFY	NO SLOPE
P15	4"	FLOOR DRAIN	FUNNEL FLOOR DRAIN	FLOOR	0"	---
P109	3/4"	COLD WATER	WATER/ ICE	WALL	60"	BTC
P109A	12" SQ.	FLOOR SINK	ICE MACHINE	FLOOR	0"	FULL GRATE
P122	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P122A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	3/4 GRATE
P123	3/4"	H & C WATER	FAUCET / DISPOSER	WALL	13"	BTC
P123A	2"	DIRECT DRAIN	DISPOSER	WALL	10"	BTC
P161	(2)3/4"	NATURAL GAS	CONVECTION OVEN	WALL	18"/36"	BTC - 60 MBTU/HR EACH
P163A	3/4"	NATURAL GAS	TILT BRAISING PAN	WALL	18"	BTC - 65 MBTU/HR
P163B	3/4"	H & C WATER	TILT BRAISING PAN	WALL	36"	BTC
P165	1"	NATURAL GAS	RANGE	WALL	18"	BTC - 70 MBTU/HR
P172	(2)3/4"	COLD WATER	COMBI OVEN	WALL	24"/48"	BTC - INTERCONNECT THRU FILTERS
P172A	3/4"	COLD WATER	COMBI OVEN	WALL	48"	BTC
P172B	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE
P172C	(2)3/4"	NATURAL GAS	COMBI OVEN	WALL	18"/36"	BTC - 105 MBTU/HR EACH
P172D	3/4"	COLD WATER	COMBI OVEN	WALL	66"	BTC; INTERCONNECT TO P172
P172E	3/4"	COLD WATER	COMBI OVEN WATER FILTER	WALL	66"	BTC
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P249A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	THREE QUARTER GRATE
P250	12" SQ.	FLOOR SINK	BOOSTER / DISHMACHINE	FLOOR	18"	BTC
P250A	3/4"	HOT WATER	DISHMACHINE	WALL	18"	EXT. THRU W.FILTER TO BOOSTER / DISH MACHINE - 140DEG.MIN.
P250B	3/4"	COLD WATER	DISHMACHINE	WALL	18"	BTC
P614	1/2"	H & C WATER	FILL FAUCET	WALL	42"	BTC
P800	12" SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE



1 FOOD SERVICE PLUMBING PLAN
1/4" = 1'-0"

SECTION 11 40 00 TO PROVIDE LOOSE WITH FOOD SERVICE EQUIPMENT. INSTALLATION BY DIV. 22 & 26.

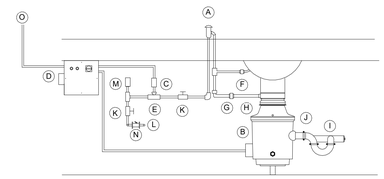
- (A) VACUUM BREAKER
- (B) DISPOSER
- (C) TIME DELAY
- (D) CONTROL PANEL
- (E) SOLENOID VALVE

DIVISION 22 TO PROVIDE AND INSTALL

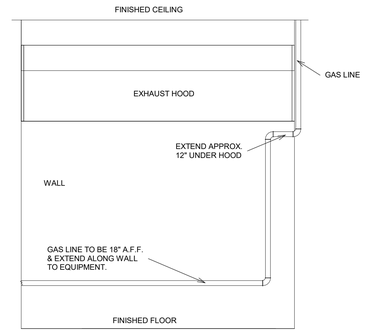
- (F) 1/2" CW INLET
- (G) FLOW CONTROL
- (H) 1/2" CW
- (I) 2" DRAIN LINE WITH P-TRAP & Y ADAPTOR
- (J) 1-1/2" TAILPIECE
- (K) GATE VALVE
- (L) 1/2" CW SUPPLY
- (M) SHOCK STOP
- (N) RPZ BACK FLOW PREVENTOR

DIVISION 26 TO PROVIDE AND INSTALL

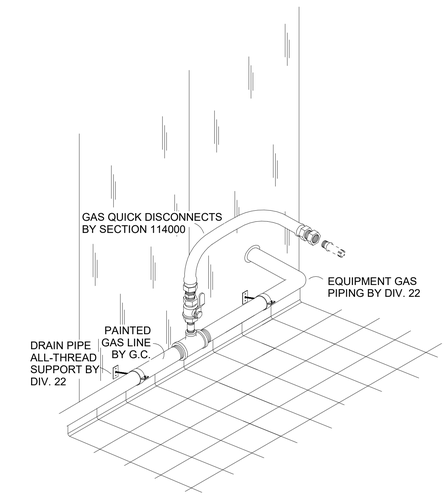
- (O) POWER SUPPLY



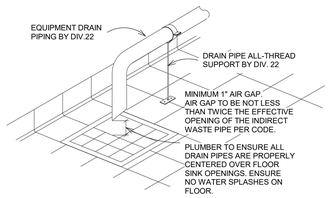
6 DISPOSER WITH VACUUM BREAKER DETAIL
NOT TO SCALE



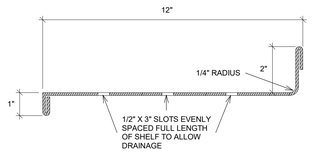
7 EXHAUST HOOD - GAS LINE ROUTING DETAIL
NOT TO SCALE



3 GAS DISCONNECT DETAIL
NOT TO SCALE



5 DRAIN PIPING FASTENER DETAIL
NOT TO SCALE



8 WAREWASH - PERFORATED OVER SHELF DETAIL
NOT TO SCALE

○	HW	HOT WATER	⊡	FFD	FUNNEL FLOOR DRAIN
○	CW	COLD WATER	◣	EVC	EXHAUST VENT CONNECTION
○	HTW	180 F HOT WATER	⋈	SVC	SUPPLY VENT CONNECTION
◎		CHILLED WATER	◖	FR	DIRECT-CONNECTED FLUE RISER
●	W	DIRECT WASTE	⊕	PS	PIPE SLEEVE
○	IW	INDIRECT WASTE	⊙		COMPRESSED AIR
⊙		GAS SUPPLY	♦		CO2
◕		STEAM SUPPLY		AFF	ABOVE FINISHED FLOOR
⊗	CR	CONDENSATE RETURN		BTC	BRANCH TO CONN. ON EQUIP
●	DR	DRAIN		DFA	DROP FROM ABOVE
□	FD	FLOOR DRAIN		CLG	CEILING
▤	FST	FLOOR SINK 3/4 GRATE			
▥	FSH	FLOOR SINK 3/4 GRATE			

2 PLUMBING SYMBOLS
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM WAS PREPARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/15/2025

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

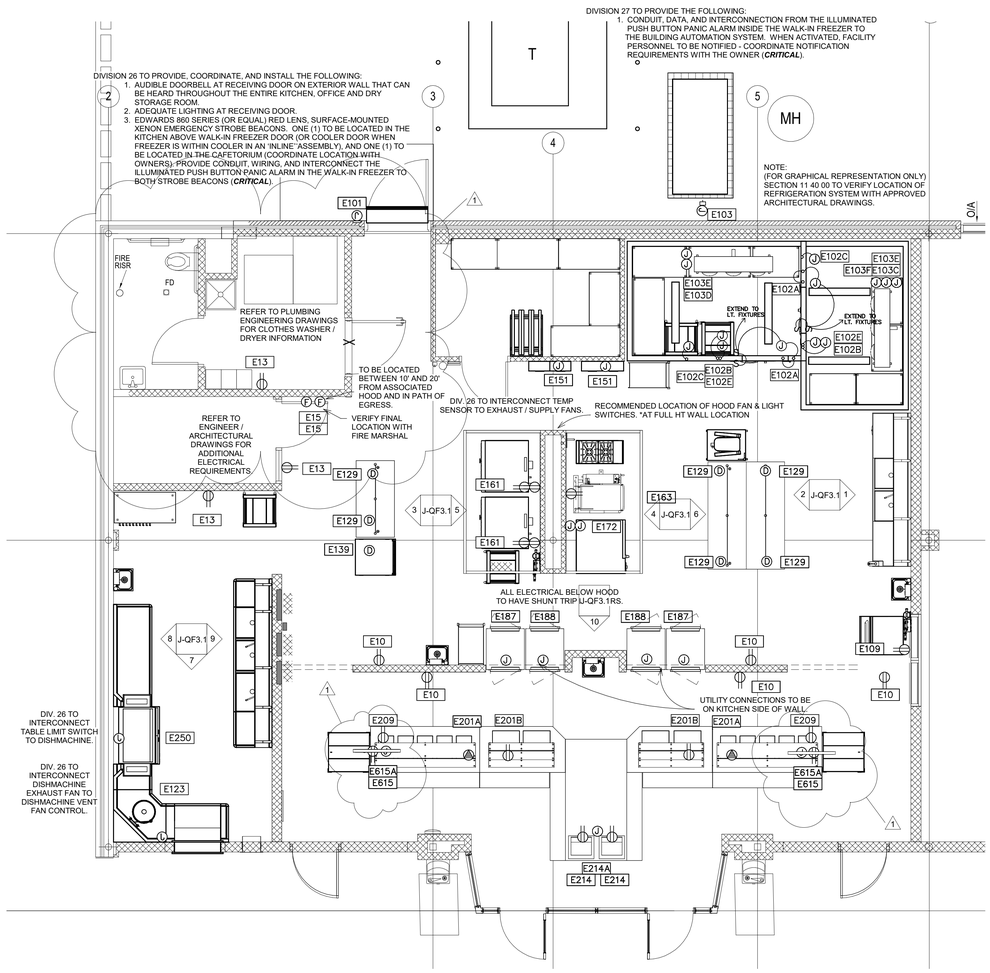
PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS PLUMBING PLAN

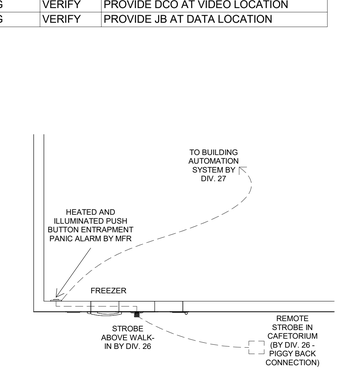
J-QF1.4

FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E10	DR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E13	WPR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E15	JB	---	---	---	FIRE PROT. SYSTEM	WALL	48"	RECESSED EMPTY CONDUIT FOR FIRE PULL
E101	JB	5.1A	120	1	AIR SCREEN	WALL	82"	BTC; MAGNETIC REED SWITCH ON DOOR JAMB & DOOR
E102A	JB	16.0A	120	1	DOOR HEATER/LIGHTS	CLG	DFA	BTC
E102B	JB	5.0A	120	1	TEMP. ALARM	CLG	DFA	BTC
E102C	JB	5.0A	120	1	PRESSURE RELIEF PORT	CLG	DFA	BTC
E102E	JB	10.0A	120	1	PANIC ALARM BUTTON	CLG	DFA	BTC-INTERCONNECT TO STROBE LIGHT/HORN ABOVE FREEZER DOOR AND IN CAFETORIUM
E103	JB/DS	38.4A	208	3	REFRIGERATION SYSTEM	VERIFY	VERIFY	BTC - WEATHERPROOF DISCONNECT SWITCH
E103C	JB	13.7A	208	1	FREEZER COIL	CLG	DFA	BTC
E103D	JB	1.8A	120	1	COOLER COIL	CLG	DFA	BTC
E103E	JB	---	---	---	DATA CONNECTION	CLG	DFA	BTC; RUN TO NEAREST IDF / MDF ROOM
E103F	JB	16.0A	120	1	DRAIN LINE HEATER	CLG	DFA	BTC; DEDICATED CIRCUIT
E109	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E123	JB	3.0HP	208	3	DISPOSER	WALL	24"	BTC; CONNECT THRU C.P. TO DISPOSER
E129	DCR	16.0A	120	1	TABLE RECEPTACLE	CLG	84"	TWISTLOCK PLUG & RECEPTACLE
E139	DCR	15.0A	120	1	INSUL. MOBILE PROOFER	CEILING	DFA	--

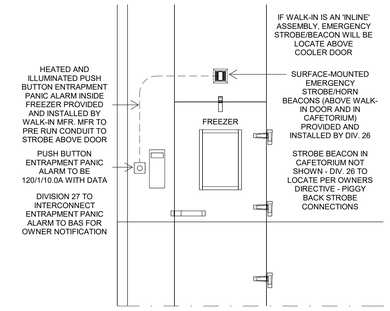
FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC
E161	(2)DR	6.0A EA.	120	1	CONVECTION OVEN	WALL	24"/48"	SHUNT TRIP BREAKER
E163	DR	5.0A	120	1	TILT BRAISING PAN	WALL	24"	SHUNT TRIP BREAKER
E172	(2)JB	15.0A EA.	208	1	COMBI OVEN	WALL	24"/48"	BTC; RE: NOTE #4- SHUNT TRIP BREAKER
E187	JB	15.5A	120/208	1	HEATED CABINET	WALL	96"	BTC; MOUNT ON KITCHEN SIDE
E188	JB	7.2A	120	1	REFRIGERATOR	WALL	96"	BTC; MOUNT ON KITCHEN SIDE-OMIT PLUG, UNIT TO BE HARDWIRED
E201A	PMR	28.0A	208	1	HOT FOOD COUNTER	FLOOR	4.5"	BTC
E201B	PMR	16.0A	120	1	COLD FOOD COUNTER	FLR	4.5"	---
E209	PMR	8.0A	120	1	DROP FRONT MILK COOLER-8 CASE	FLR	4.5"	---
E214	PMR	16.0A	120	1	CASH REGISTER	FLR	4.5"	DEDICATED CIRCUIT
E214A	CS	---	---	---	POS	FLOOR	6"	BTC; CONDUIT W/DATA LINE TO RUN TO MANAGER'S OFFICE OR IDF ROOM-VERIFY
E250	JB/DS-JB	51.7A	480	3	DISHMACHINE	WALL	66"	BTC; EXTEND FROM JB/DS AT NEAREST WALL
E615	DR	5.0A	120	1	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE DCO AT VIDEO LOCATION
E615A	JB	---	---	---	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE JB AT DATA LOCATION

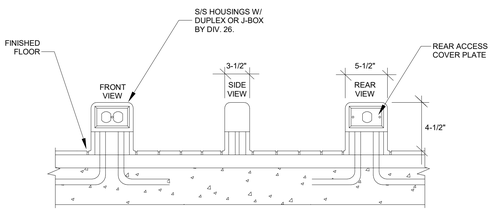


1 FOOD SERVICE ELECTRICAL PLAN
1/4" = 1'-0"



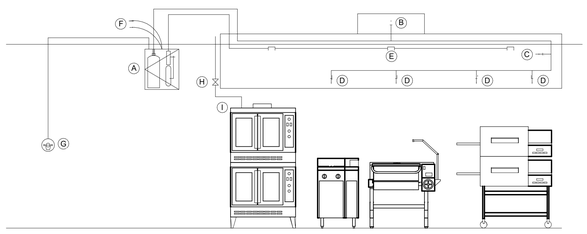
6 COLD STORAGE ASSEMBLY ENTRAPMENT PANIC ALARM DETAIL
NOT TO SCALE





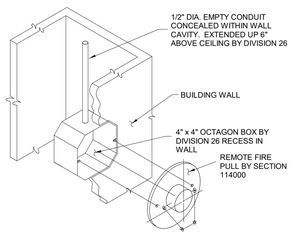
3 PEDESTAL MOUNTED RECEPTACLE DETAIL
NOT TO SCALE

NOTE:
REFER TO FDP EQUIPMENT PLAN FOR SPECIFIC COMPONENTS UNDER HOOD. ALL EQUIPMENT SHOWN HERE FOR GRAPHICAL REPRESENTATION ONLY.



- (A) S/S ENCLOSURE W/AGENT TANK AND NITROGEN CARTRIDGE
- (B) DUCT NOZZLE(S)
- (C) PLENUM NOZZLE(S)
- (D) SURFACE PROTECTION NOZZLE(S)
- (E) FUSIBLE LINK(S)
- (F) (2) WIRES FROM FIRE SYSTEM TO SHUNT TRIP BREAKERS FOR SHUT DOWN OF ELECTRICAL CONNECTIONS LOCATED BENEATH EXHAUST HOOD DURING FIRE MODE
- (G) REMOTE FIRE PULL
- (H) GAS VALVE
- (I) GAS SUPPLY (AS REQUIRED)

4 FIRE PROTECTION SYSTEM TYPICAL DETAIL
NOT TO SCALE



5 FIRE PROTECTION SYSTEM RECESSED FIRE PULL DETAIL
NOT TO SCALE

	SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES
•	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
	DR	DUPLEX RECEPTACLE		WPR	WATERPROOF RECEPTACLE (SPRING COVER)
	SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER
	SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT
	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
	PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR
	DCR	DROP CORD RECEPTACLE		CS/JB	JUNCTION BOX ON PEDESTAL
	JB	JUNCTION BOX ON CEILING		SW	SWITCH
	JB	JUNCTION BOX IN WALL		D	DATA
	JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26			

2 ELECTRICAL SYMBOLS
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FDP
FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

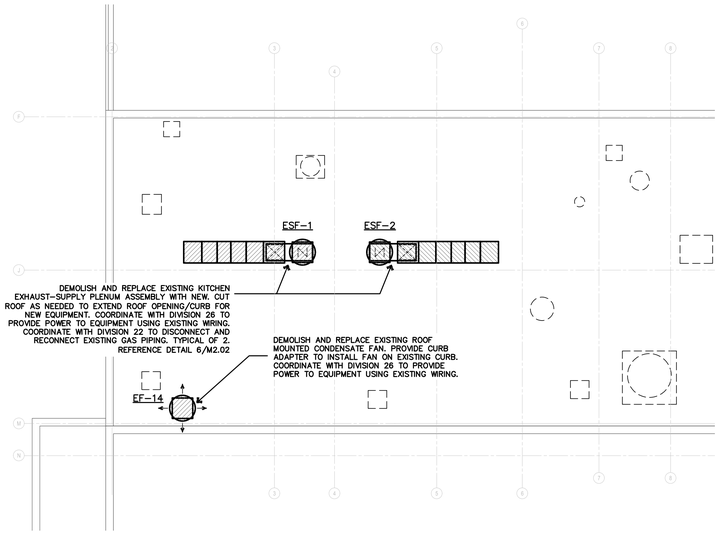
SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
FCSI
#88541119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM IS PREPARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. #88541119 ON: 07/15/2025

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

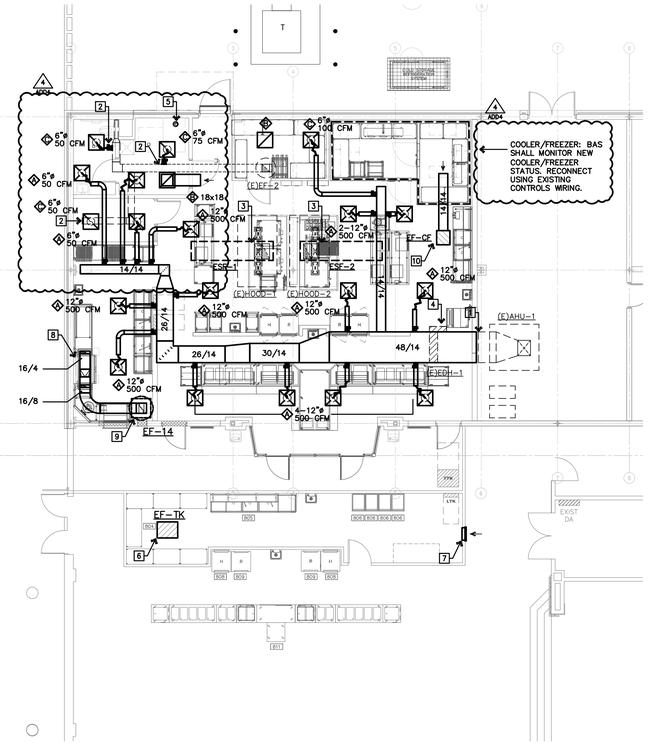
FS ELECTRICAL PLAN

J-QF1.5



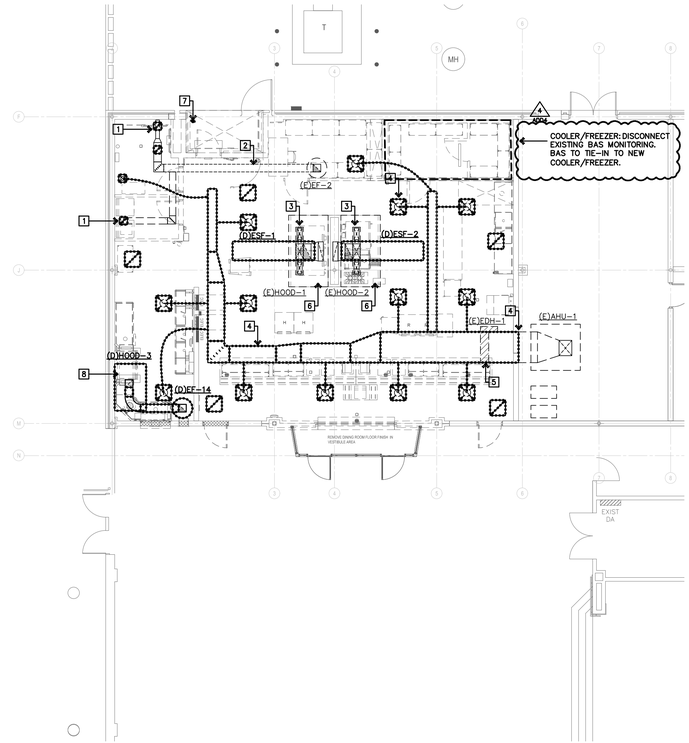
3 MECHANICAL ROOF FLOOR PLAN
SCALE: 1/8" = 1'-0"

NORTH



2 RENO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"

NORTH



1 DEMO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"

NORTH

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A	CEILING DIFFUSER – 24" X 24" FACE, PATTERN TYPE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE SCD A1–12" X 12"
B	CEILING RETURN GRILLE – 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE PDFR B1–12" X 12"
C	CEILING EXHAUST GRILLE – 24" X 24" PERFORATED FACE, STEEL CONST., WHITE FINISH, NECK SIZE SHOWN, U.L. LISTED PRICE PDDR C1–12" X 12"

NOTES:
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPES FOR AIR DEVICES.

4 ADD4

KITCHEN HOOD REFURBISHMENT NOTES

HOOD REFURBISHMENT FOR KITCHEN HOODS (QUANTITY 2):
- STEAM WASH AND DEEP CLEAN STAINLESS STEEL HOOD ASSEMBLY, CASING, AND SUPPLY GRILLES WHERE APPLICABLE.
- REPLACE GREASE FILTER RACKS.
- CLEAN EXISTING MAKE-UP AIR AND GREASE EXHAUST DUCT.
- RELAMP EXISTING LIGHT FIXTURES WITH NEW 4000K BULBS LISTED FOR USE IN AN ENCLOSED KITCHEN HOOD FIXTURE.
- COORDINATE WITH DIVISION 11 FOR REPLACEMENT OF ANSUL FIRE SUPPRESSION SYSTEM.
- HOOD ASSEMBLIES SHALL BE CLEANED TO MEET THE STANDARDS ESTABLISHED IN NFPA STANDARD 96.

KITCHEN HOOD EXHAUST & MAKE-UP AIR UNIT SCHEDULE

MARK	ESF-1,2
SERVES	KITCHEN HOOD-1 & 2
SUPPLY SECTION	
TYPE	INDIRECT GAS-FIRED MAKE-UP AIR UNIT
DRIVE	DIRECT
SPEED CONTROL	VFD
SUPPLY CFM	2250
EXT. S.P. (IN. W.G.)	0.375
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	4.6 A
UNIT MOCP	15 A
HEATING MEDIUM	NATURAL GAS
INPUT/OUTPUT (MBH)	150.0/121.5
TURNDOWN RATIO	4:1
MANUFACTURER	GREENHECK
MODEL	IGX-P109-H12-MF-E
EXHAUST SECTION	
TYPE	UPBLAST BELT DRIVE CENTRIFUGAL
EXHAUST CFM	3600
EXT. S.P. (IN. W.G.)	0.75
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	3.75 A
UNIT MOCP	15 A
MANUFACTURER	GREENHECK
EXHAUST FAN MODEL	CUBE-200-15

NOTES
1. EXHAUST FAN: PROVIDE FAN WITH PRE-FABRICATED ROOF CURB ADAPTER, VENTED CURB EXTENSION, HINGING KIT, HEAT BAFFLE, DRAIN CONNECTION, GREASE TRAP, AND DISCONNECT SWITCH. FANS SHALL BE UL LISTED FOR USE WITH TYPE 1 GREASE HOOD.
2. EXHAUST FAN: PROVIDE NEW MOTOR STARTER, SIZED FOR EXHAUST FAN MOTOR AND INSTALLED IN PLACE OF EXISTING. REFERENCE THE SPECIFICATIONS FOR STARTER REQUIREMENTS. COORDINATE WITH DIV.25 FOR RE-TERMINATION OF PERMISSIVE ON/OFF CONTROL. COORDINATE WITH DIV.26 FOR RE-TERMINATION OF LOCAL HOOD SWITCH INTERLOCK FOR START/STOP CONTROL.
3. SUPPLY FAN/FURNACE: FLUE GAS FROM HEATING COIL SHALL BE POWER VENTED.
4. SUPPLY FAN/FURNACE: WEATHERHOOD WITH ALUMINUM MESH.
5. SUPPLY FAN/FURNACE: 5 YEAR HEAT EXCHANGER WARRANTY.
6. SUPPLY FAN/FURNACE CONTROLS: INTEGRAL HEATER CONTROLS WITH BAS INTERLOCK FOR PERMISSIVE ON/OFF AND LOCAL SWITCH INTERLOCK FOR CONTROL FROM KITCHEN HOOD SWITCH. FURNACE CONTROLS SHALL BE PROGRAMMED FOR 64°F LAT, WITH A LOCKOUT FOR O/A TEMPERATURES ABOVE THE LAT SETPOINT. COORDINATE WITH DIV.25 AND DIV.26 FOR CONTROLS AND SWITCH INTERLOCKS.
7. TWO POINT POWER CONNECTION: ONE FOR EXHAUST FAN AND ONE FOR INTAKE/SUPPLY FAN.
8. INTERLOCK FAN(S) WITH ASSOCIATED COOKING HOOD
9. INTERLOCK FAN WITH SWITCH ON KITCHEN HOOD.
10. UNIT TO BE PROVIDED WITH GALVANIZED STEEL FAN PACK EXTENSION/COMBINATION CURB.
11. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH.
12. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.

4 ADD4

MECHANICAL RENO KEYED NOTES

1. TIE-IN NEW DUCTWORK TO EXISTING DUCTWORK AT WALL PENETRATION.
2. CONNECT NEW AIR DEVICE AND TAP TO EXISTING E/A TRUNK DUCT.
3. REWORK EXISTING EXHAUST AND SUPPLY DUCTWORK FROM EXISTING KITCHEN HOOD UP TO FAN, AS REQUIRED, WITH NEW TRANSITIONS AND SUPPLY AIR DUCTWORK OFFSETS TO MATE WITH NEW FAN CURB.
4. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
5. NEW DRYER VENT DUCT AND VENT CAP. REFER TO DETAIL 4/M2.02.
6. TEMP. KITCHEN – CEILING MOUNTED CABINET EXHAUST FAN. REFER TO DETAIL 1/M2.02.
7. TEMP. KITCHEN – 24"X24" SIDE WALL GRILLE. SURFACE MOUNT OPTIONAL. AUXILIARY FRAME. TITUS CT-700.
8. RECONFIGURE DUCTWORK TO CONNECT TO NEW DISHMACHINE HOOD OUTLETS. REF. KITCHEN CONSULTANT DRAWINGS FOR EXACT DIMENSIONS OF DUCT CONNECTIONS.
9. CONDENSATE EXHAUST DUCT UP THROUGH ROOF TO NEW EXHAUST FAN SET ON NEW ROOF CURB. REUSE EXISTING ROOF PENETRATION.
10. INLINE FAN INSTALLED ABOVE PLENUM. REFER TO DETAIL 2/M2.02.

EXHAUST FAN SCHEDULE

MARK	EF-TK	EF-CF	EF-14
SERVES	TEMPORARY KITCHEN	COOLER/FREEZER	DISH WASHER
TYPE	CEILING CABINET	INLINE FAN	ROOF UPBLAST
DRIVE	DIRECT	DIRECT	DIRECT
SPEED CONTROL	INTEGRAL SPEED CONTROLLER	CONSTANT	CONSTANT
CFM	1055	1000	1200
EXT. S.P. (IN. W.G.)	0.3	0.35	0.60
IMP. SIZE (IN.)	8.0	13.5	14.0
HORSEPOWER (WATTS)	1/3 HP	1/6 HP	1/3 HP
VOLTAGE	120V/1-PHASE	120V/1-PHASE	120V/1-PHASE
MANUFACTURER	COOK	COOK	COOK
MODEL	GC-862	1355QN10D	CUE-140-B
SONES (MAX.)	15.0	15.0	15.0
NOTES	1 THRU 4	1 THRU 4	1 THRU 5

NOTES
1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN. FANS SHALL BE CAPABLE OF 120% OF THE SCHEDULED CFM CAPACITY.
2. INTEGRAL DISCONNECT SWITCH.
3. RUBBER IN-SHEAR ISOLATORS.
4. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.
7. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH.

4 ADD4

MECHANICAL DEMO KEYED NOTES

1. DEMOLISH EXISTING AIR DEVICE, BRANCH DUCT, DAMPER AND TAP BACK TO TRUNK DUCT. CAP AND SEAL RESULTING OPENING.
2. EXISTING E/A TRUNK DUCT TO REMAIN.
3. DISCONNECT EXISTING S/A AND E/A DUCTWORK SERVING KITCHEN HOODS FROM FAN ASSEMBLY AND HOOD. DUCTWORK SHALL REMAIN FOR FUTURE USE/RE-CONNECTION. DEMOLISH SUPPLY AND EXHAUST FAN PLENUM ASSEMBLY SERVING KITCHEN HOODS, ALONG WITH CURB. NEW CURB TO BE PROVIDED AND INSTALLED AS PART OF RENOVATION.
4. DEMOLISH ALL EXISTING AIR DEVICES, DUCTWORK, AND DUCTWORK ACCESSORIES SERVING KITCHEN AREA BACK TO MECH. ROOM WALL PENETRATION.
5. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
6. REFURBISH EXISTING KITCHEN HOOD. REFER TO "KITCHEN HOOD REFURBISHMENT NOTES".
7. DEMOLISH AND REPLACE EXISTING DRYER EXHAUST DUCT AND FLUE VENT CAP.
8. DEMOLISH EXISTING CONDENSATE HOOD, ASSOCIATED DUCTWORK, AND ROOF EXHAUST FAN.

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09/04/2025	ADDENDUM 04

4 ADD4

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
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SEAL

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TYLER W. HERRING
106052
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PROFESSIONAL ENGINEER
09.04.2025

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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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4 ADD4

KITCHEN AREA MECHANICAL PLANS
J-M1.01

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TEXAS ENG. FIRM REG NO. F-018332

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MECHANICAL SYMBOL SCHEDULE

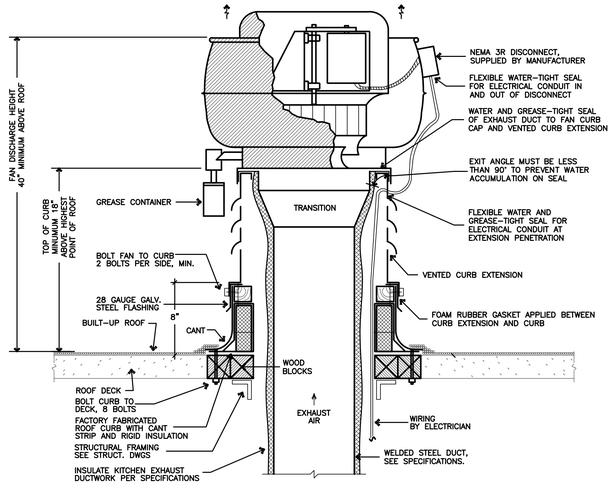
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
RS	REFRIGERANT SUPPLY
RR	REFRIGERANT RETURN
D	CONDENSATE LINE
	PETE'S PLUG
	ISOLATION VALVE
	ELECTRONIC CONTROL VALVE
	BUTTERFLY VALVE
	BALL VALVE
	UNION OR FLANGE
	STRAINER
	AUTOMATIC AIR VENT
T	LOCAL CONTROL THERMOSTAT
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	FIRE/SMOKE COMBINATION DAMPER
MD	MOTORIZED DAMPER
C	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST GRILLE
RA	RETURN AIR OPENING IN WALL
VD	VOLUME DAMPERS
	DUCT ELEVATION CHANGE
	90° DUCT ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
M	DAMPER MOTOR
T	TEMPERATURE TRANSMITTER
FS	FLOW SWITCH
P	DIFFERENTIAL PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
PS	STATIC PRESSURE SENSOR
PH	STATIC PRESSURE SENSOR HI-LIMIT
	ACCESS PANEL

A.P.	ACCESS PANEL
AHU	AIR HANDLING UNIT
B	BOILER
CH	CHILLER
CHP	CHILLED WATER PUMP
CVT	CONSTANT VOLUME TERMINAL
DH	DEHUMIDIFIER
E/A	EXHAUST AIR
EF	EXHAUST FAN
F&B	FACE & BYPASS
FF	FLY FAN
HDT	HORIZONTAL DRAW THROUGH
HWP	HOT WATER PUMP
KEF	KITCHEN EXHAUST FAN
KSF	KITCHEN SUPPLY FAN
O/A	OUTSIDE AIR
OBD	OPPOSED-BLADES DAMPER
PT	PRE-TREAT
R/A	RETURN AIR
RAHU	ROOF-MOUNTED AIR HANDLING UNIT
S/A	SUPPLY AIR
SA	SOUND ATTENUATOR
SF	SUPPLY FAN
SPD	SPILTER DAMPER
SZ	SINGLE ZONE
VAV	VARIABLE AIR VOLUME
VB	VAV BOX
VD	VOLUME DAMPER
VDT	VERTICAL DRAW THROUGH
VFD	VARIABLE FREQUENCY DRIVE
WH	WATER HEATER
⌀	DESIGNATION FOR "ROUND"
⬭	DESIGNATION FOR "OVAL"

GENERAL MECHANICAL NOTES

3

1. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION OF EQUIPMENT AND PIPING WITH THE ELECTRICAL CONTRACTOR TO INSURE NEC CLEARANCE (42 INCHES) IN FRONT OF ALL ELECTRICAL PANELS. DO NOT INSTALL DUCTWORK OR WATER PIPING OVER THE TOP OF ELECTRICAL PANELS SEE DETAIL 1/M2.01.
3. DUCT SIZES SHOWN ARE NET FREE AIR PASSAGE DIMENSIONS, DUCTS ARE NOT LINED, BUT ARE EXTERNALLY INSULATED. RUNOUTS TO CEILING OUTLETS SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET METAL WITH SPIN-IN V.D. AT TRUNK TAPS, SEE DETAIL 1 & 2/M2.01.
4. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR EXACT LOCATIONS OF CEILING OUTLETS IN RELATION TO OTHER CEILING ENTITIES. OUTLETS MUST BE COMPATIBLE WITH THE CEILING TYPES FOR THE VARIOUS AREAS.
5. IN AREAS WHERE SUPPLY AIR ENTERS CEILING CAVITY THRU RETURN AIR GRILLES AND FREE RETURNS TO AHU'S VIA CEILING CAVITY, PROVIDE RETURN AIR OPENING IN WALL-TO-DECK ABOVE CEILING THAT BLOCK PATH, REFER TO ARCHITECTURAL DRAWINGS. RETURN AIR ELBOWS SHALL BE SIZED AT 1 SQ. FT PER 400 CFM SUPPLY AIR.
6. ARRANGE PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EASY REMOVAL OF EQUIPMENT, SUB-ASSEMBLIES, COILS, FANS, MOTORS, FILTERS, ACCESS PANELS, ETC... PROVIDE UNIONS, FLANGES AND VALVES AT CONNECTIONS. PROVIDE AND INSTALL VICTAULIC JOINTS AT COILS, REF. SPECIFICATIONS. PLACE STOP VALVES ON SYSTEM SIDE OF REMOVABLE PIPE SECTIONS.
7. CONTRACTOR SHALL FIELD MEASURE STRUCTURAL ELEMENTS AND COORDINATE EQUIPMENT, PIPING AND DUCT ROUTING TO FIT EXISTING CONSTRUCTION. PROVIDE OFFSETS, BOOTS FOR ENVELOP OBSTRUCTIONS THAT CANNOT BE AVOIDED. CONSTRUCTION SHALL BE PER SMACNA STANDARDS.
8. FIELD VERFY EXISTING CONDITIONS PRIOR TO PROCUREMENT OF EQUIPMENT AND SYSTEMS.
9. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICIABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION
10. PROVIDE DUCTWORK INSULATION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF IECC.
11. PROVIDE LISTED FIRE DAMPER INSTALLATIONS AT DUCT AND RETURN AIR OPENINGS AT PENETRATIONS THROUGH THROUGH RATED PARTITIONS AND BARRIERS. ~ SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
12. PROTECT DUCTWORK AND MECHANICAL EQUIPMENT FROM CONSTRUCTION DUST AND DEBRIS DURING CONSTRUCTION. SEAL OPENINGS AS REQUIRED.
13. PROVIDE AND MAINTAIN TEMPORARY AIR FILTERS AT AIR HANDLERS USED DURING CONSTRUCTION.
14. PATCH AND REPAIR MECHANICAL SYSTEMS AND INSULATION DAMAGED DURING CONSTRUCTION.
15. SECURE ROOF MOUNTED EQUIPMENT TO WITHSTAND 142 MPH BASIC WIND SPEED, RISK CATEGORY III, EXPOSURE CATEGORY B, IN ACCORDANCE WITH IBC REQUIREMENTS.

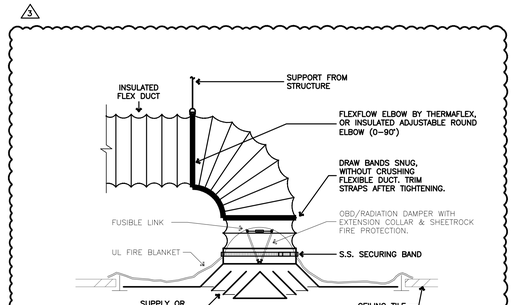


6 KITCHEN UPBLAST EXHAUST FAN DETAIL

NO SCALE

NOTES

1. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL.
2. INSTALL SHEETMETAL COVERING OVER WOOD BLOCKING IN THE AIRSTREAM OR OPEN TO THE CEILING CAVITY.

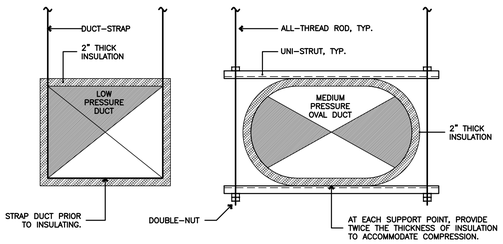


5 AIR DEVICE DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

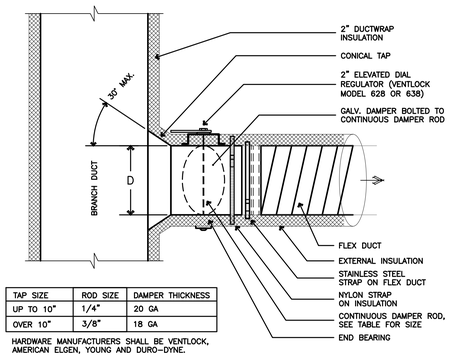


4 EXTERNALLY INSULATED DUCT SUPPORT DETAIL

NO SCALE

NOTES:

1. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT STRAPS.
2. DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



TAP SIZE	ROD SIZE	DAMPER THICKNESS
UP TO 10"	1/4"	20 GA
OVER 10"	3/8"	18 GA

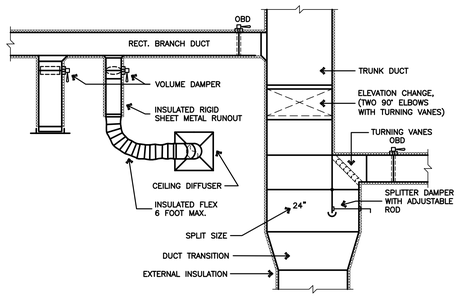
HARDWARE MANUFACTURERS SHALL BE VENTLOCK, AMERICAN ELGEN, YOUNG AND DURO-DYNE.

3 DUCT TAP CONNECTION DETAIL

NO SCALE

NOTES:

1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.
2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

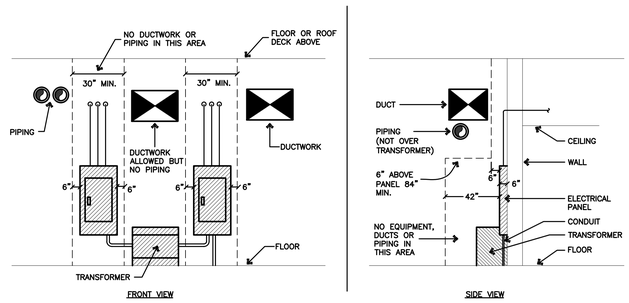


2 DUCTWORK DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

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MECHANICAL NOTES AND DETAILS
J-M2.01

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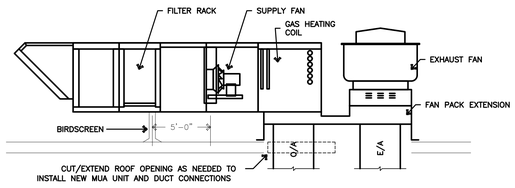


6 SUPPLY/EXHAUST KITCHEN PLENUM DETAIL

NO SCALE

NOTES:

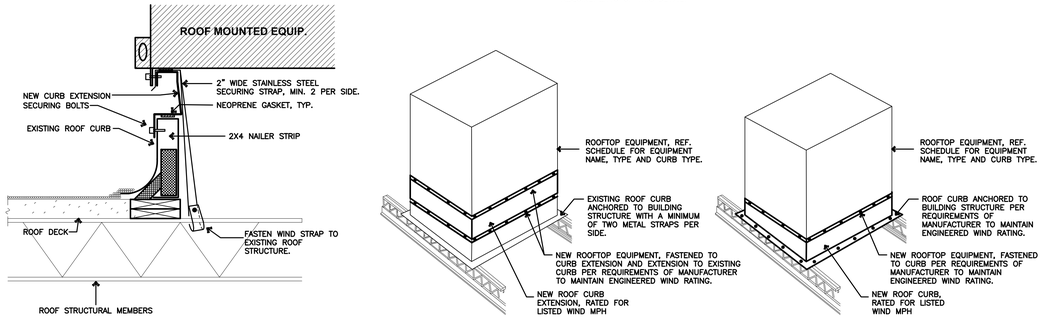
1. REFER TO DETAIL 6/M2.02 FOR CURB ANCHORING TO SATISFY WIND RATING REQUIRMENT. EQUIPMENT SHALL BE ABLE TO WITHSTAND 120 MPH WINDS.

△2

ROOF MOUNTED EQUIPMENT

MARK	EQUIPMENT TYPE	CURB TYPE
EF-14	ROOF FAN	EXISTING PERIMETER
ESF-1,2	ROOF EXHAUST & MAKE-UP AIR UNIT	NEW PERIMETER

1. ALL ROOFTOP EQUIPMENT IS TO BE INSTALLED ON NEW ROOF SUPPORTS, AND IS SUBJECT TO THE INSTALLATION REQUIREMENTS OF THIS DETAIL.



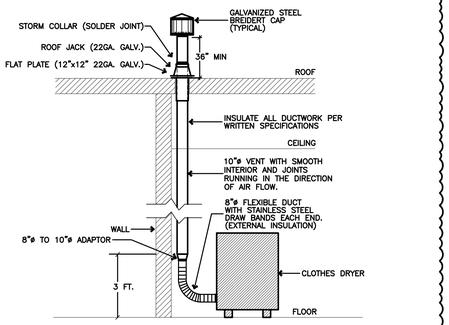
5 CURB MOUNTED EQUIPMENT ANCHORING

NO SCALE

NOTES:

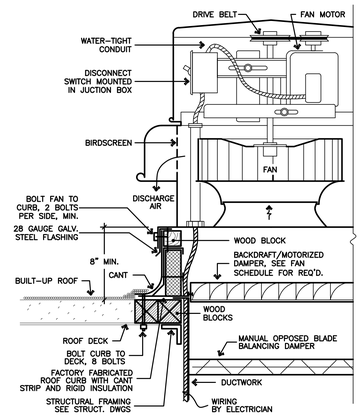
1. EQUIPMENT CURB AND EQUIPMENT ANCHORING BRACKETS SHALL BE DESIGNED TO WITHSTAND AN ASCE 7-22 WIND HAZARD RATING OF 147 MPH, FOR A CATEGORY III BUILDING AT THE PROJECT ADDRESS. THE CURB PROVIDER SHALL INCLUDE STAMPED DRAWINGS OF THE CURB AND ANCHORING DEMONSTRATING COMPLIANCE.

△2



4 COMMERICAL CLOTHES DRYER VENT

NO SCALE

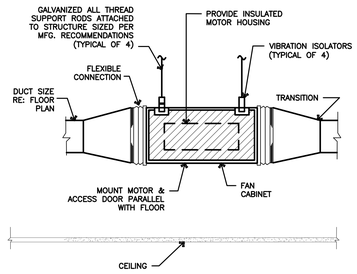


3 ROOF EXHAUST FAN AND VENT DETAIL

NO SCALE

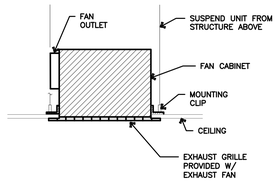
NOTES:

1. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.
2. ROOF VENT WILL NOT HAVE FAN/MOTOR ASSEMBLY, DISCONNECT SWITCH OR OBD.
3. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL WHERE APPLICABLE.
4. ALL FANS SCHEDULED TO BE PROVIDED WITH 140MPH WIND RATING, INCLUDING FACTORY PROVIDED CURB. CURB INSTALLATION SHALL FOLLOW MANUFACTURER'S REQUIREMENTS FOR SECURING TO ROOF AND EQUIPMENT WHERE IT DIFFERS FROM THE DETAIL.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 INLINE EXHAUST FAN DETAIL

NO SCALE



1 CABINET EXHAUST FAN

NO SCALE

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MECHANICAL DETAILS (CONT'D.)

J-M2.02

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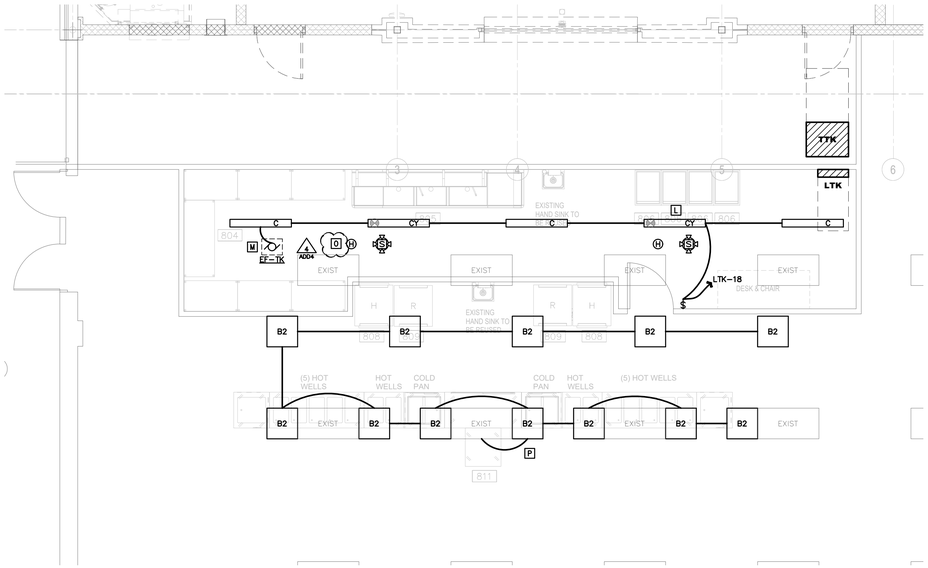
NEW PANEL — TEMP KITCHEN

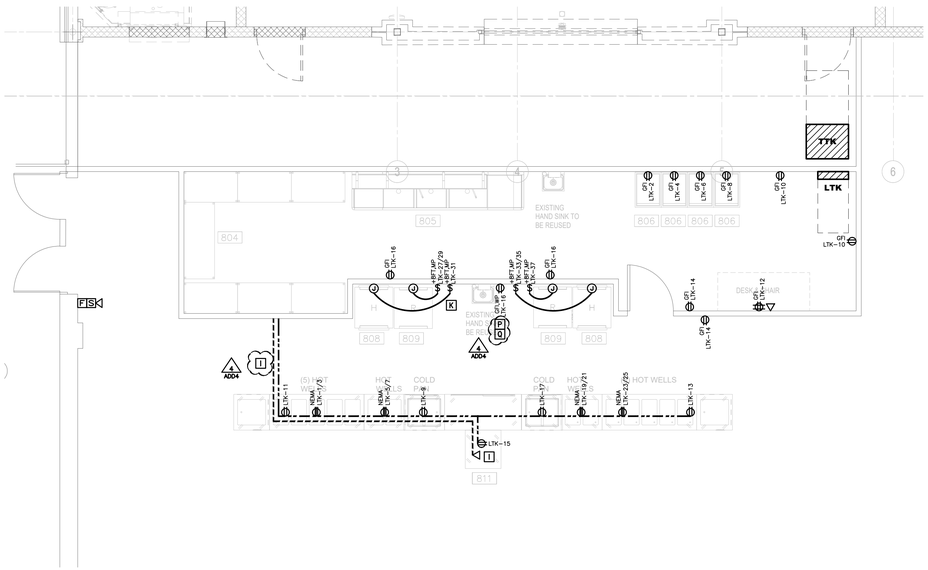
PANEL LTK — 150A MCB, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E810	2766	HOT WELLS	2–12	20/2GFI	1				2	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	3				4	20/1	3–12	TRANSPORT CART	1920	E806	
	E810A	1643	HOT WELLS	2–12	20/2GFI	5				6	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	7				8	20/1	3–12	TRANSPORT CART	1920	E806	
	E810B	600	COLD PAN	3–12	20/1GFI	9				10	20/1	3–12	2 REC	360	E800A	
	E810C	1200	BEVERAGE	3–12	20/1GFI	11				12	20/1	3–12	2 REC – DESK	360	E800B	
	E810C	1200	BEVERAGE	3–12	20/1GFI	13				14	20/1	3–12	2 REC	360	E800A	
	E811	180	CASH REGISTER	3–12	20/1GFI	15				16	20/1	3–12	3 REC	360	E800A	
	E810B	600	COLD PAN	3–12	20/1GFI	17				18	20/1	3–12	TEMP. KITCHEN LTS/FAN	566		
	E810A	1643	HOT WELLS	2–12	20/2GFI	19				20	20/1		SPARE			4 ADD4
	–	–	–	+12G	–	21				22	20/1		SPARE			
	E810	2766	HOT WELLS	2–12	20/2GFI	23				24	30/3	3–10	TEMP FOOD STORAGE UNIT	3100		4
	–	–	–	+12G	–	25				26	–	+10N+10G	–	–		
	E808	1622	HEATED CABINET	2–12	20/2	27				28	–	3/4"C	DUPLEX REC – SERVICE YARD	180		4
	–	–	–	+12N+12G	–	29				30	20/1	3–12	EXISTING CIRCUIT	500		3
	E809	984	REFRIGERATOR	3–12	20/1	31				32	20/1	3–12	EXISTING CIRCUIT	500		3
	E808	1622	HEATED CABINET	2–12	20/2	33				34	15/2	2–12	EXISTING CIRCUIT	1000		3
	–	–	–	+12N+12G	–	35				36	–	+12N+12G	–	–		
	E809	984	REFRIGERATOR	3–12	20/1	37				38	20/2	2–12	EXISTING CIRCUIT	1000		3
			SPARE		20/1	39				40	–	+12N+12G	–	–		
			SPARE		20/1	41				42	50/2	2–8	EXISTING CIRCUIT	5000		3
			SPARE		20/1	43				44	–	+8N+10G	–	–		
	TOTAL LOAD @ 100% = 38778VA						TOTAL LOAD @ 100% = 108A									

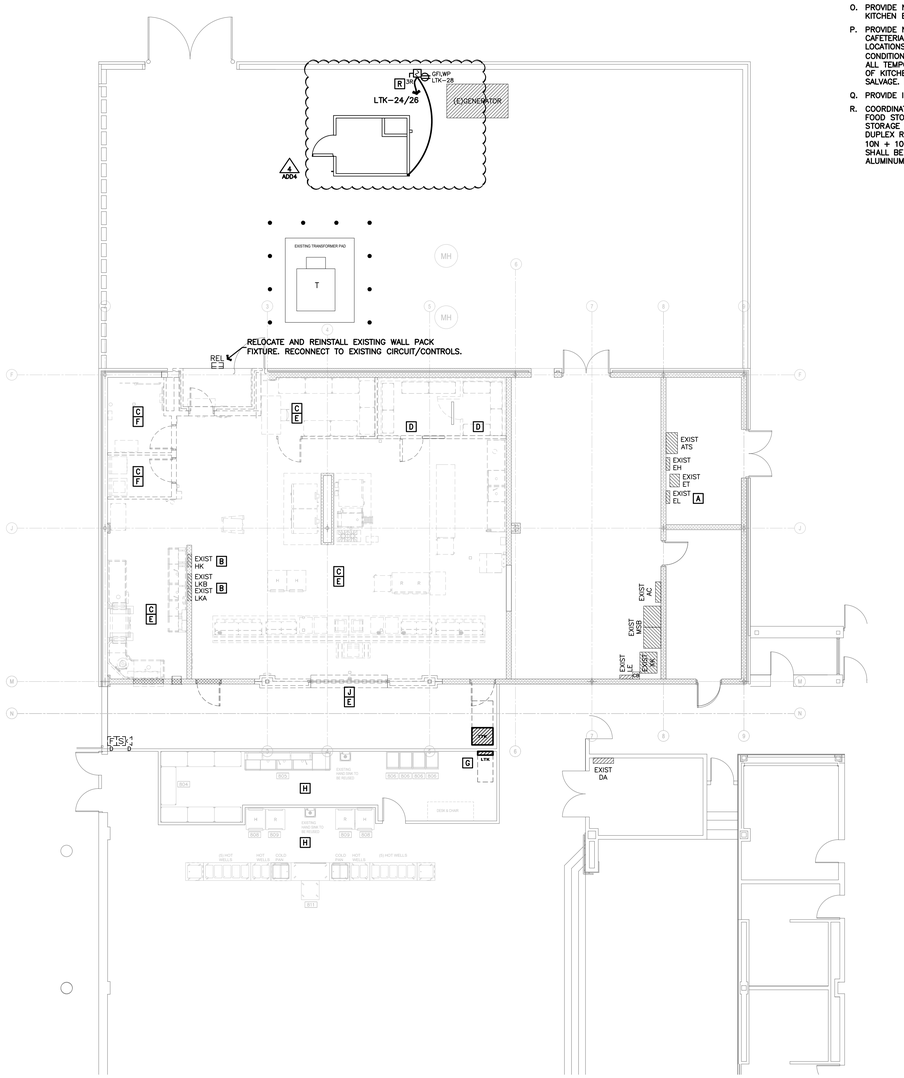
1. REF. KITCHEN CONSULTANT'S "FS" DRAWINGS FOR KITCHEN EQUIPMENT NUMBERS.
2. A DEMAND FACTOR PERCENT OF 65% HAS BEEN APPLIED TO THE KITCHEN EQUIPMENT LOAD PURSUANT TO NEC 220–20 AND NEC TABLE 220–20.
3. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN ALL REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION
4. PROVIDE CIRCUIT FOR TEMPORARY FOOD STORAGE UNIT PRIOR TO BEGINNING DEMOLITION. (4 ADD4)



T1 **TEMPORARY KITCHEN - LIGHTING PLAN**
SCALE: 1/4" = 1'– 0"



T2 **TEMPORARY KITCHEN - ELECTRICAL PLAN**
SCALE: 1/4" = 1'– 0"



1 **DEMOLITION FLOOR PLAN**
SCALE: 1/8" = 1'– 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

DEMOLITION NOTES:

A. EXISTING STANDBY GENERATOR PANEL TO REMAIN.

B. EXISTING KITCHEN PANELS TO BE REPLACED WITH NEW. MODIFY EXISTING WALLS TO MATCH NEW PANEL LAYOUTS AND DIMENSIONS.

C. EXISTING LIGHTING FIXTURES AND CEILING DEVICES TO BE REMOVED THROUGHOUT.

D. EXISTING WALK–IN COOLER/FREEZER AND ASSOCIATED EQUIPMENT TO BE REMOVED.

E. EXISTING WALL ELECTRICAL DEVICES TO BE REMOVED. EXISTING J–BOXES MAY BE REUSED WHERE NEW DEVICES ARE TO BE INSTALLED AT THE SAME LOCATIONS.

F. EXISTING ELECTRICAL DEVICES TO BE REMOVED.

G. NEW 208Y/120V PANEL AND TRANSFORMER FOR TEMPORARY KITCHEN TO BE INSTALLED PRIOR TO DEMOLITION. PANEL AND TRANSFORMER TO BE REMOVED AT END OF KITCHEN RENOVATION AND TURNED OVER TO THE DISTRICT. INSTALL TRANSFORMER ON PREMADE FIBERCRETE PAD AND WAFFLE TYPE VIBRATION ISOLATION PADS. DO NOT PROVIDE A POURED IN PLACE CONCRETE PAD AT THIS LOCATION.

H. PROVIDE RECEPTACLES AND LIGHT FIXTURES FOR TEMPORARY KITCHEN DURING RENOVATION. ALL TEMPORARY DEVICES AND EQUIPMENT TO BE REMOVED AT END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE.

I. CONDUITS ROUTED FROM TEMPORARY KITCHEN WALL AND BENEATH SERVING LINE. PROVIDE MULTICHANNEL ROLLOVER CABLE PROTECTOR FOR EXPOSED CONDUITS NOT UNDER THE SERVING LINE. ALL CONDUITS UNDER THE SERVING LINE SHALL BE SECURED TO/ROUTED ON TOP OF UNISTRUT AND NOT DIRECTLY ON THE FLOOR. DO NOT ANCHOR UNISTRUT TO THE EXISTING FLOORING. COORDINATE POWER AND DATA OUTLET LOCATIONS WITH OTHER TRADES.

J. REMOVE EXISTING LIGHT FIXTURES ABOVE NEW KITCHEN EXTENSION. MODIFY EXISTING WIRING TO MAINTAIN REMAINING FIXTURE OPERATION.

K. HARDWIRE KITCHEN EQUIPMENT TO LOCAL ON/OFF SWITCH. TYPICAL.

L. SURFACE MOUNT FIXTURES ON TEMPORARY KITCHEN CEILING. TYPICAL.

M. WIRE TEMPORARY KITCHEN FAN TO LOCAL LIGHTING CIRCUIT AND CONTROLS. FAN SHALL BE ON/OFF WITH LIGHTS.

N. EXISTING EXTERIOR LIGHT FIXTURES TO BE REMOVED.

O. PROVIDE NEW FIRE ALARM DEVICES AS PART OF THE TEMPORARY KITCHEN BUILDOUT.

P. PROVIDE NEW TEMPORARY LIGHT FIXTURES IN THE EXISTING CAFETERIA CEILING ABOVE THE SERVING LINE. COORDINATE LOCATIONS WITH TEMPORARY SERVING LINE AND EXISTING CONDITIONS. CONNECT TO EXISTING LIGHTING CONTROLS/CIRCUIT. ALL TEMPORARY LIGHT FIXTURES SHALL BE REMOVED AT THE END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE. PROVIDE REPLACEMENT CEILING TILES.

Q. PROVIDE IN–USE WEATHERPROOF COVER FOR RECEPTACLE.

R. COORDINATE NEMA 3R, FUSED SWITCH LOCATION WITH TEMPORARY FOOD STORAGE UNIT. INSTALL 2–25A FUSES TO SERVE FOOD STORAGE UNIT AND A 20A FUSE IN THIRD PHASE TO FEED DUPLEX RECEPTACLE. WIRING TO STORAGE UNIT SHALL BE 2–10 + 10N + 10G, 3/4". WIRING TO NEW 20A DUPLEX RECEPTACLE SHALL BE 2–12 + 12G. MOUNT RECEPTACLE IN NEMA 3R ALUMINUM JUNCTION BOX WITH WET LOCATION COVER.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	(4 ADD4) ADDENDUM 04

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

STATE OF TEXAS — GEORGE L. STANTON — 38582 — REGISTERED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL DEMO AND TEMP PLANS

j-ED.100

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ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

LIGHTING RENOVATION NOTES:

A. KITCHEN LIGHTS TO BE CONTROLLED BY LOCAL MOMENTARY SWITCHES AND BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.
   LEFT SWITCH SHALL CONTROL ZONE 'a' NORMAL POWER LIGHTING FIXTURES.
   RIGHT SWITCH SHALL CONTROL ZONE 'b' EMERGENCY LIGHTING FIXTURES.

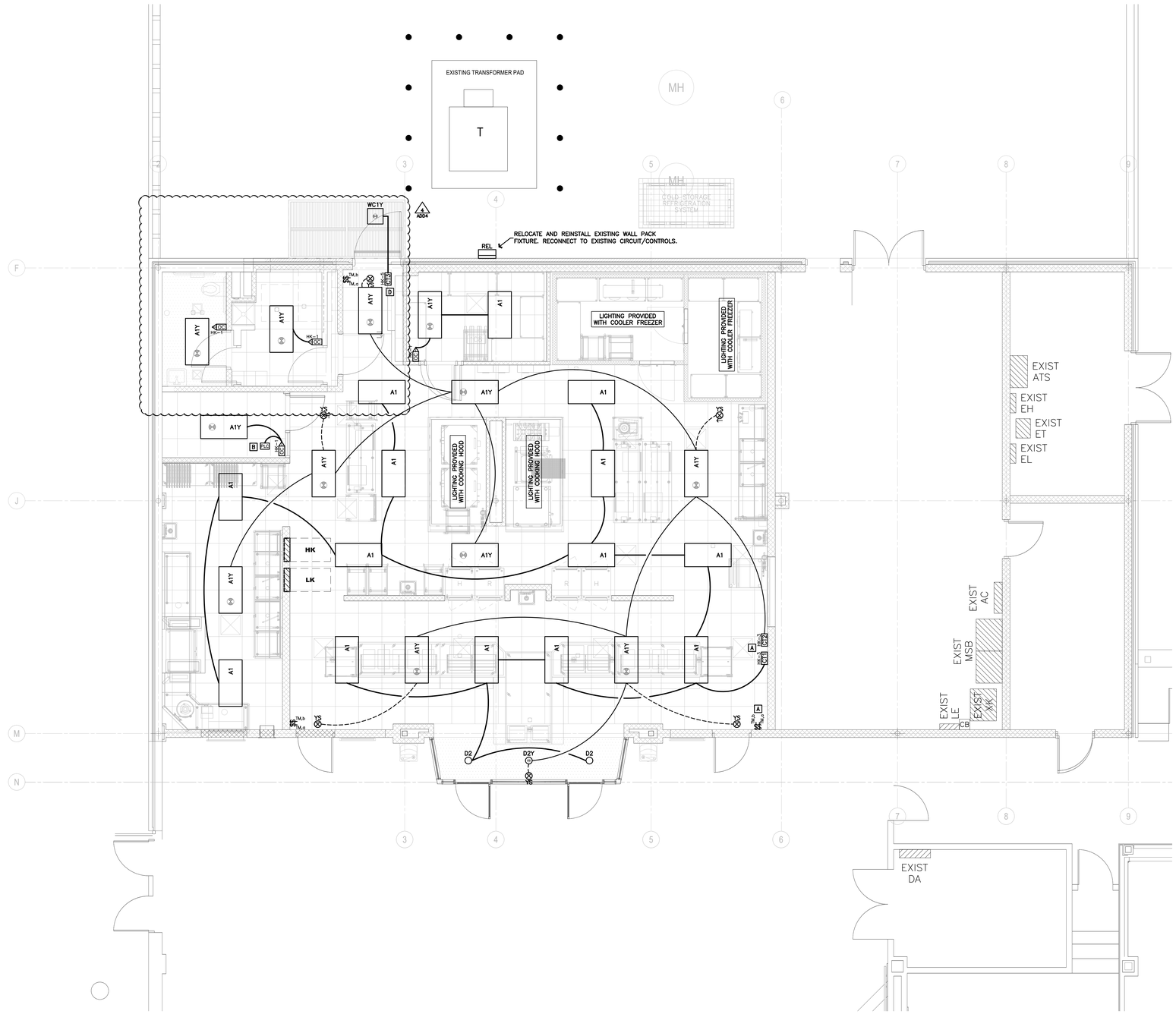
B. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

C. WIRE EXIT SIGNS UPSTREAM OF LIGHTING CONTROLS. TYPICAL.

D. EXTERIOR LIGHTS TO BE CONTROLLED BY BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.

E. AFTER REMOVAL OF THE TEMPORARY KITCHEN, PROVIDE NEW EXIT SIGN AT ORIGINAL LOCATION AND RECONNECT TO EXISTING CAFETERIAL LIGHTING CIRCUIT.

F. PATCH/REPAIR EXTERIOR SOFFIT TO ACCOMMODATE NEW SURFACE MOUNTED FIXTURES.



1 LIGHTING RENOVATION PLAN
SCALE: 1/4" = 1'- 0"

ISSUE:

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SEAL

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GEORGE L. STANTON
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PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

LIGHTING FLOOR PLANS

j-E.100

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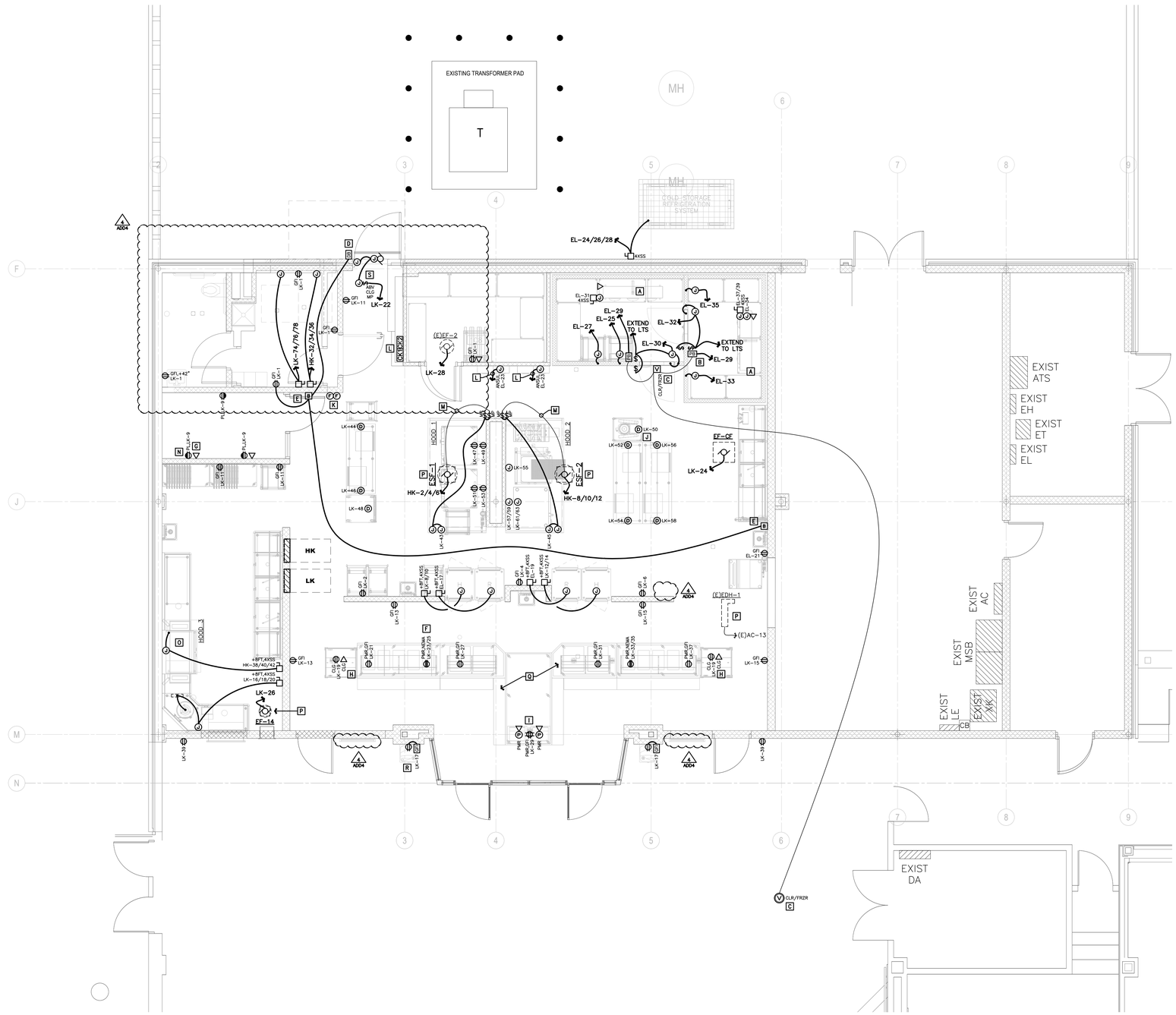

1 ELECTRICAL RENOVATION PLAN

SCALE: 1/4" = 1'- 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

ELECTRICAL RENOVATION NOTES:

A. CONNECT NEW FREEZER/COOLER AND CONDENSER TO EXISTING STANDBY GENERATOR.

B. PROVIDE ILLUMINATED PUSH BUTTON IN COOLER AND FREEZER. WHEN PRESSED RED STROBE DEVICES IN KITCHEN AND CAFETERIA SHALL ACTIVATE. TYPICAL.

C. PROVIDE HORN/STROBE DEVICE TIED TO PUSH BUTTONS IN FREEZER/COOLER.
(EDWARDS 860 SERIES OR EQUAL).

D. PROVIDE NEW DOORBELL BUTTON AT RECEIVING DOOR. DOORBELL BUTTON SHALL BE THE CLOSEST DEVICE TO THE DOOR FRAME.

E. PROVIDE NEW VIBRATING BUZZER TIED TO DOORBELL BUTTON AT RECEIVING DOOR. BUZZER TO BE WALL MOUNTED JUST BELOW THE CEILING.

F. PROVIDE NEW ELECTRICAL DEVICES MATCHING NEW KITCHEN EQUIPMENT AND ROOM LAYOUTS. REFERENCE FOOD SERVICE DRAWINGS. TYPICAL.

G. PROVIDE ROUGH-IN FOR LOW VOLTAGE DEVICES. REFERENCE TECHNOLOGY DRAWINGS, TYPICAL.

H. POWER AND DATA ROUGH-IN FOR KITCHEN MENU BOARD.

I. POWER AND DATA ROUGH-IN FOR POINT OF SALE (POS) LOCATION.

J. PROVIDE DROP CORD RECEPTACLE WITH HUBBELL KELLEMS LIQUIDTIGHT GRIPS FOR STRAIN RELIEF, TYPICAL OF ALL.

K. PROVIDE J-BOXES AND CONDUIT FOR REMOTE FIRE PULLS, SEE FOOD SERVICE DETAIL DRAWING FOR REQUIREMENTS, TYPICAL

L. WIRE ANSUL SYSTEM TO HOOD EQUIPMENT CONTROL CONTRACTOR. UPON ANSUL SYSTEM ACTIVATION ALL POWER TO EQUIPMENT BENEATH THE HOODS SHALL BE DEACTIVATED. MOUNT CONTACTOR CABINET(S) JUST BELOW THE CEILING.

M. PROVIDE SEPARATE SWITCHES TO TURN ON HOOD LIGHTS AND FANS. WIRE HOOD TEMP SENSOR AHEAD OF HOOD LIGHT SWITCH. USE 120V CIRCUIT TO CONTROL HOOD FANS THROUGH EXISTING STARTER. PROVIDE CONTROLS TRANSFORMER AS REQUIRED TO MATCH STARTER CONTROL INPUT VOLTAGE. TYPICAL.

N. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

O. INTERCONNECT DISH MACHINE TO VENT CONTROL. INTERCONNECT TABLE LIMIT SWITCH TO DISHMACHINE.

P. EXISTING MECHANICAL EQUIPMENT TO BE REPLACED. CONNECT TO CIRCUIT AS SHOWN. RECONNECT TO EXISTING STARTER/CONTACTORS, FIELD VERIFY.

Q. SAWCUT FLOOR TO INSTALL NEW PEDESTAL MOUNTED DEVICE BENEATH NEW SERVING LINES, DO NOT REUSE EXISTING STUB UPS OR DEVICES. POUR BACK SLAB AND PROVIDE NEW FINISHES, REFERENCE ARCHITECTURAL.

R. REFERENCE EDF GFI PROTECTION DETAIL FOR INSTALLATION REQUIREMENTS, TYPICAL.

S. WIRE MICRO SWITCH IN DOOR FRAME TO AIR SCREEN. COOR W/ FOOD SERVICE CONTRACTOR PRIOR TO ROUGH-IN. LOCATE LOCAL MOTOR RATED SWITCH ABOVE CEILING ADJACENT TO THE AIR SCREEN.

COOLER/FREEZER NOTES:

1. PROVIDE SEALING FOR CONDUIT IN COOLER AND FREEZER. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, CIRCULATION OF AIR FROM WARMER TO A COLDER SECTION SHALL BE PREVENTED PER N.E.C. ARTICLE 300.7 (A).
2. PROVIDE GROUND-FAULT PROTECTION OF EQUIPMENT FOR ELECTRIC HEAT TRACING AND HEATING PANELS IN THE FREEZER PER N.E.C. ARTICLE 427.22.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE LIQUID TIGHT CONDUIT AND WIRING FOR LIGHT FIXTURES AND LIGHT SWITCHES IN WALK-IN COOLER AND FREEZER, SEE FOODSERVICE CONSULTANT'S DRAWINGS.

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PROJ. NO.: 23-25
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ELECTRICAL FLOOR PLANS

j-E.200

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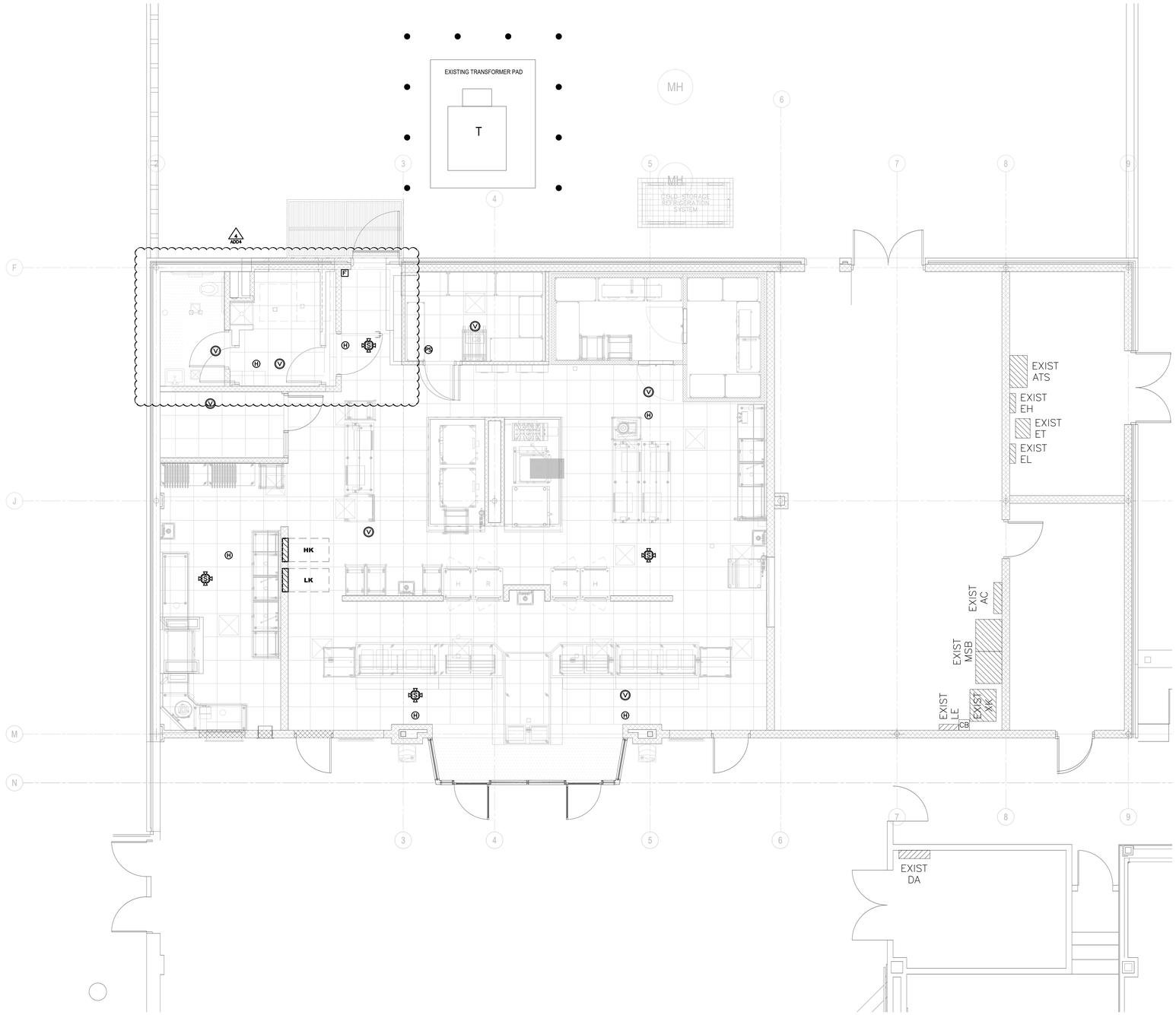

1 FIRE ALARM RENOVATION PLAN
SCALE: 1/4" = 1'- 0"

ISSUE:

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FIRE ALARM FLOOR PLANS

j-E.300

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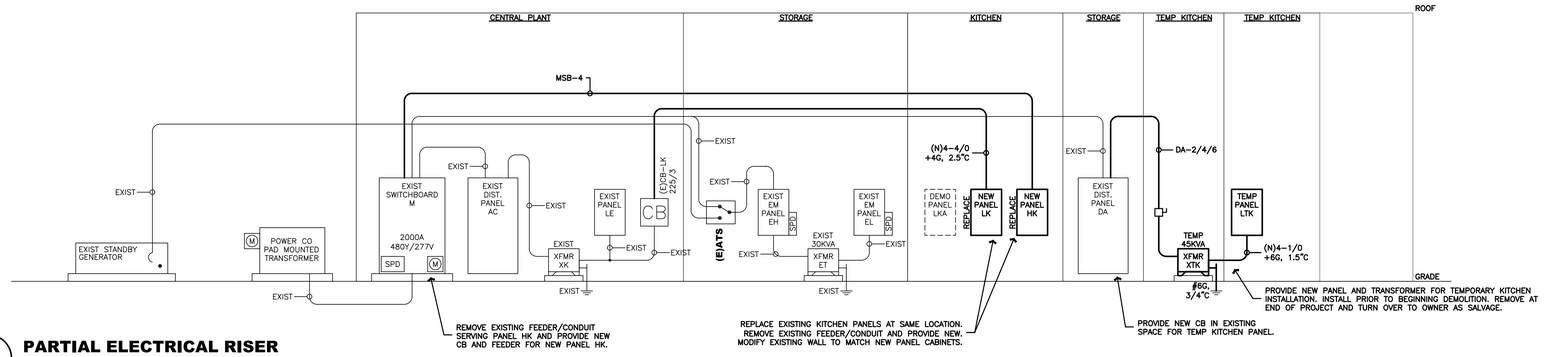

1 PARTIAL ELECTRICAL RISER

NO SCALE

NOTES:
1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED/CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.
5. REFERENCE PANEL SCHEDULES AND SHORT CIRCUIT TABLE FOR AIC AND SCCR VALUES.

NEW KITCHEN PANEL — KITCHEN

PANEL HK — 225A MLO, 480Y/277V, 3ø, 4 WIRE — AVAILABLE FAULT: 20,250A — SCCR & AIC: 25,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
6		1095	KITCHEN/SERVING LIGHTS	3–12	20/1	3				4	–	+12G	(1.5HP / 1.5HP)	–		
7		84	KITCHEN EXTERIOR LIGHTS	3–12	20/1	5				6	–	3/4"C	–	–		
			SPARE		20/1	7				8	15/3	3–12	ESF–2	4986		
			SPARE		20/1	9				10	–	+12G	(1.5HP / 1.5HP)	–		
			SPARE		20/1	11				12	–	3/4"C	–	–		
			SPARE		20/1	13				14			SPACE			
			SPARE		20/1	15				16			SPACE			
			SPARE		20/1	17				18			SPACE			
			SPARE		20/1	19				20			SPACE			
			SPARE		20/1	21				22			SPACE			
			SPACE			23				24			SPACE			
			SPACE			25				26			SPACE			
			SPACE			27				28			SPACE			
			SPACE			29				30			SPACE			
			SPACE			31				32	45/3	3–8	COMMERCIAL DRYER	28254		
			SPACE			33				34	–	+10G	–	–		
			SPACE			35				36	–	3/4"C	–	–		
			SPACE			37				38	70/3	3–8	DISHMACHINE	42963	E250	
			SPACE			39				40	–	+8G	–	–		
			SPACE			41				42	–	3/4"C	–	–		

TOTAL LOAD @ 100% = 82744VA — TOTAL LOAD @ 100% = 100A — TOTAL LOAD @ 125% = 124A

NEW KITCHEN PANEL — KITCHEN

PANEL LK — 225A MLO, 208Y/120V, 3ø, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E10	1000	5 REC – RR/STOR/CUST & BELL	3–12	20/1	1				2	20/1	3–12	1 REC – KITCHEN	180	E10	
			SPARE		20/1GFI	3				4	20/1	3–12	1 REC – KITCHEN	180	E10	
4 ADD4			SPARE		30/2GFI	5				6	20/1	3–12	1 REC – KITCHEN	180	E10	
		–	–		–	7				8	20/2	2–10	HEATED CABINET	3224	E187	
		540	3 REC – OFFICE	3–12	20/1	9				10	3/4"C	+10G	–	–		
	E10/E13	540	3 REC – KITCHEN	3–12	20/1	11				12	20/2	2–10	HEATED CABINET	3224	E187	
	E10	360	2 REC – SERVING LINE	3–12	20/1	13				14	3/4"C	+10G	–			
	E10	360	2 REC – SERVING LINE	3–12	20/1	15				16	20/3	3–12	DISPOSER	3960	E123	
		1000	2 EDF – CAFETERIA	3–12	20/1	17				18	–	+12G	(3 HP)	–		
	E615	500	2 MENU BOARDS	3–12	4 ADD4 20/1	19				20	–	3/4"C	–	–		
	E209	960	MILK COOLER	3–12	20/1	21				22	20/1	3–12	AIR SCREEN	612	E101	
	E201A	5824	HOT FOOD COUNTER	2–8	35/2GFI	23				24	15/1	3–12	EF–CF (1/6HP)	528		
		–	–	+10G	3/4"C	25				26	15/1	3–12	EF–14 (1/3HP)	864		
	E201B	1920	COLD FOOD COUNTER	3–12	20/1	27				28	15/1	3–12	EF–2 (1/6HP)	528		
	E214	360	CASH REGISTERS	3–12	4 ADD4 20/1	29				30	20/1	4 ADD4	SPARE			
	E201B	1920	COLD FOOD COUNTER	3–12	4 ADD4 20/1	31				32	20/1		SPARE			
	E201A	5824	HOT FOOD COUNTER	2–8	35/2GFI	33				34	20/1		SPARE			
		–	–	+10G	3/4"C	35				36	20/1		SPARE			
	E209	960	MILK COOLER	3–12	20/1	37				38	20/1		SPARE			
		360	2 REC – CAFETERIA	3–12	20/1	39				40	20/1		SPARE			
			SPARE		20/1	41				42	20/1		SPARE			
	E153/E153M	250	HOOD LTS & SENSOR	3–12	20/1	43				44	20/1GFI	3–12	DROP CORD	180	E129	
	E153/E153M	250	HOOD LTS & SENSOR	3–12	20/1	45				46	20/1GFI	3–12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	47				48	20/1GFI	3–12	MOBILE PROOFER	1800	E139	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	49				50	20/1GFI	3–12	20QT MIXER	960	E125	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	51				52	20/1GFI	3–12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	53				54	20/1GFI	3–12	DROP CORD	180	E129	
8	E163	600	TILT BRAISING PAN	3–12	20/1GFI	55				56	20/1GFI	3–12	DROP CORD	180	E129	
8	E172	3120	COMBI OVEN	2–12	20/2	57				58	20/1GFI	3–12	DROP CORD	180	E129	
		–	–	+12G	3/4"C	59				60	20/1	3–12	EXISTING CIRCUIT	500		5
8	E172	3120	COMBI OVEN	2–12	20/2	61				62	20/2	2–12	EXISTING CIRCUIT	1000		5
		–	–	+12G	3/4"C	63				64	–	+12N+12G	–	–		
5		250	EXISTING CIRCUIT	3–12	20/1	65				66	20/2	2–12	EXISTING CIRCUIT	1000		5
			SPACE			67				68	–	+12N+12G	–	–		
			SPACE			69				70	30/2	2–10	EXISTING CIRCUIT	3000		5
			SPACE			71				72		+10N+10G	–			
			SPACE			73				74	20/3	3–12	WASHER	3408		
			SPACE			75				76	–	+12G	–	–		
			SPACE			77				78	–	3/4"C	–	–		
			SPACE			79				80			SPACE			
			SPACE			81				82			SPACE			
			SPACE			83				84			SPACE			

TOTAL LOAD @ 100% = 55718VA — TOTAL LOAD @ 100% = 155A — TOTAL LOAD @ 65% = 101A

KITCHEN HOOD CONTACTOR SCHEDULE

POLE	DESCRIPTION	NORMAL CKT	EM CKT	CONTROL ZONE	EQUIPMENT LOCATION	CONTACTOR TYPE
HOOD 1						
CK1–1	CONVECTION OVEN	LK–47	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–2	CONVECTION OVEN	LK–49	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–3	CONVECTION OVEN	LK–51	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–4	CONVECTION OVEN	LK–53	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–5	SPARE					ELECTRICALLY HELD – NO
CK1–6	SPARE					ELECTRICALLY HELD – NO
CK1–7	SPARE					ELECTRICALLY HELD – NO
CK1–8	SPARE					ELECTRICALLY HELD – NO
HOOD 2						
CK2–1	TILT BRAISING PAN	LK–55	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–2	COMBI–OVEN	LK–57/59	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–3	(2–POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2–4	COMBI–OVEN	LK–61/63	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–5	(2–POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2–6	SPARE					ELECTRICALLY HELD – NO
CK2–7	SPARE					ELECTRICALLY HELD – NO
CK2–8	SPARE					ELECTRICALLY HELD – NO

1. REFERENCE FLOOR PLANS FOR EQUIPMENT LOCATIONS AND ADDITIONAL INFORMATION.
2. EACH KITCHEN HOOD CONTACTOR HALL BE CONTROLLED ON/OFF BY THE APPROPRIATE HOOD ANSUL SYSTEM. WHEN ACTIVATED ALL POWER WITHIN THE COOKING HOOD SHALL BE DE–ENERGIZED.

EXIST SQUARE D QED SWITCHBOARD — CENTRAL PLANT

(E)SWBD MSB — 2000A MCB, 480Y/277V, 3ø, 4 WIRE — AVAILABLE FAULT: 37,000A — SCCR & AIC: 100,000A — FREE STANDING

NOTES	CIRCUIT	DESCRIPTION	CB	FEEDER SIZE	AMPS
	1	EXTENDED DAY PANEL H	150/3	EXIST FEEDER	
	2	EXIST ATS	250/3	EXIST FEEDER	7A
2	3	EXIST PANEL HK	400/3		
4	4	NEW PANEL HK	225/3	4–4/0 +4G, 2.5"C	100A
	5	EXIST DISTRIBUTION PANEL DA	400/3	EXIST FEEDER	275A
	6	EXIST SPACE	400/3PS	–	
	7	EXIST DISTRIBUTION PANEL DB	400/3	EXIST FEEDER	
	8	EXIST DISTRIBUTION PANEL DC	400/3	EXIST FEEDER	
	9	EXIST DISTRIBUTION PANEL AC	800/3	EXIST FEEDER	
				TOTAL LOAD @ 100% =	382A
				TOTAL LOAD @ 125% =	478A

1. THE EXISTING 2000A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST GE NHB PANELBOARD — STORAGE ROOM

(E)PANEL DA — 400A MLO, 480Y/277V, 3ø, 4 WIRE — AVAILABLE FAULT: 27,000A — SCCR & AIC: 35,000A — MOUNTING: SURFACE

NOTES	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	NOTES
		SPACE			1				2	70/3	3–6	TEMP KITCHEN PANEL LTK	37918	4
		SPACE			3				4	–	+8G	–	–	
		SPACE			5				6	–	3/4"C	–	–	
		SPACE			7				8			SPACE		
		SPACE			9				10			SPACE		
2		KITCHEN LIGHTS	EXIST	20/1	11				12			SPACE		
1	3100	LIGHTS CAFETORIUM	EXIST	20/1	13				14			SPACE		
1	3370	LIGHTS CAFETORIUM	EXIST	20/1	15				16	20/1	EXIST	OUTSIDE LIGHTS	1000	
1	2300	LIGHTS CAFETORIUM RMS	EXIST	20/1	17				18	20/1	EXIST	EWH–2 IN MECH 404	3000	
	9150	AHU #2	EXIST	20/3	19				20	60/3	EXIST	DUCT HEATER 2	39000	
	–	–	–	–	21				22	–	–	(STAGE)	–	
	–	–	–	–	23				24	–	–	–	–	
	130000	PANEL PA	EXIST	225/3	25				26	–	–	–	–	
	–	(SUBFEED BREAKER)	–	–	27				28	–	–	–	–	
	–	–	–	–	29				30	–	–	–	–	

TOTAL LOAD @ 100% = 228838VA — TOTAL LOAD @ 100% = 275A — TOTAL LOAD @ 125% = 344A

1. THE EXISTING 400A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST EM STANDBY PANELBOARD — STORAGE ROOM

(E)PANEL EL — 125A MCB, 208Y/120V, 3ø, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
		500	GENERATOR REMOTE	EXIST	20/1	1				2	20/1	EXIST	MDF RM SEC	500		
		500	GENERATOR BATTERY	EXIST	20/1	3				4	20/2	EXIST	MDF RM SERVER 220	2000		
		500	GENERATOR CONTROL	EXIST	20/1	5				6	–	–	–	–		
		500	GENERATOR HEATER	EXIST	20/1	7				8	20/2	EXIST	MDF RM SERVER 220	2000		
		500	RM S125 PA SYSTEM	EXIST	20/1	9				10	–	–	–	–		
		500	RM S125 FA	EXIST	20/1	11				12	20/1		EXIST SPARE			
			EXIST SPARE		20/1	13				14	20/1		EXIST SPARE			
			EXIST SPARE		20/1	15				16	20/1		EXIST SPARE			
4	E188	864	REFRIGERATOR	3–12	20/1	17				18	20/1		EXIST SPARE			
4	E188	864	REFRIGERATOR	3–12	20/1	19				20	20/1		EXIST SPARE			
4	E109	1428	ICE MACHINE	3–12	20/1	21				22	20/1		EXIST SPARE			
4	E151	240	HOOD ANSUL SYSTEMS	3–12	20/1	23				24	25/3	3–10	REFRIGERATION SYSTEM	6192	E103	4
4	E102B	600	COOLER TEMP. ALARM	3–12	20/1	25				26	–	+10G	–	–		
4	E102C	600	COOLER PRESSURE PORT	3–12	20/1	27				28	–	3/4"C	–	–		
4	E102E	120	PANIC ALARM BUTTONS	3–12	20/1	29				30	20/1EGF	3–12	COOLER DOOR HEATER/LTS	600	E102A	4
4	E103D	216	COOLER COIL	3–12	20/1	31				32	20/1EGF	3–12	FREEZER DOOR HEATER/LTS	600	E102A	4
4	E102B	600	FREEZER TEMP. ALARM	3–12	20/1	33				34	20/1EGF	3–12	FREEZER DRAIN LINE HEATER	600	E103F	4
4	E102C	600	FREEZER PRESSURE PORT	3–12	20/1	35				36			SPACE			
4	E103C	1893	FREEZER COIL	2–10	20/2	37				38	30/3	EXIST	SPD	50		
		–	–	+10G	–	39				40	–	–	–	–		
			SPACE			41				42	–	–	–	–		

TOTAL LOAD @ 100% = 23567VA — TOTAL LOAD @ 100% = 65A — TOTAL LOAD @ 125% = 82A

1. THE EXISTING 125A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

GENERAL PANEL REQUIREMENTS:
A. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
B. FIELD VERIFY EXISTING CIRCUITS PRIOR TO BEGINNING WORK.
C. ALL OUTAGES SHALL BE SCHEDULED AND CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
D. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.

PANEL NOTES:
1. REVISE/REWORK WIRING/CONDUIT AS REQUIRED TO ADD/REMOVE DEVICES FROM EXISTING CIRCUIT.
2. EXISTING CIRCUIT TO BE DEMO.
3. REUSE EXISTING SPARE CB AND WIRE NEW CIRCUIT.
4. PROVIDE NEW CB & WIRE NEW CIRCUIT.
5. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AND REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION.
6. KITCHEN LIGHTS TO BE DUAL ZONES WIRED THROUGH LIGHTING CONTACTORS AND CONTROLLED ON/OFF BY THE BAS AND LOCAL LIGHTING SWITCHES.
7. EXTERIOR LIGHTS TO BE WIRED THROUGH LIGHTING CONTACTOR AND CONTROLLED ON/OFF BY THE BAS.
8. WIRE CIRCUITS THROUGH KITCHEN EQUIPMENT CONTROL CONTACTOR. CIRCUITS TO BE DE–ENERGIZED BY HOOD FIRE PROTECTION SYSTEM.
9. RECONNECT EXISTING TEMPORARY LOAD CENTER CIRCUIT TO NEW PANEL LK.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
4 ADD4 09/04/2025	ADDENDUM 04

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

STATE OF TEXAS — GEORGE L. STANTON — 38582 — REGISTERED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL SCHEMATIC

j-E.400

STANTON ENGINEERING GROUP
INFORMATION–ENGINEERING | TEXAS ENG. FIRM REG. NO. F–01833 | (713) 300–4082
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PLUMBING SYMBOLS LEGEND

Symbol	Description
– – – – – –	SANITARY WASTE BELOW SLAB
————	SANITARY WASTE ABOVE SLAB
—— V ——	VENT PIPING ABOVE SLAB
— — — —	VENT PIPING
—— G ——	GAS PIPING, 4-8oz
—— G5 ——	GAS PIPING, 5LB
—·—·—	DOMESTIC COLD WATER PIPING
—··—··—	DOMESTIC HOT WATER PIPING
—— D ——	DRAIN/RELIEF VENT PIPING
—⋈—	STOP VALVE
2CO	DOUBLE SAN. CLEANOUT (2-WAY)
CO	SANITARY SEWER CLEANOUT
WCO	WALL CLEANOUT
EXIST.	EXISTING
(R)	REMOVE (DEMOLISH)
(D)	DEMOLISH (REMOVE)
(E)	EXISTING – NO WORK

Abbreviation	Description
SAN.	SANITARY
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
WC	WATER CLOSET
UR	URINAL
LAV	LAVATORY
SK	SINK
EDF	ELECTRIC DRINKING FOUNTAIN
WH	WALL HYDRANT
HB	HOSEBIBB
CP	HOT WATER CIRCULATOR PUMP
FD	FLOOR DRAIN
FSINK	FLOOR SINK

PLUMBING FIXTURE NOTES

1. ALL FIXTURES SHALL MEET WATER CONSERVATION PERFORMANCE STANDARDS MANDATED BY SENATE BILL 587. ALL FIXTURES SHALL HAVE FLOW RESTRICTION DEVICES (DRINKING FOUNTAINS SHALL BE SELF-CLOSING) TO COMPLY WITH THESE REQUIREMENTS.
2. ALL FIXTURES SHALL HAVE CONTROLS REQUIRING OPERATING FORCE NO GREATER THAN FIVE (5) POUNDS.
3. FOR LAVATORIES AND SINKS, ALL FAUCETS SHALL BE NO-LEAD SOLID BRASS, MEETING ALL REQUIREMENTS OF ANSI/NSF 61, SECTION 9 AND CERTIFIED AS SUCH. ALSO, INSTALL SYMMONS 7-210 MIXING VALVE ON HOT WATER SUPPLY SIDE OF ALL FAUCETS UNLESS HIGH TEMPERATURE LIMIT IS PROVIDED WITH FAUCET. MAXIMUM WATER TEMPERATURE FOR ALL FAUCETS THAT DELIVER HOT OR TEPID WATER SHALL BE 110°F. ALL METERING FAUCETS SHALL HAVE A MINIMUM TEN (10) SECONDS OF WATER FLOW. AND, INSTALL TRUEBRO HANDI LAV-GUARD VANDAL-PROOF INSULATION KITS OVER P-TRAP, SUPPLIES, STOPS AND ALL SHARP EDGES FOR ALL SINKS AND LAVATORIES (TRAP WRAP FROM BROCAR OR PROWRAP FROM McGUIRE SHALL BE ACCEPTABLE).
4. ALL PLUMBING FIXTURES REFERENCED AS "ADA", "TAS" OR "HANDICAP COMPLIANT" SHALL MEET ALL REQUIREMENTS OF THE ADA AND THE TEXAS ACCESSIBILITY STANDARDS. IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MEET THESE REQUIREMENTS.
5. IN MANY CASES, FIXTURES WITH THE SAME PLUMBING DESIGNATION HAVE DIFFERENT INSTALLATION HEIGHTS – REFERENCE ARCHITECTURAL DRAWINGS FOR ALL INSTALLATION HEIGHTS AND HANDICAP FIXTURE DESIGNATIONS. FIXTURES DESIGNATED AS ADULT HANDICAP SHALL MEET ALL REQUIREMENTS OF THE ADA. FIXTURES DESIGNATED AS CHILD HANDICAP SHALL MEET ALL REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS FOR THE APPROPRIATE CHILDREN'S AGE GROUP (REF. ARCH. DWGS. AND SPECIFICATIONS).

PLUMBING MATERIALS

SANITARY WASTE AND VENT

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

STORM DRAIN PIPING

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB, 8" AND UNDER: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

ABOVE SLAB, 10" AND ABOVE: SERVICE WEIGHT, CAST IRON, BELL & SPIGOT.

NATURAL GAS

BELOW GRADE (OUTSIDE): YELLOW POLYETHYLENE PIPE WITH COATED STEEL RISER AND TRACER WIRE.

ABOVE SLAB: SCHEDULE 40 BLACK STEEL. PIPING 2.5" AND LARGER SHALL BE WELDED. PIPING 2" AND SMALLER SHALL HAVE SCREWED FITTINGS.

DOMESTIC WATER

INTERIOR: TYPE L COPPER WITH SOLDER TYPE WROUGHT COPPER FITTINGS, MADE UP WITH LEAD-FREE SOLDER.

EXTERIOR: TYPE K COPPER WITH SWEAT FITTINGS AND LEAD-FREE SOLDER. BEYOND 5 FEET FROM BUILDING, SCHEDULE 40 PVC.

FIRE SPRINKLER SYSTEM NOTES

1. THE EXISTING FIRE SPRINKLER SYSTEM SHALL BE MODIFIED AND/OR EXPANDED TO COVER THE AREA OF RENOVATION IN ENTIRETY. ALL NEW AND REVISED PIPING SHALL BE ENGINEERED AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR.
2. REFERENCE THE SPECIFICATIONS, DIVISION 21, FOR MORE INFORMATION.

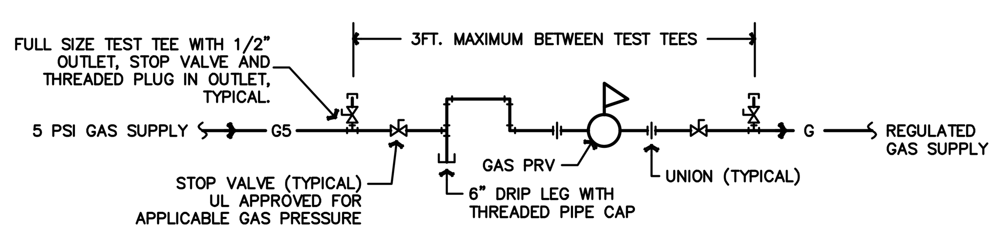
GENERAL PLUMBING NOTES

1. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL WORK DESCRIPTION. SEE THIS SHEET (P4.00) FOR PLUMBING SYMBOLS LEGEND.
2. COORDINATE PLUMBING SYSTEMS INSTALLATION WITH ARCHITECTURAL, STRUCTURAL, HVAC SYSTEMS, ELECTRICAL SYSTEMS, CONDUITS, ETC.... OFFSET PIPING AS REQUIRED TO PROVIDE A FUNCTIONING SYSTEM WITH ADEQUATE SPACE FOR SERVICING AND REPAIRS.
3. MAKE CONNECTIONS OF NEW PIPE SYSTEMS IN TO EXISTING PIPE SYSTEMS WITH THREADED OR SWEAT JOINTS. PROVIDE ELECTROLYSIS ISOLATING UNIONS AT CONNECTION OF DISSIMILAR MATERIALS. REFERENCE THE SPECIFICATIONS.
4. SITE SERVICES ARE SHOWN FOR REFERENCE ONLY. PLUMBING CONTRACTOR SHALL REFERENCE CIVIL DRAWINGS, INCLUDING LOCATIONS OF SERVICES, SIZES OF PIPES, FLOWLINE ELEVATIONS, ETC..
5. DO NOT INSTALL PLUMBING PIPING OVER ANY ELECTRICAL EQUIPMENT. REFERENCE ELECTRICAL DRAWINGS FOR LOCATIONS OF ELECTRICAL EQUIPMENT AND COORDINATE WITH ELECTRICAL SUBCONTRACTORS ACCORDINGLY. SEE DETAIL 1/P0.02. THIS INCLUDES FIRE SPRINKLER PIPING.
6. ALL PIPES THROUGH WALLS OR FLOORS SHALL BE SLEEVED AND SEALED PER DETAIL 5/P0.02. FIRE CAULK WHERE REQUIRED. THIS INCLUDES ALL WALLS, INTERIOR AND EXTERIOR. THIS INCLUDES FIRE SPRINKLER PIPING.
7. ALL CLEANOUTS SHALL BE CONNECTED TO SANITARY LINES USING WYES AND/OR LONG RADIUS ELLS. SANITARY TEES ARE NOT ACCEPTABLE. 2" MINIMUM SIZE. ALL WALL CLEAN OUTS IN VERTICAL RISERS, OR BANKS OF FIXTURES SHALL BE INSTALLED 4" ABOVE THE FLOOD RIM LEVEL OF THE LOWEST CONNECTED FIXTURE AND A MINIMUM OF 24" AFF.
8. ALL WASTE AND VENT PIPING BELOW SLAB SHALL BE 2" MINIMUM.
9. LOCATE PLUMBING VENTS THROUGH ROOF NOT NEARER THAN SIX (6) FEET AWAY FROM EDGE OF BUILDING AND TEN (10) FEET AWAY FROM ANY FRESH AIR INTAKES. OFFSET VENT PIPING, AS REQUIRED, IN CEILING SPACE BETWEEN CEILING AND ROOF TO MEET THESE REQUIREMENTS. SEE DETAIL 3/P0.02.
10. ALL DOMESTIC WATER PIPING (CW, HW AND HWR) SHALL BE INSULATED PER THE WRITTEN SPECIFICATIONS.
11. TOP OF FLOOR DRAINS IN MECHANICAL, AHU AND BOILER ROOMS SHALL BE SET 1-1/2" BELOW FINISHED FLOOR SURFACE. CONCRETE FLOOR SHALL BE SLOPED TO DRAIN, REFERENCE ARCHITECTURAL DRAWINGS. IN ALL OTHER LOCATIONS, FLOOR DRAINS SHALL BE SET FLUSH WITH FINISHED FLOOR, TAKING INTO ACCOUNT ANY FLOOR SLOPE OR FLOOR FINISH (TILE, TERRAZZO, ETC.) AS SHOWN ON ARCHITECTURAL DRAWINGS.
12. PROVIDE AN ISOLATING VALVE AT EACH WATER TAP OFF HOT AND COLD WATER MAINS TO ALLOW FOR SERVICING. VALVE SHALL BE BALL VALVE IF PIPE SIZE IS 2" OR LESS AND GATE VALVE OR BUTTERFLY VALVE IF LARGER THAN 2". SEE WRITTEN SPECIFICATIONS. VALVES SHALL BE EASILY ACCESSIBLE: PROVIDE 18" X 18", FIRE-RATED, STAINLESS STEEL ACCESS PANELS WITH HINGED, CYLINDER LOCK DOORS WHERE VALVES ARE INSTALLED ABOVE INACCESSIBLE CEILINGS OR IN WALL CHASES (MIFAB MODEL MPFR-SS-C). BALL VALVES AND BUTTERFLY VALVES INSTALLED ABOVE CEILINGS SHALL BE INSTALLED SUCH THAT HANDLE IS ON BOTTOM OF PIPE. ISOLATING WATER VALVES ABOVE CEILINGS SHALL BE INSTALLED NO MORE THAN 24" ABOVE CEILING. VALVES ABOVE INACCESSIBLE CEILINGS SHALL BE INSTALLED WITHIN REASONABLE REACH OF CEILING MOUNTED ACCESS PANEL.
13. WATER HAMMER ARRESTERS SHALL BE INSTALLED IN ADDITION TO AIR CHAMBERS PER THE RISER DIAGRAMS. SEE SPECIFICATIONS.
14. MECHANICALLY CLEAN ALL WASTE LINES WITH ROTARY MACHINE TO PROVE FREE FLOWING, SEE SPECIFICATIONS.
15. PROVIDE VENTED SLEEVE (2 PIPE SIZES LARGER THAN GAS PIPE UNLESS NOTED OTHERWISE) FOR ALL GAS PIPING IN GROUND BELOW PAVING OR SIDEWALKS AND INSIDE BUILDING IN WALLS AND IN UNVENTILATED CEILING SPACES, SEE SPECIFICATIONS.
16. GAS PIPING SHALL BE 1/2" MINIMUM. TAP GAS PIPING ON TOP OR SIDES ONLY. DO NOT INSTALL VALVES IN CEILING PLENUM OR IN ANY INACCESSIBLE LOCATION. ALL GAS VALVES SHALL BE EASILY ACCESSIBLE. REFER TO DETAIL 7/P0.01 FOR TYPICAL GAS CONNECTION INSTALLATION. REFER TO DETAIL 4/P0.01 FOR TYPICAL PRV INSTALLATION.
17. CENTER WALL HYDRANTS IN BRICK PATTERN OF EXTERIOR WALLS, REFERENCE THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
18. ALL REFRIGERATORS WITH ICE MAKERS, COMMERCIAL TYPE COFFEE MAKERS, ICE MAKERS, COFFEE VENDING MACHINES AND OTHER ITEMS PROVIDED BY OTHERS THAT REQUIRE A WATER CONNECTION SHALL HAVE A CW VALVE BOX, "VBOX", INSTALLED TO ALLOW EASY ACCESS AND REMOVAL OF MACHINE. ALSO, INSTALL IN-LINE FILTER IN WATER CONNECTION.
19. REFER TO CIVIL DRAWINGS FOR SITE SANITARY, SITE STORM SEWER, FIRE SERVICE AND DOMESTIC WATER SERVICE. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPING INSIDE BUILDING TO OUTSIDE LOCATIONS SHOWN ON PLUMBING DRAWINGS. PLUMBING CONTRACTOR SHALL INCLUDE COST OF FINAL TIE-INS TO SITE SERVICES.
20. PER THE DRAWINGS, ALL DRAINS (FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, KITCHEN DRAINS, SHOWER DRAINS, ETC.) SHALL BE VENTED AND TRAP PRIMED – NO EXCEPTIONS. TRAP PRIMING SHALL BE ACCOMPLISHED USING WATER CLOSET FLUSH VALVE TRAP PRIMING DEVICES OR PROSET SYSTEMS TRAP GUARD SEWER GAS EMISSION PROTECTION, AS SHOWN ON DRAWINGS. REFERENCE PLUMBING FLOOR PLANS AND RISER DIAGRAMS.
21. ALL PIPING LOCATED ON ROOF (GAS PIPING) SHALL BE INSTALLED ON ROOF PIPE SUPPORTS PER DETAIL 14/P0.02, 6-FOOT ON CENTER. INSTALL ROOF PIPE JACK PER DETAIL 9/P0.02 FOR ALL PIPING THROUGH ROOF.
22. COORDINATE LOCATIONS OF ALL ROOF DRAINS AND OVERFLOW ROOF DRAINS WITH ARCHITECTURAL DRAWINGS.
23. FOR COMBINATION WASTE AND VENT SYSTEMS (WHERE APPLICABLE ON DRAWINGS), DRAIN P-TRAPS SHALL BE SIZE OF PIPE SHOWN ON DRAWINGS (I.E. TWO PIPE SIZES LARGER THAN DRAIN SIZE). FOR EXAMPLE, A 4" FLOOR DRAIN SHALL HAVE A 6" P-TRAP.
24. FOR ALL PLUMBING FIXTURES, IF COPPER PIPING IS STUBBED THROUGH WALL FOR DRAIN CONNECTION, INSTALL MARVEL FITTING AT DRAIN CONNECTION FOR EASE OF SERVICING AND REPAIRS. COPPER DRAIN PIPING WILL ONLY BE ALLOWED FOR DIRECT/STRAIGHT STUB-OUT OF FIXTURE DRAIN PIPING THROUGH WALL.
25. DO NOT INSTALL ANY PIPING BENEATH CVT OR VAV BOXES. THIS INCLUDES FIRE SPRINKLER PIPING.
26. WHERE UNDERGROUND VENT PIPE SIZE IS NOT NOTATED, VENT SHALL BE 2" DIAMETER.
27. WHERE UNDERGROUND SANITARY PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR SIZE. NOT BELOW GRADE SANITARY PIPE SHALL BE SMALLER THAN 2". NO SANITARY LINE OR P-TRAP FOR A DRAIN/FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE DRAIN/FIXTURE SCHEDULE.
28. WHERE ABOVE GROUND VENT PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR VENT SIZE.
29. WHERE CW/HW PIPING SIZE TO THE FIXTURE IS NOT SHOWN ON THE FLOOR PLAN, REFER TO THE RISER DIAGRAMS FOR CW/HW PIPE SIZE. NO PIPING TO FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE FIXTURE SCHEDULE.
30. TO INSTALL NEW PLUMBING SYSTEMS BELOW EXISTING CONCRETE SLABS, FIRST PLUMBING CONTRACTOR SHALL LAY OUT CUT. THEN, DEMOLITION CONTRACTOR SHALL SAW CUT SLAB TO CONTROL CRACKING AND REMOVE ALL CONCRETE. PLUMBING CONTRACTOR SHALL THEN EXCAVATE FILL TO PROPER SLOPE, INSTALL NEW PIPING SYSTEMS AS REQUIRED, THEN BACKFILL AND COMPACT TO PROPER DENSITY. THE CONCRETE CONTRACTOR SHALL THEN INSTALL NEW SIX (6) MIL POLYETHYLENE VAPOR BARRIER AND SEAL, INSTALL NEW REINFORCING STEEL AND WELD ON TO EXISTING, THEN RE-POUR CONCRETE TO NEW LEVEL. DO NOT CUT THROUGH GRADE BEAMS WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
31. ALL ABANDONED FIXTURES, DRAINS AND PIPING (INCLUDING PIPING ABANDONED IN THE PAST) IN AREAS WHERE WORK IS BEING DONE SHALL BE COMPLETELY REMOVED FROM BUILDING (INCLUDING PIPING BELOW SLAB/GRADE – UNLESS SHOWN OTHERWISE ON DRAWINGS). EXISTING WATER PIPING SHALL BE CAPPED AT EXISTING WATER MAIN TAPS AND ALL ABANDONED PIPING REMOVED. ABANDONED VENT PIPING SHALL BE COMPLETELY REMOVED, INCLUDING EXISTING VTR's NOT RE-USED. PATCH AS REQUIRED. ONLY ACTIVE PIPING, FIXTURES AND DRAINS SHALL REMAIN IN BUILDING WHERE WORK IS BEING DONE.
32. FIELD VERIFY EXISTING CONDITIONS PRIOR PROCUREMENT OF EQUIPMENT AND SYSTEMS.
33. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION.
34. PROVIDE INSUALTION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF THE 2021-IECC. 4 ADD4
35. SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.

GAS PRV SCHEDULE

MARK	PRV-K	PRV-K2
LOCATION	MECH. YARD	MECH. YARD
SERVES	KITCHEN	KITCHEN
GAS LOAD	585 CFH	585 CFH
DISTANCE FROM METER	150 FT	150 FT
DISTANCE TO LAST OUTLET	200 FT	200 FT
INLET (SIZE/PRESSURE)	1" / 5 PSI	1" / 5 PSI
OUTLET (SIZE/PRESSURE)	2" / 7-12 IN WC	2" / 7-12 IN WC

4 ADD4



4 GAS PRESSURE REGULATOR DETAIL (PRV)

NO SCALE

NOTES:
1. GAS REGULATOR SHALL BE ANSI Z21.80 CERTIFIED FOR LINE PRESSURE REGULATION BETWEEN THE SERVICE REGULATOR AND CONNECTED EQUIPMENT.
2. ALL GAS REGULATORS WITH INLET PRESSURE ABOVE 2 PSI SHALL BE EQUIPPED WITH A FACTORY INSTALLED OVERPRESSURE PROTECTION DEVICE, AS PART OF THE ANSI Z21.80 CERTIFICATION.
3. GAS REGULATOR SHALL BE EQUIPPED WITH A VENT LIMITING DEVICE, SIZED IN ACCORDANCE WITH THE REGULATOR OUTLET PRESSURE.
4. ALL REGULATORS INSTALLED OUTDOORS SHALL BE RATED FOR OUTDOOR INSTALLATION.
5. BASIS OF DESIGN IN THE MAXITROL 325-L SERIES OF REGULATORS

PLUMBING DRAINS, CLEANOUTS AND HYDRANTS

MARK	MIN. CONNECTION SIZES (IN.) SAN	VENT	CW	HW	DESCRIPTION/SPECIFICATION FOR FIXTURE OR EQUIPMENT
FD	4	2	1/2	–	TOILET FLOOR DRAIN – TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 1/2" TRAP PRIMER TAP, 6" SQUARE, NICKEL BRONZE HSTRAINER AND SECURITY SCREWS JR SMITH MODEL 2005-03-K06PB-P050-U.
FD2	4	2	1/2	–	EQUIPMENT FLOOR DRAIN – CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, DUCTILE IRON TRUE-FIT SEDIMENT BUCKET WITH 12" STAINLESS STEEL RIM LESS GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS-540-LG-P. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD3	4	2	1/2	–	GRATED MECHANICAL ROOM FLOOR DRAIN – CAST IRON WITH FLANGE, SEEPAGE OPENINGS, 9" HEAVY-DUTY DUCTILE IRON GRATE WITH STAINLESS STEEL VENEER, CLAMPING DEVICE AND 1/2" TRAP PRIMER TAP ZURN MODEL ZS-550-C-P
FD4	4	2	1/2	–	CANWASH FLOOR DRAIN – ALL GALVANIZED CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, GALVANIZED SUR-SET SEDIMENT BUCKET WITH 12" GALVANIZED DUCTILE IRON RIM AND GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS-540-P-G-HD. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD5	4	2	1/2	–	KITCHEN FLOOR DRAINS SHALL BE SIMILAR EXCEPT WITH 7" SQUARE, BRONZE GRATE JR SMITH MODEL 2005-03-K07PB-P050-U. PROVIDE 4" DIAMETER STAINLESS STEEL FUNNEL WHERE SHOWN ON DRAWINGS. REFERENCE KITCHEN CONNECTION SCHEDULE ON PLUMBING RENOVATION FLOOR PLAN SHEET.
FS KITCHEN FS	4	2	1/2	–	FLOOR SINK – CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY STAINLESS STEEL TRACTOR DUTY FRAME WITH 3/4-TRACTOR GRATE AND 1/2" TRAP PRIMER TAP JR SMITH MODEL 3150Y-04-C-13.
FS2 (4 ADD4)	4	2	1/2	–	DEEP FLOOR SINK – FABRICATED STEEL RECEPTOR, 12" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, STAINLESS STEEL MESH LINED BUCKET AND 24X12 NICKEL BRONZE FRAME WITH 3/4 SOLID COVER. JR SMITH MODEL 3250Y-C-BS-43
CO	VARIES	–	–	–	FLOOR CLEANOUT – ADJUSTABLE EXTENSION HOUSING, CAST IRON FERRULE WITH FULL-LINE-SIZE BRASS PLUG (UP TO 4"), 5" DIAMETER STAINLESS STEEL ACCESS COVER WITH VANDAL-PROOF SECURITY SCREWS, ROUND FRAME AND TOP STYLE COMPATIBLE WITH FLOOR TYPE (REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR TYPES) ZURN MODEL ZS-1400-VP. PROVIDE CARPET FLANGE FOR CARPETED AREAS (CARPET MARKER SHALL NOT BE ACCEPTABLE) AND TERRAZZO RECESS FOR TERRAZZO FLOORS. OUTDOOR CLEANOUT – SAME AS TYPE "CO" EXCEPT WITH HEAVY-DUTY NICKEL BRONZE TOP ZURN MODEL ZN-1400-HD-VP. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
WCO	VARIES	–	–	–	WALL CLEANOUT – CAST IRON FERRULE WITH COUNTERSUNK HEAD (FULL-LINE-SIZE PVC PLUG UP TO 4") MI-FAB MODEL C1450. ACCESS COVER SHALL BE 8" SQUARE, SURFACE MOUNT, FLUSH INSTALLATION, 16-GAUGE STAINLESS STEEL ACCESS DOOR WITH FLANGED FRAME AND VANDAL-PROOF OPTION MI-FAB MODEL UA-SS-VP. ACID WASTE CLEANOUT (AWCO) SHALL BE SAME EXCEPT ACID WASTE PIPING. INSIDE CABINETWORK WHERE CLEANOUT IS NOT VISIBLE, ACCESS PANEL MAY BE ROUND STAINLESS STEEL TYPE WITH VANDAL-PROOF CENTER SCREW MI-FAB MODEL C1450-RD-3-6.
2CO	4	–	–	–	DOUBLE CLEANOUTS – SAME AS OUTDOOR CLEANOUTS. INSTALLED FOR TWO-WAY RODDING. SINGLE CLEANOUT WITH 2-WAY FITTING IS NOT ACCEPTABLE, PROVIDE TWO SEPARATE CLEANOUTS. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
HB	–	–	3/4	–	HOSEBIBB – 3/4" HOSE THREAD, INTEGRAL VACUUM BREAKER SPOUT, ROUGH CHROME FINISH WITH REMOVABLE KEYED HANDLE, WALL FLANGE CHICAGO MODEL 952.
WH	–	–	3/4	–	RESTROOM WALL HYDRANT – NARROW WALL, WARM CLIMATE TYPE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5518
WH2	–	–	3/4	–	EXTERIOR WALL HYDRANT – NON-FREEZE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5519
WH3	–	–	3/4	3/4	CANWASH WALL HYDRANT – NON-FREEZE HOSE BOX WITH STRAIGHT INLET CONNECTION, HOT AND COLD MIXING, REMOVABLE KEYED HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL BACKFLOW PREVENTER WITH 3/4" HOSE CONNECTION, HEAVY DUTY BRASS CASING, POLISHED BRONZE HYDRANT BOX WITH HINGED COVER, "WATER" CAST ON COVER, DRIP LIP AND WALL CLAMP J.R. SMITH MODEL 5560-QT-WC-H-W-PB.
WASH (4 ADD4)	–	–	3/4	3/4	CLOTHES WASHER HOSE CONNECTION – STUB OUT OF WALL WITH ELBOW TO LEAD FREE DOUBLE CHECK BACKFLOW PREVENTER WITH QUARTER TURN VALVES, WATTS LF007M3-QT-FZ 3/4; PROVIDE FEMALE NIPPLE WITH 3/4" HOSE CONNECTION FOR CONNECTION OF WASHER JUMPER HOSE. SUPPORT ASSEMBLY FROM WALL WITH UNISTRUT AND PIPE CLAMPS. ASSEMBLY SHALL BE PROVIDED FOR BOTH COLD AND HOT WATER OUTLETS. WASHER HAS INTEGRAL AIR GAP CERTIFIED TO EUROPEAN STANDARDS AND THUS REQURIES AN EXTERNAL MEANS OF BACKFLOW PREVENTION TO MEET US STANDARDS.

KITCHEN PLUMBING CONNECTION SCHEDULE

MARK	DESCRIPTION
P5	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO MOP BASIN ("MB") FAUCET. REFERENCE PLUMBING FIXTURE SCHEDULE.
P6	3" DRAIN IN FLOOR FOR MOP BASIN ("MB") DRAIN. REFERENCE PLUMBING FIXTURE SCHEDULE.
P7	3/4" CW AND 3/4" HW – IN WALL, 18" AFF, TO HOSE BIBB.
P10	FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" SQUARE HEAVY-DUTY POLISHED BRONZE GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 2005-03-K07PB-P050-U.
P11C	1/2" CW AND 1/2" HW – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P11D	2" DRAIN – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P12	FLOOR SINK – 4" OUTLET; FLUSH WITH FLOOR; CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY NICKEL BRONZE FRAME WITH 3/4-TRACTOR GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 3150Y-04-C-13.
P12A	EQUIPMENT FLOOR DRAIN – SIMILAR TO MARK P10, BUT WITH 4" OUTLET.
P15	FUNNEL FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" DIAMATER HEAVY-DUTY STAINLESS STEEL TRACTOR DUTY GRATE AND SECURITY SCREWS, 4" ROUND FUNNEL ASSEMBLY (MODEL 3580), 1/2" TRAP PRIMER TAP JR SMITH MODEL 2005-03-K07PB-P050-U
P109	3/4" CW – IN WALL, 60" AFF, TO ICE MAKER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO ICE MAKER FROM CHECK VALVE, THROUGH FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P109A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12, BUT WITH FULL GRATE. SEE DESCRIPTION ABOVE.
P110	1/2" CW AND 1/2" HW – IN WALL, 36" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO-CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P110A	2" DRAIN – IN WALL, 48" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO-CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P122	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET AT TWO COMPARTMENT SINK. INSTALL LEONARD 370-LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P122A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.

MARK	DESCRIPTION
P123	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO PRE-RINSE. 1/2" CW TO DISPOSER.
P123A	2" DRAIN – IN WALL, 10" AFF, TO DISPOSER (BYPASS GREASE TRAP).
P161	(2)3/4" GAS CONNECTION – 18"/36" AFF, TO CONVECTION OVEN, 60 CFH (EACH).
P163A	3/4" GAS CONNECTION – 18" AFF, TO TILT BRAISING PAN, 104 CFH.
P163B	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO TILT BRAISING PAN.
P165	1" GAS CONNECTION – 18" AFF, TO RANGE, 70 CFH.
P172	(2) 3/4" CW – IN WALL, 24" AFF & 48" AFF, TO COMBI OVEN. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND OVEN. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO EQUIPMENT FROM CHECK VALVE, THROUGH FILTER BANK (REF P172D & E), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172A	SIMILAR TO PLUMBING CONNECTION P172, BUT ONLY ONE 3/4" CW – IN WALL, 48" AFF. SEE DESCRIPTION ABOVE.
P172B	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P172C	(2) 3/4" GAS CONNECTION – 18"/36" AFF, TO COMBI OVEN, 105 CFH (EACH).
P172D	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO INLET OF FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172E	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. EXTEND OUTLET OF FILTER BANK BACK INTO THE WALL. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PIPING WITHIN THE WALL SHALL EXTEND TO AND SERVE TWO (2) CONNECTIONS TAGGED P172.
P249	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET. INSTALL LEONARD 370-LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P249A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.

MARK	DESCRIPTION
P250	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250A	3/4" HW – IN WALL, 18" AFF, TO BOOSTER HEATER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER AND CONNECT THROUGH FILTER (BY OTHERS) WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PROVIDE WATTS 9MD2 OR EQUAL – 140°F MINIMUM (INTERCONNECT WITH DISH MACHINE).
P250B	3/4" CW – IN WALL, 18" AFF, TO DISH MACHINE. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND DISH MACHINE. PROVIDE WATTS 9MD2 OR EQUAL (INTERCONNECT WITH DISH MACHINE).
P614	1/2" CW AND 1/2" HW – IN WALL, 42" AFF, TO FILL FAUCET.
P800	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.

KITCHEN PLUMBING CONNECTION NOTES
1. KITCHEN CONNECTION SCHEDULE IS APPLICABLE TO ALL SCHOOLS IN THIS DRAWING SET.
2. REFERENCE KITCHEN CONSULTANT'S DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL EQUIPMENT AND INSTALLATION REQUIREMENTS.
3. ALL WATER PIPING INSTALLED EXPOSED BENEATH KITCHEN EQUIPMENT, INCLUDING PIPING INSTALLED BY DIVISION 11 (I.E. UNDER SINK COUNTERTOPS, SERVING TABLES, ETC.) SHALL BE INSULATED BY THE PLUMBING CONTRACTOR PER THE SPECIFICATIONS (INCLUDE ALUMINUM JACKETING FOR ALL PIPE INSULATION, PER SPECIFICATIONS).
4. INDIRECT WASTE PIPING FROM KITCHEN EQUIPMENT IS NOT SHOWN; HOWEVER, PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THIS PIPING PER THE REQUIREMENTS OF THE KITCHEN CONSULTANT'S CONTRACT DOCUMENTS, PER THE REQUIREMENTS OF THE VARIOUS EQUIPMENT MANUFACTURERS PROVIDED AND PER THE IPC-2021, SECTION 802. ALL INDIRECT WASTE PIPING SHALL BE TYPE L COPPER. INSTALL 45°F ELBOW AT END OF EACH INDIRECT WASTE PIPE TO DIRECT FLOW OF WATER INTO FLOOR SINK.
   4.1. IPC 2015 – SECTION 802.1.1 FOOD HANDLING – EQUIPMENT AND FIXTURES UTILIZED FOR THE STORAGE, PREPARATION AND HANDLING OF FOOD SHALL DISCHARGE THROUGH AN INDIRECT WASTE PIPE BY MEANS OF AN AIR GAP. EACH WELL OF A MULTIPLE-COMPARTMENT SINK SHALL DISCHARGE INDEPENDENTLY TO A WASTE RECEPTOR. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P121, P122 AND P126.
   4.2. IPC 2015 – SECTION 8802.1.8 FOOD UTENSILS, DISHES, POTS AND PANS SINKS – SINKS, USED FOR THE WASHING, RINSING, OR SANITIZING OF UTENSILS, DISHES, POTS, PANS OR SERVICE WARE USED IN THE PREPARATION, SERVING OR EATING OF FOOD SHALL DISCHARGE INDIRECTLY THROUGH AN AIR GAP OR AN AIR BREAK TO THE DRAINAGE SYSTEM. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P249.

PLUMBING FIXTURES AND EQUIPMENT

MARK	MIN. CONNECTION SIZES (IN.) SAN	VENT	CW	HW	DESCRIPTION/SPECIFICATION
WC	4	2	1	–	WATER CLOSET – WALL MOUNTED, WHITE VITREOUS CHINA, SIPHON JET ACTION, 1.28 GPF, ELONGATED BOWL, TOP SPUD, ADA/TAS COMPLIANT, AMERICAN STANDARD AFWALL; SLOAN ROYAL 111-1.28 FLUSH VALVE WITH VANDAL-PROOF FREE-SPINNING TOP CAP, 1.28 GPF, VANDAL-PROOF STOP AND ADA/TAS COMPLIANT LEVER ACTUATOR WITH LEVER INSTALLED ON LEFT SIDE (FOR FIXTURES DESIGNATED AS "HANDICAP", INSTALL LEVER ON "WIDE-SIDE" OF TOILET STALL); BEMIS 1655-SS/C EXTRA HEAVY DUTY, WHITE, OPEN FRONT SEAT LESS COVER WITH SELF-SUSTAINING, STAINLESS STEEL CHECK HINGE; AND, FLOOR MOUNTED CARRIER.
LV	1-1/4	1-1/4	1/2	1/2	LAVATORY GOOSENECK FAUCET – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; DECK MOUNTED FAUCET, 4" CENTERS, FIXED, CHROME PLATED, 5.25" GOOSENECK SPOUT, PRESSURE COMPENSATING LAMINAR FLOW NON-AERATING 0.5 GPM OUTLET, 4" WRISTBLADE HANDLES, REBUILDABLE COMPRESSION CARTRIDGES, CHICAGO 895-317GN2AE72ABCP; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170-LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
LV2	1-1/4	1-1/4	1/2	1/2	LAVATORY – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; CHROME PLATED, ALL CAST BRASS CONSTRUCTION, ADA/TAS COMPLIANT, VANDAL-PROOF FAUCET WITH 4" WRIST BLADE HANDLES, COMPRESSION STYLE CARTRIDGES, CHROME DECK PLATE, VANDAL-PROOF AERATOR, COPPER SUPPLIES AND CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9 CHICAGO MARATHON MODEL 802-E70-317ABCP; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170-LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
EDF	1-1/2	1-1/2	1/2	–	BI-LEVEL ELECTRIC DRINKING FOUNTAINS WITH BOTTLE FILLER – WALL MOUNTED, ALL STAINLESS STEEL, ADA AND TAS COMPLIANT FOR ALL AGES, 8 GPH AT ARI STANDARDS, 2-STREAM ALL METAL BUBBLER FITTING WITH VANDAL-RESISTANT KIT AND FRONT PUSH BUTTON ACTUATION, PUSH BUTTON ACTIVATED BOTTLE FILLER WITH 1.1GPM FILL RATE AND ANIT-MICROBIAL COATING, INTEGRAL WATER FILTER, LEAD-FREE (CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9), REFRIGERANT HFC-134a, MAINTENANCE ACCESS PANEL, HALSEY-TAYLOR MODEL HTHBHVR8BL; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; FLOOR MOUNTED CHAIR CARRIER; AND, STAINLESS STEEL ADA APRON FOR LOCATIONS REQUIRED BY ADA OR TAS.
MB	3	2	3/4	3/4	MOP BASIN – 24" X 24" X 12" DEEP TERRAZZO, TWO (2) STAINLESS STEEL SPLASH CATCHER PANELS, 6" DROP FRONT WITH STAINLESS STEEL CAP, CAST BRASS DRAIN WITH STAINLESS STEEL STRAINER STERN WILLIAMS HILOW MODEL HL-1800-BP; FAUCET SHALL BE POLISHED CHROME PLATED SERVICE SINK TYPE WITH VACUUM BREAKER, INTEGRAL SUPPLY CHECK STOPS, SPOUT WITH PAIL HOOK, HOSE END AND TOP BRACE CHICAGO MODEL 897-CCF (INSTALL BACKING/BRACING INSIDE WALL TO SUPPORT FAUCET AND TOP BRACE).
LP-1	3	2	3/4	3/4	LAVATORY PUMP – FACTORY BUILT, LIFT PUMP FOR GRAY WATER WASTE, TOP ACCESS TO INTERNAL 1/6HP PUMP AND FLOAT SWITCH, 1.5" TOP AND SIDE INLETS, 1.5" TOP OUTLET, INTEGRAL CHECK VALVE AT BOTTOM INLET CONNECTIONS, 9FT POWER CORD WITH GROUNDED PLUG; LIBERTY PUMPS MODEL 406

PRELIMINARY
NOT FOR CONSTRUCTION OR BIDDING PURPOSES

STANTON ENGINEERING GROUP
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ISSUE:

Date	Issue
12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025 (4 ADD4)	ADDENDUM 04

j

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

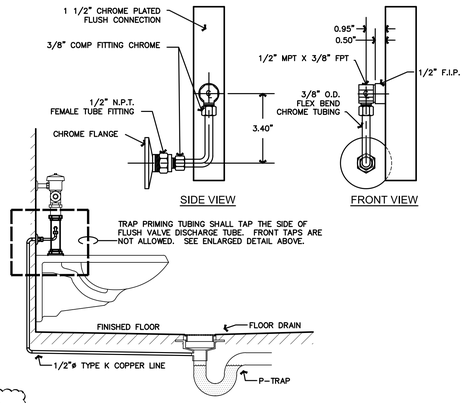
STATE OF TEXAS – INTERIM REVIEW – 106052 – LICENSED PROFESSIONAL ENGINEER – 09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

PLUMBING NOTES & SCHEDULES

j-P0.01

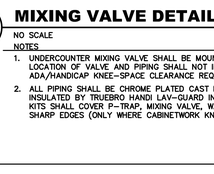


12 FLUSH VALVE TRAP PRIMING TUBE DETAIL

NO SCALE

MI-FAB MODEL MI-702-MOD FLUSH VALVE TRAP PRIMER, OR EQUAL

TANKLESS WATER HEATER SCHED.		
MARK	IEWH-1	
SERVES	LAVATORY	
LOCATION	BELOW COUNTER	
HEATER KW	1.8 KW	
TEMP RISE (@ 0.5 GPM)	25°F	
VOLTAGE/PHASE	120V/1PH	
EEMAX MODEL	SPEX1812T	

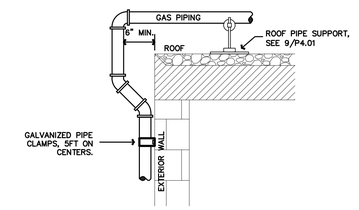


11 TANKLESS WATER HEATER

NO SCALE

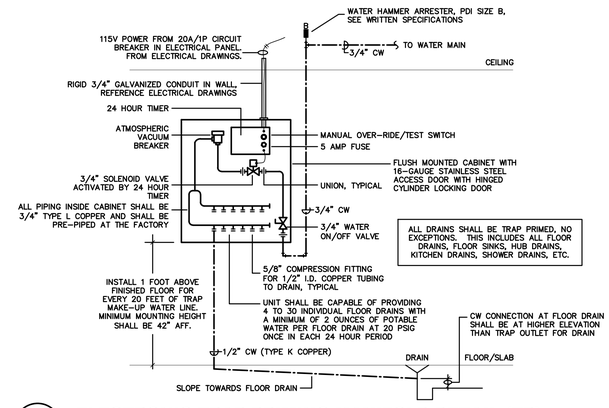
NOTES:

1. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FURNISH & INSTALL 0.5-GPM AERATOR ON FAUCET COMPATIBLE WITH TANKLESS EWH REQUIREMENTS.
5. WATER HEATER SHALL HAVE INTEGRAL ASSE-1070 COMPLIANT TEMPERED MIXING VALVE.



13 GAS PIPING WALL-TO-ROOF TRANSITION DETAIL

NO SCALE

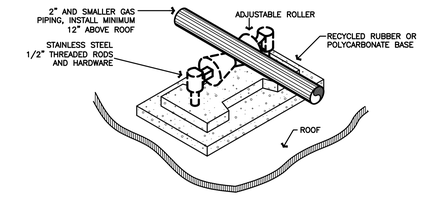


10 ELECTRONIC TRAP PRIMING MANIFOLD DETAIL (TP)

NO SCALE

NOTES:

1. REFERENCE SCHEDULE ON SHEET P3.00

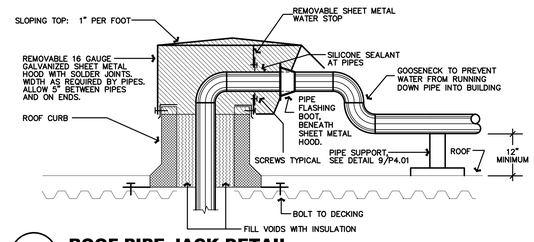


14 GAS PIPING ROOF SUPPORT DETAIL

NO SCALE

NOTES:

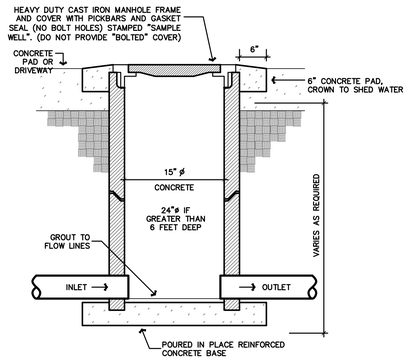
1. GAS PIPING SUPPORT SHALL BE PORTABLE PIPE HANGERS, INC. MODEL PP10-R. PIPING SHALL BE INSTALLED 12" ABOVE FINISHED ROOF. PROVIDE 18" X 18" CAREY TREAD-TYPE MATERIAL BENEATH EACH PIPE SUPPORT.
2. FIELD LOCATE ROOF STRUCTURAL SUPPORTS AND PLACE BASE OF PIPE SUPPORT OVER ROOF SUPPORTS ONLY. PROVIDE BASE OF ADEQUATE LENGTH TO SPAN ROOF JOIST TO PREVENT SUPPORTS SETTING ON ROOF DECK ONLY.
3. INSTALL SIX (6) FOOT-ON-CENTERS.
4. PIPE SUPPORT MANUFACTURER'S REPRESENTATIVE SHALL PERSONALLY INSPECT INSTALLATIONS OF PIPE SUPPORTS AND MAKE CORRECTIONS AND HEIGHT ADJUSTMENTS TO INSTALLATIONS, AS REQUIRED, DURING INSPECTION.



9 ROOF PIPE JACK DETAIL

NO SCALE

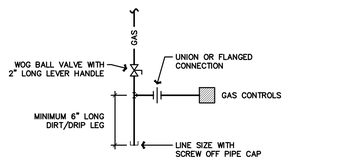
NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.



8 SAMPLE TEST WELL DETAIL (STW)

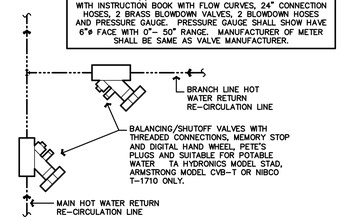
NO SCALE

NOTES:



7 TYPICAL GAS CONNECTION

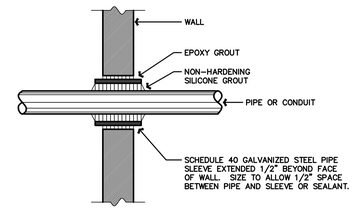
NO SCALE



6 HOT WATER BALANCING STATION

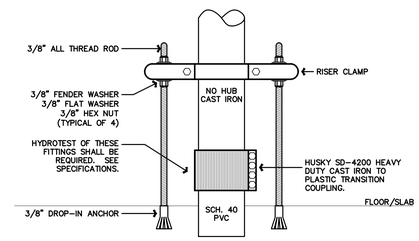
NO SCALE

PROVIDE AT EACH JUNCTION OF BRANCH HOT WATER RETURN LOOPS TO MAIN CIRCULATING HOT WATER LINE, SEE PLUMBING PLANS.



5 WALL PENETRATION DETAIL

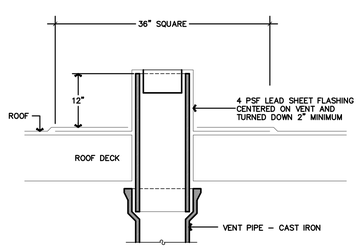
NO SCALE



4 PVC-TO-CAST IRON INSTALLATION DETAIL

NO SCALE

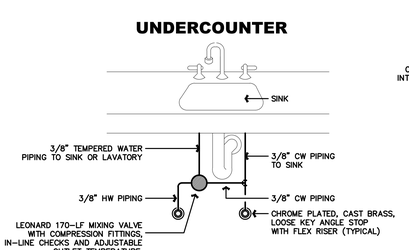
MISSION TRANSITION COUPLING DESIGNED AND CERTIFIED FOR THIS SPECIFIC APPLICATION SHALL BE ACCEPTABLE IN LIEU OF HUSKY COUPLING IN THIS DETAIL.



3 ROOF VENT DETAIL

NO SCALE

COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

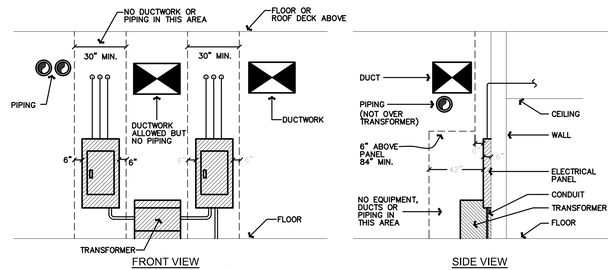


2 MIXING VALVE DETAIL

NO SCALE

NOTES

1. UNDERCOUNTER MIXING VALVE SHALL BE MOUNTED ON WALL IN FIXTURE KNEE-SPACE. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FOR ABOVE CEILING INSTALLATION, VALVE SHALL BE INSTALLED IN AN EASILY/READILY ACCESSIBLE LOCATION. SEE KITCHEN PLUMBING CONNECTION SCHEDULE FOR REQUIRED KITCHEN LOCATIONS.
5. LAVATORY MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 130°F. SINK MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 140°F.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

DO NOT INSTALL ANY PIPING BENEATH CVT BOXES. DO NOT INSTALL ANY PIPING (EXCEPT FIRE SPRINKLER PIPING AND OTHER PIPES SHOWN SPECIFICALLY ON THE PLUMBING FLOOR PLANS) OVER COMPUTER CLASSROOMS, BOOKROOMS, IDF/MDF/SERVER ROOMS OR OTHER ROOMS NOTED ON THE PLUMBING FLOOR PLANS.

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4 09/04/2025	ADDENDUM 04

j

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

STATE OF TEXAS
INTERIM REVIEW
THOMAS J. STANTON
09.04.2025

ARCHITECTS
AND PLANNING
CONSULTANTS
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HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

PLUMBING SCHEDULES & DETAILS

j-P0.02

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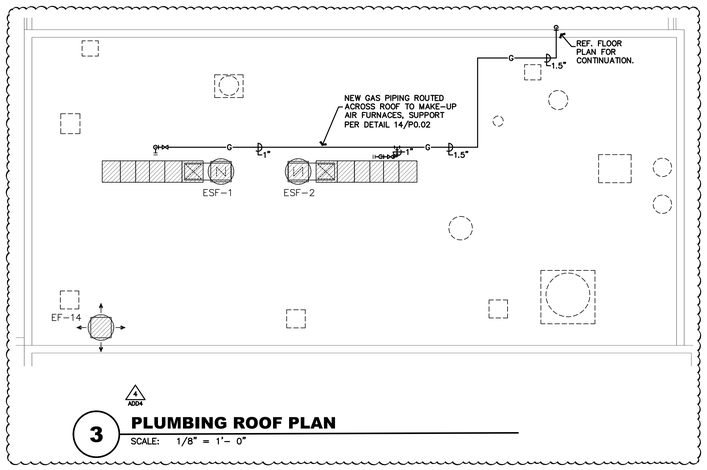
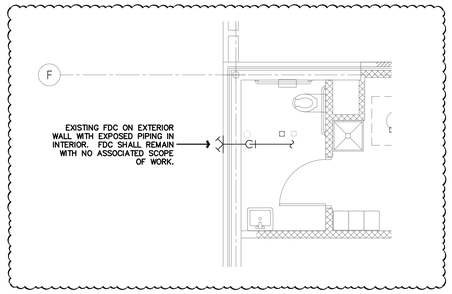


ADD4

3 PLUMBING ROOF PLAN

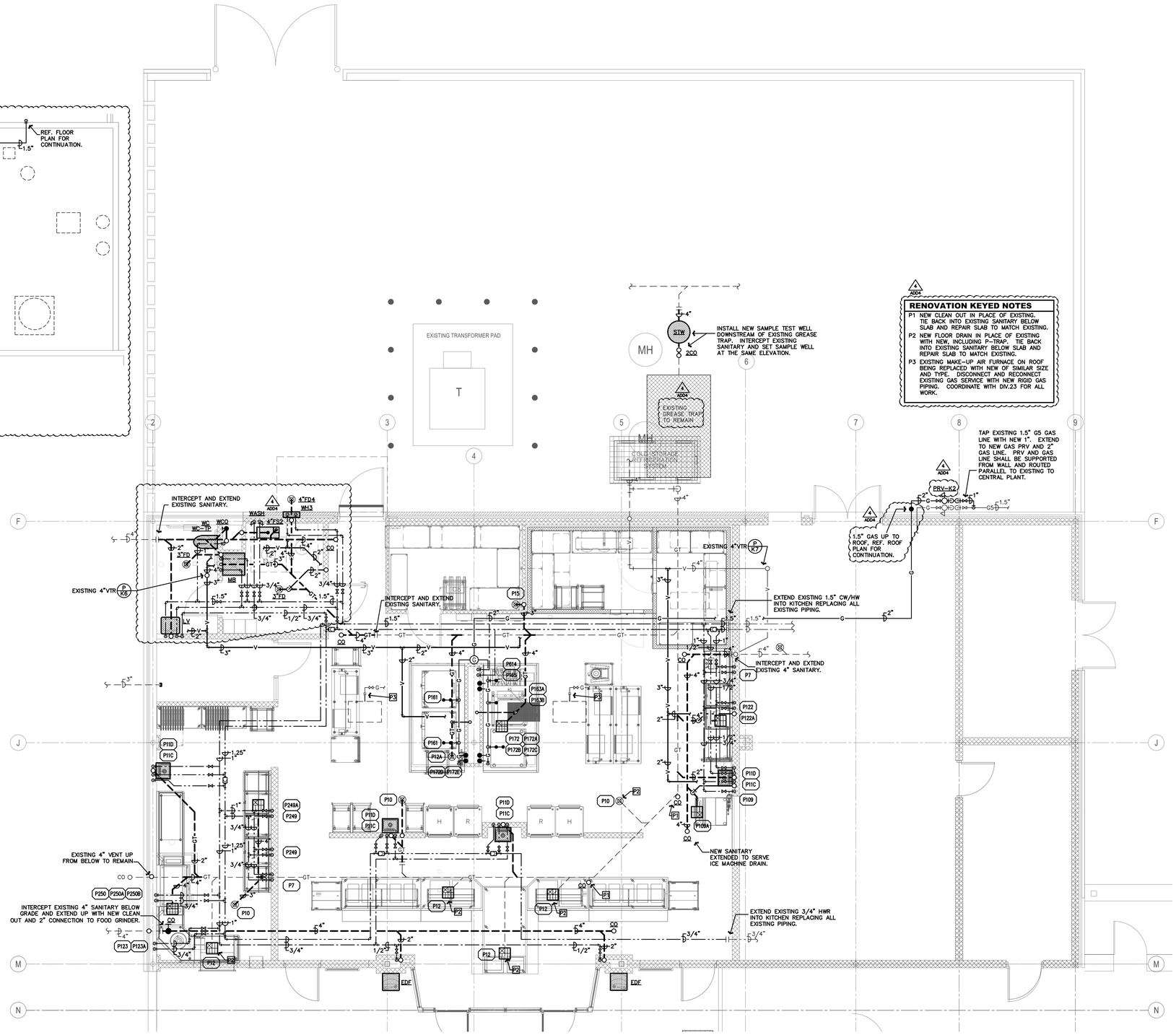
SCALE: 1/8" = 1'- 0"



ADD4

2 FIRE SPRINKLER - FDC - ETR

SCALE: 1/4" = 1'- 0"



1 PLUMBING RENOVATION FLOOR PLAN

SCALE: 1/4" = 1'- 0"

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FORT BEND INDEPENDENT SCHOOL DISTRICT

HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
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SEAL

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TYLER W. HERRING
106052
LICENSED
PROFESSIONAL
ENGINEER
09.04.2025

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HOUSTON, TEXAS 77079

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PLUMBING FLOOR PLAN

j-P1.01

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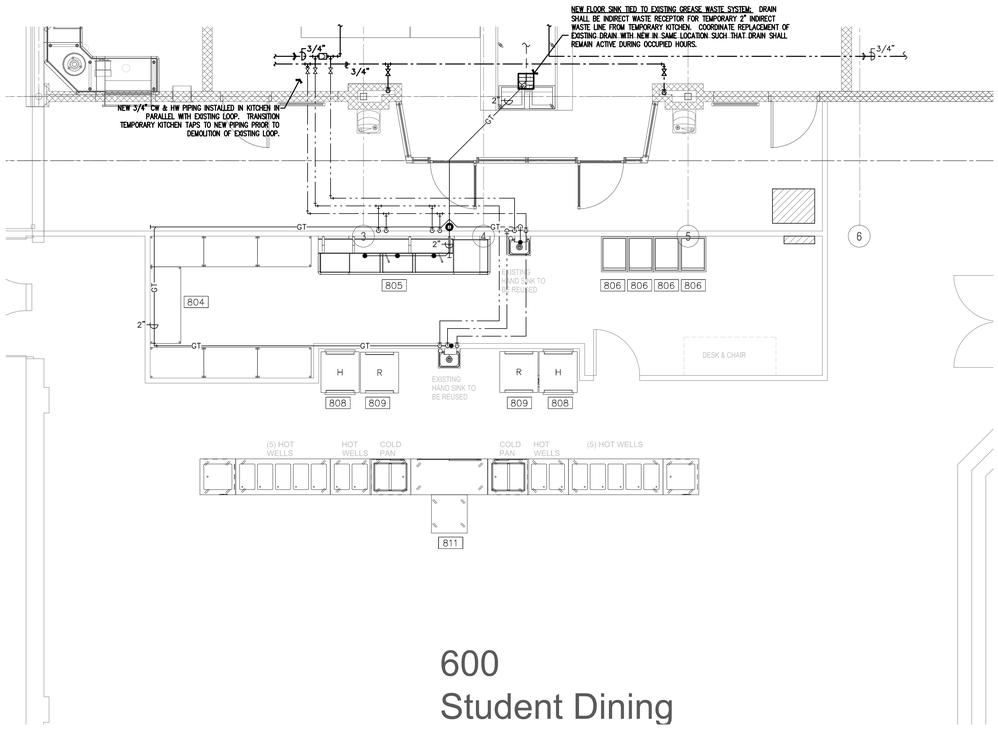


600
Student Dining

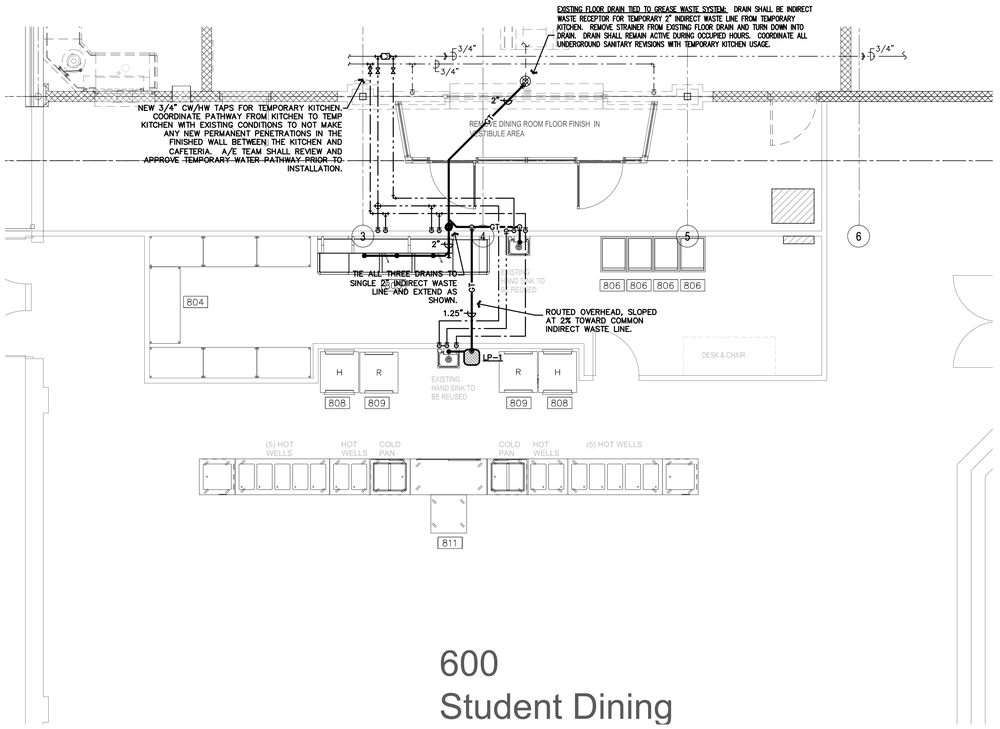
2 PLUMBING TEMPORARY KITCHEN PLAN - POST DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. AFTER DEMOLITION OF EXISTING KITCHEN AND DURING CONSTRUCTION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL REMAIN ACTIVE.
2. ALL SANITARY, CW AND HW CONNECTIONS SHALL REMAIN ACTIVE DURING ALL TIMES WHEN TEMPORARY KITCHEN IS ACTIVE.
3. UPON COMPLETION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL BE DEMOLISHED AND ALL TEMPORARILY UTILITIES SHALL BE REMOVED AND TEMPORARY WATER TAPS CAPPED AT MAIN LINE TAP.
4. ALL DEMOLISHED LAVATORIES AND FAUCETS SHALL BE PERMITTED TO BE RELOCATED ACROSS TEMPORARY KITCHENS WITHIN THE PROJECT BASED ON AVAILABILITY/PROJECT PHASING SCHEDULE. AT THE END OF THE PROJECT, REMOVE FIXTURES AND OFFER TO OWNER AS SALVAGE. IF NOT ACCEPTED, ALL FIXTURES SHALL BE DISPOSED OF BY THE CONTRACTOR.

NORTH



600
Student Dining

1 PLUMBING TEMPORARY KITCHEN PLAN - PRE DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. BEFORE DEMOLITION OF THE EXISTING KITCHEN BEGINS, INSTALL ALL NEW PLUMBING FIXTURES AND UTILITIES FOR TEMPORARY KITCHEN.

NORTH

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4 ADD4

j

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106052
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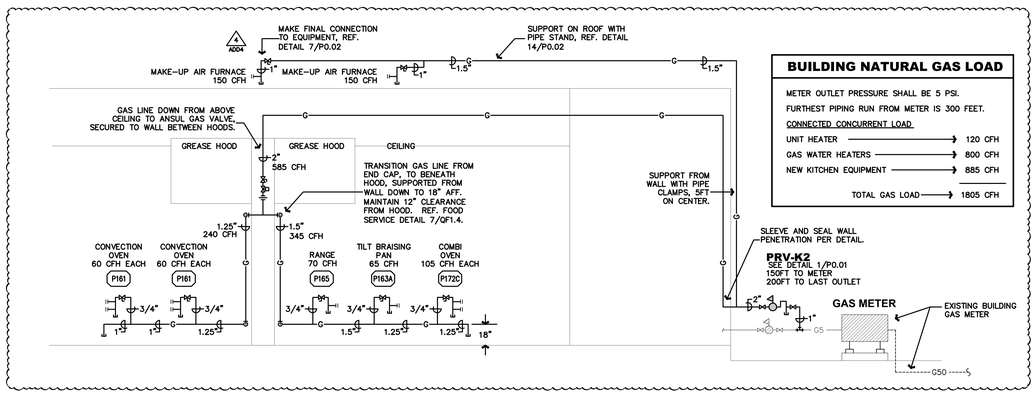
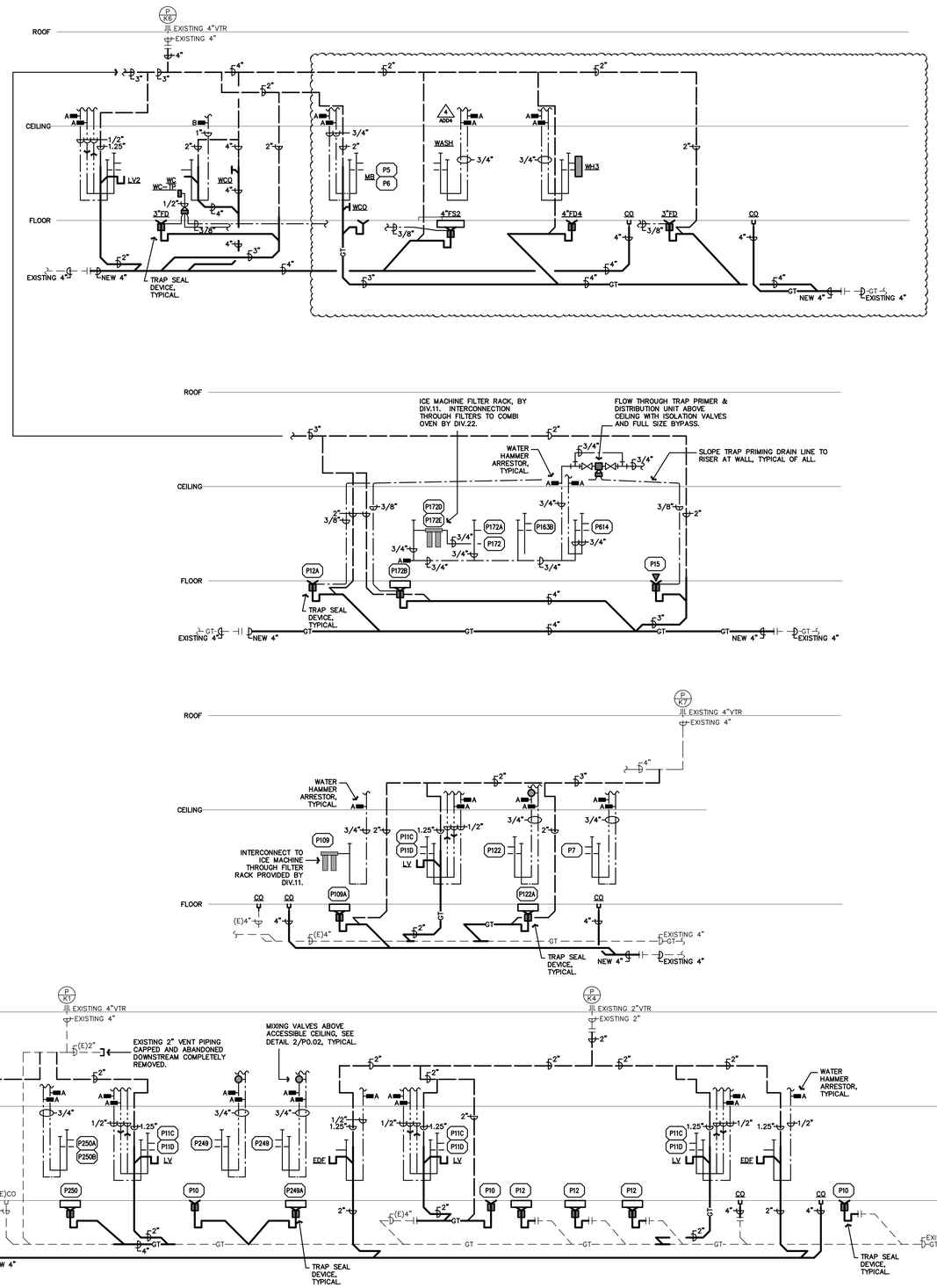
PLUMBING FLOOR PLAN - TEMP KITCHEN

j-P1.02



2 NATURAL GAS RISER DIAGRAM

NO SCALE



1 PLUMBING RISER DIAGRAMS

NO SCALE

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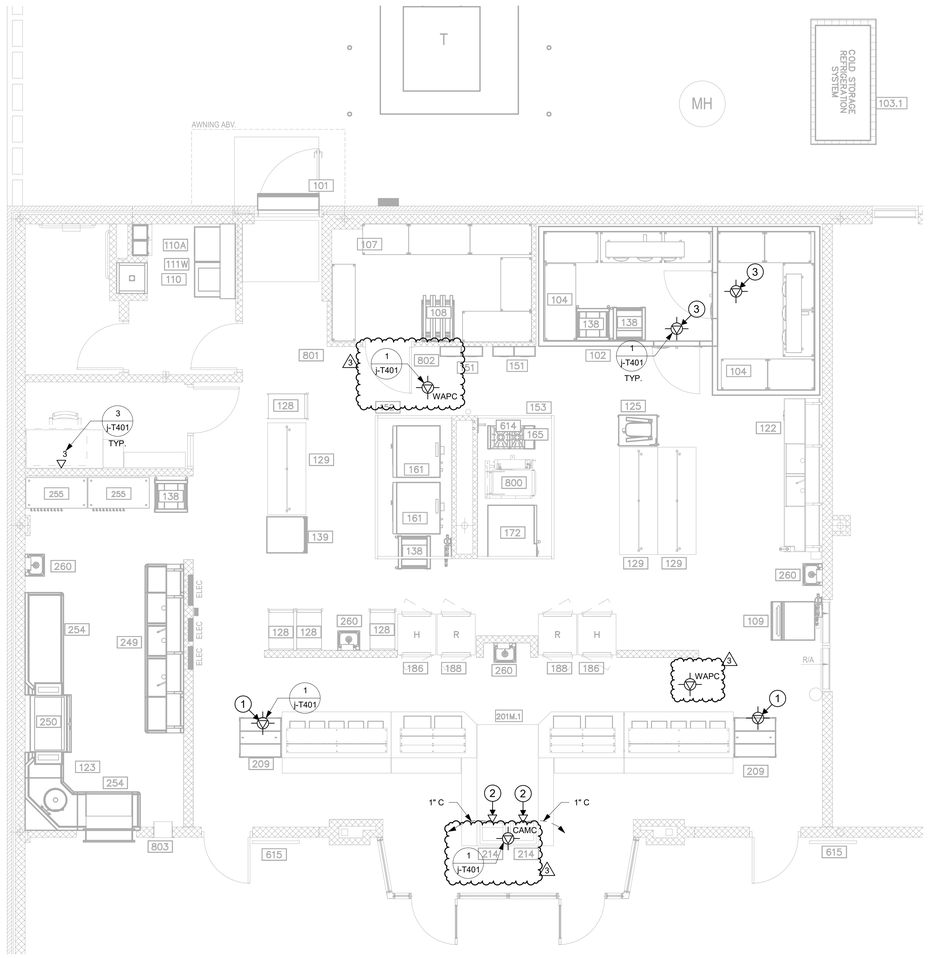
PLUMBING RISER DIAGRAMS

j-P2.00



1 j-T201 TECHNOLOGY NEW/RENOVATION KITCHEN PLAN
1/4" = 1'-0"

TECHNOLOGY FLOOR PLANS GENRAL NOTES:

1. THE TECHNOLOGY REGION / WIRING BOUNDARIES ARE IDENTIFIED ON THE OVERALL SHEETS ONLY AND NOT ON THE ENLARGED SHEETS. CONTRACTOR SHALL REFER TO THE OVERALL SHEETS FOR ALL TECHNOLOGY REGIONS / WIRING BOUNDARIES.
2. ALL CONDUIT PATHWAYS, ROUGH-INS, BACKBOXES, FLOOR BOXES, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
6. TECHNOLOGY CABLING SHALL BE ROUTED IN SEPARATE PATHWAYS IN J-HOOKS, CONDUITS, CONDUIT SLEEVES, CORES, ETC. THROUGHOUT THE ENTIRE PATHWAY. DIFFERENT MEDIA TYPES (DATA, VIDEO, SECURITY, ETC.) SHALL NOT SHARE THE SAME J-HOOK, CONDUIT, CONDUIT SLEEVE, CORE, ETC.
7. UNLESS NOTED OTHERWISE, ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE AN ACCESSIBLE CEILING (AN OPEN CEILING OR CLOUD TYPE CEILING IS NOT CONSIDERED AN ACCESSIBLE CEILING) IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF / IDF ROOM TO MINIMIZE THE CABLE LENGTH ENSURING CABLE LENGTH DOES NOT EXCEED 275 FEET.
8. UNLESS NOTED OTHERWISE ALL CONDUITS SHALL BE HOMERUN FROM THE DEVICE LOCATION AND NO DAISY CHAINING OF DEVICES/ ROUGH-INS SHALL BE ALLOWED.
9. CONDUIT SEGMENTS SHALL BE NO MORE THAN 100-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
10. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
13. EQUIPMENT NOT RELATED TO THE SUPPORT OF THE TELECOMMUNICATIONS ROOM (E.G., PIPING, DUCTWORK, PNEUMATIC TUBING) SHALL NOT BE INSTALLED IN, PASS THROUGH, OR ENTER THE TELECOMMUNICATIONS ROOM.
14. ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE A LAY-IN TYPE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE A LAY- IN TYPE CEILING TO PREVENT THE CABLES FROM BEING EXPOSED, THE CONDUIT SHALL ROUTE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. THE CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE MAIN CORRIDOR OR NEAREST MDF/IDF TO MINIMIZE THE CABLE LENGTH ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. CONDUIT, CONNECTIONS, J-BOXES, SUSPENSION, ANCHORAGES, AND OTHER CONDUIT COMPONENTS EXPOSED TO VIEW IN PUBLIC SPACES SHALL BE ROUTED AND INSTALLED CAREFULLY TO MINIMIZE VISUAL IMPACT AND SHALL BE FULLY PAINTED TO MATCH UNLESS NOTED OTHERWISE.
15. CONDUIT(S) INSTALLED IN-SLAB OR UNDER-SLAB TO FLOOR BOXES, POKE-THURS, AND TO WORKAREA OUTLETS, ETC. SHALL BE INSTALLED WITH WET RATED CABLE(S).
16. NO GRID WIRE SHALL BE UTILIZED FOR SUPPORTS ONLY USE SOLID SUPPORTS (CLIPS, ALL-THREAD, ANCHORS, ETC.).

TECHNOLOGY PLAN KEYED NOTES

NOT ALL KEYED BELOW APPLY TO THIS SHEET

1. DATA CABLE FOR CONTRACTOR FURNISHED / CONTRACTOR INSTALLED MENU BOARD. REFERENCE ARCHITECTURAL AND FOOD SERVICE DRAWINGS FOR MOUNTING HEIGHT AND ADDITIONAL INFORMATION. BUILDING POWER ADJACENT TO DATA RECEPTACLE IS REQUIRED.
2. INDOOR / OUTDOOR RATED DATA CABLE FOR POINT OF SALE LOCATION. PROVIDE (1) 1-INCH CONDUIT FOR DATA TO THE WALL BEHIND POINT OF SALE LOCATION AND UP WALL TO ABOVE ACCESSIBLE CEILING. CONDUITS SHALL TERMINATE INSIDE A DOUBLE GANG BOX THAT IS SECURED TO THE POINT OF SALE LOCATION. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS.
3. DATA CABLE FOR TEMPERATURE MONITORING OF FREEZER COOLER. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS AND TERMINATION POINT AND CONNECTIVITY NEEDS IN FREEZER / COOLER CONTROL UNIT.
4. DATA CABLE FOR TEMPORARY POINT OF SALES CASH REGISTER. COORDINATE WITH OWNER, ARCHITECT, AND CONSULTANT FOR ROUTING OF CABLES TO POINT OF SALE CASH REGISTER PRIOR TO INSTALLATION

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FBISD PKG 13 KITCHEN RENOVATIONS
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HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 12-31-25
RCDD

07/18/2025

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HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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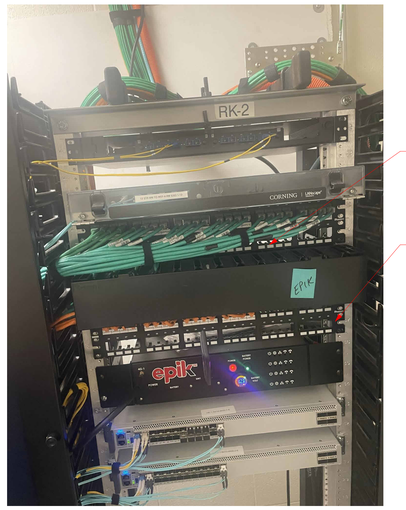
TECHNOLOGY NEW/RENOVATION KITCHEN PLAN

SHEET NO.
j-T201

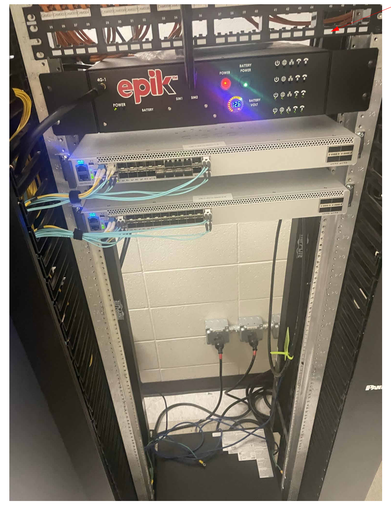


UTILIZE THIS PANEL FOR NEW WIRELESS ACCESS POINT CABLING (GREEN CABLE) 3

UTILIZE THIS PANEL FOR NEW SURVEILLANCE CAMERA CABLING (ORANGE CABLE) 3

UTILIZE OPEN PORTS ON RACK 1 DATA PANELS FOR NEW DATA WORKAREA CABLING (BLUE CABLE) 3

1 j-T300 HIGHLANDS ES EXISTING RACK - TOP PORTION
N.T.S



UTILIZE THIS PANEL FOR NEW SURVEILLANCE CAMERA CABLING (ORANGE CABLE) 3

2 j-T300 HIGHLANDS ES EXISTING RACK - BOTTOM PORTION
N.T.S

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025 3	ADDENDUM NO. 4

J

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
Expires 12-31-25
RCDD

07/18/2025

MWA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

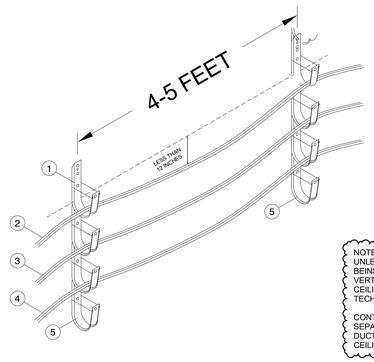
TECHNOLOGY ENLARGED VIEWS

SHEET NO.
j-T300

NOTE TO CONTRACTOR:

UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BE INSTALLED WITHIN 6-INCHES OF THE CEILING AND ACCESSIBLE BY A TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPRATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPIING OR OTHER SYSTEMS IN THE CEILING PLENUM.



KEYED NOTES:

1. J-HOOK WITH RETAINER CLIP ABOVE ACCESSIBLE CEILING (BY DIV 27).
2. DATA CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
3. A/V CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
4. SECURITY CABLE ABOVE ACCESSIBLE CEILING (BY DIV 28).
5. SPARE J-HOOK (BY DIV 27).

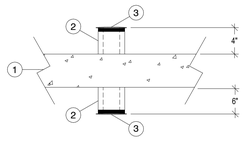
NOTE TO CONTRACTOR:
UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BEINSTALLED WITHIN 6-INCHES OF THE CEILING AND LAST VERTICALLY SITUATED J-HOOK SHALL BE NO HIGHER THAN 18" OF CEILING. CABLES AND SUPPORTS SHLL BE ACCESSIBLE BYA TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPARATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPING OR OTHER SYSTEMS IN THE CEILING PLENUM

3

1 / T400 TYPICAL J-HOOK CABLE PATHWAY

SCALE: N.T.S.

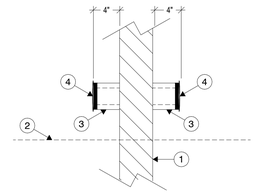


KEYED NOTES:

1. SCHEDULED FLOOR OR DECK.
2. CONDUIT SLEEVE (BY DIV 26).
3. NYLON BUSHING (BY DIV 26).

2 / T400 TYPICAL CONDUIT SLEEVE THROUGH FLOOR OR DECK DETAIL

SCALE: N.T.S.

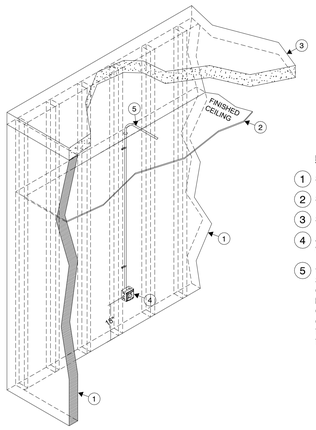


KEYED NOTES:

1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. CONDUIT SLEEVE (BY DIV 26).
4. NYLON BUSHING (BY DIV 26).

3 / T400 TYPICAL CONDUIT SLEEVE GOING THROUGH WALL

SCALE: N.T.S.



KEYED NOTES:

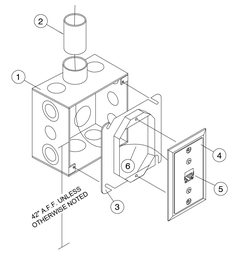
1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. SCHEDULED DECK ABOVE.
4. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX WITH DOUBLE GANG PLASTER RING (BY DIV 26).
5. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH. (BY DIV 26).

4 / T400 TYPICAL TECHNOLOGY CONDUIT ROUGH-IN

SCALE: N.T.S.

DETAIL DELETED SPACE LEFT INTENTIONALLY BLANK

3

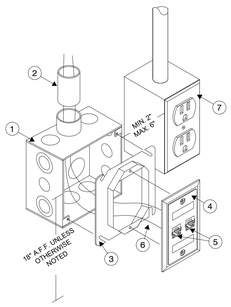


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH PHONE STUDS (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).

6 / T400 TYPICAL WALL PHONE OUTLET CONFIGURATION

SCALE: N.T.S.

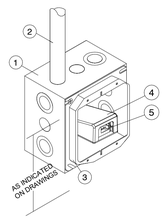


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).
7. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

7 / T400 TYPICAL DUAL DATA OUTLET CONFIGURATION

SCALE: N.T.S.

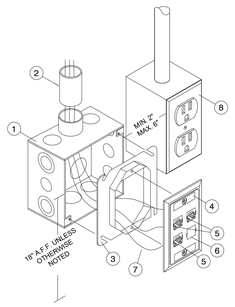


KEYED NOTES:

1. 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. DOUBLE GANG PLASTER RING (BY DIV 26).
4. SURFACE MOUNT BOX INSIDE THE 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH DOUBLE GANG BOX (BY DIV 27).
5. RJ-45 INSERT (BY DIV 27).

8 / T400 TYPICAL WALL-MOUNTED WIRELESS ACCESS POINT

SCALE: N.T.S.



KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. BLANK INSERT (BY DIV 27).
7. CABLE AS SPECIFIED (BY DIV 27).
8. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

9 / T400 TYPICAL THREE DATA OUTLET CONFIGURATION

SCALE: N.T.S.

ISSUE:

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03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025 3	ADDENDUM NO. 4

J

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 12-31-25
RCDD

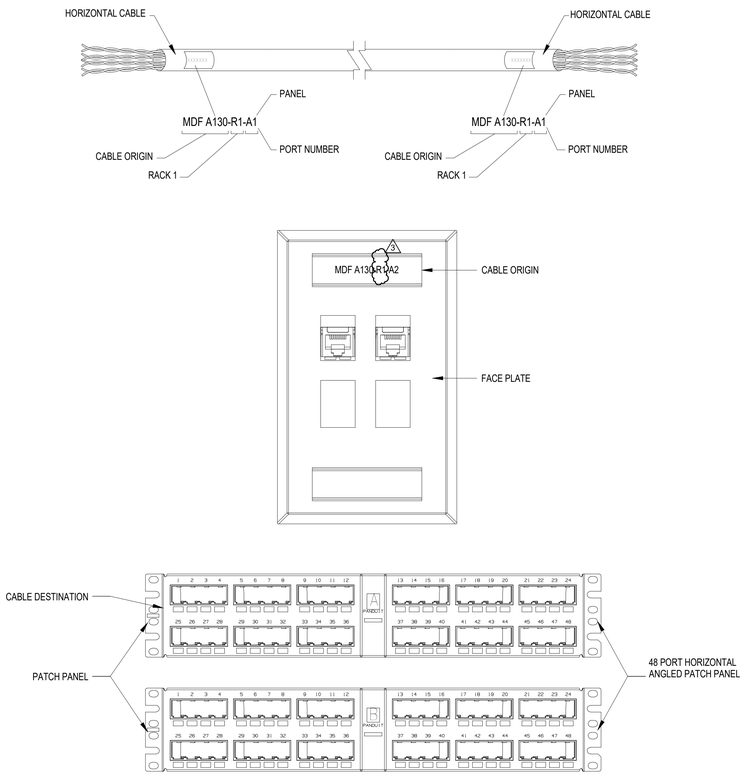
07/18/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

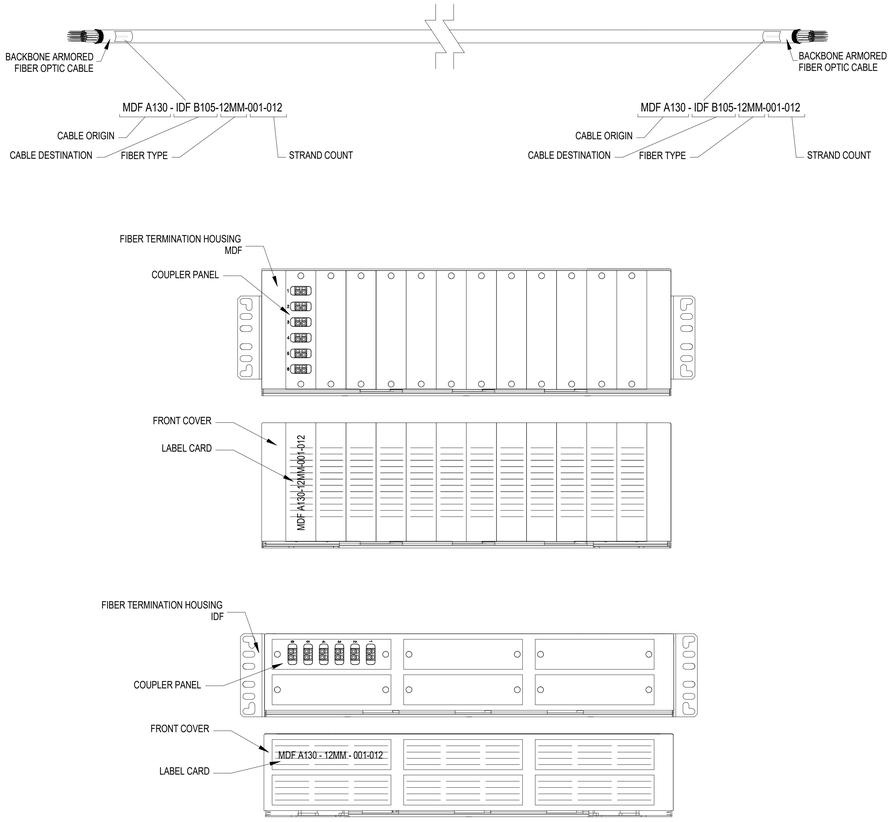
TECHNOLOGY TYPICAL DETAILS

SHEET NO.
j-T400



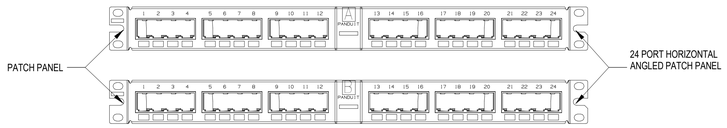
1 T500 TYPICAL HORIZONTAL DATA CABLE LABELING SCHEME

SCALE: N.T.S.



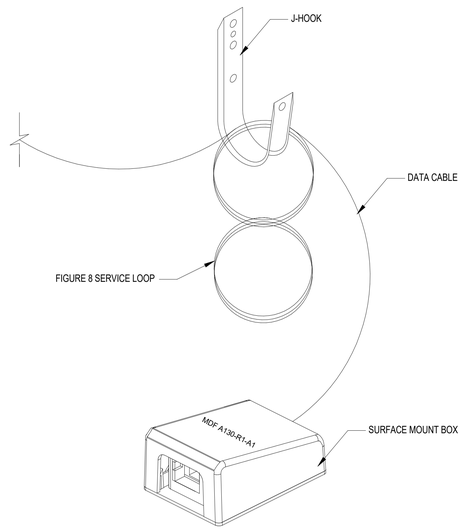
2 T500 TYPICAL FIBER BACKBONE LABELING SCHEME

SCALE: N.T.S.



3 T500 TYPICAL COPPER BACKBONE LABELING SCHEME

SCALE: N.T.S.



4 T500 ABOVE ASSESSIBLE CEILING LABELING SCHEME

SCALE: N.T.S.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
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09/04/2025 (3)	ADDENDUM NO. 4

J

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 10-31-25
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07/18/2025

MWA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

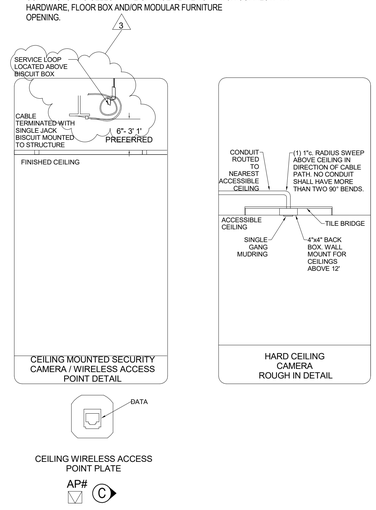
PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

TECHNOLOGY TYPICAL LABELING SCHEME

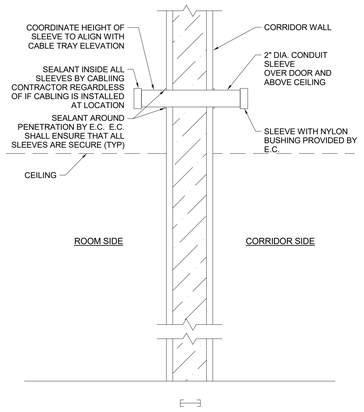
SHEET NO.
j-T500

GENERAL NOTE

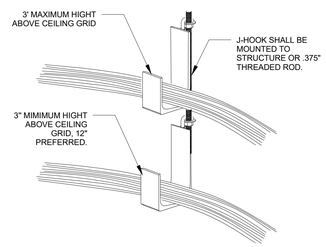
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



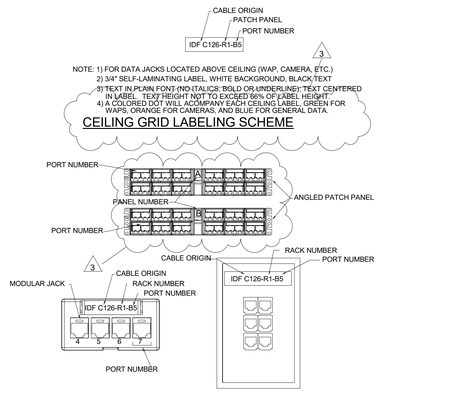
1 DATA ROUGH-IN DETAILS
SCALE: NS



2 TYPICAL CABLING SLEEVE
SCALE: NTS

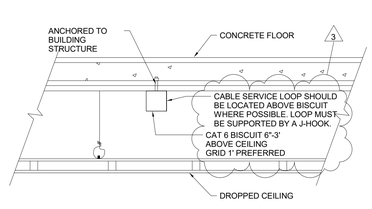


3 PANDUIT J-HOOK DETAIL
SCALE: NTS

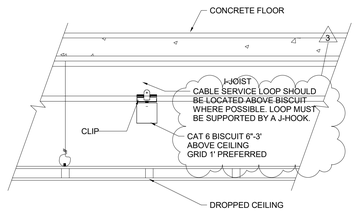


4 LABELING & CABLING SCHEMES
SCALE: NTS

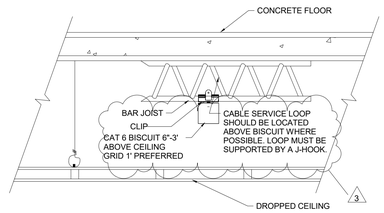
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

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07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/042025 (3)	ADDENDUM NO. 4

j

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Highlands Elementary School
2022 Colonist Park Dr. Sugar Land, TX 77478

SEAL

07-18-25

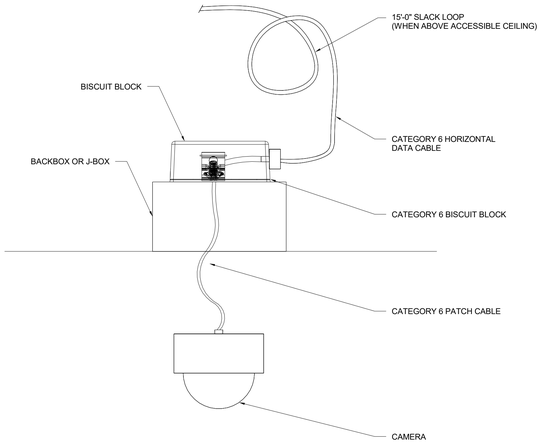
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - HIGHLAND ES - DETAILS

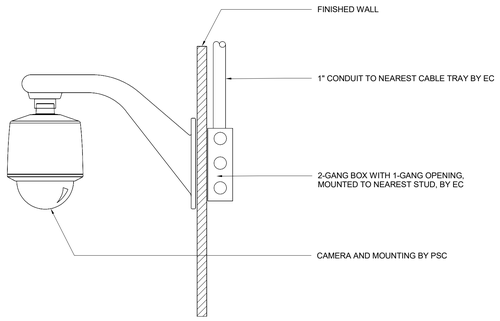
j-TN.500

GENERAL NOTES:

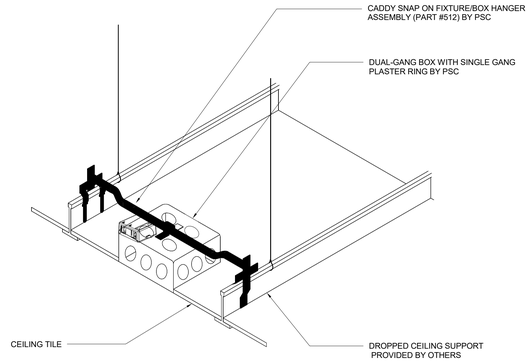
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



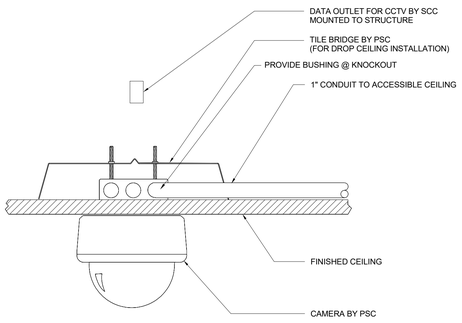
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

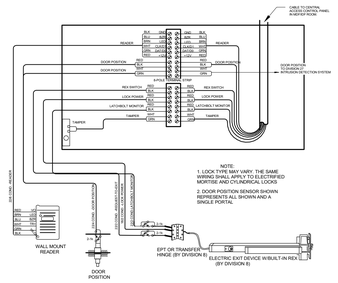


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

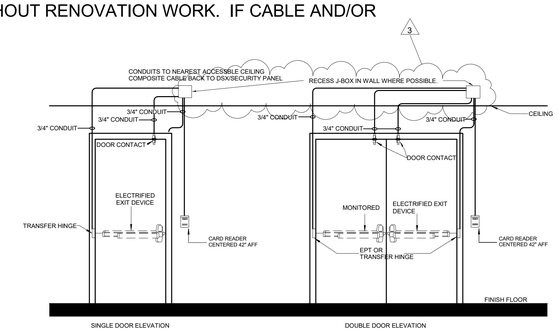
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

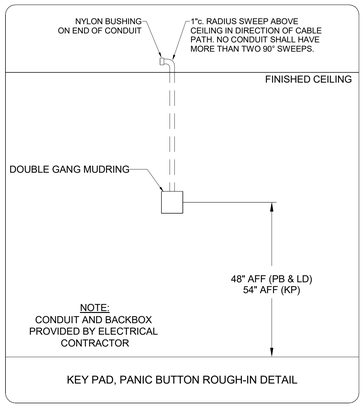
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025 ③	ADDENDUM NO. 4

j

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Highlands Elementary School
2022 Colonist Park Dr, Sugar Land, TX 77478

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 256557
EXPIRES 12-31-27
RCDD

07-18-25

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - HIGHLAND ES - SECURITY DETAILS

j-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

FORT BEND INDEPENDENT SCHOOL DISTRICT 2023 BOND

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARCELL SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

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DR. SHIRLEY ROSE-GILLIAM	BOARD MEMBER
SONYA JONES	BOARD MEMBER

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Phone Number: 713-782-8188

FOOD SERVICE
Food Design Professionals
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The Woodlands, Texas 77380
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Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

Sheet List Table	
Sheet Number	Sheet Title
School: k-Hunters Glen ES	
k-A.000	COVER AND INDEX
k-A00-01	GENERAL NOTES AND ABBREVIATIONS
k-D.101	DEMO PLAN
k-D.101-2	DEMO PLAN PHOTOS
k-D.101-3	DEMO PLAN PHOTOS
k-ED.100	ELECTRICAL DEMOLITION AND TEMPORARY KITCHEN PLAN
k-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
k-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
k-A.101	SITE PLAN
K-A.200	SLAB DEPRESSION PLAN
k-A.201	OVERALL FLOOR PLAN
k-A.300	SLAB DIMENSION CONTROL PLAN
k-A.301	KITCHEN PLAN
k-A.302	TEMPORARY KITCHEN LAYOUT
k-A.401	REFLECTED CEILING PLAN
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k-A.502	PARTITION SCHEDULE
k-QF0.0	FS GENERAL COORDINATION NOTES
k-QF1.0	FS EQUIPMENT PLAN
k-QF1.1	FS FACILITY MODEL
K-QF1.2	FS EQUIPMENT MODEL
k-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
k-QF1.4	FS PLUMBING PLAN
k-QF1.5	FS ELECTRICAL PLAN
k-QF1.6	FS CONDENSING UNITS
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k-QF4.2	FS DETAILS
k-QF4.3	FS DETAILS
k-M1.01	MECHANICAL PLANS
k-M2.01	KITCHEN MECHANICAL DETAILS
k-M2.02	MECHANICAL DETAILS (CONT.)
E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
E.001	ELECTRICALAND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
E.013	ELECTRICAL KITCHEN DETAILS
E.060	LIGHTING SCHEDULES
k-E.100	LIGHTING FLOOR PLANS
k-E.200	ELECTRICAL FLOOR PLANS
k-E.300	FIRE ALARM FLOOR PLANS
k-E.400	ELECTRICAL SCHEMATIC
k-P0.01	PLUMBING NOTES & SCHEDULES
k-P0.02	PLUMBING SCHEDULES & DETAILS
k-P1.01	PLUMBING FLOOR PLAN
k-P1.02	PLUMBING FLOOR PLAN TEMPORARY KITCHEN
k-P2.00	PLUMBING RISER DIAGRAMS
k-T000	TECHNOLOGY SYMBOLS & LEGEND
k-T200	TECHNOLOGY COMPOSITE FLOOR
k-T201	TECHNOLOGY NEW_RENOVATION KITCHEN PLAN
k-T300	TECHNOLOGY TEMPORARY KITCHEN PLAN
k-T202	TECHNOLOGY ENLARGED VIEWS
k-T400	TECHNOLOGY TYPICAL DETAILS
k-T401	TECHNOLOGY TYPICAL DETAILS
k-T500	TECHNOLOGY TYPICAL DETAILS
k-TN-000	TECHNOLOGY - INDEX SHEET
k-TN-001	TECHNOLOGY - DEMO
k-TN-100	TECHNOLOGY - OVERALL
k-TN-101	TECHNOLOGY - KITCHEN
k-TN-500	TECHNOLOGY - DETAILS
k-TN-600	TTECHNOLOGY - SECURITY DETAILS
k-TN-700	TECHNOLOGY - AV DETAILS

REGISTERED ARCHITECT MICHAEL A. MAGUIRE 22651 STATE OF TEXAS
04SEP.2025

ADDENDUM NO. 4 - SEP 04, 2025

k

TEMPORARY KITCHEN FLOOR PLAN KEYED NOTES 05/A-A03-02

01 PROVIDE & INSTALL 555 SF OF RAM BOARD TO PROTECT EXISTING FLOORING. REMOVE AFTER CONSTRUCTION IS COMPLETE. CONTRACTOR MUST REPAIR FLOORING DAMAGED DURING CONSTRUCTION.

02 PROVIDE SCHEDULED PARTITIONS. BUILD PARTITIONS ON TOP OF RAM BOARD. DO NOT ATTACH PARTITIONS TO FLOOR.

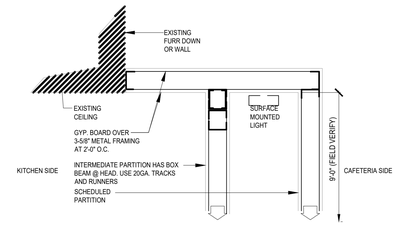
03 ATTACH PARTITIONS TO EXISTING WALL. REPAIR WALL TO MATCH EXISTING AFTER CONSTRUCTION IS COMPLETE.

TEMPORARY KITCHEN RCP KEYED NOTES 03/A-A03-02

04 ALL NEW SCHEDULED PARTITIONS AND CEILINGS FOR TEMPORARY STORAGE LAYOUT TO BE EPOXY PAINTED SW 7014 EIDER WHITE WITH SPECIFIED 4" RUBBER BASE. REMOVE WHEN CONSTRUCTION IS COMPLETED.

05 MOUNT TEMPORARY FLUORESCENT LIGHTS TO TEMPORARY CEILING.

3 KEYED NOTES
SCALE: 1/4"=1'-0"



4 TEMPORARY LAYOUT SECTION
SCALE: 1"=1'-0"

1 TEMPORARY KITCHEN RCP
SCALE: 1/4" = 1'-0"

2 TEMPORARY KITCHEN FLOOR PLAN
SCALE: 1/4" = 1'-0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ISSUED FOR ADDENDUM 04

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE:
ADDENDUM NO. 4 - SEP 04, 2025

TEMPORARY KITCHEN LAYOUT
k-A.302

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\K-Hunters Glen ES\k-A.302 TEMPORARY KITCHEN LAYOUT.dwg Sep 05, 2025 - 12:08pm

FOOD SERVICE DRAWING INDEX	
FDP SHEET NUMBER	FDP SHEET NAME
K-QF0.0	FS GENERAL COORDINATION NOTES
K-QF1.0	FS EQUIPMENT PLAN
K-QF1.1	FS FACILITY MODEL
K-QF1.2	FS EQUIPMENT MODEL
K-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
K-QF1.4	FS PLUMBING PLAN
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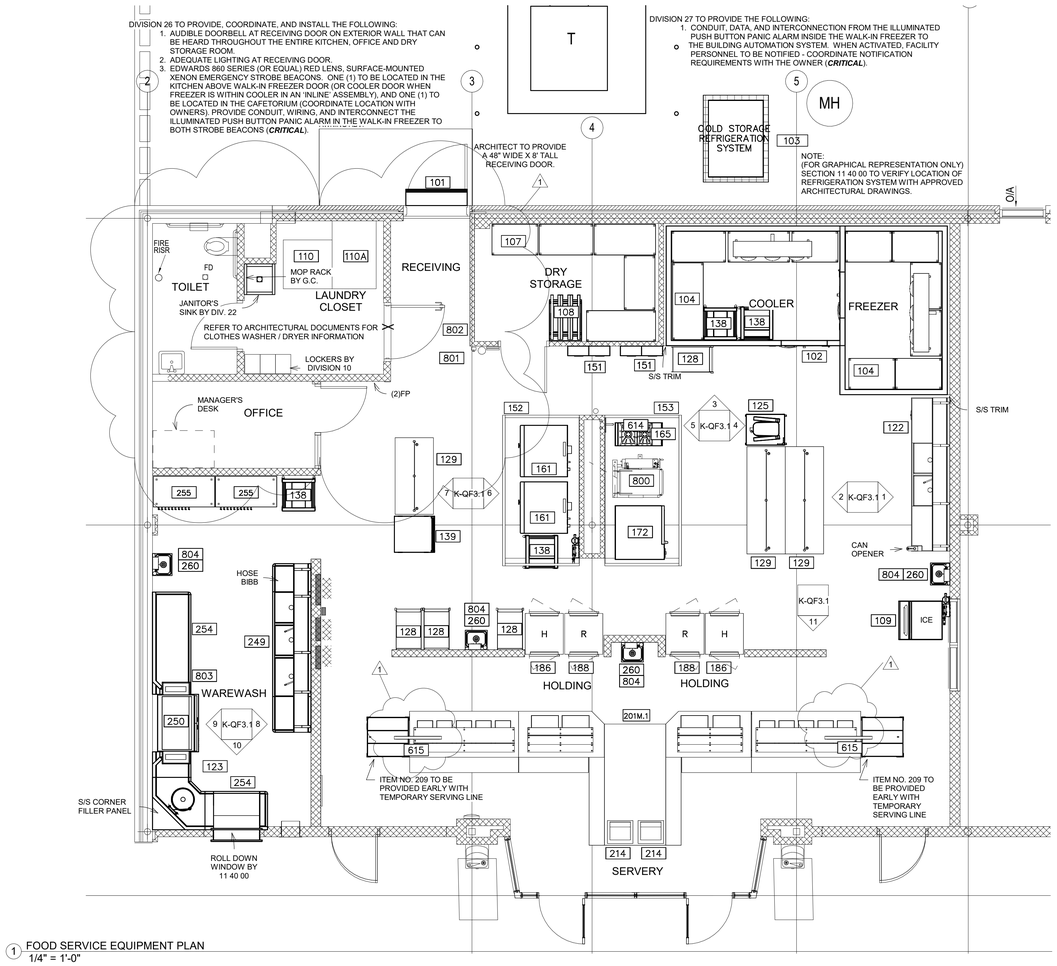
K-QF4.1	FS SECTIONS & DETAILS
K-QF4.2	FS DETAILS
K-QF4.3	FS DETAILS



1 FOOD SERVICE EQUIPMENT PLAN
1/4" = 1'-0"

FOOD SERVICE EQUIPMENT SCHEDULE					
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH DEPARTMENT COORDINATION NOTES					
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS	MANUFACTURER	MODEL
101	1	AIR SCREEN		MARS	STD248-1U A-OB
102	1	COLD STORAGE ASSEMBLY		AMERICAN PANEL	
103	1	COLD STORAGE REFRIGERATION SYSTEM		RDT	ZS1-02Z-C T3-AST
104	2	COLD STORAGE SHELVING		METRO	METROMA X Q
107	1	DRY STORAGE SHELVING		METRO	METROMA X Q
108	1	CAN RACK		NEW AGE	1250CK
109	1	ICE MACHINE W/ BIN		MANITOWOC	UYF0310A
110	1	CLOTHES WASHER	BY G.C.		
110A	1	CLOTHES DRYER	BY G.C.		
122	1	TWO COMPARTMENT SINK WITHOUT DISPOSER		CUSTOM FABRICATED	
123	1	DISPOSER - 3HP		SALVAJOR	300-CA-18-ARSS-LD
125	1	20 QT. MIXER W/STAND		HOBART	HL2000
128	4	UTILITY CART		LAKESIDE	522
129	3	WORKTABLE W/S.BAR UT.RACK		CUSTOM FABRICATED	
138	4	PAN RACK		CRES COR	207-UA-13 A
139	1	INSUL MOBILE PROOFER		CRES COR	H-137-WS UA-12D
151	2	FIRE PROTECTION SYSTEM		ANSUL	R102
152	1	EXHAUST HOOD	EXISTING		
153	1	EXHAUST HOOD	EXISTING		
161	2	CONVECTION OVEN		BLODGETT	DFG-200 DBL
165	1	TWO BURNER RANGE		VULCAN	V2B18B
172	1	COMBI OVEN		RATIONAL	ICP 6-FULL/6-FULL N/G
186	2	PASS-THRU HEATED CABINET-1DR		TRAULSEN	AHF132WP
188	2	PASS-THRU REFRIGERATOR-1DR		TRAULSEN	AHT132WP UT
201M.1	1	SERVING COUNTER-MODULAR		COUNTERCRAFT	SCOL-408-MOD
214	2	CASH REGISTER	OWNER FURNISHED		
249	1	THREE COMPARTMENT SINK NO DISPOSER		CUSTOM FABRICATED	
250	1	DISHMACHINE		HOBART	CL44-BAS
254	2	SOILED & CLEAN DISHTABLE		CUSTOM FABRICATED	
255	2	MOBILE DRYING RACK		METRO	PR48VX3
260	4	HAND SINK	FURNISHED & INSTALLED BY DIV. 22		
614	1	FILL FAUCET		T&S	B-0610
615	2	MENU MONITOR	BY OWNER		
800	1	15 GAL. BRAISING PAN		GROEN	BPM-15GA
801	1	S/S CORNER GUARDS	LOCATED ON EVERY EXPOSED CORNER THROUGHOUT KITCHEN	CUSTOM FABRICATED	
802	1	WALL BUMPERS	LOCATED ON ALL EXPOSED BUILDING WALLS	PAWLING	MD-1
803	1	WATER SOFTENER		HOBART	WS-40
804	4	S/S SPLASH GUARDS		CUSTOM FABRICATED	

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FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
488544119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THESE DRAWINGS OR PLANS ARE AUTHORIZED BY MELISSA MOORE, FCSI NO. 488544119 ON: 07/18/2025

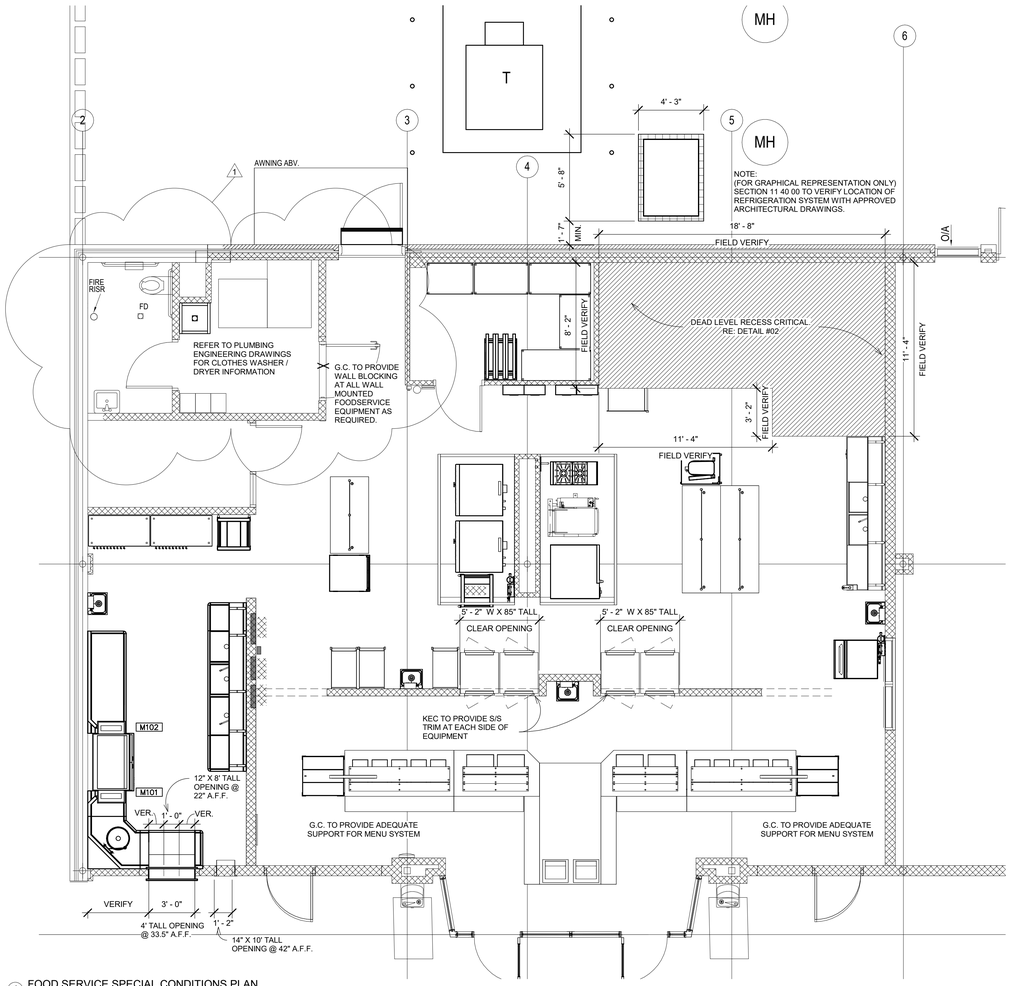
MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS EQUIPMENT PLAN

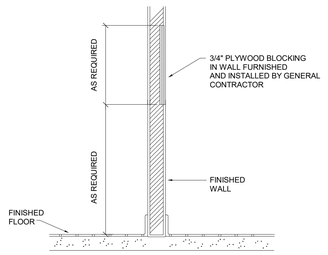
K-QF1.0

FOOD SERVICE MECHANICAL SCHEDULE						
REFER TO SHEET QF1 FOR MECHANICAL COORDINATION NOTES						
FDP NO.	FDP QTY	FDP TYPE	FDP SIZE	FDP LOC	FDP CFM	FDP S.P.
M101	1	EXHAUST	4" X 16"		400	0.30"
M102	1	EXHAUST	4" X 16"		800	0.30"



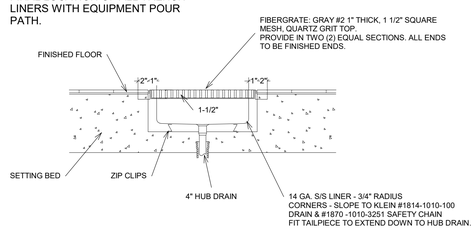
1 FOOD SERVICE SPECIAL CONDITIONS PLAN
1/4" = 1'-0"

NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION AND SIZE OF WALL BLOCKING.

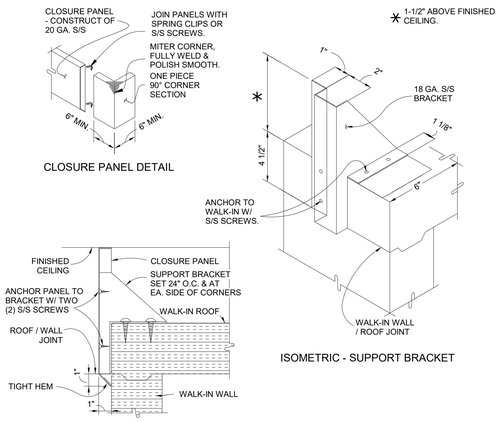


5 WALL BLOCKING DETAIL
NOT TO SCALE

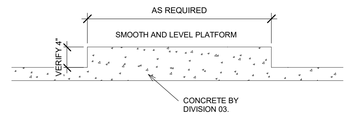
NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION OF ALL TRENCH LINERS WITH EQUIPMENT POUR PATH.



6 TRENCH LINER DETAIL
NOT TO SCALE

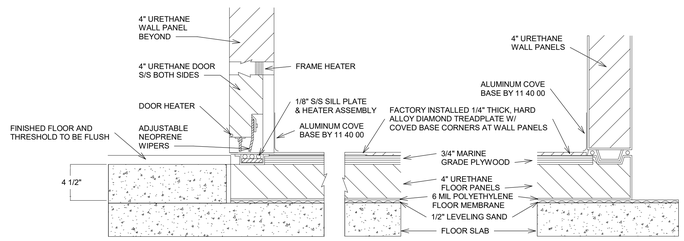


3 COLD STORAGE ASSEMBLY ENCLOSURE PANEL DETAIL
NOT TO SCALE



4 COLD STORAGE ASSEMBLY REFRIGERATION SYSTEM GROUND MOUNT 4" PLATFORM DETAIL
NOT TO SCALE

SLAB TO BE MODIFIED AS REQUIRED TO ALLOW FOR A 4 1/2" DEPRESSION SLAB. PROVIDE NEW LEVEL CONCRETE PAD FOR COLD STORAGE ASSEMBLY.



WALL SECTION @ EXTERIOR DOOR

2 COLD STORAGE ASSEMBLY 4 1/2" DEPRESSION DETAIL
NOT TO SCALE

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FDP
FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
488541119
PROFESSIONAL MEMBER
Melissa Moore
7/18/2025
THIS ITEM WAS PREPARED ON THE DATE SHOWN AND AUTHORIZED BY MELISSA MOORE, FCSI NO. 488541119
OR: 07/18/2025

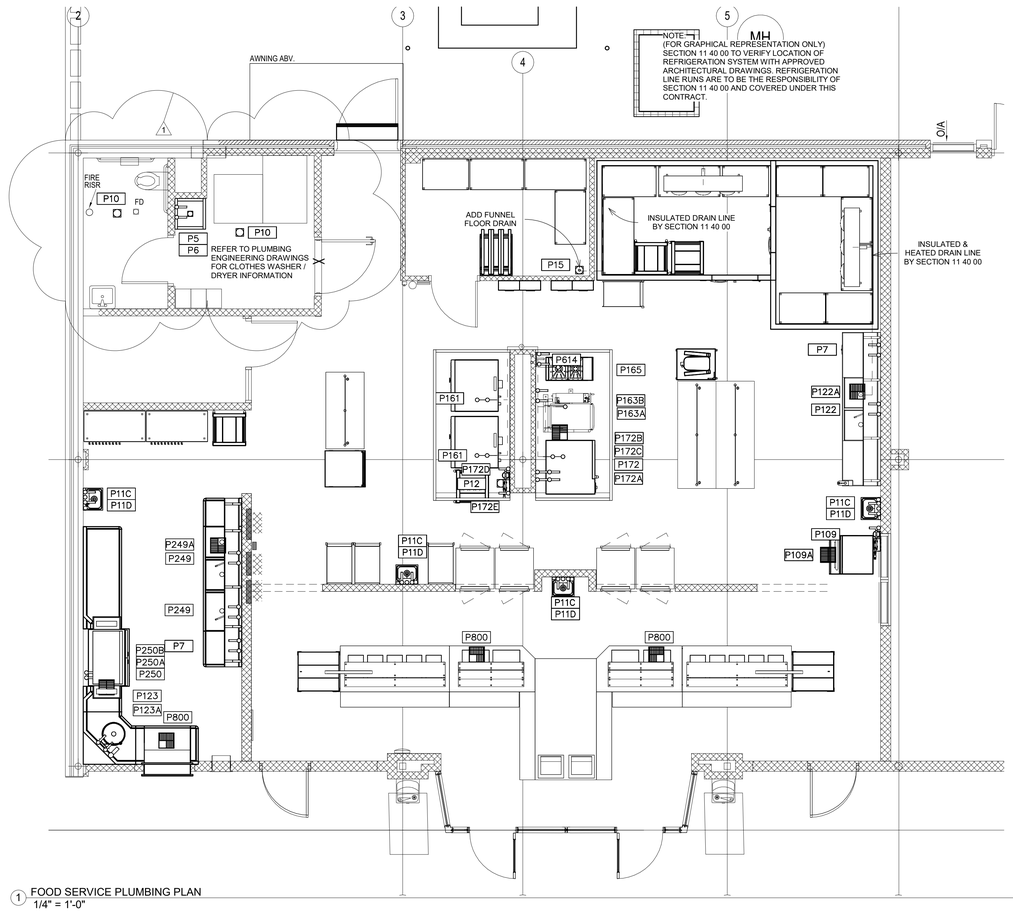
MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS SPECIAL CONDITIONS & MECHANICAL PLAN

K-QF1.3

FOOD SERVICE PLUMBING SCHEDULE						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
						<varies>
P5	3/4"	H & C WATER	JANITOR SINK	WALL	48"	JANITOR SINK BY PLUMBER
P6	4"	FLOOR DRAIN	JANITOR SINK	FLOOR	VERIFY	JANITOR SINK BY PLUMBER
P7	3/4"	H & C WATER	HOSE BIBB	WALL	18"	BTC
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	---
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P12	VERIFY	FLOOR DRAIN	EQUIP. DRAIN	FLOOR	VERIFY	NO SLOPE
P15	4"	FLOOR DRAIN	FUNNEL FLOOR DRAIN	FLOOR	0"	---
P109	3/4"	COLD WATER	WATER/ ICE	WALL	60"	BTC
P109A	12" SQ.	FLOOR SINK	ICE MACHINE	FLOOR	0"	FULL GRATE
P122	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P122A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	3/4 GRATE
P123	3/4"	H & C WATER	FAUCET / DISPOSER	WALL	13"	BTC
P123A	2"	DIRECT DRAIN	DISPOSER	WALL	10"	BTC
P161	(2)3/4"	NATURAL GAS	CONVECTION OVEN	WALL	18"/36"	BTC - 60 MBTU/HR EACH
P163A	3/4"	NATURAL GAS	TILT BRAISING PAN	WALL	18"	BTC - 65 MBTU/HR
P163B	3/4"	H & C WATER	TILT BRAISING PAN	WALL	36"	BTC
P165	1"	NATURAL GAS	RANGE	WALL	18"	BTC - 70 MBTU/HR
P172	(2)3/4"	COLD WATER	COMBI OVEN	WALL	24"/48"	BTC - INTERCONNECT THRU FILTERS
P172A	3/4"	COLD WATER	COMBI OVEN	WALL	48"	BTC
P172B	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE
P172C	(2)3/4"	NATURAL GAS	COMBI OVEN	WALL	18"/36"	BTC - 105 MBTU/HR EACH
P172D	3/4"	COLD WATER	COMBI OVEN	WALL	66"	BTC; INTERCONNECT TO P172
P172E	3/4"	COLD WATER	COMBI OVEN WATER FILTER	WALL	66"	BTC
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P249A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	THREE QUARTER GRATE
P250	12" SQ.	FLOOR SINK	BOOSTER / DISHMACHINE	FLOOR	18"	BTC
P250A	3/4"	HOT WATER	DISHMACHINE	WALL	18"	EXT. THRU W.FILTER TO BOOSTER / DISH MACHINE - 140DEG.MIN.
P250B	3/4"	COLD WATER	DISHMACHINE	WALL	18"	BTC
P614	1/2"	H & C WATER	FILL FAUCET	WALL	42"	BTC
P800	12" SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE



1 FOOD SERVICE PLUMBING PLAN
1/4" = 1'-0"

SECTION 11 40 00 TO PROVIDE LOOSE WITH FOOD SERVICE EQUIPMENT. INSTALLATION BY DIV. 22 & 26.

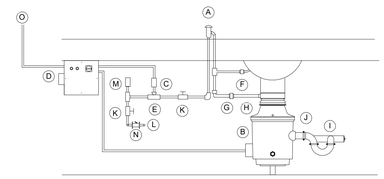
- (A) VACUUM BREAKER
- (B) DISPOSER
- (C) TIME DELAY
- (D) CONTROL PANEL
- (E) SOLENOID VALVE

DIVISION 22 TO PROVIDE AND INSTALL

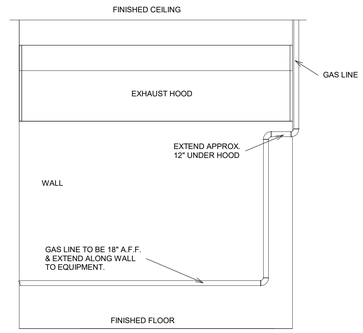
- (F) 1/2" CW INLET
- (G) FLOW CONTROL
- (H) 1/2" CW
- (I) 2" DRAIN LINE WITH P-TRAP & Y ADAPTOR
- (J) 1-1/2" TAILPIECE
- (K) GATE VALVE
- (L) 1/2" CW SUPPLY
- (M) SHOCK STOP
- (N) RPZ BACK FLOW PREVENTOR

DIVISION 26 TO PROVIDE AND INSTALL

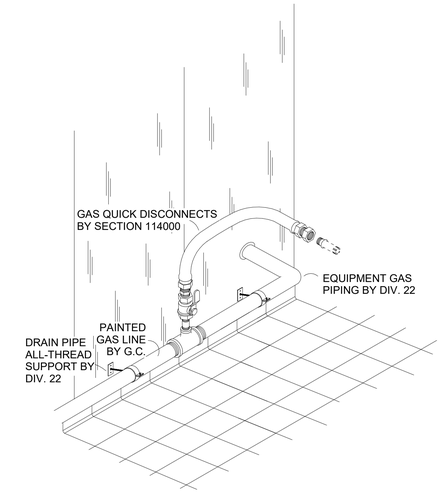
- (O) POWER SUPPLY



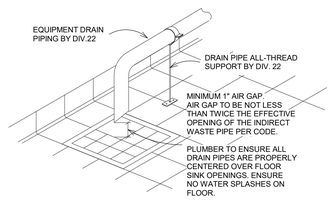
6 DISPOSER WITH VACUUM BREAKER DETAIL
NOT TO SCALE



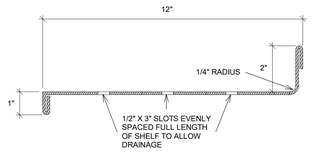
7 EXHAUST HOOD - GAS LINE ROUTING DETAIL
NOT TO SCALE



3 GAS DISCONNECT DETAIL
NOT TO SCALE



5 DRAIN PIPING FASTENER DETAIL
NOT TO SCALE



8 WAREWASH - PERFORATED OVER SHELF DETAIL
NOT TO SCALE

HW	HOT WATER	FFD		FUNNEL FLOOR DRAIN
CW	COLD WATER	EVC		EXHAUST VENT CONNECTION
HTW	180 F HOT WATER	SVC		SUPPLY VENT CONNECTION
	CHILLED WATER	FR		DIRECT-CONNECTED FLUE RISER
W	DIRECT WASTE	PS		PIPE SLEEVE
IW	INDIRECT WASTE			COMPRESSED AIR
	GAS SUPPLY			CO2
	STEAM SUPPLY		AFF	ABOVE FINISHED FLOOR
CR	CONDENSATE RETURN		BTC	BRANCH TO CONN. ON EQUIP
DR	DRAIN		DFA	DROP FROM ABOVE
FD	FLOOR DRAIN		CLG	CEILING
FST	FLOOR SINK 3/4 GRATE			
FSH	FLOOR SINK 3/4 GRATE			

2 PLUMBING SYMBOLS
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FDP
FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
108514119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
ELECTRONICALLY PREPARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 108514119 ON: 07/15/2025

ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

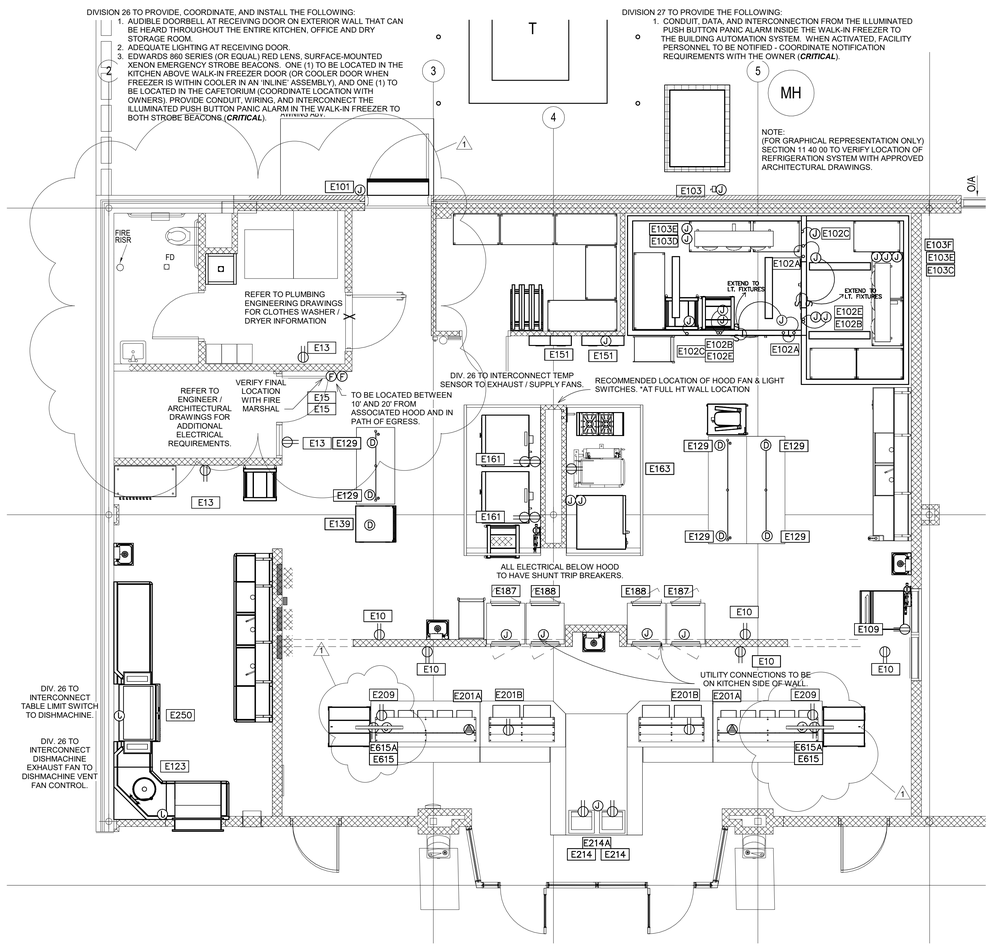
PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS PLUMBING PLAN

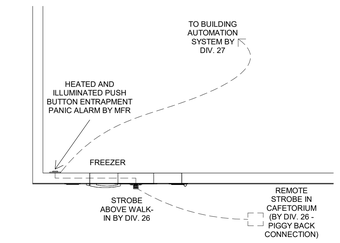
K-QF1.4

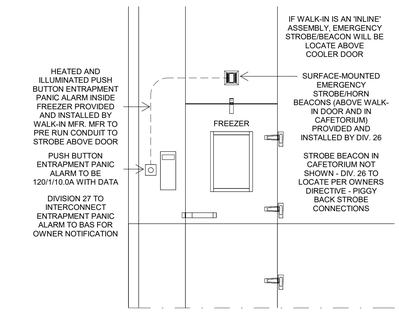
FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E10	DR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E13	WPR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E15	JB	---	---	---	FIRE PROT. SYSTEM	WALL	48"	RECESSED EMPTY CONDUIT FOR FIRE PULL
E101	JB	5.1A	120	1	AIR SCREEN	WALL	82"	BTC; MAGNETIC REED SWITCH ON DOOR JAMB & DOOR
E102A	JB	16.0A	120	1	DOOR HEATER/LIGHTS	CLG	DFA	BTC
E102B	JB	5.0A	120	1	TEMP. ALARM	CLG	DFA	BTC
E102C	JB	5.0A	120	1	PRESSURE RELIEF PORT	CLG	DFA	BTC
E102E	JB	10.0A	120	1	PANIC ALARM BUTTON	CLG	DFA	BTC-INTERCONNECT TO STROBE LIGHT/HORN ABOVE FREEZER DOOR AND IN CAFETORIUM
E103	JB/DS	21.9A	208	3	REFRIGERATION SYSTEM	VERIFY	VERIFY	BTC
E103C	JB	9.1A	208	1	FREEZER COIL	CLG	DFA	BTC
E103D	JB	1.8A	120	1	COOLER COIL	CLG	DFA	BTC
E103E	JB	---	---	---	DATA CONNECTION	CLG	DFA	BTC; RUN TO NEAREST IDF / MDF ROOM
E103F	JB	16.0A	120	1	DRAIN LINE HEATER	CLG	DFA	BTC; DEDICATED CIRCUIT
E109	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E123	JB	3.0HP	208	3	DISPOSER	WALL	24"	BTC; CONNECT THRU C.P. TO DISPOSER
E129	DCR	16.0A	120	1	TABLE RECEPTACLE	CLG	84"	TWISTLOCK PLUG & RECEPTACLE
E139	DCR	15.0A	120	1	INSUL. MOBILE PROOFER	CEILING	DFA	--

FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC
E161	(2)DR	6.0A EA.	120	1	CONVECTION OVEN	WALL	24"/48"	SHUNT TRIP BREAKER
E163	DR	5.0A	120	1	TILT BRAISING PAN	WALL	24"	SHUNT TRIP BREAKER
E187	JB	15.5A	120/208	1	HEATED CABINET	WALL	96"	BTC; MOUNT ON KITCHEN SIDE
E188	JB	7.2A	120	1	REFRIGERATOR	WALL	96"	BTC; MOUNT ON KITCHEN SIDE-OMIT PLUG, UNIT TO BE HARDWIRED
E201A	PMR	28.0A	208	1	HOT FOOD COUNTER	FLOOR	4.5"	BTC
E201B	PMR	16.0A	120	1	COLD FOOD COUNTER	FLR	4.5"	---
E209	PMR	8.0A	120	1	DROP FRONT MILK COOLER-8 CASE	FLR	4.5"	---
E214	PMR	16.0A	120	1	CASH REGISTER	FLR	4.5"	DEDICATED CIRCUIT
E214A	CS	---	---	---	POS	FLOOR	6"	BTC; CONDUIT W/DATA LINE TO RUN TO MANAGER'S OFFICE OR IDF ROOM-VERIFY
E250	JB/DS-JB	51.7A	480	3	DISHMACHINE	WALL	66"	BTC; EXTEND FROM JB/DS AT NEAREST WALL
E615	DR	5.0A	120	1	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE DCO AT VIDEO LOCATION
E615A	JB	---	---	---	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE JB AT DATA LOCATION

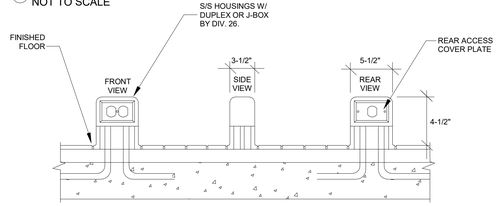


1 FOOD SERVICE ELECTRICAL PLAN
1/4" = 1'-0"



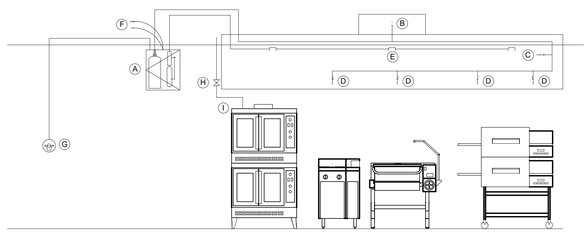


6 COLD STORAGE ASSEMBLY ENTRAPMENT PANIC ALARM DETAIL
NOT TO SCALE



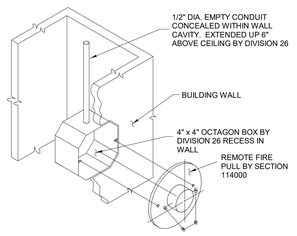
3 PEDESTAL MOUNTED RECEPTACLE DETAIL
NOT TO SCALE

NOTE:
REFER TO FDP EQUIPMENT PLAN FOR SPECIFIC COMPONENTS UNDER HOOD. ALL EQUIPMENT SHOWN HERE FOR GRAPHICAL REPRESENTATION ONLY.



- (A) S/S ENCLOSURE W/AGENT TANK AND NITROGEN CARTRIDGE
- (B) DUCT NOZZLE(S)
- (C) PLENUM NOZZLE(S)
- (D) SURFACE PROTECTION NOZZLE(S)
- (E) FUSIBLE LINK(S)
- (F) (2) WIRES FROM FIRE SYSTEM TO SHUNT TRIP BREAKERS FOR SHUT DOWN OF ELECTRICAL CONNECTIONS LOCATED BENEATH EXHAUST HOOD DURING FIRE MODE
- (G) REMOTE FIRE PULL
- (H) GAS VALVE
- (I) GAS SUPPLY (AS REQUIRED)

4 FIRE PROTECTION SYSTEM TYPICAL DETAIL
NOT TO SCALE



5 FIRE PROTECTION SYSTEM RECESSED FIRE PULL DETAIL
NOT TO SCALE

	SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES
•	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
	DR	DUPLEX RECEPTACLE		WPR	WATERPROOF RECEPTACLE (SPRING COVER)
	SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER
	SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT
	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
	PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR
	DCR	DROP CORD RECEPTACLE		CS/JB	JUNCTION BOX ON PEDESTAL
	JB	JUNCTION BOX ON CEILING		SW	SWITCH
	JB	JUNCTION BOX IN WALL		D	DATA
	JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26			

2 ELECTRICAL SYMBOLS
NOT TO SCALE

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07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

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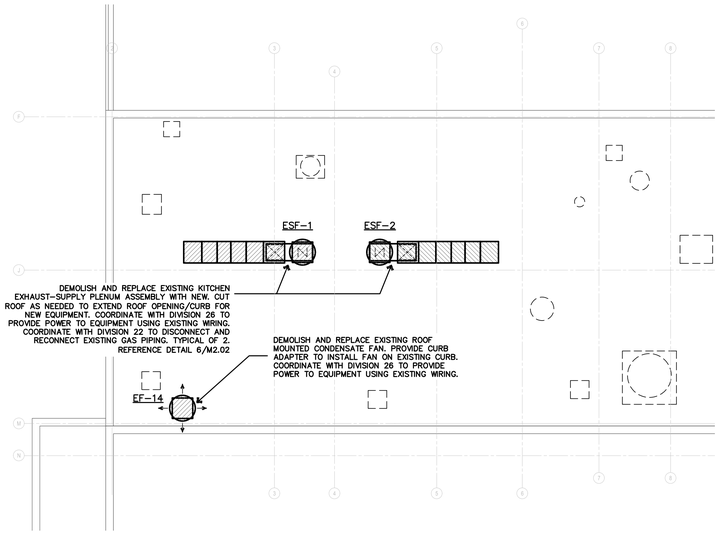
SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM IS PREPARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/15/2025

ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

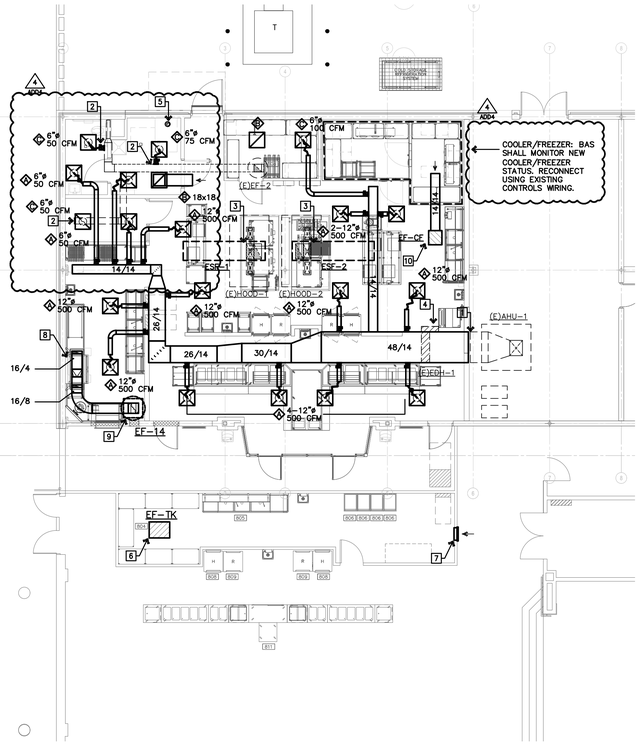
PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS ELECTRICAL PLAN

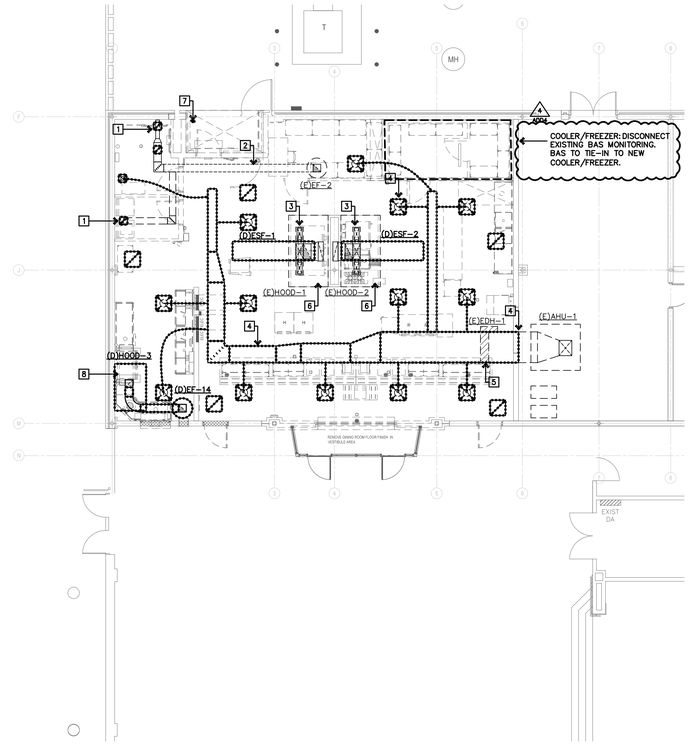
K-QF1.5



3 MECHANICAL ROOF FLOOR PLAN
SCALE: 1/8" = 1'-0"



2 RENO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"



1 DEMO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A	CEILING DIFFUSER – 24" X 24" FACE, PATTERN TYPE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE SCD A1–12" X 12"
B	CEILING RETURN GRILLE – 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE PDFR B1–12" X 12"
C	CEILING EXHAUST GRILLE – 24" X 24" PERFORATED FACE, STEEL CONST., WHITE FINISH, NECK SIZE SHOWN, U.L. LISTED PRICE PDDR C1–12" X 12"

NOTES:
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPES FOR AIR DEVICES.

A/D04

KITCHEN HOOD REFURBISHMENT NOTES

HOOD REFURBISHMENT FOR KITCHEN HOODS (QUANTITY 2):
- STEAM WASH AND DEEP CLEAN STAINLESS STEEL HOOD ASSEMBLY, CASING, AND SUPPLY GRILLES WHERE APPLICABLE.
- REPLACE GREASE FILTER RACKS.
- CLEAN EXISTING MAKE-UP AIR AND GREASE EXHAUST DUCT.
- RELAMP EXISTING LIGHT FIXTURES WITH NEW 4000K BULBS LISTED FOR USE IN AN ENCLOSED KITCHEN HOOD FIXTURE.
- COORDINATE WITH DIVISION 11 FOR REPLACEMENT OF ANSUL FIRE SUPPRESSION SYSTEM.
- HOOD ASSEMBLIES SHALL BE CLEANED TO MEET THE STANDARDS ESTABLISHED IN NFPA STANDARD 96.

KITCHEN HOOD EXHAUST & MAKE-UP AIR UNIT SCHEDULE

MARK	ESF-1,2
SERVES	KITCHEN HOOD-1 & 2
SUPPLY SECTION	
TYPE	INDIRECT GAS-FIRED MAKE-UP AIR UNIT
DRIVE	DIRECT
SPEED CONTROL	VFD
SUPPLY CFM	2250
EXT. S.P. (IN. W.G.)	0.375
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	4.6 A
UNIT MOCP	15 A
HEATING MEDIUM	NATURAL GAS
INPUT/OUTPUT (MBH)	150.0/121.5
TURNDOWN RATIO	4:1
MANUFACTURER	GREENHECK
MODEL	IGX-P109-H12-MF-E
EXHAUST SECTION	
TYPE	UPBLAST BELT DRIVE CENTRIFUGAL
EXHAUST CFM	3600
EXT. S.P. (IN. W.G.)	0.75
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	3.75 A
UNIT MOCP	15 A
MANUFACTURER	GREENHECK
EXHAUST FAN MODEL	CUBE-200-15

NOTES
1. EXHAUST FAN: PROVIDE FAN WITH PRE-FABRICATED ROOF CURB ADAPTER, VENTED CURB EXTENSION, HINGING KIT, HEAT BAFFLE, DRAIN CONNECTION, GREASE TRAP, AND DISCONNECT SWITCH. FANS SHALL BE UL LISTED FOR USE WITH TYPE I GREASE HOOD.
2. EXHAUST FAN: PROVIDE NEW MOTOR STARTER, SIZED FOR EXHAUST FAN MOTOR AND INSTALLED IN PLACE OF EXISTING. REFERENCE THE SPECIFICATIONS FOR STARTER REQUIREMENTS. COORDINATE WITH DIV.25 FOR RE-TERMINATION OF PERMISSIVE ON/OFF CONTROL. COORDINATE WITH DIV.26 FOR RE-TERMINATION OF LOCAL HOOD SWITCH INTERLOCK FOR START/STOP CONTROL.
3. SUPPLY FAN/FURNACE: FLUE GAS FROM HEATING COIL SHALL BE POWER VENTED.
4. SUPPLY FAN/FURNACE: WEATHERHOOD WITH ALUMINUM MESH.
5. SUPPLY FAN/FURNACE: 5 YEAR HEAT EXCHANGER WARRANTY.
6. SUPPLY FAN/FURNACE CONTROLS: INTEGRAL HEATER CONTROLS WITH BAS INTERLOCK FOR PERMISSIVE ON/OFF AND LOCAL SWITCH INTERLOCK FOR CONTROL FROM KITCHEN HOOD SWITCH. FURNACE CONTROLS SHALL BE PROGRAMMED FOR 64°F LAT, WITH A LOCKOUT FOR O/A TEMPERATURES ABOVE THE LAT SETPOINT. COORDINATE WITH DIV.25 AND DIV.26 FOR CONTROLS AND SWITCH INTERLOCKS.
7. TWO POINT POWER CONNECTION: ONE FOR EXHAUST FAN AND ONE FOR INTAKE/SUPPLY FAN.
8. INTERLOCK FAN(S) WITH ASSOCIATED COOKING HOOD
9. INTERLOCK FAN WITH SWITCH ON KITCHEN HOOD.
10. UNIT TO BE PROVIDED WITH GALVANIZED STEEL FAN PACK EXTENSION/COMBINATION CURB.
11. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH. A/D04

MECHANICAL RENO KEYED NOTES

1. TIE-IN NEW DUCTWORK TO EXISTING DUCTWORK AT WALL PENETRATION.
2. CONNECT NEW AIR DEVICE AND TAP TO EXISTING E/A TRUNK DUCT.
3. REWORK EXISTING EXHAUST AND SUPPLY DUCTWORK FROM EXISTING KITCHEN HOOD UP TO FAN, AS REQUIRED, WITH NEW TRANSITIONS AND SUPPLY AIR DUCTWORK OFFSETS TO MATE WITH NEW FAN CURB.
4. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
5. NEW DRYER VENT DUCT AND VENT CAP. REFER TO DETAIL 4/M2.02.
6. TEMP. KITCHEN – CEILING MOUNTED CABINET EXHAUST FAN. REFER TO DETAIL 1/M2.02.
7. TEMP. KITCHEN – 24"X24" SIDE WALL GRILLE. SURFACE MOUNT OPTIONAL. AUXILIARY FRAME. TITUS CT-700.
8. RECONFIGURE DUCTWORK TO CONNECT TO NEW DISHMACHINE HOOD OUTLETS. REF. KITCHEN CONSULTANT DRAWINGS FOR EXACT DIMENSIONS OF DUCT CONNECTIONS.
9. CONDENSATE EXHAUST DUCT UP THROUGH ROOF TO NEW EXHAUST FAN SET ON NEW ROOF CURB. REUSE EXISTING ROOF PENETRATION.
10. INLINE FAN INSTALLED ABOVE PLENUM. REFER TO DETAIL 2/M2.02.

EXHAUST FAN SCHEDULE

MARK	EF-1K	EF-CF	EF-14
SERVES	TEMPORARY KITCHEN	COOLER/FREEZER	DISH WASHER
TYPE	CEILING CABINET	INLINE FAN	ROOF UPBLAST
DRIVE	DIRECT	DIRECT	DIRECT
SPEED CONTROL	INTEGRAL SPEED CONTROLLER	CONSTANT	CONSTANT
CFM	1055	1000	1200
EXT. S.P. (IN. W.G.)	0.3	0.35	0.60
IMP. SIZE (IN.)	8.0	13.5	14.0
HORSEPOWER (WATTS)	1/3 HP	1/6 HP	1/3 HP
VOLTAGE	120V/1-PHASE	120V/1-PHASE	120V/1-PHASE
MANUFACTURER	COOK	COOK	COOK
MODEL	GC-862	1355QN10D	CUE-140-B
SONES (MAX.)	15.0	15.0	15.0
NOTES	1 THRU 4	1 THRU 4	1 THRU 5

NOTES
1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN. FANS SHALL BE CAPABLE OF 120% OF THE SCHEDULED CFM CAPACITY.
2. INTEGRAL DISCONNECT SWITCH.
3. RUBBER IN-SHEAR ISOLATORS.
4. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS. A/D04
7. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH.

MECHANICAL DEMO KEYED NOTES

1. DEMOLISH EXISTING AIR DEVICE, BRANCH DUCT, DAMPER AND TAP BACK TO TRUNK DUCT. CAP AND SEAL RESULTING OPENING.
2. EXISTING E/A TRUNK DUCT TO REMAIN.
3. DISCONNECT EXISTING S/A AND E/A DUCTWORK SERVING KITCHEN HOODS FROM FAN ASSEMBLY AND HOOD. DUCTWORK SHALL REMAIN FOR FUTURE USE/RE-CONNECTION. DEMOLISH SUPPLY AND EXHAUST FAN PLENUM ASSEMBLY SERVING KITCHEN HOODS, ALONG WITH CURB. NEW CURB TO BE PROVIDED AND INSTALLED AS PART OF RENOVATION.
4. DEMOLISH ALL EXISTING AIR DEVICES, DUCTWORK, AND DUCTWORK ACCESSORIES SERVING KITCHEN AREA BACK TO MECH. ROOM WALL PENETRATION.
5. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
6. REFURBISH EXISTING KITCHEN HOOD. REFER TO "KITCHEN HOOD REFURBISHMENT NOTES".
7. DEMOLISH AND REPLACE EXISTING DRYER EXHAUST DUCT AND FLUE VENT CAP.
8. DEMOLISH EXISTING CONDENSATE HOOD, ASSOCIATED DUCTWORK, AND ROOF EXHAUST FAN.

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05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

A/D04

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED
PROFESSIONAL
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09.04.2025

MWA ARCHITECTS
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PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

KITCHEN AREA MECHANICAL PLANS
K-M1.01

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INFORMATION@STANTONENGINEERING.COM (713) 300-8282
TEXAS ENG. FIRM REG. NO. F-6153/10710

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MECHANICAL SYMBOL SCHEDULE

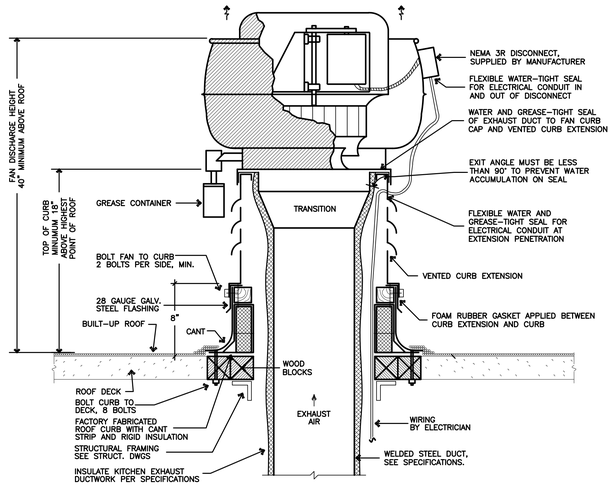
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
RS	REFRIGERANT SUPPLY
RR	REFRIGERANT RETURN
D	CONDENSATE LINE
	PETE'S PLUG
	ISOLATION VALVE
	ELECTRONIC CONTROL VALVE
	BUTTERFLY VALVE
	BALL VALVE
	UNION OR FLANGE
	STRAINER
	AUTOMATIC AIR VENT
T	LOCAL CONTROL THERMOSTAT
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	FIRE/SMOKE COMBINATION DAMPER
MD	MOTORIZED DAMPER
C	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST GRILLE
RA	RETURN AIR OPENING IN WALL
VD	VOLUME DAMPERS
	DUCT ELEVATION CHANGE
	90° DUCT ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
M	DAMPER MOTOR
T	TEMPERATURE TRANSMITTER
FS	FLOW SWITCH
P	DIFFERENTIAL PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
PS	STATIC PRESSURE SENSOR
PH	STATIC PRESSURE SENSOR HI-LIMIT
	ACCESS PANEL

A.P.	ACCESS PANEL
AHU	AIR HANDLING UNIT
B	BOILER
CH	CHILLER
CHP	CHILLED WATER PUMP
CVT	CONSTANT VOLUME TERMINAL
DH	DEHUMIDIFIER
E/A	EXHAUST AIR
EF	EXHAUST FAN
F&B	FACE & BYPASS
FF	FLY FAN
HDT	HORIZONTAL DRAW THROUGH
HWP	HOT WATER PUMP
KEF	KITCHEN EXHAUST FAN
KSF	KITCHEN SUPPLY FAN
O/A	OUTSIDE AIR
OBD	OPPOSED-BLADES DAMPER
PT	PRE-TREAT
R/A	RETURN AIR
RAHU	ROOF-MOUNTED AIR HANDLING UNIT
S/A	SUPPLY AIR
SA	SOUND ATTENUATOR
SF	SUPPLY FAN
SPD	SPILTER DAMPER
SZ	SINGLE ZONE
VAV	VARIABLE AIR VOLUME
VB	VAV BOX
VD	VOLUME DAMPER
VDT	VERTICAL DRAW THROUGH
VFD	VARIABLE FREQUENCY DRIVE
WH	WATER HEATER
⌀	DESIGNATION FOR "ROUND"
⬭	DESIGNATION FOR "OVAL"

GENERAL MECHANICAL NOTES

3

1. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION OF EQUIPMENT AND PIPING WITH THE ELECTRICAL CONTRACTOR TO INSURE NEC CLEARANCE (42 INCHES) IN FRONT OF ALL ELECTRICAL PANELS. DO NOT INSTALL DUCTWORK OR WATER PIPING OVER THE TOP OF ELECTRICAL PANELS SEE DETAIL 1/M2.01.
3. DUCT SIZES SHOWN ARE NET FREE AIR PASSAGE DIMENSIONS, DUCTS ARE NOT LINED, BUT ARE EXTERNALLY INSULATED. RUNOUTS TO CEILING OUTLETS SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET METAL WITH SPIN-IN V.D. AT TRUNK TAPS, SEE DETAIL 1 & 2/M2.01.
4. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR EXACT LOCATIONS OF CEILING OUTLETS IN RELATION TO OTHER CEILING ENTITIES. OUTLETS MUST BE COMPATIBLE WITH THE CEILING TYPES FOR THE VARIOUS AREAS.
5. IN AREAS WHERE SUPPLY AIR ENTERS CEILING CAVITY THRU RETURN AIR GRILLES AND FREE RETURNS TO AHU'S VIA CEILING CAVITY, PROVIDE RETURN AIR OPENING IN WALL-TO-DECK ABOVE CEILING THAT BLOCK PATH, REFER TO ARCHITECTURAL DRAWINGS. RETURN AIR ELBOWS SHALL BE SIZED AT 1 SQ. FT PER 400 CFM SUPPLY AIR.
6. ARRANGE PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EASY REMOVAL OF EQUIPMENT, SUB-ASSEMBLIES, COILS, FANS, MOTORS, FILTERS, ACCESS PANELS, ETC... PROVIDE UNIONS, FLANGES AND VALVES AT CONNECTIONS. PROVIDE AND INSTALL VICTAULIC JOINTS AT COILS, REF. SPECIFICATIONS. PLACE STOP VALVES ON SYSTEM SIDE OF REMOVABLE PIPE SECTIONS.
7. CONTRACTOR SHALL FIELD MEASURE STRUCTURAL ELEMENTS AND COORDINATE EQUIPMENT, PIPING AND DUCT ROUTING TO FIT EXISTING CONSTRUCTION. PROVIDE OFFSETS, BOOTS FOR ENVELOP OBSTRUCTIONS THAT CANNOT BE AVOIDED. CONSTRUCTION SHALL BE PER SMACNA STANDARDS.
8. FIELD VERFY EXISTING CONDITIONS PRIOR TO PROCUREMENT OF EQUIPMENT AND SYSTEMS.
9. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICIABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION
10. PROVIDE DUCTWORK INSULATION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF IECC.
11. PROVIDE LISTED FIRE DAMPER INSTALLATIONS AT DUCT AND RETURN AIR OPENINGS AT PENETRATIONS THROUGH THROUGH RATED PARTITIONS AND BARRIERS. — SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
12. PROTECT DUCTWORK AND MECHANICAL EQUIPMENT FROM CONSTRUCTION DUST AND DEBRIS DURING CONSTRUCTION. SEAL OPENINGS AS REQUIRED.
13. PROVIDE AND MAINTAIN TEMPORARY AIR FILTERS AT AIR HANDLERS USED DURING CONSTRUCTION.
14. PATCH AND REPAIR MECHANICAL SYSTEMS AND INSULATION DAMAGED DURING CONSTRUCTION.
15. SECURE ROOF MOUNTED EQUIPMENT TO WITHSTAND 142 MPH BASIC WIND SPEED, RISK CATEGORY III, EXPOSURE CATEGORY B, IN ACCORDANCE WITH IBC REQUIREMENTS.

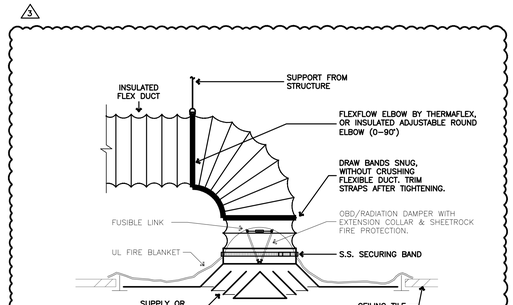


6 KITCHEN UPBLAST EXHAUST FAN DETAIL

NO SCALE

NOTES

1. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL.
2. INSTALL SHEETMETAL COVERING OVER WOOD BLOCKING IN THE AIRSTREAM OR OPEN TO THE CEILING CAVITY.

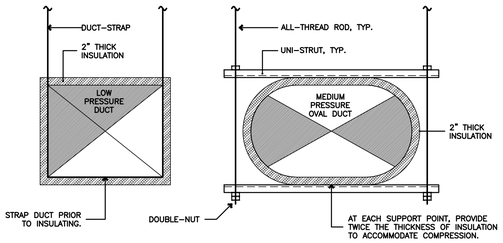


5 AIR DEVICE DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

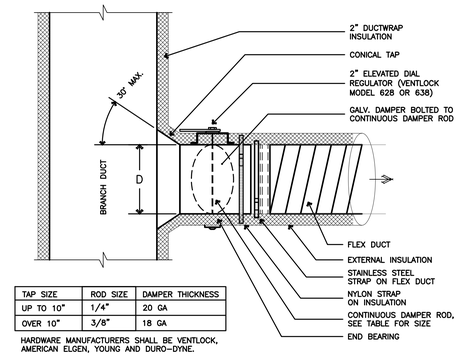


4 EXTERNALLY INSULATED DUCT SUPPORT DETAIL

NO SCALE

NOTES:

1. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT STRAPS.
2. DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



TAP SIZE	ROD SIZE	DAMPER THICKNESS
UP TO 10"	1/4"	20 GA
OVER 10"	3/8"	18 GA

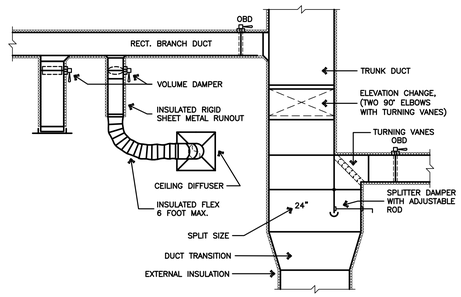
HARDWARE MANUFACTURERS SHALL BE VENTLOCK, AMERICAN ELGEN, YOUNG AND DURO-DYNE.

3 DUCT TAP CONNECTION DETAIL

NO SCALE

NOTES:

1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.
2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

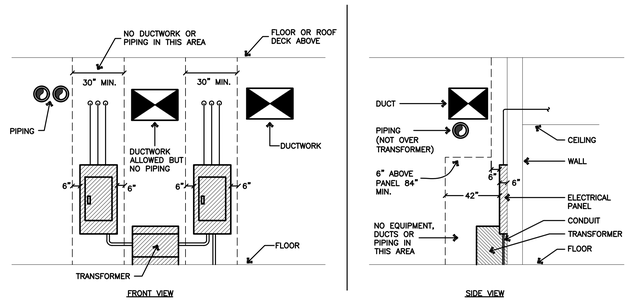


2 DUCTWORK DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

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ISSUE:

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05/23/2025	90% CD PKG.
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4 09/04/2025	ADDENDUM 04

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
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6955 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

STATE OF TEXAS
TYLER W. HERRING
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LICENSED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
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HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
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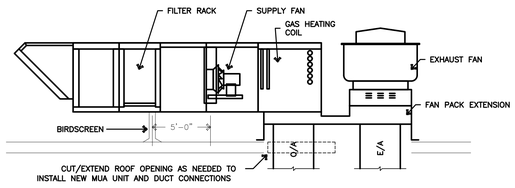
MECHANICAL NOTES AND DETAILS
K-M2.01



6 SUPPLY/EXHAUST KITCHEN PLENUM DETAIL

NO SCALE

NOTES:

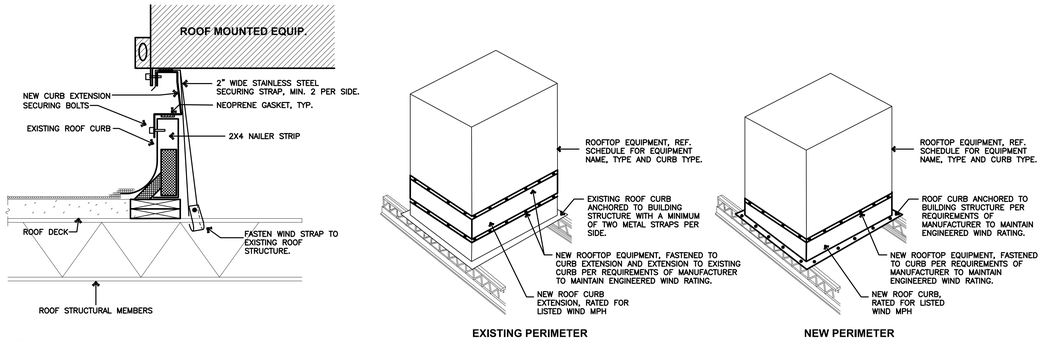
1. REFER TO DETAIL 6/M2.02 FOR CURB ANCHORING TO SATISFY WIND RATING REQUIRMENT. EQUIPMENT SHALL BE ABLE TO WITHSTAND 120 MPH WINDS.

△2

ROOF MOUNTED EQUIPMENT

MARK	EQUIPMENT TYPE	CURB TYPE
EF-14	ROOF FAN	EXISTING PERIMETER
ESF-1,2	ROOF EXHAUST & MAKE-UP AIR UNIT	NEW PERIMETER

1. ALL ROOFTOP EQUIPMENT IS TO BE INSTALLED ON NEW ROOF SUPPORTS, AND IS SUBJECT TO THE INSTALLATION REQUIREMENTS OF THIS DETAIL.



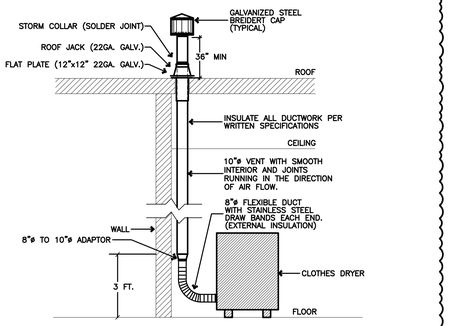
5 CURB MOUNTED EQUIPMENT ANCHORING

NO SCALE

NOTES:

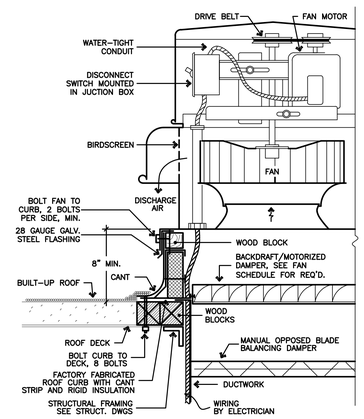
1. EQUIPMENT CURB AND EQUIPMENT ANCHORING BRACKETS SHALL BE DESIGNED TO WITHSTAND AN ASCE 7-22 WIND HAZARD RATING OF 147 MPH, FOR A CATEGORY III BUILDING AT THE PROJECT ADDRESS. THE CURB PROVIDER SHALL INCLUDE STAMPED DRAWINGS OF THE CURB AND ANCHORING DEMONSTRATING COMPLIANCE.

△2



4 COMMERICAL CLOTHES DRYER VENT

NO SCALE

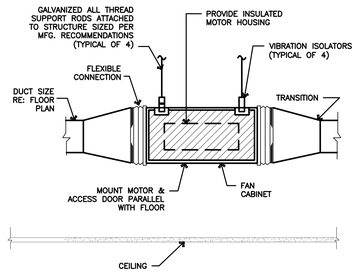


3 ROOF EXHAUST FAN AND VENT DETAIL

NO SCALE

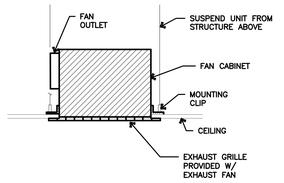
NOTES:

1. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.
2. ROOF VENT WILL NOT HAVE FAN/MOTOR ASSEMBLY, DISCONNECT SWITCH OR OBD.
3. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL WHERE APPLICABLE.
4. ALL FANS SCHEDULED TO BE PROVIDED WITH 140MPH WIND RATING, INCLUDING FACTORY PROVIDED CURB. CURB INSTALLATION SHALL FOLLOW MANUFACTURER'S REQUIREMENTS FOR SECURING TO ROOF AND EQUIPMENT WHERE IT DIFFERS FROM THE DETAIL.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 INLINE EXHAUST FAN DETAIL

NO SCALE



1 CABINET EXHAUST FAN

NO SCALE

ISSUE:

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△4 09/04/2025	ADDENDUM 04

k

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MECHANICAL DETAILS (CONT'D.)

K-M2.02

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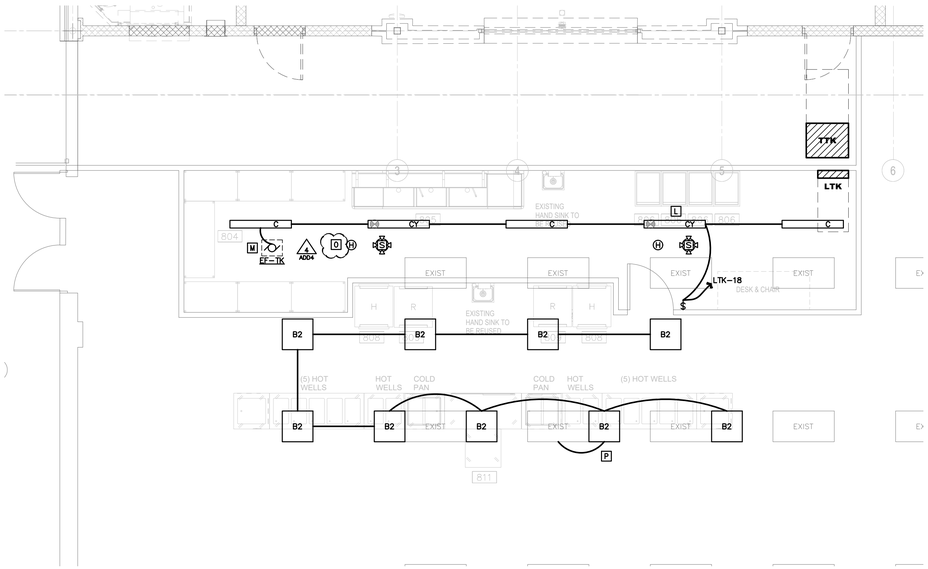
NEW PANEL — TEMP KITCHEN

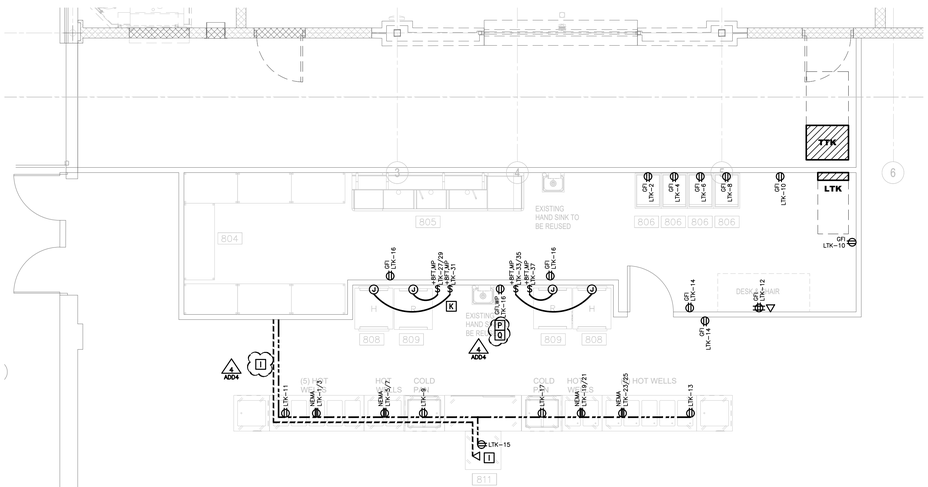
PANEL LTK — 150A MCB, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A, SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E810	2766	HOT WELLS	2–12	20/2GFI	1	■			2	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	3		■		4	20/1	3–12	TRANSPORT CART	1920	E806	
	E810A	1643	HOT WELLS	2–12	20/2GFI	5			■	6	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	7	■			8	20/1	3–12	TRANSPORT CART	1920	E806	
	E810B	600	COLD PAN	3–12	20/1GFI	9		■		10	20/1	3–12	2 REC	360	E800A	
	E810C	1200	BEVERAGE	3–12	20/1GFI	11			■	12	20/1	3–12	2 REC – DESK	360	E800B	
	E810C	1200	BEVERAGE	3–12	20/1GFI	13	■			14	20/1	3–12	2 REC	360	E800A	
	E811	180	CASH REGISTER	3–12	20/1GFI	15		■		16	20/1	3–12	3 REC	360	E800A	
	E810B	600	COLD PAN	3–12	20/1GFI	17			■	18	20/1	3–12	TEMP. KITCHEN LTS/FAN	566		
	E810A	1643	HOT WELLS	2–12	20/2GFI	19	■			20	20/1		SPARE			⚠4 ADD4
	–	–	–	+12G	–	21		■		22	20/1		SPARE			
	E810	2766	HOT WELLS	2–12	20/2GFI	23			■	24	30/3	3–10	TEMP FOOD STORAGE UNIT	3100		4
	–	–	–	+12G	–	25	■			26	–	+10N+10G	–	–		
	E808	1622	HEATED CABINET	2–12	20/2	27		■		28	–	3/4"C	DUPLEX REC – SERVICE YARD	180		4
	–	–	–	+12N+12G	–	29			■	30	20/1	3–12	EXISTING CIRCUIT	500		3
	E809	984	REFRIGERATOR	3–12	20/1	31	■			32	20/1	3–12	EXISTING CIRCUIT	500		3
	E808	1622	HEATED CABINET	2–12	20/2	33		■		34	15/2	2–12	EXISTING CIRCUIT	1000		3
	–	–	–	+12N+12G	–	35			■	36	–	+12N+12G	–	–		
	E809	984	REFRIGERATOR	3–12	20/1	37	■			38	20/2	2–12	EXISTING CIRCUIT	1000		3
			SPARE		20/1	39		■		40	–	+12N+12G	–	–		
			SPARE		20/1	41			■	42	50/2	2–8	EXISTING CIRCUIT	5000		3
			SPARE		20/1	43	■			44	–	+8N+10G	–	–		
	TOTAL LOAD @ 100% =		3877BVA				TOTAL LOAD @ 100% =			108A						

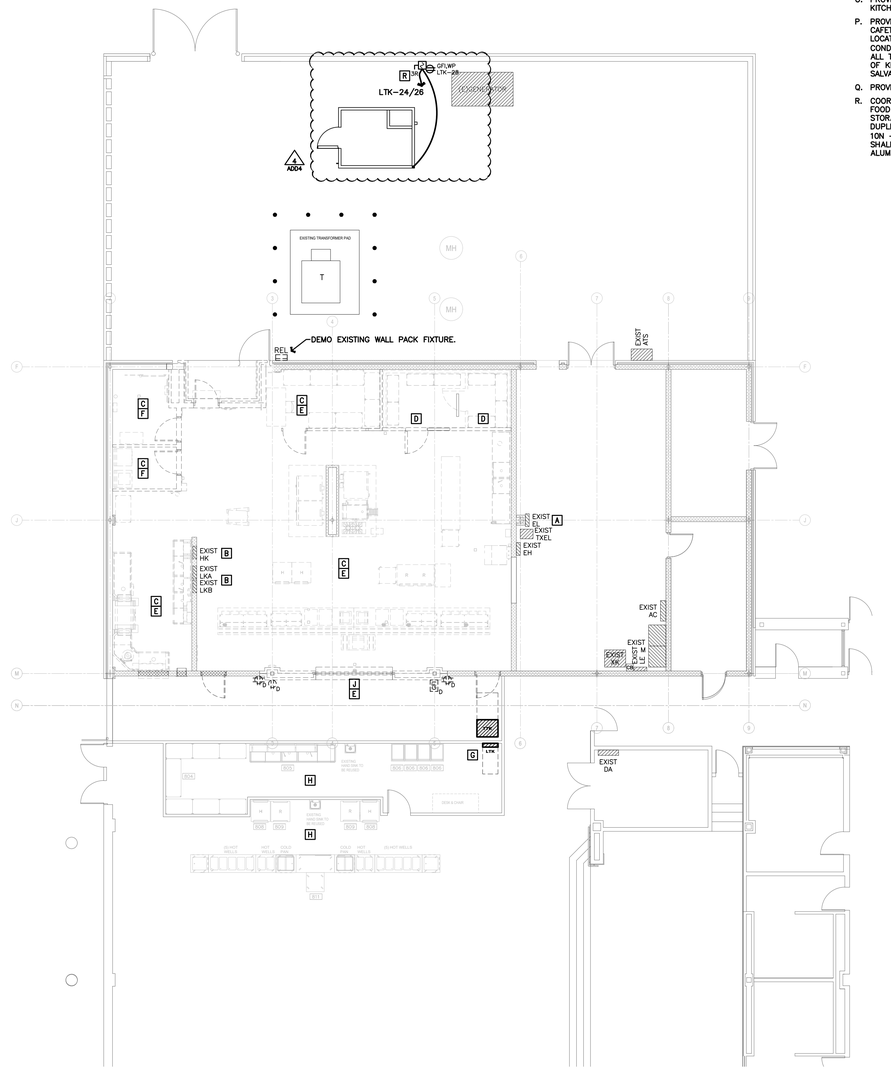
1. REF. KITCHEN CONSULTANT'S "FCS" DRAWINGS FOR KITCHEN EQUIPMENT NUMBERS.
2. A DEMAND FACTOR PERCENT OF 65% HAS BEEN APPLIED TO THE KITCHEN EQUIPMENT LOAD PURSUANT TO NEC 220–20 AND NEC TABLE 220–20.
3. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AND REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION.
4. PROVIDE CIRCUIT FOR TEMPORARY FOOD STORAGE UNIT PRIOR TO BEGINNING DEMOLITION. ⚠4 ADD4



T1 **TEMPORARY KITCHEN - LIGHTING PLAN**
SCALE: 1/4" = 1'– 0"



T2 **TEMPORARY KITCHEN - ELECTRICAL PLAN**
SCALE: 1/4" = 1'– 0"



1 **DEMOLITION FLOOR PLAN**
SCALE: 1/8" = 1'– 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

⚠4 ADD4

DEMOLITION NOTES:

A. EXISTING STANDBY GENERATOR PANEL TO REMAIN.

B. EXISTING KITCHEN PANELS TO BE REPLACED WITH NEW. MODIFY EXISTING WALLS TO MATCH NEW PANEL LAYOUTS AND DIMENSIONS.

C. EXISTING LIGHTING FIXTURES AND CEILING DEVICES TO BE REMOVED THROUGHOUT.

D. EXISTING WALK–IN COOLER/FREEZER AND ASSOCIATED EQUIPMENT TO BE REMOVED.

E. EXISTING WALL ELECTRICAL DEVICES TO BE REMOVED. EXISTING J–BOXES MAY BE REUSED WHERE NEW DEVICES ARE TO BE INSTALLED AT THE SAME LOCATIONS.

F. EXISTING ELECTRICAL DEVICES TO BE REMOVED.

G. NEW 208Y/120V PANEL AND TRANSFORMER FOR TEMPORARY KITCHEN TO BE INSTALLED PRIOR TO DEMOLITION. PANEL AND TRANSFORMER TO BE REMOVED AT END OF KITCHEN RENOVATION AND TURNED OVER TO THE DISTRICT. INSTALL TRANSFORMER ON PREMADE FIBERCRETE PAD AND WAFFLE TYPE VIBRATION ISOLATION PADS. DO NOT PROVIDE A POURED IN PLACE CONCRETE PAD AT THIS LOCATION.

H. PROVIDE RECEPTACLES AND LIGHT FIXTURES FOR TEMPORARY KITCHEN DURING RENOVATION. ALL TEMPORARY DEVICES AND EQUIPMENT TO BE REMOVED AT END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE.

I. CONDUITS ROUTED FROM TEMPORARY KITCHEN WALL AND BENEATH SERVING LINE. PROVIDE MULTICHANNEL ROLLOVER CABLE PROTECTOR FOR EXPOSED CONDUITS NOT UNDER THE SERVING LINE. ALL CONDUITS UNDER THE SERVING LINE SHALL BE SECURED TO/ROUTED ON TOP OF UNISTRUT AND NOT DIRECTLY ON THE FLOOR. DO NOT ANCHOR UNISTRUT TO THE EXISTING FLOORING. COORDINATE POWER AND DATA OUTLET LOCATIONS WITH OTHER TRADES.

J. REMOVE EXISTING LIGHT FIXTURES ABOVE NEW KITCHEN EXTENSION. MODIFY EXISTING WIRING TO MAINTAIN REMAINING FIXTURE OPERATION.

K. HARDWIRE KITCHEN EQUIPMENT TO LOCAL ON/OFF SWITCH. TYPICAL.

L. SURFACE MOUNT FIXTURES ON TEMPORARY KITCHEN CEILING. TYPICAL.

M. WIRE TEMPORARY KITCHEN FAN TO LOCAL LIGHTING CIRCUIT AND CONTROLS. FAN SHALL BE ON/OFF WITH LIGHTS.

N. EXISTING EXTERIOR LIGHT FIXTURES TO BE REMOVED.

O. PROVIDE NEW FIRE ALARM DEVICES AS PART OF THE TEMPORARY KITCHEN BUILDOUT.

P. PROVIDE NEW TEMPORARY LIGHT FIXTURES IN THE EXISTING CAFETERIA CEILING ABOVE THE SERVING LINE. COORDINATE LOCATIONS WITH TEMPORARY SERVING LINE AND EXISTING CONDITIONS. CONNECT TO EXISTING LIGHTING CONTROLS/CIRCUIT. ALL TEMPORARY LIGHT FIXTURES SHALL BE REMOVED AT THE END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE. PROVIDE REPLACEMENT CEILING TILES.

Q. PROVIDE IN–USE WEATHERPROOF COVER FOR RECEPTACLE.

R. COORDINATE NEMA 3R, FUSED SWITCH LOCATION WITH TEMPORARY FOOD STORAGE UNIT. INSTALL 2–25A FUSES TO SERVE FOOD STORAGE UNIT AND A 20A FUSE IN THIRD PHASE TO FEED DUPLEX RECEPTACLE. WIRING TO STORAGE UNIT SHALL BE 2–10 + 10N + 10G, 3/4". WIRING TO NEW 20A DUPLEX RECEPTACLE SHALL BE 2–12 + 12G. MOUNT RECEPTACLE IN NEMA 3R ALUMINUM JUNCTION BOX WITH WET LOCATION COVER.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	⚠4 ADD4 ADDENDUM 04

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
6955 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

STATE OF TEXAS — GEORGE L. STANTON — 38582 — REGISTERED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL DEMO AND TEMP PLANS

k-ED.100

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ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

LIGHTING RENOVATION NOTES:

A. KITCHEN LIGHTS TO BE CONTROLLED BY LOCAL MOMENTARY SWITCHES AND BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.

LEFT SWITCH SHALL CONTROL ZONE 'a' NORMAL POWER LIGHTING FIXTURES.

RIGHT SWITCH SHALL CONTROL ZONE 'b' EMERGENCY LIGHTING FIXTURES.

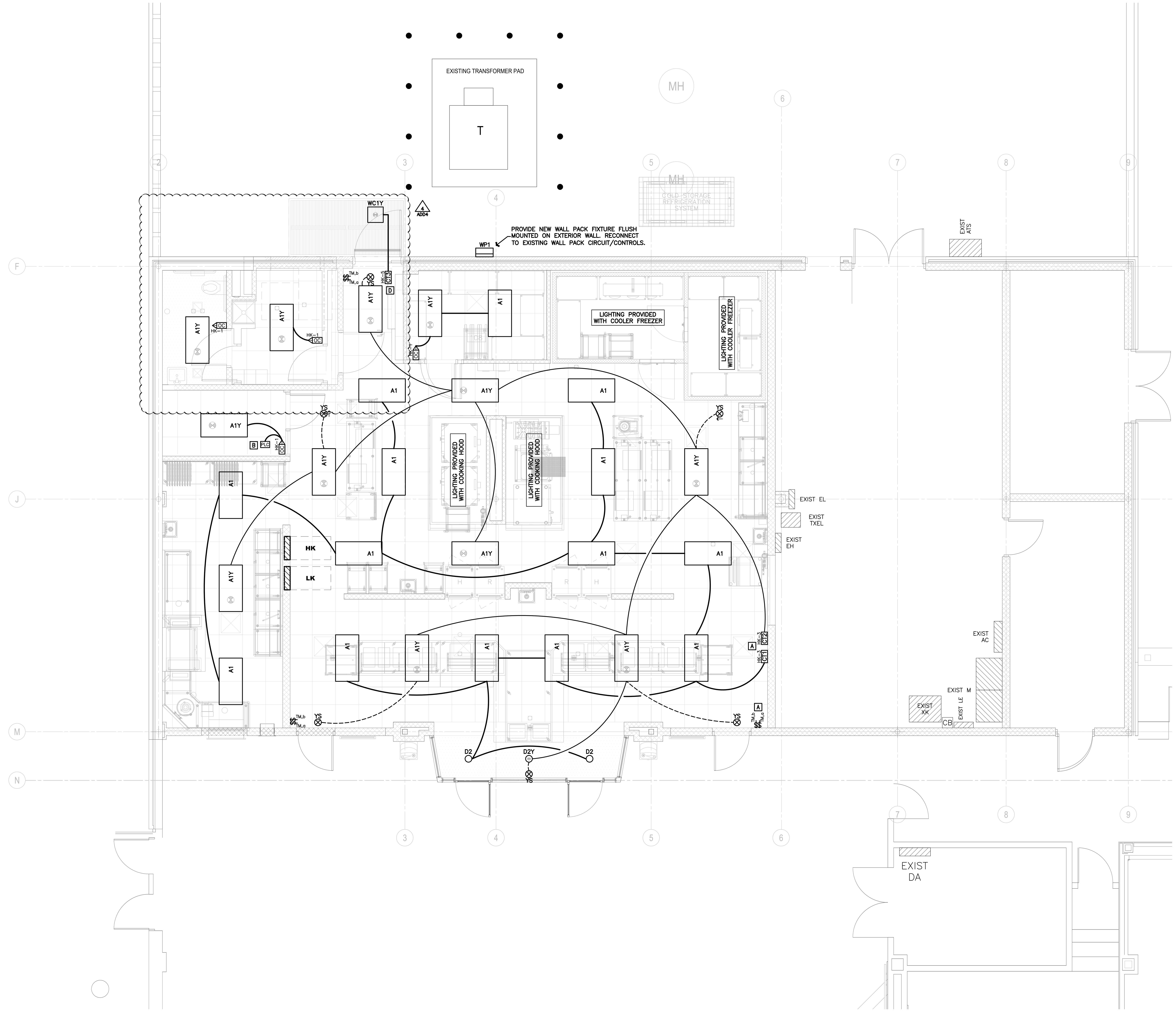
B. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

C. WIRE EXIT SIGNS UPSTREAM OF LIGHTING CONTROLS. TYPICAL.

D. EXTERIOR LIGHTS TO BE CONTROLLED BY BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.

E. AFTER REMOVAL OF THE TEMPORARY KITCHEN. PROVIDE NEW EXIT SIGN AT ORIGINAL LOCATION AND RECONNECT TO EXISTING CAFETERIAL LIGHTING CIRCUIT.

F. PATCH/REPAIR EXTERIOR SOFFIT TO ACCOMMODATE NEW SURFACE MOUNTED FIXTURES.



1 LIGHTING RENOVATION PLAN

SCALE: 1/4" = 1'– 0"

ISSUE:

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PROJ. NO.: 23-25
DATE: 07/18/2025
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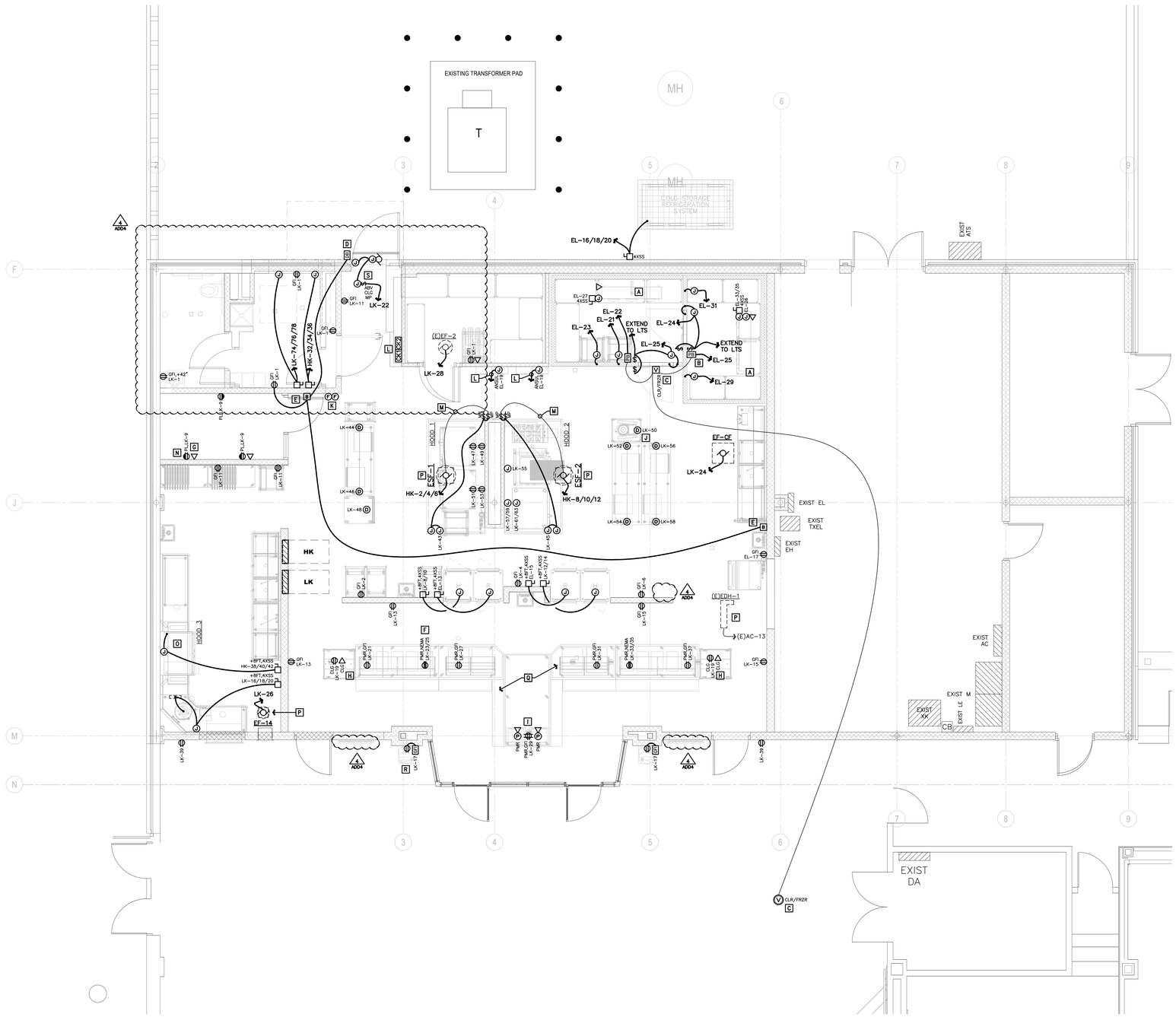
LIGHTING FLOOR PLANS

k-E.100



1 ELECTRICAL RENOVATION PLAN

SCALE: 1/4" = 1'- 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

ELECTRICAL RENOVATION NOTES:

A. CONNECT NEW FREEZER/COOLER AND CONDENSER TO EXISTING STANDBY GENERATOR.

B. PROVIDE ILLUMINATED PUSH BUTTON IN COOLER AND FREEZER. WHEN PRESSED RED STROBE DEVICES IN KITCHEN AND CAFETERIA SHALL ACTIVATE. TYPICAL.

C. PROVIDE HORN/STROBE DEVICE TIED TO PUSH BUTTONS IN FREEZER/COOLER.
(EDWARDS 860 SERIES OR EQUAL).

D. PROVIDE NEW DOORBELL BUTTON AT RECEIVING DOOR. DOORBELL BUTTON SHALL BE THE CLOSEST DEVICE TO THE DOOR FRAME.

E. PROVIDE NEW VIBRATING BUZZER TIED TO DOORBELL BUTTON AT RECEIVING DOOR. BUZZER TO BE WALL MOUNTED JUST BELOW THE CEILING.

F. PROVIDE NEW ELECTRICAL DEVICES MATCHING NEW KITCHEN EQUIPMENT AND ROOM LAYOUTS. REFERENCE FOOD SERVICE DRAWINGS. TYPICAL.

G. PROVIDE ROUGH-IN FOR LOW VOLTAGE DEVICES. REFERENCE TECHNOLOGY DRAWINGS, TYPICAL.

H. POWER AND DATA ROUGH-IN FOR KITCHEN MENU BOARD.

I. POWER AND DATA ROUGH-IN FOR POINT OF SALE (POS) LOCATION.

J. PROVIDE DROP CORD RECEPTACLE WITH HUBBELL KELLEMS LIQUIDTIGHT GRIPS FOR STRAIN RELIEF, TYPICAL OF ALL.

K. PROVIDE J-BOXES AND CONDUIT FOR REMOTE FIRE PULLS, SEE FOOD SERVICE DETAIL DRAWING FOR REQUIREMENTS, TYPICAL

L. WIRE ANSUL SYSTEM TO HOOD EQUIPMENT CONTROL CONTRACTOR. UPON ANSUL SYSTEM ACTIVATION ALL POWER TO EQUIPMENT BENEATH THE HOODS SHALL BE DEACTIVATED. MOUNT CONTACTOR CABINET(S) JUST BELOW THE CEILING.

M. PROVIDE SEPARATE SWITCHES TO TURN ON HOOD LIGHTS AND FANS. WIRE HOOD TEMP SENSOR AHEAD OF HOOD LIGHT SWITCH. USE 120V CIRCUIT TO CONTROL HOOD FANS THROUGH EXISTING STARTER. PROVIDE CONTROLS TRANSFORMER AS REQUIRED TO MATCH STARTER CONTROL INPUT VOLTAGE. TYPICAL.

N. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

O. INTERCONNECT DISH MACHINE TO VENT CONTROL. INTERCONNECT TABLE LIMIT SWITCH TO DISHMACHINE.

P. EXISTING MECHANICAL EQUIPMENT TO BE REPLACED. CONNECT TO CIRCUIT AS SHOWN. RECONNECT TO EXISTING STARTER/CONTACTORS, FIELD VERIFY.

Q. SAWCUT FLOOR TO INSTALL NEW PEDESTAL MOUNTED DEVICE BENEATH NEW SERVING LINES, DO NOT REUSE EXISTING STUB UPS OR DEVICES. POUR BACK SLAB AND PROVIDE NEW FINISHES, REFERENCE ARCHITECTURAL.

R. REFERENCE EDF GFI PROTECTION DETAIL FOR INSTALLATION REQUIREMENTS, TYPICAL.

S. WIRE MICRO SWITCH IN DOOR FRAME TO AIR SCREEN. COOR W/ FOOD SERVICE CONTRACTOR PRIOR TO ROUGH-IN. LOCATE LOCAL MOTOR RATED SWITCH ABOVE CEILING ADJACENT TO THE AIR SCREEN.

COOLER/FREEZER NOTES:

1. PROVIDE SEALING FOR CONDUIT IN COOLER AND FREEZER. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, CIRCULATION OF AIR FROM WARMER TO A COLDER SECTION SHALL BE PREVENTED PER N.E.C. ARTICLE 300.7 (A).
2. PROVIDE GROUND-FAULT PROTECTION OF EQUIPMENT FOR ELECTRIC HEAT TRACING AND HEATING PANELS IN THE FREEZER PER N.E.C. ARTICLE 427.22.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE LIQUID TIGHT CONDUIT AND WIRING FOR LIGHT FIXTURES AND LIGHT SWITCHES IN WALK-IN COOLER AND FREEZER, SEE FOODSERVICE CONSULTANT'S DRAWINGS.

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ELECTRICAL FLOOR PLANS

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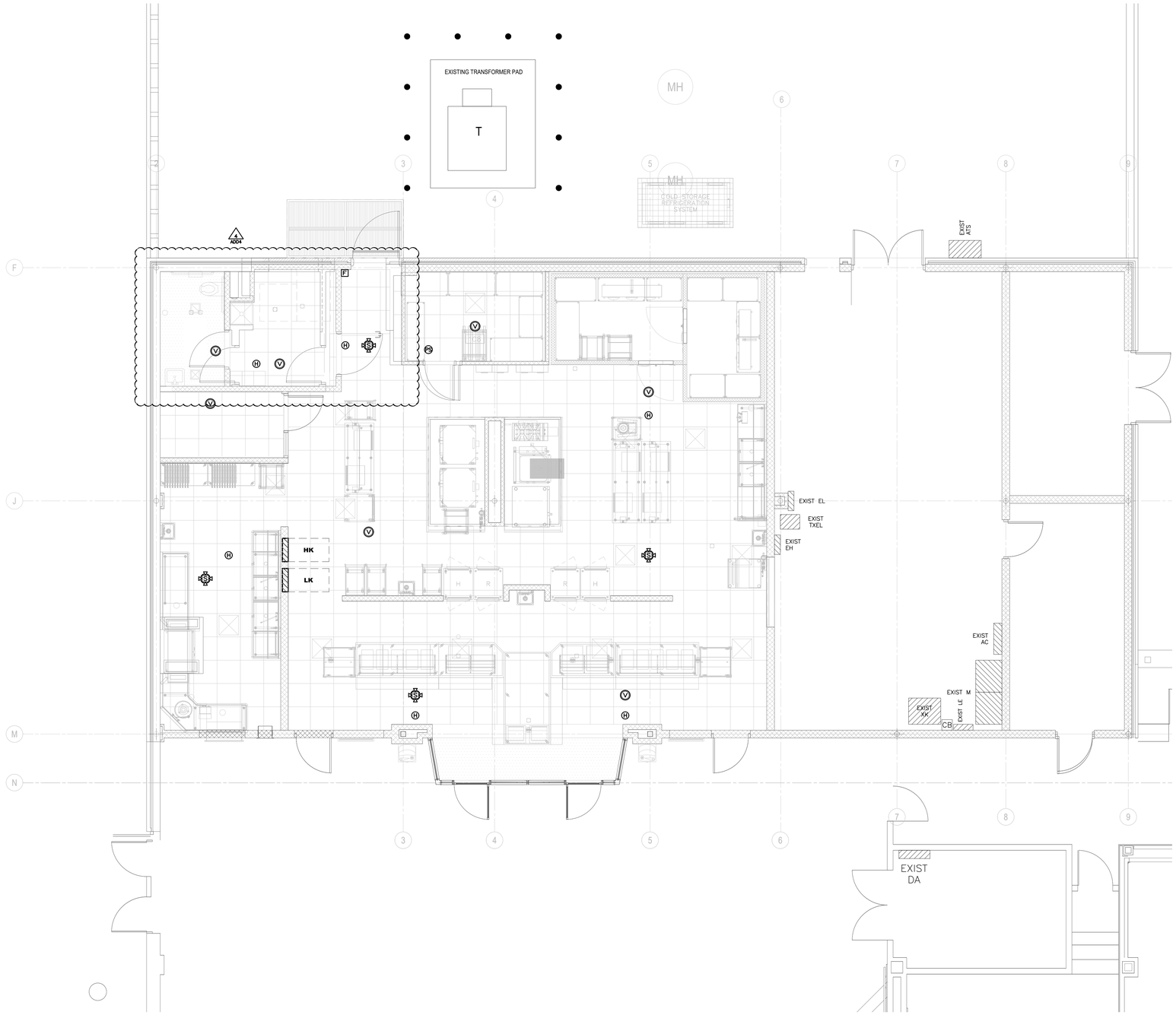

1 FIRE ALARM RENOVATION PLAN

SCALE: 1/4" = 1'- 0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
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FIRE ALARM FLOOR PLANS

k-E.300

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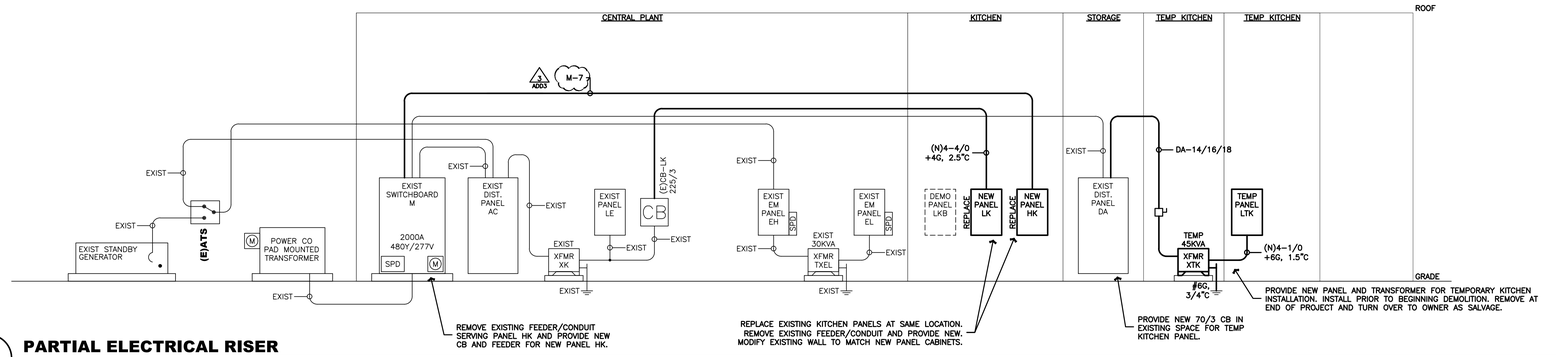

1 PARTIAL ELECTRICAL RISER

NO SCALE

NOTES:
1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED/CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.
5. REFERENCE PANEL SCHEDULES AND SHORT CIRCUIT TABLE FOR AIC AND SCCR VALUES.

NEW KITCHEN PANEL — KITCHEN

PANEL HK — 225A MLO, 480Y/277V, 3ø, 4 WIRE — AVAILABLE FAULT: 20,250A — SCCR & AIC: 25,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
6		1095	KITCHEN/SERVING LIGHTS	3-12	20/1	3				4	–	+12G	(1.5HP / 1.5HP)	–		
7		84	KITCHEN EXTERIOR LIGHTS	3-12	20/1	5				6	–	3/4"C	–	–		
			SPARE		20/1	7				8	15/3	3-12	ESF-2	4986		
			SPARE		20/1	9				10	–	+12G	(1.5HP / 1.5HP)	–		
			SPARE		20/1	11				12	–	3/4"C	–	–		
			SPARE		20/1	13				14			SPACE			
			SPARE		20/1	15				16			SPACE			
			SPARE		20/1	17				18			SPACE			
			SPARE		20/1	19				20			SPACE			
			SPARE		20/1	21				22			SPACE			
			SPACE			23				24			SPACE			
			SPACE			25				26			SPACE			
			SPACE			27				28			SPACE			
			SPACE			29				30			SPACE			
			SPACE			31				32	45/3	3-8	COMMERCIAL DRYER	28254		
			SPACE			33				34	–	+10G	–	–		
			SPACE			35				36	–	3/4"C	–	–		
			SPACE			37				38	70/3	3-8	DISHMACHINE	42963	E250	
			SPACE			39				40	–	+8G	–	–		
			SPACE			41				42	–	3/4"C	–	–		
		TOTAL LOAD @ 100% =	82744VA			TOTAL LOAD @ 100% =		100A					TOTAL LOAD @ 125% =	124A		

NEW KITCHEN PANEL — KITCHEN

PANEL LK — 225A MLO, 208Y/120V, 3ø, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E10	1000	5 REC – RR/STOR/CUST & BELL	3-12	20/1	1				2	20/1	3-12	1 REC – KITCHEN	180	E10	
			SPARE		20/1GFI	3				4	20/1	3-12	1 REC – KITCHEN	180	E10	
4 ADD4			SPARE		30/2GFI	5				6	20/1	3-12	1 REC – KITCHEN	180	E10	
		–	–		–	7				8	20/2	2-10	HEATED CABINET	3224	E187	
		540	3 REC – OFFICE	3-12	20/1	9				10	3/4"C	+10G	–	–		
	E10/E13	540	3 REC – KITCHEN	3-12	20/1	11				12	20/2	2-10	HEATED CABINET	3224	E187	
	E10	360	2 REC – SERVING LINE	3-12	20/1	13				14	3/4"C	+10G	–	–		
	E10	360	2 REC – SERVING LINE	3-12	20/1	15				16	20/3	3-12	DISPOSER	3960	E123	
		1000	2 EDF – CAFETERIA	3-12	20/1	17				18	–	+12G	(3 HP)	–		
	E615	500	2 MENU BOARDS	3-12	20/1	19				20	–	3/4"C	–	–		
	E209	960	MILK COOLER	3-12	4 ADD4 20/1	21				22	20/1	3-12	AIR SCREEN	612	E101	
	E201A	5824	HOT FOOD COUNTER	2-8	4 35/2GFI	23				24	15/1	3-12	EF-CF (1/6HP)	528		
		–	–	+10G	3/4"C	25				26	15/1	3-12	EF-14 (1/3HP)	864		
	E201B	1920	COLD FOOD COUNTER	3-12	20/1	27				28	15/1	3-12	EF-2 (1/6HP)	528		
	E214	360	CASH REGISTERS	3-12	4 20/1	29				30	20/1	4 ADD4	SPARE			
	E201B	1920	COLD FOOD COUNTER	3-12	4 ADD4 20/1	31				32	20/1		SPARE			
	E201A	5824	HOT FOOD COUNTER	2-8	35/2GFI	33				34	20/1		SPARE			
		–	–	+10G	3/4"C	35				36	20/1		SPARE			
	E209	960	MILK COOLER	3-12	20/1	37				38	20/1		SPARE			
		360	2 REC – CAFETERIA	3-12	20/1	39				40	20/1		SPARE			
			SPARE		20/1	41				42	20/1		SPARE			
	E153/E153M	250	HOOD LTS & SENSOR	3-12	20/1GFI	43				44	20/1GFI	3-12	DROP CORD	180	E129	
	E153/E153M	250	HOOD LTS & SENSOR	3-12	20/1	45				46	20/1GFI	3-12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3-12	20/1GFI	47				48	20/1GFI	3-12	MOBILE PROOFER	1800	E139	
8	E161	720	CONVECTION OVEN	3-12	20/1GFI	49				50	20/1GFI	3-12	20QT MIXER	960	E125	
8	E161	720	CONVECTION OVEN	3-12	20/1GFI	51				52	20/1GFI	3-12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3-12	20/1GFI	53				54	20/1GFI	3-12	DROP CORD	180	E129	
8	E163	600	TILT BRAISING PAN 4 ADD4	3-12	20/1GFI	55				56	20/1GFI	3-12	DROP CORD	180	E129	
8	E172	3120	COMBI OVEN	2-12	20/2	57				58	20/1GFI	3-12	DROP CORD	180	E129	
		–	–	+12G	3/4"C	59				60	20/1	3-12	EXISTING CIRCUIT	500		5
8	E172	3120	COMBI OVEN	2-12	20/2	61				62	20/2	2-12	EXISTING CIRCUIT	1000		5
		–	–	+12G	3/4"C	63				64	–	+12N+12G	–	–		
5		250	EXISTING CIRCUIT	3-12	20/1	65				66	20/2	2-12	EXISTING CIRCUIT	1000		5
9		0	TEMP LOAD CENTER	2-6	50/2	67				68	–	+12N+12G	–	–		
		–	–	+6N+8G	1"C	69				70	30/2	2-10	EXISTING CIRCUIT	3000		5
			SPACE			71				72		+10N+10G	–	–		
			SPACE			73				74	20/3	3-12	WASHER	3408		
			SPACE			75				76	–	+12G	–	–		
			SPACE			77				78	–	3/4"C	–	–		
			SPACE			79				80			SPACE			
			SPACE			81				82			SPACE			
			SPACE			83				84			SPACE			
		TOTAL LOAD @ 100% =	55718VA			TOTAL LOAD @ 100% =		155A					TOTAL LOAD @ 65% =	101A		

KITCHEN HOOD CONTACTOR SCHEDULE

POLE	DESCRIPTION	NORMAL CKT	EM CKT	CONTROL ZONE	EQUIPMENT LOCATION	CONTACTOR TYPE
HOOD 1						
CK1-1	CONVECTION OVEN	LK-47	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1-2	CONVECTION OVEN	LK-49	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1-3	CONVECTION OVEN	LK-51	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1-4	CONVECTION OVEN	LK-53	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1-5	SPARE					ELECTRICALLY HELD – NO
CK1-6	SPARE					ELECTRICALLY HELD – NO
CK1-7	SPARE					ELECTRICALLY HELD – NO
CK1-8	SPARE					ELECTRICALLY HELD – NO
HOOD 2						
CK2-1	TILT BRAISING PAN	LK-55	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2-2	COMBI-OVEN	LK-57/59	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2-3	(2-POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2-4	COMBI-OVEN	LK-61/63	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2-5	(2-POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2-6	SPARE					ELECTRICALLY HELD – NO
CK2-7	SPARE					ELECTRICALLY HELD – NO
CK2-8	SPARE					ELECTRICALLY HELD – NO

1. REFERENCE FLOOR PLANS FOR EQUIPMENT LOCATIONS AND ADDITIONAL INFORMATION.
2. EACH KITCHEN HOOD CONTACTOR HALL BE CONTROLLED ON/OFF BY THE APPROPRIATE HOOD ANSUL SYSTEM. WHEN ACTIVATED ALL POWER WITHIN THE COOKING HOOD SHALL BE DE-ENERGIZED.

EXIST SQUARE D QED SWITCHBOARD — CENTRAL PLANT

(E)SWBD M — 2000A MCB, 480Y/277V, 3ø, 4 WIRE — AVAILABLE FAULT: 37,000A — SCCR & AIC: 100,000A — FREE STANDING

NOTES	CIRCUIT	DESCRIPTION	CB	FEEDER SIZE	AMPS
	1	EXIST CIRCUIT	60/3	EXIST FEEDER	
	2	EXIST SPD	60/3	EXIST FEEDER	
	3	EXIST DISTRIBUTION PANEL AC	1200/3	EXIST FEEDER	
	4	EXIST DISTRIBUTION PANEL DA	400/3	EXIST FEEDER	314A
	5	EXIST DISTRIBUTION PANEL DC	400/3	EXIST FEEDER	
	6	EXIST DISTRIBUTION PANEL DB	400/3	EXIST FEEDER	
2,4	7	NEW PANEL HK	225/3	4-4/0 +4G, 2.5"C	100A
	8	EXIST CAPACITOR	250/3	EXIST FEEDER	
				TOTAL LOAD @ 100% =	314A
				TOTAL LOAD @ 125% =	393A

1. THE EXISTING 2000A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST GE NHB PANELBOARD — STORAGE ROOM

(E)PANEL DA — 400A MLO, 480Y/277V, 3ø, 4 WIRE — AVAILABLE FAULT: 27,000A — SCCR & AIC: 35,000A — MOUNTING: SURFACE

NOTES	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	NOTES
	3000	EXIST CIRCUIT	EXIST	20/1	1				2	20/1	EXIST	LIGHTS CAFETORIUM RMS	2300	1
1	3000	LIGHTS CAFETORIUM	EXIST	20/1	3				4	20/1	EXIST	LIGHTS CAFETORIUM	3000	1
	9150	AHU #2	EXIST	20/3	5				6	20/1	EXIST	KITCHEN LIGHTS		2
	–	–	–	–	7				8	60/3	EXIST	DUCT HEATER 3	39000	
	–	–	–	–	9				10	–	–	(STAGE)	–	
	130000	PANEL PA	EXIST	225/3	11				12	–	–	–	–	
	–	–	–	–	13				14	70/3	3-6	TEMP KITCHEN PANEL LTK	37918	4
	–	–	–	–	15				16	–	+8G	–	–	
	33750	XFRMR TLCAB	EXIST	125/3	17				18	–	3/4"C	–	–	
	–	–	–	–	19				20			SPACE		
	–	–	–	–	21				22			SPACE		
		SPACE			23				24			SPACE		
		SPACE			25				26			SPACE		
		SPACE			27				28			SPACE		
		SPACE			29				30			SPACE		
	TOTAL LOAD @ 100% =	281118VA			TOTAL LOAD @ 100% =		314A					TOTAL LOAD @ 125% =	393A	

1. THE EXISTING 400A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST EM STANDBY PANELBOARD — CENTRAL PLANT

(E)PANEL EL — 100A MCB, 208Y/120V, 3ø, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
		500	PA SYSTEM	EXIST	20/1	1				2	20/1		EXIST SPARE			
		500	SECURITY SYSTEM	EXIST	20/1	3				4	20/1		EXIST SPARE			
		250	FACP	EXIST	20/1	5				6	20/1		EXIST SPARE			
		250	F/A RPS	EXIST	20/1	7				8	20/1		EXIST SPARE			
		250	F/A RPS	EXIST	20/1	9				10	20/1		EXIST SPARE			
		250	GENERATOR ACCESSORIES	EXIST	20/1	11				12	20/1		EXIST SPARE			
4	E188	864	REFRIGERATOR	3-12	20/1	13				14	20/1		EXIST SPARE			
4	E188	864	REFRIGERATOR	3-12	20/1	15				16	25/3	3-10	REFRIGERATION SYSTEM	6192	E103	4
4	E109	1428	ICE MACHINE	3-12	20/1	17				18	–	+10G	–	–		
4	E151	240	HOOD ANSUL SYSTEMS	3-12	20/1	19				20	–	3/4"C	–	–		
4	E102B	600	COOLER TEMP. ALARM	3-12	20/1	21				22	20/1EGF	3-12	COOLER DOOR HEATER/LTS	600	E102A	4
4	E102C	600	COOLER PRESSURE PORT	3-12	20/1	23				24	20/1EGF	3-12	FREEZER DOOR HEATER/LTS	600	E102A	4
4	E102E	120	PANIC ALARM BUTTONS	3-12	20/1	25				26	20/1EGF	3-12	FREEZER DRAIN LINE HEATER	600	E103F	4
4	E103D	216	COOLER COIL	3-12	20/1	27				28			SPACE			
4	E102B	600	FREEZER TEMP. ALARM	3-12	20/1	29				30			SPACE			
4	E102C	600	FREEZER PRESSURE PORT	3-12	20/1	31				32			SPACE			
4	E103C	1893	FREEZER COIL	2-10	20/2	33				34			SPACE			
		–	–	+10G	–	35				36			SPACE			
			EXIST SPARE		40/3	37				38	30/3	EXIST	SPD	50		
		–	–	–	–	39				40	–	–	–	–		
		–	–	–	–	41				42	–	–	–	–		
		TOTAL LOAD @ 100% =	18067VA			TOTAL LOAD @ 100% =		50A					TOTAL LOAD @ 125% =	63A		

1. THE EXISTING 100A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

GENERAL PANEL REQUIREMENTS:
A. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
B. FIELD VERIFY EXISTING CIRCUITS PRIOR TO BEGINNING WORK.
C. ALL OUTAGES SHALL BE SCHEDULED AND CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
D. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.

PANEL NOTES:
1. REVISE/REWORK WIRING/CONDUIT AS REQUIRED TO ADD/REMOVE DEVICES FROM EXISTING CIRCUIT.
2. EXISTING CIRCUIT TO BE DEMO.
3. REUSE EXISTING SPARE CB AND WIRE NEW CIRCUIT.
4. PROVIDE NEW CB & WIRE NEW CIRCUIT.
5. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AND REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION.
6. KITCHEN LIGHTS TO BE DUAL ZONES WIRED THROUGH LIGHTING CONTACTORS AND CONTROLLED ON/OFF BY THE BAS AND LOCAL LIGHTING SWITCHES.
7. EXTERIOR LIGHTS TO BE WIRED THROUGH LIGHTING CONTACTOR AND CONTROLLED ON/OFF BY THE BAS.
8. WIRE CIRCUITS THROUGH KITCHEN EQUIPMENT CONTROL CONTACTOR. CIRCUITS TO BE DE-ENERGIZED BY HOOD FIRE PROTECTION SYSTEM.
9. RECONNECT EXISTING TEMPORARY LOAD CENTER CIRCUIT TO NEW PANEL LK. 4 ADD4

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	4 ADD4 ADDENDUM 04

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL
STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL SCHEMATIC

k-E.400

STANTON ENGINEERING GROUP
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PLUMBING SYMBOLS LEGEND

Symbol	Description	Abbrev.	Description
— — — — — —	SANITARY WASTE BELOW SLAB	SAN.	SANITARY
————————	SANITARY WASTE ABOVE SLAB	CW	DOMESTIC COLD WATER
—— V ——	VENT PIPING ABOVE SLAB	HW	DOMESTIC HOT WATER
——— ———	VENT PIPING	WC	WATER CLOSET
—— G ——	GAS PIPING, 4-8oz	UR	URINAL
—— G5 ——	GAS PIPING, 5LB	LAV	LAVATORY
——·——·——	DOMESTIC COLD WATER PIPING	SK	SINK
——··——··——	DOMESTIC HOT WATER PIPING	EDF	ELECTRIC DRINKING FOUNTAIN
—— D ——	DRAIN/RELIEF VENT PIPING	WH	WALL HYDRANT
——⋈——	STOP VALVE	HB	HOSEBIBB
2CO	DOUBLE SAN. CLEANOUT (2-WAY)	CP	HOT WATER CIRCULATOR PUMP
CO	SANITARY SEWER CLEANOUT	FD	FLOOR DRAIN
WCO	WALL CLEANOUT	FSINK	FLOOR SINK
EXIST.	EXISTING		
(R)	REMOVE (DEMOLISH)		
(D)	DEMOLISH (REMOVE)		
(E)	EXISTING – NO WORK		

PLUMBING FIXTURE NOTES

1. ALL FIXTURES SHALL MEET WATER CONSERVATION PERFORMANCE STANDARDS MANDATED BY SENATE BILL 587. ALL FIXTURES SHALL HAVE FLOW RESTRICTION DEVICES (DRINKING FOUNTAINS SHALL BE SELF-CLOSING) TO COMPLY WITH THESE REQUIREMENTS.
2. ALL FIXTURES SHALL HAVE CONTROLS REQUIRING OPERATING FORCE NO GREATER THAN FIVE (5) POUNDS.
3. FOR LAVATORIES AND SINKS, ALL FAUCETS SHALL BE NO-LEAD SOLID BRASS, MEETING ALL REQUIREMENTS OF ANSI/NSF 61, SECTION 9 AND CERTIFIED AS SUCH. ALSO, INSTALL SYMMONS 7-210 MIXING VALVE ON HOT WATER SUPPLY SIDE OF ALL FAUCETS UNLESS HIGH TEMPERATURE LIMIT IS PROVIDED WITH FAUCET. MAXIMUM WATER TEMPERATURE FOR ALL FAUCETS THAT DELIVER HOT OR TEPID WATER SHALL BE 110°F. ALL METERING FAUCETS SHALL HAVE A MINIMUM TEN (10) SECONDS OF WATER FLOW. AND, INSTALL TRUEBRO HANDI LAV-GUARD VANDAL-PROOF INSULATION KITS OVER P-TRAP, SUPPLIES, STOPS AND ALL SHARP EDGES FOR ALL SINKS AND LAVATORIES (TRAP WRAP FROM BROCAR OR PROWRAP FROM McGUIRE SHALL BE ACCEPTABLE).
4. ALL PLUMBING FIXTURES REFERENCED AS "ADA", "TAS" OR "HANDICAP COMPLIANT" SHALL MEET ALL REQUIREMENTS OF THE ADA AND THE TEXAS ACCESSIBILITY STANDARDS. IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MEET THESE REQUIREMENTS.
5. IN MANY CASES, FIXTURES WITH THE SAME PLUMBING DESIGNATION HAVE DIFFERENT INSTALLATION HEIGHTS – REFERENCE ARCHITECTURAL DRAWINGS FOR ALL INSTALLATION HEIGHTS AND HANDICAP FIXTURE DESIGNATIONS. FIXTURES DESIGNATED AS ADULT HANDICAP SHALL MEET ALL REQUIREMENTS OF THE ADA. FIXTURES DESIGNATED AS CHILD HANDICAP SHALL MEET ALL REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS FOR THE APPROPRIATE CHILDREN'S AGE GROUP (REF. ARCH. DWGS. AND SPECIFICATIONS).

PLUMBING MATERIALS

SANITARY WASTE AND VENT

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

STORM DRAIN PIPING

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB, 8" AND UNDER: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

ABOVE SLAB, 10" AND ABOVE: SERVICE WEIGHT, CAST IRON, BELL & SPIGOT.

NATURAL GAS

BELOW GRADE (OUTSIDE): YELLOW POLYETHYLENE PIPE WITH COATED STEEL RISER AND TRACER WIRE.

ABOVE SLAB: SCHEDULE 40 BLACK STEEL. PIPING 2.5" AND LARGER SHALL BE WELDED. PIPING 2" AND SMALLER SHALL HAVE SCREWED FITTINGS.

DOMESTIC WATER

INTERIOR: TYPE L COPPER WITH SOLDER TYPE WROUGHT COPPER FITTINGS, MADE UP WITH LEAD-FREE SOLDER.

EXTERIOR: TYPE K COPPER WITH SWEAT FITTINGS AND LEAD-FREE SOLDER. BEYOND 5 FEET FROM BUILDING, SCHEDULE 40 PVC.

FIRE SPRINKLER SYSTEM NOTES

1. THE EXISTING FIRE SPRINKLER SYSTEM SHALL BE MODIFIED AND/OR EXPANDED TO COVER THE AREA OF RENOVATION IN ENTIRETY. ALL NEW AND REVISED PIPING SHALL BE ENGINEERED AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR.
2. REFERENCE THE SPECIFICATIONS, DIVISION 21, FOR MORE INFORMATION.

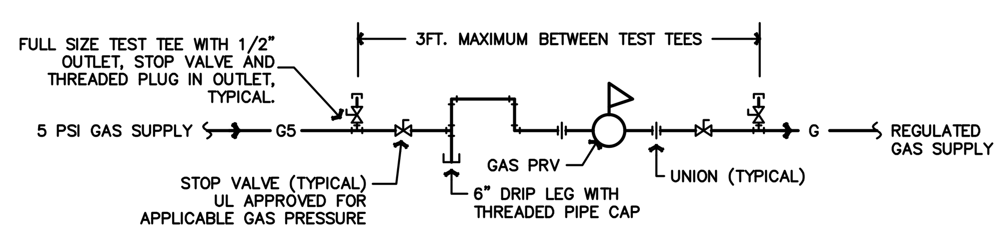
GENERAL PLUMBING NOTES

1. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL WORK DESCRIPTION. SEE THIS SHEET (P4.00) FOR PLUMBING SYMBOLS LEGEND.
2. COORDINATE PLUMBING SYSTEMS INSTALLATION WITH ARCHITECTURAL, STRUCTURAL, HVAC SYSTEMS, ELECTRICAL SYSTEMS, CONDUITS, ETC.... OFFSET PIPING AS REQUIRED TO PROVIDE A FUNCTIONING SYSTEM WITH ADEQUATE SPACE FOR SERVICING AND REPAIRS.
3. MAKE CONNECTIONS OF NEW PIPE SYSTEMS IN TO EXISTING PIPE SYSTEMS WITH THREADED OR SWEAT JOINTS. PROVIDE ELECTROLYSIS ISOLATING UNIONS AT CONNECTION OF DISSIMILAR MATERIALS. REFERENCE THE SPECIFICATIONS.
4. SITE SERVICES ARE SHOWN FOR REFERENCE ONLY. PLUMBING CONTRACTOR SHALL REFERENCE CIVIL DRAWINGS, INCLUDING LOCATIONS OF SERVICES, SIZES OF PIPES, FLOWLINE ELEVATIONS, ETC..
5. DO NOT INSTALL PLUMBING PIPING OVER ANY ELECTRICAL EQUIPMENT. REFERENCE ELECTRICAL DRAWINGS FOR LOCATIONS OF ELECTRICAL EQUIPMENT AND COORDINATE WITH ELECTRICAL SUBCONTRACTORS ACCORDINGLY. SEE DETAIL 1/P0.02. THIS INCLUDES FIRE SPRINKLER PIPING.
6. ALL PIPES THROUGH WALLS OR FLOORS SHALL BE SLEEVED AND SEALED PER DETAIL 5/P0.02. FIRE CAULK WHERE REQUIRED. THIS INCLUDES ALL WALLS, INTERIOR AND EXTERIOR. THIS INCLUDES FIRE SPRINKLER PIPING.
7. ALL CLEANOUTS SHALL BE CONNECTED TO SANITARY LINES USING WYES AND/OR LONG RADIUS ELLS. SANITARY TEES ARE NOT ACCEPTABLE. 2" MINIMUM SIZE. ALL WALL CLEAN OUTS IN VERTICAL RISERS, OR BANKS OF FIXTURES SHALL BE INSTALLED 4" ABOVE THE FLOOD RIM LEVEL OF THE LOWEST CONNECTED FIXTURE AND A MINIMUM OF 24" AFF.
8. ALL WASTE AND VENT PIPING BELOW SLAB SHALL BE 2" MINIMUM.
9. LOCATE PLUMBING VENTS THROUGH ROOF NOT NEARER THAN SIX (6) FEET AWAY FROM EDGE OF BUILDING AND TEN (10) FEET AWAY FROM ANY FRESH AIR INTAKES. OFFSET VENT PIPING, AS REQUIRED, IN CEILING SPACE BETWEEN CEILING AND ROOF TO MEET THESE REQUIREMENTS. SEE DETAIL 3/P0.02.
10. ALL DOMESTIC WATER PIPING (CW, HW AND HWR) SHALL BE INSULATED PER THE WRITTEN SPECIFICATIONS.
11. TOP OF FLOOR DRAINS IN MECHANICAL, AHU AND BOILER ROOMS SHALL BE SET 1-1/2" BELOW FINISHED FLOOR SURFACE. CONCRETE FLOOR SHALL BE SLOPED TO DRAIN, REFERENCE ARCHITECTURAL DRAWINGS. IN ALL OTHER LOCATIONS, FLOOR DRAINS SHALL BE SET FLUSH WITH FINISHED FLOOR, TAKING INTO ACCOUNT ANY FLOOR SLOPE OR FLOOR FINISH (TILE, TERRAZZO, ETC.) AS SHOWN ON ARCHITECTURAL DRAWINGS.
12. PROVIDE AN ISOLATING VALVE AT EACH WATER TAP OFF HOT AND COLD WATER MAINS TO ALLOW FOR SERVICING. VALVE SHALL BE BALL VALVE IF PIPE SIZE IS 2" OR LESS AND GATE VALVE OR BUTTERFLY VALVE IF LARGER THAN 2". SEE WRITTEN SPECIFICATIONS. VALVES SHALL BE EASILY ACCESSIBLE: PROVIDE 18" X 18", FIRE-RATED, STAINLESS STEEL ACCESS PANELS WITH HINGED, CYLINDER LOCK DOORS WHERE VALVES ARE INSTALLED ABOVE INACCESSIBLE CEILINGS OR IN WALL CHASES (MIFAB MODEL MPFR-SS-C). BALL VALVES AND BUTTERFLY VALVES INSTALLED ABOVE CEILINGS SHALL BE INSTALLED SUCH THAT HANDLE IS ON BOTTOM OF PIPE. ISOLATING WATER VALVES ABOVE CEILINGS SHALL BE INSTALLED NO MORE THAN 24" ABOVE CEILING. VALVES ABOVE INACCESSIBLE CEILINGS SHALL BE INSTALLED WITHIN REASONABLE REACH OF CEILING MOUNTED ACCESS PANEL.
13. WATER HAMMER ARRESTERS SHALL BE INSTALLED IN ADDITION TO AIR CHAMBERS PER THE RISER DIAGRAMS. SEE SPECIFICATIONS.
14. MECHANICALLY CLEAN ALL WASTE LINES WITH ROTARY MACHINE TO PROVE FREE FLOWING, SEE SPECIFICATIONS.
15. PROVIDE VENTED SLEEVE (2 PIPE SIZES LARGER THAN GAS PIPE UNLESS NOTED OTHERWISE) FOR ALL GAS PIPING IN GROUND BELOW PAVING OR SIDEWALKS AND INSIDE BUILDING IN WALLS AND IN UNVENTILATED CEILING SPACES, SEE SPECIFICATIONS.
16. GAS PIPING SHALL BE 1/2" MINIMUM. TAP GAS PIPING ON TOP OR SIDES ONLY. DO NOT INSTALL VALVES IN CEILING PLENUM OR IN ANY INACCESSIBLE LOCATION. ALL GAS VALVES SHALL BE EASILY ACCESSIBLE. REFER TO DETAIL 7/P0.01 FOR TYPICAL GAS CONNECTION INSTALLATION. REFER TO DETAIL 4/P0.01 FOR TYPICAL PRV INSTALLATION.
17. CENTER WALL HYDRANTS IN BRICK PATTERN OF EXTERIOR WALLS, REFERENCE THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
18. ALL REFRIGERATORS WITH ICE MAKERS, COMMERCIAL TYPE COFFEE MAKERS, ICE MAKERS, COFFEE VENDING MACHINES AND OTHER ITEMS PROVIDED BY OTHERS THAT REQUIRE A WATER CONNECTION SHALL HAVE A CW VALVE BOX, "VBOX", INSTALLED TO ALLOW EASY ACCESS AND REMOVAL OF MACHINE. ALSO, INSTALL IN-LINE FILTER IN WATER CONNECTION.
19. REFER TO CIVIL DRAWINGS FOR SITE SANITARY, SITE STORM SEWER, FIRE SERVICE AND DOMESTIC WATER SERVICE. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPING INSIDE BUILDING TO OUTSIDE LOCATIONS SHOWN ON PLUMBING DRAWINGS. PLUMBING CONTRACTOR SHALL INCLUDE COST OF FINAL TIE-INS TO SITE SERVICES.
20. PER THE DRAWINGS, ALL DRAINS (FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, KITCHEN DRAINS, SHOWER DRAINS, ETC.) SHALL BE VENTED AND TRAP PRIMED – NO EXCEPTIONS. TRAP PRIMING SHALL BE ACCOMPLISHED USING WATER CLOSET FLUSH VALVE TRAP PRIMING DEVICES OR PROSET SYSTEMS TRAP GUARD SEWER GAS EMISSION PROTECTION, AS SHOWN ON DRAWINGS. REFERENCE PLUMBING FLOOR PLANS AND RISER DIAGRAMS.
21. ALL PIPING LOCATED ON ROOF (GAS PIPING) SHALL BE INSTALLED ON ROOF PIPE SUPPORTS PER DETAIL 14/P0.02, 6-FOOT ON CENTER. INSTALL ROOF PIPE JACK PER DETAIL 9/P0.02 FOR ALL PIPING THROUGH ROOF.
22. COORDINATE LOCATIONS OF ALL ROOF DRAINS AND OVERFLOW ROOF DRAINS WITH ARCHITECTURAL DRAWINGS.
23. FOR COMBINATION WASTE AND VENT SYSTEMS (WHERE APPLICABLE ON DRAWINGS), DRAIN P-TRAPS SHALL BE SIZE OF PIPE SHOWN ON DRAWINGS (I.E. TWO PIPE SIZES LARGER THAN DRAIN SIZE). FOR EXAMPLE, A 4" FLOOR DRAIN SHALL HAVE A 6" P-TRAP.
24. FOR ALL PLUMBING FIXTURES, IF COPPER PIPING IS STUBBED THROUGH WALL FOR DRAIN CONNECTION, INSTALL MARVEL FITTING AT DRAIN CONNECTION FOR EASE OF SERVICING AND REPAIRS. COPPER DRAIN PIPING WILL ONLY BE ALLOWED FOR DIRECT/STRAIGHT STUB-OUT OF FIXTURE DRAIN PIPING THROUGH WALL.
25. DO NOT INSTALL ANY PIPING BENEATH CVT OR VAV BOXES. THIS INCLUDES FIRE SPRINKLER PIPING.
26. WHERE UNDERGROUND VENT PIPE SIZE IS NOT NOTATED, VENT SHALL BE 2" DIAMETER.
27. WHERE UNDERGROUND SANITARY PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR SIZE. NOT BELOW GRADE SANITARY PIPE SHALL BE SMALLER THAN 2". NO SANITARY LINE OR P-TRAP FOR A DRAIN/FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE DRAIN/FIXTURE SCHEDULE.
28. WHERE ABOVE GROUND VENT PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR VENT SIZE.
29. WHERE CW/HW PIPING SIZE TO THE FIXTURE IS NOT SHOWN ON THE FLOOR PLAN, REFER TO THE RISER DIAGRAMS FOR CW/HW PIPE SIZE. NO PIPING TO FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE FIXTURE SCHEDULE.
30. TO INSTALL NEW PLUMBING SYSTEMS BELOW EXISTING CONCRETE SLABS, FIRST PLUMBING CONTRACTOR SHALL LAY OUT CUT. THEN, DEMOLITION CONTRACTOR SHALL SAW CUT SLAB TO CONTROL CRACKING AND REMOVE ALL CONCRETE. PLUMBING CONTRACTOR SHALL THEN EXCAVATE FILL TO PROPER SLOPE, INSTALL NEW PIPING SYSTEMS AS REQUIRED, THEN BACKFILL AND COMPACT TO PROPER DENSITY. THE CONCRETE CONTRACTOR SHALL THEN INSTALL NEW SIX (6) MIL POLYETHYLENE VAPOR BARRIER AND SEAL, INSTALL NEW REINFORCING STEEL AND WELD ON TO EXISTING, THEN RE-POUR CONCRETE TO NEW LEVEL. DO NOT CUT THROUGH GRADE BEAMS WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
31. ALL ABANDONED FIXTURES, DRAINS AND PIPING (INCLUDING PIPING ABANDONED IN THE PAST) IN AREAS WHERE WORK IS BEING DONE SHALL BE COMPLETELY REMOVED FROM BUILDING (INCLUDING PIPING BELOW SLAB/GRADE – UNLESS SHOWN OTHERWISE ON DRAWINGS). EXISTING WATER PIPING SHALL BE CAPPED AT EXISTING WATER MAIN TAPS AND ALL ABANDONED PIPING REMOVED. ABANDONED VENT PIPING SHALL BE COMPLETELY REMOVED, INCLUDING EXISTING VTR's NOT RE-USED. PATCH AS REQUIRED. ONLY ACTIVE PIPING, FIXTURES AND DRAINS SHALL REMAIN IN BUILDING WHERE WORK IS BEING DONE.
32. FIELD VERIFY EXISTING CONDITIONS PRIOR PROCUREMENT OF EQUIPMENT AND SYSTEMS.
33. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION.
34. PROVIDE INSUALTION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF THE 2021-IECC. (4 ADD4)
35. SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.

GAS PRV SCHEDULE

MARK	PRV-K	PRV-K2
LOCATION	MECH. YARD	MECH. YARD
SERVES	KITCHEN	KITCHEN
GAS LOAD	585 CFH	585 CFH
DISTANCE FROM METER	150 FT	150 FT
DISTANCE TO LAST OUTLET	200 FT	200 FT
INLET (SIZE/PRESSURE)	1" / 5 PSI	1" / 5 PSI
OUTLET (SIZE/PRESSURE)	2" / 7-12 IN WC	2" / 7-12 IN WC

(4 ADD4)



4 GAS PRESSURE REGULATOR DETAIL (PRV)

NO SCALE

NOTES:
1. GAS REGULATOR SHALL BE ANSI Z21.80 CERTIFIED FOR LINE PRESSURE REGULATION BETWEEN THE SERVICE REGULATOR AND CONNECTED EQUIPMENT.
2. ALL GAS REGULATORS WITH INLET PRESSURE ABOVE 2 PSI SHALL BE EQUIPPED WITH A FACTORY INSTALLED OVERPRESSURE PROTECTION DEVICE, AS PART OF THE ANSI Z21.80 CERTIFICATION.
3. GAS REGULATOR SHALL BE EQUIPPED WITH A VENT LIMITING DEVICE, SIZED IN ACCORDANCE WITH THE REGULATOR OUTLET PRESSURE.
4. ALL REGULATORS INSTALLED OUTDOORS SHALL BE RATED FOR OUTDOOR INSTALLATION.
5. BASIS OF DESIGN IN THE MAXITROL 325-L SERIES OF REGULATORS

PLUMBING DRAINS, CLEANOUTS AND HYDRANTS

MARK	MIN. CONNECTION SIZES (IN.)				DESCRIPTION/SPECIFICATION FOR FIXTURE OR EQUIPMENT
	SAN	VENT	CW	HW	
FD	4	2	1/2	–	TOILET FLOOR DRAIN – TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 1/2" TRAP PRIMER TAP, 6" SQUARE, NICKEL BRONZE HSTRAINER AND SECURITY SCREWS JR SMITH MODEL 2005-03-K06PB-P050-U.
FD2	4	2	1/2	–	EQUIPMENT FLOOR DRAIN – CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, DUCTILE IRON TRUE-FIT SEDIMENT BUCKET WITH 12" STAINLESS STEEL RIM LESS GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS-540-LG-P. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD3	4	2	1/2	–	GRATED MECHANICAL ROOM FLOOR DRAIN – CAST IRON WITH FLANGE, SEEPAGE OPENINGS, 9" HEAVY-DUTY DUCTILE IRON GRATE WITH STAINLESS STEEL VENEER, CLAMPING DEVICE AND 1/2" TRAP PRIMER TAP ZURN MODEL ZS-550-C-P
FD4	4	2	1/2	–	CANWASH FLOOR DRAIN – ALL GALVANIZED CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, GALVANIZED SUR-SET SEDIMENT BUCKET WITH 12" GALVANIZED DUCTILE IRON RIM AND GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS-540-P-G-HD. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD5	4	2	1/2	–	KITCHEN FLOOR DRAINS SHALL BE SIMILAR EXCEPT WITH 7" SQUARE, BRONZE GRATE JR SMITH MODEL 2005-03-K07PB-P050-U. PROVIDE 4" DIAMETER STAINLESS STEEL FUNNEL WHERE SHOWN ON DRAWINGS. REFERENCE KITCHEN CONNECTION SCHEDULE ON PLUMBING RENOVATION FLOOR PLAN SHEET.
FS KITCHEN FS	4	2	1/2	–	FLOOR SINK – CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY STAINLESS STEEL TRACTOR DUTY FRAME WITH 3/4-TRACTOR GRATE AND 1/2" TRAP PRIMER TAP JR SMITH MODEL 3150Y-04-C-13.
FS2 (4 ADD4)	4	2	1/2	–	DEEP FLOOR SINK – FABRICATED STEEL RECEPTOR, 12" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, STAINLESS STEEL MESH LINED BUCKET AND 24X12 NICKEL BRONZE FRAME WITH 3/4 SOLID COVER. JR SMITH MODEL 3250Y-C-BS-43
CO	VARIES	–	–	–	FLOOR CLEANOUT – ADJUSTABLE EXTENSION HOUSING, CAST IRON FERRULE WITH FULL-LINE-SIZE BRASS PLUG (UP TO 4"), 5" DIAMETER STAINLESS STEEL ACCESS COVER WITH VANDAL-PROOF SECURITY SCREWS, ROUND FRAME AND TOP STYLE COMPATIBLE WITH FLOOR TYPE (REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR TYPES) ZURN MODEL ZS-1400-VP. PROVIDE CARPET FLANGE FOR CARPETED AREAS (CARPET MARKER SHALL NOT BE ACCEPTABLE) AND TERRAZZO RECESS FOR TERRAZZO FLOORS. OUTDOOR CLEANOUT – SAME AS TYPE "CO" EXCEPT WITH HEAVY-DUTY NICKEL BRONZE TOP ZURN MODEL ZN-1400-HD-VP. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
WCO	VARIES	–	–	–	WALL CLEANOUT – CAST IRON FERRULE WITH COUNTERSUNK HEAD (FULL-LINE-SIZE PVC PLUG UP TO 4") MI-FAB MODEL C1450. ACCESS COVER SHALL BE 8" SQUARE, SURFACE MOUNT, FLUSH INSTALLATION, 16-GAUGE STAINLESS STEEL ACCESS DOOR WITH FLANGED FRAME AND VANDAL-PROOF OPTION MI-FAB MODEL UA-SS-VP. ACID WASTE CLEANOUT (AWCO) SHALL BE SAME EXCEPT ACID WASTE PIPING. INSIDE CABINETWORK WHERE CLEANOUT IS NOT VISIBLE, ACCESS PANEL MAY BE ROUND STAINLESS STEEL TYPE WITH VANDAL-PROOF CENTER SCREW MI-FAB MODEL C1450-RD-3-6.
2CO	4	–	–	–	DOUBLE CLEANOUTS – SAME AS OUTDOOR CLEANOUTS. INSTALLED FOR TWO-WAY RODDING. SINGLE CLEANOUT WITH 2-WAY FITTING IS NOT ACCEPTABLE, PROVIDE TWO SEPARATE CLEANOUTS. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
HB	–	–	3/4	–	HOSEBIBB – 3/4" HOSE THREAD, INTEGRAL VACUUM BREAKER SPOUT, ROUGH CHROME FINISH WITH REMOVABLE KEYED HANDLE, WALL FLANGE CHICAGO MODEL 952.
WH	–	–	3/4	–	RESTROOM WALL HYDRANT – NARROW WALL, WARM CLIMATE TYPE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5518
WH2	–	–	3/4	–	EXTERIOR WALL HYDRANT – NON-FREEZE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5519
WH3	–	–	3/4	3/4	CANWASH WALL HYDRANT – NON-FREEZE HOSE BOX WITH STRAIGHT INLET CONNECTION, HOT AND COLD MIXING, REMOVABLE KEYED HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL BACKFLOW PREVENTER WITH 3/4" HOSE CONNECTION, HEAVY DUTY BRASS CASING, POLISHED BRONZE HYDRANT BOX WITH HINGED COVER, "WATER" CAST ON COVER, DRIP LIP AND WALL CLAMP J.R. SMITH MODEL 5560-QT-WC-H-W-PB.
WASH (4 ADD4)	–	–	3/4	3/4	CLOTHES WASHER HOSE CONNECTION – STUB OUT OF WALL WITH ELBOW TO LEAD FREE DOUBLE CHECK BACKFLOW PREVENTER WITH QUARTER TURN VALVES, WATTS LF007M3-QT-FZ 3/4; PROVIDE FEMALE NIPPLE WITH 3/4" HOSE CONNECTION FOR CONNECTION OF WASHER JUMPER HOSE. SUPPORT ASSEMBLY FROM WALL WITH UNISTRUT AND PIPE CLAMPS. ASSEMBLY SHALL BE PROVIDED FOR BOTH COLD AND HOT WATER OUTLETS. WASHER HAS INTEGRAL AIR GAP CERTIFIED TO EUROPEAN STANDARDS AND THUS REQURIES AN EXTERNAL MEANS OF BACKFLOW PREVENTION TO MEET US STANDARDS.

KITCHEN PLUMBING CONNECTION SCHEDULE

MARK	DESCRIPTION
P5	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO MOP BASIN ("MB") FAUCET. REFERENCE PLUMBING FIXTURE SCHEDULE.
P6	3" DRAIN IN FLOOR FOR MOP BASIN ("MB") DRAIN. REFERENCE PLUMBING FIXTURE SCHEDULE.
P7	3/4" CW AND 3/4" HW – IN WALL, 18" AFF, TO HOSE BIBB.
P10	FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" SQUARE HEAVY-DUTY POLISHED BRONZE GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 2005-03-K07PB-P050-U.
P11C	1/2" CW AND 1/2" HW – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P11D	2" DRAIN – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P12	FLOOR SINK – 4" OUTLET; FLUSH WITH FLOOR; CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY NICKEL BRONZE FRAME WITH 3/4-TRACTOR GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 3150Y-04-C-13.
P12A	EQUIPMENT FLOOR DRAIN – SIMILAR TO MARK P10, BUT WITH 4" OUTLET.
P15	FUNNEL FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" DIAMATER HEAVY-DUTY STAINLESS STEEL TRACTOR DUTY GRATE AND SECURITY SCREWS, 4" ROUND FUNNEL ASSEMBLY (MODEL 3580), 1/2" TRAP PRIMER TAP JR SMITH MODEL 2005-03-K07PB-P050-U
P109	3/4" CW – IN WALL, 60" AFF, TO ICE MAKER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO ICE MAKER FROM CHECK VALVE, THROUGH FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P109A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12, BUT WITH FULL GRATE. SEE DESCRIPTION ABOVE.
P110	1/2" CW AND 1/2" HW – IN WALL, 36" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO-CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P110A	2" DRAIN – IN WALL, 48" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO-CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P122	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET AT TWO COMPARTMENT SINK. INSTALL LEONARD 370-LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P122A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.

MARK	DESCRIPTION
P123	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO PRE-RINSE. 1/2" CW TO DISPOSER.
P123A	2" DRAIN – IN WALL, 10" AFF, TO DISPOSER (BYPASS GREASE TRAP).
P161	(2)3/4" GAS CONNECTION – 18"/36" AFF, TO CONVECTION OVEN, 60 CFH (EACH).
P163A	3/4" GAS CONNECTION – 18" AFF, TO TILT BRAISING PAN, 104 CFH.
P163B	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO TILT BRAISING PAN.
P165	1" GAS CONNECTION – 18" AFF, TO RANGE, 70 CFH.
P172	(2) 3/4" CW – IN WALL, 24" AFF & 48" AFF, TO COMBI OVEN. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND OVEN. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO EQUIPMENT FROM CHECK VALVE, THROUGH FILTER BANK (REF P172D & E), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172A	SIMILAR TO PLUMBING CONNECTION P172, BUT ONLY ONE 3/4" CW – IN WALL, 48" AFF. SEE DESCRIPTION ABOVE.
P172B	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P172C	(2) 3/4" GAS CONNECTION – 18"/36" AFF, TO COMBI OVEN, 105 CFH (EACH).
P172D	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO INLET OF FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172E	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. EXTEND OUTLET OF FILTER BANK BACK INTO THE WALL. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PIPING WITHIN THE WALL SHALL EXTEND TO AND SERVE TWO (2) CONNECTIONS TAGGED P172.
P249	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET. INSTALL LEONARD 370-LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P249A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.

MARK	DESCRIPTION
P250	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250A	3/4" HW – IN WALL, 18" AFF, TO BOOSTER HEATER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER AND CONNECT THROUGH FILTER (BY OTHERS) WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PROVIDE WATTS 9MD2 OR EQUAL – 140°F MINIMUM (INTERCONNECT WITH DISH MACHINE).
P250B	3/4" CW – IN WALL, 18" AFF, TO DISH MACHINE. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND DISH MACHINE. PROVIDE WATTS 9MD2 OR EQUAL (INTERCONNECT WITH DISH MACHINE).
P614	1/2" CW AND 1/2" HW – IN WALL, 42" AFF, TO FILL FAUCET.
P800	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.

KITCHEN PLUMBING CONNECTION NOTES

1. KITCHEN CONNECTION SCHEDULE IS APPLICABLE TO ALL SCHOOLS IN THIS DRAWING SET.
2. REFERENCE KITCHEN CONSULTANT'S DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL EQUIPMENT AND INSTALLATION REQUIREMENTS.
3. ALL WATER PIPING INSTALLED EXPOSED BENEATH KITCHEN EQUIPMENT, INCLUDING PIPING INSTALLED BY DIVISION 11 (I.E. UNDER SINK COUNTERTOPS, SERVING TABLES, ETC.) SHALL BE INSULATED BY THE PLUMBING CONTRACTOR PER THE SPECIFICATIONS (INCLUDE ALUMINUM JACKETING FOR ALL PIPE INSULATION, PER SPECIFICATIONS).
4. INDIRECT WASTE PIPING FROM KITCHEN EQUIPMENT IS NOT SHOWN; HOWEVER, PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THIS PIPING PER THE REQUIREMENTS OF THE KITCHEN CONSULTANT'S CONTRACT DOCUMENTS, PER THE REQUIREMENTS OF THE VARIOUS EQUIPMENT MANUFACTURERS PROVIDED AND PER THE IPC-2021, SECTION 802. ALL INDIRECT WASTE PIPING SHALL BE TYPE L COPPER. INSTALL 45°F ELBOW AT END OF EACH INDIRECT WASTE PIPE TO DIRECT FLOW OF WATER INTO FLOOR SINK.
   - 4.1. IPC 2015 – SECTION 802.1.1 FOOD HANDLING – EQUIPMENT AND FIXTURES UTILIZED FOR THE STORAGE, PREPARATION AND HANDLING OF FOOD SHALL DISCHARGE THROUGH AN INDIRECT WASTE PIPE BY MEANS OF AN AIR GAP. EACH WELL OF A MULTIPLE-COMPARTMENT SINK SHALL DISCHARGE INDEPENDENTLY TO A WASTE RECEPTOR. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P121, P122 AND P126.
   - 4.2. IPC 2015 – SECTION 8802.1.8 FOOD UTENSILS, DISHES, POTS AND PANS SINKS – SINKS, USED FOR THE WASHING, RINSING, OR SANITIZING OF UTENSILS, DISHES, POTS, PANS OR SERVICE WARE USED IN THE PREPARATION, SERVING OR EATING OF FOOD SHALL DISCHARGE INDIRECTLY THROUGH AN AIR GAP OR AN AIR BREAK TO THE DRAINAGE SYSTEM. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P249.

PLUMBING FIXTURES AND EQUIPMENT

MARK	MIN. CONNECTION SIZES (IN.)				DESCRIPTION/SPECIFICATION
	SAN	VENT	CW	HW	
WC	4	2	1	–	WATER CLOSET – WALL MOUNTED, WHITE VITREOUS CHINA, SIPHON JET ACTION, 1.28 GPF, ELONGATED BOWL, TOP SPUD, ADA/TAS COMPLIANT, AMERICAN STANDARD AFWALL; SLOAN ROYAL 111-1.28 FLUSH VALVE WITH VANDAL-PROOF FREE-SPINNING TOP CAP, 1.28 GPF, VANDAL-PROOF STOP AND ADA/TAS COMPLIANT LEVER ACTUATOR WITH LEVER INSTALLED ON LEFT SIDE (FOR FIXTURES DESIGNATED AS "HANDICAP", INSTALL LEVER ON "WIDE-SIDE" OF TOILET STALL); BEMIS 1655-SS/C EXTRA HEAVY DUTY, WHITE, OPEN FRONT SEAT LESS COVER WITH SELF-SUSTAINING, STAINLESS STEEL CHECK HINGE; AND, FLOOR MOUNTED CARRIER.
LV	1-1/4	1-1/4	1/2	1/2	LAVATORY GOOSENECK FAUCET – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; DECK MOUNTED FAUCET, 4" CENTERS, FIXED, CHROME PLATED, 5.25" GOOSENECK SPOUT, PRESSURE COMPENSATING LAMINAR FLOW NON-AERATING 0.5 GPM OUTLET, 4" WRISTBLADE HANDLES, REBUILDABLE COMPRESSION CARTRIDGES, CHICAGO 895-317GN2AE72ABCP; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170-LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
LV2	1-1/4	1-1/4	1/2	1/2	LAVATORY – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; CHROME PLATED, ALL CAST BRASS CONSTRUCTION, ADA/TAS COMPLIANT, VANDAL-PROOF FAUCET WITH 4" WRIST BLADE HANDLES, COMPRESSION STYLE CARTRIDGES, CHROME DECK PLATE, VANDAL-PROOF AERATOR, COPPER SUPPLIES AND CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9 CHICAGO MARATHON MODEL 802-E70-317ABCP; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170-LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
EDF	1-1/2	1-1/2	1/2	–	BI-LEVEL ELECTRIC DRINKING FOUNTAINS WITH BOTTLE FILLER – WALL MOUNTED, ALL STAINLESS STEEL, ADA AND TAS COMPLIANT FOR ALL AGES, 8 GPH AT ARI STANDARDS, 2-STREAM ALL METAL BUBBLER FITTING WITH VANDAL-RESISTANT KIT AND FRONT PUSH BUTTON ACTUATION, PUSH BUTTON ACTIVATED BOTTLE FILLER WITH 1.1GPM FILL RATE AND ANIT-MICROBIAL COATING, INTEGRAL WATER FILTER, LEAD-FREE (CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9), REFRIGERANT HFC-134a, MAINTENANCE ACCESS PANEL, HALSEY-TAYLOR MODEL HTHBHVR8BL; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; FLOOR MOUNTED CHAIR CARRIER; AND, STAINLESS STEEL ADA APRON FOR LOCATIONS REQUIRED BY ADA OR TAS.
MB	3	2	3/4	3/4	MOP BASIN – 24" X 24" X 12" DEEP TERRAZZO, TWO (2) STAINLESS STEEL SPLASH CATCHER PANELS, 6" DROP FRONT WITH STAINLESS STEEL CAP, CAST BRASS DRAIN WITH STAINLESS STEEL STRAINER STERN WILLIAMS HILOW MODEL HL-1800-BP; FAUCET SHALL BE POLISHED CHROME PLATED SERVICE SINK TYPE WITH VACUUM BREAKER, INTEGRAL SUPPLY CHECK STOPS, SPOUT WITH PAIL HOOK, HOSE END AND TOP BRACE CHICAGO MODEL 897-CCF (INSTALL BACKING/BRACING INSIDE WALL TO SUPPORT FAUCET AND TOP BRACE).
LP-1	3	2	3/4	3/4	LAVATORY PUMP – FACTORY BUILT, LIFT PUMP FOR GRAY WATER WASTE, TOP ACCESS TO INTERNAL 1/6HP PUMP AND FLOAT SWITCH, 1.5" TOP AND SIDE INLETS, 1.5" TOP OUTLET, INTEGRAL CHECK VALVE AT BOTTOM INLET CONNECTIONS, 9FT POWER CORD WITH GROUNDED PLUG; LIBERTY PUMPS MODEL 406

PRELIMINARY
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ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

MWA ARCHITECTS
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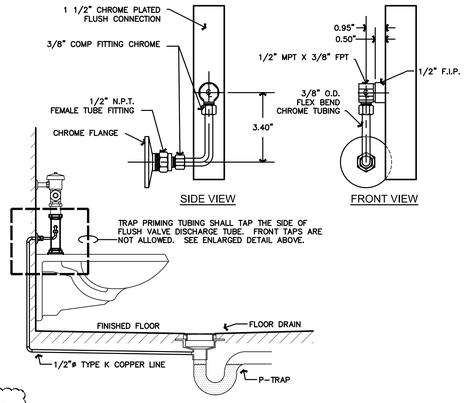
PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

PLUMBING NOTES & SCHEDULES

k-P0.01

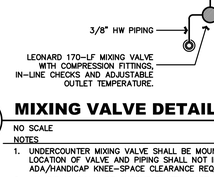


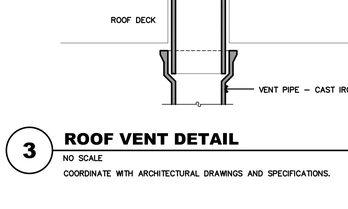
12 FLUSH VALVE TRAP PRIMING TUBE DETAIL

NO SCALE

MI-FAB MODEL MI-702-MOD FLUSH VALVE TRAP PRIMER, OR EQUAL

TANKLESS WATER HEATER SCHED.		
MARK	IEWH-1	
SERVES	LAVATORY	
LOCATION	BELOW COUNTER	
HEATER KW	1.8 KW	
TEMP RISE (@ 0.5 GPM)	25°F	
VOLTAGE/PHASE	120V/1PH	
EEMAX MODEL	SPEX1812T	





13 GAS PIPING WALL-TO-ROOF TRANSITION DETAIL

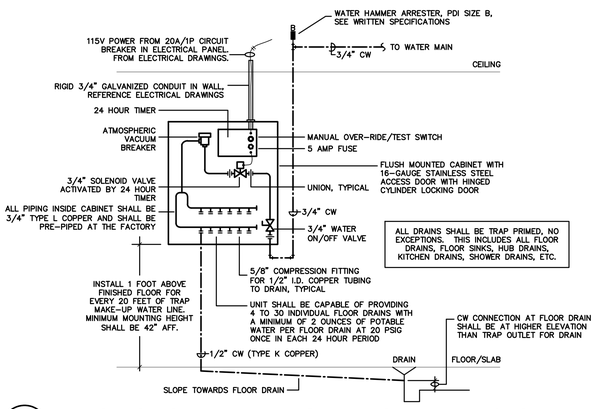
NO SCALE

11 TANKLESS WATER HEATER

NO SCALE

NOTES:

1. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FURNISH & INSTALL 0.5-GPM AERATOR ON FAUCET COMPATIBLE WITH TANKLESS EWH REQUIREMENTS.
5. WATER HEATER SHALL HAVE INTEGRAL ASSE-1070 COMPLIANT TEMPERED MIXING VALVE.

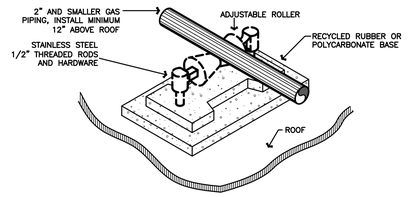


10 ELECTRONIC TRAP PRIMING MANIFOLD DETAIL (TP)

NO SCALE

NOTES:

1. REFERENCE SCHEDULE ON SHEET P3.00

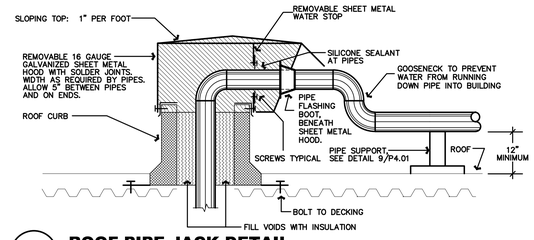


14 GAS PIPING ROOF SUPPORT DETAIL

NO SCALE

NOTES:

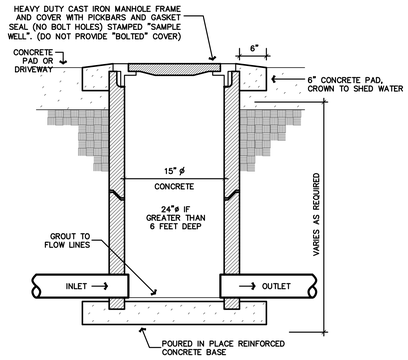
1. GAS PIPING SUPPORT SHALL BE PORTABLE PIPE HANGERS, INC. MODEL PP10-R. PIPING SHALL BE INSTALLED 12" ABOVE FINISHED ROOF. PROVIDE 18" X 18" CAREY TREAD-TYPE MATERIAL BENEATH EACH PIPE SUPPORT.
2. FIELD LOCATE ROOF STRUCTURAL SUPPORTS AND PLACE BASE OF PIPE SUPPORT OVER ROOF SUPPORTS ONLY. PROVIDE BASE OF ADEQUATE LENGTH TO SPAN ROOF JOIST TO PREVENT SUPPORTS SETTING ON ROOF DECK ONLY.
3. INSTALL SIX (6) FOOT-ON-CENTERS.
4. PIPE SUPPORT MANUFACTURER'S REPRESENTATIVE SHALL PERSONALLY INSPECT INSTALLATIONS OF PIPE SUPPORTS AND MAKE CORRECTIONS AND HEIGHT ADJUSTMENTS TO INSTALLATIONS, AS REQUIRED, DURING INSPECTION.



9 ROOF PIPE JACK DETAIL

NO SCALE

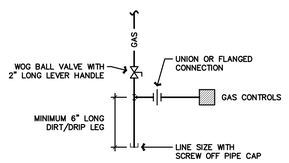
NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.



8 SAMPLE TEST WELL DETAIL (STW)

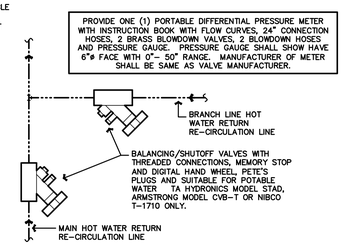
NO SCALE

NOTES:



7 TYPICAL GAS CONNECTION

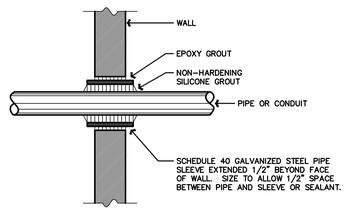
NO SCALE



6 HOT WATER BALANCING STATION

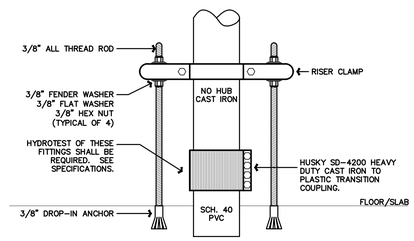
NO SCALE

PROVIDE AT EACH JUNCTION OF BRANCH HOT WATER RETURN LOOPS TO MAIN CIRCULATING HOT WATER LINE, SEE PLUMBING PLANS.



5 WALL PENETRATION DETAIL

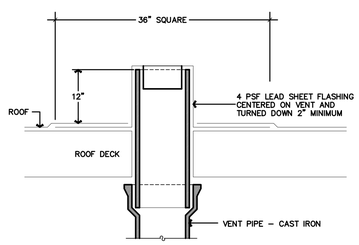
NO SCALE



4 PVC-TO-CAST IRON INSTALLATION DETAIL

NO SCALE

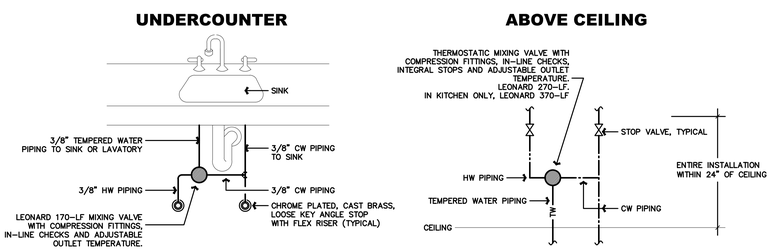
MISSION TRANSITION COUPLING DESIGNED AND CERTIFIED FOR THIS SPECIFIC APPLICATION SHALL BE ACCEPTABLE IN LIEU OF HUSKY COUPLING IN THIS DETAIL.



3 ROOF VENT DETAIL

NO SCALE

COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

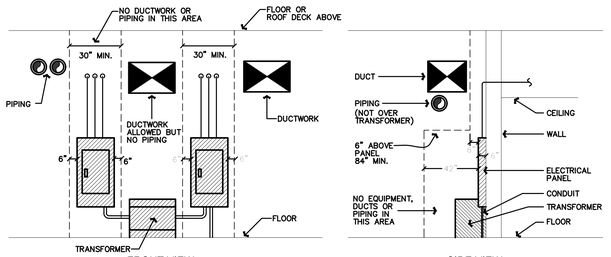


2 MIXING VALVE DETAIL

NO SCALE

NOTES

1. UNDERCOUNTER MIXING VALVE SHALL BE MOUNTED ON WALL IN FIXTURE KNEE-SPACE. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FOR ABOVE CEILING INSTALLATION, VALVE SHALL BE INSTALLED IN AN EASILY/READILY ACCESSIBLE LOCATION. SEE KITCHEN PLUMBING CONNECTION SCHEDULE FOR REQUIRED KITCHEN LOCATIONS.
5. LAVATORY MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 130°F.
   SINK MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 140°F.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

DO NOT INSTALL ANY PIPING BENEATH CVT BOXES. DO NOT INSTALL ANY PIPING (EXCEPT FIRE SPRINKLER PIPING AND OTHER PIPES SHOWN SPECIFICALLY ON THE PLUMBING FLOOR PLANS) OVER COMPUTER CLASSROOMS, BOOKROOMS, IDF/MDF/SERVER ROOMS OR OTHER ROOMS NOTED ON THE PLUMBING FLOOR PLANS.

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05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
4 09/04/2025	ADDENDUM 04

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
6955 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

STATE OF TEXAS
INTERIM REVIEW
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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PLUMBING SCHEDULES & DETAILS

k-P0.02

PRELIMINARY
NOT FOR CONSTRUCTION OR BIDDING PURPOSES

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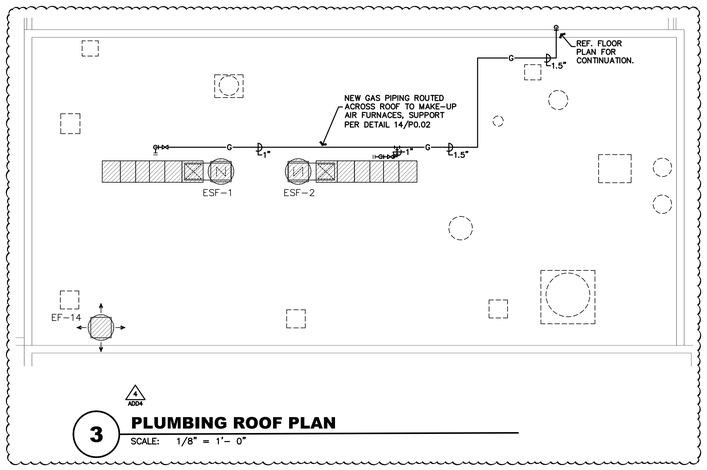
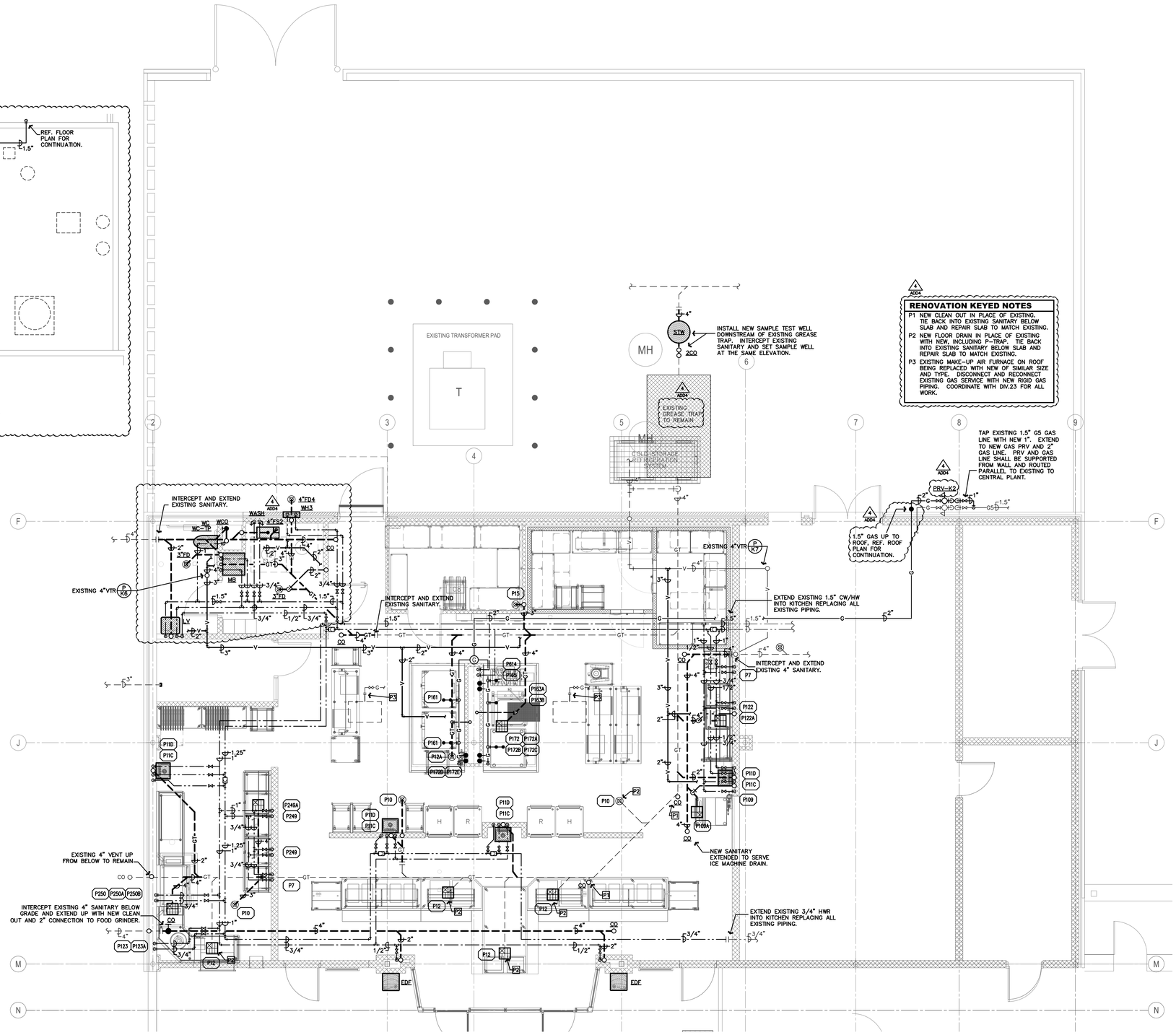


ADD4

3 PLUMBING ROOF PLAN
SCALE: 1/8" = 1'- 0"

ADD4



1 PLUMBING RENOVATION FLOOR PLAN
SCALE: 1/4" = 1'- 0"

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ADD4

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106052
LICENSED
PROFESSIONAL
ENGINEER
09.04.2025

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PLUMBING FLOOR PLAN

k-P1.01

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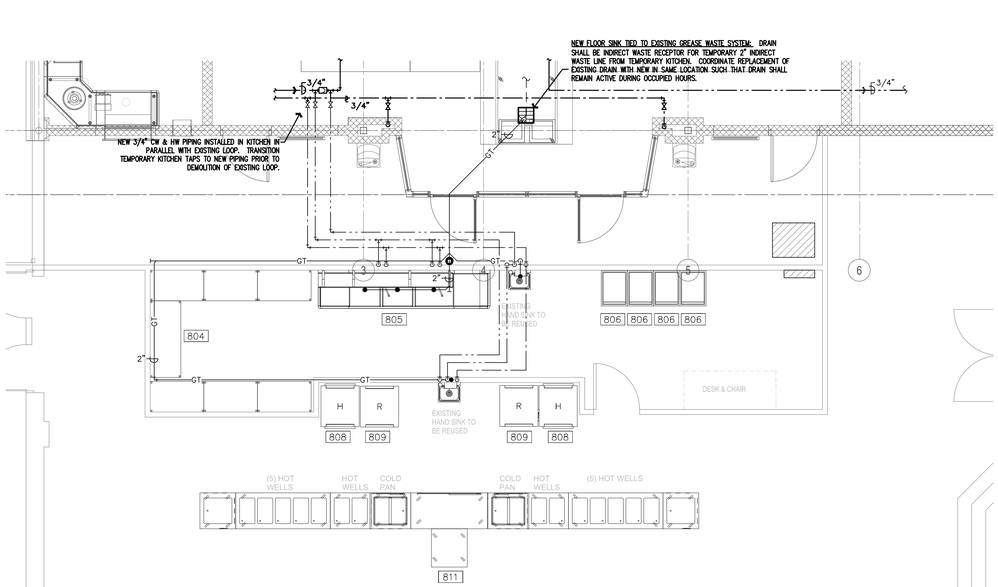


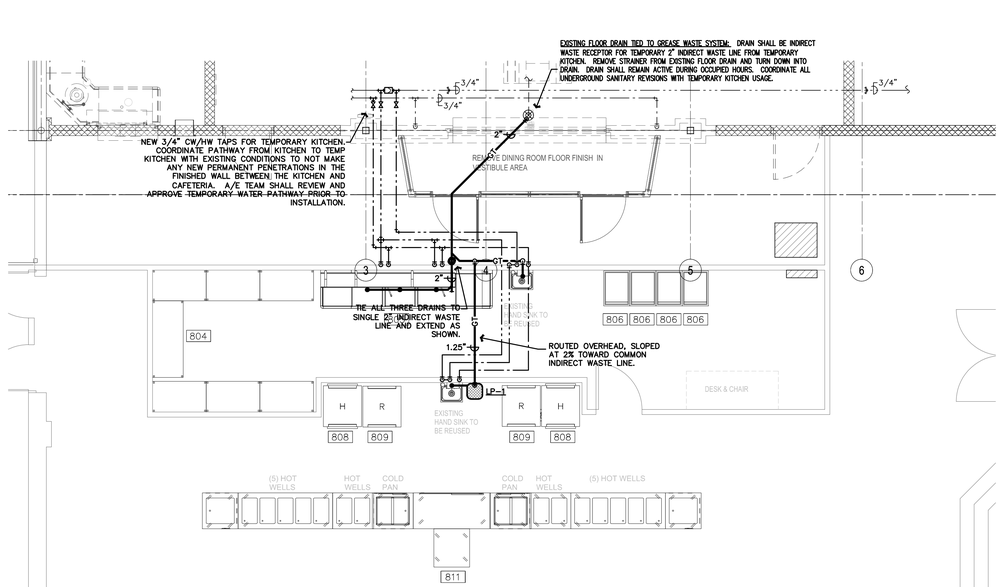
2 PLUMBING TEMPORARY KITCHEN PLAN - POST DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. AFTER DEMOLITION OF EXISTING KITCHEN AND DURING CONSTRUCTION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL REMAIN ACTIVE.
2. ALL SANITARY, CW AND HW CONNECTIONS SHALL REMAIN ACTIVE DURING ALL TIMES WHEN TEMPORARY KITCHEN IS ACTIVE.
3. UPON COMPLETION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL BE DEMOLISHED AND ALL TEMPORARILY UTILITIES SHALL BE REMOVED AND TEMPORARY WATER TAPS CAPPED AT MAIN LINE TAP.
4. ALL DEMOLISHED LAVATORIES AND FAUCETS SHALL BE PERMITTED TO BE RELOCATED ACROSS TEMPORARY KITCHENS WITHIN THE PROJECT BASED ON AVAILABILITY/PROJECT PHASING SCHEDULE. AT THE END OF THE PROJECT, REMOVE FIXTURES AND OFFER TO OWNER AS SALVAGE. IF NOT ACCEPTED, ALL FIXTURES SHALL BE DISPOSED OF BY THE CONTRACTOR.

NORTH



1 PLUMBING TEMPORARY KITCHEN PLAN - PRE DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. BEFORE DEMOLITION OF THE EXISTING KITCHEN BEGINS, INSTALL ALL NEW PLUMBING FIXTURES AND UTILITIES FOR TEMPORARY KITCHEN.

NORTH

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4 ADD4

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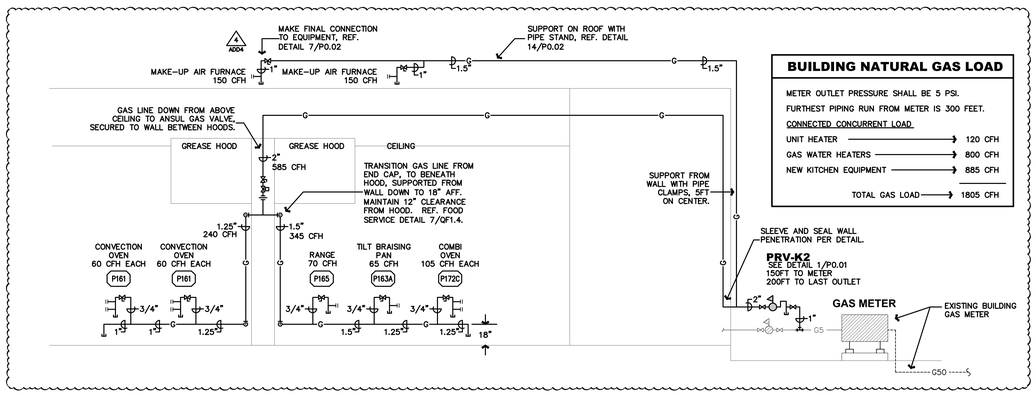
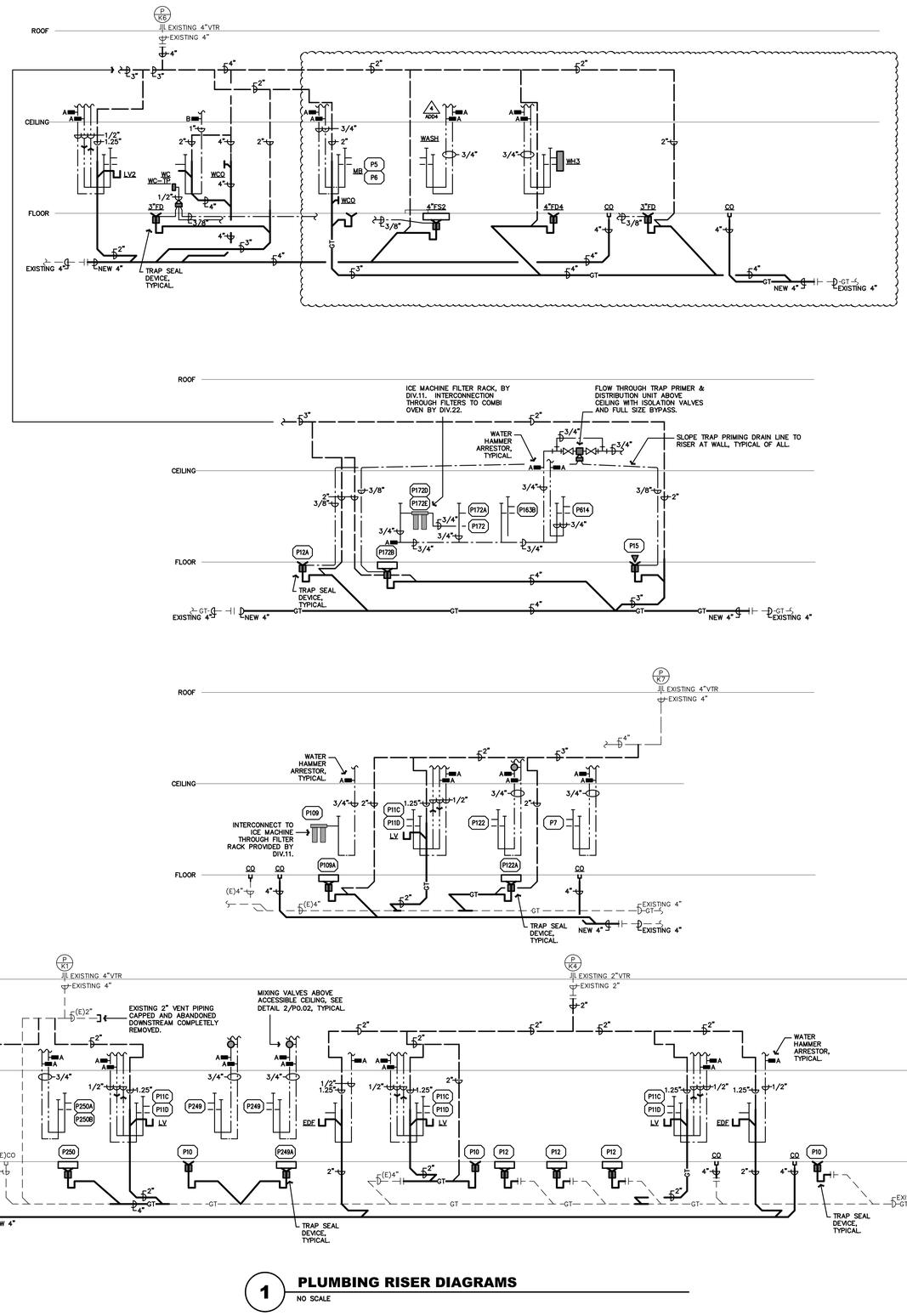
PLUMBING FLOOR PLAN - TEMP KITCHEN

k-P1.02



2 NATURAL GAS RISER DIAGRAM
NO SCALE



1 PLUMBING RISER DIAGRAMS
NO SCALE

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PLUMBING RISER DIAGRAMS

k-P2.00

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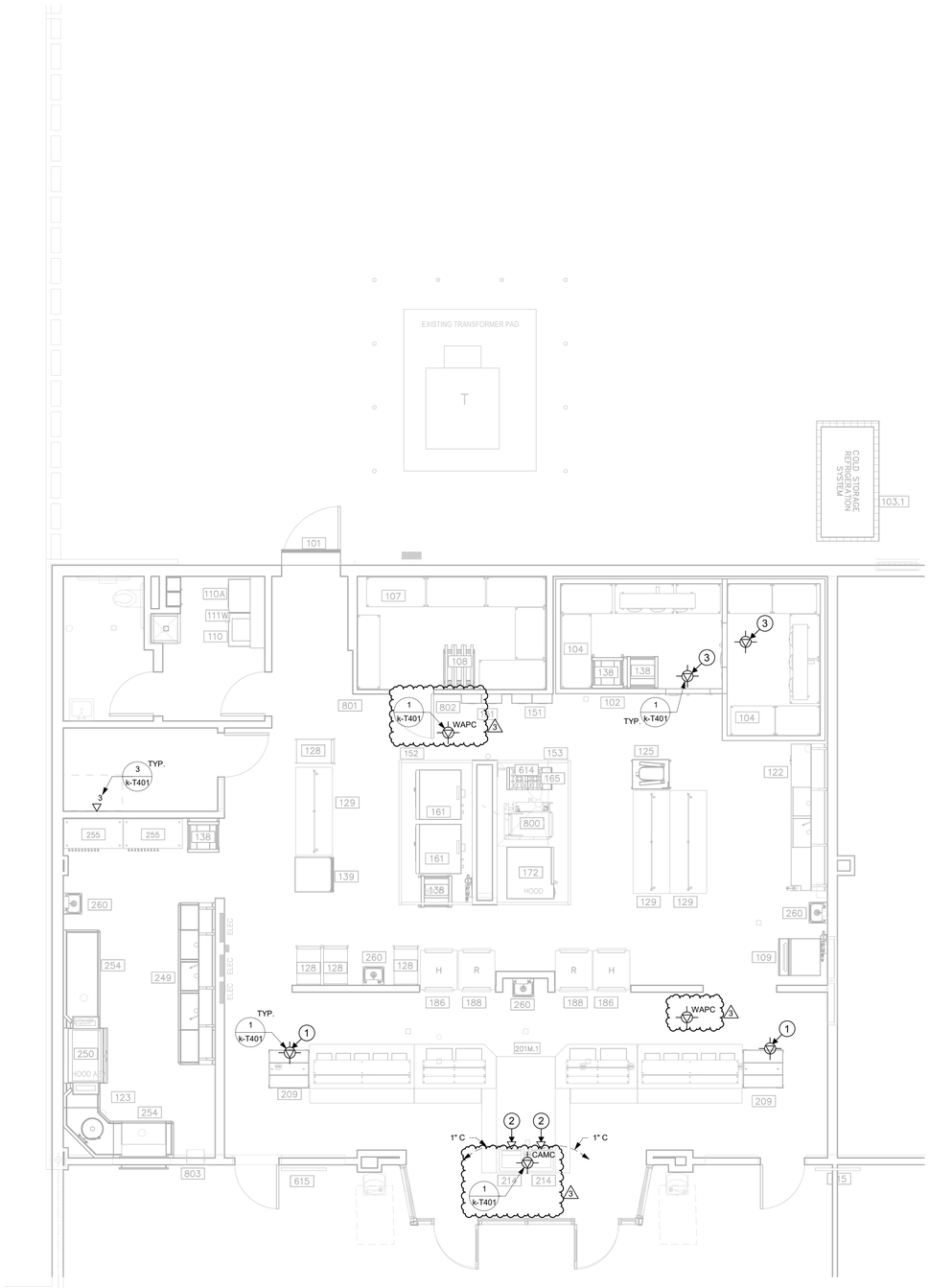

1 k-T201 TECHNOLOGY NEW/RENOVATION KITCHEN PLAN
1/4" = 1'-0"

TECHNOLOGY FLOOR PLANS GENRAL NOTES:

1. THE TECHNOLOGY REGION / WIRING BOUNDARIES ARE IDENTIFIED ON THE OVERALL SHEETS ONLY AND NOT ON THE ENLARGED SHEETS. CONTRACTOR SHALL REFER TO THE OVERALL SHEETS FOR ALL TECHNOLOGY REGIONS / WIRING BOUNDARIES.
2. ALL CONDUIT PATHWAYS, ROUGH-INS, BACKBOXES, FLOOR BOXES, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
6. TECHNOLOGY CABLING SHALL BE ROUTED IN SEPARATE PATHWAYS IN J-HOOKS, CONDUITS, CONDUIT SLEEVES, CORES, ETC. THROUGHOUT THE ENTIRE PATHWAY. DIFFERENT MEDIA TYPES (DATA, VIDEO, SECURITY, ETC.) SHALL NOT SHARE THE SAME J-HOOK, CONDUIT, CONDUIT SLEEVE, CORE, ETC.
7. UNLESS NOTED OTHERWISE, ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE AN ACCESSIBLE CEILING (AN OPEN CEILING OR CLOUD TYPE CEILING IS NOT CONSIDERED AN ACCESSIBLE CEILING) IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF / IDF ROOM TO MINIMIZE THE CABLE LENGTH ENSURING CABLE LENGTH DOES NOT EXCEED 275 FEET.
8. UNLESS NOTED OTHERWISE ALL CONDUITS SHALL BE HOMERUN FROM THE DEVICE LOCATION AND NO DAISY CHAINING OF DEVICES/ ROUGH-INS SHALL BE ALLOWED.
9. CONDUIT SEGMENTS SHALL BE NO MORE THAN 100-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
10. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
13. EQUIPMENT NOT RELATED TO THE SUPPORT OF THE TELECOMMUNICATIONS ROOM (E.G., PIPING, DUCTWORK, PNEUMATIC TUBING) SHALL NOT BE INSTALLED IN, PASS THROUGH, OR ENTER THE TELECOMMUNICATIONS ROOM.
14. ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE A LAY-IN TYPE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE A LAY- IN TYPE CEILING TO PREVENT THE CABLES FROM BEING EXPOSED, THE CONDUIT SHALL ROUTE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. THE CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE MAIN CORRIDOR OR NEAREST MDF/IDF TO MINIMIZE THE CABLE LENGTH ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. CONDUIT, CONNECTIONS, J-BOXES, SUSPENSION, ANCHORAGES, AND OTHER CONDUIT COMPONENTS EXPOSED TO VIEW IN PUBLIC SPACES SHALL BE ROUTED AND INSTALLED CAREFULLY TO MINIMIZE VISUAL IMPACT AND SHALL BE FULLY PAINTED TO MATCH UNLESS NOTED OTHERWISE.
15. CONDUIT(S) INSTALLED IN-SLAB OR UNDER-SLAB TO FLOOR BOXES, POKE-THURS, AND TO WORKAREA OUTLETS, ETC. SHALL BE INSTALLED WITH WET RATED CABLE(S).
16. NO GRID WIRE SHALL BE UTILIZED FOR SUPPORTS ONLY USE SOLID SUPPORTS (CLIPS, ALL-THREAD, ANCHORS, ETC.).

TECHNOLOGY PLAN KEYED NOTES

NOT ALL KEYED BELOW APPLY TO THIS SHEET

1. DATA CABLE FOR CONTRACTOR FURNISHED / CONTRACTOR INSTALLED MENU BOARD. REFERENCE ARCHITECTURAL AND FOOD SERVICE DRAWINGS FOR MOUNTING HEIGHT AND ADDITIONAL INFORMATION. BUILDING POWER ADJACENT TO DATA RECEPTACLE IS REQUIRED.
2. INDOOR / OUTDOOR RATED DATA CABLE FOR POINT OF SALE LOCATION. PROVIDE (1) 1-INCH CONDUIT FOR DATA TO THE WALL BEHIND POINT OF SALE LOCATION AND UP WALL TO ABOVE ACCESSIBLE CEILING. CONDUITS SHALL TERMINATE INSIDE A DOUBLE GANG BOX THAT IS SECURED TO THE POINT OF SALE LOCATION. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS.
3. DATA CABLE FOR TEMPERATURE MONITORING OF FREEZER COOLER. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS AND TERMINATION POINT AND CONNECTIVITY NEEDS IN FREEZER / COOLER CONTROL UNIT.
4. DATA CABLE FOR TEMPORARY POINT OF SALES CASH REGISTER. COORDINATE WITH OWNER, ARCHITECT, AND CONSULTANT FOR ROUTING OF CABLES TO POINT OF SALE CASH REGISTER PRIOR TO INSTALLATION

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k

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Bicsi
Jason Gonzales Jr
BICSI ID # 364970
EXPIRES 10-25
RCDD

07/18/2025

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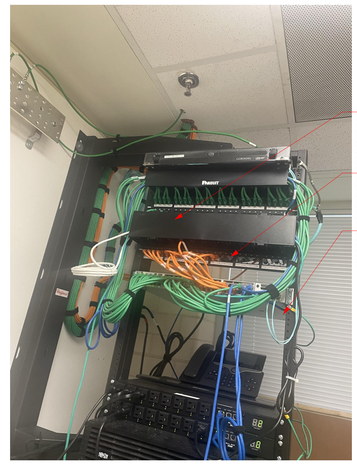
TECHNOLOGY NEW/RENOVATION KITCHEN PLAN

SHEET NO.
k-T201



1 k-T300 HUNTERS GLENN EXISTING IDF WALL RACK
N.T.S.

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Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 03-25
RCDD

07/18/2025

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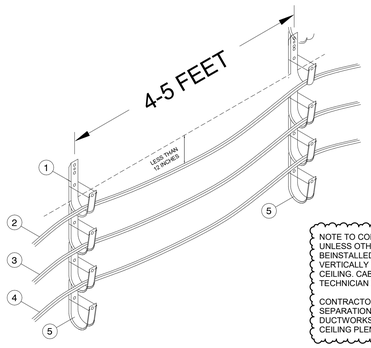
TECHNOLOGY ENLARGED VIEWS

SHEET NO.
k-T300

NOTE TO CONTRACTOR:

UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BE INSTALLED WITHIN 6-INCHES OF THE CEILING AND ACCESSIBLE BY A TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPRATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPIING OR OTHER SYSTEMS IN THE CEILING PLENUM.



KEYED NOTES:

1. J-HOOK WITH RETAINER CLIP ABOVE ACCESSIBLE CEILING (BY DIV 27).
2. DATA CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
3. A/V CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
4. SECURITY CABLE ABOVE ACCESSIBLE CEILING (BY DIV 28).
5. SPARE J-HOOK (BY DIV 27).

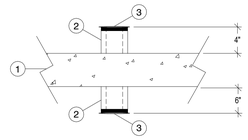
3

NOTE TO CONTRACTOR:
UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BEINSTALLED WITHIN 6-INCHES OF THE CEILING AND LAST VERTICALLY SITUATED J-HOOK SHALL BE NO HIGHER THAN 18" OF CEILING. CABLES AND SUPPORTS SHLL BE ACCESSIBLE BYA TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPARATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPING OR OTHER SYSTEMS IN THE CEILING PLENUM

1 / T400 TYPICAL J-HOOK CABLE PATHWAY

SCALE: N.T.S.

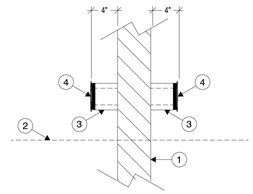


KEYED NOTES:

1. SCHEDULED FLOOR OR DECK.
2. CONDUIT SLEEVE (BY DIV 26).
3. NYLON BUSHING (BY DIV 26).

2 / T400 TYPICAL CONDUIT SLEEVE THROUGH FLOOR OR DECK DETAIL

SCALE: N.T.S.

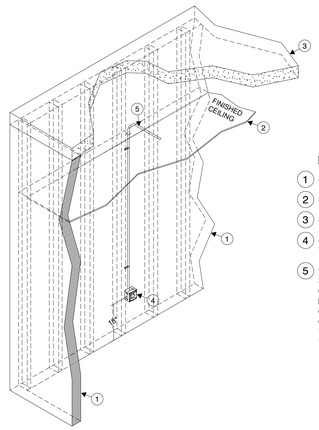


KEYED NOTES:

1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. CONDUIT SLEEVE (BY DIV 26).
4. NYLON BUSHING (BY DIV 26).

3 / T400 TYPICAL CONDUIT SLEEVE GOING THROUGH WALL

SCALE: N.T.S.



KEYED NOTES:

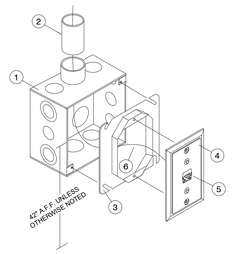
1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. SCHEDULED DECK ABOVE.
4. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX WITH DOUBLE GANG PLASTER RING (BY DIV 26).
5. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH. (BY DIV 26).

4 / T400 TYPICAL TECHNOLOGY CONDUIT ROUGH-IN

SCALE: N.T.S.

DETAIL DELETED SPACE LEFT INTENTIONALLY BLANK

3

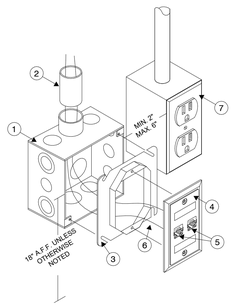


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH PHONE STUDS (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).

6 / T400 TYPICAL WALL PHONE OUTLET CONFIGURATION

SCALE: N.T.S.

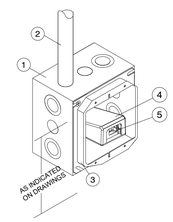


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).
7. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

7 / T400 TYPICAL DUAL DATA OUTLET CONFIGURATION

SCALE: N.T.S.

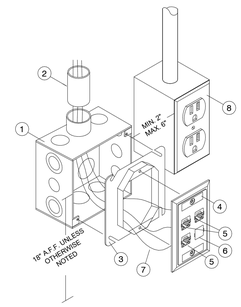


KEYED NOTES:

1. 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. DOUBLE GANG PLASTER RING (BY DIV 26).
4. SURFACE MOUNT BOX INSIDE THE 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH DOUBLE GANG BOX (BY DIV 27).
5. RJ-45 INSERT (BY DIV 27).

8 / T400 TYPICAL WALL-MOUNTED WIRELESS ACCESS POINT

SCALE: N.T.S.



KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. BLANK INSERT (BY DIV 27).
7. CABLE AS SPECIFIED (BY DIV 27).
8. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

9 / T400 TYPICAL THREE DATA OUTLET CONFIGURATION

SCALE: N.T.S.

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k

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HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

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Jason Gonzales Jr
BICSI ID # 364970
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MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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TECHNOLOGY TYPICAL DETAILS

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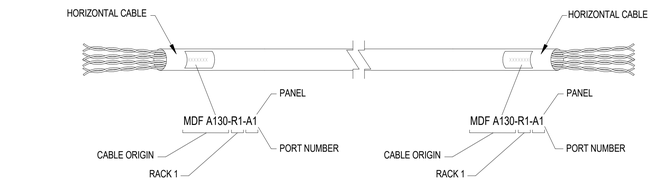
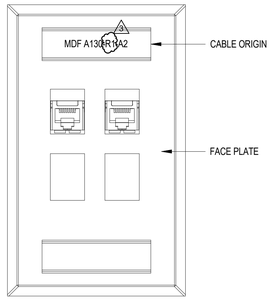
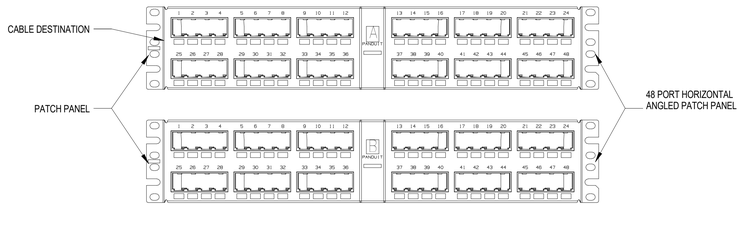
k-T400

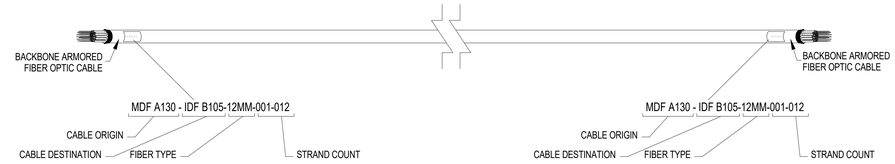


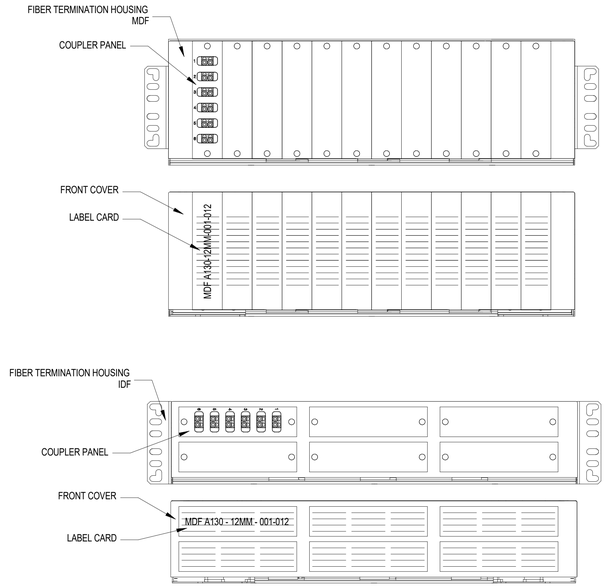




1 T500 TYPICAL HORIZONTAL DATA CABLE LABELING SCHEME

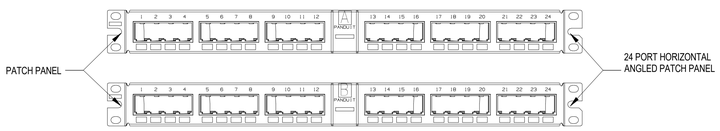
SCALE: N.T.S.





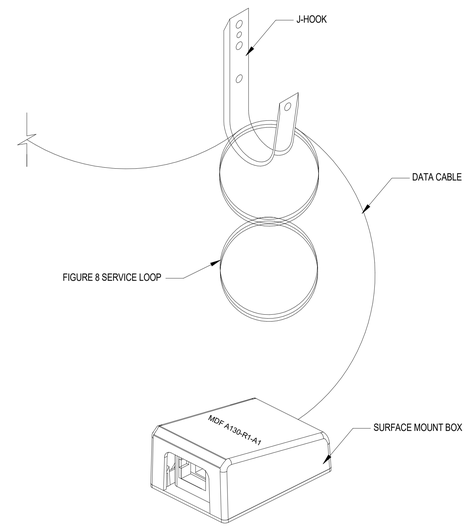
2 T500 TYPICAL FIBER BACKBONE LABELING SCHEME

SCALE: N.T.S.



3 T500 TYPICAL COPPER BACKBONE LABELING SCHEME

SCALE: N.T.S.



4 T500 ABOVE ASSESSIBLE CEILING LABELING SCHEME

SCALE: N.T.S.

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FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

07/18/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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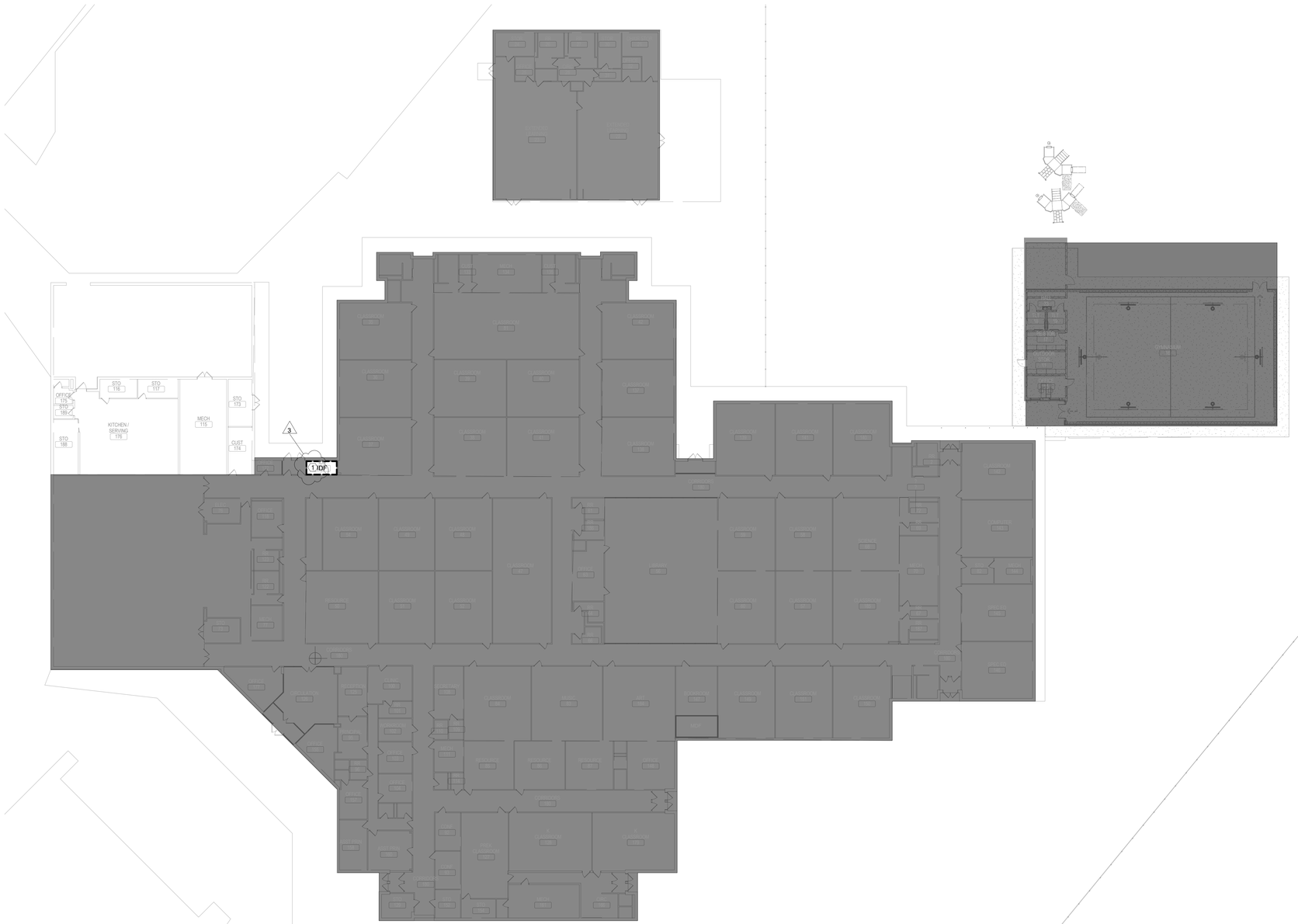
TECHNOLOGY TYPICAL DETAILS

SHEET NO.
k-T500



1 BACKGROUND 1 (HUNTERS GLEN)
SCALE: 1" = 20'-0"

TECHNOLOGY KEYNOTES

1. IDF WILL REQUIRE ADDITIONAL HARDWARE TO SUPPORT THE ADDED CAMERA CABLES.
2. CONTRACTOR TO VERIFY WEITHER ADDITIONAL HARDWARE WILL BE NEEDED TO SUPPORT ADDITIONAL CAMAERA CABLES.
3. CONTRACTOR TO COORDINATE FINAL DEVICE LOCATION AND POSITIONING WITH FBISD.

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FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Hunters Glen Elementary School
685 Independence Blvd, Missouri City, TX 77489

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Bicsi
Brian C Porter
BICSI ID #: 256557
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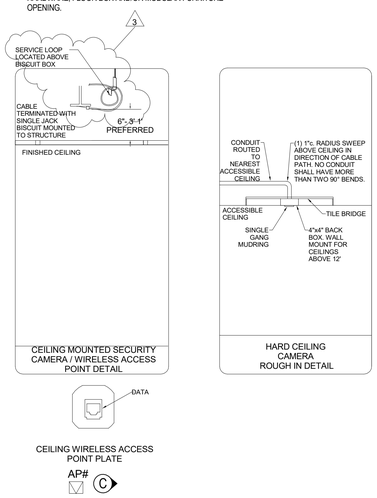
TECHNOLOGY - Hunters Glen ES - OVERALL

k-TN.100

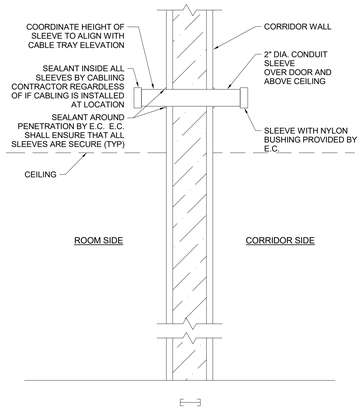
TRUENORTH A PMY COMPANY

GENERAL NOTE

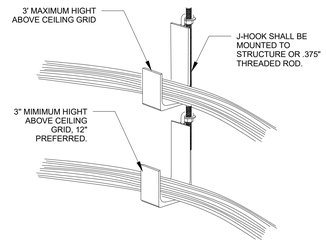
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



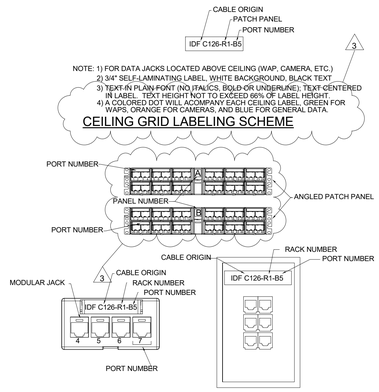
1 DATA ROUGH-IN DETAILS
SCALE: NS



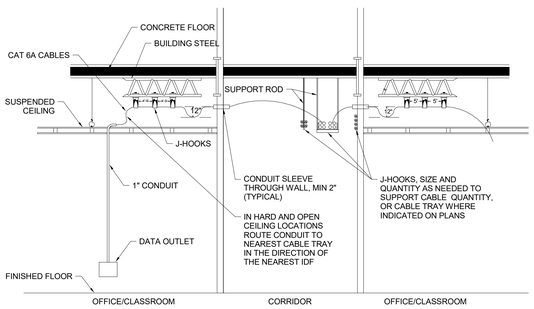
2 TYPICAL CABLING SLEEVE
SCALE: NTS



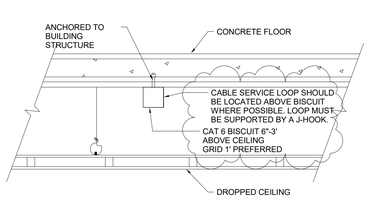
3 PANDUIT J-HOOK DETAIL
SCALE: NTS



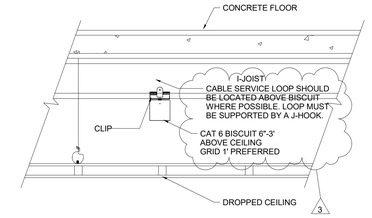
4 LABELING & CABLING SCHEMES
SCALE: NTS



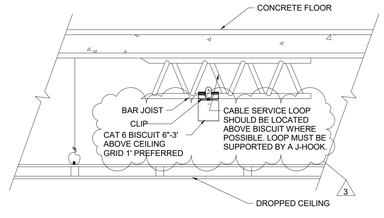
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

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FORT BEND INDEPENDENT SCHOOL DISTRICT
Hunters Glen Elementary School
695 Independence Blvd, Missouri City, TX 77489

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07-18-25

AVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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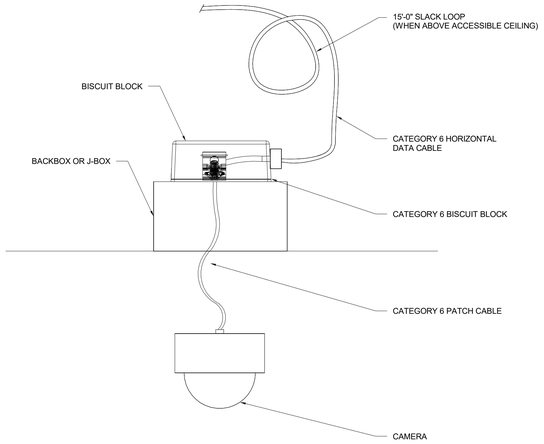
TECHNOLOGY - Hunters Glen ES - DETAILS

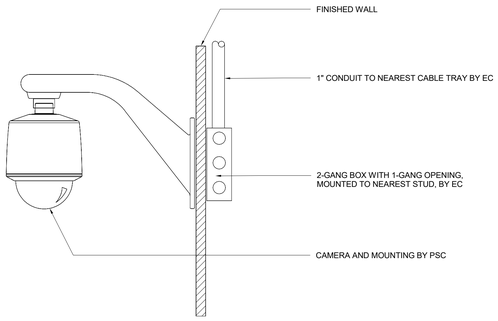
k-TN.500

GENERAL NOTES:

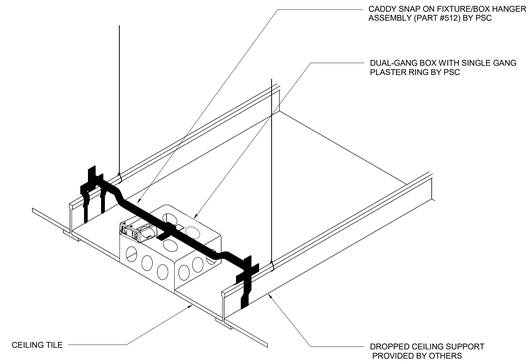
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



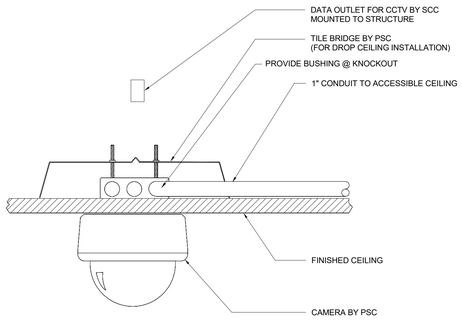
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

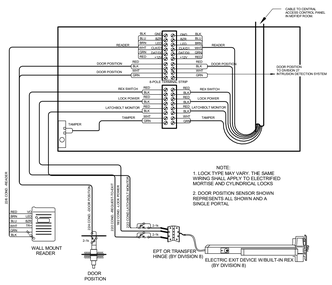


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

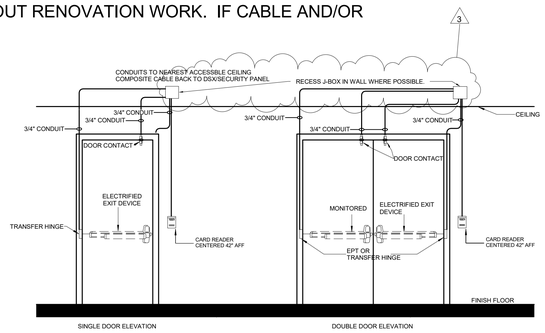
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

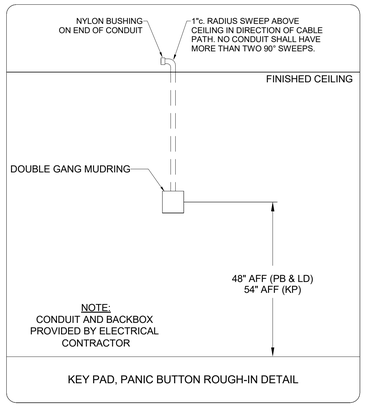
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

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FORT BEND INDEPENDENT SCHOOL DISTRICT
Hunters Glen Elementary School
695 Independence Blvd, Missouri City, TX 77489

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Brian C Porter
BICSI ID # 256557
EXPIRES 12-31-27

07-18-25

MWA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING
AND
PERMITTING
TECHNOLOGY - Hunters Glen
ES - SECURITY DETAILS

k-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

LANTERN LANE ELEMENTARY SCHOOL
3323 MISSION VALEY , MISSOURI CITY, TX 77459

FORT BEND INDEPENDENT SCHOOL DISTRICT BOND 2023

Sheet List Table	
Sheet Number	Sheet Title
School: I-Lantern Lane	
I_A0.00	COVER AND INDEX
I-A.101	Site Plan
I-A.201	Overall Floor Plan
I-A.301	Kitchen Plan
I-A.501	Finish Floor Plan
I-TN-000	TECHNOLOGY - INDEX SHEET
I-TN-100	TECHNOLOGY - OVERALL
I-TN-101	TECHNOLOGY - KITCHEN
I-TN-500	TECHNOLOGY - DETAILS
I-TN-600	TECHNOLOGY - SECURITY DETAILS

REGISTERED ARCHITECT
MICHAEL W. MAGNER
22651
STATE OF TEXAS
04 SEP. 2025

ADDENDUM NO. 4 - SEP 04, 2025

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

BOARD OF TRUSTEES

KRISTIN K. TASSIN	PRESIDENT
ANGIE HANAN	VICE PRESIDENT
DR. SHIRLEY ROSE-GILLIAM	SECRETARY
AFSHI CHARANIA	BOARD MEMBER
ADAM SCHOOF	BOARD MEMBER
ANGIE WIERZBICKI	BOARD MEMBER

PROJECT DESIGN TEAM

PROGRAM MANAGEMENT
FBISD 2023 Bond Team
2323 Texas Parkway
Missouri City, TX 77489
Phone Number: 281-327-5481

ARCHITECT
MWA Architects
11767 Katy Freeway, Suite 430
Houston, Texas 77079
Phone Number: 713-782-8188

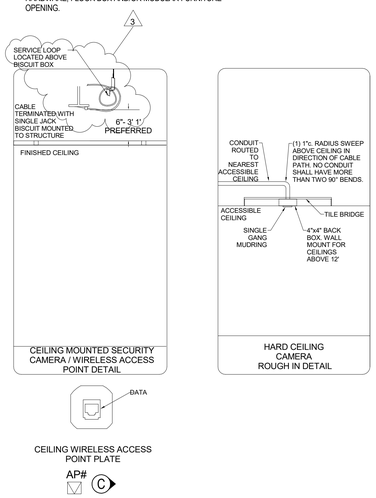
FOOD SERVICE
Food Design Professionals
26215 Oak Ridge Drive
The Woodlands, Texas 77380
Phone Number: 281-350-2323

MEP ENGINEERS
Stanton Engineering Group
1300 W. Sam Houston Pkwy South, Suite 121
Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

GENERAL NOTE

1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



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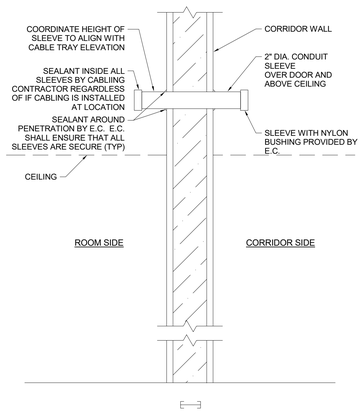

2 TYPICAL CABLING SLEEVE
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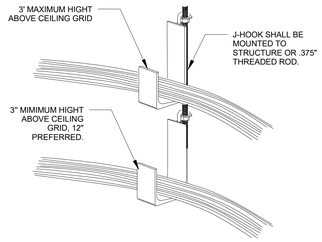
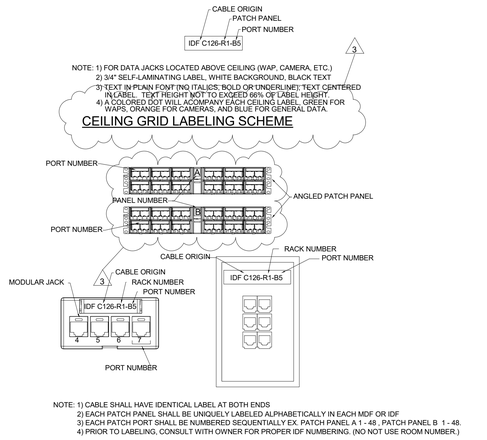


3 PANDUIT J-HOOK DETAIL
SCALE: NTS



4 LABELING & CABLING SCHEMES
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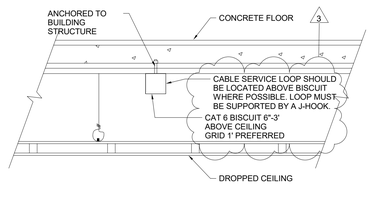
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
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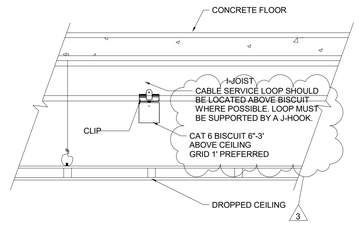
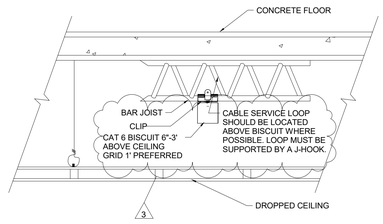


7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH
A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM NO. 4
3	

1

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Lanterns Lane Elementary School
3323 Mission Valley Dr, Missouri City, TX 77459

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 256587
EXPIRES 12-31-27

07-18-25

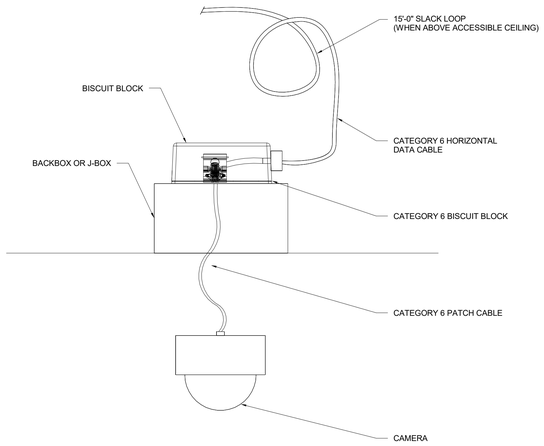
MVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Lantern Lane ES - DETAILS

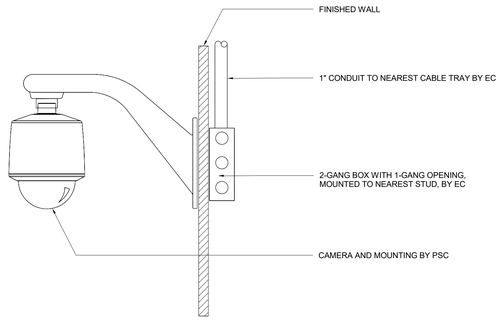
I-TN.500

GENERAL NOTES:

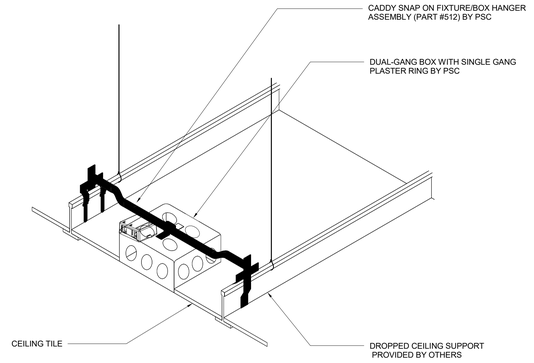
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



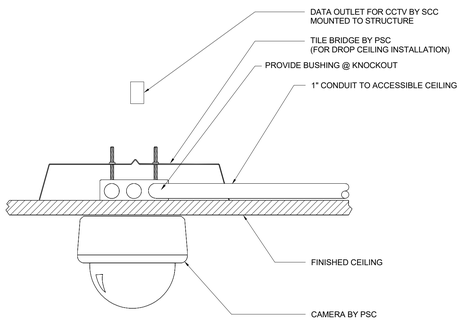
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

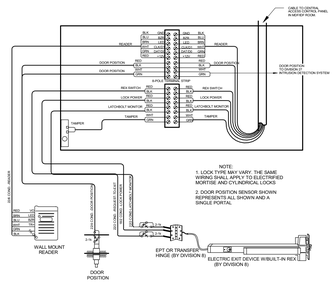


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

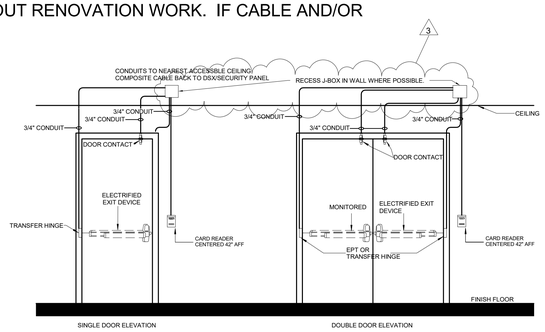
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

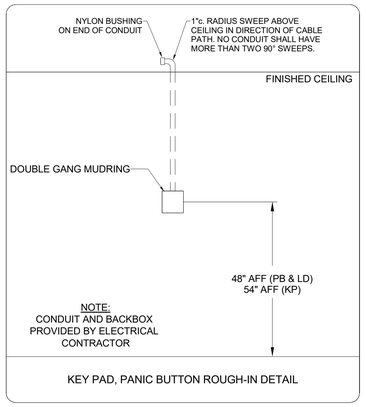
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
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09/04/2025 ③	ADDENDUM NO.4

I

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Lanterns Lane Elementary School
3323 Mission Valley Dr, Missouri City, TX 77459

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Parker
BICSI ID # 258657
EXPIRES 12-31-27

07-18-25

MWA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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AND
PERMITTING

TECHNOLOGY - Lantern Lane ES - SECURITY DETAILS

I-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DR, SUGAR LAND, TX 77478

FORT BEND INDEPENDENT SCHOOL DISTRICT

2023 FORT BEND BOND

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH — SUPERINTENDENT OF FBISD

DR. ANDRIA SCHUR, Ed.D. — CHIEF OF SCHOOLS

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PROJECT DESIGN TEAM

PROGRAM MANAGEMENT
FBISD 2023 Bond Team
2323 Texas Parkway
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Phone Number: 713-300-9292

STRUCTURAL ENGINEER
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3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

Sheet List Table	
Sheet Number	Sheet Title
School: j Highlands ES	
j-A.000	COVER AND INDEX
j-A00-01	GENERAL NOTES AND ABBREVIATIONS
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j-D.101-2	DEMO PLAN PHOTOS
j-D.101-3	DEMO PLAN PHOTOS
j-ED.100	ELECTRICAL DEMO AND TEMPORARY PLANS
j-PD.101	PLUMBING DEMOLITION FLOOR PLAN
p-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
j-A.101	SITE PLAN
j-A.200	SLAB DIMENSION CONTROL PLAN
j-A.201	OVERALL FLOOR PLAN
j-A.301	KITCHEN PLAN
j-A.302	TEMPORARY KITCHEN LAYOUT
j-A.401	REFLECTED CEILING PLAN
j-A.501	FINISH FLOOR PLAN
j-A.502	PARTITION SCHEDULE
j-QF0.0	FS GENERAL COORDINATION NOTES
j-QF1.0	FS EQUIPMENT PLAN
j-QF1.1	FS FACILITY MODEL
j-QF1.2	FS EQUIPMENT MODEL
j-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
j-QF1.4	FS PLUMBING PLAN
j-QF1.5	FS ELECTRICAL PLAN
j-QF1.6	FS CONDENSING UNITS
j-QF1.7	FS WALK-INS
j-QF1.8	FS SERVING COUNTERS 3
j-QF1.9	FS SERVING COUNTERS
j-QF2.0	FS DEMO PLAN
j-QF2.1	FS TEMPORARY SERVING
j-QF3.1	FS ELEVATIONS
j-QF4.1	FS SECTIONS & DETAILS
j-QF4.2	FS DETAILS
j-QF4.3	FS DETAILS
j-M1.01	MECHANICAL PLANS
M2.01	LEVEL 1 KITCHEN MECHANICAL PLANS
E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
E.001	ELECTRICAL AND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
E.013	ELECTRICAL KITCHEN DETAILS
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j-E200	ELECTRICAL PLANS
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j-T000	TECHNOLOGY SYMBOLS & LEGEND
j-T200	TECHNOLOGY COMPOSITE FLOOR
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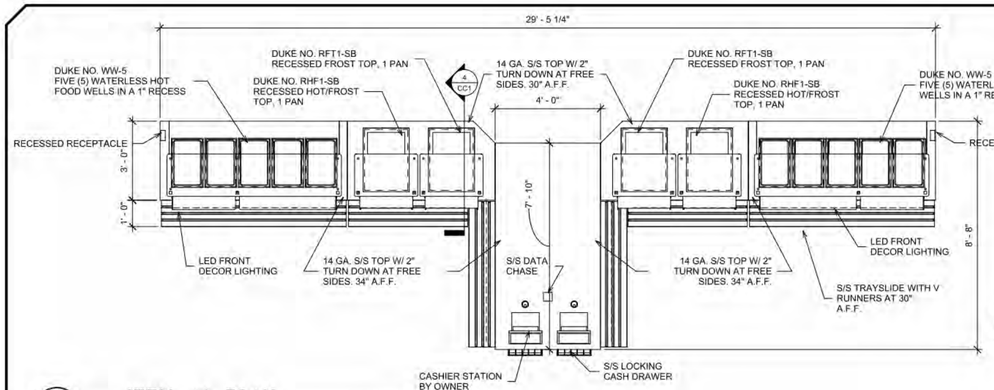
j-T300	TECHNOLOGY ENLARGED VIEWS
j-T400	TECHNOLOGY TYPICAL DETAILS
j-T401	TECHNOLOGY TYPICAL DETAILS
j-T500	TECHNOLOGY TYPICAL LABELING SCHEME
j-TN-000	TECHNOLOGY - INDEX SHEET
j-TN-001	TECHNOLOGY - ELEVATIONS
j-TN-100	TECHNOLOGY - OVERALL
j-TN-101	TECHNOLOGY - KITCHEN
j-TN-500	TECHNOLOGY - DETAILS
j-TN-600	TECHNOLOGY - SECURITY DETAILS
J-TN-700	TECHNOLOGY - AV DETAILS

REGISTERED ARCHITECT — MICHAEL A. WILLIAMS — 22651 — STATE OF TEXAS
04SEP.2025

ADDENDUM NO. 4 - SEP 04, 2025

j



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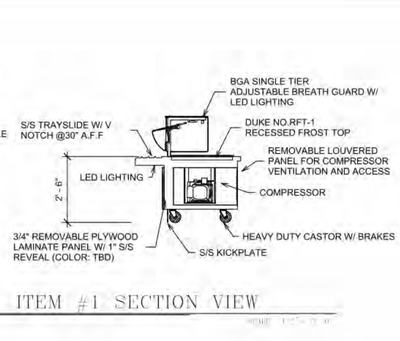

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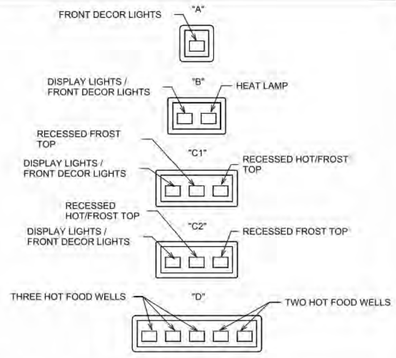

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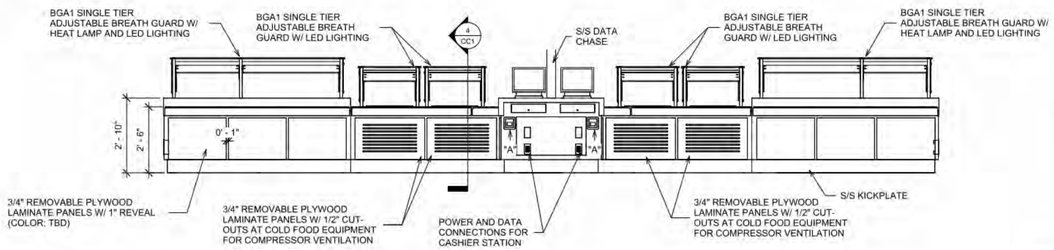
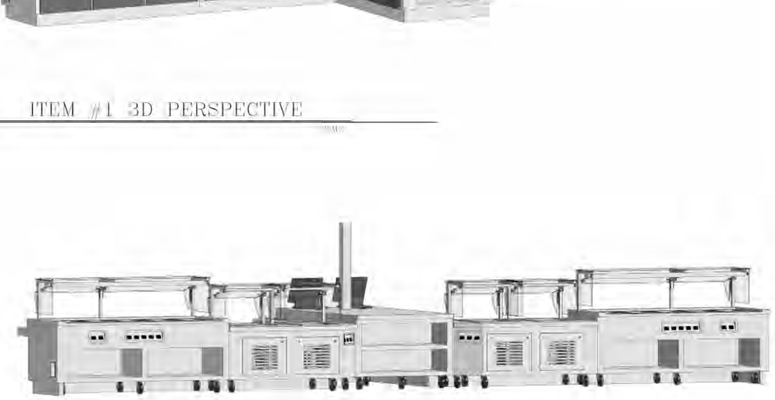
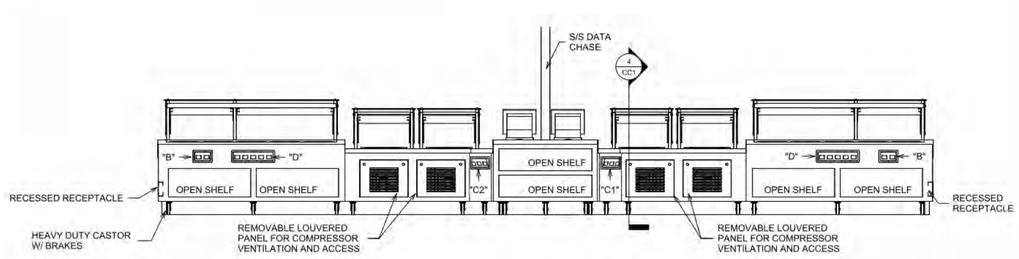


2 CC1 ITEM #1 FRONT ELEVATION



11 CC1 ITEM #1 3D PERSPECTIVE



3 CC1 ITEM #1 REAR ELEVATION

12 CC1 ITEM #1 3D PERSPECTIVE 2

13 ELECTRICAL SCHEDULE
CASHIER COUNTER

14 ELECTRICAL SCHEDULE
HOT FOOD COUNTER
(TWO (2) REQUIRED)

15 ELECTRICAL SCHEDULE
HOT FROST COUNTER
(TWO (2) REQUIRED)

EQUIPMENT BY OTHERS
COUNTERCRAFT LAYOUTS, MEPS, AND LOAD CENTERS ARE BASED ON SPECIFIED MANUFACTURERS AND MODELS AS OUTLINED IN THE SPECIFICATIONS IN THE CONTRACT DOCUMENTS. COUNTERCRAFT MUST BE NOTIFIED OF ANY CHANGES TO THE CONTRACT DOCUMENTS IN A TIMELY MANNER.

NO	REVISIONS	DATE	BY
1	PRELIMINARY DWG	10/21/2024	MAX
2	REVISIONS	11/26/2024	MAX
3			
4			
5			
6			
7			
8			
9			

CounterCraft

FBISD Bond Package 013

FOODSERVICE DESIGN PROFESSIONALS

11/26/2024

CC1

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING

FDP
FOODSERVICE DESIGN PROFESSIONALS

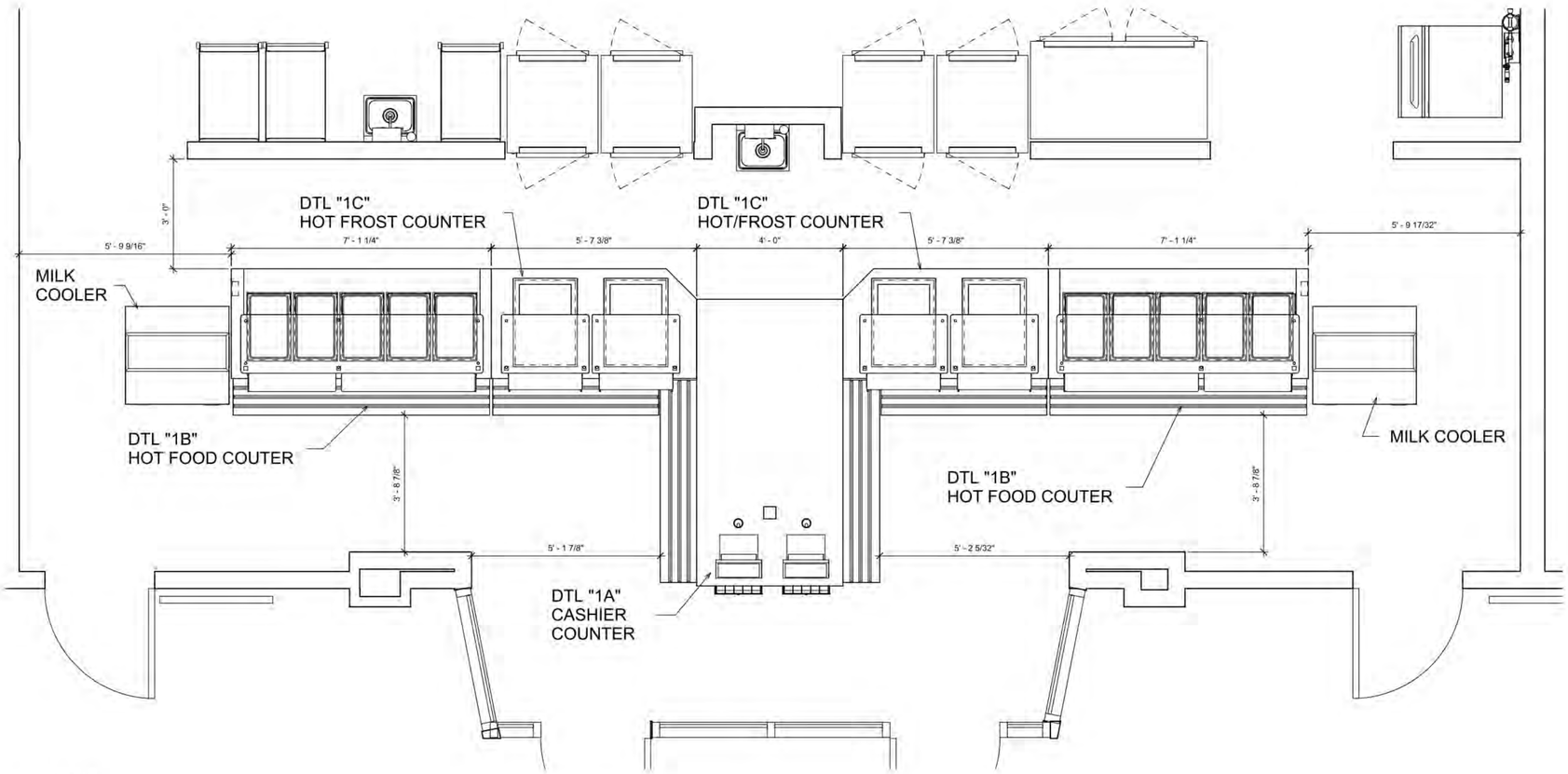
FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MELISSA MOORE ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
MELISSA MOORE, FCSI NO. 48854119
OR: 07/18/2025

MWA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/25
ISSUED FOR BIDDING AND PERMITTING
FS SERVING COUNTERS

J-QF1.8



2/CC2 LAYOUT

EQUIPMENT BY OTHERS
COUNTERCRAFT LAYOUTS, MEPS, AND LOAD CENTERS ARE BASED ON SPECIFIED MANUFACTURERS AND MODELS AS OUTLINED IN THE SPECIFICATIONS IN THE CONTRACT DOCUMENTS. COUNTERCRAFT MUST BE NOTIFIED OF ANY CHANGES TO THE CONTRACT DOCUMENTS IN A TIMELY MANNER.

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3			
4			
5			
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8			
9			

CounterCraft

FBISD Bond Package 013

FOODSERVICE DESIGN PROFESSIONALS

11/26/2024

CC2

ISSUE:

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03/11/2025	50% CD PKG.
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FDP
FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/18/2025
THIS ITEM IS DIGITALLY SIGNED AND SEALED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/18/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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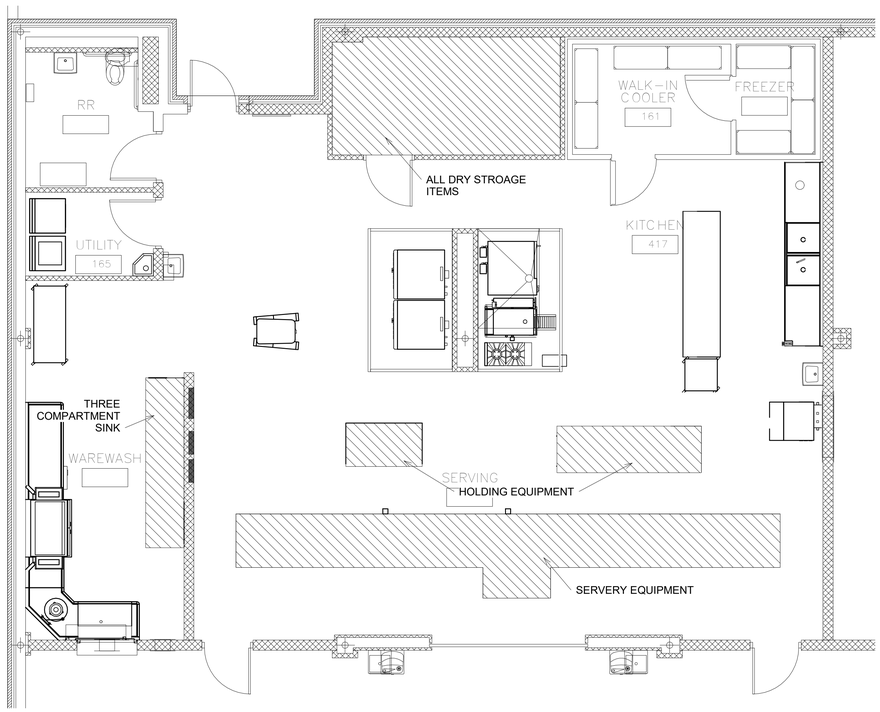
FS SERVING COUNTERS

J-QF1.9



1 FOOD SERVICE EQUIPMENT PLAN -DEMO PLAN
1/4" = 1'-0"

NOTE: ALL EQUIPMENT MAKERED WITH A
DIAGONAL HATCH TO BE RELOCATED
PER TEMPORARY SERVING PLAN SHEET J-QF2.0

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
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FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
FCSI
48804119
PROFESSIONAL MEMBER
7/15/2025
THESE DOCUMENTS WERE PREPARING OR THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48804119 ON: 07/18/2025

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/25
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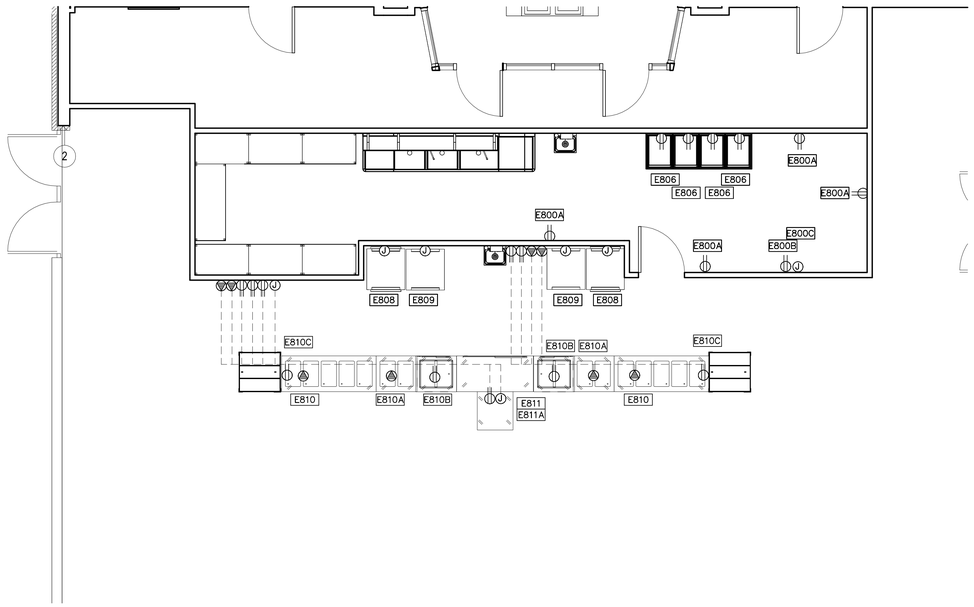
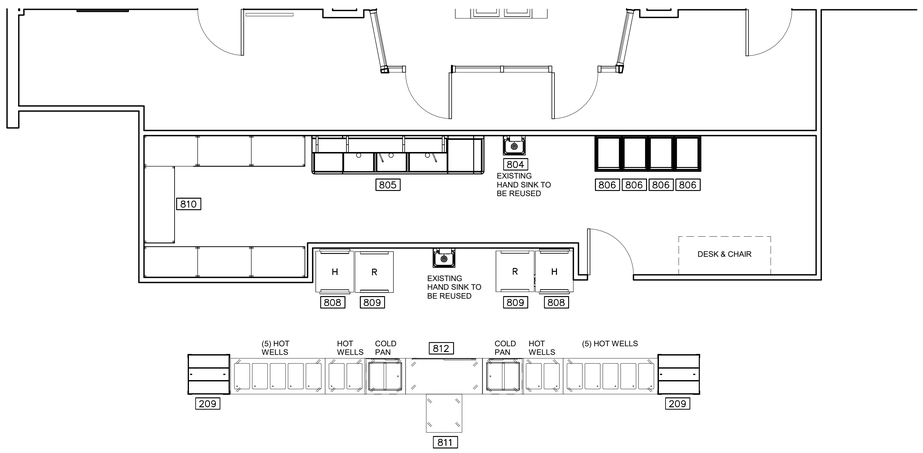
FS DEMO PLAN

J-QF2.0



4 FOOD SERVICE ELECTRICAL PLAN - TEMPORARY SERVING
1/4" = 1'-0"

FOOD SERVICE EQUIPMENT SCHEDULE - TEMPORARY SERVING					
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH DEPARTMENT COORDINATION NOTES					
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS	MANUFACTURER	MODEL
209	2	DROP FRONT MILK COOLER - 8 CASE		TRAULSEN	RMC34D4
804	1	S/S SPLASH GUARDS		CUSTOM FABRICATED	
805	1	THREE COMPARTMENT SINK NO DISPOSER	EXISTING		
806	4	TRANSPORT CART	EXISTING		
807	1	HAND LAV	EXISTING		
808	2	REACH IN HEATED CABINET - 1DR	EXISTING		
809	2	REACH IN REFRIGERATOR - 1DR.	EXISTING		
810	1	DRY STORAGE SHELVING	EXISTING / RELOCATE		
811	1	CASH REGISTER	OWNER FURNISHED		
812	1	SERVING COUNTER	EXISTING / RELOCATE		



1 FOOD SERVICE EQUIPMENT PLAN - TEMPORARY SERVING
1/4" = 1'-0"

FOOD SERVICE ELECTRICAL SCHEDULE - TEMPORARY SERVING								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E800A	DR	16.0A	120	1	CONVENIENCE	WALL	24"	---
E800B	DR	16.0A	120	1	CONVENIENCE	WALL	24"	DEDICATED CIRCUIT
E800C	JB	---	---	--	DATA CONNECTION	WALL	24"	---
E806	DR	16.0A	120	1	TRANSPORT CABINET	WALL	24"	---
E808	JB	7.8A	120/208	1	HEATED CABINET	WALL	96"	BTC; OMIT PLUG, UNIT TO BE HARDWIRED
E809	JB	8.2A	120	1	REFRIGERATOR	WALL	96"	BTC; OMIT PLUG, UNIT TO BE HARDWIRED
E810	CS/SR	13.3A	208	1	(4) HOT WELLS	WALL	24"	EXTEND TO EQUIPMENT - CONFIRM NEMA PLUG
E810A	SR	7.9A	208	1	(2) HOT WELLS	WALL	24"	EXTEND TO EQUIPMENT - CONFIRM NEMA PLUG
E810B	DR	5.0A	120	1	COLD PAN	WALL	24"	EXTEND TO EQUIPMENT
E810C	DR	10.0A	120	1	BEVERAGE	WALL	24"	EXTEND TO EQUIPMENT
E811	DR	16.0A	120	1	CASH REGISTER	WALL	24"	DEDICATED CIRCUIT - EXTEND TO EQUIPMENT
E811A	JB	-	---	1	POS	WALL	24"	BTC

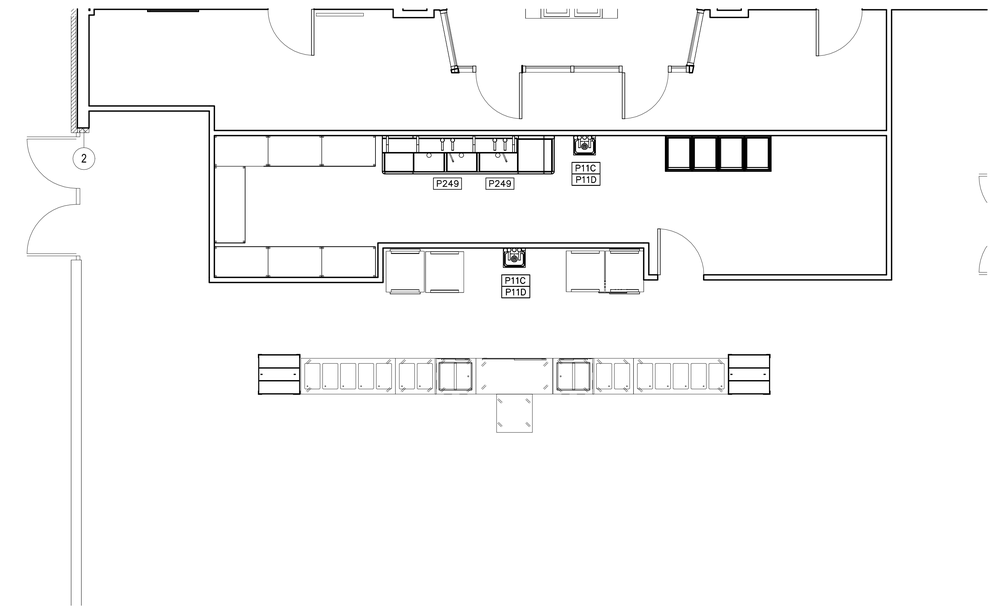
	SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES
	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
	DR	DUPLEX RECEPTACLE		WPR	WATERPROOF RECEPTACLE (SPRING COVER)
	SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER
	SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT
	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
	PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR
	DCR	DROP CORD RECEPTACLE		CS/JB	JUNCTION BOX ON PEDESTAL
	JB	JUNCTION BOX ON CEILING		SW	SWITCH
	JB	JUNCTION BOX IN WALL		D	DATA
	JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26			

5 ELECTRICAL SYMBOLS 1
NOT TO SCALE

FOOD SERVICE PLUMBING SCHEDULE - TEMPORARY SERVING						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC

	HW	HOT WATER		FFD	FUNNEL FLOOR DRAIN
	CW	COLD WATER		EVC	EXHAUST VENT CONNECTION
	HTW	180 F HOT WATER		SVC	SUPPLY VENT CONNECTION
		CHILLED WATER		FR	DIRECT-CONNECTED FLUE RISER
	W	DIRECT WASTE		PS	PIPE SLEEVE
	IW	INDIRECT WASTE			COMPRESSED AIR
		GAS SUPPLY			CO2
		STEAM SUPPLY		AFF	ABOVE FINISHED FLOOR
	CR	CONDENSATE RETURN		BTC	BRANCH TO CONN. ON EQUIP
	DR	DRAIN		DFA	DROP FROM ABOVE
	FD	FLOOR DRAIN		CLG	CEILING
	FST	FLOOR SINK 3/4 GRATE			
	FSH	FLOOR SINK 3/4 GRATE			

3 PLUMBING SYMBOLS 1
NOT TO SCALE



2 FOOD SERVICE PLUMBING PLAN - TEMPORARY SERVING
1/4" = 1'-0"

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SUGAR LAND, TX 77478

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
188541119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM WAS PREPARED OR THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI REG. 188541119 ON: 07/18/2025

MWA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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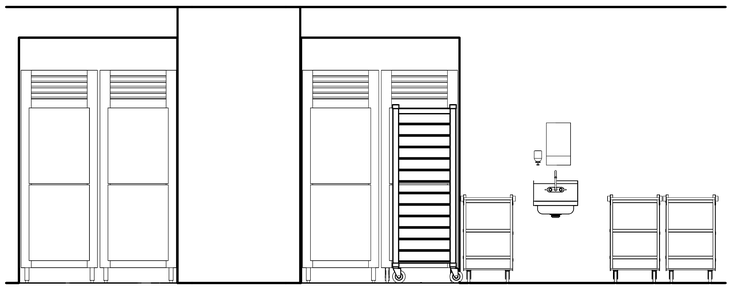
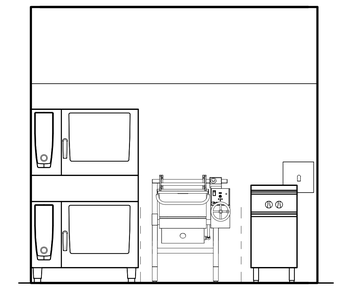
FS TEMPORARY SERVING

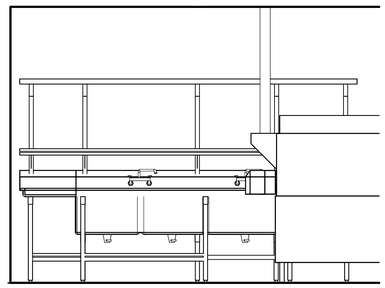
J-QF2.1



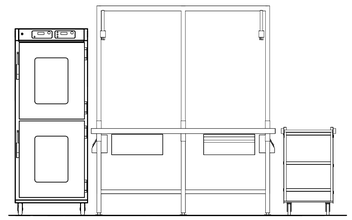
10 ELEVATION @ HOLDING
1/2" = 1'-0"



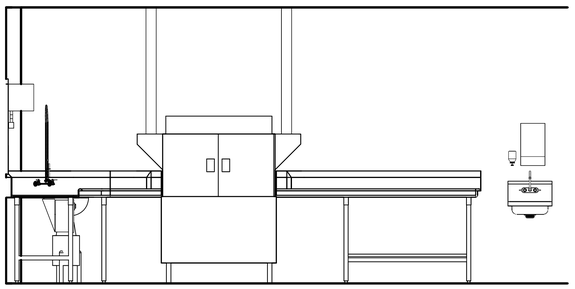
4 ELEVATION @ PRODUCTION LINE A
1/2" = 1'-0"



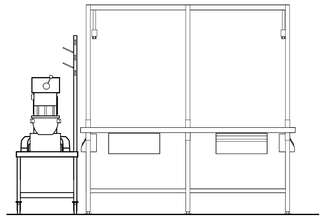
9 ELEVATION @ UTENSIL WASH
1/2" = 1'-0"



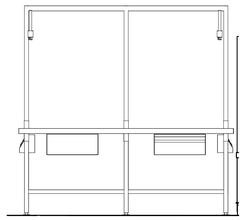
3 ELEVATION @ SETUP AREA C
1/2" = 1'-0"



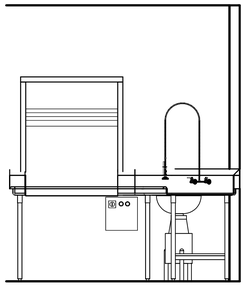
8 ELEVATION @ WAREWASH
1/2" = 1'-0"



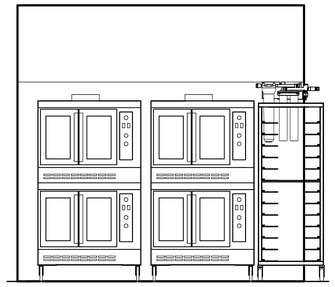
6 ELEVATION @ SETUP AREA A
1/2" = 1'-0"



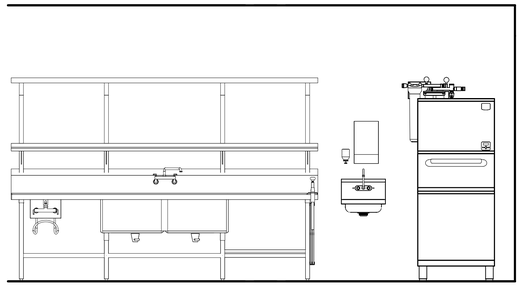
2 ELEVATION @ SETUP AREA B
1/2" = 1'-0"



7 ELEVATION @ TRAY DROP
1/2" = 1'-0"



5 ELEVATION @ PRODUCTION LINE B
1/2" = 1'-0"



1 ELEVATION @ PREP SINK
1/2" = 1'-0"

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SUGAR LAND, TX 77478

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
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PROFESSIONAL MEMBER
7/15/2025
THIS ITEM WAS PREPARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI REG 48854119 ON 07/15/2025

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ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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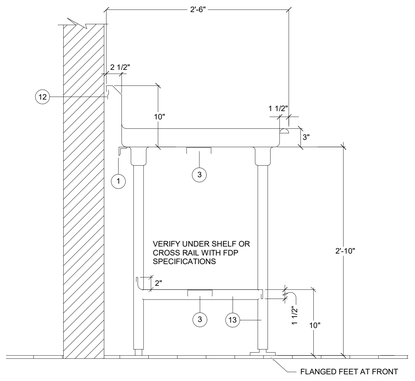
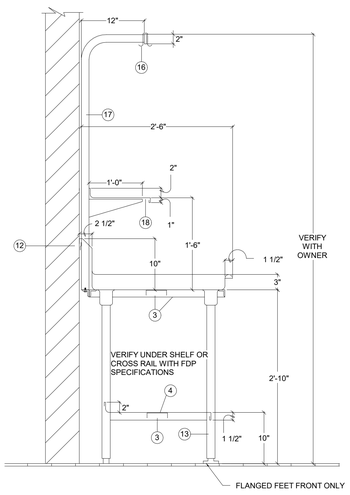
FS ELEVATIONS

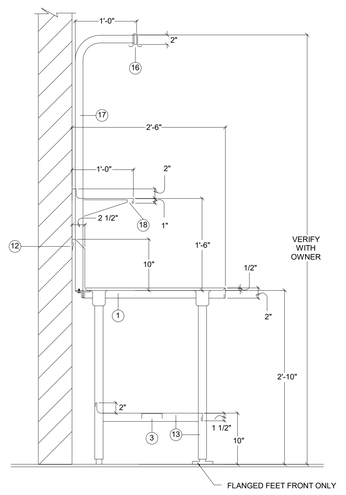
J-QF3.1



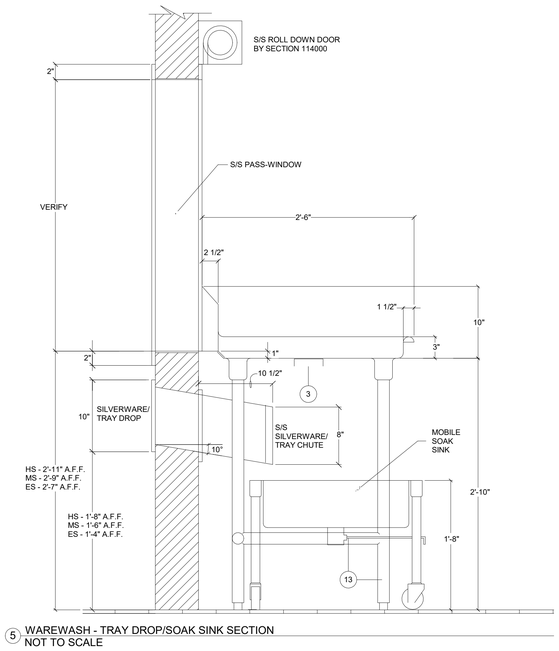
8 DRAINBOARD
NOT TO SCALE



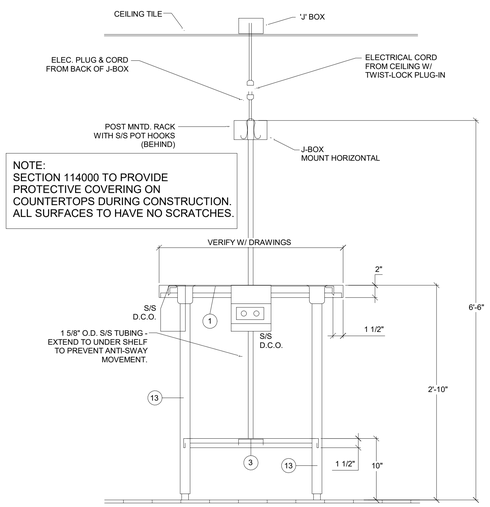
6 DRAINBOARD - UTENSIL WASH SECTION
NOT TO SCALE



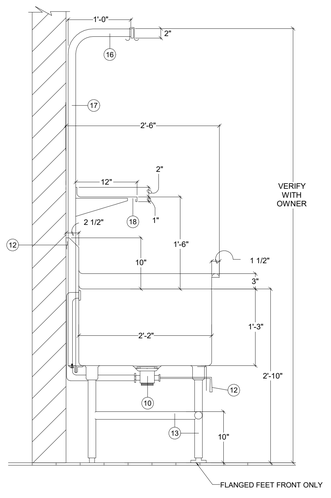
3 DRAINBOARD - PREP SINK SECTION
NOT TO SCALE



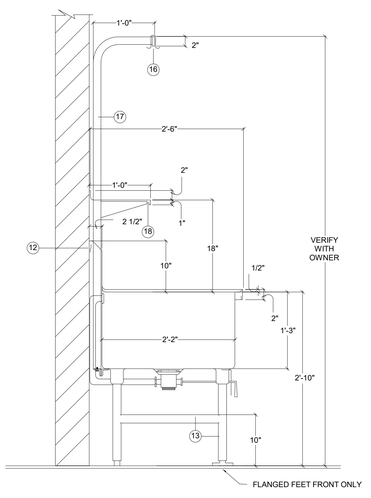
5 WAREWASH - TRAY DROP/SOAK SINK SECTION
NOT TO SCALE



7 WORKTABLE - ISLAND W/ S.BAR UT RACK & END UC DCO SECTION
NOT TO SCALE



4 SINK - UTENSIL WASH SECTION
NOT TO SCALE



2 SINK - PREP TABLE SECTION
NOT TO SCALE

SECTION DETAIL NOTES:

1. 1 1/2" X 1 1/2" X 1/8" GALVANIZED ANGLE IRON.
2. 1" X 4" 14 GAUGE STAINLESS STEEL HAT CHANNEL.
3. 16 GAUGE STAINLESS STEEL C-CHANNEL.
4. 16 GAUGE STAINLESS STEEL UNDER SHELF, COVE UP REAR 2", TURN DOWN FRONT 1 1/2".
5. 1/2" CEMENT BACKERBOARD WITH TILE FRONT BY TRADE CONTRACTOR OR COUNTER MANUFACTURER. VERIFY FINISH WITH ARCHITECTURAL DRAWINGS.
6. COLD PAN - 2" RIGID INSULATION WITH 1" C.P. DRAIN - 16 GAUGE STAINLESS STEEL SECTION FALSE BOTTOM. PERFORATE FALSE BOTTOM WITH 1/4" DIA. HOLES AT 3" O.C.
7. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN DOOR WITH RECESSED PULL.
8. MANIFOLD DRAINS AT HOT FOOD UNITS WITH 1" TYPE 'K' COPPER AND EXTEND TO VALVE IN PLUMBING COMPARTMENT.
9. FINISHED TRUE AND LEVEL MASONRY BASE BY DIVISION 09. CLOSE COUNTER BODY AT BASE AND SEAL BY SECTION 11 40 00.
10. FISHER #22314 DRAIN WITH TAILPIECE AND OVERFLOW.
11. 14 GAUGE STAINLESS STEEL BRACKET WITH DRAIN HANDLE BUSHING.
12. 16 GAUGE STAINLESS STEEL 'Z' CLIP TO WALL AND SEAL.
13. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL LEGS AND CROSS RAILS.
14. 1/2" S/S TUBING DRAIN LINE - STRAP TO SHELF AND WALL - EXTEND DOWN TO TOP OF SPLASH.
15. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL TUBING - SUPPORT FRONT OF SHELF WITH 1/2" ALL-THREAD INSIDE TUBING EXTENDING TO STRUCTURE ABOVE.
16. 1/4" S/S BAR STOCK WELDED TO TOP OF EACH POST - POT HOOKS TO BE COMPONENT HARDWARE #J77-4401 SPACED 8" O.C.
17. 1 5/8" 16 GAUGE STAINLESS STEEL TUBING - BOLT TO ANGLE IRON AND EXTEND UP THRU SPLASH TO 7'-0" A.F.F.
18. OVER SHELF - 16 GAUGE STAINLESS STEEL, COVE UP REAR 2", TURN FRONT AND ENDS DOWN 1", ENDS TO BE CAPPED WITH EASED CORNERS WHERE ADJACENT TO WALL / FIXTURE.
19. 18 GAUGE STAINLESS STEEL LOUVERED PANEL.
20. 18 GAUGE STAINLESS STEEL LOUVERED DOUBLE PAN DOOR WITH RECESSED PULL.
21. NUMBER NOT USED.
22. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN SLIDING DOOR WITH COMPONENT HARDWARE COMPONENTS

    A. #B57 - (VERIFY LENGTH) EXTRUDED ALUMINUM TRACK.
    B. #B58-5511 & #B58-5521 FRONT & REAR DOOR SHEAVES.
    C. #B62-1093 DOOR GUIDE.
    D. #B60-1086 DOOR STOPS WHERE NEEDED.
    E. #P62-1010 RECESS PULLS.

1 SECTION DETAIL NOTES
NOT TO SCALE

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AND PLANNING
CONSULTANTS
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HOUSTON, TEXAS 77079

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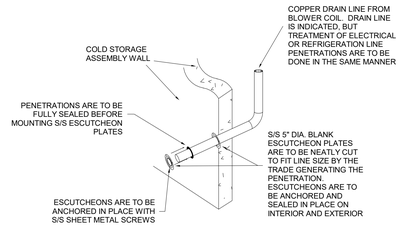
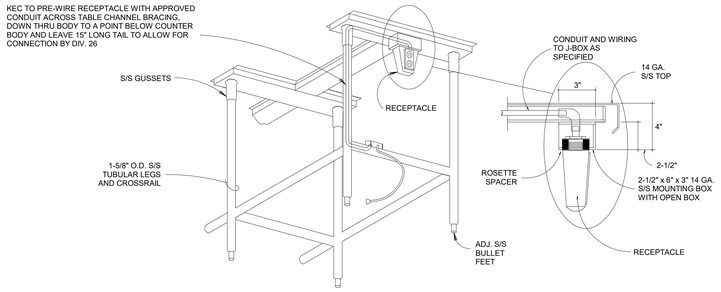
FS SECTIONS & DETAILS

J-QF4.1



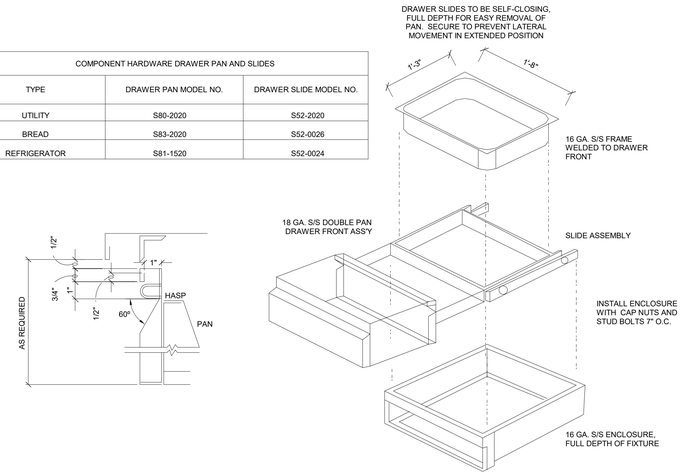
3 COLD STORAGE ASSEMBLY ESCUTCHEON & PENETRATION DETAIL
NOT TO SCALE

NOTE:
COORDINATE ALL RECEPTACLES WITH ELECTRICAL CONTRACT DRAWING REQUIREMENTS, REFER TO ELECTRICAL PLAN



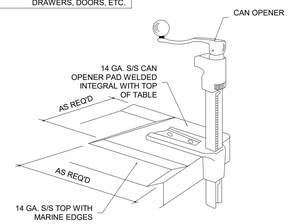
5 WORKTABLE - ELECTRICAL RECEPTACLE MOUNTED UNDER TOP DETAIL
NOT TO SCALE

COMPONENT HARDWARE DRAWER PAN AND SLIDES		
TYPE	DRAWER PAN MODEL NO.	DRAWER SLIDE MODEL NO.
UTILITY	S80-2020	S52-2020
BREAD	S83-2020	S52-0026
REFRIGERATOR	S81-1520	S52-0024

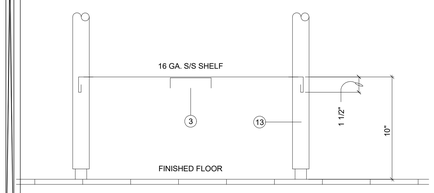


6 DRAWER ASSEMBLY DETAIL
NOT TO SCALE

NOTE: DO NOT LOCATE CAN OPENER PAD IN A POSITION THAT WOULD ALLOW CAN OPENER TO OBSTRUCT OPENING OF DRAWERS, DOORS, ETC.



10 SINK - PREP MARINE EDGE CAN OPENER DETAIL
NOT TO SCALE



11 UNDER SHELF DETAIL
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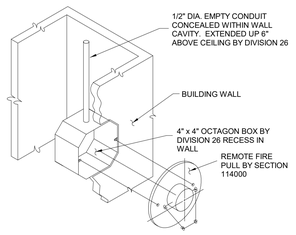
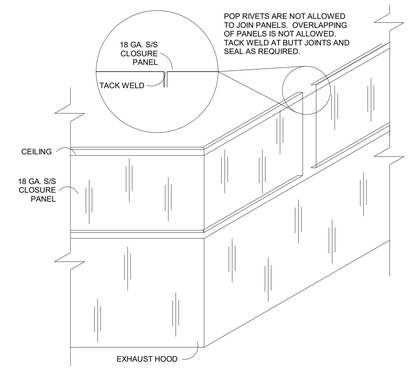
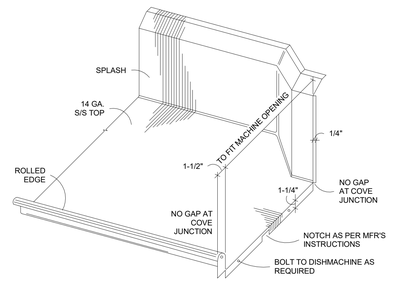
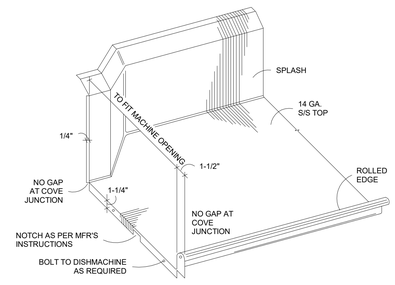


12 FIRE PROTECTION SYSTEM FIRE PULL DETAIL
NOT TO SCALE



13 EXHAUST HOOD CLOSURE PANEL DETAIL
NOT TO SCALE





14 DISHTABLE - SOILED & CLEAN CONNECTION DETAIL
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

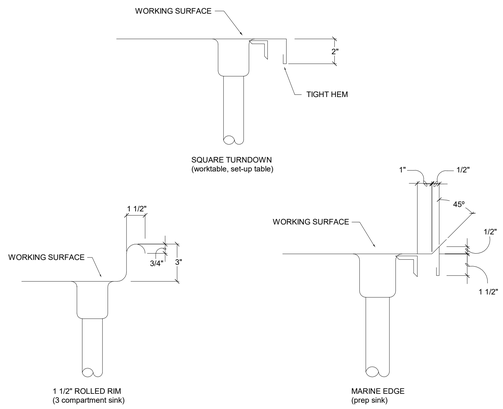
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM IS PREPARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI REG 48854119 ON 07/15/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

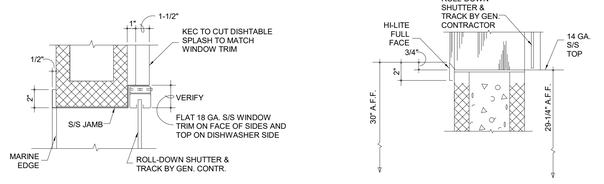
PROJ. NO.: 23-25
DATE: 07/18/25
ISSUED FOR BIDDING AND PERMITTING

FS DETAILS

J-QF4.2

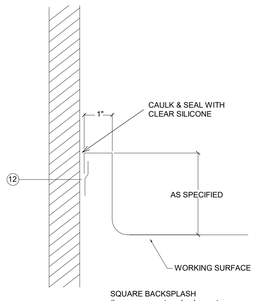


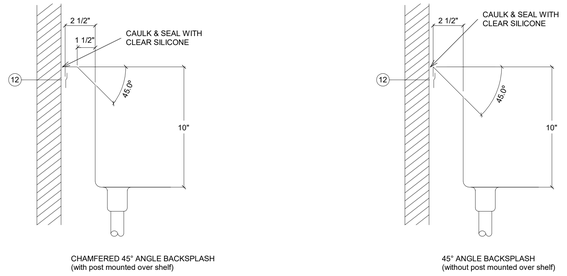
1 EDGE DETAILS
NOT TO SCALE



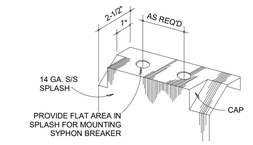
4 WAREWASH - TRAY DROP WINDOW SECTION
NOT TO SCALE

3 WAREWASH - TRAY DROP SECTION
NOT TO SCALE

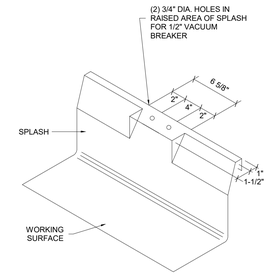




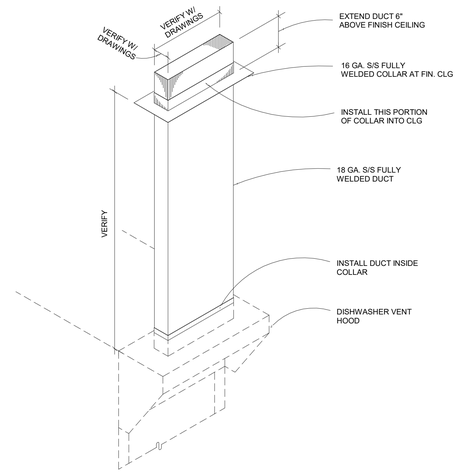
2 BACKSPLASH DETAILS
NOT TO SCALE



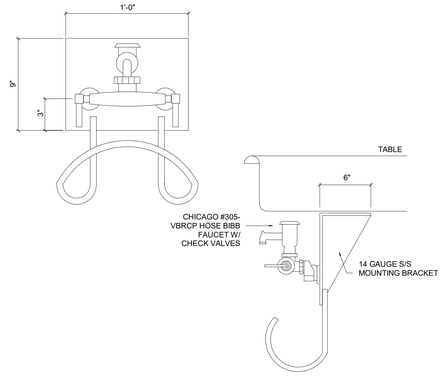
6 SPLASH @ SYPHON BREAKER
NOT TO SCALE



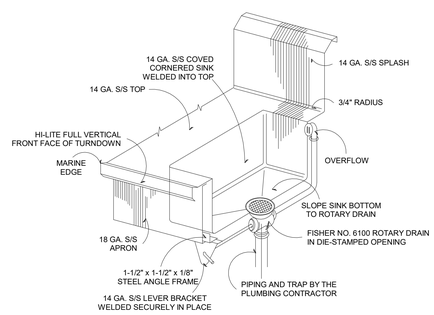
8 VACUUM BREAKER DETAIL
NOT TO SCALE



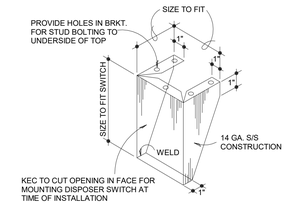
5 DISHMACHINE VENT RISER DETAIL
NOT TO SCALE



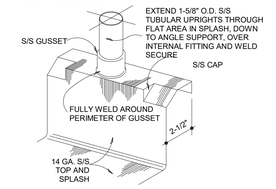
12 HOSE BIBB DETAIL
NOT TO SCALE



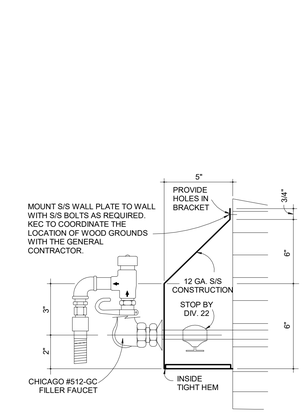
11 SINK ASSEMBLY DETAIL
NOT TO SCALE



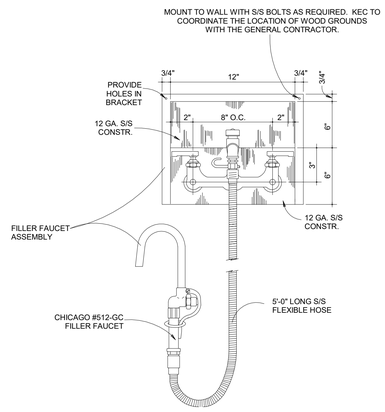
9 DISPOSER SWITCH BRACKET DETAIL
NOT TO SCALE



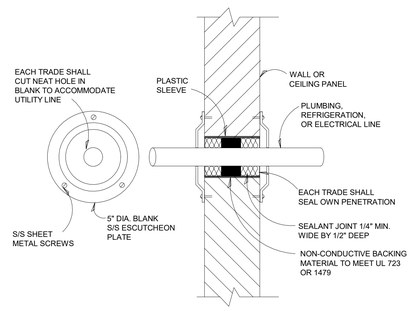
7 SPLASH @ UPRIGHT (DISH TABLE) DETAIL
NOT TO SCALE



14 FILL FAUCET DETAIL
NOT TO SCALE



15 COLD STORAGE ASSEMBLY WALL PENETRATION DETAIL
NOT TO SCALE



10 CUSTOM FAB NOTES
NOT TO SCALE

CUSTOM FABRICATION NOTES:

A. WORK SHALL BE DONE IN AN APPROVED WORKMANLIKE MANNER, TO COMPLETE SATISFACTION OF FOODSERVICE DESIGN PROFESSIONALS (FDP).

B. STAINLESS STEEL SHALL BE U.S. STANDARD GAUGES AS CALLED FOR. 18-8, TYPE 304, NOT OVER .012% MAXIMUM CARBON, NO. 4 FINISH.

C. GALVANIZED IRON SHALL BE ARMCO OR EQUAL. FRAMEWORK OF GALVANIZED IRON SHALL BE WELDED CONSTRUCTION, HAVING WELDS SMOOTH, AND WHERE GALVANIZING HAS BURNED OFF, TOUCHED UP WITH HIGH-GRADE ALUMINUM BRONZE.

D. LEGS AND CROSSRAIL SHALL BE CONTINUOUSLY WELDED, UNLESS OTHERWISE NOTED, AND GROUND SMOOTH.

E. BOTTOM OF LEGS AT FLOOR SHALL BE FITTED WITH SANITARY STAINLESS STEEL BULLET-TYPE FOOT, WITH NO LESS THAN 1/2" ADJUSTMENT.

F. LEGS SHALL BE FASTENED TO EQUIPMENT AS FOLLOWS:

01. TO SINKS BY MEANS OF CLOSED GUSSETS. GUSSETS SHALL BE S/S, REINFORCED WITH BUSHING, HAVING SET SCREWS FOR SECURING LEGS.

02. TO TABLES AND DRAINBOARDS WITH CLOSED GUSSETS WHICH SHALL BE WELDED TO GALVANIZED HAT SECTIONS OR CHANNELS, 14 GAUGE OR HEAVIER, EXPOSED HAT SECTIONS HAVING CLOSED ENDS. BRACING SHALL BE UNDERSIDE OF TOPS.

G. CLOSED GUSSETS SHALL BE 3" MINIMUM DIAMETER AT TOP, WELDED TO FRAME MEMBERS OR TO SINK BOTTOM.

H. ROLLS SHALL BE 1 1/2" DIAMETER, EXCEPT AS DETAILED TO THE CONTRARY, WITH CORNERS BULLNOSED, GROUND, AND POLISHED.

I. SEAMS AND JOINTS SHALL BE SHOP-WELDED WHERE POSSIBLE. WELDS TO BE GROUND AND POLISHED TO MATCH ORIGINAL FINISH. MATERIALS 18 GAUGE OR HEAVIER SHALL BE WELDED.

J. METAL TOPS SHALL BE ONE-PIECE WELDED CONSTRUCTION UNLESS SPECIFIED OTHERWISE, REINFORCED ON UNDERSIDE WITH GALVANIZED HAT SECTIONS OR CHANNELS WELDED IN PLACE. CROSSBRACE TO BE NOT MORE THAN 30" ON CENTERS.

K. HARDWARE SHALL BE SOLID MATERIALS AND EXCEPT WHERE EXPOSED OR SPECIFIED TO THE CONTRARY, OF CAST BRASS, CHROME-PLATED. IDENTIFY ALL HARDWARE WITH MANUFACTURER'S NAME AND NUMBER SO THAT BROKEN OR WORN PARTS MAY BE ORDERED AND REPLACED.

L. FABRICATE SINK COMPARTMENTS WITH 3/4" COVED VERTICAL AND HORIZONTAL CORNERS. MULTIPLE- COMPARTMENT PARTITIONS TO BE DOUBLE THICKNESS, CONTINUOUSLY WELDED WHERE SHEETS JOIN AT TOP. FRONT OF MULTIPLE-COMPARTMENT PARTITIONS TO BE CONTINUOUS ON EXTERIOR. BOTTOMS SHALL BE CREASED TO DRAIN.

M. ENDS OF FIXTURES, SPLASHBACKS, SHELVES, ETC., SHALL BE FINISHED FLUSH TO WALLS OR ADJOINING FIXTURES.

N. DISHTABLES, DRAINBOARDS, SPLASHBACKS, AND TURN-UP EDGES SHALL HAVE RADIUS BENDS IN ALL HORIZONTAL AND VERTICAL CORNERS, COVED AT INTERSECTIONS.

O. ROUNDED AND COVED CORNERS OR RADIUS BENDS SHALL BE 1/2" RADIUS OR LONGER.

P. UNDERSIDES OF TOPS TO BE COATED WITH HEAVY-BODIED RESINOUS MATERIAL COMPOUND FOR PERMANENT, NON-FLAKING ADHESION TO METAL, 1/8" THICK, APPLIED AFTER REINFORCING MEMBERS HAVE BEEN INSTALLED, DRYING WITHOUT DIRT-CATCHING CREVICES.

Q. SHELVES ARE TO BE TURNED UP 2" ON THE BACK EDGE. TURN OTHER EDGES DOWN 1 1/2" TO FORM OPEN CHANNELS. REINFORCE SHELF UNITS TO SUPPORT 40 LBS. PER SQUARE FOOT LOADING, PLUS 100% IMPACT LOADING.

R. TRIMWORK AND FRAMING AT MASONRY OPENINGS SHALL BE 18 GAUGE STAINLESS STEEL AND FORMED SO AS TO FIT SNUG TO WALLS AND ADJACENT SURFACES. FRAMING SHALL EXTEND A MINIMUM OF 2" ON EACH SURFACE. SEAL TRIMWORK TO WALLS. REFER TO DRAWINGS.

S. METAL COMPONENTS, UNLESS SPECIFIED OR NOTED OTHERWISE, TO BE THE FOLLOWING GAUGES:

TABLETOPS	14 GAUGE STAINLESS STEEL
WALL SHELVES	16 GAUGE STAINLESS STEEL
UNDER SHELVES	16 GAUGE STAINLESS STEEL
SINKS & DRAINBOARDS	14 GAUGE STAINLESS STEEL
EXHAUST DUCTS	18 GAUGE STAINLESS STEEL
LEGS - 1 5/8" DIA.	16 GAUGE STAINLESS STEEL

ISSUE:

12/05/2024	DD PACKAGE
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05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MELISSA MOORE, FCSI NO. 48854119 ON 07/15/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/25
ISSUED FOR BIDDING AND PERMITTING

FS DETAILS

J-QF4.3

RCP - GENERAL NOTES

1. CEILING GRID SHALL BE INSTALLED TO MATCH EXISTING GRID'S POINT OF O THIS WILL REDUCE NEED TO RE-LOCATE ABOVE CEILING DUCTS, SPRINKLER AND OTHER SUPPORT SYSTEMS.
2. REFER TO SHEET A00-01 FOR GENERAL NOTES. GENERAL NOTES APPLY TO SEVEN SCHOOL KITCHEN REMODELS.
3. LIGHTING LEVELS SHOULD BE 50 FC IN PREPARATION AREAS, WARE WASH A SERVING LINES, OR MEET MINIMUM HEALTH CODE LEVELS, WHICHEVER ITS SEE MEP PLANS
4. REPLACE HVAC DEVICES. REPLACE LIGHTING WITH 24"x24" LED LAY IN LIGH SCHEDULED IN ELECTRICAL PLANS.
5. REFER TO MECHANICAL, ELECTRICAL SHEETS FOR DEVICE SCHEDULES.

RCP - NUMBERED NOTES

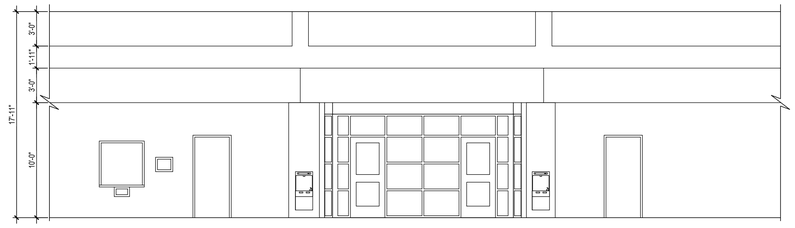
01 PROVIDE 30"x30" MIN. ACCESS HATCH IN SOFFIT CENTERED ON MOTOR.

02 AFTER LOWERING THE NEW POWER RETRACTION SYSTEM. REPAIR AND PAINT SOFFITS AND SIDWALLS OF FURR TO MATCH EXISTING.

03 SEE SHEET M2.02 FOR ROOF PENETRATION. MATCH EXISTING ROOF CONSTRUCITON AND MAINTAIN INTEGRITY OF WARRANTY CURRENTLY IN PLACE.

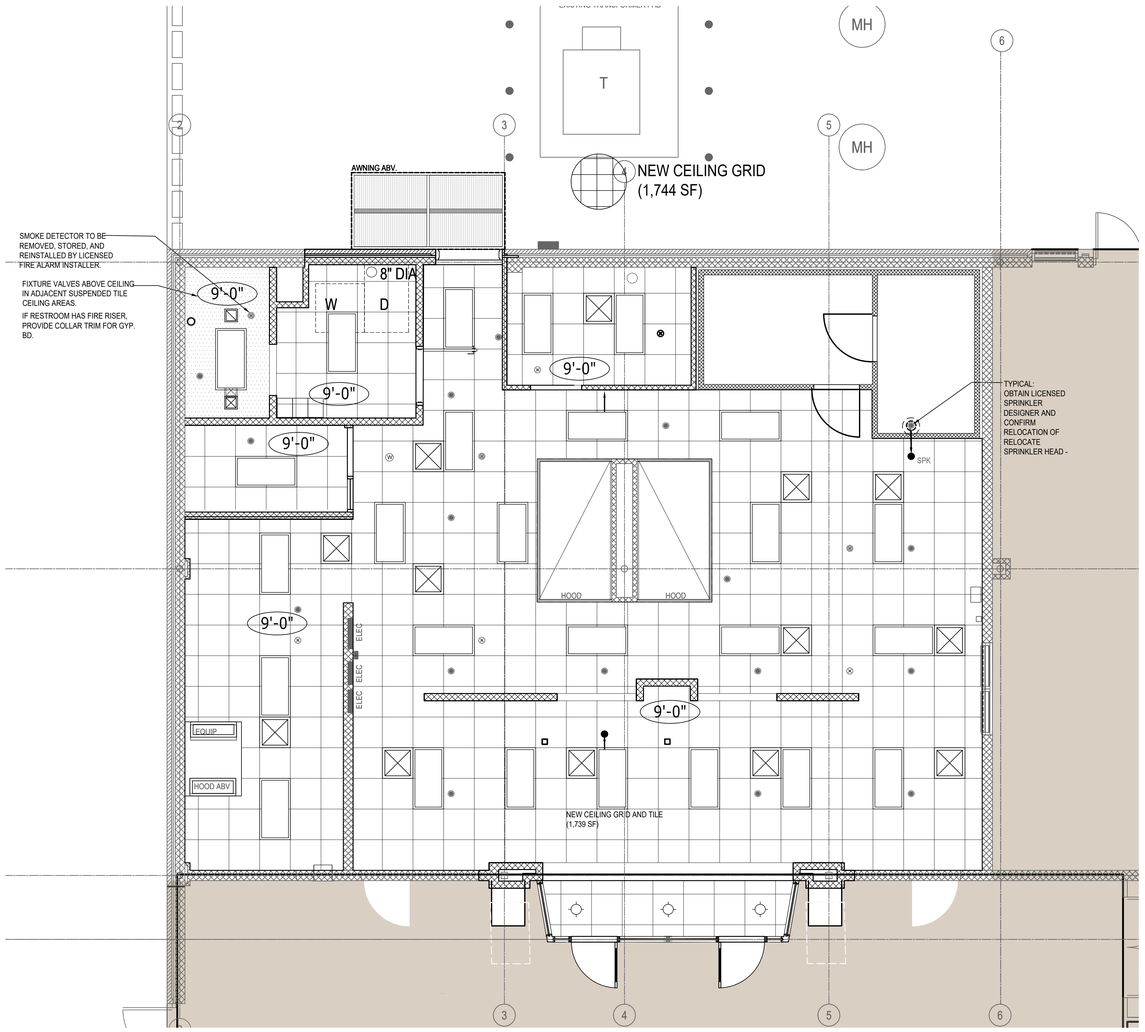
RCP DEVICE LEGEND

EXISTING TO REMAIN	NEW	DEMO	
S	S	S	CEILING MOUNTED SPEAKERS
			SECURITY CAMERA
W	W	W	WIRELESS ACCESS POINT
821-33	821-33	821-33	CEILING MOUNTED FIRE ALARM AND STROBE
			SMOKE DETECTOR
			SPRINKLER HEAD (RECESSED)
			SPRINKLER HEAD (PENDANT)
			DRYER VENT
			EXIT
			CLOCK



2 FOOD SERVICE AREA ELEVATION

SCALE: 3/16" = 1'-0"



1 REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING

j

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

REGISTERED ARCHITECT
JON M. REVIER
22851
STATE OF TEXAS

28 AUG 2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/28/25
ADDENDUM NO. 3 - AUG 28, 2025

REFLECTED CEILING PLAN

j-A.401

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\J-Highlands ES\j-A.401 REFLECTED CEILING PLAN.dwg Aug 27, 2025 - 5:41pm

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

LIGHTING RENOVATION NOTES:

A. KITCHEN LIGHTS TO BE CONTROLLED BY LOCAL MOMENTARY SWITCHES AND BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.
   LEFT SWITCH SHALL CONTROL ZONE 'a' NORMAL POWER LIGHTING FIXTURES.
   RIGHT SWITCH SHALL CONTROL ZONE 'b' EMERGENCY LIGHTING FIXTURES.

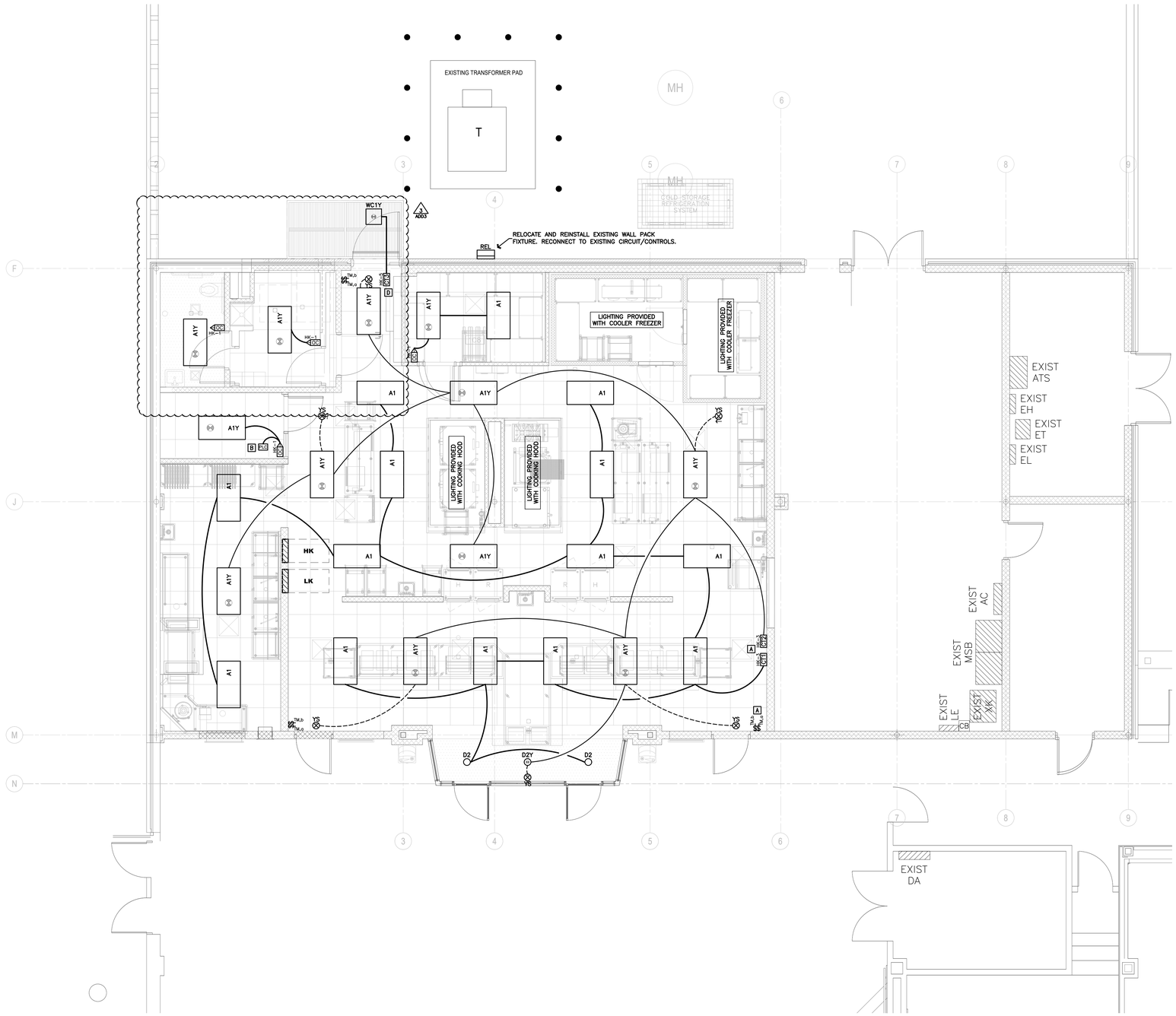
B. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

C. WIRE EXIT SIGNS UPSTREAM OF LIGHTING CONTROLS. TYPICAL.

D. EXTERIOR LIGHTS TO BE CONTROLLED BY BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.

E. AFTER REMOVAL OF THE TEMPORARY KITCHEN, PROVIDE NEW EXIT SIGN AT ORIGINAL LOCATION AND RECONNECT TO EXISTING CAFETERIAL LIGHTING CIRCUIT.

F. PATCH/REPAIR EXTERIOR SOFFIT TO ACCOMMODATE NEW SURFACE MOUNTED FIXTURES.



1 LIGHTING RENOVATION PLAN
SCALE: 1/4" = 1'- 0"

ISSUE:

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03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025	ADDENDUM NO. 3

3 A003

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
08.28.2025

MWA ARCHITECTS
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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

LIGHTING FLOOR PLANS

j-E.100

STANTON ENGINEERING GROUP
INFORMATION-TECHNOLOGY (713) 300-60360

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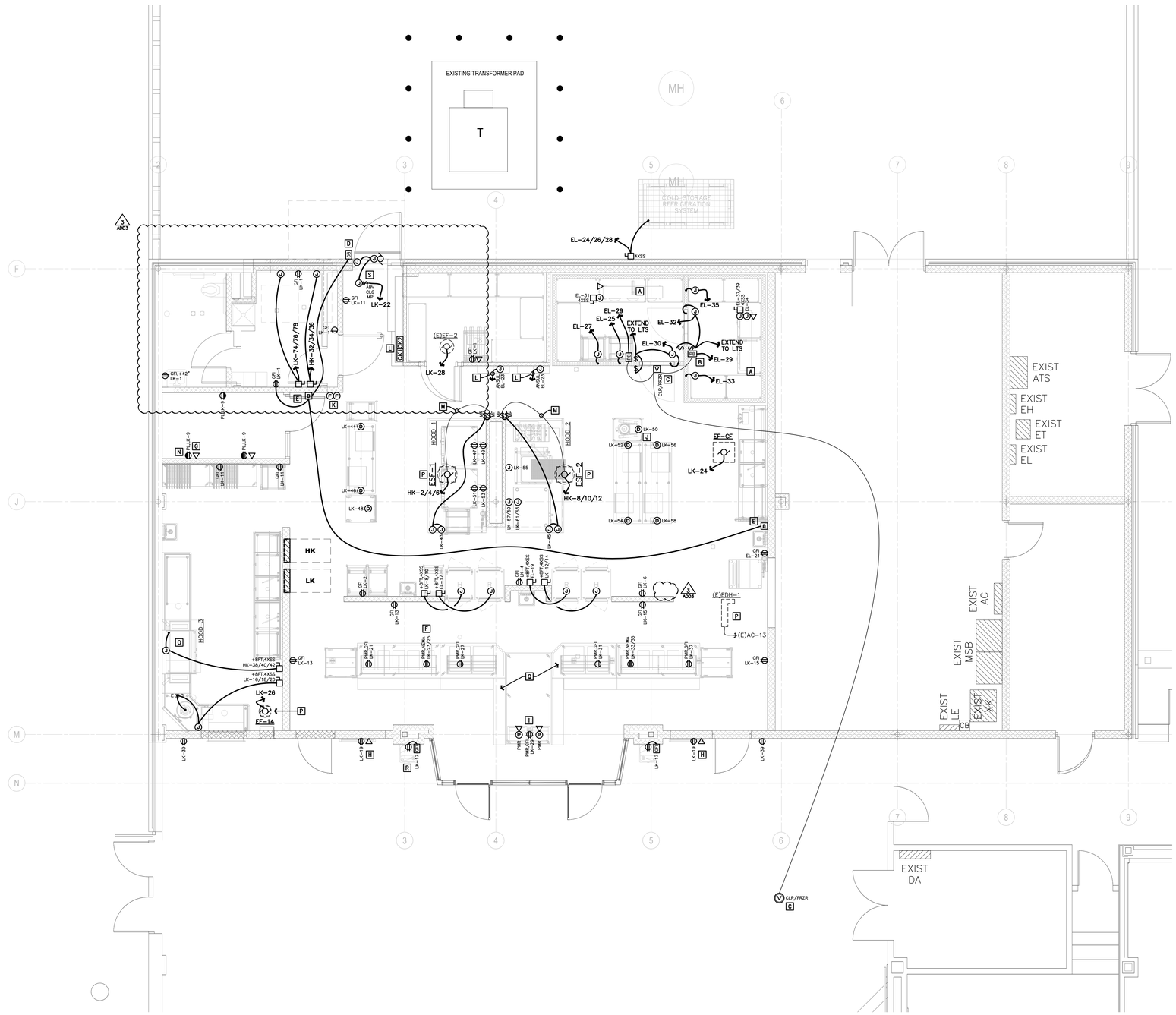

1 ELECTRICAL RENOVATION PLAN

SCALE: 1/4" = 1'- 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

ELECTRICAL RENOVATION NOTES:

A. CONNECT NEW FREEZER/COOLER AND CONDENSER TO EXISTING STANDBY GENERATOR.

B. PROVIDE ILLUMINATED PUSH BUTTON IN COOLER AND FREEZER. WHEN PRESSED RED STROBE DEVICES IN KITCHEN AND CAFETERIA SHALL ACTIVATE. TYPICAL.

C. PROVIDE HORN/STROBE DEVICE TIED TO PUSH BUTTONS IN FREEZER/COOLER.
(EDWARDS 860 SERIES OR EQUAL).

D. PROVIDE NEW DOORBELL BUTTON AT RECEIVING DOOR. DOORBELL BUTTON SHALL BE THE CLOSEST DEVICE TO THE DOOR FRAME.

E. PROVIDE NEW VIBRATING BUZZER TIED TO DOORBELL BUTTON AT RECEIVING DOOR. BUZZER TO BE WALL MOUNTED JUST BELOW THE CEILING.

F. PROVIDE NEW ELECTRICAL DEVICES MATCHING NEW KITCHEN EQUIPMENT AND ROOM LAYOUTS. REFERENCE FOOD SERVICE DRAWINGS. TYPICAL.

G. PROVIDE ROUGH-IN FOR LOW VOLTAGE DEVICES. REFERENCE TECHNOLOGY DRAWINGS, TYPICAL.

H. POWER AND DATA ROUGH-IN FOR KITCHEN MENU BOARD.

I. POWER AND DATA ROUGH-IN FOR POINT OF SALE (POS) LOCATION.

J. PROVIDE DROP CORD RECEPTACLE WITH HUBBELL KELLEMS LIQUIDTIGHT GRIPS FOR STRAIN RELIEF, TYPICAL OF ALL.

K. PROVIDE J-BOXES AND CONDUIT FOR REMOTE FIRE PULLS, SEE FOOD SERVICE DETAIL DRAWING FOR REQUIREMENTS, TYPICAL

L. WIRE ANSUL SYSTEM TO HOOD EQUIPMENT CONTROL CONTRACTOR. UPON ANSUL SYSTEM ACTIVATION ALL POWER TO EQUIPMENT BENEATH THE HOODS SHALL BE DEACTIVATED. MOUNT CONTACTOR CABINET(S) JUST BELOW THE CEILING.

M. PROVIDE SEPARATE SWITCHES TO TURN ON HOOD LIGHTS AND FANS. WIRE HOOD TEMP SENSOR AHEAD OF HOOD LIGHT SWITCH. USE 120V CIRCUIT TO CONTROL HOOD FANS THROUGH EXISTING STARTER. PROVIDE CONTROLS TRANSFORMER AS REQUIRED TO MATCH STARTER CONTROL INPUT VOLTAGE. TYPICAL.

N. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

O. INTERCONNECT DISH MACHINE TO VENT CONTROL. INTERCONNECT TABLE LIMIT SWITCH TO DISHMACHINE.

P. EXISTING MECHANICAL EQUIPMENT TO BE REPLACED. CONNECT TO CIRCUIT AS SHOWN. RECONNECT TO EXISTING STARTER/CONTACTORS, FIELD VERIFY.

Q. SAWCUT FLOOR TO INSTALL NEW PEDESTAL MOUNTED DEVICE BENEATH NEW SERVING LINES, DO NOT REUSE EXISTING STUB UPS OR DEVICES. POUR BACK SLAB AND PROVIDE NEW FINISHES, REFERENCE ARCHITECTURAL.

R. REFERENCE EDF GFI PROTECTION DETAIL FOR INSTALLATION REQUIREMENTS, TYPICAL.

S. WIRE MICRO SWITCH IN DOOR FRAME TO AIR SCREEN. COOR W/ FOOD SERVICE CONTRACTOR PRIOR TO ROUGH-IN. LOCATE LOCAL MOTOR RATED SWITCH ABOVE CEILING ADJACENT TO THE AIR SCREEN.

COOLER/FREEZER NOTES:

1. PROVIDE SEALING FOR CONDUIT IN COOLER AND FREEZER. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, CIRCULATION OF AIR FROM WARMER TO A COLDER SECTION SHALL BE PREVENTED PER N.E.C. ARTICLE 300.7 (A).
2. PROVIDE GROUND-FAULT PROTECTION OF EQUIPMENT FOR ELECTRIC HEAT TRACING AND HEATING PANELS IN THE FREEZER PER N.E.C. ARTICLE 427.22.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE LIQUID TIGHT CONDUIT AND WIRING FOR LIGHT FIXTURES AND LIGHT SWITCHES IN WALK-IN COOLER AND FREEZER, SEE FOODSERVICE CONSULTANT'S DRAWINGS.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025	ADDENDUM NO. 3

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED PROFESSIONAL ENGINEER
08.28.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
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ELECTRICAL FLOOR PLANS

j-E.200

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INFO@STANTON-ENG.COM (713) 300-6080
TEXAS ENG. FIRM REG. NO. F-01853 | 1200 N. SAM HOUSTON PARKWAY E., SUITE 125, HOUSTON, TX 77060

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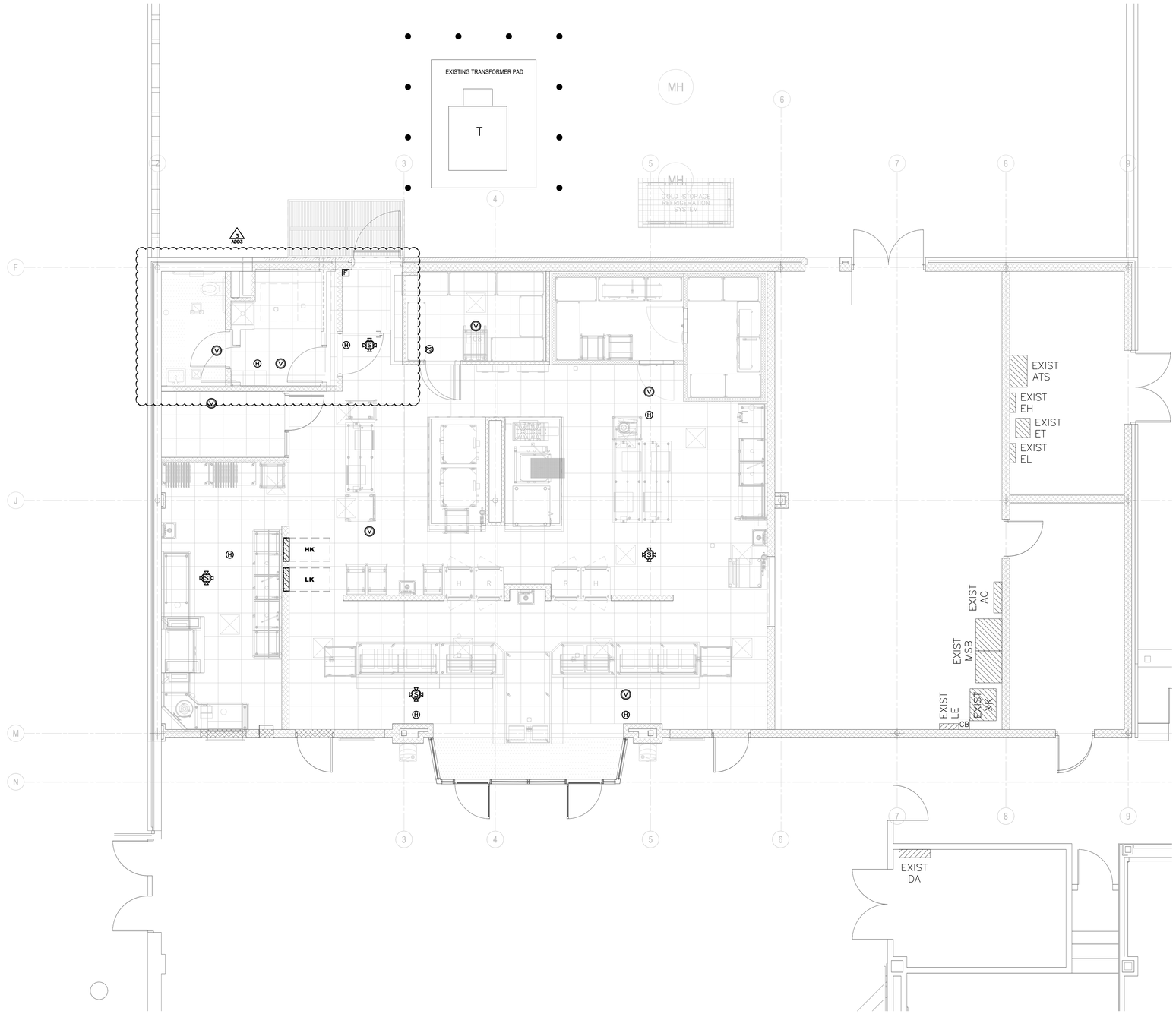

1 FIRE ALARM RENOVATION PLAN
SCALE: 1/4" = 1'- 0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
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FIRE ALARM FLOOR PLANS

j-E.300

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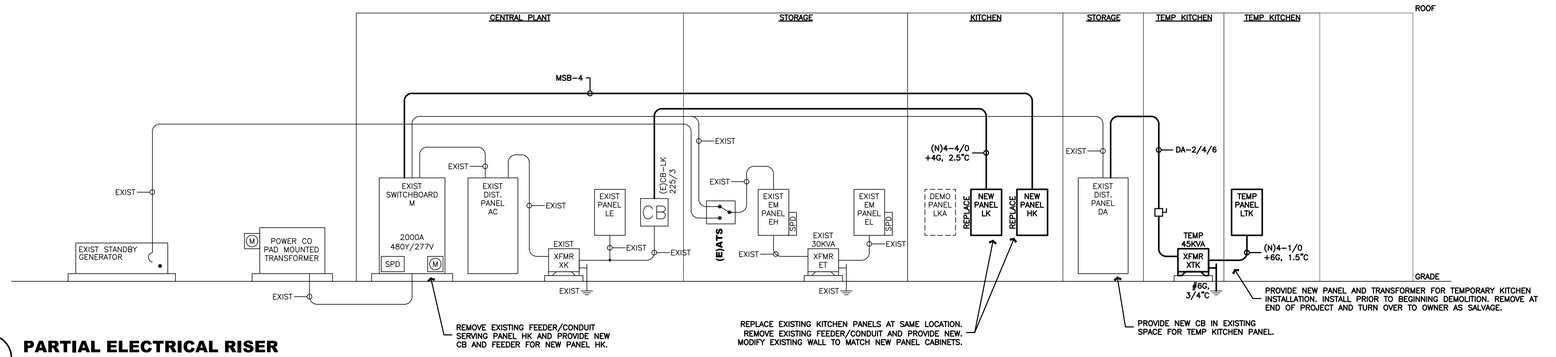

1 PARTIAL ELECTRICAL RISER

NO SCALE

NOTES:
1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED/CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.
5. REFERENCE PANEL SCHEDULES AND SHORT CIRCUIT TABLE FOR AIC AND SCCR VALUES.

NEW KITCHEN PANEL — KITCHEN

PANEL HK — 225A MLO, 480Y/277V, 3ø, 4 WIRE — AVAILABLE FAULT: 20,250A — SCCR & AIC: 25,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
6		1095	KITCHEN/SERVING LIGHTS	3–12	20/1	3				4	–	+12G	(1.5HP / 1.5HP)	–		
7		84	KITCHEN EXTERIOR LIGHTS	3–12	20/1	5				6	–	3/4"C	–	–		
			SPARE		20/1	7				8	15/3	3–12	ESF–2	4986		
			SPARE		20/1	9				10	–	+12G	(1.5HP / 1.5HP)	–		
			SPARE		20/1	11				12	–	3/4"C	–	–		
			SPARE		20/1	13				14			SPACE			
			SPARE		20/1	15				16			SPACE			
			SPARE		20/1	17				18			SPACE			
			SPARE		20/1	19				20			SPACE			
			SPARE		20/1	21				22			SPACE			
			SPACE			23				24			SPACE			
			SPACE			25				26			SPACE			
			SPACE			27				28			SPACE			
			SPACE			29				30			SPACE			
			SPACE			31				32	45/3	3–8	COMMERCIAL DRYER	28254		
			SPACE			33				34	–	+10G	–	–		
			SPACE			35				36	–	3/4"C	–	–		
			SPACE			37				38	70/3	3–8	DISHMACHINE	42963	E250	
			SPACE			39				40	–	+8G	–	–		
			SPACE			41				42	–	3/4"C	–	–		
		TOTAL LOAD @ 100% = 82744VA				TOTAL LOAD @ 100% = 100A							TOTAL LOAD @ 125% = 124A			

NEW KITCHEN PANEL — KITCHEN

PANEL LK — 225A MLO, 208Y/120V, 3ø, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E10	1000	5 REC – RR/STOR/CUST & BELL	3–12	20/1	1				2	20/1	3–12	1 REC – KITCHEN	180	E10	
			SPARE		20/1GFI	3				4	20/1	3–12	1 REC – KITCHEN	180	E10	
			SPARE		30/2GFI	5				6	20/1	3–12	1 REC – KITCHEN	180	E10	
		–	–		–	7				8	20/2	2–10	HEATED CABINET	3224	E187	
		540	3 REC – OFFICE	3–12	20/1	9				10	3/4"C	+10G	–	–		
	E10/E13	540	3 REC – KITCHEN	3–12	20/1	11				12	20/2	2–10	HEATED CABINET	3224	E187	
	E10	360	2 REC – SERVING LINE	3–12	20/1	13				14	3/4"C	+10G	–			
	E10	360	2 REC – SERVING LINE	3–12	20/1	15				16	20/3	3–12	DISPOSER	3960	E123	
		1000	2 EDF – CAFETERIA	3–12	20/1	17				18	–	+12G	(3 HP)	–		
	E615	500	2 MENU BOARDS	3–12	20/1	19				20	–	3/4"C	–	–		
	E209	960	MILK COOLER	3–12	20/1	21				22	20/1	3–12	AIR SCREEN	612	E101	
	E201A	5824	HOT FOOD COUNTER	2–8	35/2GFI	23				24	15/1	3–12	EF–CF (1/6HP)	528		
		–	–	+10G	3/4"C	25				26	15/1	3–12	EF–14 (1/3HP)	864		
	E201B	1920	COLD FOOD COUNTER	3–12	20/1	27				28	15/1	3–12	EF–2 (1/6HP)	528		
	E214	360	CASH REGISTERS	3–12	20/1	29				30	20/1		SPARE			
	E201B	1920	COLD FOOD COUNTER	3–12	20/1	31				32	20/1		SPARE			
	E201A	5824	HOT FOOD COUNTER	2–8	35/2GFI	33				34	20/1		SPARE			
		–	–	+10G	3/4"C	35				36	20/1		SPARE			
	E209	960	MILK COOLER	3–12	20/1	37				38	20/1		SPARE			
		360	2 REC – CAFETERIA	3–12	20/1	39				40	20/1		SPARE			
			SPARE		20/1	41				42	20/1		SPARE			
	E153/E153M	250	HOOD LTS & SENSOR	3–12	20/1	43				44	20/1GFI	3–12	DROP CORD	180	E129	
	E153/E153M	250	HOOD LTS & SENSOR	3–12	20/1	45				46	20/1GFI	3–12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	47				48	20/1GFI	3–12	MOBILE PROOFER	1800	E139	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	49				50	20/1GFI	3–12	20QT MIXER	960	E125	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	51				52	20/1GFI	3–12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	53				54	20/1GFI	3–12	DROP CORD	180	E129	
8	E163	600	TILT BRAISING PAN	3–12	20/1GFI	55				56	20/1GFI	3–12	DROP CORD	180	E129	
8	E172	3120	COMBI OVEN	2–12	20/2	57				58	20/1GFI	3–12	DROP CORD	180	E129	
		–	–	+12G	3/4"C	59				60	20/1	3–12	EXISTING CIRCUIT	500		5
8	E172	3120	COMBI OVEN	2–12	20/2	61				62	20/2	2–12	EXISTING CIRCUIT	1000		5
		–	–	+12G	3/4"C	63				64	–	+12N+12G	–	–		
5		250	EXISTING CIRCUIT	3–12	20/1	65				66	20/2	2–12	EXISTING CIRCUIT	1000		5
			SPACE			67				68	–	+12N+12G	–	–		
			SPACE			69				70	30/2	2–10	EXISTING CIRCUIT	3000		5
			SPACE			71				72		+10N+10G	–			
			SPACE			73				74	20/3	3–12	WASHER	3408		
			SPACE			75				76	–	+12G	–	–		
			SPACE			77				78	–	3/4"C	–	–		
			SPACE			79				80			SPACE			
			SPACE			81				82			SPACE			
			SPACE			83				84			SPACE			
		TOTAL LOAD @ 100% = 55718VA				TOTAL LOAD @ 100% = 155A							TOTAL LOAD @ 65% = 101A			

KITCHEN HOOD CONTACTOR SCHEDULE

POLE	DESCRIPTION	NORMAL CKT	EM CKT	CONTROL ZONE	EQUIPMENT LOCATION	CONTACTOR TYPE
HOOD 1						
CK1–1	CONVECTION OVEN	LK–47	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–2	CONVECTION OVEN	LK–49	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–3	CONVECTION OVEN	LK–51	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–4	CONVECTION OVEN	LK–53	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–5	SPARE					ELECTRICALLY HELD – NO
CK1–6	SPARE					ELECTRICALLY HELD – NO
CK1–7	SPARE					ELECTRICALLY HELD – NO
CK1–8	SPARE					ELECTRICALLY HELD – NO
HOOD 2						
CK2–1	TILT BRAISING PAN	LK–55	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–2	COMBI–OVEN	LK–57/59	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–3	(2–POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2–4	COMBI–OVEN	LK–61/63	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–5	(2–POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2–6	SPARE					ELECTRICALLY HELD – NO
CK2–7	SPARE					ELECTRICALLY HELD – NO
CK2–8	SPARE					ELECTRICALLY HELD – NO

1. REFERENCE FLOOR PLANS FOR EQUIPMENT LOCATIONS AND ADDITIONAL INFORMATION.
2. EACH KITCHEN HOOD CONTACTOR HALL BE CONTROLLED ON/OFF BY THE APPROPRIATE HOOD ANSUL SYSTEM. WHEN ACTIVATED ALL POWER WITHIN THE COOKING HOOD SHALL BE DE–ENERGIZED.

EXIST SQUARE D QED SWITCHBOARD — CENTRAL PLANT

(E)SWBD MSB — 2000A MCB, 480Y/277V, 3ø, 4 WIRE — AVAILABLE FAULT: 37,000A — SCCR & AIC: 100,000A — FREE STANDING

NOTES	CIRCUIT	DESCRIPTION	CB	FEEDER SIZE	AMPS
	1	EXTENDED DAY PANEL H	150/3	EXIST FEEDER	
	2	EXIST ATS	250/3	EXIST FEEDER	7A
2	3	EXIST PANEL HK	400/3		
4	4	NEW PANEL HK	225/3	4–4/0 +4G, 2.5"C	100A
	5	EXIST DISTRIBUTION PANEL DA	400/3	EXIST FEEDER	275A
	6	EXIST SPACE	400/3PS	–	
	7	EXIST DISTRIBUTION PANEL DB	400/3	EXIST FEEDER	
	8	EXIST DISTRIBUTION PANEL DC	400/3	EXIST FEEDER	
	9	EXIST DISTRIBUTION PANEL AC	800/3	EXIST FEEDER	
				TOTAL LOAD @ 100% =	382A
				TOTAL LOAD @ 125% =	478A

1. THE EXISTING 2000A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST GE NHB PANELBOARD — STORAGE ROOM

(E)PANEL DA — 400A MLO, 480Y/277V, 3ø, 4 WIRE — AVAILABLE FAULT: 27,000A — SCCR & AIC: 35,000A — MOUNTING: SURFACE

NOTES	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	NOTES
		SPACE			1				2	70/3	3–6	TEMP KITCHEN PANEL LTK	37918	4
		SPACE			3				4	–	+8G	–	–	
		SPACE			5				6	–	3/4"C	–	–	
		SPACE			7				8			SPACE		
		SPACE			9				10			SPACE		
2		KITCHEN LIGHTS	EXIST	20/1	11				12			SPACE		
1	3100	LIGHTS CAFETORIUM	EXIST	20/1	13				14			SPACE		
1	3370	LIGHTS CAFETORIUM	EXIST	20/1	15				16	20/1	EXIST	OUTSIDE LIGHTS	1000	
1	2300	LIGHTS CAFETORIUM RMS	EXIST	20/1	17				18	20/1	EXIST	EWH–2 IN MECH 404	3000	
	9150	AHU #2	EXIST	20/3	19				20	60/3	EXIST	DUCT HEATER 2	39000	
	–	–	–	–	21				22	–	–	(STAGE)	–	
	–	–	–	–	23				24	–	–	–	–	
	130000	PANEL PA	EXIST	225/3	25				26	–	–	–	–	
	–	(SUBFEED BREAKER)	–	–	27				28	–	–	–	–	
	–	–	–	–	29				30	–	–	–	–	
		TOTAL LOAD @ 100% = 228838VA										TOTAL LOAD @ 125% = 344A		

1. THE EXISTING 400A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST EM STANDBY PANELBOARD — STORAGE ROOM

(E)PANEL EL — 125A MCB, 208Y/120V, 3ø, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
		500	GENERATOR REMOTE	EXIST	20/1	1				2	20/1	EXIST	MDF RM SEC	500		
		500	GENERATOR BATTERY	EXIST	20/1	3				4	20/2	EXIST	MDF RM SERVER 220	2000		
		500	GENERATOR CONTROL	EXIST	20/1	5				6	–	–	–	–		
		500	GENERATOR HEATER	EXIST	20/1	7				8	20/2	EXIST	MDF RM SERVER 220	2000		
		500	RM S125 PA SYSTEM	EXIST	20/1	9				10	–	–	–	–		
		500	RM S125 FA	EXIST	20/1	11				12	20/1		EXIST SPARE			
			EXIST SPARE		20/1	13				14	20/1		EXIST SPARE			
			EXIST SPARE		20/1	15				16	20/1		EXIST SPARE			
4	E188	864	REFRIGERATOR	3–12	20/1	17				18	20/1		EXIST SPARE			
4	E188	864	REFRIGERATOR	3–12	20/1	19				20	20/1		EXIST SPARE			
4	E109	1428	ICE MACHINE	3–12	20/1	21				22	20/1		EXIST SPARE			
4	E151	240	HOOD ANSUL SYSTEMS	3–12	20/1	23				24	25/3	3–10	REFRIGERATION SYSTEM	6192	E103	4
4	E102B	600	COOLER TEMP. ALARM	3–12	20/1	25				26	–	+10G	–	–		
4	E102C	600	COOLER PRESSURE PORT	3–12	20/1	27				28	–	3/4"C	–	–		
4	E102E	120	PANIC ALARM BUTTONS	3–12	20/1	29				30	20/1EGF	3–12	COOLER DOOR HEATER/LTS	600	E102A	4
4	E103D	216	COOLER COIL	3–12	20/1	31				32	20/1EGF	3–12	FREEZER DOOR HEATER/LTS	600	E102A	4
4	E102B	600	FREEZER TEMP. ALARM	3–12	20/1	33				34	20/1EGF	3–12	FREEZER DRAIN LINE HEATER	600	E103F	4
4	E102C	600	FREEZER PRESSURE PORT	3–12	20/1	35				36			SPACE			
4	E103C	1893	FREEZER COIL	2–10	20/2	37				38	30/3	EXIST	SPD	50		
		–	–	+10G	–	39				40	–	–	–	–		
			SPACE			41				42	–	–	–	–		
		TOTAL LOAD @ 100% = 23567VA				TOTAL LOAD @ 100% = 65A							TOTAL LOAD @ 125% = 82A			

1. THE EXISTING 125A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

GENERAL PANEL REQUIREMENTS:
A. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
B. FIELD VERIFY EXISTING CIRCUITS PRIOR TO BEGINNING WORK.
C. ALL OUTAGES SHALL BE SCHEDULED AND CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
D. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.

PANEL NOTES:
1. REVISE/REWORK WIRING/CONDUIT AS REQUIRED TO ADD/REMOVE DEVICES FROM EXISTING CIRCUIT.
2. EXISTING CIRCUIT TO BE DEMO.
3. REUSE EXISTING SPARE CB AND WIRE NEW CIRCUIT.
4. PROVIDE NEW CB & WIRE NEW CIRCUIT.
5. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AND REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION.
6. KITCHEN LIGHTS TO BE DUAL ZONES WIRED THROUGH LIGHTING CONTACTORS AND CONTROLLED ON/OFF BY THE BAS AND LOCAL LIGHTING SWITCHES.
7. EXTERIOR LIGHTS TO BE WIRED THROUGH LIGHTING CONTACTOR AND CONTROLLED ON/OFF BY THE BAS.
8. WIRE CIRCUITS THROUGH KITCHEN EQUIPMENT CONTROL CONTACTOR. CIRCUITS TO BE DE–ENERGIZED BY HOOD FIRE PROTECTION SYSTEM.
9. RECONNECT EXISTING TEMPORARY LOAD CENTER CIRCUIT TO NEW PANEL LK.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025	ADDENDUM NO. 3

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL
STATE OF TEXAS — GEORGE L. STANTON — 38582 — LICENSED PROFESSIONAL ENGINEER
08.28.2025

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11767 KATY FREEWAY, SUITE 430
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PROJ. NO.: 23-25
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ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL SCHEMATIC

j-E.400

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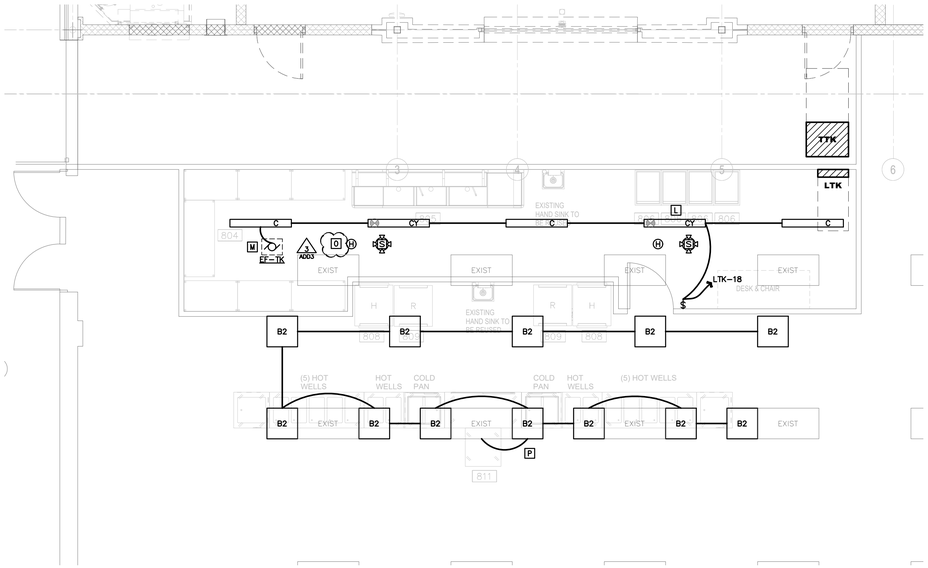
NEW PANEL — TEMP KITCHEN

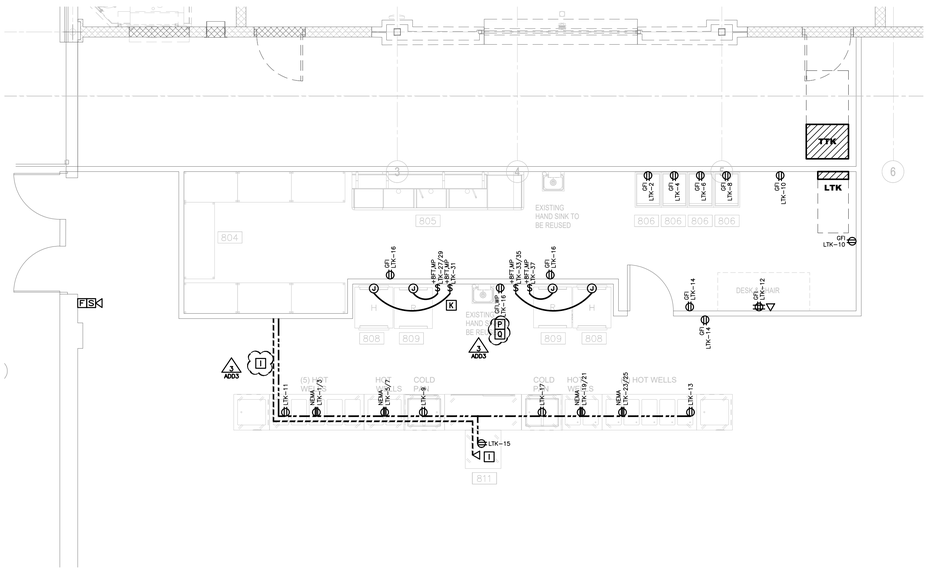
PANEL LTK — 150A MCB, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E810	2766	HOT WELLS	2–12	20/2GFI	1	■			2	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	3		■		4	20/1	3–12	TRANSPORT CART	1920	E806	
	E810A	1643	HOT WELLS	2–12	20/2GFI	5			■	6	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	7	■			8	20/1	3–12	TRANSPORT CART	1920	E806	
	E810B	600	COLD PAN	3–12	20/1GFI	9		■		10	20/1	3–12	2 REC	360	E800A	
	E810C	1200	BEVERAGE	3–12	20/1GFI	11			■	12	20/1	3–12	2 REC – DESK	360	E800B	
	E810C	1200	BEVERAGE	3–12	20/1GFI	13	■			14	20/1	3–12	2 REC	360	E800A	
	E811	180	CASH REGISTER	3–12	20/1GFI	15		■		16	20/1	3–12	3 REC	360	E800A	
	E810B	600	COLD PAN	3–12	20/1GFI	17			■	18	20/1	3–12	TEMP. KITCHEN LTS/FAN	566		
	E810A	1643	HOT WELLS	2–12	20/2GFI	19	■			20	20/1		SPARE			
	–	–	–	+12G	–	21		■		22	20/1		SPARE			
	E810	2766	HOT WELLS	2–12	20/2GFI	23			■	24	20/1		SPARE			
	–	–	–	+12G	–	25	■			26	20/1		SPARE			
	E808	1622	HEATED CABINET	2–12	20/2	27		■		28	20/1		SPARE			
	–	–	–	+12N+12G	–	29			■	30	20/1	3–12	EXISTING CIRCUIT	500		3
	E809	984	REFRIGERATOR	3–12	20/1	31	■			32	20/1	3–12	EXISTING CIRCUIT	500		3
	E808	1622	HEATED CABINET	2–12	20/2	33		■		34	15/2	2–12	EXISTING CIRCUIT	1000		3
	–	–	–	+12N+12G	–	35			■	36	–	+12N+12G	–	–		
	E809	984	REFRIGERATOR	3–12	20/1	37	■			38	20/2	2–12	EXISTING CIRCUIT	1000		3
			SPARE		20/1	39		■		40	–	+12N+12G	–	–		
			SPARE		20/1	41			■	42	50/2	2–8	EXISTING CIRCUIT	5000		3
			SPARE		20/1	43	■			44	–	+8N+10G	–	–		
	TOTAL LOAD @ 100% =		35498VA				TOTAL LOAD @ 100% =			99A						

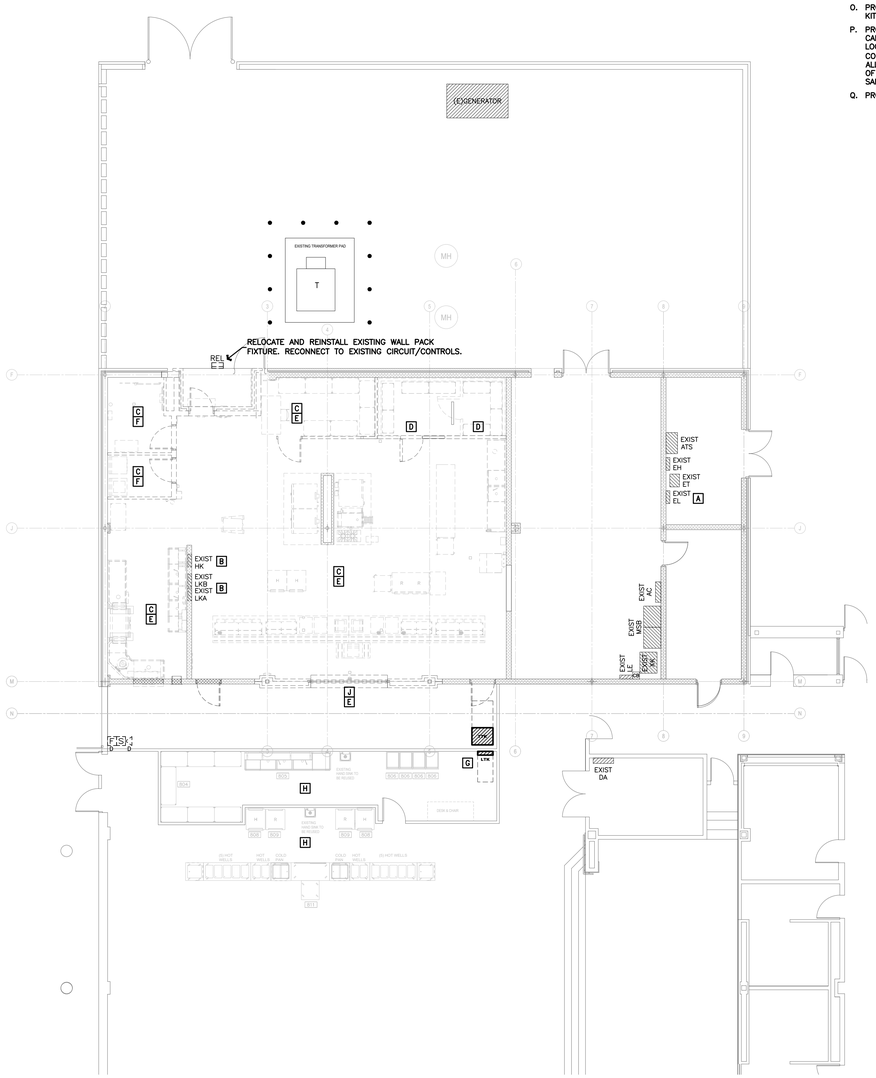
1. REF. KITCHEN CONSULTANT'S "FCS" DRAWINGS FOR KITCHEN EQUIPMENT NUMBERS.
2. A DEMAND FACTOR PERCENT OF 65% HAS BEEN APPLIED TO THE KITCHEN EQUIPMENT LOAD PURSUANT TO NEC 220–20 AND NEC TABLE 220–20.
3. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AND REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION.



T1 **TEMPORARY KITCHEN - LIGHTING PLAN**
SCALE: 1/4" = 1'– 0"



T2 **TEMPORARY KITCHEN - ELECTRICAL PLAN**
SCALE: 1/4" = 1'– 0"



1 **DEMOLITION FLOOR PLAN**
SCALE: 1/8" = 1'– 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

DEMOLITION NOTES:

A. EXISTING STANDBY GENERATOR PANEL TO REMAIN.

B. EXISTING KITCHEN PANELS TO BE REPLACED WITH NEW. MODIFY EXISTING WALLS TO MATCH NEW PANEL LAYOUTS AND DIMENSIONS.

C. EXISTING LIGHTING FIXTURES AND CEILING DEVICES TO BE REMOVED THROUGHOUT.

D. EXISTING WALK–IN COOLER/FREEZER AND ASSOCIATED EQUIPMENT TO BE REMOVED.

E. EXISTING WALL ELECTRICAL DEVICES TO BE REMOVED. EXISTING J–BOXES MAY BE REUSED WHERE NEW DEVICES ARE TO BE INSTALLED AT THE SAME LOCATIONS.

F. EXISTING ELECTRICAL DEVICES TO BE REMOVED.

G. NEW 208Y/120V PANEL AND TRANSFORMER FOR TEMPORARY KITCHEN TO BE INSTALLED PRIOR TO DEMOLITION. PANEL AND TRANSFORMER TO BE REMOVED AT END OF KITCHEN RENOVATION AND TURNED OVER TO THE DISTRICT. INSTALL TRANSFORMER ON PREMADE FIBERCRETE PAD AND WAFFLE TYPE VIBRATION ISOLATION PADS. DO NOT PROVIDE A POURED IN PLACE CONCRETE PAD AT THIS LOCATION.

H. PROVIDE RECEPTACLES AND LIGHT FIXTURES FOR TEMPORARY KITCHEN DURING RENOVATION. ALL TEMPORARY DEVICES AND EQUIPMENT TO BE REMOVED AT END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE.

I. CONDUITS ROUTED FROM TEMPORARY KITCHEN WALL AND BENEATH SERVING LINE. PROVIDE MULTICHANNEL ROLLOVER CABLE PROTECTOR FOR EXPOSED CONDUITS NOT UNDER THE SERVING LINE. ALL CONDUITS UNDER THE SERVING LINE SHALL BE SECURED TO/ROUTED ON TOP OF UNISTRUT AND NOT DIRECTLY ON THE FLOOR. DO NOT ANCHOR UNISTRUT TO THE EXISTING FLOORING. COORDINATE POWER AND DATA OUTLET LOCATIONS WITH OTHER TRADES.

J. REMOVE EXISTING LIGHT FIXTURES ABOVE NEW KITCHEN EXTENSION. MODIFY EXISTING WIRING TO MAINTAIN REMAINING FIXTURE OPERATION.

K. HARDWIRE KITCHEN EQUIPMENT TO LOCAL ON/OFF SWITCH. TYPICAL.

L. SURFACE MOUNT FIXTURES ON TEMPORARY KITCHEN CEILING. TYPICAL.

M. WIRE TEMPORARY KITCHEN FAN TO LOCAL LIGHTING CIRCUIT AND CONTROLS. FAN SHALL BE ON/OFF WITH LIGHTS.

N. EXISTING EXTERIOR LIGHT FIXTURES TO BE REMOVED.

O. PROVIDE NEW FIRE ALARM DEVICES AS PART OF THE TEMPORARY KITCHEN BUILDOUT.

P. PROVIDE NEW TEMPORARY LIGHT FIXTURES IN THE EXISTING CAFETERIA CEILING ABOVE THE SERVING LINE. COORDINATE LOCATIONS WITH TEMPORARY SERVING LINE AND EXISTING CONDITIONS. CONNECT TO EXISTING LIGHTING CONTROLS/CIRCUIT. ALL TEMPORARY LIGHT FIXTURES SHALL BE REMOVED AT THE END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE. PROVIDE REPLACEMENT CEILING TILES.

Q. PROVIDE IN–USE WEATHERPROOF COVER FOR RECEPTACLE.

ISSUE:

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03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025	ADDENDUM NO. 3

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

STATE OF TEXAS — GEORGE L. STANTON — 38582 — REGISTERED PROFESSIONAL ENGINEER
08.28.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL DEMO AND TEMP PLANS

j-ED.100

STANTON ENGINEERING GROUP
INFO@STANTON–ENG.COM (713) 300–6280 | TEXAS ENG. FIRM REG. NO. F–018332 | 1300 W. SAM HOUSTON PARKWAY S., SUITE 121, HOUSTON, TX 77042

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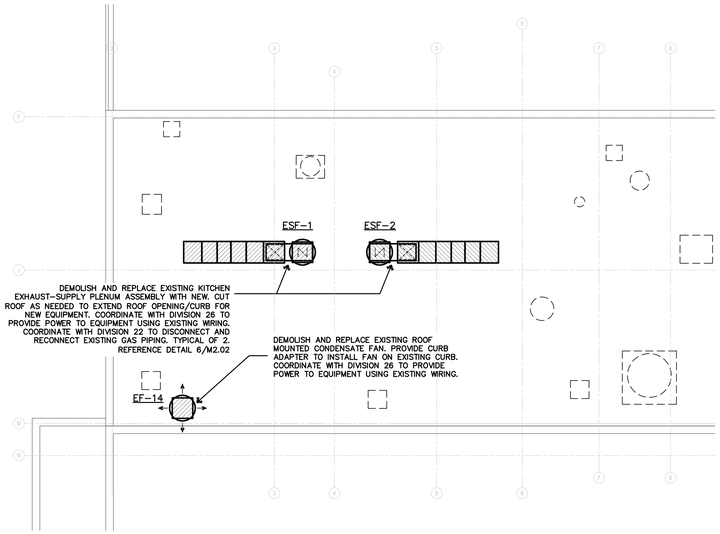
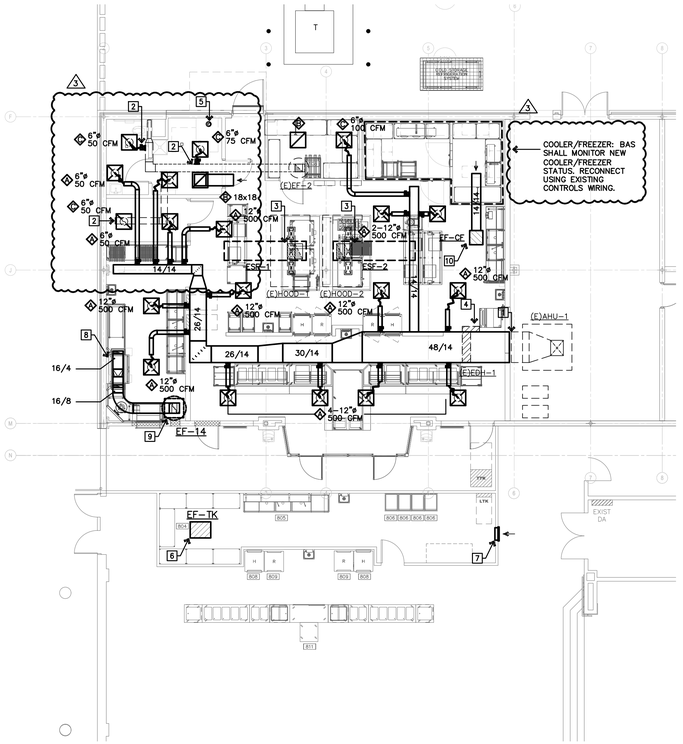


3 MECHANICAL ROOF FLOOR PLAN

SCALE: 1/8" = 1'-0"

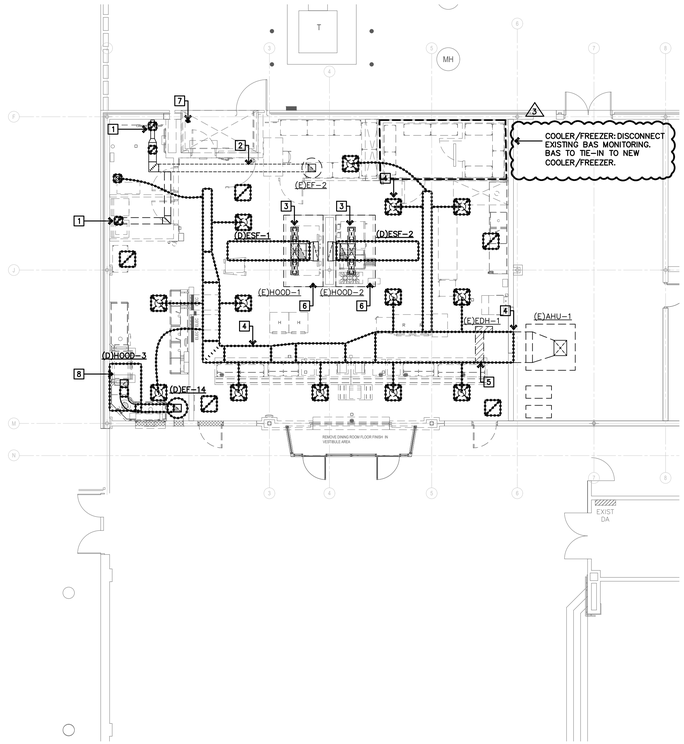
NORTH



2 RENO MECHANICAL FLOOR PLAN - KITCHEN AREA

SCALE: 1/8" = 1'-0"

NORTH



1 DEMO MECHANICAL FLOOR PLAN - KITCHEN AREA

SCALE: 1/8" = 1'-0"

NORTH

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A	CEILING DIFFUSER – 24" X 24" FACE, PATTERN TYPE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE SCD A1-12" X 12"
B	CEILING RETURN GRILLE – 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE PDRR B1-12" X 12"
C	CEILING EXHAUST GRILLE – 24" X 24" PERFORATED FACE, STEEL CONST., WHITE FINISH, NECK SIZE SHOWN, U.L. LISTED PRICE PDDR C1-12" X 12"

NOTES:

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPES FOR AIR DEVICES.

KITCHEN HOOD REFURBISHMENT NOTES

HOOD REFURBISHMENT FOR KITCHEN HOODS (QUANTITY 2):

- STEAM WASH AND DEEP CLEAN STAINLESS STEEL HOOD ASSEMBLY, CASING, AND SUPPLY GRILLES WHERE APPLICABLE.
- REPLACE GREASE FILTER RACKS.
- CLEAN EXISTING MAKE-UP AIR AND GREASE EXHAUST DUCT.
- RELAMP EXISTING LIGHT FIXTURES WITH NEW 4000K BULBS LISTED FOR USE IN AN ENCLOSED KITCHEN HOOD FIXTURE.
- COORDINATE WITH DIVISION 11 FOR REPLACEMENT OF ANSUL FIRE SUPPRESSION SYSTEM.
- HOOD ASSEMBLIES SHALL BE CLEANED TO MEET THE STANDARDS ESTABLISHED IN NFPA STANDARD 96.

KITCHEN HOOD EXHAUST & MAKE-UP AIR UNIT SCHEDULE

MARK	ESF-1,2
SERVES	KITCHEN HOOD-1 & 2
SUPPLY SECTION	
TYPE	INDIRECT GAS-FIRED MAKE-UP AIR UNIT
DRIVE	DIRECT
SPEED CONTROL	VFD
SUPPLY CFM	2250
EXT. S.P. (IN. W.G.)	0.375
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	4.6 A
UNIT MOCP	15 A
HEATING MEDIUM	NATURAL GAS
INPUT/OUTPUT (MBH)	150.0/121.5
TURNDOWN RATIO	4:1
MANUFACTURER	GREENHECK
MODEL	IGX-P109-H12-MF-E
EXHAUST SECTION	
TYPE	UPBLAST BELT DRIVE CENTRIFUGAL
EXHAUST CFM	3600
EXT. S.P. (IN. W.G.)	0.75
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	3.75 A
UNIT MOCP	15 A
MANUFACTURER	GREENHECK
EXHAUST FAN MODEL	CUBE-200-15

NOTES

1. EXHAUST FAN: PROVIDE FAN WITH PRE-FABRICATED ROOF CURB ADAPTER, VENTED CURB EXTENSION, HINGING KIT, HEAT BAFFLE, DRAIN CONNECTION, GREASE TRAP, AND DISCONNECT SWITCH. FANS SHALL BE UL LISTED FOR USE WITH TYPE 1 GREASE HOOD.
2. EXHAUST FAN: PROVIDE NEW MOTOR STARTER, SIZED FOR EXHAUST FAN MOTOR AND INSTALLED IN PLACE OF EXISTING. REFERENCE THE SPECIFICATIONS FOR STARTER REQUIREMENTS. COORDINATE WITH DIV.25 FOR RE-TERMINATION OF PERMISSIVE ON/OFF CONTROL. COORDINATE WITH DIV.26 FOR RE-TERMINATION OF LOCAL HOOD SWITCH INTERLOCK FOR START/STOP CONTROL.
3. SUPPLY FAN/FURNACE: FLUE GAS FROM HEATING COIL SHALL BE POWER VENTED.
4. SUPPLY FAN/FURNACE: WEATHERHOOD WITH ALUMINUM MESH.
5. SUPPLY FAN/FURNACE: 5 YEAR HEAT EXCHANGER WARRANTY.
6. SUPPLY FAN/FURNACE CONTROLS: INTEGRAL HEATER CONTROLS WITH BAS INTERLOCK FOR PERMISSIVE ON/OFF AND LOCAL SWITCH INTERLOCK FOR CONTROL FROM KITCHEN HOOD SWITCH. FURNACE CONTROLS SHALL BE PROGRAMMED FOR 64°F LAT, WITH A LOCKOUT FOR O/A TEMPERATURES ABOVE THE LAT SETPOINT. COORDINATE WITH DIV.25 AND DIV.26 FOR CONTROLS AND SWITCH INTERLOCKS.
7. TWO POINT POWER CONNECTION: ONE FOR EXHAUST FAN AND ONE FOR INTAKE/SUPPLY FAN.
8. INTERLOCK FAN(S) WITH ASSOCIATED COOKING HOOD
9. INTERLOCK FAN WITH SWITCH ON KITCHEN HOOD.
10. UNIT TO BE PROVIDED WITH GALVANIZED STEEL FAN PACK EXTENSION/COMBINATION CURB.
11. EQUIPMENT SHALL BE WIND RATED TO WITHSTAND 120 MPH WINDS.
12. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.

MECHANICAL RENO KEYED NOTES

1. TIE-IN NEW DUCTWORK TO EXISTING DUCTWORK AT WALL PENETRATION.
2. CONNECT NEW AIR DEVICE AND TAP TO EXISTING E/A TRUNK DUCT.
3. REWORK EXISTING EXHAUST AND SUPPLY DUCTWORK FROM EXISTING KITCHEN HOOD UP TO FAN, AS REQUIRED, WITH NEW TRANSITIONS AND SUPPLY AIR DUCTWORK OFFSETS TO MATE WITH NEW FAN CURB.
4. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
5. NEW DRYER VENT DUCT AND VENT CAP. REFER TO DETAIL 4/M2.02.
6. TEMP. KITCHEN – CEILING MOUNTED CABINET EXHAUST FAN. REFER TO DETAIL 1/M2.02.
7. TEMP. KITCHEN – 24"X24" SIDE WALL GRILLE. SURFACE MOUNT OPTIONAL. AUXILIARY FRAME. TITUS CT-700.
8. RECONFIGURE DUCTWORK TO CONNECT TO NEW DISHMACHINE HOOD OUTLETS. REF. KITCHEN CONSULTANT DRAWINGS FOR EXACT DIMENSIONS OF DUCT CONNECTIONS.
9. CONDENSATE EXHAUST DUCT UP THROUGH ROOF TO NEW EXHAUST FAN SET ON NEW ROOF CURB. REUSE EXISTING ROOF PENETRATION.
10. INLINE FAN INSTALLED ABOVE PLENUM. REFER TO DETAIL 2/M2.02.

EXHAUST FAN SCHEDULE

MARK	EF-TK	EF-CF	EF-14
SERVES	TEMPORARY KITCHEN	COOLER/FREEZER	DISH WASHER
TYPE	CEILING CABINET	INLINE FAN	ROOF UPBLAST
DRIVE	DIRECT	DIRECT	DIRECT
SPEED CONTROL	INTEGRAL SPEED CONTROLLER	CONSTANT	CONSTANT
CFM	1055	1000	1200
EXT. S.P. (IN. W.G.)	0.3	0.35	0.60
IMP. SIZE (IN.)	8.0	13.5	14.0
HORSEPOWER (WATTS)	1/3 HP	1/6 HP	1/3 HP
VOLTAGE	120V/1-PHASE	120V/1-PHASE	120V/1-PHASE
MANUFACTURER	COOK	COOK	COOK
MODEL	GC-862	13550N100	CUE-140-B
SONES (MAX.)	15.0	15.0	15.0
NOTES	1 THRU 4	1 THRU 4	1 THRU 5

NOTES

1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN. FANS SHALL BE CAPABLE OF 120% OF THE SCHEDULED CFM CAPACITY.
2. INTEGRAL DISCONNECT SWITCH.
3. RUBBER IN-SHEAR ISOLATORS.
4. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.
5. ALL ROOF MOUNTED EQUIPMENT SHALL BE WIND RATED TO WITHSTAND 120 MPH WINDS.

MECHANICAL DEMO KEYED NOTES

1. DEMOLISH EXISTING AIR DEVICE, BRANCH DUCT, DAMPER AND TAP BACK TO TRUNK DUCT. CAP AND SEAL RESULTING OPENING.
2. EXISTING E/A TRUNK DUCT TO REMAIN.
3. DISCONNECT EXISTING S/A AND E/A DUCTWORK SERVING KITCHEN HOODS FROM FAN ASSEMBLY AND HOOD. DUCTWORK SHALL REMAIN FOR FUTURE USE/RE-CONNECTION. DEMOLISH SUPPLY AND EXHAUST FAN PLENUM ASSEMBLY SERVING KITCHEN HOODS, ALONG WITH CURB. NEW CURB TO BE PROVIDED AND INSTALLED AS PART OF RENOVATION.
4. DEMOLISH ALL EXISTING AIR DEVICES, DUCTWORK, AND DUCTWORK ACCESSORIES SERVING KITCHEN AREA BACK TO MECH. ROOM WALL PENETRATION.
5. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
6. REFURBISH EXISTING KITCHEN HOOD. REFER TO "KITCHEN HOOD REFURBISHMENT NOTES".
7. DEMOLISH AND REPLACE EXISTING DRYER EXHAUST DUCT AND FLUE VENT CAP.
8. DEMOLISH EXISTING CONDENSATE HOOD, ASSOCIATED DUCTWORK, AND ROOF EXHAUST FAN.

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FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED ARCHITECT
08.28.2025

ARCHITECTS
AND PLANNING
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11767 KATY FREEWAY, SUITE 430
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PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

KITCHEN AREA MECHANICAL PLANS
J-M1.01

STANTON ENGINEERING GROUP
INFO@STANTON-ENG.COM (713) 300-6282 | TEXAS ENGINEERING FIRM REG. NO. F-21832 | 1300 W. SAM HOUSTON PARKWAY N., SUITE 121, HOUSTON, TX 77043

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MECHANICAL SYMBOL SCHEDULE

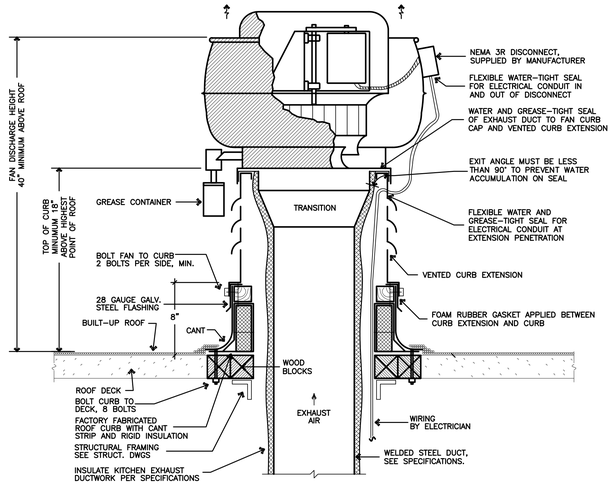
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
RS	REFRIGERANT SUPPLY
RR	REFRIGERANT RETURN
D	CONDENSATE LINE
	PETE'S PLUG
	ISOLATION VALVE
	ELECTRONIC CONTROL VALVE
	BUTTERFLY VALVE
	BALL VALVE
	UNION OR FLANGE
	STRAINER
	AUTOMATIC AIR VENT
T	LOCAL CONTROL THERMOSTAT
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	FIRE/SMOKE COMBINATION DAMPER
MD	MOTORIZED DAMPER
C	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST GRILLE
RA	RETURN AIR OPENING IN WALL
VD	VOLUME DAMPERS
	DUCT ELEVATION CHANGE
	90° DUCT ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
M	DAMPER MOTOR
T	TEMPERATURE TRANSMITTER
FS	FLOW SWITCH
P	DIFFERENTIAL PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
PS	STATIC PRESSURE SENSOR
PH	STATIC PRESSURE SENSOR HI-LIMIT
	ACCESS PANEL

A.P.	ACCESS PANEL
AHU	AIR HANDLING UNIT
B	BOILER
CH	CHILLER
CHP	CHILLED WATER PUMP
CVT	CONSTANT VOLUME TERMINAL
DH	DEHUMIDIFIER
E/A	EXHAUST AIR
EF	EXHAUST FAN
F&B	FACE & BYPASS
FF	FLY FAN
HDT	HORIZONTAL DRAW THROUGH
HWP	HOT WATER PUMP
KEF	KITCHEN EXHAUST FAN
KSF	KITCHEN SUPPLY FAN
O/A	OUTSIDE AIR
OBD	OPPOSED-BLADES DAMPER
PT	PRE-TREAT
R/A	RETURN AIR
RAHU	ROOF-MOUNTED AIR HANDLING UNIT
S/A	SUPPLY AIR
SA	SOUND ATTENUATOR
SF	SUPPLY FAN
SPD	SPILTER DAMPER
SZ	SINGLE ZONE
VAV	VARIABLE AIR VOLUME
VB	VAV BOX
VD	VOLUME DAMPER
VDT	VERTICAL DRAW THROUGH
VFD	VARIABLE FREQUENCY DRIVE
WH	WATER HEATER
⌀	DESIGNATION FOR "ROUND"
⌀	DESIGNATION FOR "OVAL"

GENERAL MECHANICAL NOTES

3

1. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION OF EQUIPMENT AND PIPING WITH THE ELECTRICAL CONTRACTOR TO INSURE NEC CLEARANCE (42 INCHES) IN FRONT OF ALL ELECTRICAL PANELS. DO NOT INSTALL DUCTWORK OR WATER PIPING OVER THE TOP OF ELECTRICAL PANELS SEE DETAIL 1/M2.01.
3. DUCT SIZES SHOWN ARE NET FREE AIR PASSAGE DIMENSIONS, DUCTS ARE NOT LINED, BUT ARE EXTERNALLY INSULATED. RUNOUTS TO CEILING OUTLETS SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET METAL WITH SPIN-IN V.D. AT TRUNK TAPS, SEE DETAIL 1 & 2/M2.01.
4. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR EXACT LOCATIONS OF CEILING OUTLETS IN RELATION TO OTHER CEILING ENTITIES. OUTLETS MUST BE COMPATIBLE WITH THE CEILING TYPES FOR THE VARIOUS AREAS.
5. IN AREAS WHERE SUPPLY AIR ENTERS CEILING CAVITY THRU RETURN AIR GRILLES AND FREE RETURNS TO AHU'S VIA CEILING CAVITY, PROVIDE RETURN AIR OPENING IN WALL-TO-DECK ABOVE CEILING THAT BLOCK PATH, REFER TO ARCHITECTURAL DRAWINGS. RETURN AIR ELBOWS SHALL BE SIZED AT 1 SQ. FT PER 400 CFM SUPPLY AIR.
6. ARRANGE PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EASY REMOVAL OF EQUIPMENT, SUB-ASSEMBLIES, COILS, FANS, MOTORS, FILTERS, ACCESS PANELS, ETC... PROVIDE UNIONS, FLANGES AND VALVES AT CONNECTIONS. PROVIDE AND INSTALL VICTAULIC JOINTS AT COILS, REF. SPECIFICATIONS. PLACE STOP VALVES ON SYSTEM SIDE OF REMOVABLE PIPE SECTIONS.
7. CONTRACTOR SHALL FIELD MEASURE STRUCTURAL ELEMENTS AND COORDINATE EQUIPMENT, PIPING AND DUCT ROUTING TO FIT EXISTING CONSTRUCTION. PROVIDE OFFSETS, BOOTS FOR ENVELOP OBSTRUCTIONS THAT CANNOT BE AVOIDED. CONSTRUCTION SHALL BE PER SMACNA STANDARDS.
8. FIELD VERFY EXISTING CONDITIONS PRIOR TO PROCUREMENT OF EQUIPMENT AND SYSTEMS.
9. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICIABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION
10. PROVIDE DUCTWORK INSULATION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF IECC.
11. PROVIDE LISTED FIRE DAMPER INSTALLATIONS AT DUCT AND RETURN AIR OPENINGS AT PENETRATIONS THROUGH THROUGH RATED PARTITIONS AND BARRIERS. – SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
12. PROTECT DUCTWORK AND MECHANICAL EQUIPMENT FROM CONSTRUCTION DUST AND DEBRIS DURING CONSTRUCTION. SEAL OPENINGS AS REQUIRED.
13. PROVIDE AND MAINTAIN TEMPORARY AIR FILTERS AT AIR HANDLERS USED DURING CONSTRUCTION.
14. PATCH AND REPAIR MECHANICAL SYSTEMS AND INSULATION DAMAGED DURING CONSTRUCTION.
15. SECURE ROOF MOUNTED EQUIPMENT TO WITHSTAND 142 MPH BASIC WIND SPEED, RISK CATEGORY III, EXPOSURE CATEGORY B, IN ACCORDANCE WITH IBC REQUIREMENTS.

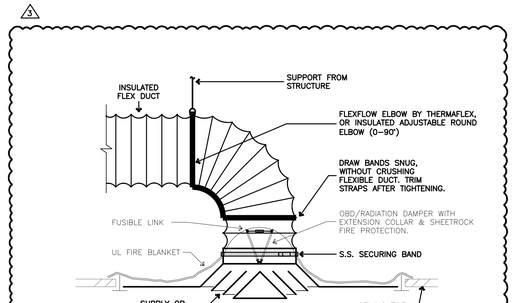


6 KITCHEN UPBLAST EXHAUST FAN DETAIL

NO SCALE

NOTES

1. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL.
2. INSTALL SHEETMETAL COVERING OVER WOOD BLOCKING IN THE AIRSTREAM OR OPEN TO THE CEILING CAVITY.

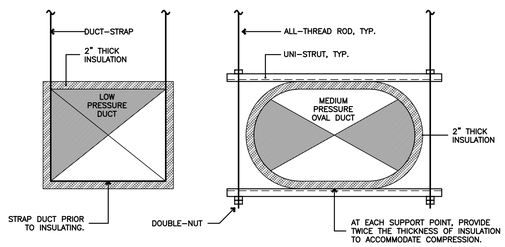


5 AIR DEVICE DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

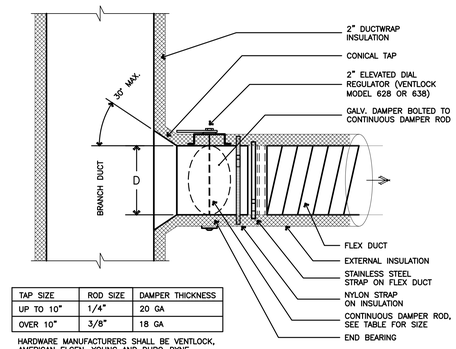


4 EXTERNALLY INSULATED DUCT SUPPORT DETAIL

NO SCALE

NOTES:

1. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT STRAPS.
2. DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



TAP SIZE	ROD SIZE	DAMPER THICKNESS
UP TO 10"	1/4"	20 GA
OVER 10"	3/8"	18 GA

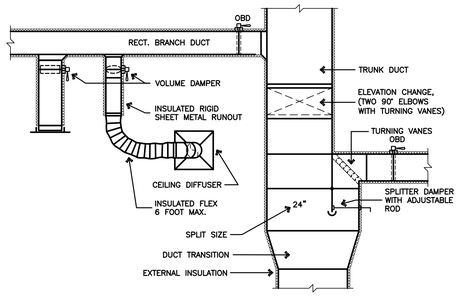
HARDWARE MANUFACTURERS SHALL BE VENTLOCK, AMERICAN ELGEN, YOUNG AND DURO-DYNE.

3 DUCT TAP CONNECTION DETAIL

NO SCALE

NOTES:

1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.
2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

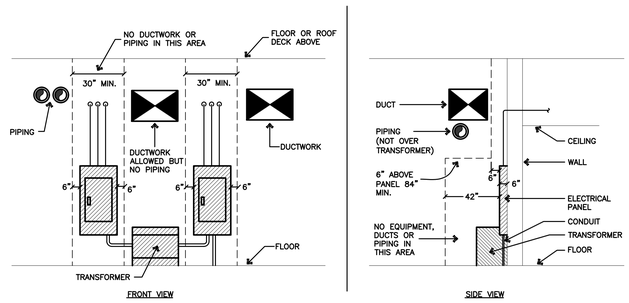


2 DUCTWORK DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025 (3 / 4003)	ADDENDUM NO. 3

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED PROFESSIONAL ENGINEER
08.28.2025

MWA ARCHITECTS
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PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

MECHANICAL NOTES AND DETAILS
J-M2.01

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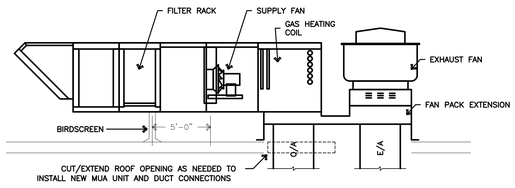


6 SUPPLY/EXHAUST KITCHEN PLENUM DETAIL

NO SCALE

NOTES:

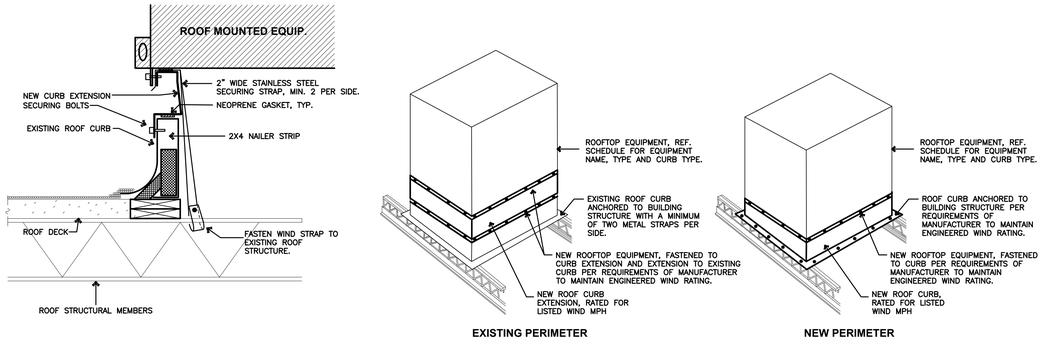
1. REFER TO DETAIL 6/M2.02 FOR CURB ANCHORING TO SATISFY WIND RATING REQUIRMENT. EQUIPMENT SHALL BE ABLE TO WITHSTAND 120 MPH WINDS.

△3

ROOF MOUNTED EQUIPMENT

MARK	EQUIPMENT TYPE	CURB TYPE
EF-14	ROOF FAN	EXISTING PERIMETER
ESF-1,2	ROOF EXHAUST & MAKE-UP AIR UNIT	NEW PERIMETER

1. ALL ROOFTOP EQUIPMENT IS TO BE INSTALLED ON NEW ROOF SUPPORTS, AND IS SUBJECT TO THE INSTALLATION REQUIREMENTS OF THIS DETAIL.



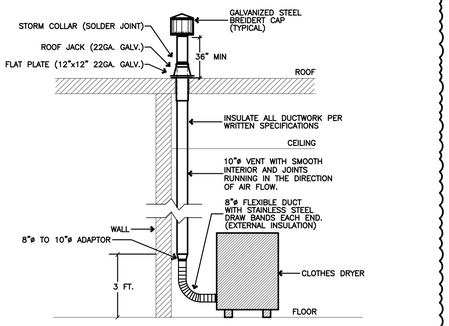
5 CURB MOUNTED EQUIPMENT ANCHORING

NO SCALE

NOTES:

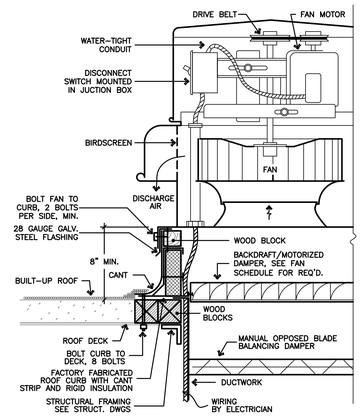
1. EQUIPMENT CURB AND EQUIPMENT ANCHORING BRACKETS SHALL BE DESIGNED TO WITHSTAND AN ASCE 7-22 WIND HAZARD RATING OF 147 MPH, FOR A CATEGORY III BUILDING AT THE PROJECT ADDRESS. THE CURB PROVIDER SHALL INCLUDE STAMPED DRAWINGS OF THE CURB AND ANCHORING DEMONSTRATING COMPLIANCE.

△3



4 COMMERICAL CLOTHES DRYER VENT

NO SCALE

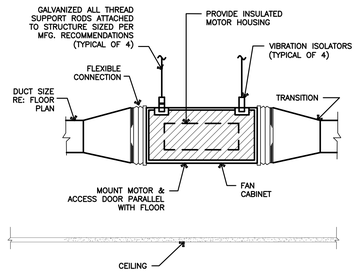


3 ROOF EXHAUST FAN AND VENT DETAIL

NO SCALE

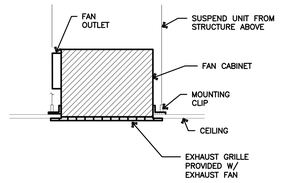
NOTES:

1. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.
2. ROOF VENT WILL NOT HAVE FAN/MOTOR ASSEMBLY, DISCONNECT SWITCH OR OBD.
3. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL WHERE APPLICABLE.
4. ALL FANS SCHEDULED TO BE PROVIDED WITH 140MPH WIND RATING, INCLUDING FACTORY PROVIDED CURB. CURB INSTALLATION SHALL FOLLOW MANUFACTURER'S REQUIREMENTS FOR SECURING TO ROOF AND EQUIPMENT WHERE IT DIFFERS FROM THE DETAIL.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 INLINE EXHAUST FAN DETAIL

NO SCALE



1 CABINET EXHAUST FAN

NO SCALE

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MECHANICAL DETAILS (CONT'D.)

J-M2.02

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PLUMBING SYMBOLS LEGEND

Symbol	Description	Abbrev.	Description
------	SANITARY WASTE BELOW SLAB	SAN.	SANITARY
———	SANITARY WASTE ABOVE SLAB	CW	DOMESTIC COLD WATER
— V —	VENT PIPING ABOVE SLAB	HW	DOMESTIC HOT WATER
— — —	VENT PIPING	WC	WATER CLOSET
— G —	GAS PIPING, 4-8oz	UR	URINAL
— G5 —	GAS PIPING, 5LB	LAV	LAVATORY
—·—·—	DOMESTIC COLD WATER PIPING	SK	SINK
—··—··—	DOMESTIC HOT WATER PIPING	EDF	ELECTRIC DRINKING FOUNTAIN
— D —	DRAIN/RELIEF VENT PIPING	WH	WALL HYDRANT
—⋈—	STOP VALVE	HB	HOSEBIBB
2CO	DOUBLE SAN. CLEANOUT (2-WAY)	CP	HOT WATER CIRCULATOR PUMP
CO	SANITARY SEWER CLEANOUT	FD	FLOOR DRAIN
WCO	WALL CLEANOUT	FSINK	FLOOR SINK
EXIST.	EXISTING		
(R)	REMOVE (DEMOLISH)		
(D)	DEMOLISH (REMOVE)		
(E)	EXISTING – NO WORK		

PLUMBING FIXTURE NOTES

1. ALL FIXTURES SHALL MEET WATER CONSERVATION PERFORMANCE STANDARDS MANDATED BY SENATE BILL 587. ALL FIXTURES SHALL HAVE FLOW RESTRICTION DEVICES (DRINKING FOUNTAINS SHALL BE SELF-CLOSING) TO COMPLY WITH THESE REQUIREMENTS.
2. ALL FIXTURES SHALL HAVE CONTROLS REQUIRING OPERATING FORCE NO GREATER THAN FIVE (5) POUNDS.
3. FOR LAVATORIES AND SINKS, ALL FAUCETS SHALL BE NO-LEAD SOLID BRASS, MEETING ALL REQUIREMENTS OF ANSI/NSF 61, SECTION 9 AND CERTIFIED AS SUCH. ALSO, INSTALL SYMMONS 7-210 MIXING VALVE ON HOT WATER SUPPLY SIDE OF ALL FAUCETS UNLESS HIGH TEMPERATURE LIMIT IS PROVIDED WITH FAUCET. MAXIMUM WATER TEMPERATURE FOR ALL FAUCETS THAT DELIVER HOT OR TEPID WATER SHALL BE 110°F. ALL METERING FAUCETS SHALL HAVE A MINIMUM TEN (10) SECONDS OF WATER FLOW. AND, INSTALL TRUEBRO HANDI LAV-GUARD VANDAL-PROOF INSULATION KITS OVER P-TRAP, SUPPLIES, STOPS AND ALL SHARP EDGES FOR ALL SINKS AND LAVATORIES (TRAP WRAP FROM BROCAR OR PROWRAP FROM McGUIRE SHALL BE ACCEPTABLE).
4. ALL PLUMBING FIXTURES REFERENCED AS "ADA", "TAS" OR "HANDICAP COMPLIANT" SHALL MEET ALL REQUIREMENTS OF THE ADA AND THE TEXAS ACCESSIBILITY STANDARDS. IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MEET THESE REQUIREMENTS.
5. IN MANY CASES, FIXTURES WITH THE SAME PLUMBING DESIGNATION HAVE DIFFERENT INSTALLATION HEIGHTS – REFERENCE ARCHITECTURAL DRAWINGS FOR ALL INSTALLATION HEIGHTS AND HANDICAP FIXTURE DESIGNATIONS. FIXTURES DESIGNATED AS ADULT HANDICAP SHALL MEET ALL REQUIREMENTS OF THE ADA. FIXTURES DESIGNATED AS CHILD HANDICAP SHALL MEET ALL REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS FOR THE APPROPRIATE CHILDREN'S AGE GROUP (REF. ARCH. DWGS. AND SPECIFICATIONS).

PLUMBING MATERIALS

SANITARY WASTE AND VENT

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

STORM DRAIN PIPING

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB, 8" AND UNDER: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

ABOVE SLAB, 10" AND ABOVE: SERVICE WEIGHT, CAST IRON, BELL & SPIGOT.

NATURAL GAS

BELOW GRADE (OUTSIDE): YELLOW POLYETHYLENE PIPE WITH COATED STEEL RISER AND TRACER WIRE.

ABOVE SLAB: SCHEDULE 40 BLACK STEEL. PIPING 2.5" AND LARGER SHALL BE WELDED. PIPING 2" AND SMALLER SHALL HAVE SCREWED FITTINGS.

DOMESTIC WATER

INTERIOR: TYPE L COPPER WITH SOLDER TYPE WROUGHT COPPER FITTINGS, MADE UP WITH LEAD-FREE SOLDER.

EXTERIOR: TYPE K COPPER WITH SWEAT FITTINGS AND LEAD-FREE SOLDER. BEYOND 5 FEET FROM BUILDING, SCHEDULE 40 PVC.

FIRE SPRINKLER SYSTEM NOTES

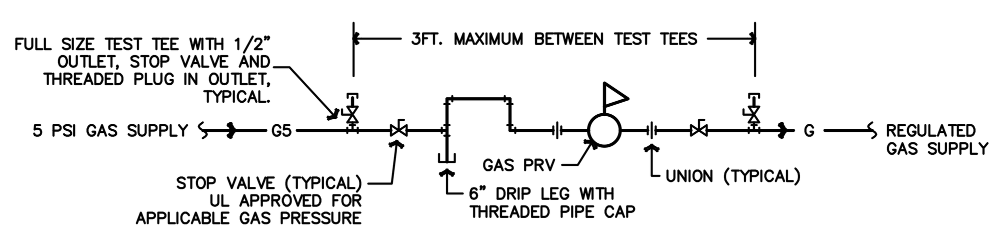
1. THE EXISTING FIRE SPRINKLER SYSTEM SHALL BE MODIFIED AND/OR EXPANDED TO COVER THE AREA OF RENOVATION IN ENTIRETY. ALL NEW AND REVISED PIPING SHALL BE ENGINEERED AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR.
2. REFERENCE THE SPECIFICATIONS, DIVISION 21, FOR MORE INFORMATION.

GENERAL PLUMBING NOTES

1. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL WORK DESCRIPTION. SEE THIS SHEET (P4.00) FOR PLUMBING SYMBOLS LEGEND.
2. COORDINATE PLUMBING SYSTEMS INSTALLATION WITH ARCHITECTURAL, STRUCTURAL, HVAC SYSTEMS, ELECTRICAL SYSTEMS, CONDUITS, ETC.... OFFSET PIPING AS REQUIRED TO PROVIDE A FUNCTIONING SYSTEM WITH ADEQUATE SPACE FOR SERVICING AND REPAIRS.
3. MAKE CONNECTIONS OF NEW PIPE SYSTEMS IN TO EXISTING PIPE SYSTEMS WITH THREADED OR SWEAT JOINTS. PROVIDE ELECTROLYSIS ISOLATING UNIONS AT CONNECTION OF DISSIMILAR MATERIALS. REFERENCE THE SPECIFICATIONS.
4. SITE SERVICES ARE SHOWN FOR REFERENCE ONLY. PLUMBING CONTRACTOR SHALL REFERENCE CIVIL DRAWINGS, INCLUDING LOCATIONS OF SERVICES, SIZES OF PIPES, FLOWLINE ELEVATIONS, ETC..
5. DO NOT INSTALL PLUMBING PIPING OVER ANY ELECTRICAL EQUIPMENT. REFERENCE ELECTRICAL DRAWINGS FOR LOCATIONS OF ELECTRICAL EQUIPMENT AND COORDINATE WITH ELECTRICAL SUBCONTRACTORS ACCORDINGLY. SEE DETAIL 1/P0.02. THIS INCLUDES FIRE SPRINKLER PIPING.
6. ALL PIPES THROUGH WALLS OR FLOORS SHALL BE SLEEVED AND SEALED PER DETAIL 5/P0.02. FIRE CAULK WHERE REQUIRED. THIS INCLUDES ALL WALLS, INTERIOR AND EXTERIOR. THIS INCLUDES FIRE SPRINKLER PIPING.
7. ALL CLEANOUTS SHALL BE CONNECTED TO SANITARY LINES USING WYES AND/OR LONG RADIUS ELLS. SANITARY TEES ARE NOT ACCEPTABLE. 2" MINIMUM SIZE. ALL WALL CLEAN OUTS IN VERTICAL RISERS, OR BANKS OF FIXTURES SHALL BE INSTALLED 4" ABOVE THE FLOOD RIM LEVEL OF THE LOWEST CONNECTED FIXTURE AND A MINIMUM OF 24" AFF.
8. ALL WASTE AND VENT PIPING BELOW SLAB SHALL BE 2" MINIMUM.
9. LOCATE PLUMBING VENTS THROUGH ROOF NOT NEARER THAN SIX (6) FEET AWAY FROM EDGE OF BUILDING AND TEN (10) FEET AWAY FROM ANY FRESH AIR INTAKES. OFFSET VENT PIPING, AS REQUIRED, IN CEILING SPACE BETWEEN CEILING AND ROOF TO MEET THESE REQUIREMENTS. SEE DETAIL 3/P0.02.
10. ALL DOMESTIC WATER PIPING (CW, HW AND HWR) SHALL BE INSULATED PER THE WRITTEN SPECIFICATIONS.
11. TOP OF FLOOR DRAINS IN MECHANICAL, AHU AND BOILER ROOMS SHALL BE SET 1-1/2" BELOW FINISHED FLOOR SURFACE. CONCRETE FLOOR SHALL BE SLOPED TO DRAIN, REFERENCE ARCHITECTURAL DRAWINGS. IN ALL OTHER LOCATIONS, FLOOR DRAINS SHALL BE SET FLUSH WITH FINISHED FLOOR, TAKING INTO ACCOUNT ANY FLOOR SLOPE OR FLOOR FINISH (TILE, TERRAZZO, ETC.) AS SHOWN ON ARCHITECTURAL DRAWINGS.
12. PROVIDE AN ISOLATING VALVE AT EACH WATER TAP OFF HOT AND COLD WATER MAINS TO ALLOW FOR SERVICING. VALVE SHALL BE BALL VALVE IF PIPE SIZE IS 2" OR LESS AND GATE VALVE OR BUTTERFLY VALVE IF LARGER THAN 2". SEE WRITTEN SPECIFICATIONS. VALVES SHALL BE EASILY ACCESSIBLE: PROVIDE 18" X 18", FIRE-RATED, STAINLESS STEEL ACCESS PANELS WITH HINGED, CYLINDER LOCK DOORS WHERE VALVES ARE INSTALLED ABOVE INACCESSIBLE CEILINGS OR IN WALL CHASES (MIFAB MODEL MPFR-SS-C). BALL VALVES AND BUTTERFLY VALVES INSTALLED ABOVE CEILINGS SHALL BE INSTALLED SUCH THAT HANDLE IS ON BOTTOM OF PIPE. ISOLATING WATER VALVES ABOVE CEILINGS SHALL BE INSTALLED NO MORE THAN 24" ABOVE CEILING. VALVES ABOVE INACCESSIBLE CEILINGS SHALL BE INSTALLED WITHIN REASONABLE REACH OF CEILING MOUNTED ACCESS PANEL.
13. WATER HAMMER ARRESTERS SHALL BE INSTALLED IN ADDITION TO AIR CHAMBERS PER THE RISER DIAGRAMS. SEE SPECIFICATIONS.
14. MECHANICALLY CLEAN ALL WASTE LINES WITH ROTARY MACHINE TO PROVE FREE FLOWING, SEE SPECIFICATIONS.
15. PROVIDE VENTED SLEEVE (2 PIPE SIZES LARGER THAN GAS PIPE UNLESS NOTED OTHERWISE) FOR ALL GAS PIPING IN GROUND BELOW PAVING OR SIDEWALKS AND INSIDE BUILDING IN WALLS AND IN UNVENTILATED CEILING SPACES, SEE SPECIFICATIONS.
16. GAS PIPING SHALL BE 1/2" MINIMUM. TAP GAS PIPING ON TOP OR SIDES ONLY. DO NOT INSTALL VALVES IN CEILING PLENUM OR IN ANY INACCESSIBLE LOCATION. ALL GAS VALVES SHALL BE EASILY ACCESSIBLE. REFER TO DETAIL 7/P0.01 FOR TYPICAL GAS CONNECTION INSTALLATION. REFER TO DETAIL 4/P0.01 FOR TYPICAL PRV INSTALLATION.
17. CENTER WALL HYDRANTS IN BRICK PATTERN OF EXTERIOR WALLS, REFERENCE THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
18. ALL REFRIGERATORS WITH ICE MAKERS, COMMERCIAL TYPE COFFEE MAKERS, ICE MAKERS, COFFEE VENDING MACHINES AND OTHER ITEMS PROVIDED BY OTHERS THAT REQUIRE A WATER CONNECTION SHALL HAVE A CW VALVE BOX, "VBOX", INSTALLED TO ALLOW EASY ACCESS AND REMOVAL OF MACHINE. ALSO, INSTALL IN-LINE FILTER IN WATER CONNECTION.
19. REFER TO CIVIL DRAWINGS FOR SITE SANITARY, SITE STORM SEWER, FIRE SERVICE AND DOMESTIC WATER SERVICE. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPING INSIDE BUILDING TO OUTSIDE LOCATIONS SHOWN ON PLUMBING DRAWINGS. PLUMBING CONTRACTOR SHALL INCLUDE COST OF FINAL TIE-INS TO SITE SERVICES.
20. PER THE DRAWINGS, ALL DRAINS (FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, KITCHEN DRAINS, SHOWER DRAINS, ETC.) SHALL BE VENTED AND TRAP PRIMED – NO EXCEPTIONS. TRAP PRIMING SHALL BE ACCOMPLISHED USING WATER CLOSET FLUSH VALVE TRAP PRIMING DEVICES OR PROSET SYSTEMS TRAP GUARD SEWER GAS EMISSION PROTECTION, AS SHOWN ON DRAWINGS. REFERENCE PLUMBING FLOOR PLANS AND RISER DIAGRAMS.
21. ALL PIPING LOCATED ON ROOF (GAS PIPING) SHALL BE INSTALLED ON ROOF PIPE SUPPORTS PER DETAIL 14/P0.02, 6-FOOT ON CENTER. INSTALL ROOF PIPE JACK PER DETAIL 9/P0.02 FOR ALL PIPING THROUGH ROOF.
22. COORDINATE LOCATIONS OF ALL ROOF DRAINS AND OVERFLOW ROOF DRAINS WITH ARCHITECTURAL DRAWINGS.
23. FOR COMBINATION WASTE AND VENT SYSTEMS (WHERE APPLICABLE ON DRAWINGS), DRAIN P-TRAPS SHALL BE SIZE OF PIPE SHOWN ON DRAWINGS (I.E. TWO PIPE SIZES LARGER THAN DRAIN SIZE). FOR EXAMPLE, A 4" FLOOR DRAIN SHALL HAVE A 6" P-TRAP.
24. FOR ALL PLUMBING FIXTURES, IF COPPER PIPING IS STUBBED THROUGH WALL FOR DRAIN CONNECTION, INSTALL MARVEL FITTING AT DRAIN CONNECTION FOR EASE OF SERVICING AND REPAIRS. COPPER DRAIN PIPING WILL ONLY BE ALLOWED FOR DIRECT/STRAIGHT STUB-OUT OF FIXTURE DRAIN PIPING THROUGH WALL.
25. DO NOT INSTALL ANY PIPING BENEATH CVT OR VAV BOXES. THIS INCLUDES FIRE SPRINKLER PIPING.
26. WHERE UNDERGROUND VENT PIPE SIZE IS NOT NOTATED, VENT SHALL BE 2" DIAMETER.
27. WHERE UNDERGROUND SANITARY PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR SIZE. NOT BELOW GRADE SANITARY PIPE SHALL BE SMALLER THAN 2". NO SANITARY LINE OR P-TRAP FOR A DRAIN/FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE DRAIN/FIXTURE SCHEDULE.
28. WHERE ABOVE GROUND VENT PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR VENT SIZE.
29. WHERE CW/HW PIPING SIZE TO THE FIXTURE IS NOT SHOWN ON THE FLOOR PLAN, REFER TO THE RISER DIAGRAMS FOR CW/HW PIPE SIZE. NO PIPING TO FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE FIXTURE SCHEDULE.
30. TO INSTALL NEW PLUMBING SYSTEMS BELOW EXISTING CONCRETE SLABS, FIRST PLUMBING CONTRACTOR SHALL LAY OUT CUT. THEN, DEMOLITION CONTRACTOR SHALL SAW CUT SLAB TO CONTROL CRACKING AND REMOVE ALL CONCRETE. PLUMBING CONTRACTOR SHALL THEN EXCAVATE FILL TO PROPER SLOPE, INSTALL NEW PIPING SYSTEMS AS REQUIRED, THEN BACKFILL AND COMPACT TO PROPER DENSITY. THE CONCRETE CONTRACTOR SHALL THEN INSTALL NEW SIX (6) MIL POLYETHYLENE VAPOR BARRIER AND SEAL, INSTALL NEW REINFORCING STEEL AND WELD ON TO EXISTING, THEN RE-POUR CONCRETE TO NEW LEVEL. DO NOT CUT THROUGH GRADE BEAMS WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
31. ALL ABANDONED FIXTURES, DRAINS AND PIPING (INCLUDING PIPING ABANDONED IN THE PAST) IN AREAS WHERE WORK IS BEING DONE SHALL BE COMPLETELY REMOVED FROM BUILDING (INCLUDING PIPING BELOW SLAB/GRADE – UNLESS SHOWN OTHERWISE ON DRAWINGS). EXISTING WATER PIPING SHALL BE CAPPED AT EXISTING WATER MAIN TAPS AND ALL ABANDONED PIPING REMOVED. ABANDONED VENT PIPING SHALL BE COMPLETELY REMOVED, INCLUDING EXISTING VTR's NOT RE-USED. PATCH AS REQUIRED. ONLY ACTIVE PIPING, FIXTURES AND DRAINS SHALL REMAIN IN BUILDING WHERE WORK IS BEING DONE.
32. FIELD VERIFY EXISTING CONDITIONS PRIOR PROCUREMENT OF EQUIPMENT AND SYSTEMS.
33. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION.
34. PROVIDE INSUALTION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF THE 2021-IECC. (3/ADD3)
35. SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.

GAS PRV SCHEDULE

MARK	PRV-K	PRV-K2 (3/ADD3)
LOCATION	MECH. YARD	MECH. YARD
SERVES	KITCHEN	KITCHEN
GAS LOAD	585 CFH	585 CFH
DISTANCE FROM METER	150 FT	150 FT
DISTANCE TO LAST OUTLET	200 FT	200 FT
INLET (SIZE/PRESSURE)	1" / 5 PSI	1" / 5 PSI
OUTLET (SIZE/PRESSURE)	2" / 7-12 IN WC	2" / 7-12 IN WC



4 GAS PRESSURE REGULATOR DETAIL (PRV)

NO SCALE

NOTES:
1. GAS REGULATOR SHALL BE ANSI Z21.80 CERTIFIED FOR LINE PRESSURE REGULATION BETWEEN THE SERVICE REGULATOR AND CONNECTED EQUIPMENT.
2. ALL GAS REGULATORS WITH INLET PRESSURE ABOVE 2 PSI SHALL BE EQUIPPED WITH A FACTORY INSTALLED OVERPRESSURE PROTECTION DEVICE, AS PART OF THE ANSI Z21.80 CERTIFICATION.
3. GAS REGULATOR SHALL BE EQUIPPED WITH A VENT LIMITING DEVICE, SIZED IN ACCORDANCE WITH THE REGULATOR OUTLET PRESSURE.
4. ALL REGULATORS INSTALLED OUTDOORS SHALL BE RATED FOR OUTDOOR INSTALLATION.
5. BASIS OF DESIGN IN THE MAXITROL 325-L SERIES OF REGULATORS

PLUMBING DRAINS, CLEANOUTS AND HYDRANTS

MARK	MIN. CONNECTION SIZES (IN.) SAN	VENT	CW	HW	DESCRIPTION/SPECIFICATION FOR FIXTURE OR EQUIPMENT
FD	4	2	1/2	–	TOILET FLOOR DRAIN – TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 1/2" TRAP PRIMER TAP, 6" SQUARE, NICKEL BRONZE HSTRAINER AND SECURITY SCREWS JR SMITH MODEL 2005-03-K06PB-P050-U.
FD2	4	2	1/2	–	EQUIPMENT FLOOR DRAIN – CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, DUCTILE IRON TRUE-FIT SEDIMENT BUCKET WITH 12" STAINLESS STEEL RIM LESS GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS-540-LG-P. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD3	4	2	1/2	–	GRATED MECHANICAL ROOM FLOOR DRAIN – CAST IRON WITH FLANGE, SEEPAGE OPENINGS, 9" HEAVY-DUTY DUCTILE IRON GRATE WITH STAINLESS STEEL VENEER, CLAMPING DEVICE AND 1/2" TRAP PRIMER TAP ZURN MODEL ZS-550-C-P
FD4	4	2	1/2	–	CANWASH FLOOR DRAIN – ALL GALVANIZED CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, GALVANIZED SUR-SET SEDIMENT BUCKET WITH 12" GALVANIZED DUCTILE IRON RIM AND GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS-540-P-G-HD. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD5	4	2	1/2	–	KITCHEN FLOOR DRAINS SHALL BE SIMILAR EXCEPT WITH 7" SQUARE, BRONZE GRATE JR SMITH MODEL 2005-03-K07PB-P050-U. PROVIDE 4" DIAMETER STAINLESS STEEL FUNNEL WHERE SHOWN ON DRAWINGS. REFERENCE KITCHEN CONNECTION SCHEDULE ON PLUMBING RENOVATION FLOOR PLAN SHEET.
FS KITCHEN FS	4	2	1/2	–	FLOOR SINK – CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY STAINLESS STEEL TRACTOR DUTY FRAME WITH 3/4-TRACTOR GRATE AND 1/2" TRAP PRIMER TAP JR SMITH MODEL 3150Y-04-C-13.
FS2 (3/ADD3)	4	2	1/2	–	DEEP FLOOR SINK – FABRICATED STEEL RECEPTOR, 12" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, STAINLESS STEEL MESH LINED BUCKET AND 24X12 NICKEL BRONZE FRAME WITH 3/4 SOLID COVER. JR SMITH MODEL 3250Y-C-BS-43
CO	VARIES	–	–	–	FLOOR CLEANOUT – ADJUSTABLE EXTENSION HOUSING, CAST IRON FERRULE WITH FULL-LINE-SIZE BRASS PLUG (UP TO 4"), 5" DIAMETER STAINLESS STEEL ACCESS COVER WITH VANDAL-PROOF SECURITY SCREWS, ROUND FRAME AND TOP STYLE COMPATIBLE WITH FLOOR TYPE (REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR TYPES) ZURN MODEL ZS-1400-VP. PROVIDE CARPET FLANGE FOR CARPETED AREAS (CARPET MARKER SHALL NOT BE ACCEPTABLE) AND TERRAZZO RECESS FOR TERRAZZO FLOORS. OUTDOOR CLEANOUT – SAME AS TYPE "CO" EXCEPT WITH HEAVY-DUTY NICKEL BRONZE TOP ZURN MODEL ZN-1400-HD-VP. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
WCO	VARIES	–	–	–	WALL CLEANOUT – CAST IRON FERRULE WITH COUNTERSUNK HEAD (FULL-LINE-SIZE PVC PLUG UP TO 4") MI-FAB MODEL C1450. ACCESS COVER SHALL BE 8" SQUARE, SURFACE MOUNT, FLUSH INSTALLATION, 16-GAUGE STAINLESS STEEL ACCESS DOOR WITH FLANGED FRAME AND VANDAL-PROOF OPTION MI-FAB MODEL UA-SS-VP. ACID WASTE CLEANOUT (AWCO) SHALL BE SAME EXCEPT ACID WASTE PIPING. INSIDE CABINETWORK WHERE CLEANOUT IS NOT VISIBLE, ACCESS PANEL MAY BE ROUND STAINLESS STEEL TYPE WITH VANDAL-PROOF CENTER SCREW MI-FAB MODEL C1450-RD-3-6.
2CO	4	–	–	–	DOUBLE CLEANOUTS – SAME AS OUTDOOR CLEANOUTS. INSTALLED FOR TWO-WAY RODDING. SINGLE CLEANOUT WITH 2-WAY FITTING IS NOT ACCEPTABLE, PROVIDE TWO SEPARATE CLEANOUTS. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
HB	–	–	3/4	–	HOSEBIBB – 3/4" HOSE THREAD, INTEGRAL VACUUM BREAKER SPOUT, ROUGH CHROME FINISH WITH REMOVABLE KEYED HANDLE, WALL FLANGE CHICAGO MODEL 952.
WH	–	–	3/4	–	RESTROOM WALL HYDRANT – NARROW WALL, WARM CLIMATE TYPE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5518
WH2	–	–	3/4	–	EXTERIOR WALL HYDRANT – NON-FREEZE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5519
WH3	–	–	3/4	3/4	CANWASH WALL HYDRANT – NON-FREEZE HOSE BOX WITH STRAIGHT INLET CONNECTION, HOT AND COLD MIXING, REMOVABLE KEYED HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL BACKFLOW PREVENTER WITH 3/4" HOSE CONNECTION, HEAVY DUTY BRASS CASING, POLISHED BRONZE HYDRANT BOX WITH HINGED COVER, "WATER" CAST ON COVER, DRIP LIP AND WALL CLAMP J.R. SMITH MODEL 5560-QT-WC-H-W-PB.
WASH (3/ADD3)	–	–	3/4	3/4	CLOTHES WASHER HOSE CONNECTION – STUB OUT OF WALL WITH ELBOW TO LEAD FREE DOUBLE CHECK BACKFLOW PREVENTER WITH QUARTER TURN VALVES, WATTS LF007M3-QT-FZ 3/4; PROVIDE FEMALE NIPPLE WITH 3/4" HOSE CONNECTION FOR CONNECTION OF WASHER JUMPER HOSE. SUPPORT ASSEMBLY FROM WALL WITH UNISTRUT AND PIPE CLAMPS. ASSEMBLY SHALL BE PROVIDED FOR BOTH COLD AND HOT WATER OUTLETS. WASHER HAS INTEGRAL AIR GAP CERTIFIED TO EUROPEAN STANDARDS AND THUS REQURIES AN EXTERNAL MEANS OF BACKFLOW PREVENTION TO MEET US STANDARDS.

PLUMBING FIXTURES AND EQUIPMENT

MARK	MIN. CONNECTION SIZES (IN.) SAN	VENT	CW	HW	DESCRIPTION/SPECIFICATION
WC	4	2	1	–	WATER CLOSET – WALL MOUNTED, WHITE VITREOUS CHINA, SIPHON JET ACTION, 1.28 GPF, ELONGATED BOWL, TOP SPUD, ADA/TAS COMPLIANT, AMERICAN STANDARD AFWALL; SLOAN ROYAL 111-1.28 FLUSH VALVE WITH VANDAL-PROOF FREE-SPINNING TOP CAP, 1.28 GPF, VANDAL-PROOF STOP AND ADA/TAS COMPLIANT LEVER ACTUATOR WITH LEVER INSTALLED ON LEFT SIDE (FOR FIXTURES DESIGNATED AS "HANDICAP", INSTALL LEVER ON "WIDE-SIDE" OF TOILET STALL); BEMIS 1655-SS/C EXTRA HEAVY DUTY, WHITE, OPEN FRONT SEAT LESS COVER WITH SELF-SUSTAINING, STAINLESS STEEL CHECK HINGE; AND, FLOOR MOUNTED CARRIER.
LV	1-1/4	1-1/4	1/2	1/2	LAVATORY GOOSENECK FAUCET – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; DECK MOUNTED FAUCET, 4" CENTERS, FIXED, CHROME PLATED, 5.25" GOOSENECK SPOUT, PRESSURE COMPENSATING LAMINAR FLOW NON-AERATING 0.5 GPM OUTLET, 4" WRISTBLADE HANDLES, REBUILDABLE COMPRESSION CARTRIDGES, CHICAGO 895-317GN2AE72ABCP; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170-LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
LV2	1-1/4	1-1/4	1/2	1/2	LAVATORY – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; CHROME PLATED, ALL CAST BRASS CONSTRUCTION, ADA/TAS COMPLIANT, VANDAL-PROOF FAUCET WITH 4" WRIST BLADE HANDLES, COMPRESSION STYLE CARTRIDGES, CHROME DECK PLATE, VANDAL-PROOF AERATOR, COPPER SUPPLIES AND CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9 CHICAGO MARATHON MODEL 802-E70-317ABCP; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170-LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
EDF	1-1/2	1-1/2	1/2	–	BI-LEVEL ELECTRIC DRINKING FOUNTAINS WITH BOTTLE FILLER – WALL MOUNTED, ALL STAINLESS STEEL, ADA AND TAS COMPLIANT FOR ALL AGES, 8 GPH AT ARI STANDARDS, 2-STREAM ALL METAL BUBBLER FITTING WITH VANDAL-RESISTANT KIT AND FRONT PUSH BUTTON ACTUATION, PUSH BUTTON ACTIVATED BOTTLE FILLER WITH 1.1GPM FILL RATE AND ANIT-MICROBIAL COATING, INTEGRAL WATER FILTER, LEAD-FREE (CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9), REFRIGERANT HFC-134a, MAINTENANCE ACCESS PANEL, HALSEY-TAYLOR MODEL HTHBHVR8BL; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; FLOOR MOUNTED CHAIR CARRIER; AND, STAINLESS STEEL ADA APRON FOR LOCATIONS REQUIRED BY ADA OR TAS.
MB	3	2	3/4	3/4	MOP BASIN – 24" X 24" X 12" DEEP TERRAZZO, TWO (2) STAINLESS STEEL SPLASH CATCHER PANELS, 6" DROP FRONT WITH STAINLESS STEEL CAP, CAST BRASS DRAIN WITH STAINLESS STEEL STRAINER STERN WILLIAMS HILOW MODEL HL-1800-BP; FAUCET SHALL BE POLISHED CHROME PLATED SERVICE SINK TYPE WITH VACUUM BREAKER, INTEGRAL SUPPLY CHECK STOPS, SPOUT WITH PAIL HOOK, HOSE END AND TOP BRACE CHICAGO MODEL 897-CCF (INSTALL BACKING/BRACING INSIDE WALL TO SUPPORT FAUCET AND TOP BRACE).
LP-1	3	2	3/4	3/4	LAVATORY PUMP – FACTORY BUILT, LIFT PUMP FOR GRAY WATER WASTE, TOP ACCESS TO INTERNAL 1/6HP PUMP AND FLOAT SWITCH, 1.5" TOP AND SIDE INLETS, 1.5" TOP OUTLET, INTEGRAL CHECK VALVE AT BOTTOM INLET CONNECTIONS, 9FT POWER CORD WITH GROUNDED PLUG; LIBERTY PUMPS MODEL 406

KITCHEN PLUMBING CONNECTION SCHEDULE

MARK	DESCRIPTION
P5	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO MOP BASIN ("MB") FAUCET. REFERENCE PLUMBING FIXTURE SCHEDULE.
P6	3" DRAIN IN FLOOR FOR MOP BASIN ("MB") DRAIN. REFERENCE PLUMBING FIXTURE SCHEDULE.
P7	3/4" CW AND 3/4" HW – IN WALL, 18" AFF, TO HOSE BIBB.
P10	FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" SQUARE HEAVY-DUTY POLISHED BRONZE GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 2005-03-K07PB-P050-U.
P11C	1/2" CW AND 1/2" HW – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P11D	2" DRAIN – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P12	FLOOR SINK – 4" OUTLET; FLUSH WITH FLOOR; CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY NICKEL BRONZE FRAME WITH 3/4-TRACTOR GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 3150Y-04-C-13.
P12A	EQUIPMENT FLOOR DRAIN – SIMILAR TO MARK P10, BUT WITH 4" OUTLET.
P15	FUNNEL FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" DIAMATER HEAVY-DUTY STAINLESS STEEL TRACTOR DUTY GRATE AND SECURITY SCREWS, 4" ROUND FUNNEL ASSEMBLY (MODEL 3580), 1/2" TRAP PRIMER TAP JR SMITH MODEL 2005-03-K07PB-P050-U
P109	3/4" CW – IN WALL, 60" AFF, TO ICE MAKER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO ICE MAKER FROM CHECK VALVE, THROUGH FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P109A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12, BUT WITH FULL GRATE. SEE DESCRIPTION ABOVE.
P110	1/2" CW AND 1/2" HW – IN WALL, 36" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO-CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P110A	2" DRAIN – IN WALL, 48" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO-CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P122	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET AT TWO COMPARTMENT SINK. INSTALL LEONARD 370-LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P122A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P123	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO PRE-RINSE. 1/2" CW TO DISPOSER.
P123A	2" DRAIN – IN WALL, 10" AFF, TO DISPOSER (BYPASS GREASE TRAP).
P161	(2)3/4" GAS CONNECTION – 18"/36" AFF, TO CONVECTION OVEN, 60 CFH (EACH).
P163A	3/4" GAS CONNECTION – 18" AFF, TO TILT BRAISING PAN, 104 CFH.
P163B	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO TILT BRAISING PAN.
P165	1" GAS CONNECTION – 18" AFF, TO RANGE, 70 CFH.
P172	(2) 3/4" CW – IN WALL, 24" AFF & 48" AFF, TO COMBI OVEN. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND OVEN. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO EQUIPMENT FROM CHECK VALVE, THROUGH FILTER BANK (REF P172D & E), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172A	SIMILAR TO PLUMBING CONNECTION P172, BUT ONLY ONE 3/4" CW – IN WALL, 48" AFF. SEE DESCRIPTION ABOVE.
P172B	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P172C	(2) 3/4" GAS CONNECTION – 18"/36" AFF, TO COMBI OVEN, 105 CFH (EACH).
P172D	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO INLET OF FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172E	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. EXTEND OUTLET OF FILTER BANK BACK INTO THE WALL. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PIPING WITHIN THE WALL SHALL EXTEND TO AND SERVE TWO (2) CONNECTIONS TAGGED P172.
P249	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET. INSTALL LEONARD 370-LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P249A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250A	3/4" HW – IN WALL, 18" AFF, TO BOOSTER HEATER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER AND CONNECT THROUGH FILTER (BY OTHERS) WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PROVIDE WATTS 9MD2 OR EQUAL – 140°F MINIMUM (INTERCONNECT WITH DISH MACHINE).
P250B	3/4" CW – IN WALL, 18" AFF, TO DISH MACHINE. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND DISH MACHINE. PROVIDE WATTS 9MD2 OR EQUAL (INTERCONNECT WITH DISH MACHINE).
P614	1/2" CW AND 1/2" HW – IN WALL, 42" AFF, TO FILL FAUCET.
P800	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.

KITCHEN PLUMBING CONNECTION NOTES
1. KITCHEN CONNECTION SCHEDULE IS APPLICABLE TO ALL SCHOOLS IN THIS DRAWING SET.
2. REFERENCE KITCHEN CONSULTANT'S DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL EQUIPMENT AND INSTALLATION REQUIREMENTS.
3. ALL WATER PIPING INSTALLED EXPOSED BENEATH KITCHEN EQUIPMENT, INCLUDING PIPING INSTALLED BY DIVISION 11 (I.E. UNDER SINK COUNTERTOPS, SERVING TABLES, ETC.) SHALL BE INSULATED BY THE PLUMBING CONTRACTOR PER THE SPECIFICATIONS (INCLUDE ALUMINUM JACKETING FOR ALL PIPE INSULATION, PER SPECIFICATIONS).
4. INDIRECT WASTE PIPING FROM KITCHEN EQUIPMENT IS NOT SHOWN; HOWEVER, PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THIS PIPING PER THE REQUIREMENTS OF THE KITCHEN CONSULTANT'S CONTRACT DOCUMENTS, PER THE REQUIREMENTS OF THE VARIOUS EQUIPMENT MANUFACTURERS PROVIDED AND PER THE IPC-2021, SECTION 802. ALL INDIRECT WASTE PIPING SHALL BE TYPE L COPPER. INSTALL 45°F ELBOW AT END OF EACH INDIRECT WASTE PIPE TO DIRECT FLOW OF WATER INTO FLOOR SINK.
   - 4.1. IPC 2015 – SECTION 802.1.1 FOOD HANDLING – EQUIPMENT AND FIXTURES UTILIZED FOR THE STORAGE, PREPARATION AND HANDLING OF FOOD SHALL DISCHARGE THROUGH AN INDIRECT WASTE PIPE BY MEANS OF AN AIR GAP. EACH WELL OF A MULTIPLE-COMPARTMENT SINK SHALL DISCHARGE INDEPENDENTLY TO A WASTE RECEPTOR. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P121, P122 AND P126.
   - 4.2. IPC 2015 – SECTION 8802.1.8 FOOD UTENSILS, DISHES, POTS AND PANS SINKS – SINKS, USED FOR THE WASHING, RINSING, OR SANITIZING OF UTENSILS, DISHES, POTS, PANS OR SERVICE WARE USED IN THE PREPARATION, SERVING OR EATING OF FOOD SHALL DISCHARGE INDIRECTLY THROUGH AN AIR GAP OR AN AIR BREAK TO THE DRAINAGE SYSTEM. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P249.

PRELIMINARY
NOT FOR CONSTRUCTION OR BIDDING PURPOSES

STANTON ENGINEERING GROUP
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ISSUE:

Date	Issue
12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025 (3/ADD3)	ADDENDUM NO. 3

j

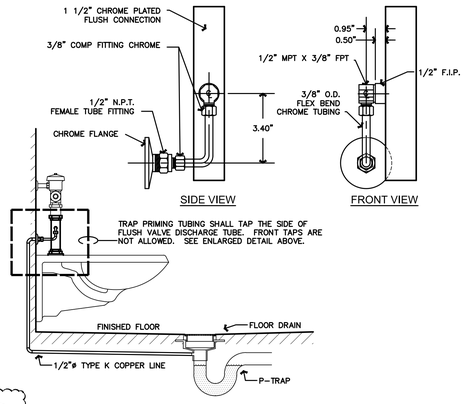
FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL
STATE OF TEXAS — INTERIM REVIEW — FOR INTERIM REVIEW AND NOT INTENDED — 106052 — LICENSED PROFESSIONAL ENGINEER
08.28.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

PLUMBING NOTES & SCHEDULES
j-P0.01

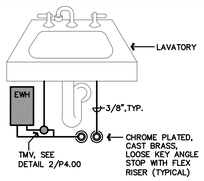


12 FLUSH VALVE TRAP PRIMING TUBE DETAIL

NO SCALE

MI-FAB MODEL MI-702-MOD FLUSH VALVE TRAP PRIMER, OR EQUAL

TANKLESS WATER HEATER SCHED.		
MARK	IEWH-1	
SERVES	LAVATORY	
LOCATION	BELOW COUNTER	
HEATER KW	1.8 KW	
TEMP RISE (@ 0.5 GPM)	25°F	
VOLTAGE/PHASE	120V/1PH	
EEMAX MODEL	SPEX1812T	

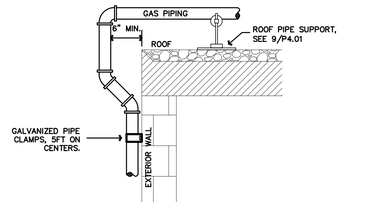


11 TANKLESS WATER HEATER

NO SCALE

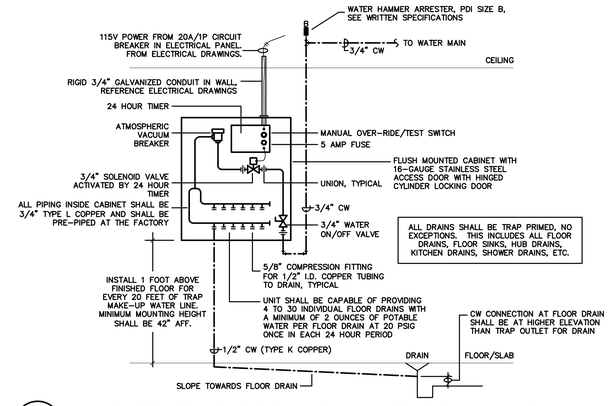
NOTES:

1. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FURNISH & INSTALL 0.5-GPM AERATOR ON FAUCET COMPATIBLE WITH TANKLESS EWH REQUIREMENTS.
5. WATER HEATER SHALL HAVE INTEGRAL ASSE-1070 COMPLIANT TEMPERED MIXING VALVE.



13 GAS PIPING WALL-TO-ROOF TRANSITION DETAIL

NO SCALE

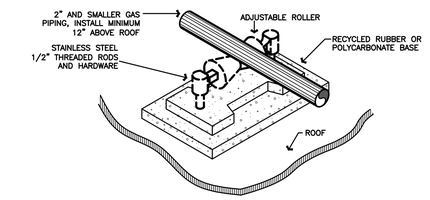


10 ELECTRONIC TRAP PRIMING MANIFOLD DETAIL (TP)

NO SCALE

NOTES:

1. REFERENCE SCHEDULE ON SHEET P3.00

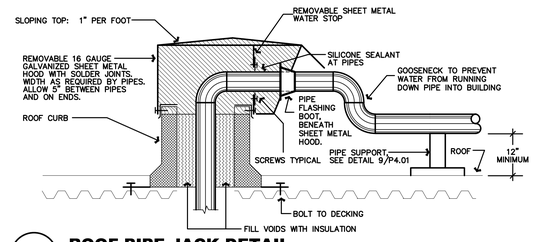


14 GAS PIPING ROOF SUPPORT DETAIL

NO SCALE

NOTES:

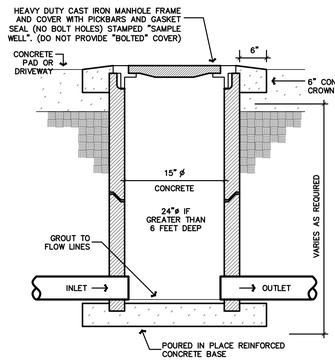
1. GAS PIPING SUPPORT SHALL BE PORTABLE PIPE HANGERS, INC. MODEL PP10-R. PIPING SHALL BE INSTALLED 12" ABOVE FINISHED ROOF. PROVIDE 18" X 18" CAREY TREAD-TYPE MATERIAL BENEATH EACH PIPE SUPPORT.
2. FIELD LOCATE ROOF STRUCTURAL SUPPORTS AND PLACE BASE OF PIPE SUPPORT OVER ROOF SUPPORTS ONLY. PROVIDE BASE OF ADEQUATE LENGTH TO SPAN ROOF JOIST TO PREVENT SUPPORTS SETTING ON ROOF DECK ONLY.
3. INSTALL SIX (6) FOOT-ON-CENTERS.
4. PIPE SUPPORT MANUFACTURER'S REPRESENTATIVE SHALL PERSONALLY INSPECT INSTALLATIONS OF PIPE SUPPORTS AND MAKE CORRECTIONS AND HEIGHT ADJUSTMENTS TO INSTALLATIONS, AS REQUIRED, DURING INSPECTION.



9 ROOF PIPE JACK DETAIL

NO SCALE

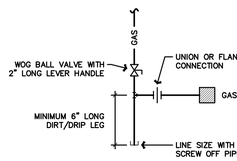
NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.



8 SAMPLE TEST WELL DETAIL (STW)

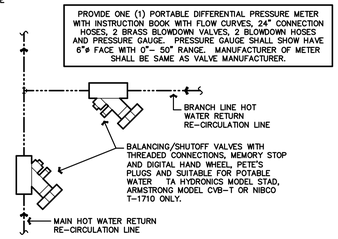
NO SCALE

NOTES:



7 TYPICAL GAS CONNECTION

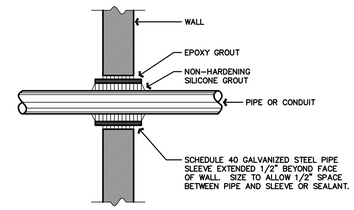
NO SCALE



6 HOT WATER BALANCING STATION

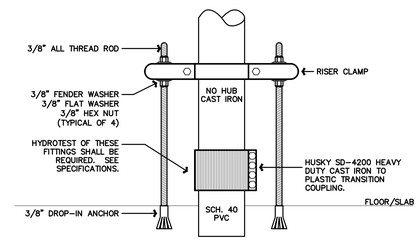
NO SCALE

PROVIDE AT EACH JUNCTION OF BRANCH HOT WATER RETURN LOOPS TO MAIN CIRCULATING HOT WATER LINE, SEE PLUMBING PLANS.



5 WALL PENETRATION DETAIL

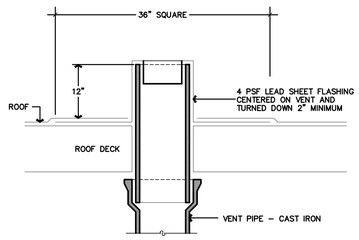
NO SCALE



4 PVC-TO-CAST IRON INSTALLATION DETAIL

NO SCALE

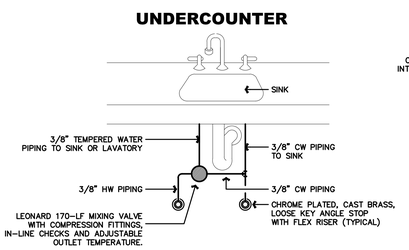
MISSION TRANSITION COUPLING DESIGNED AND CERTIFIED FOR THIS SPECIFIC APPLICATION SHALL BE ACCEPTABLE IN LIEU OF HUSKY COUPLING IN THIS DETAIL.



3 ROOF VENT DETAIL

NO SCALE

COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

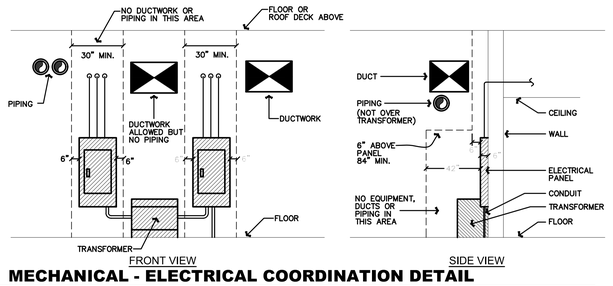


2 MIXING VALVE DETAIL

NO SCALE

NOTES

1. UNDERCOUNTER MIXING VALVE SHALL BE MOUNTED ON WALL IN FIXTURE KNEE-SPACE. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FOR ABOVE CEILING INSTALLATION, VALVE SHALL BE INSTALLED IN AN EASILY/READILY ACCESSIBLE LOCATION. SEE KITCHEN PLUMBING CONNECTION SCHEDULE FOR REQUIRED KITCHEN LOCATIONS.
5. LAVATORY MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 130°F.
   SINK MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 140°F.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

DO NOT INSTALL ANY PIPING BENEATH CVT BOXES. DO NOT INSTALL ANY PIPING (EXCEPT FIRE SPRINKLER PIPING AND OTHER PIPES SHOWN SPECIFICALLY ON THE PLUMBING FLOOR PLANS) OVER COMPUTER CLASSROOMS, BOOKROOMS, IDF/MDF/SERVER ROOMS OR OTHER ROOMS NOTED ON THE PLUMBING FLOOR PLANS.

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3 ADD3 08/28/2025	ADDENDUM NO. 3

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2022 COLONIST PARK DRIVE
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PLUMBING SCHEDULES & DETAILS

j-P0.02

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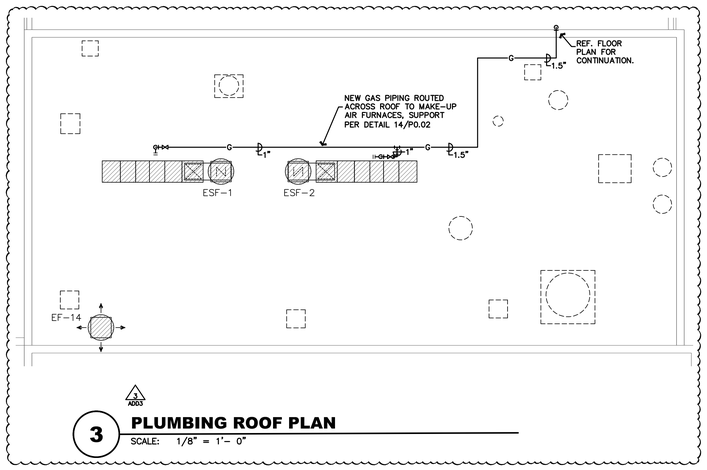
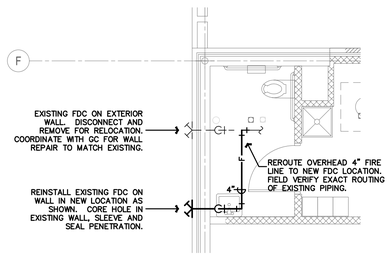


3 A003

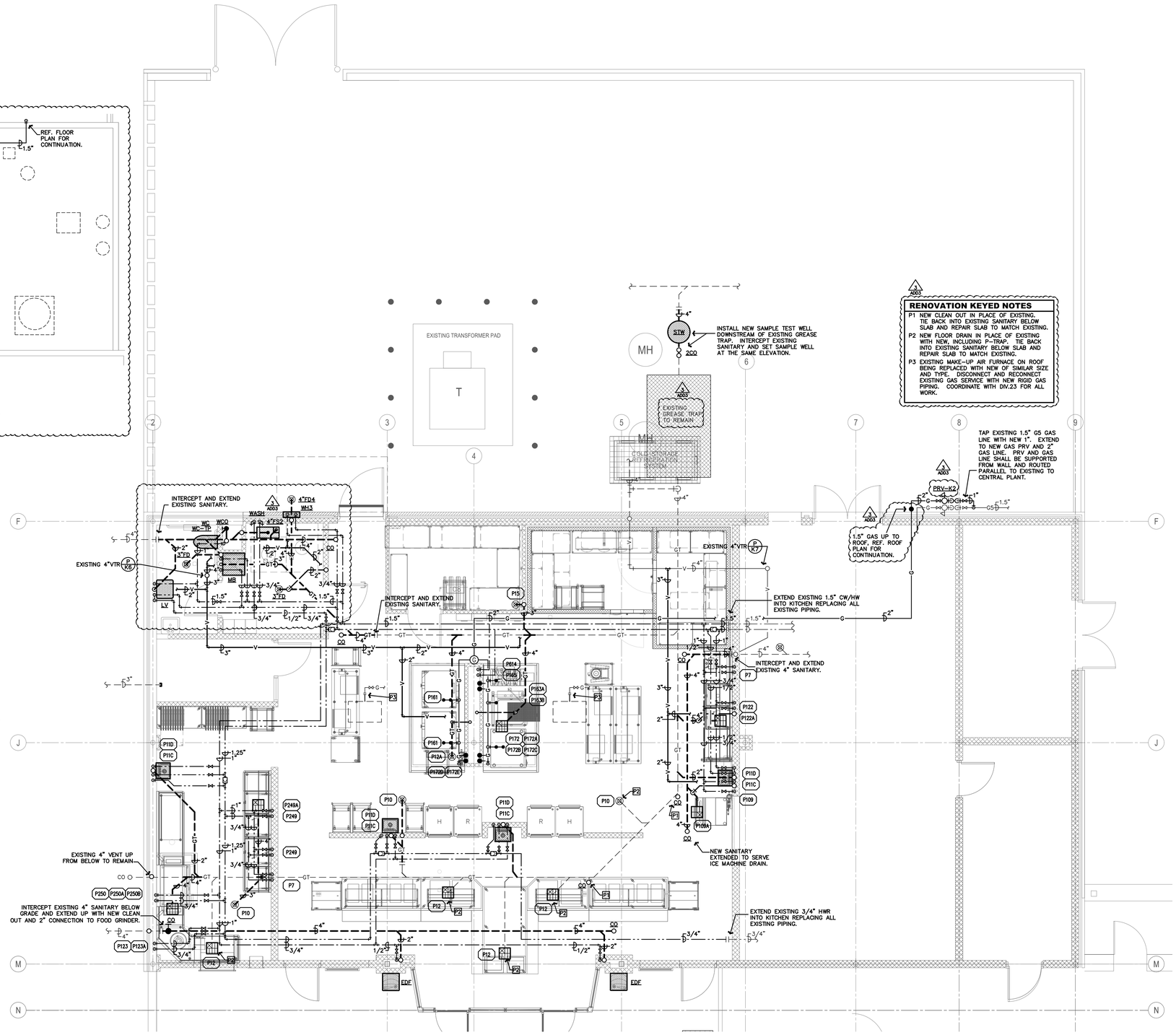
3 PLUMBING ROOF PLAN

SCALE: 1/8" = 1'- 0"



2 FIRE SPRINKLER - FDC RELOCATION

SCALE: 1/4" = 1'- 0"



1 PLUMBING RENOVATION FLOOR PLAN

SCALE: 1/4" = 1'- 0"

RENOVATION KEYED NOTES

P1 NEW CLEAN OUT IN PLACE OF EXISTING. TIE BACK INTO EXISTING SANITARY BELOW SLAB AND REPAIR SLAB TO MATCH EXISTING.

P2 NEW FLOOR DRAIN IN PLACE OF EXISTING WITH NEW, INCLUDING P-TRAP. TIE BACK INTO EXISTING SANITARY BELOW SLAB AND REPAIR SLAB TO MATCH EXISTING.

P3 EXISTING MAKE-UP AIR FURNACE ON ROOF BEING REPLACED WITH NEW OF SIMILAR SIZE AND TYPE. DISCONNECT AND RECONNECT EXISTING GAS SERVICE WITH NEW RIGID GAS PIPING. COORDINATE WITH DIV.23 FOR ALL WORK.

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PLUMBING FLOOR PLAN

j-P1.01

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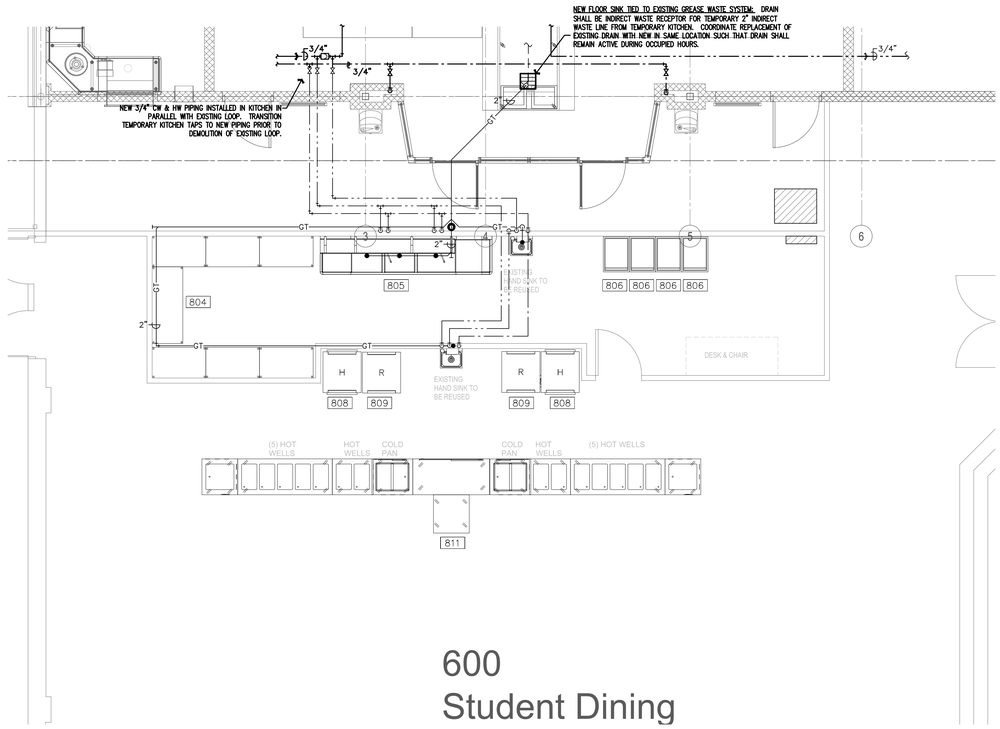


600
Student Dining

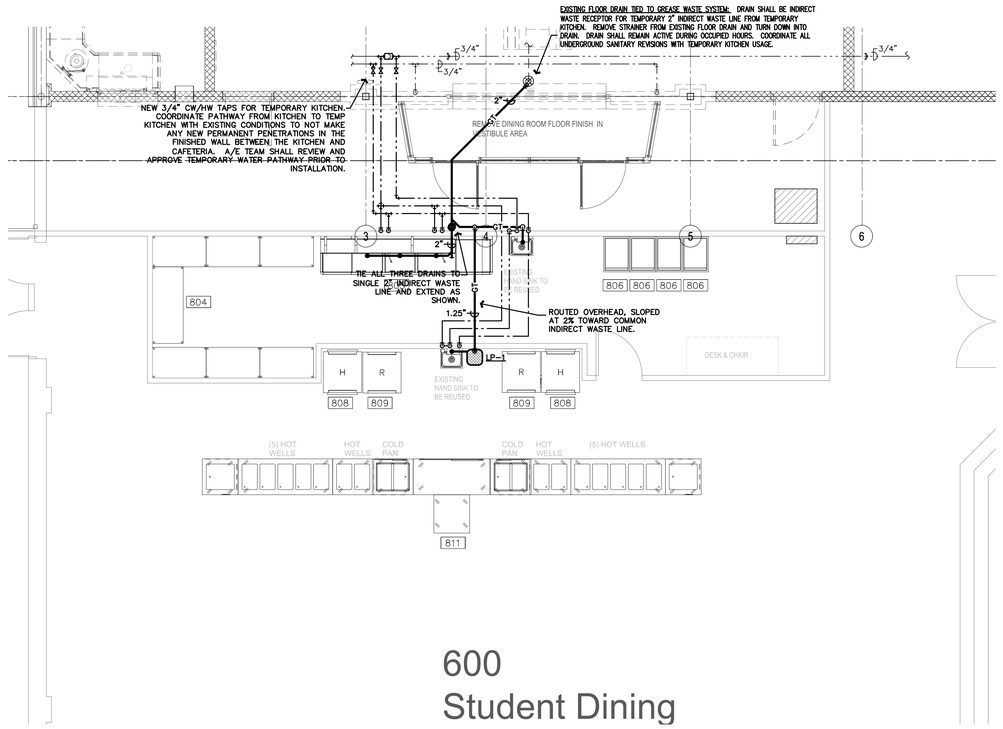
2 PLUMBING TEMPORARY KITCHEN PLAN - POST DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. AFTER DEMOLITION OF EXISTING KITCHEN AND DURING CONSTRUCTION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL REMAIN ACTIVE.
2. ALL SANITARY, CW AND HW CONNECTIONS SHALL REMAIN ACTIVE DURING ALL TIMES WHEN TEMPORARY KITCHEN IS ACTIVE.
3. UPON COMPLETION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL BE DEMOLISHED AND ALL TEMPORARILY UTILITIES SHALL BE REMOVED AND TEMPORARY WATER TAPS CAPPED AT MAIN LINE TAP.
4. ALL DEMOLISHED LAVATORIES AND FAUCETS SHALL BE PERMITTED TO BE RELOCATED ACROSS TEMPORARY KITCHENS WITHIN THE PROJECT BASED ON AVAILABILITY/PROJECT PHASING SCHEDULE. AT THE END OF THE PROJECT, REMOVE FIXTURES AND OFFER TO OWNER AS SALVAGE. IF NOT ACCEPTED, ALL FIXTURES SHALL BE DISPOSED OF BY THE CONTRACTOR.

NORTH



600
Student Dining

1 PLUMBING TEMPORARY KITCHEN PLAN - PRE DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. BEFORE DEMOLITION OF THE EXISTING KITCHEN BEGINS, INSTALL ALL NEW PLUMBING FIXTURES AND UTILITIES FOR TEMPORARY KITCHEN.

NORTH

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3 4003

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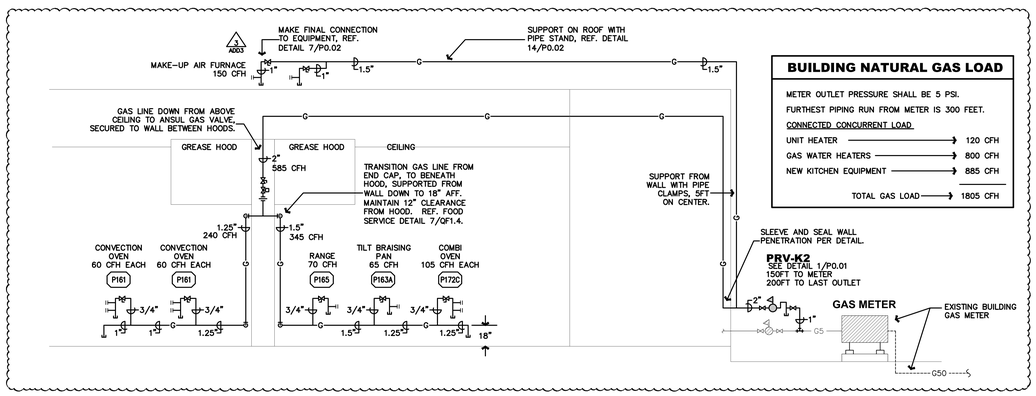
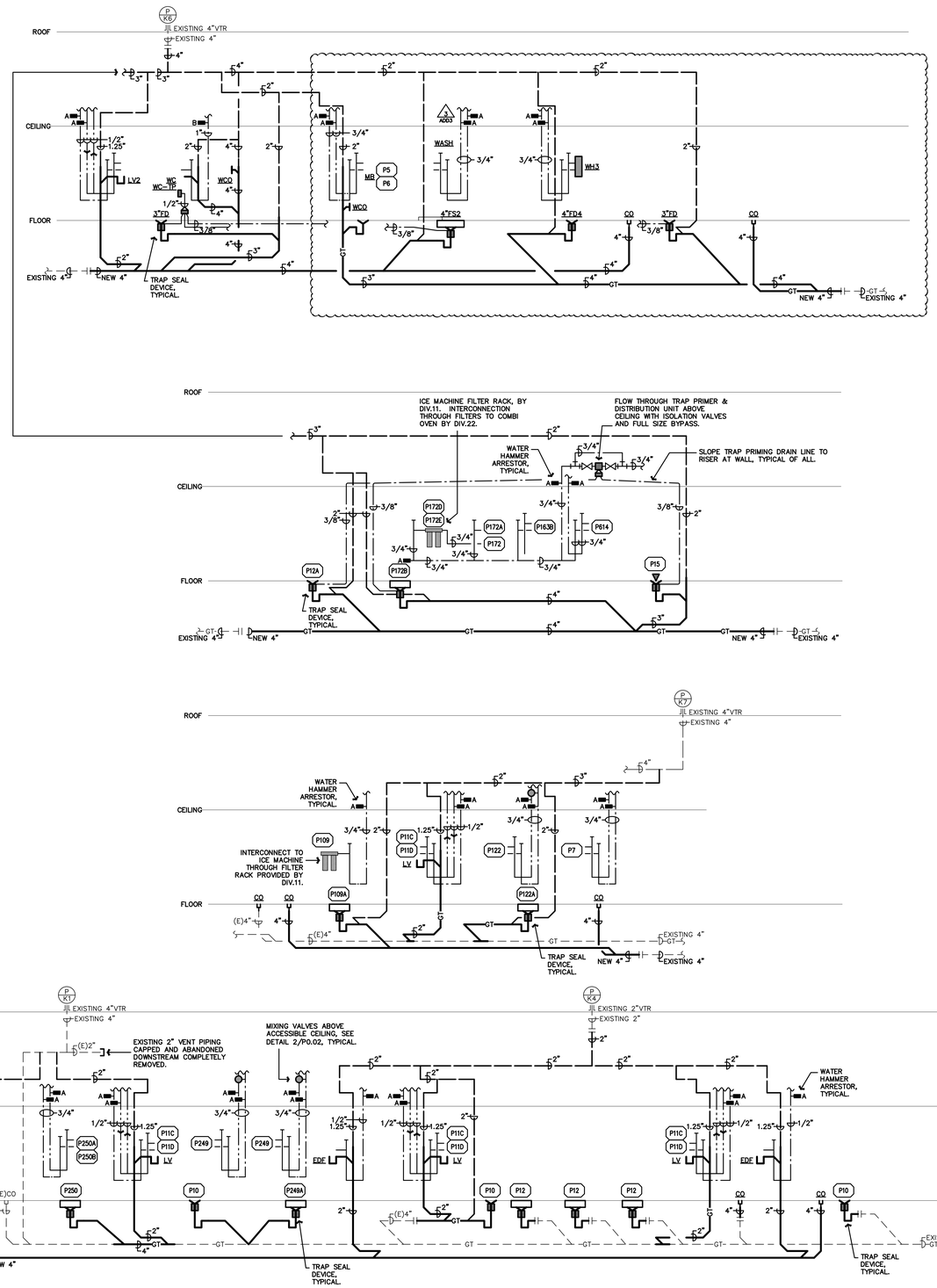
PLUMBING FLOOR PLAN - TEMP KITCHEN

j-P1.02



2 NATURAL GAS RISER DIAGRAM

NO SCALE



1 PLUMBING RISER DIAGRAMS

NO SCALE

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j-P2.00

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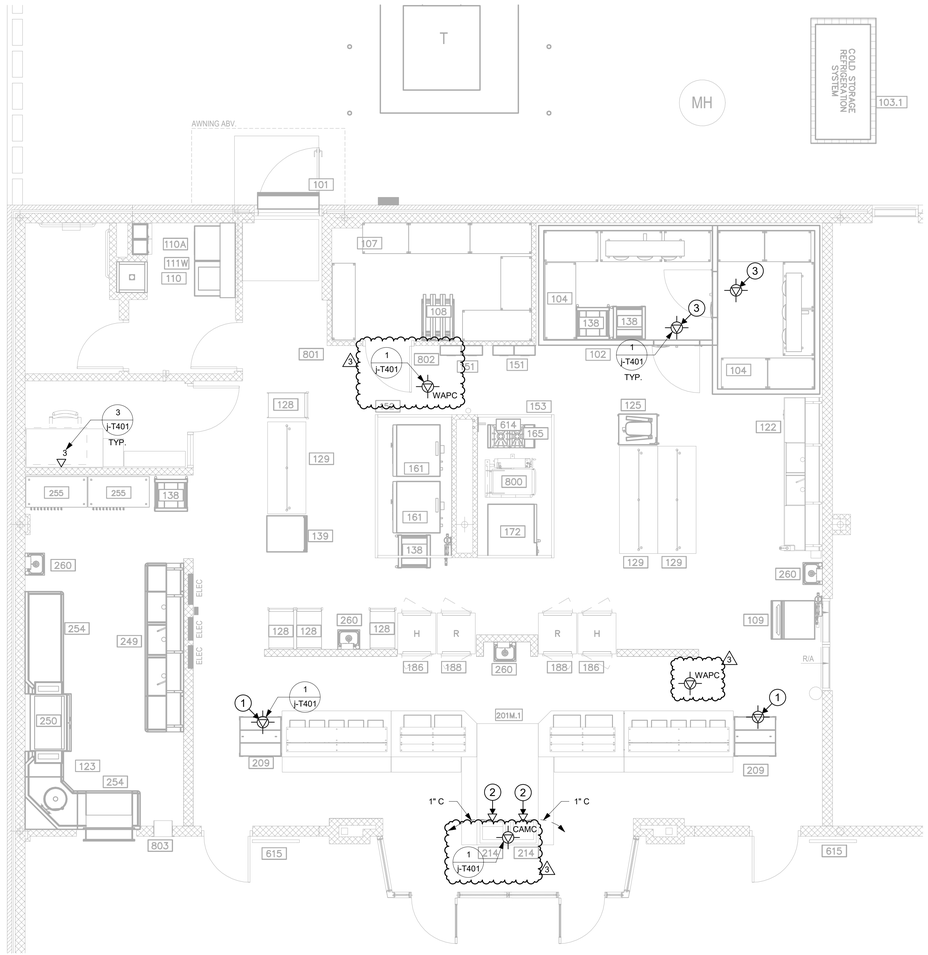

1 j-T201 TECHNOLOGY NEW/RENOVATION KITCHEN PLAN
1/4" = 1'-0"

TECHNOLOGY FLOOR PLANS GENRAL NOTES:

1. THE TECHNOLOGY REGION / WIRING BOUNDARIES ARE IDENTIFIED ON THE OVERALL SHEETS ONLY AND NOT ON THE ENLARGED SHEETS. CONTRACTOR SHALL REFER TO THE OVERALL SHEETS FOR ALL TECHNOLOGY REGIONS / WIRING BOUNDARIES.
2. ALL CONDUIT PATHWAYS, ROUGH-INS, BACKBOXES, FLOOR BOXES, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
6. TECHNOLOGY CABLING SHALL BE ROUTED IN SEPARATE PATHWAYS IN J-HOOKS, CONDUITS, CONDUIT SLEEVES, CORES, ETC. THROUGHOUT THE ENTIRE PATHWAY. DIFFERENT MEDIA TYPES (DATA, VIDEO, SECURITY, ETC.) SHALL NOT SHARE THE SAME J-HOOK, CONDUIT, CONDUIT SLEEVE, CORE, ETC.
7. UNLESS NOTED OTHERWISE, ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE AN ACCESSIBLE CEILING (AN OPEN CEILING OR CLOUD TYPE CEILING IS NOT CONSIDERED AN ACCESSIBLE CEILING) IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF / IDF ROOM TO MINIMIZE THE CABLE LENGTH ENSURING CABLE LENGTH DOES NOT EXCEED 275 FEET.
8. UNLESS NOTED OTHERWISE ALL CONDUITS SHALL BE HOMERUN FROM THE DEVICE LOCATION AND NO DAISY CHAINING OF DEVICES/ ROUGH-INS SHALL BE ALLOWED.
9. CONDUIT SEGMENTS SHALL BE NO MORE THAN 100-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
10. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
13. EQUIPMENT NOT RELATED TO THE SUPPORT OF THE TELECOMMUNICATIONS ROOM (E.G., PIPING, DUCTWORK, PNEUMATIC TUBING) SHALL NOT BE INSTALLED IN, PASS THROUGH, OR ENTER THE TELECOMMUNICATIONS ROOM.
14. ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE A LAY-IN TYPE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE A LAY- IN TYPE CEILING TO PREVENT THE CABLES FROM BEING EXPOSED, THE CONDUIT SHALL ROUTE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. THE CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE MAIN CORRIDOR OR NEAREST MDF/IDF TO MINIMIZE THE CABLE LENGTH ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. CONDUIT, CONNECTIONS, J-BOXES, SUSPENSION, ANCHORAGES, AND OTHER CONDUIT COMPONENTS EXPOSED TO VIEW IN PUBLIC SPACES SHALL BE ROUTED AND INSTALLED CAREFULLY TO MINIMIZE VISUAL IMPACT AND SHALL BE FULLY PAINTED TO MATCH UNLESS NOTED OTHERWISE.
15. CONDUIT(S) INSTALLED IN-SLAB OR UNDER-SLAB TO FLOOR BOXES, POKE-THURS, AND TO WORKAREA OUTLETS, ETC. SHALL BE INSTALLED WITH WET RATED CABLE(S).
16. NO GRID WIRE SHALL BE UTILIZED FOR SUPPORTS ONLY USE SOLID SUPPORTS (CLIPS, ALL-THREAD, ANCHORS, ETC.).

TECHNOLOGY PLAN KEYED NOTES

NOT ALL KEYED BELOW APPLY TO THIS SHEET

(1) DATA CABLE FOR CONTRACTOR FURNISHED / CONTRACTOR INSTALLED MENU BOARD. REFERENCE ARCHITECTURAL AND FOOD SERVICE DRAWINGS FOR MOUNTING HEIGHT AND ADDITIONAL INFORMATION. BUILDING POWER ADJACENT TO DATA RECEPTACLE IS REQUIRED.

(2) INDOOR / OUTDOOR RATED DATA CABLE FOR POINT OF SALE LOCATION. PROVIDE (1) 1-INCH CONDUIT FOR DATA TO THE WALL BEHIND POINT OF SALE LOCATION AND UP WALL TO ABOVE ACCESSIBLE CEILING. CONDUITS SHALL TERMINATE INSIDE A DOUBLE GANG BOX THAT IS SECURED TO THE POINT OF SALE LOCATION. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS.

(3) DATA CABLE FOR TEMPERATURE MONITORING OF FREEZER COOLER. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS AND TERMINATION POINT AND CONNECTIVITY NEEDS IN FREEZER / COOLER CONTROL UNIT.

(4) DATA CABLE FOR TEMPORARY POINT OF SALES CASH REGISTER. COORDINATE WITH OWNER, ARCHITECT, AND CONSULTANT FOR ROUTING OF CABLES TO POINT OF SALE CASH REGISTER PRIOR TO INSTALLATION

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BICSI ID # 364970
EXPIRES 12-31-25
RCDD

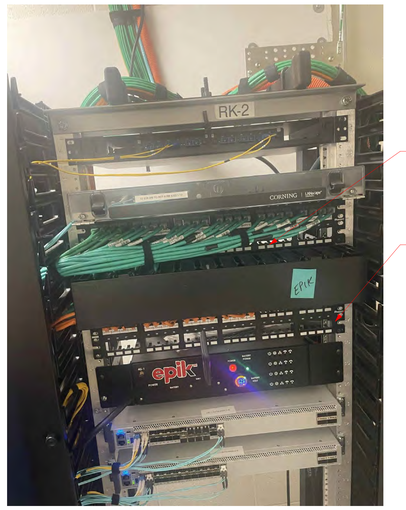
07/18/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

TECHNOLOGY NEW/RENOVATION KITCHEN PLAN

SHEET NO.
j-T201

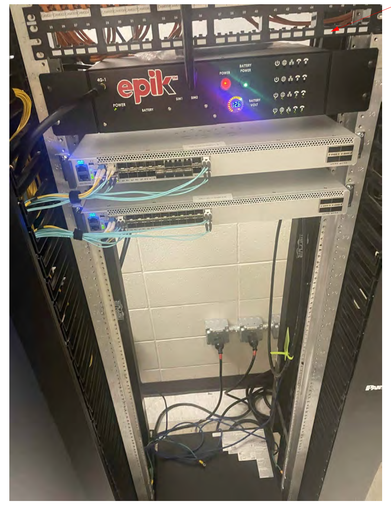


1 HIGHLANDS ES EXISTING RACK - TOP PORTION
j-T300 N.T.S

UTILIZE THIS PANEL FOR NEW WIRELESS ACCESS POINT CABLING (GREEN CABLE) 3

UTILIZE THIS PANEL FOR NEW SURVEILLANCE CAMERA CABLING (ORANGE CABLE) 3

UTILIZE OPEN PORTS ON RACK 1 DATA PANELS FOR NEW DATA WORKAREA CABLING (BLUE CABLE) 3



2 HIGHLANDS ES EXISTING RACK - BOTTOM PORTION
j-T300 N.T.S

UTILIZE THIS PANEL FOR NEW SURVEILLANCE CAMERA CABLING (ORANGE CABLE) 3

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/26/2025 3	ADDENDUM NO. 3

J

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 12-31-25
RCDD

07/18/2025

ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

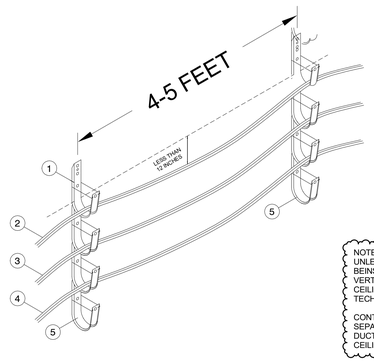
TECHNOLOGY ENLARGED VIEWS

SHEET NO.
j-T300

NOTE TO CONTRACTOR:

UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BE INSTALLED WITHIN 6-INCHES OF THE CEILING AND ACCESSIBLE BY A TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPRATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPIING OR OTHER SYSTEMS IN THE CEILING PLENUM.



KEYED NOTES:

1. J-HOOK WITH RETAINER CLIP ABOVE ACCESSIBLE CEILING (BY DIV 27).
2. DATA CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
3. A/V CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
4. SECURITY CABLE ABOVE ACCESSIBLE CEILING (BY DIV 28).
5. SPARE J-HOOK (BY DIV 27).

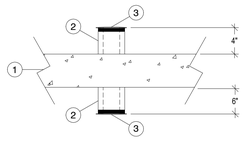
NOTE TO CONTRACTOR:
UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BEINSTALLED WITHIN 6-INCHES OF THE CEILING AND LAST VERTICALLY SITUATED J-HOOK SHALL BE NO HIGHER THAN 18" OF CEILING. CABLES AND SUPPORTS SHLL BE ACCESSIBLE BYA TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPARATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPING OR OTHER SYSTEMS IN THE CEILING PLENUM

3

1 / T400 TYPICAL J-HOOK CABLE PATHWAY

SCALE: N.T.S.

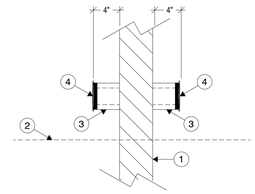


KEYED NOTES:

1. SCHEDULED FLOOR OR DECK.
2. CONDUIT SLEEVE (BY DIV 26).
3. NYLON BUSHING (BY DIV 26).

2 / T400 TYPICAL CONDUIT SLEEVE THROUGH FLOOR OR DECK DETAIL

SCALE: N.T.S.

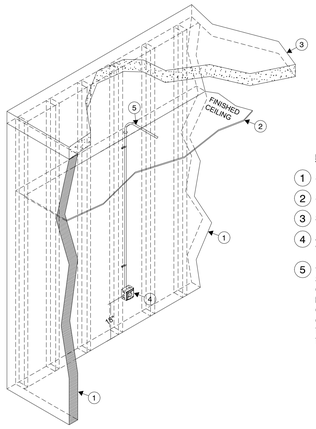


KEYED NOTES:

1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. CONDUIT SLEEVE (BY DIV 26).
4. NYLON BUSHING (BY DIV 26).

3 / T400 TYPICAL CONDUIT SLEEVE GOING THROUGH WALL

SCALE: N.T.S.



KEYED NOTES:

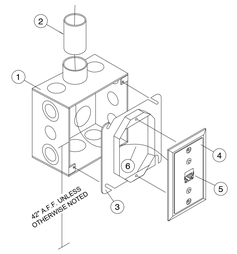
1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. SCHEDULED DECK ABOVE.
4. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX WITH DOUBLE GANG PLASTER RING (BY DIV 26).
5. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH. (BY DIV 26).

4 / T400 TYPICAL TECHNOLOGY CONDUIT ROUGH-IN

SCALE: N.T.S.

DETAIL DELETED SPACE LEFT INTENTIONALLY BLANK

3

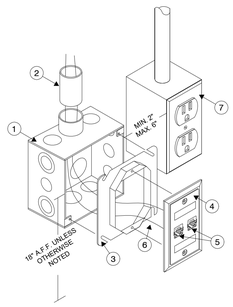


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH PHONE STUDS (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).

6 / T400 TYPICAL WALL PHONE OUTLET CONFIGURATION

SCALE: N.T.S.

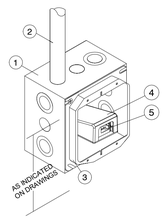


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).
7. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

7 / T400 TYPICAL DUAL DATA OUTLET CONFIGURATION

SCALE: N.T.S.

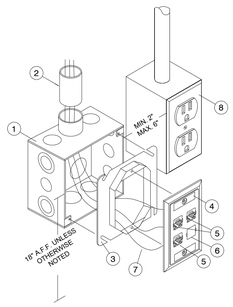


KEYED NOTES:

1. 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. DOUBLE GANG PLASTER RING (BY DIV 26).
4. SURFACE MOUNT BOX INSIDE THE 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH DOUBLE GANG BOX (BY DIV 27).
5. RJ-45 INSERT (BY DIV 27).

8 / T400 TYPICAL WALL-MOUNTED WIRELESS ACCESS POINT

SCALE: N.T.S.



KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. BLANK INSERT (BY DIV 27).
7. CABLE AS SPECIFIED (BY DIV 27).
8. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

9 / T400 TYPICAL THREE DATA OUTLET CONFIGURATION

SCALE: N.T.S.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/26/2025 (3)	ADDENDUM NO. 3

J

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

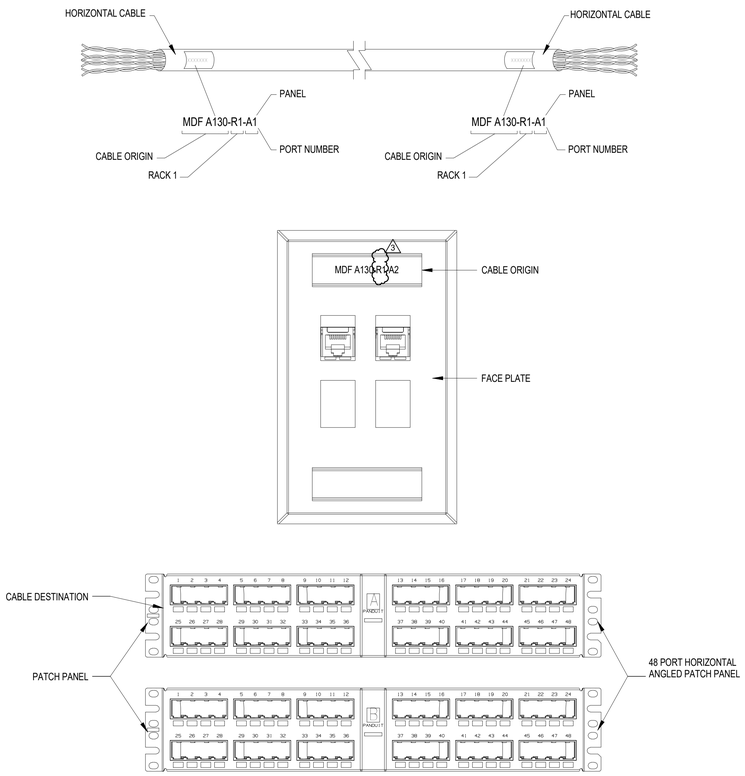
07/18/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

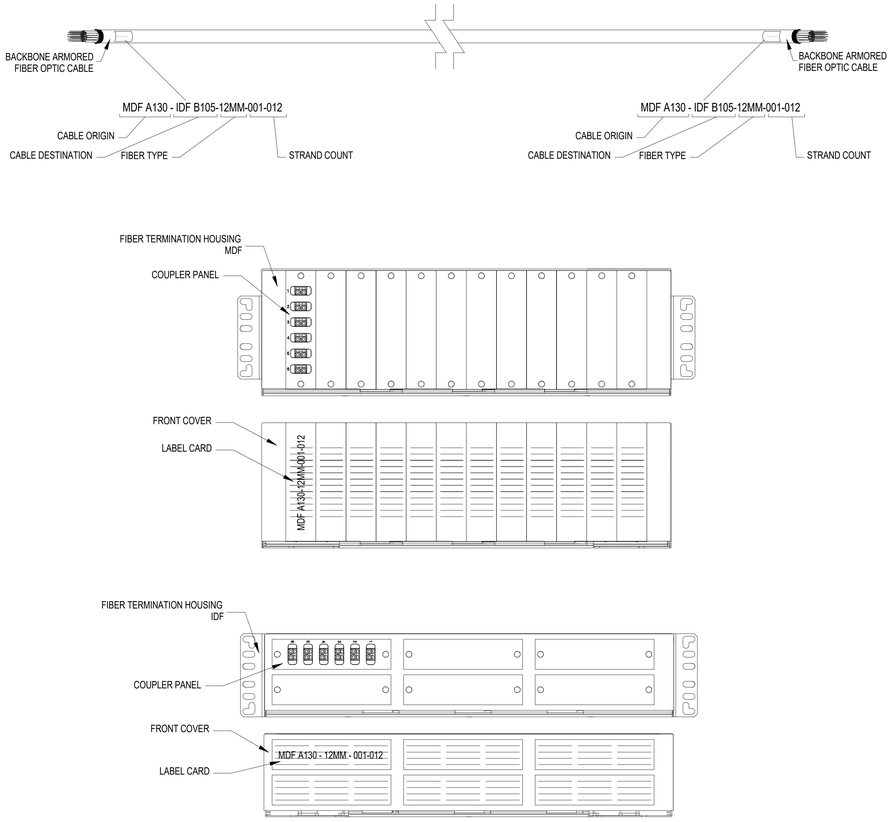
TECHNOLOGY TYPICAL DETAILS

SHEET NO.
j-T400



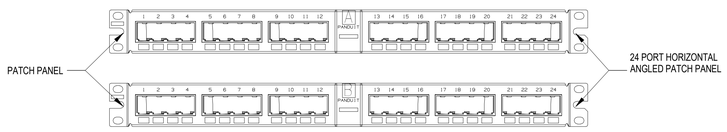
1 T500 TYPICAL HORIZONTAL DATA CABLE LABELING SCHEME

SCALE: N.T.S.



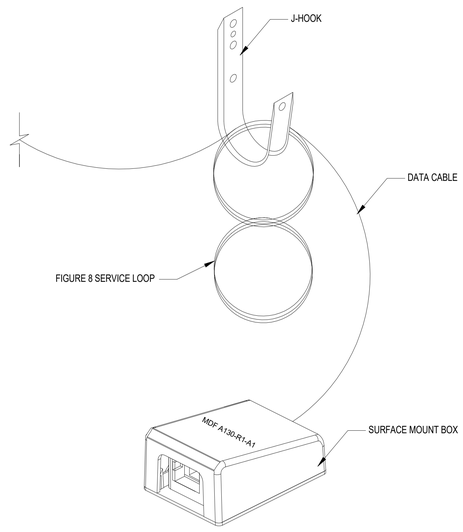
2 T500 TYPICAL FIBER BACKBONE LABELING SCHEME

SCALE: N.T.S.



3 T500 TYPICAL COPPER BACKBONE LABELING SCHEME

SCALE: N.T.S.



4 T500 ABOVE ASSESSIBLE CEILING LABELING SCHEME

SCALE: N.T.S.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/26/2025	ADDENDUM NO. 3

J

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HIGHLANDS ELEMENTARY SCHOOL
2022 COLONIST PARK DRIVE
SUGAR LAND, TX 77478

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 10-31-25
RCDD

07/18/2025

ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

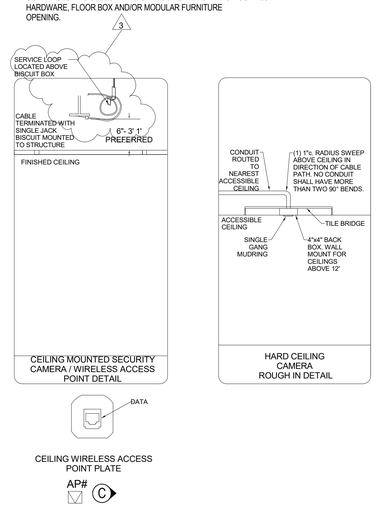
PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

TECHNOLOGY TYPICAL LABELING SCHEME

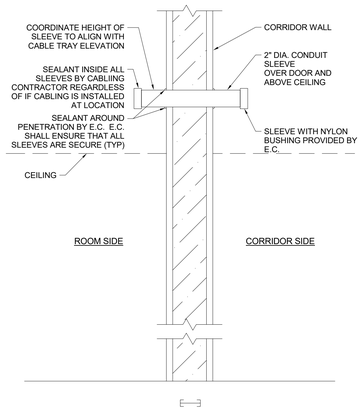
SHEET NO.
j-T500

GENERAL NOTE

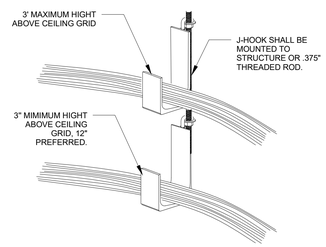
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



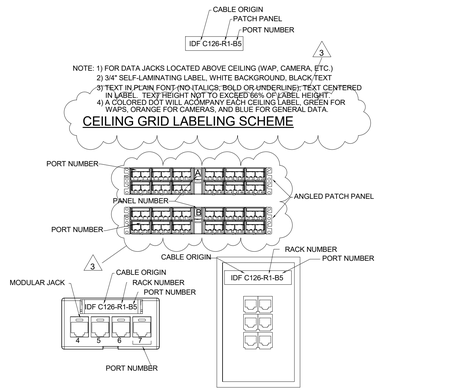
1 DATA ROUGH-IN DETAILS
SCALE: NS



2 TYPICAL CABLING SLEEVE
SCALE: NTS

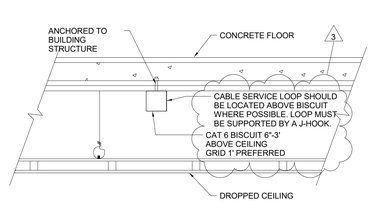


3 PANDUIT J-HOOK DETAIL
SCALE: NTS

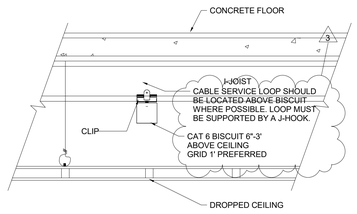


4 LABELING & CABLING SCHEMES
SCALE: NTS

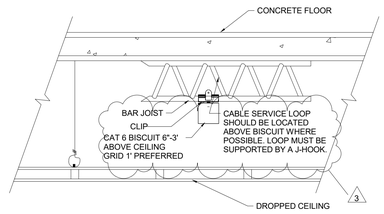
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

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03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025	ADDENDUM NO. 3

j

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Highlands Elementary School
2022 Colonist Park Dr. Sugar Land, TX 77478

SEAL

07-18-25

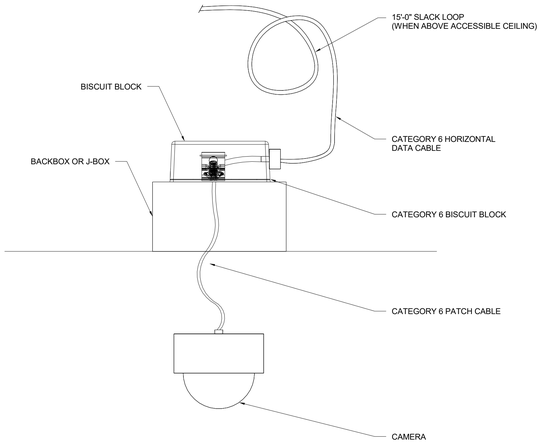
AVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - HIGHLAND ES - DETAILS

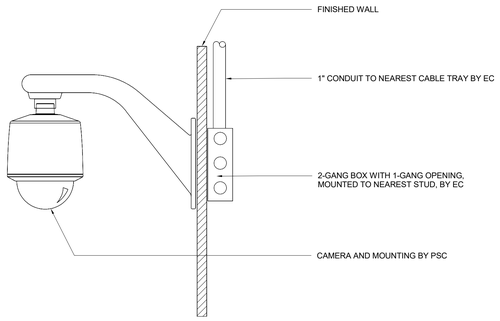
j-TN.500

GENERAL NOTES:

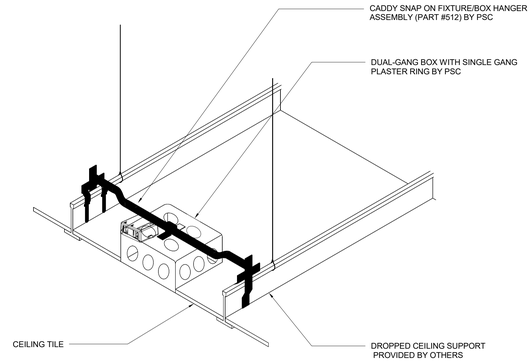
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



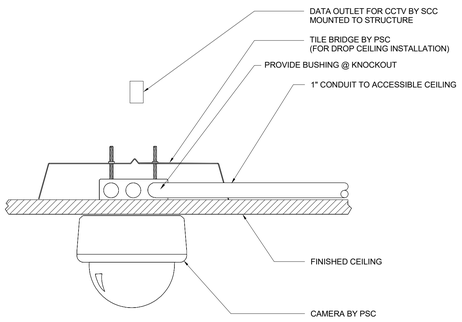
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

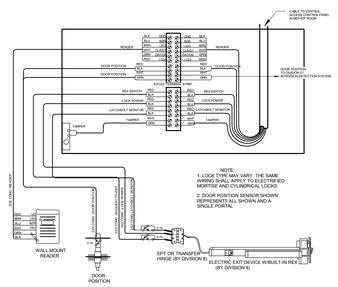


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

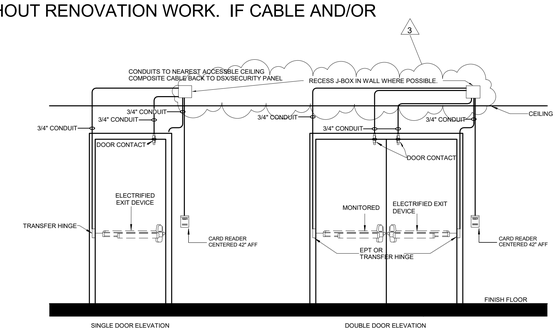
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

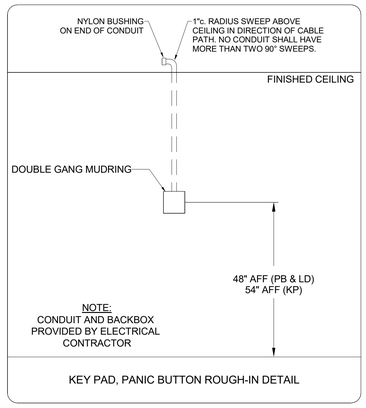
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025	ADDENDUM NO. 3

j

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Highlands Elementary School
2022 Colonist Park Dr, Sugar Land, TX 77478

SEAL

07-18-25

MVA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING
AND
PERMITTING

TECHNOLOGY - HIGHLAND ES - SECURITY DETAILS

j-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

FORT BEND INDEPENDENT SCHOOL DISTRICT 2023 BOND

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

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Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

Sheet List Table	
Sheet Number	Sheet Title
School: k-Hunters Glen ES	
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k-A00-01	GENERAL NOTES AND ABBREVIATIONS
k-D.101	DEMO PLAN
k-D.101-2	DEMO PLAN PHOTOS
k-D.101-3	DEMO PLAN PHOTOS
k-ED.100	ELECTRICAL DEMOLITION AND TEMPORARY KITCHEN PLAN
k-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
k-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
k-A.101	SITE PLAN
K-A.200	SLAB DEPRESSION PLAN
k-A.201	OVERALL FLOOR PLAN
k-A.300	SLAB DIMENSION CONTROL PLAN
k-A.301	KITCHEN PLAN
k-A.302	TEMPORARY KITCHEN LAYOUT
k-A.401	REFLECTED CEILING PLAN
k-A.501	FINISH FLOOR PLAN
k-A.502	PARTITION SCHEDULE
k-QF0.0	FS GENERAL COORDINATION NOTES
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k-QF1.1	FS FACILITY MODEL
K-QF1.2	FS EQUIPMENT MODEL
k-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
k-QF1.4	FS PLUMBING PLAN
k-QF1.5	FS ELECTRICAL PLAN
k-QF1.6	FS CONDENSING UNITS
k-QF1.7	FS WALK-INS
k-QF1.8	FS SERVING LINE
k-QF1.9	FS SERVING LINE
k-QF2.0	FS DEMO PLAN
k-QF2.1	FS TEMPORARY SERVING
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k-QF4.2	FS DETAILS
k-QF4.3	FS DETAILS
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k-M2.01	KITCHEN MECHANICAL DETAILS
k-M2.02	MECHANICAL DETAILS (CONT.)
E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
E.001	ELECTRICALAND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
E.013	ELECTRICAL KITCHEN DETAILS
E.060	LIGHTING SCHEDULES
k-E.100	LIGHTING FLOOR PLANS
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k-E.300	FIRE ALARM FLOOR PLANS
k-E.400	ELECTRICAL SCHEMATIC
k-P0.01	PLUMBING NOTES & SCHEDULES
k-P0.02	PLUMBING SCHEDULES & DETAILS
k-P1.01	PLUMBING FLOOR PLAN
k-P1.02	PLUMBING FLOOR PLAN TEMPORARY KITCHEN
k-P2.00	PLUMBING RISER DIAGRAMS
k-T000	TECHNOLOGY SYMBOLS & LEGEND
k-T200	TECHNOLOGY COMPOSITE FLOOR
k-T201	TECHNOLOGY NEW_RENOVATION KITCHEN PLAN
k-T300	TECHNOLOGY TEMPORARY KITCHEN PLAN
k-T202	TECHNOLOGY ENLARGED VIEWS
k-T400	TECHNOLOGY TYPICAL DETAILS
k-T401	TECHNOLOGY TYPICAL DETAILS
k-T500	TECHNOLOGY TYPICAL DETAILS
k-TN-000	TECHNOLOGY - INDEX SHEET
k-TN-001	TECHNOLOGY - DEMO
k-TN-100	TECHNOLOGY - OVERALL
k-TN-101	TECHNOLOGY - KITCHEN
k-TN-500	TECHNOLOGY - DETAILS
k-TN-600	TTECHNOLOGY - SECURITY DETAILS
k-TN-700	TECHNOLOGY - AV DETAILS

REGISTERED ARCHITECT — MICHAEL A. MWANGUHYA — 22651 — STATE OF TEXAS
04SEP.2025

ADDENDUM NO. 4 - SEP 04, 2025

k

RCP - GENERAL NOTES

1. CEILING GRID SHALL BE INSTALLED TO MATCH EXISTING GRID'S POINT OF ORIGIN. THIS WILL REDUCE NEED TO RE-LOCATE ABOVE CEILING DUCTS, SPRINKLER PIPING AND OTHER SUPPORT SYSTEMS.
2. REFER TO SHEET A00-01 FOR GENERAL NOTES. GENERAL NOTES APPLY TO ALL SEVEN SCHOOL KITCHEN REMODELS.
3. LIGHTING LEVELS SHOULD BE 50 FC IN PREPARATION AREAS, WARE WASH AND SERVING LINES, OR MEET MINIMUM HEALTH CODE LEVELS, WHICHEVER ITS GREATER. SEE MEP PLANS
4. REPLACE HVAC DEVICES. REPLACE LIGHTING WITH 24"x24" LED LAY IN LIGHT AS SCHEDULED IN ELECTRICAL PLANS.
5. REFER TO MECHANICAL, ELECTRICAL SHEETS FOR DEVICE SCHEDULES.

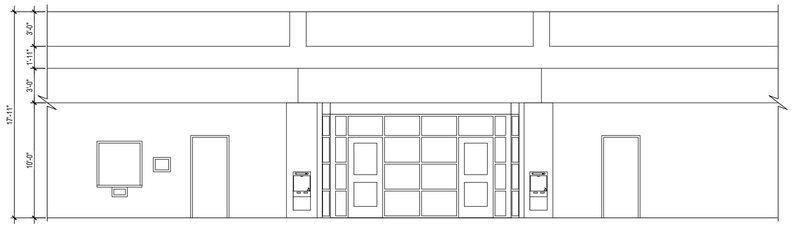
RCP - NUMBERED NOTES

01 PROVIDE 30"x30" MIN. ACCESS HATCH IN SOFFIT CENTERED ON MOTOR.

02 AFTER LOWERING THE NEW POWER RETRACTION SYSTEM. REPAIR AND PAINT SOFFITS AND SIDWALLS OF FURR TO MATCH EXISTING.

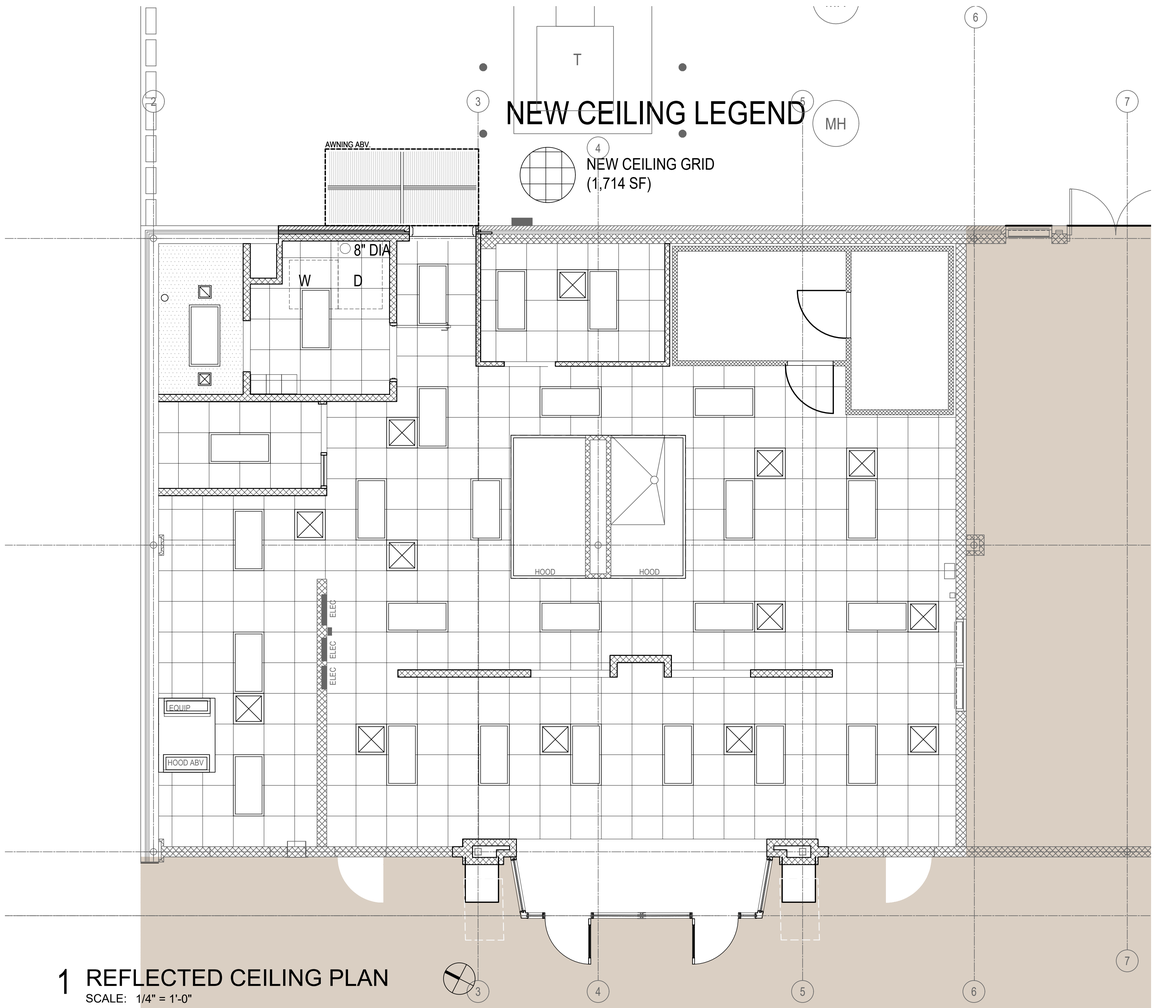
03 SEE SHEET M2.02 FOR ROOF PENETRATION. MATCH EXISTING ROOF CONSTRUCITON AND MAINTAIN INTEGRITY OF WARRANTY CURRENTLY IN PLACE.

2 RCP GENERAL NOTES



3 FOOD SERVICE AREA ELEVATION

SCALE: 3/16" = 1'-0"



1 REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

ISSUE:

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k

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FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
6951 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

28 AUG 2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
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HOUSTON, TEXAS 77079

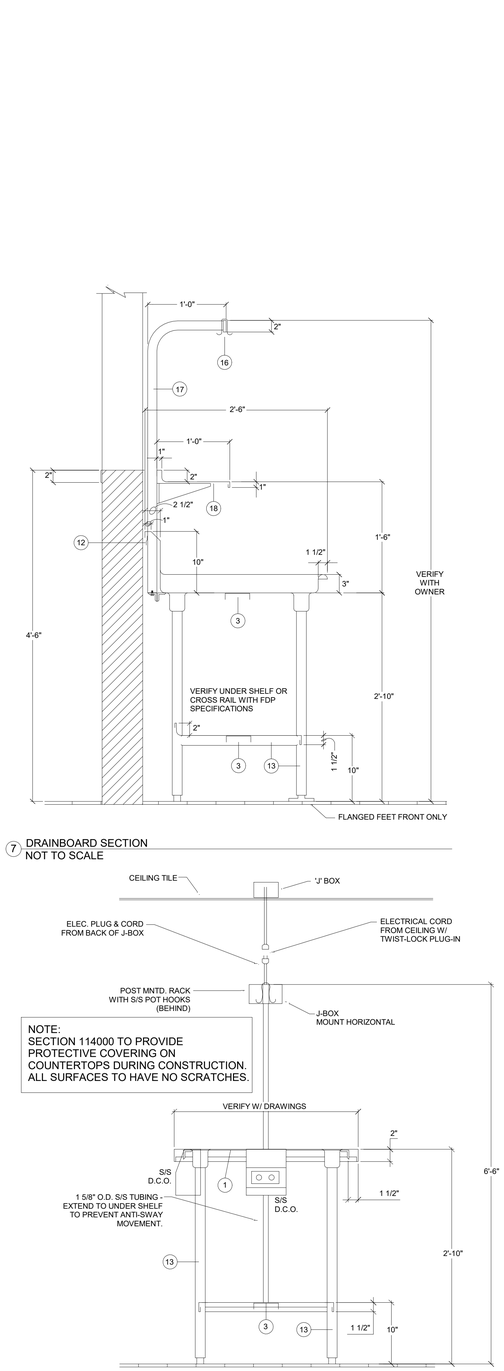
PROJ. NO.: 23-25
DATE: 07/28/25
ADDENDUM NO. 3 - AUG 28, 2025

REFLECTED CEILING PLAN

k-A.401

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\K-Hunters Glen ES\k-A.401 REFLECTED CEILING PLAN.dwg Aug 27, 2025 - 4:11pm

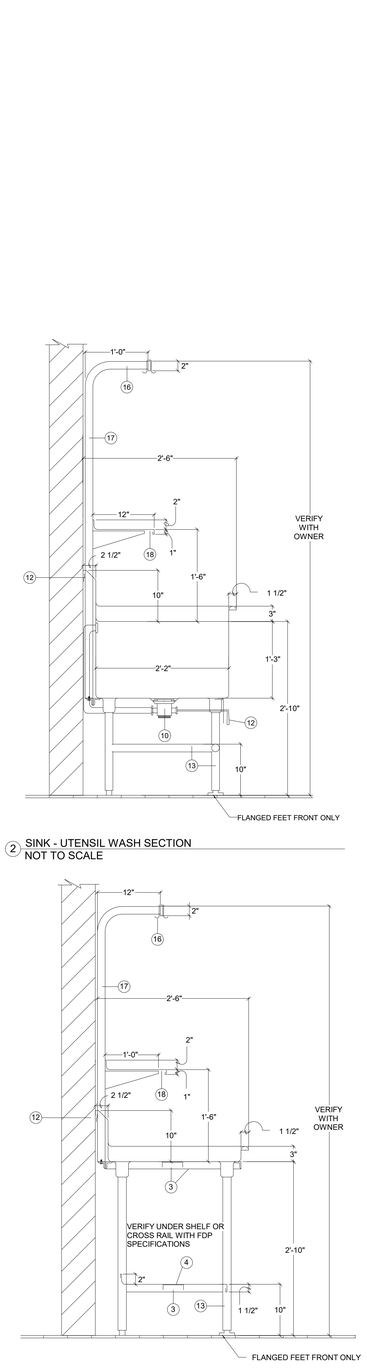
7 DRAINBOARD SECTION
NOT TO SCALE



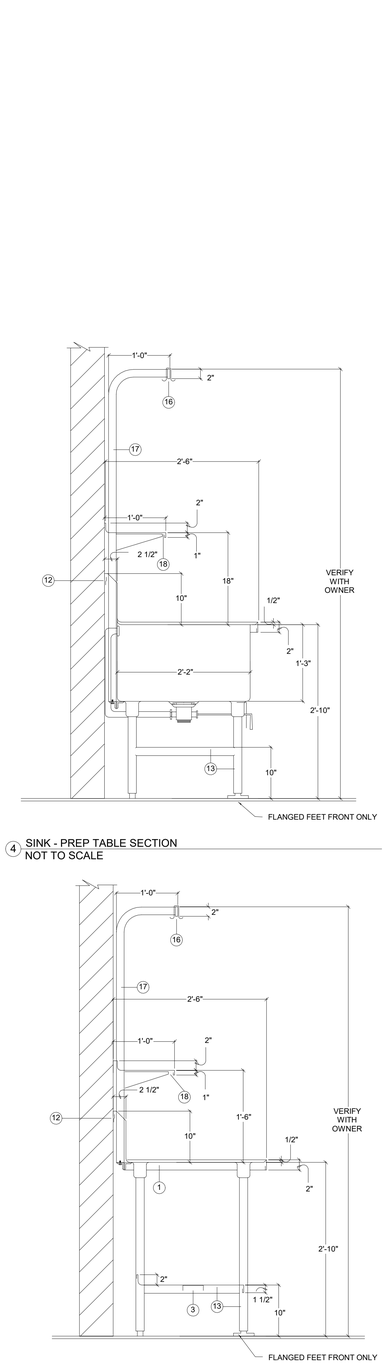
6 WORKTABLE - ISLAND W/ S.BAR UT RACK & END UC DCO SECTION
NOT TO SCALE

2 SINK - UTENSIL WASH SECTION
NOT TO SCALE

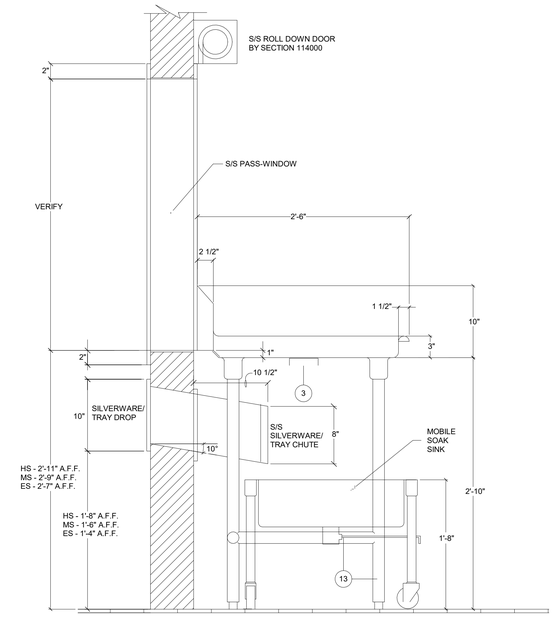
4 SINK - PREP TABLE SECTION
NOT TO SCALE



5 DRAINBOARD - UTENSIL WASH SECTION
NOT TO SCALE



3 DRAINBOARD - PREP SINK SECTION
NOT TO SCALE



8 WAREWASH - TRAY DROP/SOAK SINK SECTION
NOT TO SCALE

SECTION DETAIL NOTES:

1. 1 1/2" X 1 1/2" X 1/8" GALVANIZED ANGLE IRON.
2. 1" X 4" 14 GAUGE STAINLESS STEEL HAT CHANNEL.
3. 16 GAUGE STAINLESS STEEL C-CHANNEL.
4. 16 GAUGE STAINLESS STEEL UNDER SHELF, COVE UP REAR 2", TURN DOWN FRONT 1 1/2".
5. 1/2" CEMENT BACKERBOARD WITH TILE FRONT BY TRADE CONTRACTOR OR COUNTER MANUFACTURER. VERIFY FINISH WITH ARCHITECTURAL DRAWINGS.
6. COLD PAN - 2" RIGID INSULATION WITH 1" C.P. DRAIN - 16 GAUGE STAINLESS STEEL SECTION FALSE BOTTOM. PERFORATE FALSE BOTTOM WITH 1/4" DIA. HOLES AT 3" O.C.
7. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN DOOR WITH RECESSED PULL.
8. MANIFOLD DRAINS AT HOT FOOD UNITS WITH 1" TYPE 'K' COPPER AND EXTEND TO VALVE IN PLUMBING COMPARTMENT.
9. FINISHED TRUE AND LEVEL MASONRY BASE BY DIVISION 09. CLOSE COUNTER BODY AT BASE AND SEAL BY SECTION 11 40 00.
10. FISHER #22314 DRAIN WITH TAILPIECE AND OVERFLOW.
11. 14 GAUGE STAINLESS STEEL BRACKET WITH DRAIN HANDLE BUSHING.
12. 16 GAUGE STAINLESS STEEL 'Z' CLIP TO WALL AND SEAL.
13. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL LEGS AND CROSS RAILS.
14. 1/2" S/S TUBING DRAIN LINE - STRAP TO SHELF AND WALL - EXTEND DOWN TO TOP OF SPLASH.
15. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL TUBING - SUPPORT FRONT OF SHELF WITH 1/2" ALL-THREAD INSIDE TUBING EXTENDING TO STRUCTURE ABOVE.
16. 1/4" S/S BAR STOCK WELDED TO TOP OF EACH POST - POT HOOKS TO BE COMPONENT HARDWARE #J77-4401 SPACED 8" O.C.
17. 1 5/8" 16 GAUGE STAINLESS STEEL TUBING - BOLT TO ANGLE IRON AND EXTEND UP THRU SPLASH TO 7'-0" A.F.F.
18. OVER SHELF - 16 GAUGE STAINLESS STEEL, COVE UP REAR 2", TURN FRONT AND ENDS DOWN 1", ENDS TO BE CAPPED WITH EASED CORNERS WHERE ADJACENT TO WALL / FIXTURE.
19. 18 GAUGE STAINLESS STEEL LOUVERED PANEL.
20. 18 GAUGE STAINLESS STEEL LOUVERED DOUBLE PAN DOOR WITH RECESSED PULL.
21. NUMBER NOT USED.
22. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN SLIDING DOOR WITH COMPONENT HARDWARE COMPONENTS

    A. #B57 - (VERIFY LENGTH) EXTRUDED ALUMINUM TRACK.
    B. #B58-5511 & #B58-5521 FRONT & REAR DOOR SHEAVES.
    C. #B62-1093 DOOR GUIDE.
    D. #B60-1086 DOOR STOPS WHERE NEEDED.
    E. #P62-1010 RECESS PULLS.

1 SECTION DETAIL NOTES
NOT TO SCALE

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FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

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FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
46854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 46854119 ON: 07/18/2025

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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/25
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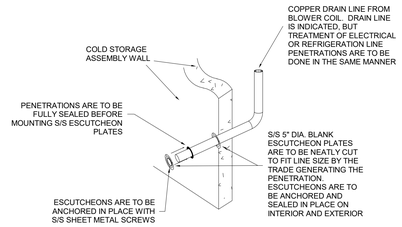
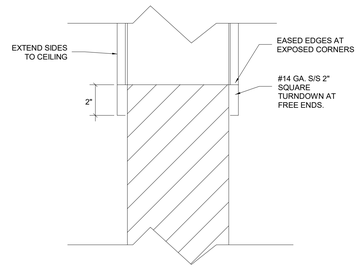
FS SECTIONS & DETAILS

K-QF4.1

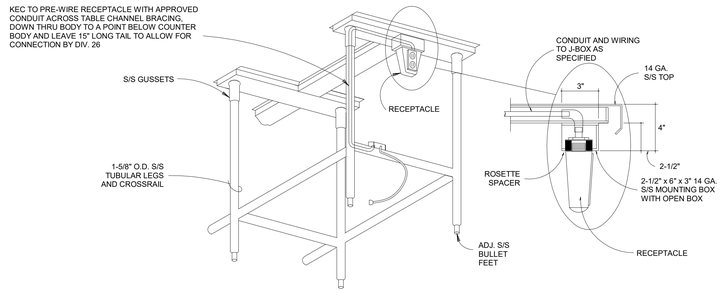


3 COLD STORAGE ASSEMBLY ESCUTCHEON & PENETRATION DETAIL
NOT TO SCALE



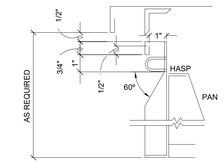
4 S/S WALL CAP DETAIL
NOT TO SCALE

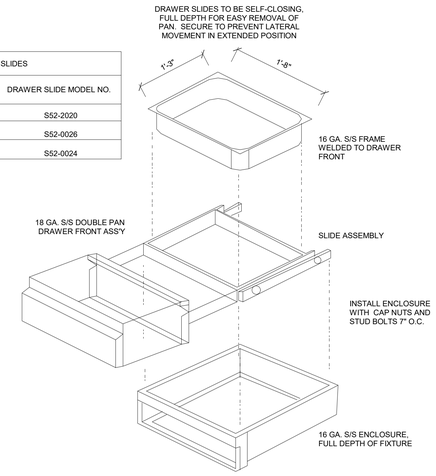
NOTE:
COORDINATE ALL RECEPTACLES WITH ELECTRICAL CONTRACT DRAWING REQUIREMENTS, REFER TO ELECTRICAL PLAN



5 WORKTABLE - ELECTRICAL RECEPTACLE MOUNTED UNDER TOP DETAIL
NOT TO SCALE

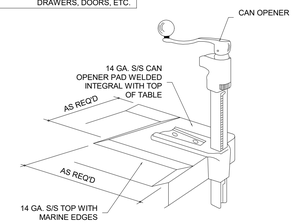
COMPONENT HARDWARE DRAWER PAN AND SLIDES		
TYPE	DRAWER PAN MODEL NO.	DRAWER SLIDE MODEL NO.
UTILITY	S80-2020	S52-2020
BREAD	S83-2020	S52-0026
REFRIGERATOR	S81-1520	S52-0024



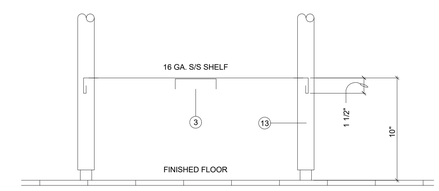


6 DRAWER ASSEMBLY DETAIL
NOT TO SCALE

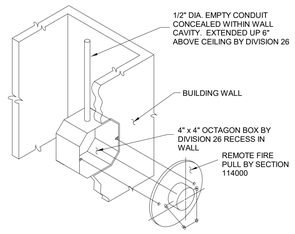
NOTE: DO NOT LOCATE CAN OPENER PAD IN A POSITION THAT WOULD ALLOW CAN OPENER TO OBSTRUCT OPENING OF DRAWERS, DOORS, ETC.



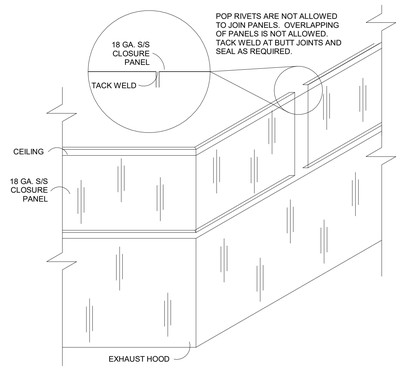
10 SINK - PREP MARINE EDGE CAN OPENER DETAIL
NOT TO SCALE



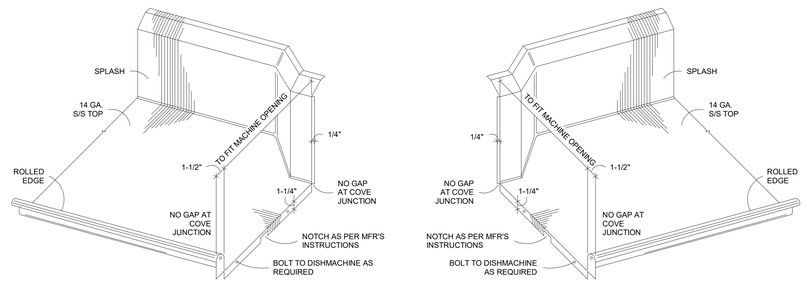
11 UNDER SHELF DETAIL
NOT TO SCALE



12 FIRE PROTECTION SYSTEM FIRE PULL DETAIL
NOT TO SCALE



13 EXHAUST HOOD CLOSURE PANEL DETAIL
NOT TO SCALE



14 DISHTABLE - SOILED & CLEAN CONNECTION DETAIL
NOT TO SCALE

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SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
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PROFESSIONAL MEMBER
Melissa Moore
7/15/2025 APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 468544119
QN: 0119620035

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PROJ. NO.: 23-25
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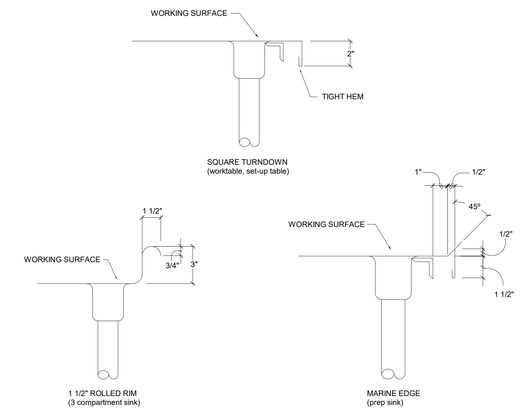
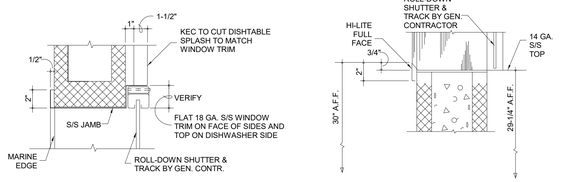
FS DETAILS

K-QF4.2

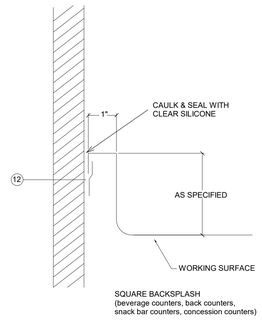


1 EDGE DETAILS
NOT TO SCALE

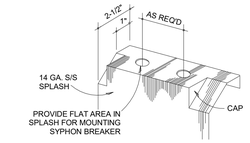


4 WAREWASH - TRAY DROP WINDOW SECTION
NOT TO SCALE

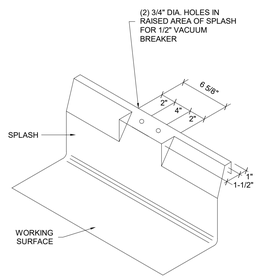
3 WAREWASH - TRAY DROP SECTION
NOT TO SCALE



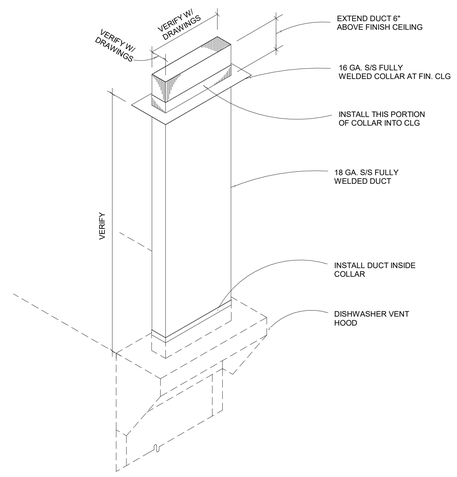
2 BACKSPLASH DETAILS
NOT TO SCALE



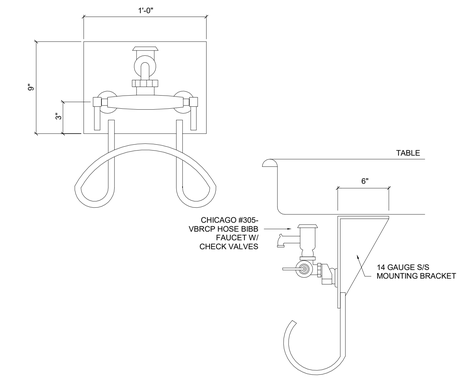
6 SPLASH @ SYPHON BREAKER
NOT TO SCALE



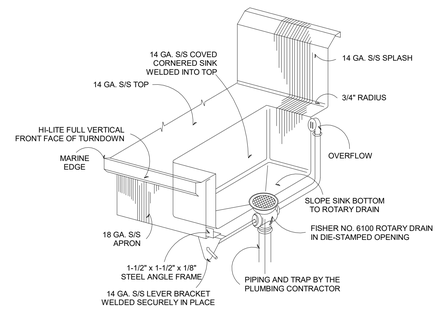
8 VACUUM BREAKER DETAIL
NOT TO SCALE



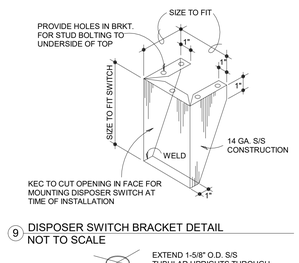
5 DISHMACHINE VENT RISER DETAIL
NOT TO SCALE



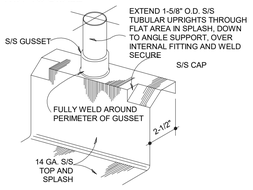
12 HOSE BIBB DETAIL
NOT TO SCALE



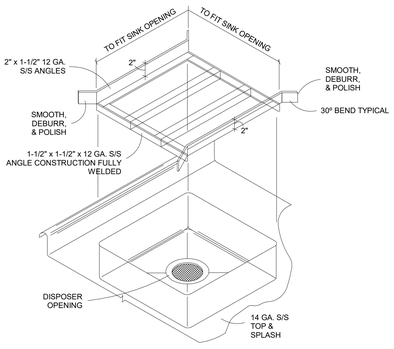
11 SINK ASSEMBLY DETAIL
NOT TO SCALE



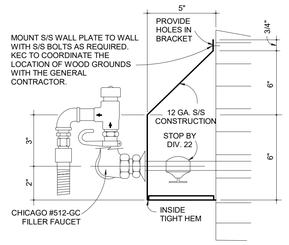
9 DISPOSER SWITCH BRACKET DETAIL
NOT TO SCALE



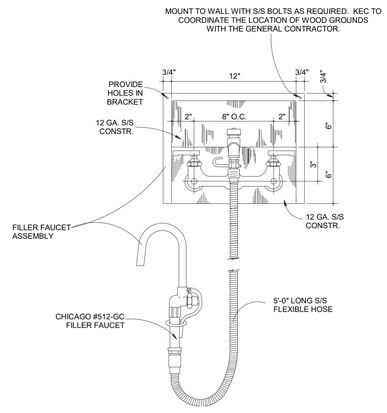
7 SPLASH @ UPRIGHT (DISH TABLE) DETAIL
NOT TO SCALE



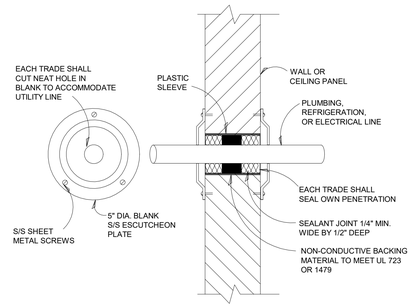
13 SINK - DISPOSER W/ REMOVABLE ANGLED RACK GUIDE DETAIL
NOT TO SCALE



14 FILL FAUCET DETAIL
NOT TO SCALE



15 COLD STORAGE ASSEMBLY WALL PENETRATION DETAIL
NOT TO SCALE



CUSTOM FABRICATION NOTES:

A. WORK SHALL BE DONE IN AN APPROVED WORKMANLIKE MANNER, TO COMPLETE SATISFACTION OF FOODSERVICE DESIGN PROFESSIONALS (FDP).

B. STAINLESS STEEL SHALL BE U.S. STANDARD GAUGES AS CALLED FOR. 18-8, TYPE 304, NOT OVER .012% MAXIMUM CARBON, NO. 4 FINISH.

C. GALVANIZED IRON SHALL BE ARMCO OR EQUAL. FRAMEWORK OF GALVANIZED IRON SHALL BE WELDED CONSTRUCTION, HAVING WELDS SMOOTH, AND WHERE GALVANIZING HAS BURNED OFF, TOUCHED UP WITH HIGH-GRADE ALUMINUM BRONZE.

D. LEGS AND CROSSRAIL SHALL BE CONTINUOUSLY WELDED, UNLESS OTHERWISE NOTED, AND GROUND SMOOTH.

E. BOTTOM OF LEGS AT FLOOR SHALL BE FITTED WITH SANITARY STAINLESS STEEL BULLET-TYPE FOOT, WITH NO LESS THAN 1/2" ADJUSTMENT.

F. LEGS SHALL BE FASTENED TO EQUIPMENT AS FOLLOWS:

01. TO SINKS BY MEANS OF CLOSED GUSSETS. GUSSETS SHALL BE S/S, REINFORCED WITH BUSHING, HAVING SET SCREWS FOR SECURING LEGS.

02. TO TABLES AND DRAINBOARDS WITH CLOSED GUSSETS WHICH SHALL BE WELDED TO GALVANIZED HAT SECTIONS OR CHANNELS, 14 GAUGE OR HEAVIER, EXPOSED HAT SECTIONS HAVING CLOSED ENDS. BRACING SHALL BE UNDERSIDE OF TOPS.

G. CLOSED GUSSETS SHALL BE 3" MINIMUM DIAMETER AT TOP, WELDED TO FRAME MEMBERS OR TO SINK BOTTOM.

H. ROLLS SHALL BE 1 1/2" DIAMETER, EXCEPT AS DETAILED TO THE CONTRARY, WITH CORNERS BULLNOSED, GROUND, AND POLISHED.

I. SEAMS AND JOINTS SHALL BE SHOP-WELDED WHERE POSSIBLE. WELDS TO BE GROUND AND POLISHED TO MATCH ORIGINAL FINISH. MATERIALS 18 GAUGE OR HEAVIER SHALL BE WELDED.

J. METAL TOPS SHALL BE ONE-PIECE WELDED CONSTRUCTION UNLESS SPECIFIED OTHERWISE, REINFORCED ON UNDERSIDE WITH GALVANIZED HAT SECTIONS OR CHANNELS WELDED IN PLACE. CROSSBRACE TO BE NOT MORE THAN 30" ON CENTERS.

K. HARDWARE SHALL BE SOLID MATERIALS AND EXCEPT WHERE EXPOSED OR SPECIFIED TO THE CONTRARY, OF CAST BRASS, CHROME-PLATED. IDENTIFY ALL HARDWARE WITH MANUFACTURER'S NAME AND NUMBER SO THAT BROKEN OR WORN PARTS MAY BE ORDERED AND REPLACED.

L. FABRICATE SINK COMPARTMENTS WITH 3/4" COVED VERTICAL AND HORIZONTAL CORNERS. MULTIPLE- COMPARTMENT PARTITIONS TO BE DOUBLE THICKNESS, CONTINUOUSLY WELDED WHERE SHEETS JOIN AT TOP. FRONT OF MULTIPLE-COMPARTMENT PARTITIONS TO BE CONTINUOUS ON EXTERIOR. BOTTOMS SHALL BE CREASED TO DRAIN.

M. ENDS OF FIXTURES, SPLASHBACKS, SHELVES, ETC., SHALL BE FINISHED FLUSH TO WALLS OR ADJOINING FIXTURES.

N. DISHTABLES, DRAINBOARDS, SPLASHBACKS, AND TURN-UP EDGES SHALL HAVE RADIUS BENDS IN ALL HORIZONTAL AND VERTICAL CORNERS, COVED AT INTERSECTIONS.

O. ROUNDED AND COVED CORNERS OR RADIUS BENDS SHALL BE 1/2" RADIUS OR LONGER.

P. UNDERSIDES OF TOPS TO BE COATED WITH HEAVY-BODIED RESINOUS MATERIAL COMPOUND FOR PERMANENT, NON-FLAKING ADHESION TO METAL, 1/8" THICK, APPLIED AFTER REINFORCING MEMBERS HAVE BEEN INSTALLED, DRYING WITHOUT DIRT-CATCHING CREVICES.

Q. SHELVES ARE TO BE TURNED UP 2" ON THE BACK EDGE. TURN OTHER EDGES DOWN 1 1/2" TO FORM OPEN CHANNELS. REINFORCE SHELF UNITS TO SUPPORT 40 LBS. PER SQUARE FOOT LOADING, PLUS 100% IMPACT LOADING.

R. TRIMWORK AND FRAMING AT MASONRY OPENINGS SHALL BE 18 GAUGE STAINLESS STEEL AND FORMED SO AS TO FIT SNUG TO WALLS AND ADJACENT SURFACES. FRAMING SHALL EXTEND A MINIMUM OF 2" ON EACH SURFACE. SEAL TRIMWORK TO WALLS. REFER TO DRAWINGS.

S. METAL COMPONENTS, UNLESS SPECIFIED OR NOTED OTHERWISE, TO BE THE FOLLOWING GAUGES:

TABLETOPS	14 GAUGE STAINLESS STEEL
WALL SHELVES	16 GAUGE STAINLESS STEEL
UNDER SHELVES	16 GAUGE STAINLESS STEEL
SINKS & DRAINBOARDS	14 GAUGE STAINLESS STEEL
EXHAUST DUCTS	18 GAUGE STAINLESS STEEL
LEGS - 1 5/8" DIA.	16 GAUGE STAINLESS STEEL

10 CUSTOM FAB NOTES
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

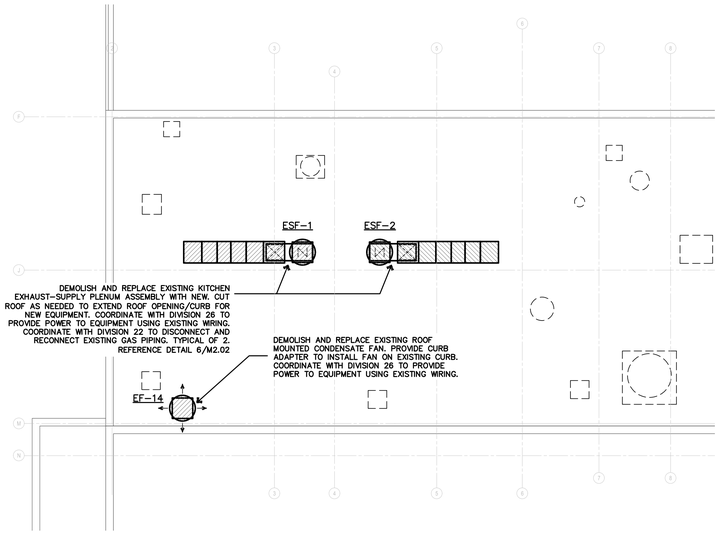
SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025 DATE APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/18/2025

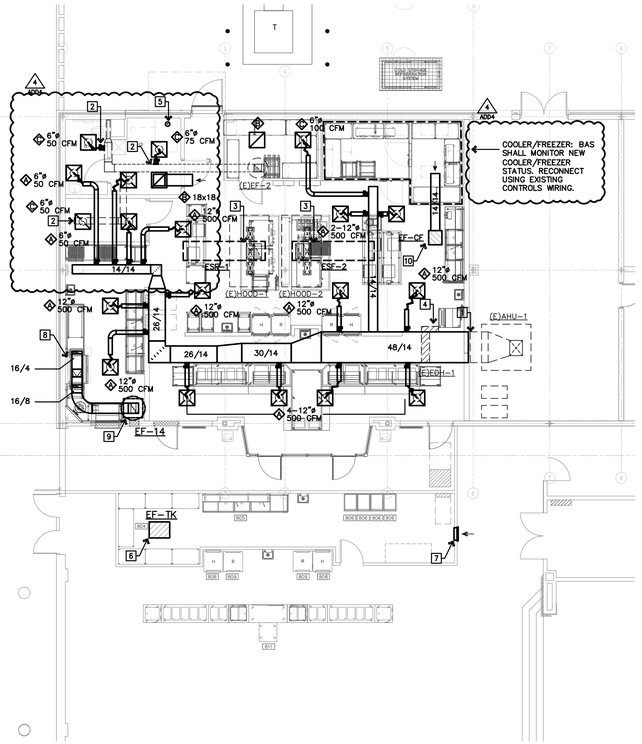
MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/25
ISSUED FOR BIDDING AND PERMITTING
FS DETAILS

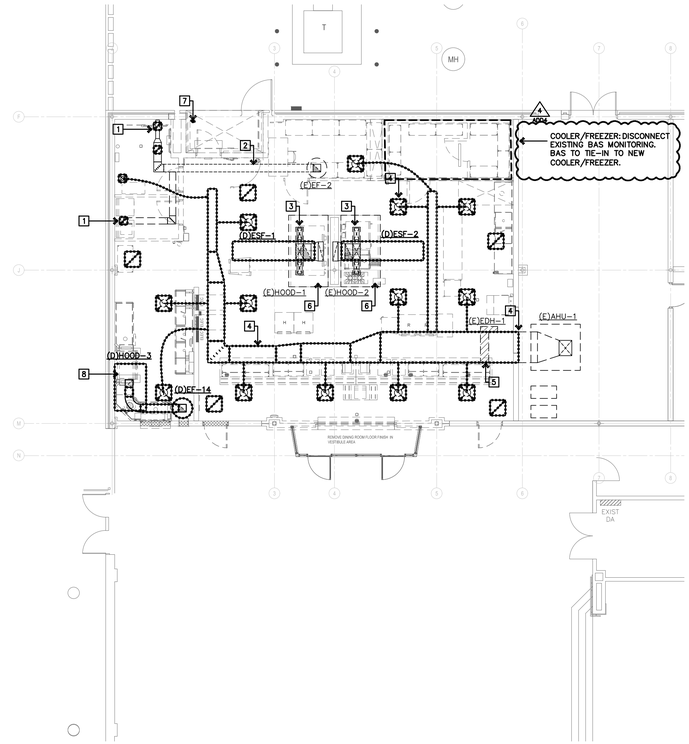
K-QF4.3



3 MECHANICAL ROOF FLOOR PLAN
SCALE: 1/8" = 1'-0"



2 RENO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"



1 DEMO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A	CEILING DIFFUSER – 24" X 24" FACE, PATTERN TYPE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE SCD A1–12" X 12"
B	CEILING RETURN GRILLE – 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE PDFR B1–12" X 12"
C	CEILING EXHAUST GRILLE – 24" X 24" PERFORATED FACE, STEEL CONST., WHITE FINISH, NECK SIZE SHOWN, U.L. LISTED PRICE PDDR C1–12" X 12"

NOTES:
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPES FOR AIR DEVICES.

A/D04

KITCHEN HOOD REFURBISHMENT NOTES

HOOD REFURBISHMENT FOR KITCHEN HOODS (QUANTITY 2):
- STEAM WASH AND DEEP CLEAN STAINLESS STEEL HOOD ASSEMBLY, CASING, AND SUPPLY GRILLES WHERE APPLICABLE.
- REPLACE GREASE FILTER RACKS.
- CLEAN EXISTING MAKE-UP AIR AND GREASE EXHAUST DUCT.
- RELAMP EXISTING LIGHT FIXTURES WITH NEW 4000K BULBS LISTED FOR USE IN AN ENCLOSED KITCHEN HOOD FIXTURE.
- COORDINATE WITH DIVISION 11 FOR REPLACEMENT OF ANSUL FIRE SUPPRESSION SYSTEM.
- HOOD ASSEMBLIES SHALL BE CLEANED TO MEET THE STANDARDS ESTABLISHED IN NFPA STANDARD 96.

KITCHEN HOOD EXHAUST & MAKE-UP AIR UNIT SCHEDULE

MARK	ESF-1,2
SERVES	KITCHEN HOOD-1 & 2
SUPPLY SECTION	
TYPE	INDIRECT GAS-FIRED MAKE-UP AIR UNIT
DRIVE	DIRECT
SPEED CONTROL	VFD
SUPPLY CFM	2250
EXT. S.P. (IN. W.G.)	0.375
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	4.6 A
UNIT MOCP	15 A
HEATING MEDIUM	NATURAL GAS
INPUT/OUTPUT (MBH)	150.0/121.5
TURNDOWN RATIO	4:1
MANUFACTURER	GREENHECK
MODEL	IGX-P109-H12-MF-E
EXHAUST SECTION	
TYPE	UPBLAST BELT DRIVE CENTRIFUGAL
EXHAUST CFM	3600
EXT. S.P. (IN. W.G.)	0.75
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	3.75 A
UNIT MOCP	15 A
MANUFACTURER	GREENHECK
EXHAUST FAN MODEL	CUBE-200-15

NOTES
1. EXHAUST FAN: PROVIDE FAN WITH PRE-FABRICATED ROOF CURB ADAPTER, VENTED CURB EXTENSION, HINGING KIT, HEAT BAFFLE, DRAIN CONNECTION, GREASE TRAP, AND DISCONNECT SWITCH. FANS SHALL BE UL LISTED FOR USE WITH TYPE I GREASE HOOD.
2. EXHAUST FAN: PROVIDE NEW MOTOR STARTER, SIZED FOR EXHAUST FAN MOTOR AND INSTALLED IN PLACE OF EXISTING. REFERENCE THE SPECIFICATIONS FOR STARTER REQUIREMENTS. COORDINATE WITH DIV.25 FOR RE-TERMINATION OF PERMISSIVE ON/OFF CONTROL. COORDINATE WITH DIV.26 FOR RE-TERMINATION OF LOCAL HOOD SWITCH INTERLOCK FOR START/STOP CONTROL.
3. SUPPLY FAN/FURNACE: FLUE GAS FROM HEATING COIL SHALL BE POWER VENTED.
4. SUPPLY FAN/FURNACE: WEATHERHOOD WITH ALUMINUM MESH.
5. SUPPLY FAN/FURNACE: 5 YEAR HEAT EXCHANGER WARRANTY.
6. SUPPLY FAN/FURNACE CONTROLS: INTEGRAL HEATER CONTROLS WITH BAS INTERLOCK FOR PERMISSIVE ON/OFF AND LOCAL SWITCH INTERLOCK FOR CONTROL FROM KITCHEN HOOD SWITCH. FURNACE CONTROLS SHALL BE PROGRAMMED FOR 64°F LAT, WITH A LOCKOUT FOR O/A TEMPERATURES ABOVE THE LAT SETPOINT. COORDINATE WITH DIV.25 AND DIV.26 FOR CONTROLS AND SWITCH INTERLOCKS.
7. TWO POINT POWER CONNECTION: ONE FOR EXHAUST FAN AND ONE FOR INTAKE/SUPPLY FAN.
8. INTERLOCK FAN(S) WITH ASSOCIATED COOKING HOOD
9. INTERLOCK FAN WITH SWITCH ON KITCHEN HOOD.
10. UNIT TO BE PROVIDED WITH GALVANIZED STEEL FAN PACK EXTENSION/COMBINATION CURB.
11. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH. A/D04

MECHANICAL RENO KEYED NOTES

1. TIE-IN NEW DUCTWORK TO EXISTING DUCTWORK AT WALL PENETRATION.
2. CONNECT NEW AIR DEVICE AND TAP TO EXISTING E/A TRUNK DUCT.
3. REWORK EXISTING EXHAUST AND SUPPLY DUCTWORK FROM EXISTING KITCHEN HOOD UP TO FAN, AS REQUIRED, WITH NEW TRANSITIONS AND SUPPLY AIR DUCTWORK OFFSETS TO MATE WITH NEW FAN CURB.
4. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
5. NEW DRYER VENT DUCT AND VENT CAP. REFER TO DETAIL 4/M2.02.
6. TEMP. KITCHEN – CEILING MOUNTED CABINET EXHAUST FAN. REFER TO DETAIL 1/M2.02.
7. TEMP. KITCHEN – 24"X24" SIDE WALL GRILLE. SURFACE MOUNT OPTIONAL. AUXILIARY FRAME. TITUS CT-700.
8. RECONFIGURE DUCTWORK TO CONNECT TO NEW DISHMACHINE HOOD OUTLETS. REF. KITCHEN CONSULTANT DRAWINGS FOR EXACT DIMENSIONS OF DUCT CONNECTIONS.
9. CONDENSATE EXHAUST DUCT UP THROUGH ROOF TO NEW EXHAUST FAN SET ON NEW ROOF CURB. REUSE EXISTING ROOF PENETRATION.
10. INLINE FAN INSTALLED ABOVE PLENUM. REFER TO DETAIL 2/M2.02.

EXHAUST FAN SCHEDULE

MARK	EF-1K	EF-CF	EF-14
SERVES	TEMPORARY KITCHEN	COOLER/FREEZER	DISH WASHER
TYPE	CEILING CABINET	INLINE FAN	ROOF UPBLAST
DRIVE	DIRECT	DIRECT	DIRECT
SPEED CONTROL	INTEGRAL SPEED CONTROLLER	CONSTANT	CONSTANT
CFM	1055	1000	1200
EXT. S.P. (IN. W.G.)	0.3	0.35	0.60
IMP. SIZE (IN.)	8.0	13.5	14.0
HORSEPOWER (WATTS)	1/3 HP	1/6 HP	1/3 HP
VOLTAGE	120V/1-PHASE	120V/1-PHASE	120V/1-PHASE
MANUFACTURER	COOK	COOK	COOK
MODEL	GC-862	1355QN10D	CUE-140-B
SONES (MAX.)	15.0	15.0	15.0
NOTES	1 THRU 4	1 THRU 4	1 THRU 5

NOTES
1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN. FANS SHALL BE CAPABLE OF 120% OF THE SCHEDULED CFM CAPACITY.
2. INTEGRAL DISCONNECT SWITCH.
3. RUBBER IN-SHEAR ISOLATORS.
4. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS. A/D04
7. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH.

MECHANICAL DEMO KEYED NOTES

1. DEMOLISH EXISTING AIR DEVICE, BRANCH DUCT, DAMPER AND TAP BACK TO TRUNK DUCT. CAP AND SEAL RESULTING OPENING.
2. EXISTING E/A TRUNK DUCT TO REMAIN.
3. DISCONNECT EXISTING S/A AND E/A DUCTWORK SERVING KITCHEN HOODS FROM FAN ASSEMBLY AND HOOD. DUCTWORK SHALL REMAIN FOR FUTURE USE/RE-CONNECTION. DEMOLISH SUPPLY AND EXHAUST FAN PLENUM ASSEMBLY SERVING KITCHEN HOODS, ALONG WITH CURB. NEW CURB TO BE PROVIDED AND INSTALLED AS PART OF RENOVATION.
4. DEMOLISH ALL EXISTING AIR DEVICES, DUCTWORK, AND DUCTWORK ACCESSORIES SERVING KITCHEN AREA BACK TO MECH. ROOM WALL PENETRATION.
5. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
6. REFURBISH EXISTING KITCHEN HOOD. REFER TO "KITCHEN HOOD REFURBISHMENT NOTES".
7. DEMOLISH AND REPLACE EXISTING DRYER EXHAUST DUCT AND FLUE VENT CAP.
8. DEMOLISH EXISTING CONDENSATE HOOD, ASSOCIATED DUCTWORK, AND ROOF EXHAUST FAN.

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09/04/2025	ADDENDUM 04

A/D04

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
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SEAL

STATE OF TEXAS
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PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

KITCHEN AREA MECHANICAL PLANS
K-M1.01

STANTON ENGINEERING GROUP
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TEXAS ENG. FIRM REG. NO. F-6153/21019

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MECHANICAL SYMBOL SCHEDULE

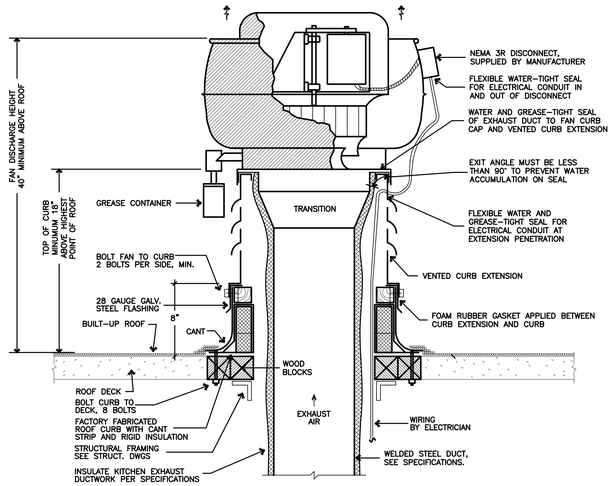
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
RS	REFRIGERANT SUPPLY
RR	REFRIGERANT RETURN
D	CONDENSATE LINE
	PETE'S PLUG
	ISOLATION VALVE
	ELECTRONIC CONTROL VALVE
	BUTTERFLY VALVE
	BALL VALVE
	UNION OR FLANGE
	STRAINER
	AUTOMATIC AIR VENT
T	LOCAL CONTROL THERMOSTAT
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	FIRE/SMOKE COMBINATION DAMPER
MD	MOTORIZED DAMPER
C	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST GRILLE
RA	RETURN AIR OPENING IN WALL
VD	VOLUME DAMPERS
	DUCT ELEVATION CHANGE
	90° DUCT ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
M	DAMPER MOTOR
T	TEMPERATURE TRANSMITTER
FS	FLOW SWITCH
P	DIFFERENTIAL PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
PS	STATIC PRESSURE SENSOR
PH	STATIC PRESSURE SENSOR HI-LIMIT
	ACCESS PANEL

A.P.	ACCESS PANEL
AHU	AIR HANDLING UNIT
B	BOILER
CH	CHILLER
CHP	CHILLED WATER PUMP
CVT	CONSTANT VOLUME TERMINAL
DH	DEHUMIDIFIER
E/A	EXHAUST AIR
EF	EXHAUST FAN
F&B	FACE & BYPASS
FF	FLY FAN
HDT	HORIZONTAL DRAW THROUGH
HWP	HOT WATER PUMP
KEF	KITCHEN EXHAUST FAN
KSF	KITCHEN SUPPLY FAN
O/A	OUTSIDE AIR
OBD	OPPOSED-BLADES DAMPER
PT	PRE-TREAT
R/A	RETURN AIR
RAHU	ROOF-MOUNTED AIR HANDLING UNIT
S/A	SUPPLY AIR
SA	SOUND ATTENUATOR
SF	SUPPLY FAN
SPD	SPILTER DAMPER
SZ	SINGLE ZONE
VAV	VARIABLE AIR VOLUME
VB	VAV BOX
VD	VOLUME DAMPER
VDT	VERTICAL DRAW THROUGH
VFD	VARIABLE FREQUENCY DRIVE
WH	WATER HEATER
⌀	DESIGNATION FOR "ROUND"
⬭	DESIGNATION FOR "OVAL"

GENERAL MECHANICAL NOTES

3

1. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION OF EQUIPMENT AND PIPING WITH THE ELECTRICAL CONTRACTOR TO INSURE NEC CLEARANCE (42 INCHES) IN FRONT OF ALL ELECTRICAL PANELS. DO NOT INSTALL DUCTWORK OR WATER PIPING OVER THE TOP OF ELECTRICAL PANELS SEE DETAIL 1/M2.01.
3. DUCT SIZES SHOWN ARE NET FREE AIR PASSAGE DIMENSIONS, DUCTS ARE NOT LINED, BUT ARE EXTERNALLY INSULATED. RUNOUTS TO CEILING OUTLETS SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET METAL WITH SPIN-IN V.D. AT TRUNK TAPS, SEE DETAIL 1 & 2/M2.01.
4. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR EXACT LOCATIONS OF CEILING OUTLETS IN RELATION TO OTHER CEILING ENTITIES. OUTLETS MUST BE COMPATIBLE WITH THE CEILING TYPES FOR THE VARIOUS AREAS.
5. IN AREAS WHERE SUPPLY AIR ENTERS CEILING CAVITY THRU RETURN AIR GRILLES AND FREE RETURNS TO AHU'S VIA CEILING CAVITY, PROVIDE RETURN AIR OPENING IN WALL-TO-DECK ABOVE CEILING THAT BLOCK PATH, REFER TO ARCHITECTURAL DRAWINGS. RETURN AIR ELBOWS SHALL BE SIZED AT 1 SQ. FT PER 400 CFM SUPPLY AIR.
6. ARRANGE PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EASY REMOVAL OF EQUIPMENT, SUB-ASSEMBLIES, COILS, FANS, MOTORS, FILTERS, ACCESS PANELS, ETC... PROVIDE UNIONS, FLANGES AND VALVES AT CONNECTIONS. PROVIDE AND INSTALL VICTAULIC JOINTS AT COILS, REF. SPECIFICATIONS. PLACE STOP VALVES ON SYSTEM SIDE OF REMOVABLE PIPE SECTIONS.
7. CONTRACTOR SHALL FIELD MEASURE STRUCTURAL ELEMENTS AND COORDINATE EQUIPMENT, PIPING AND DUCT ROUTING TO FIT EXISTING CONSTRUCTION. PROVIDE OFFSETS, BOOTS FOR ENVELOP OBSTRUCTIONS THAT CANNOT BE AVOIDED. CONSTRUCTION SHALL BE PER SMACNA STANDARDS.
8. FIELD VERFY EXISTING CONDITIONS PRIOR TO PROCUREMENT OF EQUIPMENT AND SYSTEMS.
9. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICIABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION
10. PROVIDE DUCTWORK INSULATION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF IECC.
11. PROVIDE LISTED FIRE DAMPER INSTALLATIONS AT DUCT AND RETURN AIR OPENINGS AT PENETRATIONS THROUGH THROUGH RATED PARTITIONS AND BARRIERS. — SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
12. PROTECT DUCTWORK AND MECHANICAL EQUIPMENT FROM CONSTRUCTION DUST AND DEBRIS DURING CONSTRUCTION. SEAL OPENINGS AS REQUIRED.
13. PROVIDE AND MAINTAIN TEMPORARY AIR FILTERS AT AIR HANDLERS USED DURING CONSTRUCTION.
14. PATCH AND REPAIR MECHANICAL SYSTEMS AND INSULATION DAMAGED DURING CONSTRUCTION.
15. SECURE ROOF MOUNTED EQUIPMENT TO WITHSTAND 142 MPH BASIC WIND SPEED, RISK CATEGORY III, EXPOSURE CATEGORY B, IN ACCORDANCE WITH IBC REQUIREMENTS.

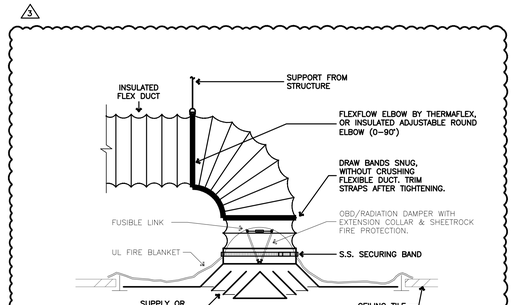


6 KITCHEN UPBLAST EXHAUST FAN DETAIL

NO SCALE

NOTES

1. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL.
2. INSTALL SHEETMETAL COVERING OVER WOOD BLOCKING IN THE AIRSTREAM OR OPEN TO THE CEILING CAVITY.

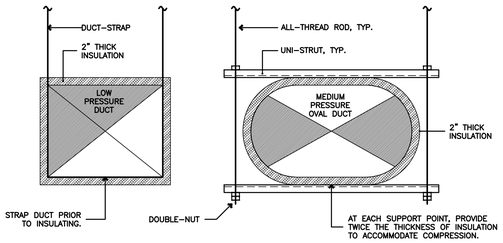


5 AIR DEVICE DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

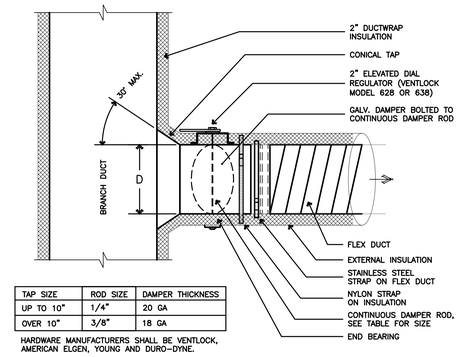


4 EXTERNALLY INSULATED DUCT SUPPORT DETAIL

NO SCALE

NOTES:

1. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT STRAPS.
2. DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



TAP SIZE	ROD SIZE	DAMPER THICKNESS
UP TO 10"	1/4"	20 GA
OVER 10"	3/8"	18 GA

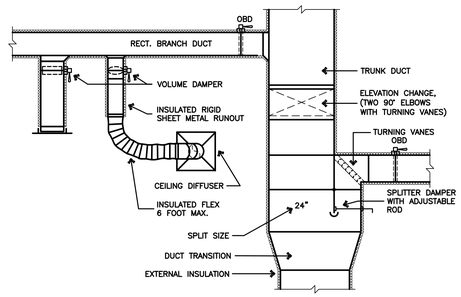
HARDWARE MANUFACTURERS SHALL BE VENTLOCK, AMERICAN ELGEN, YOUNG AND DURO-DYNE.

3 DUCT TAP CONNECTION DETAIL

NO SCALE

NOTES:

1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.
2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

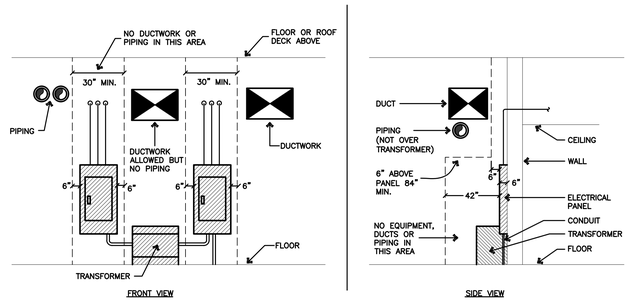


2 DUCTWORK DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

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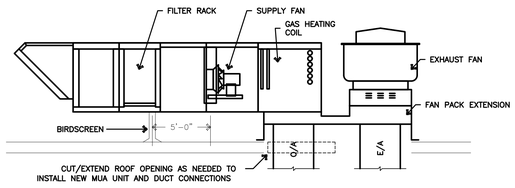
MECHANICAL NOTES AND DETAILS
K-M2.01



6 SUPPLY/EXHAUST KITCHEN PLENUM DETAIL

NO SCALE

NOTES:

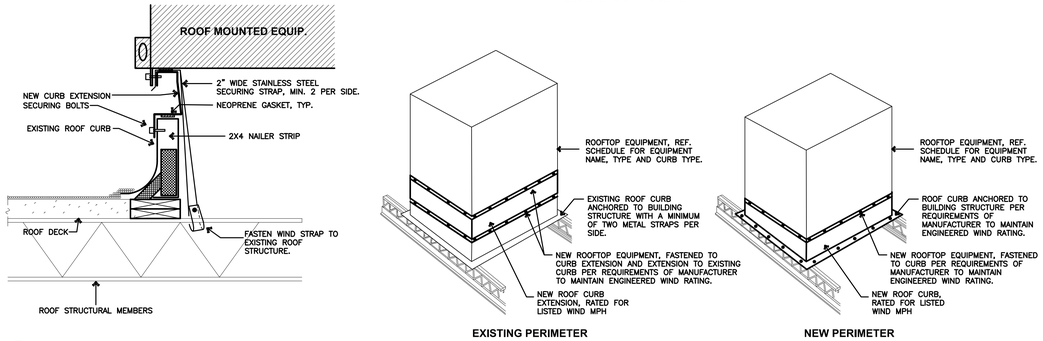
1. REFER TO DETAIL 6/M2.02 FOR CURB ANCHORING TO SATISFY WIND RATING REQUIRMENT. EQUIPMENT SHALL BE ABLE TO WITHSTAND 120 MPH WINDS.

△2

ROOF MOUNTED EQUIPMENT

MARK	EQUIPMENT TYPE	CURB TYPE
EF-14	ROOF FAN	EXISTING PERIMETER
ESF-1,2	ROOF EXHAUST & MAKE-UP AIR UNIT	NEW PERIMETER

1. ALL ROOFTOP EQUIPMENT IS TO BE INSTALLED ON NEW ROOF SUPPORTS, AND IS SUBJECT TO THE INSTALLATION REQUIREMENTS OF THIS DETAIL.



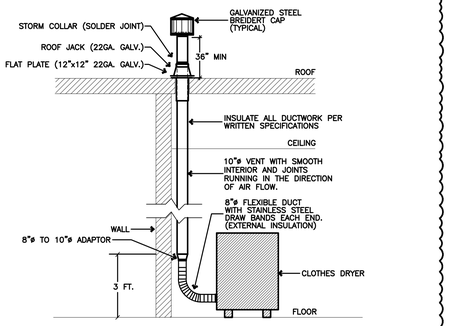
5 CURB MOUNTED EQUIPMENT ANCHORING

NO SCALE

NOTES:

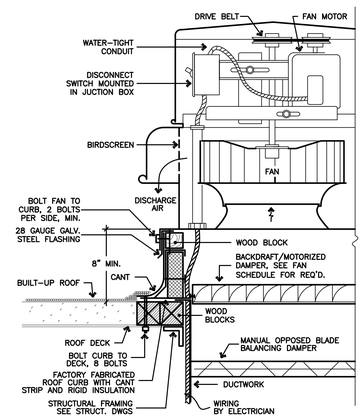
1. EQUIPMENT CURB AND EQUIPMENT ANCHORING BRACKETS SHALL BE DESIGNED TO WITHSTAND AN ASCE 7-22 WIND HAZARD RATING OF 147 MPH, FOR A CATEGORY III BUILDING AT THE PROJECT ADDRESS. THE CURB PROVIDER SHALL INCLUDE STAMPED DRAWINGS OF THE CURB AND ANCHORING DEMONSTRATING COMPLIANCE.

△2



4 COMMERICAL CLOTHES DRYER VENT

NO SCALE

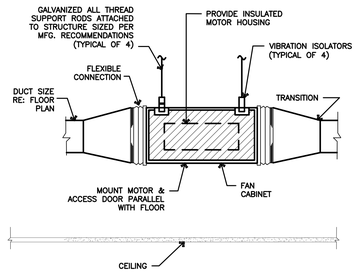


3 ROOF EXHAUST FAN AND VENT DETAIL

NO SCALE

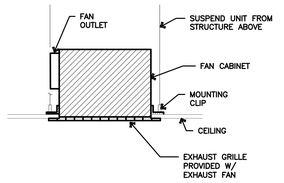
NOTES:

1. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.
2. ROOF VENT WILL NOT HAVE FAN/MOTOR ASSEMBLY, DISCONNECT SWITCH OR OBD.
3. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL WHERE APPLICABLE.
4. ALL FANS SCHEDULED TO BE PROVIDED WITH 140MPH WIND RATING, INCLUDING FACTORY PROVIDED CURB. CURB INSTALLATION SHALL FOLLOW MANUFACTURER'S REQUIREMENTS FOR SECURING TO ROOF AND EQUIPMENT WHERE IT DIFFERS FROM THE DETAIL.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 INLINE EXHAUST FAN DETAIL

NO SCALE



1 CABINET EXHAUST FAN

NO SCALE

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MECHANICAL DETAILS (CONT'D.)

K-M2.02

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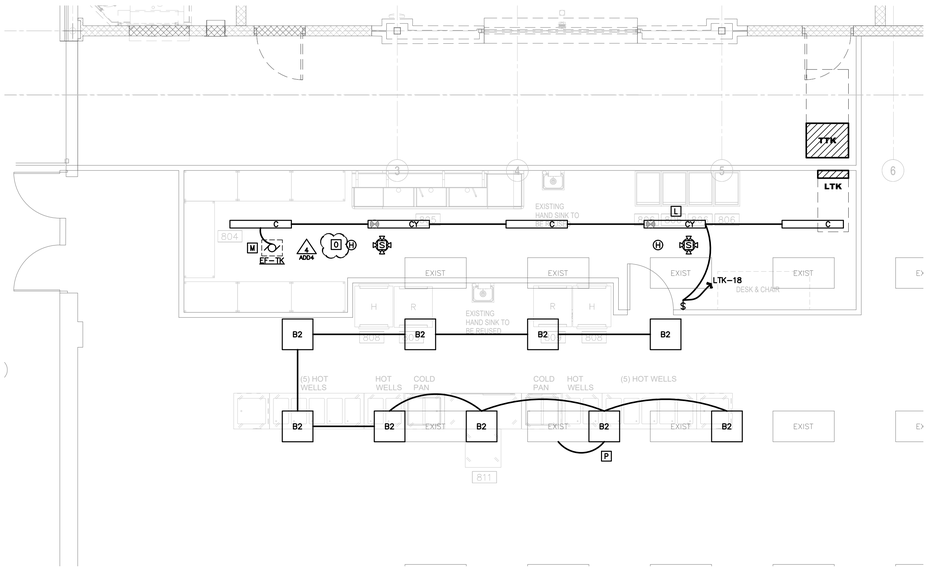
NEW PANEL — TEMP KITCHEN

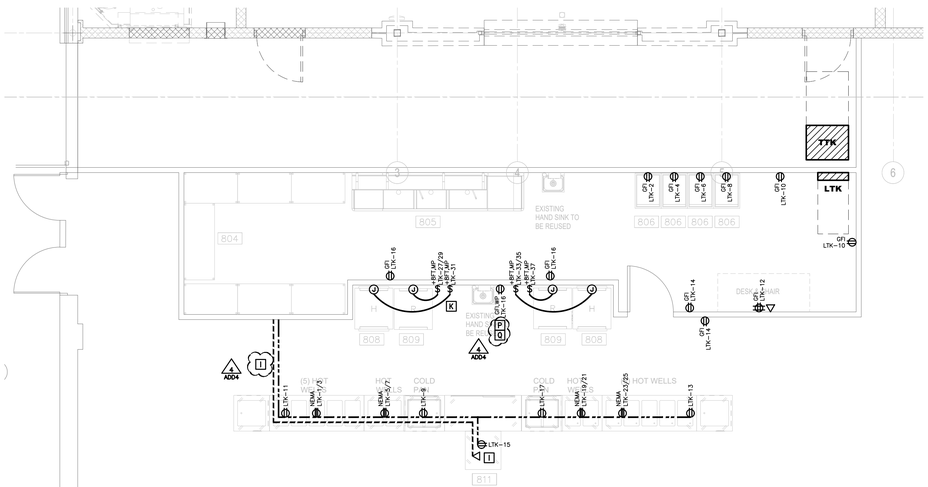
PANEL LTK — 150A MCB, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A, SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E810	2766	HOT WELLS	2–12	20/2GFI	1	■			2	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	3		■		4	20/1	3–12	TRANSPORT CART	1920	E806	
	E810A	1643	HOT WELLS	2–12	20/2GFI	5			■	6	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	7	■			8	20/1	3–12	TRANSPORT CART	1920	E806	
	E810B	600	COLD PAN	3–12	20/1GFI	9		■		10	20/1	3–12	2 REC	360	E800A	
	E810C	1200	BEVERAGE	3–12	20/1GFI	11			■	12	20/1	3–12	2 REC – DESK	360	E800B	
	E810C	1200	BEVERAGE	3–12	20/1GFI	13	■			14	20/1	3–12	2 REC	360	E800A	
	E811	180	CASH REGISTER	3–12	20/1GFI	15		■		16	20/1	3–12	3 REC	360	E800A	
	E810B	600	COLD PAN	3–12	20/1GFI	17			■	18	20/1	3–12	TEMP. KITCHEN LTS/FAN	566		
	E810A	1643	HOT WELLS	2–12	20/2GFI	19	■			20	20/1		SPARE			⚠4 ADD4
	–	–	–	+12G	–	21		■		22	20/1		SPARE			
	E810	2766	HOT WELLS	2–12	20/2GFI	23			■	24	30/3	3–10	TEMP FOOD STORAGE UNIT	3100		4
	–	–	–	+12G	–	25	■			26	–	+10N+10G	–	–		
	E808	1622	HEATED CABINET	2–12	20/2	27		■		28	–	3/4"C	DUPLEX REC – SERVICE YARD	180		4
	–	–	–	+12N+12G	–	29			■	30	20/1	3–12	EXISTING CIRCUIT	500		3
	E809	984	REFRIGERATOR	3–12	20/1	31	■			32	20/1	3–12	EXISTING CIRCUIT	500		3
	E808	1622	HEATED CABINET	2–12	20/2	33		■		34	15/2	2–12	EXISTING CIRCUIT	1000		3
	–	–	–	+12N+12G	–	35			■	36	–	+12N+12G	–	–		
	E809	984	REFRIGERATOR	3–12	20/1	37	■			38	20/2	2–12	EXISTING CIRCUIT	1000		3
			SPARE		20/1	39		■		40	–	+12N+12G	–	–		
			SPARE		20/1	41			■	42	50/2	2–8	EXISTING CIRCUIT	5000		3
			SPARE		20/1	43	■			44	–	+8N+10G	–	–		
	TOTAL LOAD @ 100% =		3877BVA				TOTAL LOAD @ 100% =			108A						

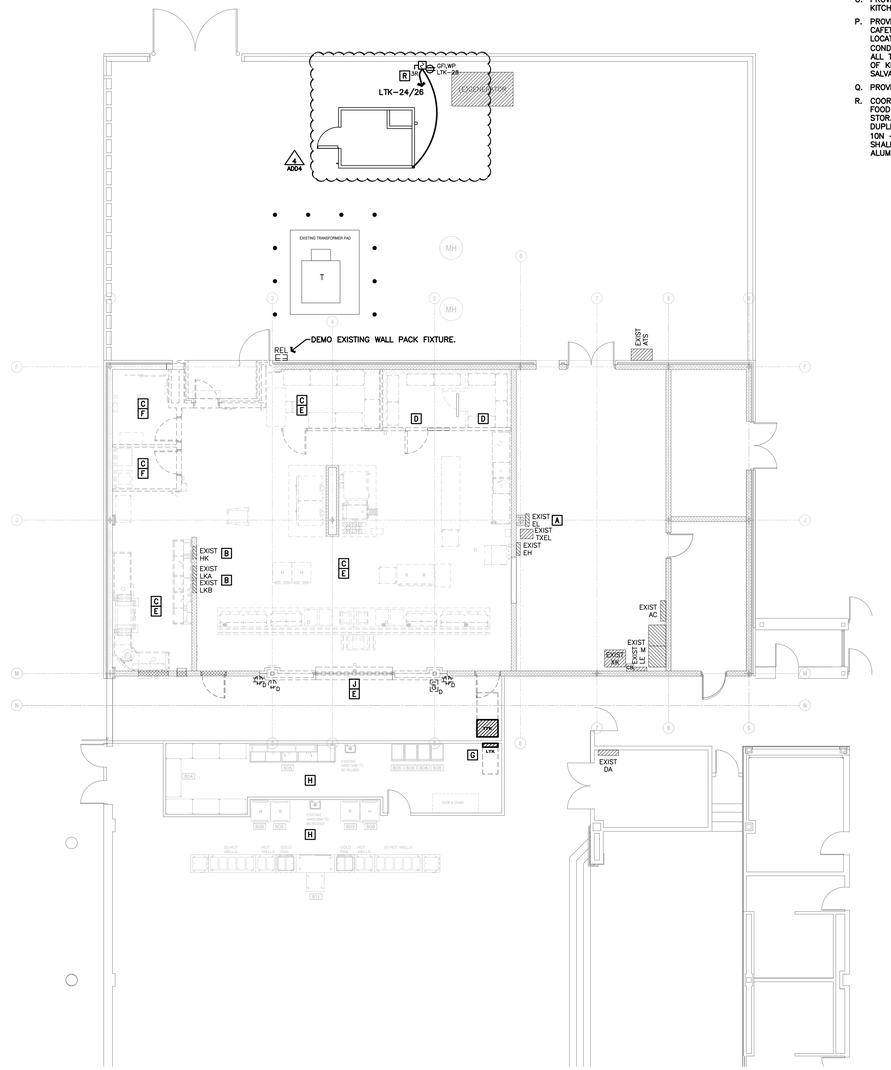
1. REF. KITCHEN CONSULTANT'S "FCS" DRAWINGS FOR KITCHEN EQUIPMENT NUMBERS.
2. A DEMAND FACTOR PERCENT OF 65% HAS BEEN APPLIED TO THE KITCHEN EQUIPMENT LOAD PURSUANT TO NEC 220–20 AND NEC TABLE 220–20.
3. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AND REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION.
4. PROVIDE CIRCUIT FOR TEMPORARY FOOD STORAGE UNIT PRIOR TO BEGINNING DEMOLITION. ⚠4 ADD4



T1 **TEMPORARY KITCHEN - LIGHTING PLAN**
SCALE: 1/4" = 1'– 0"



T2 **TEMPORARY KITCHEN - ELECTRICAL PLAN**
SCALE: 1/4" = 1'– 0"



1 **DEMOLITION FLOOR PLAN**
SCALE: 1/8" = 1'– 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

⚠4 ADD4

DEMOLITION NOTES:

A. EXISTING STANDBY GENERATOR PANEL TO REMAIN.

B. EXISTING KITCHEN PANELS TO BE REPLACED WITH NEW. MODIFY EXISTING WALLS TO MATCH NEW PANEL LAYOUTS AND DIMENSIONS.

C. EXISTING LIGHTING FIXTURES AND CEILING DEVICES TO BE REMOVED THROUGHOUT.

D. EXISTING WALK–IN COOLER/FREEZER AND ASSOCIATED EQUIPMENT TO BE REMOVED.

E. EXISTING WALL ELECTRICAL DEVICES TO BE REMOVED. EXISTING J–BOXES MAY BE REUSED WHERE NEW DEVICES ARE TO BE INSTALLED AT THE SAME LOCATIONS.

F. EXISTING ELECTRICAL DEVICES TO BE REMOVED.

G. NEW 208Y/120V PANEL AND TRANSFORMER FOR TEMPORARY KITCHEN TO BE INSTALLED PRIOR TO DEMOLITION. PANEL AND TRANSFORMER TO BE REMOVED AT END OF KITCHEN RENOVATION AND TURNED OVER TO THE DISTRICT. INSTALL TRANSFORMER ON PREMADE FIBERCRETE PAD AND WAFFLE TYPE VIBRATION ISOLATION PADS. DO NOT PROVIDE A POURED IN PLACE CONCRETE PAD AT THIS LOCATION.

H. PROVIDE RECEPTACLES AND LIGHT FIXTURES FOR TEMPORARY KITCHEN DURING RENOVATION. ALL TEMPORARY DEVICES AND EQUIPMENT TO BE REMOVED AT END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE.

I. CONDUITS ROUTED FROM TEMPORARY KITCHEN WALL AND BENEATH SERVING LINE. PROVIDE MULTICHANNEL ROLLOVER CABLE PROTECTOR FOR EXPOSED CONDUITS NOT UNDER THE SERVING LINE. ALL CONDUITS UNDER THE SERVING LINE SHALL BE SECURED TO/ROUTED ON TOP OF UNISTRUT AND NOT DIRECTLY ON THE FLOOR. DO NOT ANCHOR UNISTRUT TO THE EXISTING FLOORING. COORDINATE POWER AND DATA OUTLET LOCATIONS WITH OTHER TRADES.

J. REMOVE EXISTING LIGHT FIXTURES ABOVE NEW KITCHEN EXTENSION. MODIFY EXISTING WIRING TO MAINTAIN REMAINING FIXTURE OPERATION.

K. HARDWIRE KITCHEN EQUIPMENT TO LOCAL ON/OFF SWITCH. TYPICAL.

L. SURFACE MOUNT FIXTURES ON TEMPORARY KITCHEN CEILING. TYPICAL.

M. WIRE TEMPORARY KITCHEN FAN TO LOCAL LIGHTING CIRCUIT AND CONTROLS. FAN SHALL BE ON/OFF WITH LIGHTS.

N. EXISTING EXTERIOR LIGHT FIXTURES TO BE REMOVED.

O. PROVIDE NEW FIRE ALARM DEVICES AS PART OF THE TEMPORARY KITCHEN BUILDOUT.

P. PROVIDE NEW TEMPORARY LIGHT FIXTURES IN THE EXISTING CAFETERIA CEILING ABOVE THE SERVING LINE. COORDINATE LOCATIONS WITH TEMPORARY SERVING LINE AND EXISTING CONDITIONS. CONNECT TO EXISTING LIGHTING CONTROLS/CIRCUIT. ALL TEMPORARY LIGHT FIXTURES SHALL BE REMOVED AT THE END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE. PROVIDE REPLACEMENT CEILING TILES.

Q. PROVIDE IN–USE WEATHERPROOF COVER FOR RECEPTACLE.

R. COORDINATE NEMA 3R, FUSED SWITCH LOCATION WITH TEMPORARY FOOD STORAGE UNIT. INSTALL 2–25A FUSES TO SERVE FOOD STORAGE UNIT AND A 20A FUSE IN THIRD PHASE TO FEED DUPLEX RECEPTACLE. WIRING TO STORAGE UNIT SHALL BE 2–10 + 10N + 10G, 3/4". WIRING TO NEW 20A DUPLEX RECEPTACLE SHALL BE 2–12 + 12G. MOUNT RECEPTACLE IN NEMA 3R ALUMINUM JUNCTION BOX WITH WET LOCATION COVER.

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ELECTRICAL DEMO AND TEMP PLANS

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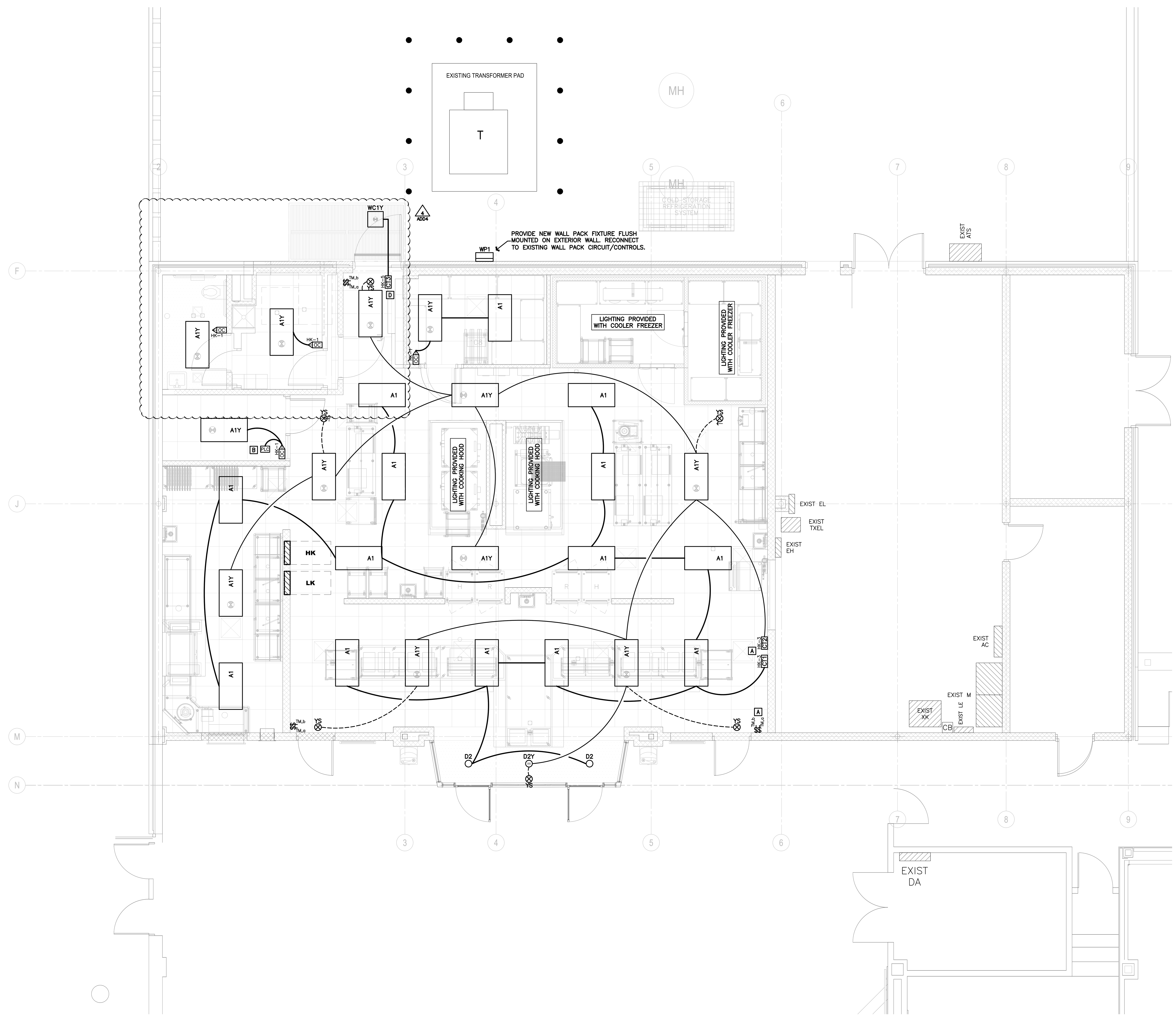

1 LIGHTING RENOVATION PLAN

SCALE: 1/4" = 1'- 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

LIGHTING RENOVATION NOTES:

A. KITCHEN LIGHTS TO BE CONTROLLED BY LOCAL MOMENTARY SWITCHES AND BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.

LEFT SWITCH SHALL CONTROL ZONE 'a' NORMAL POWER LIGHTING FIXTURES.
RIGHT SWITCH SHALL CONTROL ZONE 'b' EMERGENCY LIGHTING FIXTURES.

B. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

C. WIRE EXIT SIGNS UPSTREAM OF LIGHTING CONTROLS. TYPICAL.

D. EXTERIOR LIGHTS TO BE CONTROLLED BY BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.

E. AFTER REMOVAL OF THE TEMPORARY KITCHEN. PROVIDE NEW EXIT SIGN AT ORIGINAL LOCATION AND RECONNECT TO EXISTING CAFETERIAL LIGHTING CIRCUIT.

F. PATCH/REPAIR EXTERIOR SOFFIT TO ACCOMMODATE NEW SURFACE MOUNTED FIXTURES.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

4 ADD4

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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INFO@STANTON-ENG.COM (713) 300-9292
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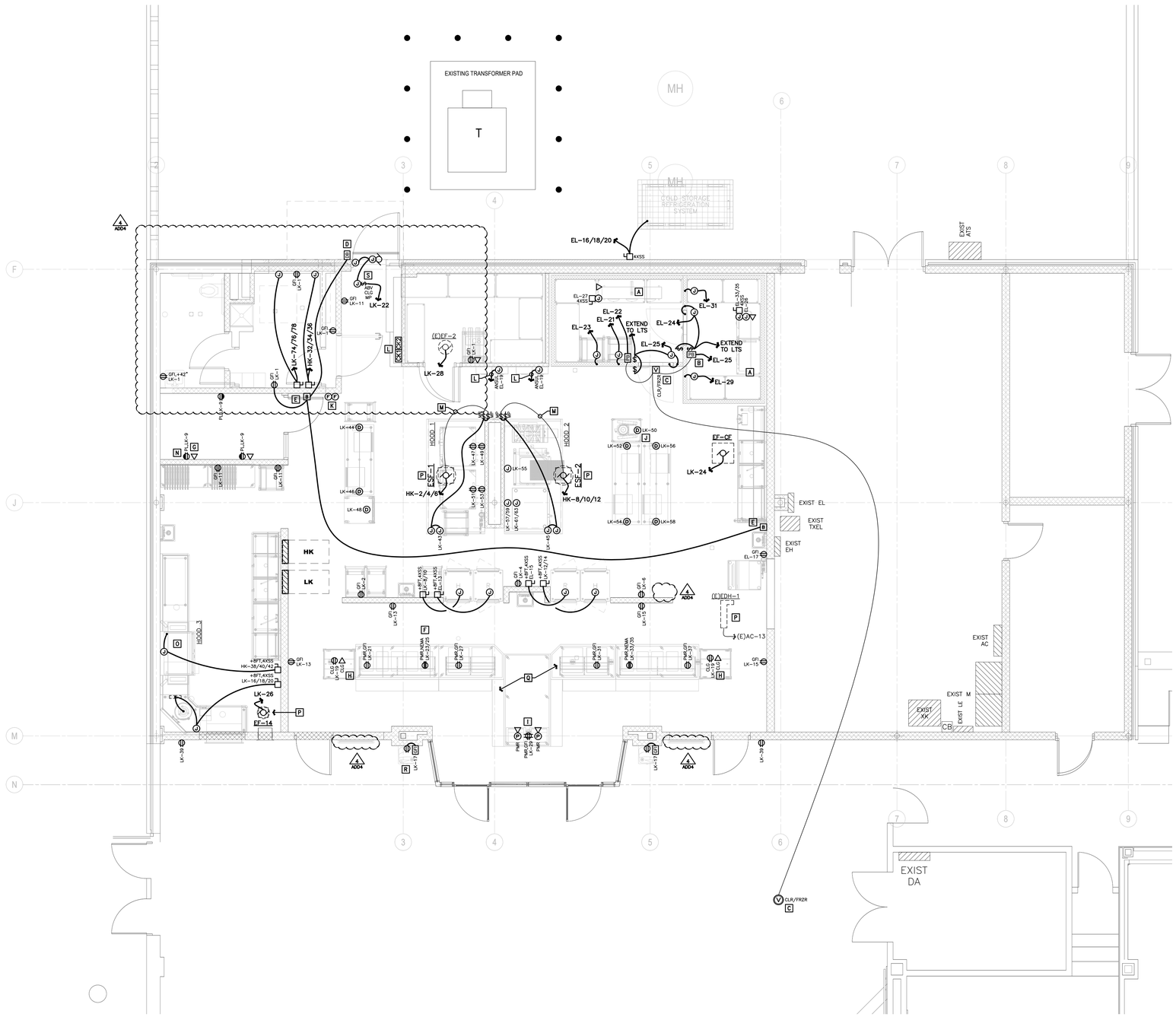
1300 W. SAM HOUSTON PARKWAY S., SUITE 121, HOUSTON, TX 77042

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

LIGHTING FLOOR PLANS

k-E.100



1 ELECTRICAL RENOVATION PLAN

SCALE: 1/4" = 1'- 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

ELECTRICAL RENOVATION NOTES:

A. CONNECT NEW FREEZER/COOLER AND CONDENSER TO EXISTING STANDBY GENERATOR.

B. PROVIDE ILLUMINATED PUSH BUTTON IN COOLER AND FREEZER. WHEN PRESSED RED STROBE DEVICES IN KITCHEN AND CAFETERIA SHALL ACTIVATE. TYPICAL.

C. PROVIDE HORN/STROBE DEVICE TIED TO PUSH BUTTONS IN FREEZER/COOLER.
(EDWARDS 860 SERIES OR EQUAL).

D. PROVIDE NEW DOORBELL BUTTON AT RECEIVING DOOR. DOORBELL BUTTON SHALL BE THE CLOSEST DEVICE TO THE DOOR FRAME.

E. PROVIDE NEW VIBRATING BUZZER TIED TO DOORBELL BUTTON AT RECEIVING DOOR. BUZZER TO BE WALL MOUNTED JUST BELOW THE CEILING.

F. PROVIDE NEW ELECTRICAL DEVICES MATCHING NEW KITCHEN EQUIPMENT AND ROOM LAYOUTS. REFERENCE FOOD SERVICE DRAWINGS. TYPICAL.

G. PROVIDE ROUGH-IN FOR LOW VOLTAGE DEVICES. REFERENCE TECHNOLOGY DRAWINGS, TYPICAL.

H. POWER AND DATA ROUGH-IN FOR KITCHEN MENU BOARD.

I. POWER AND DATA ROUGH-IN FOR POINT OF SALE (POS) LOCATION.

J. PROVIDE DROP CORD RECEPTACLE WITH HUBBELL KELLEMS LIQUIDTIGHT GRIPS FOR STRAIN RELIEF, TYPICAL OF ALL.

K. PROVIDE J-BOXES AND CONDUIT FOR REMOTE FIRE PULLS, SEE FOOD SERVICE DETAIL DRAWING FOR REQUIREMENTS, TYPICAL

L. WIRE ANSUL SYSTEM TO HOOD EQUIPMENT CONTROL CONTRACTOR. UPON ANSUL SYSTEM ACTIVATION ALL POWER TO EQUIPMENT BENEATH THE HOODS SHALL BE DEACTIVATED. MOUNT CONTACTOR CABINET(S) JUST BELOW THE CEILING.

M. PROVIDE SEPARATE SWITCHES TO TURN ON HOOD LIGHTS AND FANS. WIRE HOOD TEMP SENSOR AHEAD OF HOOD LIGHT SWITCH. USE 120V CIRCUIT TO CONTROL HOOD FANS THROUGH EXISTING STARTER. PROVIDE CONTROLS TRANSFORMER AS REQUIRED TO MATCH STARTER CONTROL INPUT VOLTAGE. TYPICAL.

N. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

O. INTERCONNECT DISH MACHINE TO VENT CONTROL. INTERCONNECT TABLE LIMIT SWITCH TO DISHMACHINE.

P. EXISTING MECHANICAL EQUIPMENT TO BE REPLACED. CONNECT TO CIRCUIT AS SHOWN. RECONNECT TO EXISTING STARTER/CONTACTORS, FIELD VERIFY.

Q. SAWCUT FLOOR TO INSTALL NEW PEDESTAL MOUNTED DEVICE BENEATH NEW SERVING LINES, DO NOT REUSE EXISTING STUB UPS OR DEVICES. POUR BACK SLAB AND PROVIDE NEW FINISHES, REFERENCE ARCHITECTURAL.

R. REFERENCE EDF GFI PROTECTION DETAIL FOR INSTALLATION REQUIREMENTS, TYPICAL.

S. WIRE MICRO SWITCH IN DOOR FRAME TO AIR SCREEN. COOR W/ FOOD SERVICE CONTRACTOR PRIOR TO ROUGH-IN. LOCATE LOCAL MOTOR RATED SWITCH ABOVE CEILING ADJACENT TO THE AIR SCREEN.

COOLER/FREEZER NOTES:

1. PROVIDE SEALING FOR CONDUIT IN COOLER AND FREEZER. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, CIRCULATION OF AIR FROM WARMER TO A COLDER SECTION SHALL BE PREVENTED PER N.E.C. ARTICLE 300.7 (A).
2. PROVIDE GROUND-FAULT PROTECTION OF EQUIPMENT FOR ELECTRIC HEAT TRACING AND HEATING PANELS IN THE FREEZER PER N.E.C. ARTICLE 427.22.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE LIQUID TIGHT CONDUIT AND WIRING FOR LIGHT FIXTURES AND LIGHT SWITCHES IN WALK-IN COOLER AND FREEZER, SEE FOODSERVICE CONSULTANT'S DRAWINGS.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

k

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6955 INDEPENDENCE BLVD
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SEAL

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PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL FLOOR PLANS

k-E.200

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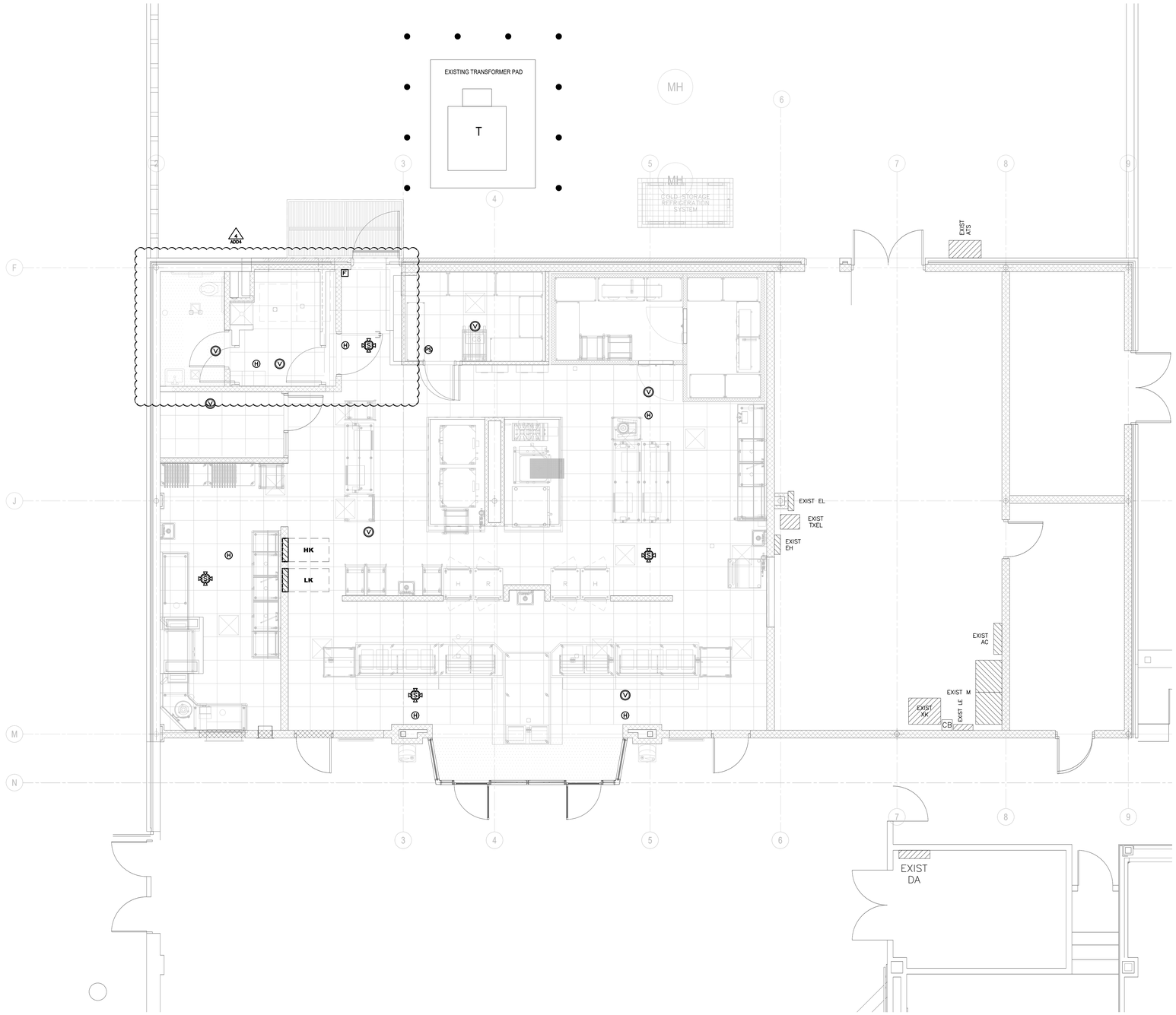

1 FIRE ALARM RENOVATION PLAN

SCALE: 1/4" = 1'- 0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

k

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HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
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FIRE ALARM FLOOR PLANS

k-E.300

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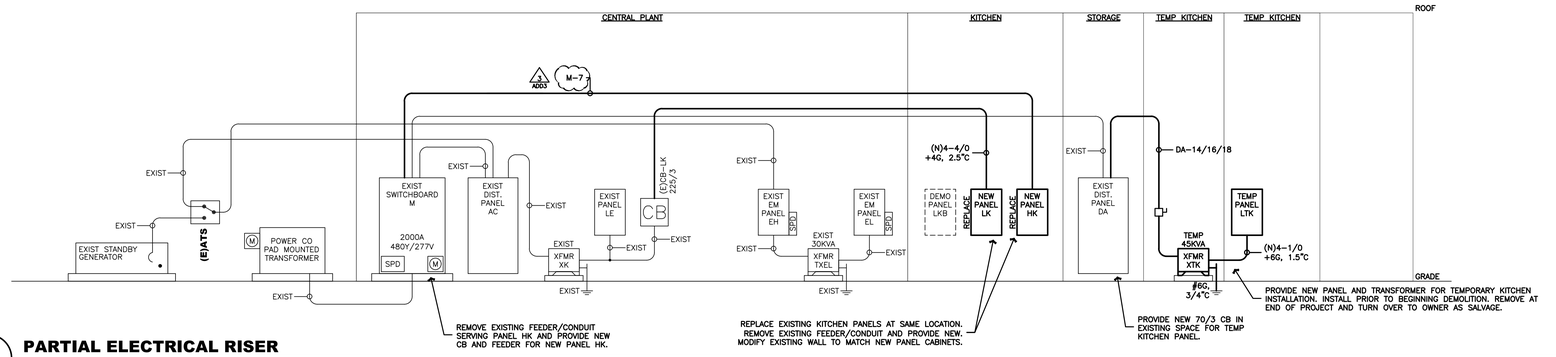

1 PARTIAL ELECTRICAL RISER

NO SCALE

NOTES:
1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED/CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.
5. REFERENCE PANEL SCHEDULES AND SHORT CIRCUIT TABLE FOR AIC AND SCCR VALUES.

NEW KITCHEN PANEL — KITCHEN

PANEL HK — 225A MLO, 480Y/277V, 3ø, 4 WIRE — AVAILABLE FAULT: 20,250A — SCCR & AIC: 25,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
6		1095	KITCHEN/SERVING LIGHTS	3-12	20/1	3				4	–	+12G	(1.5HP / 1.5HP)	–		
7		84	KITCHEN EXTERIOR LIGHTS	3-12	20/1	5				6	–	3/4"C	–	–		
			SPARE		20/1	7				8	15/3	3-12	ESF-2	4986		
			SPARE		20/1	9				10	–	+12G	(1.5HP / 1.5HP)	–		
			SPARE		20/1	11				12	–	3/4"C	–	–		
			SPARE		20/1	13				14			SPACE			
			SPARE		20/1	15				16			SPACE			
			SPARE		20/1	17				18			SPACE			
			SPARE		20/1	19				20			SPACE			
			SPARE		20/1	21				22			SPACE			
			SPACE			23				24			SPACE			
			SPACE			25				26			SPACE			
			SPACE			27				28			SPACE			
			SPACE			29				30			SPACE			
			SPACE			31				32	45/3	3-8	COMMERCIAL DRYER	28254		
			SPACE			33				34	–	+10G	–	–		
			SPACE			35				36	–	3/4"C	–	–		
			SPACE			37				38	70/3	3-8	DISHMACHINE	42963	E250	
			SPACE			39				40	–	+8G	–	–		
			SPACE			41				42	–	3/4"C	–	–		
		TOTAL LOAD @ 100% =	82744VA			TOTAL LOAD @ 100% =		100A					TOTAL LOAD @ 125% =	124A		

NEW KITCHEN PANEL — KITCHEN

PANEL LK — 225A MLO, 208Y/120V, 3ø, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E10	1000	5 REC – RR/STOR/CUST & BELL	3-12	20/1	1				2	20/1	3-12	1 REC – KITCHEN	180	E10	
			SPARE		20/1GFI	3				4	20/1	3-12	1 REC – KITCHEN	180	E10	
4 ADD4			SPARE		30/2GFI	5				6	20/1	3-12	1 REC – KITCHEN	180	E10	
		–	–		–	7				8	20/2	2-10	HEATED CABINET	3224	E187	
		540	3 REC – OFFICE	3-12	20/1	9				10	3/4"C	+10G	–	–		
	E10/E13	540	3 REC – KITCHEN	3-12	20/1	11				12	20/2	2-10	HEATED CABINET	3224	E187	
	E10	360	2 REC – SERVING LINE	3-12	20/1	13				14	3/4"C	+10G	–	–		
	E10	360	2 REC – SERVING LINE	3-12	20/1	15				16	20/3	3-12	DISPOSER	3960	E123	
		1000	2 EDF – CAFETERIA	3-12	20/1	17				18	–	+12G	(3 HP)	–		
	E615	500	2 MENU BOARDS	3-12	20/1	19				20	–	3/4"C	–	–		
	E209	960	MILK COOLER	3-12	4 ADD4 20/1	21				22	20/1	3-12	AIR SCREEN	612	E101	
	E201A	5824	HOT FOOD COUNTER	2-8	4 35/2GFI	23				24	15/1	3-12	EF-CF (1/6HP)	528		
		–	–	+10G	3/4"C	25				26	15/1	3-12	EF-14 (1/3HP)	864		
	E201B	1920	COLD FOOD COUNTER	3-12	20/1	27				28	15/1	3-12	EF-2 (1/6HP)	528		
	E214	360	CASH REGISTERS	3-12	4 20/1	29				30	20/1	4 ADD4	SPARE			
	E201B	1920	COLD FOOD COUNTER	3-12	4 ADD4 20/1	31				32	20/1		SPARE			
	E201A	5824	HOT FOOD COUNTER	2-8	35/2GFI	33				34	20/1		SPARE			
		–	–	+10G	3/4"C	35				36	20/1		SPARE			
	E209	960	MILK COOLER	3-12	20/1	37				38	20/1		SPARE			
		360	2 REC – CAFETERIA	3-12	20/1	39				40	20/1		SPARE			
			SPARE		20/1	41				42	20/1		SPARE			
	E153/E153M	250	HOOD LTS & SENSOR	3-12	20/1GFI	43				44	20/1GFI	3-12	DROP CORD	180	E129	
	E153/E153M	250	HOOD LTS & SENSOR	3-12	20/1	45				46	20/1GFI	3-12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3-12	20/1GFI	47				48	20/1GFI	3-12	MOBILE PROOFER	1800	E139	
8	E161	720	CONVECTION OVEN	3-12	20/1GFI	49				50	20/1GFI	3-12	20QT MIXER	960	E125	
8	E161	720	CONVECTION OVEN	3-12	20/1GFI	51				52	20/1GFI	3-12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3-12	20/1GFI	53				54	20/1GFI	3-12	DROP CORD	180	E129	
8	E163	600	TILT BRAISING PAN 4 ADD4	3-12	20/1GFI	55				56	20/1GFI	3-12	DROP CORD	180	E129	
8	E172	3120	COMBI OVEN	2-12	20/2	57				58	20/1GFI	3-12	DROP CORD	180	E129	
		–	–	+12G	3/4"C	59				60	20/1	3-12	EXISTING CIRCUIT	500		5
8	E172	3120	COMBI OVEN	2-12	20/2	61				62	20/2	2-12	EXISTING CIRCUIT	1000		5
		–	–	+12G	3/4"C	63				64	–	+12N+12G	–	–		
5		250	EXISTING CIRCUIT	3-12	20/1	65				66	20/2	2-12	EXISTING CIRCUIT	1000		5
9		0	TEMP LOAD CENTER	2-6	50/2	67				68	–	+12N+12G	–	–		
		–	–	+6N+8G	1"C	69				70	30/2	2-10	EXISTING CIRCUIT	3000		5
			SPACE			71				72		+10N+10G	–	–		
			SPACE			73				74	20/3	3-12	WASHER	3408		
			SPACE			75				76	–	+12G	–	–		
			SPACE			77				78	–	3/4"C	–	–		
			SPACE			79				80			SPACE			
			SPACE			81				82			SPACE			
			SPACE			83				84			SPACE			
		TOTAL LOAD @ 100% =	55718VA			TOTAL LOAD @ 100% =		155A					TOTAL LOAD @ 65% =	101A		

KITCHEN HOOD CONTACTOR SCHEDULE

POLE	DESCRIPTION	NORMAL CKT	EM CKT	CONTROL ZONE	EQUIPMENT LOCATION	CONTACTOR TYPE
HOOD 1						
CK1-1	CONVECTION OVEN	LK-47	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1-2	CONVECTION OVEN	LK-49	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1-3	CONVECTION OVEN	LK-51	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1-4	CONVECTION OVEN	LK-53	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1-5	SPARE					ELECTRICALLY HELD – NO
CK1-6	SPARE					ELECTRICALLY HELD – NO
CK1-7	SPARE					ELECTRICALLY HELD – NO
CK1-8	SPARE					ELECTRICALLY HELD – NO
HOOD 2						
CK2-1	TILT BRAISING PAN	LK-55	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2-2	COMBI-OVEN	LK-57/59	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2-3	(2-POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2-4	COMBI-OVEN	LK-61/63	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2-5	(2-POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2-6	SPARE					ELECTRICALLY HELD – NO
CK2-7	SPARE					ELECTRICALLY HELD – NO
CK2-8	SPARE					ELECTRICALLY HELD – NO

1. REFERENCE FLOOR PLANS FOR EQUIPMENT LOCATIONS AND ADDITIONAL INFORMATION.
2. EACH KITCHEN HOOD CONTACTOR HALL BE CONTROLLED ON/OFF BY THE APPROPRIATE HOOD ANSUL SYSTEM. WHEN ACTIVATED ALL POWER WITHIN THE COOKING HOOD SHALL BE DE-ENERGIZED.

EXIST SQUARE D QED SWITCHBOARD — CENTRAL PLANT

(E)SWBD M — 2000A MCB, 480Y/277V, 3ø, 4 WIRE — AVAILABLE FAULT: 37,000A — SCCR & AIC: 100,000A — FREE STANDING

NOTES	CIRCUIT	DESCRIPTION	CB	FEEDER SIZE	AMPS
	1	EXIST CIRCUIT	60/3	EXIST FEEDER	
	2	EXIST SPD	60/3	EXIST FEEDER	
	3	EXIST DISTRIBUTION PANEL AC	1200/3	EXIST FEEDER	
	4	EXIST DISTRIBUTION PANEL DA	400/3	EXIST FEEDER	314A
	5	EXIST DISTRIBUTION PANEL DC	400/3	EXIST FEEDER	
	6	EXIST DISTRIBUTION PANEL DB	400/3	EXIST FEEDER	
2,4	7	NEW PANEL HK	225/3	4-4/0 +4G, 2.5"C	100A
	8	EXIST CAPACITOR	250/3	EXIST FEEDER	
				TOTAL LOAD @ 100% =	314A
				TOTAL LOAD @ 125% =	393A

1. THE EXISTING 2000A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST GE NHB PANELBOARD — STORAGE ROOM

(E)PANEL DA — 400A MLO, 480Y/277V, 3ø, 4 WIRE — AVAILABLE FAULT: 27,000A — SCCR & AIC: 35,000A — MOUNTING: SURFACE

NOTES	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	NOTES
	3000	EXIST CIRCUIT	EXIST	20/1	1				2	20/1	EXIST	LIGHTS CAFETORIUM RMS	2300	1
1	3000	LIGHTS CAFETORIUM	EXIST	20/1	3				4	20/1	EXIST	LIGHTS CAFETORIUM	3000	1
	9150	AHU #2	EXIST	20/3	5				6	20/1	EXIST	KITCHEN LIGHTS		2
	–	–	–	–	7				8	60/3	EXIST	DUCT HEATER 3	39000	
	–	–	–	–	9				10	–	–	(STAGE)	–	
	130000	PANEL PA	EXIST	225/3	11				12	–	–	–	–	
	–	–	–	–	13				14	70/3	3-6	TEMP KITCHEN PANEL LTK	37918	4
	–	–	–	–	15				16	–	+8G	–	–	
	33750	XFRMR TLCAB	EXIST	125/3	17				18	–	3/4"C	–	–	
	–	–	–	–	19				20			SPACE		
	–	–	–	–	21				22			SPACE		
		SPACE			23				24			SPACE		
		SPACE			25				26			SPACE		
		SPACE			27				28			SPACE		
		SPACE			29				30			SPACE		
	TOTAL LOAD @ 100% =	281118VA			TOTAL LOAD @ 100% =		314A					TOTAL LOAD @ 125% =	393A	

1. THE EXISTING 400A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST EM STANDBY PANELBOARD — CENTRAL PLANT

(E)PANEL EL — 100A MCB, 208Y/120V, 3ø, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
		500	PA SYSTEM	EXIST	20/1	1				2	20/1		EXIST SPARE			
		500	SECURITY SYSTEM	EXIST	20/1	3				4	20/1		EXIST SPARE			
		250	FACP	EXIST	20/1	5				6	20/1		EXIST SPARE			
		250	F/A RPS	EXIST	20/1	7				8	20/1		EXIST SPARE			
		250	F/A RPS	EXIST	20/1	9				10	20/1		EXIST SPARE			
		250	GENERATOR ACCESSORIES	EXIST	20/1	11				12	20/1		EXIST SPARE			
4	E188	864	REFRIGERATOR	3-12	20/1	13				14	20/1		EXIST SPARE			
4	E188	864	REFRIGERATOR	3-12	20/1	15				16	25/3	3-10	REFRIGERATION SYSTEM	6192	E103	4
4	E109	1428	ICE MACHINE	3-12	20/1	17				18	–	+10G	–	–		
4	E151	240	HOOD ANSUL SYSTEMS	3-12	20/1	19				20	–	3/4"C	–	–		
4	E102B	600	COOLER TEMP. ALARM	3-12	20/1	21				22	20/1EGF	3-12	COOLER DOOR HEATER/LTS	600	E102A	4
4	E102C	600	COOLER PRESSURE PORT	3-12	20/1	23				24	20/1EGF	3-12	FREEZER DOOR HEATER/LTS	600	E102A	4
4	E102E	120	PANIC ALARM BUTTONS	3-12	20/1	25				26	20/1EGF	3-12	FREEZER DRAIN LINE HEATER	600	E103F	4
4	E103D	216	COOLER COIL	3-12	20/1	27				28			SPACE			
4	E102B	600	FREEZER TEMP. ALARM	3-12	20/1	29				30			SPACE			
4	E102C	600	FREEZER PRESSURE PORT	3-12	20/1	31				32			SPACE			
4	E103C	1893	FREEZER COIL	2-10	20/2	33				34			SPACE			
		–	–	+10G	–	35				36			SPACE			
			EXIST SPARE		40/3	37				38	30/3	EXIST	SPD	50		
		–	–	–	–	39				40	–	–	–	–		
		–	–	–	–	41				42	–	–	–	–		
		TOTAL LOAD @ 100% =	18067VA			TOTAL LOAD @ 100% =		50A					TOTAL LOAD @ 125% =	63A		

1. THE EXISTING 100A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

GENERAL PANEL REQUIREMENTS:
A. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
B. FIELD VERIFY EXISTING CIRCUITS PRIOR TO BEGINNING WORK.
C. ALL OUTAGES SHALL BE SCHEDULED AND CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
D. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.

PANEL NOTES:
1. REVISE/REWORK WIRING/CONDUIT AS REQUIRED TO ADD/REMOVE DEVICES FROM EXISTING CIRCUIT.
2. EXISTING CIRCUIT TO BE DEMO.
3. REUSE EXISTING SPARE CB AND WIRE NEW CIRCUIT.
4. PROVIDE NEW CB & WIRE NEW CIRCUIT.
5. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AND REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION.
6. KITCHEN LIGHTS TO BE DUAL ZONES WIRED THROUGH LIGHTING CONTACTORS AND CONTROLLED ON/OFF BY THE BAS AND LOCAL LIGHTING SWITCHES.
7. EXTERIOR LIGHTS TO BE WIRED THROUGH LIGHTING CONTACTOR AND CONTROLLED ON/OFF BY THE BAS.
8. WIRE CIRCUITS THROUGH KITCHEN EQUIPMENT CONTROL CONTACTOR. CIRCUITS TO BE DE-ENERGIZED BY HOOD FIRE PROTECTION SYSTEM.
9. RECONNECT EXISTING TEMPORARY LOAD CENTER CIRCUIT TO NEW PANEL LK. 4 ADD4

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	4 ADD4 ADDENDUM 04

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL
STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL SCHEMATIC

k-E.400

STANTON ENGINEERING GROUP
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PLUMBING SYMBOLS LEGEND

Symbol	Description	Abbrev.	Description
— — — — — —	SANITARY WASTE BELOW SLAB	SAN.	SANITARY
————————	SANITARY WASTE ABOVE SLAB	CW	DOMESTIC COLD WATER
—— V ——	VENT PIPING ABOVE SLAB	HW	DOMESTIC HOT WATER
— — — — —	VENT PIPING	WC	WATER CLOSET
—— G ——	GAS PIPING, 4-8oz	UR	URINAL
—— G5 ——	GAS PIPING, 5LB	LAV	LAVATORY
—·—·—	DOMESTIC COLD WATER PIPING	SK	SINK
—··—··—	DOMESTIC HOT WATER PIPING	EDF	ELECTRIC DRINKING FOUNTAIN
—— D ——	DRAIN/RELIEF VENT PIPING	WH	WALL HYDRANT
——⋈——	STOP VALVE	HB	HOSEBIBB
2CO	DOUBLE SAN. CLEANOUT (2-WAY)	CP	HOT WATER CIRCULATOR PUMP
CO	SANITARY SEWER CLEANOUT	FD	FLOOR DRAIN
WCO	WALL CLEANOUT	FSINK	FLOOR SINK
EXIST.	EXISTING		
(R)	REMOVE (DEMOLISH)		
(D)	DEMOLISH (REMOVE)		
(E)	EXISTING – NO WORK		

PLUMBING FIXTURE NOTES

1. ALL FIXTURES SHALL MEET WATER CONSERVATION PERFORMANCE STANDARDS MANDATED BY SENATE BILL 587. ALL FIXTURES SHALL HAVE FLOW RESTRICTION DEVICES (DRINKING FOUNTAINS SHALL BE SELF-CLOSING) TO COMPLY WITH THESE REQUIREMENTS.
2. ALL FIXTURES SHALL HAVE CONTROLS REQUIRING OPERATING FORCE NO GREATER THAN FIVE (5) POUNDS.
3. FOR LAVATORIES AND SINKS, ALL FAUCETS SHALL BE NO-LEAD SOLID BRASS, MEETING ALL REQUIREMENTS OF ANSI/NSF 61, SECTION 9 AND CERTIFIED AS SUCH. ALSO, INSTALL SYMMONS 7-210 MIXING VALVE ON HOT WATER SUPPLY SIDE OF ALL FAUCETS UNLESS HIGH TEMPERATURE LIMIT IS PROVIDED WITH FAUCET. MAXIMUM WATER TEMPERATURE FOR ALL FAUCETS THAT DELIVER HOT OR TEPID WATER SHALL BE 110°F. ALL METERING FAUCETS SHALL HAVE A MINIMUM TEN (10) SECONDS OF WATER FLOW. AND, INSTALL TRUEBRO HANDI LAV-GUARD VANDAL-PROOF INSULATION KITS OVER P-TRAP, SUPPLIES, STOPS AND ALL SHARP EDGES FOR ALL SINKS AND LAVATORIES (TRAP WRAP FROM BROCAR OR PROWRAP FROM McGUIRE SHALL BE ACCEPTABLE).
4. ALL PLUMBING FIXTURES REFERENCED AS "ADA", "TAS" OR "HANDICAP COMPLIANT" SHALL MEET ALL REQUIREMENTS OF THE ADA AND THE TEXAS ACCESSIBILITY STANDARDS. IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MEET THESE REQUIREMENTS.
5. IN MANY CASES, FIXTURES WITH THE SAME PLUMBING DESIGNATION HAVE DIFFERENT INSTALLATION HEIGHTS – REFERENCE ARCHITECTURAL DRAWINGS FOR ALL INSTALLATION HEIGHTS AND HANDICAP FIXTURE DESIGNATIONS. FIXTURES DESIGNATED AS ADULT HANDICAP SHALL MEET ALL REQUIREMENTS OF THE ADA. FIXTURES DESIGNATED AS CHILD HANDICAP SHALL MEET ALL REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS FOR THE APPROPRIATE CHILDREN'S AGE GROUP (REF. ARCH. DWGS. AND SPECIFICATIONS).

PLUMBING MATERIALS

SANITARY WASTE AND VENT

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

STORM DRAIN PIPING

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB, 8" AND UNDER: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

ABOVE SLAB, 10" AND ABOVE: SERVICE WEIGHT, CAST IRON, BELL & SPIGOT.

NATURAL GAS

BELOW GRADE (OUTSIDE): YELLOW POLYETHYLENE PIPE WITH COATED STEEL RISER AND TRACER WIRE.

ABOVE SLAB: SCHEDULE 40 BLACK STEEL. PIPING 2.5" AND LARGER SHALL BE WELDED. PIPING 2" AND SMALLER SHALL HAVE SCREWED FITTINGS.

DOMESTIC WATER

INTERIOR: TYPE L COPPER WITH SOLDER TYPE WROUGHT COPPER FITTINGS, MADE UP WITH LEAD-FREE SOLDER.

EXTERIOR: TYPE K COPPER WITH SWEAT FITTINGS AND LEAD-FREE SOLDER. BEYOND 5 FEET FROM BUILDING, SCHEDULE 40 PVC.

FIRE SPRINKLER SYSTEM NOTES

1. THE EXISTING FIRE SPRINKLER SYSTEM SHALL BE MODIFIED AND/OR EXPANDED TO COVER THE AREA OF RENOVATION IN ENTIRETY. ALL NEW AND REVISED PIPING SHALL BE ENGINEERED AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR.
2. REFERENCE THE SPECIFICATIONS, DIVISION 21, FOR MORE INFORMATION.

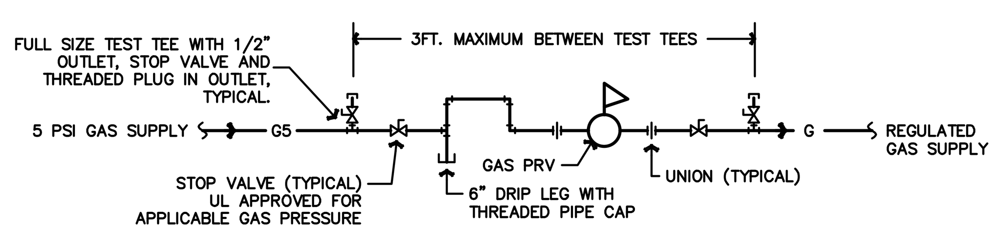
GENERAL PLUMBING NOTES

1. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL WORK DESCRIPTION. SEE THIS SHEET (P4.00) FOR PLUMBING SYMBOLS LEGEND.
2. COORDINATE PLUMBING SYSTEMS INSTALLATION WITH ARCHITECTURAL, STRUCTURAL, HVAC SYSTEMS, ELECTRICAL SYSTEMS, CONDUITS, ETC.... OFFSET PIPING AS REQUIRED TO PROVIDE A FUNCTIONING SYSTEM WITH ADEQUATE SPACE FOR SERVICING AND REPAIRS.
3. MAKE CONNECTIONS OF NEW PIPE SYSTEMS IN TO EXISTING PIPE SYSTEMS WITH THREADED OR SWEAT JOINTS. PROVIDE ELECTROLYSIS ISOLATING UNIONS AT CONNECTION OF DISSIMILAR MATERIALS. REFERENCE THE SPECIFICATIONS.
4. SITE SERVICES ARE SHOWN FOR REFERENCE ONLY. PLUMBING CONTRACTOR SHALL REFERENCE CIVIL DRAWINGS, INCLUDING LOCATIONS OF SERVICES, SIZES OF PIPES, FLOWLINE ELEVATIONS, ETC..
5. DO NOT INSTALL PLUMBING PIPING OVER ANY ELECTRICAL EQUIPMENT. REFERENCE ELECTRICAL DRAWINGS FOR LOCATIONS OF ELECTRICAL EQUIPMENT AND COORDINATE WITH ELECTRICAL SUBCONTRACTORS ACCORDINGLY. SEE DETAIL 1/P0.02. THIS INCLUDES FIRE SPRINKLER PIPING.
6. ALL PIPES THROUGH WALLS OR FLOORS SHALL BE SLEEVED AND SEALED PER DETAIL 5/P0.02. FIRE CAULK WHERE REQUIRED. THIS INCLUDES ALL WALLS, INTERIOR AND EXTERIOR. THIS INCLUDES FIRE SPRINKLER PIPING.
7. ALL CLEANOUTS SHALL BE CONNECTED TO SANITARY LINES USING WYES AND/OR LONG RADIUS ELLS. SANITARY TEES ARE NOT ACCEPTABLE. 2" MINIMUM SIZE. ALL WALL CLEAN OUTS IN VERTICAL RISERS, OR BANKS OF FIXTURES SHALL BE INSTALLED 4" ABOVE THE FLOOD RIM LEVEL OF THE LOWEST CONNECTED FIXTURE AND A MINIMUM OF 24" AFF.
8. ALL WASTE AND VENT PIPING BELOW SLAB SHALL BE 2" MINIMUM.
9. LOCATE PLUMBING VENTS THROUGH ROOF NOT NEARER THAN SIX (6) FEET AWAY FROM EDGE OF BUILDING AND TEN (10) FEET AWAY FROM ANY FRESH AIR INTAKES. OFFSET VENT PIPING, AS REQUIRED, IN CEILING SPACE BETWEEN CEILING AND ROOF TO MEET THESE REQUIREMENTS. SEE DETAIL 3/P0.02.
10. ALL DOMESTIC WATER PIPING (CW, HW AND HWR) SHALL BE INSULATED PER THE WRITTEN SPECIFICATIONS.
11. TOP OF FLOOR DRAINS IN MECHANICAL, AHU AND BOILER ROOMS SHALL BE SET 1-1/2" BELOW FINISHED FLOOR SURFACE. CONCRETE FLOOR SHALL BE SLOPED TO DRAIN, REFERENCE ARCHITECTURAL DRAWINGS. IN ALL OTHER LOCATIONS, FLOOR DRAINS SHALL BE SET FLUSH WITH FINISHED FLOOR, TAKING INTO ACCOUNT ANY FLOOR SLOPE OR FLOOR FINISH (TILE, TERRAZZO, ETC.) AS SHOWN ON ARCHITECTURAL DRAWINGS.
12. PROVIDE AN ISOLATING VALVE AT EACH WATER TAP OFF HOT AND COLD WATER MAINS TO ALLOW FOR SERVICING. VALVE SHALL BE BALL VALVE IF PIPE SIZE IS 2" OR LESS AND GATE VALVE OR BUTTERFLY VALVE IF LARGER THAN 2". SEE WRITTEN SPECIFICATIONS. VALVES SHALL BE EASILY ACCESSIBLE: PROVIDE 18" X 18", FIRE-RATED, STAINLESS STEEL ACCESS PANELS WITH HINGED, CYLINDER LOCK DOORS WHERE VALVES ARE INSTALLED ABOVE INACCESSIBLE CEILINGS OR IN WALL CHASES (MIFAB MODEL MPFR-SS-C). BALL VALVES AND BUTTERFLY VALVES INSTALLED ABOVE CEILINGS SHALL BE INSTALLED SUCH THAT HANDLE IS ON BOTTOM OF PIPE. ISOLATING WATER VALVES ABOVE CEILINGS SHALL BE INSTALLED NO MORE THAN 24" ABOVE CEILING. VALVES ABOVE INACCESSIBLE CEILINGS SHALL BE INSTALLED WITHIN REASONABLE REACH OF CEILING MOUNTED ACCESS PANEL.
13. WATER HAMMER ARRESTERS SHALL BE INSTALLED IN ADDITION TO AIR CHAMBERS PER THE RISER DIAGRAMS. SEE SPECIFICATIONS.
14. MECHANICALLY CLEAN ALL WASTE LINES WITH ROTARY MACHINE TO PROVE FREE FLOWING, SEE SPECIFICATIONS.
15. PROVIDE VENTED SLEEVE (2 PIPE SIZES LARGER THAN GAS PIPE UNLESS NOTED OTHERWISE) FOR ALL GAS PIPING IN GROUND BELOW PAVING OR SIDEWALKS AND INSIDE BUILDING IN WALLS AND IN UNVENTILATED CEILING SPACES, SEE SPECIFICATIONS.
16. GAS PIPING SHALL BE 1/2" MINIMUM. TAP GAS PIPING ON TOP OR SIDES ONLY. DO NOT INSTALL VALVES IN CEILING PLENUM OR IN ANY INACCESSIBLE LOCATION. ALL GAS VALVES SHALL BE EASILY ACCESSIBLE. REFER TO DETAIL 7/P0.01 FOR TYPICAL GAS CONNECTION INSTALLATION. REFER TO DETAIL 4/P0.01 FOR TYPICAL PRV INSTALLATION.
17. CENTER WALL HYDRANTS IN BRICK PATTERN OF EXTERIOR WALLS, REFERENCE THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
18. ALL REFRIGERATORS WITH ICE MAKERS, COMMERCIAL TYPE COFFEE MAKERS, ICE MAKERS, COFFEE VENDING MACHINES AND OTHER ITEMS PROVIDED BY OTHERS THAT REQUIRE A WATER CONNECTION SHALL HAVE A CW VALVE BOX, "VBOX", INSTALLED TO ALLOW EASY ACCESS AND REMOVAL OF MACHINE. ALSO, INSTALL IN-LINE FILTER IN WATER CONNECTION.
19. REFER TO CIVIL DRAWINGS FOR SITE SANITARY, SITE STORM SEWER, FIRE SERVICE AND DOMESTIC WATER SERVICE. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPING INSIDE BUILDING TO OUTSIDE LOCATIONS SHOWN ON PLUMBING DRAWINGS. PLUMBING CONTRACTOR SHALL INCLUDE COST OF FINAL TIE-INS TO SITE SERVICES.
20. PER THE DRAWINGS, ALL DRAINS (FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, KITCHEN DRAINS, SHOWER DRAINS, ETC.) SHALL BE VENTED AND TRAP PRIMED – NO EXCEPTIONS. TRAP PRIMING SHALL BE ACCOMPLISHED USING WATER CLOSET FLUSH VALVE TRAP PRIMING DEVICES OR PROSET SYSTEMS TRAP GUARD SEWER GAS EMISSION PROTECTION, AS SHOWN ON DRAWINGS. REFERENCE PLUMBING FLOOR PLANS AND RISER DIAGRAMS.
21. ALL PIPING LOCATED ON ROOF (GAS PIPING) SHALL BE INSTALLED ON ROOF PIPE SUPPORTS PER DETAIL 14/P0.02, 6-FOOT ON CENTER. INSTALL ROOF PIPE JACK PER DETAIL 9/P0.02 FOR ALL PIPING THROUGH ROOF.
22. COORDINATE LOCATIONS OF ALL ROOF DRAINS AND OVERFLOW ROOF DRAINS WITH ARCHITECTURAL DRAWINGS.
23. FOR COMBINATION WASTE AND VENT SYSTEMS (WHERE APPLICABLE ON DRAWINGS), DRAIN P-TRAPS SHALL BE SIZE OF PIPE SHOWN ON DRAWINGS (I.E. TWO PIPE SIZES LARGER THAN DRAIN SIZE). FOR EXAMPLE, A 4" FLOOR DRAIN SHALL HAVE A 6" P-TRAP.
24. FOR ALL PLUMBING FIXTURES, IF COPPER PIPING IS STUBBED THROUGH WALL FOR DRAIN CONNECTION, INSTALL MARVEL FITTING AT DRAIN CONNECTION FOR EASE OF SERVICING AND REPAIRS. COPPER DRAIN PIPING WILL ONLY BE ALLOWED FOR DIRECT/STRAIGHT STUB-OUT OF FIXTURE DRAIN PIPING THROUGH WALL.
25. DO NOT INSTALL ANY PIPING BENEATH CVT OR VAV BOXES. THIS INCLUDES FIRE SPRINKLER PIPING.
26. WHERE UNDERGROUND VENT PIPE SIZE IS NOT NOTATED, VENT SHALL BE 2" DIAMETER.
27. WHERE UNDERGROUND SANITARY PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR SIZE. NOT BELOW GRADE SANITARY PIPE SHALL BE SMALLER THAN 2". NO SANITARY LINE OR P-TRAP FOR A DRAIN/FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE DRAIN/FIXTURE SCHEDULE.
28. WHERE ABOVE GROUND VENT PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR VENT SIZE.
29. WHERE CW/HW PIPING SIZE TO THE FIXTURE IS NOT SHOWN ON THE FLOOR PLAN, REFER TO THE RISER DIAGRAMS FOR CW/HW PIPE SIZE. NO PIPING TO FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE FIXTURE SCHEDULE.
30. TO INSTALL NEW PLUMBING SYSTEMS BELOW EXISTING CONCRETE SLABS, FIRST PLUMBING CONTRACTOR SHALL LAY OUT CUT. THEN, DEMOLITION CONTRACTOR SHALL SAW CUT SLAB TO CONTROL CRACKING AND REMOVE ALL CONCRETE. PLUMBING CONTRACTOR SHALL THEN EXCAVATE FILL TO PROPER SLOPE, INSTALL NEW PIPING SYSTEMS AS REQUIRED, THEN BACKFILL AND COMPACT TO PROPER DENSITY. THE CONCRETE CONTRACTOR SHALL THEN INSTALL NEW SIX (6) MIL POLYETHYLENE VAPOR BARRIER AND SEAL, INSTALL NEW REINFORCING STEEL AND WELD ON TO EXISTING, THEN RE-POUR CONCRETE TO NEW LEVEL. DO NOT CUT THROUGH GRADE BEAMS WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
31. ALL ABANDONED FIXTURES, DRAINS AND PIPING (INCLUDING PIPING ABANDONED IN THE PAST) IN AREAS WHERE WORK IS BEING DONE SHALL BE COMPLETELY REMOVED FROM BUILDING (INCLUDING PIPING BELOW SLAB/GRADE – UNLESS SHOWN OTHERWISE ON DRAWINGS). EXISTING WATER PIPING SHALL BE CAPPED AT EXISTING WATER MAIN TAPS AND ALL ABANDONED PIPING REMOVED. ABANDONED VENT PIPING SHALL BE COMPLETELY REMOVED, INCLUDING EXISTING VTR's NOT RE-USED. PATCH AS REQUIRED. ONLY ACTIVE PIPING, FIXTURES AND DRAINS SHALL REMAIN IN BUILDING WHERE WORK IS BEING DONE.
32. FIELD VERIFY EXISTING CONDITIONS PRIOR PROCUREMENT OF EQUIPMENT AND SYSTEMS.
33. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION.
34. PROVIDE INSUALTION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF THE 2021-IECC. (4 ADD4)
35. SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.

GAS PRV SCHEDULE

MARK	PRV-K	PRV-K2
LOCATION	MECH. YARD	MECH. YARD
SERVES	KITCHEN	KITCHEN
GAS LOAD	585 CFH	585 CFH
DISTANCE FROM METER	150 FT	150 FT
DISTANCE TO LAST OUTLET	200 FT	200 FT
INLET (SIZE/PRESSURE)	1" / 5 PSI	1" / 5 PSI
OUTLET (SIZE/PRESSURE)	2" / 7-12 IN WC	2" / 7-12 IN WC

(4 ADD4)



4 GAS PRESSURE REGULATOR DETAIL (PRV)

NO SCALE

NOTES:
1. GAS REGULATOR SHALL BE ANSI Z21.80 CERTIFIED FOR LINE PRESSURE REGULATION BETWEEN THE SERVICE REGULATOR AND CONNECTED EQUIPMENT.
2. ALL GAS REGULATORS WITH INLET PRESSURE ABOVE 2 PSI SHALL BE EQUIPPED WITH A FACTORY INSTALLED OVERPRESSURE PROTECTION DEVICE, AS PART OF THE ANSI Z21.80 CERTIFICATION.
3. GAS REGULATOR SHALL BE EQUIPPED WITH A VENT LIMITING DEVICE, SIZED IN ACCORDANCE WITH THE REGULATOR OUTLET PRESSURE.
4. ALL REGULATORS INSTALLED OUTDOORS SHALL BE RATED FOR OUTDOOR INSTALLATION.
5. BASIS OF DESIGN IN THE MAXITROL 325-L SERIES OF REGULATORS

PLUMBING DRAINS, CLEANOUTS AND HYDRANTS

MARK	MIN. CONNECTION SIZES (IN.) SAN	VENT	CW	HW	DESCRIPTION/SPECIFICATION FOR FIXTURE OR EQUIPMENT
FD	4	2	1/2	–	TOILET FLOOR DRAIN – TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 1/2" TRAP PRIMER TAP, 6" SQUARE, NICKEL BRONZE HSTRAINER AND SECURITY SCREWS JR SMITH MODEL 2005-03-K06PB-P050-U.
FD2	4	2	1/2	–	EQUIPMENT FLOOR DRAIN – CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, DUCTILE IRON TRUE-FIT SEDIMENT BUCKET WITH 12" STAINLESS STEEL RIM LESS GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS-540-LG-P. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD3	4	2	1/2	–	GRATED MECHANICAL ROOM FLOOR DRAIN – CAST IRON WITH FLANGE, SEEPAGE OPENINGS, 9" HEAVY-DUTY DUCTILE IRON GRATE WITH STAINLESS STEEL VENEER, CLAMPING DEVICE AND 1/2" TRAP PRIMER TAP ZURN MODEL ZS-550-C-P
FD4	4	2	1/2	–	CANWASH FLOOR DRAIN – ALL GALVANIZED CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, GALVANIZED SUR-SET SEDIMENT BUCKET WITH 12" GALVANIZED DUCTILE IRON RIM AND GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS-540-P-G-HD. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD5	4	2	1/2	–	KITCHEN FLOOR DRAINS SHALL BE SIMILAR EXCEPT WITH 7" SQUARE, BRONZE GRATE JR SMITH MODEL 2005-03-K07PB-P050-U. PROVIDE 4" DIAMETER STAINLESS STEEL FUNNEL WHERE SHOWN ON DRAWINGS. REFERENCE KITCHEN CONNECTION SCHEDULE ON PLUMBING RENOVATION FLOOR PLAN SHEET.
FS KITCHEN FS	4	2	1/2	–	FLOOR SINK – CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY STAINLESS STEEL TRACTOR DUTY FRAME WITH 3/4-TRACTOR GRATE AND 1/2" TRAP PRIMER TAP JR SMITH MODEL 3150Y-04-C-13.
FS2 (4 ADD4)	4	2	1/2	–	DEEP FLOOR SINK – FABRICATED STEEL RECEPTOR, 12" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, STAINLESS STEEL MESH LINED BUCKET AND 24X12 NICKEL BRONZE FRAME WITH 3/4 SOLID COVER. JR SMITH MODEL 3250Y-C-BS-43
CO	VARIES	–	–	–	FLOOR CLEANOUT – ADJUSTABLE EXTENSION HOUSING, CAST IRON FERRULE WITH FULL-LINE-SIZE BRASS PLUG (UP TO 4"), 5" DIAMETER STAINLESS STEEL ACCESS COVER WITH VANDAL-PROOF SECURITY SCREWS, ROUND FRAME AND TOP STYLE COMPATIBLE WITH FLOOR TYPE (REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR TYPES) ZURN MODEL ZS-1400-VP. PROVIDE CARPET FLANGE FOR CARPETED AREAS (CARPET MARKER SHALL NOT BE ACCEPTABLE) AND TERRAZZO RECESS FOR TERRAZZO FLOORS. OUTDOOR CLEANOUT – SAME AS TYPE "CO" EXCEPT WITH HEAVY-DUTY NICKEL BRONZE TOP ZURN MODEL ZN-1400-HD-VP. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
WCO	VARIES	–	–	–	WALL CLEANOUT – CAST IRON FERRULE WITH COUNTERSUNK HEAD (FULL-LINE-SIZE PVC PLUG UP TO 4") MI-FAB MODEL C1450. ACCESS COVER SHALL BE 8" SQUARE, SURFACE MOUNT, FLUSH INSTALLATION, 16-GAUGE STAINLESS STEEL ACCESS DOOR WITH FLANGED FRAME AND VANDAL-PROOF OPTION MI-FAB MODEL UA-SS-VP. ACID WASTE CLEANOUT (AWCO) SHALL BE SAME EXCEPT ACID WASTE PIPING. INSIDE CABINETWORK WHERE CLEANOUT IS NOT VISIBLE, ACCESS PANEL MAY BE ROUND STAINLESS STEEL TYPE WITH VANDAL-PROOF CENTER SCREW MI-FAB MODEL C1450-RD-3-6.
2CO	4	–	–	–	DOUBLE CLEANOUTS – SAME AS OUTDOOR CLEANOUTS. INSTALLED FOR TWO-WAY RODDING. SINGLE CLEANOUT WITH 2-WAY FITTING IS NOT ACCEPTABLE, PROVIDE TWO SEPARATE CLEANOUTS. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
HB	–	–	3/4	–	HOSEBIBB – 3/4" HOSE THREAD, INTEGRAL VACUUM BREAKER SPOUT, ROUGH CHROME FINISH WITH REMOVABLE KEYED HANDLE, WALL FLANGE CHICAGO MODEL 952.
WH	–	–	3/4	–	RESTROOM WALL HYDRANT – NARROW WALL, WARM CLIMATE TYPE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5518
WH2	–	–	3/4	–	EXTERIOR WALL HYDRANT – NON-FREEZE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5519
WH3	–	–	3/4	3/4	CANWASH WALL HYDRANT – NON-FREEZE HOSE BOX WITH STRAIGHT INLET CONNECTION, HOT AND COLD MIXING, REMOVABLE KEYED HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL BACKFLOW PREVENTER WITH 3/4" HOSE CONNECTION, HEAVY DUTY BRASS CASING, POLISHED BRONZE HYDRANT BOX WITH HINGED COVER, "WATER" CAST ON COVER, DRIP LIP AND WALL CLAMP J.R. SMITH MODEL 5560-QT-WC-H-W-PB.
WASH (4 ADD4)	–	–	3/4	3/4	CLOTHES WASHER HOSE CONNECTION – STUB OUT OF WALL WITH ELBOW TO LEAD FREE DOUBLE CHECK BACKFLOW PREVENTER WITH QUARTER TURN VALVES, WATTS LF007M3-QT-FZ 3/4; PROVIDE FEMALE NIPPLE WITH 3/4" HOSE CONNECTION FOR CONNECTION OF WASHER JUMPER HOSE. SUPPORT ASSEMBLY FROM WALL WITH UNISTRUT AND PIPE CLAMPS. ASSEMBLY SHALL BE PROVIDED FOR BOTH COLD AND HOT WATER OUTLETS. WASHER HAS INTEGRAL AIR GAP CERTIFIED TO EUROPEAN STANDARDS AND THUS REQURIES AN EXTERNAL MEANS OF BACKFLOW PREVENTION TO MEET US STANDARDS.

KITCHEN PLUMBING CONNECTION SCHEDULE

MARK	DESCRIPTION
P5	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO MOP BASIN ("MB") FAUCET. REFERENCE PLUMBING FIXTURE SCHEDULE.
P6	3" DRAIN IN FLOOR FOR MOP BASIN ("MB") DRAIN. REFERENCE PLUMBING FIXTURE SCHEDULE.
P7	3/4" CW AND 3/4" HW – IN WALL, 18" AFF, TO HOSE BIBB.
P10	FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" SQUARE HEAVY-DUTY POLISHED BRONZE GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 2005-03-K07PB-P050-U.
P11C	1/2" CW AND 1/2" HW – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P11D	2" DRAIN – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P12	FLOOR SINK – 4" OUTLET; FLUSH WITH FLOOR; CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY NICKEL BRONZE FRAME WITH 3/4-TRACTOR GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 3150Y-04-C-13.
P12A	EQUIPMENT FLOOR DRAIN – SIMILAR TO MARK P10, BUT WITH 4" OUTLET.
P15	FUNNEL FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" DIAMATER HEAVY-DUTY STAINLESS STEEL TRACTOR DUTY GRATE AND SECURITY SCREWS, 4" ROUND FUNNEL ASSEMBLY (MODEL 3580), 1/2" TRAP PRIMER TAP JR SMITH MODEL 2005-03-K07PB-P050-U
P109	3/4" CW – IN WALL, 60" AFF, TO ICE MAKER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO ICE MAKER FROM CHECK VALVE, THROUGH FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P109A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12, BUT WITH FULL GRATE. SEE DESCRIPTION ABOVE.
P110	1/2" CW AND 1/2" HW – IN WALL, 36" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO-CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P110A	2" DRAIN – IN WALL, 48" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO-CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P122	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET AT TWO COMPARTMENT SINK. INSTALL LEONARD 370-LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P122A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P123	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO PRE-RINSE. 1/2" CW TO DISPOSER.
P123A	2" DRAIN – IN WALL, 10" AFF, TO DISPOSER (BYPASS GREASE TRAP).
P161	(2)3/4" GAS CONNECTION – 18"/36" AFF, TO CONVECTION OVEN, 60 CFH (EACH).
P163A	3/4" GAS CONNECTION – 18" AFF, TO TILT BRAISING PAN, 104 CFH.
P163B	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO TILT BRAISING PAN.
P165	1" GAS CONNECTION – 18" AFF, TO RANGE, 70 CFH.
P172	(2) 3/4" CW – IN WALL, 24" AFF & 48" AFF, TO COMBI OVEN. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND OVEN. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO EQUIPMENT FROM CHECK VALVE, THROUGH FILTER BANK (REF P172D & E), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172A	SIMILAR TO PLUMBING CONNECTION P172, BUT ONLY ONE 3/4" CW – IN WALL, 48" AFF. SEE DESCRIPTION ABOVE.
P172B	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P172C	(2) 3/4" GAS CONNECTION – 18"/36" AFF, TO COMBI OVEN, 105 CFH (EACH).
P172D	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO INLET OF FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172E	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. EXTEND OUTLET OF FILTER BANK BACK INTO THE WALL. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PIPING WITHIN THE WALL SHALL EXTEND TO AND SERVE TWO (2) CONNECTIONS TAGGED P172.
P249	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET. INSTALL LEONARD 370-LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P249A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250A	3/4" HW – IN WALL, 18" AFF, TO BOOSTER HEATER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER AND CONNECT THROUGH FILTER (BY OTHERS) WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PROVIDE WATTS 9MD2 OR EQUAL – 140°F MINIMUM (INTERCONNECT WITH DISH MACHINE).
P250B	3/4" CW – IN WALL, 18" AFF, TO DISH MACHINE. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND DISH MACHINE. PROVIDE WATTS 9MD2 OR EQUAL (INTERCONNECT WITH DISH MACHINE).
P614	1/2" CW AND 1/2" HW – IN WALL, 42" AFF, TO FILL FAUCET.
P800	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.

KITCHEN PLUMBING CONNECTION NOTES
1. KITCHEN CONNECTION SCHEDULE IS APPLICABLE TO ALL SCHOOLS IN THIS DRAWING SET.
2. REFERENCE KITCHEN CONSULTANT'S DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL EQUIPMENT AND INSTALLATION REQUIREMENTS.
3. ALL WATER PIPING INSTALLED EXPOSED BENEATH KITCHEN EQUIPMENT, INCLUDING PIPING INSTALLED BY DIVISION 11 (I.E. UNDER SINK COUNTERTOPS, SERVING TABLES, ETC.) SHALL BE INSULATED BY THE PLUMBING CONTRACTOR PER THE SPECIFICATIONS (INCLUDE ALUMINUM JACKETING FOR ALL PIPE INSULATION, PER SPECIFICATIONS).
4. INDIRECT WASTE PIPING FROM KITCHEN EQUIPMENT IS NOT SHOWN; HOWEVER, PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THIS PIPING PER THE REQUIREMENTS OF THE KITCHEN CONSULTANT'S CONTRACT DOCUMENTS, PER THE REQUIREMENTS OF THE VARIOUS EQUIPMENT MANUFACTURERS PROVIDED AND PER THE IPC-2021, SECTION 802. ALL INDIRECT WASTE PIPING SHALL BE TYPE L COPPER. INSTALL 45°F ELBOW AT END OF EACH INDIRECT WASTE PIPE TO DIRECT FLOW OF WATER INTO FLOOR SINK.
   - 4.1. IPC 2015 – SECTION 802.1.1 FOOD HANDLING – EQUIPMENT AND FIXTURES UTILIZED FOR THE STORAGE, PREPARATION AND HANDLING OF FOOD SHALL DISCHARGE THROUGH AN INDIRECT WASTE PIPE BY MEANS OF AN AIR GAP. EACH WELL OF A MULTIPLE-COMPARTMENT SINK SHALL DISCHARGE INDEPENDENTLY TO A WASTE RECEPTOR. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P121, P122 AND P126.
   - 4.2. IPC 2015 – SECTION 8802.1.8 FOOD UTENSILS, DISHES, POTS AND PANS SINKS – SINKS, USED FOR THE WASHING, RINSING, OR SANITIZING OF UTENSILS, DISHES, POTS, PANS OR SERVICE WARE USED IN THE PREPARATION, SERVING OR EATING OF FOOD SHALL DISCHARGE INDIRECTLY THROUGH AN AIR GAP OR AN AIR BREAK TO THE DRAINAGE SYSTEM. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P249.

PLUMBING FIXTURES AND EQUIPMENT

MARK	MIN. CONNECTION SIZES (IN.) SAN	VENT	CW	HW	DESCRIPTION/SPECIFICATION
WC	4	2	1	–	WATER CLOSET – WALL MOUNTED, WHITE VITREOUS CHINA, SIPHON JET ACTION, 1.28 GPF, ELONGATED BOWL, TOP SPUD, ADA/TAS COMPLIANT, AMERICAN STANDARD AFWALL; SLOAN ROYAL 111-1.28 FLUSH VALVE WITH VANDAL-PROOF FREE-SPINNING TOP CAP, 1.28 GPF, VANDAL-PROOF STOP AND ADA/TAS COMPLIANT LEVER ACTUATOR WITH LEVER INSTALLED ON LEFT SIDE (FOR FIXTURES DESIGNATED AS "HANDICAP", INSTALL LEVER ON "WIDE-SIDE" OF TOILET STALL); BEMIS 1655-SS/C EXTRA HEAVY DUTY, WHITE, OPEN FRONT SEAT LESS COVER WITH SELF-SUSTAINING, STAINLESS STEEL CHECK HINGE; AND, FLOOR MOUNTED CARRIER.
LV	1-1/4	1-1/4	1/2	1/2	LAVATORY GOOSENECK FAUCET – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; DECK MOUNTED FAUCET, 4" CENTERS, FIXED, CHROME PLATED, 5.25" GOOSENECK SPOUT, PRESSURE COMPENSATING LAMINAR FLOW NON-AERATING 0.5 GPM OUTLET, 4" WRISTBLADE HANDLES, REBUILDABLE COMPRESSION CARTRIDGES, CHICAGO 895-317GN2AE72ABCP; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170-LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
LV2	1-1/4	1-1/4	1/2	1/2	LAVATORY – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; CHROME PLATED, ALL CAST BRASS CONSTRUCTION, ADA/TAS COMPLIANT, VANDAL-PROOF FAUCET WITH 4" WRIST BLADE HANDLES, COMPRESSION STYLE CARTRIDGES, CHROME DECK PLATE, VANDAL-PROOF AERATOR, COPPER SUPPLIES AND CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9 CHICAGO MARATHON MODEL 802-E70-317ABCP; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170-LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
EDF	1-1/2	1-1/2	1/2	–	BI-LEVEL ELECTRIC DRINKING FOUNTAINS WITH BOTTLE FILLER – WALL MOUNTED, ALL STAINLESS STEEL, ADA AND TAS COMPLIANT FOR ALL AGES, 8 GPH AT ARI STANDARDS, 2-STREAM ALL METAL BUBBLER FITTING WITH VANDAL-RESISTANT KIT AND FRONT PUSH BUTTON ACTUATION, PUSH BUTTON ACTIVATED BOTTLE FILLER WITH 1.1GPM FILL RATE AND ANIT-MICROBIAL COATING, INTEGRAL WATER FILTER, LEAD-FREE (CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9), REFRIGERANT HFC-134a, MAINTENANCE ACCESS PANEL, HALSEY-TAYLOR MODEL HTHBHVR8BL; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; FLOOR MOUNTED CHAIR CARRIER; AND, STAINLESS STEEL ADA APRON FOR LOCATIONS REQUIRED BY ADA OR TAS.
MB	3	2	3/4	3/4	MOP BASIN – 24" X 24" X 12" DEEP TERRAZZO, TWO (2) STAINLESS STEEL SPLASH CATCHER PANELS, 6" DROP FRONT WITH STAINLESS STEEL CAP, CAST BRASS DRAIN WITH STAINLESS STEEL STRAINER STERN WILLIAMS HILOW MODEL HL-1800-BP; FAUCET SHALL BE POLISHED CHROME PLATED SERVICE SINK TYPE WITH VACUUM BREAKER, INTEGRAL SUPPLY CHECK STOPS, SPOUT WITH PAIL HOOK, HOSE END AND TOP BRACE CHICAGO MODEL 897-CCF (INSTALL BACKING/BRACING INSIDE WALL TO SUPPORT FAUCET AND TOP BRACE).
LP-1	3	2	3/4	3/4	LAVATORY PUMP – FACTORY BUILT, LIFT PUMP FOR GRAY WATER WASTE, TOP ACCESS TO INTERNAL 1/6HP PUMP AND FLOAT SWITCH, 1.5" TOP AND SIDE INLETS, 1.5" TOP OUTLET, INTEGRAL CHECK VALVE AT BOTTOM INLET CONNECTIONS, 9FT POWER CORD WITH GROUNDED PLUG; LIBERTY PUMPS MODEL 406

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025 (4 ADD4)	ADDENDUM 04

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

STATE OF TEXAS — INTERIM REVIEW — FOR INTERIM REVIEW AND NOT INTENDED — 106052 — LICENSED PROFESSIONAL ENGINEER — 09.04.2025

MWA ARCHITECTS
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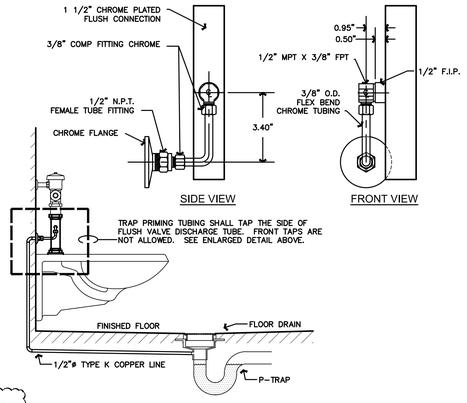
PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

PLUMBING NOTES & SCHEDULES

k-P0.01

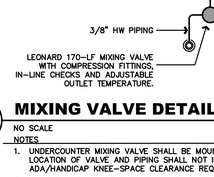


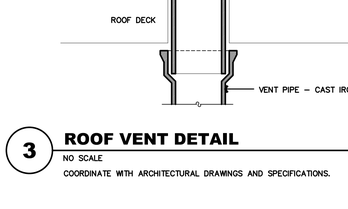
12 FLUSH VALVE TRAP PRIMING TUBE DETAIL

NO SCALE

MI-FAB MODEL MI-702-MOD FLUSH VALVE TRAP PRIMER, OR EQUAL

TANKLESS WATER HEATER SCHED.		
MARK	IEWH-1	
SERVES	LAVATORY	
LOCATION	BELOW COUNTER	
HEATER KW	1.8 KW	
TEMP RISE (@ 0.5 GPM)	25°F	
VOLTAGE/PHASE	120V/1PH	
EEMAX MODEL	SPEX1812T	





13 GAS PIPING WALL-TO-ROOF TRANSITION DETAIL

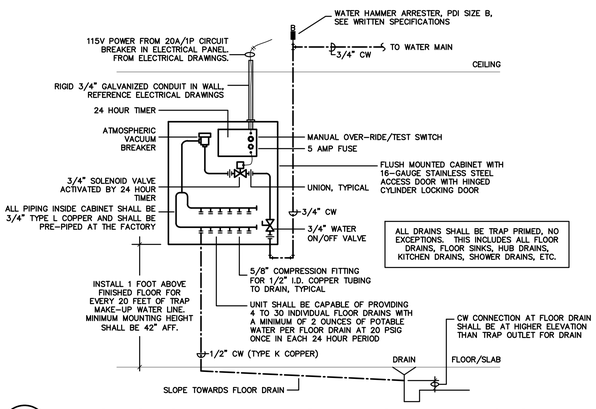
NO SCALE

11 TANKLESS WATER HEATER

NO SCALE

NOTES:

1. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FURNISH & INSTALL 0.5-GPM AERATOR ON FAUCET COMPATIBLE WITH TANKLESS EWH REQUIREMENTS.
5. WATER HEATER SHALL HAVE INTEGRAL ASSE-1070 COMPLIANT TEMPERED MIXING VALVE.

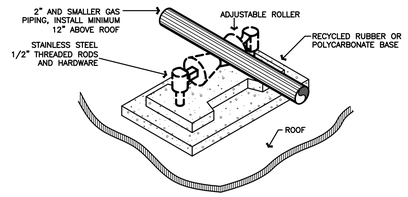


10 ELECTRONIC TRAP PRIMING MANIFOLD DETAIL (TP)

NO SCALE

NOTES:

1. REFERENCE SCHEDULE ON SHEET P3.00

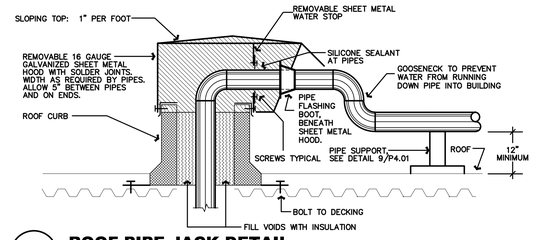


14 GAS PIPING ROOF SUPPORT DETAIL

NO SCALE

NOTES:

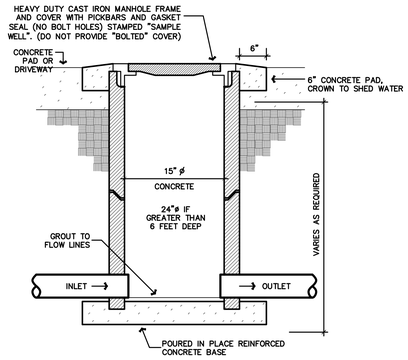
1. GAS PIPING SUPPORT SHALL BE PORTABLE PIPE HANGERS, INC. MODEL PP10-R. PIPING SHALL BE INSTALLED 12" ABOVE FINISHED ROOF. PROVIDE 18" X 18" CAREY TREAD-TYPE MATERIAL BENEATH EACH PIPE SUPPORT.
2. FIELD LOCATE ROOF STRUCTURAL SUPPORTS AND PLACE BASE OF PIPE SUPPORT OVER ROOF SUPPORTS ONLY. PROVIDE BASE OF ADEQUATE LENGTH TO SPAN ROOF JOIST TO PREVENT SUPPORTS SETTING ON ROOF DECK ONLY.
3. INSTALL SIX (6) FOOT-ON-CENTERS.
4. PIPE SUPPORT MANUFACTURER'S REPRESENTATIVE SHALL PERSONALLY INSPECT INSTALLATIONS OF PIPE SUPPORTS AND MAKE CORRECTIONS AND HEIGHT ADJUSTMENTS TO INSTALLATIONS, AS REQUIRED, DURING INSPECTION.



9 ROOF PIPE JACK DETAIL

NO SCALE

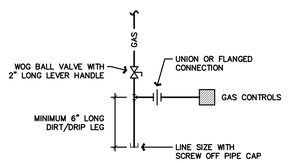
NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.



8 SAMPLE TEST WELL DETAIL (STW)

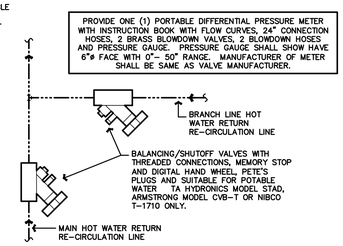
NO SCALE

NOTES:



7 TYPICAL GAS CONNECTION

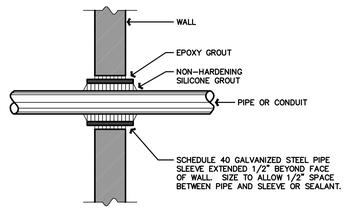
NO SCALE



6 HOT WATER BALANCING STATION

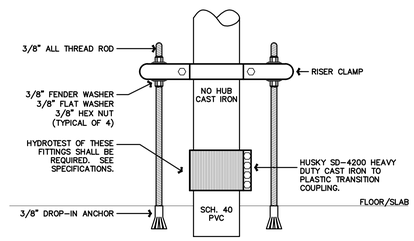
NO SCALE

PROVIDE AT EACH JUNCTION OF BRANCH HOT WATER RETURN LOOPS TO MAIN CIRCULATING HOT WATER LINE, SEE PLUMBING PLANS.



5 WALL PENETRATION DETAIL

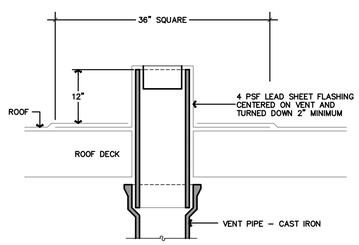
NO SCALE



4 PVC-TO-CAST IRON INSTALLATION DETAIL

NO SCALE

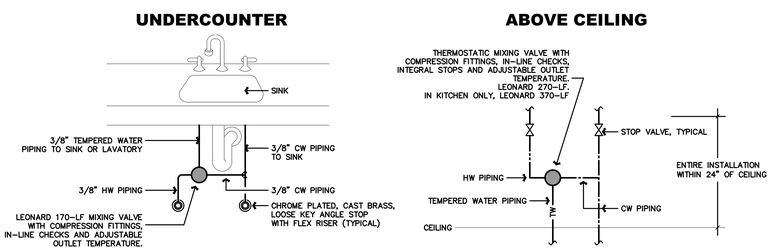
MISSION TRANSITION COUPLING DESIGNED AND CERTIFIED FOR THIS SPECIFIC APPLICATION SHALL BE ACCEPTABLE IN LIEU OF HUSKY COUPLING IN THIS DETAIL.



3 ROOF VENT DETAIL

NO SCALE

COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

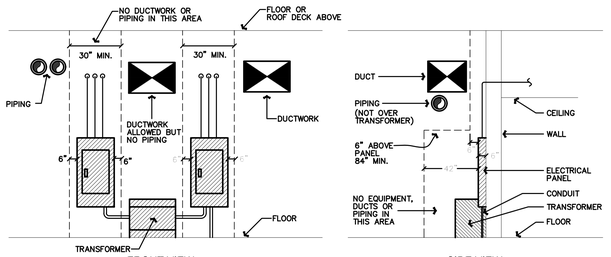


2 MIXING VALVE DETAIL

NO SCALE

NOTES

1. UNDERCOUNTER MIXING VALVE SHALL BE MOUNTED ON WALL IN FIXTURE KNEE-SPACE. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FOR ABOVE CEILING INSTALLATION, VALVE SHALL BE INSTALLED IN AN EASILY/READILY ACCESSIBLE LOCATION. SEE KITCHEN PLUMBING CONNECTION SCHEDULE FOR REQUIRED KITCHEN LOCATIONS.
5. LAVATORY MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 130°F.
   SINK MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 140°F.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

DO NOT INSTALL ANY PIPING BENEATH CVT BOXES. DO NOT INSTALL ANY PIPING (EXCEPT FIRE SPRINKLER PIPING AND OTHER PIPES SHOWN SPECIFICALLY ON THE PLUMBING FLOOR PLANS) OVER COMPUTER CLASSROOMS, BOOKROOMS, IDF/MDF/SERVER ROOMS OR OTHER ROOMS NOTED ON THE PLUMBING FLOOR PLANS.

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05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
4 09/04/2025	ADDENDUM 04

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
6955 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

STATE OF TEXAS
INTERIM REVIEW
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
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PLUMBING SCHEDULES & DETAILS

k-P0.02

PRELIMINARY
NOT FOR CONSTRUCTION OR BIDDING PURPOSES

STANTON ENGINEERING GROUP
INFO@STANTON-ENG.COM (713) 300-6080
TEXAS ENGINEERING REG. NO. F-01833 | 1300 W. SAM HOUSTON PARKWAY S., SUITE 121, HOUSTON, TX 77042

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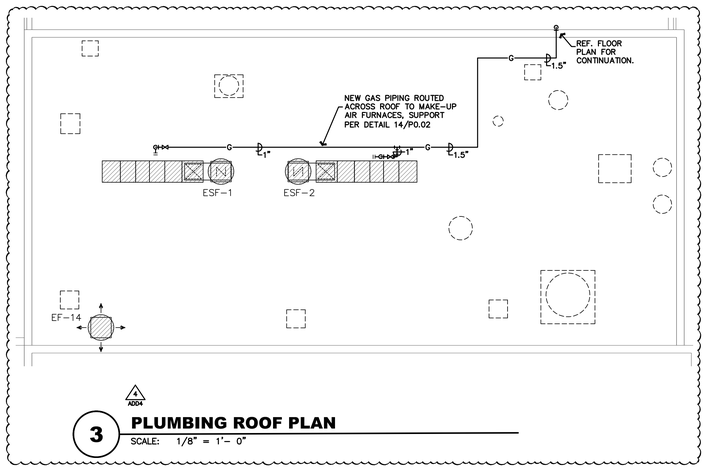
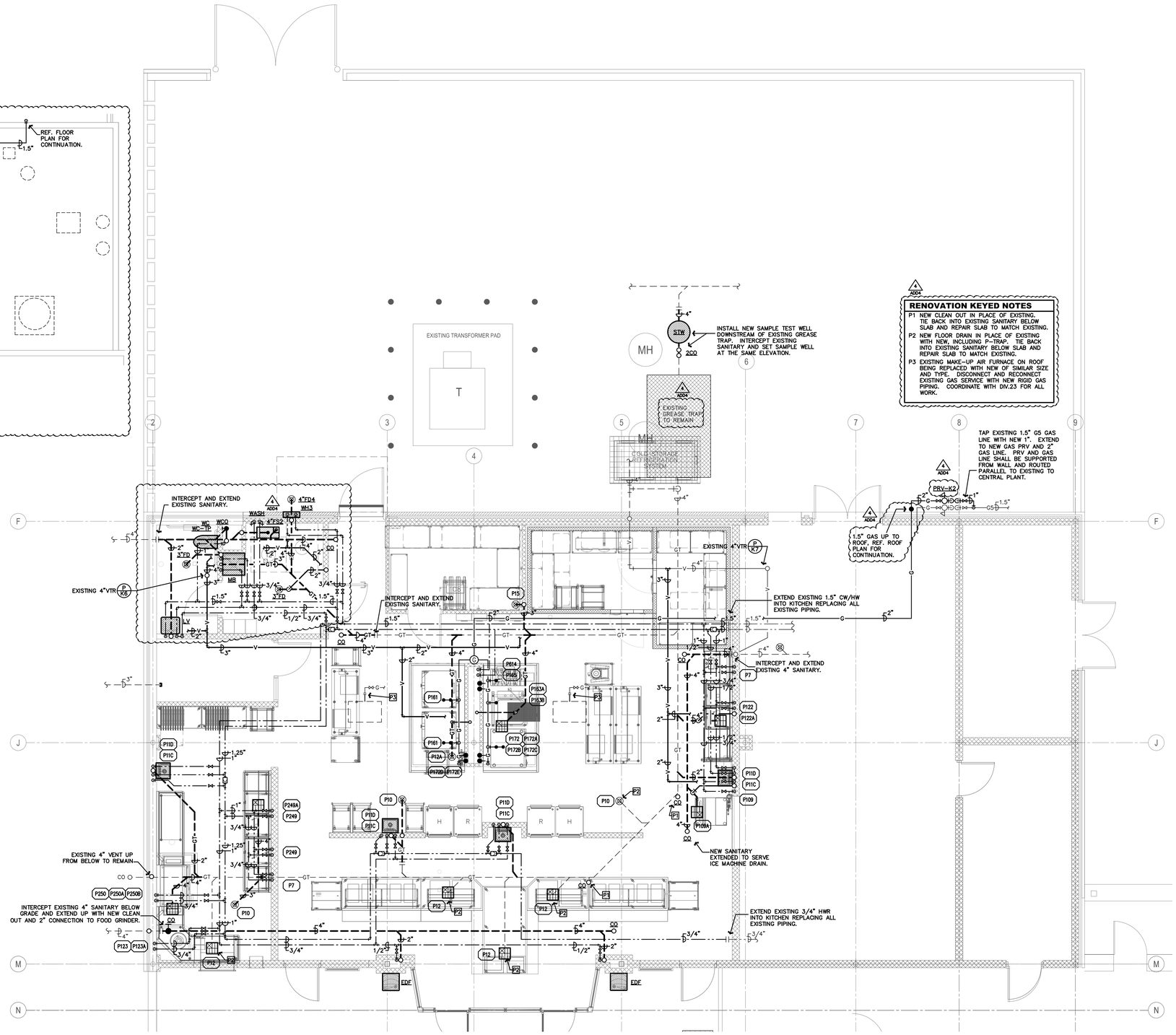


ADD4

3 PLUMBING ROOF PLAN
SCALE: 1/8" = 1'- 0"

ADD4



1 PLUMBING RENOVATION FLOOR PLAN
SCALE: 1/4" = 1'- 0"

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ADD4

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
6951 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED
PROFESSIONAL
ENGINEER
09.04.2025

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ARCHITECTS AND PLANNING CONSULTANTS
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HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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PLUMBING FLOOR PLAN

k-P1.01

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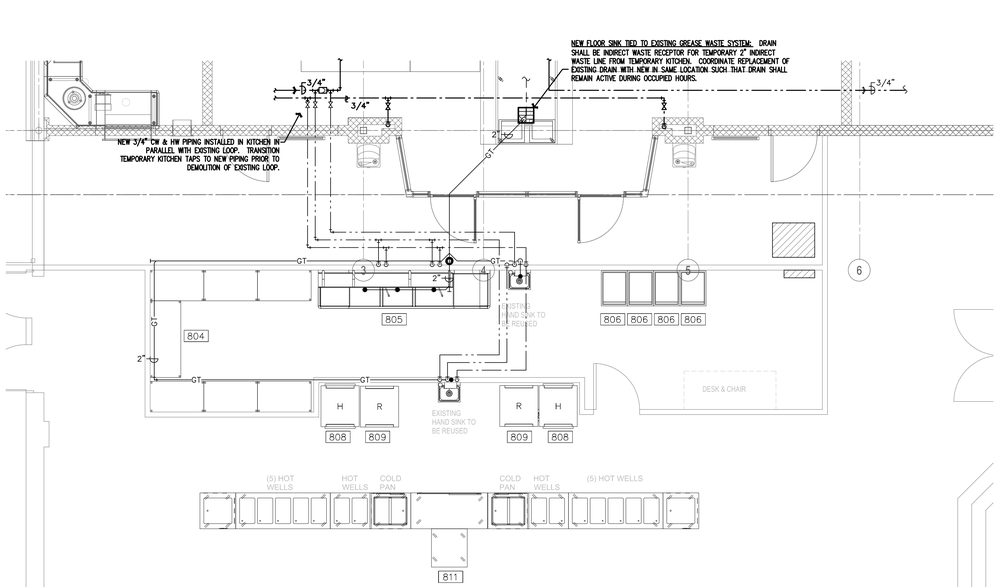


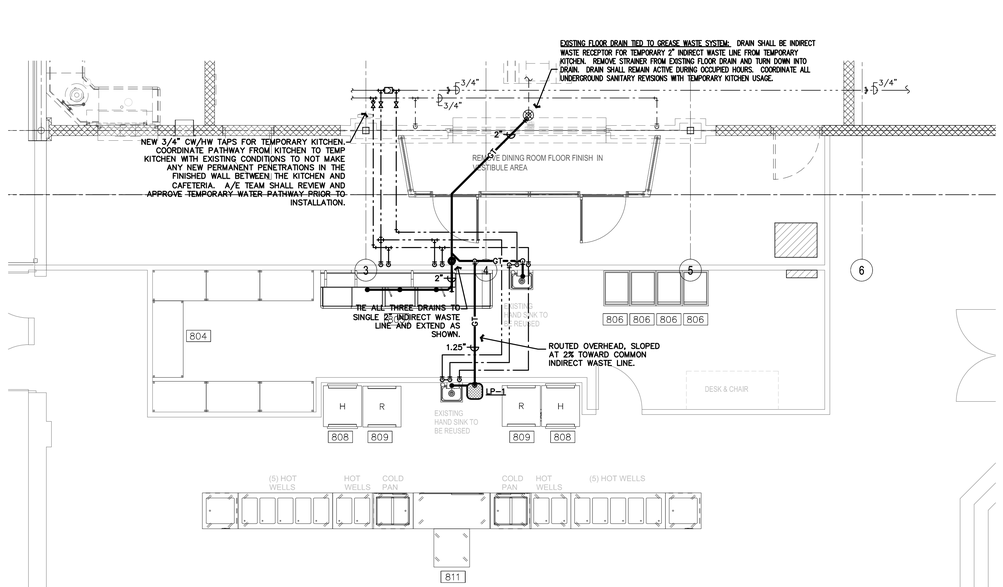
2 PLUMBING TEMPORARY KITCHEN PLAN - POST DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. AFTER DEMOLITION OF EXISTING KITCHEN AND DURING CONSTRUCTION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL REMAIN ACTIVE.
2. ALL SANITARY, CW AND HW CONNECTIONS SHALL REMAIN ACTIVE DURING ALL TIMES WHEN TEMPORARY KITCHEN IS ACTIVE.
3. UPON COMPLETION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL BE DEMOLISHED AND ALL TEMPORARILY UTILITIES SHALL BE REMOVED AND TEMPORARY WATER TAPS CAPPED AT MAIN LINE TAP.
4. ALL DEMOLISHED LAVATORIES AND FAUCETS SHALL BE PERMITTED TO BE RELOCATED ACROSS TEMPORARY KITCHENS WITHIN THE PROJECT BASED ON AVAILABILITY/PROJECT PHASING SCHEDULE. AT THE END OF THE PROJECT, REMOVE FIXTURES AND OFFER TO OWNER AS SALVAGE. IF NOT ACCEPTED, ALL FIXTURES SHALL BE DISPOSED OF BY THE CONTRACTOR.

NORTH



1 PLUMBING TEMPORARY KITCHEN PLAN - PRE DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. BEFORE DEMOLITION OF THE EXISTING KITCHEN BEGINS, INSTALL ALL NEW PLUMBING FIXTURES AND UTILITIES FOR TEMPORARY KITCHEN.

NORTH

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09/04/2025	ADDENDUM 04

4 ADD4

k

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
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ARCHITECT
09.04.2025

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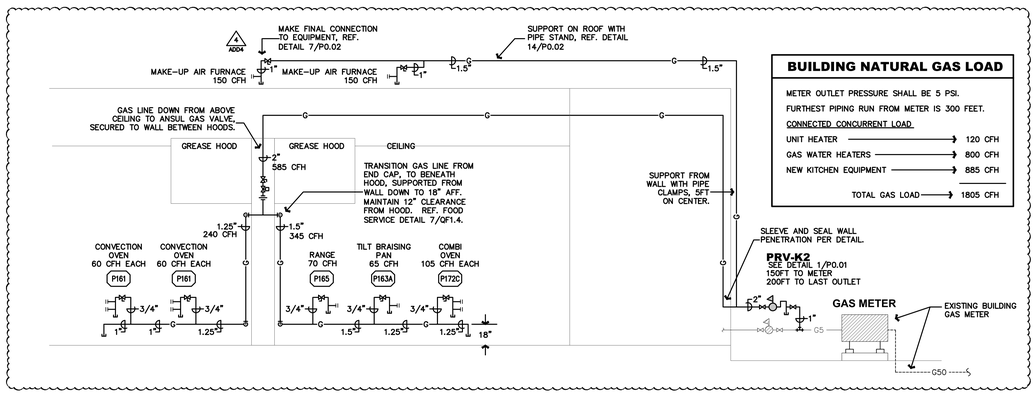
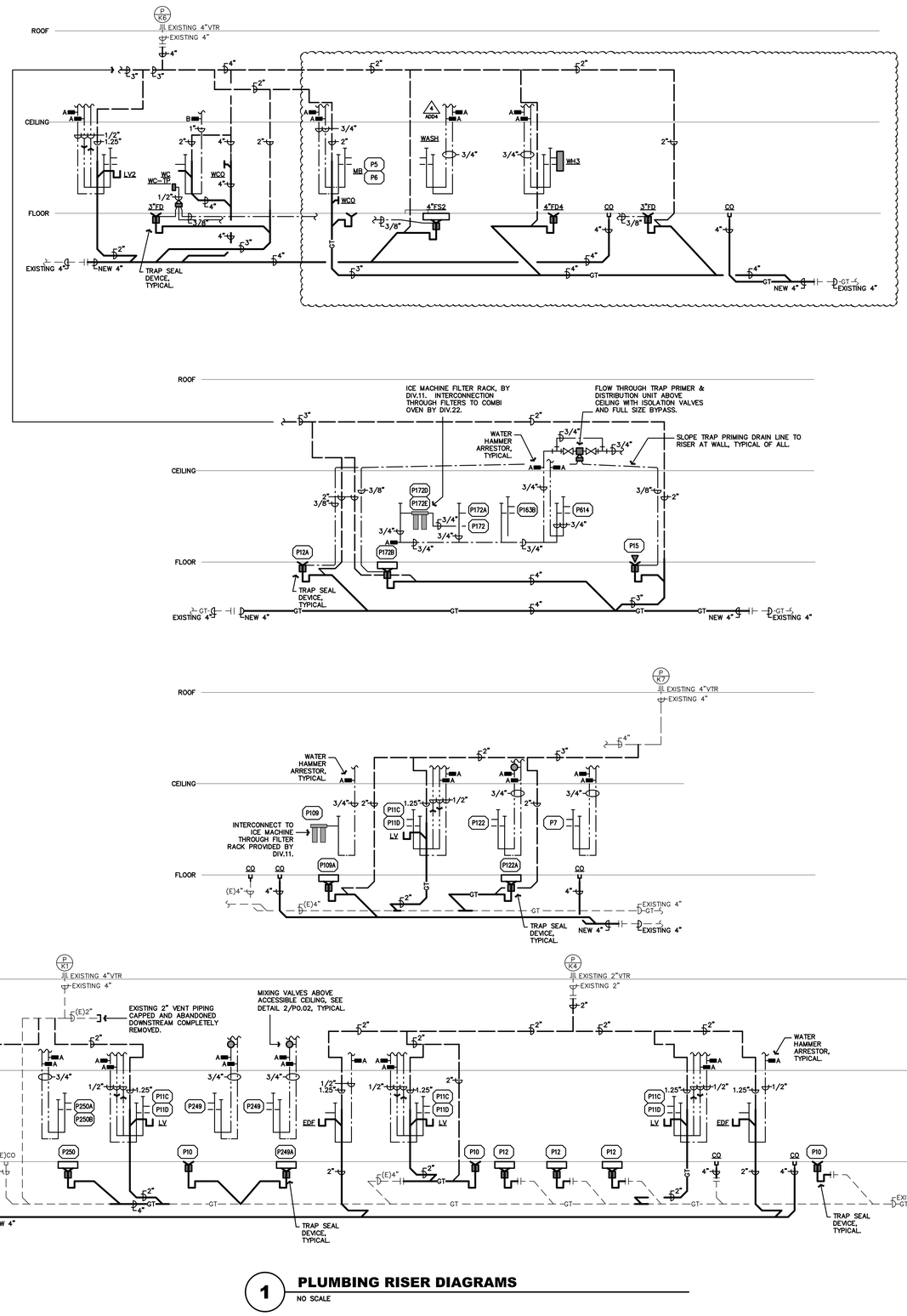
PLUMBING FLOOR PLAN - TEMP KITCHEN

k-P1.02



2 NATURAL GAS RISER DIAGRAM
NO SCALE



1 PLUMBING RISER DIAGRAMS
NO SCALE

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695 INDEPENDENCE BLVD
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PLUMBING RISER DIAGRAMS

k-P2.00

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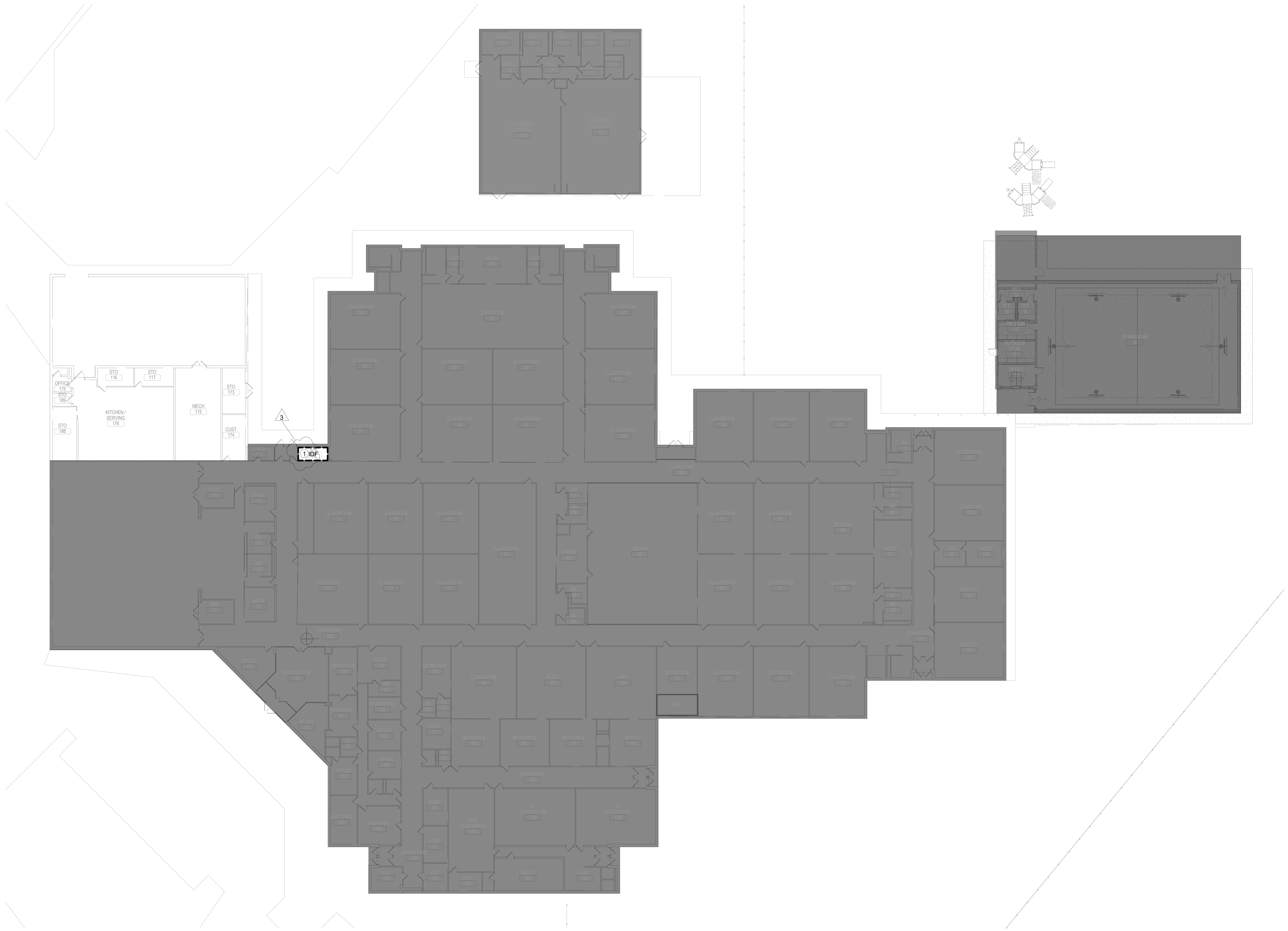
TECHNOLOGY KEYNOTES

1. IDF WILL REQUIRE ADDITIONAL HARDWARE TO SUPPORT THE ADDED CAMERA CABLES.
2. CONTRACTOR TO VERIFY WEITHER ADDITIONAL HARDWARE WILL BE NEEDED TO SUPPORT ADDITIONAL CAMAERA CABLES.
3. CONTRACTOR TO COORDINATE FINAL DEVICE LOCATION AND POSITIONING WITH FBISD.



1 BACKGROUND 1 (HUNTERS GLEN)
SCALE: 1" = 20'-0"

TRUENORTH A PMY COMPANY

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FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Hunters Glen Elementary School
695 Independence Blvd, Missouri City, TX 77489

SEAL
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Bicsi
Brian C Porter
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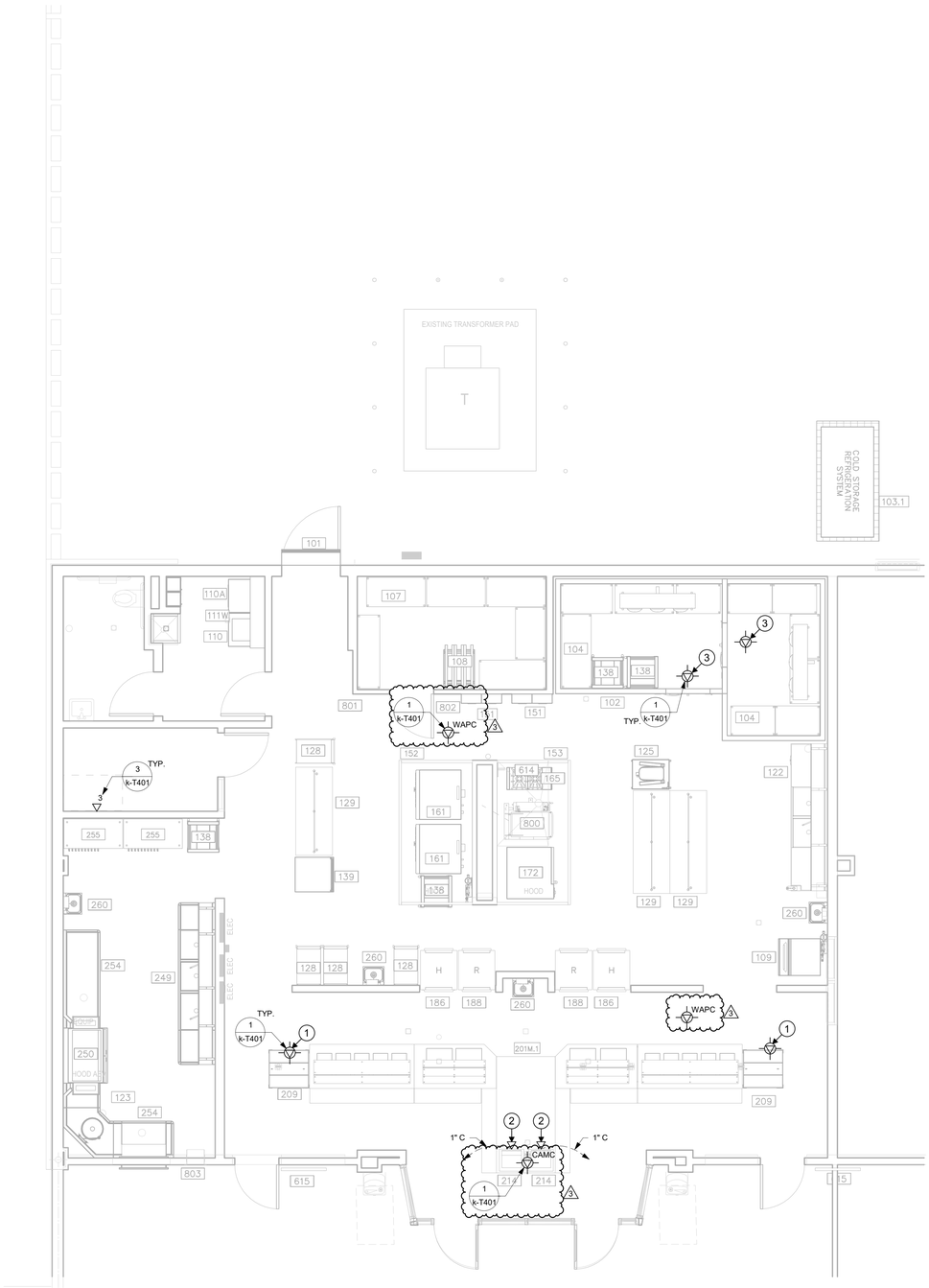
TECHNOLOGY - Hunters Glen ES - OVERALL

k-TN.100



1 k-T201 TECHNOLOGY NEW/RENOVATION KITCHEN PLAN
1/4" = 1'-0"

TECHNOLOGY FLOOR PLANS GENRAL NOTES:

1. THE TECHNOLOGY REGION / WIRING BOUNDARIES ARE IDENTIFIED ON THE OVERALL SHEETS ONLY AND NOT ON THE ENLARGED SHEETS. CONTRACTOR SHALL REFER TO THE OVERALL SHEETS FOR ALL TECHNOLOGY REGIONS / WIRING BOUNDARIES.
2. ALL CONDUIT PATHWAYS, ROUGH-INS, BACKBOXES, FLOOR BOXES, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
6. TECHNOLOGY CABLING SHALL BE ROUTED IN SEPARATE PATHWAYS IN J-HOOKS, CONDUITS, CONDUIT SLEEVES, CORES, ETC. THROUGHOUT THE ENTIRE PATHWAY. DIFFERENT MEDIA TYPES (DATA, VIDEO, SECURITY, ETC.) SHALL NOT SHARE THE SAME J-HOOK, CONDUIT, CONDUIT SLEEVE, CORE, ETC.
7. UNLESS NOTED OTHERWISE, ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE AN ACCESSIBLE CEILING (AN OPEN CEILING OR CLOUD TYPE CEILING IS NOT CONSIDERED AN ACCESSIBLE CEILING) IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF / IDF ROOM TO MINIMIZE THE CABLE LENGTH ENSURING CABLE LENGTH DOES NOT EXCEED 275 FEET.
8. UNLESS NOTED OTHERWISE ALL CONDUITS SHALL BE HOMERUN FROM THE DEVICE LOCATION AND NO DAISY CHAINING OF DEVICES/ ROUGH-INS SHALL BE ALLOWED.
9. CONDUIT SEGMENTS SHALL BE NO MORE THAN 100-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
10. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
13. EQUIPMENT NOT RELATED TO THE SUPPORT OF THE TELECOMMUNICATIONS ROOM (E.G., PIPING, DUCTWORK, PNEUMATIC TUBING) SHALL NOT BE INSTALLED IN, PASS THROUGH, OR ENTER THE TELECOMMUNICATIONS ROOM.
14. ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE A LAY-IN TYPE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE A LAY- IN TYPE CEILING TO PREVENT THE CABLES FROM BEING EXPOSED, THE CONDUIT SHALL ROUTE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. THE CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE MAIN CORRIDOR OR NEAREST MDF/IDF TO MINIMIZE THE CABLE LENGTH ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. CONDUIT, CONNECTIONS, J-BOXES, SUSPENSION, ANCHORAGES, AND OTHER CONDUIT COMPONENTS EXPOSED TO VIEW IN PUBLIC SPACES SHALL BE ROUTED AND INSTALLED CAREFULLY TO MINIMIZE VISUAL IMPACT AND SHALL BE FULLY PAINTED TO MATCH UNLESS NOTED OTHERWISE.
15. CONDUIT(S) INSTALLED IN-SLAB OR UNDER-SLAB TO FLOOR BOXES, POKE-THURS, AND TO WORKAREA OUTLETS, ETC. SHALL BE INSTALLED WITH WET RATED CABLE(S).
16. NO GRID WIRE SHALL BE UTILIZED FOR SUPPORTS ONLY USE SOLID SUPPORTS (CLIPS, ALL-THREAD, ANCHORS, ETC.).

TECHNOLOGY PLAN KEYED NOTES

NOT ALL KEYED BELOW APPLY TO THIS SHEET

1. DATA CABLE FOR CONTRACTOR FURNISHED / CONTRACTOR INSTALLED MENU BOARD. REFERENCE ARCHITECTURAL AND FOOD SERVICE DRAWINGS FOR MOUNTING HEIGHT AND ADDITIONAL INFORMATION. BUILDING POWER ADJACENT TO DATA RECEPTACLE IS REQUIRED.
2. INDOOR / OUTDOOR RATED DATA CABLE FOR POINT OF SALE LOCATION. PROVIDE (1) 1-INCH CONDUIT FOR DATA TO THE WALL BEHIND POINT OF SALE LOCATION AND UP WALL TO ABOVE ACCESSIBLE CEILING. CONDUITS SHALL TERMINATE INSIDE A DOUBLE GANG BOX THAT IS SECURED TO THE POINT OF SALE LOCATION. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS.
3. DATA CABLE FOR TEMPERATURE MONITORING OF FREEZER COOLER. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS AND TERMINATION POINT AND CONNECTIVITY NEEDS IN FREEZER / COOLER CONTROL UNIT.
4. DATA CABLE FOR TEMPORARY POINT OF SALES CASH REGISTER. COORDINATE WITH OWNER, ARCHITECT, AND CONSULTANT FOR ROUTING OF CABLES TO POINT OF SALE CASH REGISTER PRIOR TO INSTALLATION

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k

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 10-31-25
RCDD

07/18/2025

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HOUSTON, TEXAS 77079

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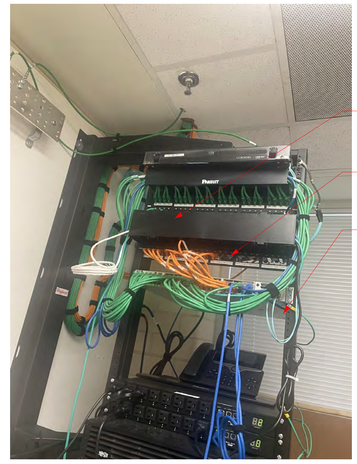
TECHNOLOGY NEW/RENOVATION KITCHEN PLAN

SHEET NO.
k-T201



1 k-T300 HUNTERS GLENN EXISTING IDF WALL RACK
N.T.S.

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HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

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BICSI ID # 364970
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RCDD

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AND PLANNING
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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
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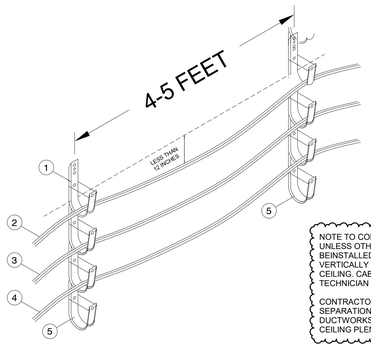
TECHNOLOGY ENLARGED VIEWS

SHEET NO.
k-T300

NOTE TO CONTRACTOR:

UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BE INSTALLED WITHIN 6-INCHES OF THE CEILING AND ACCESSIBLE BY A TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPRATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPIING OR OTHER SYSTEMS IN THE CEILING PLENUM.



KEYED NOTES:

1. J-HOOK WITH RETAINER CLIP ABOVE ACCESSIBLE CEILING (BY DIV 27).
2. DATA CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
3. A/V CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
4. SECURITY CABLE ABOVE ACCESSIBLE CEILING (BY DIV 28).
5. SPARE J-HOOK (BY DIV 27).

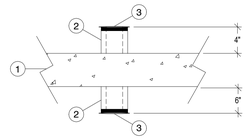
3

NOTE TO CONTRACTOR:
UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BEINSTALLED WITHIN 6-INCHES OF THE CEILING AND LAST VERTICALLY SITUATED J-HOOK SHALL BE NO HIGHER THAN 18" OF CEILING. CABLES AND SUPPORTS SHLL BE ACCESSIBLE BYA TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPARATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPING OR OTHER SYSTEMS IN THE CEILING PLENUM

1 / T400 TYPICAL J-HOOK CABLE PATHWAY

SCALE: N.T.S.

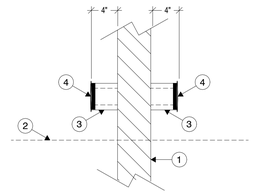


KEYED NOTES:

1. SCHEDULED FLOOR OR DECK.
2. CONDUIT SLEEVE (BY DIV 26).
3. NYLON BUSHING (BY DIV 26).

2 / T400 TYPICAL CONDUIT SLEEVE THROUGH FLOOR OR DECK DETAIL

SCALE: N.T.S.

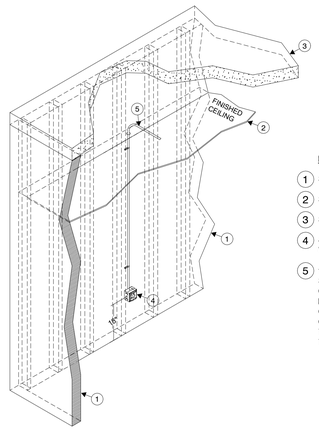


KEYED NOTES:

1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. CONDUIT SLEEVE (BY DIV 26).
4. NYLON BUSHING (BY DIV 26).

3 / T400 TYPICAL CONDUIT SLEEVE GOING THROUGH WALL

SCALE: N.T.S.



KEYED NOTES:

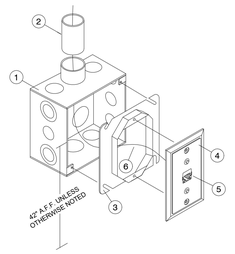
1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. SCHEDULED DECK ABOVE.
4. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX WITH DOUBLE GANG PLASTER RING (BY DIV 26).
5. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH. (BY DIV 26).

4 / T400 TYPICAL TECHNOLOGY CONDUIT ROUGH-IN

SCALE: N.T.S.

DETAIL DELETED SPACE LEFT INTENTIONALLY BLANK

3

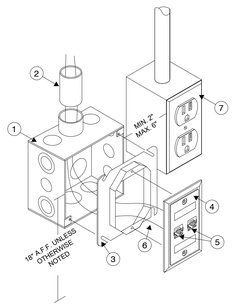


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH PHONE STUDS (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).

6 / T400 TYPICAL WALL PHONE OUTLET CONFIGURATION

SCALE: N.T.S.

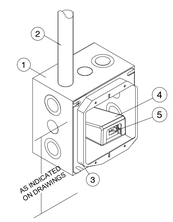


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).
7. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

7 / T400 TYPICAL DUAL DATA OUTLET CONFIGURATION

SCALE: N.T.S.

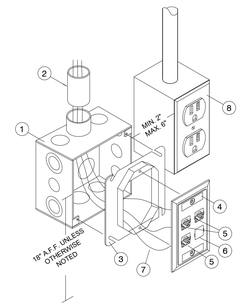


KEYED NOTES:

1. 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. DOUBLE GANG PLASTER RING (BY DIV 26).
4. SURFACE MOUNT BOX INSIDE THE 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH DOUBLE GANG BOX (BY DIV 27).
5. RJ-45 INSERT (BY DIV 27).

8 / T400 TYPICAL WALL-MOUNTED WIRELESS ACCESS POINT

SCALE: N.T.S.



KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. BLANK INSERT (BY DIV 27).
7. CABLE AS SPECIFIED (BY DIV 27).
8. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

9 / T400 TYPICAL THREE DATA OUTLET CONFIGURATION

SCALE: N.T.S.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/26/2025 (3)	ADDENDUM NO. 3

k

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

07/18/2025

MWA ARCHITECTS

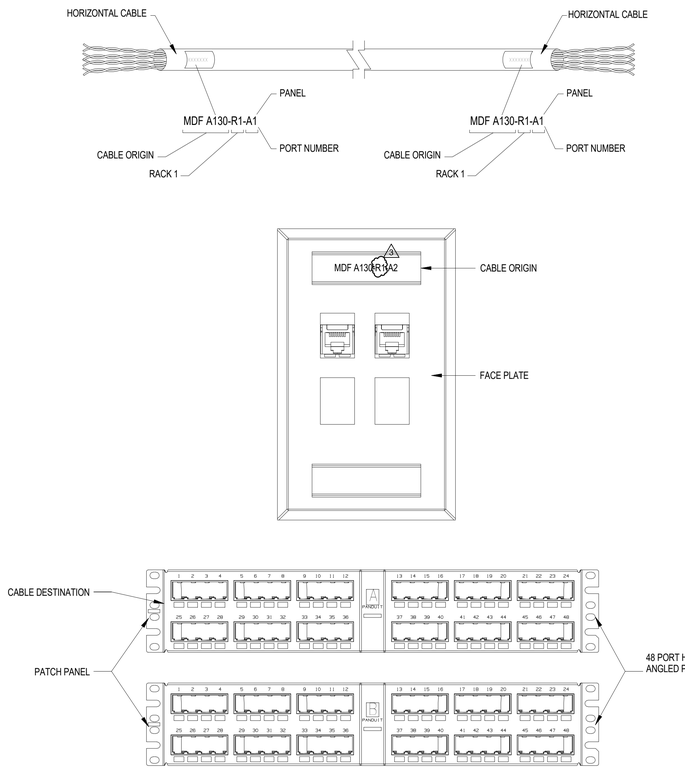
ARCHITECTS AND PLANNING CONSULTANTS

11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

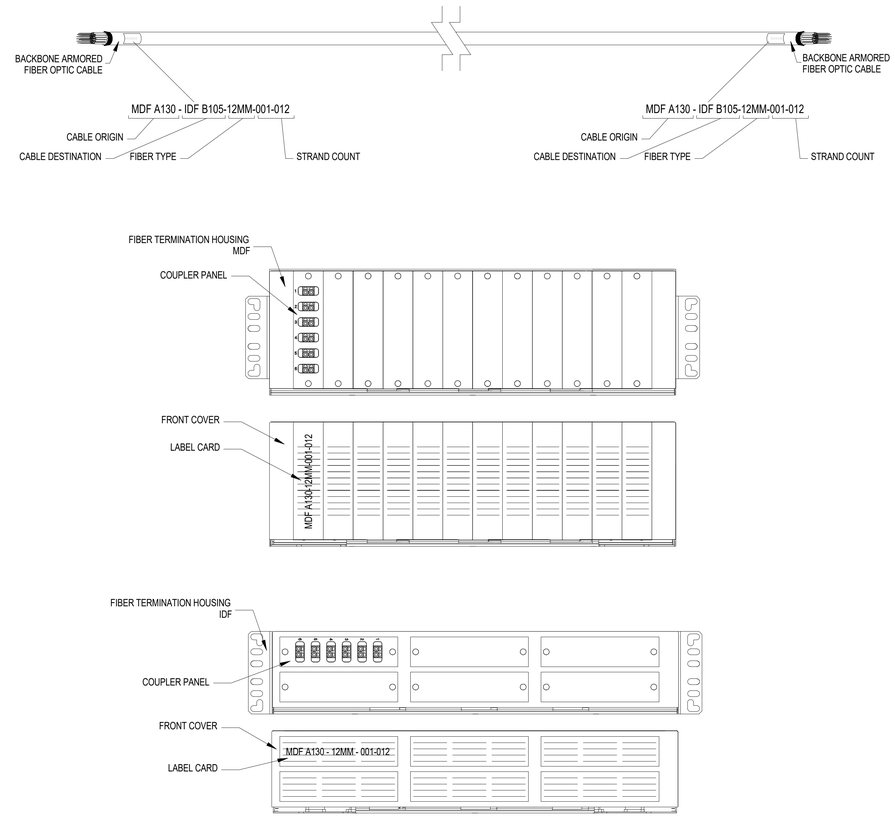
TECHNOLOGY TYPICAL DETAILS

SHEET NO.
k-T400



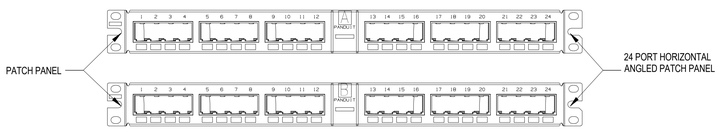
1 T500 TYPICAL HORIZONTAL DATA CABLE LABELING SCHEME

SCALE: N.T.S.



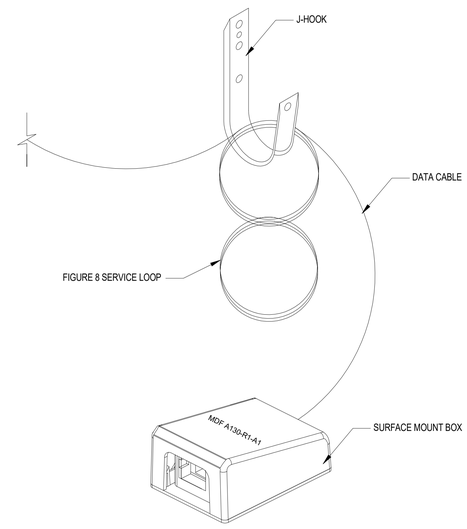
2 T500 TYPICAL FIBER BACKBONE LABELING SCHEME

SCALE: N.T.S.



3 T500 TYPICAL COPPER BACKBONE LABELING SCHEME

SCALE: N.T.S.



4 T500 ABOVE ASSESSIBLE CEILING LABELING SCHEME

SCALE: N.T.S.

ISSUE:

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03/11/2025	50% CD PKG.
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08/26/2025	ADDENDUM NO. 3

k

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD
MISSOURI CITY, TX 77489

SEAL

07/18/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

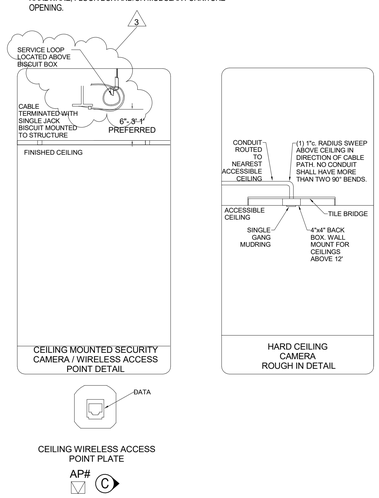
PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

TECHNOLOGY TYPICAL DETAILS

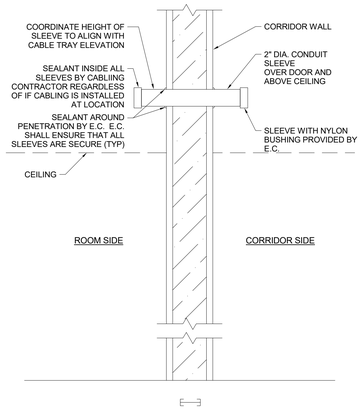
SHEET NO.
k-T500

GENERAL NOTE

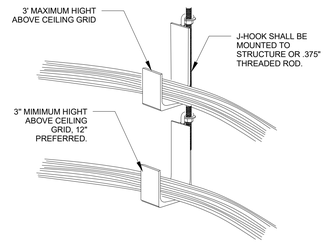
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



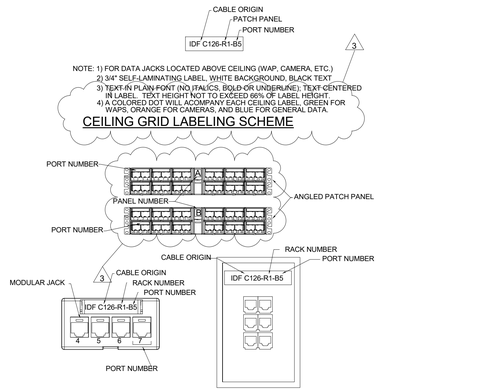
1 DATA ROUGH-IN DETAILS
SCALE: NS



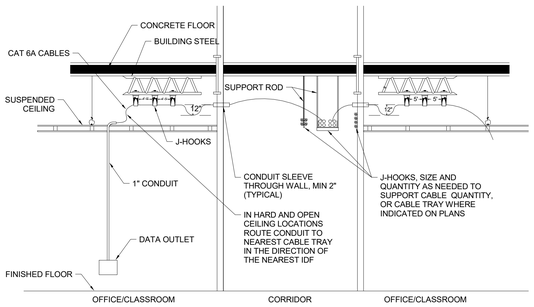
2 TYPICAL CABLING SLEEVE
SCALE: NTS



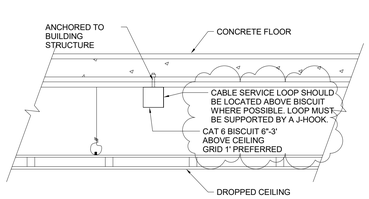
3 PANDUIT J-HOOK DETAIL
SCALE: NTS



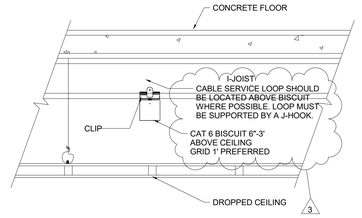
4 LABELING & CABLING SCHEMES
SCALE: NTS



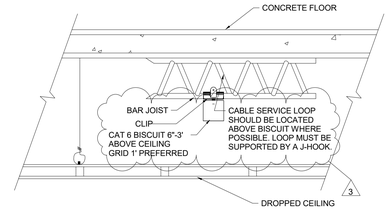
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

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08/28/2025	ADDENDUM NO. 3

k

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Hunters Glen Elementary School
695 Independence Blvd, Missouri City, TX 77489

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 258857
EXPIRES 12-31-27

07-18-25

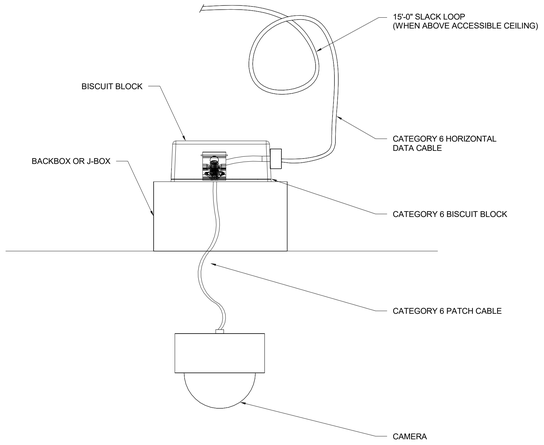
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Hunters Glen ES - DETAILS

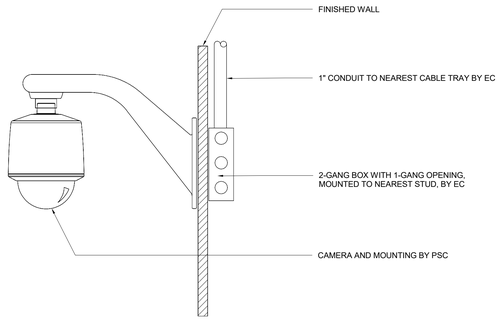
k-TN.500

GENERAL NOTES:

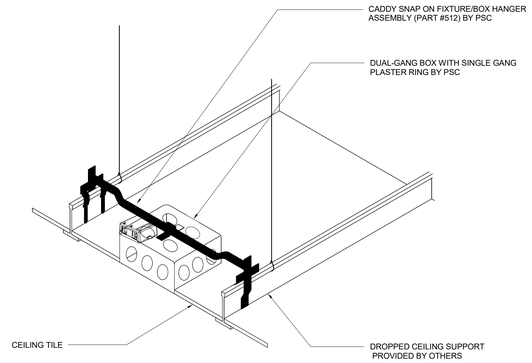
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
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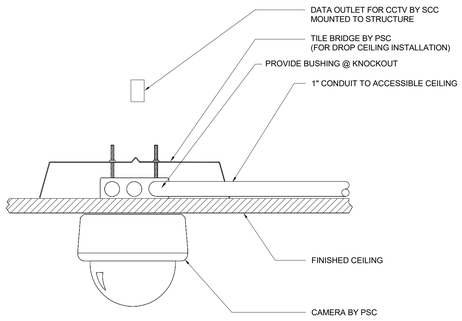
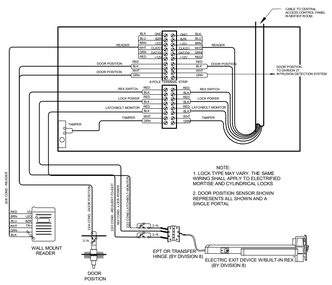


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

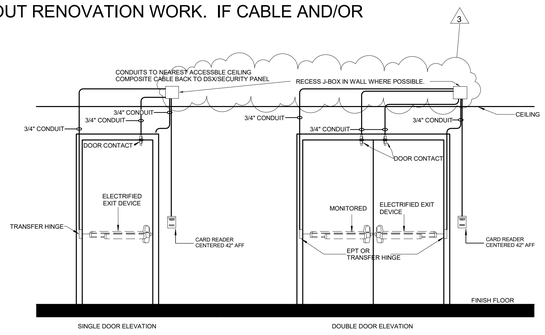
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

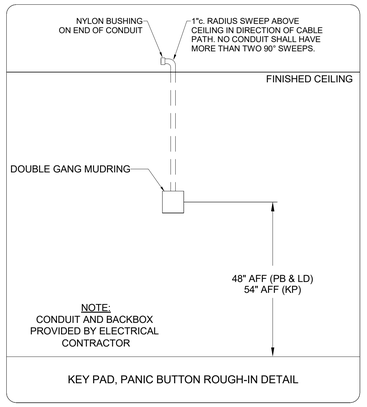
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

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k

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Hunters Glen Elementary School
695 Independence Blvd, Missouri City, TX 77489

SEAL

07-18-25

MWA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING
AND
PERMITTING
TECHNOLOGY - Hunters Glen
ES - SECURITY DETAILS

k-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

LANTERN LANE ELEMENTARY SCHOOL
3323 MISSION VALEY , MISSOURI CITY, TX 77459

FORT BEND INDEPENDENT SCHOOL DISTRICT BOND 2023

Sheet List Table	
Sheet Number	Sheet Title
School: I-Lantern Lane	
I_A0.00	COVER AND INDEX
I-A.101	Site Plan
I-A.201	Overall Floor Plan
I-A.301	Kitchen Plan
I-A.501	Finish Floor Plan
I-TN-000	TECHNOLOGY - INDEX SHEET
I-TN-100	TECHNOLOGY - OVERALL
I-TN-101	TECHNOLOGY - KITCHEN
I-TN-500	TECHNOLOGY - DETAILS
I-TN-600	TECHNOLOGY - SECURITY DETAILS

REGISTERED ARCHITECT
MICHAEL W. MAGNER
22651
STATE OF TEXAS
04 SEP. 2025

ADDENDUM NO. 4 - SEP 04, 2025

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

BOARD OF TRUSTEES

KRISTIN K. TASSIN	PRESIDENT
ANGIE HANAN	VICE PRESIDENT
DR. SHIRLEY ROSE-GILLIAM	SECRETARY
AFSHI CHARANIA	BOARD MEMBER
ADAM SCHOOF	BOARD MEMBER
ANGIE WIERZBICKI	BOARD MEMBER

PROJECT DESIGN TEAM

PROGRAM MANAGEMENT
FBISD 2023 Bond Team
2323 Texas Parkway
Missouri City, TX 77489
Phone Number: 281-327-5481

ARCHITECT
MWA Architects
11767 Katy Freeway, Suite 430
Houston, Texas 77079
Phone Number: 713-782-8188

FOOD SERVICE
Food Design Professionals
26215 Oak Ridge Drive
The Woodlands, Texas 77380
Phone Number: 281-350-2323

MEP ENGINEERS
Stanton Engineering Group
1300 W. Sam Houston Pkwy South, Suite 121
Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

FBISD BP013 KITCHEN RENOVATIONS ES

PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

FORT BEND INDEPENDENT SCHOOL DISTRICT

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

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PROJECT DESIGN TEAM

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STRUCTURAL ENGINEER
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Sheet List Table	
Sheet Number	Sheet Title
School: o-Palmer ES	
o-A.000	COVER AND INDEX
o-A00-01	GENERAL NOTES AND ABBREVIATIONS
o-D.101	DEMO PLAN
o-D.101-2	DEMO PLAN PHOTOS
o-ED.100	ELECTRICAL DEMOLITION AND TEMP PLANS
o-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
o-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
o-A.101	SITE PLAN
o-A.200	SLAB DIMENSION CONTROL PLAN
o-A.201	FLOOR PLAN
o-A.301	KITCHEN PLAN
o-A.302	TEMPORARY KITCHEN LAYOUT
o-A.401	REFLECTED CEILING PLAN
o-A.501	FINISH FLOOR PLAN
o-A.502	PARTITION SCHEDULE
o-S1	KITCHEN PLAN
o-S2	SECTIONS AND TYPICAL DETAILS
o-QF0.0	FS GENERAL COORDINATION NOTES
o-QF1.0	FS EQUIPMENT PLAN
o-QF1.1	FS FACILITY MODEL
o-QF1.2	FS EQUIPMENT MODEL
o-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
o-QF1.4	FS PLUMBING PLAN
o-QF1.5	FS ELECTRICAL PLAN
o-QF1.6	FS CONDENSING UNITS
o-QF1.7	FS WALK-INS
o-QF1.8	FS SERVING LINE
o-QF1.9	FS SERVING LINE
o-QF2.0	FS DEMO PLAN
o-QF2.1	FS TEMPORARY SERVING
o-QF3.1	FS ELEVATIONS
o-QF4.1	FS SECTIONS & DETAILS 3
o-QF4.2	FS DETAILS
o-QF4.3	FS DETAILS
o-M1.01	MECHANICAL PLANS
E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
E.001	ELECTRICAL AND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
E.013	ELECTRICAL KITCHEN DETAILS
E.060	LIGHTING SCHEDULES
o-E.100	LIGHTING FLOOR PLAN
o-E.200	ELECTRICAL FLOOR PLANS
o-E.300	FIRE ALARM FLOOR PLANS
o-E.400	ELECTRICAL SCHEMATIC
o-P1.01	PLUMBING FLOOR PLAN
o-P1.02	PLUMBING TEMPORARY KITCHEN PLAN
o-T000	TECHNOLOGY SYMBOLS & LEGEND
o-T200	TECHNOLOGY COMPOSITE FLOOR PLAN
o-T201	TECHNOLOGY NEW_RENOVATION KITCHEN PLAN
o-T202	TECHNOLOGY TEMPORARY KITCHEN PLAN
o-T300	TECHNOLOGY ENLARGED VIEWS
o-T400	TECHNOLOGY TYPICAL DETAILS
o-T401	TECHNOLOGY TYPICAL DETAILS
o-T500	TECHNOLOGY TYPICAL DETAILS
o-TN-000	TECHNOLOGY - INDEX SHEET
o-TN-001	TECHNOLOGY - DEMO
o-TN-100	TECHNOLOGY - OVERALL
o-TN-101	TECHNOLOGY - KITCHEN
o-TN-500	TECHNOLOGY - DETAILS
o-TN-600	TTECHNOLOGY - SECURITY DETAILS
o-TN-700	TECHNOLOGY - AV DETAILS

REGISTERED ARCHITECT MWA ARCHITECTURE 22651 STATE OF TEXAS
04SEP.2025

ADDENDUM NO. 4 - SEP 04, 2025

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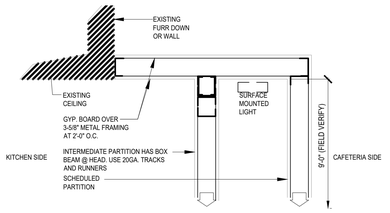


3 TEMPORARY LAYOUT SECTION

SCALE: 1"=1'0"

4 KEYED NOTES

TEMPORARY KITCHEN FLOOR PLAN KEYED NOTES 05/A-A03-02

01 PROVIDE & INSTALL 555 SF OF RAM BOARD TO PROTECT EXISTING FLOORING. REMOVE AFTER CONSTRUCTION IS COMPLETE. CONTRACTOR MUST REPAIR FLOORING DAMAGED DURING CONSTRUCTION.

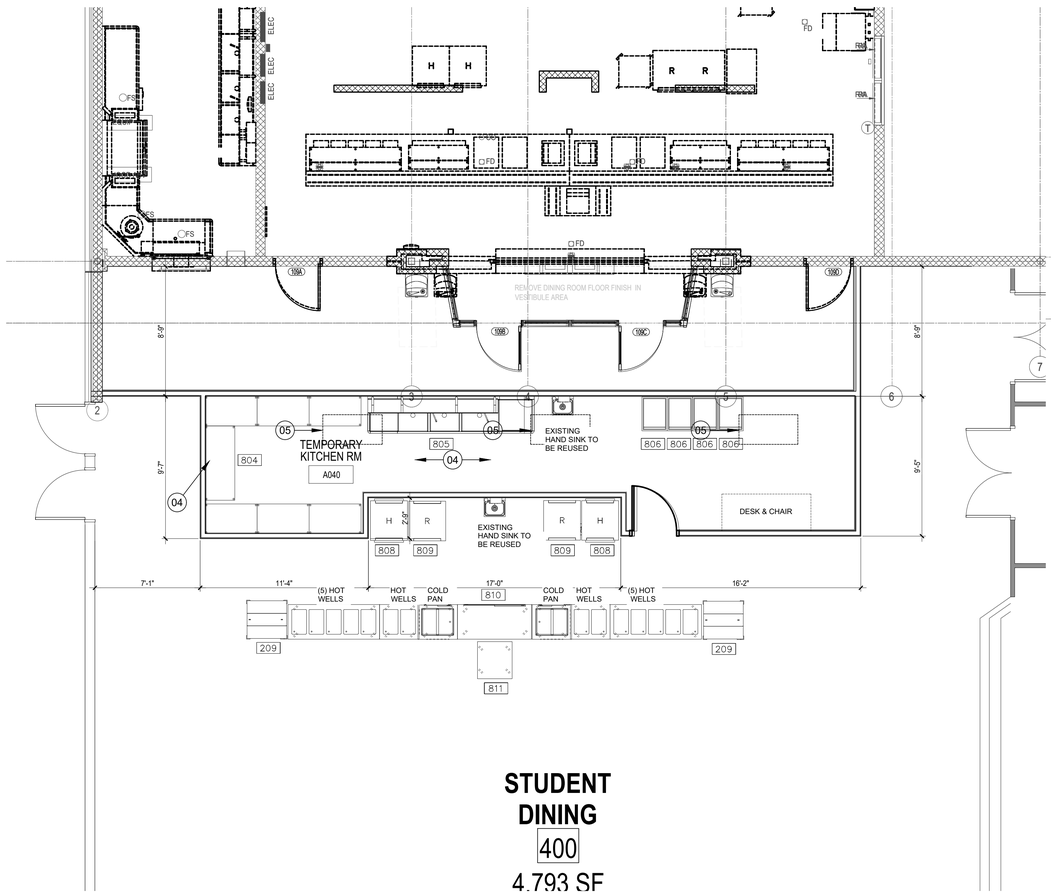
02 PROVIDE SCHEDULED PARTITIONS. BUILD PARTITIONS ON TOP OF RAM BOARD. DO NOT ATTACH PARTITIONS TO FLOOR.

03 ATTACH PARTITIONS TO EXISTING WALL. REPAIR WALL TO MATCH EXISTING AFTER CONSTRUCTION IS COMPLETE.

TEMPORARY KITCHEN RCP KEYED NOTES 03/A-A03-02

04 ALL NEW SCHEDULED PARTITIONS AND CEILINGS FOR TEMPORARY STORAGE LAYOUT TO BE EPOXY PAINTED SW 7014 EIDER WHITE WITH SPECIFIED 4" RUBBER BASE. REMOVE WHEN CONSTRUCTION IS COMPLETED.

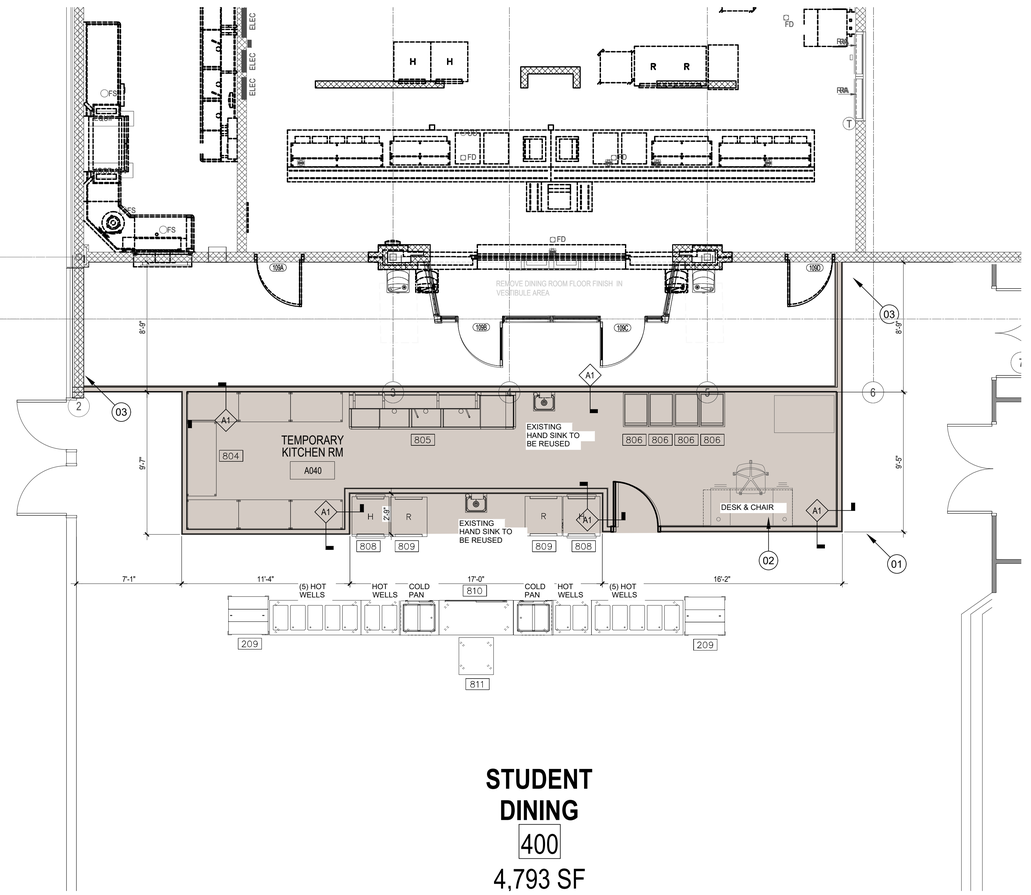
05 MOUNT TEMPORARY FLUORESCENT LIGHTS TO TEMPORARY CEILING.



STUDENT DINING
400
4,793 SF

1 TEMPORARY KITCHEN RCP

SCALE: 1/4" = 1'-0"



STUDENT DINING
400
4,793 SF

2 TEMPORARY KITCHEN FLOOR PLAN

SCALE: 1/4" = 1'-0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ISSUED FOR ADDENDUM 04

O

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT

PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

04 SEP. 2025

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE:
ADDENDUM NO. 4 - SEP 04, 2025

TEMPORARY KITCHEN LAYOUT
o-A.302

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\O-Palmer ES\o-A.302 TEMPORARY KITCHEN LAYOUT.dwg Sep 05, 2025 - 12:05pm

FOOD SERVICE DRAWING INDEX	
FDP SHEET NUMBER	FDP SHEET NAME

O-QF0.0	FS GENERAL COORDINATION NOTES
O-QF1.0	FS EQUIPMENT PLAN
O-QF1.1	FS FACILITY MODEL
O-QF1.2	FS EQUIPMENT MODEL
O-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
O-QF1.4	FS PLUMBING PLAN
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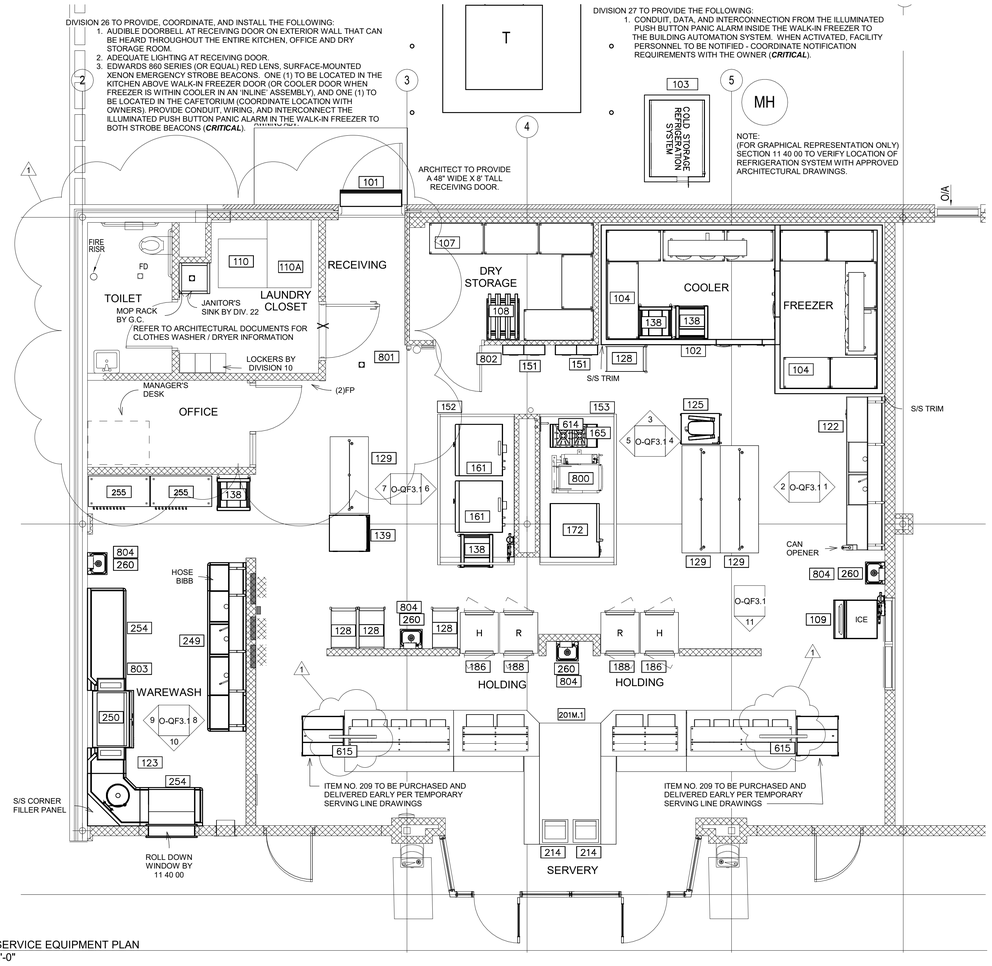
O-QF4.1	FS SECTIONS & DETAILS
O-QF4.2	FS DETAILS
O-QF4.3	FS DETAILS



1 FOOD SERVICE EQUIPMENT PLAN
1/4" = 1'-0"

FOOD SERVICE EQUIPMENT SCHEDULE					
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH DEPARTMENT COORDINATION NOTES					
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS	MANUFACTURER	MODEL
101	1	AIR SCREEN		MARS	STD248-1UA-O
102	1	COLD STORAGE ASSEMBLY		AMERICAN PANEL	
103	1	COLD STORAGE REFRIGERATION SYSTEM		RDT	ZS1-02Z-CT3-AST
104	2	COLD STORAGE SHELVING		METRO	METROMAX Q
107	1	DRY STORAGE SHELVING		METRO	METROMAX Q
108	1	CAN RACK		NEW AGE	1250CK
109	1	ICE MACHINE W/ BIN		MANITOWOC	UYF0310A
110	1	CLOTHES WASHER	BY G.C.		
110A	1	CLOTHES DRYER	BY G.C.		
122	1	TWO COMPARTMENT SINK WITHOUT DISPOSER		CUSTOM FABRICATED	
123	1	DISPOSER - 3HP		SALVAJOR	300-CA-18-ARSS-LD
125	1	20 QT. MIXER W/STAND		HOBART	HL200
128	4	UTILITY CART		LAKESIDE	522
129	3	WORKTABLE W/S.BAR UT.RACK		CUSTOM FABRICATED	
138	4	PAN RACK		CRES COR	207-UA-13A
139	1	INSUL MOBILE PROOFER		CRES COR	H-137-WSUA-12D
151	2	FIRE PROTECTION SYSTEM		ANSUL	R102
152	1	EXHAUST HOOD	EXISTING		
153	1	EXHAUST HOOD	EXISTING		
161	2	CONVECTION OVEN		BLODGETT	DFP-200 DBL
165	1	TWO BURNER RANGE		VULCAN	V2B18B
172	1	COMBI OVEN		RATIONAL	ICP 6-FULL/6-FULL N/G
186	2	PASS-THRU HEATED CABINET-1DR		TRAULSEN	AHF132WP
188	2	PASS-THRU REFRIGERATOR-1DR		TRAULSEN	AHT132WPUT
201M.1	1	SERVING COUNTER-MODULAR		COUNTERCRAFT	SCOL-408-MOD
214	2	CASH REGISTER	OWNER FURNISHED		
249	1	THREE COMPARTMENT SINK NO DISPOSER		CUSTOM FABRICATED	
250	1	DISHMACHINE		HOBART	CL44-BAS
254	2	SOILED & CLEAN DISHTABLE		CUSTOM FABRICATED	
255	2	MOBILE DRYING RACK		METRO	PR48VX3
260	4	HAND SINK	FURNISHED & INSTALLED BY DIV. 22		
614	1	FILL FAUCET		T&S	B-0610
615	2	MENU MONITOR	BY OWNER		
800	1	15 GAL. BRAISING PAN		GROEN	BPM-15GA
801	1	S/S CORNER GUARDS	LOCATED ON EVERY EXPOSED CORNER THROUGHOUT KITCHEN	CUSTOM FABRICATED	
802	1	WALL BUMPERS	LOCATED ON ALL EXPOSED BUILDING WALLS	PAWLING	MD-1
803	1	WATER SOFTENER		HOBART	WS-40
804	4	S/S SPLASH GUARDS		CUSTOM FABRICATED	

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09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT

PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
46854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MELISSA MOORE, FCSI ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 46854119 ON: 07/18/2025

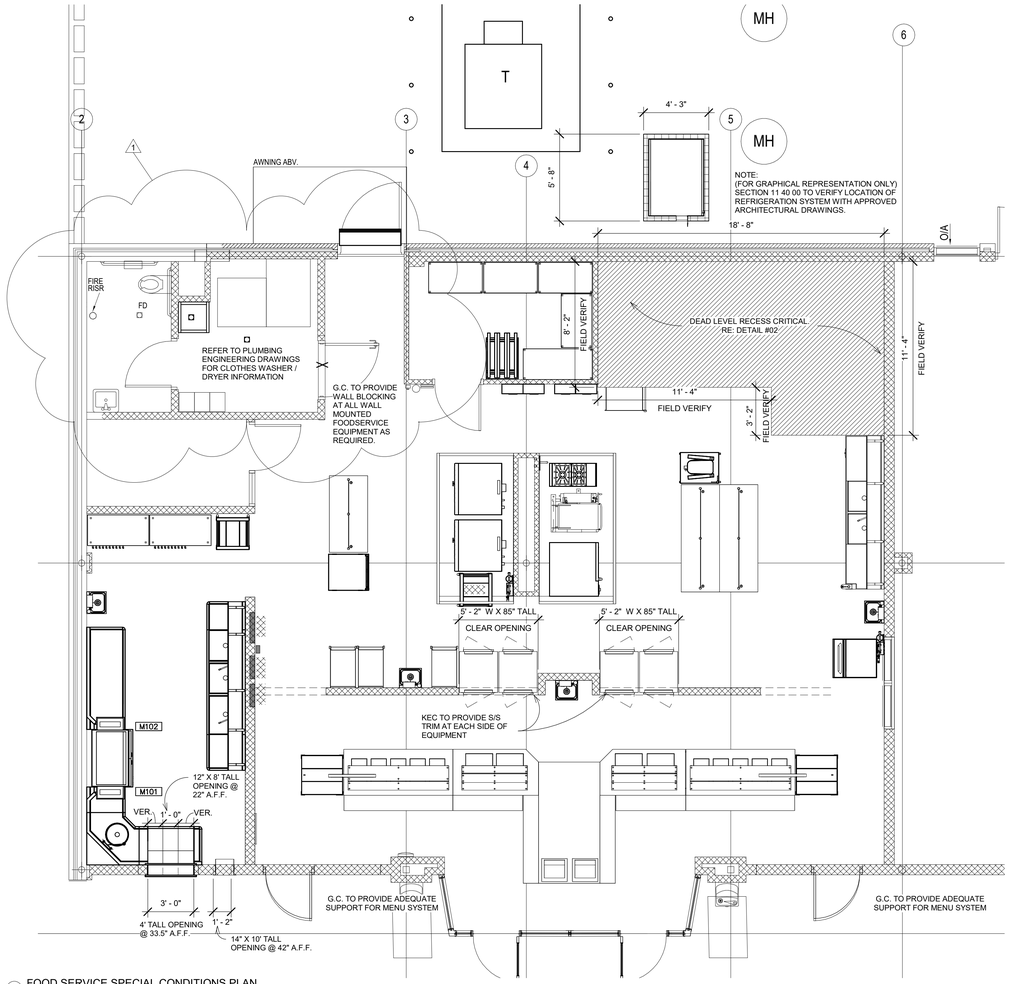
ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS EQUIPMENT PLAN

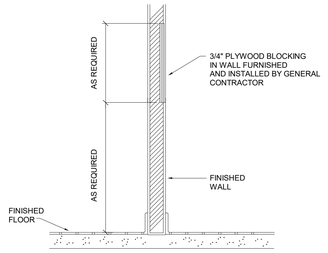
O-QF1.0

FOOD SERVICE MECHANICAL SCHEDULE						
REFER TO SHEET QF1 FOR MECHANICAL COORDINATION NOTES						
FDP NO.	FDP QTY	FDP TYPE	FDP SIZE	FDP LOC	FDP CFM	FDP S.P.
M101	1	EXHAUST	4" X 16"		400	0.30"
M102	1	EXHAUST	4" X 16"		800	0.30"



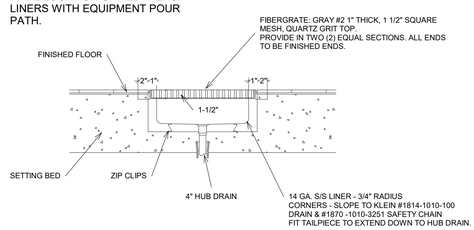
1 FOOD SERVICE SPECIAL CONDITIONS PLAN
1/4" = 1'-0"

NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION AND SIZE OF WALL BLOCKING.

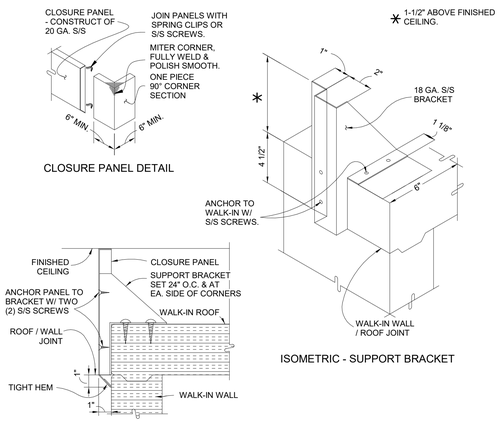


5 WALL BLOCKING DETAIL
NOT TO SCALE

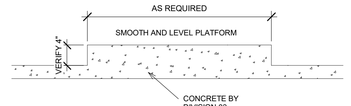
NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION OF ALL TRENCH LINERS WITH EQUIPMENT POUR PATH.



6 TRENCH LINER DETAIL
NOT TO SCALE

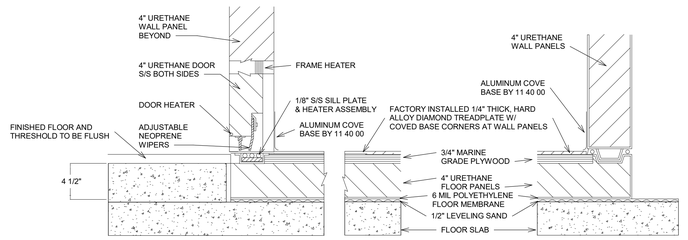


3 COLD STORAGE ASSEMBLY ENCLOSURE PANEL DETAIL
NOT TO SCALE



COLD STORAGE ASSEMBLY REFRIGERATION SYSTEM GROUND MOUNT 4" PLATFORM DETAIL
4 NOT TO SCALE

SLAB TO BE MODIFIED AS REQUIRED TO ALLOW FOR A 4 1/2" DEPRESSION SLAB. PROVIDE NEW LEVEL CONCRETE PAD FOR COLD STORAGE ASSEMBLY.



WALL SECTION @ EXTERIOR DOOR

2 COLD STORAGE ASSEMBLY 4 1/2" DEPRESSION DETAIL
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
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09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
ENGINEERING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO: 48854119 ON: 07/18/2025

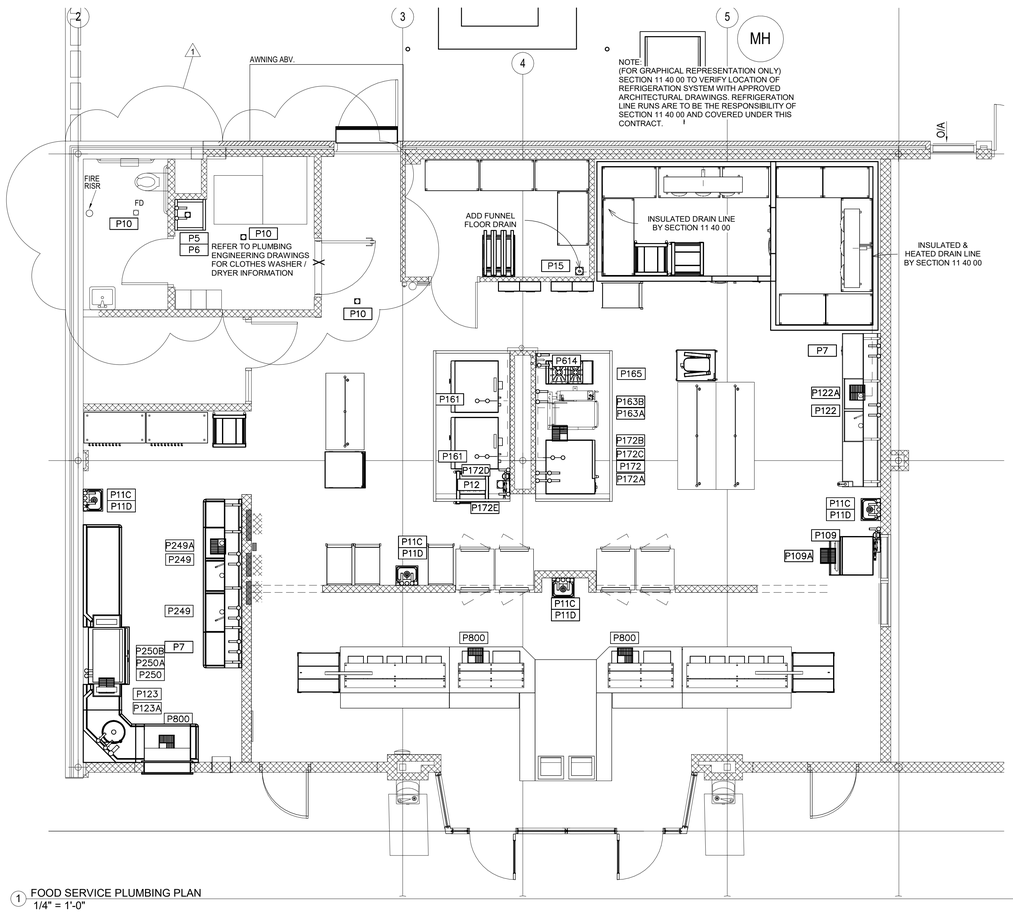
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS SPECIAL CONDITIONS & MECHANICAL PLAN

O-QF1.3

FOOD SERVICE PLUMBING SCHEDULE						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P5	3/4"	H & C WATER	JANITOR SINK	WALL	48"	JANITOR SINK BY PLUMBER
P6	4"	FLOOR DRAIN	JANITOR SINK	FLOOR	VERIFY	JANITOR SINK BY PLUMBER
P7	3/4"	H & C WATER	HOSE BIBB	WALL	18"	BTC
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	---
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P12	VERIFY	FLOOR DRAIN	EQUIP. DRAIN	FLOOR	VERIFY	NO SLOPE
P15	4"	FLOOR DRAIN	FUNNEL FLOOR DRAIN	FLOOR	0"	---
P109	3/4"	COLD WATER	WATER/ ICE	WALL	60"	BTC
P109A	12" SQ.	FLOOR SINK	ICE MACHINE	FLOOR	0"	FULL GRATE
P122	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P122A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	3/4 GRATE
P123	3/4"	H & C WATER	FAUCET / DISPOSER	WALL	13"	BTC
P123A	2"	DIRECT DRAIN	DISPOSER	WALL	10"	BTC
P161	(2)3/4"	NATURAL GAS	CONVECTION OVEN	WALL	18"/36"	BTC - 60 MBTU/HR EACH
P163A	3/4"	NATURAL GAS	TILT BRAISING PAN	WALL	18"	BTC - 65 MBTU/HR
P163B	3/4"	H & C WATER	TILT BRAISING PAN	WALL	36"	BTC
P165	1"	NATURAL GAS	RANGE	WALL	18"	BTC - 70 MBTU/HR
P172	(2)3/4"	COLD WATER	COMBI OVEN	WALL	24"/48"	BTC - INTERCONNECT THRU FILTERS
P172A	3/4"	COLD WATER	COMBI OVEN	WALL	48"	BTC
P172B	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE
P172C	(2)3/4"	NATURAL GAS	COMBI OVEN	WALL	18"/36"	BTC: 105 MBTU/HR EACH
P172D	3/4"	COLD WATER	COMBI OVEN	WALL	66"	BTC; INTERCONNECT TO P172
P172E	3/4"	COLD WATER	COMBI OVEN WATER FILTER	WALL	66"	BTC
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P249A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	THREE QUARTER GRATE
P250	12" SQ.	FLOOR SINK	BOOSTER / DISHMACHINE	FLOOR	18"	BTC
P250A	3/4"	HOT WATER	DISHMACHINE	WALL	18"	EXT. THRU W.FILTER TO BOOSTER / DISH MACHINE - 140DEG.MIN.
P250B	3/4"	COLD WATER	DISHMACHINE	WALL	18"	BTC
P614	1/2"	H & C WATER	FILL FAUCET	WALL	42"	BTC
P800	12" SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE



1 FOOD SERVICE PLUMBING PLAN
1/4" = 1'-0"

SECTION 11 40 00 TO PROVIDE LOOSE WITH FOOD SERVICE EQUIPMENT. INSTALLATION BY DIV. 22 & 26.

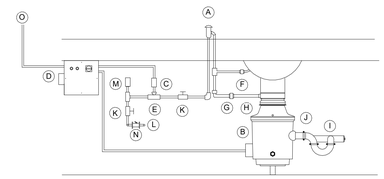
- (A) VACUUM BREAKER
- (B) DISPOSER
- (C) TIME DELAY
- (D) CONTROL PANEL
- (E) SOLENOID VALVE

DIVISION 22 TO PROVIDE AND INSTALL

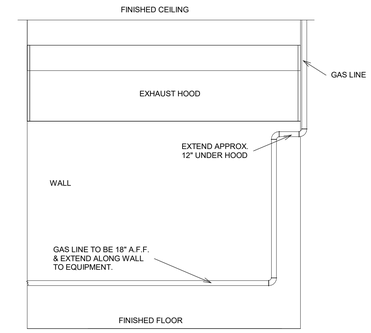
- (F) 1/2" CW INLET
- (G) FLOW CONTROL
- (H) 1/2" CW
- (I) 2" DRAIN LINE WITH P-TRAP & Y ADAPTOR
- (J) 1-1/2" TAILPIECE
- (K) GATE VALVE
- (L) 1/2" CW SUPPLY
- (M) SHOCK STOP
- (N) RPZ BACK FLOW PREVENTOR

DIVISION 26 TO PROVIDE AND INSTALL

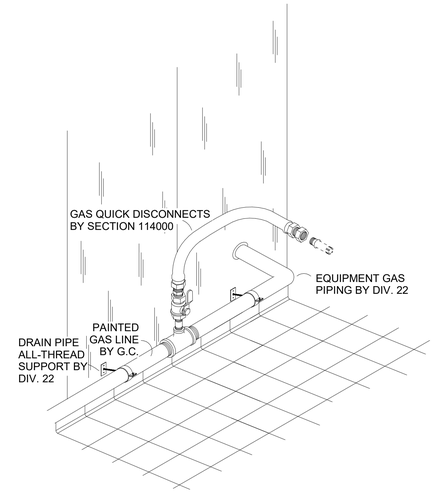
- (O) POWER SUPPLY



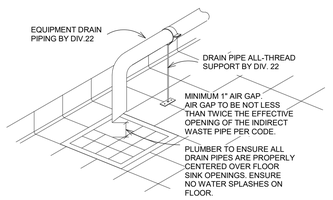
6 DISPOSER WITH VACUUM BREAKER DETAIL
NOT TO SCALE



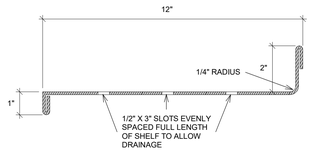
7 EXHAUST HOOD - GAS LINE ROUTING DETAIL
NOT TO SCALE



3 GAS DISCONNECT DETAIL
NOT TO SCALE



5 DRAIN PIPING FASTENER DETAIL
NOT TO SCALE



8 WAREWASH - PERFORATED OVER SHELF DETAIL
NOT TO SCALE

○	HW	HOT WATER	⊡	FFD	FUNNEL FLOOR DRAIN
○	CW	COLD WATER	◣	EVC	EXHAUST VENT CONNECTION
○	HTW	180 F HOT WATER	◢	SVC	SUPPLY VENT CONNECTION
⊙		CHILLED WATER	◔	FR	DIRECT-CONNECTED FLUE RISER
●	W	DIRECT WASTE	⊕	PS	PIPE SLEEVE
○	IW	INDIRECT WASTE	⊙		COMPRESSED AIR
⊙		GAS SUPPLY	♦		CO2
◕		STEAM SUPPLY		AFF	ABOVE FINISHED FLOOR
⊗	CR	CONDENSATE RETURN		BTC	BRANCH TO CONN. ON EQUIP
●	DR	DRAIN		DFA	DROP FROM ABOVE
□	FD	FLOOR DRAIN		CLG	CEILING
▦	FST	FLOOR SINK 3/4 GRATE			
▥	FSH	FLOOR SINK 3/4 GRATE			

2 PLUMBING SYMBOLS
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
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05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FDP
FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
46854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 46854119 ON: 07/18/2025

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

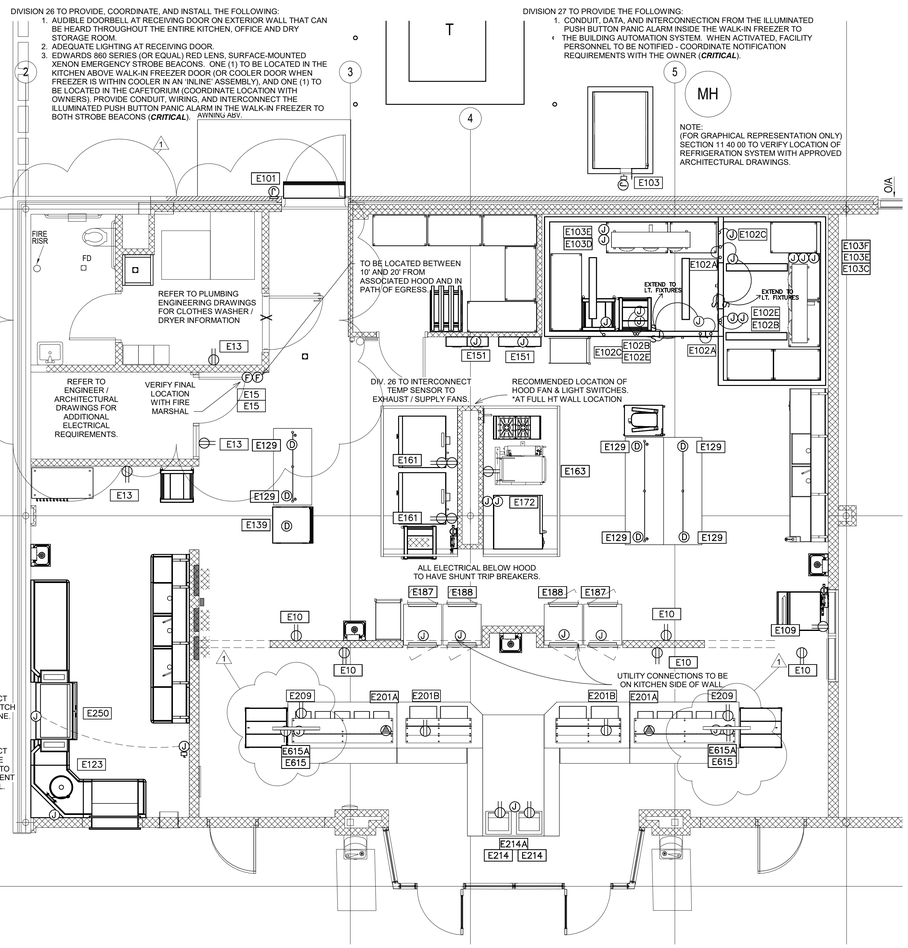
PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS PLUMBING PLAN

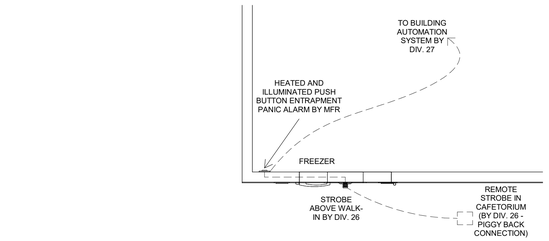
O-QF1.4

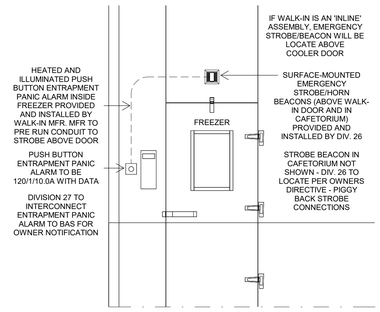
FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E10	DR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E13	WPR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E15	JB	---	---	---	FIRE PROT. SYSTEM	WALL	48"	RECESSED EMPTY CONDUIT FOR FIRE PULL
E101	JB	5.1A	120	1	AIR SCREEN	WALL	82"	BTC; MAGNETIC REED SWITCH ON DOOR JAMB & DOOR
E102A	JB	16.0A	120	1	DOOR HEATER/LIGHTS	CLG	DFA	BTC
E102B	JB	5.0A	120	1	TEMP. ALARM	CLG	DFA	BTC
E102C	JB	5.0A	120	1	PRESSURE RELIEF PORT	CLG	DFA	BTC
E102E	JB	10.0A	120	1	PANIC ALARM BUTTON	CLG	DFA	BTC-INTERCONNECT TO STROBE LIGHT/HORN ABOVE FREEZER DOOR AND IN CAFETORIUM
E103	JB/DS	25.0A	208	3	REFRIGERATION SYSTEM	VERIFY	VERIFY	BTC - WEATHERPROOF DISCONNECT SWITCH
E103C	JB	9.1A	208	1	FREEZER COIL	CLG	DFA	BTC
E103D	JB	1.8A	120	1	COOLER COIL	CLG	DFA	BTC
E103E	JB	---	---	---	DATA CONNECTION	CLG	DFA	BTC; RUN TO NEAREST IDF / MDF ROOM
E103F	JB	16.0A	120	1	DRAIN LINE HEATER	CLG	DFA	BTC; DEDICATED CIRCUIT
E109	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E123	JB	3.0HP	208	3	DISPOSER	WALL	24"	BTC; CONNECT THRU C.P. TO DISPOSER
E129	DCR	16.0A	120	1	TABLE RECEPTACLE	CLG	84"	TWISTLOCK PLUG & RECEPTACLE
E139	DCR	15.0A	120	1	INSUL. MOBILE PROOFER	CEILING	DFA	--

FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC
E161	(2)DR	6.0A EA.	120	1	CONVECTION OVEN	WALL	24"/48"	SHUNT TRIP BREAKER
E163	DR	5.0A	120	1	TILT BRAISING PAN	WALL	24"	SHUNT TRIP BREAKER
E172	(2)JB	15.0A EA.	208	1	COMBI OVEN	WALL	24"/48"	BTC; RE: NOTE #4- SHUNT TRIP BREAKER
E187	JB	15.5A	120/208	1	HEATED CABINET	WALL	96"	BTC; MOUNT ON KITCHEN SIDE
E188	JB	7.2A	120	1	REFRIGERATOR	WALL	96"	BTC; MOUNT ON KITCHEN SIDE-OMIT PLUG, UNIT TO BE HARDWIRED
E201A	PMR	28.0A	208	1	HOT FOOD COUNTER	FLOOR	4.5"	BTC
E201B	PMR	16.0A	120	1	COLD FOOD COUNTER	FLR	4.5"	---
E209	PMR	8.0A	120	1	DROP FRONT MILK COOLER-8 CASE	FLR	4.5"	---
E214	PMR	16.0A	120	1	CASH REGISTER	FLR	4.5"	DEDICATED CIRCUIT
E214A	CS	---	---	---	POS	FLOOR	6"	BTC; CONDUIT W/DATA LINE TO RUN TO MANAGER'S OFFICE OR IDF ROOM-VERIFY
E250	JB/DS-JB	51.7A	480	3	DISHMACHINE	WALL	66"	BTC; EXTEND FROM JB/DS AT NEAREST WALL
E615	DR	5.0A	120	1	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE DCO AT VIDEO LOCATION
E615A	JB	---	---	---	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE JB AT DATA LOCATION

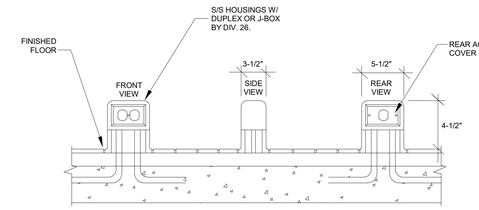


1 FOOD SERVICE ELECTRICAL PLAN
1/4" = 1'-0"



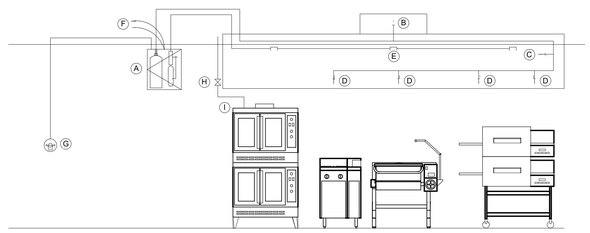


6 COLD STORAGE ASSEMBLY ENTRAPMENT PANIC ALARM DETAIL
NOT TO SCALE



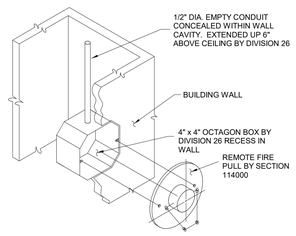
3 PEDESTAL MOUNTED RECEPTACLE DETAIL
NOT TO SCALE

NOTE:
REFER TO FDP EQUIPMENT PLAN FOR SPECIFIC COMPONENTS UNDER HOOD.
ALL EQUIPMENT SHOWN HERE FOR GRAPHICAL REPRESENTATION ONLY.



A	S/S ENCLOSURE W/AGENT TANK AND NITROGEN CARTRIDGE
B	DUCT NOZZLE(S)
C	PLENUM NOZZLE(S)
D	SURFACE PROTECTION NOZZLE(S)
E	FUSIBLE LINK(S)
F	(2) WIRES FROM FIRE SYSTEM TO SHUNT TRIP BREAKERS FOR SHUT DOWN OF ELECTRICAL CONNECTIONS LOCATED BENEATH EXHAUST HOOD DURING FIRE MODE
G	REMOTE FIRE PULL
H	GAS VALVE
I	GAS SUPPLY (AS REQUIRED)

4 FIRE PROTECTION SYSTEM TYPICAL DETAIL
NOT TO SCALE



5 FIRE PROTECTION SYSTEM RECESSED FIRE PULL DETAIL
NOT TO SCALE

	SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES
•	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
	DR	DUPLEX RECEPTACLE		WPR	WATERPROOF RECEPTACLE (SPRING COVER)
	SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER
	SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT
	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
	PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR
	DCR	DROP CORD RECEPTACLE		CS/JB	JUNCTION BOX ON PEDESTAL
	JB	JUNCTION BOX ON CEILING		SW	SWITCH
	JB	JUNCTION BOX IN WALL		D	DATA
	JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26			

2 ELECTRICAL SYMBOLS
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
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7/15/2026
THE ITEM APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/18/2025

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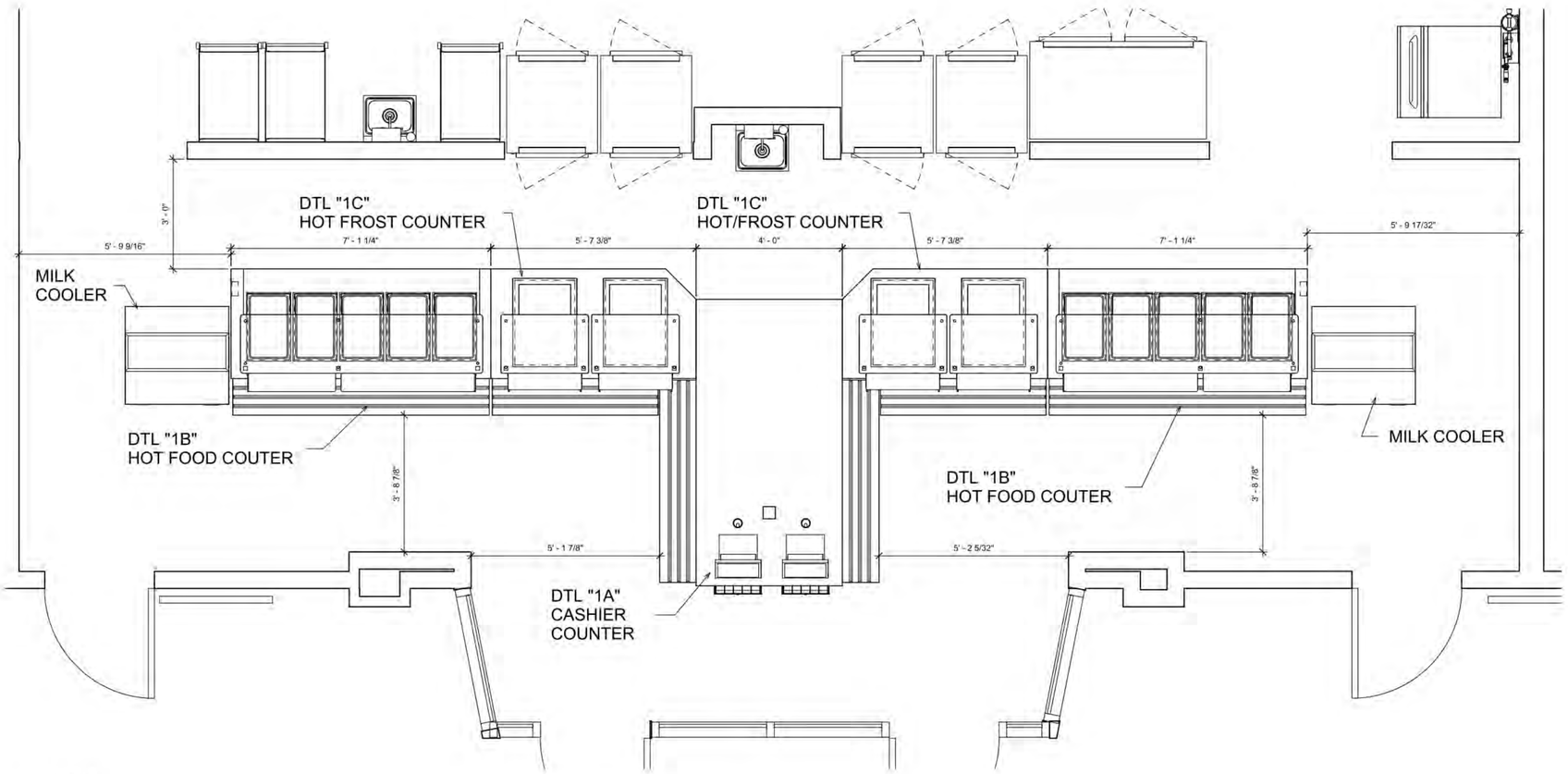
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS ELECTRICAL PLAN

O-QF1.5



2 / CC2 LAYOUT

EQUIPMENT BY OTHERS
COUNTERCRAFT LAYOUTS, MEPS, AND LOAD CENTERS ARE BASED ON SPECIFIED MANUFACTURERS AND MODELS AS OUTLINED IN THE SPECIFICATIONS IN THE CONTRACT DOCUMENTS. COUNTERCRAFT MUST BE NOTIFIED OF ANY CHANGES TO THE CONTRACT DOCUMENTS IN A TIMELY MANNER.

NO	REVISIONS (PRELIMINARY ZONES)	DATE	BY
1	REVISIONS	09/23/2024	MAX
2		11/26/2024	MAX
3			
4			
5			
6			
7			
8			
9			

CounterCraft

FBISD Bond Package 013

FOODSERVICE DESIGN PROFESSIONALS

11/26/2024

CC2

ISSUE:

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MWA ARCHITECTS
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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/25
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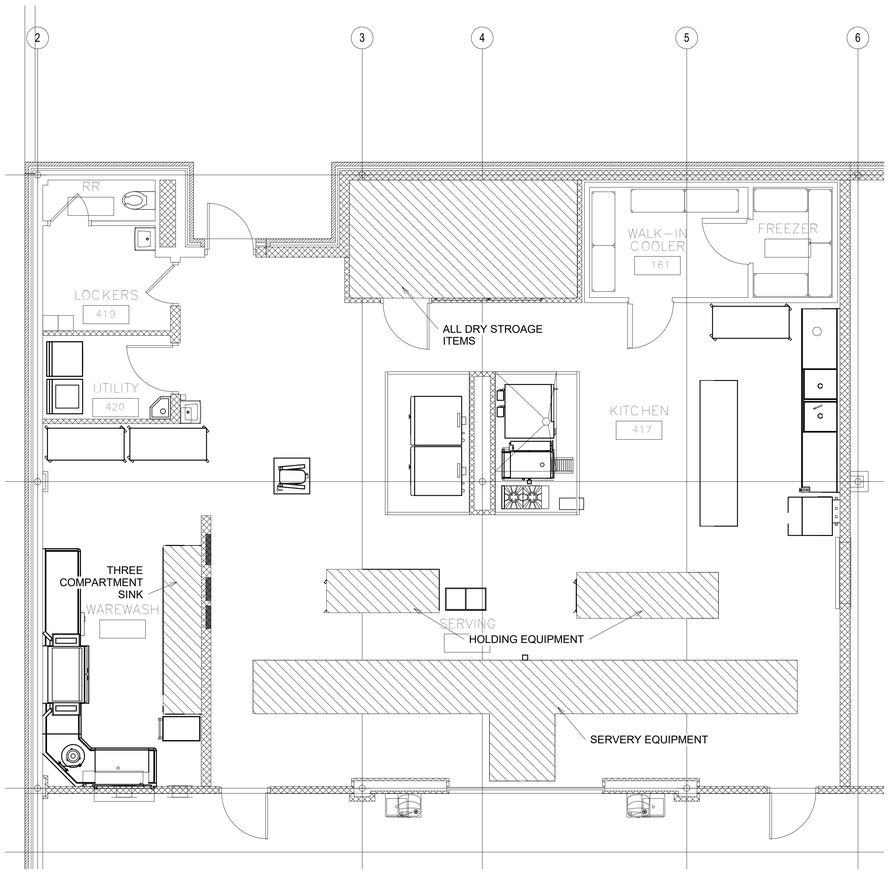
FS SERVING LINE

O-QF1.9



1 FOOD SERVICE EQUIPMENT PLAN - DEMO PLAN
1/4" = 1'-0"

NOTE: ALL EQUIPMENT MAKERED WITH A DIAGONAL HATCH TO BE RELOCATED PER TEMPORARY SERVING PLAN SHEET O-QF2.0

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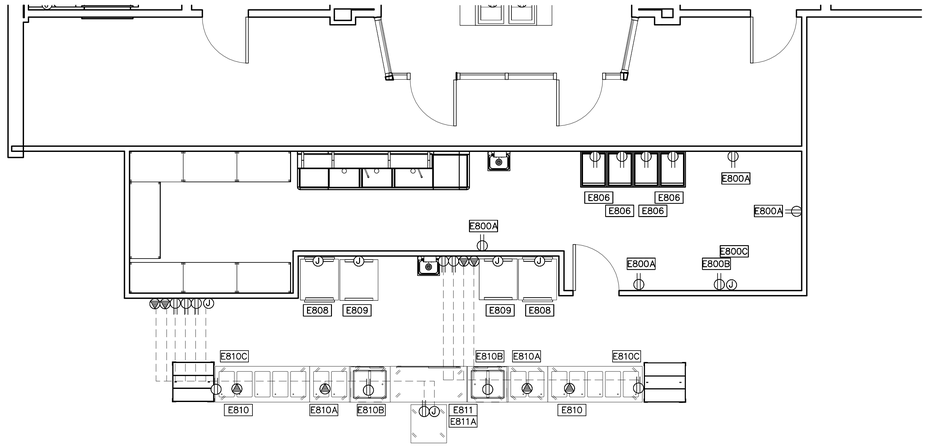
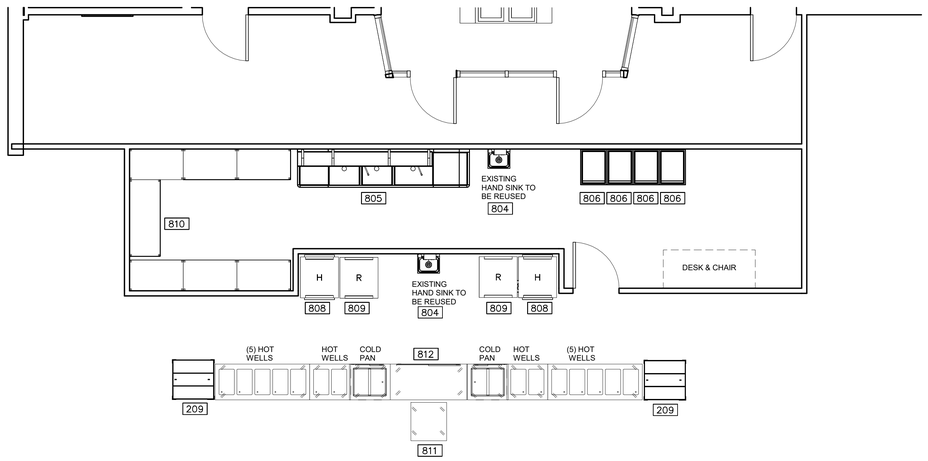
FS DEMO PLAN

O-QF2.0



4 FOOD SERVICE ELECTRICAL PLAN - TEMPORARY SERVING
1/4" = 1'-0"

FOOD SERVICE EQUIPMENT SCHEDULE - TEMPORARY SERVING					
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH DEPARTMENT COORDINATION NOTES					
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS	MANUFACTURER	MODEL
209	2	DROP FRONT MILK COOLER - 8 CASE		TRAULSEN	RMC34D4
804	2	S/S SPLASH GUARDS		CUSTOM FABRICATED	
805	1	THREE COMPARTMENT SINK NO DISPOSER	EXISTING		
806	4	TRANSPORT CART	EXISTING		
807	1	HAND LAV	EXISTING		
808	2	REACH IN HEATED CABINET - 1DR	EXISTING		
809	2	REACH IN REFRIGERATOR - 1DR.	EXISTING		
810	1	DRY STORAGE SHELVING	EXISTING		
811	1	CASH REGISTER	OWNER FURNISHED		
812	1	SERVING COUNTER	EXISTING		



1 FOOD SERVICE EQUIPMENT PLAN - TEMPORARY SERVING
1/4" = 1'-0"

FOOD SERVICE ELECTRICAL SCHEDULE - TEMPORARY SERVING								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E800A	DR	16.0A	120	1	CONVENIENCE	WALL	24"	---
E800B	DR	16.0A	120	1	CONVENIENCE	WALL	24"	DEDICATED CIRCUIT
E800C	JB	---	---	--	DATA CONNECTION	WALL	24"	---
E806	DR	16.0A	120	1	TRANSPORT CABINET	WALL	24"	---
E808	JB	7.8A	120/208	1	HEATED CABINET	WALL	96"	BTC; OMIT PLUG, UNIT TO BE HARDWIRED
E809	JB	8.2A	120	1	REFRIGERATOR	WALL	96"	BTC; OMIT PLUG, UNIT TO BE HARDWIRED
E810	CS/SR	13.3A	208	1	(4) HOT WELLS	WALL	24"	EXTEND TO EQUIPMENT - CONFIRM NEMA PLUG
E810A	SR	7.9A	208	1	(2) HOT WELLS	WALL	24"	EXTEND TO EQUIPMENT - CONFIRM NEMA PLUG
E810B	DR	5.0A	120	1	COLD PAN	WALL	24"	EXTEND TO EQUIPMENT
E810C	DR	10.0A	120	1	BEVERAGE	WALL	24"	EXTEND TO EQUIPMENT
E811	DR	16.0A	120	1	CASH REGISTER	WALL	24"	DEDICATED CIRCUIT - EXTEND TO EQUIPMENT
E811A	JB	-	---	1	POS	WALL	24"	BTC

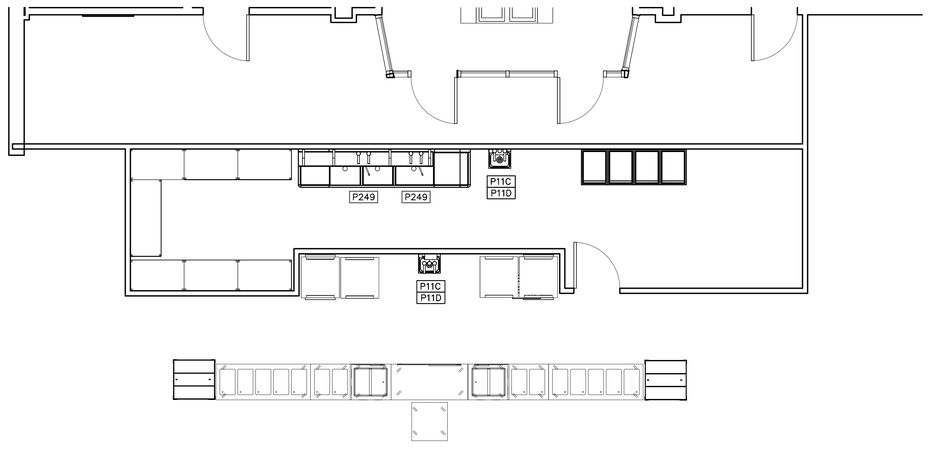
	SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES
•	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
	DR	DUPLEX RECEPTACLE		WPR	WATERPROOF RECEPTACLE (SPRING COVER)
	SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER
	SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT
	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
	PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR
	DCR	DROP CORD RECEPTACLE		CS/JB	JUNCTION BOX ON PEDESTAL
	JB	JUNCTION BOX ON CEILING		SW	SWITCH
	JB	JUNCTION BOX IN WALL		D	DATA
	JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26			

5 ELECTRICAL SYMBOLS 1
NOT TO SCALE

FOOD SERVICE PLUMBING SCHEDULE - TEMPORARY SERVING						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC

	HW	HOT WATER		FFD	FUNNEL FLOOR DRAIN
	CW	COLD WATER		EVC	EXHAUST VENT CONNECTION
	HTW	180 F HOT WATER		SVC	SUPPLY VENT CONNECTION
		CHILLED WATER		FR	DIRECT-CONNECTED FLUE RISER
	W	DIRECT WASTE		PS	PIPE SLEEVE
	IW	INDIRECT WASTE			COMPRESSED AIR
		GAS SUPPLY			CO2
		STEAM SUPPLY		AFF	ABOVE FINISHED FLOOR
	CR	CONDENSATE RETURN		BTC	BRANCH TO CONN. ON EQUIP
	DR	DRAIN		DFA	DROP FROM ABOVE
	FD	FLOOR DRAIN		CLG	CEILING
	FST	FLOOR SINK 3/4 GRATE			
	FSH	FLOOR SINK 3/4 GRATE			

3 PLUMBING SYMBOLS 1
NOT TO SCALE



2 FOOD SERVICE PLUMBING PLAN - TEMPORARY SERVING
1/4" = 1'-0"

ISSUE:

12/05/2024	DD PACKAGE
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05/23/2025	90% CD PKG.
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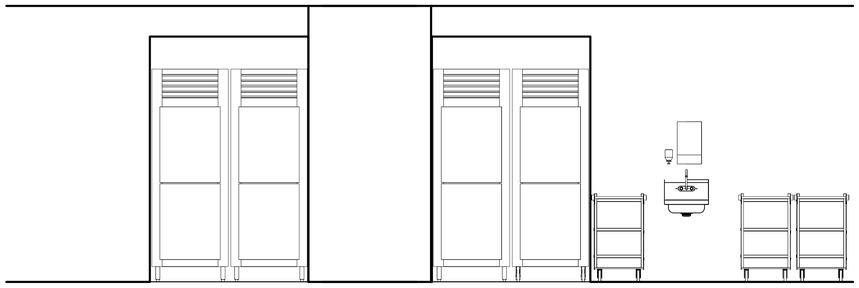
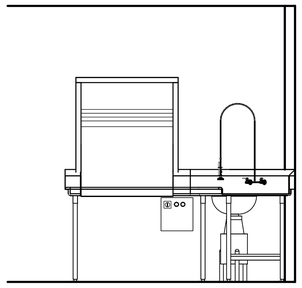
FS TEMPORARY SERVING

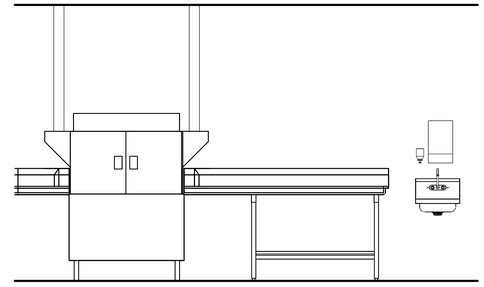
O-QF2.1



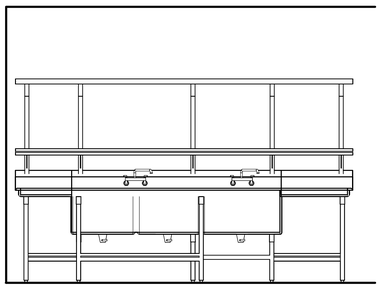
11 ELEVATION @ HOLDING
1/2" = 1'-0"



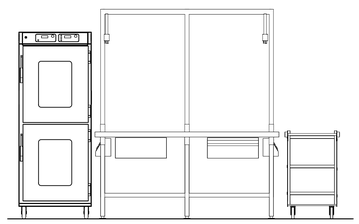
10 ELEVATION @ DISPOSER & TRAY DROP WINDOW
1/2" = 1'-0"



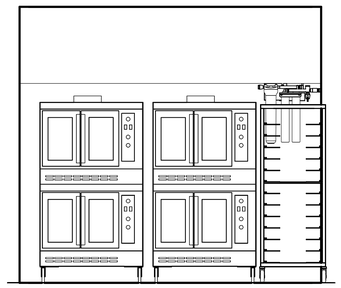
9 ELEVATION @ DISHMACHINE
1/2" = 1'-0"



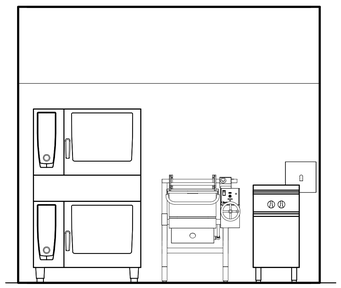
8 ELEVATION @ THREE COMPARTMENT SINK
1/2" = 1'-0"



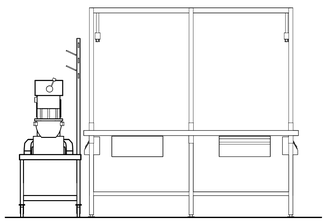
7 ELEVATION @ SETUP TABLE & MOBILE HEATED CABINET
1/2" = 1'-0"



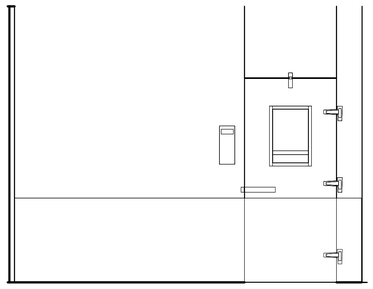
6 ELEVATION @ PRODUCTION 2
1/2" = 1'-0"



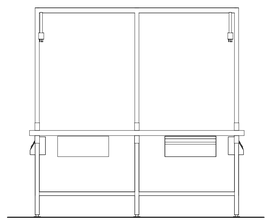
5 ELEVATION @ PRODUCTION 1
1/2" = 1'-0"



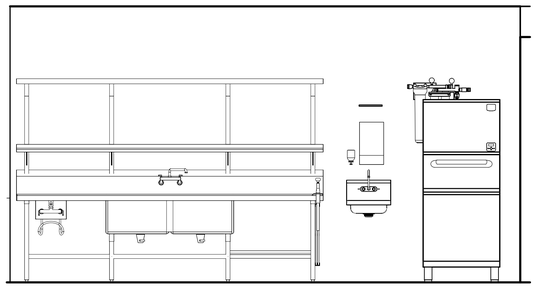
4 ELEVATION @ SETUP TABLE & MIXER
1/2" = 1'-0"



3 ELEVATION @ COLD STORAGE ASSEMBLY
1/2" = 1'-0"



2 ELEVATION @ SETUP TABLE
1/2" = 1'-0"



1 ELEVATION @ PREP SINK & ICE MACHINE
1/2" = 1'-0"

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FORT BEND INDEPENDENT SCHOOL DISTRICT

PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
7/15/2025
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ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
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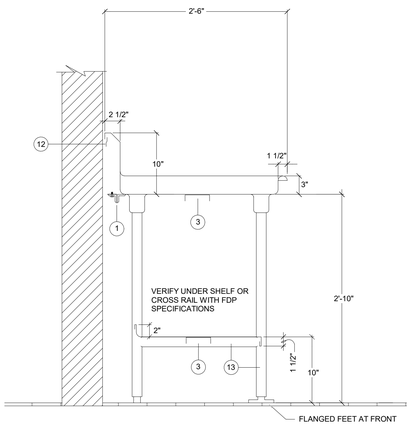
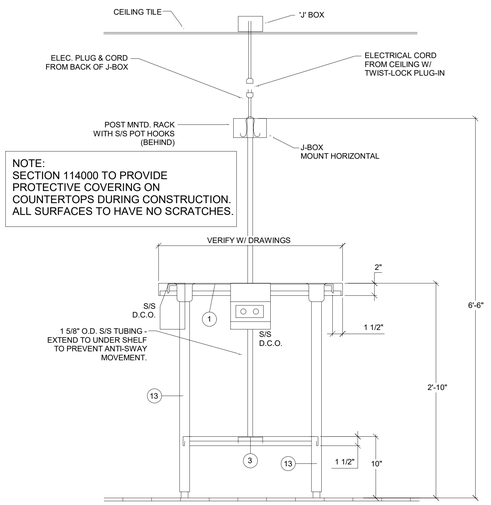
PROJ. NO.: 23-25
DATE: 07/18/25
ISSUED FOR BIDDING AND PERMITTING
FS ELEVATIONS

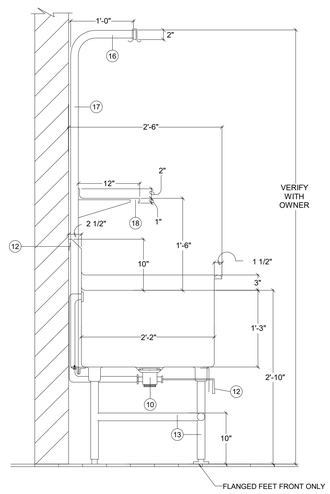
O-QF3.1



7 DRAINBOARD
NOT TO SCALE



6 WORKTABLE - ISLAND W/ S.BAR UT RACK & END UC DCO SECTION
NOT TO SCALE



2 SINK - UTENSIL WASH SECTION
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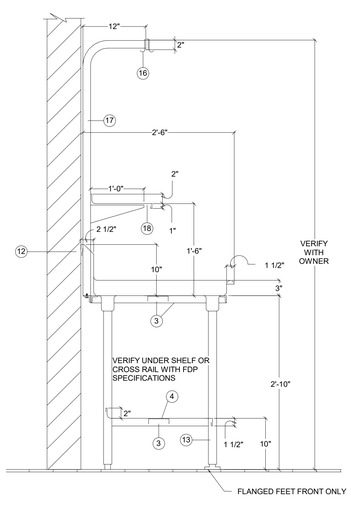
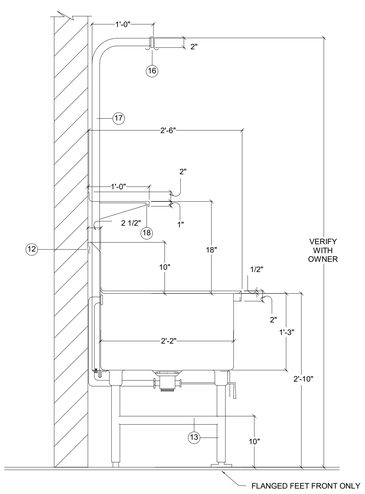
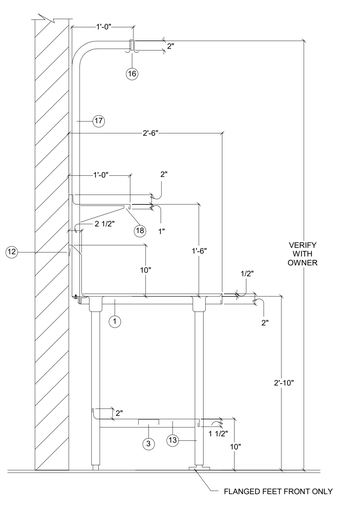


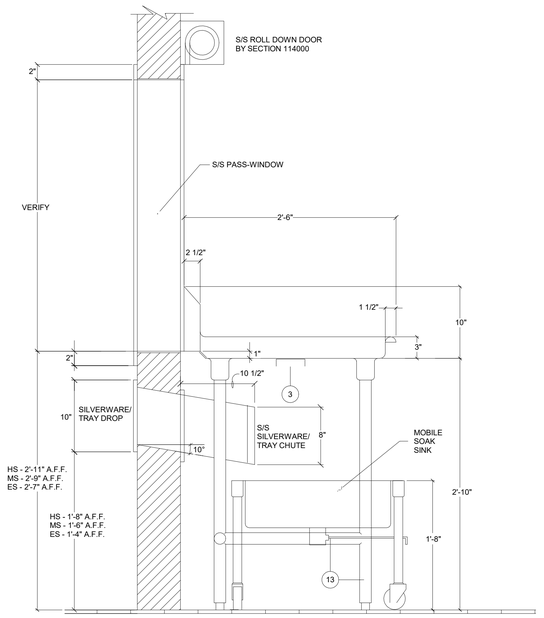
5 DRAINBOARD - UTENSIL WASH SECTION
NOT TO SCALE



4 SINK - PREP TABLE SECTION
NOT TO SCALE



3 DRAINBOARD - PREP SINK SECTION
NOT TO SCALE



8 WAREWASH - TRAY DROP/SOAK SINK SECTION
NOT TO SCALE

SECTION DETAIL NOTES:

1. 1 1/2" X 1 1/2" X 1/8" GALVANIZED ANGLE IRON.
2. 1" X 4" 14 GAUGE STAINLESS STEEL HAT CHANNEL.
3. 16 GAUGE STAINLESS STEEL C-CHANNEL.
4. 16 GAUGE STAINLESS STEEL UNDER SHELF, COVE UP REAR 2", TURN DOWN FRONT 1 1/2".
5. 1/2" CEMENT BACKERBOARD WITH TILE FRONT BY TRADE CONTRACTOR OR COUNTER MANUFACTURER. VERIFY FINISH WITH ARCHITECTURAL DRAWINGS.
6. COLD PAN - 2" RIGID INSULATION WITH 1" C.P. DRAIN - 16 GAUGE STAINLESS STEEL SECTION FALSE BOTTOM. PERFORATE FALSE BOTTOM WITH 1/4" DIA. HOLES AT 3" O.C.
7. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN DOOR WITH RECESSED PULL.
8. MANIFOLD DRAINS AT HOT FOOD UNITS WITH 1" TYPE 'K' COPPER AND EXTEND TO VALVE IN PLUMBING COMPARTMENT.
9. FINISHED TRUE AND LEVEL MASONRY BASE BY DIVISION 09. CLOSE COUNTER BODY AT BASE AND SEAL BY SECTION 11 40 00.
10. FISHER #22314 DRAIN WITH TAILPIECE AND OVERFLOW.
11. 14 GAUGE STAINLESS STEEL BRACKET WITH DRAIN HANDLE BUSHING.
12. 16 GAUGE STAINLESS STEEL 'Z' CLIP TO WALL AND SEAL.
13. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL LEGS AND CROSS RAILS.
14. 1/2" S/S TUBING DRAIN LINE - STRAP TO SHELF AND WALL - EXTEND DOWN TO TOP OF SPLASH.
15. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL TUBING - SUPPORT FRONT OF SHELF WITH 1/2" ALL-THREAD INSIDE TUBING EXTENDING TO STRUCTURE ABOVE.
16. 1/4" S/S BAR STOCK WELDED TO TOP OF EACH POST - POT HOOKS TO BE COMPONENT HARDWARE #J77-4401 SPACED 8" O.C.
17. 1 5/8" 16 GAUGE STAINLESS STEEL TUBING - BOLT TO ANGLE IRON AND EXTEND UP THRU SPLASH TO 7'-0" A.F.F.
18. OVER SHELF - 16 GAUGE STAINLESS STEEL, COVE UP REAR 2", TURN FRONT AND ENDS DOWN 1", ENDS TO BE CAPPED WITH EASED CORNERS WHERE ADJACENT TO WALL / FIXTURE.
19. 18 GAUGE STAINLESS STEEL LOUVERED PANEL.
20. 18 GAUGE STAINLESS STEEL LOUVERED DOUBLE PAN DOOR WITH RECESSED PULL.
21. NUMBER NOT USED.
22. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN SLIDING DOOR WITH COMPONENT HARDWARE COMPONENTS
    - A. #B57 - (VERIFY LENGTH) EXTRUDED ALUMINUM TRACK.
    - B. #B58-5511 & #B58-5521 FRONT & REAR DOOR SHEAVES.
    - C. #B62-1093 DOOR GUIDE.
    - D. #B60-1086 DOOR STOPS WHERE NEEDED.
    - E. #P62-1010 RECESS PULLS.

1 SECTION DETAIL NOTES
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SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
ELECTRONICALLY APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/15/2025

ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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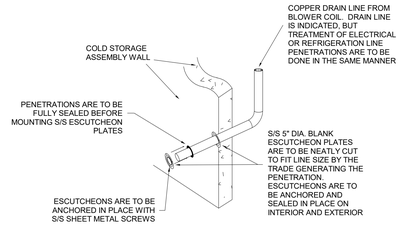
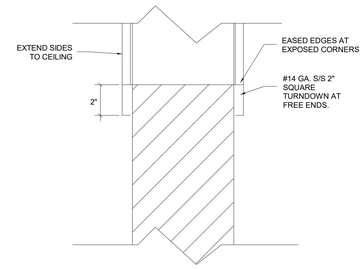
FS SECTIONS & DETAILS

O-QF4.1

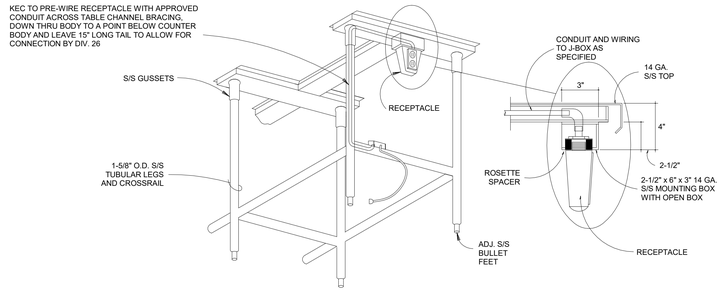


3 COLD STORAGE ASSEMBLY ESCUTCHEON & PENETRATION DETAIL
NOT TO SCALE



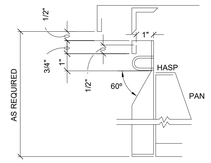
4 S/S WALL CAP DETAIL
NOT TO SCALE

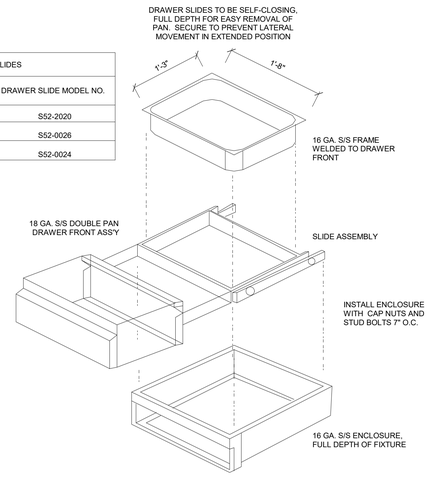
NOTE:
COORDINATE ALL RECEPTACLES WITH ELECTRICAL CONTRACT DRAWING REQUIREMENTS, REFER TO ELECTRICAL PLAN



5 WORKTABLE - ELECTRICAL RECEPTACLE MOUNTED UNDER TOP DETAIL
NOT TO SCALE

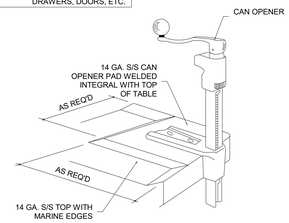
COMPONENT HARDWARE DRAWER PAN AND SLIDES		
TYPE	DRAWER PAN MODEL NO.	DRAWER SLIDE MODEL NO.
UTILITY	S80-2020	S52-2020
BREAD	S83-2020	S52-0026
REFRIGERATOR	S81-1520	S52-0024



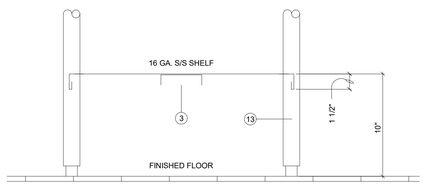


6 DRAWER ASSEMBLY DETAIL
NOT TO SCALE

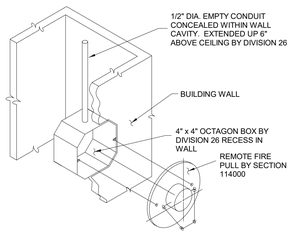
NOTE: DO NOT LOCATE CAN OPENER PAD IN A POSITION THAT WOULD ALLOW CAN OPENER TO OBSTRUCT OPENING OF DRAWERS, DOORS, ETC.



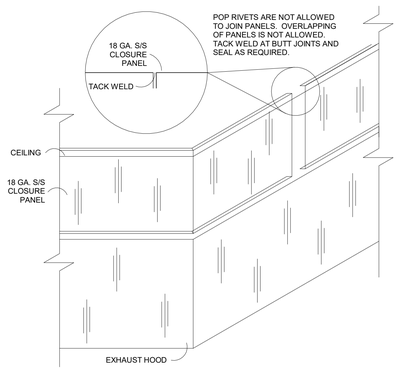
10 SINK - PREP MARINE EDGE CAN OPENER DETAIL
NOT TO SCALE



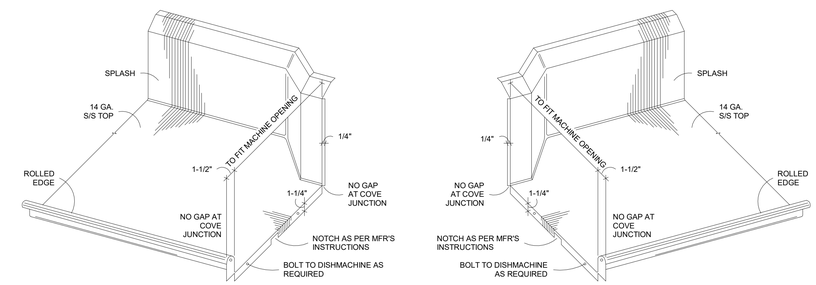
11 UNDER SHELF DETAIL
NOT TO SCALE



12 FIRE PROTECTION SYSTEM FIRE PULL DETAIL
NOT TO SCALE



13 EXHAUST HOOD CLOSURE PANEL DETAIL
NOT TO SCALE



14 DISHTABLE - SOILED & CLEAN CONNECTION DETAIL
NOT TO SCALE

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48854119
PROFESSIONAL MEMBER
7/15/2025
ITEMS APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/15/2025

ARCHITECTS
AND PLANNING
CONSULTANTS
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HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/25
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FS DETAILS

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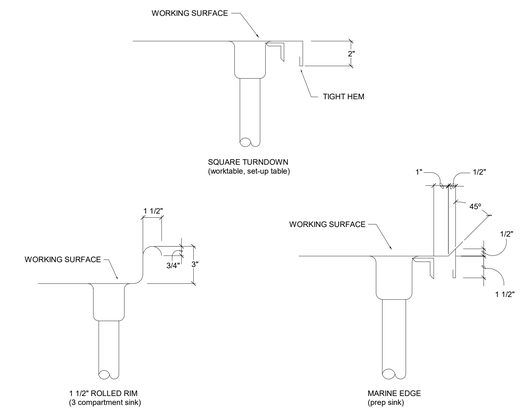
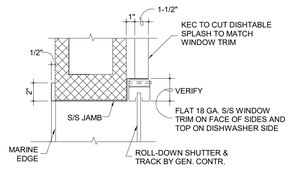
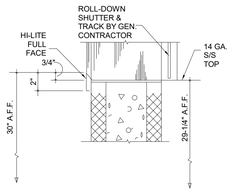


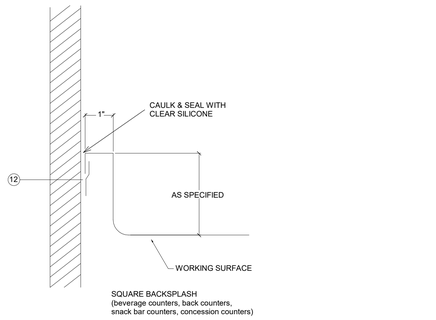
1 EDGE DETAILS
NOT TO SCALE



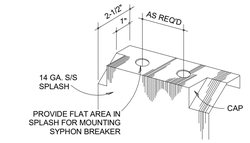
4 WAREWASH - TRAY DROP WINDOW SECTION
NOT TO SCALE



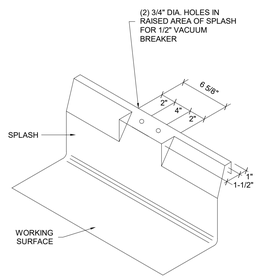
3 WAREWASH - TRAY DROP SECTION
NOT TO SCALE



2 BACKSPLASH DETAILS
NOT TO SCALE



6 SPLASH @ SYPHON BREAKER
NOT TO SCALE



8 VACUUM BREAKER DETAIL
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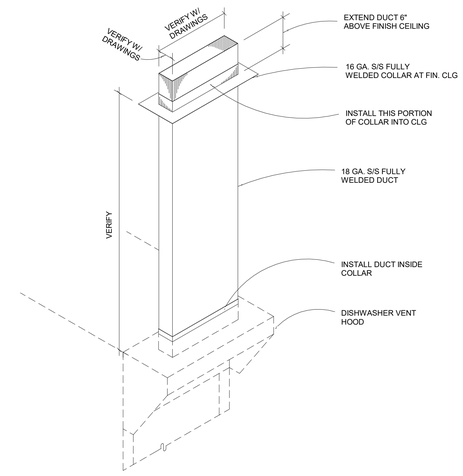
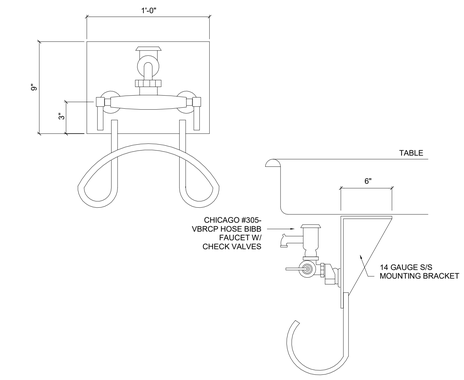
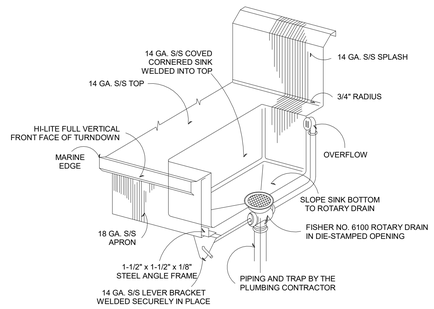


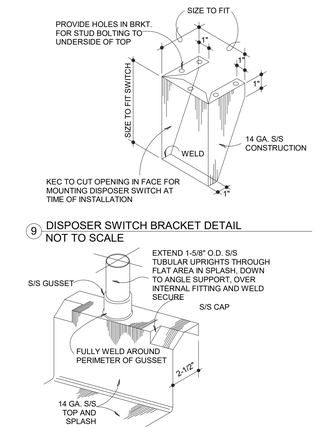
5 DISHMACHINE VENT RISER DETAIL
NOT TO SCALE



12 HOSE BIBB DETAIL
NOT TO SCALE



11 SINK ASSEMBLY DETAIL
NOT TO SCALE



9 DISPOSER SWITCH BRACKET DETAIL
NOT TO SCALE

7 SPLASH @ UPRIGHT (DISH TABLE) DETAIL
NOT TO SCALE

CUSTOM FABRICATION NOTES:

A. WORK SHALL BE DONE IN AN APPROVED WORKMANLIKE MANNER, TO COMPLETE SATISFACTION OF FOODSERVICE DESIGN PROFESSIONALS (FDP).

B. STAINLESS STEEL SHALL BE U.S. STANDARD GAUGES AS CALLED FOR. 18-8, TYPE 304, NOT OVER .012% MAXIMUM CARBON, NO. 4 FINISH.

C. GALVANIZED IRON SHALL BE ARMCO OR EQUAL. FRAMEWORK OF GALVANIZED IRON SHALL BE WELDED CONSTRUCTION, HAVING WELDS SMOOTH, AND WHERE GALVANIZING HAS BURNED OFF, TOUCHED UP WITH HIGH-GRADE ALUMINUM BRONZE.

D. LEGS AND CROSSRAIL SHALL BE CONTINUOUSLY WELDED, UNLESS OTHERWISE NOTED, AND GROUND SMOOTH.

E. BOTTOM OF LEGS AT FLOOR SHALL BE FITTED WITH SANITARY STAINLESS STEEL BULLET-TYPE FOOT, WITH NO LESS THAN 1/2" ADJUSTMENT.

F. LEGS SHALL BE FASTENED TO EQUIPMENT AS FOLLOWS:

01. TO SINKS BY MEANS OF CLOSED GUSSETS. GUSSETS SHALL BE S/S, REINFORCED WITH BUSHING, HAVING SET SCREWS FOR SECURING LEGS.

02. TO TABLES AND DRAINBOARDS WITH CLOSED GUSSETS WHICH SHALL BE WELDED TO GALVANIZED HAT SECTIONS OR CHANNELS, 14 GAUGE OR HEAVIER, EXPOSED HAT SECTIONS HAVING CLOSED ENDS. BRACING SHALL BE UNDERSIDE OF TOPS.

G. CLOSED GUSSETS SHALL BE 3" MINIMUM DIAMETER AT TOP, WELDED TO FRAME MEMBERS OR TO SINK BOTTOM.

H. ROLLS SHALL BE 1 1/2" DIAMETER, EXCEPT AS DETAILED TO THE CONTRARY, WITH CORNERS BULLNOSED, GROUND, AND POLISHED.

I. SEAMS AND JOINTS SHALL BE SHOP-WELDED WHERE POSSIBLE. WELDS TO BE GROUND AND POLISHED TO MATCH ORIGINAL FINISH. MATERIALS 18 GAUGE OR HEAVIER SHALL BE WELDED.

J. METAL TOPS SHALL BE ONE-PIECE WELDED CONSTRUCTION UNLESS SPECIFIED OTHERWISE, REINFORCED ON UNDERSIDE WITH GALVANIZED HAT SECTIONS OR CHANNELS WELDED IN PLACE. CROSSBRACE TO BE NOT MORE THAN 30" ON CENTERS.

K. HARDWARE SHALL BE SOLID MATERIALS AND EXCEPT WHERE EXPOSED OR SPECIFIED TO THE CONTRARY, OF CAST BRASS, CHROME-PLATED. IDENTIFY ALL HARDWARE WITH MANUFACTURER'S NAME AND NUMBER SO THAT BROKEN OR WORN PARTS MAY BE ORDERED AND REPLACED.

L. FABRICATE SINK COMPARTMENTS WITH 3/4" COVED VERTICAL AND HORIZONTAL CORNERS. MULTIPLE- COMPARTMENT PARTITIONS TO BE DOUBLE THICKNESS, CONTINUOUSLY WELDED WHERE SHEETS JOIN AT TOP. FRONT OF MULTIPLE-COMPARTMENT PARTITIONS TO BE CONTINUOUS ON EXTERIOR. BOTTOMS SHALL BE CREASED TO DRAIN.

M. ENDS OF FIXTURES, SPLASHBACKS, SHELVES, ETC., SHALL BE FINISHED FLUSH TO WALLS OR ADJOINING FIXTURES.

N. DISHTABLES, DRAINBOARDS, SPLASHBACKS, AND TURN-UP EDGES SHALL HAVE RADIUS BENDS IN ALL HORIZONTAL AND VERTICAL CORNERS, COVED AT INTERSECTIONS.

O. ROUNDED AND COVED CORNERS OR RADIUS BENDS SHALL BE 1/2" RADIUS OR LONGER.

P. UNDERSIDES OF TOPS TO BE COATED WITH HEAVY-BODIED RESINOUS MATERIAL COMPOUND FOR PERMANENT, NON-FLAKING ADHESION TO METAL, 1/8" THICK, APPLIED AFTER REINFORCING MEMBERS HAVE BEEN INSTALLED, DRYING WITHOUT DIRT-CATCHING CREVICES.

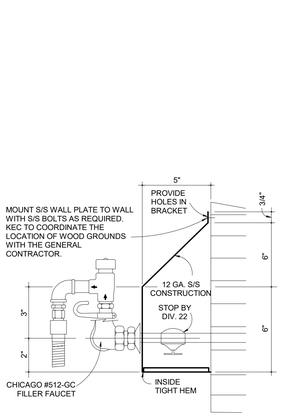
Q. SHELVES ARE TO BE TURNED UP 2" ON THE BACK EDGE. TURN OTHER EDGES DOWN 1 1/2" TO FORM OPEN CHANNELS. REINFORCE SHELF UNITS TO SUPPORT 40 LBS. PER SQUARE FOOT LOADING, PLUS 100% IMPACT LOADING.

R. TRIMWORK AND FRAMING AT MASONRY OPENINGS SHALL BE 18 GAUGE STAINLESS STEEL AND FORMED SO AS TO FIT SNUG TO WALLS AND ADJACENT SURFACES. FRAMING SHALL EXTEND A MINIMUM OF 2" ON EACH SURFACE. SEAL TRIMWORK TO WALLS. REFER TO DRAWINGS.

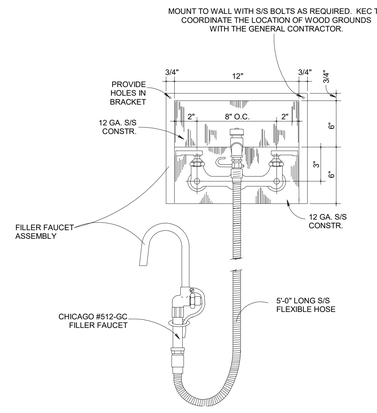
S. METAL COMPONENTS, UNLESS SPECIFIED OR NOTED OTHERWISE, TO BE THE FOLLOWING GAUGES:

TABLETOPS	14 GAUGE STAINLESS STEEL
WALL SHELVES	16 GAUGE STAINLESS STEEL
UNDER SHELVES	16 GAUGE STAINLESS STEEL
SINKS & DRAINBOARDS	14 GAUGE STAINLESS STEEL
EXHAUST DUCTS	18 GAUGE STAINLESS STEEL
LEGS - 1 5/8" DIA.	16 GAUGE STAINLESS STEEL

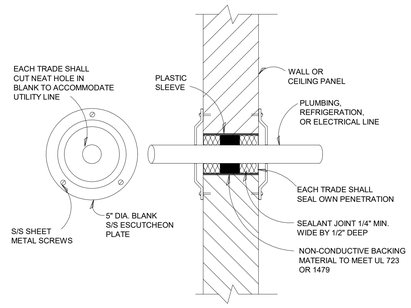
10 CUSTOM FAB NOTES
NOT TO SCALE



14 FILL FAUCET DETAIL
NOT TO SCALE



15 COLD STORAGE ASSEMBLY WALL PENETRATION DETAIL
NOT TO SCALE



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FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
7/15/2025
ELECTRONIC SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/18/2025

ARCHITECTS

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PROJ. NO.: 23-25
DATE: 07/18/25
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FS DETAILS

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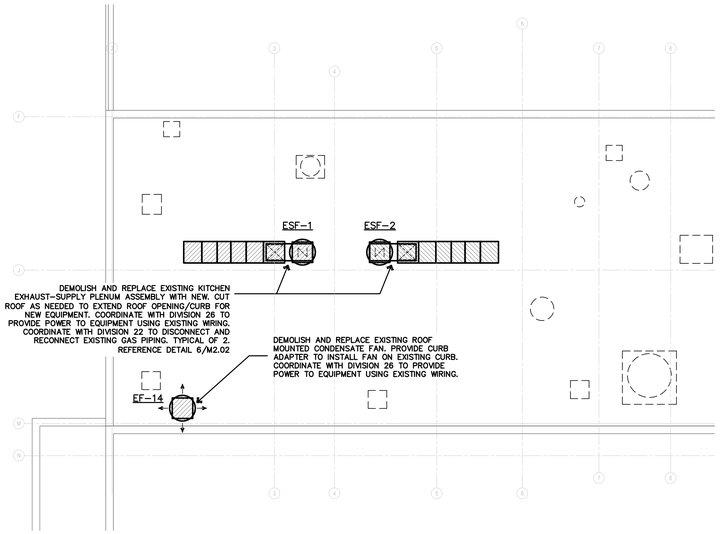
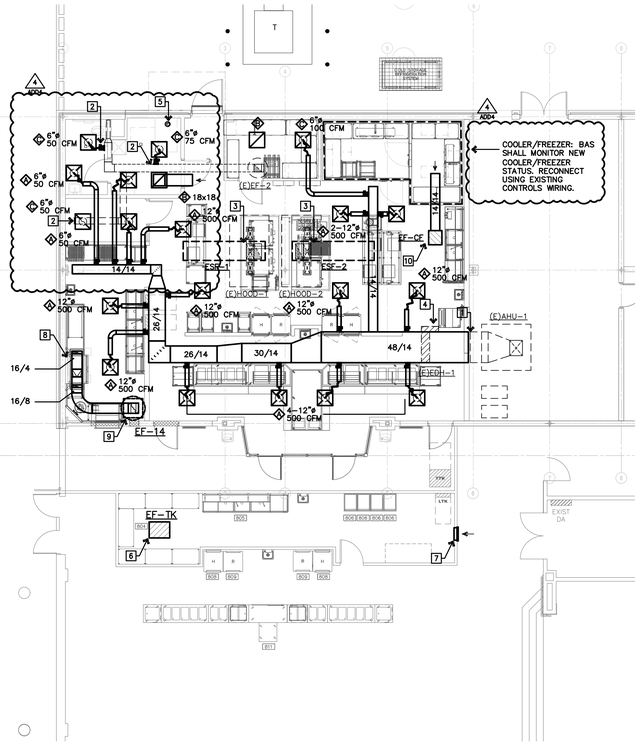


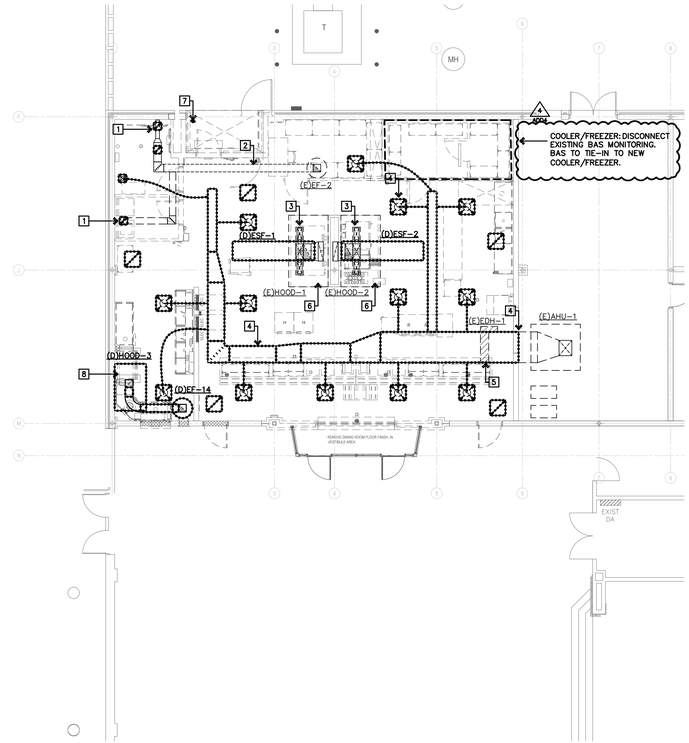
3 MECHANICAL ROOF FLOOR PLAN
SCALE: 1/8" = 1'-0"

NORTH



2 RENO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"

NORTH



1 DEMO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"

NORTH

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A	CEILING DIFFUSER – 24" X 24" FACE, PATTERN TYPE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE SCD A1–12" X 12"
B	CEILING RETURN GRILLE – 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE PDFR B1–12" X 12"
C	CEILING EXHAUST GRILLE – 24" X 24" PERFORATED FACE, STEEL CONST., WHITE FINISH, NECK SIZE SHOWN, U.L. LISTED PRICE PDDR C1–12" X 12"

NOTES:
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPES FOR AIR DEVICES.

4/A004

KITCHEN HOOD REFURBISHMENT NOTES

HOOD REFURBISHMENT FOR KITCHEN HOODS (QUANTITY 2):
- STEAM WASH AND DEEP CLEAN STAINLESS STEEL HOOD ASSEMBLY, CASING, AND SUPPLY GRILLES WHERE APPLICABLE.
- REPLACE GREASE FILTER RACKS.
- CLEAN EXISTING MAKE-UP AIR AND GREASE EXHAUST DUCT.
- RELAMP EXISTING LIGHT FIXTURES WITH NEW 4000K BULBS LISTED FOR USE IN AN ENCLOSED KITCHEN HOOD FIXTURE.
- COORDINATE WITH DIVISION 11 FOR REPLACEMENT OF ANSUL FIRE SUPPRESSION SYSTEM.
- HOOD ASSEMBLIES SHALL BE CLEANED TO MEET THE STANDARDS ESTABLISHED IN NFPA STANDARD 96.

KITCHEN HOOD EXHAUST & MAKE-UP AIR UNIT SCHEDULE

MARK	ESF-1,2
SERVES	KITCHEN HOOD-1 & 2
SUPPLY SECTION	
TYPE	INDIRECT GAS-FIRED MAKE-UP AIR UNIT
DRIVE	DIRECT
SPEED CONTROL	VFD
SUPPLY CFM	2250
EXT. S.P. (IN. W.G.)	0.375
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	4.6 A
UNIT MOCP	15 A
HEATING MEDIUM	NATURAL GAS
INPUT/OUTPUT (MBH)	150.0/121.5
TURNDOWN RATIO	4:1
MANUFACTURER	GREENHECK
MODEL	IGX-P109-H12-MF-E
EXHAUST SECTION	
TYPE	UPBLAST BELT DRIVE CENTRIFUGAL
EXHAUST CFM	3600
EXT. S.P. (IN. W.G.)	0.75
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	3.75 A
UNIT MOCP	15 A
MANUFACTURER	GREENHECK
EXHAUST FAN MODEL	CUBE-200-15

NOTES
1. EXHAUST FAN: PROVIDE FAN WITH PRE-FABRICATED ROOF CURB ADAPTER, VENTED CURB EXTENSION, HINGING KIT, HEAT BAFFLE, DRAIN CONNECTION, GREASE TRAP, AND DISCONNECT SWITCH. FANS SHALL BE UL LISTED FOR USE WITH TYPE 1 GREASE HOOD.
2. EXHAUST FAN: PROVIDE NEW MOTOR STARTER, SIZED FOR EXHAUST FAN MOTOR AND INSTALLED IN PLACE OF EXISTING. REFERENCE THE SPECIFICATIONS FOR STARTER REQUIREMENTS. COORDINATE WITH DIV.25 FOR RE-TERMINATION OF PERMISSIVE ON/OFF CONTROL. COORDINATE WITH DIV.26 FOR RE-TERMINATION OF LOCAL HOOD SWITCH INTERLOCK FOR START/STOP CONTROL.
3. SUPPLY FAN/FURNACE: FLUE GAS FROM HEATING COIL SHALL BE POWER VENTED.
4. SUPPLY FAN/FURNACE: WEATHERHOOD WITH ALUMINUM MESH.
5. SUPPLY FAN/FURNACE: 5 YEAR HEAT EXCHANGER WARRANTY.
6. SUPPLY FAN/FURNACE CONTROLS: INTEGRAL HEATER CONTROLS WITH BAS INTERLOCK FOR PERMISSIVE ON/OFF AND LOCAL SWITCH INTERLOCK FOR CONTROL FROM KITCHEN HOOD SWITCH. FURNACE CONTROLS SHALL BE PROGRAMMED FOR 64°F LAT, WITH A LOCKOUT FOR O/A TEMPERATURES ABOVE THE LAT SETPOINT. COORDINATE WITH DIV.25 AND DIV.26 FOR CONTROLS AND SWITCH INTERLOCKS.
7. TWO POINT POWER CONNECTION: ONE FOR EXHAUST FAN AND ONE FOR INTAKE/SUPPLY FAN.
8. INTERLOCK FAN(S) WITH ASSOCIATED COOKING HOOD
9. INTERLOCK FAN WITH SWITCH ON KITCHEN HOOD.
10. UNIT TO BE PROVIDED WITH GALVANIZED STEEL FAN PACK EXTENSION/COMBINATION CURB.
11. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN (ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH.
12. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.

4/A004

MECHANICAL RENO KEYED NOTES

1. TIE-IN NEW DUCTWORK TO EXISTING DUCTWORK AT WALL PENETRATION.
2. CONNECT NEW AIR DEVICE AND TAP TO EXISTING E/A TRUNK DUCT.
3. REWORK EXISTING EXHAUST AND SUPPLY DUCTWORK FROM EXISTING KITCHEN HOOD UP TO FAN, AS REQUIRED, WITH NEW TRANSITIONS AND SUPPLY AIR DUCTWORK OFFSETS TO MATE WITH NEW FAN CURB.
4. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
5. NEW DRYER VENT DUCT AND VENT CAP. REFER TO DETAIL 4/M2.02.
6. TEMP. KITCHEN – CEILING MOUNTED CABINET EXHAUST FAN. REFER TO DETAIL 1/M2.02.
7. TEMP. KITCHEN – 24"X24" SIDE WALL GRILLE. SURFACE MOUNT OPTIONAL. AUXILIARY FRAME. TITUS CT-700.
8. RECONFIGURE DUCTWORK TO CONNECT TO NEW DISHMACHINE HOOD OUTLETS. REF. KITCHEN CONSULTANT DRAWINGS FOR EXACT DIMENSIONS OF DUCT CONNECTIONS.
9. CONDENSATE EXHAUST DUCT UP THROUGH ROOF TO NEW EXHAUST FAN SET ON NEW ROOF CURB. REUSE EXISTING ROOF PENETRATION.
10. INLINE FAN INSTALLED ABOVE PLENUM. REFER TO DETAIL 2/M2.02.

MECHANICAL DEMO KEYED NOTES

1. DEMOLISH EXISTING AIR DEVICE, BRANCH DUCT, DAMPER AND TAP BACK TO TRUNK DUCT. CAP AND SEAL RESULTING OPENING.
2. EXISTING E/A TRUNK DUCT TO REMAIN.
3. DISCONNECT EXISTING S/A AND E/A DUCTWORK SERVING KITCHEN HOODS FROM FAN ASSEMBLY AND HOOD. DUCTWORK SHALL REMAIN FOR FUTURE USE/RE-CONNECTION. DEMOLISH SUPPLY AND EXHAUST FAN PLENUM ASSEMBLY SERVING KITCHEN HOODS, ALONG WITH CURB. NEW CURB TO BE PROVIDED AND INSTALLED AS PART OF RENOVATION.
4. DEMOLISH ALL EXISTING AIR DEVICES, DUCTWORK, AND DUCTWORK ACCESSORIES SERVING KITCHEN AREA BACK TO MECH. ROOM WALL PENETRATION.
5. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
6. REFURBISH EXISTING KITCHEN HOOD. REFER TO "KITCHEN HOOD REFURBISHMENT NOTES".
7. DEMOLISH AND REPLACE EXISTING DRYER EXHAUST DUCT AND FLUE VENT CAP.
8. DEMOLISH EXISTING CONDENSATE HOOD, ASSOCIATED DUCTWORK, AND ROOF EXHAUST FAN.

EXHAUST FAN SCHEDULE

MARK	EF-TK	EF-CF	EF-14
SERVES	TEMPORARY KITCHEN	COOLER/FREEZER	DISH WASHER
TYPE	CEILING CABINET	INLINE FAN	ROOF UPBLAST
DRIVE	DIRECT	DIRECT	DIRECT
SPEED CONTROL	INTEGRAL SPEED CONTROLLER	CONSTANT	CONSTANT
CFM	1055	1000	1200
EXT. S.P. (IN. W.G.)	0.3	0.35	0.60
IMP. SIZE (IN.)	8.0	13.5	14.0
HORSEPOWER (WATTS)	1/3 HP	1/6 HP	1/3 HP
VOLTAGE	120V/1-PHASE	120V/1-PHASE	120V/1-PHASE
MANUFACTURER	COOK	COOK	COOK
MODEL	GC-862	1355QN10D	CUE-140-B
SONES (MAX.)	15.0	15.0	15.0
NOTES	1 THRU 4	1 THRU 4	1 THRU 5

NOTES
1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN. FANS SHALL BE CAPABLE OF 120% OF THE SCHEDULED CFM CAPACITY.
2. INTEGRAL DISCONNECT SWITCH.
3. RUBBER IN-SHEAR ISOLATORS.
4. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.
5. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH.

4/A004

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09/04/2025	ADDENDUM 04

4/A004

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SEAL

STATE OF TEXAS
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ARCHITECT
09.04.2025

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PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

KITCHEN AREA MECHANICAL PLANS
O-M1.01

STANTON ENGINEERING GROUP
INFO@STANTON-ENG.COM (713) 300-6092

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1300 W. SAM HOUSTON PARKWAY N., SUITE 121, HOUSTON, TX 77043

MECHANICAL SYMBOL SCHEDULE

CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
RS	REFRIGERANT SUPPLY
RR	REFRIGERANT RETURN
D	CONDENSATE LINE
	PETE'S PLUG
	ISOLATION VALVE
	ELECTRONIC CONTROL VALVE
	BUTTERFLY VALVE
	BALL VALVE
	UNION OR FLANGE
	STRAINER
	AUTOMATIC AIR VENT
T	LOCAL CONTROL THERMOSTAT
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	FIRE/SMOKE COMBINATION DAMPER
MD	MOTORIZED DAMPER
C	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST GRILLE
10Ø	RETURN AIR OPENING IN WALL
VD	VOLUME DAMPERS
	DUCT ELEVATION CHANGE
	90° DUCT ELBOW WITH TURNING VANES
	FLEXIBLE DUCT

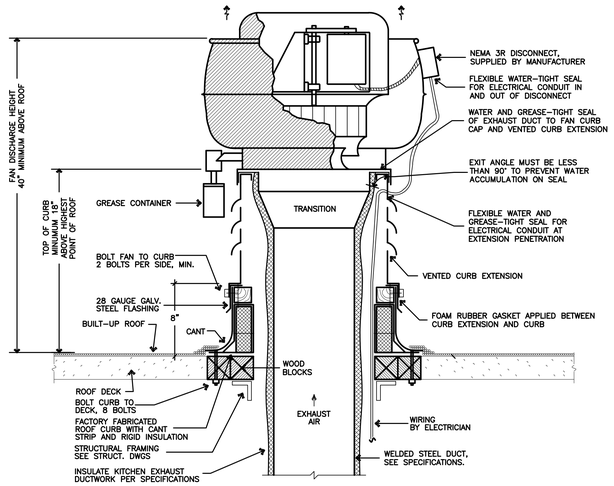
M	DAMPER MOTOR
T	TEMPERATURE TRANSMITTER
FS	FLOW SWITCH
P	DIFFERENTIAL PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
PS	STATIC PRESSURE SENSOR
PH	STATIC PRESSURE SENSOR HI-LIMIT
	ACCESS PANEL

A.P.	ACCESS PANEL
AHU	AIR HANDLING UNIT
B	BOILER
CH	CHILLER
CHP	CHILLED WATER PUMP
CVT	CONSTANT VOLUME TERMINAL
DH	DEHUMIDIFIER
E/A	EXHAUST AIR
EF	EXHAUST FAN
F&B	FACE & BYPASS
FF	FLY FAN
HDT	HORIZONTAL DRAW THROUGH
HWP	HOT WATER PUMP
KEF	KITCHEN EXHAUST FAN
KSF	KITCHEN SUPPLY FAN
O/A	OUTSIDE AIR
OBD	OPPOSED-BLADES DAMPER
PT	PRE-TREAT
R/A	RETURN AIR
RAHU	ROOF-MOUNTED AIR HANDLING UNIT
S/A	SUPPLY AIR
SA	SOUND ATTENUATOR
SF	SUPPLY FAN
SPD	SPILTER DAMPER
SZ	SINGLE ZONE
VAV	VARIABLE AIR VOLUME
VB	VAV BOX
VD	VOLUME DAMPER
VDT	VERTICAL DRAW THROUGH
VFD	VARIABLE FREQUENCY DRIVE
WH	WATER HEATER
⌀	DESIGNATION FOR "ROUND"
⬭	DESIGNATION FOR "OVAL"

GENERAL MECHANICAL NOTES

3

1. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION OF EQUIPMENT AND PIPING WITH THE ELECTRICAL CONTRACTOR TO INSURE NEC CLEARANCE (42 INCHES) IN FRONT OF ALL ELECTRICAL PANELS. DO NOT INSTALL DUCTWORK OR WATER PIPING OVER THE TOP OF ELECTRICAL PANELS SEE DETAIL 1/M2.01.
3. DUCT SIZES SHOWN ARE NET FREE AIR PASSAGE DIMENSIONS, DUCTS ARE NOT LINED, BUT ARE EXTERNALLY INSULATED. RUNOUTS TO CEILING OUTLETS SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET METAL WITH SPIN-IN V.D. AT TRUNK TAPS, SEE DETAIL 1 & 2/M2.01.
4. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR EXACT LOCATIONS OF CEILING OUTLETS IN RELATION TO OTHER CEILING ENTITIES. OUTLETS MUST BE COMPATIBLE WITH THE CEILING TYPES FOR THE VARIOUS AREAS.
5. IN AREAS WHERE SUPPLY AIR ENTERS CEILING CAVITY THRU RETURN AIR GRILLES AND FREE RETURNS TO AHU'S VIA CEILING CAVITY, PROVIDE RETURN AIR OPENING IN WALL-TO-DECK ABOVE CEILING THAT BLOCK PATH, REFER TO ARCHITECTURAL DRAWINGS. RETURN AIR ELBOWS SHALL BE SIZED AT 1 SQ. FT PER 400 CFM SUPPLY AIR.
6. ARRANGE PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EASY REMOVAL OF EQUIPMENT, SUB-ASSEMBLIES, COILS, FANS, MOTORS, FILTERS, ACCESS PANELS, ETC... PROVIDE UNIONS, FLANGES AND VALVES AT CONNECTIONS. PROVIDE AND INSTALL VICTAULIC JOINTS AT COILS, REF. SPECIFICATIONS. PLACE STOP VALVES ON SYSTEM SIDE OF REMOVABLE PIPE SECTIONS.
7. CONTRACTOR SHALL FIELD MEASURE STRUCTURAL ELEMENTS AND COORDINATE EQUIPMENT, PIPING AND DUCT ROUTING TO FIT EXISTING CONSTRUCTION. PROVIDE OFFSETS, BOOTS FOR ENVELOP OBSTRUCTIONS THAT CANNOT BE AVOIDED. CONSTRUCTION SHALL BE PER SMACNA STANDARDS.
8. FIELD VERFY EXISTING CONDITIONS PRIOR TO PROCUREMENT OF EQUIPMENT AND SYSTEMS.
9. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICIABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION
10. PROVIDE DUCTWORK INSULATION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF IECC.
11. PROVIDE LISTED FIRE DAMPER INSTALLATIONS AT DUCT AND RETURN AIR OPENINGS AT PENETRATIONS THROUGH THROUGH RATED PARTITIONS AND BARRIERS. — SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
12. PROTECT DUCTWORK AND MECHANICAL EQUIPMENT FROM CONSTRUCTION DUST AND DEBRIS DURING CONSTRUCTION. SEAL OPENINGS AS REQUIRED.
13. PROVIDE AND MAINTAIN TEMPORARY AIR FILTERS AT AIR HANDLERS USED DURING CONSTRUCTION.
14. PATCH AND REPAIR MECHANICAL SYSTEMS AND INSULATION DAMAGED DURING CONSTRUCTION.
15. SECURE ROOF MOUNTED EQUIPMENT TO WITHSTAND 142 MPH BASIC WIND SPEED, RISK CATEGORY III, EXPOSURE CATEGORY B, IN ACCORDANCE WITH IBC REQUIREMENTS.

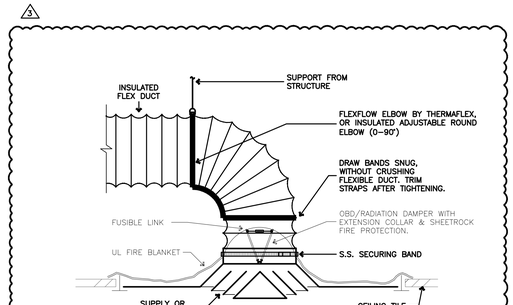


6 KITCHEN UPBLAST EXHAUST FAN DETAIL

NO SCALE

NOTES

1. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL.
2. INSTALL SHEETMETAL COVERING OVER WOOD BLOCKING IN THE AIRSTREAM OR OPEN TO THE CEILING CAVITY.

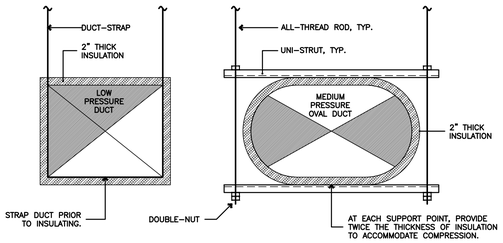


5 AIR DEVICE DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

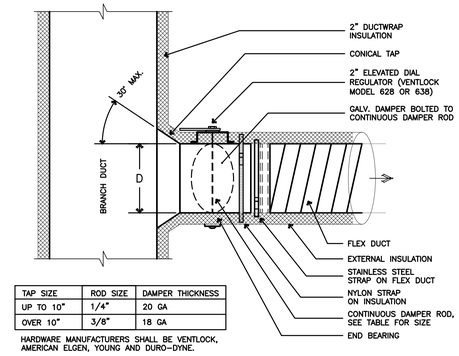


4 EXTERNALLY INSULATED DUCT SUPPORT DETAIL

NO SCALE

NOTES:

1. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT STRAPS.
2. DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



TAP SIZE	ROD SIZE	DAMPER THICKNESS
UP TO 10"	1/4"	20 GA
OVER 10"	3/8"	18 GA

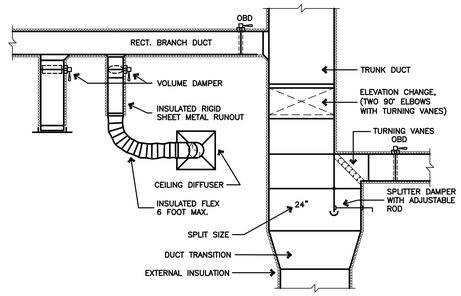
HARDWARE MANUFACTURERS SHALL BE VENTLOCK, AMERICAN ELGEN, YOUNG AND DURO-DYNE.

3 DUCT TAP CONNECTION DETAIL

NO SCALE

NOTES:

1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.
2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

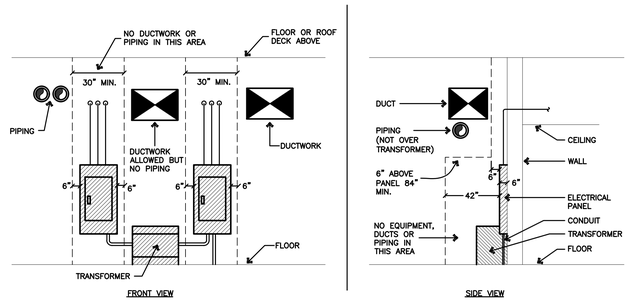


2 DUCTWORK DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

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09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
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MECHANICAL NOTES AND DETAILS

O-M2.01

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TEXAS ENG. FIRM REG. NO. F-018537-00

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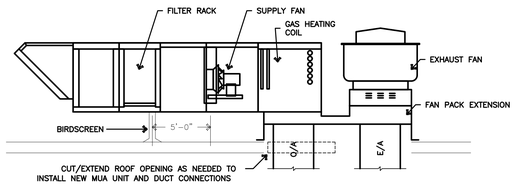


6 SUPPLY/EXHAUST KITCHEN PLENUM DETAIL

NO SCALE

NOTES:

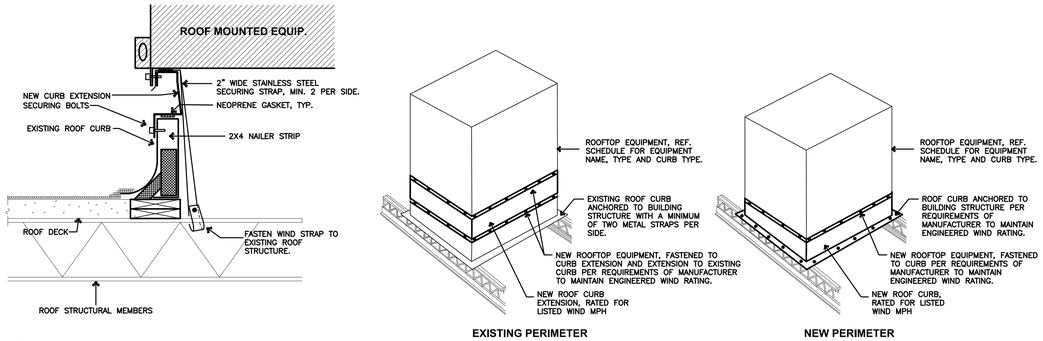
1. REFER TO DETAIL 6/M2.02 FOR CURB ANCHORING TO SATISFY WIND RATING REQUIRMENT. EQUIPMENT SHALL BE ABLE TO WITHSTAND 120 MPH WINDS.

△2

ROOF MOUNTED EQUIPMENT

MARK	EQUIPMENT TYPE	CURB TYPE
EF-14	ROOF FAN	EXISTING PERIMETER
ESF-1,2	ROOF EXHAUST & MAKE-UP AIR UNIT	NEW PERIMETER

1. ALL ROOFTOP EQUIPMENT IS TO BE INSTALLED ON NEW ROOF SUPPORTS, AND IS SUBJECT TO THE INSTALLATION REQUIREMENTS OF THIS DETAIL.



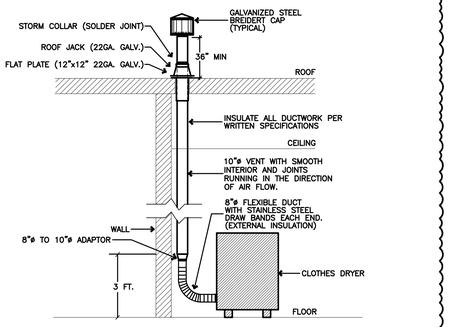
5 CURB MOUNTED EQUIPMENT ANCHORING

NO SCALE

NOTES:

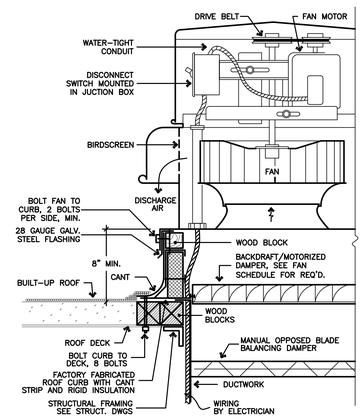
1. EQUIPMENT CURB AND EQUIPMENT ANCHORING BRACKETS SHALL BE DESIGNED TO WITHSTAND AN ASCE 7-22 WIND HAZARD RATING OF 147 MPH, FOR A CATEGORY III BUILDING AT THE PROJECT ADDRESS. THE CURB PROVIDER SHALL INCLUDE STAMPED DRAWINGS OF THE CURB AND ANCHORING DEMONSTRATING COMPLIANCE.

△2



4 COMMERICAL CLOTHES DRYER VENT

NO SCALE

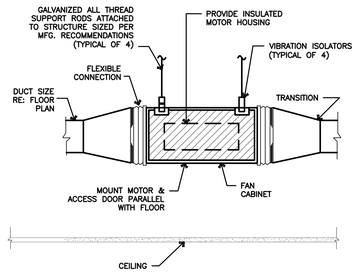


3 ROOF EXHAUST FAN AND VENT DETAIL

NO SCALE

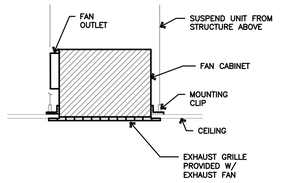
NOTES:

1. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.
2. ROOF VENT WILL NOT HAVE FAN/MOTOR ASSEMBLY, DISCONNECT SWITCH OR OBD.
3. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL WHERE APPLICABLE.
4. ALL FANS SCHEDULED TO BE PROVIDED WITH 140MPH WIND RATING, INCLUDING FACTORY PROVIDED CURB. CURB INSTALLATION SHALL FOLLOW MANUFACTURER'S REQUIREMENTS FOR SECURING TO ROOF AND EQUIPMENT WHERE IT DIFFERS FROM THE DETAIL.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 INLINE EXHAUST FAN DETAIL

NO SCALE



1 CABINET EXHAUST FAN

NO SCALE

△4 12/04 09/04/2025 ADDENDUM 04

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FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED PROFESSIONAL ENGINEER
09.04.2025

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MECHANICAL DETAILS (CONT'D.)

O-M2.02

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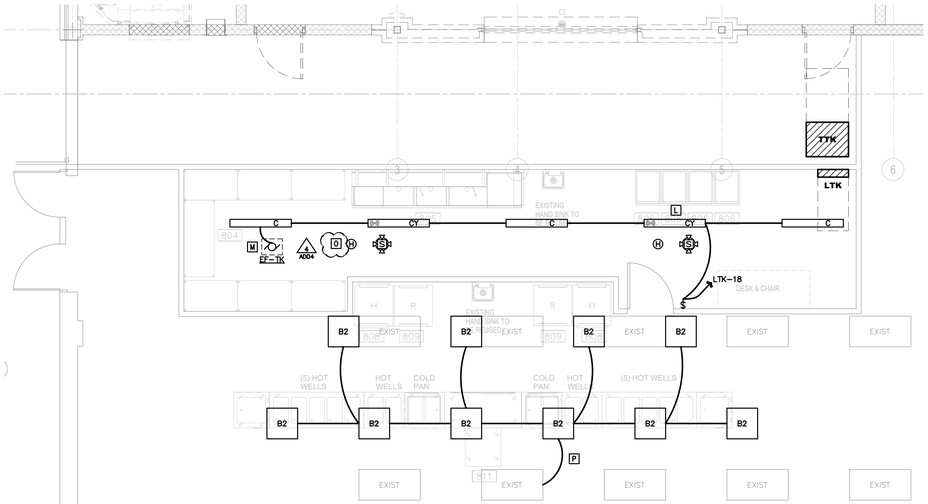
NEW PANEL — TEMP KITCHEN

PANEL LTK — 150A MCB, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

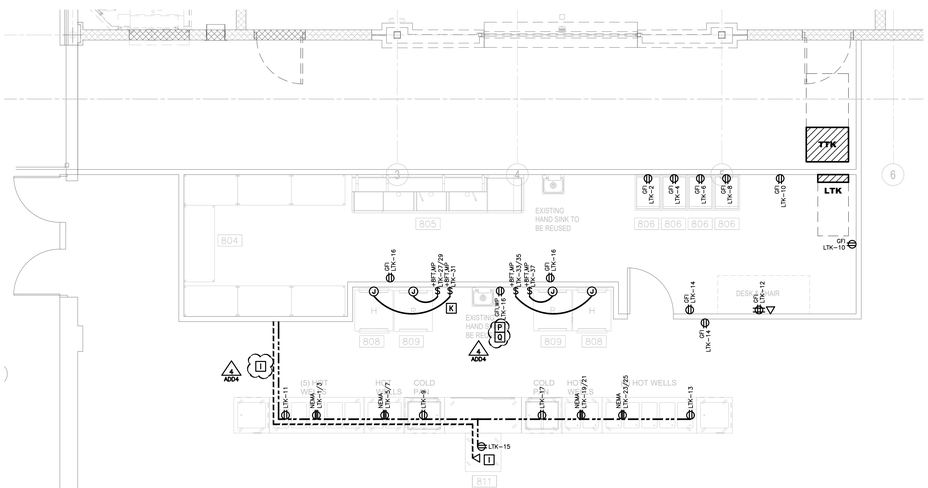
NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E810	2766	HOT WELLS	2–12	20/2GFI	1	■			2	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	3		■		4	20/1	3–12	TRANSPORT CART	1920	E806	
	E810A	1643	HOT WELLS	2–12	20/2GFI	5			■	6	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	7	■			8	20/1	3–12	TRANSPORT CART	1920	E806	
	E810B	600	COLD PAN	3–12	20/1GFI	9		■		10	20/1	3–12	2 REC	360	E800A	
	E810C	1200	BEVERAGE	3–12	20/1GFI	11			■	12	20/1	3–12	2 REC – DESK	360	E800B	
	E810C	1200	BEVERAGE	3–12	20/1GFI	13	■			14	20/1	3–12	2 REC	360	E800A	
	E811	180	CASH REGISTER	3–12	20/1GFI	15		■		16	20/1	3–12	3 REC	360	E800A	
	E810B	600	COLD PAN	3–12	20/1GFI	17			■	18	20/1	3–12	TEMP. KITCHEN LTS/FAN	566		
	E810A	1643	HOT WELLS	2–12	20/2GFI	19	■			20	20/1		SPARE			⚠4 A004
	–	–	–	+12G	–	21		■		22	20/1		SPARE			
	E810	2766	HOT WELLS	2–12	20/2GFI	23			■	24	30/3	3–10	TEMP FOOD STORAGE UNIT	3100		4
	–	–	–	+12G	–	25	■			26	–	+10N+10G	–	–		
	E808	1622	HEATED CABINET	2–12	20/2	27		■		28	–	3/4"C	DUPLEX REC – SERVICE YARD	180		4
	–	–	–	+12N+12G	–	29			■	30	20/1	3–12	EXISTING CIRCUIT	500		3
	E809	984	REFRIGERATOR	3–12	20/1	31	■			32	20/1	3–12	EXISTING CIRCUIT	500		3
	E808	1622	HEATED CABINET	2–12	20/2	33		■		34	15/2	2–12	EXISTING CIRCUIT	1000		3
	–	–	–	+12N+12G	–	35			■	36	–	+12N+12G	–	–		
	E809	984	REFRIGERATOR	3–12	20/1	37	■			38	20/2	2–12	EXISTING CIRCUIT	1000		3
			SPARE		20/1	39		■		40	–	+12N+12G	–	–		
			SPARE		20/1	41			■	42	50/2	2–8	EXISTING CIRCUIT	5000		3
			SPARE		20/1	43	■			44	–	+8N+10G	–	–		
	TOTAL LOAD @ 100% =		3877BVA				TOTAL LOAD @ 100% =			108A						

1. REF. KITCHEN CONSULTANT'S "FCS" DRAWINGS FOR KITCHEN EQUIPMENT NUMBERS.
2. A DEMAND FACTOR PERCENT OF 65% HAS BEEN APPLIED TO THE KITCHEN EQUIPMENT LOAD PURSUANT TO NEC 220–20 AND NEC TABLE 220–20.
3. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AS REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION
4. PROVIDE CIRCUIT FOR TEMPORARY FOOD STORAGE UNIT PRIOR TO BEGINNING DEMOLITION. ⚠4 A004



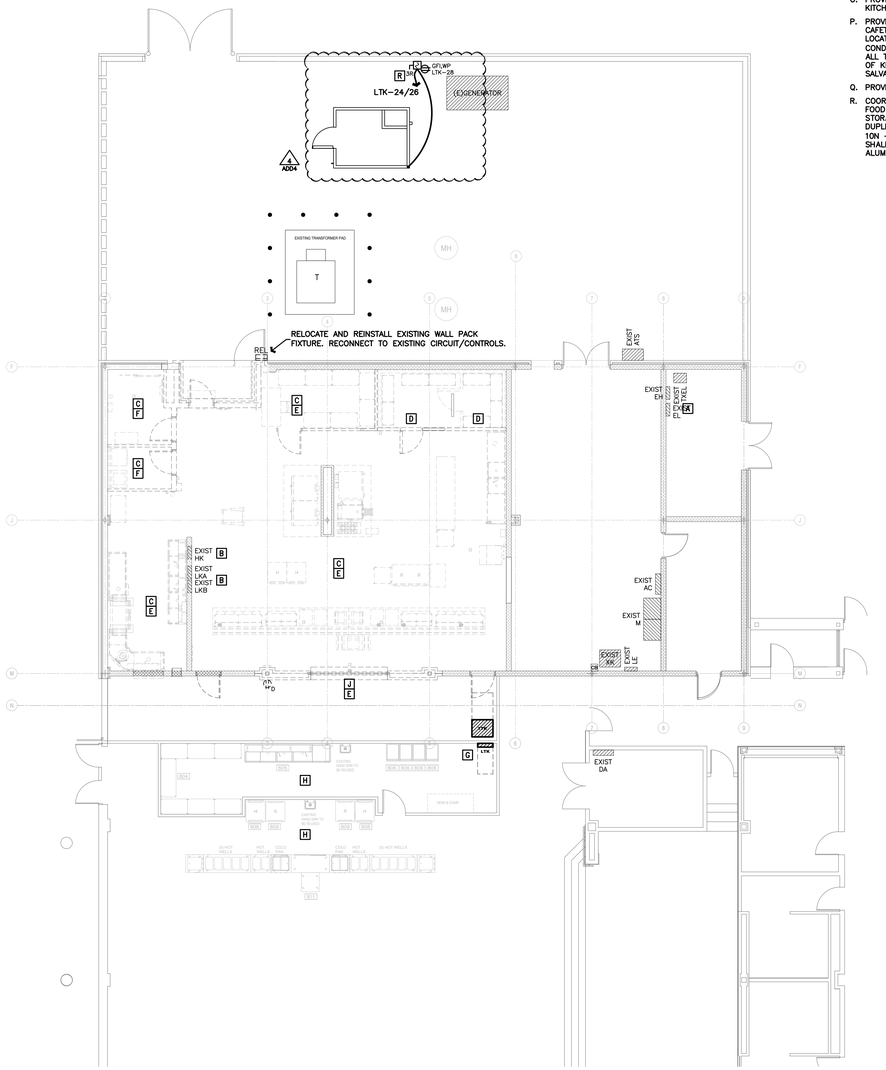
T1 TEMPORARY KITCHEN - LIGHTING PLAN

SCALE: 1/4" = 1'– 0"



T2 TEMPORARY KITCHEN - ELECTRICAL PLAN

SCALE: 1/4" = 1'– 0"



1 DEMOLITION FLOOR PLAN

SCALE: 1/8" = 1'– 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

⚠4 A004

DEMOLITION NOTES:

A. EXISTING STANDBY GENERATOR PANEL TO REMAIN.

B. EXISTING KITCHEN PANELS TO BE REPLACED WITH NEW. MODIFY EXISTING WALLS TO MATCH NEW PANEL LAYOUTS AND DIMENSIONS.

C. EXISTING LIGHTING FIXTURES AND CEILING DEVICES TO BE REMOVED THROUGHOUT.

D. EXISTING WALK–IN COOLER/FREEZER AND ASSOCIATED EQUIPMENT TO BE REMOVED.

E. EXISTING WALL ELECTRICAL DEVICES TO BE REMOVED. EXISTING J–BOXES MAY BE REUSED WHERE NEW DEVICES ARE TO BE INSTALLED AT THE SAME LOCATIONS.

F. EXISTING ELECTRICAL DEVICES TO BE REMOVED.

G. NEW 208Y/120V PANEL AND TRANSFORMER FOR TEMPORARY KITCHEN TO BE INSTALLED PRIOR TO DEMOLITION. PANEL AND TRANSFORMER TO BE REMOVED AT END OF KITCHEN RENOVATION AND TURNED OVER TO THE DISTRICT. INSTALL TRANSFORMER ON PREMADE FIBERCRETE PAD AND WAFFLE TYPE VIBRATION ISOLATION PADS. DO NOT PROVIDE A POURED IN PLACE CONCRETE PAD AT THIS LOCATION.

H. PROVIDE RECEPTACLES AND LIGHT FIXTURES FOR TEMPORARY KITCHEN DURING RENOVATION. ALL TEMPORARY DEVICES AND EQUIPMENT TO BE REMOVED AT END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE.

I. CONDUITS ROUTED FROM TEMPORARY KITCHEN WALL AND BENEATH SERVING LINE. PROVIDE MULTICHANNEL ROLLOVER CABLE PROTECTOR FOR EXPOSED CONDUITS NOT UNDER THE SERVING LINE. ALL CONDUITS UNDER THE SERVING LINE SHALL BE SECURED TO/ROUTED ON TOP OF UNISTRUT AND NOT DIRECTLY ON THE FLOOR. DO NOT ANCHOR UNISTRUT TO THE EXISTING FLOORING. COORDINATE POWER AND DATA OUTLET LOCATIONS WITH OTHER TRADES.

J. REMOVE EXISTING LIGHT FIXTURES ABOVE NEW KITCHEN EXTENSION. MODIFY EXISTING WIRING TO MAINTAIN REMAINING FIXTURE OPERATION.

K. HARDWIRE KITCHEN EQUIPMENT TO LOCAL ON/OFF SWITCH. TYPICAL.

L. SURFACE MOUNT FIXTURES ON TEMPORARY KITCHEN CEILING. TYPICAL.

M. WIRE TEMPORARY KITCHEN FAN TO LOCAL LIGHTING CIRCUIT AND CONTROLS. FAN SHALL BE ON/OFF WITH LIGHTS.

N. EXISTING EXTERIOR LIGHT FIXTURES TO BE REMOVED.

O. PROVIDE NEW FIRE ALARM DEVICES AS PART OF THE TEMPORARY KITCHEN BUILDOUT.

P. PROVIDE NEW TEMPORARY LIGHT FIXTURES IN THE EXISTING CAFETERIA CEILING ABOVE THE SERVING LINE. COORDINATE LOCATIONS WITH TEMPORARY SERVING LINE AND EXISTING CONDITIONS. CONNECT TO EXISTING LIGHTING CONTROLS/CIRCUIT. ALL TEMPORARY LIGHT FIXTURES SHALL BE REMOVED AT THE END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE. PROVIDE REPLACEMENT CEILING TILES.

Q. PROVIDE IN–USE WEATHERPROOF COVER FOR RECEPTACLE.

R. COORDINATE NEMA 3R, FUSED SWITCH LOCATION WITH TEMPORARY FOOD STORAGE UNIT. INSTALL 2–25A FUSES TO SERVE FOOD STORAGE UNIT AND A 20A FUSE IN THIRD PHASE TO FEED DUPLEX RECEPTACLE. WIRING TO STORAGE UNIT SHALL BE 2–10 + 10N + 10G, 3/4". WIRING TO NEW 20A DUPLEX RECEPTACLE SHALL BE 2–12 + 12G. MOUNT RECEPTACLE IN NEMA 3R ALUMINUM JUNCTION BOX WITH WET LOCATION COVER.

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FORT BEND INDEPENDENT SCHOOL DISTRICT

PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

STATE OF TEXAS — GEORGE L. STANTON — 38582 — REGISTERED — PROFESSIONAL ENGINEER
09.04.2025

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11767 KATY FREEWAY, SUITE 430
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ELECTRICAL DEMO AND TEMP PLANS

o-ED.100

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INFORMATION PROVIDED (713) 300–60360
TEXAS ENGINEERING FIRM REG. NO.F–12,522,00

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ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

LIGHTING RENOVATION NOTES:

A. KITCHEN LIGHTS TO BE CONTROLLED BY LOCAL MOMENTARY SWITCHES AND BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.
   LEFT SWITCH SHALL CONTROL ZONE 'a' NORMAL POWER LIGHTING FIXTURES.
   RIGHT SWITCH SHALL CONTROL ZONE 'b' EMERGENCY LIGHTING FIXTURES.

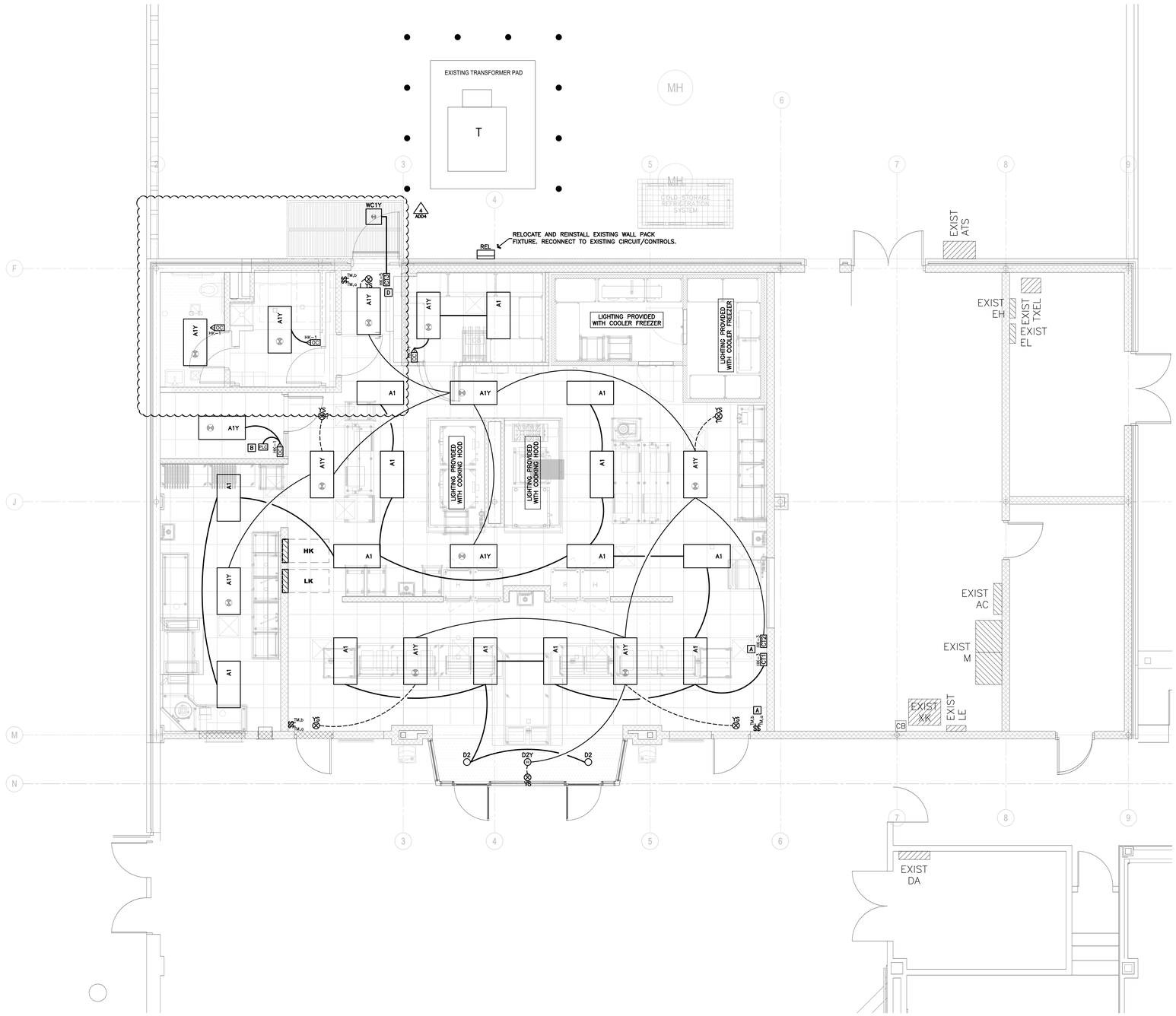
B. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

C. WIRE EXIT SIGNS UPSTREAM OF LIGHTING CONTROLS. TYPICAL.

D. EXTERIOR LIGHTS TO BE CONTROLLED BY BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.

E. AFTER REMOVAL OF THE TEMPORARY KITCHEN, PROVIDE NEW EXIT SIGN AT ORIGINAL LOCATION AND RECONNECT TO EXISTING CAFETERIAL LIGHTING CIRCUIT.

F. PATCH/REPAIR EXTERIOR SOFFIT TO ACCOMMODATE NEW SURFACE MOUNTED FIXTURES.



1 LIGHTING RENOVATION PLAN
SCALE: 1/4" = 1'- 0"

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LIGHTING FLOOR PLANS

o-E.100

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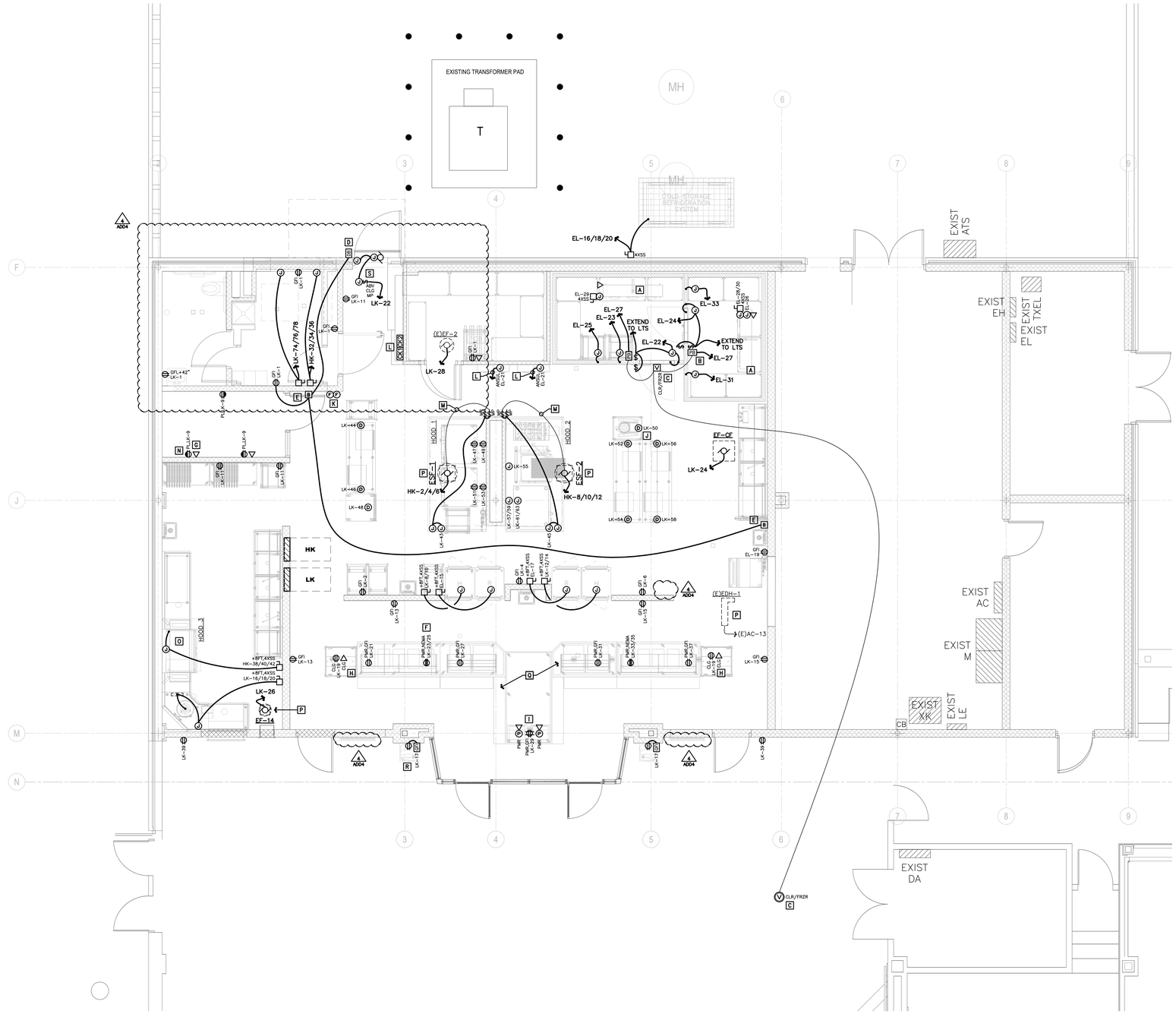

1 ELECTRICAL RENOVATION PLAN

SCALE: 1/4" = 1'- 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

ELECTRICAL RENOVATION NOTES:

A. CONNECT NEW FREEZER/COOLER AND CONDENSER TO EXISTING STANDBY GENERATOR.

B. PROVIDE ILLUMINATED PUSH BUTTON IN COOLER AND FREEZER. WHEN PRESSED RED STROBE DEVICES IN KITCHEN AND CAFETERIA SHALL ACTIVATE. TYPICAL.

C. PROVIDE HORN/STROBE DEVICE TIED TO PUSH BUTTONS IN FREEZER/COOLER.
(EDWARDS 860 SERIES OR EQUAL).

D. PROVIDE NEW DOORBELL BUTTON AT RECEIVING DOOR. DOORBELL BUTTON SHALL BE THE CLOSEST DEVICE TO THE DOOR FRAME.

E. PROVIDE NEW VIBRATING BUZZER TIED TO DOORBELL BUTTON AT RECEIVING DOOR. BUZZER TO BE WALL MOUNTED JUST BELOW THE CEILING.

F. PROVIDE NEW ELECTRICAL DEVICES MATCHING NEW KITCHEN EQUIPMENT AND ROOM LAYOUTS. REFERENCE FOOD SERVICE DRAWINGS. TYPICAL.

G. PROVIDE ROUGH-IN FOR LOW VOLTAGE DEVICES. REFERENCE TECHNOLOGY DRAWINGS, TYPICAL.

H. POWER AND DATA ROUGH-IN FOR KITCHEN MENU BOARD.

I. POWER AND DATA ROUGH-IN FOR POINT OF SALE (POS) LOCATION.

J. PROVIDE DROP CORD RECEPTACLE WITH HUBBELL KELLEMS LIQUIDTIGHT GRIPS FOR STRAIN RELIEF, TYPICAL OF ALL.

K. PROVIDE J-BOXES AND CONDUIT FOR REMOTE FIRE PULLS, SEE FOOD SERVICE DETAIL DRAWING FOR REQUIREMENTS, TYPICAL

L. WIRE ANSUL SYSTEM TO HOOD EQUIPMENT CONTROL CONTRACTOR. UPON ANSUL SYSTEM ACTIVATION ALL POWER TO EQUIPMENT BENEATH THE HOODS SHALL BE DEACTIVATED. MOUNT CONTACTOR CABINET(S) JUST BELOW THE CEILING.

M. PROVIDE SEPARATE SWITCHES TO TURN ON HOOD LIGHTS AND FANS. WIRE HOOD TEMP SENSOR AHEAD OF HOOD LIGHT SWITCH. USE 120V CIRCUIT TO CONTROL HOOD FANS THROUGH EXISTING STARTER. PROVIDE CONTROLS TRANSFORMER AS REQUIRED TO MATCH STARTER CONTROL INPUT VOLTAGE. TYPICAL.

N. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

O. INTERCONNECT DISH MACHINE TO VENT CONTROL. INTERCONNECT TABLE LIMIT SWITCH TO DISHMACHINE.

P. EXISTING MECHANICAL EQUIPMENT TO BE REPLACED. CONNECT TO CIRCUIT AS SHOWN. RECONNECT TO EXISTING STARTER/CONTACTORS, FIELD VERIFY.

Q. SAWCUT FLOOR TO INSTALL NEW PEDESTAL MOUNTED DEVICE BENEATH NEW SERVING LINES, DO NOT REUSE EXISTING STUB UPS OR DEVICES. POUR BACK SLAB AND PROVIDE NEW FINISHES, REFERENCE ARCHITECTURAL.

R. REFERENCE EDF GFI PROTECTION DETAIL FOR INSTALLATION REQUIREMENTS, TYPICAL.

S. WIRE MICRO SWITCH IN DOOR FRAME TO AIR SCREEN. COOR W/ FOOD SERVICE CONTRACTOR PRIOR TO ROUGH-IN. LOCATE LOCAL MOTOR RATED SWITCH ABOVE CEILING ADJACENT TO THE AIR SCREEN.

COOLER/FREEZER NOTES:

1. PROVIDE SEALING FOR CONDUIT IN COOLER AND FREEZER. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, CIRCULATION OF AIR FROM WARMER TO A COLDER SECTION SHALL BE PREVENTED PER N.E.C. ARTICLE 300.7 (A).
2. PROVIDE GROUND-FAULT PROTECTION OF EQUIPMENT FOR ELECTRIC HEAT TRACING AND HEATING PANELS IN THE FREEZER PER N.E.C. ARTICLE 427.22.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE LIQUID TIGHT CONDUIT AND WIRING FOR LIGHT FIXTURES AND LIGHT SWITCHES IN WALK-IN COOLER AND FREEZER, SEE FOODSERVICE CONSULTANT'S DRAWINGS.

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ELECTRICAL FLOOR PLANS

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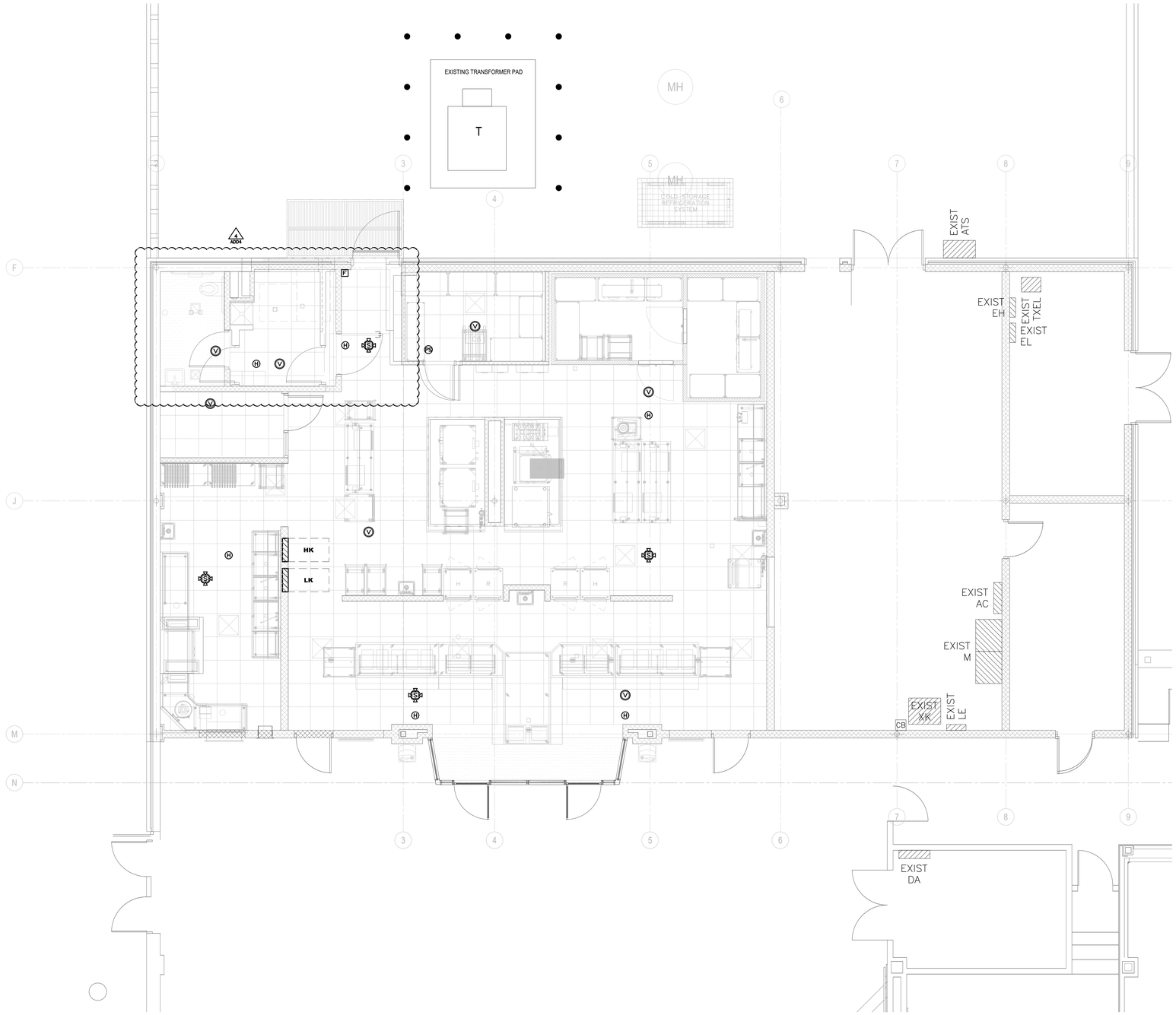

1 FIRE ALARM RENOVATION PLAN
SCALE: 1/4" = 1'- 0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

4 ADD4

0

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

FIRE ALARM FLOOR PLANS

o-E.300

STANTON ENGINEERING GROUP
INFORMATION@STANTONENGINEERING.COM | (713) 300-4080

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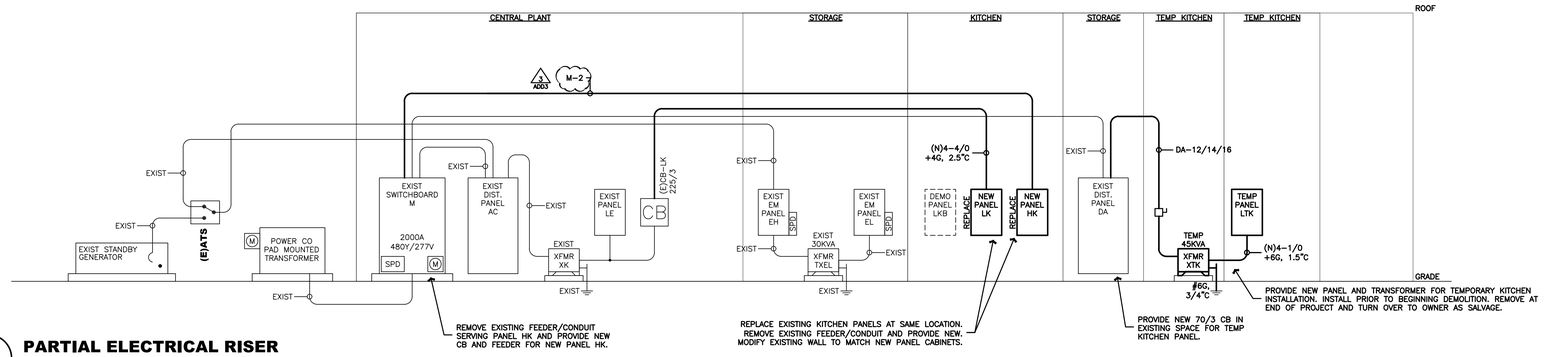
12999 W. SAM HOUSTON PARKWAY S., SUITE 725, HOUSTON, TX 77072



1 PARTIAL ELECTRICAL RISER

NO SCALE

NOTES:
1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED/CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.
5. REFERENCE PANEL SCHEDULES AND SHORT CIRCUIT TABLE FOR AIC AND SCCR VALUES.

NEW KITCHEN PANEL — KITCHEN

PANEL HK — 225A MLO, 480Y/277V, 3ϕ, 4 WIRE — AVAILABLE FAULT: 20,250A — SCCR & AIC: 25,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
6		376	KITCHEN ROOM LIGHTS	3-12	20/1	1				2	15/3	3-12	ESF-1	4986		
7		1095	KITCHEN/SERVING LIGHTS	3-12	20/1	3				4	–	+12G	(1.5HP / 1.5HP)	–		
		84	KITCHEN EXTERIOR LIGHTS	3-12	20/1	5				6	–	3/4"C	–	–		
			SPARE		20/1	7				8	15/3	3-12	ESF-2	4986		
			SPARE		20/1	9				10	–	+12G	(1.5HP / 1.5HP)	–		
			SPARE		20/1	11				12	–	3/4"C	–	–		
			SPARE		20/1	13				14			SPACE			
			SPARE		20/1	15				16			SPACE			
			SPARE		20/1	17				18			SPACE			
			SPARE		20/1	19				20			SPACE			
			SPARE		20/1	21				22			SPACE			
			SPACE			23				24			SPACE			
			SPACE			25				26			SPACE			
			SPACE			27				28			SPACE			
			SPACE			29				30			SPACE			
			SPACE			31				32	45/3	3-8	COMMERCIAL DRYER	28254		
			SPACE			33				34	–	+10G	–	–		
			SPACE			35				36	–	3/4"C	–	–		
			SPACE			37				38	70/3	3-8	DISHMACHINE	42963	E250	
			SPACE			39				40	–	+8G	–	–		
			SPACE			41				42	–	3/4"C	–	–		

TOTAL LOAD @ 100% = 82744VA — TOTAL LOAD @ 100% = 100A — TOTAL LOAD @ 125% = 124A

NEW KITCHEN PANEL — KITCHEN

PANEL LK — 225A MLO, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E10	1000	5 REC – RR/STOR/CUST & BELL	3-12	20/1	1				2	20/1	3-12	1 REC – KITCHEN	180	E10	
			SPARE		20/1GFI	3				4	20/1	3-12	1 REC – KITCHEN	180	E10	
4 ADD4			SPARE		30/2GFI	5				6	20/1	3-12	1 REC – KITCHEN	180	E10	
		–	–		–	7				8	20/2	2-10	HEATED CABINET	3224	E187	
		540	3 REC – OFFICE	3-12	20/1	9				10	3/4"C	+10G	–	–		
	E10/E13	540	3 REC – KITCHEN	3-12	20/1	11				12	20/2	2-10	HEATED CABINET	3224	E187	
	E10	360	2 REC – SERVING LINE	3-12	20/1	13				14	3/4"C	+10G	–	–		
	E10	360	2 REC – SERVING LINE	3-12	20/1	15				16	20/3	3-12	DISPOSER	3960	E123	
		1000	2 EDF – CAFETERIA	3-12	20/1	17				18	–	+12G	(3 HP)	–		
	E615	500	2 MENU BOARDS	3-12	20/1	19				20	–	3/4"C	–	–		
	E209	960	MILK COOLER	3-12	4 ADD4 20/1	21				22	20/1	3-12	AIR SCREEN	612	E101	
	E201A	5824	HOT FOOD COUNTER	2-8	35/2GFI	23				24	15/1	3-12	EF-CF (1/6HP)	528		
		–	–	+10G	3/4"C	25				26	15/1	3-12	EF-14 (1/3HP)	864		
	E201B	1920	COLD FOOD COUNTER	3-12	20/1	27				28	15/1	3-12	EF-2 (1/6HP)	528		
	E214	360	CASH REGISTERS	3-12	20/1	29				30	20/1	4 ADD4	SPARE			
	E201B	1920	COLD FOOD COUNTER	3-12	4 ADD4 20/1	31				32	20/1	4 ADD4	SPARE			
	E201A	5824	HOT FOOD COUNTER	2-8	35/2GFI	33				34	20/1		SPARE			
		–	–	+10G	3/4"C	35				36	20/1		SPARE			
	E209	960	MILK COOLER	3-12	20/1	37				38	20/1		SPARE			
		360	2 REC – CAFETERIA	3-12	20/1	39				40	20/1		SPARE			
			SPARE		20/1	41				42	20/1GFI	3-12	DROP CORD	180	E129	
	E153/E153M	250	HOOD LTS & SENSOR	3-12	20/1	43				44	20/1GFI	3-12	DROP CORD	180	E129	
	E153/E153M	250	HOOD LTS & SENSOR	3-12	20/1	45				46	20/1GFI	3-12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3-12	20/1GFI	47				48	20/1GFI	3-12	MOBILE PROOFER	1800	E139	
8	E161	720	CONVECTION OVEN	3-12	20/1GFI	49				50	20/1GFI	3-12	20QT MIXER	960	E125	
8	E161	720	CONVECTION OVEN	3-12	20/1GFI	51				52	20/1GFI	3-12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3-12	20/1GFI	53				54	20/1GFI	3-12	DROP CORD	180	E129	
8	E163	600	TILT BRAISING PAN 4 ADD4	3-12	20/1GFI	55				56	20/1GFI	3-12	DROP CORD	180	E129	
8	E172	3120	COMBI OVEN	2-12	20/2	57				58	20/1GFI	3-12	DROP CORD	180	E129	
		–	–	+12G	3/4"C	59				60	20/1	3-12	EXISTING CIRCUIT	500		5
8	E172	3120	COMBI OVEN	2-12	20/2	61				62	20/2	2-12	EXISTING CIRCUIT	1000		5
		–	–	+12G	3/4"C	63				64	–	+12N+12G	–	–		
5		250	EXISTING CIRCUIT	3-12	20/1	65				66	20/2	2-12	EXISTING CIRCUIT	1000		5
9		0	TEMP LOAD CENTER	4-2	100/2	67				68	–	+12N+12G	–	–		
		–	–	+2N+6G	1.25"C	69				70	30/2	2-10	EXISTING CIRCUIT	3000		5
			SPACE			71				72	–	+10N+10G	–	–		
			SPACE			73				74	20/3	3-12	WASHER	3408		
			SPACE			75				76	–	+12G	–	–		
			SPACE			77				78	–	3/4"C	–	–		
			SPACE			79				80			SPACE			
			SPACE			81				82			SPACE			
			SPACE			83				84			SPACE			

TOTAL LOAD @ 100% = 55718VA — TOTAL LOAD @ 100% = 155A — TOTAL LOAD @ 65% = 101A

KITCHEN HOOD CONTACTOR SCHEDULE

POLE	DESCRIPTION	NORMAL CKT	EM CKT	CONTROL ZONE	EQUIPMENT LOCATION	CONTACTOR TYPE
HOOD 1						
CK1-1	CONVECTION OVEN	LK-47	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1-2	CONVECTION OVEN	LK-49	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1-3	CONVECTION OVEN	LK-51	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1-4	CONVECTION OVEN	LK-53	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1-5	SPARE					ELECTRICALLY HELD – NO
CK1-6	SPARE					ELECTRICALLY HELD – NO
CK1-7	SPARE					ELECTRICALLY HELD – NO
CK1-8	SPARE					ELECTRICALLY HELD – NO
HOOD 2						
CK2-1	TILT BRAISING PAN	LK-55	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2-2	COMBI-OVEN	LK-57/59	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2-3	(2-POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2-4	COMBI-OVEN	LK-61/63	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2-5	(2-POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2-6	SPARE					ELECTRICALLY HELD – NO
CK2-7	SPARE					ELECTRICALLY HELD – NO
CK2-8	SPARE					ELECTRICALLY HELD – NO

1. REFERENCE FLOOR PLANS FOR EQUIPMENT LOCATIONS AND ADDITIONAL INFORMATION.
2. EACH KITCHEN HOOD CONTACTOR HALL BE CONTROLLED ON/OFF BY THE APPROPRIATE HOOD ANSUL SYSTEM. WHEN ACTIVATED ALL POWER WITHIN THE COOKING HOOD SHALL BE DE-ENERGIZED.

EXIST SWITCHBOARD — CENTRAL PLANT

(E)SWBD M — 2000A MLO, 480Y/277V, 3ϕ, 4 WIRE — AVAILABLE FAULT: 50,000A — SCCR & AIC: 50,000A — FREE STANDING

NOTES	CIRCUIT	DESCRIPTION	CB	FEEDER SIZE	AMPS
	1	EXIST DISTRIBUTION PANEL DC	400/3	EXIST FEEDER	
2,4	2	NEW PANEL HK	225/3	4-4/0 +4G, 2.5"C	100A
	3	EXIST DISTRIBUTION PANEL DA	400/3	EXIST FEEDER	274A
	4	EXIST DISTRIBUTION PANEL DB	400/3	EXIST FEEDER	
	5	EXIST DISTRIBUTION PANEL AC	1200/3	EXIST FEEDER	
				TOTAL LOAD @ 100% =	373A
				TOTAL LOAD @ 125% =	466A

1. THE EXISTING 2000A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST GE NHB PANELBOARD

(E)PANEL DA — 400A MLO, 480Y/277V, 3ϕ, 4 WIRE — AVAILABLE FAULT: 27,000A — SCCR & AIC: 35,000A — MOUNTING: SURFACE

NOTES	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	NOTES
	39000	DUCT HEATER 2	EXIST	60/3	1				2	20/3	EXIST	AHU #2	9150	
	–	(STAGE)	–	–	3				4	–	–	–	–	
	–	–	–	–	5				6	–	–	–	–	
2		KITCHEN LIGHTS	EXIST	20/1	7				8	20/1	EXIST	LIGHTS CAFETORIUM RMS	2300	1
1	3000	LIGHTS CAFETORIUM	EXIST	20/1	9				10	20/1	EXIST	EXIST CIRCUIT	3000	
1	3000	LIGHTS CAFETORIUM	EXIST	20/1	11				12	70/3	3-6	TEMP KITCHEN PANEL LTK	37918	4
		SPACE			13				14	–	+8G	–	–	
		SPACE			15				16	–	3/4"C	–	–	
		SPACE			17				18			SPACE		
		SPACE			19				20			SPACE		
		SPACE			21				22			SPACE		
		SPACE			23				24			SPACE		
	130000	PANEL PA	EXIST	225/3	25				26	–	–	–	–	
	–	(SUBFEED BREAKER)	–	–	27				28	–	–	–	–	
	–	–	–	–	29				30	–	–	–	–	

TOTAL LOAD @ 100% = 227368VA — TOTAL LOAD @ 100% = 274A — TOTAL LOAD @ 125% = 342A

1. THE EXISTING 400A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST EM STANDBY PANELBOARD — CENTRAL PLANT

(E)PANEL EL — 100A MCB, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
		250	F/A RPS	EXIST	20/1	1				2	20/1	EXIST	F/A RPS	250		
		250	F/A RPS	EXIST	20/1	3				4	20/1	EXIST	F/A RPS	250		
		250	F/A RPS	EXIST	20/1	5				6	20/1	EXIST	F/A RPS	250		
		250	F/A RPS	EXIST	20/1	7				8	20/1	EXIST	GEN JACKET HTR	1000		
		250	GEN ANTI COND	EXIST	20/1	9				10	20/1	EXIST	GEN JACKET HTR	1000		
		250	GEN BATTERY CHARGER	EXIST	20/1	11				12	20/1	EXIST	FACP	250		
		250	SECURITY SYSTEM	EXIST	20/1	13				14	20/1	EXIST	PA SYSTEM	500		
3	E188	864	REFRIGERATOR	3-12	20/1	15				16	25/3	3-10	REFRIGERATION SYSTEM	6192	E103	4
3	E188	864	REFRIGERATOR	3-12	20/1	17				18	–	+10G	–	–		
3	E109	1428	ICE MACHINE	3-12	20/1	19				20	–	3/4"C	–	–		
3	E151	240	HOOD ANSUL SYSTEMS	3-12	20/1	21				22	20/1EGF	3-12	COOLER DOOR HEATER/LTS	600	E102A	4
3	E102B	600	COOLER TEMP. ALARM	3-12	20/1	23				24	20/1EGF	3-12	FREEZER DOOR HEATER/LTS	600	E102A	4
3	E102C	600	COOLER PRESSURE PORT	3-12	20/1	25				26	20/1EGF	3-12	FREEZER DRAIN LINE HEATER	600	E103F	4
3	E102E	120	PANIC ALARM BUTTONS	3-12	20/1	27				28	20/2	2-10	FREEZER COIL	1893	E103C	4
3	E103D	216	COOLER COIL	3-12	20/1	29				30	–	+10G	–	–		
3	E102B	600	FREEZER TEMP. ALARM	3-12	20/1	31				32	20/1		EXIST SPARE			
3	E102C	600	FREEZER PRESSURE PORT	3-12	20/1	33				34	20/1		EXIST SPARE			
			EXIST SPARE		20/1	35				36	20/1		EXIST SPARE			
			EXIST SPARE		20/1	37				38	30/3	EXIST	SPD	50		
			EXIST SPARE		20/1	39				40	–	–	–	–		
			EXIST SPARE		20/1	41				42	–	–	–	–		

TOTAL LOAD @ 100% = 21317VA — TOTAL LOAD @ 100% = 59A — TOTAL LOAD @ 125% = 74A

1. THE EXISTING 100A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

GENERAL PANEL REQUIREMENTS:
A. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
B. FIELD VERIFY EXISTING CIRCUITS PRIOR TO BEGINNING WORK.
C. ALL OUTAGES SHALL BE SCHEDULED AND CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
D. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.

PANEL NOTES:
1. REVISE/REWORK WIRING/CONDUIT AS REQUIRED TO ADD/REMOVE DEVICES FROM EXISTING CIRCUIT.
2. EXISTING CIRCUIT TO BE DEMO.
3. REUSE EXISTING SPARE CB AND WIRE NEW CIRCUIT.
4. PROVIDE NEW CB & WIRE NEW CIRCUIT.
5. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AND REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION.
6. KITCHEN LIGHTS TO BE DUAL ZONES WIRED THROUGH LIGHTING CONTACTORS AND CONTROLLED ON/OFF BY THE BAS AND LOCAL LIGHTING SWITCHES.
7. EXTERIOR LIGHTS TO BE WIRED THROUGH LIGHTING CONTACTOR, AND CONTROLLED ON/OFF BY THE BAS.
8. WIRE CIRCUITS THROUGH KITCHEN EQUIPMENT CONTROL CONTACTOR. CIRCUITS TO BE DE-ENERGIZED BY HOOD FIRE PROTECTION SYSTEM.
9. RECONNECT EXISTING TEMPORARY LOAD CENTER CIRCUIT TO NEW PANEL LK. (4 ADD4)

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
4 ADD4 09/04/2025	ADDENDUM 04

0

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT

PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

STATE OF TEXAS — GEORGE L. STANTON — 38582 — REGISTERED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
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PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL SCHEMATIC

o-E.400

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PLUMBING SYMBOLS LEGEND

------	SANITARY WASTE BELOW SLAB	SAN.	SANITARY
——	SANITARY WASTE ABOVE SLAB	CW	DOMESTIC COLD WATER
— V —	VENT PIPING ABOVE SLAB	HW	DOMESTIC HOT WATER
— — —	VENT PIPING	WC	WATER CLOSET
— G —	GAS PIPING, 4–8oz	UR	URINAL
— G5 —	GAS PIPING, 5LB	LAV	LAVATORY
—·—·—	DOMESTIC COLD WATER PIPING	SK	SINK
—··—··—	DOMESTIC HOT WATER PIPING	EDF	ELECTRIC DRINKING FOUNTAIN
— D —	DRAIN/RELIEF VENT PIPING	WH	WALL HYDRANT
—⋈—	STOP VALVE	HB	HOSEBIBB
2CO	DOUBLE SAN. CLEANOUT (2–WAY)	CP	HOT WATER CIRCULATOR PUMP
CO	SANITARY SEWER CLEANOUT	FD	FLOOR DRAIN
WCO	WALL CLEANOUT	FSINK	FLOOR SINK
EXIST.	EXISTING		
(R)	REMOVE (DEMOLISH)		
(D)	DEMOLISH (REMOVE)		
(E)	EXISTING – NO WORK		

PLUMBING FIXTURE NOTES

1. ALL FIXTURES SHALL MEET WATER CONSERVATION PERFORMANCE STANDARDS MANDATED BY SENATE BILL 587. ALL FIXTURES SHALL HAVE FLOW RESTRICTION DEVICES (DRINKING FOUNTAINS SHALL BE SELF–CLOSING) TO COMPLY WITH THESE REQUIREMENTS.
2. ALL FIXTURES SHALL HAVE CONTROLS REQUIRING OPERATING FORCE NO GREATER THAN FIVE (5) POUNDS.
3. FOR LAVATORIES AND SINKS, ALL FAUCETS SHALL BE NO–LEAD SOLID BRASS, MEETING ALL REQUIREMENTS OF ANSI/NSF 61, SECTION 9 AND CERTIFIED AS SUCH. ALSO, INSTALL SYMMONS 7–210 MIXING VALVE ON HOT WATER SUPPLY SIDE OF ALL FAUCETS UNLESS HIGH TEMPERATURE LIMIT IS PROVIDED WITH FAUCET. MAXIMUM WATER TEMPERATURE FOR ALL FAUCETS THAT DELIVER HOT OR TEPID WATER SHALL BE 110°F. ALL METERING FAUCETS SHALL HAVE A MINIMUM TEN (10) SECONDS OF WATER FLOW. AND, INSTALL TRUEBRO HANDI LAV–GUARD VANDAL–PROOF INSULATION KITS OVER P–TRAP, SUPPLIES, STOPS AND ALL SHARP EDGES FOR ALL SINKS AND LAVATORIES (TRAP WRAP FROM BROCAR OR PROWRAP FROM McGUIRE SHALL BE ACCEPTABLE).
4. ALL PLUMBING FIXTURES REFERENCED AS "ADA", "TAS" OR "HANDICAP COMPLIANT" SHALL MEET ALL REQUIREMENTS OF THE ADA AND THE TEXAS ACCESSIBILITY STANDARDS. IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MEET THESE REQUIREMENTS.
5. IN MANY CASES, FIXTURES WITH THE SAME PLUMBING DESIGNATION HAVE DIFFERENT INSTALLATION HEIGHTS – REFERENCE ARCHITECTURAL DRAWINGS FOR ALL INSTALLATION HEIGHTS AND HANDICAP FIXTURE DESIGNATIONS. FIXTURES DESIGNATED AS ADULT HANDICAP SHALL MEET ALL REQUIREMENTS OF THE ADA. FIXTURES DESIGNATED AS CHILD HANDICAP SHALL MEET ALL REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS FOR THE APPROPRIATE CHILDREN'S AGE GROUP (REF. ARCH. DWGS. AND SPECIFICATIONS).

PLUMBING MATERIALS

SANITARY WASTE AND VENT

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB: STANDARD WEIGHT, CAST IRON, NO–HUB PIPING.

STORM DRAIN PIPING

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB, 8" AND UNDER: STANDARD WEIGHT, CAST IRON, NO–HUB PIPING.

ABOVE SLAB, 10" AND ABOVE: SERVICE WEIGHT, CAST IRON, BELL & SPIGOT.

NATURAL GAS

BELOW GRADE (OUTSIDE): YELLOW POLYETHYLENE PIPE WITH COATED STEEL RISER AND TRACER WIRE.

ABOVE SLAB: SCHEDULE 40 BLACK STEEL. PIPING 2.5" AND LARGER SHALL BE WELDED. PIPING 2" AND SMALLER SHALL HAVE SCREWED FITTINGS.

DOMESTIC WATER

INTERIOR: TYPE L COPPER WITH SOLDER TYPE WROUGHT COPPER FITTINGS, MADE UP WITH LEAD–FREE SOLDER.

EXTERIOR: TYPE K COPPER WITH SWEAT FITTINGS AND LEAD–FREE SOLDER. BEYOND 5 FEET FROM BUILDING, SCHEDULE 40 PVC.

FIRE SPRINKLER SYSTEM NOTES

1. THE EXISTING FIRE SPRINKLER SYSTEM SHALL BE MODIFIED AND/OR EXPANDED TO COVER THE AREA OF RENOVATION IN ENTIRETY. ALL NEW AND REVISED PIPING SHALL BE ENGINEERED AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR.
2. REFERENCE THE SPECIFICATIONS, DIVISION 21, FOR MORE INFORMATION.

GENERAL PLUMBING NOTES

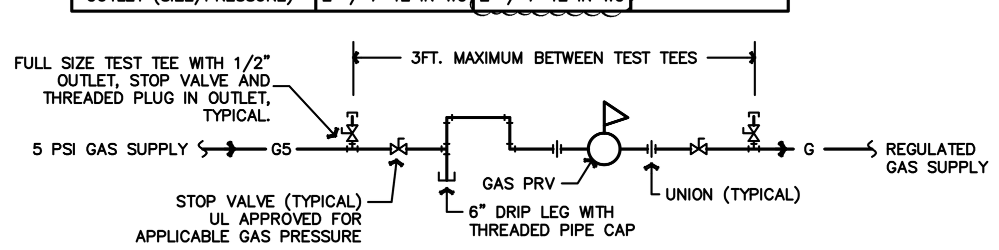
1. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL WORK DESCRIPTION. SEE THIS SHEET (P4.00) FOR PLUMBING SYMBOLS LEGEND.
2. COORDINATE PLUMBING SYSTEMS INSTALLATION WITH ARCHITECTURAL, STRUCTURAL, HVAC SYSTEMS, ELECTRICAL SYSTEMS, CONDUITS, ETC.... OFFSET PIPING AS REQUIRED TO PROVIDE A FUNCTIONING SYSTEM WITH ADEQUATE SPACE FOR SERVICING AND REPAIRS.
3. MAKE CONNECTIONS OF NEW PIPE SYSTEMS IN TO EXISTING PIPE SYSTEMS WITH THREADED OR SWEAT JOINTS. PROVIDE ELECTROLYSIS ISOLATING UNIONS AT CONNECTION OF DISSIMILAR MATERIALS. REFERENCE THE SPECIFICATIONS.
4. SITE SERVICES ARE SHOWN FOR REFERENCE ONLY. PLUMBING CONTRACTOR SHALL REFERENCE CIVIL DRAWINGS, INCLUDING LOCATIONS OF SERVICES, SIZES OF PIPES, FLOWLINE ELEVATIONS, ETC..
5. DO NOT INSTALL PLUMBING PIPING OVER ANY ELECTRICAL EQUIPMENT. REFERENCE ELECTRICAL DRAWINGS FOR LOCATIONS OF ELECTRICAL EQUIPMENT AND COORDINATE WITH ELECTRICAL SUBCONTRACTORS ACCORDINGLY. SEE DETAIL 1/P0.02. THIS INCLUDES FIRE SPRINKLER PIPING.
6. ALL PIPES THROUGH WALLS OR FLOORS SHALL BE SLEEVED AND SEALED PER DETAIL 5/P0.02. FIRE CAULK WHERE REQUIRED. THIS INCLUDES ALL WALLS, INTERIOR AND EXTERIOR. THIS INCLUDES FIRE SPRINKLER PIPING.
7. ALL CLEANOUTS SHALL BE CONNECTED TO SANITARY LINES USING WYES AND/OR LONG RADIUS ELLS. SANITARY TEES ARE NOT ACCEPTABLE. 2" MINIMUM SIZE. ALL WALL CLEAN OUTS IN VERTICAL RISERS, OR BANKS OF FIXTURES SHALL BE INSTALLED 4" ABOVE THE FLOOD RIM LEVEL OF THE LOWEST CONNECTED FIXTURE AND A MINIMUM OF 24" AFF.
8. ALL WASTE AND VENT PIPING BELOW SLAB SHALL BE 2" MINIMUM.
9. LOCATE PLUMBING VENTS THROUGH ROOF NOT NEARER THAN SIX (6) FEET AWAY FROM EDGE OF BUILDING AND TEN (10) FEET AWAY FROM ANY FRESH AIR INTAKES. OFFSET VENT PIPING, AS REQUIRED, IN CEILING SPACE BETWEEN CEILING AND ROOF TO MEET THESE REQUIREMENTS. SEE DETAIL 3/P0.02.
10. ALL DOMESTIC WATER PIPING (CW, HW AND HWR) SHALL BE INSULATED PER THE WRITTEN SPECIFICATIONS.
11. TOP OF FLOOR DRAINS IN MECHANICAL, AHU AND BOILER ROOMS SHALL BE SET 1–1/2" BELOW FINISHED FLOOR SURFACE. CONCRETE FLOOR SHALL BE SLOPED TO DRAIN, REFERENCE ARCHITECTURAL DRAWINGS. IN ALL OTHER LOCATIONS, FLOOR DRAINS SHALL BE SET FLUSH WITH FINISHED FLOOR, TAKING INTO ACCOUNT ANY FLOOR SLOPE OR FLOOR FINISH (TILE, TERRAZZO, ETC.) AS SHOWN ON ARCHITECTURAL DRAWINGS.
12. PROVIDE AN ISOLATING VALVE AT EACH WATER TAP OFF HOT AND COLD WATER MAINS TO ALLOW FOR SERVICING. VALVE SHALL BE BALL VALVE IF PIPE SIZE IS 2" OR LESS AND GATE VALVE OR BUTTERFLY VALVE IF LARGER THAN 2". SEE WRITTEN SPECIFICATIONS. VALVES SHALL BE EASILY ACCESSIBLE: PROVIDE 18" X 18", FIRE–RATED, STAINLESS STEEL ACCESS PANELS WITH HINGED, CYLINDER LOCK DOORS WHERE VALVES ARE INSTALLED ABOVE INACCESSIBLE CEILINGS OR IN WALL CHASES (MIFAB MODEL MPFR–SS–C). BALL VALVES AND BUTTERFLY VALVES INSTALLED ABOVE CEILINGS SHALL BE INSTALLED SUCH THAT HANDLE IS ON BOTTOM OF PIPE. ISOLATING WATER VALVES ABOVE CEILINGS SHALL BE INSTALLED NO MORE THAN 24" ABOVE CEILING. VALVES ABOVE INACCESSIBLE CEILINGS SHALL BE INSTALLED WITHIN REASONABLE REACH OF CEILING MOUNTED ACCESS PANEL.
13. WATER HAMMER ARRESTERS SHALL BE INSTALLED IN ADDITION TO AIR CHAMBERS PER THE RISER DIAGRAMS. SEE SPECIFICATIONS.
14. MECHANICALLY CLEAN ALL WASTE LINES WITH ROTARY MACHINE TO PROVE FREE FLOWING, SEE SPECIFICATIONS.
15. PROVIDE VENTED SLEEVE (2 PIPE SIZES LARGER THAN GAS PIPE UNLESS NOTED OTHERWISE) FOR ALL GAS PIPING IN GROUND BELOW PAVING OR SIDEWALKS AND INSIDE BUILDING IN WALLS AND IN UNVENTILATED CEILING SPACES, SEE SPECIFICATIONS.
16. GAS PIPING SHALL BE 1/2" MINIMUM. TAP GAS PIPING ON TOP OR SIDES ONLY. DO NOT INSTALL VALVES IN CEILING PLENUM OR IN ANY INACCESSIBLE LOCATION. ALL GAS VALVES SHALL BE EASILY ACCESSIBLE. REFER TO DETAIL 7/P0.01 FOR TYPICAL GAS CONNECTION INSTALLATION. REFER TO DETAIL 4/P0.01 FOR TYPICAL PRV INSTALLATION.
17. CENTER WALL HYDRANTS IN BRICK PATTERN OF EXTERIOR WALLS, REFERENCE THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
18. ALL REFRIGERATORS WITH ICE MAKERS, COMMERCIAL TYPE COFFEE MAKERS, ICE MAKERS, COFFEE VENDING MACHINES AND OTHER ITEMS PROVIDED BY OTHERS THAT REQUIRE A WATER CONNECTION SHALL HAVE A CW VALVE BOX, "VBOX", INSTALLED TO ALLOW EASY ACCESS AND REMOVAL OF MACHINE. ALSO, INSTALL IN–LINE FILTER IN WATER CONNECTION.
19. REFER TO CIVIL DRAWINGS FOR SITE SANITARY, SITE STORM SEWER, FIRE SERVICE AND DOMESTIC WATER SERVICE. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPING INSIDE BUILDING TO OUTSIDE LOCATIONS SHOWN ON PLUMBING DRAWINGS. PLUMBING CONTRACTOR SHALL INCLUDE COST OF FINAL TIE–INS TO SITE SERVICES.
20. PER THE DRAWINGS, ALL DRAINS (FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, KITCHEN DRAINS, SHOWER DRAINS, ETC.) SHALL BE VENTED AND TRAP PRIMED – NO EXCEPTIONS. TRAP PRIMING SHALL BE ACCOMPLISHED USING WATER CLOSET FLUSH VALVE TRAP PRIMING DEVICES OR PROSET SYSTEMS TRAP GUARD SEWER GAS EMISSION PROTECTION, AS SHOWN ON DRAWINGS. REFERENCE PLUMBING FLOOR PLANS AND RISER DIAGRAMS.
21. ALL PIPING LOCATED ON ROOF (GAS PIPING) SHALL BE INSTALLED ON ROOF PIPE SUPPORTS PER DETAIL 14/P0.02, 6–FOOT ON CENTER. INSTALL ROOF PIPE JACK PER DETAIL 9/P0.02 FOR ALL PIPING THROUGH ROOF.
22. COORDINATE LOCATIONS OF ALL ROOF DRAINS AND OVERFLOW ROOF DRAINS WITH ARCHITECTURAL DRAWINGS.
23. FOR COMBINATION WASTE AND VENT SYSTEMS (WHERE APPLICABLE ON DRAWINGS), DRAIN P–TRAPS SHALL BE SIZE OF PIPE SHOWN ON DRAWINGS (I.E. TWO PIPE SIZES LARGER THAN DRAIN SIZE). FOR EXAMPLE, A 4" FLOOR DRAIN SHALL HAVE A 6" P–TRAP.
24. FOR ALL PLUMBING FIXTURES, IF COPPER PIPING IS STUBBED THROUGH WALL FOR DRAIN CONNECTION, INSTALL MARVEL FITTING AT DRAIN CONNECTION FOR EASE OF SERVICING AND REPAIRS. COPPER DRAIN PIPING WILL ONLY BE ALLOWED FOR DIRECT/STRAIGHT STUB–OUT OF FIXTURE DRAIN PIPING THROUGH WALL.
25. DO NOT INSTALL ANY PIPING BENEATH CVT OR VAV BOXES. THIS INCLUDES FIRE SPRINKLER PIPING.
26. WHERE UNDERGROUND VENT PIPE SIZE IS NOT NOTATED, VENT SHALL BE 2" DIAMETER.
27. WHERE UNDERGROUND SANITARY PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR SIZE. NOT BELOW GRADE SANITARY PIPE SHALL BE SMALLER THAN 2". NO SANITARY LINE OR P–TRAP FOR A DRAIN/FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE DRAIN/FIXTURE SCHEDULE.
28. WHERE ABOVE GROUND VENT PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR VENT SIZE.
29. WHERE CW/HW PIPING SIZE TO THE FIXTURE IS NOT SHOWN ON THE FLOOR PLAN, REFER TO THE RISER DIAGRAMS FOR CW/HW PIPE SIZE. NO PIPING TO FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE FIXTURE SCHEDULE.
30. TO INSTALL NEW PLUMBING SYSTEMS BELOW EXISTING CONCRETE SLABS, FIRST PLUMBING CONTRACTOR SHALL LAY OUT CUT. THEN, DEMOLITION CONTRACTOR SHALL SAW CUT SLAB TO CONTROL CRACKING AND REMOVE ALL CONCRETE. PLUMBING CONTRACTOR SHALL THEN EXCAVATE FILL TO PROPER SLOPE, INSTALL NEW PIPING SYSTEMS AS REQUIRED, THEN BACKFILL AND COMPACT TO PROPER DENSITY. THE CONCRETE CONTRACTOR SHALL THEN INSTALL NEW SIX (6) MIL POLYETHYLENE VAPOR BARRIER AND SEAL, INSTALL NEW REINFORCING STEEL AND WELD ON TO EXISTING, THEN RE–POUR CONCRETE TO NEW LEVEL. DO NOT CUT THROUGH GRADE BEAMS WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
31. ALL ABANDONED FIXTURES, DRAINS AND PIPING (INCLUDING PIPING ABANDONED IN THE PAST) IN AREAS WHERE WORK IS BEING DONE SHALL BE COMPLETELY REMOVED FROM BUILDING (INCLUDING PIPING BELOW SLAB/GRADE – UNLESS SHOWN OTHERWISE ON DRAWINGS). EXISTING WATER PIPING SHALL BE CAPPED AT EXISTING WATER MAIN TAPS AND ALL ABANDONED PIPING REMOVED. ABANDONED VENT PIPING SHALL BE COMPLETELY REMOVED, INCLUDING EXISTING VTR's NOT RE–USED. PATCH AS REQUIRED. ONLY ACTIVE PIPING, FIXTURES AND DRAINS SHALL REMAIN IN BUILDING WHERE WORK IS BEING DONE.
32. FIELD VERIFY EXISTING CONDITIONS PRIOR PROCUREMENT OF EQUIPMENT AND SYSTEMS.
33. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION.
34. PROVIDE INSUALTION WITH R–VALUES MEETING OR EXCEEDING REQUIREMENTS OF THE 2021–IECC.
35. SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.

4 ADD4

GAS PRV SCHEDULE

MARK	PRV–K	PRV–K2
LOCATION	MECH. YARD	MECH. YARD
SERVES	KITCHEN	KITCHEN
GAS LOAD	585 CFH	585 CFH
DISTANCE FROM METER	150 FT	150 FT
DISTANCE TO LAST OUTLET	200 FT	200 FT
INLET (SIZE/PRESSURE)	1" / 5 PSI	1" / 5 PSI
OUTLET (SIZE/PRESSURE)	2" / 7–12 IN WC	2" / 7–12 IN WC

4 ADD4



4 GAS PRESSURE REGULATOR DETAIL (PRV)

NO SCALE

NOTES:
1. GAS REGULATOR SHALL BE ANSI Z21.80 CERTIFIED FOR LINE PRESSURE REGULATION BETWEEN THE SERVICE REGULATOR AND CONNECTED EQUIPMENT.
2. ALL GAS REGULATORS WITH INLET PRESSURE ABOVE 2 PSI SHALL BE EQUIPPED WITH A FACTORY INSTALLED OVERPRESSURE PROTECTION DEVICE, AS PART OF THE ANSI Z21.80 CERTIFICATION.
3. GAS REGULATOR SHALL BE EQUIPPED WITH A VENT LIMITING DEVICE, SIZED IN ACCORDANCE WITH THE REGULATOR OUTLET PRESSURE.
4. ALL REGULATORS INSTALLED OUTDOORS SHALL BE RATED FOR OUTDOOR INSTALLATION.
5. BASIS OF DESIGN IN THE MAXITROL 325–L SERIES OF REGULATORS

PLUMBING DRAINS, CLEANOUTS AND HYDRANTS

MARK	MIN. CONNECTION SIZES (IN.)				DESCRIPTION/SPECIFICATION FOR FIXTURE OR EQUIPMENT
	SAN	VENT	CW	HW	
FD	4	2	1/2	–	TOILET FLOOR DRAIN – TWO–PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 1/2" TRAP PRIMER TAP, 6" SQUARE, NICKEL BRONZE HSTRAINER AND SECURITY SCREWS JR SMITH MODEL 2005–03–K06PB–P050–U.
FD2	4	2	1/2	–	EQUIPMENT FLOOR DRAIN – CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, DUCTILE IRON TRUE–FIT SEDIMENT BUCKET WITH 12" STAINLESS STEEL RIM LESS GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS–540–LG–P. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD3	4	2	1/2	–	GRATED MECHANICAL ROOM FLOOR DRAIN – CAST IRON WITH FLANGE, SEEPAGE OPENINGS, 9" HEAVY–DUTY DUCTILE IRON GRATE WITH STAINLESS STEEL VENEER, CLAMPING DEVICE AND 1/2" TRAP PRIMER TAP ZURN MODEL ZS–550–C–P
FD4	4	2	1/2	–	CANWASH FLOOR DRAIN – ALL GALVANIZED CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, GALVANIZED SUR–SET SEDIMENT BUCKET WITH 12" GALVANIZED DUCTILE IRON RIM AND GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS–540–P–G–HD. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD5	4	2	1/2	–	KITCHEN FLOOR DRAINS SHALL BE SIMILAR EXCEPT WITH 7" SQUARE, BRONZE GRATE JR SMITH MODEL 2005–03–K07PB–P050–U. PROVIDE 4" DIAMETER STAINLESS STEEL FUNNEL WHERE SHOWN ON DRAWINGS. REFERENCE KITCHEN CONNECTION SCHEDULE ON PLUMBING RENOVATION FLOOR PLAN SHEET.
FS KITCHEN FS	4	2	1/2	–	FLOOR SINK – CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY STAINLESS STEEL TRACTOR DUTY FRAME WITH 3/4–TRACTOR GRATE AND 1/2" TRAP PRIMER TAP JR SMITH MODEL 3150Y–04–C–13.
FS2 (4 ADD4)	4	2	1/2	–	DEEP FLOOR SINK – FABRICATED STEEL RECEPTOR, 12" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, STAINLESS STEEL MESH LINED BUCKET AND 24X12 NICKEL BRONZE FRAME WITH 3/4 SOLID COVER. JR SMITH MODEL 3250Y–C–BS–43
CO	VARIES	–	–	–	FLOOR CLEANOUT – ADJUSTABLE EXTENSION HOUSING, CAST IRON FERRULE WITH FULL–LINE–SIZE BRASS PLUG (UP TO 4"), 5" DIAMETER STAINLESS STEEL ACCESS COVER WITH VANDAL–PROOF SECURITY SCREWS, ROUND FRAME AND TOP STYLE COMPATIBLE WITH FLOOR TYPE (REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR TYPES) ZURN MODEL ZS–1400–VP. PROVIDE CARPET FLANGE FOR CARPETED AREAS (CARPET MARKER SHALL NOT BE ACCEPTABLE) AND TERRAZZO RECESS FOR TERRAZZO FLOORS. OUTDOOR CLEANOUT – SAME AS TYPE "CO" EXCEPT WITH HEAVY–DUTY NICKEL BRONZE TOP ZURN MODEL ZN–1400–HD–VP. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
WCO	VARIES	–	–	–	WALL CLEANOUT – CAST IRON FERRULE WITH COUNTERSUNK HEAD (FULL–LINE–SIZE PVC PLUG UP TO 4") MI–FAB MODEL C1450. ACCESS COVER SHALL BE 8" SQUARE, SURFACE MOUNT, FLUSH INSTALLATION, 16–GAUGE STAINLESS STEEL ACCESS DOOR WITH FLANGED FRAME AND VANDAL–PROOF OPTION MI–FAB MODEL UA–SS–VP. ACID WASTE CLEANOUT (AWCO) SHALL BE SAME EXCEPT ACID WASTE PIPING. INSIDE CABINETWORK WHERE CLEANOUT IS NOT VISIBLE, ACCESS PANEL MAY BE ROUND STAINLESS STEEL TYPE WITH VANDAL–PROOF CENTER SCREW MI–FAB MODEL C1450–RD–3–6.
2CO	4	–	–	–	DOUBLE CLEANOUTS – SAME AS OUTDOOR CLEANOUTS. INSTALLED FOR TWO–WAY RODDING. SINGLE CLEANOUT WITH 2–WAY FITTING IS NOT ACCEPTABLE, PROVIDE TWO SEPARATE CLEANOUTS. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
HB	–	–	3/4	–	HOSEBIBB – 3/4" HOSE THREAD, INTEGRAL VACUUM BREAKER SPOUT, ROUGH CHROME FINISH WITH REMOVABLE KEYED HANDLE, WALL FLANGE CHICAGO MODEL 952.
WH	–	–	3/4	–	RESTROOM WALL HYDRANT – NARROW WALL, WARM CLIMATE TYPE HOSE BOX, QUARTER–TURN WHEEL HANDLE, ASSE APPROVED ANTI–SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16–GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5518
WH2	–	–	3/4	–	EXTERIOR WALL HYDRANT – NON–FREEZE HOSE BOX, QUARTER–TURN WHEEL HANDLE, ASSE APPROVED ANTI–SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16–GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5519
WH3	–	–	3/4	3/4	CANWASH WALL HYDRANT – NON–FREEZE HOSE BOX WITH STRAIGHT INLET CONNECTION, HOT AND COLD MIXING, REMOVABLE KEYED HANDLE, ASSE APPROVED ANTI–SIPHON INTEGRAL BACKFLOW PREVENTER WITH 3/4" HOSE CONNECTION, HEAVY DUTY BRASS CASING, POLISHED BRONZE HYDRANT BOX WITH HINGED COVER, "WATER" CAST ON COVER, DRIP LIP AND WALL CLAMP J.R. SMITH MODEL 5560–QT–WC–H–W–PB.
WASH (4 ADD4)	–	–	3/4	3/4	CLOTHES WASHER HOSE CONNECTION – STUB OUT OF WALL WITH ELBOW TO LEAD FREE DOUBLE CHECK BACKFLOW PREVENTER WITH QUARTER TURN VALVES, WATTS LF007M3–QT–FZ 3/4; PROVIDE FEMALE NIPPLE WITH 3/4" HOSE CONNECTION FOR CONNECTION OF WASHER JUMPER HOSE. SUPPORT ASSEMBLY FROM WALL WITH UNISTRUT AND PIPE CLAMPS. ASSEMBLY SHALL BE PROVIDED FOR BOTH COLD AND HOT WATER OUTLETS. WASHER HAS INTEGRAL AIR GAP CERTIFIED TO EUROPEAN STANDARDS AND THUS REQURIES AN EXTERNAL MEANS OF BACKFLOW PREVENTION TO MEET US STANDARDS.

PLUMBING FIXTURES AND EQUIPMENT

MARK	MIN. CONNECTION SIZES (IN.)				DESCRIPTION/SPECIFICATION
	SAN	VENT	CW	HW	
WC	4	2	1	–	WATER CLOSET – WALL MOUNTED, WHITE VITREOUS CHINA, SIPHON JET ACTION, 1.28 GPF, ELONGATED BOWL, TOP SPUD, ADA/TAS COMPLIANT, AMERICAN STANDARD AFWALL; SLOAN ROYAL 111–1.28 FLUSH VALVE WITH VANDAL–PROOF FREE–SPINNING TOP CAP, 1.28 GPF, VANDAL–PROOF STOP AND ADA/TAS COMPLIANT LEVER ACTUATOR WITH LEVER INSTALLED ON LEFT SIDE (FOR FIXTURES DESIGNATED AS "HANDICAP", INSTALL LEVER ON "WIDE–SIDE" OF TOILET STALL); BEMIS 1655–SS/C EXTRA HEAVY DUTY, WHITE, OPEN FRONT SEAT LESS COVER WITH SELF–SUSTAINING, STAINLESS STEEL CHECK HINGE; AND, FLOOR MOUNTED CARRIER.
LV	1–1/4	1–1/4	1/2	1/2	LAVATORY GOOSENECK FAUCET – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF–DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; DECK MOUNTED FAUCET, 4" CENTERS, FIXED, CHROME PLATED, 5.25" GOOSENECK SPOUT, PRESSURE COMPENSATING LAMINAR FLOW NON–AERATING 0.5 GPM OUTLET, 4" WRISTBLADE HANDLES, REBUILDABLE COMPRESSION CARTRIDGES, CHICAGO 895–317GN2AE72ABCP; CHROME PLATED, 17–GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17–GAUGE CAST BRASS P–TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV–GUARD VANDAL–PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170–LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
LV2	1–1/4	1–1/4	1/2	1/2	LAVATORY – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF–DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; CHROME PLATED, ALL CAST BRASS CONSTRUCTION, ADA/TAS COMPLIANT, VANDAL–PROOF FAUCET WITH 4" WRIST BLADE HANDLES, COMPRESSION STYLE CARTRIDGES, CHROME DECK PLATE, VANDAL–PROOF AERATOR, COPPER SUPPLIES AND CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9 CHICAGO MARATHON MODEL 802–E70–317ABCP; CHROME PLATED, 17–GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17–GAUGE CAST BRASS P–TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV–GUARD VANDAL–PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170–LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
EDF	1–1/2	1–1/2	1/2	–	BI–LEVEL ELECTRIC DRINKING FOUNTAINS WITH BOTTLE FILLER – WALL MOUNTED, ALL STAINLESS STEEL, ADA AND TAS COMPLIANT FOR ALL AGES, 8 GPH AT ARI STANDARDS, 2–STREAM ALL METAL BUBBLER FITTING WITH VANDAL–RESISTANT KIT AND FRONT PUSH BUTTON ACTUATION, PUSH BUTTON ACTIVATED BOTTLE FILLER WITH 1.1GPM FILL RATE AND ANIT–MICROBIAL COATING, INTEGRAL WATER FILTER, LEAD–FREE (CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9), REFRIGERANT HFC–134a, MAINTENANCE ACCESS PANEL, HALSEY–TAYLOR MODEL HTHBHVR8BL; CHROME PLATED, 17–GAUGE CAST BRASS P–TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; FLOOR MOUNTED CHAIR CARRIER; AND, STAINLESS STEEL ADA APRON FOR LOCATIONS REQUIRED BY ADA OR TAS.
MB	3	2	3/4	3/4	MOP BASIN – 24" X 24" X 12" DEEP TERRAZZO, TWO (2) STAINLESS STEEL SPLASH CATCHER PANELS, 6" DROP FRONT WITH STAINLESS STEEL CAP, CAST BRASS DRAIN WITH STAINLESS STEEL STRAINER STERN WILLIAMS HILOW MODEL HL–1800–BP; FAUCET SHALL BE POLISHED CHROME PLATED SERVICE SINK TYPE WITH VACUUM BREAKER, INTEGRAL SUPPLY CHECK STOPS, SPOUT WITH PAIL HOOK, HOSE END AND TOP BRACE CHICAGO MODEL 897–CCF (INSTALL BACKING/BRACING INSIDE WALL TO SUPPORT FAUCET AND TOP BRACE).
LP–1	3	2	3/4	3/4	LAVATORY PUMP – FACTORY BUILT, LIFT PUMP FOR GRAY WATER WASTE, TOP ACCESS TO INTERNAL 1/6HP PUMP AND FLOAT SWITCH, 1.5" TOP AND SIDE INLETS, 1.5" TOP OUTLET, INTEGRAL CHECK VALVE AT BOTTOM INLET CONNECTIONS, 9FT POWER CORD WITH GROUNDED PLUG; LIBERTY PUMPS MODEL 406

KITCHEN PLUMBING CONNECTION SCHEDULE

MARK	DESCRIPTION
P5	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO MOP BASIN ("MB") FAUCET. REFERENCE PLUMBING FIXTURE SCHEDULE.
P6	3" DRAIN IN FLOOR FOR MOP BASIN ("MB") DRAIN. REFERENCE PLUMBING FIXTURE SCHEDULE.
P7	3/4" CW AND 3/4" HW – IN WALL, 18" AFF, TO HOSE BIBB.
P10	FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO–PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" SQUARE HEAVY–DUTY POLISHED BRONZE GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 2005–03–K07PB–P050–U.
P11C	1/2" CW AND 1/2" HW – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P11D	2" DRAIN – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P12	FLOOR SINK – 4" OUTLET; FLUSH WITH FLOOR; CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY NICKEL BRONZE FRAME WITH 3/4–TRACTOR GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 3150Y–04–C–13.
P12A	EQUIPMENT FLOOR DRAIN – SIMILAR TO MARK P10, BUT WITH 4" OUTLET.
P15	FUNNEL FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO–PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" DIAMATER HEAVY–DUTY STAINLESS STEEL TRACTOR DUTY GRATE AND SECURITY SCREWS, 4" ROUND FUNNEL ASSEMBLY (MODEL 3580), 1/2" TRAP PRIMER TAP JR SMITH MODEL 2005–03–K07PB–P050–U
P109	3/4" CW – IN WALL, 60" AFF, TO ICE MAKER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO ICE MAKER FROM CHECK VALVE, THROUGH FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P109A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12, BUT WITH FULL GRATE. SEE DESCRIPTION ABOVE.
P110	1/2" CW AND 1/2" HW – IN WALL, 36" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO–CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P110A	2" DRAIN – IN WALL, 48" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO–CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P122	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET AT TWO COMPARTMENT SINK. INSTALL LEONARD 370–LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P122A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P123	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO PRE–RINSE. 1/2" CW TO DISPOSER.
P123A	2" DRAIN – IN WALL, 10" AFF, TO DISPOSER (BYPASS GREASE TRAP).
P161	(2)3/4" GAS CONNECTION – 18"/36" AFF, TO CONVECTION OVEN, 60 CFH (EACH).
P163A	3/4" GAS CONNECTION – 18" AFF, TO TILT BRAISING PAN, 104 CFH.
P163B	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO TILT BRAISING PAN.
P165	1" GAS CONNECTION – 18" AFF, TO RANGE, 70 CFH.
P172	(2) 3/4" CW – IN WALL, 24" AFF & 48" AFF, TO COMBI OVEN. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND OVEN. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO EQUIPMENT FROM CHECK VALVE, THROUGH FILTER BANK (REF P172D & E), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172A	SIMILAR TO PLUMBING CONNECTION P172, BUT ONLY ONE 3/4" CW – IN WALL, 48" AFF. SEE DESCRIPTION ABOVE.
P172B	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P172C	(2) 3/4" GAS CONNECTION – 18"/36" AFF, TO COMBI OVEN, 105 CFH (EACH).
P172D	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO INLET OF FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172E	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. EXTEND OUTLET OF FILTER BANK BACK INTO THE WALL. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PIPING WITHIN THE WALL SHALL EXTEND TO AND SERVE TWO (2) CONNECTIONS TAGGED P172.
P249	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET. INSTALL LEONARD 370–LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P249A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250A	3/4" HW – IN WALL, 18" AFF, TO BOOSTER HEATER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER AND CONNECT THROUGH FILTER (BY OTHERS) WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PROVIDE WATTS 9MD2 OR EQUAL – 140°F MINIMUM (INTERCONNECT WITH DISH MACHINE).
P250B	3/4" CW – IN WALL, 18" AFF, TO DISH MACHINE. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND DISH MACHINE. PROVIDE WATTS 9MD2 OR EQUAL (INTERCONNECT WITH DISH MACHINE).
P614	1/2" CW AND 1/2" HW – IN WALL, 42" AFF, TO FILL FAUCET.
P800	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.

KITCHEN PLUMBING CONNECTION NOTES
1. KITCHEN CONNECTION SCHEDULE IS APPLICABLE TO ALL SCHOOLS IN THIS DRAWING SET.
2. REFERENCE KITCHEN CONSULTANT'S DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL EQUIPMENT AND INSTALLATION REQUIREMENTS.
3. ALL WATER PIPING INSTALLED EXPOSED BENEATH KITCHEN EQUIPMENT, INCLUDING PIPING INSTALLED BY DIVISION 11 (I.E. UNDER SINK COUNTERTOPS, SERVING TABLES, ETC.) SHALL BE INSULATED BY THE PLUMBING CONTRACTOR PER THE SPECIFICATIONS (INCLUDE ALUMINUM JACKETING FOR ALL PIPE INSULATION, PER SPECIFICATIONS).
4. INDIRECT WASTE PIPING FROM KITCHEN EQUIPMENT IS NOT SHOWN; HOWEVER, PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THIS PIPING PER THE REQUIREMENTS OF THE KITCHEN CONSULTANT'S CONTRACT DOCUMENTS, PER THE REQUIREMENTS OF THE VARIOUS EQUIPMENT MANUFACTURERS PROVIDED AND PER THE IPC–2021, SECTION 802. ALL INDIRECT WASTE PIPING SHALL BE TYPE L COPPER. INSTALL 45°F ELBOW AT END OF EACH INDIRECT WASTE PIPE TO DIRECT FLOW OF WATER INTO FLOOR SINK.
   - 4.1. IPC 2015 – SECTION 802.1.1 FOOD HANDLING – EQUIPMENT AND FIXTURES UTILIZED FOR THE STORAGE, PREPARATION AND HANDLING OF FOOD SHALL DISCHARGE THROUGH AN INDIRECT WASTE PIPE BY MEANS OF AN AIR GAP. EACH WELL OF A MULTIPLE–COMPARTMENT SINK SHALL DISCHARGE INDEPENDENTLY TO A WASTE RECEPTOR. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P121, P122 AND P126.
   - 4.2. IPC 2015 – SECTION 8802.1.8 FOOD UTENSILS, DISHES, POTS AND PANS SINKS – SINKS, USED FOR THE WASHING, RINSING, OR SANITIZING OF UTENSILS, DISHES, POTS, PANS OR SERVICE WARE USED IN THE PREPARATION, SERVING OR EATING OF FOOD SHALL DISCHARGE INDIRECTLY THROUGH AN AIR GAP OR AN AIR BREAK TO THE DRAINAGE SYSTEM. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P249.

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09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
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PROJ. NO.: 23-25
DATE: 07/18/2025
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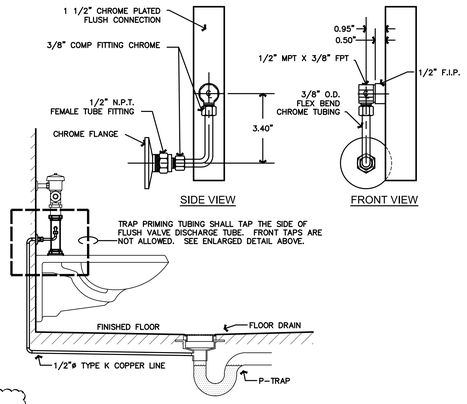
PLUMBING NOTES & SCHEDULES

o-P0.01

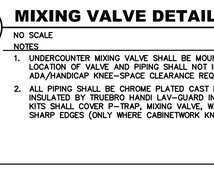


12 FLUSH VALVE TRAP PRIMING TUBE DETAIL

NO SCALE

MI-FAB MODEL MI-702-MOD FLUSH VALVE TRAP PRIMER, OR EQUAL

TANKLESS WATER HEATER SCHED.		
MARK	IEWH-1	
SERVES	LAVATORY	
LOCATION	BELOW COUNTER	
HEATER KW	1.8 KW	
TEMP RISE (@ 0.5 GPM)	25°F	
VOLTAGE/PHASE	120V/1PH	
EEMAX MODEL	SPEX1812T	

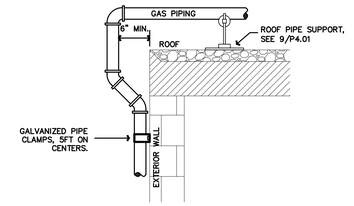


11 TANKLESS WATER HEATER

NO SCALE

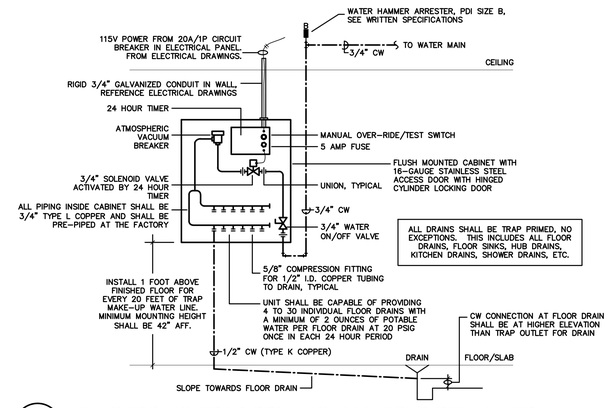
NOTES:

1. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FURNISH & INSTALL 0.5-GPM AERATOR ON FAUCET COMPATIBLE WITH TANKLESS EWH REQUIREMENTS.
5. WATER HEATER SHALL HAVE INTEGRAL ASSE-1070 COMPLIANT TEMPERED MIXING VALVE.



13 GAS PIPING WALL-TO-ROOF TRANSITION DETAIL

NO SCALE

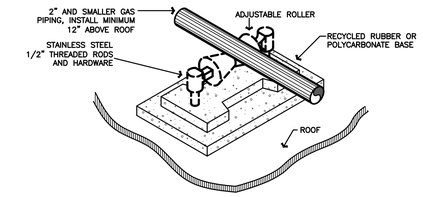


10 ELECTRONIC TRAP PRIMING MANIFOLD DETAIL (TP)

NO SCALE

NOTES:

1. REFERENCE SCHEDULE ON SHEET P3.00

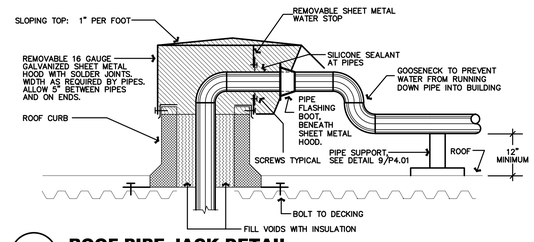


14 GAS PIPING ROOF SUPPORT DETAIL

NO SCALE

NOTES:

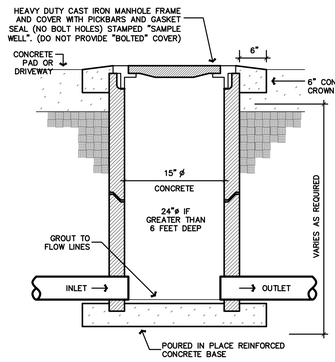
1. GAS PIPING SUPPORT SHALL BE PORTABLE PIPE HANGERS, INC. MODEL PP10-R. PIPING SHALL BE INSTALLED 12" ABOVE FINISHED ROOF. PROVIDE 18" X 18" CAREY TREAD-TYPE MATERIAL BENEATH EACH PIPE SUPPORT.
2. FIELD LOCATE ROOF STRUCTURAL SUPPORTS AND PLACE BASE OF PIPE SUPPORT OVER ROOF SUPPORTS ONLY. PROVIDE BASE OF ADEQUATE LENGTH TO SPAN ROOF JOIST TO PREVENT SUPPORTS SETTING ON ROOF DECK ONLY.
3. INSTALL SIX (6) FOOT-ON-CENTERS.
4. PIPE SUPPORT MANUFACTURER'S REPRESENTATIVE SHALL PERSONALLY INSPECT INSTALLATIONS OF PIPE SUPPORTS AND MAKE CORRECTIONS AND HEIGHT ADJUSTMENTS TO INSTALLATIONS, AS REQUIRED, DURING INSPECTION.



9 ROOF PIPE JACK DETAIL

NO SCALE

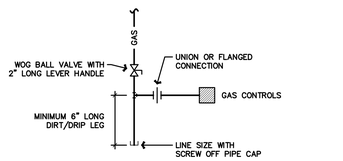
NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.



8 SAMPLE TEST WELL DETAIL (STW)

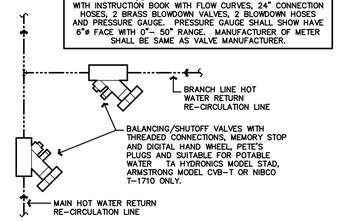
NO SCALE

NOTES:



7 TYPICAL GAS CONNECTION

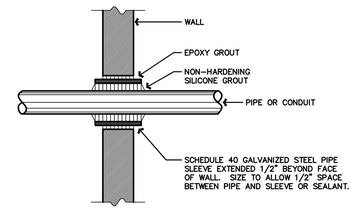
NO SCALE



6 HOT WATER BALANCING STATION

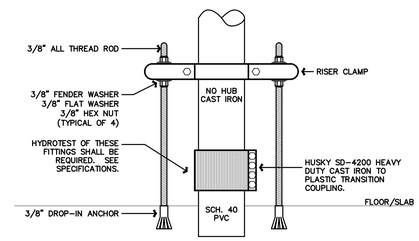
NO SCALE

PROVIDE AT EACH JUNCTION OF BRANCH HOT WATER RETURN LOOPS TO MAIN CIRCULATING HOT WATER LINE, SEE PLUMBING PLANS.



5 WALL PENETRATION DETAIL

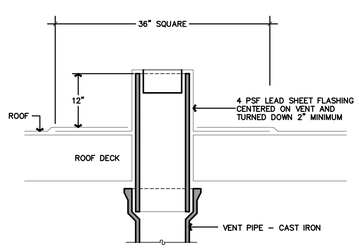
NO SCALE



4 PVC-TO-CAST IRON INSTALLATION DETAIL

NO SCALE

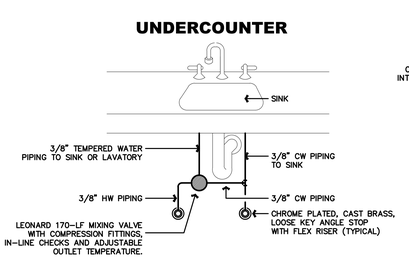
MISSION TRANSITION COUPLING DESIGNED AND CERTIFIED FOR THIS SPECIFIC APPLICATION SHALL BE ACCEPTABLE IN LIEU OF HUSKY COUPLING IN THIS DETAIL.



3 ROOF VENT DETAIL

NO SCALE

COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

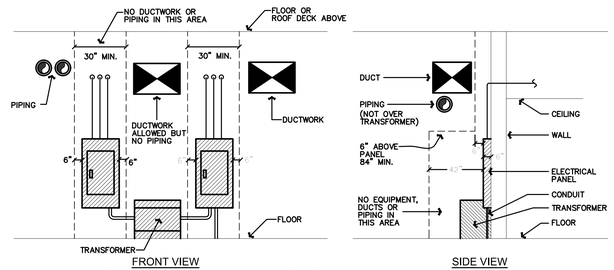


2 MIXING VALVE DETAIL

NO SCALE

NOTES

1. UNDERCOUNTER MIXING VALVE SHALL BE MOUNTED ON WALL IN FIXTURE KNEE-SPACE. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FOR ABOVE CEILING INSTALLATION, VALVE SHALL BE INSTALLED IN AN EASILY/READILY ACCESSIBLE LOCATION. SEE KITCHEN PLUMBING CONNECTION SCHEDULE FOR REQUIRED KITCHEN LOCATIONS.
5. LAVATORY MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 130°F.
   SINK MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 140°F.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

DO NOT INSTALL ANY PIPING BENEATH CVT BOXES. DO NOT INSTALL ANY PIPING (EXCEPT FIRE SPRINKLER PIPING AND OTHER PIPES SHOWN SPECIFICALLY ON THE PLUMBING FLOOR PLANS) OVER COMPUTER CLASSROOMS, BOOKROOMS, IDF/MDF/SERVER ROOMS OR OTHER ROOMS NOTED ON THE PLUMBING FLOOR PLANS.

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09/04/2025	ADDENDUM 04

ADD#4

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FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

STATE OF TEXAS
INTERIM REVIEW
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
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PLUMBING SCHEDULES & DETAILS

o-P0.02

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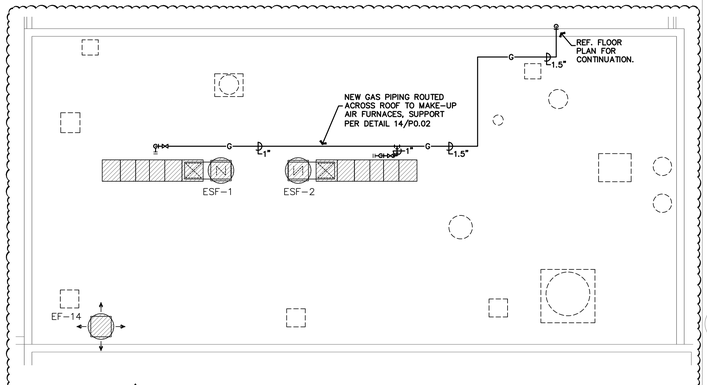
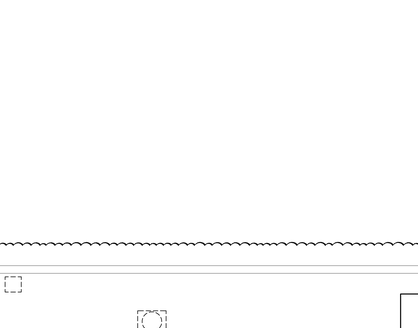
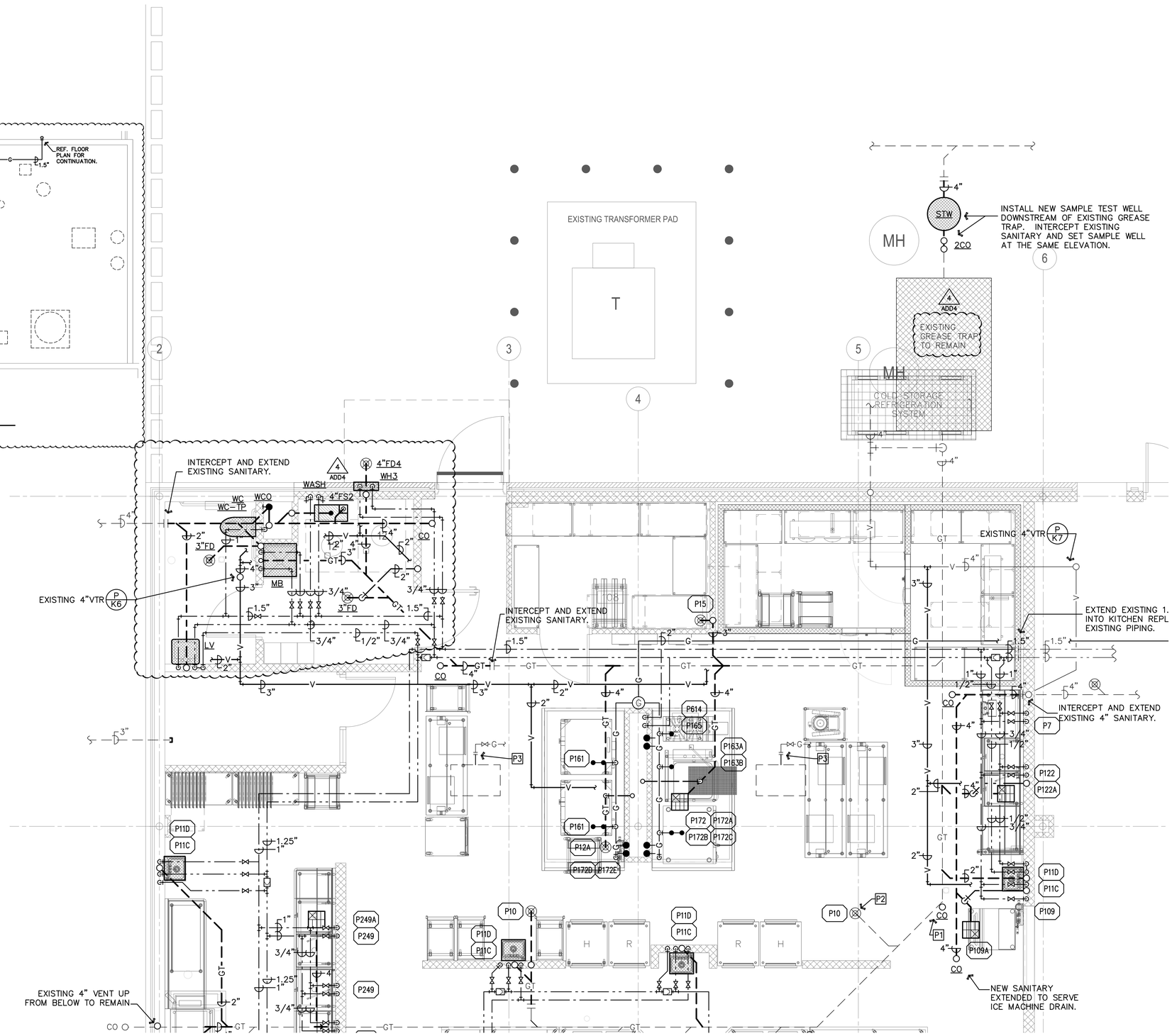


4 ADD4

3 PLUMBING ROOF PLAN

SCALE: 1/8" = 1'- 0"





1 PLUMBING RENOVATION FLOOR PLAN

SCALE: 1/4" = 1'- 0"

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PLUMBING FLOOR PLAN

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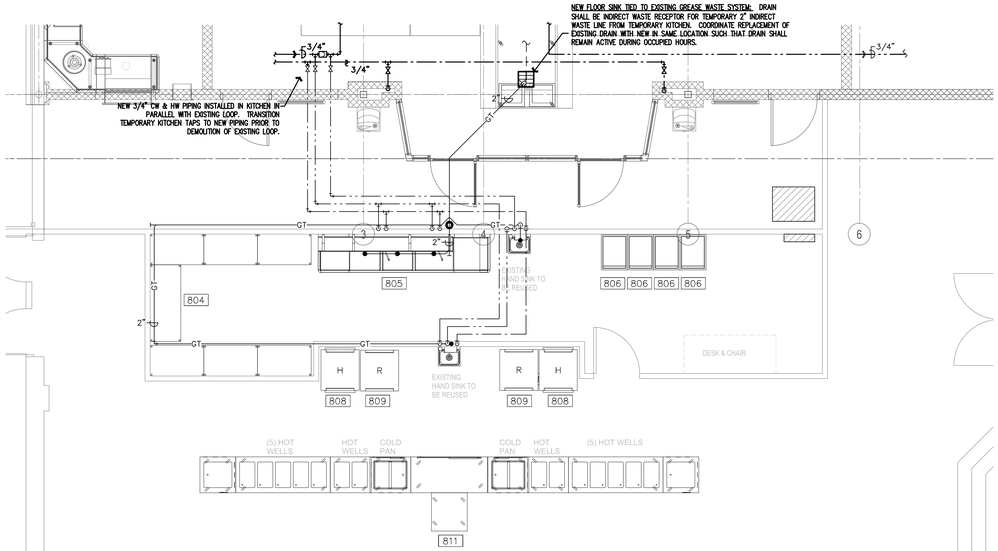


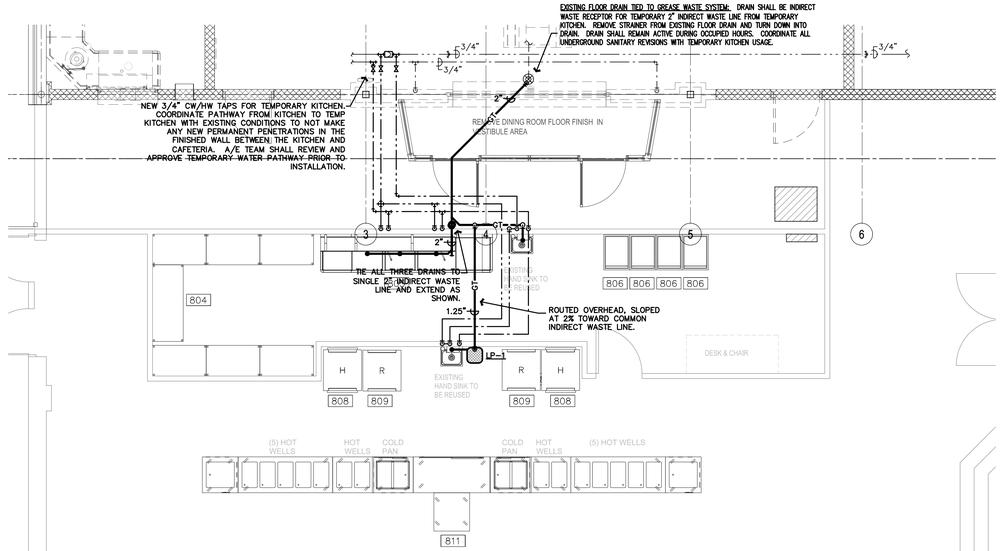
2 PLUMBING TEMPORARY KITCHEN PLAN - POST DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. AFTER DEMOLITION OF EXISTING KITCHEN AND DURING CONSTRUCTION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL REMAIN ACTIVE.
2. ALL SANITARY, CW AND HW CONNECTIONS SHALL REMAIN ACTIVE DURING ALL TIMES WHEN TEMPORARY KITCHEN IS ACTIVE.
3. UPON COMPLETION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL BE DEMOLISHED AND ALL TEMPORARILY UTILITIES SHALL BE REMOVED AND TEMPORARY WATER TAPS CAPPED AT MAIN LINE TAP.
4. ALL DEMOLISHED LAVATORIES AND FAUCETS SHALL BE PERMITTED TO BE RELOCATED ACROSS TEMPORARY KITCHENS WITHIN THE PROJECT BASED ON AVAILABILITY/PROJECT PHASING SCHEDULE. AT THE END OF THE PROJECT, REMOVE FIXTURES AND OFFER TO OWNER AS SALVAGE. IF NOT ACCEPTED, ALL FIXTURES SHALL BE DISPOSED OF BY THE CONTRACTOR.

NORTH



1 PLUMBING TEMPORARY KITCHEN PLAN - PRE DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. BEFORE DEMOLITION OF THE EXISTING KITCHEN BEGINS, INSTALL ALL NEW PLUMBING FIXTURES AND UTILITIES FOR TEMPORARY KITCHEN.

NORTH

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07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

4 ADD4

0

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED
PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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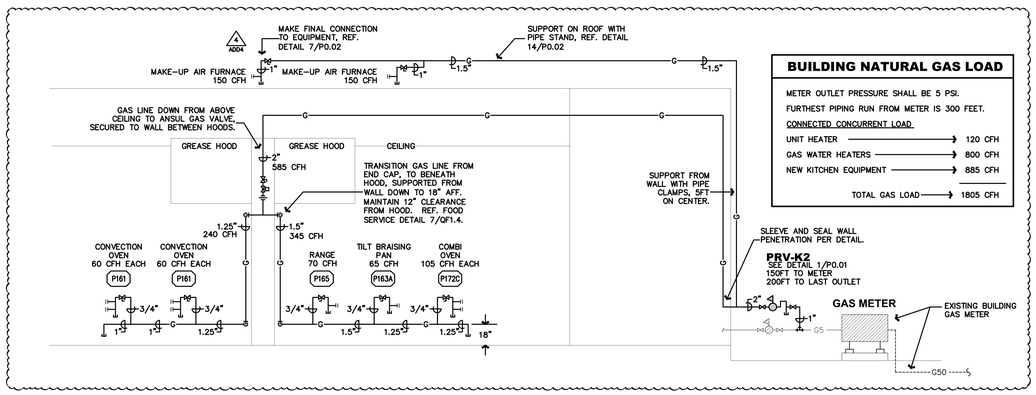
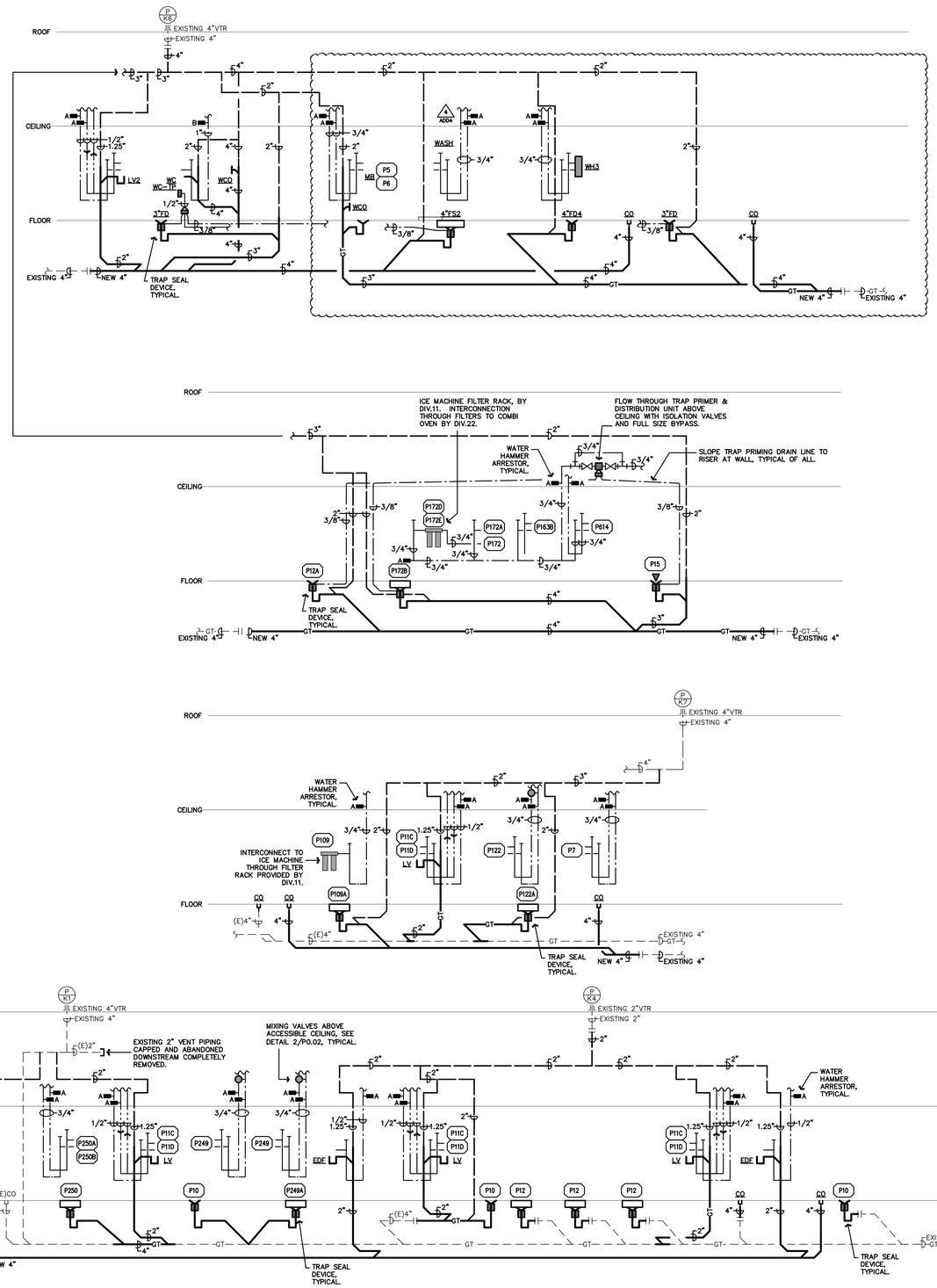
PLUMBING FLOOR PLAN - TEMP KITCHEN

o-P1.02



2 NATURAL GAS RISER DIAGRAM
NO SCALE



1 PLUMBING RISER DIAGRAMS
NO SCALE

STANTON ENGINEERING GROUP
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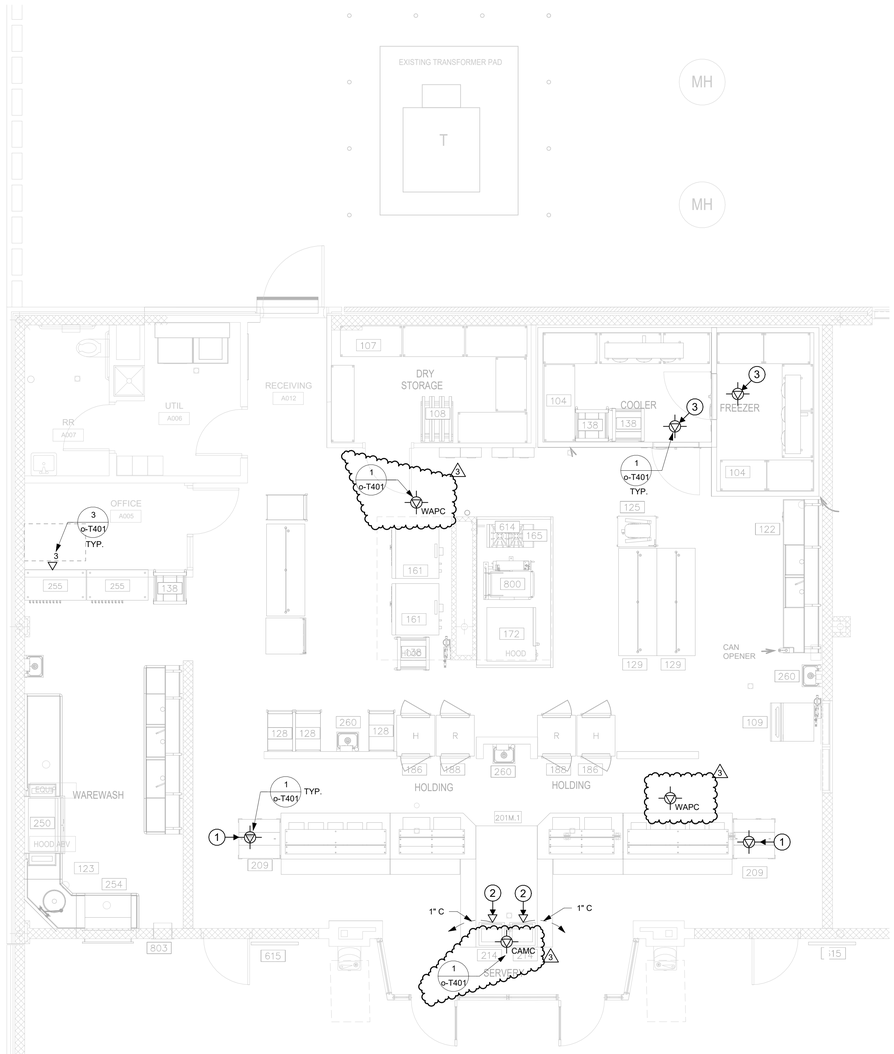
PLUMBING RISER DIAGRAMS

o-P2.00



1 o-T201 TECHNOLOGY NEW/RENOVATION KITCHEN PLAN
1/4" = 1'-0"

TECHNOLOGY FLOOR PLANS GENRAL NOTES:

1. THE TECHNOLOGY REGION / WIRING BOUNDARIES ARE IDENTIFIED ON THE OVERALL SHEETS ONLY AND NOT ON THE ENLARGED SHEETS. CONTRACTOR SHALL REFER TO THE OVERALL SHEETS FOR ALL TECHNOLOGY REGIONS / WIRING BOUNDARIES.
2. ALL CONDUIT PATHWAYS, ROUGH-INS, BACKBOXES, FLOOR BOXES, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
6. TECHNOLOGY CABLING SHALL BE ROUTED IN SEPARATE PATHWAYS IN J-HOOKS, CONDUITS, CONDUIT SLEEVES, CORES, ETC. THROUGHOUT THE ENTIRE PATHWAY. DIFFERENT MEDIA TYPES (DATA, VIDEO, SECURITY, ETC.) SHALL NOT SHARE THE SAME J-HOOK, CONDUIT, CONDUIT SLEEVE, CORE, ETC.
7. UNLESS NOTED OTHERWISE, ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE AN ACCESSIBLE CEILING (AN OPEN CEILING OR CLOUD TYPE CEILING IS NOT CONSIDERED AN ACCESSIBLE CEILING) IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF / IDF ROOM TO MINIMIZE THE CABLE LENGTH ENSURING CABLE LENGTH DOES NOT EXCEED 275 FEET.
8. UNLESS NOTED OTHERWISE ALL CONDUITS SHALL BE HOMERUN FROM THE DEVICE LOCATION AND NO DAISY CHAINING OF DEVICES/ ROUGH-INS SHALL BE ALLOWED.
9. CONDUIT SEGMENTS SHALL BE NO MORE THAN 100-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
10. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
13. EQUIPMENT NOT RELATED TO THE SUPPORT OF THE TELECOMMUNICATIONS ROOM (E.G., PIPING, DUCTWORK, PNEUMATIC TUBING) SHALL NOT BE INSTALLED IN, PASS THROUGH, OR ENTER THE TELECOMMUNICATIONS ROOM.
14. ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE A LAY-IN TYPE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE A LAY- IN TYPE CEILING TO PREVENT THE CABLES FROM BEING EXPOSED, THE CONDUIT SHALL ROUTE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. THE CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE MAIN CORRIDOR OR NEAREST MDF/IDF TO MINIMIZE THE CABLE LENGTH ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. CONDUIT, CONNECTIONS, J-BOXES, SUSPENSION, ANCHORAGES, AND OTHER CONDUIT COMPONENTS EXPOSED TO VIEW IN PUBLIC SPACES SHALL BE ROUTED AND INSTALLED CAREFULLY TO MINIMIZE VISUAL IMPACT AND SHALL BE FULLY PAINTED TO MATCH UNLESS NOTED OTHERWISE.
15. CONDUIT(S) INSTALLED IN-SLAB OR UNDER-SLAB TO FLOOR BOXES, POKE-THURS, AND TO WORKAREA OUTLETS, ETC. SHALL BE INSTALLED WITH WET RATED CABLE(S).
16. NO GRID WIRE SHALL BE UTILIZED FOR SUPPORTS ONLY USE SOLID SUPPORTS (CLIPS, ALL-THREAD, ANCHORS, ETC.).

TECHNOLOGY PLAN KEYED NOTES

NOT ALL KEYED BELOW APPLY TO THIS SHEET

(1) DATA CABLE FOR CONTRACTOR FURNISHED / CONTRACTOR INSTALLED MENU BOARD. REFERENCE ARCHITECTURAL AND FOOD SERVICE DRAWINGS FOR MOUNTING HEIGHT AND ADDITIONAL INFORMATION. BUILDING POWER ADJACENT TO DATA RECEPTACLE IS REQUIRED.

(2) INDOOR / OUTDOOR RATED DATA CABLE FOR POINT OF SALE LOCATION. PROVIDE (1) 1-INCH CONDUIT FOR DATA TO THE WALL BEHIND POINT OF SALE LOCATION AND UP WALL TO ABOVE ACCESSIBLE CEILING. CONDUITS SHALL TERMINATE INSIDE A DOUBLE GANG BOX THAT IS SECURED TO THE POINT OF SALE LOCATION. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS.

(3) DATA CABLE FOR TEMPERATURE MONITORING OF FREEZER COOLER. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS AND TERMINATION POINT AND CONNECTIVITY NEEDS IN FREEZER / COOLER CONTROL UNIT.

(4) DATA CABLE FOR TEMPORARY POINT OF SALES CASH REGISTER. COORDINATE WITH OWNER, ARCHITECT, AND CONSULTANT FOR ROUTING OF CABLES TO POINT OF SALE CASH REGISTER PRIOR TO INSTALLATION

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FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

07/18/2025

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11767 KATY FREEWAY, SUITE 430
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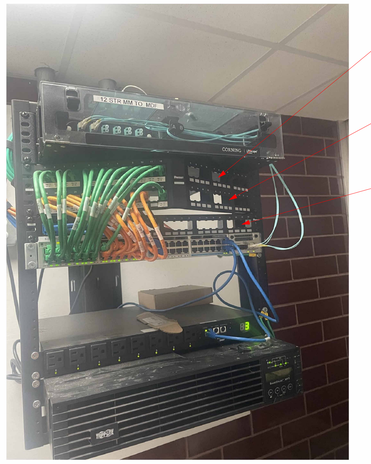
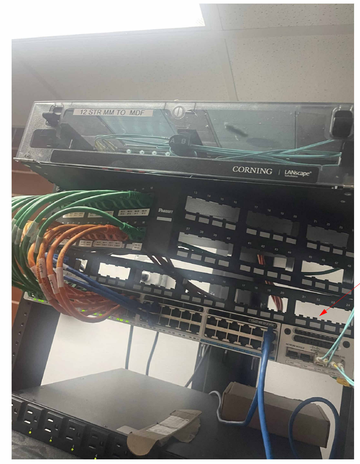
TECHNOLOGY NEW/RENOVATION KITCHEN PLAN

SHEET NO.
o-T201



1 o-T300 PALMER ES EXISTING WALL MOUNTED IDF RACK
N.T.S



2 o-T300 PALMER ES EXISTING WALL MOUNTED IDF RACK - PANEL DETAIL
N.T.S

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09/04/2025 3	ADDENDUM NO. 4

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HOUSTON, TEXAS 77079

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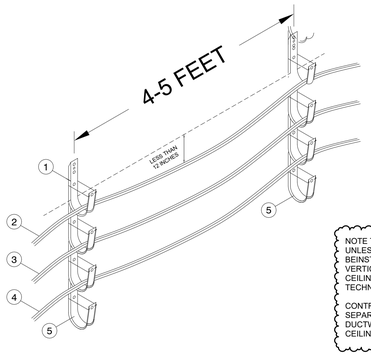
TECHNOLOGY ENLARGED VIEWS

SHEET NO.
o-T300

NOTE TO CONTRACTOR:

UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BE INSTALLED WITHIN 6-INCHES OF THE CEILING AND ACCESSIBLE BY A TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPRATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPIING OR OTHER SYSTEMS IN THE CEILING PLENUM.



KEYED NOTES:

1. J-HOOK WITH RETAINER CLIP ABOVE ACCESSIBLE CEILING (BY DIV 27).
2. DATA CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
3. A/V CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
4. SECURITY CABLE ABOVE ACCESSIBLE CEILING (BY DIV 28).
5. SPARE J-HOOK (BY DIV 27).

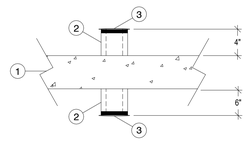
NOTE TO CONTRACTOR:
UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BEINSTALLED WITHIN 6-INCHES OF THE CEILING AND LAST VERTICALLY SITUATED J-HOOK SHALL BE NO HIGHER THAN 18" OF CEILING. CABLES AND SUPPORTS SHLL BE ACCESSIBLE BYA TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPARATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPING OR OTHER SYSTEMS IN THE CEILING PLENUM

3

1 / T400 TYPICAL J-HOOK CABLE PATHWAY

SCALE: N.T.S.

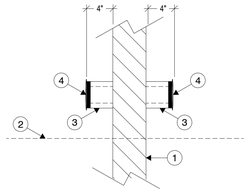


KEYED NOTES:

1. SCHEDULED FLOOR OR DECK.
2. CONDUIT SLEEVE (BY DIV 26).
3. NYLON BUSHING (BY DIV 26).

2 / T400 TYPICAL CONDUIT SLEEVE THROUGH FLOOR OR DECK DETAIL

SCALE: N.T.S.

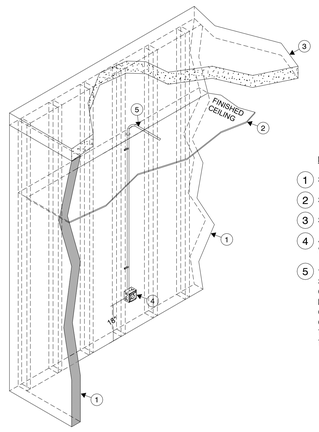


KEYED NOTES:

1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. CONDUIT SLEEVE (BY DIV 26).
4. NYLON BUSHING (BY DIV 26).

3 / T400 TYPICAL CONDUIT SLEEVE GOING THROUGH WALL

SCALE: N.T.S.



KEYED NOTES:

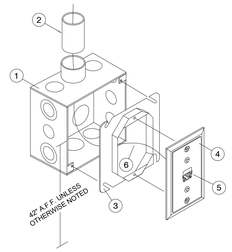
1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. SCHEDULED DECK ABOVE.
4. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX WITH DOUBLE GANG PLASTER RING (BY DIV 26).
5. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH. (BY DIV 26).

4 / T400 TYPICAL TECHNOLOGY CONDUIT ROUGH-IN

SCALE: N.T.S.

DETAIL DELETED SPACE LEFT INTENTIONALLY BLANK

3

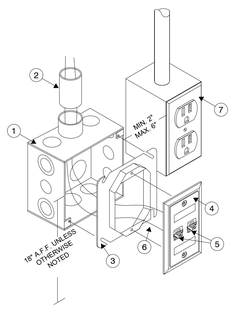


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH PHONE STUDS (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).

6 / T400 TYPICAL WALL PHONE OUTLET CONFIGURATION

SCALE: N.T.S.

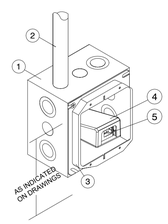


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).
7. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

7 / T400 TYPICAL DUAL DATA OUTLET CONFIGURATION

SCALE: N.T.S.

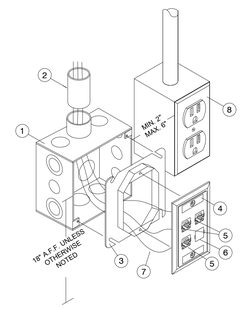


KEYED NOTES:

1. 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. DOUBLE GANG PLASTER RING (BY DIV 26).
4. SURFACE MOUNT BOX INSIDE THE 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH DOUBLE GANG BOX (BY DIV 27).
5. RJ-45 INSERT (BY DIV 27).

8 / T400 TYPICAL WALL-MOUNTED WIRELESS ACCESS POINT

SCALE: N.T.S.



KEYED NOTES:

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2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. BLANK INSERT (BY DIV 27).
7. CABLE AS SPECIFIED (BY DIV 27).
8. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

9 / T400 TYPICAL THREE DATA OUTLET CONFIGURATION

SCALE: N.T.S.

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REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 12-31-25
RCDD

07/18/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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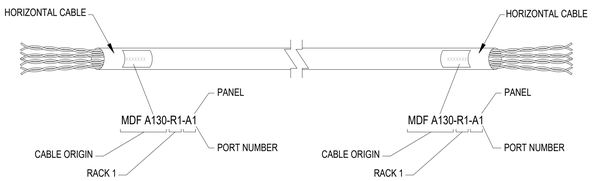
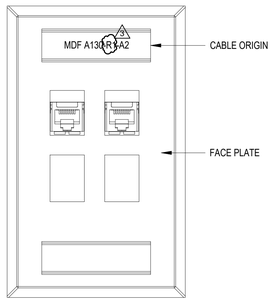
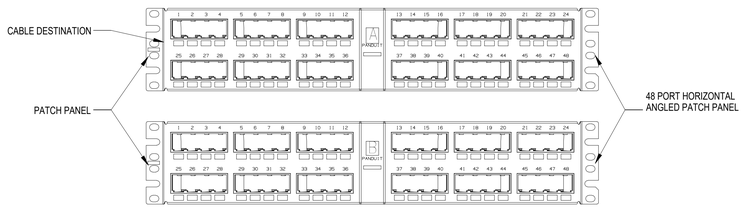
TECHNOLOGY TYPICAL DETAILS

SHEET NO.

o-T400

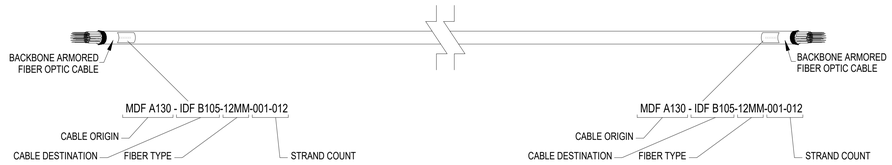


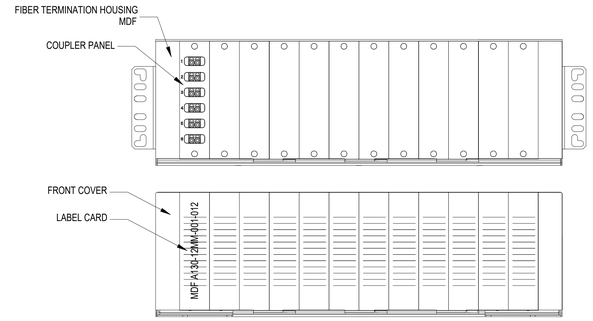


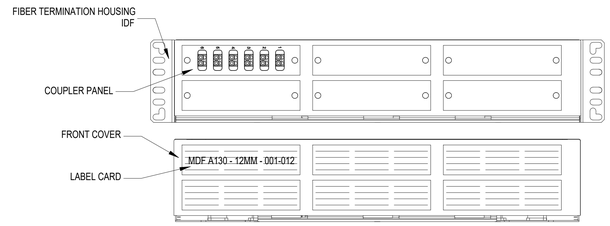


1 T500 TYPICAL HORIZONTAL DATA CABLE LABELING SCHEME

SCALE: N.T.S.

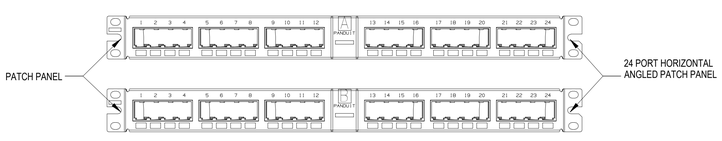






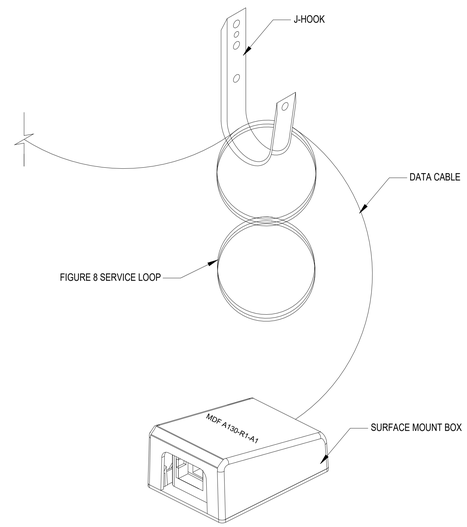
2 T500 TYPICAL FIBER BACKBONE LABELING SCHEME

SCALE: N.T.S.



3 T500 TYPICAL COPPER BACKBONE LABELING SCHEME

SCALE: N.T.S.



4 T500 ABOVE ASSESSIBLE CEILING LABELING SCHEME

SCALE: N.T.S.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM NO. 4

O

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 12-31-25
RCDD

07/18/2025

MWA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
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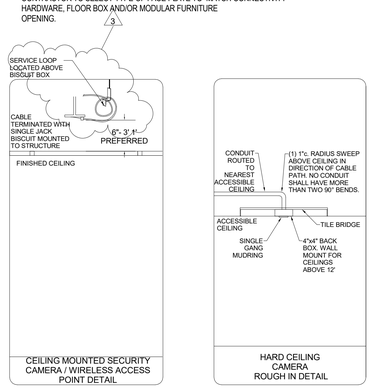
TECHNOLOGY TYPICAL DETAILS

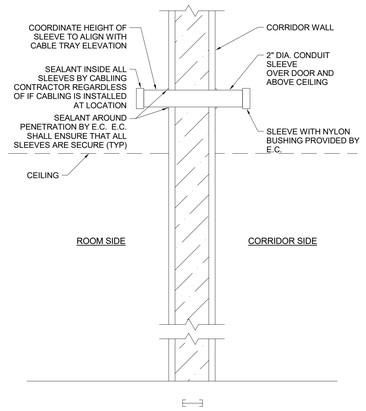
SHEET NO.
o-T500

GENERAL NOTE

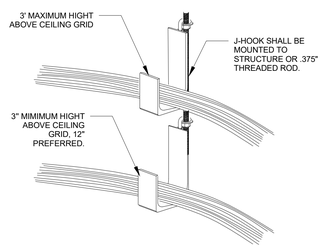
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



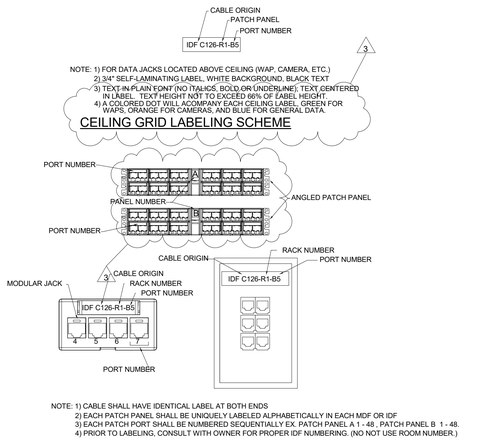
1 DATA ROUGH-IN DETAILS
SCALE: NS



2 TYPICAL CABLING SLEEVE
SCALE: NTS

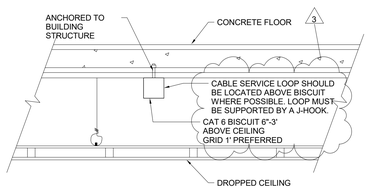


3 PANDUIT J-HOOK DETAIL
SCALE: NTS

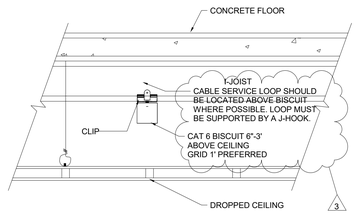


4 LABELING & CABLING SCHEMES
SCALE: NTS

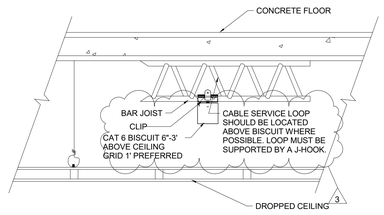
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PWY COMPANY

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FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Palmer Elementary School
4208 Crow Valley Dr. Missouri City, TX 77459

SEAL

07-18-25

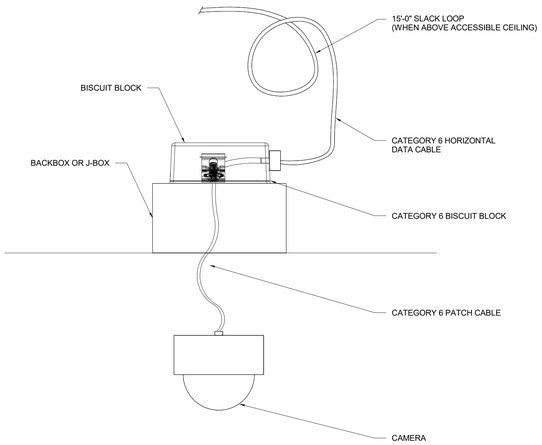
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Palmer ES - DETAILS

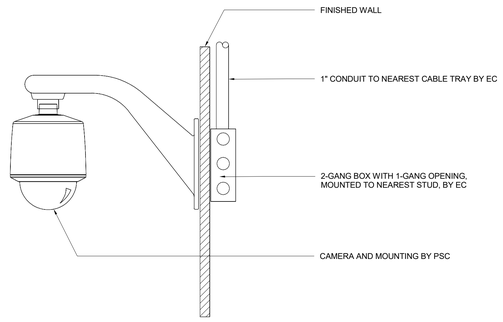
o-TN.500

GENERAL NOTES:

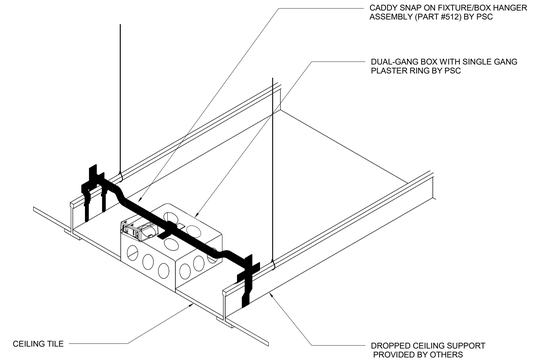
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



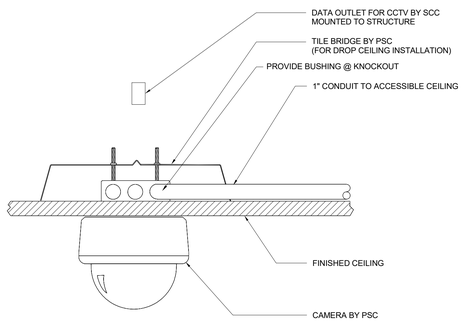
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

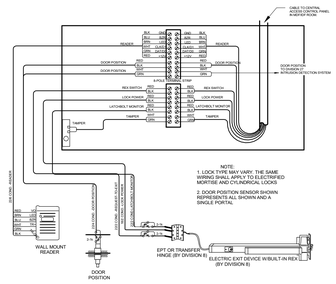


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

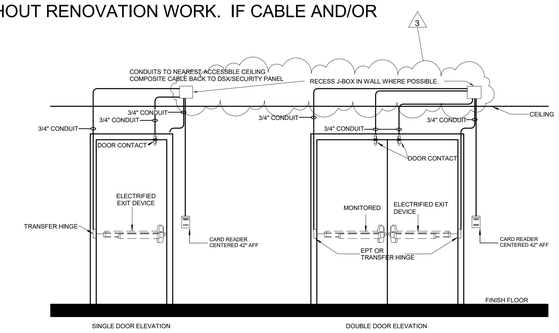
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

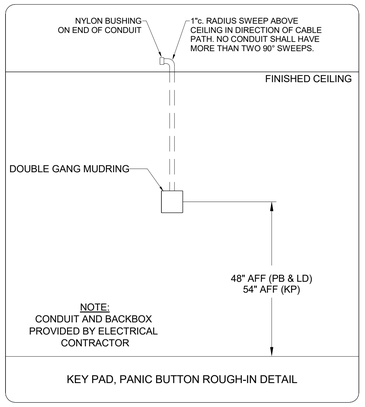
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

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FORT BEND INDEPENDENT SCHOOL DISTRICT
Palmer Elementary School
4208 Crow Valley Dr. Missouri City, TX 77459

SEAL

07-18-25

MVA ARCHITECTS
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AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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PERMITTING
TECHNOLOGY - Palmer ES - SECURITY DETAILS

o-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

PECAN GROVE ELEMENTARY SCHOOL
3330 OLD S DR, RICHMOND, TX 77406

FORT BEND INDEPENDENT SCHOOL DISTRICT

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

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2323 Texas Parkway
Missouri City, TX 77489
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Houston, Texas 77079
Phone Number: 713-782-8188

FOOD SERVICE
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26215 Oak Ridge Drive
The Woodlands, Texas 77380
Phone Number: 281-350-2323

MEP ENGINEERS
Stanton Engineering Group
1300 W. Sam Houston Pkwy South, Suite 121
Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

REGISTERED ARCHITECT — MICHAEL A. MALDONADO — 22651 — STATE OF TEXAS
04 SEPT. 2025

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p-D.101-2	DEMO PLAN PHOTOS
p-D.101-3	DEMO PLAN PHOTOS
p-ED.100	ELECTRICAL DEMOLITION AND TEMP PLANS
p-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
p-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
p-A.101	SITE PLAN
p-A.200	SLAB DIMENSION CONTROL PLAN
p-A.201	OVERALL FLOOR PLAN
p-A.301	KITCHEN PLAN
p-A.302	TEMPORARY KITCHEN LAYOUT
p-A.401	REFLECTED CEILING PLAN
p-A.501	FINISH FLOOR PLAN
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p-QF1.6	CONDENSING UNITS
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p-QF1.9	FS SERVING LINE
p-QF2.0	FS DEMO PLAN
p-QF2.1	FS TEMPORARY SERVING
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p-MT.01	MECHANICAL PLANS
p-M2.01	KITCHEN MECHANICAL DETAILS
E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
E.001	ELECTRICAL AND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
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E.060	LIGHTING SCHEDULES
p-E100	LIGHTING FLOOR PLAN
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p-TN-100	TECHNOLOGY - OVERALL
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p-TN-500	TECHNOLOGY - DETAILS
p-TN-600	TECHNOLOGY - SECURITY DETAILS
p-TN-700	TECHNOLOGY - AV DETAILS

ADDENDUM NO. 4 - SEP 04, 2025

p

TEMPORARY KITCHEN FLOOR PLAN KEYED NOTES 05/A-A03-02

01 PROVIDE & INSTALL 555 SF OF RAM BOARD TO PROTECT EXISTING FLOORING. REMOVE AFTER CONSTRUCTION IS COMPLETE. CONTRACTOR MUST REPAIR FLOORING DAMAGED DURING CONSTRUCTION.

02 PROVIDE SCHEDULED PARTITIONS. BUILD PARTITIONS ON TOP OF RAM BOARD. DO NOT ATTACH PARTITIONS TO FLOOR.

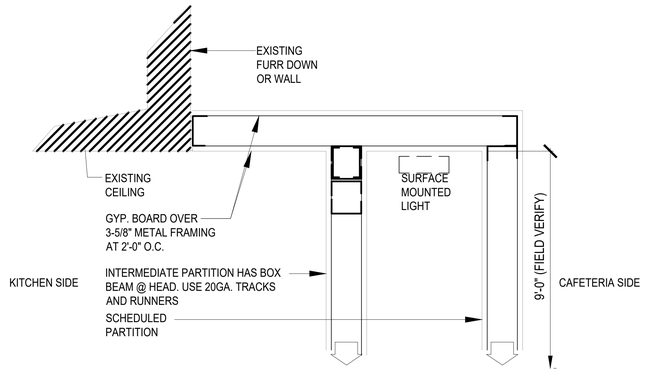
03 ATTACH PARTITIONS TO EXISTING WALL. REPAIR WALL TO MATCH EXISTING AFTER CONSTRUCTION IS COMPLETE.

TEMPORARY KITCHEN RCP KEYED NOTES 03/A-A03-02

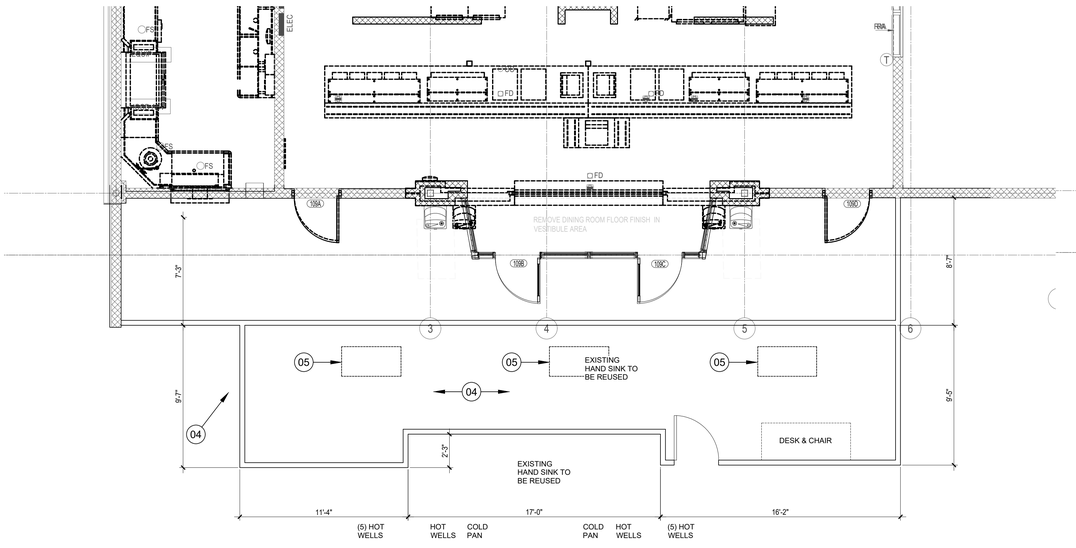
04 ALL NEW SCHEDULED PARTITIONS AND CEILINGS FOR TEMPORARY STORAGE LAYOUT TO BE EPOXY PAINTED SW 7014 EIDER WHITE WITH SPECIFIED 4" RUBBER BASE. REMOVE WHEN CONSTRUCTION IS COMPLETED.

05 MOUNT TEMPORARY FLUORESCENT LIGHTS TO TEMPORARY CEILING.

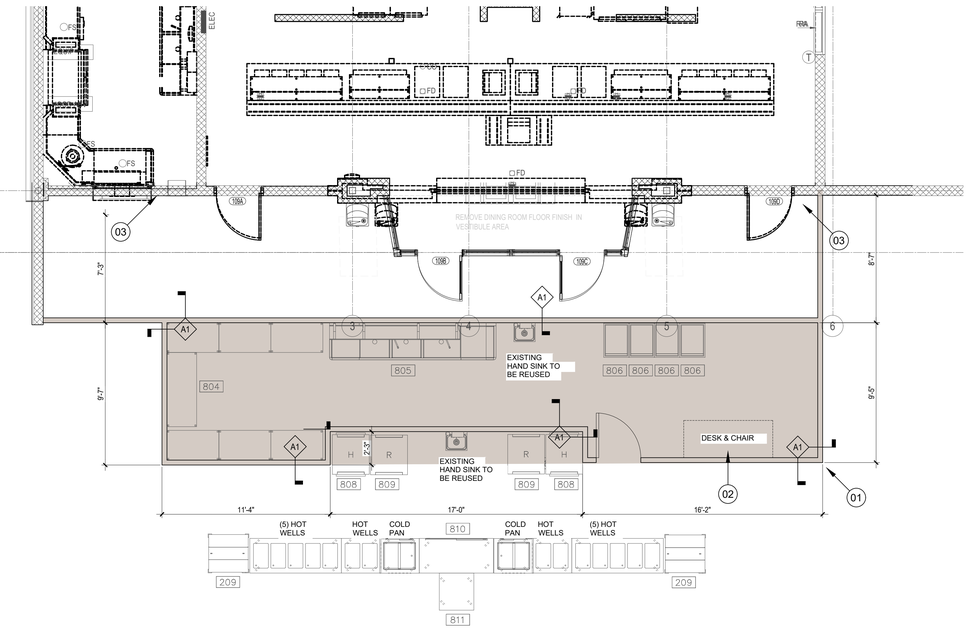
3 KEYED NOTES



4 TEMPORARY LAYOUT SECTION
SCALE: 1"=1'-0"



1 KITCHEN PLAN
SCALE: 1/4" = 1'-0"



2 TEMPORARY KITCHEN FLOOR PLAN
SCALE: 1/4" = 1'-0"

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p

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PECAN GROVE ELEMENTARY SCHOOL
3330 OLD S DRIVE
RICHMOND, TX 77406

SEAL

REGISTERED ARCHITECT
ROY KENT MOORE
22651
STATE OF TEXAS

04 SEP 2025

MWA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE:
ADDENDUM NO. 4 - SEP 04, 2025

TEMPORARY
KITCHEN
LAYOUT
p-A.302

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\P-Pecan Grove ES\p-A.302 TEMPORARY KITCHEN LAYOUT.dwg Sep 05, 2025 - 12:03pm

RCP - GENERAL NOTES

1. CEILING GRID SHALL BE INSTALLED TO MATCH EXISTING GRID'S POINT OF ORIGIN. THIS WILL REDUCE NEED TO RE-LOCATE ABOVE CEILING DUCTS, SPRINKLER PIPING AND OTHER SUPPORT SYSTEMS.
2. REFER TO SHEET A00-01 FOR GENERAL NOTES. GENERAL NOTES APPLY TO ALL SEVEN SCHOOL KITCHEN REMODELS.
3. LIGHTING LEVELS SHOULD BE 50 FC IN PREPARATION AREAS, WARE WASH AND SERVING LINES, OR MEET MINIMUM HEALTH CODE LEVELS, WHICHEVER ITS GREATER. SEE MEP PLANS
4. REPLACE HVAC DEVICES. REPLACE LIGHTING WITH 24"x24" LED LAY IN LIGHT AS SCHEDULED IN ELECTRICAL PLANS.
5. REFER TO MECHANICAL, ELECTRICAL SHEETS FOR DEVICE SCHEDULES.

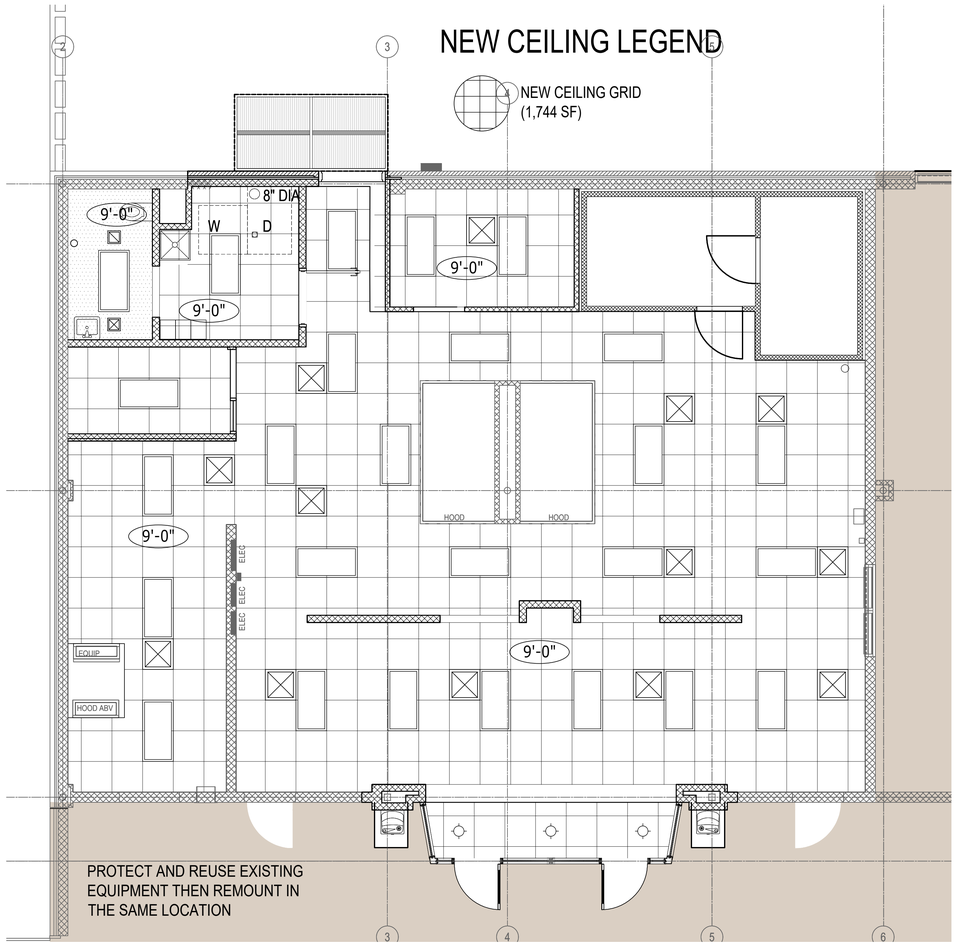
RCP - NUMBERED NOTES

01 PROVIDE 30"x30" MIN. ACCESS HATCH IN SOFFIT CENTERED ON MOTOR.

02 AFTER LOWERING THE NEW POWER RETRACTION SYSTEM. REPAIR AND PAINT SOFFITS AND SIDWALLS OF FURR TO MATCH EXISTING.

03 SEE SHEET M2.02 FOR ROOF PENETRATION. MATCH EXISTING ROOF CONSTRUCITON AND MAINTAIN INTEGRITY OF WARRANTY CURRENTLY IN PLACE.

2 RCP GENERAL NOTES

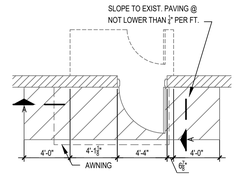


1 REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

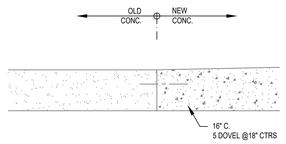
3 FOOD SERVICE AREA ELEVATION

SCALE: 3/16" = 1'-0"



5 RAMP @ REAR DOOR

SCALE: 3/16"=1'-0"



A

SCALE: 1/2"=1'-0"

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FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PECAN GROVE ELEMENTARY SCHOOL
3330 OLD S DRIVE
RICHMOND, TX 77406

SEAL

REGISTERED ARCHITECT
ROBERT L. WILLIAMS
22651
STATE OF TEXAS

28 AUG 2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

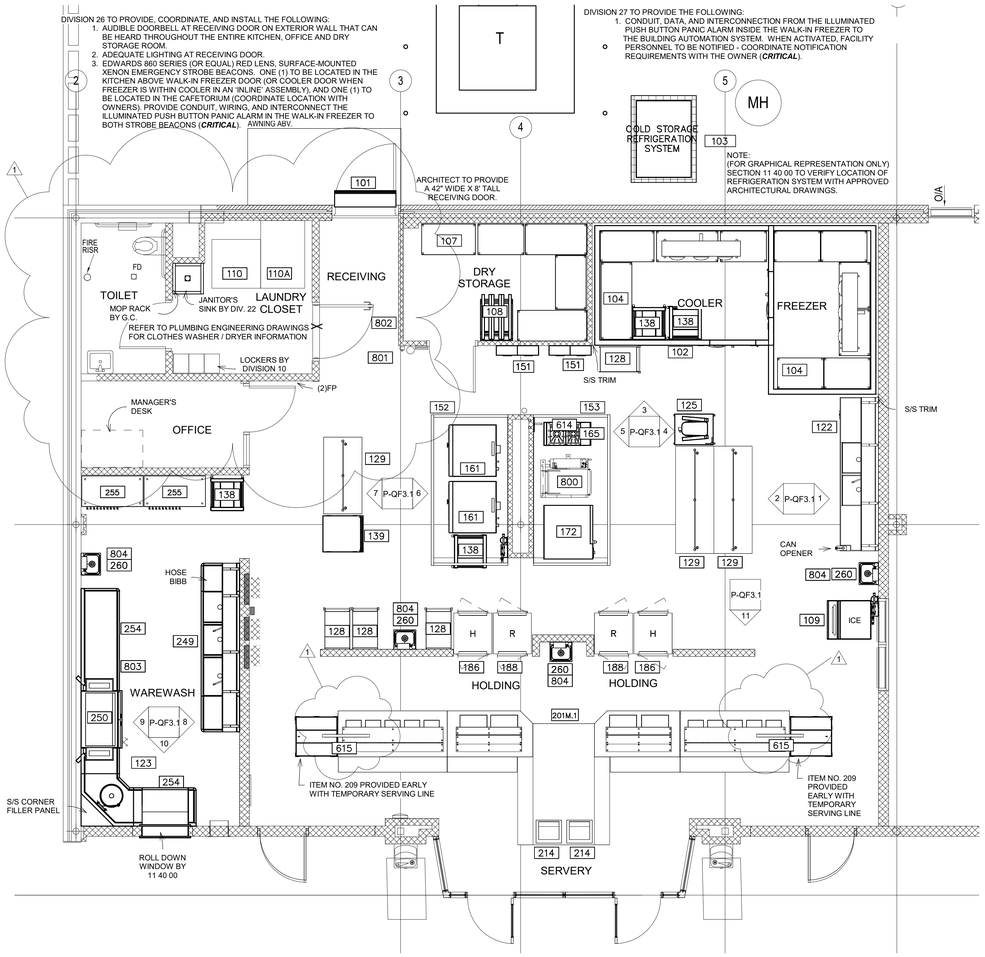
PROJ. NO.: 23-25
DATE: 07/28/25
ADDENDUM NO. 3 - AUG 28, 2025

REFLECTED CEILING PLAN

p-A.401

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\P-Pecan Grove ES\p-A.401 REFLECTED CEILING PLAN.dwg Aug 27, 2025 - 5:47pm

FOOD SERVICE DRAWING INDEX	
FDP SHEET NUMBER	FDP SHEET NAME
P-QF0.0	FS GENERAL COORDINATION NOTES
P-QF1.0	FS EQUIPMENT PLAN
P-QF1.1	FS FACILITY MODEL
P-QF1.2	FS EQUIPMENT MODEL
P-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
P-QF1.4	FS PLUMBING PLAN
P-QF1.5	FS ELECTRICAL PLAN
P-QF1.6	FS CONDENSING UNITS
P-QF1.7	FS WALK-INS
P-QF1.8	FS SERVING LINE
P-QF1.9	FS SERVING LINE
P-QF2.0	FS DEMO PLAN
P-QF2.1	FS TEMPORARY SERVING
P-QF3.1	FS ELEVATIONS
P-QF4.1	FS SECTIONS & DETAILS
P-QF4.2	FS DETAILS
P-QF4.3	FS DETAILS



1 FOOD SERVICE EQUIPMENT PLAN
1/4" = 1'-0"

FOOD SERVICE EQUIPMENT SCHEDULE					
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH DEPARTMENT COORDINATION NOTES					
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS	MANUFACTURER	MODEL
	336				
101	1	AIR SCREEN		MARS	STD248-1UA-OB
102	1	COLD STORAGE ASSEMBLY		AMERICAN PANEL	
103	1	COLD STORAGE REFRIGERATION SYSTEM			
104	2	COLD STORAGE SHELVING		METRO	METROMAX Q
107	1	DRY STORAGE SHELVING		METRO	METROMAX Q
108	1	CAN RACK		NEW AGE	1250CK
109	1	ICE MACHINE W/ BIN		MANITOWOC	UYF0310A
110	1	CLOTHES WASHER	BY G.C.		
110A	1	CLOTHES DRYER	BY G.C.		
122	1	TWO COMPARTMENT SINK WITHOUT DISPOSER		CUSTOM FABRIACTED	
123	1	DISPOSER - 3HP		SALVAJOR	300-CA-18-ARSS-LD
125	1	20 QT. MIXER W/STAND		HOBART	HL200
128	4	UTILITY CART		LAKESIDE	522
129	3	WORKTABLE W/S.BAR UT.RACK		CUSTOM FABRIACTED	
138	4	PAN RACK		CRES COR	207-UA-13A
139	1	INSUL MOBILE PROOFER		CRES COR	H-137-WSUA-12D
151	2	FIRE PROTECTION SYSTEM		ANSUL	R102
152	1	EXHAUST HOOD	EXISTING		
153	1	EXHAUST HOOD	EXISTING		
161	2	CONVECTION OVEN		BLODGETT	DFG-200 DBL
165	1	TWO BURNER RANGE		VULCAN	V2B18B
172	1	COMBI OVEN		RATIONAL	ICP 6-FULL/6-FULL N/G
186	2	PASS-THRU HEATED CABINET-1DR		TRAULSEN	AHF132WP
188	2	PASS-THRU REFRIGERATOR-1DR		TRAULSEN	AHT132WPUT
201M.1	1	SERVING COUNTER-MODULAR		COUNTERCRAFT	SCOL-408-MOD
214	2	CASH REGISTER	OWNER FURNISHED		
249	1	THREE COMPARTMENT SINK NO DISPOSER		CUSTOM FABRIACTED	
250	1	DISHMACHINE		HOBART	CL44-BAS
254	2	SOILED & CLEAN DISHTABLE		CUSTOM FABRIACTED	
255	2	MOBILE DRYING RACK		METRO	PR48VX3
260	4	HAND SINK	FURNISHED & INSTALLED BY DIV. 22		
614	1	FILL FAUCET		T&S	B-0610
615	2	MENU MONITOR	BY OWNER		
800	1	15 GAL. BRAISING PAN		GROEN	BPM-15GA
801	1	S/S CORNER GUARDS	LOCATED ON EVERY EXPOSED CORNER THROUGHOUT KITCHEN	CUSTOM FABRIACTED	
802	1	WALL BUMPERS	LOCATED ON ALL EXPOSED BUILDING WALLS	PAWLING	MD-1
803	1	WATER SOFTENER		HOBART	WS-40
804	4	S/S SPLASH GUARDS			

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
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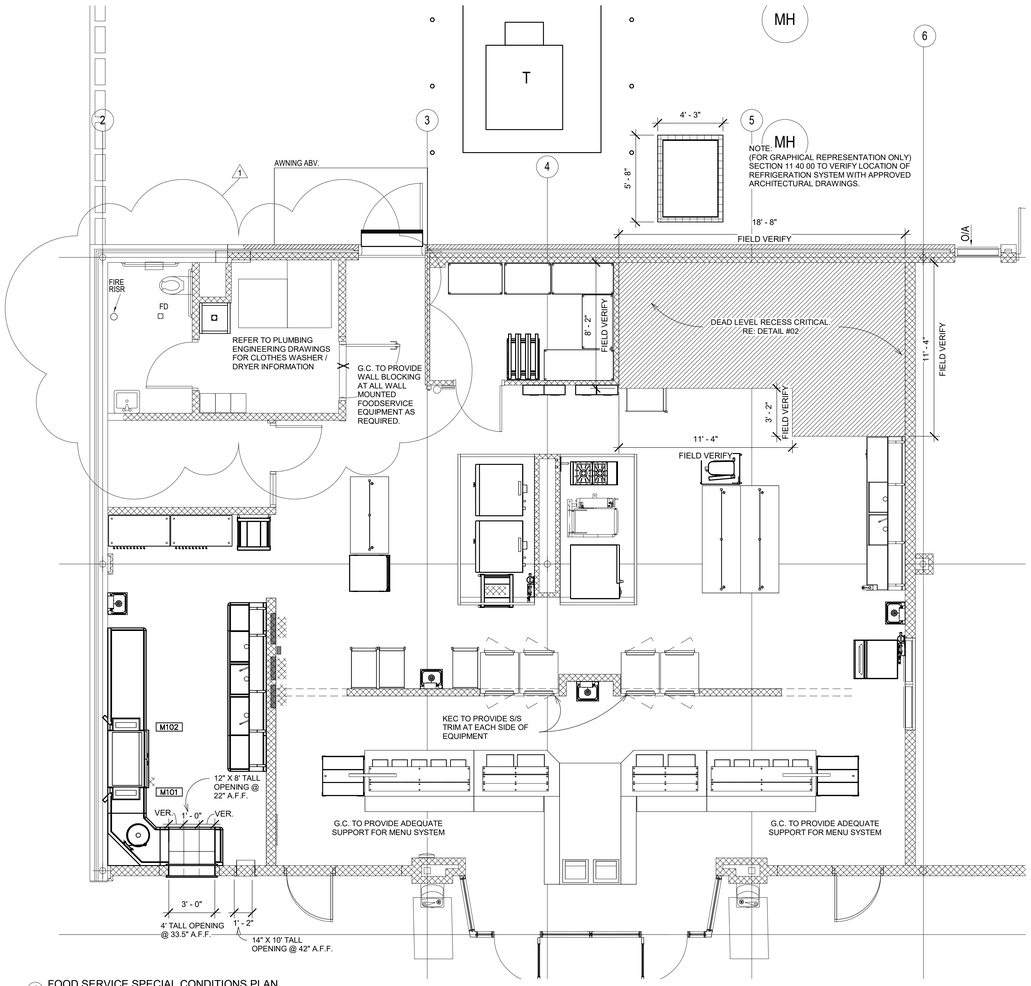
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS EQUIPMENT PLAN

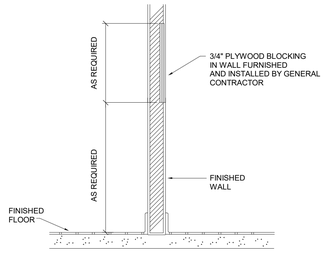
P-QF1.0

FOOD SERVICE MECHANICAL SCHEDULE						
REFER TO SHEET QF1 FOR MECHANICAL COORDINATION NOTES						
FDP NO.	FDP QTY	FDP TYPE	FDP SIZE	FDP LOC	FDP CFM	FDP S.P.
M101	1	EXHAUST	4" X 16"		400	0.30"
M102	1	EXHAUST	4" X 16"		800	0.30"

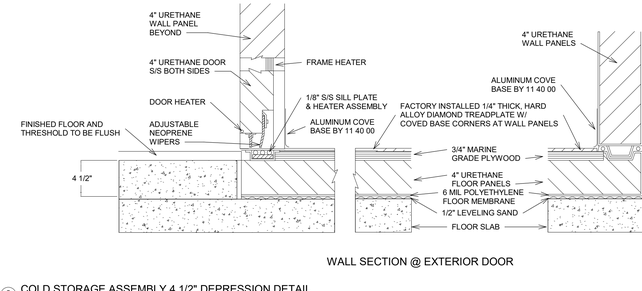


1 FOOD SERVICE SPECIAL CONDITIONS PLAN
1/4" = 1'-0"

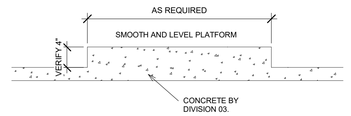
NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION AND SIZE OF WALL BLOCKING.



5 WALL BLOCKING DETAIL
NOT TO SCALE

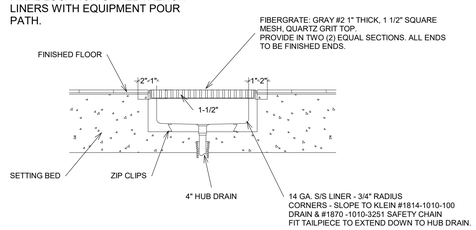


3 COLD STORAGE ASSEMBLY ENCLOSURE PANEL DETAIL
NOT TO SCALE



4 COLD STORAGE ASSEMBLY REFRIGERATION SYSTEM GROUND MOUNT 4" PLATFORM DETAIL
NOT TO SCALE

NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION OF ALL TRENCH LINERS WITH EQUIPMENT POUR PATH.



6 TRENCH LINER DETAIL
NOT TO SCALE

SLAB TO BE MODIFIED AS REQUIRED TO ALLOW FOR A 4 1/2" DEPRESSION SLAB. PROVIDE NEW LEVEL CONCRETE PAD FOR COLD STORAGE ASSEMBLY.

WALL SECTION @ EXTERIOR DOOR

2 COLD STORAGE ASSEMBLY 4 1/2" DEPRESSION DETAIL
NOT TO SCALE

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PROJ. NO.: 23-25
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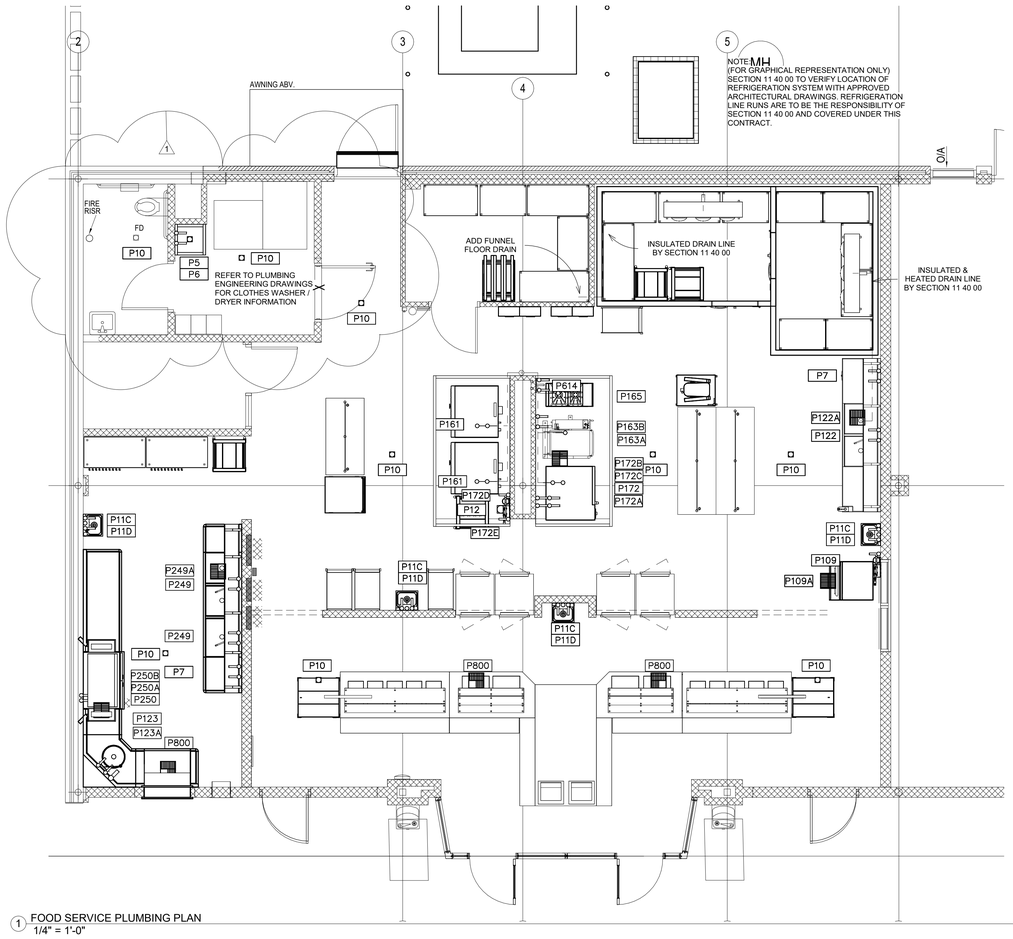
FS SPECIAL CONDITIONS & MECHANICAL PLAN

P-QF1.3

FOOD SERVICE PLUMBING SCHEDULE						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P5	3/4"	H & C WATER	JANITOR SINK	WALL	48"	JANITOR SINK BY PLUMBER
P6	4"	FLOOR DRAIN	JANITOR SINK	FLOOR	VERIFY	JANITOR SINK BY PLUMBER
P7	3/4"	H & C WATER	HOSE BIBB	WALL	18"	BTC
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	---
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P12	VERIFY	FLOOR DRAIN	EQUIP. DRAIN	FLOOR	VERIFY	NO SLOPE
P15	4"	FLOOR DRAIN	FUNNEL FLOOR DRAIN	FLOOR	0"	---
P109	3/4"	COLD WATER	WATER/ ICE	WALL	60"	BTC
P109A	12" SQ.	FLOOR SINK	ICE MACHINE	FLOOR	0"	FULL GRATE
P122	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P122A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	3/4 GRATE
P123	3/4"	H & C WATER	FAUCET / DISPOSER	WALL	13"	BTC
P123A	2"	DIRECT DRAIN	DISPOSER	WALL	10"	BTC
P161	(2)3/4"	NATURAL GAS	CONVECTION OVEN	WALL	18"/36"	BTC - 60 MBTU/HR EACH
P163A	3/4"	NATURAL GAS	TILT BRAISING PAN	WALL	18"	BTC - 65 MBTU/HR
P163B	3/4"	H & C WATER	TILT BRAISING PAN	WALL	36"	BTC
P165	1"	NATURAL GAS	RANGE	WALL	18"	BTC - 70 MBTU/HR
P172	(2)3/4"	COLD WATER	COMBI OVEN	WALL	24"/48"	BTC - INTERCONNECT THRU FILTERS
P172A	3/4"	COLD WATER	COMBI OVEN	WALL	48"	BTC
P172B	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE
P172C	(2)3/4"	NATURAL GAS	COMBI OVEN	WALL	18"/36"	BTC - 105 MBTU/HR EACH
P172D	3/4"	COLD WATER	COMBI OVEN	WALL	66"	BTC; INTERCONNECT TO P172
P172E	3/4"	COLD WATER	COMBI OVEN WATER FILTER	WALL	66"	BTC
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P249A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	THREE QUARTER GRATE
P250	12" SQ.	FLOOR SINK	BOOSTER / DISHMACHINE	FLOOR	18"	BTC
P250A	3/4"	HOT WATER	DISHMACHINE	WALL	18"	EXT. THRU W.FILTER TO BOOSTER / DISH MACHINE - 140DEG.MIN.
P250B	3/4"	COLD WATER	DISHMACHINE	WALL	18"	BTC
P614	1/2"	H & C WATER	FILL FAUCET	WALL	42"	BTC
P800	12" SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE



1 FOOD SERVICE PLUMBING PLAN
1/4" = 1'-0"

SECTION 11 40 00 TO PROVIDE LOOSE WITH FOOD SERVICE EQUIPMENT. INSTALLATION BY DIV. 22 & 26.

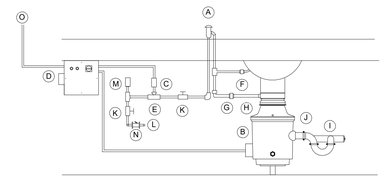
- (A) VACUUM BREAKER
- (B) DISPOSER
- (C) TIME DELAY
- (D) CONTROL PANEL
- (E) SOLENOID VALVE

DIVISION 22 TO PROVIDE AND INSTALL

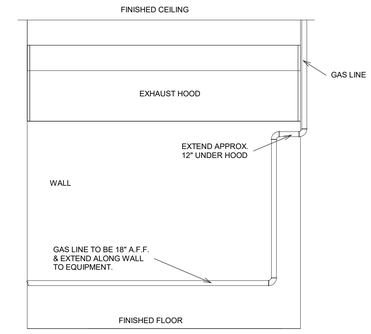
- (F) 1/2" CW INLET
- (G) FLOW CONTROL
- (H) 1/2" CW
- (I) 2" DRAIN LINE WITH P-TRAP & Y ADAPTOR
- (J) 1-1/2" TAILPIECE
- (K) GATE VALVE
- (L) 1/2" CW SUPPLY
- (M) SHOCK STOP
- (N) RPZ BACK FLOW PREVENTOR

DIVISION 26 TO PROVIDE AND INSTALL

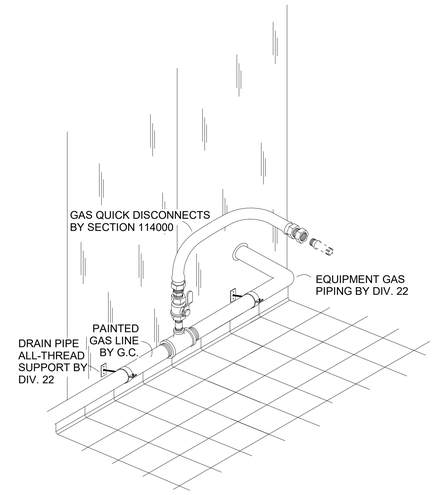
- (O) POWER SUPPLY



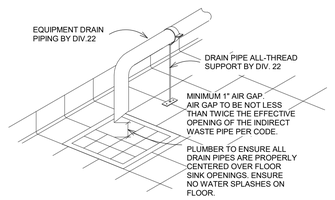
6 DISPOSER WITH VACUUM BREAKER DETAIL
NOT TO SCALE



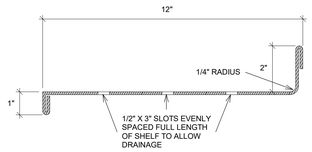
7 EXHAUST HOOD - GAS LINE ROUTING DETAIL
NOT TO SCALE



3 GAS DISCONNECT DETAIL
NOT TO SCALE



5 DRAIN PIPING FASTENER DETAIL
NOT TO SCALE



8 WAREWASH - PERFORATED OVER SHELF DETAIL
NOT TO SCALE

HW	HOT WATER	FFD	FUNNEL FLOOR DRAIN		
CW	COLD WATER	EVC	EXHAUST VENT CONNECTION		
HTW	180 F HOT WATER	SVC	SUPPLY VENT CONNECTION		
	CHILLED WATER	FR	DIRECT-CONNECTED FLUE RISER		
W	DIRECT WASTE	PS	PIPE SLEEVE		
IW	INDIRECT WASTE		COMPRESSED AIR		
	GAS SUPPLY		CO2		
	STEAM SUPPLY	AFF	ABOVE FINISHED FLOOR		
CR	CONDENSATE RETURN	BTC	BRANCH TO CONN. ON EQUIP		
DR	DRAIN	DFA	DROP FROM ABOVE		
FD	FLOOR DRAIN	CLG	CEILING		
FST	FLOOR SINK 3/4 GRATE				
FSH	FLOOR SINK 3/4 GRATE				

2 PLUMBING SYMBOLS
NOT TO SCALE

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7/15/2025
ELECTRONICALLY SEALING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 488584119 ON: 07/15/2025

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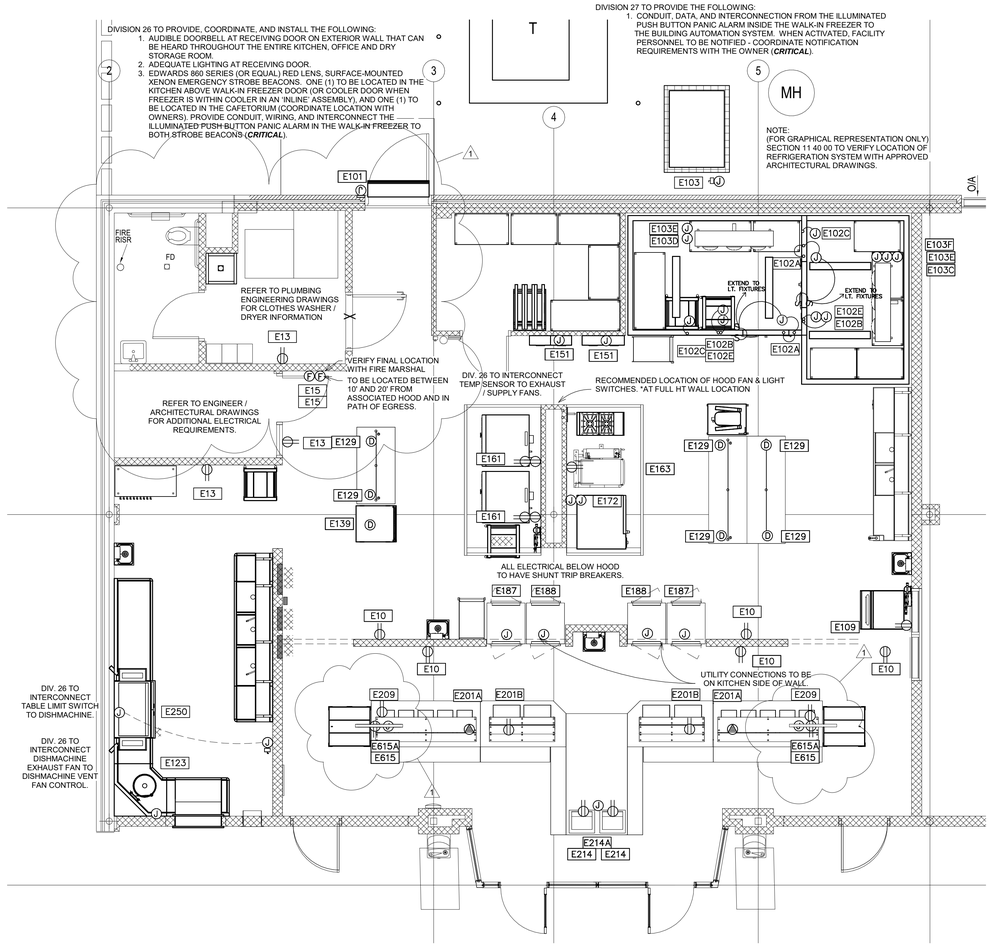
PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS PLUMBING PLAN

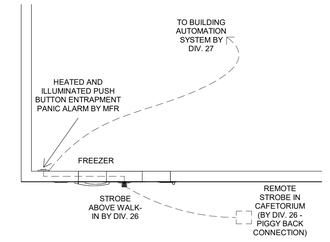
P-QF1.4

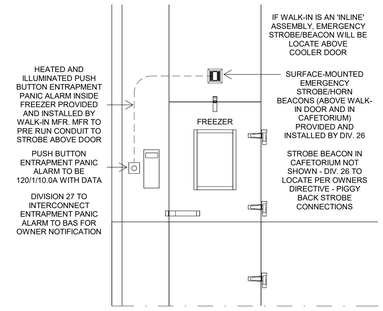
FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E10	DR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E13	WPR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E15	JB	---	---	---	FIRE PROT. SYSTEM	WALL	48"	RECESSED EMPTY CONDUIT FOR FIRE PULL
E101	JB	5.1A	120	1	AIR SCREEN	WALL	82"	BTC; MAGNETIC REED SWITCH ON DOOR JAMB & DOOR
E102A	JB	16.0A	120	1	DOOR HEATER/LIGHTS	CLG	DFA	BTC
E102B	JB	5.0A	120	1	TEMP. ALARM	CLG	DFA	BTC
E102C	JB	5.0A	120	1	PRESSURE RELIEF PORT	CLG	DFA	BTC
E102E	JB	10.0A	120	1	PANIC ALARM BUTTON	CLG	DFA	BTC-INTERCONNECT TO STROBE LIGHT/HORN ABOVE FREEZER DOOR AND IN CAFETORIUM
E103	JB/DS	21.9A	208	3	REFRIGERATION SYSTEM	VERIFY	VERIFY	BTC
E103C	JB	9.1A	208	1	FREEZER COIL	CLG	DFA	BTC
E103D	JB	1.8A	120	1	COOLER COIL	CLG	DFA	BTC
E103E	JB	---	---	---	DATA CONNECTION	CLG	DFA	BTC; RUN TO NEAREST IDF / MDF ROOM
E103F	JB	16.0A	120	1	DRAIN LINE HEATER	CLG	DFA	BTC; DEDICATED CIRCUIT
E109	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E123	JB	3.0HP	208	3	DISPOSER	WALL	24"	BTC; CONNECT THRU C.P. TO DISPOSER
E129	DCR	16.0A	120	1	TABLE RECEPTACLE	CLG	84"	TWISTLOCK PLUG & RECEPTACLE
E139	DCR	15.0A	120	1	INSUL. MOBILE PROOFER	CEILING	DFA	--

FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC
E161	(2)DR	6.0A EA.	120	1	CONVECTION OVEN	WALL	24"/48"	SHUNT TRIP BREAKER
E163	DR	5.0A	120	1	TILT BRAISING PAN	WALL	24"	SHUNT TRIP BREAKER
E172	(2)JB	15.0A EA.	208	1	COMBI OVEN	WALL	24"/48"	BTC- SHUNT TRIP BREAKER
E187	JB	15.5A	120/208	1	HEATED CABINET	WALL	96"	BTC; MOUNT ON KITCHEN SIDE
E188	JB	7.2A	120	1	REFRIGERATOR	WALL	96"	BTC; MOUNT ON KITCHEN SIDE-OMIT PLUG, UNIT TO BE HARDWIRED
E201A	PMR	28.0A	208	1	HOT FOOD COUNTER	FLOOR	4.5"	BTC
E201B	PMR	16.0A	120	1	COLD FOOD COUNTER	FLR	4.5"	---
E209	PMR	8.0A	120	1	DROP FRONT MILK COOLER-8 CASE	FLR	4.5"	---
E214	PMR	16.0A	120	1	CASH REGISTER	FLR	4.5"	DEDICATED CIRCUIT
E214A	CS	---	---	---	POS	FLOOR	6"	BTC; CONDUIT W/DATA LINE TO RUN TO MANAGER'S OFFICE OR IDF ROOM-VERIFY
E250	JB/DS-JB	51.7A	480	3	DISHMACHINE	WALL	66"	BTC; EXTEND FROM JB/DS AT NEAREST WALL
E615	DR	5.0A	120	1	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE DCO AT VIDEO LOCATION
E615A	JB	---	---	---	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE JB AT DATA LOCATION

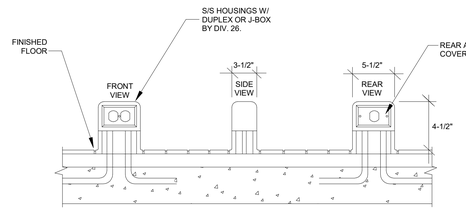


1 FOOD SERVICE ELECTRICAL PLAN
1/4" = 1'-0"

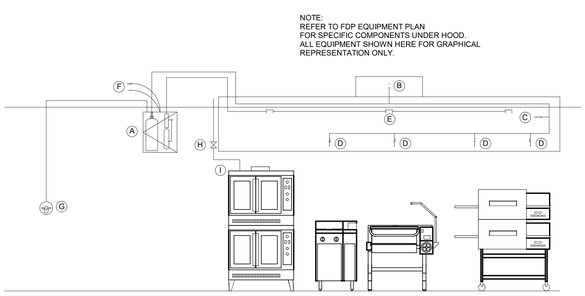




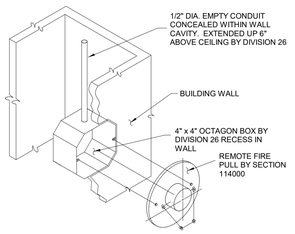
6 COLD STORAGE ASSEMBLY ENTRAPMENT PANIC ALARM DETAIL
NOT TO SCALE



3 PEDESTAL MOUNTED RECEPTACLE DETAIL
NOT TO SCALE



4 FIRE PROTECTION SYSTEM TYPICAL DETAIL
NOT TO SCALE



5 FIRE PROTECTION SYSTEM RECESSED FIRE PULL DETAIL
NOT TO SCALE

	SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES
•	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
	DR	DUPLEX RECEPTACLE		WPR	WATERPROOF RECEPTACLE (SPRING COVER)
	SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER
	SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT
	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
	PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR
	DCR	DROP CORD RECEPTACLE		CS/JB	JUNCTION BOX ON PEDESTAL
	JB	JUNCTION BOX ON CEILING		SW	SWITCH
	JB	JUNCTION BOX IN WALL		D	DATA
	JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26			

2 ELECTRICAL SYMBOLS
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PECAN GROVE ELEMENTARY SCHOOL
3330 OLD S DRIVE
RICHMOND, TX 77406

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
488543119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM IS ELECTRONICALLY SEALED AND THE SIGNATURE ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 488543119 ON 07/18/2025

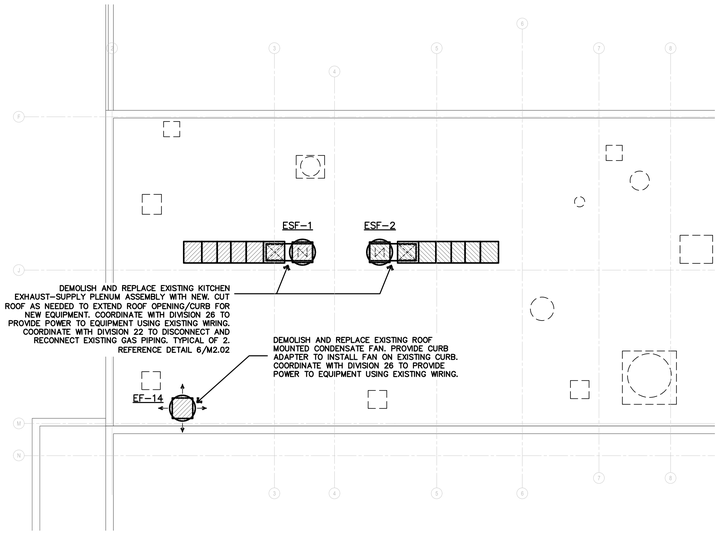
ARCHITECTS

ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

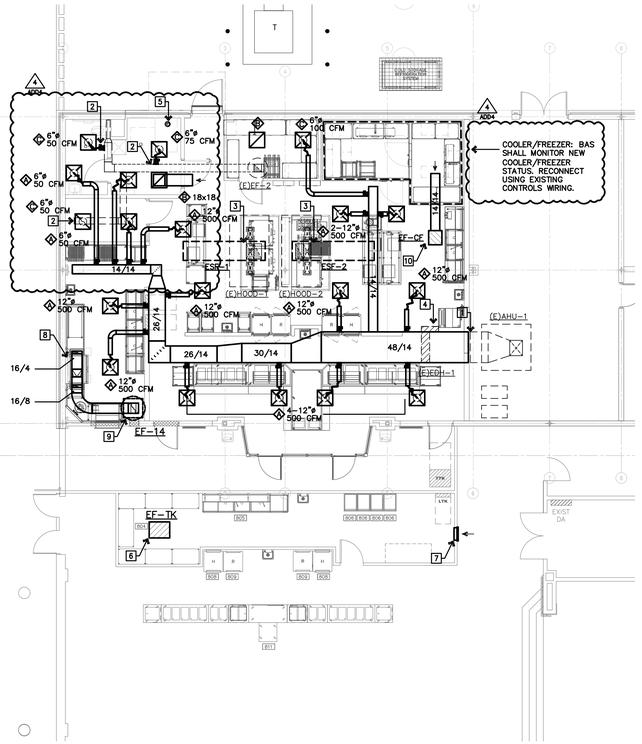
PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS ELECTRICAL PLAN

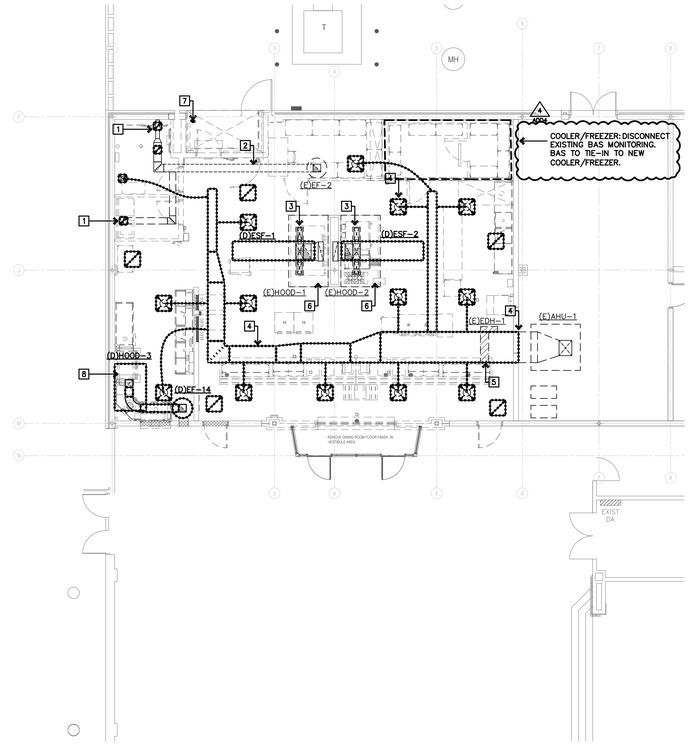
P-QF1.5



3 MECHANICAL ROOF FLOOR PLAN
SCALE: 1/8" = 1'-0"



2 RENO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"



1 DEMO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A	CEILING DIFFUSER – 24" X 24" FACE, PATTERN TYPE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE SCD A1–12" X 12"
B	CEILING RETURN GRILLE – 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE PDFR B1–12" X 12"
C	CEILING EXHAUST GRILLE – 24" X 24" PERFORATED FACE, STEEL CONST., WHITE FINISH, NECK SIZE SHOWN, U.L. LISTED PRICE PDDR C1–12" X 12"

NOTES:
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPES FOR AIR DEVICES.

4/AD04

KITCHEN HOOD REFURBISHMENT NOTES

HOOD REFURBISHMENT FOR KITCHEN HOODS (QUANTITY 2):
- STEAM WASH AND DEEP CLEAN STAINLESS STEEL HOOD ASSEMBLY, CASING, AND SUPPLY GRILLES WHERE APPLICABLE.
- REPLACE GREASE FILTER RACKS.
- CLEAN EXISTING MAKE-UP AIR AND GREASE EXHAUST DUCT.
- RELAMP EXISTING LIGHT FIXTURES WITH NEW 4000K BULBS LISTED FOR USE IN AN ENCLOSED KITCHEN HOOD FIXTURE.
- COORDINATE WITH DIVISION 11 FOR REPLACEMENT OF ANSUL FIRE SUPPRESSION SYSTEM.
- HOOD ASSEMBLIES SHALL BE CLEANED TO MEET THE STANDARDS ESTABLISHED IN NFPA STANDARD 96.

KITCHEN HOOD EXHAUST & MAKE-UP AIR UNIT SCHEDULE

MARK	ESF-1,2
SERVES	KITCHEN HOOD-1 & 2
SUPPLY SECTION	
TYPE	INDIRECT GAS-FIRED MAKE-UP AIR UNIT
DRIVE	DIRECT
SPEED CONTROL	VFD
SUPPLY CFM	2250
EXT. S.P. (IN. W.G.)	0.375
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	4.8 A
UNIT MOCP	15 A
HEATING MEDIUM	NATURAL GAS
INPUT/OUTPUT (MBH)	150.0/121.5
TURNDOWN RATIO	4:1
MANUFACTURER	GREENHECK
MODEL	IGX-P109-H12-MF-E
EXHAUST SECTION	
TYPE	UPBLAST BELT DRIVE CENTRIFUGAL
EXHAUST CFM	3600
EXT. S.P. (IN. W.G.)	0.75
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	3.75 A
UNIT MOCP	15 A
MANUFACTURER	GREENHECK
EXHAUST FAN MODEL	CUBE-200-15

NOTES
1. EXHAUST FAN: PROVIDE FAN WITH PRE-FABRICATED ROOF CURB ADAPTER, VENTED CURB EXTENSION, HINGING KIT, HEAT BAFFLE, DRAIN CONNECTION, GREASE TRAP, AND DISCONNECT SWITCH. FANS SHALL BE UL LISTED FOR USE WITH TYPE I GREASE HOOD.
2. EXHAUST FAN: PROVIDE NEW MOTOR STARTER, SIZED FOR EXHAUST FAN MOTOR AND INSTALLED IN PLACE OF EXISTING. REFERENCE THE SPECIFICATIONS FOR STARTER REQUIREMENTS. COORDINATE WITH DIV.25 FOR RE-TERMINATION OF PERMISSIVE ON/OFF CONTROL. COORDINATE WITH DIV.26 FOR RE-TERMINATION OF LOCAL HOOD SWITCH INTERLOCK FOR START/STOP CONTROL.
3. SUPPLY FAN/FURNACE: FLUE GAS FROM HEATING COIL SHALL BE POWER VENTED.
4. SUPPLY FAN/FURNACE: WEATHERHOOD WITH ALUMINUM MESH.
5. SUPPLY FAN/FURNACE: 5 YEAR HEAT EXCHANGER WARRANTY.
6. SUPPLY FAN/FURNACE CONTROLS: INTEGRAL HEATER CONTROLS WITH BAS INTERLOCK FOR PERMISSIVE ON/OFF AND LOCAL SWITCH INTERLOCK FOR CONTROL FROM KITCHEN HOOD SWITCH. FURNACE CONTROLS SHALL BE PROGRAMMED FOR 64°F LAT, WITH A LOCKOUT FOR O/A TEMPERATURES ABOVE THE LAT SETPOINT. COORDINATE WITH DIV.25 AND DIV.26 FOR CONTROLS AND SWITCH INTERLOCKS.
7. TWO POINT POWER CONNECTION: ONE FOR EXHAUST FAN AND ONE FOR INTAKE/SUPPLY FAN.
8. INTERLOCK FAN(S) WITH ASSOCIATED COOKING HOOD
9. INTERLOCK FAN WITH SWITCH ON KITCHEN HOOD.
10. UNIT TO BE PROVIDED WITH GALVANIZED STEEL FAN PACK EXTENSION/COMBINATION CURB.
11. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN (ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS 4/AD04

MECHANICAL RENO KEYED NOTES

1. TIE-IN NEW DUCTWORK TO EXISTING DUCTWORK AT WALL PENETRATION.
2. CONNECT NEW AIR DEVICE AND TAP TO EXISTING E/A TRUNK DUCT.
3. REWORK EXISTING EXHAUST AND SUPPLY DUCTWORK FROM EXISTING KITCHEN HOOD UP TO FAN, AS REQUIRED, WITH NEW TRANSITIONS AND SUPPLY AIR DUCTWORK OFFSETS TO MATE WITH NEW FAN CURB.
4. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
5. NEW DRYER VENT DUCT AND VENT CAP. REFER TO DETAIL 4/M2.02.
6. TEMP. KITCHEN – CEILING MOUNTED CABINET EXHAUST FAN. REFER TO DETAIL 1/M2.02.
7. TEMP. KITCHEN – 24"X24" SIDE WALL GRILLE. SURFACE MOUNT OPTIONAL. AUXILIARY FRAME. TITUS CT-700.
8. RECONFIGURE DUCTWORK TO CONNECT TO NEW DISHMACHINE HOOD OUTLETS. REF. KITCHEN CONSULTANT DRAWINGS FOR EXACT DIMENSIONS OF DUCT CONNECTIONS.
9. CONDENSATE EXHAUST DUCT UP THROUGH ROOF TO NEW EXHAUST FAN SET ON NEW ROOF CURB. REUSE EXISTING ROOF PENETRATION.
10. INLINE FAN INSTALLED ABOVE PLENUM. REFER TO DETAIL 2/M2.02.

MECHANICAL DEMO KEYED NOTES

1. DEMOLISH EXISTING AIR DEVICE, BRANCH DUCT, DAMPER AND TAP BACK TO TRUNK DUCT. CAP AND SEAL RESULTING OPENING.
2. EXISTING E/A TRUNK DUCT TO REMAIN.
3. DISCONNECT EXISTING S/A AND E/A DUCTWORK SERVING KITCHEN HOODS FROM FAN ASSEMBLY AND HOOD. DUCTWORK SHALL REMAIN FOR FUTURE USE/RE-CONNECTION. DEMOLISH SUPPLY AND EXHAUST FAN PLENUM ASSEMBLY SERVING KITCHEN HOODS, ALONG WITH CURB. NEW CURB TO BE PROVIDED AND INSTALLED AS PART OF RENOVATION.
4. DEMOLISH ALL EXISTING AIR DEVICES, DUCTWORK, AND DUCTWORK ACCESSORIES SERVING KITCHEN AREA BACK TO MECH. ROOM WALL PENETRATION.
5. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
6. REFURBISH EXISTING KITCHEN HOOD. REFER TO "KITCHEN HOOD REFURBISHMENT NOTES".
7. DEMOLISH AND REPLACE EXISTING DRYER EXHAUST DUCT AND FLUE VENT CAP.
8. DEMOLISH EXISTING CONDENSATE HOOD, ASSOCIATED DUCTWORK, AND ROOF EXHAUST FAN.

EXHAUST FAN SCHEDULE

MARK	EF-TK	EF-CF	EF-14
SERVES	TEMPORARY KITCHEN	COOLER/FREEZER	DISH WASHER
TYPE	CEILING CABINET	INLINE FAN	ROOF UPBLAST
DRIVE	DIRECT	DIRECT	DIRECT
SPEED CONTROL	INTEGRAL SPEED CONTROLLER	CONSTANT	CONSTANT
CFM	1055	1000	1200
EXT. S.P. (IN. W.G.)	0.3	0.35	0.60
IMP. SIZE (IN.)	8.0	13.5	14.0
HORSEPOWER (WATTS)	1/3 HP	1/6 HP	1/3 HP
VOLTAGE	120V/1-PHASE	120V/1-PHASE	120V/1-PHASE
MANUFACTURER	COOK	COOK	COOK
MODEL	GC-862	135SQN10D	CUE-140-B
SONES (MAX.)	15.0	15.0	15.0
NOTES	1 THRU 4	1 THRU 4	1 THRU 5

NOTES
1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN. FANS SHALL BE CAPABLE OF 120% OF THE SCHEDULED CFM CAPACITY.
2. INTEGRAL DISCONNECT SWITCH.
3. RUBBER IN-SHEAR ISOLATORS.
4. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.
7. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH. 4/AD04

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09/04/2025	ADDENDUM 04

4/AD04

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PECAN GROVE ELEMENTARY SCHOOL
3330 OLD SOUTH DRIVE
RICHMOND, TX 77406

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

KITCHEN AREA MECHANICAL PLANS
P-M1.01

STANTON ENGINEERING GROUP
INFO@STANTON-ENG.COM | (713) 300-4080
TEXAS ENG. FIRM REG. NO. F-01833 | 1300 W. SAM HOUSTON PARKWAY S., SUITE 125, HOUSTON, TX 77042

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MECHANICAL SYMBOL SCHEDULE

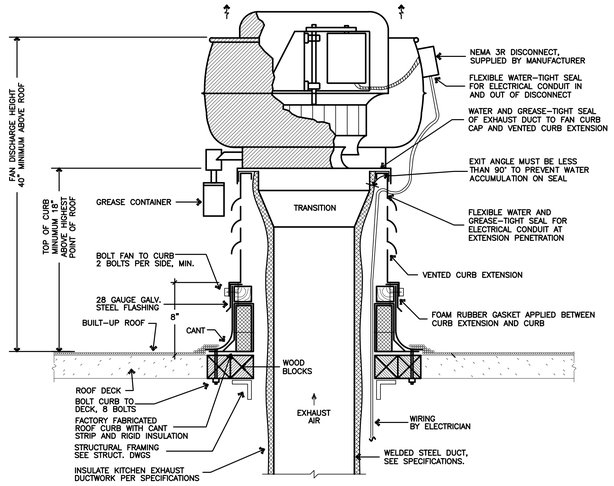
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
RS	REFRIGERANT SUPPLY
RR	REFRIGERANT RETURN
D	CONDENSATE LINE
	PETE'S PLUG
	ISOLATION VALVE
	ELECTRONIC CONTROL VALVE
	BUTTERFLY VALVE
	BALL VALVE
	UNION OR FLANGE
	STRAINER
	AUTOMATIC AIR VENT
T	LOCAL CONTROL THERMOSTAT
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	FIRE/SMOKE COMBINATION DAMPER
MD	MOTORIZED DAMPER
C	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST GRILLE
10Ø	RETURN AIR OPENING IN WALL
VD	VOLUME DAMPERS
	DUCT ELEVATION CHANGE
	90° DUCT ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
M	DAMPER MOTOR
T	TEMPERATURE TRANSMITTER
FS	FLOW SWITCH
P	DIFFERENTIAL PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
PS	STATIC PRESSURE SENSOR
PH	STATIC PRESSURE SENSOR HI-LIMIT
	ACCESS PANEL

A.P.	ACCESS PANEL
AHU	AIR HANDLING UNIT
B	BOILER
CH	CHILLER
CHP	CHILLED WATER PUMP
CVT	CONSTANT VOLUME TERMINAL
DH	DEHUMIDIFIER
E/A	EXHAUST AIR
EF	EXHAUST FAN
F&B	FACE & BYPASS
FF	FLY FAN
HDT	HORIZONTAL DRAW THROUGH
HWP	HOT WATER PUMP
KEF	KITCHEN EXHAUST FAN
KSF	KITCHEN SUPPLY FAN
O/A	OUTSIDE AIR
OBD	OPPOSED-BLADES DAMPER
PT	PRE-TREAT
R/A	RETURN AIR
RAHU	ROOF-MOUNTED AIR HANDLING UNIT
S/A	SUPPLY AIR
SA	SOUND ATTENUATOR
SF	SUPPLY FAN
SPD	SPILTER DAMPER
SZ	SINGLE ZONE
VAV	VARIABLE AIR VOLUME
VB	VAV BOX
VD	VOLUME DAMPER
VDT	VERTICAL DRAW THROUGH
VFD	VARIABLE FREQUENCY DRIVE
WH	WATER HEATER
⌀	DESIGNATION FOR "ROUND"
⬭	DESIGNATION FOR "OVAL"

GENERAL MECHANICAL NOTES

3

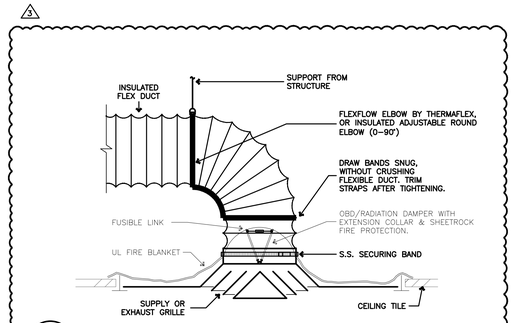
1. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION OF EQUIPMENT AND PIPING WITH THE ELECTRICAL CONTRACTOR TO INSURE NEC CLEARANCE (42 INCHES) IN FRONT OF ALL ELECTRICAL PANELS. DO NOT INSTALL DUCTWORK OR WATER PIPING OVER THE TOP OF ELECTRICAL PANELS SEE DETAIL 1/M2.01.
3. DUCT SIZES SHOWN ARE NET FREE AIR PASSAGE DIMENSIONS, DUCTS ARE NOT LINED, BUT ARE EXTERNALLY INSULATED. RUNOUTS TO CEILING OUTLETS SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET METAL WITH SPIN-IN V.D. AT TRUNK TAPS, SEE DETAIL 1 & 2/M2.01.
4. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR EXACT LOCATIONS OF CEILING OUTLETS IN RELATION TO OTHER CEILING ENTITIES. OUTLETS MUST BE COMPATIBLE WITH THE CEILING TYPES FOR THE VARIOUS AREAS.
5. IN AREAS WHERE SUPPLY AIR ENTERS CEILING CAVITY THRU RETURN AIR GRILLES AND FREE RETURNS TO AHU'S VIA CEILING CAVITY, PROVIDE RETURN AIR OPENING IN WALL--TO--DECK ABOVE CEILING THAT BLOCK PATH, REFER TO ARCHITECTURAL DRAWINGS. RETURN AIR ELBOWS SHALL BE SIZED AT 1 SQ. FT PER 400 CFM SUPPLY AIR.
6. ARRANGE PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EASY REMOVAL OF EQUIPMENT, SUB--ASSEMBLIES, COILS, FANS, MOTORS, FILTERS, ACCESS PANELS, ETC... PROVIDE UNIONS, FLANGES AND VALVES AT CONNECTIONS. PROVIDE AND INSTALL VICTAULIC JOINTS AT COILS, REF. SPECIFICATIONS. PLACE STOP VALVES ON SYSTEM SIDE OF REMOVABLE PIPE SECTIONS.
7. CONTRACTOR SHALL FIELD MEASURE STRUCTURAL ELEMENTS AND COORDINATE EQUIPMENT, PIPING AND DUCT ROUTING TO FIT EXISTING CONSTRUCTION. PROVIDE OFFSETS, BOOTS FOR ENVELOP OBSTRUCTIONS THAT CANNOT BE AVOIDED. CONSTRUCTION SHALL BE PER SMACNA STANDARDS.
8. FIELD VERFY EXISTING CONDITIONS PRIOR TO PROCUREMENT OF EQUIPMENT AND SYSTEMS.
9. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICIABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION
10. PROVIDE DUCTWORK INSULATION WITH R--VALUES MEETING OR EXCEEDING REQUIREMENTS OF IECC.
11. PROVIDE LISTED FIRE DAMPER INSTALLATIONS AT DUCT AND RETURN AIR OPENINGS AT PENETRATIONS THROUGH THROUGH RATED PARTITIONS AND BARRIERS. -- SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
12. PROTECT DUCTWORK AND MECHANICAL EQUIPMENT FROM CONSTRUCTION DUST AND DEBRIS DURING CONSTRUCTION. SEAL OPENINGS AS REQUIRED.
13. PROVIDE AND MAINTAIN TEMPORARY AIR FILTERS AT AIR HANDLERS USED DURING CONSTRUCTION.
14. PATCH AND REPAIR MECHANICAL SYSTEMS AND INSULATION DAMAGED DURING CONSTRUCTION.
15. SECURE ROOF MOUNTED EQUIPMENT TO WITHSTAND 142 MPH BASIC WIND SPEED, RISK CATEGORY III, EXPOSURE CATEGORY B, IN ACCORDANCE WITH IBC REQUIREMENTS.



6 KITCHEN UPBLAST EXHAUST FAN DETAIL

NO SCALE

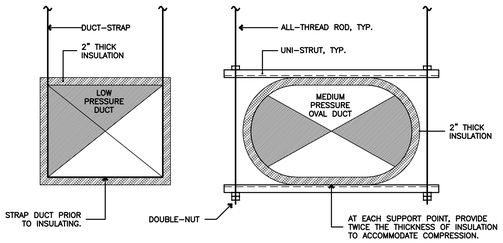
NOTES
1. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL.
2. INSTALL SHEETMETAL COVERING OVER WOOD BLOCKING IN THE AIRSTREAM OR OPEN TO THE CEILING CAVITY.



5 AIR DEVICE DETAIL

NO SCALE

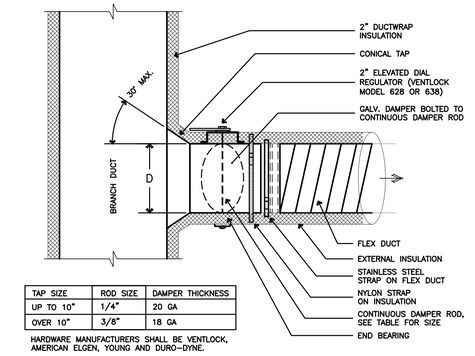
NOTES:
1. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



4 EXTERNALLY INSULATED DUCT SUPPORT DETAIL

NO SCALE

NOTES:
1. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT STRAPS.
2. DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



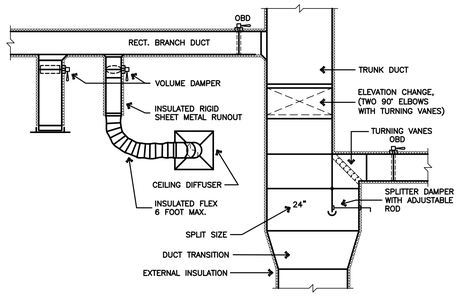
TAP SIZE	ROD SIZE	DAMPER THICKNESS
UP TO 10"	1/4"	20 GA
OVER 10"	3/8"	18 GA

HARDWARE MANUFACTURERS SHALL BE VENTLOCK, AMERICAN ELGEN, YOUNG AND DURO-DYNE.

3 DUCT TAP CONNECTION DETAIL

NO SCALE

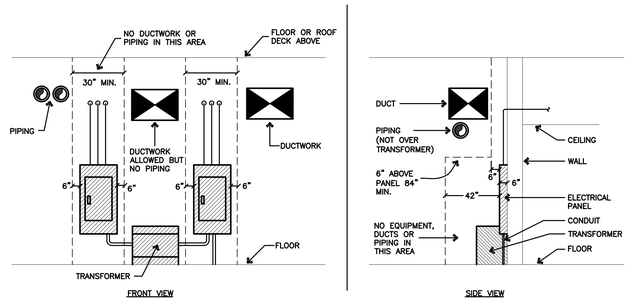
NOTES:
1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.
2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 DUCTWORK DETAIL

NO SCALE

NOTES:
1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

NOTES:
1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

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4 09/04/2025	ADDENDUM 04

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PECAN GROVE ELEMENTARY SCHOOL
3330 OLD SOUTH DRIVE
RICHMOND, TX 77406

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

MECHANICAL NOTES AND DETAILS
P-M2.01

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TEXAS ENG. FIRM REG. NO. F-018332-0

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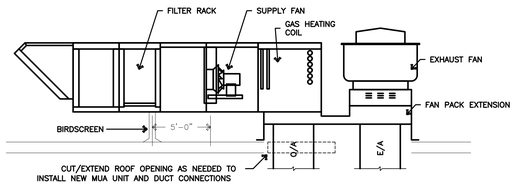


6 SUPPLY/EXHAUST KITCHEN PLENUM DETAIL

NO SCALE

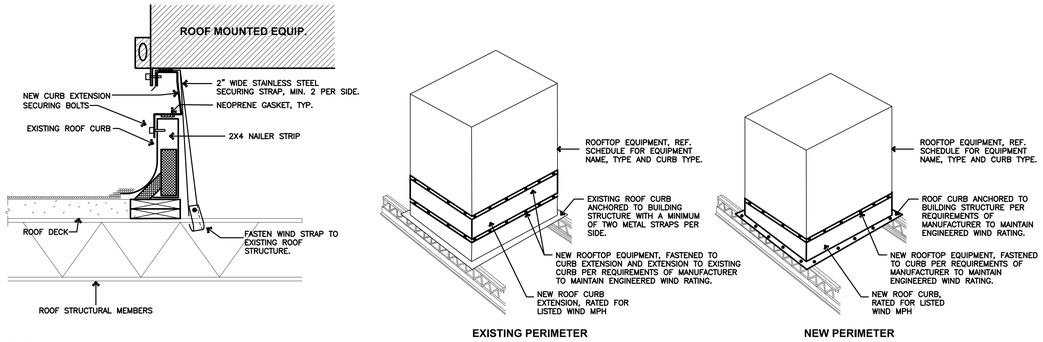
NOTES:

1. REFER TO DETAIL 6/M2.02 FOR CURB ANCHORING TO SATISFY WIND RATING REQUIRMENT. EQUIPMENT SHALL BE ABLE TO WITHSTAND 120 MPH WINDS.

ROOF MOUNTED EQUIPMENT

MARK	EQUIPMENT TYPE	CURB TYPE
EF-14	ROOF FAN	EXISTING PERIMETER
ESF-1,2	ROOF EXHAUST & MAKE-UP AIR UNIT	NEW PERIMETER

1. ALL ROOFTOP EQUIPMENT IS TO BE INSTALLED ON NEW ROOF SUPPORTS, AND IS SUBJECT TO THE INSTALLATION REQUIREMENTS OF THIS DETAIL.

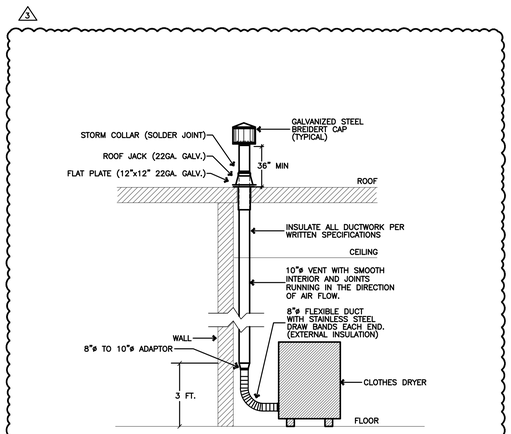


5 CURB MOUNTED EQUIPMENT ANCHORING

NO SCALE

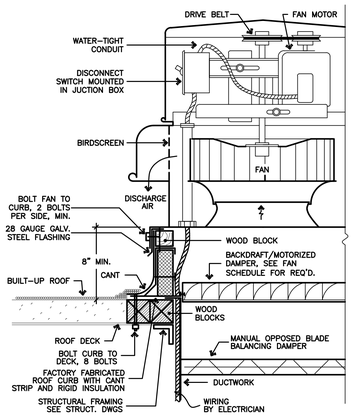
NOTES:

1. EQUIPMENT CURB AND EQUIPMENT ANCHORING BRACKETS SHALL BE DESIGNED TO WITHSTAND AN ASCE 7-22 WIND HAZARD RATING OF 147 MPH, FOR A CATEGORY III BUILDING AT THE PROJECT ADDRESS. THE CURB PROVIDER SHALL INCLUDE STAMPED DRAWINGS OF THE CURB AND ANCHORING DEMONSTRATING COMPLIANCE.



4 COMMERICAL CLOTHES DRYER VENT

NO SCALE

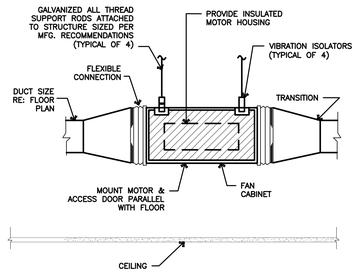


3 ROOF EXHAUST FAN AND VENT DETAIL

NO SCALE

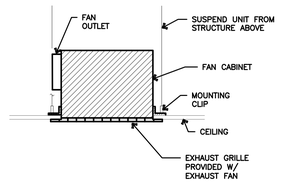
NOTES:

1. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.
2. ROOF VENT WILL NOT HAVE FAN/MOTOR ASSEMBLY, DISCONNECT SWITCH OR OBD.
3. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL WHERE APPLICABLE.
4. ALL FANS SCHEDULED TO BE PROVIDED WITH 140MPH WIND RATING, INCLUDING FACTORY PROVIDED CURB. CURB INSTALLATION SHALL FOLLOW MANUFACTURER'S REQUIREMENTS FOR SECURING TO ROOF AND EQUIPMENT WHERE IT DIFFERS FROM THE DETAIL.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 INLINE EXHAUST FAN DETAIL

NO SCALE



1 CABINET EXHAUST FAN

NO SCALE

ISSUE:

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MECHANICAL DETAILS (CONT'D.)

P-M2.02

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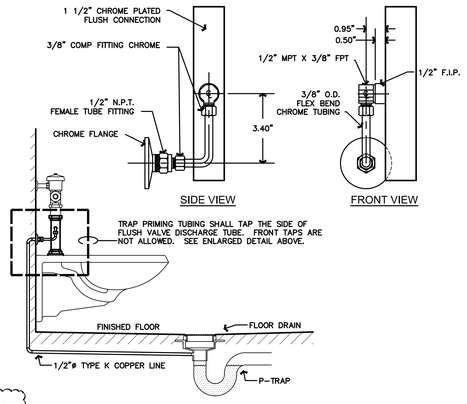
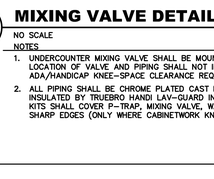


12 FLUSH VALVE TRAP PRIMING TUBE DETAIL

NO SCALE

MI-FAB MODEL MI-702-MOD FLUSH VALVE TRAP PRIMER, OR EQUAL

TANKLESS WATER HEATER SCHED.		
MARK	IEWH-1	
SERVES	LAVATORY	
LOCATION	BELOW COUNTER	
HEATER KW	1.8 KW	
TEMP RISE (@ 0.5 GPM)	25°F	
VOLTAGE/PHASE	120V/1PH	
EEMAX MODEL	SPEX1812T	

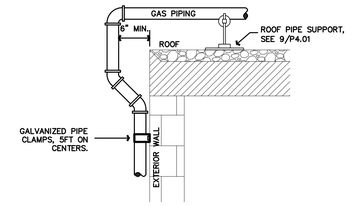


11 TANKLESS WATER HEATER

NO SCALE

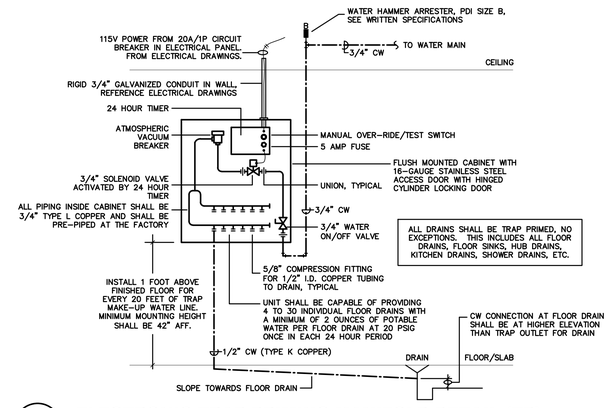
NOTES:

1. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FURNISH & INSTALL 0.5-GPM AERATOR ON FAUCET COMPATIBLE WITH TANKLESS EWH REQUIREMENTS.
5. WATER HEATER SHALL HAVE INTEGRAL ASSE-1070 COMPLIANT TEMPERED MIXING VALVE.



13 GAS PIPING WALL-TO-ROOF TRANSITION DETAIL

NO SCALE

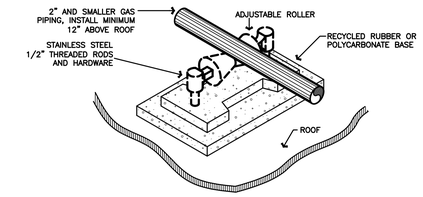


10 ELECTRONIC TRAP PRIMING MANIFOLD DETAIL (TP)

NO SCALE

NOTES:

1. REFERENCE SCHEDULE ON SHEET P3.00

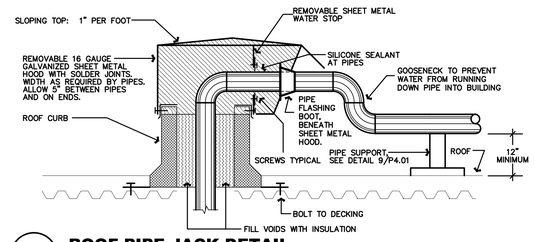


14 GAS PIPING ROOF SUPPORT DETAIL

NO SCALE

NOTES:

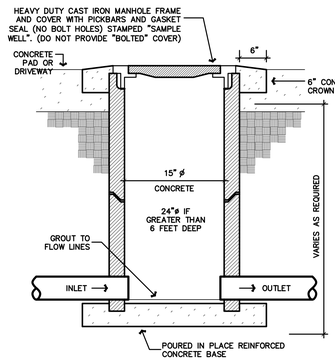
1. GAS PIPING SUPPORT SHALL BE PORTABLE PIPE HANGERS, INC. MODEL PP10-R. PIPING SHALL BE INSTALLED 12" ABOVE FINISHED ROOF. PROVIDE 18" X 18" CAREY TREAD-TYPE MATERIAL BENEATH EACH PIPE SUPPORT.
2. FIELD LOCATE ROOF STRUCTURAL SUPPORTS AND PLACE BASE OF PIPE SUPPORT OVER ROOF SUPPORTS ONLY. PROVIDE BASE OF ADEQUATE LENGTH TO SPAN ROOF JOIST TO PREVENT SUPPORTS SETTING ON ROOF DECK ONLY.
3. INSTALL SIX (6) FOOT-ON-CENTERS.
4. PIPE SUPPORT MANUFACTURER'S REPRESENTATIVE SHALL PERSONALLY INSPECT INSTALLATIONS OF PIPE SUPPORTS AND MAKE CORRECTIONS AND HEIGHT ADJUSTMENTS TO INSTALLATIONS, AS REQUIRED, DURING INSPECTION.



9 ROOF PIPE JACK DETAIL

NO SCALE

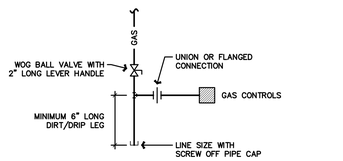
NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.



8 SAMPLE TEST WELL DETAIL (STW)

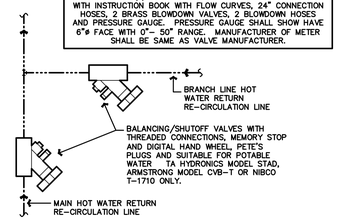
NO SCALE

NOTES:



7 TYPICAL GAS CONNECTION

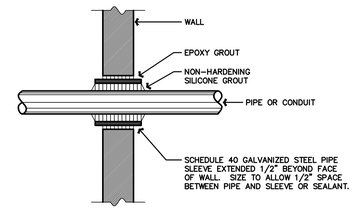
NO SCALE



6 HOT WATER BALANCING STATION

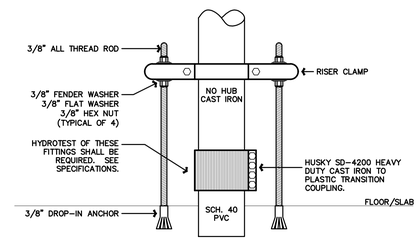
NO SCALE

PROVIDE AT EACH JUNCTION OF BRANCH HOT WATER RETURN LOOPS TO MAIN CIRCULATING HOT WATER LINE, SEE PLUMBING PLANS.



5 WALL PENETRATION DETAIL

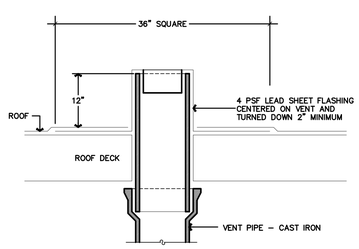
NO SCALE



4 PVC-TO-CAST IRON INSTALLATION DETAIL

NO SCALE

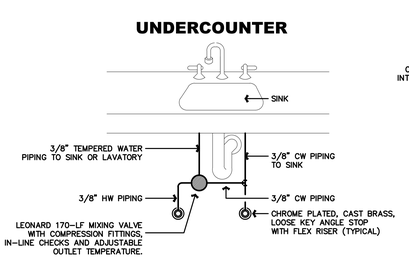
MISSION TRANSITION COUPLING DESIGNED AND CERTIFIED FOR THIS SPECIFIC APPLICATION SHALL BE ACCEPTABLE IN LIEU OF HUSKY COUPLING IN THIS DETAIL.



3 ROOF VENT DETAIL

NO SCALE

COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

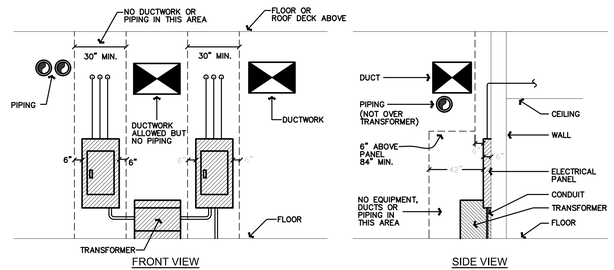


2 MIXING VALVE DETAIL

NO SCALE

NOTES

1. UNDERCOUNTER MIXING VALVE SHALL BE MOUNTED ON WALL IN FIXTURE KNEE-SPACE. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FOR ABOVE CEILING INSTALLATION, VALVE SHALL BE INSTALLED IN AN EASILY/READILY ACCESSIBLE LOCATION. SEE KITCHEN PLUMBING CONNECTION SCHEDULE FOR REQUIRED KITCHEN LOCATIONS.
5. LAVATORY MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 130°F.
   SINK MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 140°F.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

DO NOT INSTALL ANY PIPING BENEATH CVT BOXES. DO NOT INSTALL ANY PIPING (EXCEPT FIRE SPRINKLER PIPING AND OTHER PIPES SHOWN SPECIFICALLY ON THE PLUMBING FLOOR PLANS) OVER COMPUTER CLASSROOMS, BOOKROOMS, IDF/MDF/SERVER ROOMS OR OTHER ROOMS NOTED ON THE PLUMBING FLOOR PLANS.

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05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

ADD#4

O

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FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

STATE OF TEXAS
INTERIM REVIEW
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
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PROJ. NO.: 23-25
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PLUMBING SCHEDULES & DETAILS

o-P0.02

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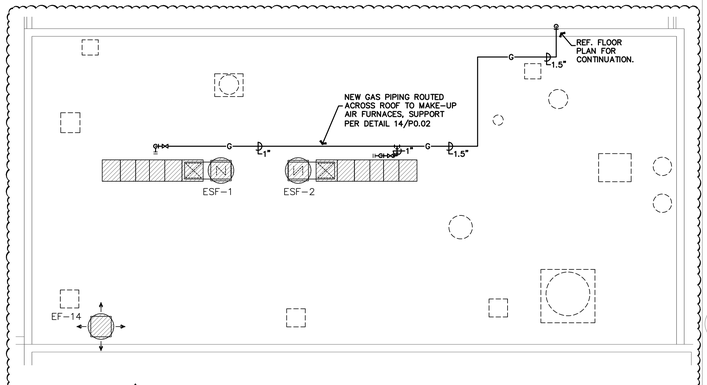
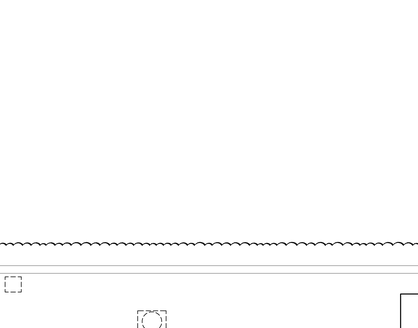
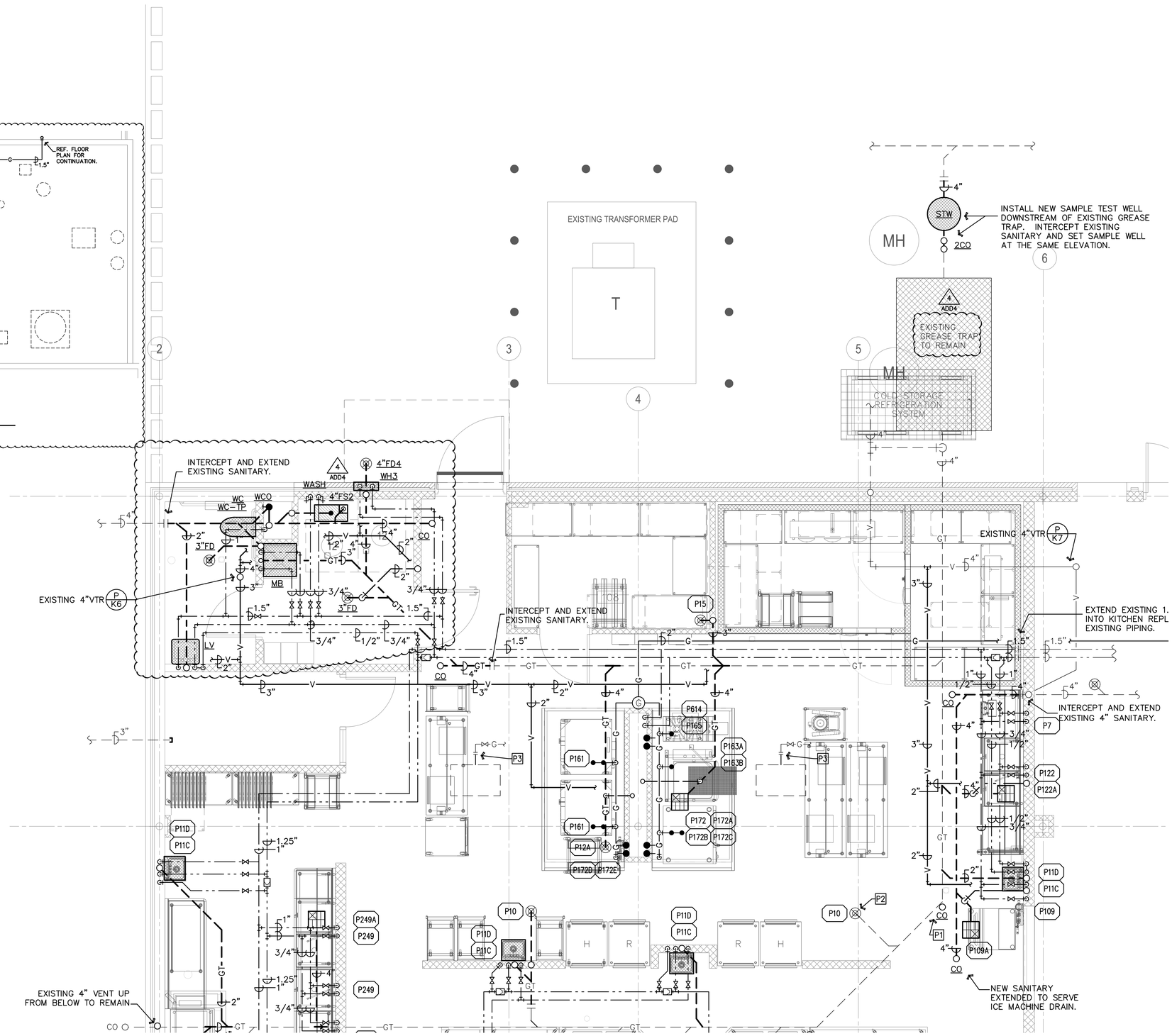


4 ADD4

3 PLUMBING ROOF PLAN

SCALE: 1/8" = 1'- 0"





1 PLUMBING RENOVATION FLOOR PLAN

SCALE: 1/4" = 1'- 0"

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PLUMBING FLOOR PLAN

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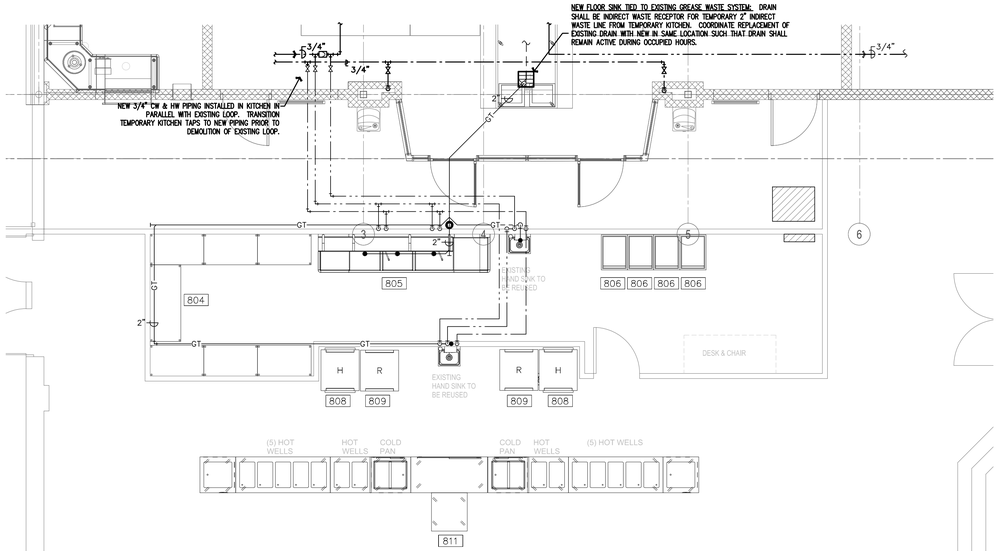


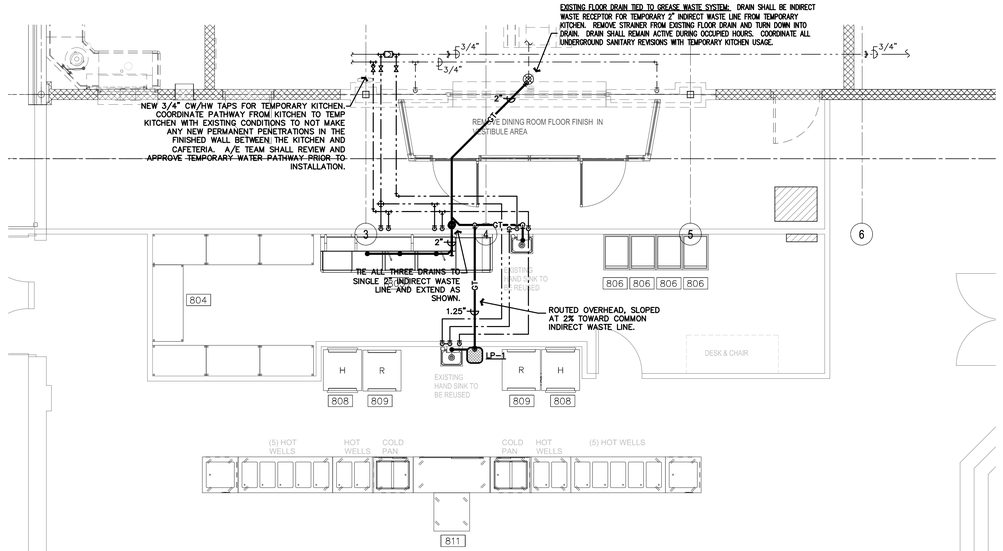
2 PLUMBING TEMPORARY KITCHEN PLAN - POST DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. AFTER DEMOLITION OF EXISTING KITCHEN AND DURING CONSTRUCTION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL REMAIN ACTIVE.
2. ALL SANITARY, CW AND HW CONNECTIONS SHALL REMAIN ACTIVE DURING ALL TIMES WHEN TEMPORARY KITCHEN IS ACTIVE.
3. UPON COMPLETION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL BE DEMOLISHED AND ALL TEMPORARILY UTILITIES SHALL BE REMOVED AND TEMPORARY WATER TAPS CAPPED AT MAIN LINE TAP.
4. ALL DEMOLISHED LAVATORIES AND FAUCETS SHALL BE PERMITTED TO BE RELOCATED ACROSS TEMPORARY KITCHENS WITHIN THE PROJECT BASED ON AVAILABILITY/PROJECT PHASING SCHEDULE. AT THE END OF THE PROJECT, REMOVE FIXTURES AND OFFER TO OWNER AS SALVAGE. IF NOT ACCEPTED, ALL FIXTURES SHALL BE DISPOSED OF BY THE CONTRACTOR.

NORTH



1 PLUMBING TEMPORARY KITCHEN PLAN - PRE DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. BEFORE DEMOLITION OF THE EXISTING KITCHEN BEGINS, INSTALL ALL NEW PLUMBING FIXTURES AND UTILITIES FOR TEMPORARY KITCHEN.

NORTH

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4 ADD4

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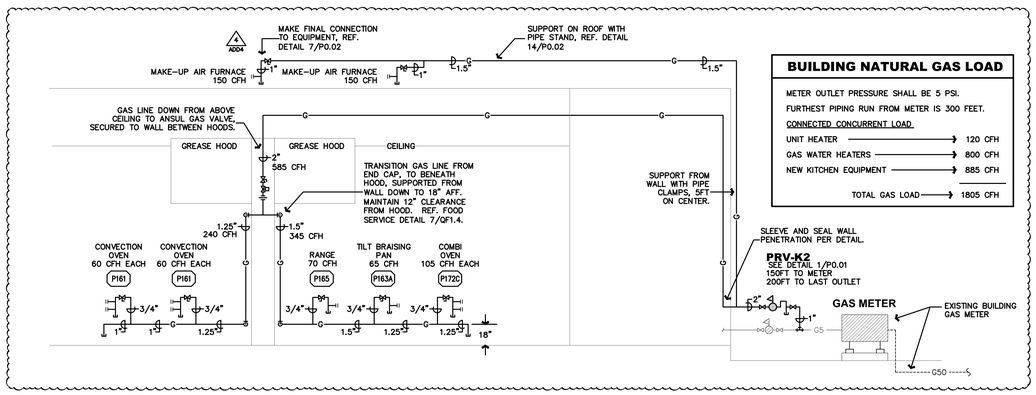
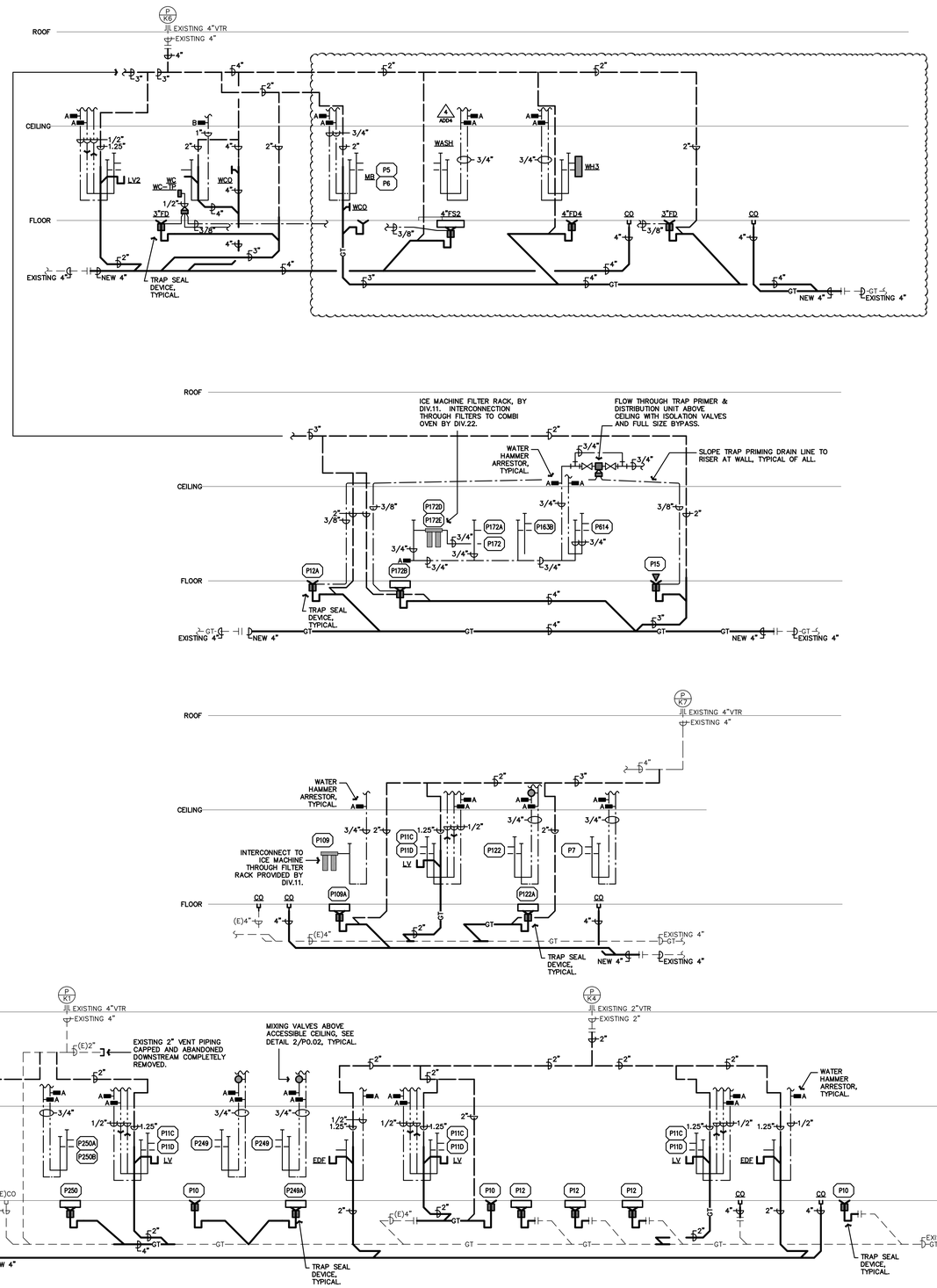
PLUMBING FLOOR PLAN - TEMP KITCHEN

o-P1.02



2 NATURAL GAS RISER DIAGRAM
NO SCALE



1 PLUMBING RISER DIAGRAMS
NO SCALE

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09/04/2025	ADDENDUM 04

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FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

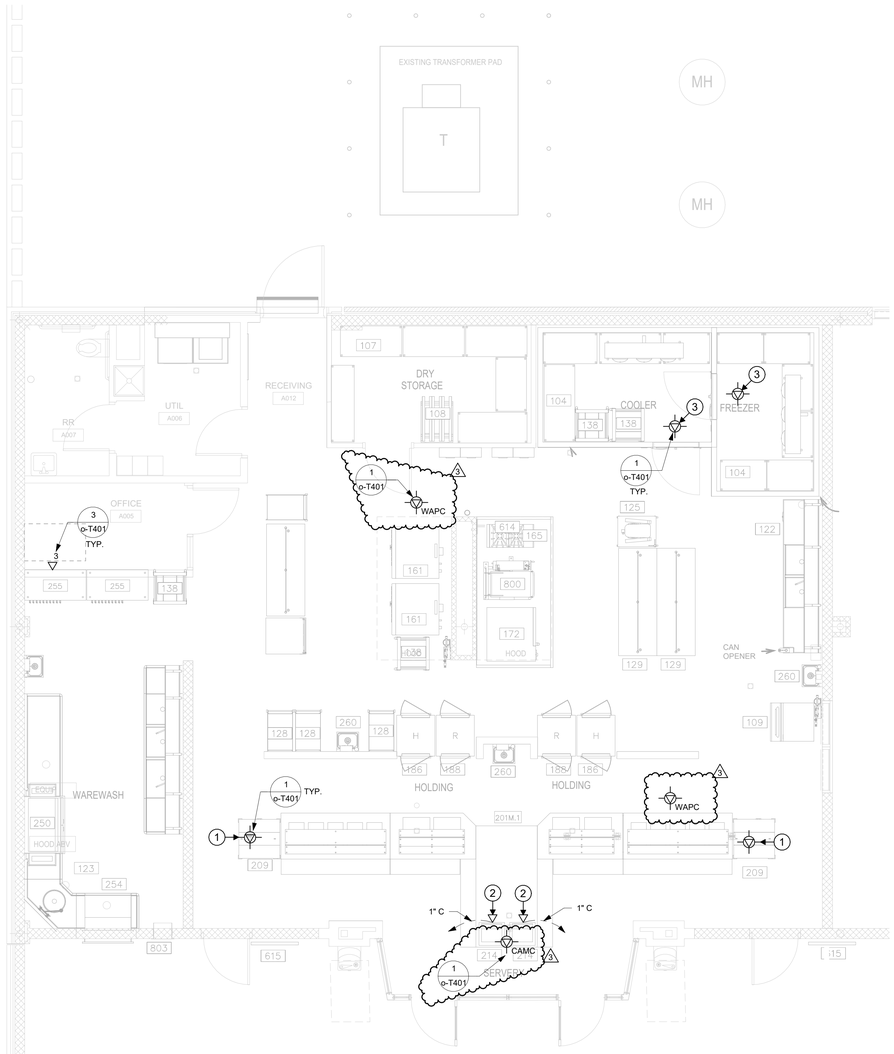
SEAL
STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

PLUMBING RISER DIAGRAMS

o-P2.00



1 o-T201 TECHNOLOGY NEW/RENOVATION KITCHEN PLAN
1/4" = 1'-0"

TECHNOLOGY FLOOR PLANS GENRAL NOTES:

1. THE TECHNOLOGY REGION / WIRING BOUNDARIES ARE IDENTIFIED ON THE OVERALL SHEETS ONLY AND NOT ON THE ENLARGED SHEETS. CONTRACTOR SHALL REFER TO THE OVERALL SHEETS FOR ALL TECHNOLOGY REGIONS / WIRING BOUNDARIES.
2. ALL CONDUIT PATHWAYS, ROUGH-INS, BACKBOXES, FLOOR BOXES, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
6. TECHNOLOGY CABLING SHALL BE ROUTED IN SEPARATE PATHWAYS IN J-HOOKS, CONDUITS, CONDUIT SLEEVES, CORES, ETC. THROUGHOUT THE ENTIRE PATHWAY. DIFFERENT MEDIA TYPES (DATA, VIDEO, SECURITY, ETC.) SHALL NOT SHARE THE SAME J-HOOK, CONDUIT, CONDUIT SLEEVE, CORE, ETC.
7. UNLESS NOTED OTHERWISE, ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE AN ACCESSIBLE CEILING (AN OPEN CEILING OR CLOUD TYPE CEILING IS NOT CONSIDERED AN ACCESSIBLE CEILING) IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF / IDF ROOM TO MINIMIZE THE CABLE LENGTH ENSURING CABLE LENGTH DOES NOT EXCEED 275 FEET.
8. UNLESS NOTED OTHERWISE ALL CONDUITS SHALL BE HOMERUN FROM THE DEVICE LOCATION AND NO DAISY CHAINING OF DEVICES/ ROUGH-INS SHALL BE ALLOWED.
9. CONDUIT SEGMENTS SHALL BE NO MORE THAN 100-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
10. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
13. EQUIPMENT NOT RELATED TO THE SUPPORT OF THE TELECOMMUNICATIONS ROOM (E.G., PIPING, DUCTWORK, PNEUMATIC TUBING) SHALL NOT BE INSTALLED IN, PASS THROUGH, OR ENTER THE TELECOMMUNICATIONS ROOM.
14. ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE A LAY-IN TYPE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE A LAY- IN TYPE CEILING TO PREVENT THE CABLES FROM BEING EXPOSED, THE CONDUIT SHALL ROUTE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. THE CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE MAIN CORRIDOR OR NEAREST MDF/IDF TO MINIMIZE THE CABLE LENGTH ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. CONDUIT, CONNECTIONS, J-BOXES, SUSPENSION, ANCHORAGES, AND OTHER CONDUIT COMPONENTS EXPOSED TO VIEW IN PUBLIC SPACES SHALL BE ROUTED AND INSTALLED CAREFULLY TO MINIMIZE VISUAL IMPACT AND SHALL BE FULLY PAINTED TO MATCH UNLESS NOTED OTHERWISE.
15. CONDUIT(S) INSTALLED IN-SLAB OR UNDER-SLAB TO FLOOR BOXES, POKE-THURS, AND TO WORKAREA OUTLETS, ETC. SHALL BE INSTALLED WITH WET RATED CABLE(S).
16. NO GRID WIRE SHALL BE UTILIZED FOR SUPPORTS ONLY USE SOLID SUPPORTS (CLIPS, ALL-THREAD, ANCHORS, ETC.).

TECHNOLOGY PLAN KEYED NOTES

NOT ALL KEYED BELOW APPLY TO THIS SHEET

(1) DATA CABLE FOR CONTRACTOR FURNISHED / CONTRACTOR INSTALLED MENU BOARD. REFERENCE ARCHITECTURAL AND FOOD SERVICE DRAWINGS FOR MOUNTING HEIGHT AND ADDITIONAL INFORMATION. BUILDING POWER ADJACENT TO DATA RECEPTACLE IS REQUIRED.

(2) INDOOR / OUTDOOR RATED DATA CABLE FOR POINT OF SALE LOCATION. PROVIDE (1) 1-INCH CONDUIT FOR DATA TO THE WALL BEHIND POINT OF SALE LOCATION AND UP WALL TO ABOVE ACCESSIBLE CEILING. CONDUITS SHALL TERMINATE INSIDE A DOUBLE GANG BOX THAT IS SECURED TO THE POINT OF SALE LOCATION. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS.

(3) DATA CABLE FOR TEMPERATURE MONITORING OF FREEZER COOLER. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS AND TERMINATION POINT AND CONNECTIVITY NEEDS IN FREEZER / COOLER CONTROL UNIT.

(4) DATA CABLE FOR TEMPORARY POINT OF SALES CASH REGISTER. COORDINATE WITH OWNER, ARCHITECT, AND CONSULTANT FOR ROUTING OF CABLES TO POINT OF SALE CASH REGISTER PRIOR TO INSTALLATION

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM NO. 4

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FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

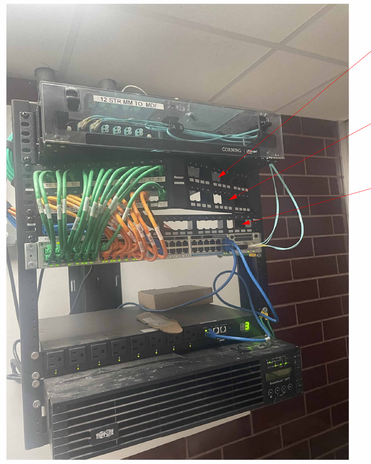
07/18/2025

ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

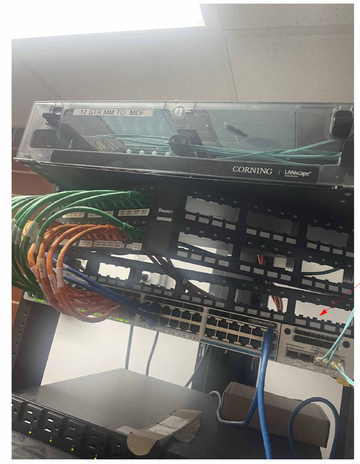
PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

TECHNOLOGY NEW/RENOVATION KITCHEN PLAN

SHEET NO.
o-T201



1 o-T300 PALMER ES EXISTING WALL MOUNTED IDF RACK
N.T.S



2 o-T300 PALMER ES EXISTING WALL MOUNTED IDF RACK - PANEL DETAIL
N.T.S

ISSUE:

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03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025 3	ADDENDUM NO. 4

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PALMER ELEMENTARY SCHOOL
4208 CROW VALLEY DRIVE
MISSOURI CITY, TX 77459

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 12-31-25
RCDD

07/18/2025

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HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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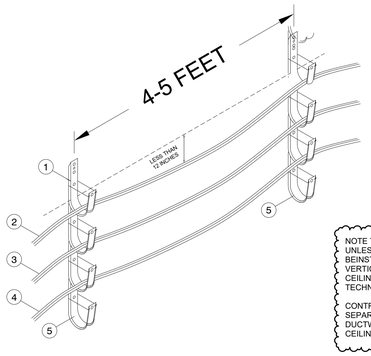
TECHNOLOGY ENLARGED VIEWS

SHEET NO.
o-T300

NOTE TO CONTRACTOR:

UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BE INSTALLED WITHIN 6-INCHES OF THE CEILING AND ACCESSIBLE BY A TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPRATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPIING OR OTHER SYSTEMS IN THE CEILING PLENUM.



KEYED NOTES:

1. J-HOOK WITH RETAINER CLIP ABOVE ACCESSIBLE CEILING (BY DIV 27).
2. DATA CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
3. A/V CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
4. SECURITY CABLE ABOVE ACCESSIBLE CEILING (BY DIV 28).
5. SPARE J-HOOK (BY DIV 27).

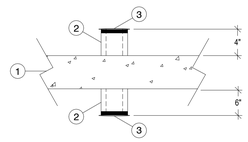
NOTE TO CONTRACTOR:
UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BEINSTALLED WITHIN 6-INCHES OF THE CEILING AND LAST VERTICALLY SITUATED J-HOOK SHALL BE NO HIGHER THAN 18" OF CEILING. CABLES AND SUPPORTS SHLL BE ACCESSIBLE BYA TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPARATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPING OR OTHER SYSTEMS IN THE CEILING PLENUM

3

1 / T400 TYPICAL J-HOOK CABLE PATHWAY

SCALE: N.T.S.

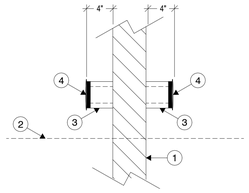


KEYED NOTES:

1. SCHEDULED FLOOR OR DECK.
2. CONDUIT SLEEVE (BY DIV 26).
3. NYLON BUSHING (BY DIV 26).

2 / T400 TYPICAL CONDUIT SLEEVE THROUGH FLOOR OR DECK DETAIL

SCALE: N.T.S.

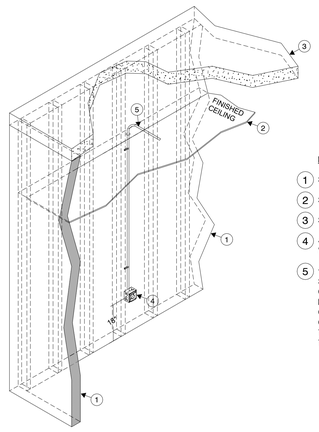


KEYED NOTES:

1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. CONDUIT SLEEVE (BY DIV 26).
4. NYLON BUSHING (BY DIV 26).

3 / T400 TYPICAL CONDUIT SLEEVE GOING THROUGH WALL

SCALE: N.T.S.



KEYED NOTES:

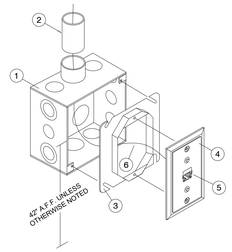
1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. SCHEDULED DECK ABOVE.
4. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX WITH DOUBLE GANG PLASTER RING (BY DIV 26).
5. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH. (BY DIV 26).

4 / T400 TYPICAL TECHNOLOGY CONDUIT ROUGH-IN

SCALE: N.T.S.

DETAIL DELETED SPACE LEFT INTENTIONALLY BLANK

3

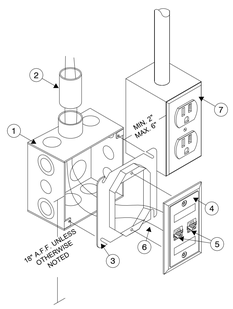


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH PHONE STUDS (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).

6 / T400 TYPICAL WALL PHONE OUTLET CONFIGURATION

SCALE: N.T.S.

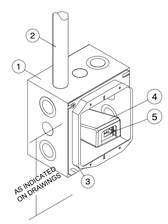


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).
7. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

7 / T400 TYPICAL DUAL DATA OUTLET CONFIGURATION

SCALE: N.T.S.

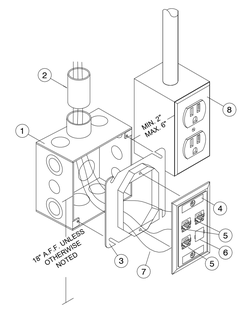


KEYED NOTES:

1. 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. DOUBLE GANG PLASTER RING (BY DIV 26).
4. SURFACE MOUNT BOX INSIDE THE 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH DOUBLE GANG BOX (BY DIV 27).
5. RJ-45 INSERT (BY DIV 27).

8 / T400 TYPICAL WALL-MOUNTED WIRELESS ACCESS POINT

SCALE: N.T.S.



KEYED NOTES:

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2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. BLANK INSERT (BY DIV 27).
7. CABLE AS SPECIFIED (BY DIV 27).
8. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

9 / T400 TYPICAL THREE DATA OUTLET CONFIGURATION

SCALE: N.T.S.

ISSUE:

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O

FBISD PKG 13 KITCHEN RENOVATIONS
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MISSOURI CITY, TX 77459

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 12-31-25
RCDD

07/18/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
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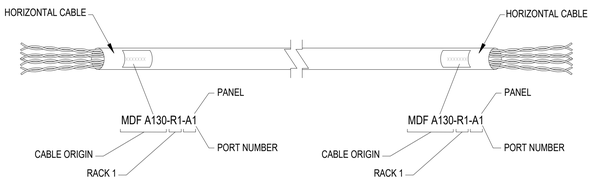
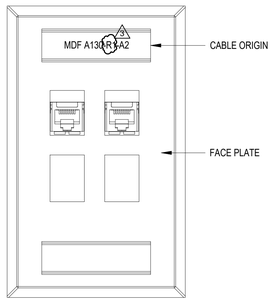
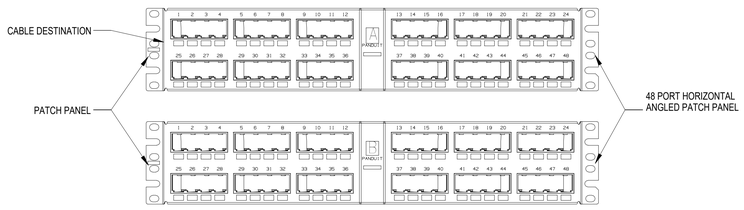
TECHNOLOGY TYPICAL DETAILS

SHEET NO.

o-T400

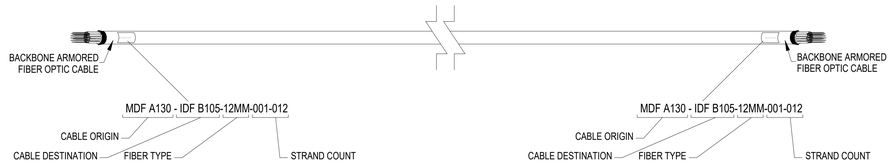


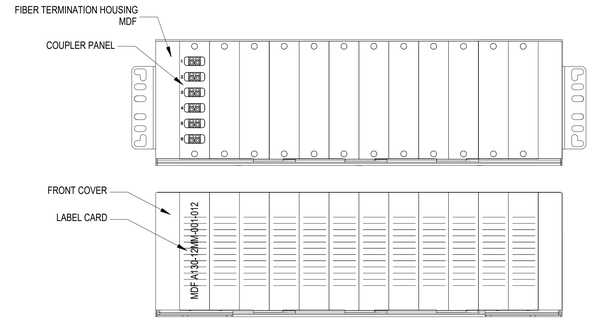


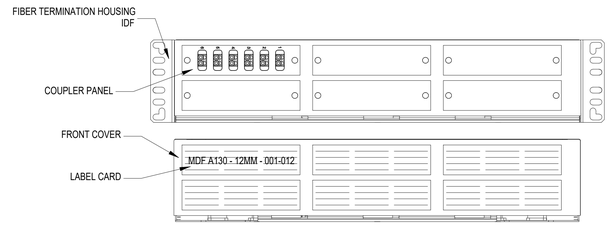


1 T500 TYPICAL HORIZONTAL DATA CABLE LABELING SCHEME

SCALE: N.T.S.

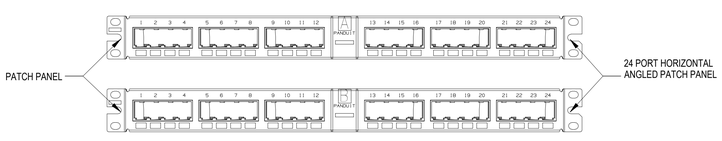






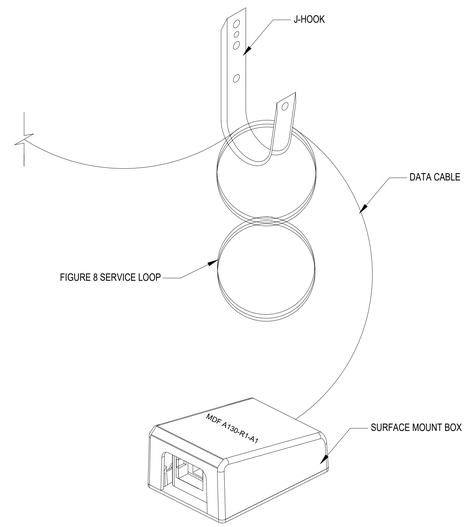
2 T500 TYPICAL FIBER BACKBONE LABELING SCHEME

SCALE: N.T.S.



3 T500 TYPICAL COPPER BACKBONE LABELING SCHEME

SCALE: N.T.S.



4 T500 ABOVE ASSESSIBLE CEILING LABELING SCHEME

SCALE: N.T.S.

ISSUE:

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03/11/2025	50% CD PKG.
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07/18/2025	ISSUED FOR BIDDING AND PERMITTING
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MWA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

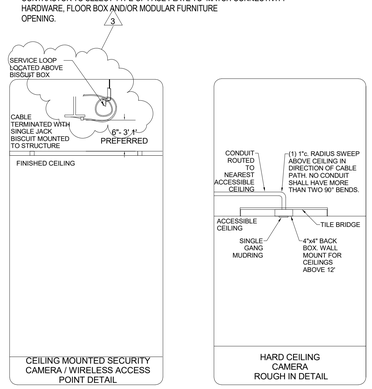
PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

TECHNOLOGY TYPICAL DETAILS

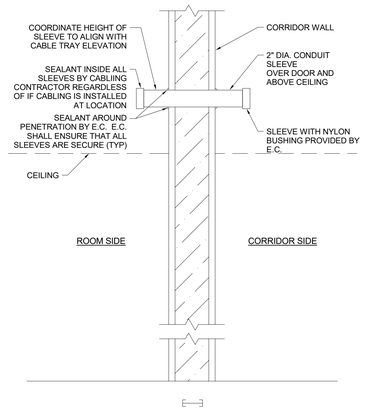
SHEET NO.
o-T500

GENERAL NOTE

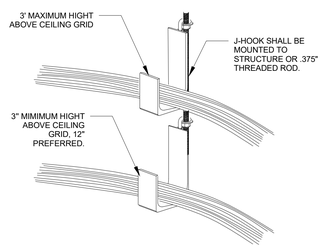
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



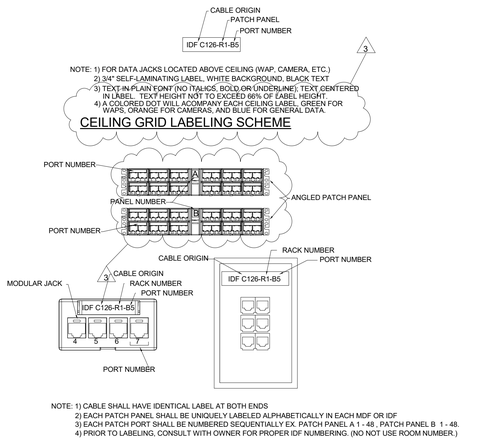
1 DATA ROUGH-IN DETAILS
SCALE: NS



2 TYPICAL CABLING SLEEVE
SCALE: NTS

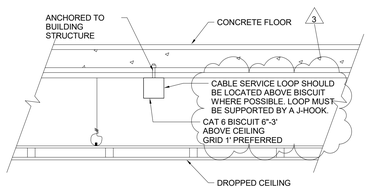


3 PANDUIT J-HOOK DETAIL
SCALE: NTS

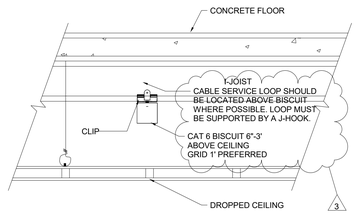


4 LABELING & CABLING SCHEMES
SCALE: NTS

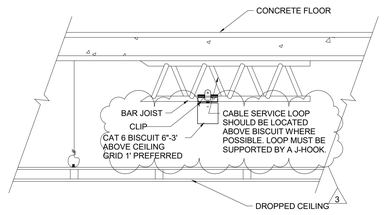
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PWY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025	ADDENDUM NO. 3

0

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Palmer Elementary School
4208 Crow Valley Dr. Missouri City, TX 77459

SEAL

07-18-25

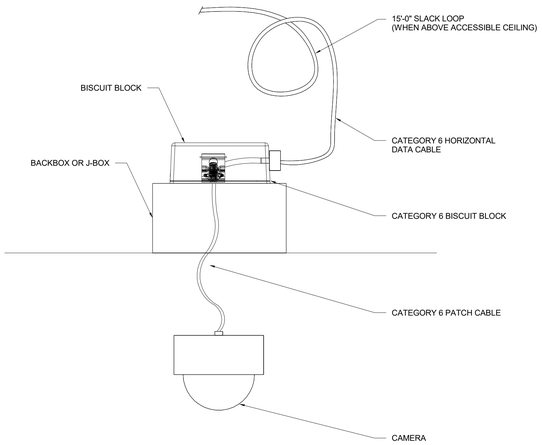
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Palmer ES - DETAILS

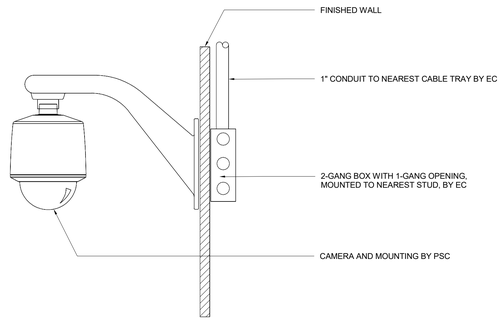
o-TN.500

GENERAL NOTES:

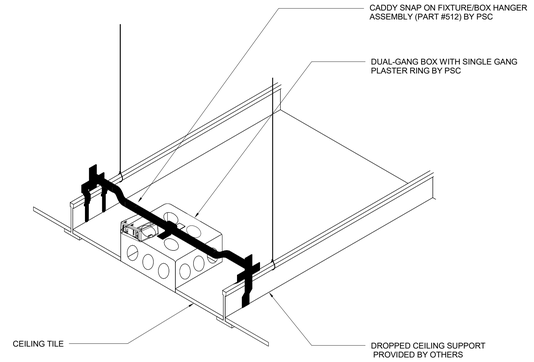
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



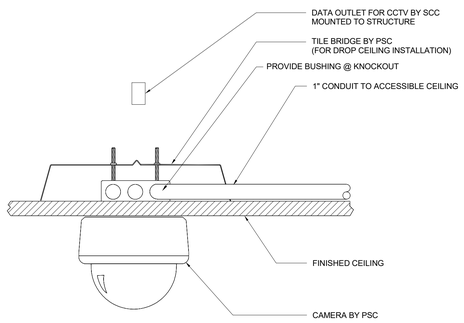
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

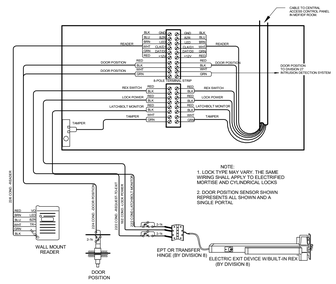


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

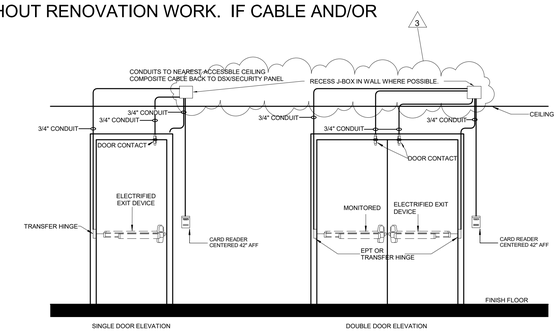
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

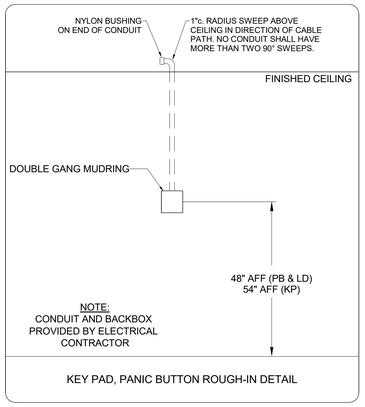
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

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FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Palmer Elementary School
4208 Crow Valley Dr. Missouri City, TX 77459

SEAL

07-18-25

MVA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING
AND
PERMITTING
TECHNOLOGY - Palmer ES - SECURITY DETAILS

o-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

PECAN GROVE ELEMENTARY SCHOOL
3330 OLD S DR, RICHMOND, TX 77406

FORT BEND INDEPENDENT SCHOOL DISTRICT

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

BOARD OF TRUSTEES

KRISTIN K. TASSIN	PRESIDENT
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AFSHI CHARANIA	BOARD MEMBER
ADAM SCHOOF	BOARD MEMBER
ANGIE WIERZBICKI	BOARD MEMBER

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The Woodlands, Texas 77380
Phone Number: 281-350-2323

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Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

REGISTERED ARCHITECT — MICHAEL A. MALDONADO — 22651 — STATE OF TEXAS
04 SEPT. 2025

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Sheet Number	Sheet Title
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p-D.101-2	DEMO PLAN PHOTOS
p-D.101-3	DEMO PLAN PHOTOS
p-ED.100	ELECTRICAL DEMOLITION AND TEMP PLANS
p-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
p-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
p-A.101	SITE PLAN
p-A.200	SLAB DIMENSION CONTROL PLAN
p-A.201	OVERALL FLOOR PLAN
p-A.301	KITCHEN PLAN
p-A.302	TEMPORARY KITCHEN LAYOUT
p-A.401	REFLECTED CEILING PLAN
p-A.501	FINISH FLOOR PLAN
p-A.502	PARTITION SCHEDULE
p-S1	KITCHEN PLAN
p-S2	SECTIONS AND TYPICAL DETAILS
p-QF1	FS GENERAL COORDINATION NOTES
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p-QF1.1	FS FACILITY MODEL
p-QF1.2	FS EQUIPMENT MODEL
p-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
p-QF1.4	FS PLUMBING PLAN
p-QF1.5	FS ELECTRICAL PLAN
p-QF1.6	CONDENSING UNITS
p-QF1.7	FS WALK-INS
p-QF1.8	FS SERVING LINE
p-QF1.9	FS SERVING LINE
p-QF2.0	FS DEMO PLAN
p-QF2.1	FS TEMPORARY SERVING
p-QF3.1	FS ELEVATIONS
p-QF4.1	FS SECTIONS & DETAILS
p-QF4.2	FS DETAILS
p-QF4.3	FS DETAILS
p-MT.01	MECHANICAL PLANS
p-M2.01	KITCHEN MECHANICAL DETAILS
E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
E.001	ELECTRICAL AND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
E.013	ELECTRICAL KITCHEN DETAILS
E.060	LIGHTING SCHEDULES
p-E100	LIGHTING FLOOR PLAN
p-E200	ELECTRICAL FLOOR PLANS
p-E.300	FIRE ALARM FLOOR PLANS
p-E.400	ELECTRICAL SCHEMATIC
p-P0.01	PLUMBING NOTES AND SCHEDULES
p-P0.02	PLUMBING SCHEDULES AND DETAILS
p-P1.01	PLUMBING FLOOR PLAN
p-P1.02	PLUMBING FLOOR PLAN - TEMPORARY KITCHEN PLAN
p-T000	TECHNOLOGY SYMBOLS & LEGEND
p-T200	TECHNOLOGY COMPOSITE FLOOR PLAN
p-T201	TECHNOLOGY NEW_RENOVATION KITCHEN PLAN
p-T202	TECHNOLOGY TEMPORARY KITCHEN PLAN
p-T300	TECHNOLOGY ENLARGED VIEWS
p-T400	TECHNOLOGY TYPICAL DETAILS
p-T401	TECHNOLOGY TYPICAL DETAILS
p-T500	TECHNOLOGY TYPICAL DETAILS
p-TN-000	TECHNOLOGY - INDEX SHEET
p-TN-001	TECHNOLOGY - KITCHEN DEMOLITION
p-TN-100	TECHNOLOGY - OVERALL
p-TN-101	TECHNOLOGY - KITCHEN
p-TN-500	TECHNOLOGY - DETAILS
p-TN-600	TECHNOLOGY - SECURITY DETAILS
p-TN-700	TECHNOLOGY - AV DETAILS

ADDENDUM NO. 4 - SEP 04, 2025

p

TEMPORARY KITCHEN FLOOR PLAN KEYED NOTES 05/A-A03-02

01 PROVIDE & INSTALL 555 SF OF RAM BOARD TO PROTECT EXISTING FLOORING. REMOVE AFTER CONSTRUCTION IS COMPLETE. CONTRACTOR MUST REPAIR FLOORING DAMAGED DURING CONSTRUCTION.

02 PROVIDE SCHEDULED PARTITIONS. BUILD PARTITIONS ON TOP OF RAM BOARD. DO NOT ATTACH PARTITIONS TO FLOOR.

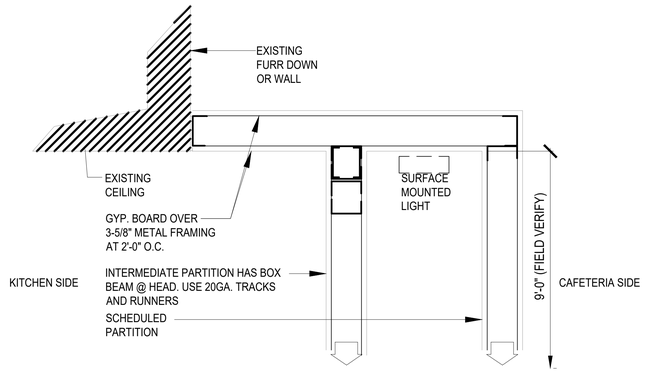
03 ATTACH PARTITIONS TO EXISTING WALL. REPAIR WALL TO MATCH EXISTING AFTER CONSTRUCTION IS COMPLETE.

TEMPORARY KITCHEN RCP KEYED NOTES 03/A-A03-02

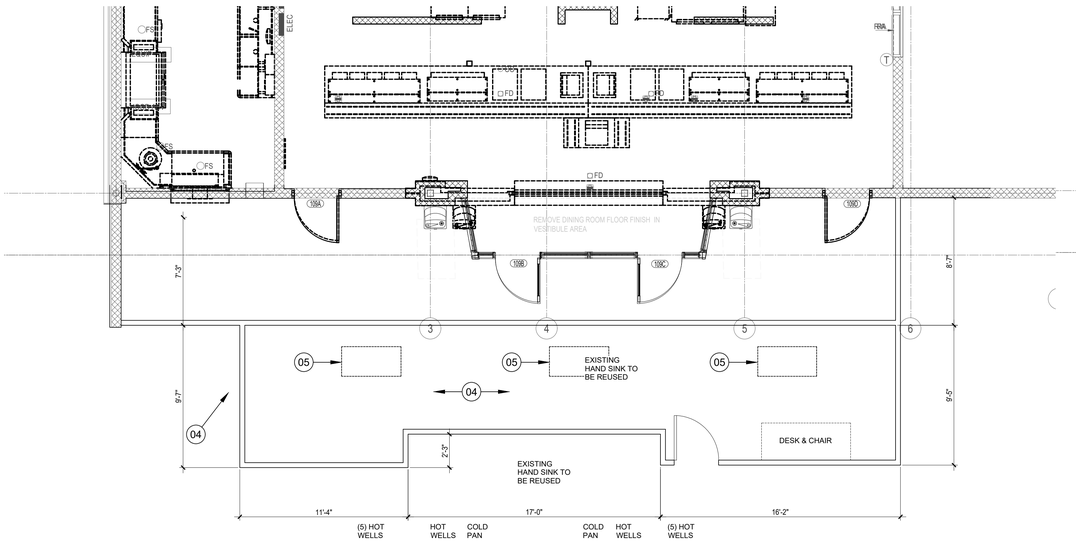
04 ALL NEW SCHEDULED PARTITIONS AND CEILINGS FOR TEMPORARY STORAGE LAYOUT TO BE EPOXY PAINTED SW 7014 EIDER WHITE WITH SPECIFIED 4" RUBBER BASE. REMOVE WHEN CONSTRUCTION IS COMPLETED.

05 MOUNT TEMPORARY FLUORESCENT LIGHTS TO TEMPORARY CEILING.

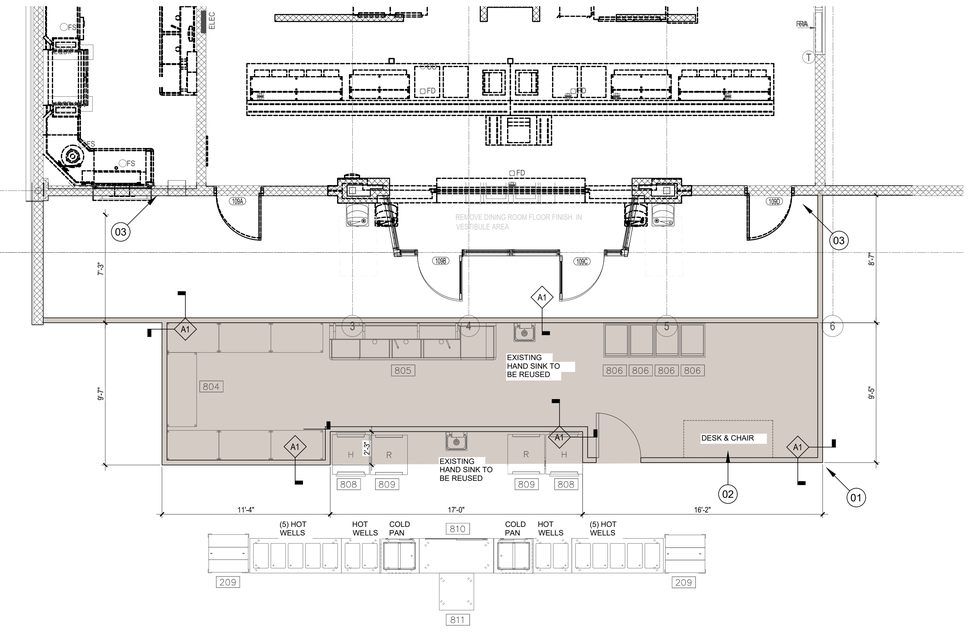
3 KEYED NOTES



4 TEMPORARY LAYOUT SECTION
SCALE: 1"=1'-0"



1 KITCHEN PLAN
SCALE: 1/4" = 1'-0"



2 TEMPORARY KITCHEN FLOOR PLAN
SCALE: 1/4" = 1'-0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ISSUED FOR ADDENDUM 04

p

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PECAN GROVE ELEMENTARY SCHOOL
3330 OLD S DRIVE
RICHMOND, TX 77406

SEAL

REGISTERED ARCHITECT
ROY KENT MOORE
22651
STATE OF TEXAS

04 SEP 2025

MWA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE:
ADDENDUM NO. 4 - SEP 04, 2025

TEMPORARY
KITCHEN
LAYOUT
p-A.302

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\P-Pecan Grove ES\p-A.302 TEMPORARY KITCHEN LAYOUT.dwg Sep 05, 2025 - 12:03pm

RCP - GENERAL NOTES

1. CEILING GRID SHALL BE INSTALLED TO MATCH EXISTING GRID'S POINT OF ORIGIN. THIS WILL REDUCE NEED TO RE-LOCATE ABOVE CEILING DUCTS, SPRINKLER PIPING AND OTHER SUPPORT SYSTEMS.
2. REFER TO SHEET A00-01 FOR GENERAL NOTES. GENERAL NOTES APPLY TO ALL SEVEN SCHOOL KITCHEN REMODELS.
3. LIGHTING LEVELS SHOULD BE 50 FC IN PREPARATION AREAS, WARE WASH AND SERVING LINES, OR MEET MINIMUM HEALTH CODE LEVELS, WHICHEVER ITS GREATER. SEE MEP PLANS
4. REPLACE HVAC DEVICES. REPLACE LIGHTING WITH 24"x24" LED LAY IN LIGHT AS SCHEDULED IN ELECTRICAL PLANS.
5. REFER TO MECHANICAL, ELECTRICAL SHEETS FOR DEVICE SCHEDULES.

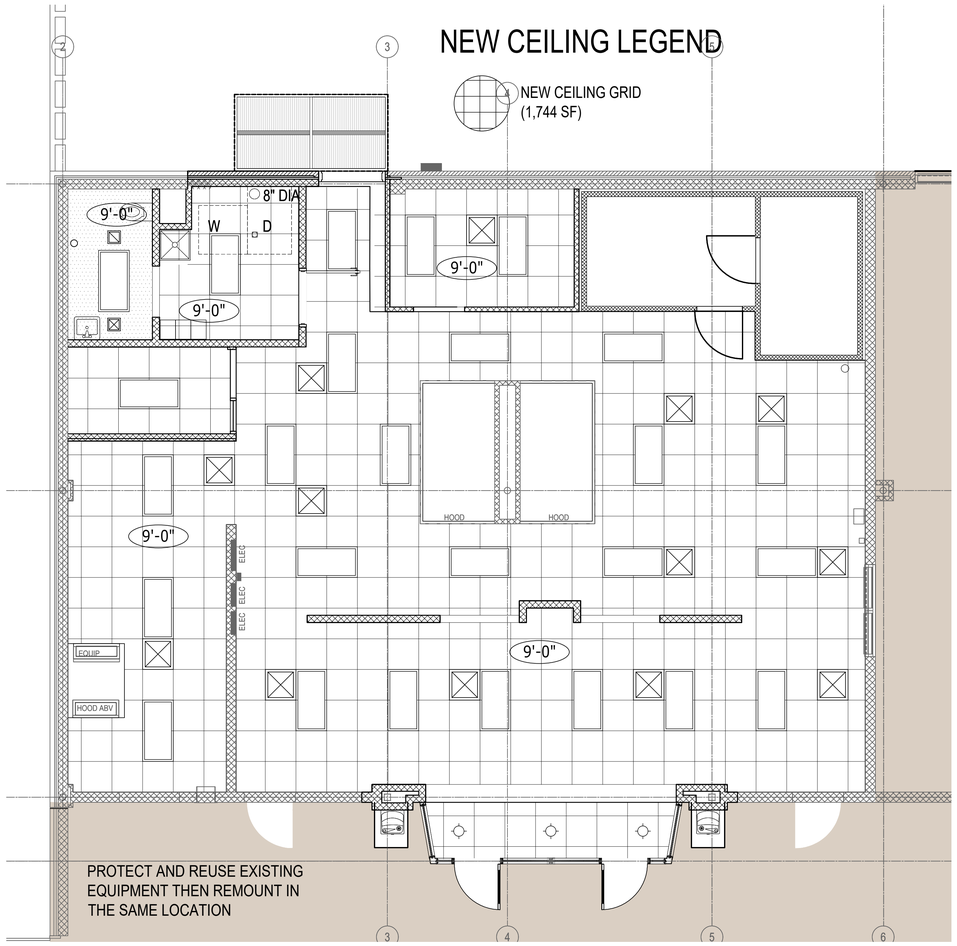
RCP - NUMBERED NOTES

01 PROVIDE 30"x30" MIN. ACCESS HATCH IN SOFFIT CENTERED ON MOTOR.

02 AFTER LOWERING THE NEW POWER RETRACTION SYSTEM. REPAIR AND PAINT SOFFITS AND SIDWALLS OF FURR TO MATCH EXISTING.

03 SEE SHEET M2.02 FOR ROOF PENETRATION. MATCH EXISTING ROOF CONSTRUCITON AND MAINTAIN INTEGRITY OF WARRANTY CURRENTLY IN PLACE.

2 RCP GENERAL NOTES

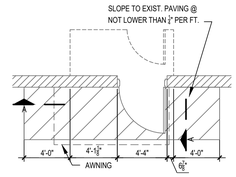


1 REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

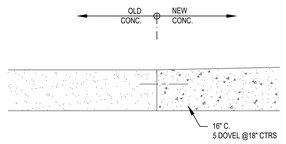
3 FOOD SERVICE AREA ELEVATION

SCALE: 3/16" = 1'-0"



5 RAMP @ REAR DOOR

SCALE: 3/16"=1'-0"



A

SCALE: 1/2"=1'-0"

ISSUE:

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07/18/2025	ISSUED FOR BIDDING AND PERMITTING

p

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PECAN GROVE ELEMENTARY SCHOOL
3330 OLD S DRIVE
RICHMOND, TX 77406

SEAL

REGISTERED ARCHITECT
ROBERT L. WILLIAMS
22651
STATE OF TEXAS

28 AUG 2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

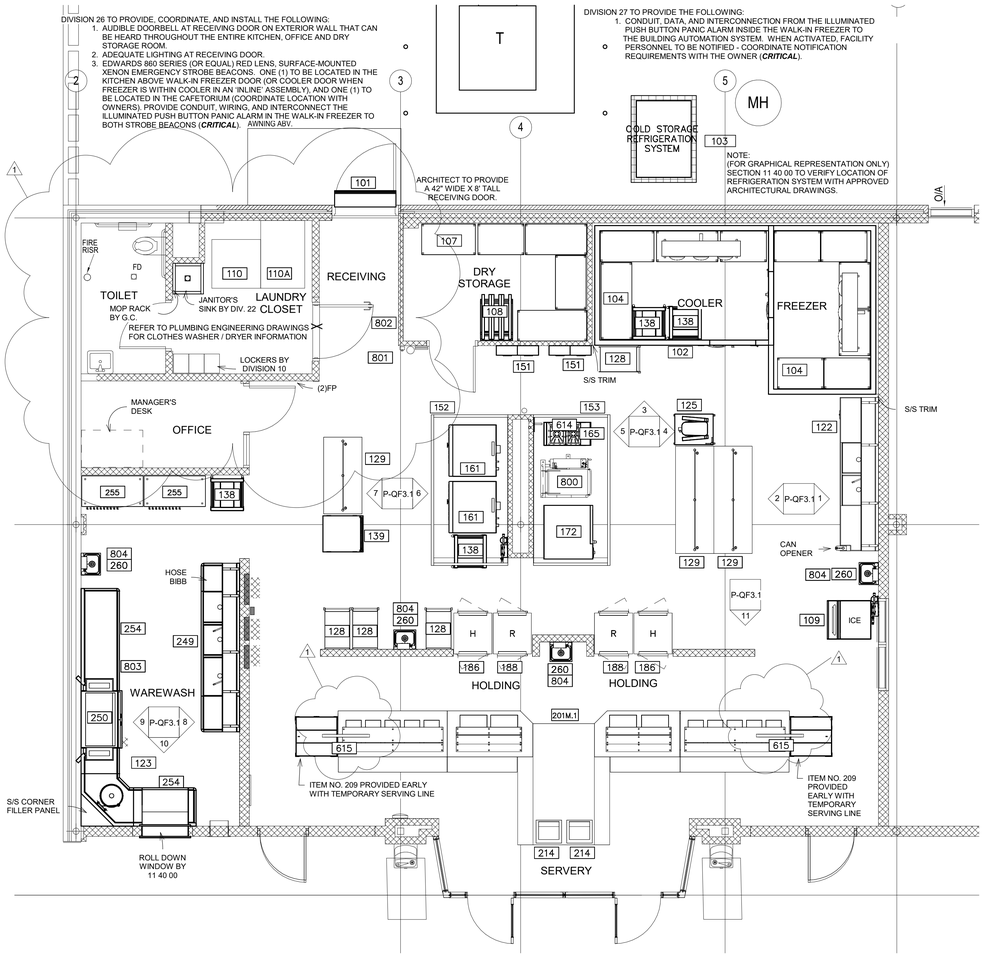
PROJ. NO.: 23-25
DATE: 07/28/25
ADDENDUM NO. 3 - AUG 28, 2025

REFLECTED CEILING PLAN

p-A.401

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\P-Pecan Grove ES\p-A.401 REFLECTED CEILING PLAN.dwg Aug 27, 2025 - 5:47pm

FOOD SERVICE DRAWING INDEX	
FDP SHEET NUMBER	FDP SHEET NAME
P-QF0.0	FS GENERAL COORDINATION NOTES
P-QF1.0	FS EQUIPMENT PLAN
P-QF1.1	FS FACILITY MODEL
P-QF1.2	FS EQUIPMENT MODEL
P-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
P-QF1.4	FS PLUMBING PLAN
P-QF1.5	FS ELECTRICAL PLAN
P-QF1.6	FS CONDENSING UNITS
P-QF1.7	FS WALK-INS
P-QF1.8	FS SERVING LINE
P-QF1.9	FS SERVING LINE
P-QF2.0	FS DEMO PLAN
P-QF2.1	FS TEMPORARY SERVING
P-QF3.1	FS ELEVATIONS
P-QF4.1	FS SECTIONS & DETAILS
P-QF4.2	FS DETAILS
P-QF4.3	FS DETAILS



1 FOOD SERVICE EQUIPMENT PLAN
1/4" = 1'-0"

FOOD SERVICE EQUIPMENT SCHEDULE					
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH DEPARTMENT COORDINATION NOTES					
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS	MANUFACTURER	MODEL
	336				
101	1	AIR SCREEN		MARS	STD248-1UA-OB
102	1	COLD STORAGE ASSEMBLY		AMERICAN PANEL	
103	1	COLD STORAGE REFRIGERATION SYSTEM			
104	2	COLD STORAGE SHELVING		METRO	METROMAX Q
107	1	DRY STORAGE SHELVING		METRO	METROMAX Q
108	1	CAN RACK		NEW AGE	1250CK
109	1	ICE MACHINE W/ BIN		MANITOWOC	UYF0310A
110	1	CLOTHES WASHER	BY G.C.		
110A	1	CLOTHES DRYER	BY G.C.		
122	1	TWO COMPARTMENT SINK WITHOUT DISPOSER		CUSTOM FABRIACTED	
123	1	DISPOSER - 3HP		SALVAJOR	300-CA-18-ARSS-LD
125	1	20 QT. MIXER W/STAND		HOBART	HL200
128	4	UTILITY CART		LAKESIDE	522
129	3	WORKTABLE W/S.BAR UT.RACK		CUSTOM FABRIACTED	
138	4	PAN RACK		CRES COR	207-UA-13A
139	1	INSUL MOBILE PROOFER		CRES COR	H-137-WSUA-12D
151	2	FIRE PROTECTION SYSTEM		ANSUL	R102
152	1	EXHAUST HOOD	EXISTING		
153	1	EXHAUST HOOD	EXISTING		
161	2	CONVECTION OVEN		BLODGETT	DFG-200 DBL
165	1	TWO BURNER RANGE		VULCAN	V2B18B
172	1	COMBI OVEN		RATIONAL	ICP 6-FULL/6-FULL N/G
186	2	PASS-THRU HEATED CABINET-1DR		TRAULSEN	AHF132WP
188	2	PASS-THRU REFRIGERATOR-1DR		TRAULSEN	AHT132WPUT
201M.1	1	SERVING COUNTER-MODULAR		COUNTERCRAFT	SCOL-408-MOD
214	2	CASH REGISTER	OWNER FURNISHED		
249	1	THREE COMPARTMENT SINK NO DISPOSER		CUSTOM FABRIACTED	
250	1	DISHMACHINE		HOBART	CL44-BAS
254	2	SOILED & CLEAN DISHTABLE		CUSTOM FABRIACTED	
255	2	MOBILE DRYING RACK		METRO	PR48VX3
260	4	HAND SINK	FURNISHED & INSTALLED BY DIV. 22		
614	1	FILL FAUCET		T&S	B-0610
615	2	MENU MONITOR	BY OWNER		
800	1	15 GAL. BRAISING PAN		GROEN	BPM-15GA
801	1	S/S CORNER GUARDS	LOCATED ON EVERY EXPOSED CORNER THROUGHOUT KITCHEN	CUSTOM FABRIACTED	
802	1	WALL BUMPERS	LOCATED ON ALL EXPOSED BUILDING WALLS	PAWLING	MD-1
803	1	WATER SOFTENER		HOBART	WS-40
804	4	S/S SPLASH GUARDS			

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PECAN GROVE ELEMENTARY SCHOOL
3330 OLD S DRIVE
RICHMOND, TX 77406

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
FCSI 48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
ELECTRONICALLY APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/15/2025

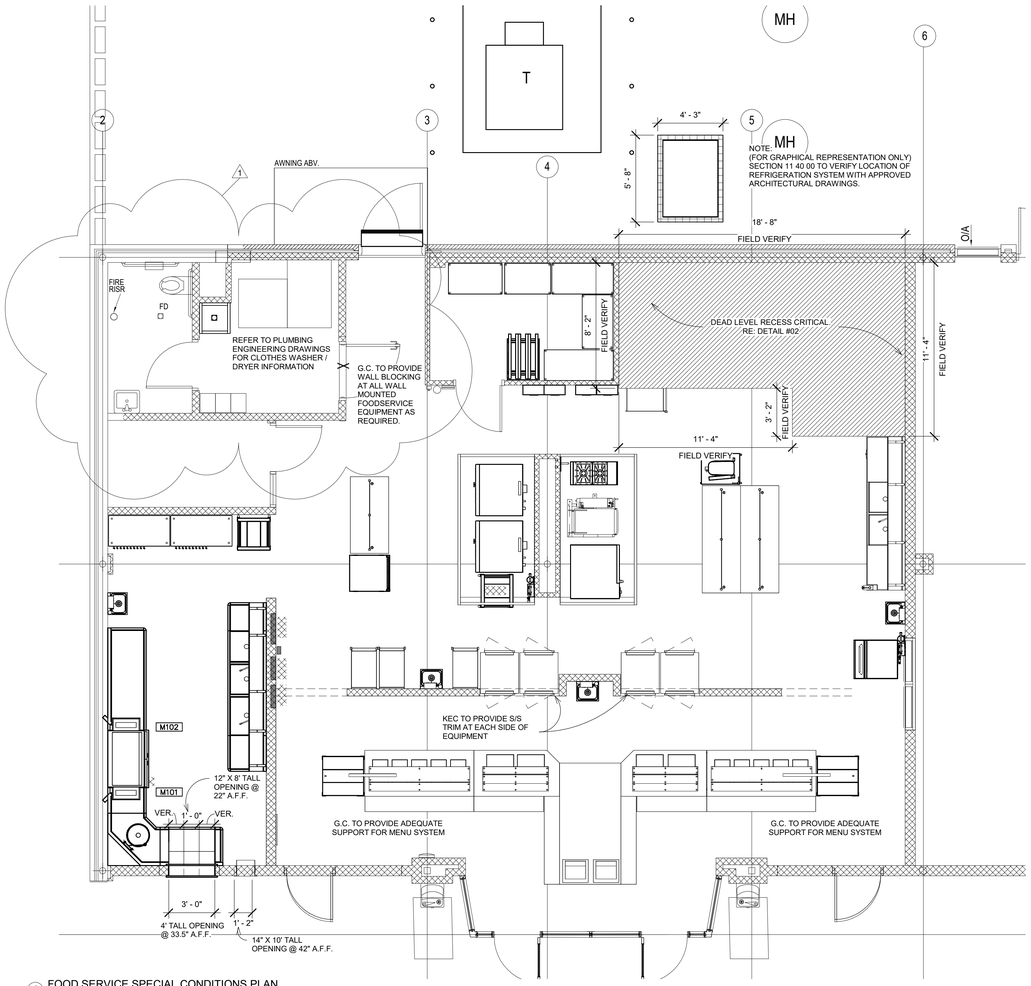
ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS EQUIPMENT PLAN

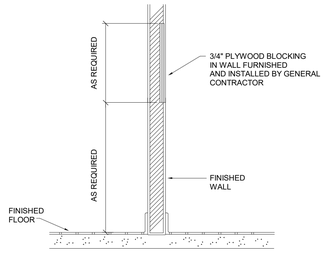
P-QF1.0

FOOD SERVICE MECHANICAL SCHEDULE						
REFER TO SHEET QF1 FOR MECHANICAL COORDINATION NOTES						
FDP NO.	FDP QTY	FDP TYPE	FDP SIZE	FDP LOC	FDP CFM	FDP S.P.
M101	1	EXHAUST	4" X 16"		400	0.30"
M102	1	EXHAUST	4" X 16"		800	0.30"

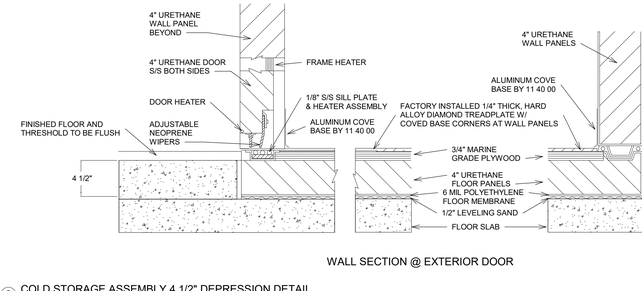


1 FOOD SERVICE SPECIAL CONDITIONS PLAN
1/4" = 1'-0"

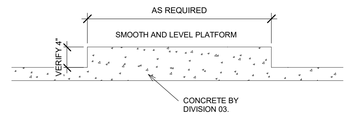
NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION AND SIZE OF WALL BLOCKING.



5 WALL BLOCKING DETAIL
NOT TO SCALE

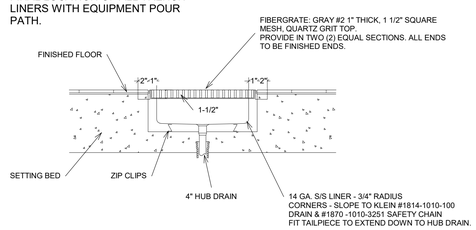


3 COLD STORAGE ASSEMBLY ENCLOSURE PANEL DETAIL
NOT TO SCALE



4 COLD STORAGE ASSEMBLY REFRIGERATION SYSTEM GROUND MOUNT 4" PLATFORM DETAIL
NOT TO SCALE

NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION OF ALL TRENCH LINERS WITH EQUIPMENT POUR PATH.



6 TRENCH LINER DETAIL
NOT TO SCALE

SLAB TO BE MODIFIED AS REQUIRED TO ALLOW FOR A 4 1/2" DEPRESSION SLAB. PROVIDE NEW LEVEL CONCRETE PAD FOR COLD STORAGE ASSEMBLY.

WALL SECTION @ EXTERIOR DOOR

2 COLD STORAGE ASSEMBLY 4 1/2" DEPRESSION DETAIL
NOT TO SCALE

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09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

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3330 OLD S DRIVE
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Melissa Moore
7/15/2025
DRAWING OR THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 888541119 ON: 07/18/2025

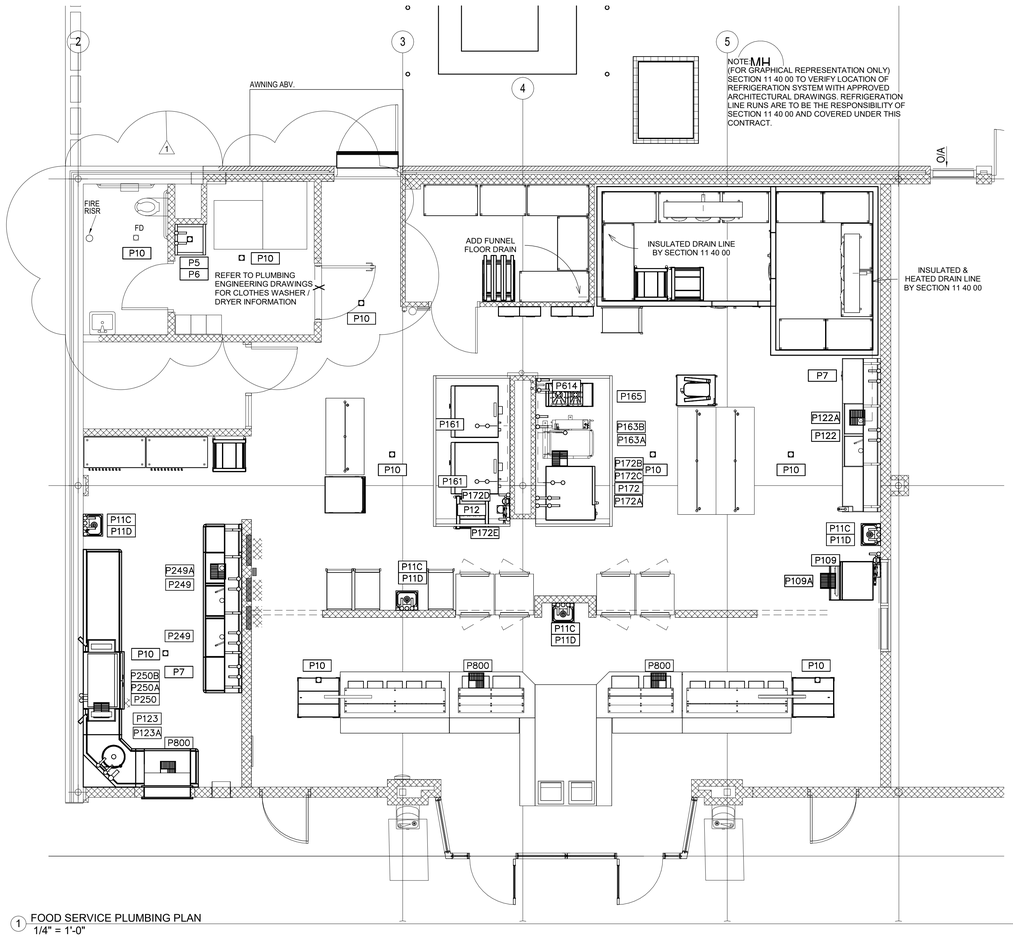
ARCHITECTS
AWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS SPECIAL CONDITIONS & MECHANICAL PLAN

P-QF1.3

FOOD SERVICE PLUMBING SCHEDULE						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P5	3/4"	H & C WATER	JANITOR SINK	WALL	48"	JANITOR SINK BY PLUMBER
P6	4"	FLOOR DRAIN	JANITOR SINK	FLOOR	VERIFY	JANITOR SINK BY PLUMBER
P7	3/4"	H & C WATER	HOSE BIBB	WALL	18"	BTC
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	---
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P12	VERIFY	FLOOR DRAIN	EQUIP. DRAIN	FLOOR	VERIFY	NO SLOPE
P15	4"	FLOOR DRAIN	FUNNEL FLOOR DRAIN	FLOOR	0"	---
P109	3/4"	COLD WATER	WATER/ ICE	WALL	60"	BTC
P109A	12" SQ.	FLOOR SINK	ICE MACHINE	FLOOR	0"	FULL GRATE
P122	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P122A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	3/4 GRATE
P123	3/4"	H & C WATER	FAUCET / DISPOSER	WALL	13"	BTC
P123A	2"	DIRECT DRAIN	DISPOSER	WALL	10"	BTC
P161	(2)3/4"	NATURAL GAS	CONVECTION OVEN	WALL	18"/36"	BTC - 60 MBTU/HR EACH
P163A	3/4"	NATURAL GAS	TILT BRAISING PAN	WALL	18"	BTC - 65 MBTU/HR
P163B	3/4"	H & C WATER	TILT BRAISING PAN	WALL	36"	BTC
P165	1"	NATURAL GAS	RANGE	WALL	18"	BTC - 70 MBTU/HR
P172	(2)3/4"	COLD WATER	COMBI OVEN	WALL	24"/48"	BTC - INTERCONNECT THRU FILTERS
P172A	3/4"	COLD WATER	COMBI OVEN	WALL	48"	BTC
P172B	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE
P172C	(2)3/4"	NATURAL GAS	COMBI OVEN	WALL	18"/36"	BTC - 105 MBTU/HR EACH
P172D	3/4"	COLD WATER	COMBI OVEN	WALL	66"	BTC; INTERCONNECT TO P172
P172E	3/4"	COLD WATER	COMBI OVEN WATER FILTER	WALL	66"	BTC
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P249A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	THREE QUARTER GRATE
P250	12" SQ.	FLOOR SINK	BOOSTER / DISHMACHINE	FLOOR	18"	BTC
P250A	3/4"	HOT WATER	DISHMACHINE	WALL	18"	EXT. THRU W.FILTER TO BOOSTER / DISH MACHINE - 140DEG.MIN.
P250B	3/4"	COLD WATER	DISHMACHINE	WALL	18"	BTC
P614	1/2"	H & C WATER	FILL FAUCET	WALL	42"	BTC
P800	12" SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE



1 FOOD SERVICE PLUMBING PLAN
1/4" = 1'-0"

SECTION 11 40 00 TO PROVIDE LOOSE WITH FOOD SERVICE EQUIPMENT. INSTALLATION BY DIV. 22 & 26.

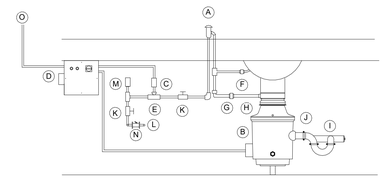
- (A) VACUUM BREAKER
- (B) DISPOSER
- (C) TIME DELAY
- (D) CONTROL PANEL
- (E) SOLENOID VALVE

DIVISION 22 TO PROVIDE AND INSTALL

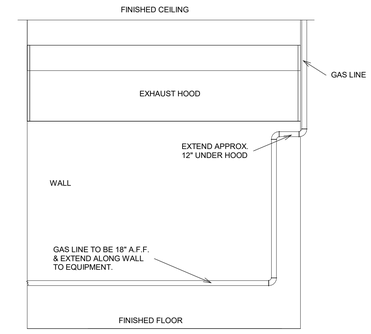
- (F) 1/2" CW INLET
- (G) FLOW CONTROL
- (H) 1/2" CW
- (I) 2" DRAIN LINE WITH P-TRAP & Y ADAPTOR
- (J) 1-1/2" TAILPIECE
- (K) GATE VALVE
- (L) 1/2" CW SUPPLY
- (M) SHOCK STOP
- (N) RPZ BACK FLOW PREVENTOR

DIVISION 26 TO PROVIDE AND INSTALL

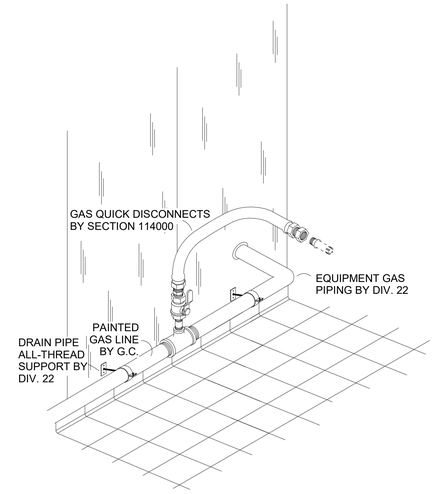
- (O) POWER SUPPLY



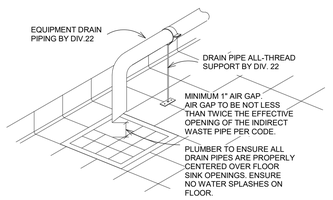
6 DISPOSER WITH VACUUM BREAKER DETAIL
NOT TO SCALE



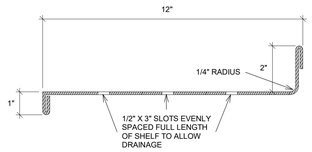
7 EXHAUST HOOD - GAS LINE ROUTING DETAIL
NOT TO SCALE



3 GAS DISCONNECT DETAIL
NOT TO SCALE



5 DRAIN PIPING FASTENER DETAIL
NOT TO SCALE



8 WAREWASH - PERFORATED OVER SHELF DETAIL
NOT TO SCALE

HW	HOT WATER	FFD	FUNNEL FLOOR DRAIN		
CW	COLD WATER	EVC	EXHAUST VENT CONNECTION		
HTW	180 F HOT WATER	SVC	SUPPLY VENT CONNECTION		
	CHILLED WATER	FR	DIRECT-CONNECTED FLUE RISER		
W	DIRECT WASTE	PS	PIPE SLEEVE		
IW	INDIRECT WASTE		COMPRESSED AIR		
	GAS SUPPLY		CO2		
	STEAM SUPPLY	AFF	ABOVE FINISHED FLOOR		
CR	CONDENSATE RETURN	BTC	BRANCH TO CONN. ON EQUIP		
DR	DRAIN	DFA	DROP FROM ABOVE		
FD	FLOOR DRAIN	CLG	CEILING		
FST	FLOOR SINK 3/4 GRATE				
FSH	FLOOR SINK 3/4 GRATE				

2 PLUMBING SYMBOLS
NOT TO SCALE

ISSUE:

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05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PECAN GROVE ELEMENTARY SCHOOL
3330 OLD S DRIVE
RICHMOND, TX 77406

SEAL

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488584119
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Melissa Moore
7/15/2025
ELECTRONICALLY SEALING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 488584119 ON: 07/15/2025

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ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

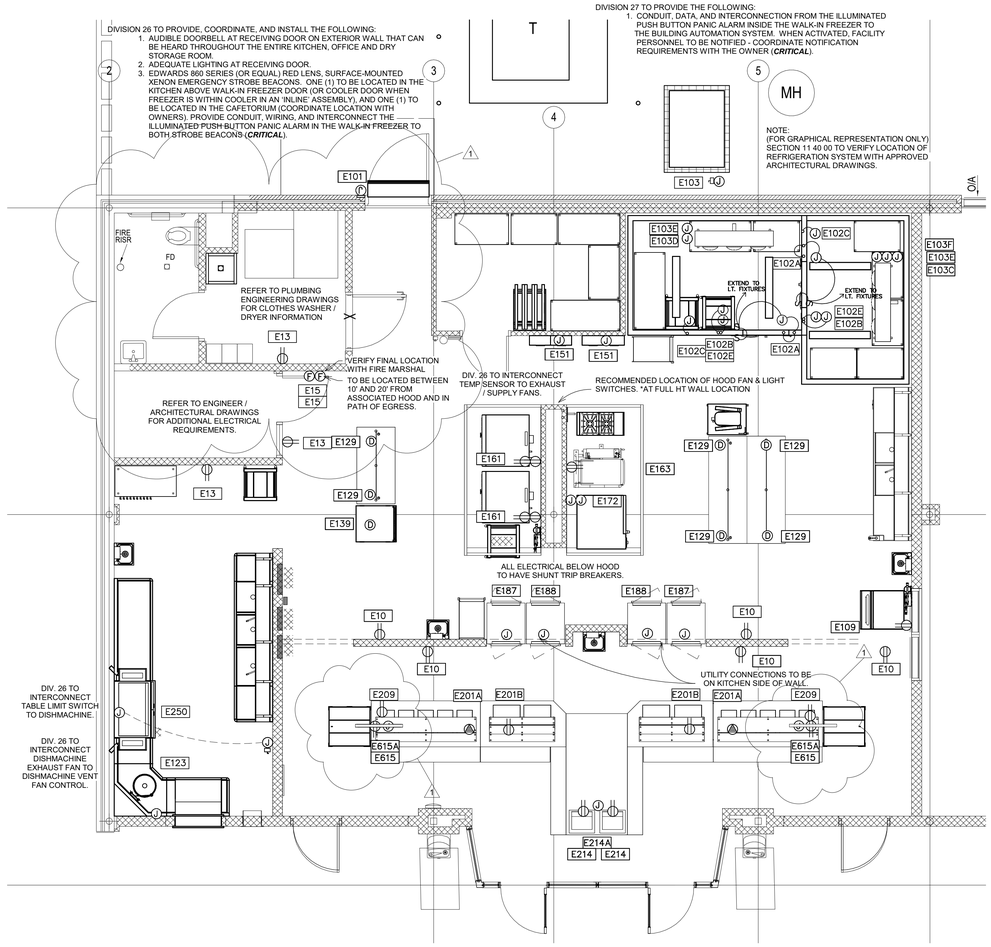
PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS PLUMBING PLAN

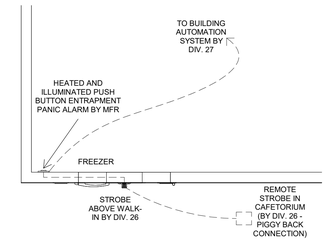
P-QF1.4

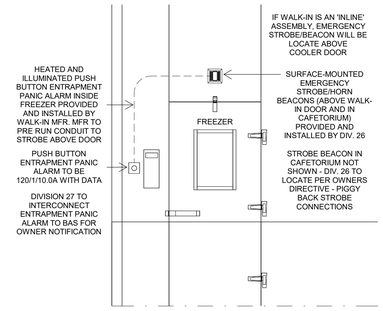
FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E10	DR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E13	WPR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E15	JB	---	---	---	FIRE PROT. SYSTEM	WALL	48"	RECESSED EMPTY CONDUIT FOR FIRE PULL
E101	JB	5.1A	120	1	AIR SCREEN	WALL	82"	BTC; MAGNETIC REED SWITCH ON DOOR JAMB & DOOR
E102A	JB	16.0A	120	1	DOOR HEATER/LIGHTS	CLG	DFA	BTC
E102B	JB	5.0A	120	1	TEMP. ALARM	CLG	DFA	BTC
E102C	JB	5.0A	120	1	PRESSURE RELIEF PORT	CLG	DFA	BTC
E102E	JB	10.0A	120	1	PANIC ALARM BUTTON	CLG	DFA	BTC-INTERCONNECT TO STROBE LIGHT/HORN ABOVE FREEZER DOOR AND IN CAFETORIUM
E103	JB/DS	21.9A	208	3	REFRIGERATION SYSTEM	VERIFY	VERIFY	BTC
E103C	JB	9.1A	208	1	FREEZER COIL	CLG	DFA	BTC
E103D	JB	1.8A	120	1	COOLER COIL	CLG	DFA	BTC
E103E	JB	---	---	---	DATA CONNECTION	CLG	DFA	BTC; RUN TO NEAREST IDF / MDF ROOM
E103F	JB	16.0A	120	1	DRAIN LINE HEATER	CLG	DFA	BTC; DEDICATED CIRCUIT
E109	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E123	JB	3.0HP	208	3	DISPOSER	WALL	24"	BTC; CONNECT THRU C.P. TO DISPOSER
E129	DCR	16.0A	120	1	TABLE RECEPTACLE	CLG	84"	TWISTLOCK PLUG & RECEPTACLE
E139	DCR	15.0A	120	1	INSUL. MOBILE PROOFER	CEILING	DFA	--

FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC
E161	(2)DR	6.0A EA.	120	1	CONVECTION OVEN	WALL	24"/48"	SHUNT TRIP BREAKER
E163	DR	5.0A	120	1	TILT BRAISING PAN	WALL	24"	SHUNT TRIP BREAKER
E172	(2)JB	15.0A EA.	208	1	COMBI OVEN	WALL	24"/48"	BTC- SHUNT TRIP BREAKER
E187	JB	15.5A	120/208	1	HEATED CABINET	WALL	96"	BTC; MOUNT ON KITCHEN SIDE
E188	JB	7.2A	120	1	REFRIGERATOR	WALL	96"	BTC; MOUNT ON KITCHEN SIDE-OMIT PLUG, UNIT TO BE HARDWIRED
E201A	PMR	28.0A	208	1	HOT FOOD COUNTER	FLOOR	4.5"	BTC
E201B	PMR	16.0A	120	1	COLD FOOD COUNTER	FLR	4.5"	---
E209	PMR	8.0A	120	1	DROP FRONT MILK COOLER-8 CASE	FLR	4.5"	---
E214	PMR	16.0A	120	1	CASH REGISTER	FLR	4.5"	DEDICATED CIRCUIT
E214A	CS	---	---	---	POS	FLOOR	6"	BTC; CONDUIT W/DATA LINE TO RUN TO MANAGER'S OFFICE OR IDF ROOM-VERIFY
E250	JB/DS-JB	51.7A	480	3	DISHMACHINE	WALL	66"	BTC; EXTEND FROM JB/DS AT NEAREST WALL
E615	DR	5.0A	120	1	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE DCO AT VIDEO LOCATION
E615A	JB	---	---	---	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE JB AT DATA LOCATION

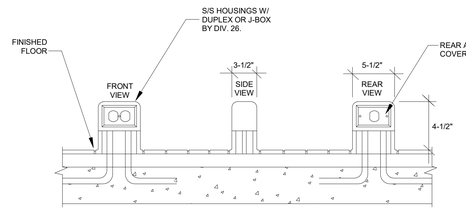


1 FOOD SERVICE ELECTRICAL PLAN
1/4" = 1'-0"

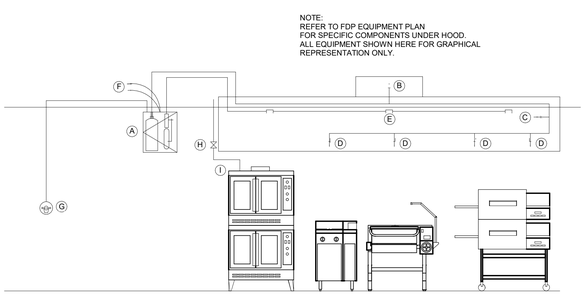




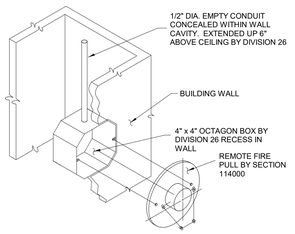
6 COLD STORAGE ASSEMBLY ENTRAPMENT PANIC ALARM DETAIL
NOT TO SCALE



3 PEDESTAL MOUNTED RECEPTACLE DETAIL
NOT TO SCALE



4 FIRE PROTECTION SYSTEM TYPICAL DETAIL
NOT TO SCALE



5 FIRE PROTECTION SYSTEM RECESSED FIRE PULL DETAIL
NOT TO SCALE

	SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES
•	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
	DR	DUPLEX RECEPTACLE		WPR	WATERPROOF RECEPTACLE (SPRING COVER)
	SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER
	SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT
	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
	PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR
	DCR	DROP CORD RECEPTACLE		CS/JB	JUNCTION BOX ON PEDESTAL
	JB	JUNCTION BOX ON CEILING		SW	SWITCH
	JB	JUNCTION BOX IN WALL		D	DATA
	JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26			

2 ELECTRICAL SYMBOLS
NOT TO SCALE

ISSUE:

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07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

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PECAN GROVE ELEMENTARY SCHOOL
3330 OLD S DRIVE
RICHMOND, TX 77406

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
488543119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
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ARCHITECTS

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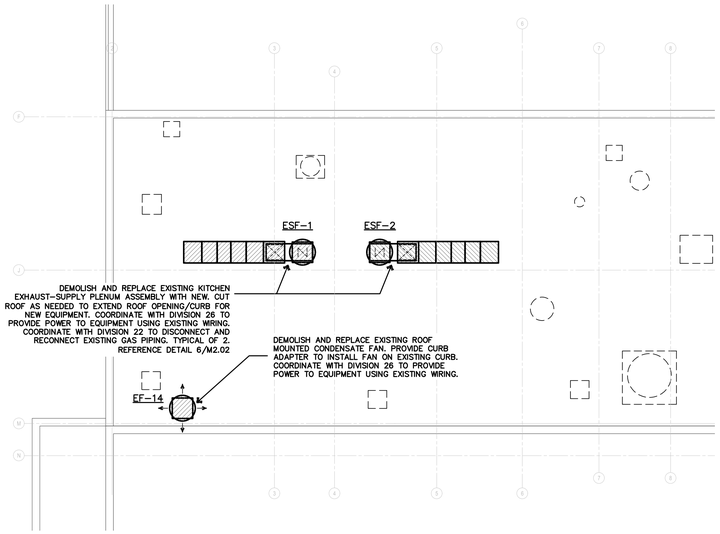
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

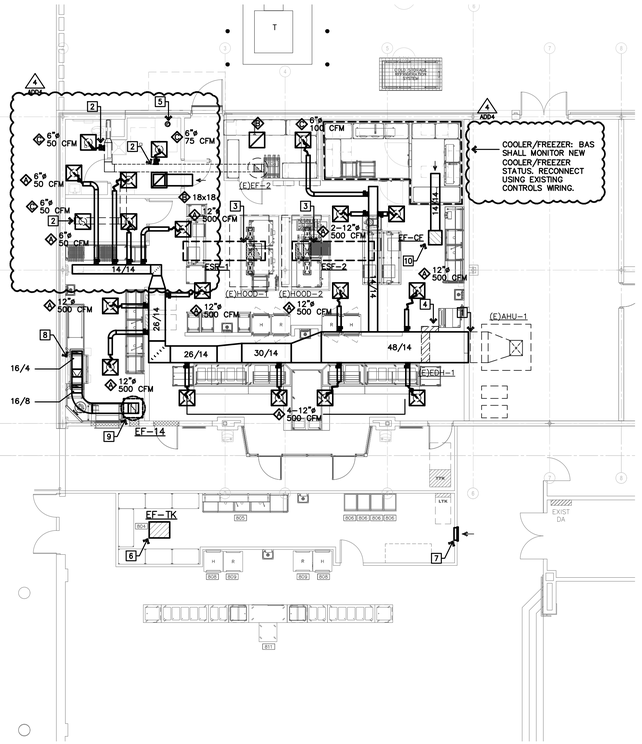
PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS ELECTRICAL PLAN

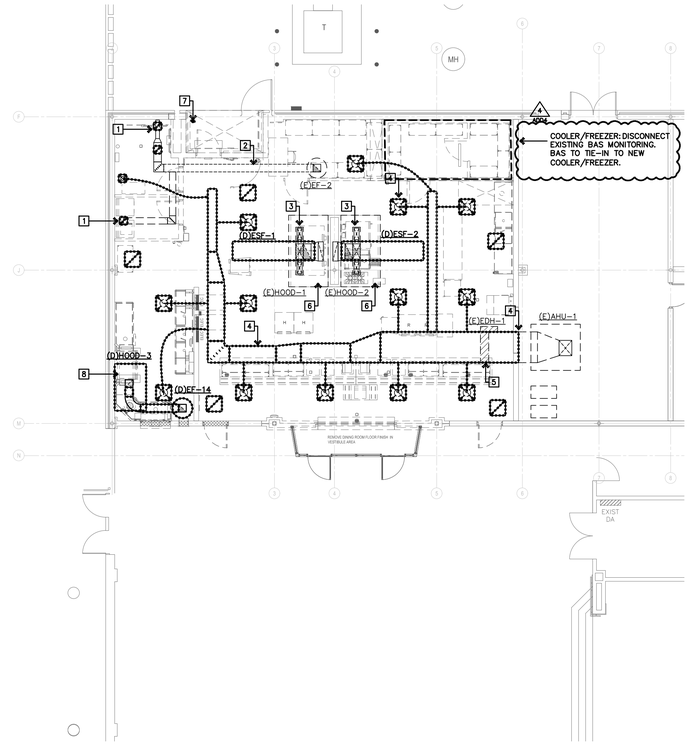
P-QF1.5



3 MECHANICAL ROOF FLOOR PLAN
SCALE: 1/8" = 1'-0"



2 RENO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"



1 DEMO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A	CEILING DIFFUSER – 24" X 24" FACE, PATTERN TYPE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE SCD A1–12" X 12"
B	CEILING RETURN GRILLE – 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE PDFR B1–12" X 12"
C	CEILING EXHAUST GRILLE – 24" X 24" PERFORATED FACE, STEEL CONST., WHITE FINISH, NECK SIZE SHOWN, U.L. LISTED PRICE PDDR C1–12" X 12"

NOTES:
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPES FOR AIR DEVICES.

4/AD04

KITCHEN HOOD REFURBISHMENT NOTES

HOOD REFURBISHMENT FOR KITCHEN HOODS (QUANTITY 2):
- STEAM WASH AND DEEP CLEAN STAINLESS STEEL HOOD ASSEMBLY, CASING, AND SUPPLY GRILLES WHERE APPLICABLE.
- REPLACE GREASE FILTER RACKS.
- CLEAN EXISTING MAKE-UP AIR AND GREASE EXHAUST DUCT.
- RELAMP EXISTING LIGHT FIXTURES WITH NEW 4000K BULBS LISTED FOR USE IN AN ENCLOSED KITCHEN HOOD FIXTURE.
- COORDINATE WITH DIVISION 11 FOR REPLACEMENT OF ANSUL FIRE SUPPRESSION SYSTEM.
- HOOD ASSEMBLIES SHALL BE CLEANED TO MEET THE STANDARDS ESTABLISHED IN NFPA STANDARD 96.

KITCHEN HOOD EXHAUST & MAKE-UP AIR UNIT SCHEDULE

MARK	ESF-1,2
SERVES	KITCHEN HOOD-1 & 2
SUPPLY SECTION	
TYPE	INDIRECT GAS-FIRED MAKE-UP AIR UNIT
DRIVE	DIRECT
SPEED CONTROL	VFD
SUPPLY CFM	2250
EXT. S.P. (IN. W.G.)	0.375
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	4.8 A
UNIT MOCP	15 A
HEATING MEDIUM	NATURAL GAS
INPUT/OUTPUT (MBH)	150.0/121.5
TURNDOWN RATIO	4:1
MANUFACTURER	GREENHECK
MODEL	IGX-P109-H12-MF-E
EXHAUST SECTION	
TYPE	UPBLAST BELT DRIVE CENTRIFUGAL
EXHAUST CFM	3600
EXT. S.P. (IN. W.G.)	0.75
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	3.75 A
UNIT MOCP	15 A
MANUFACTURER	GREENHECK
EXHAUST FAN MODEL	CUBE-200-15

NOTES
1. EXHAUST FAN: PROVIDE FAN WITH PRE-FABRICATED ROOF CURB ADAPTER, VENTED CURB EXTENSION, HINGING KIT, HEAT BAFFLE, DRAIN CONNECTION, GREASE TRAP, AND DISCONNECT SWITCH. FANS SHALL BE UL LISTED FOR USE WITH TYPE I GREASE HOOD.
2. EXHAUST FAN: PROVIDE NEW MOTOR STARTER, SIZED FOR EXHAUST FAN MOTOR AND INSTALLED IN PLACE OF EXISTING. REFERENCE THE SPECIFICATIONS FOR STARTER REQUIREMENTS. COORDINATE WITH DIV.25 FOR RE-TERMINATION OF PERMISSIVE ON/OFF CONTROL. COORDINATE WITH DIV.26 FOR RE-TERMINATION OF LOCAL HOOD SWITCH INTERLOCK FOR START/STOP CONTROL.
3. SUPPLY FAN/FURNACE: FLUE GAS FROM HEATING COIL SHALL BE POWER VENTED.
4. SUPPLY FAN/FURNACE: WEATHERHOOD WITH ALUMINUM MESH.
5. SUPPLY FAN/FURNACE: 5 YEAR HEAT EXCHANGER WARRANTY.
6. SUPPLY FAN/FURNACE CONTROLS: INTEGRAL HEATER CONTROLS WITH BAS INTERLOCK FOR PERMISSIVE ON/OFF AND LOCAL SWITCH INTERLOCK FOR CONTROL FROM KITCHEN HOOD SWITCH. FURNACE CONTROLS SHALL BE PROGRAMMED FOR 64°F LAT, WITH A LOCKOUT FOR O/A TEMPERATURES ABOVE THE LAT SETPOINT. COORDINATE WITH DIV.25 AND DIV.26 FOR CONTROLS AND SWITCH INTERLOCKS.
7. TWO POINT POWER CONNECTION: ONE FOR EXHAUST FAN AND ONE FOR INTAKE/SUPPLY FAN.
8. INTERLOCK FAN(S) WITH ASSOCIATED COOKING HOOD
9. INTERLOCK FAN WITH SWITCH ON KITCHEN HOOD.
10. UNIT TO BE PROVIDED WITH GALVANIZED STEEL FAN PACK EXTENSION/COMBINATION CURB.
11. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN (ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS 4/AD04

MECHANICAL RENO KEYED NOTES

1. TIE-IN NEW DUCTWORK TO EXISTING DUCTWORK AT WALL PENETRATION.
2. CONNECT NEW AIR DEVICE AND TAP TO EXISTING E/A TRUNK DUCT.
3. REWORK EXISTING EXHAUST AND SUPPLY DUCTWORK FROM EXISTING KITCHEN HOOD UP TO FAN, AS REQUIRED, WITH NEW TRANSITIONS AND SUPPLY AIR DUCTWORK OFFSETS TO MATE WITH NEW FAN CURB.
4. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
5. NEW DRYER VENT DUCT AND VENT CAP. REFER TO DETAIL 4/M2.02.
6. TEMP. KITCHEN – CEILING MOUNTED CABINET EXHAUST FAN. REFER TO DETAIL 1/M2.02.
7. TEMP. KITCHEN – 24"X24" SIDE WALL GRILLE. SURFACE MOUNT OPTIONAL. AUXILIARY FRAME. TITUS CT-700.
8. RECONFIGURE DUCTWORK TO CONNECT TO NEW DISHMACHINE HOOD OUTLETS. REF. KITCHEN CONSULTANT DRAWINGS FOR EXACT DIMENSIONS OF DUCT CONNECTIONS.
9. CONDENSATE EXHAUST DUCT UP THROUGH ROOF TO NEW EXHAUST FAN SET ON NEW ROOF CURB. REUSE EXISTING ROOF PENETRATION.
10. INLINE FAN INSTALLED ABOVE PLENUM. REFER TO DETAIL 2/M2.02.

MECHANICAL DEMO KEYED NOTES

1. DEMOLISH EXISTING AIR DEVICE, BRANCH DUCT, DAMPER AND TAP BACK TO TRUNK DUCT. CAP AND SEAL RESULTING OPENING.
2. EXISTING E/A TRUNK DUCT TO REMAIN.
3. DISCONNECT EXISTING S/A AND E/A DUCTWORK SERVING KITCHEN HOODS FROM FAN ASSEMBLY AND HOOD. DUCTWORK SHALL REMAIN FOR FUTURE USE/RE-CONNECTION. DEMOLISH SUPPLY AND EXHAUST FAN PLENUM ASSEMBLY SERVING KITCHEN HOODS, ALONG WITH CURB. NEW CURB TO BE PROVIDED AND INSTALLED AS PART OF RENOVATION.
4. DEMOLISH ALL EXISTING AIR DEVICES, DUCTWORK, AND DUCTWORK ACCESSORIES SERVING KITCHEN AREA BACK TO MECH. ROOM WALL PENETRATION.
5. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
6. REFURBISH EXISTING KITCHEN HOOD. REFER TO "KITCHEN HOOD REFURBISHMENT NOTES".
7. DEMOLISH AND REPLACE EXISTING DRYER EXHAUST DUCT AND FLUE VENT CAP.
8. DEMOLISH EXISTING CONDENSATE HOOD, ASSOCIATED DUCTWORK, AND ROOF EXHAUST FAN.

EXHAUST FAN SCHEDULE

MARK	EF-TK	EF-CF	EF-14
SERVES	TEMPORARY KITCHEN	COOLER/FREEZER	DISH WASHER
TYPE	CEILING CABINET	INLINE FAN	ROOF UPBLAST
DRIVE	DIRECT	DIRECT	DIRECT
SPEED CONTROL	INTEGRAL SPEED CONTROLLER	CONSTANT	CONSTANT
CFM	1055	1000	1200
EXT. S.P. (IN. W.G.)	0.3	0.35	0.60
IMP. SIZE (IN.)	8.0	13.5	14.0
HORSEPOWER (WATTS)	1/3 HP	1/6 HP	1/3 HP
VOLTAGE	120V/1-PHASE	120V/1-PHASE	120V/1-PHASE
MANUFACTURER	COOK	COOK	COOK
MODEL	GC-862	135SQN10D	CUE-140-B
SONES (MAX.)	15.0	15.0	15.0
NOTES	1 THRU 4	1 THRU 4	1 THRU 5

NOTES
1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN. FANS SHALL BE CAPABLE OF 120% OF THE SCHEDULED CFM CAPACITY.
2. INTEGRAL DISCONNECT SWITCH.
3. RUBBER IN-SHEAR ISOLATORS.
4. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.
7. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH. 4/AD04

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09/04/2025	ADDENDUM 04

4/AD04

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
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PROJ. NO.: 23-25
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KITCHEN AREA MECHANICAL PLANS
P-M1.01

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MECHANICAL SYMBOL SCHEDULE

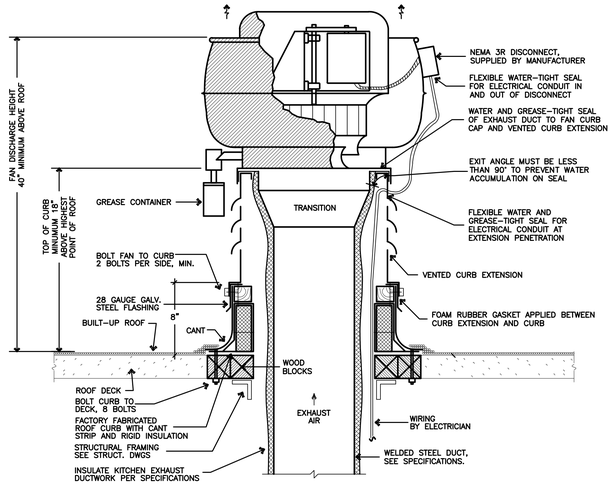
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
RS	REFRIGERANT SUPPLY
RR	REFRIGERANT RETURN
D	CONDENSATE LINE
	PETE'S PLUG
	ISOLATION VALVE
	ELECTRONIC CONTROL VALVE
	BUTTERFLY VALVE
	BALL VALVE
	UNION OR FLANGE
	STRAINER
	AUTOMATIC AIR VENT
T	LOCAL CONTROL THERMOSTAT
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	FIRE/SMOKE COMBINATION DAMPER
MD	MOTORIZED DAMPER
C	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST GRILLE
10Ø	RETURN AIR OPENING IN WALL
VD	VOLUME DAMPERS
	DUCT ELEVATION CHANGE
	90° DUCT ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
M	DAMPER MOTOR
T	TEMPERATURE TRANSMITTER
FS	FLOW SWITCH
P	DIFFERENTIAL PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
PS	STATIC PRESSURE SENSOR
PH	STATIC PRESSURE SENSOR HI-LIMIT
	ACCESS PANEL

A.P.	ACCESS PANEL
AHU	AIR HANDLING UNIT
B	BOILER
CH	CHILLER
CHP	CHILLED WATER PUMP
CVT	CONSTANT VOLUME TERMINAL
DH	DEHUMIDIFIER
E/A	EXHAUST AIR
EF	EXHAUST FAN
F&B	FACE & BYPASS
FF	FLY FAN
HDT	HORIZONTAL DRAW THROUGH
HWP	HOT WATER PUMP
KEF	KITCHEN EXHAUST FAN
KSF	KITCHEN SUPPLY FAN
O/A	OUTSIDE AIR
OBD	OPPOSED-BLADES DAMPER
PT	PRE-TREAT
R/A	RETURN AIR
RAHU	ROOF-MOUNTED AIR HANDLING UNIT
S/A	SUPPLY AIR
SA	SOUND ATTENUATOR
SF	SUPPLY FAN
SPD	SPILTER DAMPER
SZ	SINGLE ZONE
VAV	VARIABLE AIR VOLUME
VB	VAV BOX
VD	VOLUME DAMPER
VDT	VERTICAL DRAW THROUGH
VFD	VARIABLE FREQUENCY DRIVE
WH	WATER HEATER
⌀	DESIGNATION FOR "ROUND"
⬭	DESIGNATION FOR "OVAL"

GENERAL MECHANICAL NOTES

3

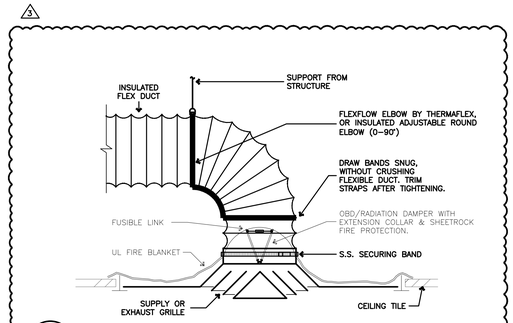
1. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION OF EQUIPMENT AND PIPING WITH THE ELECTRICAL CONTRACTOR TO INSURE NEC CLEARANCE (42 INCHES) IN FRONT OF ALL ELECTRICAL PANELS. DO NOT INSTALL DUCTWORK OR WATER PIPING OVER THE TOP OF ELECTRICAL PANELS SEE DETAIL 1/M2.01.
3. DUCT SIZES SHOWN ARE NET FREE AIR PASSAGE DIMENSIONS, DUCTS ARE NOT LINED, BUT ARE EXTERNALLY INSULATED. RUNOUTS TO CEILING OUTLETS SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET METAL WITH SPIN-IN V.D. AT TRUNK TAPS, SEE DETAIL 1 & 2/M2.01.
4. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR EXACT LOCATIONS OF CEILING OUTLETS IN RELATION TO OTHER CEILING ENTITIES. OUTLETS MUST BE COMPATIBLE WITH THE CEILING TYPES FOR THE VARIOUS AREAS.
5. IN AREAS WHERE SUPPLY AIR ENTERS CEILING CAVITY THRU RETURN AIR GRILLES AND FREE RETURNS TO AHU'S VIA CEILING CAVITY, PROVIDE RETURN AIR OPENING IN WALL--TO--DECK ABOVE CEILING THAT BLOCK PATH, REFER TO ARCHITECTURAL DRAWINGS. RETURN AIR ELBOWS SHALL BE SIZED AT 1 SQ. FT PER 400 CFM SUPPLY AIR.
6. ARRANGE PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EASY REMOVAL OF EQUIPMENT, SUB--ASSEMBLIES, COILS, FANS, MOTORS, FILTERS, ACCESS PANELS, ETC... PROVIDE UNIONS, FLANGES AND VALVES AT CONNECTIONS. PROVIDE AND INSTALL VICTAULIC JOINTS AT COILS, REF. SPECIFICATIONS. PLACE STOP VALVES ON SYSTEM SIDE OF REMOVABLE PIPE SECTIONS.
7. CONTRACTOR SHALL FIELD MEASURE STRUCTURAL ELEMENTS AND COORDINATE EQUIPMENT, PIPING AND DUCT ROUTING TO FIT EXISTING CONSTRUCTION. PROVIDE OFFSETS, BOOTS FOR ENVELOP OBSTRUCTIONS THAT CANNOT BE AVOIDED. CONSTRUCTION SHALL BE PER SMACNA STANDARDS.
8. FIELD VERFY EXISTING CONDITIONS PRIOR TO PROCUREMENT OF EQUIPMENT AND SYSTEMS.
9. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICIABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION
10. PROVIDE DUCTWORK INSULATION WITH R--VALUES MEETING OR EXCEEDING REQUIREMENTS OF IECC.
11. PROVIDE LISTED FIRE DAMPER INSTALLATIONS AT DUCT AND RETURN AIR OPENINGS AT PENETRATIONS THROUGH THROUGH RATED PARTITIONS AND BARRIERS. -- SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
12. PROTECT DUCTWORK AND MECHANICAL EQUIPMENT FROM CONSTRUCTION DUST AND DEBRIS DURING CONSTRUCTION. SEAL OPENINGS AS REQUIRED.
13. PROVIDE AND MAINTAIN TEMPORARY AIR FILTERS AT AIR HANDLERS USED DURING CONSTRUCTION.
14. PATCH AND REPAIR MECHANICAL SYSTEMS AND INSULATION DAMAGED DURING CONSTRUCTION.
15. SECURE ROOF MOUNTED EQUIPMENT TO WITHSTAND 142 MPH BASIC WIND SPEED, RISK CATEGORY III, EXPOSURE CATEGORY B, IN ACCORDANCE WITH IBC REQUIREMENTS.



6 KITCHEN UPBLAST EXHAUST FAN DETAIL

NO SCALE

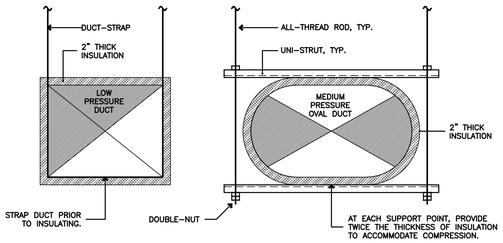
NOTES
1. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL.
2. INSTALL SHEETMETAL COVERING OVER WOOD BLOCKING IN THE AIRSTREAM OR OPEN TO THE CEILING CAVITY.



5 AIR DEVICE DETAIL

NO SCALE

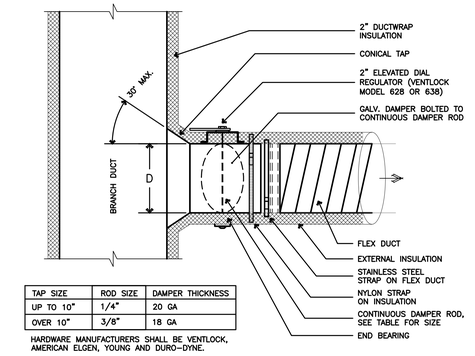
NOTES:
1. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



4 EXTERNALLY INSULATED DUCT SUPPORT DETAIL

NO SCALE

NOTES:
1. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT STRAPS.
2. DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



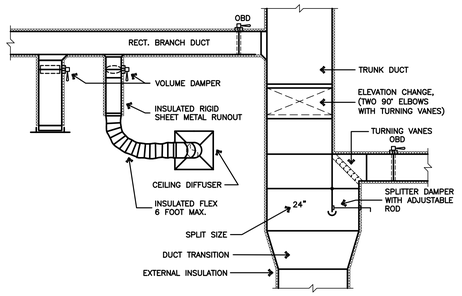
TAP SIZE	ROD SIZE	DAMPER THICKNESS
UP TO 10"	1/4"	20 GA
OVER 10"	3/8"	18 GA

HARDWARE MANUFACTURERS SHALL BE VENTLOCK, AMERICAN ELGEN, YOUNG AND DURO-DYNE.

3 DUCT TAP CONNECTION DETAIL

NO SCALE

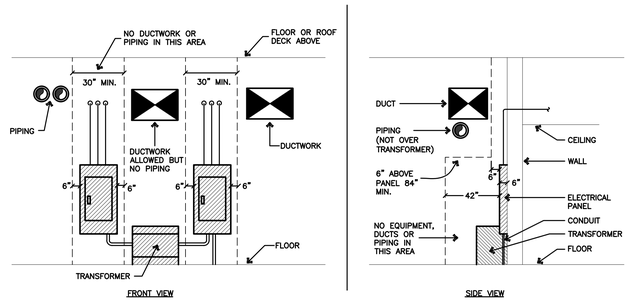
NOTES:
1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.
2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 DUCTWORK DETAIL

NO SCALE

NOTES:
1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

NOTES:
1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

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MECHANICAL NOTES AND DETAILS
P-M2.01

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INFO@STANTON-ENG.COM (713) 300-6060
TEXAS ENG. FIRM REG. NO. F-018332-0

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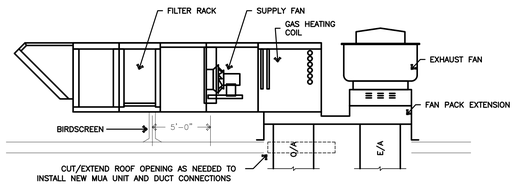


6 SUPPLY/EXHAUST KITCHEN PLENUM DETAIL

NO SCALE

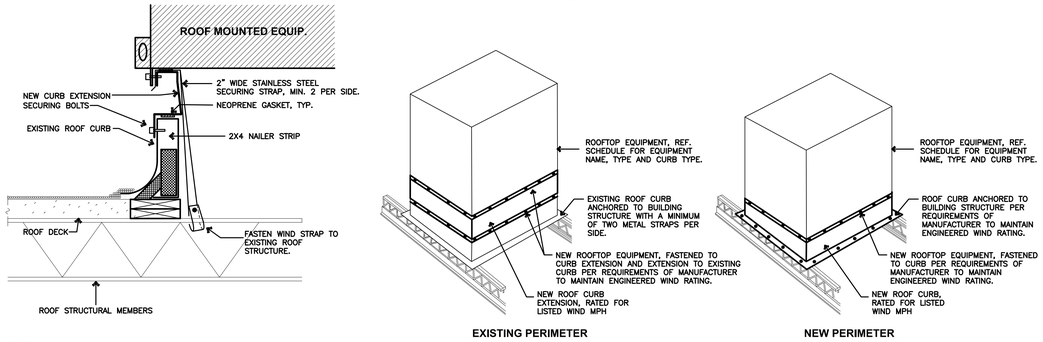
NOTES:

1. REFER TO DETAIL 6/M2.02 FOR CURB ANCHORING TO SATISFY WIND RATING REQUIRMENT. EQUIPMENT SHALL BE ABLE TO WITHSTAND 120 MPH WINDS.

ROOF MOUNTED EQUIPMENT

MARK	EQUIPMENT TYPE	CURB TYPE
EF-14	ROOF FAN	EXISTING PERIMETER
ESF-1,2	ROOF EXHAUST & MAKE-UP AIR UNIT	NEW PERIMETER

1. ALL ROOFTOP EQUIPMENT IS TO BE INSTALLED ON NEW ROOF SUPPORTS, AND IS SUBJECT TO THE INSTALLATION REQUIREMENTS OF THIS DETAIL.

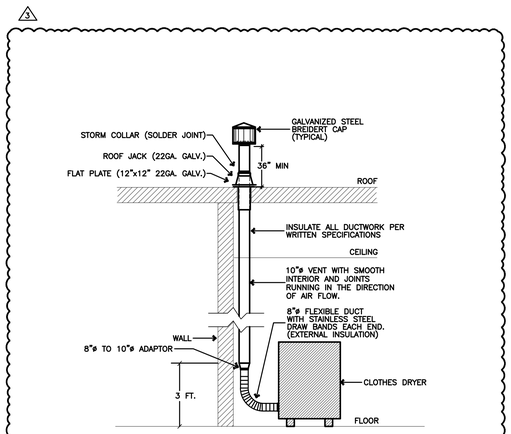


5 CURB MOUNTED EQUIPMENT ANCHORING

NO SCALE

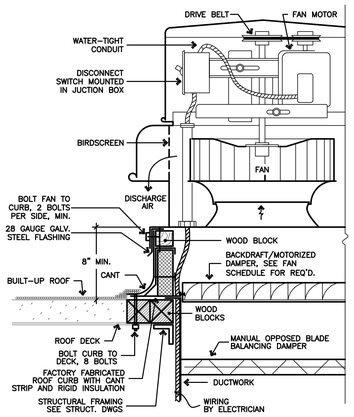
NOTES:

1. EQUIPMENT CURB AND EQUIPMENT ANCHORING BRACKETS SHALL BE DESIGNED TO WITHSTAND AN ASCE 7-22 WIND HAZARD RATING OF 147 MPH, FOR A CATEGORY III BUILDING AT THE PROJECT ADDRESS. THE CURB PROVIDER SHALL INCLUDE STAMPED DRAWINGS OF THE CURB AND ANCHORING DEMONSTRATING COMPLIANCE.



4 COMMERICAL CLOTHES DRYER VENT

NO SCALE

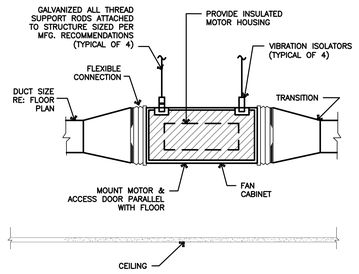


3 ROOF EXHAUST FAN AND VENT DETAIL

NO SCALE

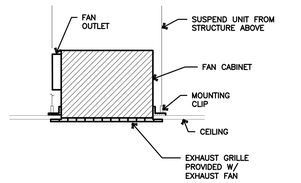
NOTES:

1. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.
2. ROOF VENT WILL NOT HAVE FAN/MOTOR ASSEMBLY, DISCONNECT SWITCH OR OBD.
3. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL WHERE APPLICABLE.
4. ALL FANS SCHEDULED TO BE PROVIDED WITH 140MPH WIND RATING, INCLUDING FACTORY PROVIDED CURB. CURB INSTALLATION SHALL FOLLOW MANUFACTURER'S REQUIREMENTS FOR SECURING TO ROOF AND EQUIPMENT WHERE IT DIFFERS FROM THE DETAIL.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 INLINE EXHAUST FAN DETAIL

NO SCALE



1 CABINET EXHAUST FAN

NO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PECAN GROVE ELEMENTARY SCHOOL
3330 OLD SOUTH DRIVE
RICHMOND, TX 77406

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED PROFESSIONAL ENGINEER
09.04.2025

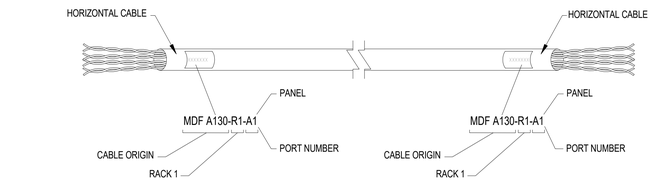
MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

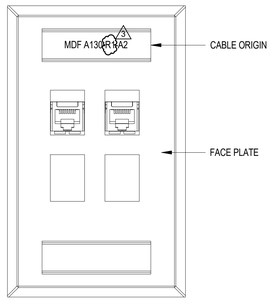
PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

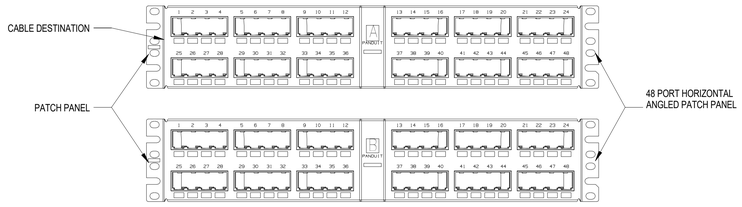
MECHANICAL DETAILS (CONT'D.)

P-M2.02

STANTON ENGINEERING GROUP
INFORMATION@STANTONENG.COM | (713) 300-4000
TEXAS ENG. FIRM REG. NO. F-619 | 5757 W. SAM HOUSTON PARKWAY N., SUITE 125, HOUSTON, TX 77041
©2025 ALL RIGHTS RESERVED

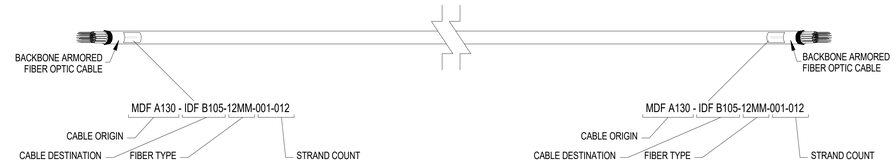


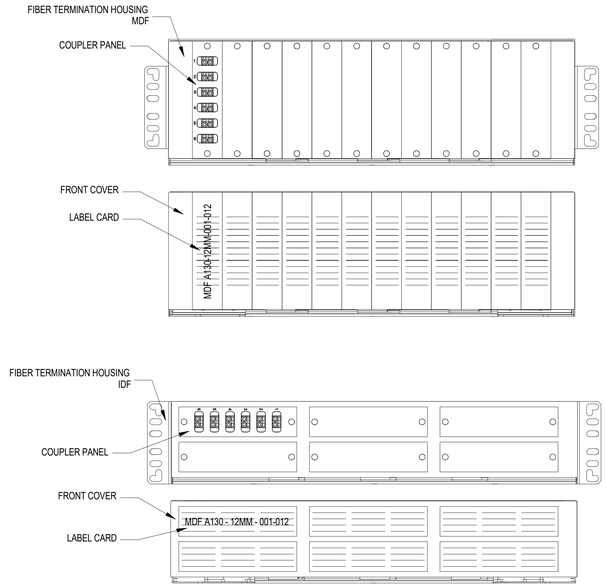




1 T500 TYPICAL HORIZONTAL DATA CABLE LABELING SCHEME

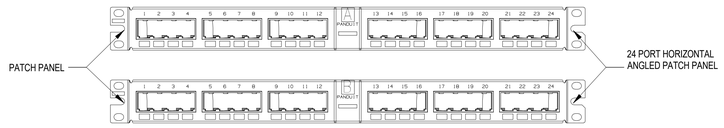
SCALE: N.T.S.





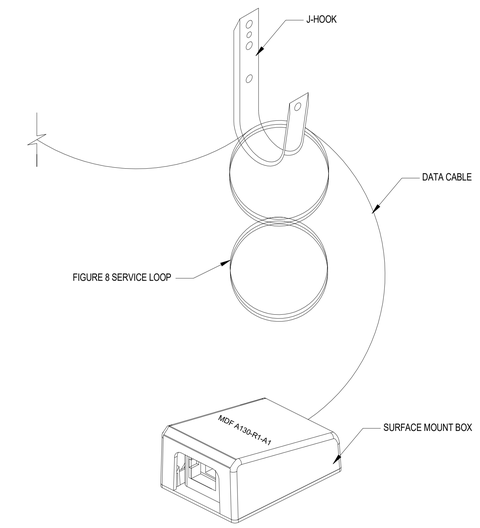
2 T500 TYPICAL FIBER BACKBONE LABELING SCHEME

SCALE: N.T.S.



3 T500 TYPICAL COPPER BACKBONE LABELING SCHEME

SCALE: N.T.S.



4 T500 ABOVE ASSESSIBLE CEILING LABELING SCHEME

SCALE: N.T.S.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/26/2025	ADDENDUM NO. 3

p

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
PECAN GROVE ELEMENTARY SCHOOL
3330 OLD SOUTH DRIVE
RICHMOND, TX 77406

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
BICSI
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 12-31-25
RCDD

07/18/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

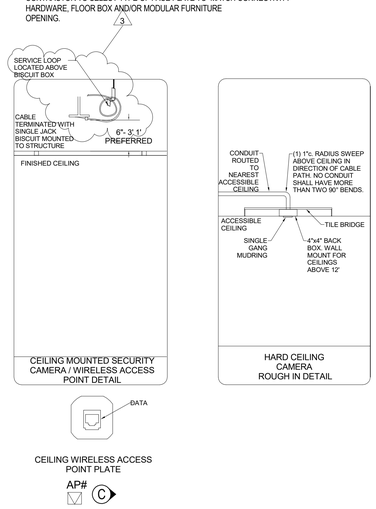
PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

TECHNOLOGY TYPICAL DETAILS

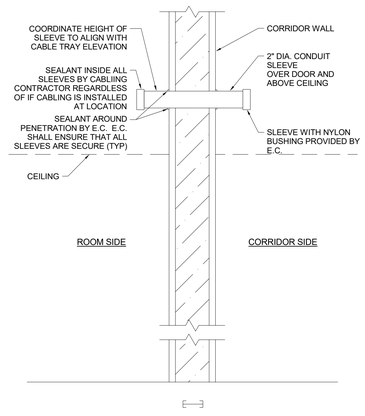
SHEET NO.
p-T500

GENERAL NOTE

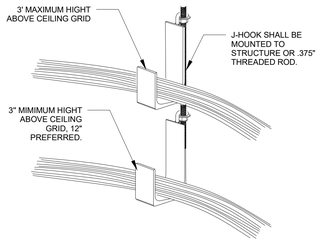
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



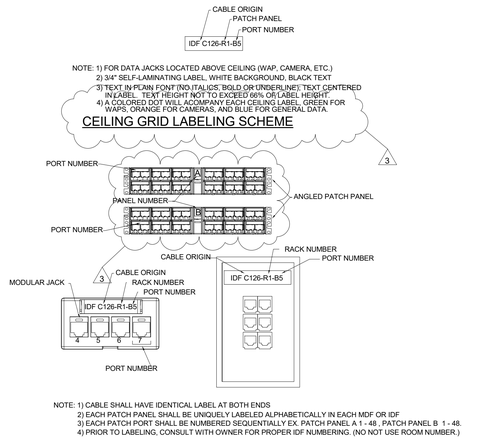
1 DATA ROUGH-IN DETAILS
SCALE: NS



2 TYPICAL CABLING SLEEVE
SCALE: NTS

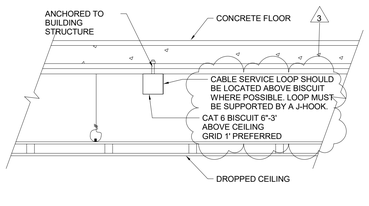


3 PANDUIT J-HOOK DETAIL
SCALE: NTS

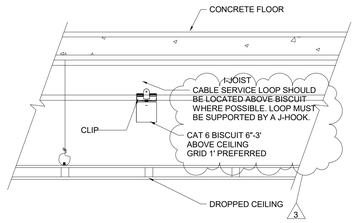


4 LABELING & CABLING SCHEMES
SCALE: NTS

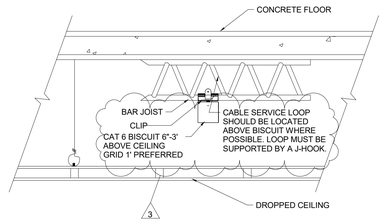
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
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07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025	ADDENDUM NO. 3

p

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Pecan Grove Elementary School
3330 Old S Dr, Richmond, TX 77406

SEAL

07-18-25

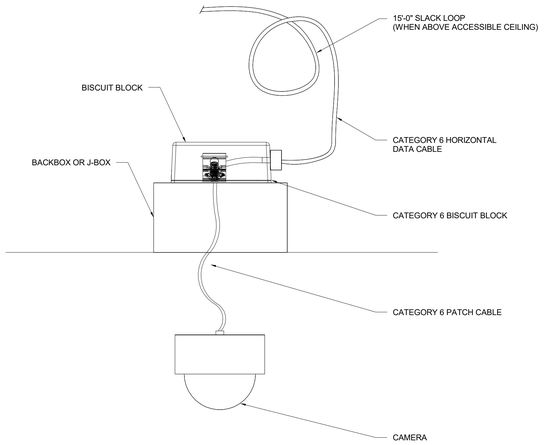
MVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Pecan Grove ES - DETAILS

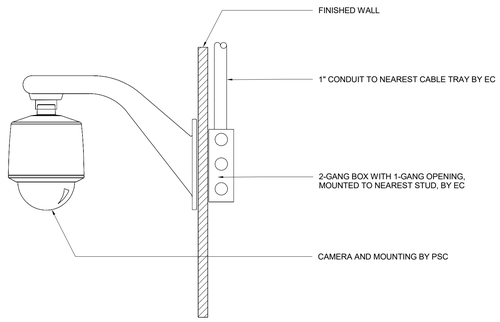
p-TN.500

GENERAL NOTES:

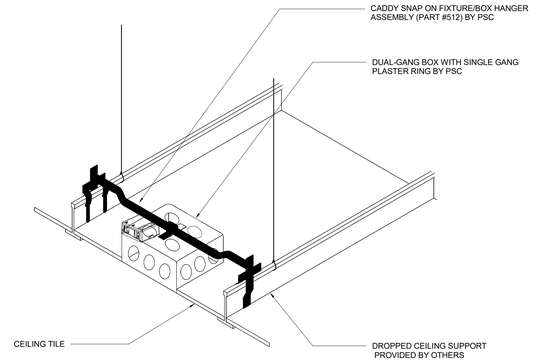
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



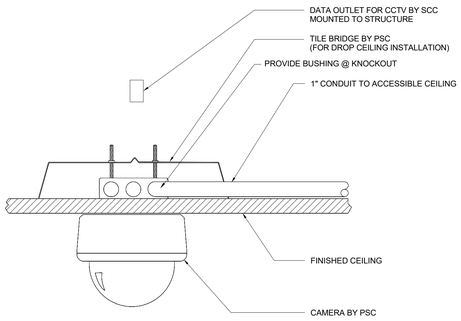
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

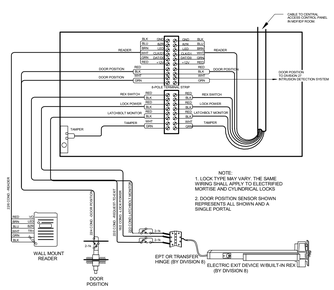


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

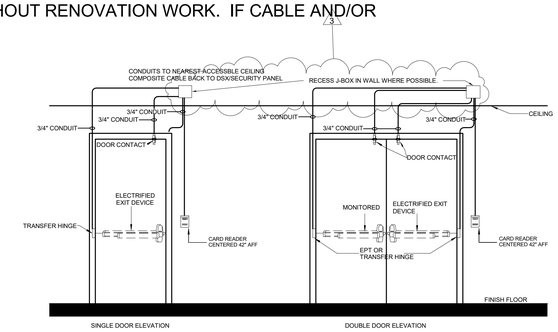
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

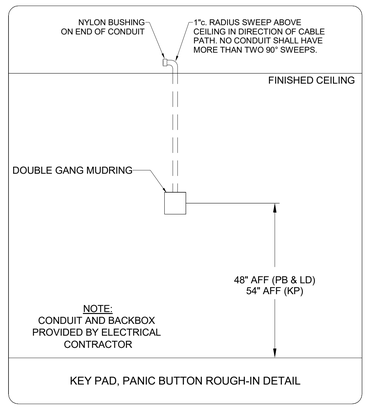
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025	ADDENDUM NO. 3

p

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Pecan Grove Elementary School
3330 Old S Dr, Richmond, TX 77406

SEAL

BICSI Registered Communications Distribution Designer
Brian C Porter
BICSI ID # 256857
EXPIRES 02-01-27

07-18-25

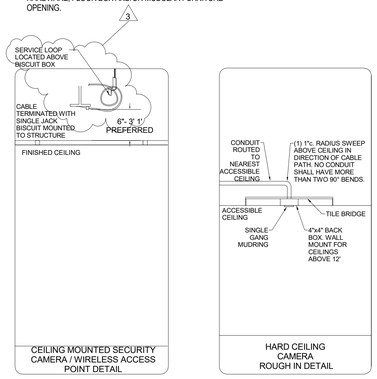
MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Pecan Grove ES - SECURITY DETAILS

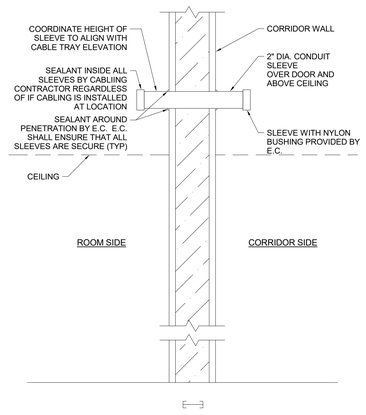
p-TN.600

GENERAL NOTE

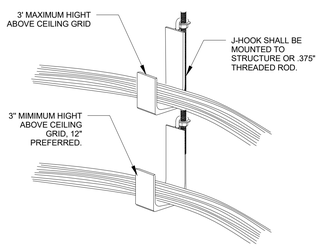
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



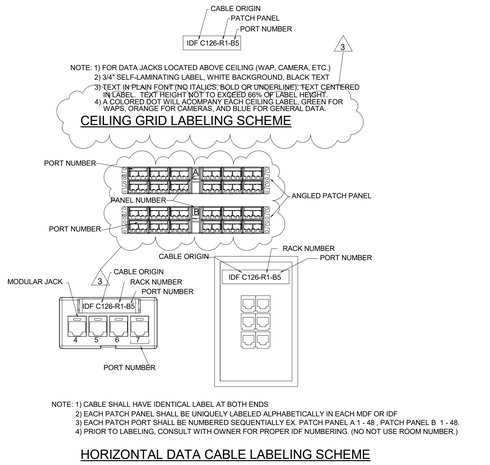
1 DATA ROUGH-IN DETAILS
SCALE: NS



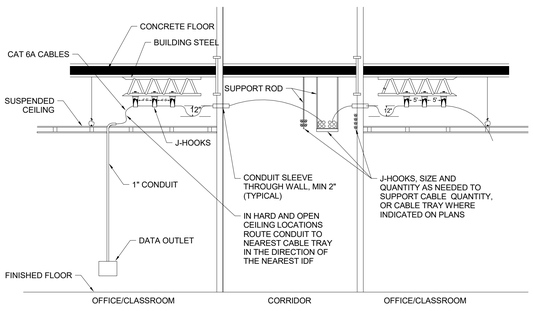
2 TYPICAL CABLING SLEEVE
SCALE: NTS



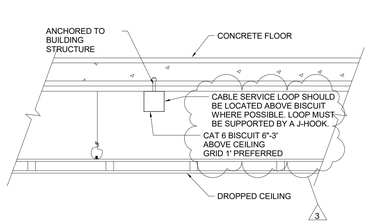
3 PANDUIT J-HOOK DETAIL
SCALE: NTS



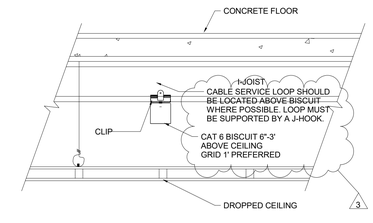
4 LABELING & CABLING SCHEMES
SCALE: NTS



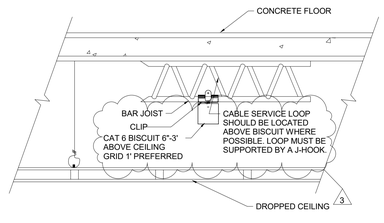
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025	ADDENDUM NO. 3

q

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Ridgegate Elementary School
6015 W Ridgecreek Dr, Houston, TX 77053

SEAL

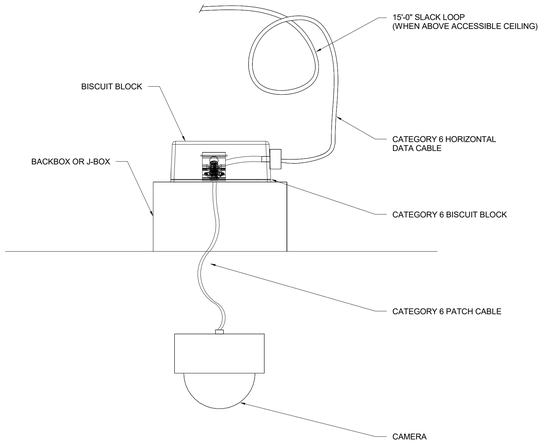
07-18-25

MVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

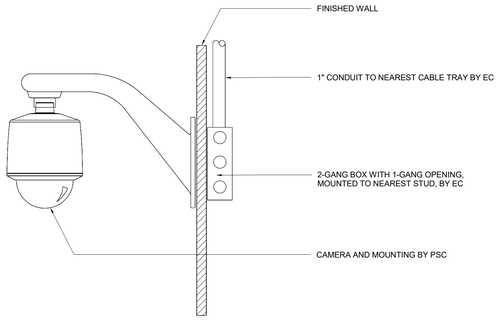
PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Ridgegate ES - DETAILS
q-TN.500

GENERAL NOTES:

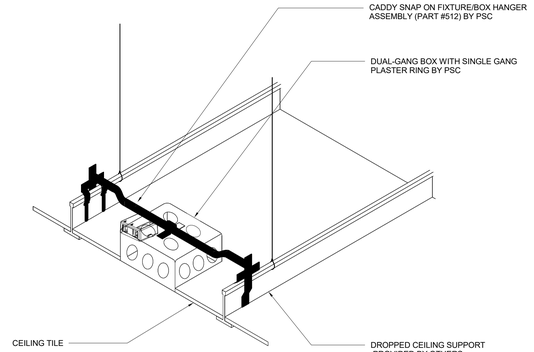
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



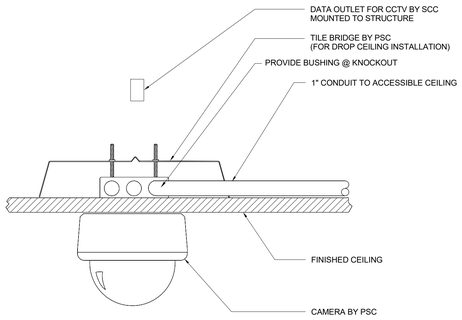
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

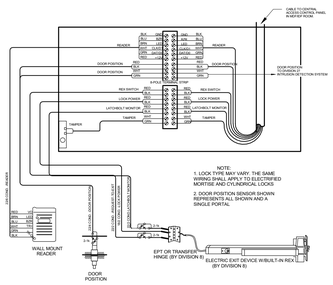


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

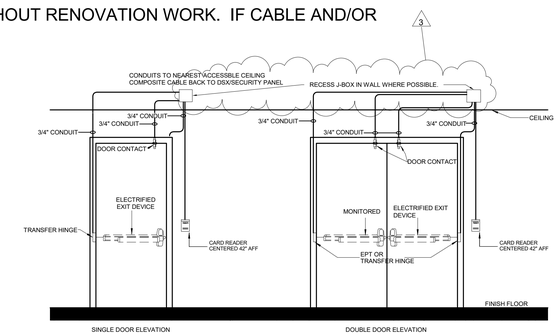
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

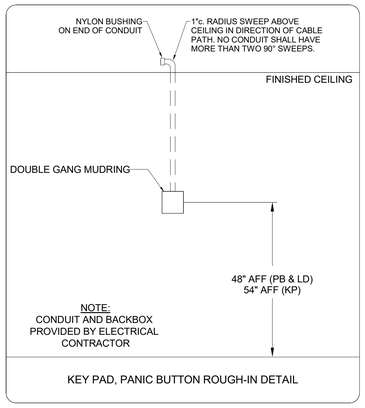
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025 ③	ADDENDUM NO. 3

q

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Ridgegate Elementary School
6015 W Ridgecreek Dr. Houston, TX 77053

SEAL

07-18-25

MVA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

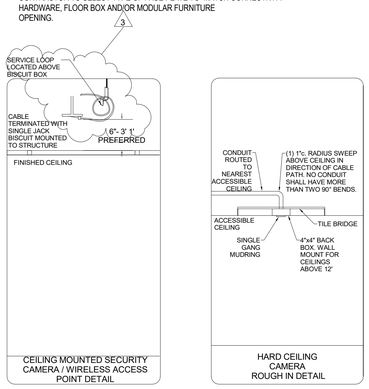
PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING
AND
PERMITTING

TECHNOLOGY - Ridgegate ES
- SECURITY DETAILS

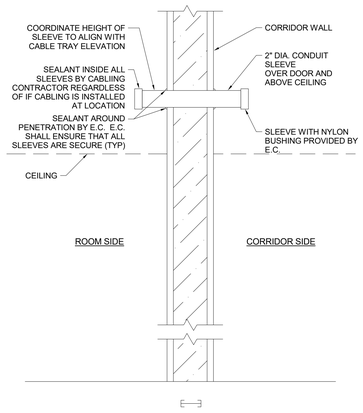
q-TN.600

GENERAL NOTE

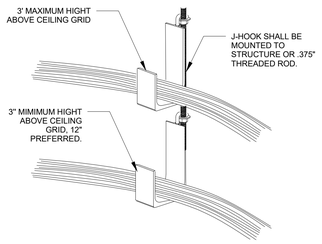
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



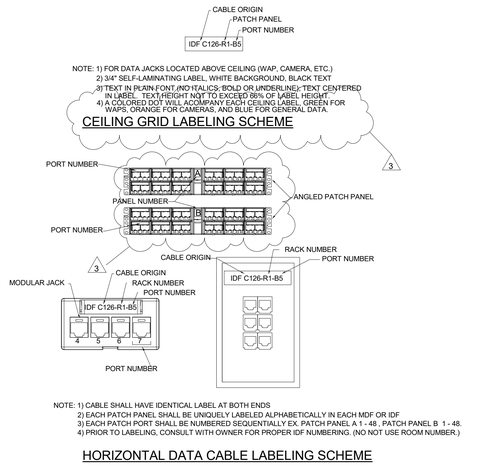
1 DATA ROUGH-IN DETAILS
SCALE: NS



2 TYPICAL CABLING SLEEVE
SCALE: NTS

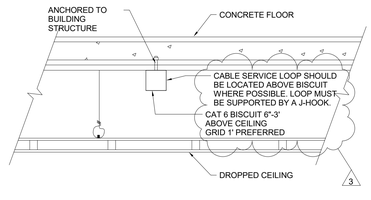


3 PANDUIT J-HOOK DETAIL
SCALE: NTS

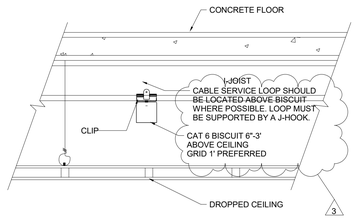


4 LABELING & CABLING SCHEMES
SCALE: NTS

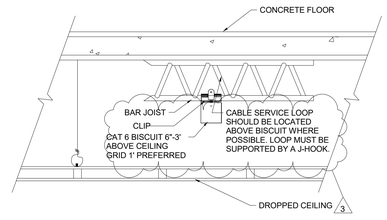
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PMY COMPANY

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r

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Ridgemont Elementary School
4910 Raven Ridge Dr. Houston, TX 77053

SEAL

07-18-25

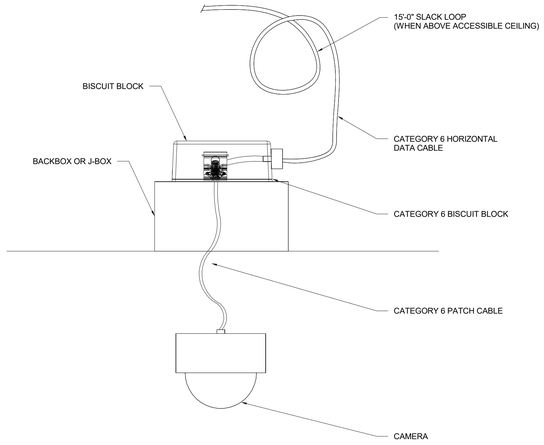
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Ridgemont ES - DETAILS

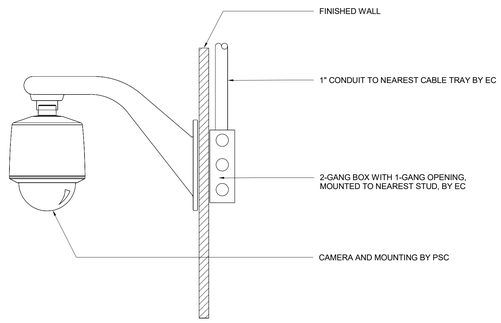
r-TN.500

GENERAL NOTES:

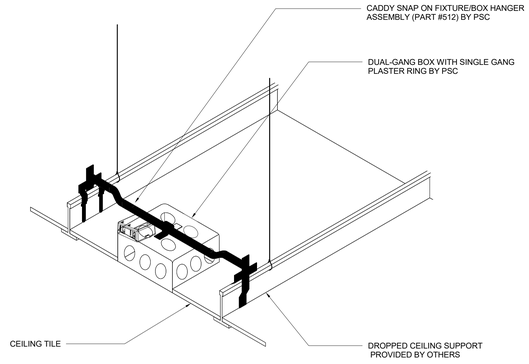
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



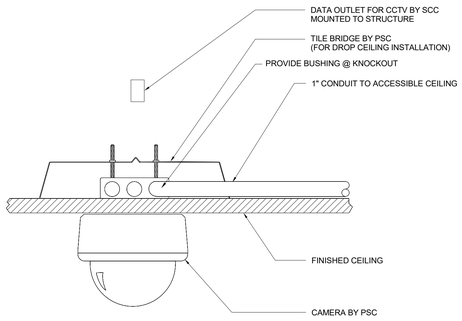
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS



5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

ACCESS CONROL DETAILS AND GENERAL NOTES:

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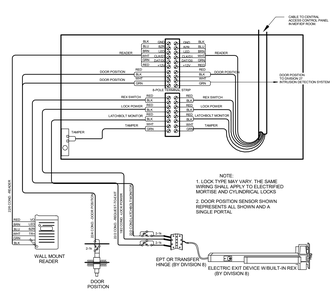
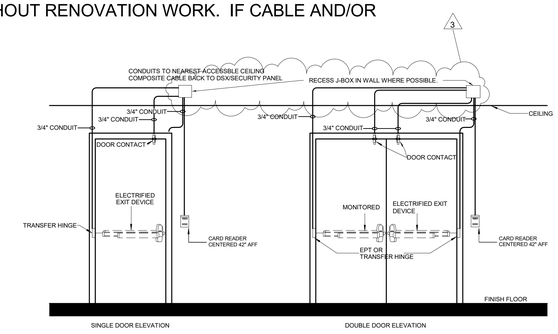
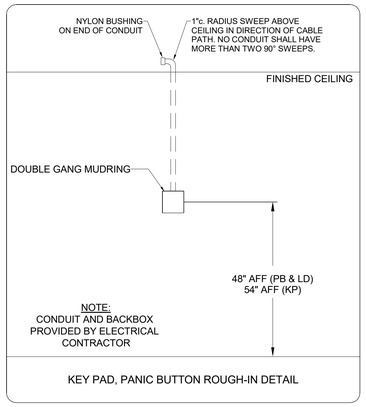


1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

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08/28/2025 (3)	ADDENDUM NO. 3

r

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Ridgemont Elementary School
4910 Raven Ridge Dr. Houston, TX 77053

SEAL

07-18-25

MVA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING
AND
PERMITTING
TECHNOLOGY - Ridgemont
ES - SECURITY DETAILS

r-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

SETTLERS WAY ELEMENTARY SCHOOL
SETTLERS WAY PARK, 3015 SETTLERS WAY BLVD,
SUGAR LAND, TX 77479

FORT BEND INDEPENDENT SCHOOL DISTRICT

2023 FORT BEND BOND

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s-D.101-2	DEMO PLAN PHOTOS
s-D.101-3	DEMO PLAN PHOTOS
s-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
s-ED.100	ELECTRICAL DEMOLITION AND TEMPORARY PLANS
s-TD201	TECHNOLOGY DEMOLITION FLOOR PLAN
s-A.101	SITE PLAN
s-A.200	SLAB DIMENSION CONTROL PLAN
s-A.201	OVERALL FLOOR PLAN
s-A.301	KITCHEN PLAN
s-A.302	TEMPORARY KITCHEN LAYOUT
s-A.401	REFLECTED CEILING PLAN
s-A.501	FINISH FLOOR PLAN
s-A.502	PARTITION SCHEDULE
s-S1	KITCHEN PLAN
s-S2	SECTIONS AND TYPICAL DETAILS
s-QF0.0	FS GENERAL COORDINATION NOTES
s-QF1.0	FS EQUIPMENT PLAN
s-QF1.1	FS FACILITY MODEL
s-QF1.2	FS EQUIPMENT MODEL
s-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
s-QF1.4	FS PLUMBING PLAN
s-QF1.5	FS ELECTRICAL PLAN
s-QF1.6	FS CONDENSING UNITS
s-QF1.7	FS WALK-INS
s-QF1.8	FS SERVING LINE
s-QF1.9	FS SERVING LINE
s-QF2.0	FS DEMO PLAN
s-QF2.1	FS TEMPORARY SERVING 3
s-QF3.1	FS ELEVATIONS
s-QF4.1	FS SECTIONS & DETAILS
s-QF4.2	FS DETAILS
s-QF4.3	FS DETAILS
s-M1.01	MECHANICAL PLANS
s-M2.01	MECHANICAL NOTES AND DETAILS
s-M2.02	MECHANICAL DETAILS
s-E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
s-E.001	ELECTRICAL AND FIRE ALARM NOTES
s-E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
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E.013	ELECTRICAL KITCHEN DETAILS
E.060	LIGHTING SCHEDULES
s-E.100	LIGHTING FLOOR PLANS
s-E.200	ELECTRICAL FLOOR PLANS
s-E.300	FIRE ALARM FLOOR PLANS
s-E.400	ELECTRICAL SCHEMATIC
s-P0.01	PLUMBING NOTES & SCHEDULES
s-P0.02	PLUMBING SCHEDULES & DETAILS
s-P1.01	PLUMBING FLOOR PLAN
s-P1.02	PLUMBING TEMPORARY KITCHEN PLAN
s-P2.00	PLUMBING RISER DIAGRAMS 3
s-T000	TECHNOLOGY SYMBOLS & LEGEND
s-T200	TECHNOLOGY COMPOSITE FLOOR PLAN
s-T201	TECHNOLOGY NEW RENOVATION KITCHEN PLAN
s-T202	TECHNOLOGY TEMPORARY KITCHEN FLOOR PLAN
s-T300	TECHNOLOGY ENLARGED VIEWS
s-T400	TECHNOLOGY TYPICAL DETAILS
s-T401	TECHNOLOGY TYPICAL DETAILS
s-T500	TECHNOLOGY TYPICAL DETAILS
s-TN-000	TECHNOLOGY - INDEX SHEET
s-TN-001	TECHNOLOGY - KITCHEN DEMOLITION
s-TN-100	TECHNOLOGY - OVERALL
s-TN-101	TECHNOLOGY - KITCHEN
s-TN-500	TECHNOLOGY - DETAILS
s-TN-600	TECHNOLOGY - SECURITY DETAILS
s-TN-700	TECHNOLOGY - AV DETAILS

REGISTERED ARCHITECT — MICHAEL A. MACHNIK — 22651 — STATE OF TEXAS
04SEP.2025

ADDENDUM NO. 4 - SEP 04, 2025

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH — SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D. — CHIEF OF SCHOOLS

BOARD OF TRUSTEES

KRISTIN K. TASSIN — PRESIDENT
ANGIE HANAN — VICE PRESIDENT
DR. SHIRLEY ROSE-GILLIAM — SECRETARY
AFSHI CHARANIA — BOARD MEMBER
ADAM SCHOOF — BOARD MEMBER
ANGIE WIERZBICKI — BOARD MEMBER

PROJECT DESIGN TEAM

PROGRAM MANAGEMENT
FBISD 2023 Bond Team
2323 Texas Parkway
Missouri City, TX 77489
Phone Number: 281-327-5481

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11767 Katy Freeway, Suite 430
Houston, Texas 77079
Phone Number: 713-782-8188

FOOD SERVICE
Food Design Professionals
26215 Oak Ridge Drive
The Woodlands, Texas 77380
Phone Number: 281-350-2323

MEP ENGINEERS
Stanton Engineering Group
1300 W. Sam Houston Pkwy South, Suite 121
Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

S

TEMPORARY KITCHEN FLOOR PLAN KEYED NOTES 05/A-A03-02

01 PROVIDE & INSTALL 555 SF OF RAM BOARD TO PROTECT EXISTING FLOORING. REMOVE AFTER CONSTRUCTION IS COMPLETE. CONTRACTOR MUST REPAIR FLOORING DAMAGED DURING CONSTRUCTION.

02 PROVIDE SCHEDULED PARTITIONS. BUILD PARTITIONS ON TOP OF RAM BOARD. DO NOT ATTACH PARTITIONS TO FLOOR.

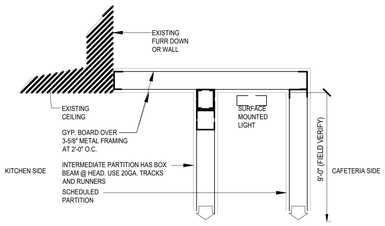
03 ATTACH PARTITIONS TO EXISTING WALL. REPAIR WALL TO MATCH EXISTING AFTER CONSTRUCTION IS COMPLETE.

TEMPORARY KITCHEN RCP KEYED NOTES 03/A-A03-02

04 ALL NEW SCHEDULED PARTITIONS AND CEILINGS FOR TEMPORARY STORAGE LAYOUT TO BE EPOXY PAINTED SW 7014 EIDER WHITE WITH SPECIFIED 4" RUBBER BASE. REMOVE WHEN CONSTRUCTION IS COMPLETED.

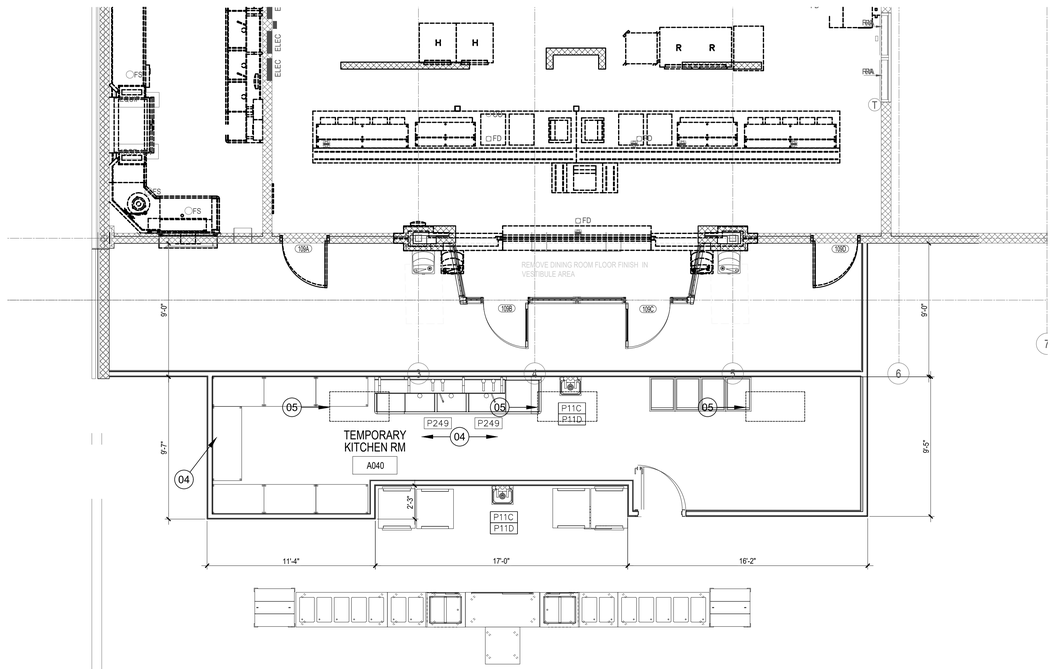
05 MOUNT TEMPORARY FLUORESCENT LIGHTS TO TEMPORARY CEILING.

3 KEYED NOTES



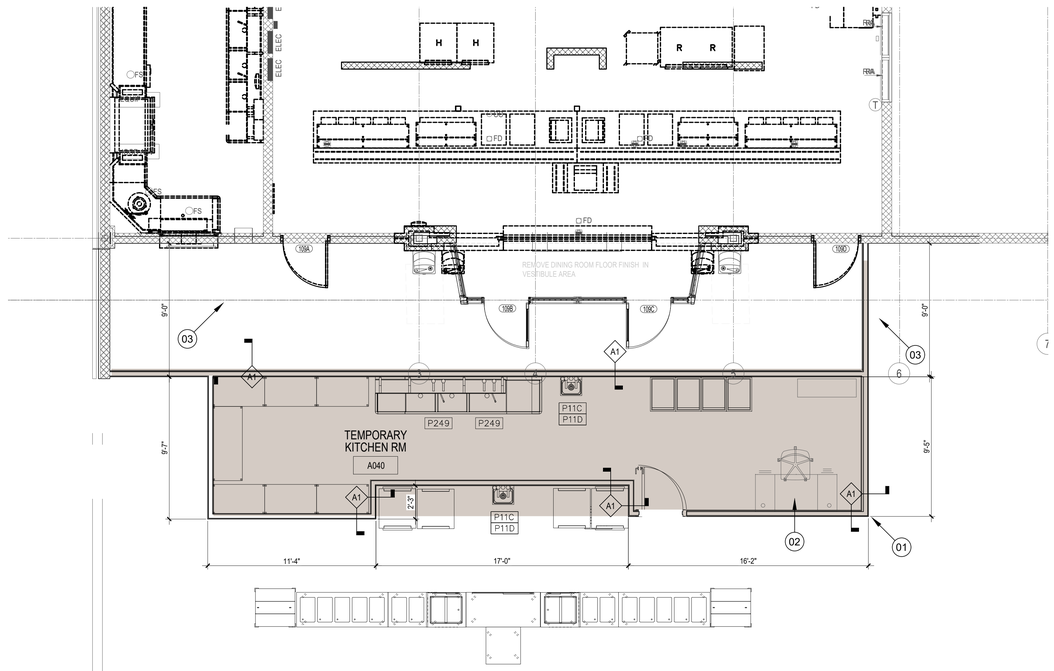
4 TEMPORARY LAYOUT SECTION

SCALE: 1"=1'-0"



1 KITCHEN PLAN

SCALE: 1/4" = 1'-0"



2 TEMPORARY KITCHEN FLOOR PLAN

SCALE: 1/4" = 1'-0"

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09/04/2025	ISSUED FOR ADDENDUM 04

S

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD
SUGAR LAND, TX 77479

SEAL

REGISTERED ARCHITECT
MICHAEL A. WEBB
24651
STATE OF TEXAS

09/04/2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: ADDENDUM NO. 4 - SEP 04, 2025

TEMPORARY KITCHEN LAYOUT
s-A.302

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\S-Settlers Way ES\s-A.302 TEMPORARY KITCHEN LAYOUT.dwg Sep 05, 2025 - 12:02pm

RCP - GENERAL NOTES

1. CEILING GRID SHALL BE INSTALLED TO MATCH EXISTING GRID'S POINT OF ORIGIN. THIS WILL REDUCE NEED TO RE-LOCATE ABOVE CEILING DUCTS, SPRINKLER PIPING AND OTHER SUPPORT SYSTEMS.
2. REFER TO SHEET A00-01 FOR GENERAL NOTES. GENERAL NOTES APPLY TO ALL SEVEN SCHOOL KITCHEN REMODELS.
3. LIGHTING LEVELS SHOULD BE 50 FC IN PREPARATION AREAS, WARE WASH AND SERVING LINES, OR MEET MINIMUM HEALTH CODE LEVELS, WHICHEVER ITS GREATER. SEE MEP PLANS
4. REPLACE HVAC DEVICES. REPLACE LIGHTING WITH 24"x24" LED LAY IN LIGHT AS SCHEDULED IN ELECTRICAL PLANS.
5. REFER TO MECHANICAL, ELECTRICAL SHEETS FOR DEVICE SCHEDULES.

RCP - NUMBERED NOTES

01 PROVIDE 30"x30" MIN. ACCESS HATCH IN SOFFIT CENTERED ON MOTOR.

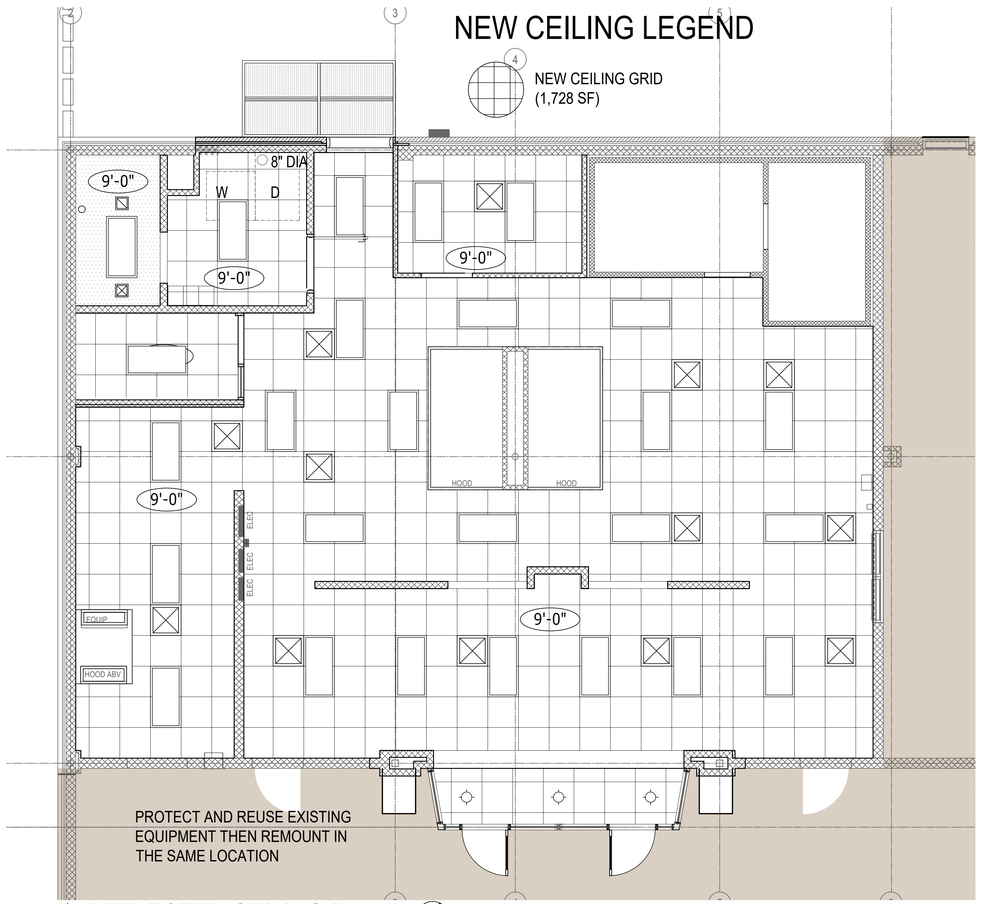
02 AFTER LOWERING THE NEW POWER RETRACTION SYSTEM. REPAIR AND PAINT SOFFITS AND SIDWALLS OF FURR TO MATCH EXISTING.

03 SEE SHEET M2.02 FOR ROOF PENETRATION. MATCH EXISTING ROOF CONSTRUCITON AND MAINTAIN INTEGRITY OF WARRANTY CURRENTLY IN PLACE.

2 RCP GENERAL NOTES

3 FOOD SERVICE AREA ELEVATION

SCALE: 3/16" = 1'-0"



1 REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

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FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD
SUGAR LAND, TX 77479

SEAL
REGISTERED ARCHITECT
ROBERT A. MOORE
42651
STATE OF TEXAS
28 AUG 2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

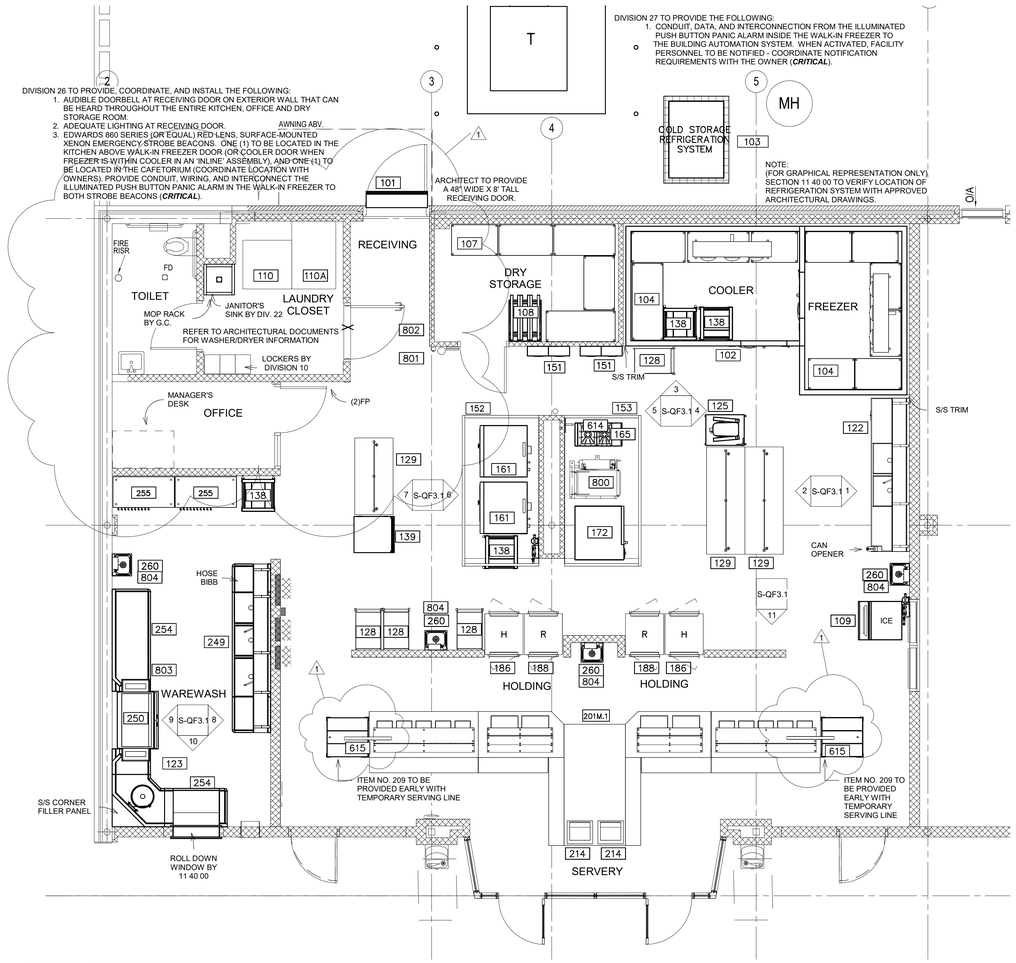
PROJ. NO.: 23-25
DATE: 07/28/25
ADDENDUM NO. 3 - AUG 28, 2025

REFLECTED CEILING PLAN

s-A.401

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\S-Settlers Way ES\s-A.401 REFLECTED CEILING PLAN.dwg Aug 27, 2025 - 5:50pm

FOOD SERVICE DRAWING INDEX	
FDP SHEET NUMBER	FDP SHEET NAME
S-QF0.0	FS GENERAL COORDINATION NOTES
S-QF1.0	FS EQUIPMENT PLAN
S-QF1.1	FS FACILITY MODEL
S-QF1.2	FS EQUIPMENT MODEL
S-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
S-QF1.4	FS PLUMBING PLAN
S-QF1.5	FS ELECTRICAL PLAN
S-QF1.6	FS CONDENSING UNITS
S-QF1.7	FS WALK-INS
S-QF1.8	FS SERVING LINE
S-QF1.9	FS SERVING LINE
S-QF2.0	FS DEMO PLAN
S-QF2.1	FS TEMPORARY SERVING
S-QF3.1	FS ELEVATIONS
S-QF4.1	FS SECTIONS & DETAILS
S-QF4.2	FS DETAILS
S-QF4.3	FS DETAILS



1 FOOD SERVICE EQUIPMENT PLAN
1/4" = 1'-0"

FOOD SERVICE EQUIPMENT SCHEDULE					
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH DEPARTMENT COORDINATION NOTES					
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS	MANUFACTURER	MODEL
101	1	AIR SCREEN		MARS	STD248-1UA-OB
102	1	COLD STORAGE ASSEMBLY		AMERICAN PANEL	
103	1	COLD STORAGE REFRIGERATION SYSTEM		RDT	ZS1-02Z-CT3-AST
104	2	COLD STORAGE SHELVING		METRO	METROMAX Q
107	1	DRY STORAGE SHELVING		METRO	METROMAX Q
108	1	CAN RACK		NEW AGE	1250CK
109	1	ICE MACHINE W/ BIN		MAITOWOC	UYF0310A
110	1	CLOTHES WASHER	BY G.C.		
110A	1	CLOTHES DRYER	BY G.C.		
122	1	TWO COMPARTMENT SINK WITHOUT DISPOSER		CUSTOM FABRICATED	
123	1	DISPOSER - 3HP		SALVAJOR	300-CA-18-ARSS-LD
125	1	20 QT. MIXER W/STAND		HOBART	HL200
128	4	UTILITY CART		LAKESIDE	522
129	3	WORKTABLE W/S.BAR UT.RACK		CUSTOM FABRICATED	
138	4	PAN RACK		CRES COR	207-UA-13A
139	1	INSUL MOBILE PROOFER		CRES COR	H-137-WSUA-12D
151	2	FIRE PROTECTION SYSTEM		ANSUL	R102
152	1	EXHAUST HOOD	EXISTING		
153	1	EXHAUST HOOD	EXISTING		
161	2	CONVECTION OVEN		BLODGETT	DFG-200 DBL
165	1	TWO BURNER RANGE		VULCAN	V2B18B
172	1	COMBI OVEN		RATIONAL	ICP 6-FULL/6-FULL N/G
186	2	PASS-THRU HEATED CABINET-1DR		TRAULSEN	AHF132WP
188	2	PASS-THRU REFRIGERATOR-1DR		TRAULSEN	AHT132WPUT
201M.1	1	SERVING COUNTER-MODULAR		COUNTERCRAFT	SCOL-408-MOD
214	2	CASH REGISTER	OWNER FURNISHED		
249	1	THREE COMPARTMENT SINK NO DISPOSER		CUSTOM FABRICATED	
250	1	DISHMACHINE		HOBART	CL44-BAS
254	2	SOILED & CLEAN DISHTABLE		CUSTOM FABRICATED	
255	2	MOBILE DRYING RACK		METRO	PR48VX3
260	4	HAND SINK	FURNISHED & INSTALLED BY DIV. 22		
614	1	FILL FAUCET		T&S	B-0610
615	2	MENU MONITOR	BY OWNER		
800	1	15 GAL. BRAISING PAN		GROEN	BPM-15GA
801	1	S/S CORNER GUARDS	LOCATED ON EVERY EXPOSED CORNER THROUGHOUT KITCHEN	CUSTOM FABRICATED	
802	1	WALL BUMPERS	LOCATED ON ALL EXPOSED BUILDING WALLS	PAWLING	MD-1
803	1	WATER SOFTENER		HOBART	WS-40
804	4	S/S SPLASH GUARDS		CUSTOM FABRICATED	

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD
SUGAR LAND, TX 77479

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
888544119
PROFESSIONAL MEMBER
Melissa Moore
7/18/2025
THIS ITEM IS ELECTRONICALLY SIGNED AND SEALED BY MELISSA MOORE, FCSI NO. 888544119 ON 07/18/2025

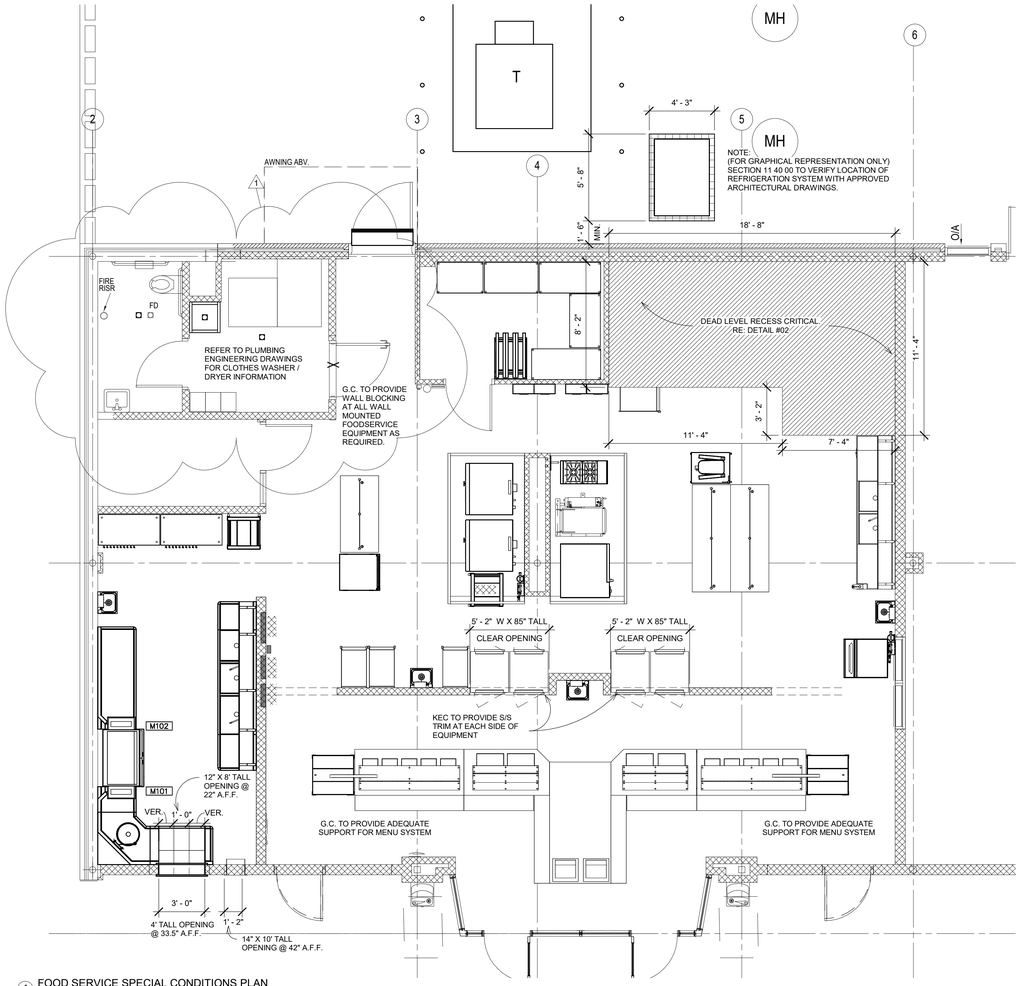
MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS EQUIPMENT PLAN

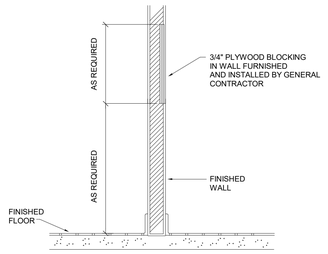
S-QF1.0

FOOD SERVICE MECHANICAL SCHEDULE						
REFER TO SHEET QF1 FOR MECHANICAL COORDINATION NOTES						
FDP NO.	FDP QTY	FDP TYPE	FDP SIZE	FDP LOC	FDP CFM	FDP S.P.
M101	1	EXHAUST	4" X 16"		400	.030"
M102	1	EXHAUST	4" X 16"		800	.030"



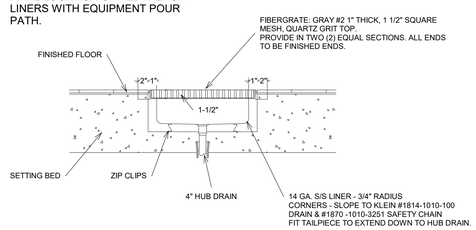
1 FOOD SERVICE SPECIAL CONDITIONS PLAN
1/4" = 1'-0"

NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION AND SIZE OF WALL BLOCKING.

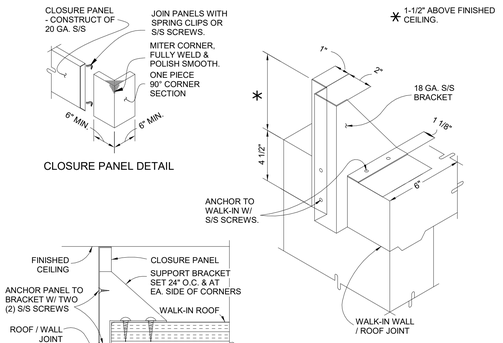


5 WALL BLOCKING DETAIL
NOT TO SCALE

NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION OF ALL TRENCH LINERS WITH EQUIPMENT POUR PATH.



6 TRENCH LINER DETAIL
NOT TO SCALE

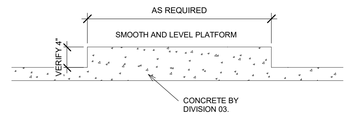


CLOSURE PANEL DETAIL

ISOMETRIC - SUPPORT BRACKET

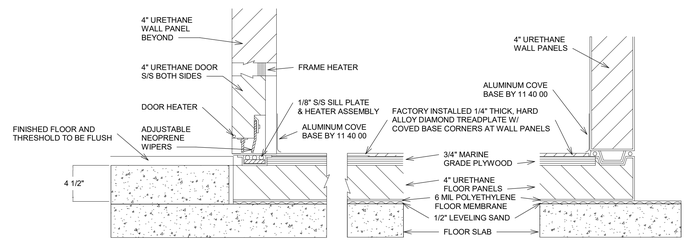
SECTION - CLOSURE PANEL

3 COLD STORAGE ASSEMBLY ENCLOSURE PANEL DETAIL
NOT TO SCALE



COLD STORAGE ASSEMBLY REFRIGERATION SYSTEM
4 GROUND MOUNT 4" PLATFORM DETAIL
NOT TO SCALE

SLAB TO BE MODIFIED AS REQUIRED TO ALLOW FOR A 4 1/2" DEPRESSION SLAB. PROVIDE NEW LEVEL CONCRETE PAD FOR COLD STORAGE ASSEMBLY.



WALL SECTION @ EXTERIOR DOOR

2 COLD STORAGE ASSEMBLY 4 1/2" DEPRESSION DETAIL
NOT TO SCALE

ISSUE:

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09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD
SUGAR LAND, TX 77479

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
68854119
PROFESSIONAL MEMBER
7/15/2025
ITEMS APPEARING ON THIS DRAWING AUTHORIZED BY MELISSA MOORE, FCSI NO. 68854119
ON: 07/18/2025

ARCHITECTS

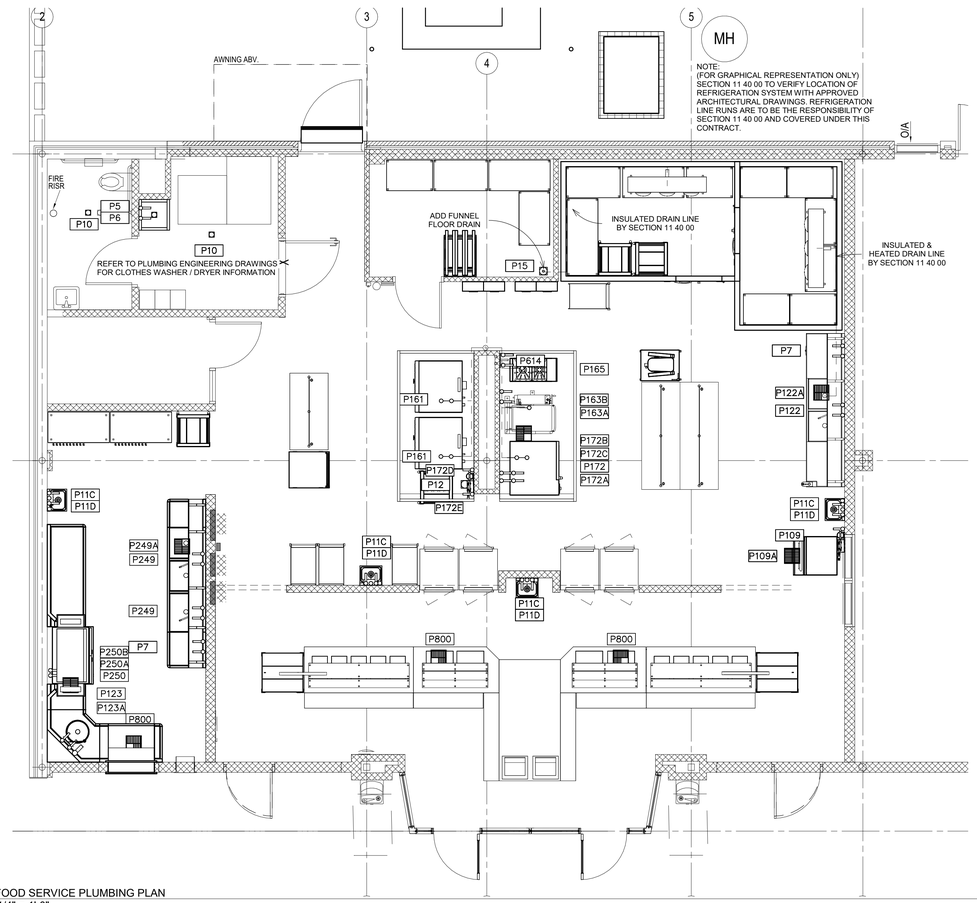
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS SPECIAL CONDITIONS & MECHANICAL PLAN

S-QF1.3

FOOD SERVICE PLUMBING SCHEDULE						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P5	3/4"	H & C WATER	JANITOR SINK	WALL	48"	JANITOR SINK BY PLUMBER
P6	4"	FLOOR DRAIN	JANITOR SINK	FLOOR	VERIFY	JANITOR SINK BY PLUMBER
P7	3/4"	H & C WATER	HOSE BIBB	WALL	18"	BTC
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	---
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P12	VERIFY	FLOOR DRAIN	EQUIP. DRAIN	FLOOR	VERIFY	NO SLOPE
P15	4"	FLOOR DRAIN	FUNNEL FLOOR DRAIN	FLOOR	0"	---
P109	3/4"	COLD WATER	WATER/ ICE	WALL	60"	BTC
P109A	12" SQ.	FLOOR SINK	ICE MACHINE	FLOOR	0"	FULL GRATE
P122	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P122A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	3/4 GRATE
P123	3/4"	H & C WATER	FAUCET / DISPOSER	WALL	13"	BTC
P123A	2"	DIRECT DRAIN	DISPOSER	WALL	10"	BTC
P161	(2)3/4"	NATURAL GAS	CONVECTION OVEN	WALL	18"/36"	BTC - 60 MBTU/HR EACH
P163A	3/4"	NATURAL GAS	TILT BRAISING PAN	WALL	18"	BTC - 65 MBTU/HR
P163B	3/4"	H & C WATER	TILT BRAISING PAN	WALL	36"	BTC
P165	1"	NATURAL GAS	RANGE	WALL	18"	BTC - 70 MBTU/HR
P172	(2)3/4"	COLD WATER	COMBI OVEN	WALL	24"/48"	BTC - INTERCONNECT THRU FILTERS
P172A	3/4"	COLD WATER	COMBI OVEN	WALL	48"	BTC
P172B	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE
P172C	(2)3/4"	NATURAL GAS	COMBI OVEN	WALL	18"/36"	BTC - 105 MBTU/HR EACH
P172D	3/4"	COLD WATER	COMBI OVEN	WALL	66"	BTC; INTERCONNECT TO P172
P172E	3/4"	COLD WATER	COMBI OVEN WATER FILTER	WALL	66"	BTC
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P249A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	THREE QUARTER GRATE
P250	12" SQ.	FLOOR SINK	BOOSTER / DISHMACHINE	FLOOR	18"	BTC
P250A	3/4"	HOT WATER	DISHMACHINE	WALL	18"	EXT. THRU W.FILTER TO BOOSTER / DISH MACHINE - 140DEG.MIN.
P250B	3/4"	COLD WATER	DISHMACHINE	WALL	18"	BTC
P614	1/2"	H & C WATER	FILL FAUCET	WALL	42"	BTC
P800	12" SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE



1 FOOD SERVICE PLUMBING PLAN
1/4" = 1'-0"

SECTION 11 40 00 TO PROVIDE LOOSE WITH FOOD SERVICE EQUIPMENT. INSTALLATION BY DIV. 22 & 26.

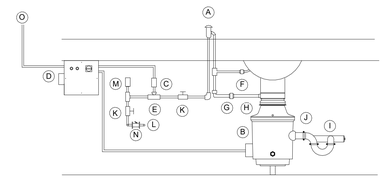
- (A) VACUUM BREAKER
- (B) DISPOSER
- (C) TIME DELAY
- (D) CONTROL PANEL
- (E) SOLENOID VALVE

DIVISION 22 TO PROVIDE AND INSTALL

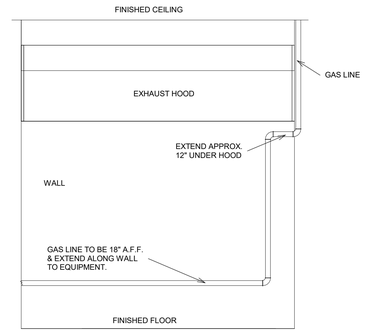
- (F) 1/2" CW INLET
- (G) FLOW CONTROL
- (H) 1/2" CW
- (I) 2" DRAIN LINE WITH P-TRAP & Y ADAPTOR
- (J) 1-1/2" TAILPIECE
- (K) GATE VALVE
- (L) 1/2" CW SUPPLY
- (M) SHOCK STOP
- (N) RPZ BACK FLOW PREVENTOR

DIVISION 26 TO PROVIDE AND INSTALL

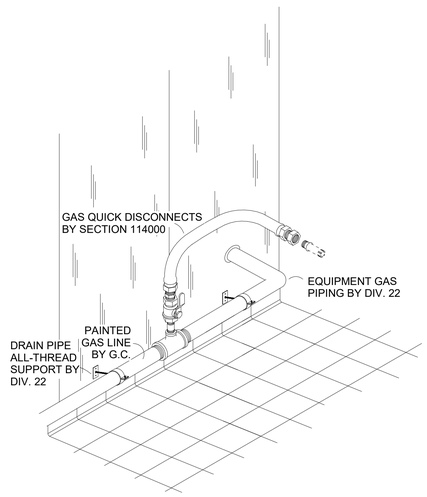
- (O) POWER SUPPLY



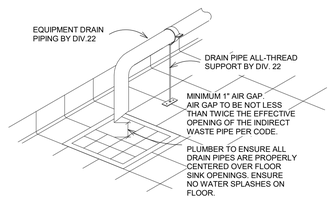
6 DISPOSER WITH VACUUM BREAKER DETAIL
NOT TO SCALE



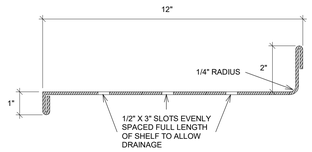
7 EXHAUST HOOD - GAS LINE ROUTING DETAIL
NOT TO SCALE



3 GAS DISCONNECT DETAIL
NOT TO SCALE



5 DRAIN PIPING FASTENER DETAIL
NOT TO SCALE



8 WAREWASH - PERFORATED OVER SHELF DETAIL
NOT TO SCALE

HW	HOT WATER	FFD		FUNNEL FLOOR DRAIN
CW	COLD WATER	EVC		EXHAUST VENT CONNECTION
HTW	180 F HOT WATER	SVC		SUPPLY VENT CONNECTION
	CHILLED WATER	FR		DIRECT-CONNECTED FLUE RISER
W	DIRECT WASTE	PS		PIPE SLEEVE
IW	INDIRECT WASTE			COMPRESSED AIR
	GAS SUPPLY			CO2
	STEAM SUPPLY		AFF	ABOVE FINISHED FLOOR
CR	CONDENSATE RETURN		BTC	BRANCH TO CONN. ON EQUIP
DR	DRAIN		DFA	DROP FROM ABOVE
FD	FLOOR DRAIN		CLG	CEILING
FST	FLOOR SINK 3/4 GRATE			
FSH	FLOOR SINK 3/4 GRATE			

2 PLUMBING SYMBOLS
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD
SUGAR LAND, TX 77479

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
108554119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM WAS PREPARING ON THIS DATE ADOPTED BY MELISSA MOORE, FCSI NO 108554119
CRL 07/15/2025

ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

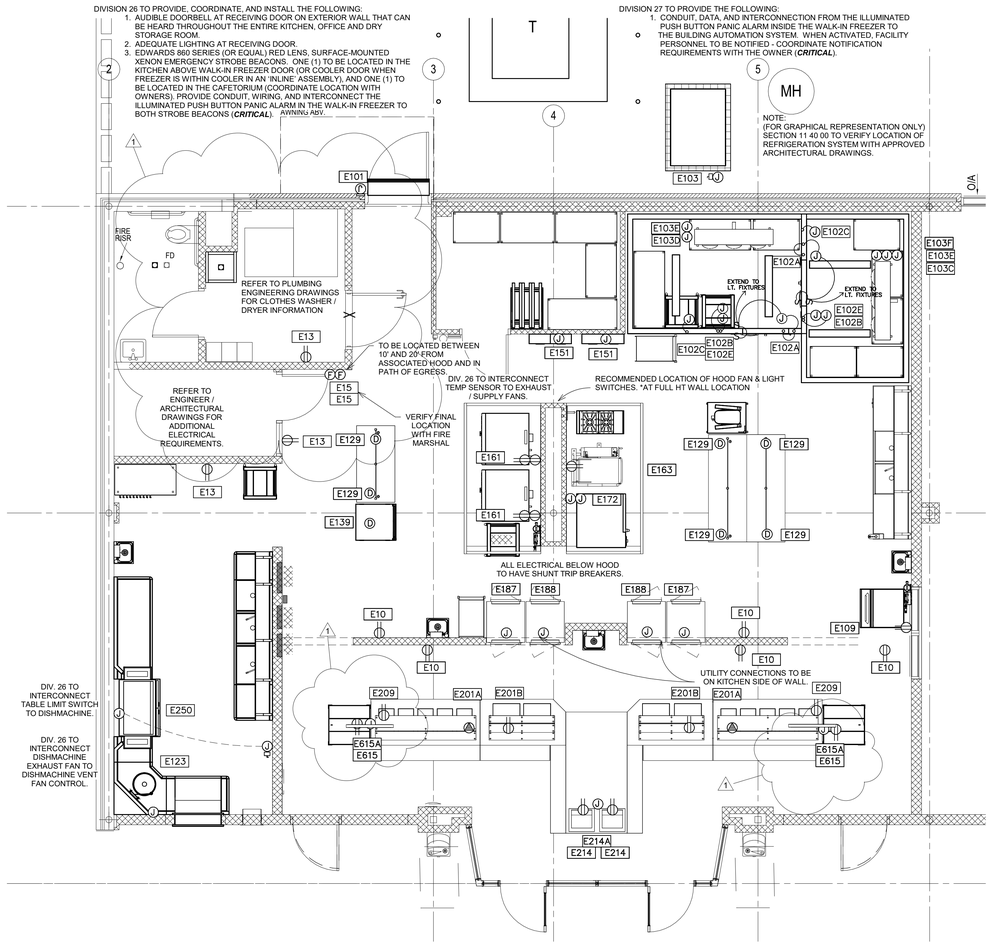
PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS PLUMBING PLAN

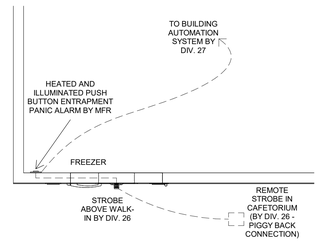
S-QF1.4

FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E10	DR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E13	WPR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E15	JB	---	---	---	FIRE PROT. SYSTEM	WALL	48"	RECESSED EMPTY CONDUIT FOR FIRE PULL
E101	JB	5.1A	120	1	AIR SCREEN	WALL	82"	BTC; MAGNETIC REED SWITCH ON DOOR JAMB & DOOR
E102A	JB	16.0A	120	1	DOOR HEATER/LIGHTS	CLG	DFA	BTC
E102B	JB	5.0A	120	1	TEMP. ALARM	CLG	DFA	BTC
E102C	JB	5.0A	120	1	PRESSURE RELIEF PORT	CLG	DFA	BTC
E102E	JB	10.0A	120	1	PANIC ALARM BUTTON	CLG	DFA	BTC-INTERCONNECT TO STROBE LIGHT/HORN ABOVE FREEZER DOOR AND IN CAFETORIUM
E103	JB/DS	25.0A	208	3	REFRIGERATION SYSTEM	VERIFY	VERIFY	BTC
E103C	JB	9.1A	208	1	FREEZER COIL	CLG	DFA	BTC
E103D	JB	1.8A	120	1	COOLER COIL	CLG	DFA	BTC
E103E	JB	---	---	---	DATA CONNECTION	CLG	DFA	BTC; RUN TO NEAREST IDF / MDF ROOM
E103F	JB	16.0A	120	1	DRAIN LINE HEATER	CLG	DFA	BTC; DEDICATED CIRCUIT
E109	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E123	JB	3.0HP	208	3	DISPOSER	WALL	24"	BTC; CONNECT THRU C.P. TO DISPOSER
E129	DCR	16.0A	120	1	TABLE RECEPTACLE	CLG	84"	TWISTLOCK PLUG & RECEPTACLE
E139	DCR	15.0A	120	1	INSUL. MOBILE PROOFER	CEILING	DFA	--

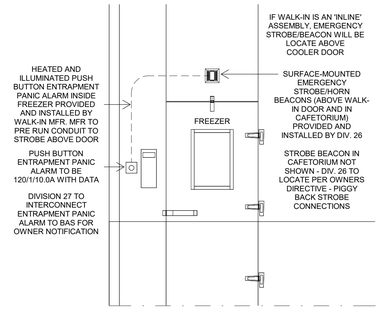
FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC
E161	(2)DR	6.0A EA.	120	1	CONVECTION OVEN	WALL	24"/48"	SHUNT TRIP BREAKER
E163	DR	5.0A	120	1	TILT BRAISING PAN	WALL	24"	SHUNT TRIP BREAKER
E172	(2)JB	15.0A EA.	208	1	COMBI OVEN	WALL	24"/48"	BTC - SHUNT TRIP BREAKER
E187	JB	15.5A	120/208	1	HEATED CABINET	WALL	96"	BTC; MOUNT ON KITCHEN SIDE
E188	JB	7.2A	120	1	REFRIGERATOR	WALL	96"	BTC; MOUNT ON KITCHEN SIDE-OMIT PLUG, UNIT TO BE HARDWIRED
E201A	PMR	28.0A	208	1	HOT FOOD COUNTER	FLOOR	4.5"	BTC
E201B	PMR	16.0A	120	1	COLD FOOD COUNTER	FLR	4.5"	---
E209	PMR	8.0A	120	1	DROP FRONT MILK COOLER-8 CASE	FLR	4.5"	---
E214	PMR	16.0A	120	1	CASH REGISTER	FLR	4.5"	DEDICATED CIRCUIT
E214A	CS	---	---	---	POS	FLOOR	6"	BTC; CONDUIT W/DATA LINE TO RUN TO MANAGER'S OFFICE OR IDF ROOM-VERIFY
E250	JB/DS-JB	51.7A	480	3	DISHMACHINE	WALL	66"	BTC; EXTEND FROM JB/DS AT NEAREST WALL
E615	DR	5.0A	120	1	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE DCO AT VIDEO LOCATION
E615A	JB	---	---	---	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE JB AT DATA LOCATION

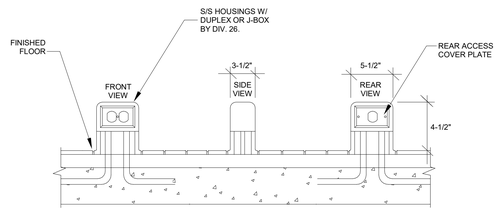


1 FOOD SERVICE ELECTRICAL PLAN
1/4" = 1'-0"



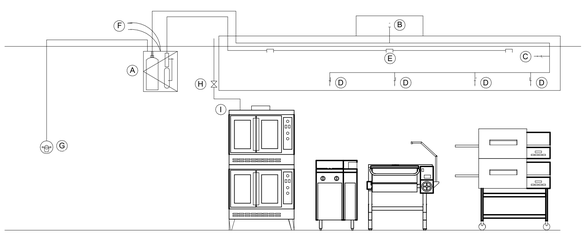
6 COLD STORAGE ASSEMBLY ENTRAPMENT PANIC ALARM DETAIL
NOT TO SCALE



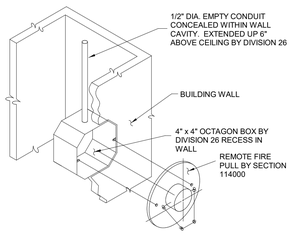


3 PEDESTAL MOUNTED RECEPTACLE DETAIL
NOT TO SCALE

NOTE:
REFER TO FDP EQUIPMENT PLAN FOR SPECIFIC COMPONENTS UNDER HOOD. ALL EQUIPMENT SHOWN HERE FOR GRAPHICAL REPRESENTATION ONLY.



4 FIRE PROTECTION SYSTEM TYPICAL DETAIL
NOT TO SCALE



5 FIRE PROTECTION SYSTEM RECESSED FIRE PULL DETAIL
NOT TO SCALE

	SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES
•	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
	DR	DUPLEX RECEPTACLE		WPR	WATERPROOF RECEPTACLE (SPRING COVER)
	SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER
	SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT
	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
	PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR
	DCR	DROP CORD RECEPTACLE		CSJB	JUNCTION BOX ON PEDESTAL
	JB	JUNCTION BOX ON CEILING		SW	SWITCH
	JB	JUNCTION BOX IN WALL		D	DATA
	JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26			

2 ELECTRICAL SYMBOLS
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD
SUGAR LAND, TX 77479

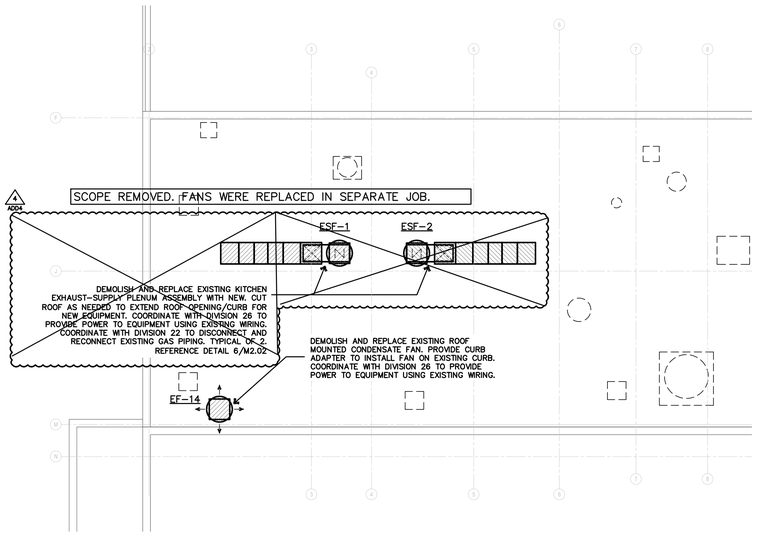
SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/15/2025
DOCUMENTS PREPARING OR THIS TRANSMITTED AUTHORIZED BY

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

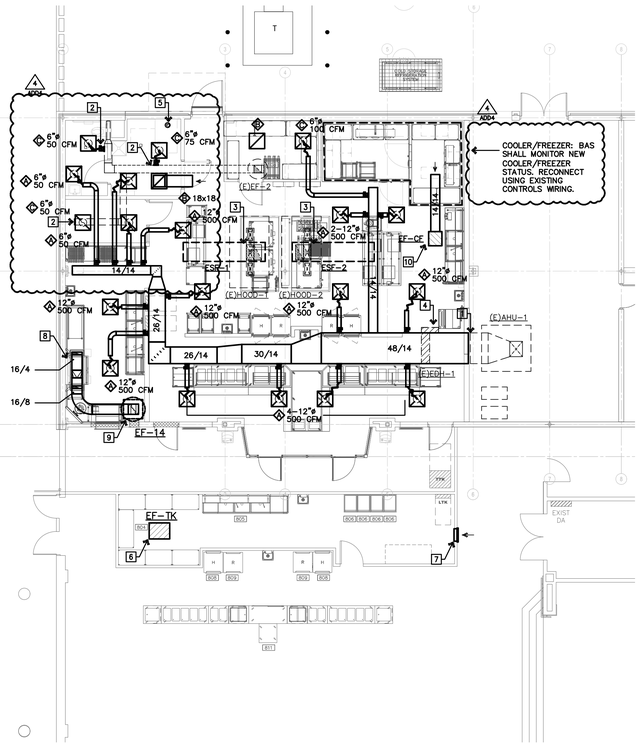
PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS ELECTRICAL PLAN

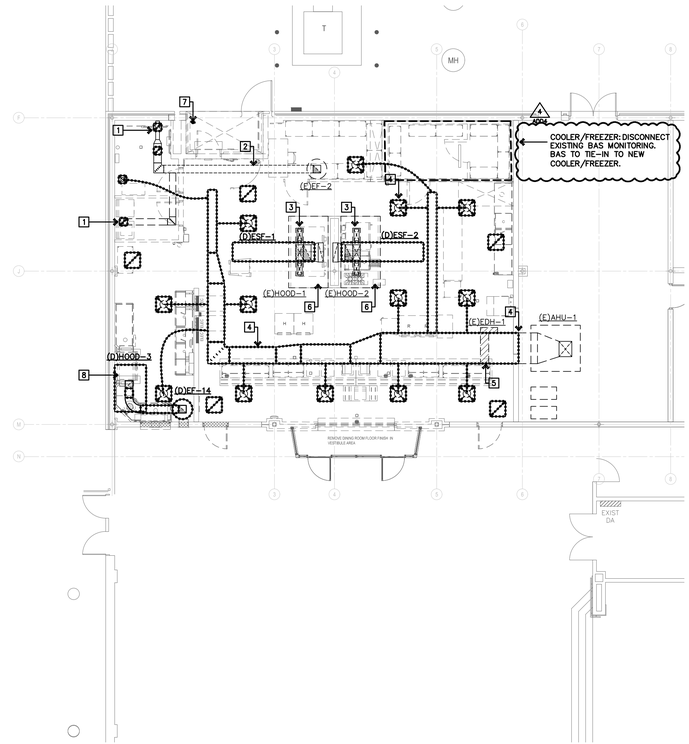
S-QF1.5



3 MECHANICAL ROOF FLOOR PLAN
SCALE: 1/8" = 1'-0"



2 RENO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"



1 DEMO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A	CEILING DIFFUSER – 24" X 24" FACE, PATTERN TYPE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE SCD A1–12" X 12"
B	CEILING RETURN GRILLE – 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE PDFR B1–12" X 12"
C	CEILING EXHAUST GRILLE – 24" X 24" PERFORATED FACE, STEEL CONST., WHITE FINISH, NECK SIZE SHOWN, U.L. LISTED PRICE PDDR C1–12" X 12"

NOTES:
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPES FOR AIR DEVICES.

KITCHEN HOOD REFURBISHMENT NOTES

HOOD REFURBISHMENT FOR KITCHEN HOODS (QUANTITY 2):
- STEAM WASH AND DEEP CLEAN STAINLESS STEEL HOOD ASSEMBLY, CASING, AND SUPPLY GRILLES WHERE APPLICABLE.
- REPLACE GREASE FILTER RACKS.
- CLEAN EXISTING MAKE-UP AIR AND GREASE EXHAUST DUCT.
- RELAMP EXISTING LIGHT FIXTURES WITH NEW 4000K BULBS LISTED FOR USE IN AN ENCLOSED KITCHEN HOOD FIXTURE.
- COORDINATE WITH DIVISION 11 FOR REPLACEMENT OF ANSUL FIRE SUPPRESSION SYSTEM.
- HOOD ASSEMBLIES SHALL BE CLEANED TO MEET THE STANDARDS ESTABLISHED IN NFPA STANDARD 96.

KITCHEN HOOD EXHAUST & MAKE-UP AIR UNIT SCHEDULE

MARK	ESF-1,2
SERVES	KITCHEN HOOD-1 & 2
SUPPLY SECTION	
TYPE	INDIRECT GAS-FIRED MAKE-UP AIR UNIT
DRIVE	DIRECT
SPEED CONTROL	VFD
SUPPLY CFM	2250
EXT. S.P. (IN.W.G.)	0.375
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	4.6 A
UNIT MOCP	15 A
HEATING MEDIUM	NATURAL GAS
INPUT/OUTPUT (MBH)	150.0/121.5
TURNDOWN RATIO	4:1
MANUFACTURER	GREENHECK
MODEL	MX-P109-H12-MF-E
EXHAUST SECTION	
TYPE	UPBLAST BELT DRIVE CENTRIFUGAL
EXHAUST CFM	3600
EXT. S.P. (IN. W.G.)	0.75
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	3.75 A
UNIT MOCP	15 A
MANUFACTURER	GREENHECK
EXHAUST FAN MODEL	CUBE-200-15

NOTES
1. EXHAUST FAN: PROVIDE FAN WITH PRE-FABRICATED ROOF CURB ADAPTER, VENTED CURB EXTENSION, HINGING KIT, HEAT BAFFLE, DRAIN CONNECTION, GREASE TRAP, AND DISCONNECT SWITCH. FANS SHALL BE UL LISTED FOR USE WITH TYPE 1 GREASE HOOD.
2. EXHAUST FAN: PROVIDE NEW MOTOR STARTER, SIZED FOR EXHAUST FAN MOTOR AND INSTALLED IN PLACE OF EXISTING. REFERENCE THE SPECIFICATIONS FOR STARTER REQUIREMENTS. COORDINATE WITH DIV.25 FOR RE-TERMINATION OF PERMISSIVE ON/OFF CONTROL. COORDINATE WITH DIV.26 FOR RE-TERMINATION OF LOCAL HOOD SWITCH INTERLOCK FOR START/STOP CONTROL.
3. SUPPLY FAN/FURNACE: FLUE GAS FROM HEATING COIL SHALL BE POWER VENTED.
4. SUPPLY FAN/FURNACE: WEATHERHOOD WITH ALUMINUM MESH.
5. SUPPLY FAN/FURNACE: 5 YEAR HEAT EXCHANGER WARRANTY.
6. SUPPLY FAN/FURNACE CONTROLS: INTEGRAL HEATER CONTROLS WITH BAS INTERLOCK FOR PERMISSIVE ON/OFF AND LOCAL SWITCH INTERLOCK FOR CONTROL FROM KITCHEN HOOD SWITCH. FURNACE CONTROLS SHALL BE PROGRAMMED FOR 64°F LAT, WITH A LOCKOUT FOR O/A TEMPERATURES ABOVE THE LAT SETPOINT. COORDINATE WITH DIV.25 AND DIV.26 FOR CONTROLS AND SWITCH INTERLOCKS.
7. TWO POINT POWER CONNECTION: ONE FOR EXHAUST FAN AND ONE FOR INTAKE/SUPPLY FAN.
8. INTERLOCK FAN(S) WITH ASSOCIATED COOKING HOOD
9. INTERLOCK FAN WITH SWITCH ON KITCHEN HOOD.
10. UNIT TO BE PROVIDED WITH GALVANIZED STEEL FAN PACK EXTENSION/COMBINATION CURB.
11. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH.

MECHANICAL RENO KEYED NOTES

1. TIE-IN NEW DUCTWORK TO EXISTING DUCTWORK AT WALL PENETRATION.
2. ~~CONNECT NEW AIR SENSE AND TAP TO SWRNG E/A TRUNK DUCT.~~
3. ~~REWORK EXISTING EXHAUST AND SUPPLY DUCTWORK FROM EXISTING KITCHEN HOOD UP TO FAN, AS REQUIRED, WITH NEW TRANSITIONS AND SUPPLY AIR DUCTWORK OFFSETS TO MATE WITH NEW FAN CURB.~~
4. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
5. NEW DRYER VENT DUCT AND VENT CAP. REFER TO DETAIL 4/M2.02.
6. TEMP. KITCHEN – CEILING MOUNTED CABINET EXHAUST FAN. REFER TO DETAIL 1/M2.02.
7. TEMP. KITCHEN – 24"X24" SIDE WALL GRILLE. SURFACE MOUNT OPTIONAL. AUXILIARY FRAME. TITUS CT-700.
8. RECONFIGURE DUCTWORK TO CONNECT TO NEW DISHMACHINE HOOD OUTLETS. REF. KITCHEN CONSULTANT DRAWINGS FOR EXACT DIMENSIONS OF DUCT CONNECTIONS.
9. CONDENSATE EXHAUST DUCT UP THROUGH ROOF TO NEW EXHAUST FAN SET ON NEW ROOF CURB. REUSE EXISTING ROOF PENETRATION.
10. INLINE FAN INSTALLED ABOVE PLENUM. REFER TO DETAIL 2/M2.02.

NOTE #3 (SETTLER'S WAY ONLY)RE-CONNECT EXISTING S/A AND E/A TO KITCHEN HOOD.

MECHANICAL DEMO KEYED NOTES

1. DEMOLISH EXISTING AIR DEVICE, BRANCH DUCT, DAMPER AND TAP BACK TO TRUNK DUCT. CAP AND SEAL RESULTING OPENING.
2. EXISTING E/A TRUNK DUCT TO REMAIN.
3. ~~DISCONNECT EXISTING S/A AND E/A DUCTWORK SERVING KITCHEN HOODS FROM FAN ASSEMBLY AND HOOD. DUCTWORK SHALL REMAIN FOR FUTURE USE/RE-CONNECTION. DEMOLISH SUPPLY AND EXHAUST FAN PLENUM ASSEMBLY SERVING KITCHEN HOODS, ALONG WITH CURB. NEW CURB TO BE PROVIDED AND INSTALLED AS PART OF RENOVATION.~~
4. DEMOLISH ALL EXISTING AIR DEVICES, DUCTWORK, AND DUCTWORK ACCESSORIES SERVING KITCHEN AREA BACK TO MECH. ROOM WALL PENETRATION.
5. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
6. REFURBISH EXISTING KITCHEN HOOD. REFER TO "KITCHEN HOOD REFURBISHMENT NOTES".
7. DEMOLISH AND REPLACE EXISTING DRYER EXHAUST DUCT AND FLUE VENT CAP.
8. DEMOLISH EXISTING CONDENSATE HOOD, ASSOCIATED DUCTWORK, AND ROOF EXHAUST FAN.

NOTE #3 (SETTLER'S WAY ONLY) EXISTING KITCHEN HOOD FANS SHALL REMAIN. DISCONNECT EXISTING S/A AND E/A TO KITCHEN HOOD. DUCT SHALL REMAIN FOR FUTURE USE/RE-CONNECTION.

EXHAUST FAN SCHEDULE

MARK	EF-TK	EF-CF	EF-14
SERVES	TEMPORARY KITCHEN	COOLER/FREEZER	DISH WASHER
TYPE	CEILING CABINET	INLINE FAN	ROOF UPBLAST
DRIVE	DIRECT	DIRECT	DIRECT
SPEED CONTROL	INTEGRAL SPEED CONTROLLER	CONSTANT	CONSTANT
CFM	1055	1000	1200
EXT. S.P. (IN. W.G.)	0.3	0.35	0.60
IMP. SIZE (IN.)	8.0	13.5	14.0
HORSEPOWER (WATTS)	1/3 HP	1/6 HP	1/3 HP
VOLTAGE	120V/1-PHASE	120V/1-PHASE	120V/1-PHASE
MANUFACTURER	COOK	COOK	COOK
MODEL	GC-862	1355QN10D	CUE-140-B
SONES (MAX.)	15.0	15.0	15.0
NOTES	1 THRU 4	1 THRU 4	1 THRU 5

NOTES
1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN. FANS SHALL BE CAPABLE OF 120% OF THE SCHEDULED CFM CAPACITY.
2. INTEGRAL DISCONNECT SWITCH.
3. RUBBER IN-SHEAR ISOLATORS.
4. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.
7. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH.

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09/04/2025	ADDENDUM 04

S

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD.
SUGAR LAND, TX 77479

SEAL
STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED
ARCHITECT
09.04.2025

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

KITCHEN AREA
MECHANICAL PLANS
S-M1.01

STANTON ENGINEERING GROUP
INFORMATION@SEGTEX.COM (713) 300-6092
TEXAS ENG. FIRM REG NO. F-018332
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1300 W. SAM HOUSTON PARKWAY N., SUITE 121, HOUSTON, TX 77043

MECHANICAL SYMBOL SCHEDULE

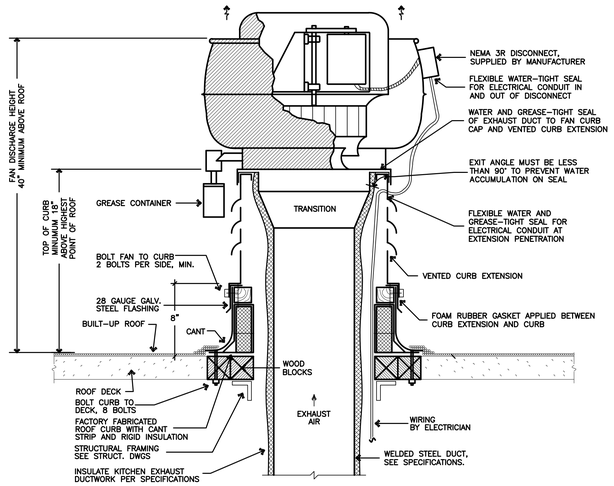
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
RS	REFRIGERANT SUPPLY
RR	REFRIGERANT RETURN
D	CONDENSATE LINE
	PETE'S PLUG
	ISOLATION VALVE
	ELECTRONIC CONTROL VALVE
	BUTTERFLY VALVE
	BALL VALVE
	UNION OR FLANGE
	STRAINER
	AUTOMATIC AIR VENT
T	LOCAL CONTROL THERMOSTAT
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	FIRE/SMOKE COMBINATION DAMPER
MD	MOTORIZED DAMPER
C	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST GRILLE
RG	RETURN AIR OPENING IN WALL
VD	VOLUME DAMPERS
	DUCT ELEVATION CHANGE
	90° DUCT ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
M	DAMPER MOTOR
T	TEMPERATURE TRANSMITTER
FS	FLOW SWITCH
P	DIFFERENTIAL PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
PS	STATIC PRESSURE SENSOR
PH	STATIC PRESSURE SENSOR HI-LIMIT
	ACCESS PANEL

A.P.	ACCESS PANEL
AHU	AIR HANDLING UNIT
B	BOILER
CH	CHILLER
CHP	CHILLED WATER PUMP
CVT	CONSTANT VOLUME TERMINAL
DH	DEHUMIDIFIER
E/A	EXHAUST AIR
EF	EXHAUST FAN
F&B	FACE & BYPASS
FF	FLY FAN
HDT	HORIZONTAL DRAW THROUGH
HWP	HOT WATER PUMP
KEF	KITCHEN EXHAUST FAN
KSF	KITCHEN SUPPLY FAN
O/A	OUTSIDE AIR
OBD	OPPOSED-BLADES DAMPER
PT	PRE-TREAT
R/A	RETURN AIR
RAHU	ROOF-MOUNTED AIR HANDLING UNIT
S/A	SUPPLY AIR
SA	SOUND ATTENUATOR
SF	SUPPLY FAN
SPD	SPILTER DAMPER
SZ	SINGLE ZONE
VAV	VARIABLE AIR VOLUME
VB	VAV BOX
VD	VOLUME DAMPER
VDT	VERTICAL DRAW THROUGH
VFD	VARIABLE FREQUENCY DRIVE
WH	WATER HEATER
⌀	DESIGNATION FOR "ROUND"
⌀	DESIGNATION FOR "OVAL"

GENERAL MECHANICAL NOTES

3

1. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION OF EQUIPMENT AND PIPING WITH THE ELECTRICAL CONTRACTOR TO INSURE NEC CLEARANCE (42 INCHES) IN FRONT OF ALL ELECTRICAL PANELS. DO NOT INSTALL DUCTWORK OR WATER PIPING OVER THE TOP OF ELECTRICAL PANELS SEE DETAIL 1/M2.01.
3. DUCT SIZES SHOWN ARE NET FREE AIR PASSAGE DIMENSIONS, DUCTS ARE NOT LINED, BUT ARE EXTERNALLY INSULATED. RUNOUTS TO CEILING OUTLETS SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET METAL WITH SPIN-IN V.D. AT TRUNK TAPS, SEE DETAIL 1 & 2/M2.01.
4. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR EXACT LOCATIONS OF CEILING OUTLETS IN RELATION TO OTHER CEILING ENTITIES. OUTLETS MUST BE COMPATIBLE WITH THE CEILING TYPES FOR THE VARIOUS AREAS.
5. IN AREAS WHERE SUPPLY AIR ENTERS CEILING CAVITY THRU RETURN AIR GRILLES AND FREE RETURNS TO AHU'S VIA CEILING CAVITY, PROVIDE RETURN AIR OPENING IN WALL-TO-DECK ABOVE CEILING THAT BLOCK PATH, REFER TO ARCHITECTURAL DRAWINGS. RETURN AIR ELBOWS SHALL BE SIZED AT 1 SQ. FT PER 400 CFM SUPPLY AIR.
6. ARRANGE PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EASY REMOVAL OF EQUIPMENT, SUB-ASSEMBLIES, COILS, FANS, MOTORS, FILTERS, ACCESS PANELS, ETC... PROVIDE UNIONS, FLANGES AND VALVES AT CONNECTIONS. PROVIDE AND INSTALL VICTAULIC JOINTS AT COILS, REF. SPECIFICATIONS. PLACE STOP VALVES ON SYSTEM SIDE OF REMOVABLE PIPE SECTIONS.
7. CONTRACTOR SHALL FIELD MEASURE STRUCTURAL ELEMENTS AND COORDINATE EQUIPMENT, PIPING AND DUCT ROUTING TO FIT EXISTING CONSTRUCTION. PROVIDE OFFSETS, BOOTS FOR ENVELOP OBSTRUCTIONS THAT CANNOT BE AVOIDED. CONSTRUCTION SHALL BE PER SMACNA STANDARDS.
8. FIELD VERFY EXISTING CONDITIONS PRIOR TO PROCUREMENT OF EQUIPMENT AND SYSTEMS.
9. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICIABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION
10. PROVIDE DUCTWORK INSULATION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF IECC.
11. PROVIDE LISTED FIRE DAMPER INSTALLATIONS AT DUCT AND RETURN AIR OPENINGS AT PENETRATIONS THROUGH THROUGH RATED PARTITIONS AND BARRIERS. — SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
12. PROTECT DUCTWORK AND MECHANICAL EQUIPMENT FROM CONSTRUCTION DUST AND DEBRIS DURING CONSTRUCTION. SEAL OPENINGS AS REQUIRED.
13. PROVIDE AND MAINTAIN TEMPORARY AIR FILTERS AT AIR HANDLERS USED DURING CONSTRUCTION.
14. PATCH AND REPAIR MECHANICAL SYSTEMS AND INSULATION DAMAGED DURING CONSTRUCTION.
15. SECURE ROOF MOUNTED EQUIPMENT TO WITHSTAND 142 MPH BASIC WIND SPEED, RISK CATEGORY III, EXPOSURE CATEGORY B, IN ACCORDANCE WITH IBC REQUIREMENTS.

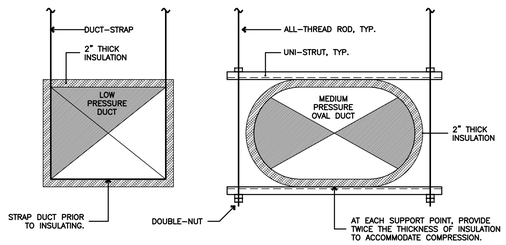


6 KITCHEN UPBLAST EXHAUST FAN DETAIL

NO SCALE

NOTES

1. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL.
2. INSTALL SHEETMETAL COVERING OVER WOOD BLOCKING IN THE AIRSTREAM OR OPEN TO THE CEILING CAVITY.

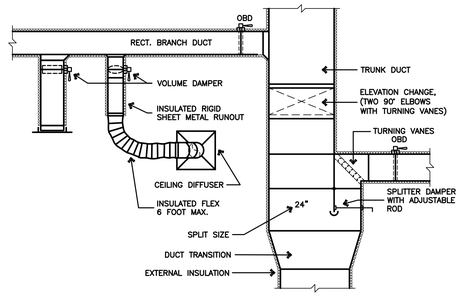


4 EXTERNALLY INSULATED DUCT SUPPORT DETAIL

NO SCALE

NOTES:

1. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT STRAPS.
2. DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

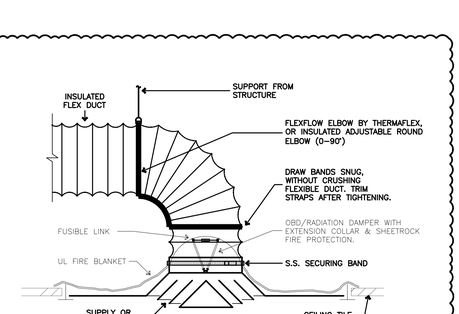


2 DUCTWORK DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

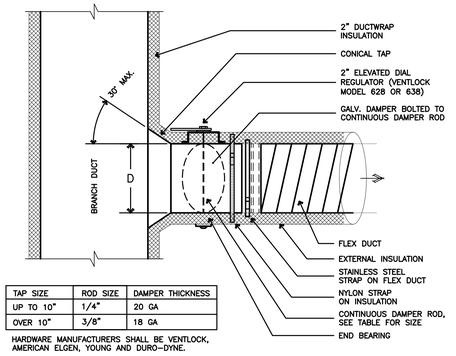


5 AIR DEVICE DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



TAP SIZE	ROD SIZE	DAMPER THICKNESS
UP TO 10"	1/4"	20 GA
OVER 10"	3/8"	18 GA

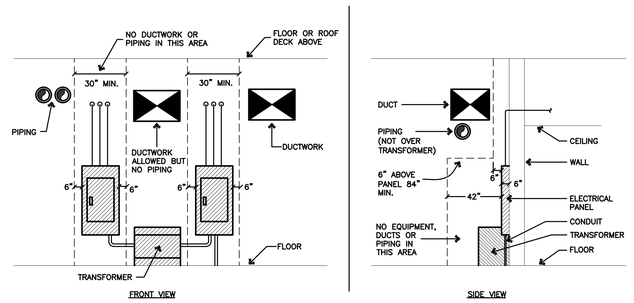
HARDWARE MANUFACTURERS SHALL BE VENTLOCK, AMERICAN ELGEN, YOUNG AND DURO-DYNE.

3 DUCT TAP CONNECTION DETAIL

NO SCALE

NOTES:

1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.
2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

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FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD.
SUGAR LAND, TX 77479

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

MECHANICAL NOTES AND DETAILS
S-M2.01

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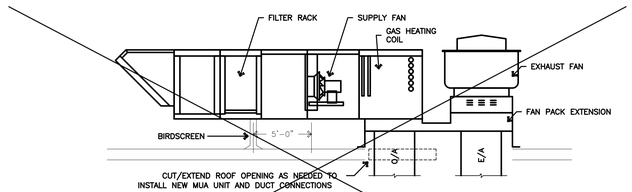
NOT APPLICABLE TO SETTLER'S WAY



6 SUPPLY/EXHAUST KITCHEN PLENUM DETAIL

NO SCALE

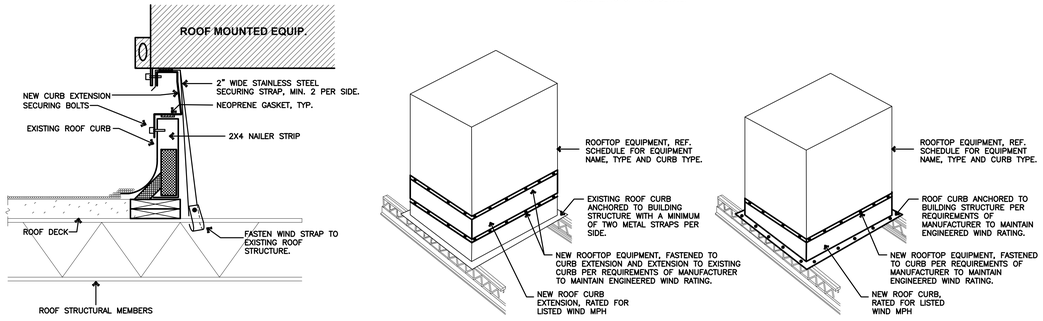
NOTES:

1. REFER TO DETAIL 6/M2.02 FOR CURB ANCHORING TO SATISFY WIND RATING REQUIRMENT. EQUIPMENT SHALL BE ABLE TO WITHSTAND 120 MPH WINDS.

ROOF MOUNTED EQUIPMENT

MARK	EQUIPMENT TYPE	CURB TYPE
EF-14	ROOF FAN	EXISTING PERIMETER
ESF-1,2	ROOF EXHAUST & MAKE-UP AIR UNIT	NEW PERIMETER

1. ALL ROOFTOP EQUIPMENT IS TO BE INSTALLED ON NEW ROOF SUPPORTS, AND IS SUBJECT TO THE INSTALLATION REQUIREMENTS OF THIS DETAIL.

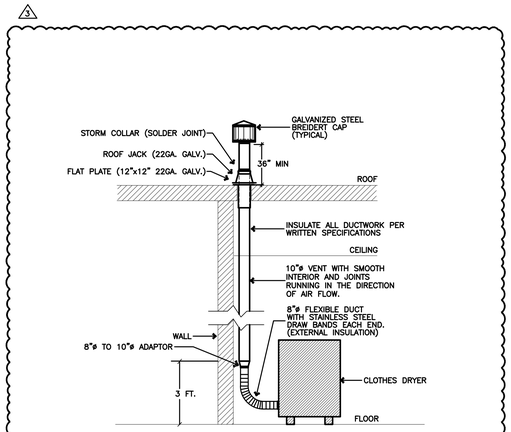


5 CURB MOUNTED EQUIPMENT ANCHORING

NO SCALE

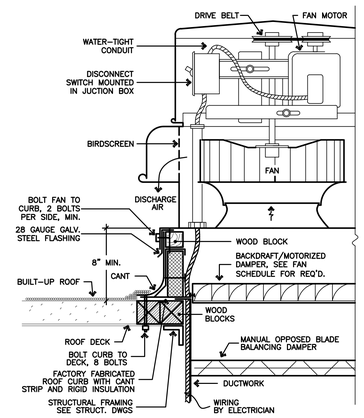
NOTES:

1. EQUIPMENT CURB AND EQUIPMENT ANCHORING BRACKETS SHALL BE DESIGNED TO WITHSTAND AN ASCE 7-22 WIND HAZARD RATING OF 147 MPH, FOR A CATEGORY III BUILDING AT THE PROJECT ADDRESS. THE CURB PROVIDER SHALL INCLUDE STAMPED DRAWINGS OF THE CURB AND ANCHORING DEMONSTRATING COMPLIANCE.



4 COMMERICAL CLOTHES DRYER VENT

NO SCALE

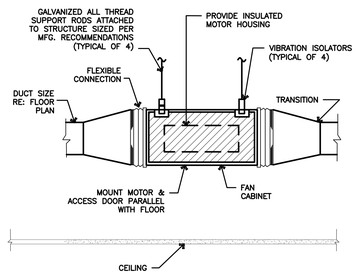


3 ROOF EXHAUST FAN AND VENT DETAIL

NO SCALE

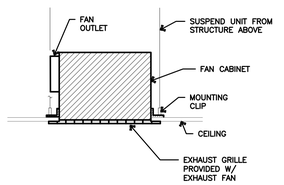
NOTES:

1. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.
2. ROOF VENT WILL NOT HAVE FAN/MOTOR ASSEMBLY, DISCONNECT SWITCH OR OBD.
3. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL WHERE APPLICABLE.
4. ALL FANS SCHEDULED TO BE PROVIDED WITH 140MPH WIND RATING, INCLUDING FACTORY PROVIDED CURB. CURB INSTALLATION SHALL FOLLOW MANUFACTURER'S REQUIREMENTS FOR SECURING TO ROOF AND EQUIPMENT WHERE IT DIFFERS FROM THE DETAIL.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 INLINE EXHAUST FAN DETAIL

NO SCALE



1 CABINET EXHAUST FAN

NO SCALE

ISSUE:

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4 ADD4 09/04/2025	ADDENDUM 04

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MECHANICAL DETAILS (CONT'D.)

S-M2.02

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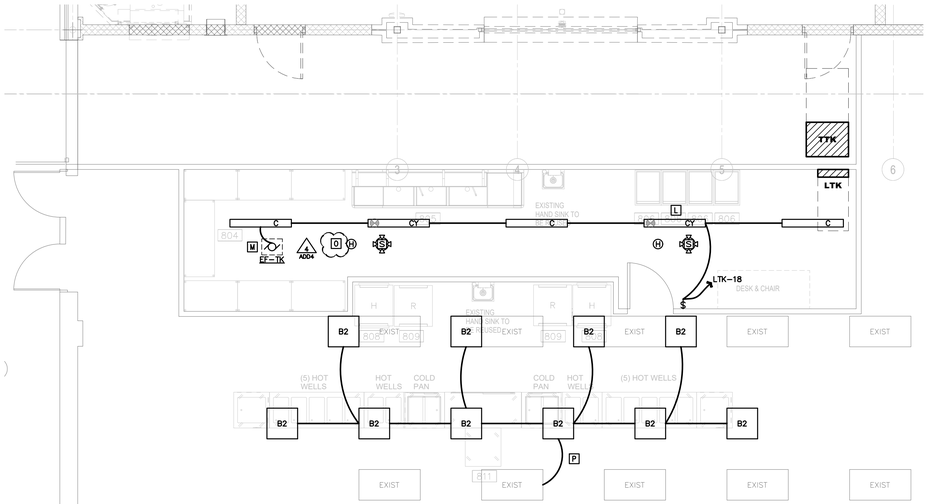
NEW PANEL — TEMP KITCHEN

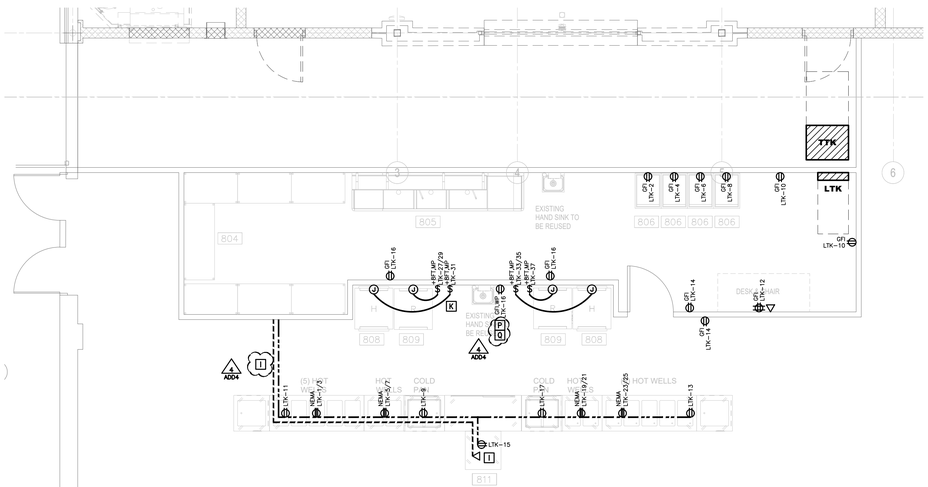
PANEL LTK — 150A MCB, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E810	2766	HOT WELLS	2–12	20/2GFI	1				2	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	3				4	20/1	3–12	TRANSPORT CART	1920	E806	
	E810A	1643	HOT WELLS	2–12	20/2GFI	5				6	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	7				8	20/1	3–12	TRANSPORT CART	1920	E806	
	E810B	600	COLD PAN	3–12	20/1GFI	9				10	20/1	3–12	2 REC	360	E800A	
	E810C	1200	BEVERAGE	3–12	20/1GFI	11				12	20/1	3–12	2 REC – DESK	360	E800B	
	E810C	1200	BEVERAGE	3–12	20/1GFI	13				14	20/1	3–12	2 REC	360	E800A	
	E811	180	CASH REGISTER	3–12	20/1GFI	15				16	20/1	3–12	3 REC	360	E800A	
	E810B	600	COLD PAN	3–12	20/1GFI	17				18	20/1	3–12	TEMP. KITCHEN LTS/FAN	566		
	E810A	1643	HOT WELLS	2–12	20/2GFI	19				20	20/1		SPARE			⚠4 ADD4
	–	–	–	+12G	–	21				22	20/1		SPARE			
	E810	2766	HOT WELLS	2–12	20/2GFI	23				24	30/3	3–10	TEMP FOOD STORAGE UNIT	3100		4
	–	–	–	+12G	–	25				26	–	+10N+10G	–	–		
	E808	1622	HEATED CABINET	2–12	20/2	27				28	–	3/4"C	DUPLEX REC – SERVICE YARD	180		4
	–	–	–	+12N+12G	–	29				30	20/1	3–12	EXISTING CIRCUIT	500		3
	E809	984	REFRIGERATOR	3–12	20/1	31				32	20/1	3–12	EXISTING CIRCUIT	500		3
	E808	1622	HEATED CABINET	2–12	20/2	33				34	15/2	2–12	EXISTING CIRCUIT	1000		3
	–	–	–	+12N+12G	–	35				36	–	+12N+12G	–	–		
	E809	984	REFRIGERATOR	3–12	20/1	37				38	20/2	2–12	EXISTING CIRCUIT	1000		3
			SPARE		20/1	39				40	–	+12N+12G	–	–		
			SPARE		20/1	41				42	50/2	2–8	EXISTING CIRCUIT	5000		3
			SPARE		20/1	43				44	–	+8N+10G	–	–		
	TOTAL LOAD @ 100% = 38778VA						TOTAL LOAD @ 100% = 108A									

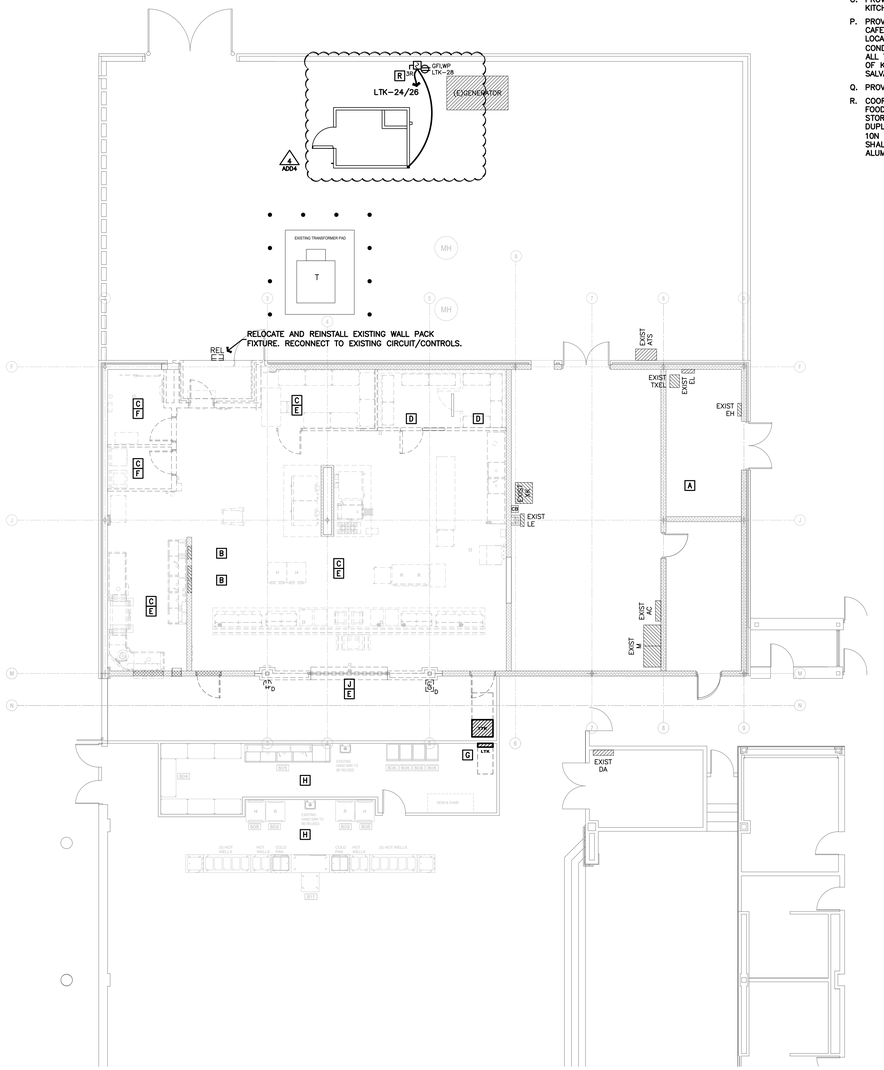
1. REF. KITCHEN CONSULTANT'S "FCS" DRAWINGS FOR KITCHEN EQUIPMENT NUMBERS.
2. A DEMAND FACTOR PERCENT OF 65% HAS BEEN APPLIED TO THE KITCHEN EQUIPMENT LOAD PURSUANT TO NEC 220–20 AND NEC TABLE 220–20.
3. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMODELED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AS REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION
4. PROVIDE CIRCUIT FOR TEMPORARY FOOD STORAGE UNIT PRIOR TO BEGINNING DEMOLITION. ⚠4 ADD4



T1 **TEMPORARY KITCHEN - LIGHTING PLAN**
SCALE: 1/4" = 1'– 0"



T2 **TEMPORARY KITCHEN - ELECTRICAL PLAN**
SCALE: 1/4" = 1'– 0"



1 **DEMOLITION FLOOR PLAN**
SCALE: 1/8" = 1'– 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

⚠4 ADD4

DEMOLITION NOTES:

A. EXISTING STANDBY GENERATOR PANEL TO REMAIN.

B. EXISTING KITCHEN PANELS TO BE REPLACED WITH NEW. MODIFY EXISTING WALLS TO MATCH NEW PANEL LAYOUTS AND DIMENSIONS.

C. EXISTING LIGHTING FIXTURES AND CEILING DEVICES TO BE REMOVED THROUGHOUT.

D. EXISTING WALK–IN COOLER/FREEZER AND ASSOCIATED EQUIPMENT TO BE REMOVED.

E. EXISTING WALL ELECTRICAL DEVICES TO BE REMOVED. EXISTING J–BOXES MAY BE REUSED WHERE NEW DEVICES ARE TO BE INSTALLED AT THE SAME LOCATIONS.

F. EXISTING ELECTRICAL DEVICES TO BE REMOVED.

G. NEW 208Y/120V PANEL AND TRANSFORMER FOR TEMPORARY KITCHEN TO BE INSTALLED PRIOR TO DEMOLITION. PANEL AND TRANSFORMER TO BE REMOVED AT END OF KITCHEN RENOVATION AND TURNED OVER TO THE DISTRICT. INSTALL TRANSFORMER ON PREMADE FIBERCRETE PAD AND WAFFLE TYPE VIBRATION ISOLATION PADS. DO NOT PROVIDE A POURED IN PLACE CONCRETE PAD AT THIS LOCATION.

H. PROVIDE RECEPTACLES AND LIGHT FIXTURES FOR TEMPORARY KITCHEN DURING RENOVATION. ALL TEMPORARY DEVICES AND EQUIPMENT TO BE REMOVED AT END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE.

I. CONDUITS ROUTED FROM TEMPORARY KITCHEN WALL AND BENEATH SERVING LINE. PROVIDE MULTICHANNEL ROLLOVER CABLE PROTECTOR FOR EXPOSED CONDUITS NOT UNDER THE SERVING LINE. ALL CONDUITS UNDER THE SERVING LINE SHALL BE SECURED TO/ROUTED ON TOP OF UNISTRUT AND NOT DIRECTLY ON THE FLOOR. DO NOT ANCHOR UNISTRUT TO THE EXISTING FLOORING. COORDINATE POWER AND DATA OUTLET LOCATIONS WITH OTHER TRADES.

J. REMOVE EXISTING LIGHT FIXTURES ABOVE NEW KITCHEN EXTENSION. MODIFY EXISTING WIRING TO MAINTAIN REMAINING FIXTURE OPERATION.

K. HARDWIRE KITCHEN EQUIPMENT TO LOCAL ON/OFF SWITCH. TYPICAL.

L. SURFACE MOUNT FIXTURES ON TEMPORARY KITCHEN CEILING. TYPICAL.

M. WIRE TEMPORARY KITCHEN FAN TO LOCAL LIGHTING CIRCUIT AND CONTROLS. FAN SHALL BE ON/OFF WITH LIGHTS.

N. EXISTING EXTERIOR LIGHT FIXTURES TO BE REMOVED.

O. PROVIDE NEW FIRE ALARM DEVICES AS PART OF THE TEMPORARY KITCHEN BUILDOUT.

P. PROVIDE NEW TEMPORARY LIGHT FIXTURES IN THE EXISTING CAFETERIA CEILING ABOVE THE SERVING LINE. COORDINATE LOCATIONS WITH TEMPORARY SERVING LINE AND EXISTING CONDITIONS. CONNECT TO EXISTING LIGHTING CONTROLS/CIRCUIT. ALL TEMPORARY LIGHT FIXTURES SHALL BE REMOVED AT THE END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE. PROVIDE REPLACEMENT CEILING TILES.

Q. PROVIDE IN–USE WEATHERPROOF COVER FOR RECEPTACLE.

R. COORDINATE NEMA 3R, FUSED SWITCH LOCATION WITH TEMPORARY FOOD STORAGE UNIT. INSTALL 2–25A FUSES TO SERVE FOOD STORAGE UNIT AND A 20A FUSE IN THIRD PHASE TO FEED DUPLEX RECEPTACLE. WIRING TO STORAGE UNIT SHALL BE 2–10 + 10N + 10G, 3/4". WIRING TO NEW 20A DUPLEX RECEPTACLE SHALL BE 2–12 + 12G. MOUNT RECEPTACLE IN NEMA 3R ALUMINUM JUNCTION BOX WITH WET LOCATION COVER.

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09/04/2025	ADDENDUM 04

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STATE OF TEXAS — GEORGE L. STANTON — 38582 — REGISTERED — PROFESSIONAL ENGINEER
09.04.2025

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ELECTRICAL DEMO AND TEMP PLANS

s-ED.100

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ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

LIGHTING RENOVATION NOTES:

A. KITCHEN LIGHTS TO BE CONTROLLED BY LOCAL MOMENTARY SWITCHES AND BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.
   LEFT SWITCH SHALL CONTROL ZONE 'a' NORMAL POWER LIGHTING FIXTURES.
   RIGHT SWITCH SHALL CONTROL ZONE 'b' EMERGENCY LIGHTING FIXTURES.

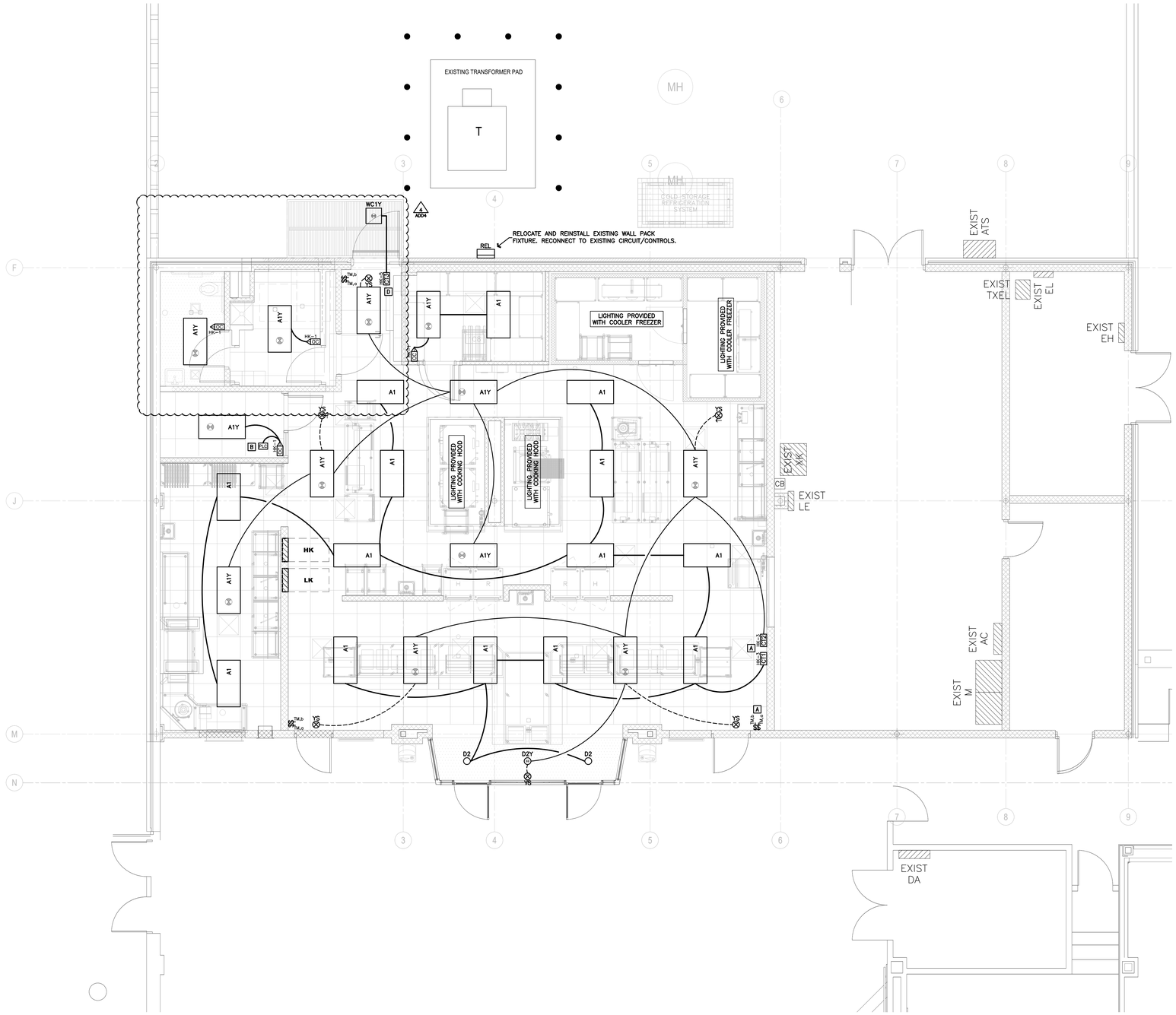
B. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

C. WIRE EXIT SIGNS UPSTREAM OF LIGHTING CONTROLS. TYPICAL.

D. EXTERIOR LIGHTS TO BE CONTROLLED BY BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.

E. AFTER REMOVAL OF THE TEMPORARY KITCHEN, PROVIDE NEW EXIT SIGN AT ORIGINAL LOCATION AND RECONNECT TO EXISTING CAFETERIAL LIGHTING CIRCUIT.

F. PATCH/REPAIR EXTERIOR SOFFIT TO ACCOMMODATE NEW SURFACE MOUNTED FIXTURES.



1 LIGHTING RENOVATION PLAN
SCALE: 1/4" = 1'- 0"

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LIGHTING FLOOR PLANS

s-E.100

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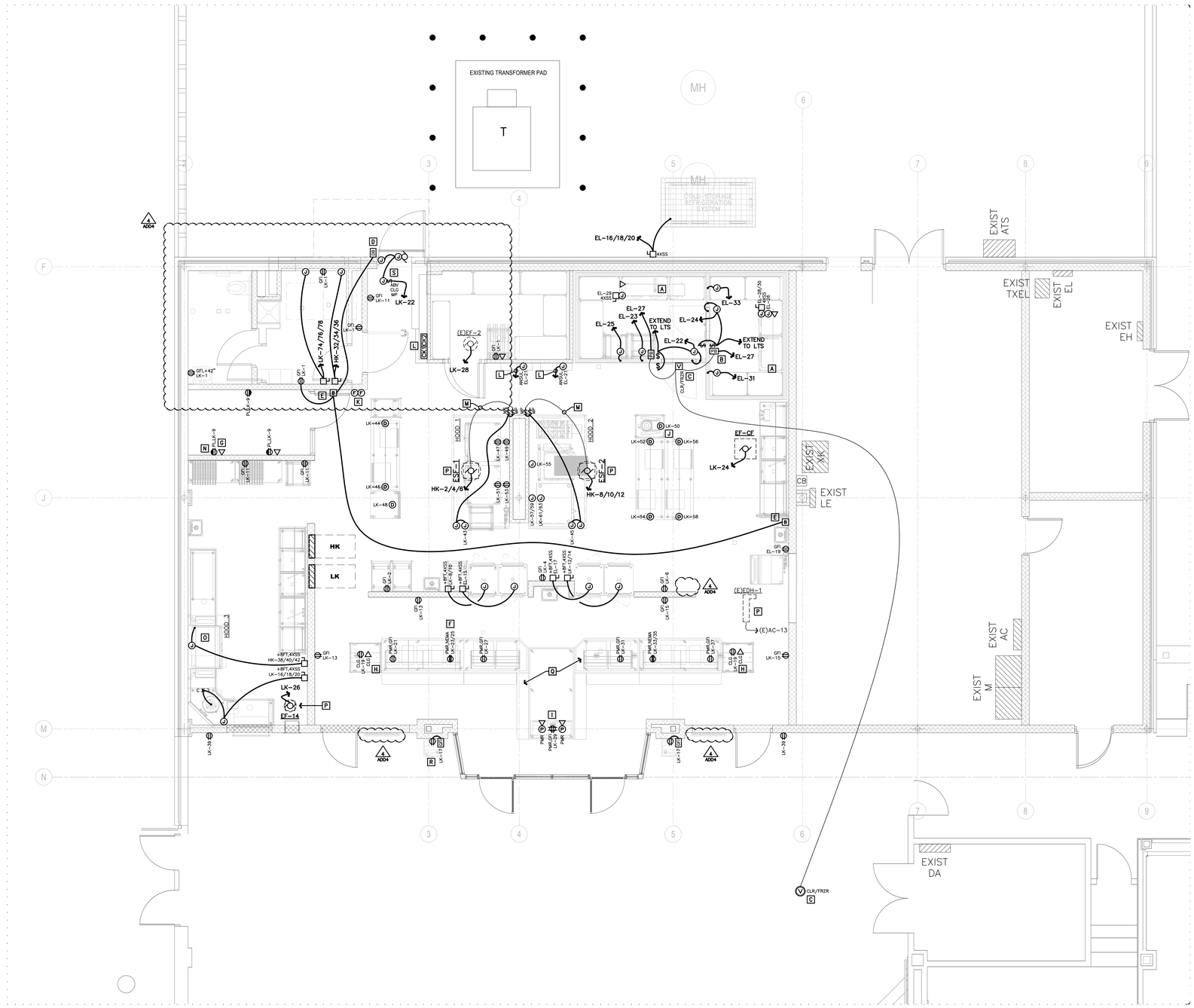

1 ELECTRICAL RENOVATION PLAN

SCALE: 1/4" = 1'- 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

ELECTRICAL RENOVATION NOTES:

A. CONNECT NEW FREEZER/COOLER AND CONDENSER TO EXISTING STANDBY GENERATOR.

B. PROVIDE ILLUMINATED PUSH BUTTON IN COOLER AND FREEZER. WHEN PRESSED RED STROBE DEVICES IN KITCHEN AND CAFETERIA SHALL ACTIVATE. TYPICAL.

C. PROVIDE HORN/STROBE DEVICE TIED TO PUSH BUTTONS IN FREEZER/COOLER.
(EDWARDS 860 SERIES OR EQUAL).

D. PROVIDE NEW DOORBELL BUTTON AT RECEIVING DOOR. DOORBELL BUTTON SHALL BE THE CLOSEST DEVICE TO THE DOOR FRAME.

E. PROVIDE NEW VIBRATING BUZZER TIED TO DOORBELL BUTTON AT RECEIVING DOOR. BUZZER TO BE WALL MOUNTED JUST BELOW THE CEILING.

F. PROVIDE NEW ELECTRICAL DEVICES MATCHING NEW KITCHEN EQUIPMENT AND ROOM LAYOUTS. REFERENCE FOOD SERVICE DRAWINGS. TYPICAL.

G. PROVIDE ROUGH-IN FOR LOW VOLTAGE DEVICES. REFERENCE TECHNOLOGY DRAWINGS, TYPICAL.

H. POWER AND DATA ROUGH-IN FOR KITCHEN MENU BOARD.

I. POWER AND DATA ROUGH-IN FOR POINT OF SALE (POS) LOCATION.

J. PROVIDE DROP CORD RECEPTACLE WITH HUBBELL KELLEMS LIQUIDTIGHT GRIPS FOR STRAIN RELIEF, TYPICAL OF ALL.

K. PROVIDE J-BOXES AND CONDUIT FOR REMOTE FIRE PULLS, SEE FOOD SERVICE DETAIL DRAWING FOR REQUIREMENTS, TYPICAL

L. WIRE ANSUL SYSTEM TO HOOD EQUIPMENT CONTROL CONTRACTOR. UPON ANSUL SYSTEM ACTIVATION ALL POWER TO EQUIPMENT BENEATH THE HOODS SHALL BE DEACTIVATED. MOUNT CONTACTOR CABINET(S) JUST BELOW THE CEILING.

M. PROVIDE SEPARATE SWITCHES TO TURN ON HOOD LIGHTS AND FANS. WIRE HOOD TEMP SENSOR AHEAD OF HOOD LIGHT SWITCH. USE 120V CIRCUIT TO CONTROL HOOD FANS THROUGH EXISTING STARTER. PROVIDE CONTROLS TRANSFORMER AS REQUIRED TO MATCH STARTER CONTROL INPUT VOLTAGE. TYPICAL.

N. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

O. INTERCONNECT DISH MACHINE TO VENT CONTROL. INTERCONNECT TABLE LIMIT SWITCH TO DISHMACHINE.

P. EXISTING MECHANICAL EQUIPMENT TO BE REPLACED. CONNECT TO CIRCUIT AS SHOWN. RECONNECT TO EXISTING STARTER/CONTACTORS, FIELD VERIFY.

Q. SAWCUT FLOOR TO INSTALL NEW PEDESTAL MOUNTED DEVICE BENEATH NEW SERVING LINES, DO NOT REUSE EXISTING STUB UPS OR DEVICES. POUR BACK SLAB AND PROVIDE NEW FINISHES, REFERENCE ARCHITECTURAL.

R. REFERENCE EDF GFI PROTECTION DETAIL FOR INSTALLATION REQUIREMENTS, TYPICAL.

S. WIRE MICRO SWITCH IN DOOR FRAME TO AIR SCREEN. COOR W/ FOOD SERVICE CONTRACTOR PRIOR TO ROUGH-IN. LOCATE LOCAL MOTOR RATED SWITCH ABOVE CEILING ADJACENT TO THE AIR SCREEN.

COOLER/FREEZER NOTES:

1. PROVIDE SEALING FOR CONDUIT IN COOLER AND FREEZER. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, CIRCULATION OF AIR FROM WARMER TO A COLDER SECTION SHALL BE PREVENTED PER N.E.C. ARTICLE 300.7 (A).
2. PROVIDE GROUND-FAULT PROTECTION OF EQUIPMENT FOR ELECTRIC HEAT TRACING AND HEATING PANELS IN THE FREEZER PER N.E.C. ARTICLE 427.22.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE LIQUID TIGHT CONDUIT AND WIRING FOR LIGHT FIXTURES AND LIGHT SWITCHES IN WALK-IN COOLER AND FREEZER, SEE FOODSERVICE CONSULTANT'S DRAWINGS.

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ELECTRICAL FLOOR PLANS

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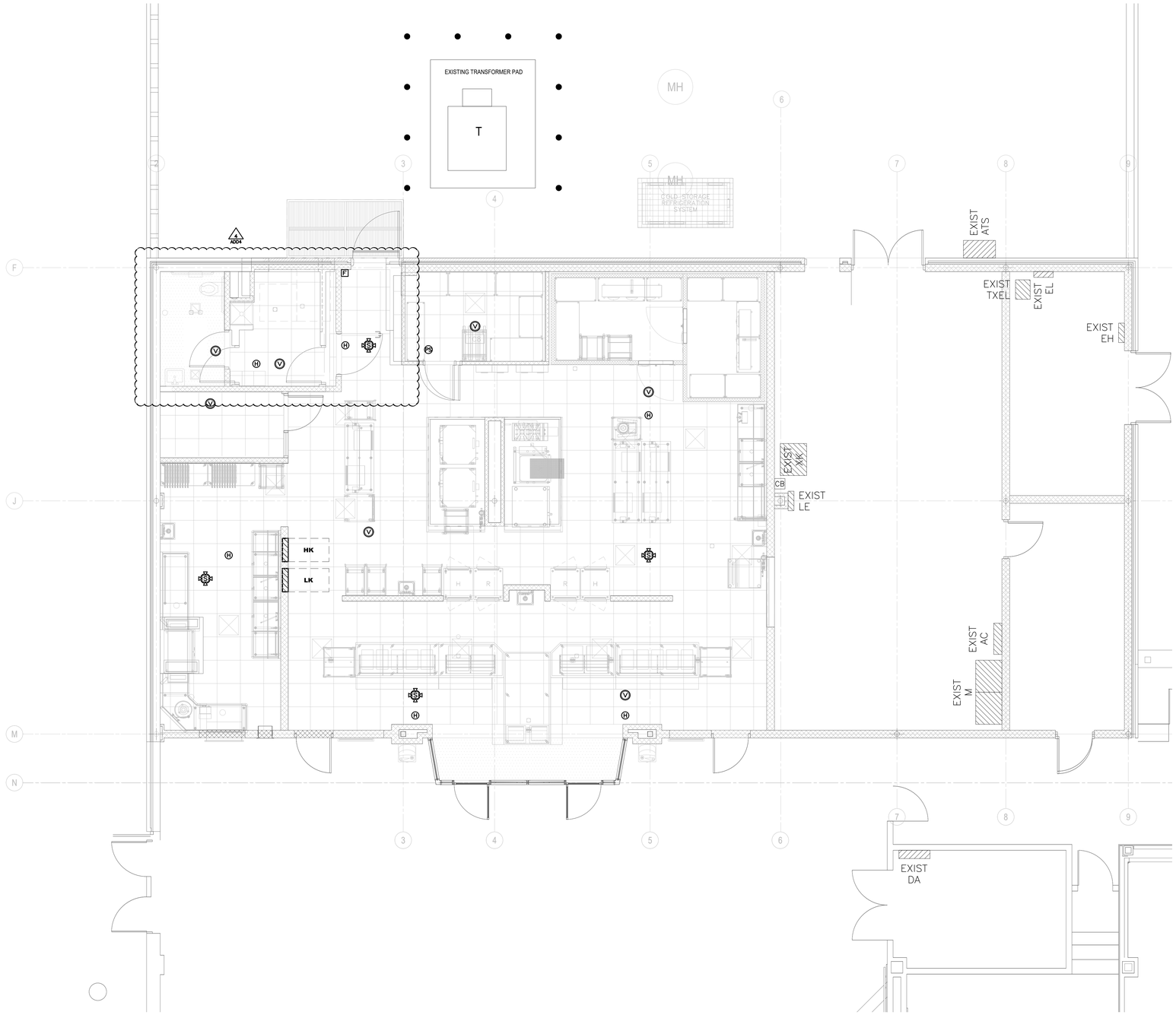

1 **FIRE ALARM RENOVATION PLAN**
SCALE: 1/4" = 1'- 0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
1 ADD4 09/04/2025	ADDENDUM 04

S

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD.
SUGAR LAND, TX 77479

SEAL

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

FIRE ALARM FLOOR PLANS

s-E.300

STANTON ENGINEERING GROUP
INFO@STANTON-ENG.COM (713) 300-6080

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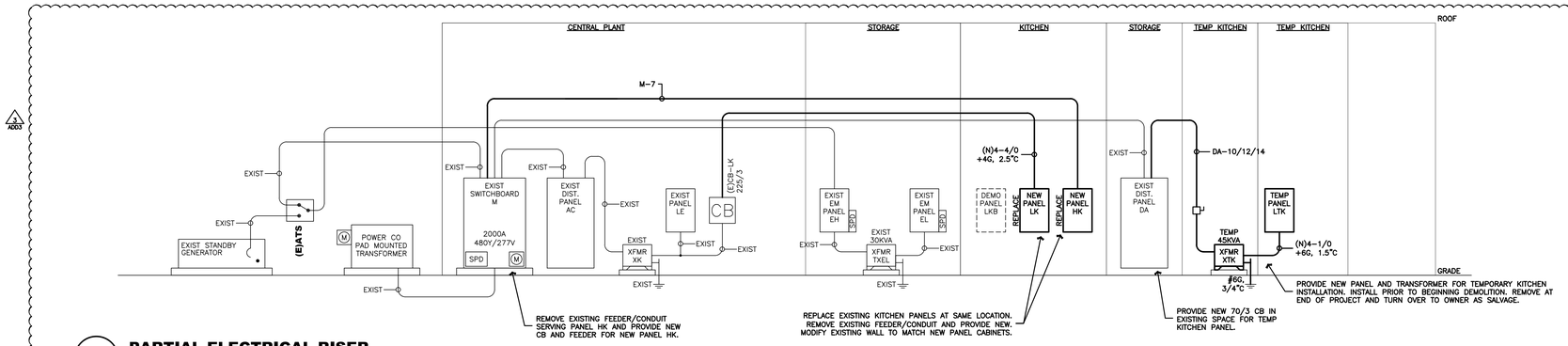

1 PARTIAL ELECTRICAL RISER

NO SCALE

NOTES:
1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED/CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.
5. REFERENCE PANEL SCHEDULES AND SHORT CIRCUIT TABLE FOR AIC AND SCCR VALUES.

NEW KITCHEN PANEL — KITCHEN

PANEL HK — 225A MLO, 480Y/277V, 3ϕ, 4 WIRE — AVAILABLE FAULT: 20,250A — SCCR & AIC: 25,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
		376	KITCHEN ROOM LIGHTS	3–12	20/1	1				2	15/3	3–12	ESF–1	4986		
6		1095	KITCHEN/SERVING LIGHTS	3–12	20/1	3				4	–	+12G	(1.5HP / 1.5HP)	–		
7		84	KITCHEN EXTERIOR LIGHTS	3–12	20/1	5				6	–	3/4"C	–	–		
			SPARE		20/1	7				8	15/3	3–12	ESF–2	4986		
			SPARE		20/1	9				10	–	+12G	(1.5HP / 1.5HP)	–		
			SPARE		20/1	11				12	–	3/4"C	–	–		
			SPARE		20/1	13				14			SPACE			
			SPARE		20/1	15				16			SPACE			
			SPARE		20/1	17				18			SPACE			
			SPARE		20/1	19				20			SPACE			
			SPARE		20/1	21				22			SPACE			
			SPACE			23				24			SPACE			
			SPACE			25				26			SPACE			
			SPACE			27				28			SPACE			
			SPACE			29				30			SPACE			
			SPACE			31				32	45/3	3–8	COMMERCIAL DRYER	28254		
			SPACE			33				34	–	+10G	–	–		
			SPACE			35				36	–	3/4"C	–	–		
			SPACE			37				38	70/3	3–6	DISHMACHINE	42963	E250	
			SPACE			39				40	–	+8G	–	–		
			SPACE			41				42	–	3/4"C	–	–		

TOTAL LOAD @ 100% = 82744VA — TOTAL LOAD @ 100% = 100A — TOTAL LOAD @ 125% = 124A

NEW KITCHEN PANEL — KITCHEN

PANEL LK — 225A MLO, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E10	1000	5 REC – RR/STOR/CUST & BELL	3–12	20/1	1				2	20/1	3–12	1 REC – KITCHEN	180	E10	
			SPARE		20/1GFI	3				4	20/1	3–12	1 REC – KITCHEN	180	E10	
			SPARE		30/2GFI	5				6	20/1	3–12	1 REC – KITCHEN	180	E10	
4 ADD4		–	–	–	–	7				8	20/2	2–10	HEATED CABINET	3224	E187	
		540	3 REC – OFFICE	3–12	20/1	9				10	3/4"C	+10G	–	–		
	E10/E13	540	3 REC – KITCHEN	3–12	20/1	11				12	20/2	2–10	HEATED CABINET	3224	E187	
	E10	360	2 REC – SERVING LINE	3–12	20/1	13				14	3/4"C	+10G	–	–		
	E10	360	2 REC – SERVING LINE	3–12	20/1	15				16	20/3	3–12	DISPOSER	3960	E123	
		1000	2 EDF – CAFETERIA	3–12	20/1	17				18	–	+12G	(3 HP)	–		
	E615	500	2 MENU BOARDS	3–12	4 ADD4 20/1	19				20	–	3/4"C	–	–		
	E209	960	MILK COOLER	3–12	4 ADD4 20/1	21				22	20/1	3–12	AIR SCREEN	612	E101	
	E201A	5824	HOT FOOD COUNTER	2–8	35/2GFI	23				24	15/1	3–12	EF–CF (1/6HP)	528		
		–	–	+10G	3/4"C	25				26	15/1	3–12	EF–14 (1/3HP)	864		
	E201B	1920	COLD FOOD COUNTER	3–12	20/1	27				28	15/1	3–12	EF–2 (1/6HP)	528		
	E214	360	CASH REGISTERS	3–12	4 ADD4 20/1	29				30	20/1	4 ADD4	SPARE			
	E201B	1920	COLD FOOD COUNTER	3–12	4 ADD4 20/1	31				32	20/1		SPARE			
	E201A	5824	HOT FOOD COUNTER	2–8	35/2GFI	33				34	20/1		SPARE			
		–	–	+10G	3/4"C	35				36	20/1		SPARE			
	E209	960	MILK COOLER	3–12	20/1	37				38	20/1		SPARE			
		360	2 REC – CAFETERIA	3–12	20/1	39				40	20/1		SPARE			
			SPARE		20/1	41				42	20/1		SPARE			
	E153/E153M	250	HOOD LTS & SENSOR	3–12	20/1	43				44	20/1GFI	3–12	DROP CORD	180	E129	
	E153/E153M	250	HOOD LTS & SENSOR	3–12	20/1	45				46	20/1GFI	3–12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	47				48	20/1GFI	3–12	MOBILE PROOFER	1800	E139	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	49				50	20/1GFI	3–12	20QT MIXER	960	E125	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	51				52	20/1GFI	3–12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	53				54	20/1GFI	3–12	DROP CORD	180	E129	
8	E163	600	TILT BRAISING PAN 4 ADD4	3–12	20/1GFI	55				56	20/1GFI	3–12	DROP CORD	180	E129	
8	E172	3120	COMBI OVEN	2–12	20/2	57				58	20/1GFI	3–12	DROP CORD	180	E129	
		–	–	+12G	3/4"C	59				60	20/1	3–12	EXISTING CIRCUIT	500		5
8	E172	3120	COMBI OVEN	2–12	20/2	61				62	20/2	2–12	EXISTING CIRCUIT	1000		5
		–	–	+12G	3/4"C	63				64	–	+12N+12G	–	–		
5		250	EXISTING CIRCUIT	3–12	20/1	65				66	20/2	2–12	EXISTING CIRCUIT	1000		5
			SPACE			67				68	–	+12N+12G	–	–		
			SPACE			69				70	30/2	2–10	EXISTING CIRCUIT	3000		5
			SPACE			71				72	–	+10N+10G	–	–		
			SPACE			73				74	20/3	3–12	WASHER	3408		
			SPACE			75				76	–	+12G	–	–		
			SPACE			77				78	–	3/4"C	–	–		
			SPACE			79				80			SPACE			
			SPACE			81				82			SPACE			
			SPACE			83				84			SPACE			

TOTAL LOAD @ 100% = 55718VA — TOTAL LOAD @ 100% = 155A — TOTAL LOAD @ 65% = 101A

KITCHEN HOOD CONTACTOR SCHEDULE

POLE	DESCRIPTION	NORMAL CKT	EM CKT	CONTROL ZONE	EQUIPMENT LOCATION	CONTACTOR TYPE
HOOD 1						
CK1–1	CONVECTION OVEN	LK–47	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–2	CONVECTION OVEN	LK–49	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–3	CONVECTION OVEN	LK–51	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–4	CONVECTION OVEN	LK–53	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–5	SPARE					ELECTRICALLY HELD – NO
CK1–6	SPARE					ELECTRICALLY HELD – NO
CK1–7	SPARE					ELECTRICALLY HELD – NO
CK1–8	SPARE					ELECTRICALLY HELD – NO
HOOD 2						
CK2–1	TILT BRAISING PAN	LK–55	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–2	COMBI–OVEN	LK–57/59	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–3	(2–POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2–4	COMBI–OVEN	LK–61/63	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–5	(2–POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2–6	SPARE					ELECTRICALLY HELD – NO
CK2–7	SPARE					ELECTRICALLY HELD – NO
CK2–8	SPARE					ELECTRICALLY HELD – NO

1. REFERENCE FLOOR PLANS FOR EQUIPMENT LOCATIONS AND ADDITIONAL INFORMATION.
2. EACH KITCHEN HOOD CONTACTOR HALL BE CONTROLLED ON/OFF BY THE APPROPRIATE HOOD ANSUL SYSTEM. WHEN ACTIVATED ALL POWER WITHIN THE COOKING HOOD SHALL BE DE–ENERGIZED.

EXIST GE SWITCHBOARD — CENTRAL PLANT

(E)SWBD M — 1600A MCB, 480Y/277V, 3ϕ, 4 WIRE — AVAILABLE FAULT: 37,000A — SCCR & AIC: 100,000A — FREE STANDING

NOTES	CIRCUIT	DESCRIPTION	CB	FEEDER SIZE	AMPS
	1	EXTENDED DAY PANEL H	200/3	EXIST FEEDER	
	2	PFCC	200/3	EXIST FEEDER	
	3	EXIST DISTRIBUTION PANEL DA	400/3	EXIST FEEDER	274A
	4	EXIST DISTRIBUTION PANEL DB	400/3	EXIST FEEDER	
	5	EXIST DISTRIBUTION PANEL AC	800/3	EXIST FEEDER	
	6	EXIST DISTRIBUTION PANEL DC	400/3	EXIST FEEDER	
2,3	7	NEW PANEL HK	225/3	4–4/0 +4G, 2.5"C	100A
	8	XFMR TLCAB	125/3	EXIST FEEDER	
	9	SPD	60/3	EXIST FEEDER	
				TOTAL LOAD @ 100% =	274A
				TOTAL LOAD @ 125% =	342A

1. THE EXISTING 2000A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST WESTINGHOUSE PANELBOARD

(E)PANEL DA — 400A MLO, 480Y/277V, 3ϕ, 4 WIRE — AVAILABLE FAULT: 27,000A — SCCR & AIC: 35,000A — MOUNTING: SURFACE

NOTES	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	NOTES
	9150	AHU #2	EXIST	20/3	1				2	60/3	EXIST	DUCT HEATER 2	39000	
	–	–	–	–	3				4	–	–	(STAGE)	–	
	–	–	–	–	5				6	–	–	–	–	
2		KITCHEN LTS	EXIST	20/1	7				8	20/1	EXIST	EXIST CIRCUIT	3000	
	3000	CAFETERIA LTS	EXIST	20/1	9				10	70/3	3–6	TEMP KITCHEN PANEL LTK	37918	4
	2300	CUSTODIAN LTS	EXIST	20/1	11				12	–	+8G	–	–	
	3000	STAGE/RR/STOR LTS	EXIST	20/1	13				14	–	3/4"C	–	–	
		SPACE			15				16			SPACE		
		SPACE			17				18			SPACE		
		SPACE			19				20			SPACE		
		SPACE			21				22			SPACE		
		SPACE			23				24			SPACE		
	130000	PANEL PA	EXIST	225/3	25				26	–	–	–	–	
	–	(SUBFEED BREAKER)	–	–	27				28	–	–	–	–	
	–	–	–	–	29				30	–	–	–	–	

TOTAL LOAD @ 100% = 227368VA — TOTAL LOAD @ 100% = 274A — TOTAL LOAD @ 125% = 342A

1. THE EXISTING 400A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST EM STANDBY PANELBOARD — CENTRAL PLANT

(E)PANEL EL — 100A MCB, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
		500	PA SYSTEM	EXIST	20/1	1				2	20/1	EXIST	F/A RPS	250		
		250	SECURITY SYSTEM	EXIST	20/1	3				4	20/1	EXIST	F/A RPS	250		
		250	FACP	EXIST	20/1	5				6	20/1	EXIST	F/A RPS	250		
		250	F/A RPS	EXIST	20/1	7				8	20/1	EXIST	F/A RPS	250		
		250	F/A RPS	EXIST	20/1	9				10	20/1	EXIST	F/A RPS	250		
			EXIST SPARE		20/1	11				12	20/1		EXIST SPARE			
			EXIST SPARE		20/1	13				14	20/1		EXIST SPARE			
3	E188	864	REFRIGERATOR	3–12	20/1	15				16	25/3	3–10	REFRIGERATION SYSTEM	6192	E103	4
3	E188	864	REFRIGERATOR	3–12	20/1	17				18	–	+10G	–	–		
3	E109	1428	ICE MACHINE	3–12	20/1	19				20	–	3/4"C	–	–		
3	E151	240	HOOD ANSUL SYSTEMS	3–12	20/1	21				22	20/1EGF	3–12	COOLER DOOR HEATER/LTS	600	E102A	4
3	E102B	600	COOLER TEMP. ALARM	3–12	20/1	23				24	20/1EGF	3–12	FREEZER DOOR HEATER/LTS	600	E102A	4
3	E102C	600	COOLER PRESSURE PORT	3–12	20/1	25				26	20/1EGF	3–12	FREEZER DRAIN LINE HEATER	600	E103F	4
3	E102E	120	PANIC ALARM BUTTONS	3–12	20/1	27				28	20/2	2–10	FREEZER COIL	1893	E103C	4
3	E103D	216	COOLER COIL	3–12	20/1	29				30	–	+10G	–	–		
3	E102B	600	FREEZER TEMP. ALARM	3–12	20/1	31				32	20/1		EXIST SPARE			
3	E102C	600	FREEZER PRESSURE PORT	3–12	20/1	33				34	20/1		EXIST SPARE			
		300	GENERATOR ANTI COND HTR	EXIST	20/1	35				36	20/1		EXIST SPARE			
		250	GENERATOR BATTERY CHRGR	EXIST	20/1	37				38	30/3	EXIST	SPD	50		
		4500	GEN JACKET HTR	EXIST	30/2	39				40	–	–	–	–		
		–	–	–	–	41				42	–	–	–	–		

TOTAL LOAD @ 100% = 23867VA — TOTAL LOAD @ 100% = 66A — TOTAL LOAD @ 125% = 83A

1. THE EXISTING 100A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

GENERAL PANEL REQUIREMENTS:
A. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
B. FIELD VERIFY EXISTING CIRCUITS PRIOR TO BEGINNING WORK.
C. ALL OUTAGES SHALL BE SCHEDULED AND CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
D. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.

PANEL NOTES:
1. REVISE/REWORK WIRING/CONDUIT AS REQUIRED TO ADD/REMOVE DEVICES FROM EXISTING CIRCUIT.
2. EXISTING CIRCUIT TO BE DEMO.
3. REUSE EXISTING SPARE CB AND WIRE NEW CIRCUIT.
4. PROVIDE NEW CB & WIRE NEW CIRCUIT.
5. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AND REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION.
6. KITCHEN LIGHTS TO BE DUAL ZONES WIRED THROUGH LIGHTING CONTACTORS AND CONTROLLED ON/OFF BY THE BAS AND LOCAL LIGHTING SWITCHES.
7. EXTERIOR LIGHTS TO BE WIRED THROUGH LIGHTING CONTACTOR AND CONTROLLED ON/OFF BY THE BAS.
8. WIRE CIRCUITS THROUGH KITCHEN EQUIPMENT CONTROL CONTACTOR. CIRCUITS TO BE DE–ENERGIZED BY HOOD FIRE PROTECTION SYSTEM.
9. RECONNECT EXISTING TEMPORARY LOAD CENTER CIRCUIT TO NEW PANEL LK. (4 ADD4)

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03/11/2025	50% CD PKG.
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4 ADD4 09/04/2025	ADDENDUM 04

S

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD.
SUGAR LAND, TX 77479

SEAL

STATE OF TEXAS — GEORGE L. STANTON — 38582 — LICENSED PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
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ELECTRICAL SCHEMATIC

s-E.400

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DEMOLITION KEYED NOTES

D1 EXISTING CLEAN OUT SHALL BE REPLACED WITH NEW. CHIP OUT SLAB AROUND CLEANOUT TO REMOVE.

D2 EXISTING FLOOR DRAIN SHALL BE REPLACED WITH NEW, INCLUDING P-TRAP. CHIP OUT SLAB AROUND DRAIN TO REMOVE FLOOR DRAIN AND EXISTING P-TRAP.

D3 CUT AND CAP EXISTING HW/CW FOR FUTURE EXTENSION. DEMOLISH ALL PIPING WITHIN KITCHEN. DEMOLITION SHALL BE DELAYED UNTIL NEW CW MAIN AND HW PIPING LOOP IS INSTALLED IN PARALLEL. CW/HW SERVICE TO THE TEMPORARY KITCHEN SHALL BE UNINTERRUPTED DURING OCCUPIED HOURS. COORDINATE SWITCHOVER FROM EXISTING PIPING TO NEW WITH OCCUPANCY SCHEDULE.

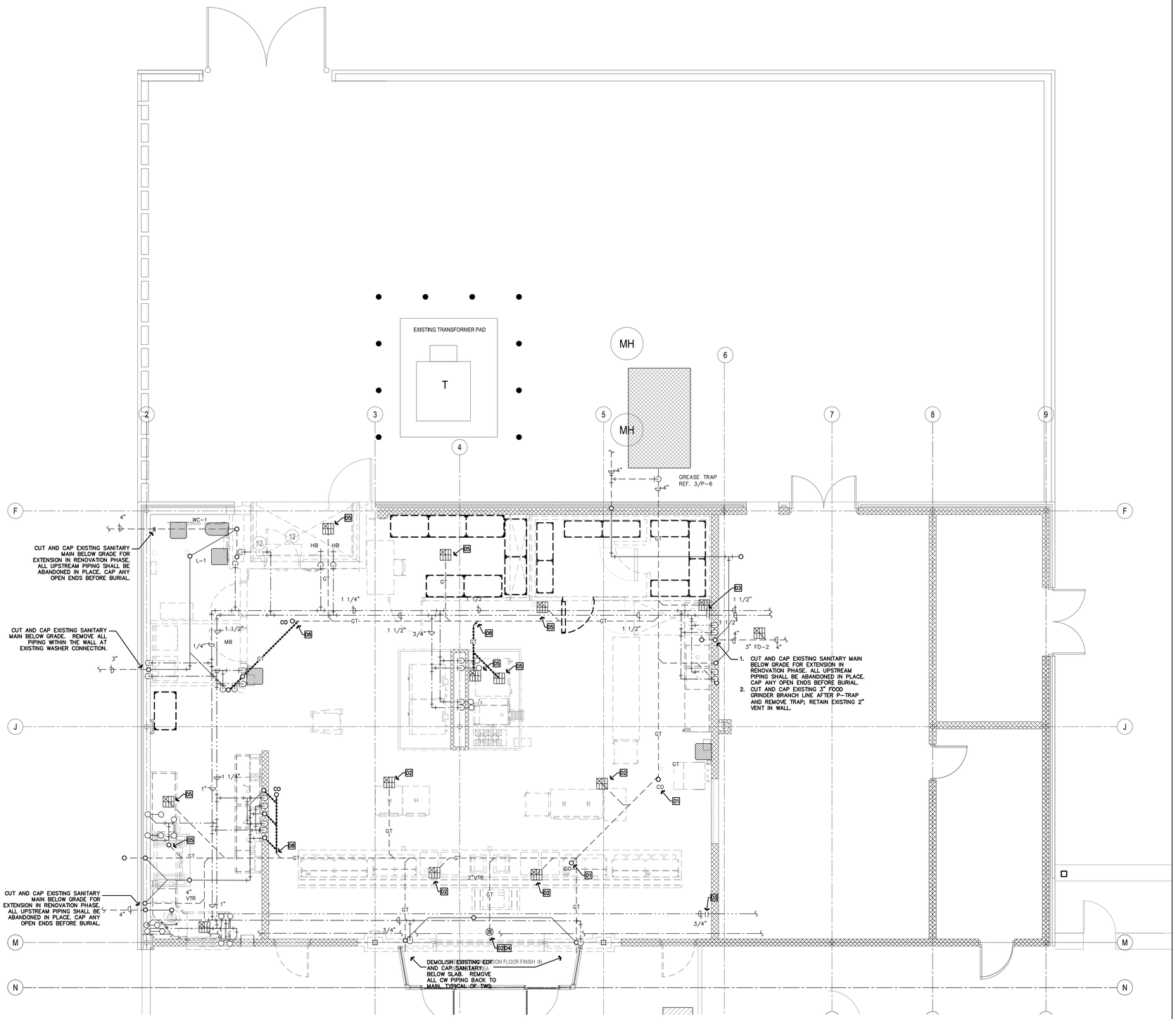
D4 EXISTING FLOOR DRAIN TIED TO GREASE WASTE SYSTEM. DRAIN IS BEING USED FOR TEMPORARY KITCHEN INDIRECT WASTE AND SHALL REMAIN ACTIVE DURING OCCUPIED HOURS. COORDINATE DEMOLITION AND REPLACEMENT WITH TEMPORARY KITCHEN USAGE.

D5 DEMOLISH EXISTING DRAIN A CAP BELOW SLAB.

D6 EXISTING SPACE BEING DEMOLISHED. CAP EXISTING SANITARY MAIN BELOW SLAB AND REMOVE UPSTREAM PIPING. CUT/CHIP OUT SLAB AS REQUIRED AND REPAIR TO MATCH EXISTING.

D7 TEMPORARILY CAP EXISTING SANITARY MAIN BELOW SLAB AND REMOVE UPSTREAM PIPING. CUT/CHIP OUT SLAB AS REQUIRED AND REPAIR TO MATCH EXISTING. PIPING TO BE REPLACED WITH NEW TRUNK AND ADDITIONAL DRAIN BRANCH LINES.

D8 CUT AND CAP EXISTING SANITARY MAIN BELOW GRADE FOR EXTENSION IN RENOVATION PHASE. ALL UPSTREAM PIPING SHALL BE ABANDONED IN PLACE. CAP ANY OPEN ENDS BEFORE BURIAL.



1 PLUMBING DEMOLITION FLOOR PLAN
SCALE: 1/4" = 1'- 0"

ISSUE:

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03/11/2025	50% CD PKG.
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PLUMBING DEMOLITION FLOOR PLAN

s-PD1.01

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PLUMBING SYMBOLS LEGEND

Symbol	Description	Abbreviation	Meaning
— — — — — —	SANITARY WASTE BELOW SLAB	SAN.	SANITARY
————————	SANITARY WASTE ABOVE SLAB	CW	DOMESTIC COLD WATER
—— V ——	VENT PIPING ABOVE SLAB	HW	DOMESTIC HOT WATER
——— ———	VENT PIPING	WC	WATER CLOSET
—— G ——	GAS PIPING, 4–8oz	UR	URINAL
—— G5 ——	GAS PIPING, 5LB	LAV	LAVATORY
—·—·—	DOMESTIC COLD WATER PIPING	SK	SINK
—··—··—	DOMESTIC HOT WATER PIPING	EDF	ELECTRIC DRINKING FOUNTAIN
—— D ——	DRAIN/RELIEF VENT PIPING	WH	WALL HYDRANT
—⋈—	STOP VALVE	HB	HOSEBIBB
2CO	DOUBLE SAN. CLEANOUT (2–WAY)	CP	HOT WATER CIRCULATOR PUMP
CO	SANITARY SEWER CLEANOUT	FD	FLOOR DRAIN
WCO	WALL CLEANOUT	FSINK	FLOOR SINK
EXIST.	EXISTING		
(R)	REMOVE (DEMOLISH)		
(D)	DEMOLISH (REMOVE)		
(E)	EXISTING – NO WORK		

PLUMBING FIXTURE NOTES

1. ALL FIXTURES SHALL MEET WATER CONSERVATION PERFORMANCE STANDARDS MANDATED BY SENATE BILL 587. ALL FIXTURES SHALL HAVE FLOW RESTRICTION DEVICES (DRINKING FOUNTAINS SHALL BE SELF–CLOSING) TO COMPLY WITH THESE REQUIREMENTS.
2. ALL FIXTURES SHALL HAVE CONTROLS REQUIRING OPERATING FORCE NO GREATER THAN FIVE (5) POUNDS.
3. FOR LAVATORIES AND SINKS, ALL FAUCETS SHALL BE NO–LEAD SOLID BRASS, MEETING ALL REQUIREMENTS OF ANSI/NSF 61, SECTION 9 AND CERTIFIED AS SUCH. ALSO, INSTALL SYMMONS 7–210 MIXING VALVE ON HOT WATER SUPPLY SIDE OF ALL FAUCETS UNLESS HIGH TEMPERATURE LIMIT IS PROVIDED WITH FAUCET. MAXIMUM WATER TEMPERATURE FOR ALL FAUCETS THAT DELIVER HOT OR TEPID WATER SHALL BE 110°F. ALL METERING FAUCETS SHALL HAVE A MINIMUM TEN (10) SECONDS OF WATER FLOW. AND, INSTALL TRUEBRO HANDI LAV–GUARD VANDAL–PROOF INSULATION KITS OVER P–TRAP, SUPPLIES, STOPS AND ALL SHARP EDGES FOR ALL SINKS AND LAVATORIES (TRAP WRAP FROM BROCAR OR PROWRAP FROM McGUIRE SHALL BE ACCEPTABLE).
4. ALL PLUMBING FIXTURES REFERENCED AS "ADA", "TAS" OR "HANDICAP COMPLIANT" SHALL MEET ALL REQUIREMENTS OF THE ADA AND THE TEXAS ACCESSIBILITY STANDARDS. IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MEET THESE REQUIREMENTS.
5. IN MANY CASES, FIXTURES WITH THE SAME PLUMBING DESIGNATION HAVE DIFFERENT INSTALLATION HEIGHTS – REFERENCE ARCHITECTURAL DRAWINGS FOR ALL INSTALLATION HEIGHTS AND HANDICAP FIXTURE DESIGNATIONS. FIXTURES DESIGNATED AS ADULT HANDICAP SHALL MEET ALL REQUIREMENTS OF THE ADA. FIXTURES DESIGNATED AS CHILD HANDICAP SHALL MEET ALL REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS FOR THE APPROPRIATE CHILDREN'S AGE GROUP (REF. ARCH. DWGS. AND SPECIFICATIONS).

PLUMBING MATERIALS

SANITARY WASTE AND VENT

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB: STANDARD WEIGHT, CAST IRON, NO–HUB PIPING.

STORM DRAIN PIPING

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB, 8" AND UNDER: STANDARD WEIGHT, CAST IRON, NO–HUB PIPING.

ABOVE SLAB, 10" AND ABOVE: SERVICE WEIGHT, CAST IRON, BELL & SPIGOT.

NATURAL GAS

BELOW GRADE (OUTSIDE): YELLOW POLYETHYLENE PIPE WITH COATED STEEL RISER AND TRACER WIRE.

ABOVE SLAB: SCHEDULE 40 BLACK STEEL. PIPING 2.5" AND LARGER SHALL BE WELDED. PIPING 2" AND SMALLER SHALL HAVE SCREWED FITTINGS.

DOMESTIC WATER

INTERIOR: TYPE L COPPER WITH SOLDER TYPE WROUGHT COPPER FITTINGS, MADE UP WITH LEAD–FREE SOLDER.

EXTERIOR: TYPE K COPPER WITH SWEAT FITTINGS AND LEAD–FREE SOLDER. BEYOND 5 FEET FROM BUILDING, SCHEDULE 40 PVC.

FIRE SPRINKLER SYSTEM NOTES

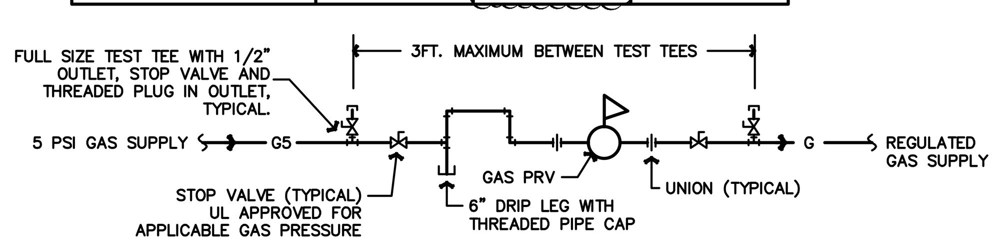
1. THE EXISTING FIRE SPRINKLER SYSTEM SHALL BE MODIFIED AND/OR EXPANDED TO COVER THE AREA OF RENOVATION IN ENTIRETY. ALL NEW AND REVISED PIPING SHALL BE ENGINEERED AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR.
2. REFERENCE THE SPECIFICATIONS, DIVISION 21, FOR MORE INFORMATION.

GENERAL PLUMBING NOTES

1. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL WORK DESCRIPTION. SEE THIS SHEET (P4.00) FOR PLUMBING SYMBOLS LEGEND.
2. COORDINATE PLUMBING SYSTEMS INSTALLATION WITH ARCHITECTURAL, STRUCTURAL, HVAC SYSTEMS, ELECTRICAL SYSTEMS, CONDUITS, ETC.... OFFSET PIPING AS REQUIRED TO PROVIDE A FUNCTIONING SYSTEM WITH ADEQUATE SPACE FOR SERVICING AND REPAIRS.
3. MAKE CONNECTIONS OF NEW PIPE SYSTEMS IN TO EXISTING PIPE SYSTEMS WITH THREADED OR SWEAT JOINTS. PROVIDE ELECTROLYSIS ISOLATING UNIONS AT CONNECTION OF DISSIMILAR MATERIALS. REFERENCE THE SPECIFICATIONS.
4. SITE SERVICES ARE SHOWN FOR REFERENCE ONLY. PLUMBING CONTRACTOR SHALL REFERENCE CIVIL DRAWINGS, INCLUDING LOCATIONS OF SERVICES, SIZES OF PIPES, FLOWLINE ELEVATIONS, ETC..
5. DO NOT INSTALL PLUMBING PIPING OVER ANY ELECTRICAL EQUIPMENT. REFERENCE ELECTRICAL DRAWINGS FOR LOCATIONS OF ELECTRICAL EQUIPMENT AND COORDINATE WITH ELECTRICAL SUBCONTRACTORS ACCORDINGLY. SEE DETAIL 1/P0.02. THIS INCLUDES FIRE SPRINKLER PIPING.
6. ALL PIPES THROUGH WALLS OR FLOORS SHALL BE SLEEVED AND SEALED PER DETAIL 5/P0.02. FIRE CAULK WHERE REQUIRED. THIS INCLUDES ALL WALLS, INTERIOR AND EXTERIOR. THIS INCLUDES FIRE SPRINKLER PIPING.
7. ALL CLEANOUTS SHALL BE CONNECTED TO SANITARY LINES USING WYES AND/OR LONG RADIUS ELLS. SANITARY TEES ARE NOT ACCEPTABLE. 2" MINIMUM SIZE. ALL WALL CLEAN OUTS IN VERTICAL RISERS, OR BANKS OF FIXTURES SHALL BE INSTALLED 4" ABOVE THE FLOOD RIM LEVEL OF THE LOWEST CONNECTED FIXTURE AND A MINIMUM OF 24" AFF.
8. ALL WASTE AND VENT PIPING BELOW SLAB SHALL BE 2" MINIMUM.
9. LOCATE PLUMBING VENTS THROUGH ROOF NOT NEARER THAN SIX (6) FEET AWAY FROM EDGE OF BUILDING AND TEN (10) FEET AWAY FROM ANY FRESH AIR INTAKES. OFFSET VENT PIPING, AS REQUIRED, IN CEILING SPACE BETWEEN CEILING AND ROOF TO MEET THESE REQUIREMENTS. SEE DETAIL 3/P0.02.
10. ALL DOMESTIC WATER PIPING (CW, HW AND HWR) SHALL BE INSULATED PER THE WRITTEN SPECIFICATIONS.
11. TOP OF FLOOR DRAINS IN MECHANICAL, AHU AND BOILER ROOMS SHALL BE SET 1–1/2" BELOW FINISHED FLOOR SURFACE. CONCRETE FLOOR SHALL BE SLOPED TO DRAIN, REFERENCE ARCHITECTURAL DRAWINGS. IN ALL OTHER LOCATIONS, FLOOR DRAINS SHALL BE SET FLUSH WITH FINISHED FLOOR, TAKING INTO ACCOUNT ANY FLOOR SLOPE OR FLOOR FINISH (TILE, TERRAZZO, ETC.) AS SHOWN ON ARCHITECTURAL DRAWINGS.
12. PROVIDE AN ISOLATING VALVE AT EACH WATER TAP OFF HOT AND COLD WATER MAINS TO ALLOW FOR SERVICING. VALVE SHALL BE BALL VALVE IF PIPE SIZE IS 2" OR LESS AND GATE VALVE OR BUTTERFLY VALVE IF LARGER THAN 2". SEE WRITTEN SPECIFICATIONS. VALVES SHALL BE EASILY ACCESSIBLE: PROVIDE 18" X 18", FIRE–RATED, STAINLESS STEEL ACCESS PANELS WITH HINGED, CYLINDER LOCK DOORS WHERE VALVES ARE INSTALLED ABOVE INACCESSIBLE CEILINGS OR IN WALL CHASES (MIFAB MODEL MPFR–SS–C). BALL VALVES AND BUTTERFLY VALVES INSTALLED ABOVE CEILINGS SHALL BE INSTALLED SUCH THAT HANDLE IS ON BOTTOM OF PIPE. ISOLATING WATER VALVES ABOVE CEILINGS SHALL BE INSTALLED NO MORE THAN 24" ABOVE CEILING. VALVES ABOVE INACCESSIBLE CEILINGS SHALL BE INSTALLED WITHIN REASONABLE REACH OF CEILING MOUNTED ACCESS PANEL.
13. WATER HAMMER ARRESTERS SHALL BE INSTALLED IN ADDITION TO AIR CHAMBERS PER THE RISER DIAGRAMS. SEE SPECIFICATIONS.
14. MECHANICALLY CLEAN ALL WASTE LINES WITH ROTARY MACHINE TO PROVE FREE FLOWING, SEE SPECIFICATIONS.
15. PROVIDE VENTED SLEEVE (2 PIPE SIZES LARGER THAN GAS PIPE UNLESS NOTED OTHERWISE) FOR ALL GAS PIPING IN GROUND BELOW PAVING OR SIDEWALKS AND INSIDE BUILDING IN WALLS AND IN UNVENTILATED CEILING SPACES, SEE SPECIFICATIONS.
16. GAS PIPING SHALL BE 1/2" MINIMUM. TAP GAS PIPING ON TOP OR SIDES ONLY. DO NOT INSTALL VALVES IN CEILING PLENUM OR IN ANY INACCESSIBLE LOCATION. ALL GAS VALVES SHALL BE EASILY ACCESSIBLE. REFER TO DETAIL 7/P0.01 FOR TYPICAL GAS CONNECTION INSTALLATION. REFER TO DETAIL 4/P0.01 FOR TYPICAL PRV INSTALLATION.
17. CENTER WALL HYDRANTS IN BRICK PATTERN OF EXTERIOR WALLS, REFERENCE THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
18. ALL REFRIGERATORS WITH ICE MAKERS, COMMERCIAL TYPE COFFEE MAKERS, ICE MAKERS, COFFEE VENDING MACHINES AND OTHER ITEMS PROVIDED BY OTHERS THAT REQUIRE A WATER CONNECTION SHALL HAVE A CW VALVE BOX, "VBOX", INSTALLED TO ALLOW EASY ACCESS AND REMOVAL OF MACHINE. ALSO, INSTALL IN–LINE FILTER IN WATER CONNECTION.
19. REFER TO CIVIL DRAWINGS FOR SITE SANITARY, SITE STORM SEWER, FIRE SERVICE AND DOMESTIC WATER SERVICE. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPING INSIDE BUILDING TO OUTSIDE LOCATIONS SHOWN ON PLUMBING DRAWINGS. PLUMBING CONTRACTOR SHALL INCLUDE COST OF FINAL TIE–INS TO SITE SERVICES.
20. PER THE DRAWINGS, ALL DRAINS (FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, KITCHEN DRAINS, SHOWER DRAINS, ETC.) SHALL BE VENTED AND TRAP PRIMED – NO EXCEPTIONS. TRAP PRIMING SHALL BE ACCOMPLISHED USING WATER CLOSET FLUSH VALVE TRAP PRIMING DEVICES OR PROSET SYSTEMS TRAP GUARD SEWER GAS EMISSION PROTECTION, AS SHOWN ON DRAWINGS. REFERENCE PLUMBING FLOOR PLANS AND RISER DIAGRAMS.
21. ALL PIPING LOCATED ON ROOF (GAS PIPING) SHALL BE INSTALLED ON ROOF PIPE SUPPORTS PER DETAIL 14/P0.02, 6–FOOT ON CENTER. INSTALL ROOF PIPE JACK PER DETAIL 9/P0.02 FOR ALL PIPING THROUGH ROOF.
22. COORDINATE LOCATIONS OF ALL ROOF DRAINS AND OVERFLOW ROOF DRAINS WITH ARCHITECTURAL DRAWINGS.
23. FOR COMBINATION WASTE AND VENT SYSTEMS (WHERE APPLICABLE ON DRAWINGS), DRAIN P–TRAPS SHALL BE SIZE OF PIPE SHOWN ON DRAWINGS (I.E. TWO PIPE SIZES LARGER THAN DRAIN SIZE). FOR EXAMPLE, A 4" FLOOR DRAIN SHALL HAVE A 6" P–TRAP.
24. FOR ALL PLUMBING FIXTURES, IF COPPER PIPING IS STUBBED THROUGH WALL FOR DRAIN CONNECTION, INSTALL MARVEL FITTING AT DRAIN CONNECTION FOR EASE OF SERVICING AND REPAIRS. COPPER DRAIN PIPING WILL ONLY BE ALLOWED FOR DIRECT/STRAIGHT STUB–OUT OF FIXTURE DRAIN PIPING THROUGH WALL.
25. DO NOT INSTALL ANY PIPING BENEATH CVT OR VAV BOXES. THIS INCLUDES FIRE SPRINKLER PIPING.
26. WHERE UNDERGROUND VENT PIPE SIZE IS NOT NOTATED, VENT SHALL BE 2" DIAMETER.
27. WHERE UNDERGROUND SANITARY PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR SIZE. NOT BELOW GRADE SANITARY PIPE SHALL BE SMALLER THAN 2". NO SANITARY LINE OR P–TRAP FOR A DRAIN/FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE DRAIN/FIXTURE SCHEDULE.
28. WHERE ABOVE GROUND VENT PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR VENT SIZE.
29. WHERE CW/HW PIPING SIZE TO THE FIXTURE IS NOT SHOWN ON THE FLOOR PLAN, REFER TO THE RISER DIAGRAMS FOR CW/HW PIPE SIZE. NO PIPING TO FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE FIXTURE SCHEDULE.
30. TO INSTALL NEW PLUMBING SYSTEMS BELOW EXISTING CONCRETE SLABS, FIRST PLUMBING CONTRACTOR SHALL LAY OUT CUT. THEN, DEMOLITION CONTRACTOR SHALL SAW CUT SLAB TO CONTROL CRACKING AND REMOVE ALL CONCRETE. PLUMBING CONTRACTOR SHALL THEN EXCAVATE FILL TO PROPER SLOPE, INSTALL NEW PIPING SYSTEMS AS REQUIRED, THEN BACKFILL AND COMPACT TO PROPER DENSITY. THE CONCRETE CONTRACTOR SHALL THEN INSTALL NEW SIX (6) MIL POLYETHYLENE VAPOR BARRIER AND SEAL, INSTALL NEW REINFORCING STEEL AND WELD ON TO EXISTING, THEN RE–POUR CONCRETE TO NEW LEVEL. DO NOT CUT THROUGH GRADE BEAMS WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
31. ALL ABANDONED FIXTURES, DRAINS AND PIPING (INCLUDING PIPING ABANDONED IN THE PAST) IN AREAS WHERE WORK IS BEING DONE SHALL BE COMPLETELY REMOVED FROM BUILDING (INCLUDING PIPING BELOW SLAB/GRADE – UNLESS SHOWN OTHERWISE ON DRAWINGS). EXISTING WATER PIPING SHALL BE CAPPED AT EXISTING WATER MAIN TAPS AND ALL ABANDONED PIPING REMOVED. ABANDONED VENT PIPING SHALL BE COMPLETELY REMOVED, INCLUDING EXISTING VTR's NOT RE–USED. PATCH AS REQUIRED. ONLY ACTIVE PIPING, FIXTURES AND DRAINS SHALL REMAIN IN BUILDING WHERE WORK IS BEING DONE.
32. FIELD VERIFY EXISTING CONDITIONS PRIOR PROCUREMENT OF EQUIPMENT AND SYSTEMS.
33. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION.
34. PROVIDE INSUALTION WITH R–VALUES MEETING OR EXCEEDING REQUIREMENTS OF THE 2021–IECC. (4 ADD4)
35. SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.

GAS PRV SCHEDULE

MARK	PRV–K	PRV–K2 (4 ADD4)
LOCATION	MECH. YARD	MECH. YARD
SERVES	KITCHEN	KITCHEN
GAS LOAD	585 CFH	585 CFH
DISTANCE FROM METER	150 FT	150 FT
DISTANCE TO LAST OUTLET	200 FT	200 FT
INLET (SIZE/PRESSURE)	1" / 5 PSI	1" / 5 PSI
OUTLET (SIZE/PRESSURE)	2" / 7–12 IN WC	2" / 7–12 IN WC



4 GAS PRESSURE REGULATOR DETAIL (PRV)

NO SCALE

NOTES:

1. GAS REGULATOR SHALL BE ANSI Z21.80 CERTIFIED FOR LINE PRESSURE REGULATION BETWEEN THE SERVICE REGULATOR AND CONNECTED EQUIPMENT.
2. ALL GAS REGULATORS WITH INLET PRESSURE ABOVE 2 PSI SHALL BE EQUIPPED WITH A FACTORY INSTALLED OVERPRESSURE PROTECTION DEVICE, AS PART OF THE ANSI Z21.80 CERTIFICATION.
3. GAS REGULATOR SHALL BE EQUIPPED WITH A VENT LIMITING DEVICE, SIZED IN ACCORDANCE WITH THE REGULATOR OUTLET PRESSURE.
4. ALL REGULATORS INSTALLED OUTDOORS SHALL BE RATED FOR OUTDOOR INSTALLATION.
5. BASIS OF DESIGN IN THE MAXITROL 325–L SERIES OF REGULATORS

PLUMBING DRAINS, CLEANOUTS AND HYDRANTS

MARK	MIN. CONNECTION SIZES (IN.)				DESCRIPTION/SPECIFICATION FOR FIXTURE OR EQUIPMENT
	SAN	VENT	CW	HW	
FD	4	2	1/2	–	TOILET FLOOR DRAIN – TWO–PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 1/2" TRAP PRIMER TAP, 6" SQUARE, NICKEL BRONZE HSTRAINER AND SECURITY SCREWS JR SMITH MODEL 2005–03–K06PB–P050–U.
FD2	4	2	1/2	–	EQUIPMENT FLOOR DRAIN – CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, DUCTILE IRON TRUE–FIT SEDIMENT BUCKET WITH 12" STAINLESS STEEL RIM LESS GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS–540–LG–P. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD3	4	2	1/2	–	GRATED MECHANICAL ROOM FLOOR DRAIN – CAST IRON WITH FLANGE, SEEPAGE OPENINGS, 9" HEAVY–DUTY DUCTILE IRON GRATE WITH STAINLESS STEEL VENEER, CLAMPING DEVICE AND 1/2" TRAP PRIMER TAP ZURN MODEL ZS–550–C–P
FD4	4	2	1/2	–	CANWASH FLOOR DRAIN – ALL GALVANIZED CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, GALVANIZED SUR–SET SEDIMENT BUCKET WITH 12" GALVANIZED DUCTILE IRON RIM AND GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS–540–P–G–HD. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD5	4	2	1/2	–	KITCHEN FLOOR DRAINS SHALL BE SIMILAR EXCEPT WITH 7" SQUARE, BRONZE GRATE JR SMITH MODEL 2005–03–K07PB–P050–U. PROVIDE 4" DIAMETER STAINLESS STEEL FUNNEL WHERE SHOWN ON DRAWINGS. REFERENCE KITCHEN CONNECTION SCHEDULE ON PLUMBING RENOVATION FLOOR PLAN SHEET.
FS KITCHEN FS	4	2	1/2	–	FLOOR SINK – CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY STAINLESS STEEL TRACTOR DUTY FRAME WITH 3/4–TRACTOR GRATE AND 1/2" TRAP PRIMER TAP JR SMITH MODEL 3150Y–04–C–13.
FS2 (4 ADD4)	4	2	1/2	–	DEEP FLOOR SINK – FABRICATED STEEL RECEPTOR, 12" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, STAINLESS STEEL MESH LINED BUCKET AND 24X12 NICKEL BRONZE FRAME WITH 3/4 SOLID COVER. JR SMITH MODEL 3250Y–C–BS–43
CO	VARIES	–	–	–	FLOOR CLEANOUT – ADJUSTABLE EXTENSION HOUSING, CAST IRON FERRULE WITH FULL–LINE–SIZE BRASS PLUG (UP TO 4"), 5" DIAMETER STAINLESS STEEL ACCESS COVER WITH VANDAL–PROOF SECURITY SCREWS, ROUND FRAME AND TOP STYLE COMPATIBLE WITH FLOOR TYPE (REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR TYPES) ZURN MODEL ZS–1400–VP. PROVIDE CARPET FLANGE FOR CARPETED AREAS (CARPET MARKER SHALL NOT BE ACCEPTABLE) AND TERRAZZO RECESS FOR TERRAZZO FLOORS. OUTDOOR CLEANOUT – SAME AS TYPE "CO" EXCEPT WITH HEAVY–DUTY NICKEL BRONZE TOP ZURN MODEL ZN–1400–HD–VP. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
WCO	VARIES	–	–	–	WALL CLEANOUT – CAST IRON FERRULE WITH COUNTERSUNK HEAD (FULL–LINE–SIZE PVC PLUG UP TO 4") MI–FAB MODEL C1450. ACCESS COVER SHALL BE 8" SQUARE, SURFACE MOUNT, FLUSH INSTALLATION, 16–GAUGE STAINLESS STEEL ACCESS DOOR WITH FLANGED FRAME AND VANDAL–PROOF OPTION MI–FAB MODEL UA–SS–VP. ACID WASTE CLEANOUT (AWCO) SHALL BE SAME EXCEPT ACID WASTE PIPING. INSIDE CABINETWORK WHERE CLEANOUT IS NOT VISIBLE, ACCESS PANEL MAY BE ROUND STAINLESS STEEL TYPE WITH VANDAL–PROOF CENTER SCREW MI–FAB MODEL C1450–RD–3–6.
2CO	4	–	–	–	DOUBLE CLEANOUTS – SAME AS OUTDOOR CLEANOUTS. INSTALLED FOR TWO–WAY RODDING. SINGLE CLEANOUT WITH 2–WAY FITTING IS NOT ACCEPTABLE, PROVIDE TWO SEPARATE CLEANOUTS. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
HB	–	–	3/4	–	HOSEBIBB – 3/4" HOSE THREAD, INTEGRAL VACUUM BREAKER SPOUT, ROUGH CHROME FINISH WITH REMOVABLE KEYED HANDLE, WALL FLANGE CHICAGO MODEL 952.
WH	–	–	3/4	–	RESTROOM WALL HYDRANT – NARROW WALL, WARM CLIMATE TYPE HOSE BOX, QUARTER–TURN WHEEL HANDLE, ASSE APPROVED ANTI–SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16–GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5518
WH2	–	–	3/4	–	EXTERIOR WALL HYDRANT – NON–FREEZE HOSE BOX, QUARTER–TURN WHEEL HANDLE, ASSE APPROVED ANTI–SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16–GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5519
WH3	–	–	3/4	3/4	CANWASH WALL HYDRANT – NON–FREEZE HOSE BOX WITH STRAIGHT INLET CONNECTION, HOT AND COLD MIXING, REMOVABLE KEYED HANDLE, ASSE APPROVED ANTI–SIPHON INTEGRAL BACKFLOW PREVENTER WITH 3/4" HOSE CONNECTION, HEAVY DUTY BRASS CASING, POLISHED BRONZE HYDRANT BOX WITH HINGED COVER, "WATER" CAST ON COVER, DRIP LIP AND WALL CLAMP J.R. SMITH MODEL 5560–QT–WC–H–W–PB.
WASH (4 ADD4)	–	–	3/4	3/4	CLOTHES WASHER HOSE CONNECTION – STUB OUT OF WALL WITH ELBOW TO LEAD FREE DOUBLE CHECK BACKFLOW PREVENTER WITH QUARTER TURN VALVES, WATTS LF007M3–QT–FZ 3/4; PROVIDE FEMALE NIPPLE WITH 3/4" HOSE CONNECTION FOR CONNECTION OF WASHER JUMPER HOSE. SUPPORT ASSEMBLY FROM WALL WITH UNISTRUT AND PIPE CLAMPS. ASSEMBLY SHALL BE PROVIDED FOR BOTH COLD AND HOT WATER OUTLETS. WASHER HAS INTEGRAL AIR GAP CERTIFIED TO EUROPEAN STANDARDS AND THUS REQURIES AN EXTERNAL MEANS OF BACKFLOW PREVENTION TO MEET US STANDARDS.

KITCHEN PLUMBING CONNECTION SCHEDULE

MARK	DESCRIPTION
P5	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO MOP BASIN ("MB") FAUCET. REFERENCE PLUMBING FIXTURE SCHEDULE.
P6	3" DRAIN IN FLOOR FOR MOP BASIN ("MB") DRAIN. REFERENCE PLUMBING FIXTURE SCHEDULE.
P7	3/4" CW AND 3/4" HW – IN WALL, 18" AFF, TO HOSE BIBB.
P10	FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO–PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" SQUARE HEAVY–DUTY POLISHED BRONZE GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 2005–03–K07PB–P050–U.
P11C	1/2" CW AND 1/2" HW – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P11D	2" DRAIN – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P12	FLOOR SINK – 4" OUTLET; FLUSH WITH FLOOR; CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY NICKEL BRONZE FRAME WITH 3/4–TRACTOR GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 3150Y–04–C–13.
P12A	EQUIPMENT FLOOR DRAIN – SIMILAR TO MARK P10, BUT WITH 4" OUTLET.
P15	FUNNEL FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO–PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" DIAMATER HEAVY–DUTY STAINLESS STEEL TRACTOR DUTY GRATE AND SECURITY SCREWS, 4" ROUND FUNNEL ASSEMBLY (MODEL 3580), 1/2" TRAP PRIMER TAP JR SMITH MODEL 2005–03–K07PB–P050–U
P109	3/4" CW – IN WALL, 60" AFF, TO ICE MAKER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO ICE MAKER FROM CHECK VALVE, THROUGH FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P109A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12, BUT WITH FULL GRATE. SEE DESCRIPTION ABOVE.
P110	1/2" CW AND 1/2" HW – IN WALL, 36" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO–CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P110A	2" DRAIN – IN WALL, 48" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO–CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P122	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET AT TWO COMPARTMENT SINK. INSTALL LEONARD 370–LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P122A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P123	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO PRE–RINSE. 1/2" CW TO DISPOSER.
P123A	2" DRAIN – IN WALL, 10" AFF, TO DISPOSER (BYPASS GREASE TRAP).
P161	(2)3/4" GAS CONNECTION – 18"/36" AFF, TO CONVECTION OVEN, 60 CFH (EACH).
P163A	3/4" GAS CONNECTION – 18" AFF, TO TILT BRAISING PAN, 104 CFH.
P163B	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO TILT BRAISING PAN.
P165	1" GAS CONNECTION – 18" AFF, TO RANGE, 70 CFH.
P172	(2) 3/4" CW – IN WALL, 24" AFF & 48" AFF, TO COMBI OVEN. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND OVEN. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO EQUIPMENT FROM CHECK VALVE, THROUGH FILTER BANK (REF P172D & E), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172A	SIMILAR TO PLUMBING CONNECTION P172, BUT ONLY ONE 3/4" CW – IN WALL, 48" AFF. SEE DESCRIPTION ABOVE.
P172B	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P172C	(2) 3/4" GAS CONNECTION – 18"/36" AFF, TO COMBI OVEN, 105 CFH (EACH).
P172D	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO INLET OF FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172E	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. EXTEND OUTLET OF FILTER BANK BACK INTO THE WALL. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PIPING WITHIN THE WALL SHALL EXTEND TO AND SERVE TWO (2) CONNECTIONS TAGGED P172.
P249	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET. INSTALL LEONARD 370–LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P249A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250A	3/4" HW – IN WALL, 18" AFF, TO BOOSTER HEATER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER AND CONNECT THROUGH FILTER (BY OTHERS) WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PROVIDE WATTS 9MD2 OR EQUAL – 140°F MINIMUM (INTERCONNECT WITH DISH MACHINE).
P250B	3/4" CW – IN WALL, 18" AFF, TO DISH MACHINE. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND DISH MACHINE. PROVIDE WATTS 9MD2 OR EQUAL (INTERCONNECT WITH DISH MACHINE).
P614	1/2" CW AND 1/2" HW – IN WALL, 42" AFF, TO FILL FAUCET.
P800	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.

KITCHEN PLUMBING CONNECTION NOTES

1. KITCHEN CONNECTION SCHEDULE IS APPLICABLE TO ALL SCHOOLS IN THIS DRAWING SET.
2. REFERENCE KITCHEN CONSULTANT'S DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL EQUIPMENT AND INSTALLATION REQUIREMENTS.
3. ALL WATER PIPING INSTALLED EXPOSED BENEATH KITCHEN EQUIPMENT, INCLUDING PIPING INSTALLED BY DIVISION 11 (I.E. UNDER SINK COUNTERTOPS, SERVING TABLES, ETC.) SHALL BE INSULATED BY THE PLUMBING CONTRACTOR PER THE SPECIFICATIONS (INCLUDE ALUMINUM JACKETING FOR ALL PIPE INSULATION, PER SPECIFICATIONS).
4. INDIRECT WASTE PIPING FROM KITCHEN EQUIPMENT IS NOT SHOWN; HOWEVER, PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THIS PIPING PER THE REQUIREMENTS OF THE KITCHEN CONSULTANT'S CONTRACT DOCUMENTS, PER THE REQUIREMENTS OF THE VARIOUS EQUIPMENT MANUFACTURERS PROVIDED AND PER THE IPC–2021, SECTION 802. ALL INDIRECT WASTE PIPING SHALL BE TYPE L COPPER. INSTALL 45°F ELBOW AT END OF EACH INDIRECT WASTE PIPE TO DIRECT FLOW OF WATER INTO FLOOR SINK.
   - 4.1. IPC 2015 – SECTION 802.1.1 FOOD HANDLING – EQUIPMENT AND FIXTURES UTILIZED FOR THE STORAGE, PREPARATION AND HANDLING OF FOOD SHALL DISCHARGE THROUGH AN INDIRECT WASTE PIPE BY MEANS OF AN AIR GAP. EACH WELL OF A MULTIPLE–COMPARTMENT SINK SHALL DISCHARGE INDEPENDENTLY TO A WASTE RECEPTOR. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P121, P122 AND P126.
   - 4.2. IPC 2015 – SECTION 8802.1.8 FOOD UTENSILS, DISHES, POTS AND PANS SINKS – SINKS, USED FOR THE WASHING, RINSING, OR SANITIZING OF UTENSILS, DISHES, POTS, PANS OR SERVICE WARE USED IN THE PREPARATION, SERVING OR EATING OF FOOD SHALL DISCHARGE INDIRECTLY THROUGH AN AIR GAP OR AN AIR BREAK TO THE DRAINAGE SYSTEM. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P249.

PLUMBING FIXTURES AND EQUIPMENT

MARK	MIN. CONNECTION SIZES (IN.)				DESCRIPTION/SPECIFICATION
	SAN	VENT	CW	HW	
WC	4	2	1	–	WATER CLOSET – WALL MOUNTED, WHITE VITREOUS CHINA, SIPHON JET ACTION, 1.28 GPF, ELONGATED BOWL, TOP SPUD, ADA/TAS COMPLIANT, AMERICAN STANDARD AFWALL; SLOAN ROYAL 111–1.28 FLUSH VALVE WITH VANDAL–PROOF FREE–SPINNING TOP CAP, 1.28 GPF, VANDAL–PROOF STOP AND ADA/TAS COMPLIANT LEVER ACTUATOR WITH LEVER INSTALLED ON LEFT SIDE (FOR FIXTURES DESIGNATED AS "HANDICAP", INSTALL LEVER ON "WIDE–SIDE" OF TOILET STALL); BEMIS 1655–SS/C EXTRA HEAVY DUTY, WHITE, OPEN FRONT SEAT LESS COVER WITH SELF–SUSTAINING, STAINLESS STEEL CHECK HINGE; AND, FLOOR MOUNTED CARRIER.
LV	1–1/4	1–1/4	1/2	1/2	LAVATORY GOOSENECK FAUCET – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF–DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; DECK MOUNTED FAUCET, 4" CENTERS, FIXED, CHROME PLATED, 5.25" GOOSENECK SPOUT, PRESSURE COMPENSATING LAMINAR FLOW NON–AERATING 0.5 GPM OUTLET, 4" WRISTBLADE HANDLES, REBUILDABLE COMPRESSION CARTRIDGES, CHICAGO 895–317GN2AE72ABCP; CHROME PLATED, 17–GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17–GAUGE CAST BRASS P–TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV–GUARD VANDAL–PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170–LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
LV2	1–1/4	1–1/4	1/2	1/2	LAVATORY – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF–DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; CHROME PLATED, ALL CAST BRASS CONSTRUCTION, ADA/TAS COMPLIANT, VANDAL–PROOF FAUCET WITH 4" WRIST BLADE HANDLES, COMPRESSION STYLE CARTRIDGES, CHROME DECK PLATE, VANDAL–PROOF AERATOR, COPPER SUPPLIES AND CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9 CHICAGO MARATHON MODEL 802–E70–317ABCP; CHROME PLATED, 17–GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17–GAUGE CAST BRASS P–TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV–GUARD VANDAL–PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170–LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
EDF	1–1/2	1–1/2	1/2	–	BI–LEVEL ELECTRIC DRINKING FOUNTAINS WITH BOTTLE FILLER – WALL MOUNTED, ALL STAINLESS STEEL, ADA AND TAS COMPLIANT FOR ALL AGES, 8 GPH AT ARI STANDARDS, 2–STREAM ALL METAL BUBBLER FITTING WITH VANDAL–RESISTANT KIT AND FRONT PUSH BUTTON ACTUATION, PUSH BUTTON ACTIVATED BOTTLE FILLER WITH 1.1GPM FILL RATE AND ANIT–MICROBIAL COATING, INTEGRAL WATER FILTER, LEAD–FREE (CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9), REFRIGERANT HFC–134a, MAINTENANCE ACCESS PANEL, HALSEY–TAYLOR MODEL HTHBHVR8BL; CHROME PLATED, 17–GAUGE CAST BRASS P–TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; FLOOR MOUNTED CHAIR CARRIER; AND, STAINLESS STEEL ADA APRON FOR LOCATIONS REQUIRED BY ADA OR TAS.
MB	3	2	3/4	3/4	MOP BASIN – 24" X 24" X 12" DEEP TERRAZZO, TWO (2) STAINLESS STEEL SPLASH CATCHER PANELS, 6" DROP FRONT WITH STAINLESS STEEL CAP, CAST BRASS DRAIN WITH STAINLESS STEEL STRAINER STERN WILLIAMS HILOW MODEL HL–1800–BP; FAUCET SHALL BE POLISHED CHROME PLATED SERVICE SINK TYPE WITH VACUUM BREAKER, INTEGRAL SUPPLY CHECK STOPS, SPOUT WITH PAIL HOOK, HOSE END AND TOP BRACE CHICAGO MODEL 897–CCF (INSTALL BACKING/BRACING INSIDE WALL TO SUPPORT FAUCET AND TOP BRACE).
LP–1	3	2	3/4	3/4	LAVATORY PUMP – FACTORY BUILT, LIFT PUMP FOR GRAY WATER WASTE, TOP ACCESS TO INTERNAL 1/6HP PUMP AND FLOAT SWITCH, 1.5" TOP AND SIDE INLETS, 1.5" TOP OUTLET, INTEGRAL CHECK VALVE AT BOTTOM INLET CONNECTIONS, 9FT POWER CORD WITH GROUNDED PLUG; LIBERTY PUMPS MODEL 406

PRELIMINARY
NOT FOR CONSTRUCTION OR BIDDING PURPOSES

STANTON ENGINEERING GROUP

INFO@STANTON–ENG.COM (713) 300–9292 | TEXAS ENG. FIRM REG NO. F–016332 | 1300 W. SAM HOUSTON PARKWAY S., SUITE 121, HOUSTON, TX 77042

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ISSUE:

Date	Issue
12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

S

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD.
SUGAR LAND, TX 77479

SEAL

STATE OF TEXAS — INTERIM REVIEW — 106052 — LICENSED PROFESSIONAL ENGINEER — 09.04.2025

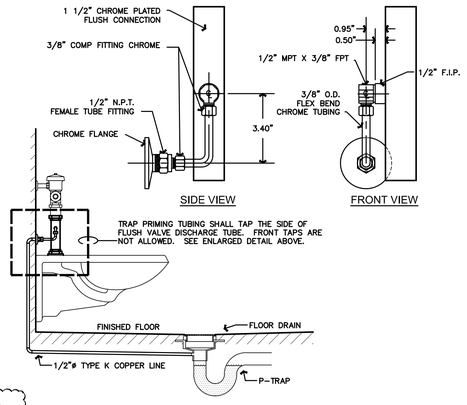
MWA ARCHITECTS

ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

PLUMBING NOTES & SCHEDULES

s-P0.01

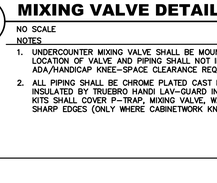


12 FLUSH VALVE TRAP PRIMING TUBE DETAIL

NO SCALE

MI-FAB MODEL MI-702-MOD FLUSH VALVE TRAP PRIMER, OR EQUAL

TANKLESS WATER HEATER SCHED.		
MARK	IEWH-1	
SERVES	LAVATORY	
LOCATION	BELOW COUNTER	
HEATER KW	1.8 KW	
TEMP RISE (@ 0.5 GPM)	25°F	
VOLTAGE/PHASE	120V/1PH	
EEMAX MODEL	SPEX1812T	

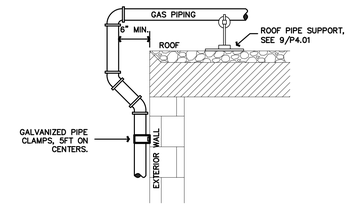


11 TANKLESS WATER HEATER

NO SCALE

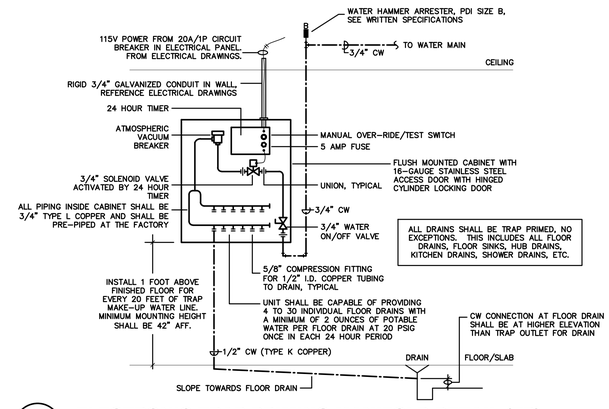
NOTES:

1. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FURNISH & INSTALL 0.5-GPM AERATOR ON FAUCET COMPATIBLE WITH TANKLESS EWH REQUIREMENTS.
5. WATER HEATER SHALL HAVE INTEGRAL ASSE-1070 COMPLIANT TEMPERED MIXING VALVE.



13 GAS PIPING WALL-TO-ROOF TRANSITION DETAIL

NO SCALE

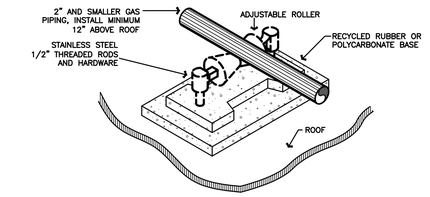


10 ELECTRONIC TRAP PRIMING MANIFOLD DETAIL (TP)

NO SCALE

NOTES:

1. REFERENCE SCHEDULE ON SHEET P3.00

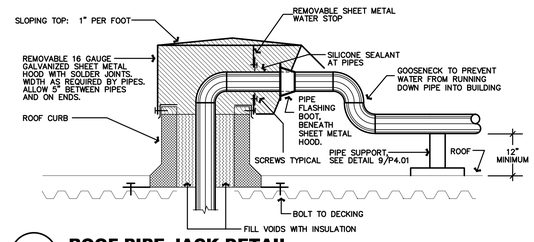


14 GAS PIPING ROOF SUPPORT DETAIL

NO SCALE

NOTES:

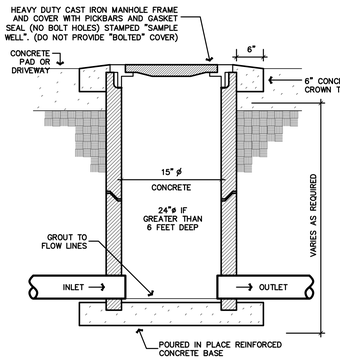
1. GAS PIPING SUPPORT SHALL BE PORTABLE PIPE HANGERS, INC. MODEL PP10-R. PIPING SHALL BE INSTALLED 12" ABOVE FINISHED ROOF. PROVIDE 18" X 18" CAREY TREAD-TYPE MATERIAL BENEATH EACH PIPE SUPPORT.
2. FIELD LOCATE ROOF STRUCTURAL SUPPORTS AND PLACE BASE OF PIPE SUPPORT OVER ROOF SUPPORTS ONLY. PROVIDE BASE OF ADEQUATE LENGTH TO SPAN ROOF JOIST TO PREVENT SUPPORTS SETTING ON ROOF DECK ONLY.
3. INSTALL SIX (6) FOOT-ON-CENTERS.
4. PIPE SUPPORT MANUFACTURER'S REPRESENTATIVE SHALL PERSONALLY INSPECT INSTALLATIONS OF PIPE SUPPORTS AND MAKE CORRECTIONS AND HEIGHT ADJUSTMENTS TO INSTALLATIONS, AS REQUIRED, DURING INSPECTION.



9 ROOF PIPE JACK DETAIL

NO SCALE

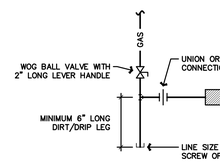
NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.



8 SAMPLE TEST WELL DETAIL (STW)

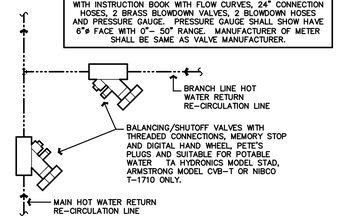
NO SCALE

NOTES:



7 TYPICAL GAS CONNECTION

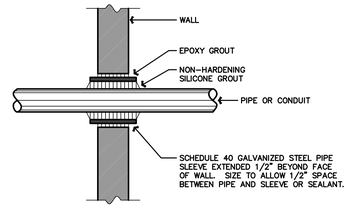
NO SCALE



6 HOT WATER BALANCING STATION

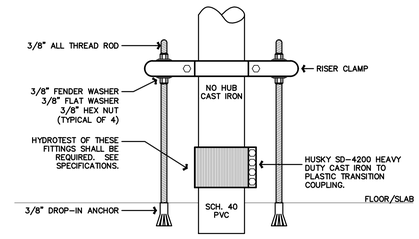
NO SCALE

PROVIDE AT EACH JUNCTION OF BRANCH HOT WATER RETURN LOOPS TO MAIN CIRCULATING HOT WATER LINE, SEE PLUMBING PLANS.



5 WALL PENETRATION DETAIL

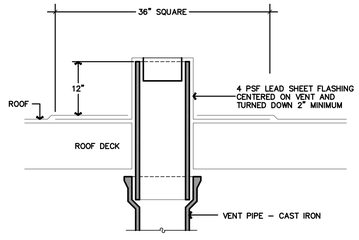
NO SCALE



4 PVC-TO-CAST IRON INSTALLATION DETAIL

NO SCALE

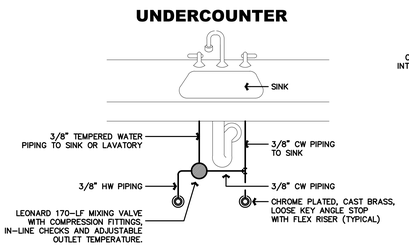
MISSION TRANSITION COUPLING DESIGNED AND CERTIFIED FOR THIS SPECIFIC APPLICATION SHALL BE ACCEPTABLE IN LIEU OF HUSKY COUPLING IN THIS DETAIL.



3 ROOF VENT DETAIL

NO SCALE

COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

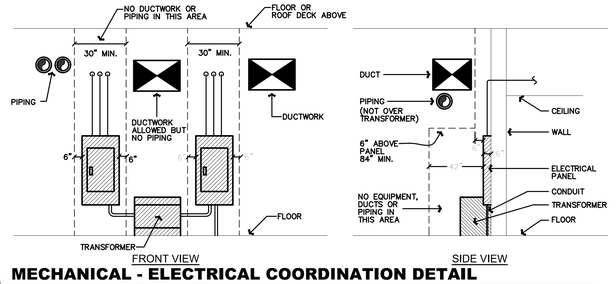


2 MIXING VALVE DETAIL

NO SCALE

NOTES

1. UNDERCOUNTER MIXING VALVE SHALL BE MOUNTED ON WALL IN FIXTURE KNEE-SPACE. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FOR ABOVE CEILING INSTALLATION, VALVE SHALL BE INSTALLED IN AN EASILY/READILY ACCESSIBLE LOCATION. SEE KITCHEN PLUMBING CONNECTION SCHEDULE FOR REQUIRED KITCHEN LOCATIONS.
5. LAVATORY MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 130°F.
   SINK MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 140°F.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

DO NOT INSTALL ANY PIPING BENEATH CVT BOXES. DO NOT INSTALL ANY PIPING (EXCEPT FIRE SPRINKLER PIPING AND OTHER PIPES SHOWN SPECIFICALLY ON THE PLUMBING FLOOR PLANS) OVER COMPUTER CLASSROOMS, BOOKROOMS, IDF/MDF/SERVER ROOMS OR OTHER ROOMS NOTED ON THE PLUMBING FLOOR PLANS.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

S

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD.
SUGAR LAND, TX 77479

SEAL

STATE OF TEXAS — INTERIM REVIEW — NOT FOR CONSTRUCTION — 09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

PLUMBING SCHEDULES & DETAILS

s-P0.02

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STANTON ENGINEERING GROUP
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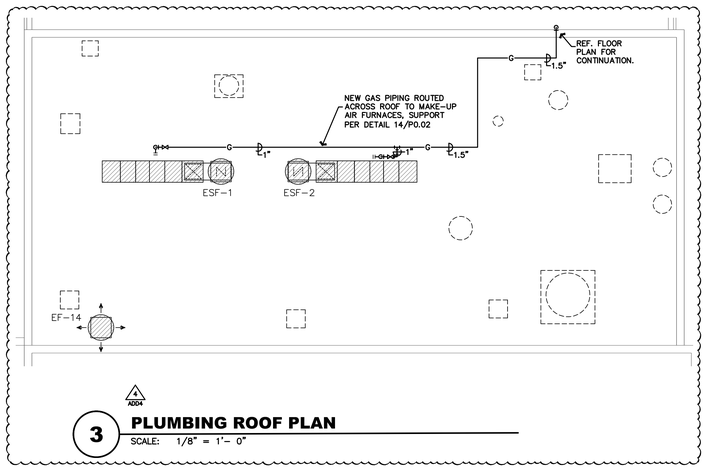
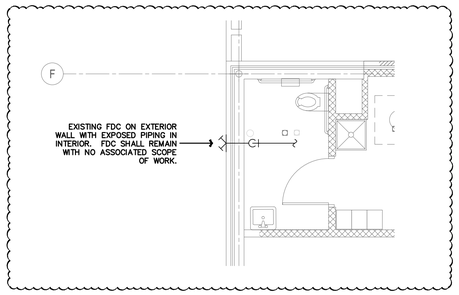


ADD4

3 PLUMBING ROOF PLAN

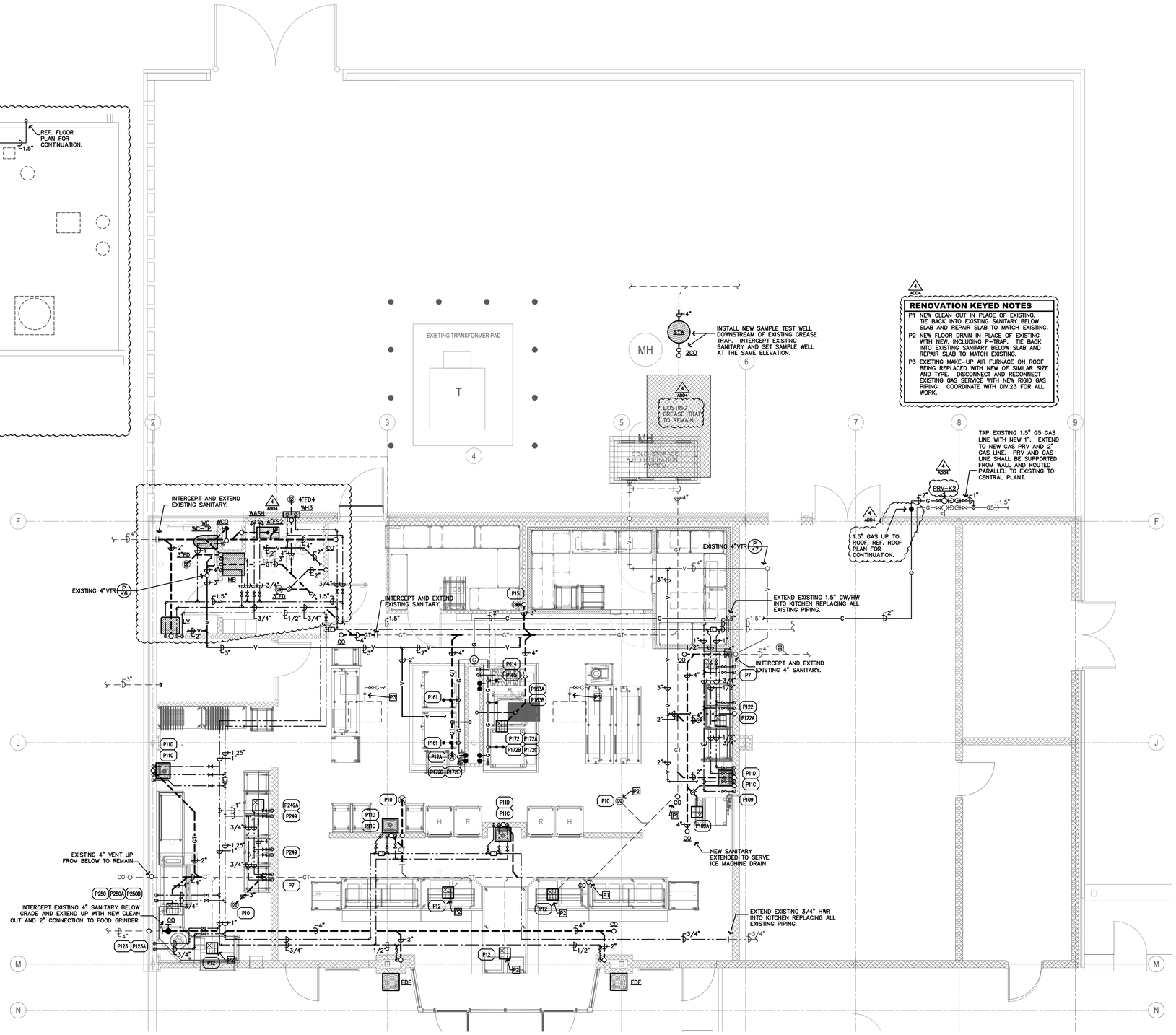
SCALE: 1/8" = 1'- 0"



ADD4

2 FIRE SPRINKLER - FDC - ETR

SCALE: 1/4" = 1'- 0"



ADD4

RENOVATION KEYED NOTES

P1 NEW CLEAN OUT IN PLACE OF EXISTING. TIE BACK INTO EXISTING SANITARY BELOW SLAB AND REPAIR SLAB TO MATCH EXISTING.

P2 NEW FLOOR DRAIN IN PLACE OF EXISTING WITH NEW, INCLUDING P-TRAP. TIE BACK INTO EXISTING SANITARY BELOW SLAB AND REPAIR SLAB TO MATCH EXISTING.

P3 EXISTING MAKE-UP AIR FURNACE ON ROOF BEING REPLACED WITH NEW OF SIMILAR SIZE AND TYPE. DISCONNECT AND RECONNECT EXISTING GAS SERVICE WITH NEW RIGID GAS PIPING. COORDINATE WITH DIV.23 FOR ALL WORK.

1 PLUMBING RENOVATION FLOOR PLAN

SCALE: 1/4" = 1'- 0"

ISSUE:

12/05/2024	DD PACKAGE
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05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

ADD4

S

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD.
SUGAR LAND, TX 77479

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED
PROFESSIONAL
ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

PLUMBING FLOOR PLAN

s-P1.01

STANTON ENGINEERING GROUP
INFORMATION@STANTONENG.COM (713) 300-8256
TEXAS ENG. FIRM REG. NO. F-21833 | 1200 W. SAM HOUSTON PARKWAY S., SUITE 121, HOUSTON, TX 77042

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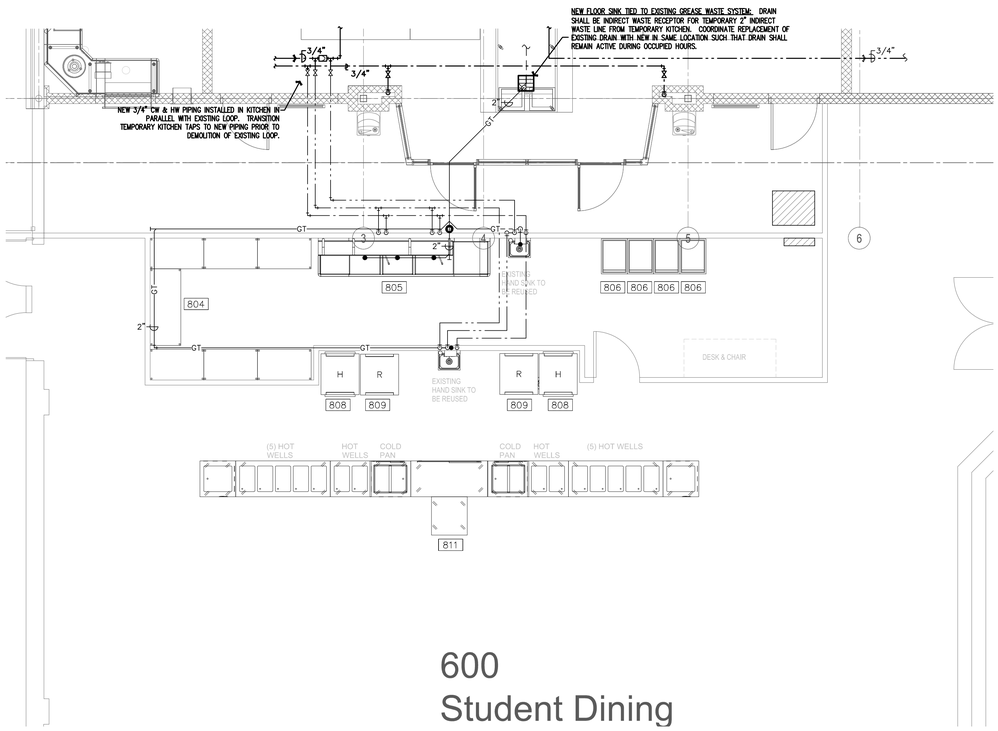


600
Student Dining

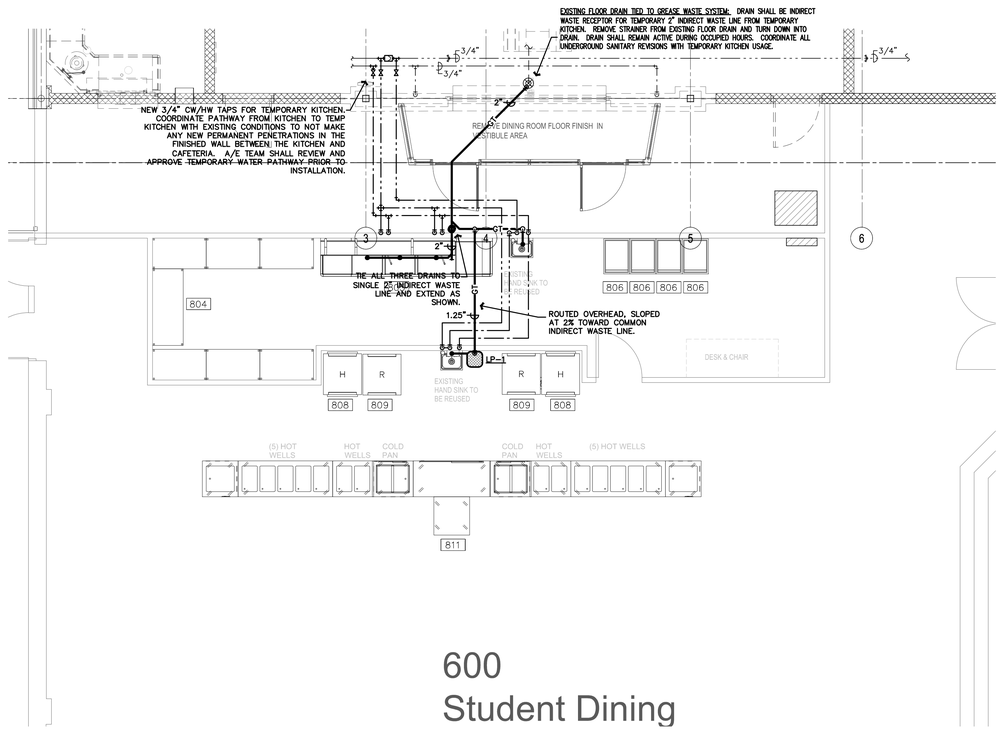
2 PLUMBING TEMPORARY KITCHEN PLAN - POST DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. AFTER DEMOLITION OF EXISTING KITCHEN AND DURING CONSTRUCTION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL REMAIN ACTIVE.
2. ALL SANITARY, CW AND HW CONNECTIONS SHALL REMAIN ACTIVE DURING ALL TIMES WHEN TEMPORARY KITCHEN IS ACTIVE.
3. UPON COMPLETION OF NEW KITCHEN, EXISTING TEMPORARY KITCHEN SHALL BE DEMOLISHED AND ALL TEMPORARILY UTILITIES SHALL BE REMOVED AND TEMPORARY WATER TAPS CAPPED AT MAIN LINE TAP.
4. ALL DEMOLISHED LAVATORIES AND FAUCETS SHALL BE PERMITTED TO BE RELOCATED ACROSS TEMPORARY KITCHENS WITHIN THE PROJECT BASED ON AVAILABILITY/PROJECT PHASING SCHEDULE. AT THE END OF THE PROJECT, REMOVE FIXTURES AND OFFER TO OWNER AS SALVAGE. IF NOT ACCEPTED, ALL FIXTURES SHALL BE DISPOSED OF BY THE CONTRACTOR.

NORTH



600
Student Dining

1 PLUMBING TEMPORARY KITCHEN PLAN - PRE DEMO

SCALE: 1/4" = 1'-0"

NOTES:

1. BEFORE DEMOLITION OF THE EXISTING KITCHEN BEGINS, INSTALL ALL NEW PLUMBING FIXTURES AND UTILITIES FOR TEMPORARY KITCHEN.

NORTH

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4 ADD4

S

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FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
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SUGAR LAND, TX 77479

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED
ARCHITECT
09.04.2025

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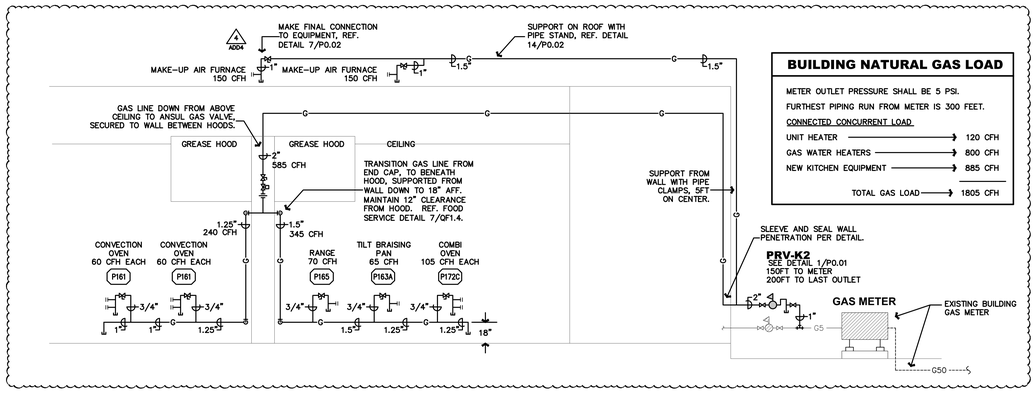
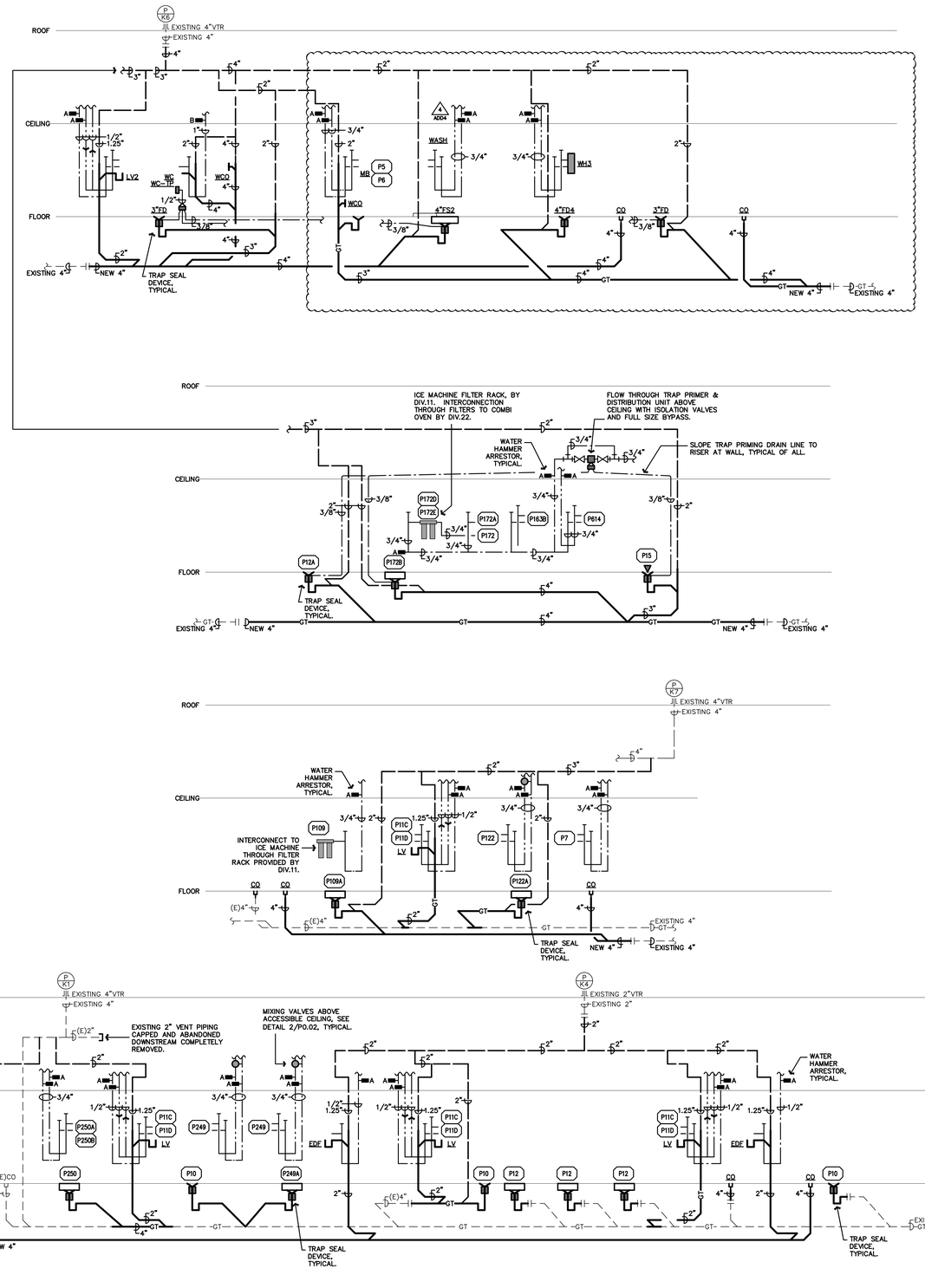
PLUMBING FLOOR PLAN - TEMP KITCHEN

s-P1.02



2 NATURAL GAS RISER DIAGRAM

NO SCALE



1 PLUMBING RISER DIAGRAMS

NO SCALE

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09/04/2025	ADDENDUM 04

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FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD.
SUGAR LAND, TX 77479

SEAL

MWA ARCHITECTS
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HOUSTON, TEXAS 77079

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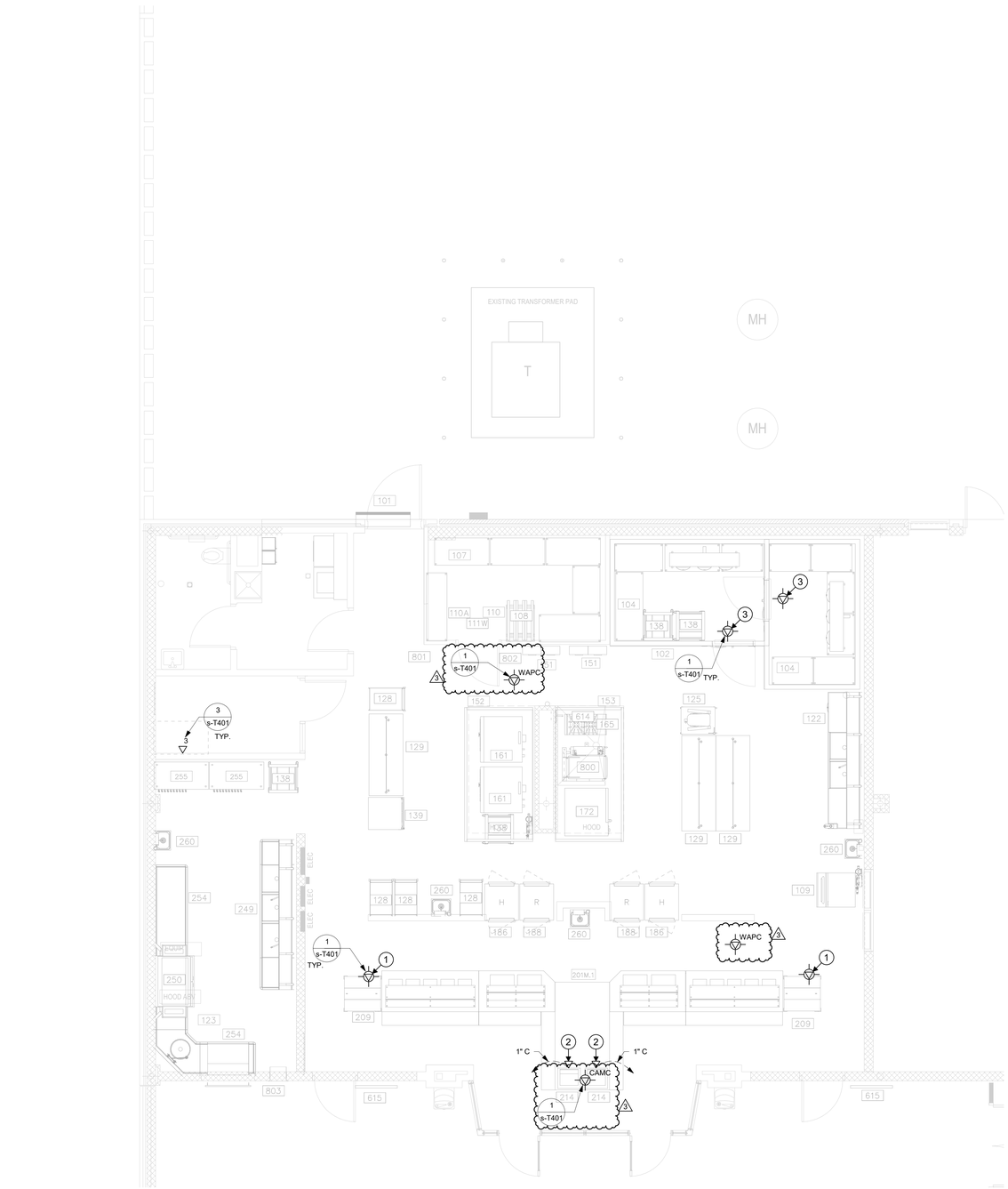
PLUMBING RISER DIAGRAMS

s-P2.00



1 s-T201 TECHNOLOGY NEW/RENOVATION KITCHEN PLAN
1/4" = 1'-0"

TECHNOLOGY FLOOR PLANS GENRAL NOTES:

1. THE TECHNOLOGY REGION / WIRING BOUNDARIES ARE IDENTIFIED ON THE OVERALL SHEETS ONLY AND NOT ON THE ENLARGED SHEETS. CONTRACTOR SHALL REFER TO THE OVERALL SHEETS FOR ALL TECHNOLOGY REGIONS / WIRING BOUNDARIES.
2. ALL CONDUIT PATHWAYS, ROUGH-INS, BACKBOXES, FLOOR BOXES, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
6. TECHNOLOGY CABLING SHALL BE ROUTED IN SEPARATE PATHWAYS IN J-HOOKS, CONDUITS, CONDUIT SLEEVES, CORES, ETC. THROUGHOUT THE ENTIRE PATHWAY. DIFFERENT MEDIA TYPES (DATA, VIDEO, SECURITY, ETC.) SHALL NOT SHARE THE SAME J-HOOK, CONDUIT, CONDUIT SLEEVE, CORE, ETC.
7. UNLESS NOTED OTHERWISE, ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE AN ACCESSIBLE CEILING (AN OPEN CEILING OR CLOUD TYPE CEILING IS NOT CONSIDERED AN ACCESSIBLE CEILING) IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF / IDF ROOM TO MINIMIZE THE CABLE LENGTH ENSURING CABLE LENGTH DOES NOT EXCEED 275 FEET.
8. UNLESS NOTED OTHERWISE ALL CONDUITS SHALL BE HOMERUN FROM THE DEVICE LOCATION AND NO DAISY CHAINING OF DEVICES/ ROUGH-INS SHALL BE ALLOWED.
9. CONDUIT SEGMENTS SHALL BE NO MORE THAN 100-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
10. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
13. EQUIPMENT NOT RELATED TO THE SUPPORT OF THE TELECOMMUNICATIONS ROOM (E.G., PIPING, DUCTWORK, PNEUMATIC TUBING) SHALL NOT BE INSTALLED IN, PASS THROUGH, OR ENTER THE TELECOMMUNICATIONS ROOM.
14. ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE A LAY-IN TYPE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE A LAY- IN TYPE CEILING TO PREVENT THE CABLES FROM BEING EXPOSED, THE CONDUIT SHALL ROUTE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. THE CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE MAIN CORRIDOR OR NEAREST MDF/IDF TO MINIMIZE THE CABLE LENGTH ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. CONDUIT, CONNECTIONS, J-BOXES, SUSPENSION, ANCHORAGES, AND OTHER CONDUIT COMPONENTS EXPOSED TO VIEW IN PUBLIC SPACES SHALL BE ROUTED AND INSTALLED CAREFULLY TO MINIMIZE VISUAL IMPACT AND SHALL BE FULLY PAINTED TO MATCH UNLESS NOTED OTHERWISE.
15. CONDUIT(S) INSTALLED IN-SLAB OR UNDER-SLAB TO FLOOR BOXES, POKE-THURS, AND TO WORKAREA OUTLETS, ETC. SHALL BE INSTALLED WITH WET RATED CABLE(S).
16. NO GRID WIRE SHALL BE UTILIZED FOR SUPPORTS ONLY USE SOLID SUPPORTS (CLIPS, ALL-THREAD, ANCHORS, ETC.).

TECHNOLOGY PLAN KEYED NOTES

NOT ALL KEYED BELOW APPLY TO THIS SHEET

1. DATA CABLE FOR CONTRACTOR FURNISHED / CONTRACTOR INSTALLED MENU BOARD. REFERENCE ARCHITECTURAL AND FOOD SERVICE DRAWINGS FOR MOUNTING HEIGHT AND ADDITIONAL INFORMATION. BUILDING POWER ADJACENT TO DATA RECEPTACLE IS REQUIRED.
2. INDOOR / OUTDOOR RATED DATA CABLE FOR POINT OF SALE LOCATION. PROVIDE (1) 1-INCH CONDUIT FOR DATA TO THE WALL BEHIND POINT OF SALE LOCATION AND UP WALL TO ABOVE ACCESSIBLE CEILING. CONDUITS SHALL TERMINATE INSIDE A DOUBLE GANG BOX THAT IS SECURED TO THE POINT OF SALE LOCATION. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS.
3. DATA CABLE FOR TEMPERATURE MONITORING OF FREEZER COOLER. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS AND TERMINATION POINT AND CONNECTIVITY NEEDS IN FREEZER / COOLER CONTROL UNIT.
4. DATA CABLE FOR TEMPORARY POINT OF SALES CASH REGISTER. COORDINATE WITH OWNER, ARCHITECT, AND CONSULTANT FOR ROUTING OF CABLES TO POINT OF SALE CASH REGISTER PRIOR TO INSTALLATION

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09/04/2025 3	ADDENDUM NO. 4

S

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD
SUGAR LAND, TX 774

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
BICSI
Jason Gonzalez Jr.
BICSI ID # 364370
EXPIRES 12-31-25
RCDD

07/18/2025

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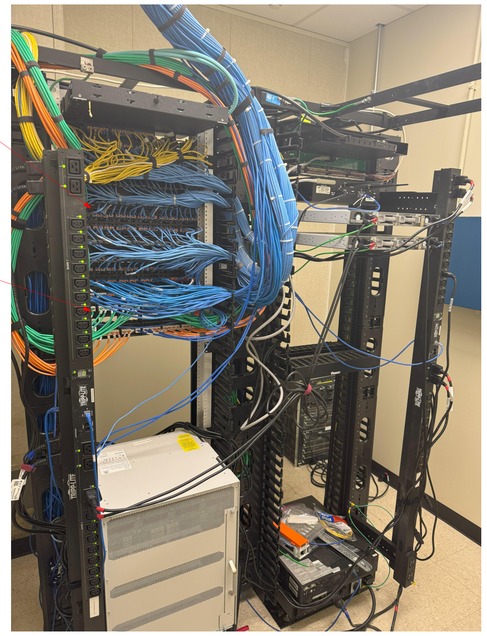
TECHNOLOGY NEW/RENOVATION KITCHEN PLAN

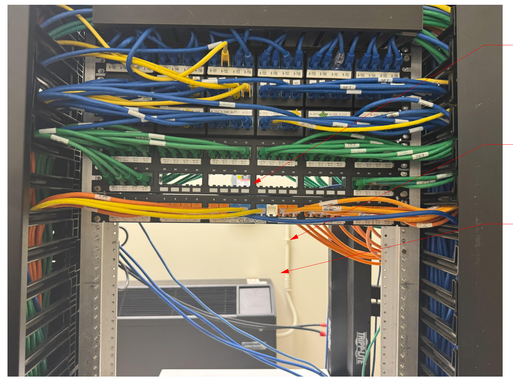
SHEET NO.
s-T201

REMOVE EXISTING CABLING THAT IS CURRENTLY TERMINATED IN KITCHEN DEMOLITION AREA FROM RACK. UTILZE PORT MADE AVAIBLE FROM DEMOLITION FOR NEW CABLING TO BE INSTALLED TO RENOVATION CABLING OUTLETS

RACK 1 PATCH PANEL RE: 2/s-T300



1 s-T300 REAR OF EXISTING IDF RACK SYSTEM
N.T.S.



UTILIZE THIS PANEL FOR NEW WIRELESS ACCESS POINT CABLING (GREEN CABLE) 3

PROVIDE NEW PATCH PANEL FOR CAMERAS

PROVIDE NEW PANEL FOR NEW DATA WORKAREA CABLING (BLUE CABLE) 3

2 s-T300 RACK 1 PATCH PANEL CLOSEUP
N.T.S.

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3015 SETTLERS WAY BLVD
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PROJ. NO.: 23-25
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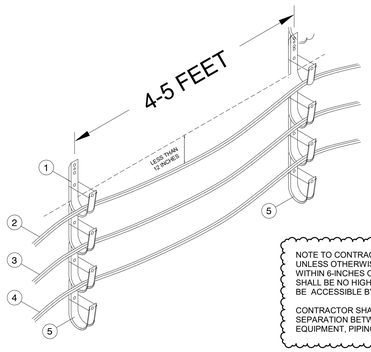
TECHNOLOGY ENLARGED VIEWS

SHEET NO.
s-T300

NOTE TO CONTRACTOR:

UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BE INSTALLED WITHIN 6-INCHES OF THE CEILING AND ACCESSIBLE BY A TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPRATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPIING OR OTHER SYSTEMS IN THE CEILING PLENUM.



KEYED NOTES:

1. J-HOOK WITH RETAINER CLIP ABOVE ACCESSIBLE CEILING (BY DIV 27).
2. DATA CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
3. A/V CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
4. SECURITY CABLE ABOVE ACCESSIBLE CEILING (BY DIV 28).
5. SPARE J-HOOK (BY DIV 27).

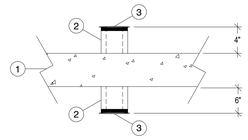
3

NOTE TO CONTRACTOR:
UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BEINSTALLED WITHIN 6-INCHES OF THE CEILING AND LAST VERTICALLY SITUATED J-HOOK SHALL BE NO HIGHER THAN 18" OF CEILING. CABLES AND SUPPORTS SHLL BE ACCESSIBLE BYA TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPARATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPING OR OTHER SYSTEMS IN THE CEILING PLENUM

1 / T400 TYPICAL J-HOOK CABLE PATHWAY

SCALE: N.T.S.

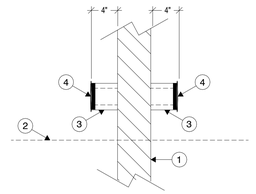


KEYED NOTES:

1. SCHEDULED FLOOR OR DECK.
2. CONDUIT SLEEVE (BY DIV 26).
3. NYLON BUSHING (BY DIV 26).

2 / T400 TYPICAL CONDUIT SLEEVE THROUGH FLOOR OR DECK DETAIL

SCALE: N.T.S.

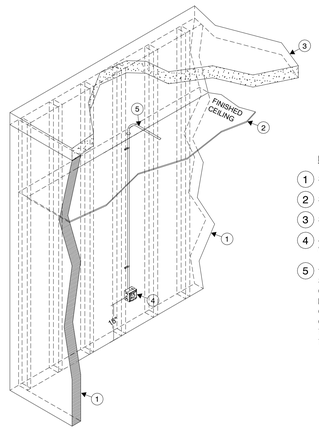


KEYED NOTES:

1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. CONDUIT SLEEVE (BY DIV 26).
4. NYLON BUSHING (BY DIV 26).

3 / T400 TYPICAL CONDUIT SLEEVE GOING THROUGH WALL

SCALE: N.T.S.



KEYED NOTES:

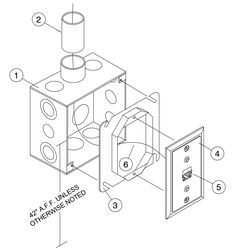
1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. SCHEDULED DECK ABOVE.
4. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX WITH DOUBLE GANG PLASTER RING (BY DIV 26).
5. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH. (BY DIV 26).

4 / T400 TYPICAL TECHNOLOGY CONDUIT ROUGH-IN

SCALE: N.T.S.

DETAIL DELETED
SPACE LEFT
INTENTIONALLY
BLANK

3

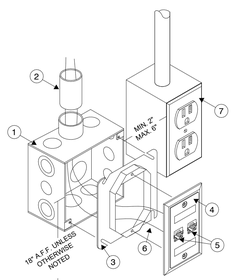


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH PHONE STUDS (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).

6 / T400 TYPICAL WALL PHONE OUTLET CONFIGURATION

SCALE: N.T.S.

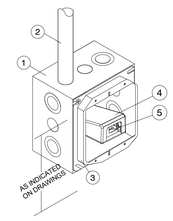


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).
7. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

7 / T400 TYPICAL DUAL DATA OUTLET CONFIGURATION

SCALE: N.T.S.

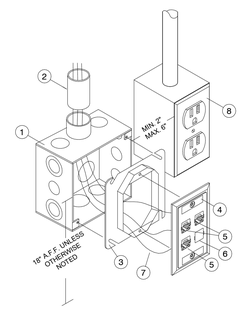


KEYED NOTES:

1. 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. DOUBLE GANG PLASTER RING (BY DIV 26).
4. SURFACE MOUNT BOX INSIDE THE 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH DOUBLE GANG BOX (BY DIV 27).
5. RJ-45 INSERT (BY DIV 27).

8 / T400 TYPICAL WALL-MOUNTED WIRELESS ACCESS POINT

SCALE: N.T.S.



KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. BLANK INSERT (BY DIV 27).
7. CABLE AS SPECIFIED (BY DIV 27).
8. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

9 / T400 TYPICAL THREE DATA OUTLET CONFIGURATION

SCALE: N.T.S.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025 (3)	ADDENDUM NO. 4

S

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD
SUGAR LAND, TX 774

SEAL

CERTIFIED TECHNOLOGY SPECIALIST
DESIGNATED COMMUNICATIONS DISTRIBUTION DESIGNER
BICSI
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 12-31-25
RCDD

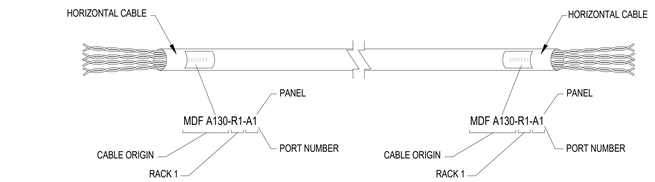
07/18/2025

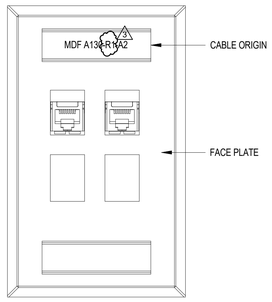
MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

TECHNOLOGY TYPICAL DETAILS

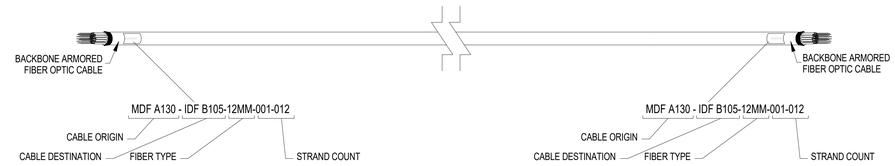
SHEET NO.
s-T400

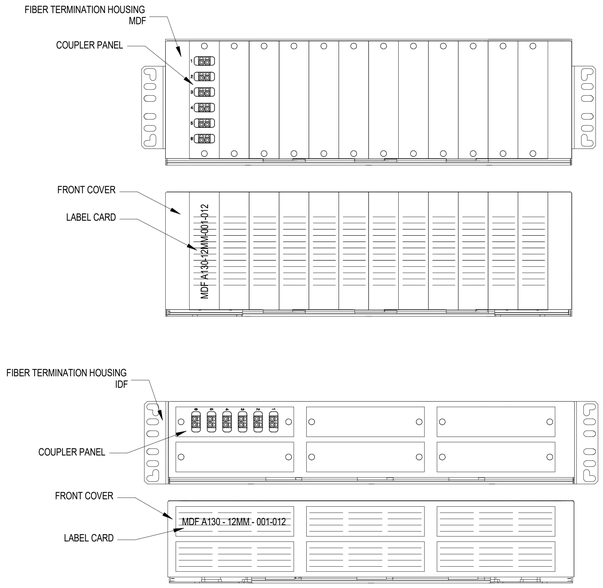




1 T500 TYPICAL HORIZONTAL DATA CABLE LABELING SCHEME

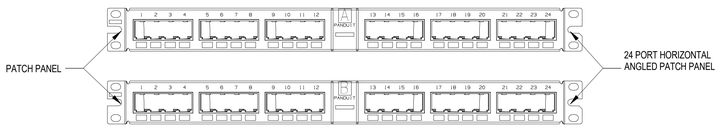
SCALE: N.T.S.





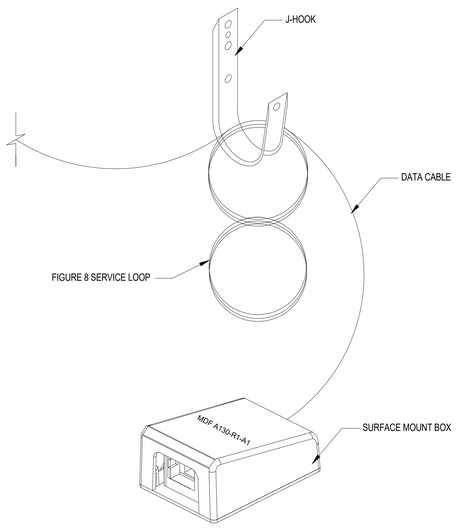
2 T500 TYPICAL FIBER BACKBONE LABELING SCHEME

SCALE: N.T.S.



3 T500 TYPICAL COPPER BACKBONE LABELING SCHEME

SCALE: N.T.S.



4 T500 ABOVE ASSESSIBLE CEILING LABELING SCHEME

SCALE: N.T.S.

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S

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SETTLERS WAY ELEMENTARY SCHOOL
3015 SETTLERS WAY BLVD
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SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 12-31-25
RCDD

07/18/2025

MWA ARCHITECTS
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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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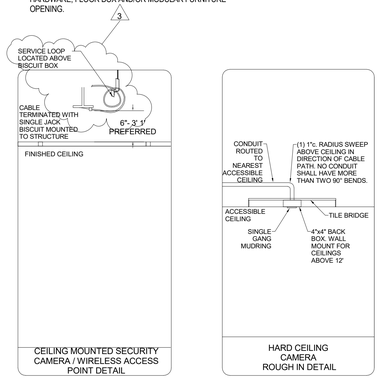
TECHNOLOGY TYPICAL DETAILS

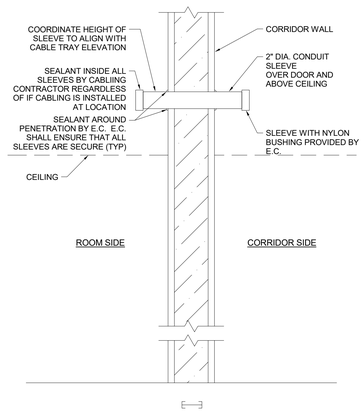
SHEET NO.
s-T500

GENERAL NOTE

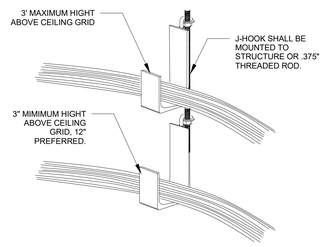
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



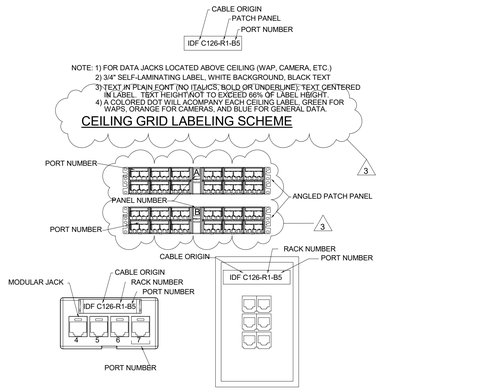
1 DATA ROUGH-IN DETAILS
SCALE: NS



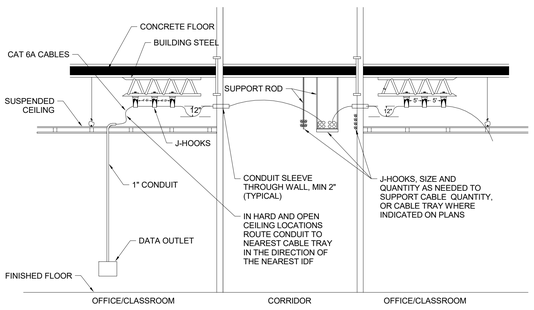
2 TYPICAL CABLING SLEEVE
SCALE: NTS



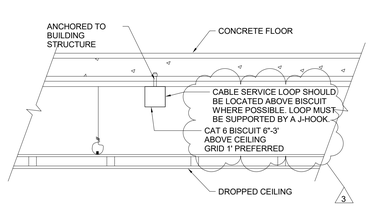
3 PANDUIT J-HOOK DETAIL
SCALE: NTS



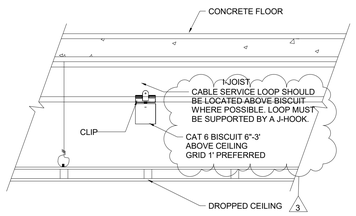
4 LABELING & CABLING SCHEMES
SCALE: NTS



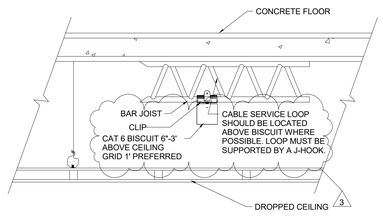
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH
A PWY COMPANY

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09/04/2025	3 ADDENDUM NO. 4

S

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Settlers Way Elementary School
3015 Settlers Way Blvd, Sugar Land, TX 77479

SEAL

07-18-25

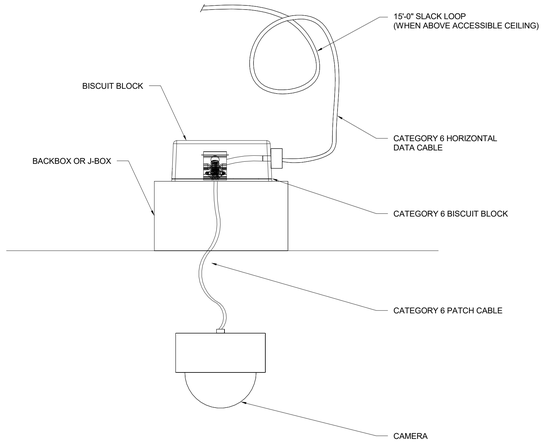
MVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Settlers Way ES - DETAILS

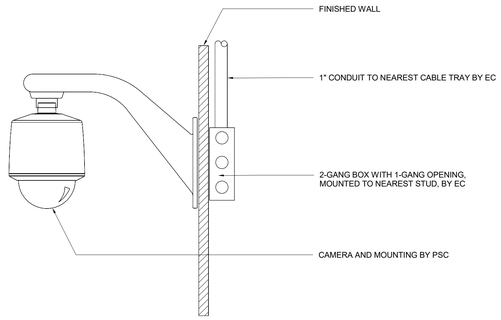
s-TN.500

GENERAL NOTES:

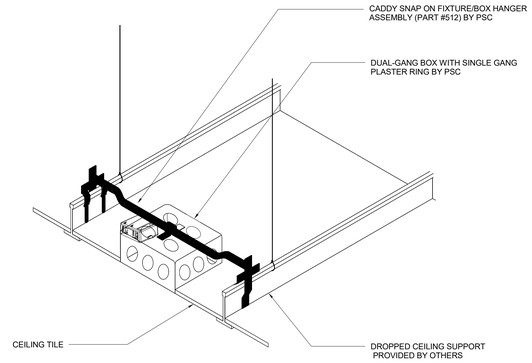
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



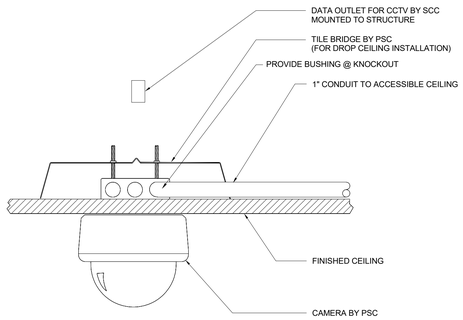
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

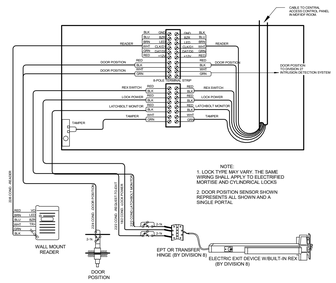


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

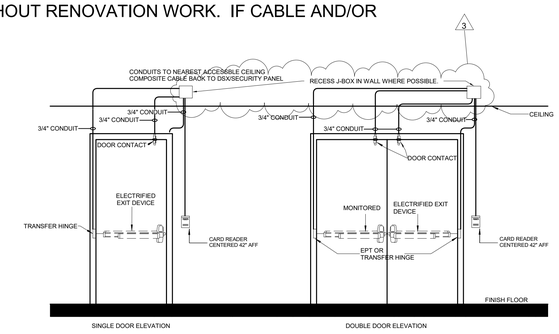
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

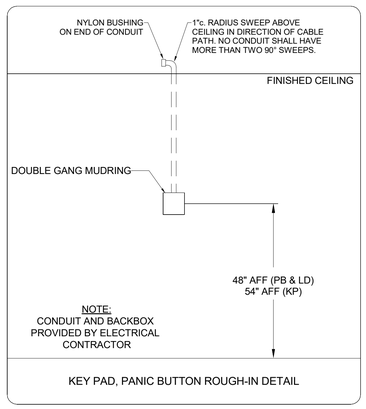
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

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09/04/2025 ③	ADDENDUM NO. 4

S

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Settlers Way Elementary School
3015 Settlers Way Blvd. Sugar Land, TX 77479

SEAL

BICSI REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Brian O Porter
BICSI ID # 351957
EXPIRES 12-31-27

07-18-25

MVA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
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AND
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TECHNOLOGY - Settlers Way
ES - SECURITY DETAILS

s-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

SIENNA CROSSING ELEMENTARY SCHOOL
10011 STEEP BANK TRCE, MISSOURI CITY, TX 77459

Sheet List Table	
Sheet Number	Sheet Title
School: t-Sienna Crossing ES	
t-A.000	COVER AND INDEX
t-A00-01	GENERAL NOTES AND ABBREVIATIONS
t-A.201	FLOOR PLAN
t-A.301	KITCHEN PLAN
t-A.401	REFLECTED CEILING PLAN
t-A.501	FINISH FLOOR PLAN
t-E.200	ELECTRICAL PLAN AND SCHEDULES
t-TN-000	TECHNOLOGY - INDEX SHEET
t-TN-100	TECHNOLOGY - OVERALL
t-TN-101	TECHNOLOGY - KITCHEN
t-TN-500	TECHNOLOGY - DETAILS
t-TN-600	TECHNOLOGY - SECURITY DETAILS

REGISTERED ARCHITECT
MICHAEL A. WAGNER
22651
STATE OF TEXAS
04 SEPT. 2025

ADDENDUM NO. 4 - SEP 04, 2025

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

BOARD OF TRUSTEES

KRISTIN K. TASSIN	PRESIDENT
ANGIE HANAN	VICE PRESIDENT
DR. SHIRLEY ROSE-GILLIAM	SECRETARY
AFSHI CHARANIA	BOARD MEMBER
ADAM SCHOOF	BOARD MEMBER
ANGIE WIERZBICKI	BOARD MEMBER

PROJECT DESIGN TEAM

PROGRAM MANAGEMENT
FBISD 2023 Bond Team
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Missouri City, TX 77489
Phone Number: 281-327-5481

ARCHITECT
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Houston, Texas 77079
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FOOD SERVICE
Food Design Professionals
26215 Oak Ridge Drive
The Woodlands, Texas 77380
Phone Number: 281-350-2323

MEP ENGINEERS
Stanton Engineering Group
1300 W. Sam Houston Pkwy South, Suite 121
Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

SYMBOL LEGEND

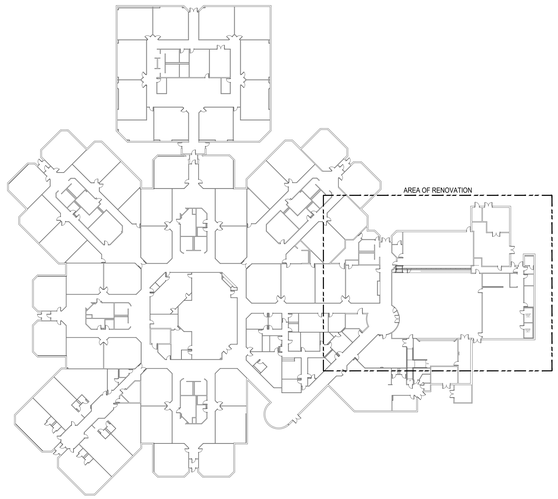
	SIMPLEX/DUPLEX/QUAD – 5361/2 REC
GFI	DUPLEX W/ GFCI PROTECTION–P&S 2097
J	J–BOX
	CEILING MOUNTED J–BOX
M	MOTOR
	HEAVY DUTY, NON–FUSED DISCONNECT. MIN RATING OF CIRCUIT OCPD/VOLTAGE.
	ELECTRICAL PANEL
	HOMERUN TO CIRCUIT NOTED
E	EXISTING DEVICES TO REMAIN
R	EXISTING DEVICES TO BE RELOCATED
D	EXISTING DEVICES TO BE DEMO/REMOVED
REP	EXISTING DEVICES TO BE REPLACED
S	INDICATES SURFACE MOUNTED
SR	INDICATES SURFACE RACEWAY
+	INDICATES ABOVE COUNTER DEVICE
–	INDICATES DEVICE AT +30–60"
++	INDICATES DEVICE AT +80–96"
CLG	INDICATES DEVICES MOUNTED IN CEILING
WP	INDICATES WEATHERPROOF COVER
3R	INDICATES 3R RATED DEVICE
(E)LA–X	CONNECT(ED) TO EXIST CIRCUIT LA–X
(D)LA–X	DEMO PORTION OF EXIST CIRCUIT LA–X
(N)LA–X	CONNECT(ED) TO NEW CIRCUIT LA–X

GENERAL ELECTRICAL NOTES:

1. INSTALL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION INCLUDING ALL AMENDMENTS.
2. PROVIDE CONDUIT FOR ALL DEVICES INSTALLED IN WALLS.
   - 2.A. 3/4"C FOR POWER AND 1"C FOR LOW VOLTAGE/DATA UNLESS NOTED OTHERWISE.
   - 2.B. PROVIDE PROTECTIVE BUSHING ON END OF ALL LOW VOLTAGE CONDUITS.
   - 2.C. ALL ELECTRICAL HOMERUNS SHALL BE IN CONDUIT, MIN 3/4"C.
   - 2.D. USE INSULATED THROAT FITTINGS FOR CONNECTIONS TO HOUSINGS, BOXES, ENCLOSURES, ETC.
   - 2.E. MAX LENGTH FOR FLEX CONDUIT SHALL BE 6FT AND MIN. SIZE SHALL BE 1/2". ALL FLEX CONDUIT SHALL BE LISTED FOR GROUNDING.
3. CONDUIT TYPES:
   - 3.A. INSIDE BUILDINGS: GALVANIZED STEEL EMT.
     - 3.A.A. ALL LOW VOLTAGE CABLING SHALL BE INSTALLED IN CONDUIT IN EXPOSED CEILING AREAS. ROUTE TO NEAREST ACCESSIBLE CEILING WITH CONTINUOUS PATHWAYS TO LOW VOLTAGE SOURCE/DEVICE.
     - 3.A.B. ALL LOW VOLTAGE CABLING SHALL BE INSTALLED IN CONDUIT ABOVE INACCESSIBLE CEILINGS. ROUTE TO NEAREST ACCESSIBLE CEILING WITH CONTINUOUS PATHWAYS TO LOW VOLTAGE SOURCE/DEVICE.
   - 3.B. NO MC CABLE SHALL BE ALLOWED.
   - 3.C. PROVIDE FLEXIBLE CONNECTIONS TO MOTORS, PUMPS, TRANSFORMERS, OR SIMILAR EQUIPMENT.
4. PROVIDE GALVANIZED STEEL, ONE–PIECE CONSTRUCTION, OUTLET BOXES IN ALL CASES SUITABLE FOR INTENDED USE.
   - 4.A. BOXES OUTSIDE SHALL BE STEEL NEMA 3 TYPE.
   - 4.B. PROVIDE CEILING BRACKET TO SUPPORT CEILING MOUNTED DEVICES FROM CEILING TEES.
5. 20 AMP, SINGLE PHASE BRANCH CIRCUITS SERVING LIGHTING AND GENERAL RECEPTACLES MAY BE GROUPED IN A SINGLE RACEWAY PROVIDED A NEUTRAL CONDUCTOR IS INSTALLED FOR EACH CIRCUIT REQUIRING A NEUTRAL.
   - 5.A. DO NOT INSTALL MORE THAN FOUR CURRENT CARRYING CONDUCTORS IN A CONDUIT EXCEPT SIX #12 OR #10 CURRENT CARRYING CONDUCTORS MAY BE INSTALLED IN 3/4" OR LARGER CONDUIT FOR 20A CIRCUITS.
   - 5.B. DO NOT INSTALL 480/277 VOLT CONDUCTORS IN THE SAME CONDUIT WITH 240/208/120 VOLT CONDUCTORS.
   - 5.C. DO NOT COMBINE NEUTRALS. PROVIDE DEDICATED NEUTRALS FOR EACH BRANCH CIRCUIT.
   - 5.D. MULTIPLE DEVICES ON A CIRCUIT SUCH AS RECEPTACLES SHALL BE WIRED WITH A PIGTAIL SO THE DEVICE DOES NOT PROVIDE THE CONTINUITY PATH. FEED THROUGH CONNECTIONS FOR GFCI RECEPTACLES SHALL NOT BE USED FOR PROTECTION OF DOWNSTREAM DEVICES.
6. PROVIDE GREEN GROUND WIRE WITH ALL CIRCUITS SIZED PER NEC. BOND GREEN GROUND WIRE TO EACH END OF CONDUIT.
7. PROVIDE J–BOXES, CONDUIT AND SLEEVES THRU ALL FIRE WALLS FOR DATA, TELEPHONE, SECURITY, FIRE ALARM, SOUND SYSTEM, LOW VOLTAGE WIRING, ETC. PROVIDE PROTECTIVE BUSHINGS ON ENDS OF ALL LOW VOLTAGE CONDUITS.
8. PROVIDE PULL BOXES, JUNCTION BOXES, WIRING TROUGHS AND CABINETS WHEREVER REQUIRED FOR PROPER INSTALLATION OF VARIOUS ELECTRICAL SYSTEMS. ALL JUNCTION/PULL BOXES INSTALLED ABOVE ACCESSIBLE CEILINGS SHALL BE MOUNTED SO THAT THE ACCESS PANEL IS NO HIGHER THAN 18" ABOVE THE CEILING.
9. PROVIDE CIRCUIT LABELS IN PERMANENT MARKER ON ALL NEW AND EXISTING J–BOX COVERS UTILIZED IN THE AREA OF RENOVATION.
10. PROVIDE CIRCUIT LABEL ON ALL ABOVE CEILING J–BOXES, EQUIPMENT, ETC. IDENTIFYING THE CIRCUITS CONTAINED/CONNECTED.
11. ALL WIRING SHALL BE 600 VOLT, SOFT DRAWN ANNEALED COPPER, 98% CONDUCTIVITY, CONTINUOUS FROM OUTLET TO OUTLET. MINIMUM WIRE SIZE #12.
    - 11.A. TYPICAL BUILDING WIRE SHALL BE STRANDED TYPE THHN, THWN–2 (WET RATED FOR 90°C), OR XHHW–2. MINIMUM WIRE SIZE SHALL BE #12.
    - 11.B. ALL BUILDING WIRE SHALL BE COLOR CODED WITH THE SAME COLOR CONNECTED TO THE SAME UNGROUNDED PHASE THROUGHOUT THE INSTALLATION MATCHING THE EXISTING BUILDING COLOR CODE SCHEME.
12. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, PROVIDE AIR SEAL PER NEC TO PREVENT CIRCULATION OF AIR FROM WARMER TO COOLER SECTIONS.
13. DRAWINGS, SCHEDULES, NOTES, AND DETAILS ARE INTENDED TO BE COMPLIMENTARY. ANY WORK DESCRIBED IN ANY OF THEM, WILL BE WORK REQUIRED UNDER THIS CONTRACT. WHERE THERE IS A CONFLICT BETWEEN DIFFERENT PORTIONS OF THE DESIGN DOCUMENTS IT SHALL BE CLARIFIED BY REQ. BARRING CLARIFICATION PRIOR TO BIDDING THE MOST EXPENSIVE OPTION SHALL BE INCLUDED AND CLARIFICATION SHALL BE MADE DURING CONSTRUCTION.
14. SHOULD ANY WORK REQUIRED BY THE DRAWINGS AND SPECIFICATIONS BE IN VIOLATION OF ANY FEDERAL, STATE, COUNTY OR CITY LAWS, ORDINANCE OR REGULATION, THOSE LAWS AND REGULATIONS SHALL PREVAIL, AND SHALL BE COMPLIED WITH BY THE CONTRACTOR AS A PART OF THIS WORK WITH NO EXTRA COMPENSATION.
15. ALL MATERIAL MUST BE NEW AND OF GOOD QUALITY AND SHALL BEAR THE STAMP OF APPROVAL OF THE UNDERWRITERS' LABORATORIES, INC. (U.L.).

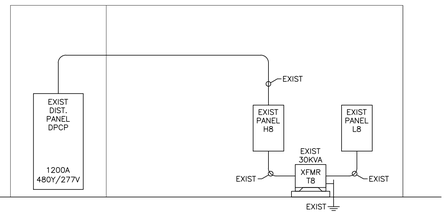
GENERAL RENOVATION AND REMODELING NOTES:

1. THESE ELECTRICAL DRAWINGS ONLY SHOW SOME EXISTING ELECTRICAL PANELS, DEVICES AND LIGHT FIXTURES IN AREAS OF RENOVATION. ALL OTHER ELECTRICAL EQUIPMENT, WIRING DEVICES, LOW VOLTAGE SYSTEMS, J–BOXES AND CONDUITS SHALL BE LOCATED AND FIELD VERIFIED BY CONTRACTOR.
2. ALL REMOVED DEVICES SHALL BE OFFERED TO THE OWNER AS SALVAGE.
3. RELOCATE CONDUIT AS NECESSARY TO ALLOW NEW OR MODIFIED CONSTRUCTION. RESUPPORT EXISTING CABLING/CONDUIT TO REMAIN TO MEET CURRENTLY ADOPTED CODE REQUIREMENTS. REMOVE ALL ABANDONED CONDUIT AND WIRE. REPAIR EXISTING ELECTRICAL SYSTEMS DAMAGED BY CONSTRUCTION ACTIVITIES.
4. ANY DAMAGE TO EXISTING BUILDING, ELECTRICAL EQUIPMENT, WIRING DEVICES, CONDUIT, WIRING, ETC. SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER. ALL MATERIALS USED FOR THE REPLACEMENT MUST MEET RENOVATION PROJECT STANDARDS.
5. ELECTRICAL CONTRACTOR SHALL BEGIN FIELD VERIFYING ALL EXISTING BRANCH CIRCUITS FOR EXISTING AREAS TO BE RENOVATED IMMEDIATELY AFTER THE CONTRACT IS ISSUED.
6. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CIRCUITS WITH OWNER'S MAINTENANCE PERSONNEL AFTER NORMAL BUILDING HOURS AS REQUIRED.
7. ANY CIRCUIT OR PATCH, CIRCUIT TO REMAIN OR BE REUSED SHALL REMAIN ACTIVE.
8. ELECTRICAL CONTRACTOR SHALL INCLUDE COST RELATED TO FIELD VERIFY EXISTING CIRCUITS IN BASE PROPOSAL.
9. FIND AND RECORD ALL EXISTING DEVICES IN CEILINGS, WALLS AND CASEWORK IN AREAS TO BE RENOVATED. PROVIDE A COPY OF THE FIELD VERIFIED DEVICE DRAWINGS TO OWNER PRIOR TO BEGINNING WORK.
10. AT THE END OF THE PROJECT, PROVIDE A NEW TYPEWRITTEN AS–BUILT PANEL SCHEDULE FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT USING BUILDING ROOM NUMBERS.



2 OVERALL FLOOR PLAN

SCALE: 1" = 50'– 0"



3 PARTIAL ELECTRICAL RISER - SIENNA CROSSING ES

NO SCALE

NOTES:

1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED/CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.
5. REFERENCE PANEL SCHEDULES AND SHORT CIRCUIT TABLE FOR AIC AND SCCR VALUES.

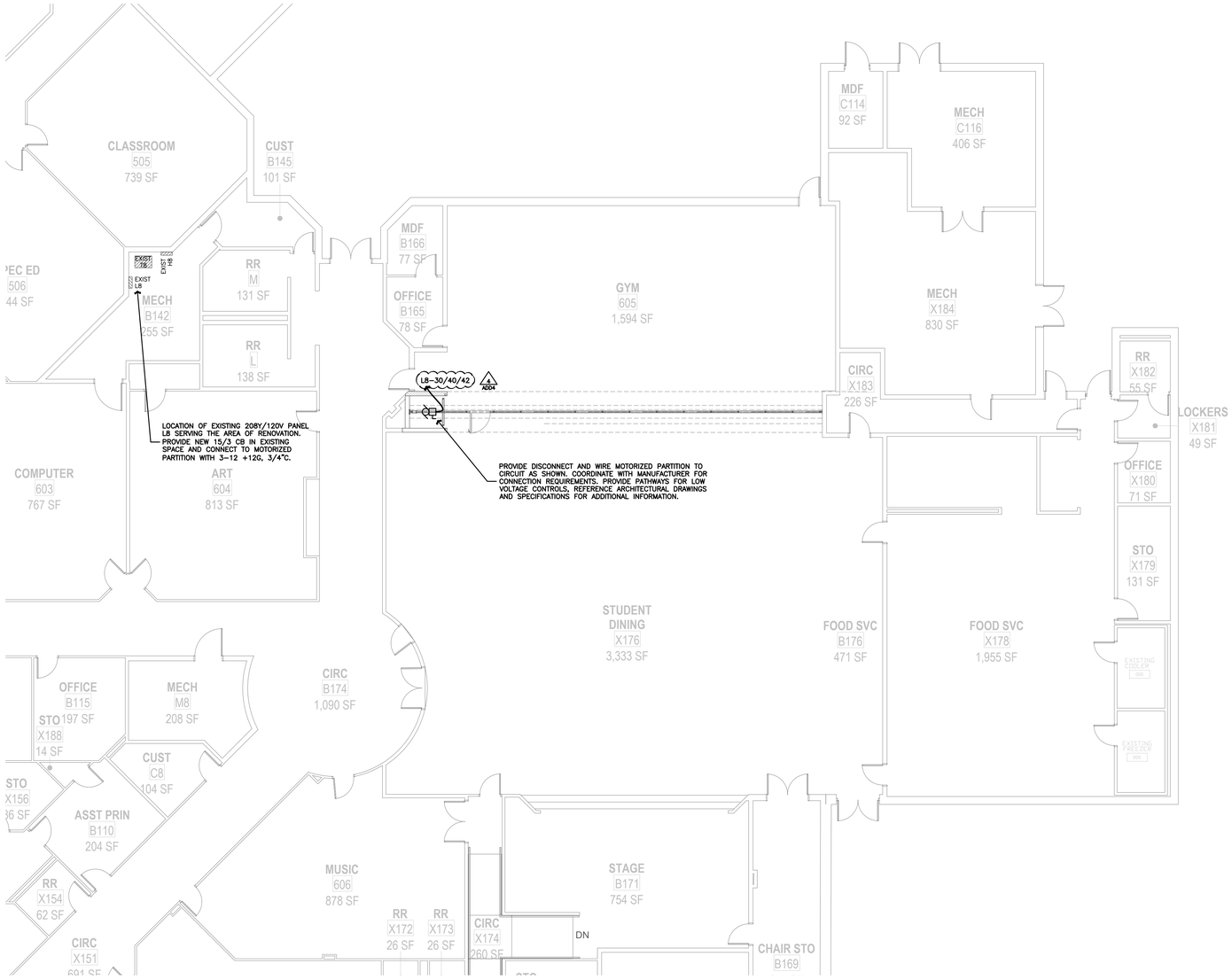
A/A004

MECH B142

(E)PANEL L8 — 100A MCB, 208Y/120V, 3Ø, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	NOTES
	540	RECEPTACLES	EXIST	20/1	1	■			2	20/1	EXIST	COMPUTER RECEPTACLES	1000	
	720	COMPUTER RECEPTACLES	EXIST	20/1	3		■		4	20/1	EXIST	COMPUTER RECEPTACLES	750	
	900	RECEPTACLES	EXIST	20/1	5			■	6	20/1	EXIST	RECEPTACLES	1250	
	720	RECEPTACLES	EXIST	20/1	7	■			8	20/1	EXIST	COMPUTER RECEPTACLES	540	
	1080	RECEPTACLES	EXIST	20/1	9		■		10	20/1	EXIST	COMPUTER RECEPTACLES	360	
	500	EDF	EXIST	20/1	11			■	12	20/1	EXIST	COMPUTER RECEPTACLES	360	
	500	EDF	EXIST	20/1	13	■			14	20/1	EXIST	COMPUTER RECEPTACLES	540	
	1250	COMPUTER RECEPTACLES	EXIST	20/1	15		■		16	20/1	EXIST	RECEPTACLES	900	
	1000	COMPUTER RECEPTACLES	EXIST	20/1	17			■	18	20/1	EXIST	RECEPTACLES	900	
	250	EMS	EXIST	20/1	19	■			20	20/1	EXIST	EF–1F	260	
	1250	COMPUTER RECEPTACLES	EXIST	20/1	21		■		22	20/1	EXIST	LIGHTING	1000	
	1250	COMPUTER RECEPTACLES	EXIST	20/1	23			■	24	20/1	EXIST	FIRE/SMOKE DAMPERS	400	
	1000	PRINTERS	EXIST	20/1	25	■			26	20/1	EXIST	FIRE/SMOKE DAMPERS	400	
		EXIST SPARE		20/1	27		■		28	20/1	EXIST	COMPUTER RECEPTACLES	1250	
		EXIST SPARE		20/1	29			■	30	20/1	EXIST	COMPUTER RECEPTACLES	1250	
	1250	COMPUTER RECEPTACLES	EXIST	20/1	31	■			32	20/1	EXIST	COMPUTER RECEPTACLES	1250	
	1250	COMPUTER RECEPTACLES	EXIST	20/1	33		■		34	20/1		EXIST SPARE		
	1250	COMPUTER RECEPTACLES	EXIST	20/1	35			■	36	20/1		EXIST SPARE		
		SPACE			37	■			38	15/3	3–12	MOTORIZED PARTITION – CAFE	1728	2
		SPACE			39		■		40	–	+12G	–	–	
		SPACE			41			■	42	–	3/4"C	–	–	
TOTAL LOAD @ 100% = 28848VA					TOTAL LOAD @ 100% =				80A			NEC DIVERSIFIED LOAD =	63A	

1. THE EXISTING 100A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE AND WIRE CIRCUIT AS SHOWN.



1 ELECTRICAL RENOVATION PLAN

SCALE: 1/8" = 1'– 0"

ISSUE:	
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03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

A/A004

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FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SIENNA CROSSING ELEMENTARY SCHOOL
10011 STEEP BANK TRACE
MISSOURI CITY, TX 77459

SEAL

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL FLOOR PLAN & SCHEDULES

t-E.200

STANTON ENGINEERING GROUP
INFORMATION PROVIDED (713) 300–60360

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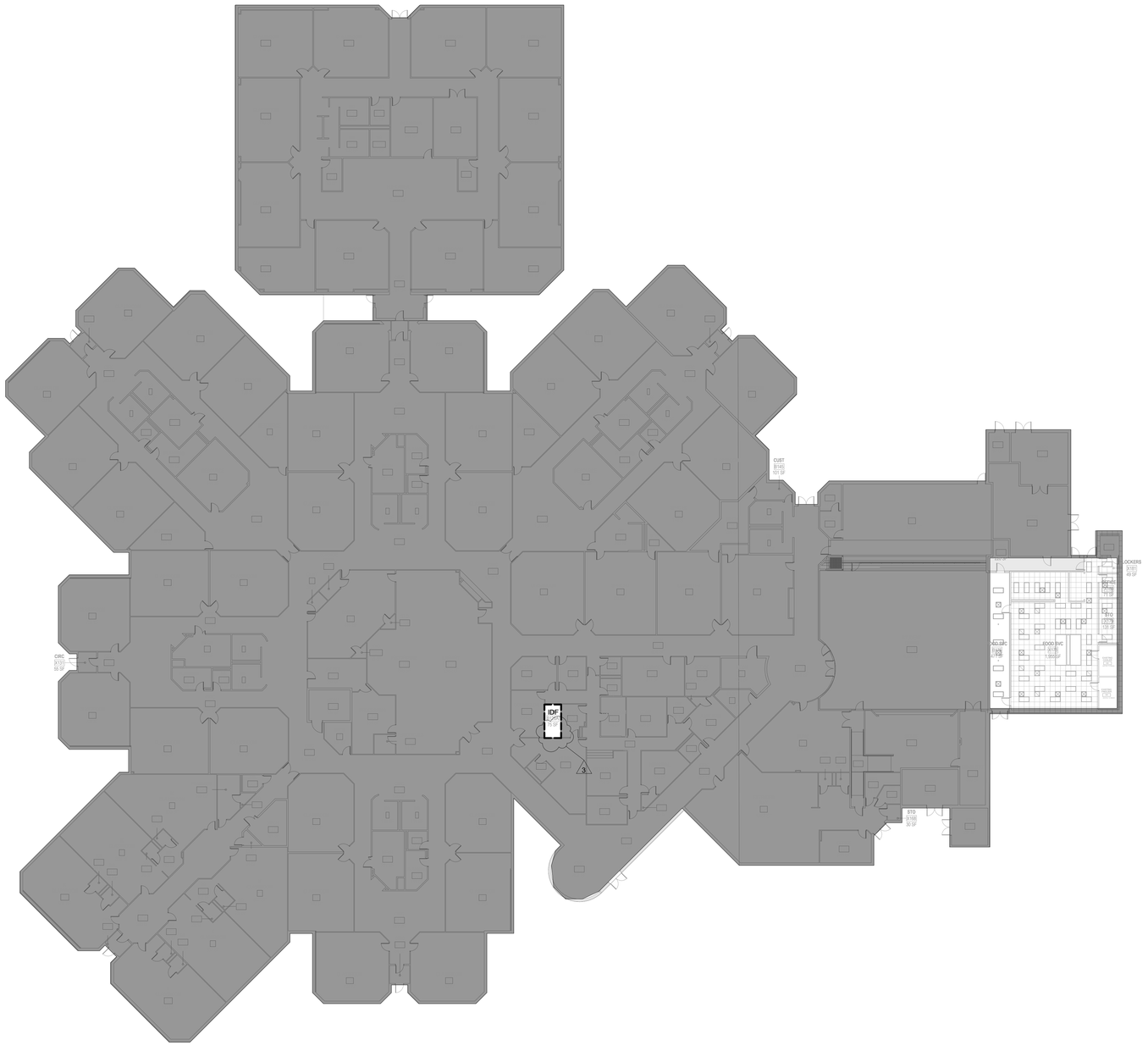
12800 W. SAM HOUSTON PARKWAY S., SUITE 125, HOUSTON, TX 77042

TECHNOLOGY KEYNOTES

1. IDF WILL REQUIRE ADDITIONAL HARDWARE TO SUPPORT THE ADDED CAMERA CABLES.
2. CONTRACTOR TO VERIFY WEITHER ADDITIONAL HARDWARE WILL BE NEEDED TO SUPPORT ADDITIONAL CAMAERA CABLES.
3. CONTRACTOR TO COORDINATE FINAL DEVICE LOCATION AND POSITIONING WITH FBISD.



1 BACKGROUND T (SIENNA CROSSING ES)
SCALE: 1" = 20'-0"

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	3 ADDENDUM NO. 4

t

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Sienna Crossing Elementary School
10011 Steep Bank Trce, Missouri City, TX 77459

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 256957
EXPIRES 12-31-27
RCDD

07-18-25

ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

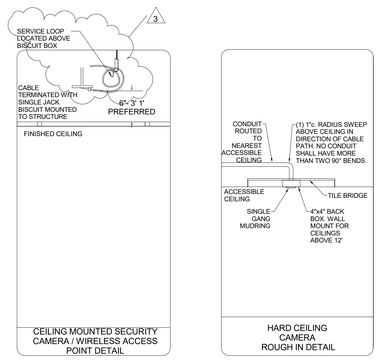
PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING
AND
PERMITTING

TECHNOLOGY - Sienna Crossing ES - OVERALL

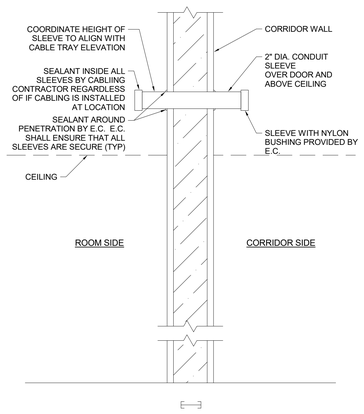
t-TN.100

GENERAL NOTE

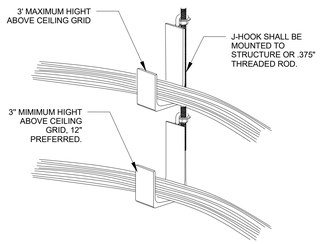
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



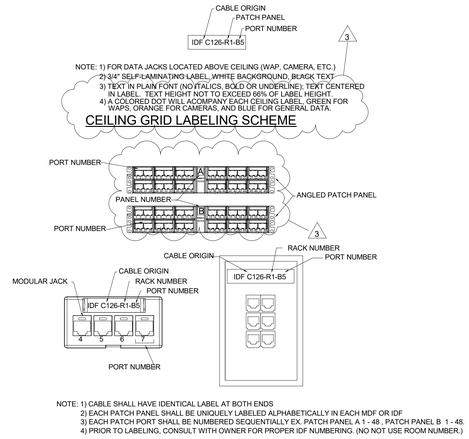
1 DATA ROUGH-IN DETAILS
SCALE: NS



2 TYPICAL CABLING SLEEVE
SCALE: NTS

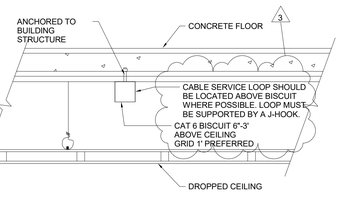


3 PANDUIT J-HOOK DETAIL
SCALE: NTS

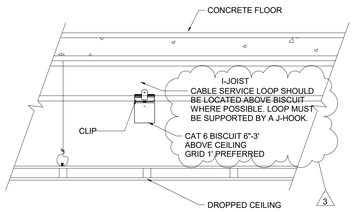


4 LABELING & CABLING SCHEMES
SCALE: NTS

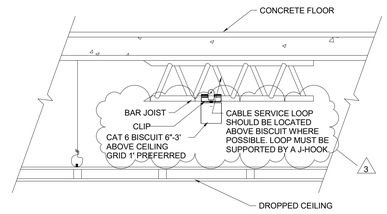
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

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09/04/2025	ADDENDUM NO. 4
3	

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FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Sienna Crossing Elementary School
10011 Steep Bank Tree, Missouri City, TX 77459

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 256557
EXPIRES 12-31-27

07-18-25

MVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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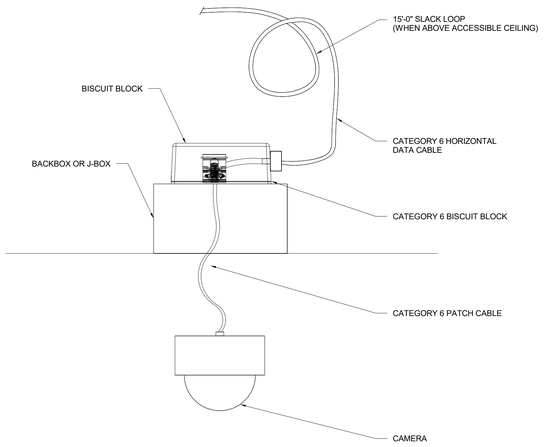
TECHNOLOGY - Sienna Crossing ES - DETAILS

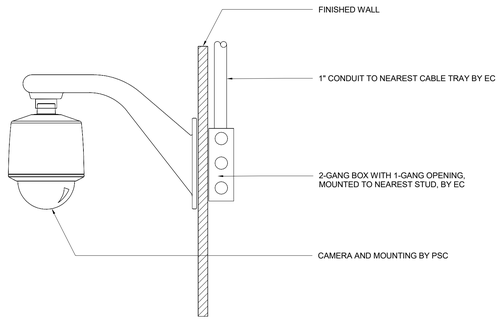
t-TN.500

GENERAL NOTES:

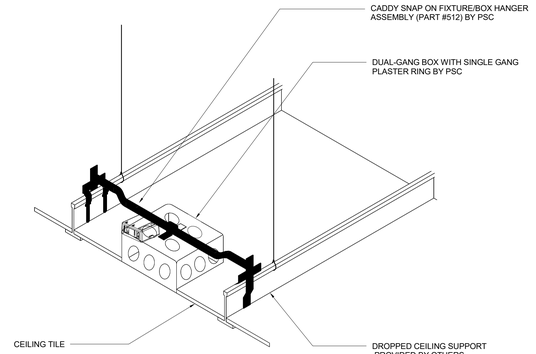
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



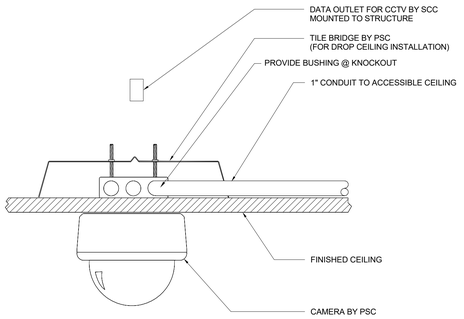
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

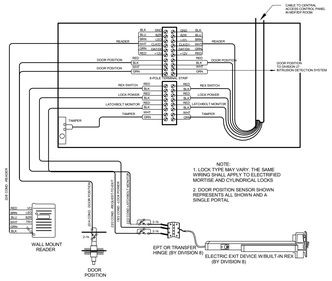


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

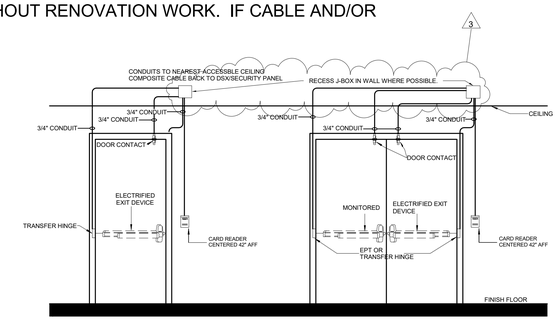
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

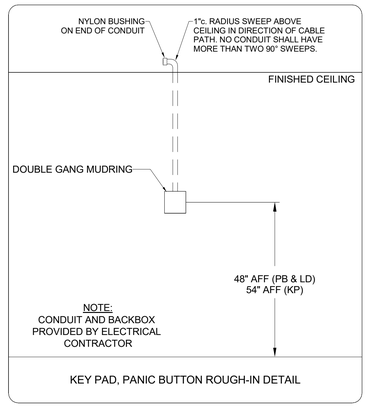
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

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FORT BEND INDEPENDENT SCHOOL DISTRICT
Sienna Crossing Elementary School
10011 Steep Bank Tree, Missouri City, TX 77459

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
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EXPIRES 12-31-27

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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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TECHNOLOGY - Sienna Crossing ES - SECURITY DETAILS

t-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

SUGAR MILL ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD, SUGAR LAND, TX 77498

FORT BEND INDEPENDENT SCHOOL DISTRICT

FORT BEND INDEPENDENT SCHOOL DISTRICT

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

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AFSHI CHARANIA	BOARD MEMBER
ADAM SCHOOF	BOARD MEMBER
ANGIE WIERZBICKI	BOARD MEMBER

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FBISD 2023 Bond Team
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Missouri City, TX 77489
Phone Number: 281-327-5481

ARCHITECT
MWA Architects
11767 Katy Freeway, Suite 430
Houston, Texas 77079
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FOOD SERVICE
Food Design Professionals
26215 Oak Ridge Drive
The Woodlands, Texas 77380
Phone Number: 281-350-2323

MEP ENGINEERS
Stanton Engineering Group
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Houston, Texas 77042
Phone Number: 713-300-9292

STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

REGISTERED ARCHITECT
MICHAEL MAGNER
22651
STATE OF TEXAS
04SEP.2025

Sheet List Table	
Sheet Number	Sheet Title
School: u-Sugar Mill ES	
u-A.000	COVER AND INDEX
u-A00-01	GENERAL NOTES AND ABBREVIATIONS
u-A.D.101	DEMO PLAN
u-D.101-2	REFERENCE PHOTOS FLOOR PLAN
u-D.101-3	DEMO PLAN PHOTOS
u-ED.100	ELECTRICAL DEMO AND TEMP PLANS
u-PD1.01	PLUMBING DEMOLITION FLOOR PLAN
u-A.101	SITE PLAN
u-A.200	SLAB DIMENSION CONTROL PLAN
u-A.201	FLOOR PLAN
u-A.301	KITCHEN PLAN
u-A.302	TEMPORARY KITCHEN LAYOUT
u-A.401	REFLECTED CEILING PLAN
u-A.501	FINISH FLOOR PLAN
u-A.502	PARTITION SCHEDULE
u-S1	KITCHEN PLAN
u-S2	SECTIONS AND TYPICAL DETAILS
u-C1.0	GRADING & PAVING PLAN
u-QF0.0	FS GENERAL COORDINATION NOTES
u-QF1.0	FS EQUIPMENT PLAN
u-QF1.1	FS FACILITY MODEL
u-QF1.2	FS EQUIPMENT MODEL
u-QF1.3	QF SPECIAL CONDITIONS & MECHANICAL PLAN
u-QF1.4	FS PLUMBING PLAN
u-QF1.5	FS ELECTRICAL PLAN
u-QF1.6	FS CONDENSING UNITS
u-QF1.7	FS WALK-INS
u-QF1.8	FS SERVING COUNTERS
u-QF1.9	FS SERVING COUNTERS
u-QF2.0	FS DEMO PLAN
U-QF2.1	FS TEMPORARY SERVING
u-QF3.1	FS ELEVATIONS
u-QF4.1	FS SECTIONS & DETAILS
u-QF4.2	FS DETAILS
u-QF4.3	FS DETAILS
u-M1.01	MECHANICAL PLANS
M2.01	KITCHEN MECHANICAL DETAILS
u-M2.02	MECHANICAL DETAILS
E.000	ELECTRICAL AND FIRE ALARM SCHEDULES
E.001	ELECTRICAL AND FIRE ALARM NOTES
E.010	ELECTRICAL DEVICE DETAILS
E.011	ELECTRICAL DETAILS
E.012	ELECTRICAL DETAILS
E.013	ELECTRICAL KITCHEN DETAILS
E.060	LIGHTING SCHEDULES
u-E.100	LIGHTING FLOOR PLAN
u-E.200	ELECTRICAL FLOOR PLAN
u-E.300	FIRE ALARM FLOOR PLANS
u-E.400	ELECTRICAL SCHEMATIC
u-P0.01	PLUMBING NOTES AND SCHEDULES
u-P0.02	PLUMBING SCHEDULES & DETAILS
u-P1.01	PLUMBING FLOOR PLAN
u-P1.02	PLUMBING FLOOR PLAN - TEMPORARY KITCHEN
u-T000	TECHNOLOGY SYMBOLS & LEGEND
u-T200	TECHNOLOGY COMPOSITE FLOOR PLAN
u-T201	TECHNOLOGY NEW_RENOVATION KITCHEN PLAN
u-T202	TECHNOLOGY TEMPORARY KITCHEN PLAN
u-T300	TECHNOLOGY ENLARGED VIEWS
u-T400	TECHNOLOGY TYPICAL DETAILS
u-T401	TECHNOLOGY TYPICAL DETAILS
u-T500	TECHNOLOGY TYPICAL DETAILS
u-TN-000	TECHNOLOGY - INDEX SHEET
u-TN-001	TECHNOLOGY - KITCHEN DEMOLITION
u-TN-100	TECHNOLOGY - OVERALL
u-TN-101	TECHNOLOGY - KITCHEN
u-TN-500	TECHNOLOGY - DETAILS
u-TN-600	TECHNOLOGY - SECURITY DETAILS
u-TN-700	TECHNOLOGY - AV DETAILS

3

ADDENDUM NO. 4 - SEP 04, 2025

U

TEMPORARY KITCHEN FLOOR PLAN KEYED NOTES 05/A-A03-02

01 PROVIDE & INSTALL 555 SF OF RAM BOARD TO PROTECT EXISTING FLOORING. REMOVE AFTER CONSTRUCTION IS COMPLETE. CONTRACTOR MUST REPAIR FLOORING DAMAGED DURING CONSTRUCTION.

02 PROVIDE SCHEDULED PARTITIONS. BUILD PARTITIONS ON TOP OF RAM BOARD. DO NOT ATTACH PARTITIONS TO FLOOR.

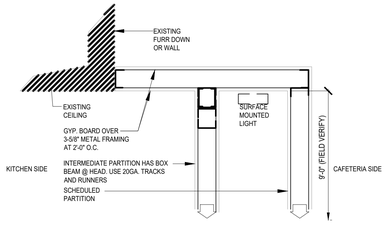
03 ATTACH PARTITIONS TO EXISTING WALL. REPAIR WALL TO MATCH EXISTING AFTER CONSTRUCTION IS COMPLETE.

TEMPORARY KITCHEN RCP KEYED NOTES 03/A-A03-02

04 ALL NEW SCHEDULED PARTITIONS AND CEILINGS FOR TEMPORARY STORAGE LAYOUT TO BE EPOXY PAINTED SW 7014 EIDER WHITE WITH SPECIFIED 4" RUBBER BASE. REMOVE WHEN CONSTRUCTION IS COMPLETED.

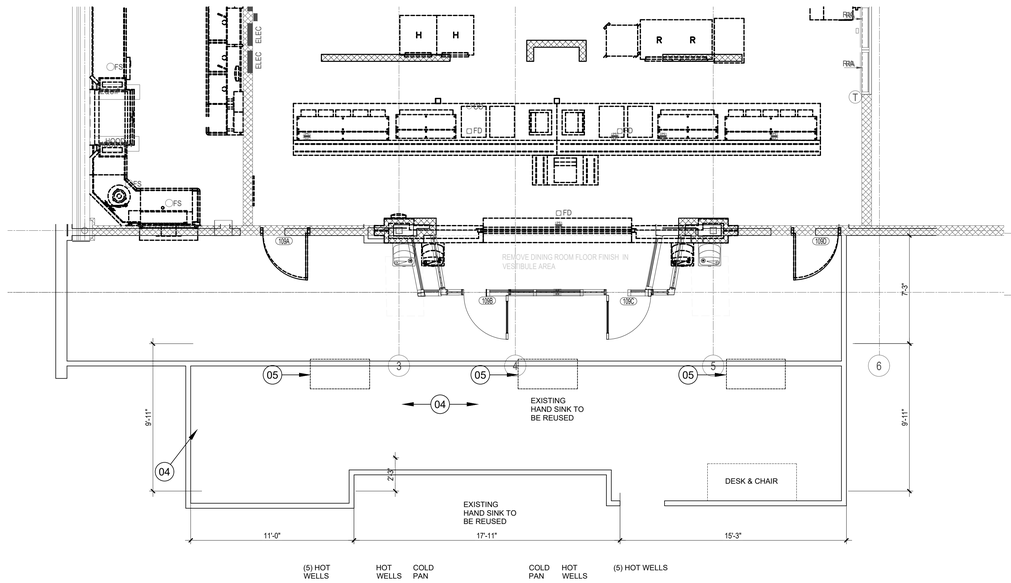
05 MOUNT TEMPORARY FLUORESCENT LIGHTS TO TEMPORARY CEILING.

3 KEYED NOTES



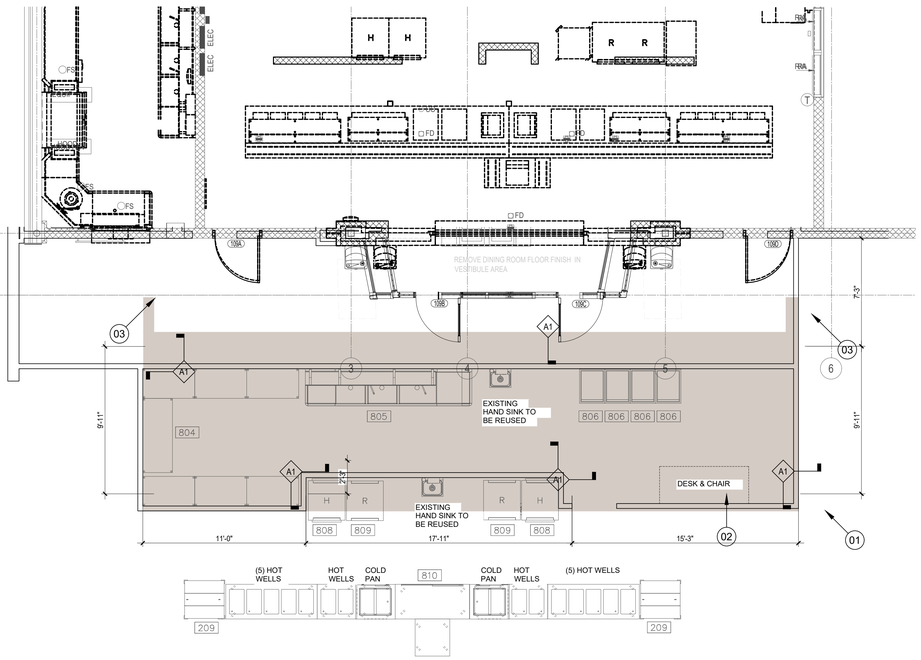
4 TEMPORARY LAYOUT SECTION

SCALE: 1"=1'-0"



1 TEMPORARY KITCHEN RCP

SCALE: 1/4" = 1'-0"



2 TEMPORARY KITCHEN FLOOR PLAN

SCALE: 1/4" = 1'-0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ISSUED FOR ADDENDUM 04

u

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILLS ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD
SUGAR LAND, TX 77498

SEAL

04 SEP. 2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25

DATE: ADDENDUM NO. 4 - SEP 04, 2025

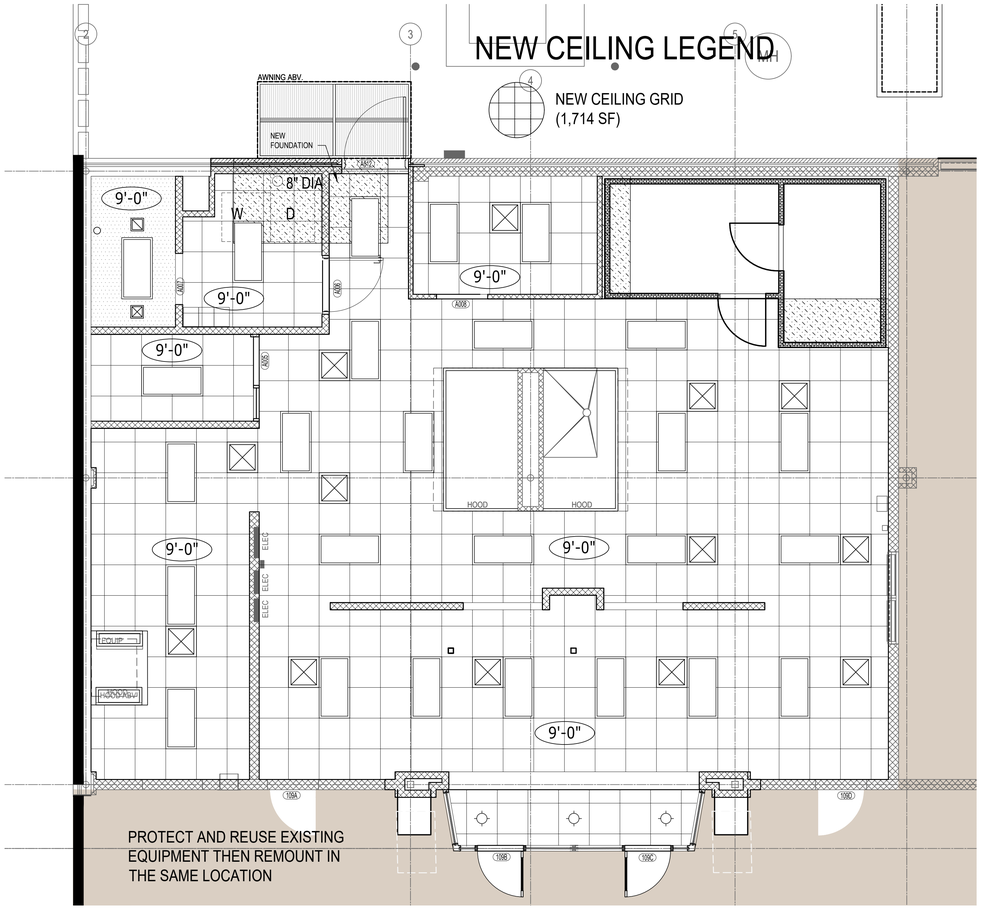
TEMPORARY KITCHEN LAYOUT
u-A.302

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\U-Sugar Mill ES\u-A.302 TEMPORARY KITCHEN LAYOUT.dwg Sep 05, 2025 - 11:49am

RCP - GENERAL NOTES

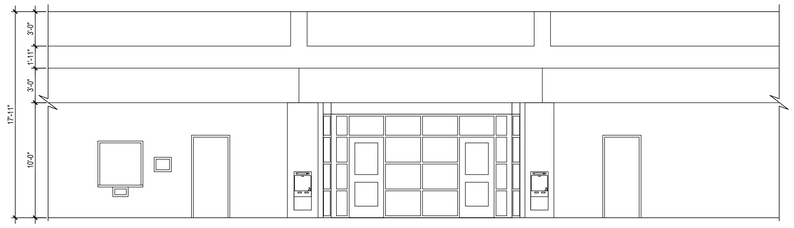
1. CEILING GRID SHALL BE INSTALLED TO MATCH EXISTING GRID'S POINT OF ORIGIN. THIS WILL REDUCE NEED TO RE-LOCATE ABOVE CEILING DUCTS, SPRINKLER PIPING AND OTHER SUPPORT SYSTEMS.
2. REFER TO SHEET A00-01 FOR GENERAL NOTES. GENERAL NOTES APPLY TO ALL SEVEN SCHOOL KITCHEN REMODELS.
3. LIGHTING LEVELS SHOULD BE 50 FC IN PREPARATION AREAS, WARE WASH AND SERVING LINES, OR MEET MINIMUM HEALTH CODE LEVELS, WHICHEVER ITS GREATER. SEE MEP PLANS
4. REPLACE HVAC DEVICES. REPLACE LIGHTING WITH 24"x24" LED LAY IN LIGHT AS SCHEDULED IN ELECTRICAL PLANS.
5. REFER TO MECHANICAL, ELECTRICAL SHEETS FOR DEVICE SCHEDULES.

2 RCP GENERAL NOTES



1 REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"



3 FOOD SERVICE AREA ELEVATION

SCALE: 3/16" = 1'-0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING

u

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILLS ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD
SUGAR LAND, TX 77498

SEAL

REGISTERED ARCHITECT
MICHAEL K. MAUCK
#26051
STATE OF TEXAS

28 AUG 2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

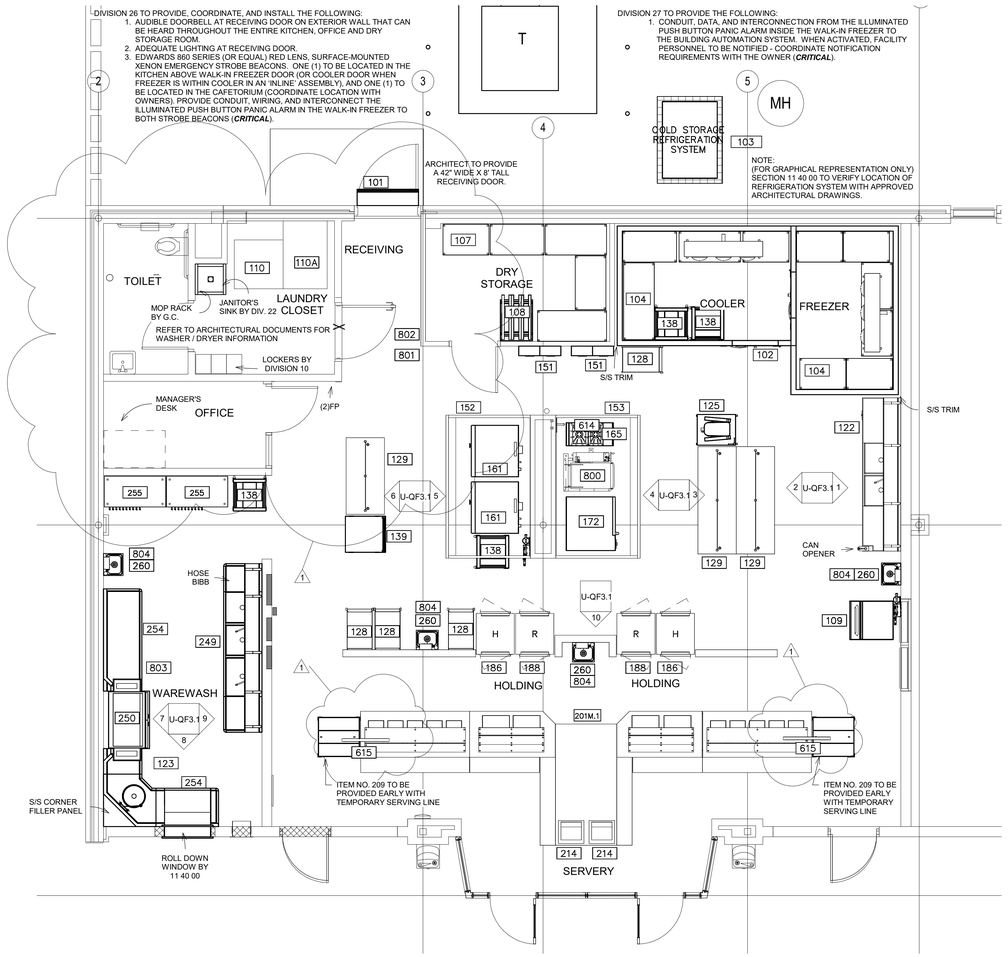
PROJ. NO.: 23-25
DATE: 07/28/25
ADDENDUM NO. 3 - AUG 28, 2025

REFLECTED CEILING PLAN

u-A.401

F:\2023\23-25 FBISD Package 13 Kitchen Renovations\DWGS\Drawings\U-Sugar Mill ES\u-A.401 REFLECTED CEILING PLAN.dwg Aug 27, 2025 - 5:52pm

FOOD SERVICE DRAWING INDEX	
FDP SHEET NUMBER	FDP SHEET NAME
U-QF0.0	FS GENERAL COORDINATION NOTES
U-QF1.0	FS EQUIPMENT PLAN
U-QF1.1	FS FACILITY MODEL
U-QF1.2	FS EQUIPMENT MODEL
U-QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
U-QF1.4	FS PLUMBING PLAN
U-QF1.5	FS ELECTRICAL PLAN
U-QF1.6	FS CONDENSING UNITS
U-QF1.7	FS WALK-INS
U-QF1.8	FS SERVING COUNTERS
U-QF1.9	FS SERVING COUNTERS
U-QF2.0	FS DEMO PLAN
U-QF2.1	FS TEMPORARY SERVING
U-QF3.1	FS ELEVATIONS
U-QF4.1	FS SECTIONS & DETAILS
U-QF4.2	FS DETAILS
U-QF4.3	FS DETAILS



1 FOOD SERVICE EQUIPMENT PLAN
1/4" = 1'-0"

FOOD SERVICE EQUIPMENT SCHEDULE					
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH DEPARTMENT COORDINATION NOTES					
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS	MANUFACTURER	MODEL
101	1	AIR SCREEN		MARS	STD248-1UA-OB
102	1	COLD STORAGE ASSEMBLY		AMERICAN PANEL	
103	1	COLD STORAGE REFRIGERATION SYSTEM			
104	2	COLD STORAGE SHELVING		METRO	METROMAX Q
107	1	DRY STORAGE SHELVING		METRO	METROMAX Q
108	1	CAN RACK		NEW AGE	1250CK
109	1	ICE MACHINE W/ BIN		MANITOWOC	UYF0310A
110	1	CLOTHES WASHER	BY G.C.		
110A	1	CLOTHES DRYER	BY G.C.		
122	1	TWO COMPARTMENT SINK WITHOUT DISPOSER		CUSTOM FABRICATED	
123	1	DISPOSER - 3HP		SALVAJOR	300-CA-18-ASRR-LD
125	1	20 QT. MIXER W/STAND		HOBART	HL200
128	4	UTILITY CART		LAKESIDE	522
129	3	WORKTABLE W/S.BAR UT.RACK		CUSTOM FABRICATED	
138	4	PAN RACK		CRES COR	207-UA-13A
139	1	INSUL MOBILE PROOFER		CRES COR	H-137-WSUA-12D
151	2	FIRE PROTECTION SYSTEM		ANSUL	R102
152	1	EXHAUST HOOD	EXISTING		
153	1	EXHAUST HOOD	EXISTING		
161	2	CONVECTION OVEN		BLODGETT	DFG-200 DBL
165	1	TWO BURNER RANGE		VULCAN	V2B18B
172	1	COMBI OVEN		RATIONAL	ICP 6-FULL/6-FULL N/G
186	2	PASS-THRU HEATED CABINET-1DR		TRAULSEN	AHF132WP
188	2	PASS-THRU REFRIGERATOR-1DR		TRAULSEN	AHT132WPUT
201M.1	1	SERVING COUNTER-MODULAR		COUNTERCRAFT	SCOL-408-MOD
214	2	CASH REGISTER	OWNER FURNISHED		
249	1	THREE COMPARTMENT SINK NO DISPOSER		CUSTOM FABRICATED	
250	1	DISHMACHINE		HOBART	CL44-BAS
254	2	SOILED & CLEAN DISHTABLE		CUSTOM FABRICATED	
255	2	MOBILE DRYING RACK		METRO	PR48VX3
260	4	HAND SINK	FURNISHED & INSTALLED BY DIV. 22		
614	1	FILL FAUCET		T&S	B-0610
615	2	MENU MONITOR	BY OWNER		
800	1	15 GAL. BRAISING PAN		GROEN	BPM-15GA
801	1	S/S CORNER GUARDS	LOCATED ON EVERY EXPOSED CORNER THROUGHOUT KITCHEN	CUSTOM FABRICATED	
802	1	WALL BUMPERS	LOCATED ON ALL EXPOSED BUILDING WALLS	PAWLING	MD-1
803	1	WATER SOFTENER		HOBART	WS-40
804	4	S/S SPLASH GUARDS		CUSTOM FABRICATED	

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILLS ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD
SUGAR LAND, TX 77498

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
ELECTRONIC SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/15/2025

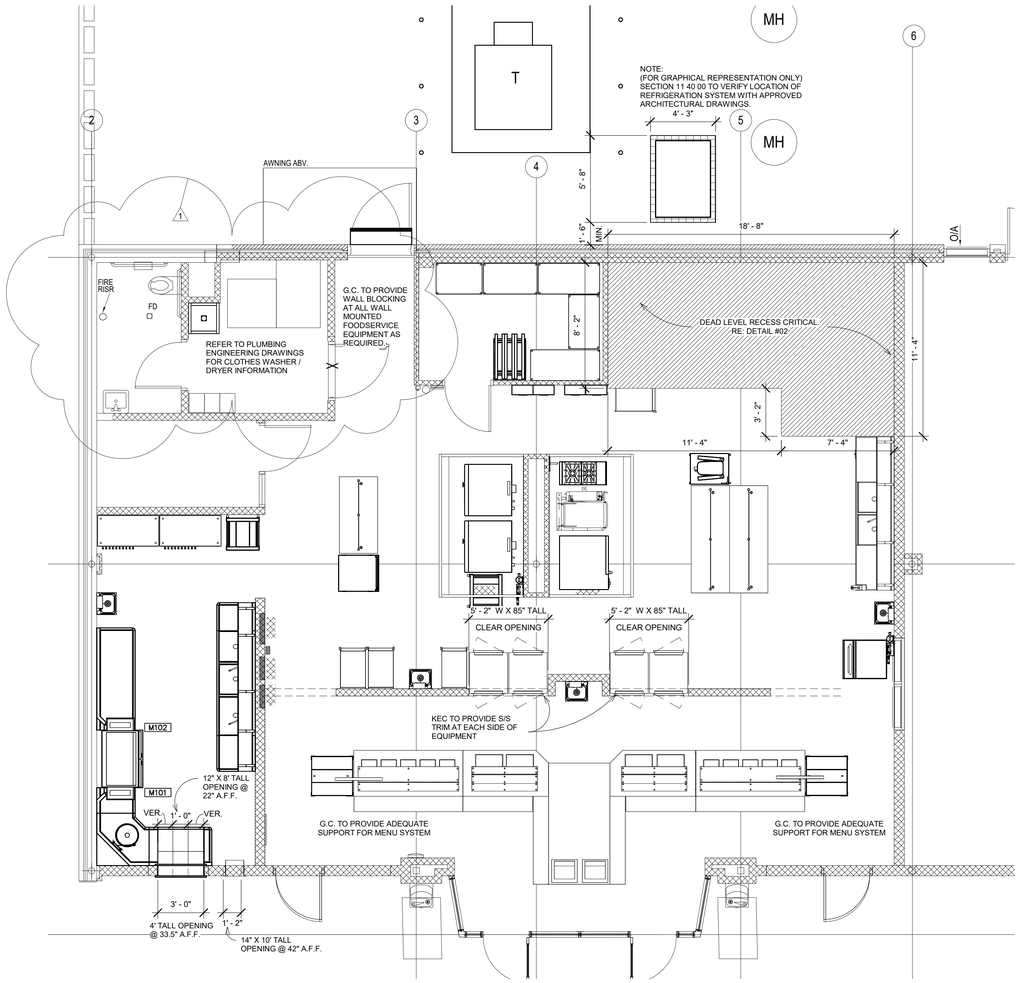
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS EQUIPMENT PLAN

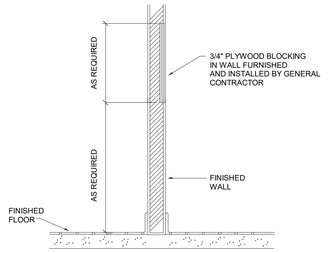
U-QF1.0

FOOD SERVICE MECHANICAL SCHEDULE						
REFER TO SHEET QF1 FOR MECHANICAL COORDINATION NOTES						
FDP NO.	FDP QTY	FDP TYPE	FDP SIZE	FDP LOC	FDP CFM	FDP S.P.
M101	1	EXHAUST	4" X 16"		400	0.30"
M102	1	EXHAUST	4" X 16"		800	0.30"



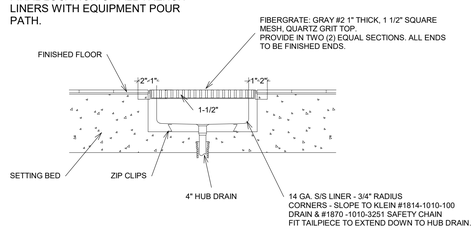
1 FOOD SERVICE SPECIAL CONDITIONS PLAN
1/4" = 1'-0"

NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION AND SIZE OF WALL BLOCKING.

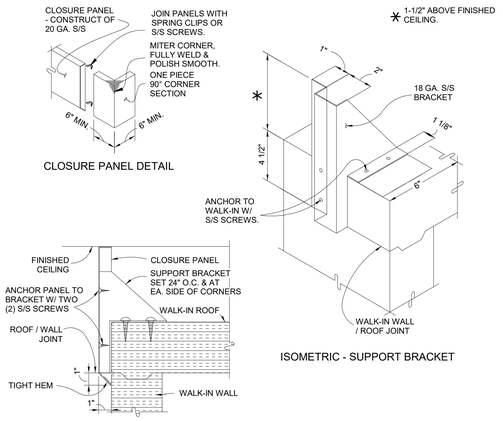


5 WALL BLOCKING DETAIL
NOT TO SCALE

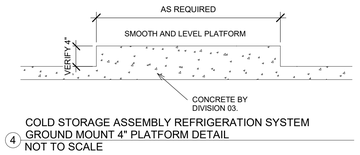
NOTE:
SECTION 11 40 00 TO COORDINATE FINAL LOCATION OF ALL TRENCH LINERS WITH EQUIPMENT POUR PATH.



6 TRENCH LINER DETAIL
NOT TO SCALE

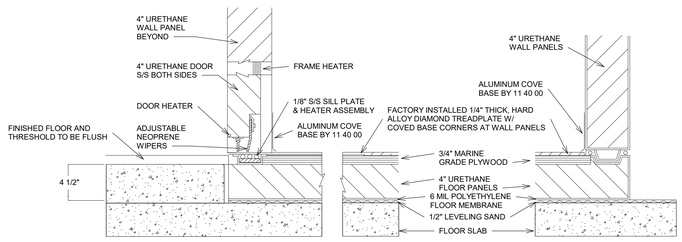


3 COLD STORAGE ASSEMBLY ENCLOSURE PANEL DETAIL
NOT TO SCALE



4 COLD STORAGE ASSEMBLY REFRIGERATION SYSTEM GROUND MOUNT 4" PLATFORM DETAIL
NOT TO SCALE

SLAB TO BE MODIFIED AS REQUIRED
TO ALLOW FOR A 4 1/2" DEPRESSION SLAB.
PROVIDE NEW LEVEL CONCRETE PAD FOR COLD STORAGE ASSEMBLY.



2 COLD STORAGE ASSEMBLY 4 1/2" DEPRESSION DETAIL
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FDP
FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILLS ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD
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PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/16/2025

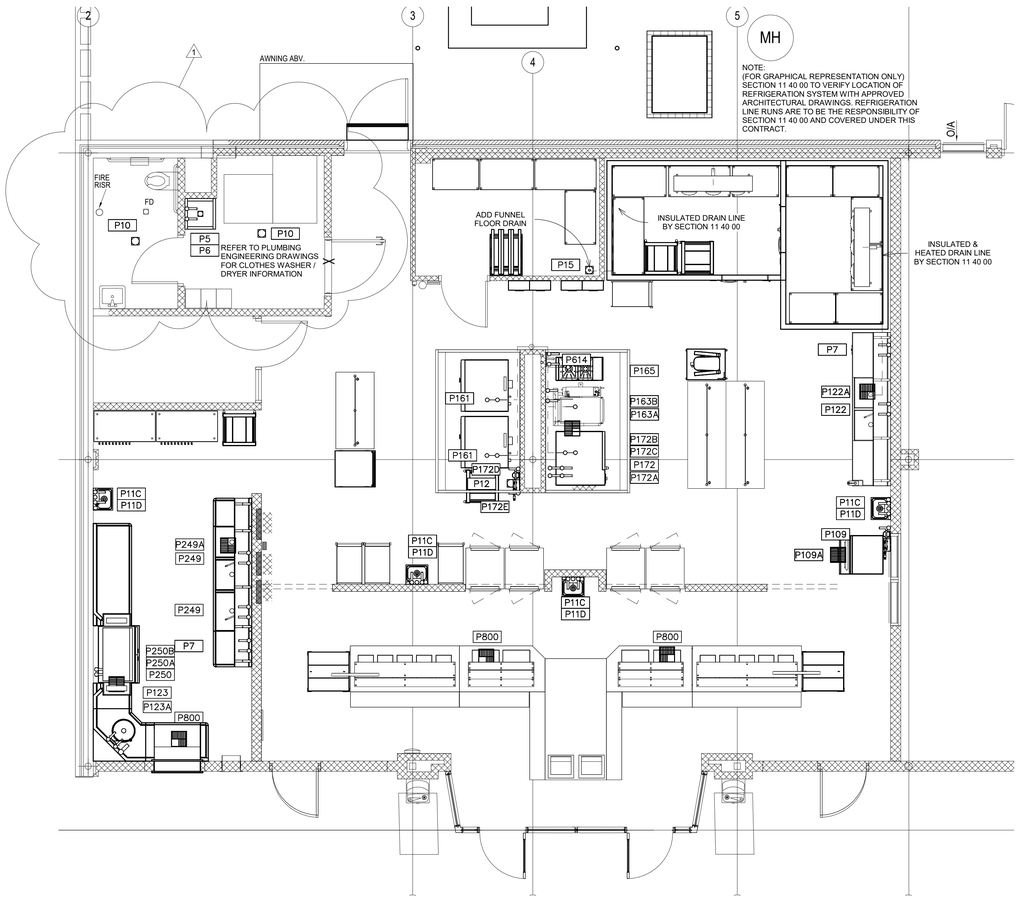
ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS SPECIAL CONDITIONS & MECHANICAL PLAN

U-QF1.3

FOOD SERVICE PLUMBING SCHEDULE						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P5	3/4"	H & C WATER	JANITOR SINK	WALL	48"	JANITOR SINK BY PLUMBER
P6	4"	FLOOR DRAIN	JANITOR SINK	FLOOR	VERIFY	JANITOR SINK BY PLUMBER
P7	3/4"	H & C WATER	HOSE BIBB	WALL	18"	BTC
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	---
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P12	VERIFY	FLOOR DRAIN	EQUIP. DRAIN	FLOOR	VERIFY	NO SLOPE
P15	4"	FLOOR DRAIN	FUNNEL FLOOR DRAIN	FLOOR	0"	---
P109	3/4"	COLD WATER	WATER/ ICE	WALL	60"	BTC
P109A	12" SQ.	FLOOR SINK	ICE MACHINE	FLOOR	0"	FULL GRATE
P122	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P122A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	3/4 GRATE
P123	3/4"	H & C WATER	FAUCET / DISPOSER	WALL	13"	BTC
P123A	2"	DIRECT DRAIN	DISPOSER	WALL	10"	BTC
P161	(2)3/4"	NATURAL GAS	CONVECTION OVEN	WALL	18"/36"	BTC - 60 MBTU/HR EACH
P163A	3/4"	NATURAL GAS	TILT BRAISING PAN	WALL	18"	BTC - 65 MBTU/HR
P163B	3/4"	H & C WATER	TILT BRAISING PAN	WALL	36"	BTC
P165	1"	NATURAL GAS	RANGE	WALL	18"	BTC - 70 MBTU/HR
P172	(2)3/4"	COLD WATER	COMBI OVEN	WALL	24"/48"	BTC - INTERCONNECT THRU FILTERS
P172A	3/4"	COLD WATER	COMBI OVEN	WALL	48"	BTC
P172B	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE
P172C	(2)3/4"	NATURAL GAS	COMBI OVEN	WALL	18"/36"	BTC: 105 MBTU/HR EACH
P172D	3/4"	COLD WATER	COMBI OVEN	WALL	66"	BTC; INTERCONNECT TO P172
P172E	3/4"	COLD WATER	COMBI OVEN WATER FILTER	WALL	66"	BTC
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P249A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	THREE QUARTER GRATE
P250	12" SQ.	FLOOR SINK	BOOSTER / DISHMACHINE	FLOOR	18"	BTC
P250A	3/4"	HOT WATER	DISHMACHINE	WALL	18"	EXT. THRU W.FILTER TO BOOSTER / DISH MACHINE - 140DEG.MIN.
P250B	3/4"	COLD WATER	DISHMACHINE	WALL	18"	BTC
P614	1/2"	H & C WATER	FILL FAUCET	WALL	42"	BTC
P800	12" SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE



1 FOOD SERVICE PLUMBING PLAN
1/4" = 1'-0"

SECTION 11 40 00 TO PROVIDE LOOSE WITH FOOD SERVICE EQUIPMENT. INSTALLATION BY DIV. 22 & 26.

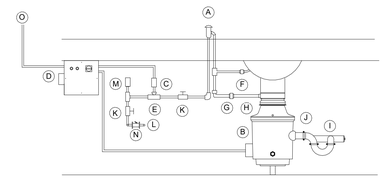
- (A) VACUUM BREAKER
- (B) DISPOSER
- (C) TIME DELAY
- (D) CONTROL PANEL
- (E) SOLENOID VALVE

DIVISION 22 TO PROVIDE AND INSTALL

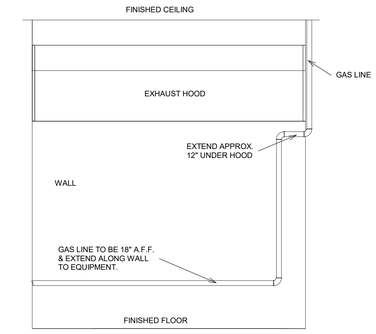
- (F) 1/2" CW INLET
- (G) FLOW CONTROL
- (H) 1/2" CW
- (I) 2" DRAIN LINE WITH P-TRAP & Y ADAPTOR
- (J) 1-1/2" TAILPIECE
- (K) GATE VALVE
- (L) 1/2" CW SUPPLY
- (M) SHOCK STOP
- (N) RPZ BACK FLOW PREVENTOR

DIVISION 26 TO PROVIDE AND INSTALL

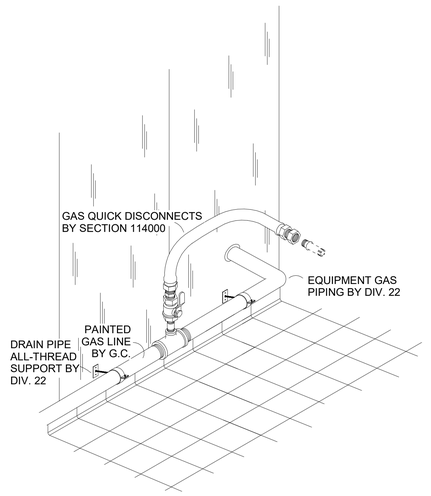
- (O) POWER SUPPLY



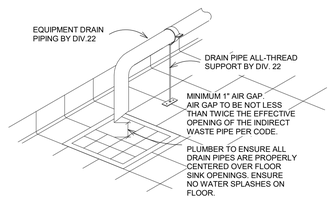
6 DISPOSER WITH VACUUM BREAKER DETAIL
NOT TO SCALE



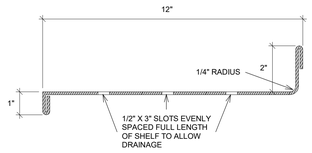
7 EXHAUST HOOD - GAS LINE ROUTING DETAIL
NOT TO SCALE



3 GAS DISCONNECT DETAIL
NOT TO SCALE



5 DRAIN PIPING FASTENER DETAIL
NOT TO SCALE



8 WAREWASH - PERFORATED OVER SHELF DETAIL
NOT TO SCALE

HW	HOT WATER	FFD		FUNNEL FLOOR DRAIN
CW	COLD WATER	EVC		EXHAUST VENT CONNECTION
HTW	180 F HOT WATER	SVC		SUPPLY VENT CONNECTION
	CHILLED WATER	FR		DIRECT-CONNECTED FLUE RISER
W	DIRECT WASTE	PS		PIPE SLEEVE
IW	INDIRECT WASTE			COMPRESSED AIR
	GAS SUPPLY			CO2
	STEAM SUPPLY		AFF	ABOVE FINISHED FLOOR
CR	CONDENSATE RETURN		BTC	BRANCH TO CONN. ON EQUIP
DR	DRAIN		DFA	DROP FROM ABOVE
FD	FLOOR DRAIN		CLG	CEILING
FST	FLOOR SINK 3/4 GRATE			
FSH	FLOOR SINK 3/4 GRATE			

2 PLUMBING SYMBOLS
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FDP
FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILLS ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD
SUGAR LAND, TX 77498

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7/15/2025
DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/16/2025

ARCHITECTS
AND PLANNING
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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS PLUMBING PLAN

U-QF1.4

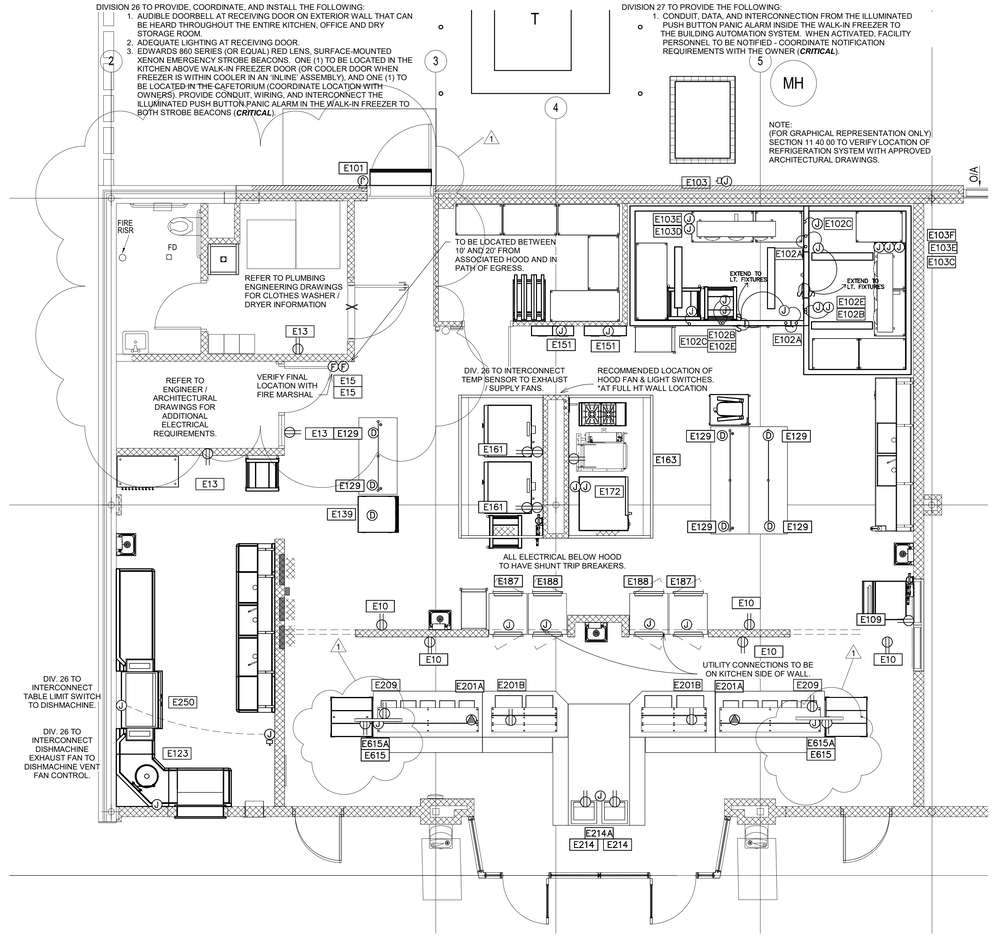
FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E10	DR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E13	WPR	16.0A	120	1	CONVENIENCE	WALL	24"	MOUNT HORIZONTAL
E15	JB	---	---	---	FIRE PROT. SYSTEM	WALL	48"	RECESSED EMPTY CONDUIT FOR FIRE PULL
E101	JB	5.1A	120	1	AIR SCREEN	WALL	82"	BTC; MAGNETIC REED SWITCH ON DOOR JAMB & DOOR
E102A	JB	16.0A	120	1	DOOR HEATER/LIGHTS	CLG	DFA	BTC
E102B	JB	5.0A	120	1	TEMP. ALARM	CLG	DFA	BTC
E102C	JB	5.0A	120	1	PRESSURE RELIEF PORT	CLG	DFA	BTC
E102E	JB	10.0A	120	1	PANIC ALARM BUTTON	CLG	DFA	BTC-INTERCONNECT TO STROBE LIGHT/HORN ABOVE FREEZER DOOR AND IN CAFETORIUM
E103	JB/DS	21.9A	208	3	REFRIGERATION SYSTEM	VERIFY	VERIFY	BTC
E103C	JB	9.1A	208	1	FREEZER COIL	CLG	DFA	BTC
E103D	JB	1.8A	120	1	COOLER COIL	CLG	DFA	BTC
E103E	JB	---	---	---	DATA CONNECTION	CLG	DFA	BTC; RUN TO NEAREST IDF / MDF ROOM
E103F	JB	16.0A	120	1	DRAIN LINE HEATER	CLG	DFA	BTC; DEDICATED CIRCUIT
E109	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E123	JB	3.0HP	208	3	DISPOSER	WALL	24"	BTC; CONNECT THRU C.P. TO DISPOSER
E129	DCR	16.0A	120	1	TABLE RECEPTACLE	CLG	84"	TWISTLOCK PLUG & RECEPTACLE

FOOD SERVICE ELECTRICAL SCHEDULE								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E139	DCR	15.0A	120	1	INSUL. MOBILE PROOFER	CEILING	DFA	--
E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC; RE: NOTE #4, #6, #9 & #11
E161	(2)DR	6.0A EA.	120	1	CONVECTION OVEN	WALL	24"/48"	SHUNT TRIP BREAKER
E163	DR	5.0A	120	1	TILT BRAISING PAN	WALL	24"	SHUNT TRIP BREAKER
E172	(2)JB	15.0A EA.	208	1	COMBI OVEN	WALL	24"/48"	BTC- SHUNT TRIP BREAKER
E187	JB	15.5A	120/208	1	HEATED CABINET	WALL	96"	BTC; MOUNT ON KITCHEN SIDE
E188	JB	7.2A	120	1	REFRIGERATOR	WALL	96"	BTC; MOUNT ON KITCHEN SIDE-OMIT PLUG, UNIT TO BE HARDWIRED
E201A	PMR	28.0A	208	1	HOT FOOD COUNTER	FLOOR	4.5"	BTC
E201B	PMR	16.0A	120	1	COLD FOOD COUNTER	FLR	4.5"	---
E209	PMR	8.0A	120	1	DROP FRONT MILK COOLER-8 CASE	FLR	4.5"	---
E214	PMR	16.0A	120	1	CASH REGISTER	FLR	4.5"	DEDICATED CIRCUIT
E214A	CS	---	---	---	POS	FLOOR	6"	BTC; CONDUIT W/DATA LINE TO RUN TO MANAGER'S OFFICE OR IDF ROOM-VERIFY
E250	JB/DS-JB	51.7A	480	3	DISHMACHINE	WALL	66"	BTC; EXTEND FROM JB/DS AT NEAREST WALL
E615	DR	5.0A	120	1	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE DCO AT VIDEO LOCATION
E615A	JB	---	---	---	VIDEO / DATA SYSTEM	CLG	VERIFY	PROVIDE JB AT DATA LOCATION

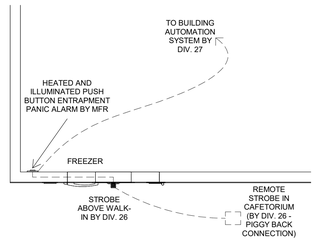
DIVISION 26 TO PROVIDE, COORDINATE, AND INSTALL THE FOLLOWING:
1. AUDIBLE DOORBELL AT RECEIVING DOOR ON EXTERIOR WALL THAT CAN BE HEARD THROUGHOUT THE ENTIRE KITCHEN, OFFICE AND DRY STORAGE ROOM.
2. ADEQUATE LIGHTING AT RECEIVING DOOR.
3. EDWARDS 860 SERIES (OR EQUAL) RED LENS, SURFACE-MOUNTED XENON EMERGENCY STROBE BEACONS. ONE (1) TO BE LOCATED IN THE KITCHEN ABOVE WALK-IN FREEZER DOOR (OR COOLER DOOR WHEN FREEZER IS WITHIN COOLER IN AN 'INLINE' ASSEMBLY), AND ONE (1) TO BE LOCATED IN THE CAFETORIUM (COORDINATE LOCATION WITH OWNERS). PROVIDE CONDUIT, WIRING, AND INTERCONNECT THE ILLUMINATED PUSH BUTTON PANIC ALARM IN THE WALK-IN FREEZER TO BOTH STROBE BEACONS (***CRITICAL***).

DIVISION 27 TO PROVIDE THE FOLLOWING:
1. CONDUIT, DATA, AND INTERCONNECTION FROM THE ILLUMINATED PUSH BUTTON PANIC ALARM INSIDE THE WALK-IN FREEZER TO THE BUILDING AUTOMATION SYSTEM. WHEN ACTIVATED, FACILITY PERSONNEL TO BE NOTIFIED - COORDINATE NOTIFICATION REQUIREMENTS WITH THE OWNER (***CRITICAL***).

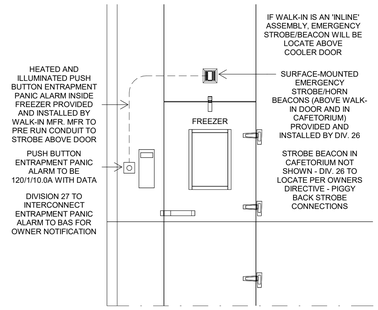
NOTE:
(FOR GRAPHICAL REPRESENTATION ONLY) SECTION 11 40 00 TO VERIFY LOCATION OF REFRIGERATION SYSTEM WITH APPROVED ARCHITECTURAL DRAWINGS.

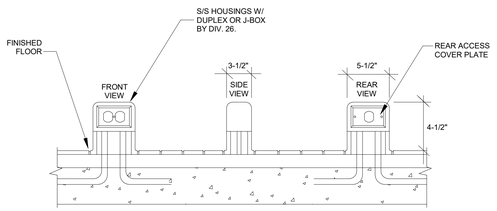


1 FOOD SERVICE ELECTRICAL PLAN
1/4" = 1'-0"



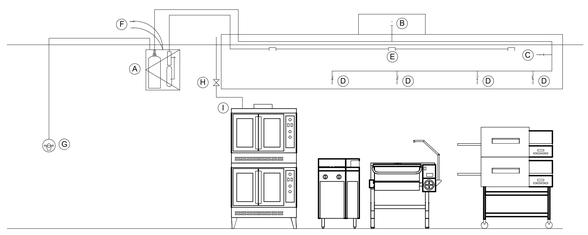
6 COLD STORAGE ASSEMBLY ENTRAPMENT PANIC ALARM DETAIL
NOT TO SCALE





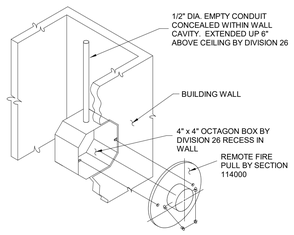
3 PEDESTAL MOUNTED RECEPTACLE DETAIL
NOT TO SCALE

NOTE:
REFER TO FDP EQUIPMENT PLAN FOR SPECIFIC COMPONENTS UNDER HOOD. ALL EQUIPMENT SHOWN HERE FOR GRAPHICAL REPRESENTATION ONLY.



A	S/S ENCLOSURE W/AGENT TANK AND NITROGEN CARTRIDGE
B	DUCT NOZZLE(S)
C	PLENUM NOZZLE(S)
D	SURFACE PROTECTION NOZZLE(S)
E	FUSIBLE LINK(S)
F	(2) WIRES FROM FIRE SYSTEM TO SHUNT TRIP BREAKERS FOR SHUT DOWN OF ELECTRICAL CONNECTIONS LOCATED BENEATH EXHAUST HOOD DURING FIRE MODE
G	REMOTE FIRE PULL
H	GAS VALVE
I	GAS SUPPLY (AS REQUIRED)

4 FIRE PROTECTION SYSTEM TYPICAL DETAIL
NOT TO SCALE



5 FIRE PROTECTION SYSTEM RECESSED FIRE PULL DETAIL
NOT TO SCALE

	SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES
•	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
	DR	DUPLEX RECEPTACLE		WPR	WATERPROOF RECEPTACLE (SPRING COVER)
	SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER
	SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT
	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
	PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR
	DCR	DROP CORD RECEPTACLE		CS/JB	JUNCTION BOX ON PEDESTAL
	JB	JUNCTION BOX ON CEILING		SW	SWITCH
	JB	JUNCTION BOX IN WALL		D	DATA
	JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26			

2 ELECTRICAL SYMBOLS
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM #4

FDP
FOODSERVICE DESIGN PROFESSIONALS

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FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILLS ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD
SUGAR LAND, TX 77498

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PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/15/2025

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ARCHITECTS AND PLANNING CONSULTANTS
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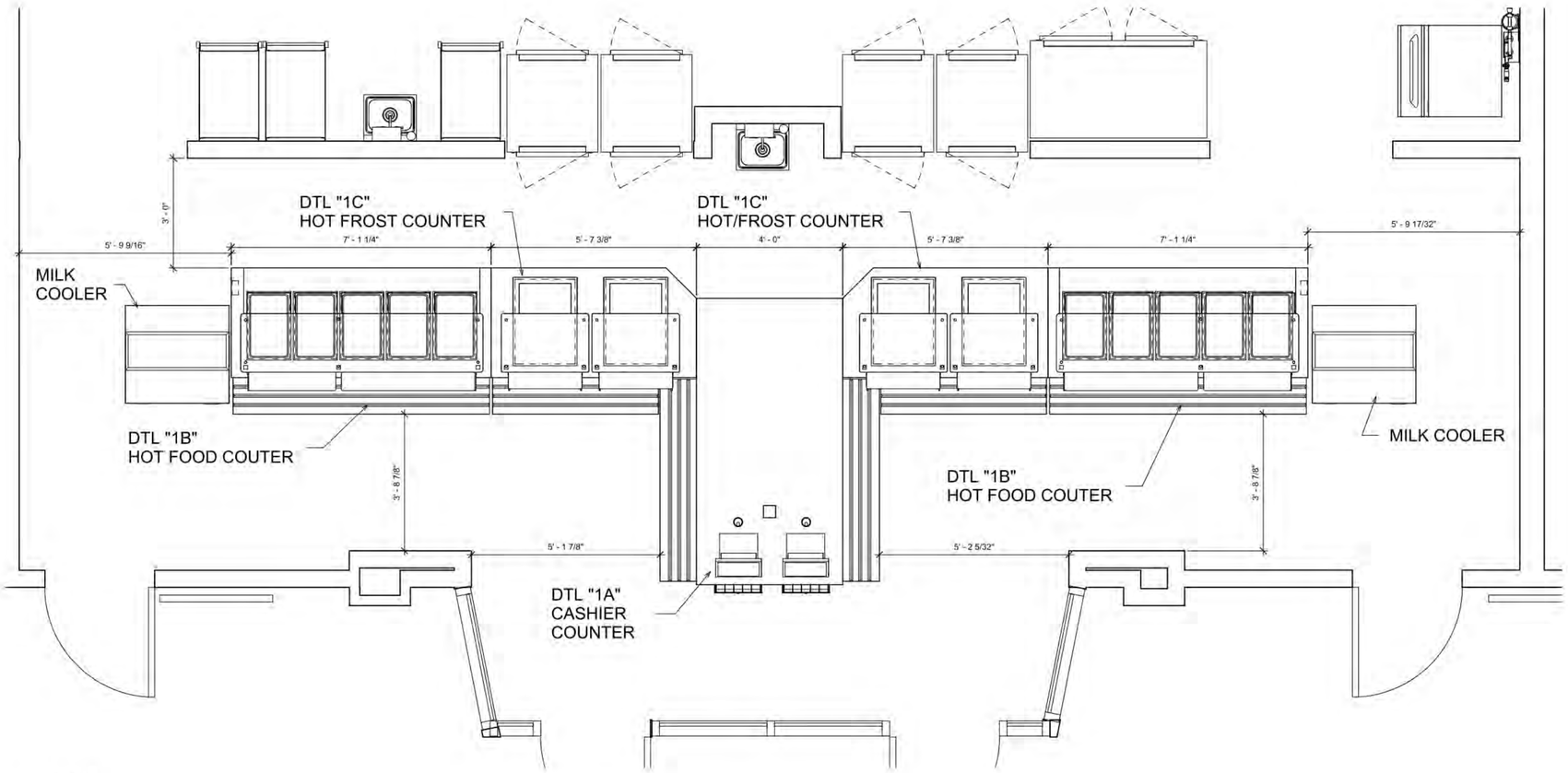
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 08/28/25
ADDENDUM #1

FS ELECTRICAL PLAN

U-QF1.5



2 CC2 LAYOUT

EQUIPMENT BY OTHERS
COUNTERCRAFT LAYOUTS, MEPS, AND LOAD CENTERS ARE BASED ON SPECIFIED MANUFACTURERS AND MODELS AS OUTLINED IN THE SPECIFICATIONS IN THE CONTRACT DOCUMENTS. COUNTERCRAFT MUST BE NOTIFIED OF ANY CHANGES TO THE CONTRACT DOCUMENTS IN A TIMELY MANNER.

NO	REVISIONS	DATE	BY
1	PRELIMINARY DWG	10/21/2024	MAX
2	REVISIONS	11/26/2024	MAX
3			
4			
5			
6			
7			
8			
9			

CounterCraft

FBISD Bond Package 013

FOODSERVICE DESIGN PROFESSIONALS

11/26/2024

CC2

ISSUE:

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FDP
FOODSERVICE DESIGN PROFESSIONALS

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FORT BEND INDEPENDENT SCHOOL DISTRICT
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13707 JESS PIRTLE BLVD
SUGAR LAND, TX 77498

SEAL

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Melissa Moore
7/15/2025 APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 46854119 ON: 07/18/2025

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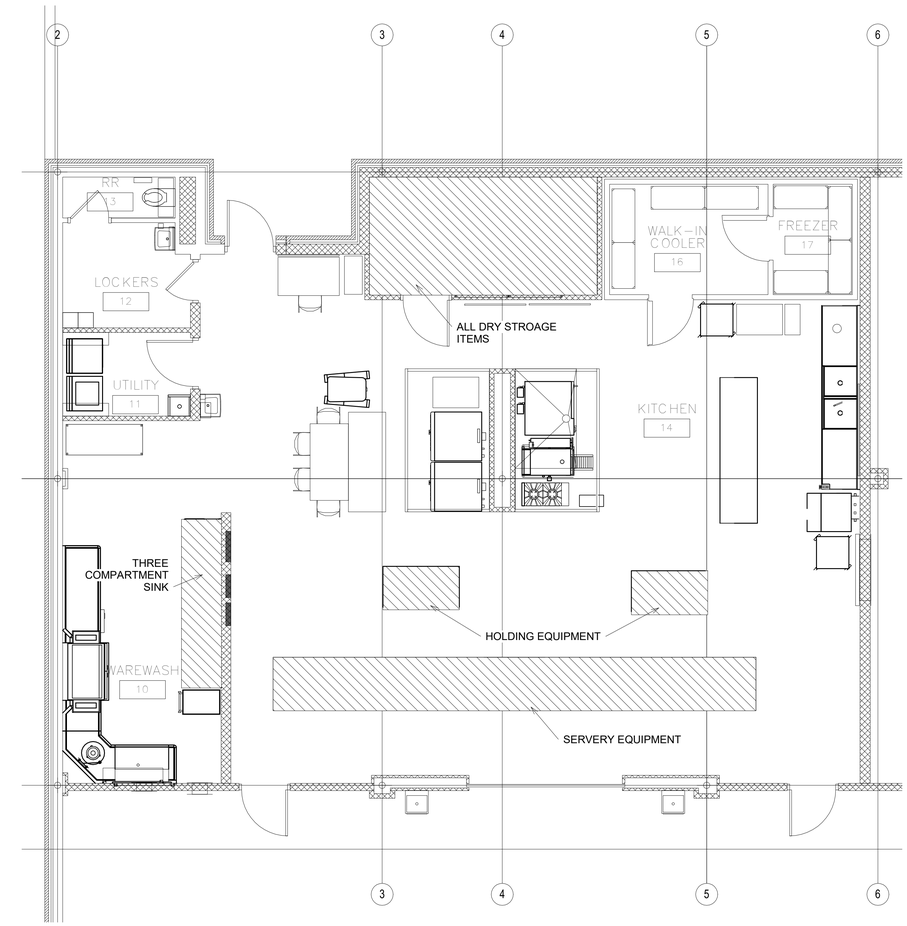
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/25
ISSUED FOR BIDDING AND PERMITTING
FS SERVING COUNTERS

U-QF1.9



1 FOOD SERVICE EQUIPMENT PLAN - DEMO PLAN
1/4" = 1'-0"

NOTE: ALL EQUIPMENT MAKERED WITH A
DIAGONAL HATCH TO BE RELOCATED
PER TEMPORARY SERVING PLAN SHEET U-QF2.0

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7/15/2025 APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI REG 48834119 ON 07/18/2025

MWA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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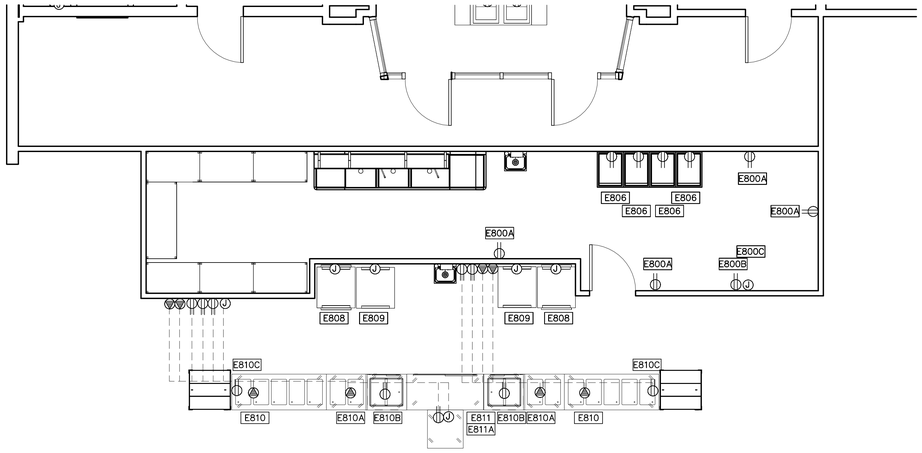
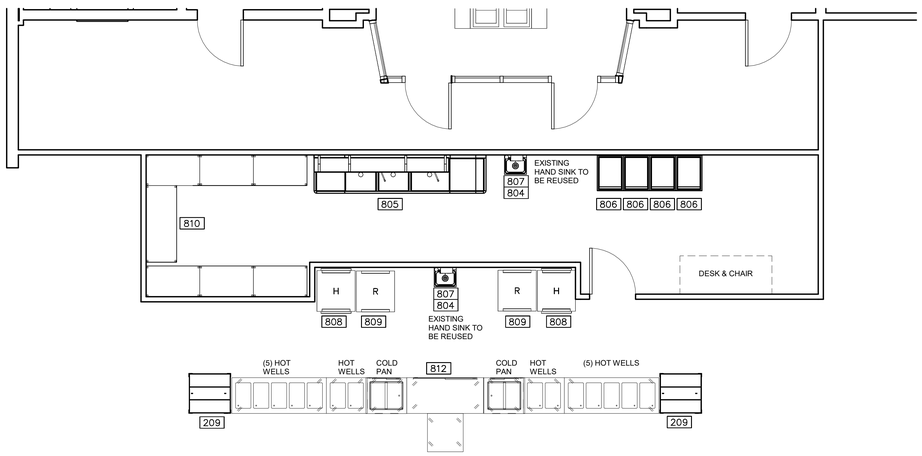
FS DEMO PLAN

U-QF2.0



4 FOOD SERVICE ELECTRICAL PLAN - TEMPORARY SERVING
1/4" = 1'-0"

FOOD SERVICE EQUIPMENT SCHEDULE - TEMPORARY SERVING					
REFER TO SHEET QF1 FOR GENERAL CONTRACTOR & HEALTH DEPARTMENT COORDINATION NOTES					
FDP ITEM	FDP QTY	FDP DESCRIPTION	FDP REMARKS	MANUFACTURER	MODEL
804	2	S/S SPLASH GUARDS		CUSTOM FABRICATED	
805	1	THREE COMPARTMENT SINK NO DISPOSER	EXISTING		
806	4	TRANSPORT CART	EXISTING		
807	2	HAND LAV	EXISTING		
808	2	REACH IN HEATED CABINET - 1DR	EXISTING		
809	2	REACH IN REFRIGERATOR - 1DR.	EXISTING		
810	1	DRY STORAGE SHELVING	EXISTING		
812	1	SERVING COUNTER	EXISTING		



1 FOOD SERVICE EQUIPMENT PLAN - TEMPORARY SERVING
1/4" = 1'-0"

FOOD SERVICE ELECTRICAL SCHEDULE - TEMPORARY SERVING								
REFER TO SHEET QF1 FOR ELECTRICAL COORDINATION NOTES								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E800A	DR	16.0A	120	1	CONVENIENCE	WALL	24"	---
E800B	DR	16.0A	120	1	CONVENIENCE	WALL	24"	DEDICATED CIRCUIT
E800C	JB	---	---	--	DATA CONNECTION	WALL	24"	---
E806	DR	16.0A	120	1	TRANSPORT CABINET	WALL	24"	---
E808	SR	7.8A	120/208	1	HEATED CABINET	WALL	96"	BTC; OMIT PLUG, UNIT TO BE HARDWIRED
E809	DR	8.2A	120	1	REFRIGERATOR	WALL	96"	BTC; OMIT PLUG, UNIT TO BE HARDWIRED
E810	SR	27.3A	208	1	(5) HOT WELLS	WALL	24"	EXTEND TO EQUIPMENT - CONFIRM NEMA PLUG
E810A	SR	7.9A	208	1	(2) HOT WELLS	WALL	24"	EXTEND TO EQUIPMENT - CONFIRM NEMA PLUG
E810B	DR	10.0A	120	1	COLD PAN	WALL	24"	EXTEND TO EQUIPMENT
E810C	DR	10.0A	120	1	BEVERAGE	WALL	24"	EXTEND TO EQUIPMENT
E811	DR	16.0A	120	1	CASH REGISTER	WALL	24"	DEDICATED CIRCUIT - EXTEND TO EQUIPMENT
E811A	JB	-	---	1	POS	WALL	24"	BTC

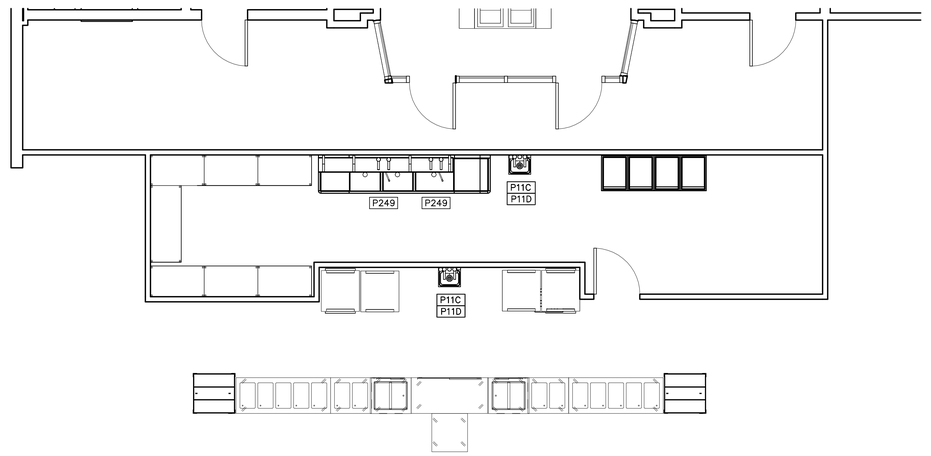
	SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES
•	CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
	DR	DUPLEX RECEPTACLE		WPR	WATERPROOF RECEPTACLE (SPRING COVER)
	SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER
	SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT
	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
	PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR
	DCR	DROP CORD RECEPTACLE		CS/JB	JUNCTION BOX ON PEDESTAL
	JB	JUNCTION BOX ON CEILING		SW	SWITCH
	JB	JUNCTION BOX IN WALL		D	DATA
	JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26			

5 ELECTRICAL SYMBOLS 1
NOT TO SCALE

FOOD SERVICE PLUMBING SCHEDULE - TEMPORARY SERVING						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC

	HW	HOT WATER		FFD	FUNNEL FLOOR DRAIN
	CW	COLD WATER		EVC	EXHAUST VENT CONNECTION
	HTW	180 F HOT WATER		SVC	SUPPLY VENT CONNECTION
		CHILLED WATER		FR	DIRECT-CONNECTED FLUE RISER
	W	DIRECT WASTE		PS	PIPE SLEEVE
	IW	INDIRECT WASTE			COMPRESSED AIR
		GAS SUPPLY			CO2
		STEAM SUPPLY		AFF	ABOVE FINISHED FLOOR
	CR	CONDENSATE RETURN		BTC	BRANCH TO CONN. ON EQUIP
	DR	DRAIN		DFA	DROP FROM ABOVE
	FD	FLOOR DRAIN		CLG	CEILING
	FST	FLOOR SINK 3/4 GRATE			
	FSH	FLOOR SINK 3/4 GRATE			

3 PLUMBING SYMBOLS 1
NOT TO SCALE



2 FOOD SERVICE PLUMBING PLAN - TEMPORARY SERVING
1/4" = 1'-0"

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05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING

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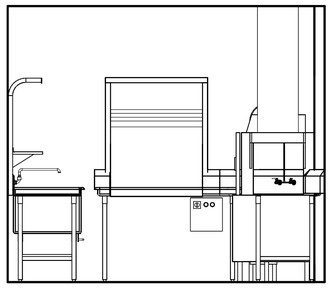
Melissa Moore
7/15/2025
DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/18/2025

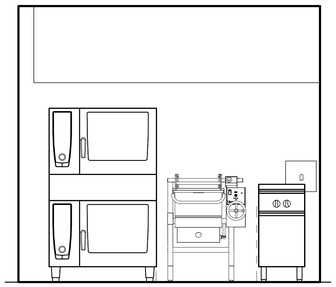
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/25
ISSUED FOR BIDDING AND PERMITTING
FS TEMPORARY SERVING

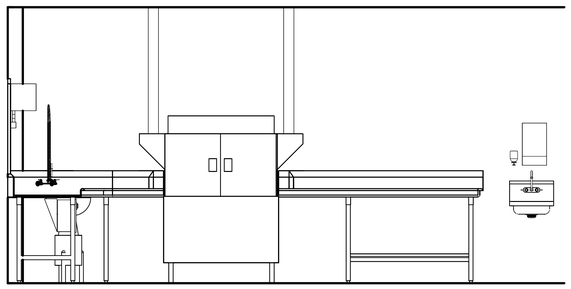
U-QF2.1



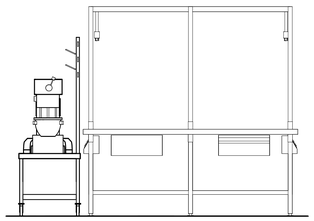
8 ELEVATION @ TRAY DROP
1/2" = 1'-0"



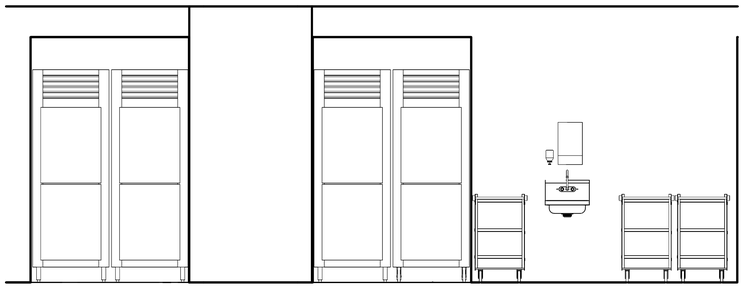
4 ELEVATION @ PRODUCTION LINE A
1/2" = 1'-0"



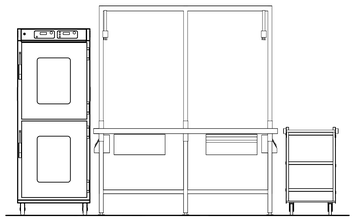
7 ELEVATION @ WAREWASH
1/2" = 1'-0"



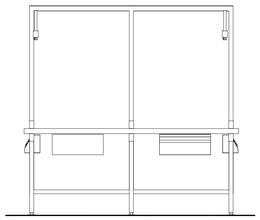
3 ELEVATION @ SETUP LINE B
1/2" = 1'-0"



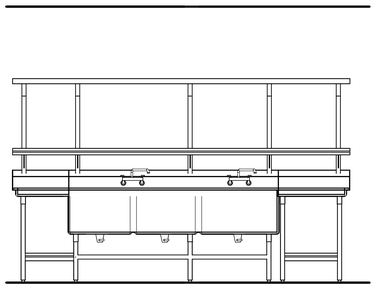
10 ELEVATION @ HOLDING
1/2" = 1'-0"



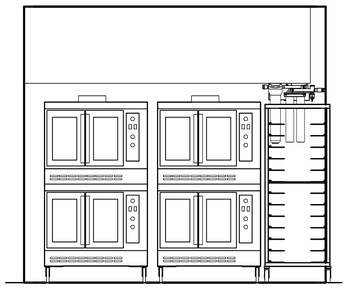
6 ELEVATION @ SETUP LINE C
1/2" = 1'-0"



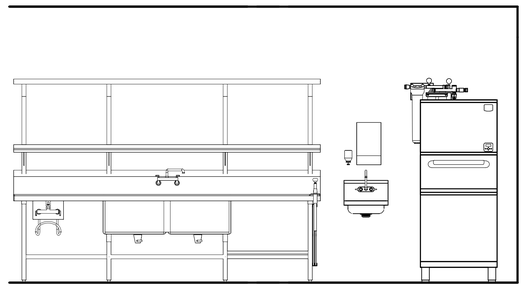
2 ELEVATION @ SETUP LINE A
1/2" = 1'-0"



9 ELEVATION @ UTENSIL WASH
1/2" = 1'-0"



5 ELEVATION @ PRODUCTION LINE B
1/2" = 1'-0"



1 ELEVATION @ PREP SINK
1/2" = 1'-0"

ISSUE:

12/05/2024	DD PACKAGE
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05/23/2025	90% CD PKG.
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FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILLS ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD
SUGAR LAND, TX 77498

SEAL

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025 APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 07/18/2025

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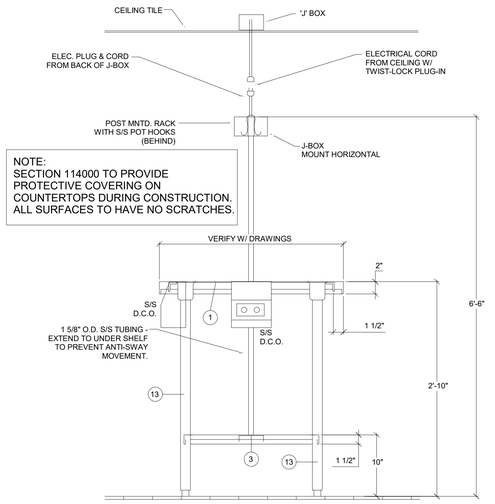
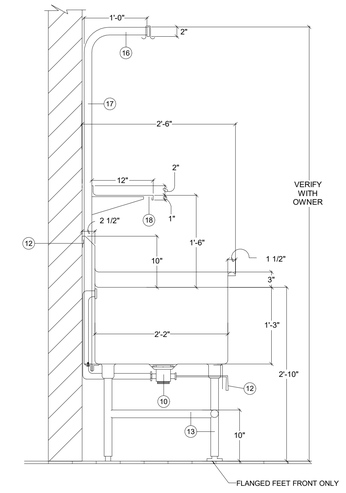
FS ELEVATIONS

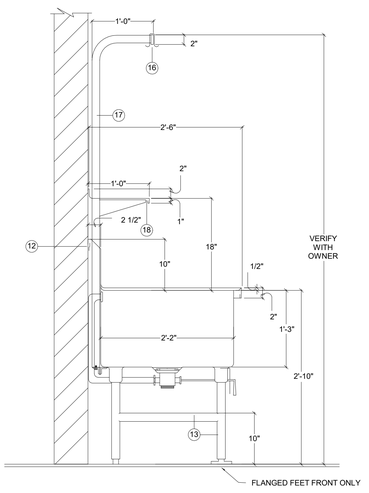
U-QF3.1



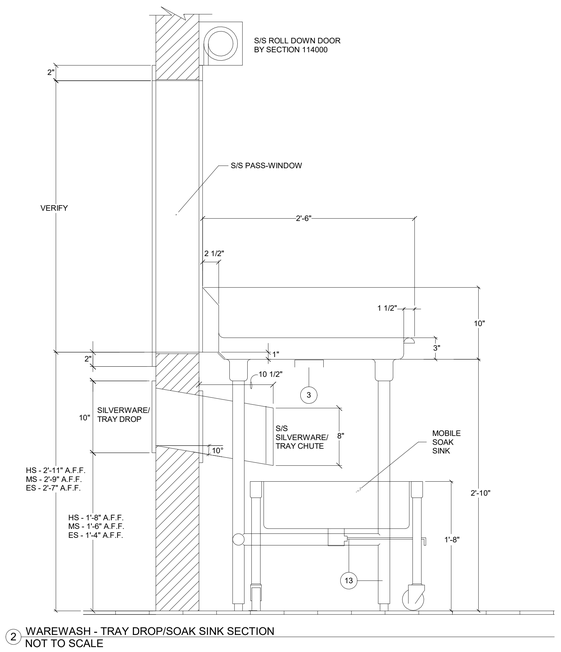
8 WORKTABLE - ISLAND W/ S.BAR UT RACK & END UC DCO SECTION
NOT TO SCALE



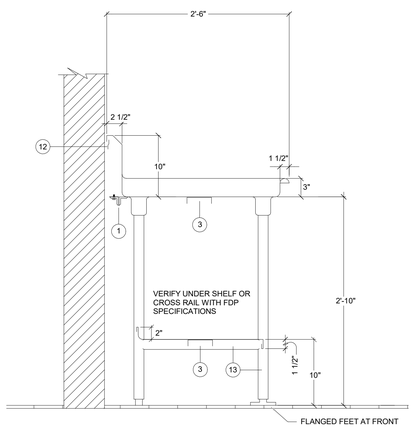
6 SINK - UTENSIL WASH SECTION
NOT TO SCALE



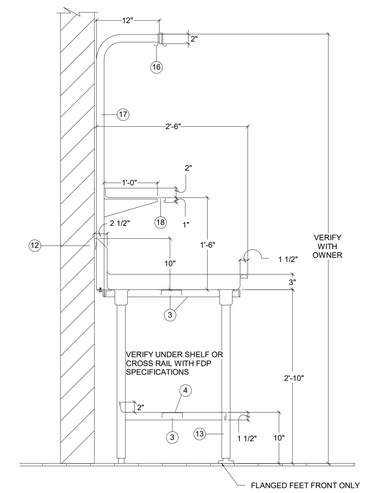
4 SINK - PREP TABLE SECTION
NOT TO SCALE



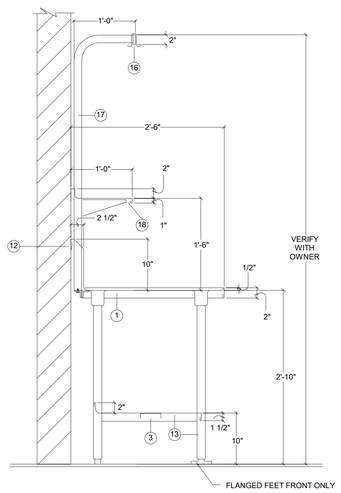
2 WAREWASH - TRAY DROP/SOAK SINK SECTION
NOT TO SCALE



7 DRAINBOARD
NOT TO SCALE



5 DRAINBOARD - UTENSIL WASH SECTION
NOT TO SCALE



3 DRAINBOARD - PREP SINK SECTION
NOT TO SCALE

SECTION DETAIL NOTES:

1. 1 1/2" X 1 1/2" X 1/8" GALVANIZED ANGLE IRON.
2. 1" X 4" 14 GAUGE STAINLESS STEEL HAT CHANNEL.
3. 16 GAUGE STAINLESS STEEL C-CHANNEL.
4. 16 GAUGE STAINLESS STEEL UNDER SHELF, COVE UP REAR 2", TURN DOWN FRONT 1 1/2".
5. 1/2" CEMENT BACKERBOARD WITH TILE FRONT BY TRADE CONTRACTOR OR COUNTER MANUFACTURER. VERIFY FINISH WITH ARCHITECTURAL DRAWINGS.
6. COLD PAN - 2" RIGID INSULATION WITH 1" C.P. DRAIN - 16 GAUGE STAINLESS STEEL SECTION FALSE BOTTOM. PERFORATE FALSE BOTTOM WITH 1/4" DIA. HOLES AT 3" O.C.
7. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN DOOR WITH RECESSED PULL.
8. MANIFOLD DRAINS AT HOT FOOD UNITS WITH 1" TYPE 'K' COPPER AND EXTEND TO VALVE IN PLUMBING COMPARTMENT.
9. FINISHED TRUE AND LEVEL MASONRY BASE BY DIVISION 09. CLOSE COUNTER BODY AT BASE AND SEAL BY SECTION 11 40 00.
10. FISHER #22314 DRAIN WITH TAILPIECE AND OVERFLOW.
11. 14 GAUGE STAINLESS STEEL BRACKET WITH DRAIN HANDLE BUSHING.
12. 16 GAUGE STAINLESS STEEL 'Z' CLIP TO WALL AND SEAL.
13. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL LEGS AND CROSS RAILS.
14. 1/2" S/S TUBING DRAIN LINE - STRAP TO SHELF AND WALL - EXTEND DOWN TO TOP OF SPLASH.
15. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL TUBING - SUPPORT FRONT OF SHELF WITH 1/2" ALL-THREAD INSIDE TUBING EXTENDING TO STRUCTURE ABOVE.
16. 1/4" S/S BAR STOCK WELDED TO TOP OF EACH POST - POT HOOKS TO BE COMPONENT HARDWARE #J77-4401 SPACED 8" O.C.
17. 1 5/8" 16 GAUGE STAINLESS STEEL TUBING - BOLT TO ANGLE IRON AND EXTEND UP THRU SPLASH TO 7'-0" A.F.F.
18. OVER SHELF - 16 GAUGE STAINLESS STEEL, COVE UP REAR 2", TURN FRONT AND ENDS DOWN 1", ENDS TO BE CAPPED WITH EASED CORNERS WHERE ADJACENT TO WALL / FIXTURE.
19. 18 GAUGE STAINLESS STEEL LOUVERED PANEL.
20. 18 GAUGE STAINLESS STEEL LOUVERED DOUBLE PAN DOOR WITH RECESSED PULL.
21. NUMBER NOT USED.
22. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN SLIDING DOOR WITH COMPONENT HARDWARE COMPONENTS

    A. #B57 - (VERIFY LENGTH) EXTRUDED ALUMINUM TRACK.
    B. #B58-5511 & #B58-5521 FRONT & REAR DOOR SHEAVES.
    C. #B62-1093 DOOR GUIDE.
    D. #B60-1086 DOOR STOPS WHERE NEEDED.
    E. #P62-1010 RECESS PULLS.

1 SECTION DETAIL NOTES
NOT TO SCALE

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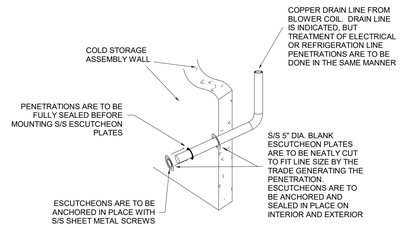
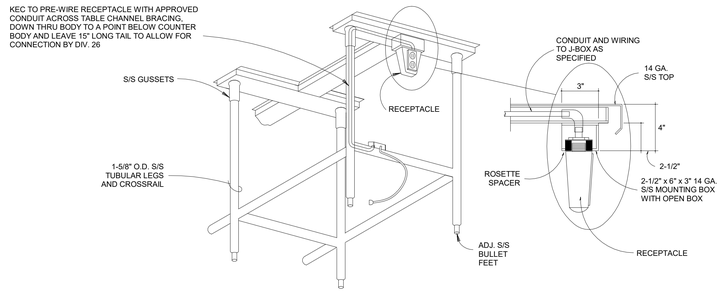
FS SECTIONS & DETAILS

U-QF4.1



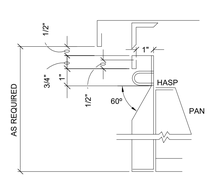
3 COLD STORAGE ASSEMBLY ESCUTCHEON & PENETRATION DETAIL
NOT TO SCALE

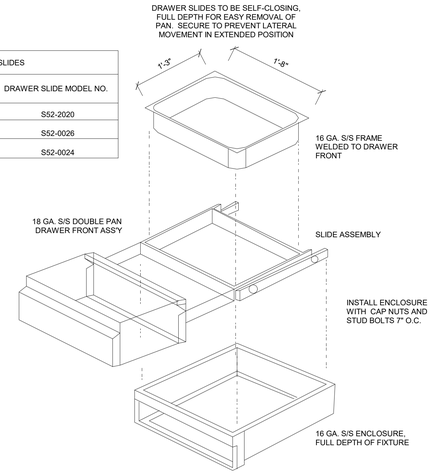
NOTE:
COORDINATE ALL RECEPTACLES WITH ELECTRICAL CONTRACT DRAWING REQUIREMENTS, REFER TO ELECTRICAL PLAN



5 WORKTABLE - ELECTRICAL RECEPTACLE MOUNTED UNDER TOP DETAIL
NOT TO SCALE

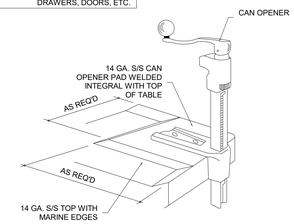
COMPONENT HARDWARE DRAWER PAN AND SLIDES		
TYPE	DRAWER PAN MODEL NO.	DRAWER SLIDE MODEL NO.
UTILITY	S80-2020	S52-2020
BREAD	S83-2020	S52-0026
REFRIGERATOR	S81-1520	S52-0024



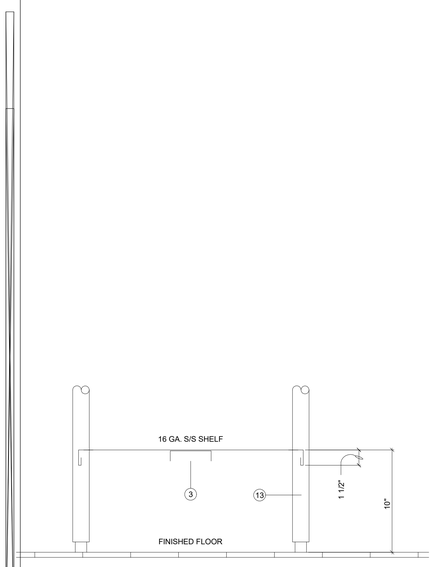


6 DRAWER ASSEMBLY DETAIL
NOT TO SCALE

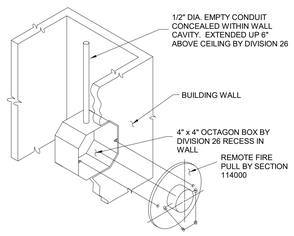
NOTE: DO NOT LOCATE CAN OPENER PAD IN A POSITION THAT WOULD ALLOW CAN OPENER TO OBSTRUCT OPENING OF DRAWERS, DOORS, ETC.



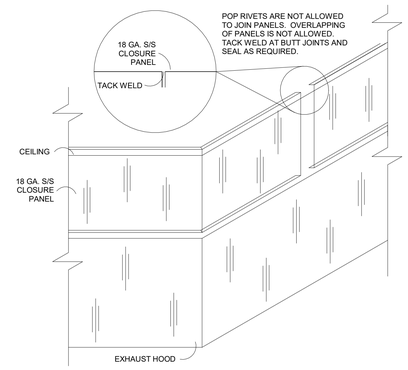
10 SINK - PREP MARINE EDGE CAN OPENER DETAIL
NOT TO SCALE



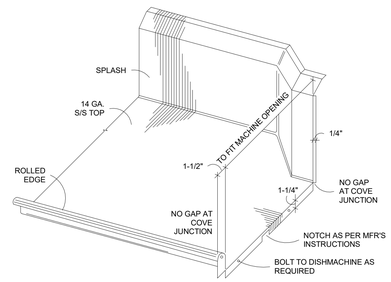
7 UNDER SHELF DETAIL
NOT TO SCALE

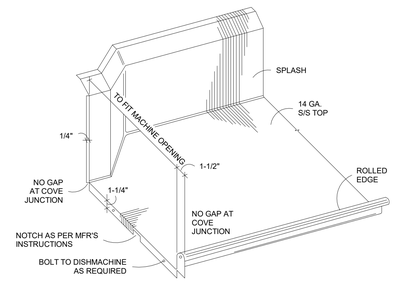


12 FIRE PROTECTION SYSTEM FIRE PULL DETAIL
NOT TO SCALE



13 EXHAUST HOOD CLOSURE PANEL DETAIL
NOT TO SCALE





14 DISHTABLE - SOILED & CLEAN CONNECTION DETAIL
NOT TO SCALE

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APPEARING ON THIS

MWA ARCHITECTS
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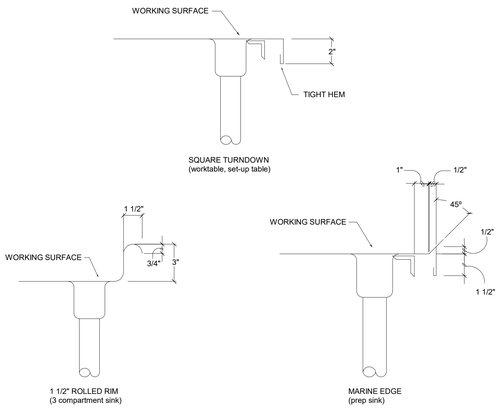
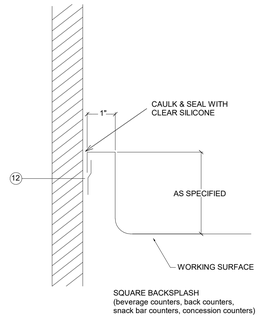
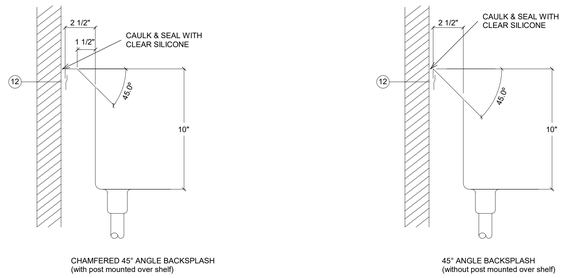
U-QF4.2



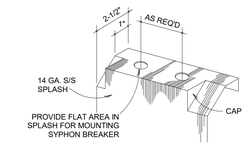
1 EDGE DETAILS
NOT TO SCALE



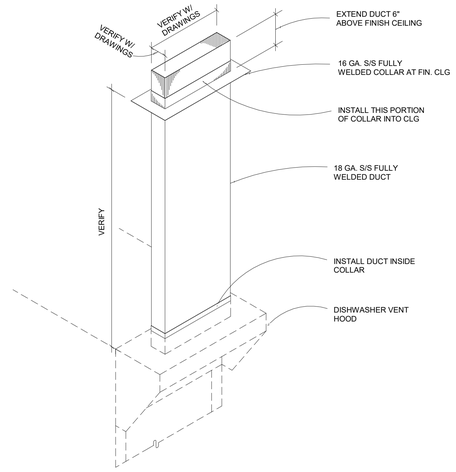
SQUARE BACKSPLASH
(beverage counters, back counters,
snack bar counters, concession counters)



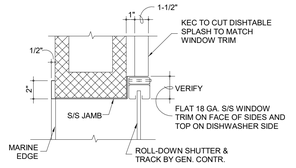
2 BACKSPLASH DETAILS
NOT TO SCALE



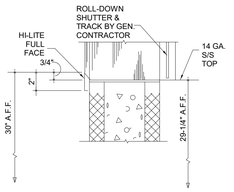
6 SPLASH @ SYPHON BREAKER
NOT TO SCALE



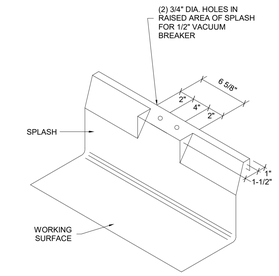
5 DISHMACHINE VENT RISER DETAIL
NOT TO SCALE



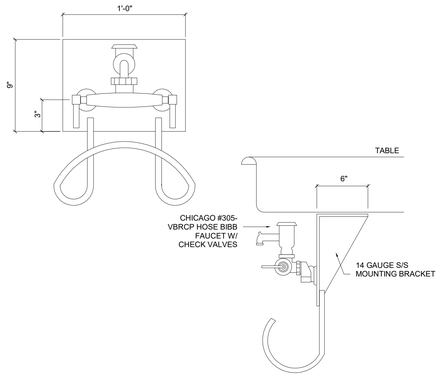
4 WAREWASH - TRAY DROP WINDOW SECTION
NOT TO SCALE



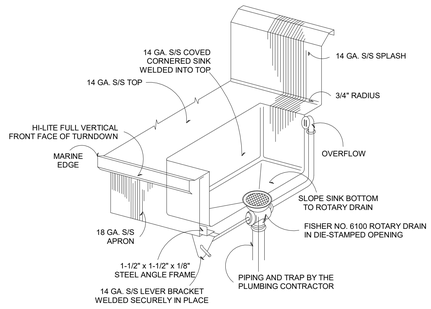
3 WAREWASH - TRAY DROP SECTION
NOT TO SCALE



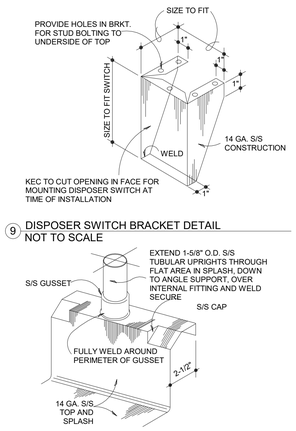
8 VACUUM BREAKER DETAIL
NOT TO SCALE



12 HOSE BIBB DETAIL
NOT TO SCALE

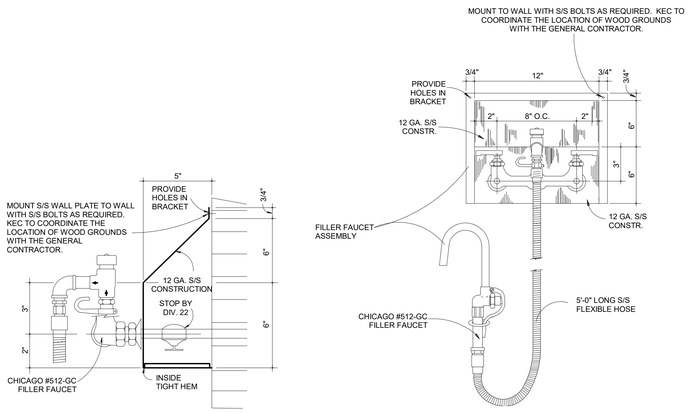


11 SINK ASSEMBLY DETAIL
NOT TO SCALE

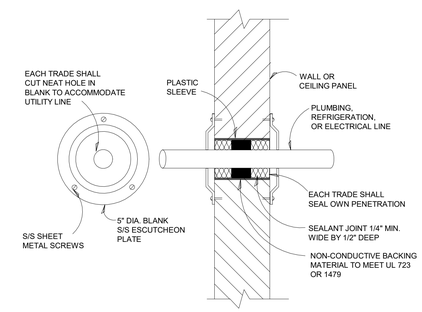


9 DISPOSER SWITCH BRACKET DETAIL
NOT TO SCALE

7 SPLASH @ UPRIGHT (DISH TABLE) DETAIL
NOT TO SCALE



14 FILL FAUCET DETAIL
NOT TO SCALE



15 COLD STORAGE ASSEMBLY WALL PENETRATION DETAIL
NOT TO SCALE

CUSTOM FABRICATION NOTES:

A. WORK SHALL BE DONE IN AN APPROVED WORKMANLIKE MANNER, TO COMPLETE SATISFACTION OF FOODSERVICE DESIGN PROFESSIONALS (FDP).

B. STAINLESS STEEL SHALL BE U.S. STANDARD GAUGES AS CALLED FOR. 18-8, TYPE 304, NOT OVER .012% MAXIMUM CARBON, NO. 4 FINISH.

C. GALVANIZED IRON SHALL BE ARMCO OR EQUAL. FRAMEWORK OF GALVANIZED IRON SHALL BE WELDED CONSTRUCTION, HAVING WELDS SMOOTH, AND WHERE GALVANIZING HAS BURNED OFF, TOUCHED UP WITH HIGH-GRADE ALUMINUM BRONZE.

D. LEGS AND CROSSRAIL SHALL BE CONTINUOUSLY WELDED, UNLESS OTHERWISE NOTED, AND GROUND SMOOTH.

E. BOTTOM OF LEGS AT FLOOR SHALL BE FITTED WITH SANITARY STAINLESS STEEL BULLET-TYPE FOOT, WITH NO LESS THAN 1/2" ADJUSTMENT.

F. LEGS SHALL BE FASTENED TO EQUIPMENT AS FOLLOWS:

01. TO SINKS BY MEANS OF CLOSED GUSSETS. GUSSETS SHALL BE S/S, REINFORCED WITH BUSHING, HAVING SET SCREWS FOR SECURING LEGS.

02. TO TABLES AND DRAINBOARDS WITH CLOSED GUSSETS WHICH SHALL BE WELDED TO GALVANIZED HAT SECTIONS OR CHANNELS, 14 GAUGE OR HEAVIER, EXPOSED HAT SECTIONS HAVING CLOSED ENDS. BRACING SHALL BE UNDERSIDE OF TOPS.

G. CLOSED GUSSETS SHALL BE 3" MINIMUM DIAMETER AT TOP, WELDED TO FRAME MEMBERS OR TO SINK BOTTOM.

H. ROLLS SHALL BE 1 1/2" DIAMETER, EXCEPT AS DETAILED TO THE CONTRARY, WITH CORNERS BULLNOSED, GROUND, AND POLISHED.

I. SEAMS AND JOINTS SHALL BE SHOP-WELDED WHERE POSSIBLE. WELDS TO BE GROUND AND POLISHED TO MATCH ORIGINAL FINISH. MATERIALS 18 GAUGE OR HEAVIER SHALL BE WELDED.

J. METAL TOPS SHALL BE ONE-PIECE WELDED CONSTRUCTION UNLESS SPECIFIED OTHERWISE, REINFORCED ON UNDERSIDE WITH GALVANIZED HAT SECTIONS OR CHANNELS WELDED IN PLACE. CROSSBRACE TO BE NOT MORE THAN 30" ON CENTERS.

K. HARDWARE SHALL BE SOLID MATERIALS AND EXCEPT WHERE EXPOSED OR SPECIFIED TO THE CONTRARY, OF CAST BRASS, CHROME-PLATED. IDENTIFY ALL HARDWARE WITH MANUFACTURER'S NAME AND NUMBER SO THAT BROKEN OR WORN PARTS MAY BE ORDERED AND REPLACED.

L. FABRICATE SINK COMPARTMENTS WITH 3/4" COVED VERTICAL AND HORIZONTAL CORNERS. MULTIPLE- COMPARTMENT PARTITIONS TO BE DOUBLE THICKNESS, CONTINUOUSLY WELDED WHERE SHEETS JOIN AT TOP. FRONT OF MULTIPLE-COMPARTMENT PARTITIONS TO BE CONTINUOUS ON EXTERIOR. BOTTOMS SHALL BE CREASED TO DRAIN.

M. ENDS OF FIXTURES, SPLASHBACKS, SHELVES, ETC., SHALL BE FINISHED FLUSH TO WALLS OR ADJOINING FIXTURES.

N. DISHTABLES, DRAINBOARDS, SPLASHBACKS, AND TURN-UP EDGES SHALL HAVE RADIUS BENDS IN ALL HORIZONTAL AND VERTICAL CORNERS, COVED AT INTERSECTIONS.

O. ROUNDED AND COVED CORNERS OR RADIUS BENDS SHALL BE 1/2" RADIUS OR LONGER.

P. UNDERSIDES OF TOPS TO BE COATED WITH HEAVY-BODIED RESINOUS MATERIAL COMPOUND FOR PERMANENT, NON-FLAKING ADHESION TO METAL, 1/8" THICK, APPLIED AFTER REINFORCING MEMBERS HAVE BEEN INSTALLED, DRYING WITHOUT DIRT-CATCHING CREVICES.

Q. SHELVES ARE TO BE TURNED UP 2" ON THE BACK EDGE. TURN OTHER EDGES DOWN 1 1/2" TO FORM OPEN CHANNELS. REINFORCE SHELF UNITS TO SUPPORT 40 LBS. PER SQUARE FOOT LOADING, PLUS 100% IMPACT LOADING.

R. TRIMWORK AND FRAMING AT MASONRY OPENINGS SHALL BE 18 GAUGE STAINLESS STEEL AND FORMED SO AS TO FIT SNUG TO WALLS AND ADJACENT SURFACES. FRAMING SHALL EXTEND A MINIMUM OF 2" ON EACH SURFACE. SEAL TRIMWORK TO WALLS. REFER TO DRAWINGS.

S. METAL COMPONENTS, UNLESS SPECIFIED OR NOTED OTHERWISE, TO BE THE FOLLOWING GAUGES:

TABLETOPS	14 GAUGE STAINLESS STEEL
WALL SHELVES	16 GAUGE STAINLESS STEEL
UNDER SHELVES	16 GAUGE STAINLESS STEEL
SINKS & DRAINBOARDS	14 GAUGE STAINLESS STEEL
EXHAUST DUCTS	18 GAUGE STAINLESS STEEL
LEGS - 1 5/8" DIA.	16 GAUGE STAINLESS STEEL

10 CUSTOM FAB NOTES
NOT TO SCALE

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING

FDP
FOODSERVICE DESIGN PROFESSIONALS

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILLS ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD
SUGAR LAND, TX 77498

SEAL
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
7/15/2025
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MELISSA MOORE, FCSI NO: 48854119 ON: 07/15/2025
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ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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DATE: 07/18/25
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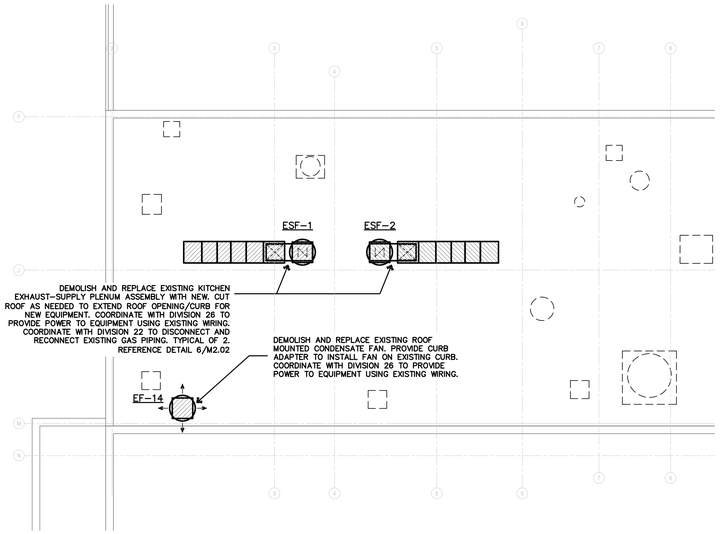
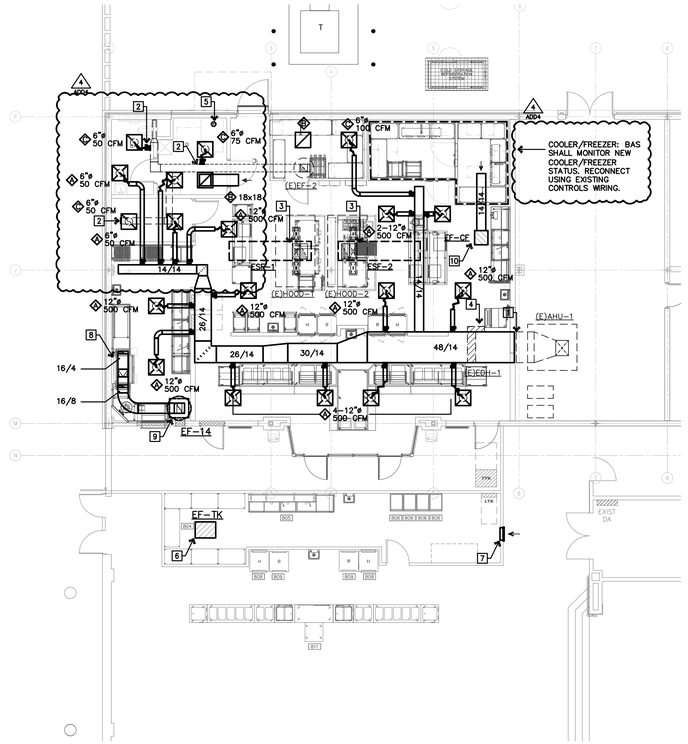
FS DETAILS

U-QF4.3



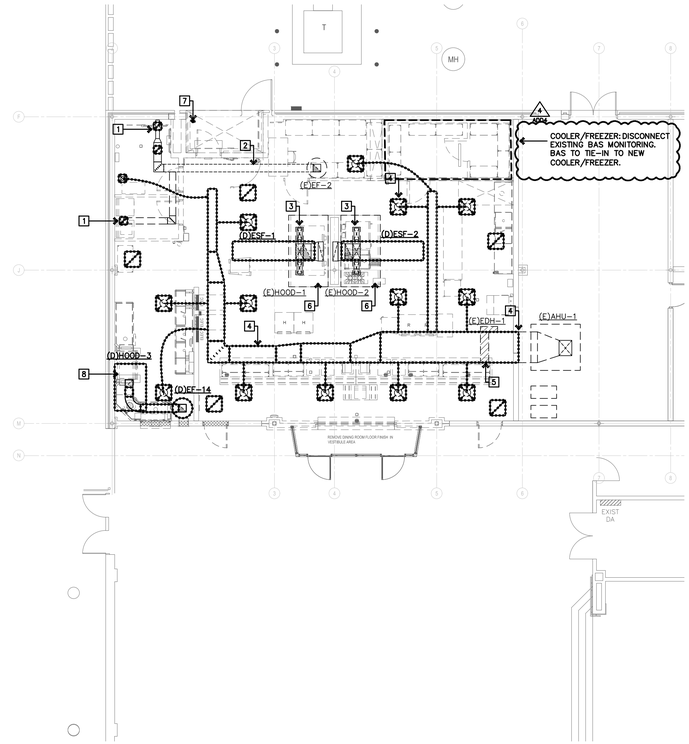
3 MECHANICAL ROOF FLOOR PLAN
SCALE: 1/8" = 1'-0"

NORTH



2 RENO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"

NORTH



1 DEMO MECHANICAL FLOOR PLAN - KITCHEN AREA
SCALE: 1/8" = 1'-0"

NORTH

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A	CEILING DIFFUSER – 24" X 24" FACE, PATTERN TYPE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE SCD A1-12" X 12"
B	CEILING RETURN GRILLE – 24" X 24" PERFORATED FACE, STEEL CONSTRUCTION, WHITE FINISH, U.L. LISTED PRICE PDFR B1-12" X 12"
C	CEILING EXHAUST GRILLE – 24" X 24" PERFORATED FACE, STEEL CONST., WHITE FINISH, NECK SIZE SHOWN, U.L. LISTED PRICE PDDR C1-12" X 12"

NOTES:
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPES FOR AIR DEVICES.

A 4004

KITCHEN HOOD REFURBISHMENT NOTES

HOOD REFURBISHMENT FOR KITCHEN HOODS (QUANTITY 2):
- STEAM WASH AND DEEP CLEAN STAINLESS STEEL HOOD ASSEMBLY, CASING, AND SUPPLY GRILLES WHERE APPLICABLE.
- REPLACE GREASE FILTER RACKS.
- CLEAN EXISTING MAKE-UP AIR AND GREASE EXHAUST DUCT.
- RELAMP EXISTING LIGHT FIXTURES WITH NEW 4000K BULBS LISTED FOR USE IN AN ENCLOSED KITCHEN HOOD FIXTURE.
- COORDINATE WITH DIVISION 11 FOR REPLACEMENT OF ANSUL FIRE SUPPRESSION SYSTEM.
- HOOD ASSEMBLIES SHALL BE CLEANED TO MEET THE STANDARDS ESTABLISHED IN NFPA STANDARD 96.

KITCHEN HOOD EXHAUST & MAKE-UP AIR UNIT SCHEDULE

MARK	ESF-1,2
SERVES	KITCHEN HOOD-1 & 2
SUPPLY SECTION	
TYPE	INDIRECT GAS-FIRED MAKE-UP AIR UNIT
DRIVE	DIRECT
SPEED CONTROL	VFD
SUPPLY CFM	2250
EXT. S.P. (IN. W.G.)	0.375
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	4.6 A
UNIT MOCP	15 A
HEATING MEDIUM	NATURAL GAS
INPUT/OUTPUT (MBH)	150.0/121.5
TURNDOWN RATIO	4:1
MANUFACTURER	GREENHECK
MODEL	IGX-P109-H12-MF-E
EXHAUST SECTION	
TYPE	UPBLAST BELT DRIVE CENTRIFUGAL
EXHAUST CFM	3600
EXT. S.P. (IN. W.G.)	0.75
HORSEPOWER (WATTS)	1-1/2 HP
VOLTAGE	480V/3-PHASE
UNIT MCA	3.75 A
UNIT MOCP	15 A
MANUFACTURER	GREENHECK
EXHAUST FAN MODEL	CUBE-200-15

NOTES
1. EXHAUST FAN: PROVIDE FAN WITH PRE-FABRICATED ROOF CURB ADAPTER, VENTED CURB EXTENSION, HINGING KIT, HEAT BAFFLE, DRAIN CONNECTION, GREASE TRAP, AND DISCONNECT SWITCH. FANS SHALL BE UL LISTED FOR USE WITH TYPE 1 GREASE HOOD.
2. EXHAUST FAN: PROVIDE NEW MOTOR STARTER, SIZED FOR EXHAUST FAN MOTOR AND INSTALLED IN PLACE OF EXISTING. REFERENCE THE SPECIFICATIONS FOR STARTER REQUIREMENTS. COORDINATE WITH DIV.25 FOR RE-TERMINATION OF PERMISSIVE ON/OFF CONTROL. COORDINATE WITH DIV.26 FOR RE-TERMINATION OF LOCAL HOOD SWITCH INTERLOCK FOR START/STOP CONTROL.
3. SUPPLY FAN/FURNACE: FLUE GAS FROM HEATING COIL SHALL BE POWER VENTED.
4. SUPPLY FAN/FURNACE: WEATHERHOOD WITH ALUMINUM MESH.
5. SUPPLY FAN/FURNACE: 5 YEAR HEAT EXCHANGER WARRANTY.
6. SUPPLY FAN/FURNACE CONTROLS: INTEGRAL HEATER CONTROLS WITH BAS INTERLOCK FOR PERMISSIVE ON/OFF AND LOCAL SWITCH INTERLOCK FOR CONTROL FROM KITCHEN HOOD SWITCH. FURNACE CONTROLS SHALL BE PROGRAMMED FOR 64°F LAT, WITH A LOCKOUT FOR O/A TEMPERATURES ABOVE THE LAT SETPOINT. COORDINATE WITH DIV.25 AND DIV.26 FOR CONTROLS AND SWITCH INTERLOCKS.
7. TWO POINT POWER CONNECTION: ONE FOR EXHAUST FAN AND ONE FOR INTAKE/SUPPLY FAN.
8. INTERLOCK FAN(S) WITH ASSOCIATED COOKING HOOD
9. INTERLOCK FAN WITH SWITCH ON KITCHEN HOOD.
10. UNIT TO BE PROVIDED WITH GALVANIZED STEEL FAN PACK EXTENSION/COMBINATION CURB.
11. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH.
12. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.

A 4004

MECHANICAL RENO KEYED NOTES

1. TIE-IN NEW DUCTWORK TO EXISTING DUCTWORK AT WALL PENETRATION.
2. CONNECT NEW AIR DEVICE AND TAP TO EXISTING E/A TRUNK DUCT.
3. REWORK EXISTING EXHAUST AND SUPPLY DUCTWORK FROM EXISTING KITCHEN HOOD UP TO FAN, AS REQUIRED, WITH NEW TRANSITIONS AND SUPPLY AIR DUCTWORK OFFSETS TO MATE WITH NEW FAN CURB.
4. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
5. NEW DRYER VENT DUCT AND VENT CAP. REFER TO DETAIL 4/M2.02.
6. TEMP. KITCHEN – CEILING MOUNTED CABINET EXHAUST FAN. REFER TO DETAIL 1/M2.02.
7. TEMP. KITCHEN – 24"X24" SIDE WALL GRILLE. SURFACE MOUNT OPTIONAL. AUXILIARY FRAME. TITUS CT-700.
8. RECONFIGURE DUCTWORK TO CONNECT TO NEW DISHMACHINE HOOD OUTLETS. REF. KITCHEN CONSULTANT DRAWINGS FOR EXACT DIMENSIONS OF DUCT CONNECTIONS.
9. CONDENSATE EXHAUST DUCT UP THROUGH ROOF TO NEW EXHAUST FAN SET ON NEW ROOF CURB. REUSE EXISTING ROOF PENETRATION.
10. INLINE FAN INSTALLED ABOVE PLENUM. REFER TO DETAIL 2/M2.02.

EXHAUST FAN SCHEDULE

MARK	EF-TK	EF-CF	EF-14
SERVES	TEMPORARY KITCHEN	COOLER/FREEZER	DISH WASHER
TYPE	CEILING CABINET	INLINE FAN	ROOF UPBLAST
DRIVE	DIRECT	DIRECT	DIRECT
SPEED CONTROL	INTEGRAL SPEED CONTROLLER	CONSTANT	CONSTANT
CFM	1055	1000	1200
EXT. S.P. (IN. W.G.)	0.3	0.35	0.60
IMP. SIZE (IN.)	8.0	13.5	14.0
HORSEPOWER (WATTS)	1/3 HP	1/6 HP	1/3 HP
VOLTAGE	120V/1-PHASE	120V/1-PHASE	120V/1-PHASE
MANUFACTURER	COOK	COOK	COOK
MODEL	GC-862	1355DN10D	CUE-140-B
SONES (MAX.)	15.0	15.0	15.0
NOTES	1 THRU 4	1 THRU 4	1 THRU 5

NOTES
1. STATIC PRESSURE SHOWN IS EXTERNAL TO THE UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN. FANS SHALL BE CAPABLE OF 120% OF THE SCHEDULED CFM CAPACITY.
2. INTEGRAL DISCONNECT SWITCH.
3. RUBBER IN-SHEAR ISOLATORS.
4. REFER TO WRITTEN SPECS FOR ADDITIONAL REQUIREMENTS.
7. FAN SHALL BE WIND RATED 141 MPH OR WIND SPEED LISTED IN ASCE/SEI 7-22, RISK CATEGORY III FOR PROJECT ADDRESS, IF LESS THAN 141 MPH.

A 4004

MECHANICAL DEMO KEYED NOTES

1. DEMOLISH EXISTING AIR DEVICE, BRANCH DUCT, DAMPER AND TAP BACK TO TRUNK DUCT. CAP AND SEAL RESULTING OPENING.
2. EXISTING E/A TRUNK DUCT TO REMAIN.
3. DISCONNECT EXISTING S/A AND E/A DUCTWORK SERVING KITCHEN HOODS FROM FAN ASSEMBLY AND HOOD. DUCTWORK SHALL REMAIN FOR FUTURE USE/RE-CONNECTION. DEMOLISH SUPPLY AND EXHAUST FAN PLENUM ASSEMBLY SERVING KITCHEN HOODS, ALONG WITH CURB. NEW CURB TO BE PROVIDED AND INSTALLED AS PART OF RENOVATION.
4. DEMOLISH ALL EXISTING AIR DEVICES, DUCTWORK, AND DUCTWORK ACCESSORIES SERVING KITCHEN AREA BACK TO MECH. ROOM WALL PENETRATION.
5. EXISTING ELECTRIC DUCT HEATER TO BE RETAINED FOR RE-INSTALLATION IN RENOVATION PHASE.
6. REFURBISH EXISTING KITCHEN HOOD. REFER TO "KITCHEN HOOD REFURBISHMENT NOTES".
7. DEMOLISH AND REPLACE EXISTING DRYER EXHAUST DUCT AND FLUE VENT CAP.
8. DEMOLISH EXISTING CONDENSATE HOOD, ASSOCIATED DUCTWORK, AND ROOF EXHAUST FAN.

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09/04/2025	ADDENDUM 04

A 4004

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FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILL ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD.
SUGAR LAND, TX 77498

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED PROFESSIONAL ENGINEER
09.04.2025

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PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

KITCHEN AREA MECHANICAL PLANS
U-M1.01

STANTON ENGINEERING GROUP
INFORMATION@STANTONENG.COM (713) 300-4080

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12800 W. SAM HOUSTON PARKWAY N., SUITE 125, HOUSTON, TX 77040

MECHANICAL SYMBOL SCHEDULE

CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
RS	REFRIGERANT SUPPLY
RR	REFRIGERANT RETURN
D	CONDENSATE LINE
	PETE'S PLUG
	ISOLATION VALVE
	ELECTRONIC CONTROL VALVE
	BUTTERFLY VALVE
	BALL VALVE
	UNION OR FLANGE
	STRAINER
	AUTOMATIC AIR VENT
T	LOCAL CONTROL THERMOSTAT
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	FIRE/SMOKE COMBINATION DAMPER
MD	MOTORIZED DAMPER
C	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST GRILLE
10Ø	RETURN AIR OPENING IN WALL
VD	VOLUME DAMPERS
	DUCT ELEVATION CHANGE
	90° DUCT ELBOW WITH TURNING VANES
	FLEXIBLE DUCT

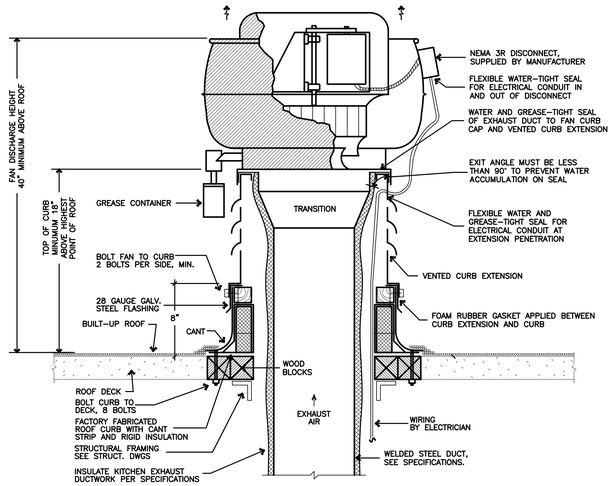
M	DAMPER MOTOR
T	TEMPERATURE TRANSMITTER
FS	FLOW SWITCH
P	DIFFERENTIAL PRESSURE SENSOR
SD	DUCT SMOKE DETECTOR
PS	STATIC PRESSURE SENSOR
PH	STATIC PRESSURE SENSOR HI-LIMIT
	ACCESS PANEL

A.P.	ACCESS PANEL
AHU	AIR HANDLING UNIT
B	BOILER
CH	CHILLER
CHP	CHILLED WATER PUMP
CVT	CONSTANT VOLUME TERMINAL
DH	DEHUMIDIFIER
E/A	EXHAUST AIR
EF	EXHAUST FAN
F&B	FACE & BYPASS
FF	FLY FAN
HDT	HORIZONTAL DRAW THROUGH
HWP	HOT WATER PUMP
KEF	KITCHEN EXHAUST FAN
KSF	KITCHEN SUPPLY FAN
O/A	OUTSIDE AIR
OBD	OPPOSED-BLADES DAMPER
PT	PRE-TREAT
R/A	RETURN AIR
RAHU	ROOF-MOUNTED AIR HANDLING UNIT
S/A	SUPPLY AIR
SA	SOUND ATTENUATOR
SF	SUPPLY FAN
SPD	SPILTER DAMPER
SZ	SINGLE ZONE
VAV	VARIABLE AIR VOLUME
VB	VAV BOX
VD	VOLUME DAMPER
VDT	VERTICAL DRAW THROUGH
VFD	VARIABLE FREQUENCY DRIVE
WH	WATER HEATER
⌀	DESIGNATION FOR "ROUND"
⬭	DESIGNATION FOR "OVAL"

GENERAL MECHANICAL NOTES

3

1. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. COORDINATE INSTALLATION OF EQUIPMENT AND PIPING WITH THE ELECTRICAL CONTRACTOR TO INSURE NEC CLEARANCE (42 INCHES) IN FRONT OF ALL ELECTRICAL PANELS. DO NOT INSTALL DUCTWORK OR WATER PIPING OVER THE TOP OF ELECTRICAL PANELS SEE DETAIL 1/M2.01.
3. DUCT SIZES SHOWN ARE NET FREE AIR PASSAGE DIMENSIONS, DUCTS ARE NOT LINED, BUT ARE EXTERNALLY INSULATED. RUNOUTS TO CEILING OUTLETS SHALL BE EXTERNALLY INSULATED GALVANIZED SHEET METAL WITH SPIN-IN V.D. AT TRUNK TAPS, SEE DETAIL 1 & 2/M2.01.
4. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR EXACT LOCATIONS OF CEILING OUTLETS IN RELATION TO OTHER CEILING ENTITIES. OUTLETS MUST BE COMPATIBLE WITH THE CEILING TYPES FOR THE VARIOUS AREAS.
5. IN AREAS WHERE SUPPLY AIR ENTERS CEILING CAVITY THRU RETURN AIR GRILLES AND FREE RETURNS TO AHU'S VIA CEILING CAVITY, PROVIDE RETURN AIR OPENING IN WALL-TO-DECK ABOVE CEILING THAT BLOCK PATH, REFER TO ARCHITECTURAL DRAWINGS. RETURN AIR ELBOWS SHALL BE SIZED AT 1 SQ. FT PER 400 CFM SUPPLY AIR.
6. ARRANGE PIPING CONNECTIONS TO ALL EQUIPMENT TO ALLOW EASY REMOVAL OF EQUIPMENT, SUB-ASSEMBLIES, COILS, FANS, MOTORS, FILTERS, ACCESS PANELS, ETC... PROVIDE UNIONS, FLANGES AND VALVES AT CONNECTIONS. PROVIDE AND INSTALL VICTAULIC JOINTS AT COILS, REF. SPECIFICATIONS. PLACE STOP VALVES ON SYSTEM SIDE OF REMOVABLE PIPE SECTIONS.
7. CONTRACTOR SHALL FIELD MEASURE STRUCTURAL ELEMENTS AND COORDINATE EQUIPMENT, PIPING AND DUCT ROUTING TO FIT EXISTING CONSTRUCTION. PROVIDE OFFSETS, BOOTS FOR ENVELOP OBSTRUCTIONS THAT CANNOT BE AVOIDED. CONSTRUCTION SHALL BE PER SMACNA STANDARDS.
8. FIELD VERFY EXISTING CONDITIONS PRIOR TO PROCUREMENT OF EQUIPMENT AND SYSTEMS.
9. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICIABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION
10. PROVIDE DUCTWORK INSULATION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF IECC.
11. PROVIDE LISTED FIRE DAMPER INSTALLATIONS AT DUCT AND RETURN AIR OPENINGS AT PENETRATIONS THROUGH THROUGH RATED PARTITIONS AND BARRIERS. — SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
12. PROTECT DUCTWORK AND MECHANICAL EQUIPMENT FROM CONSTRUCTION DUST AND DEBRIS DURING CONSTRUCTION. SEAL OPENINGS AS REQUIRED.
13. PROVIDE AND MAINTAIN TEMPORARY AIR FILTERS AT AIR HANDLERS USED DURING CONSTRUCTION.
14. PATCH AND REPAIR MECHANICAL SYSTEMS AND INSULATION DAMAGED DURING CONSTRUCTION.
15. SECURE ROOF MOUNTED EQUIPMENT TO WITHSTAND 142 MPH BASIC WIND SPEED, RISK CATEGORY III, EXPOSURE CATEGORY B, IN ACCORDANCE WITH IBC REQUIREMENTS.

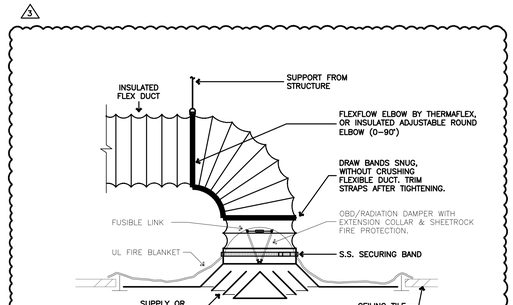


6 KITCHEN UPBLAST EXHAUST FAN DETAIL

NO SCALE

NOTES

1. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL.
2. INSTALL SHEETMETAL COVERING OVER WOOD BLOCKING IN THE AIRSTREAM OR OPEN TO THE CEILING CAVITY.

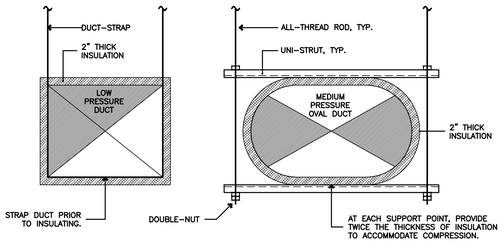


5 AIR DEVICE DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

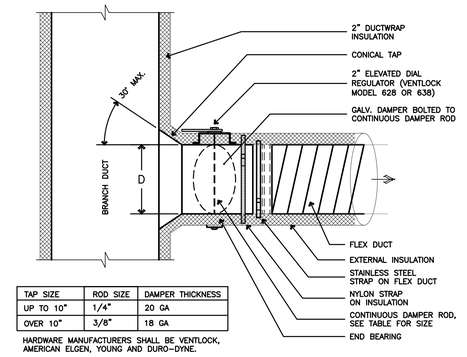


4 EXTERNALLY INSULATED DUCT SUPPORT DETAIL

NO SCALE

NOTES:

1. ROUND MEDIUM PRESSURE DUCT MAY BE SUPPORTED WITH DUCT STRAPS.
2. DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



TAP SIZE	ROD SIZE	DAMPER THICKNESS
UP TO 10"	1/4"	20 GA
OVER 10"	3/8"	18 GA

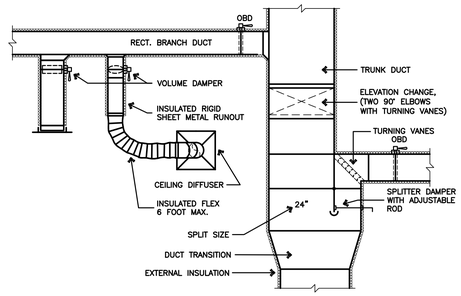
HARDWARE MANUFACTURERS SHALL BE VENTLOCK, AMERICAN ELGEN, YOUNG AND DURO-DYNE.

3 DUCT TAP CONNECTION DETAIL

NO SCALE

NOTES:

1. DELETE CONICAL SECTION IF TOO LARGE FOR THE DUCT.
2. REFER TO SPECIFICATIONS OF FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

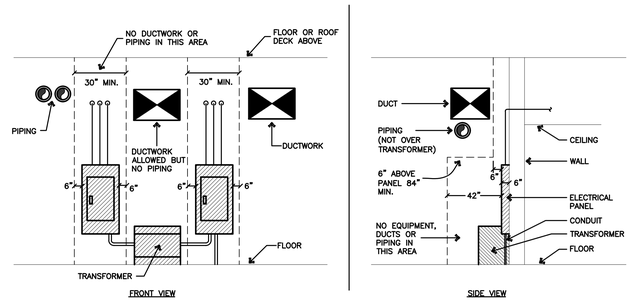


2 DUCTWORK DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

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FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILL ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD.
SUGAR LAND, TX 77498

SEAL

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TYLER W. HERRING
106052
LICENSED PROFESSIONAL ENGINEER
09.04.2025

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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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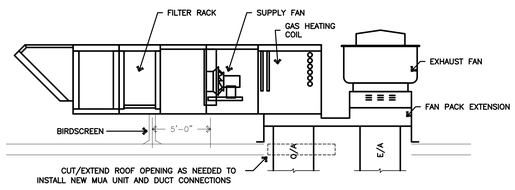
MECHANICAL NOTES AND DETAILS

U-M2.01



6 SUPPLY/EXHAUST KITCHEN PLENUM DETAIL

NO SCALE

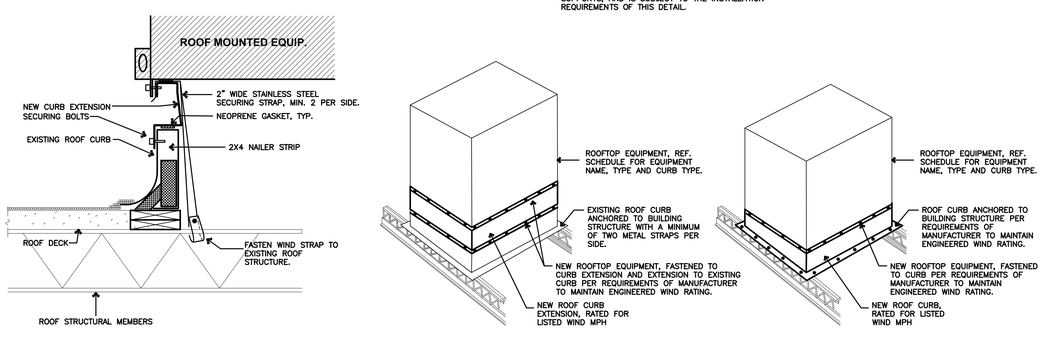
NOTES:

1. REFER TO DETAIL 6/M2.02 FOR CURB ANCHORING TO SATISFY WIND RATING REQUIRMENT. EQUIPMENT SHALL BE ABLE TO WITHSTAND 120 MPH WINDS.

ROOF MOUNTED EQUIPMENT

MARK	EQUIPMENT TYPE	CURB TYPE
EF-14	ROOF FAN	EXISTING PERIMETER
ESF-1,2	ROOF EXHAUST & MAKE-UP AIR UNIT	NEW PERIMETER

1. ALL ROOFTOP EQUIPMENT IS TO BE INSTALLED ON NEW ROOF SUPPORTS, AND IS SUBJECT TO THE INSTALLATION REQUIREMENTS OF THIS DETAIL.

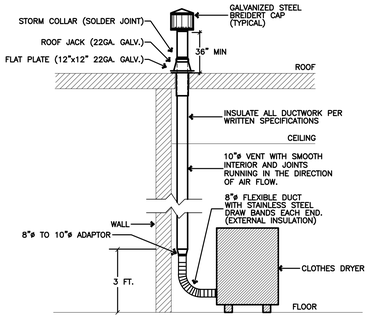


5 CURB MOUNTED EQUIPMENT ANCHORING

NO SCALE

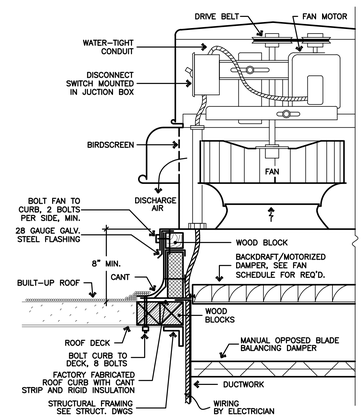
NOTES:

1. EQUIPMENT CURB AND EQUIPMENT ANCHORING BRACKETS SHALL BE DESIGNED TO WITHSTAND AN ASCE 7-22 WIND HAZARD RATING OF 147 MPH, FOR A CATEGORY III BUILDING AT THE PROJECT ADDRESS. THE CURB PROVIDER SHALL INCLUDE STAMPED DRAWINGS OF THE CURB AND ANCHORING DEMONSTRATING COMPLIANCE.



4 COMMERICAL CLOTHES DRYER VENT

NO SCALE

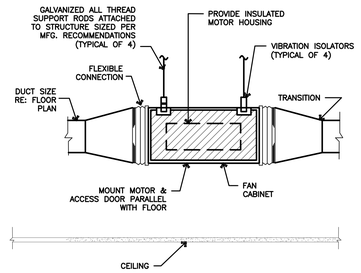


3 ROOF EXHAUST FAN AND VENT DETAIL

NO SCALE

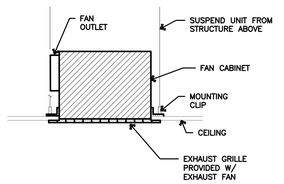
NOTES:

1. NO WOOD BLOCKING SHALL BE LEFT EXPOSED IN THE CEILING PLENUM. COVER ALL EXPOSED WOOD WITH 1/2" SHEETROCK OR 20 GAUGE GALVANIZED SHEETMETAL.
2. ROOF VENT WILL NOT HAVE FAN/MOTOR ASSEMBLY, DISCONNECT SWITCH OR OBD.
3. ARCHITECTURAL ROOF CURB INSTALLATION REQUIREMENTS SHALL SUPERCEDE THIS DETAIL WHERE APPLICABLE.
4. ALL FANS SCHEDULED TO BE PROVIDED WITH 140MPH WIND RATING, INCLUDING FACTORY PROVIDED CURB. CURB INSTALLATION SHALL FOLLOW MANUFACTURER'S REQUIREMENTS FOR SECURING TO ROOF AND EQUIPMENT WHERE IT DIFFERS FROM THE DETAIL.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



2 INLINE EXHAUST FAN DETAIL

NO SCALE



1 CABINET EXHAUST FAN

NO SCALE

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MECHANICAL DETAILS (CONT'D.)

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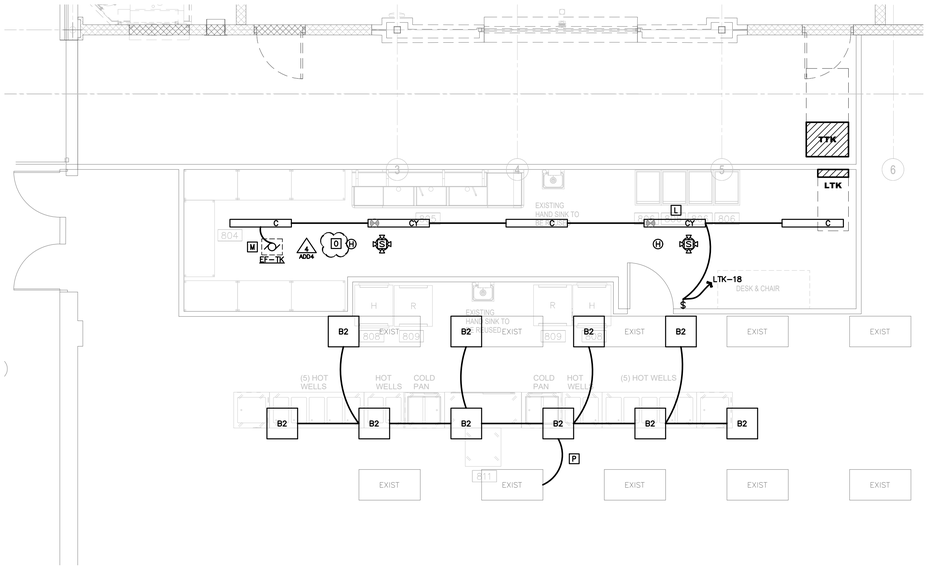
NEW PANEL — TEMP KITCHEN

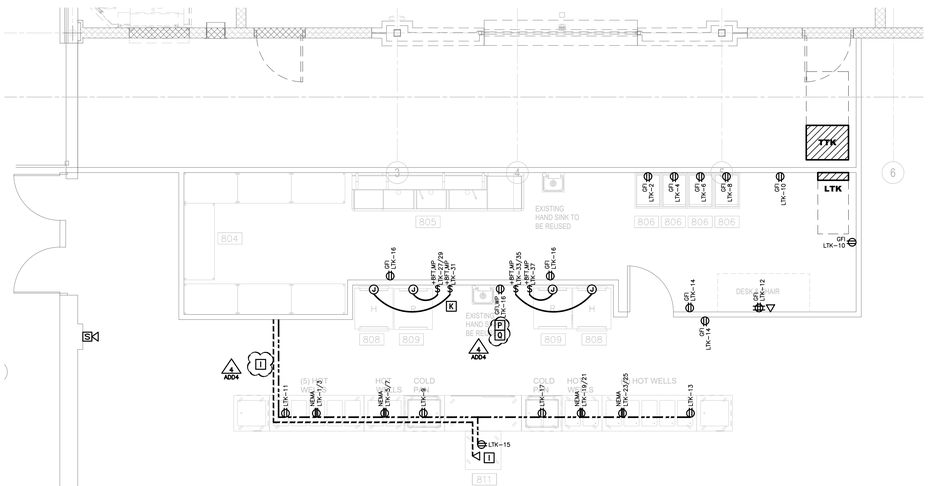
PANEL LTK — 150A MCB, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E810	2766	HOT WELLS	2–12	20/2GFI	1	■			2	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	3		■		4	20/1	3–12	TRANSPORT CART	1920	E806	
	E810A	1643	HOT WELLS	2–12	20/2GFI	5			■	6	20/1	3–12	TRANSPORT CART	1920	E806	
	–	–	–	+12G	–	7	■			8	20/1	3–12	TRANSPORT CART	1920	E806	
	E810B	600	COLD PAN	3–12	20/1GFI	9		■		10	20/1	3–12	2 REC	360	E800A	
	E810C	1200	BEVERAGE	3–12	20/1GFI	11			■	12	20/1	3–12	2 REC – DESK	360	E800B	
	E810C	1200	BEVERAGE	3–12	20/1GFI	13	■			14	20/1	3–12	2 REC	360	E800A	
	E811	180	CASH REGISTER	3–12	20/1GFI	15		■		16	20/1	3–12	3 REC	360	E800A	
	E810B	600	COLD PAN	3–12	20/1GFI	17			■	18	20/1	3–12	TEMP. KITCHEN LTS/FAN	566		
	E810A	1643	HOT WELLS	2–12	20/2GFI	19	■			20	20/1		SPARE			⚠4 ADD4
	–	–	–	+12G	–	21		■		22	20/1		SPARE			⚠4 ADD4
	E810	2766	HOT WELLS	2–12	20/2GFI	23			■	24	30/3	3–10	TEMP FOOD STORAGE UNIT	3100		4
	–	–	–	+12G	–	25	■			26	–	+10N+10G	–	–		
	E808	1622	HEATED CABINET	2–12	20/2	27		■		28	–	3/4"C	DUPLEX REC – SERVICE YARD	180		4
	–	–	–	+12N+12G	–	29			■	30	20/1	3–12	EXISTING CIRCUIT	500		3
	E809	984	REFRIGERATOR	3–12	20/1	31	■			32	20/1	3–12	EXISTING CIRCUIT	500		3
	E808	1622	HEATED CABINET	2–12	20/2	33		■		34	15/2	2–12	EXISTING CIRCUIT	1000		3
	–	–	–	+12N+12G	–	35			■	36	–	+12N+12G	–	–		
	E809	984	REFRIGERATOR	3–12	20/1	37	■			38	20/2	2–12	EXISTING CIRCUIT	1000		3
			SPARE		20/1	39		■		40	–	+12N+12G	–	–		
			SPARE		20/1	41			■	42	50/2	2–8	EXISTING CIRCUIT	5000		3
			SPARE		20/1	43	■			44	–	+8N+10G	–	–		
	TOTAL LOAD @ 100% = 3877BVA						TOTAL LOAD @ 100% = 108A									

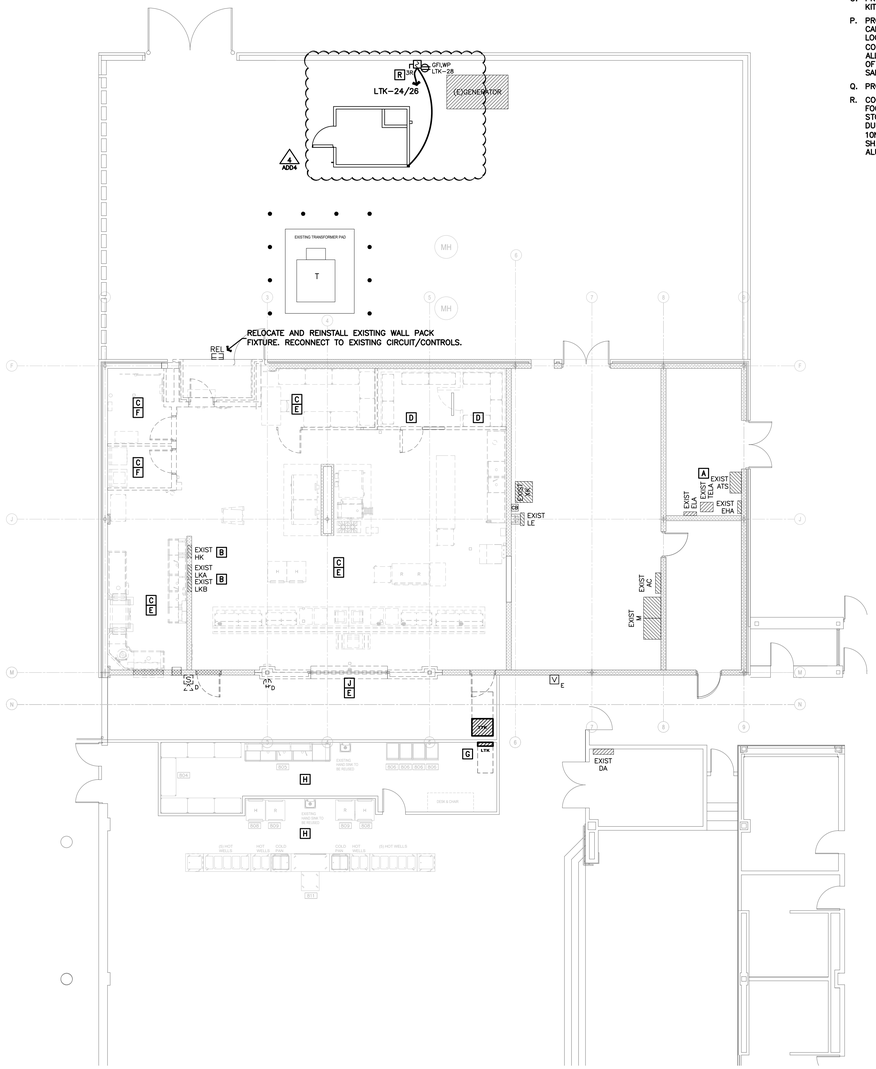
1. REF. KITCHEN CONSULTANT'S "FCS" DRAWINGS FOR KITCHEN EQUIPMENT NUMBERS.
2. A DEMAND FACTOR PERCENT OF 65% HAS BEEN APPLIED TO THE KITCHEN EQUIPMENT LOAD PURSUANT TO NEC 220–20 AND NEC TABLE 220–20.
3. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMODELED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN ALL REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION
4. PROVIDE CIRCUIT FOR TEMPORARY FOOD STORAGE UNIT PRIOR TO BEGINNING DEMOLITION. ⚠4 ADD4



T1 **TEMPORARY KITCHEN - LIGHTING PLAN**
SCALE: 1/4" = 1'– 0"



T2 **TEMPORARY KITCHEN - ELECTRICAL PLAN**
SCALE: 1/4" = 1'– 0"



1 **DEMOLITION FLOOR PLAN**
SCALE: 1/8" = 1'– 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

DEMOLITION NOTES:

A. EXISTING STANDBY GENERATOR PANEL TO REMAIN.

B. EXISTING KITCHEN PANELS TO BE REPLACED WITH NEW. MODIFY EXISTING WALLS TO MATCH NEW PANEL LAYOUTS AND DIMENSIONS.

C. EXISTING LIGHTING FIXTURES AND CEILING DEVICES TO BE REMOVED THROUGHOUT.

D. EXISTING WALK–IN COOLER/FREEZER AND ASSOCIATED EQUIPMENT TO BE REMOVED.

E. EXISTING WALL ELECTRICAL DEVICES TO BE REMOVED. EXISTING J–BOXES MAY BE REUSED WHERE NEW DEVICES ARE TO BE INSTALLED AT THE SAME LOCATIONS.

F. EXISTING ELECTRICAL DEVICES TO BE REMOVED.

G. NEW 208Y/120V PANEL AND TRANSFORMER FOR TEMPORARY KITCHEN TO BE INSTALLED PRIOR TO DEMOLITION. PANEL AND TRANSFORMER TO BE REMOVED AT END OF KITCHEN RENOVATION AND TURNED OVER TO THE DISTRICT. INSTALL TRANSFORMER ON PREMADE FIBERCRETE PAD AND WAFFLE TYPE VIBRATION ISOLATION PADS. DO NOT PROVIDE A POURED IN PLACE CONCRETE PAD AT THIS LOCATION.

H. PROVIDE RECEPTACLES AND LIGHT FIXTURES FOR TEMPORARY KITCHEN DURING RENOVATION. ALL TEMPORARY DEVICES AND EQUIPMENT TO BE REMOVED AT END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE.

I. CONDUITS ROUTED FROM TEMPORARY KITCHEN WALL AND BENEATH SERVING LINE. PROVIDE MULTICHANNEL ROLLOVER CABLE PROTECTOR FOR EXPOSED CONDUITS NOT UNDER THE SERVING LINE. ALL CONDUITS UNDER THE SERVING LINE SHALL BE SECURED TO/ROUTED ON TOP OF UNISTRUT AND NOT DIRECTLY ON THE FLOOR. DO NOT ANCHOR UNISTRUT TO THE EXISTING FLOORING. COORDINATE POWER AND DATA OUTLET LOCATIONS WITH OTHER TRADES.

J. REMOVE EXISTING LIGHT FIXTURES ABOVE NEW KITCHEN EXTENSION. MODIFY EXISTING WIRING TO MAINTAIN REMAINING FIXTURE OPERATION.

K. HARDWIRE KITCHEN EQUIPMENT TO LOCAL ON/OFF SWITCH. TYPICAL.

L. SURFACE MOUNT FIXTURES ON TEMPORARY KITCHEN CEILING. TYPICAL.

M. WIRE TEMPORARY KITCHEN FAN TO LOCAL LIGHTING CIRCUIT AND CONTROLS. FAN SHALL BE ON/OFF WITH LIGHTS.

N. EXISTING EXTERIOR LIGHT FIXTURES TO BE REMOVED.

O. PROVIDE NEW FIRE ALARM DEVICES AS PART OF THE TEMPORARY KITCHEN BUILDOUT.

P. PROVIDE NEW TEMPORARY LIGHT FIXTURES IN THE EXISTING CAFETERIA CEILING ABOVE THE SERVING LINE. COORDINATE LOCATIONS WITH TEMPORARY SERVING LINE AND EXISTING CONDITIONS. CONNECT TO EXISTING LIGHTING CONTROLS/CIRCUIT. ALL TEMPORARY LIGHT FIXTURES SHALL BE REMOVED AT THE END OF KITCHEN RENOVATION AND OFFERED TO THE OWNER AS SALVAGE. PROVIDE REPLACEMENT CEILING TILES.

Q. PROVIDE IN–USE WEATHERPROOF COVER FOR RECEPTACLE.

R. COORDINATE NEMA 3R, FUSED SWITCH LOCATION WITH TEMPORARY FOOD STORAGE UNIT. INSTALL 2–25A FUSES TO SERVE FOOD STORAGE UNIT AND A 20A FUSE IN THIRD PHASE TO FEED DUPLEX RECEPTACLE. WIRING TO STORAGE UNIT SHALL BE 2–10 + 10N + 10G, 3/4". WIRING TO NEW 20A DUPLEX RECEPTACLE SHALL BE 2–12 + 12G. MOUNT RECEPTACLE IN NEMA 3R ALUMINUM JUNCTION BOX WITH WET LOCATION COVER.

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FORT BEND INDEPENDENT SCHOOL DISTRICT

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SUGAR LAND, TX 77498

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STATE OF TEXAS — GEORGE L. STANTON — 38582 — REGISTERED PROFESSIONAL ENGINEER

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ELECTRICAL DEMO AND TEMP PLANS

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ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

LIGHTING RENOVATION NOTES:

A. KITCHEN LIGHTS TO BE CONTROLLED BY LOCAL MOMENTARY SWITCHES AND BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.

LEFT SWITCH SHALL CONTROL ZONE 'a' NORMAL POWER LIGHTING FIXTURES.
RIGHT SWITCH SHALL CONTROL ZONE 'b' EMERGENCY LIGHTING FIXTURES.

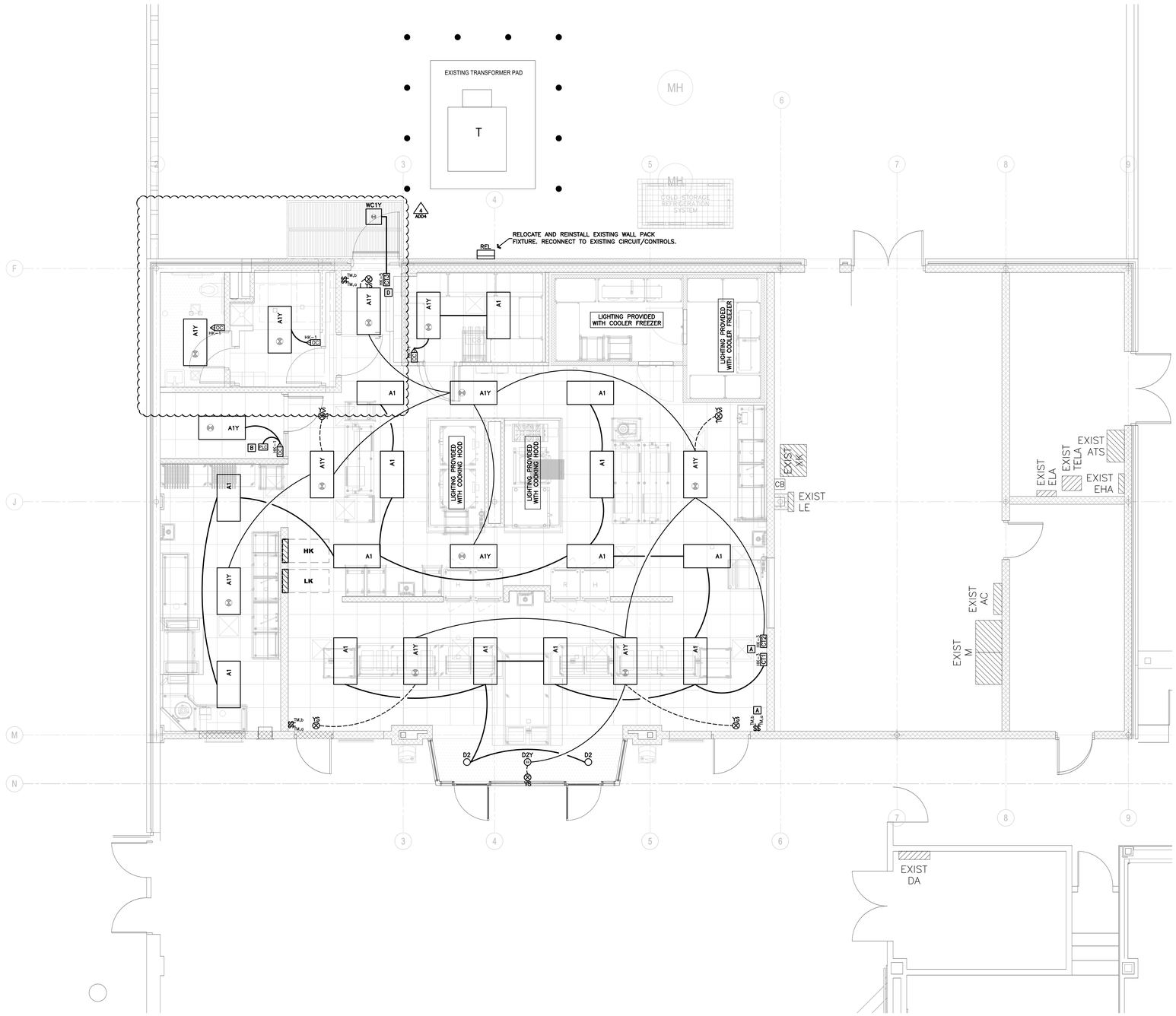
B. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

C. WIRE EXIT SIGNS UPSTREAM OF LIGHTING CONTROLS. TYPICAL.

D. EXTERIOR LIGHTS TO BE CONTROLLED BY BAS. LIGHTING CONTACTOR LOCATIONS SHOWN SCHEMATICALLY ONLY. LOCATE LIGHTING CONTACTOR ENCLOSURE IN THE ADJACENT CENTRAL PLANT SPACE, FIELD VERIFY. REFERENCE LIGHTING CONTROL DETAIL. TYPICAL.

E. AFTER REMOVAL OF THE TEMPORARY KITCHEN, PROVIDE NEW EXIT SIGN AT ORIGINAL LOCATION AND RECONNECT TO EXISTING CAFETERIAL LIGHTING CIRCUIT.

F. PATCH/REPAIR EXTERIOR SOFFIT TO ACCOMMODATE NEW SURFACE MOUNTED FIXTURES.



1 LIGHTING RENOVATION PLAN
SCALE: 1/4" = 1'- 0"

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ADD4

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LIGHTING FLOOR PLANS

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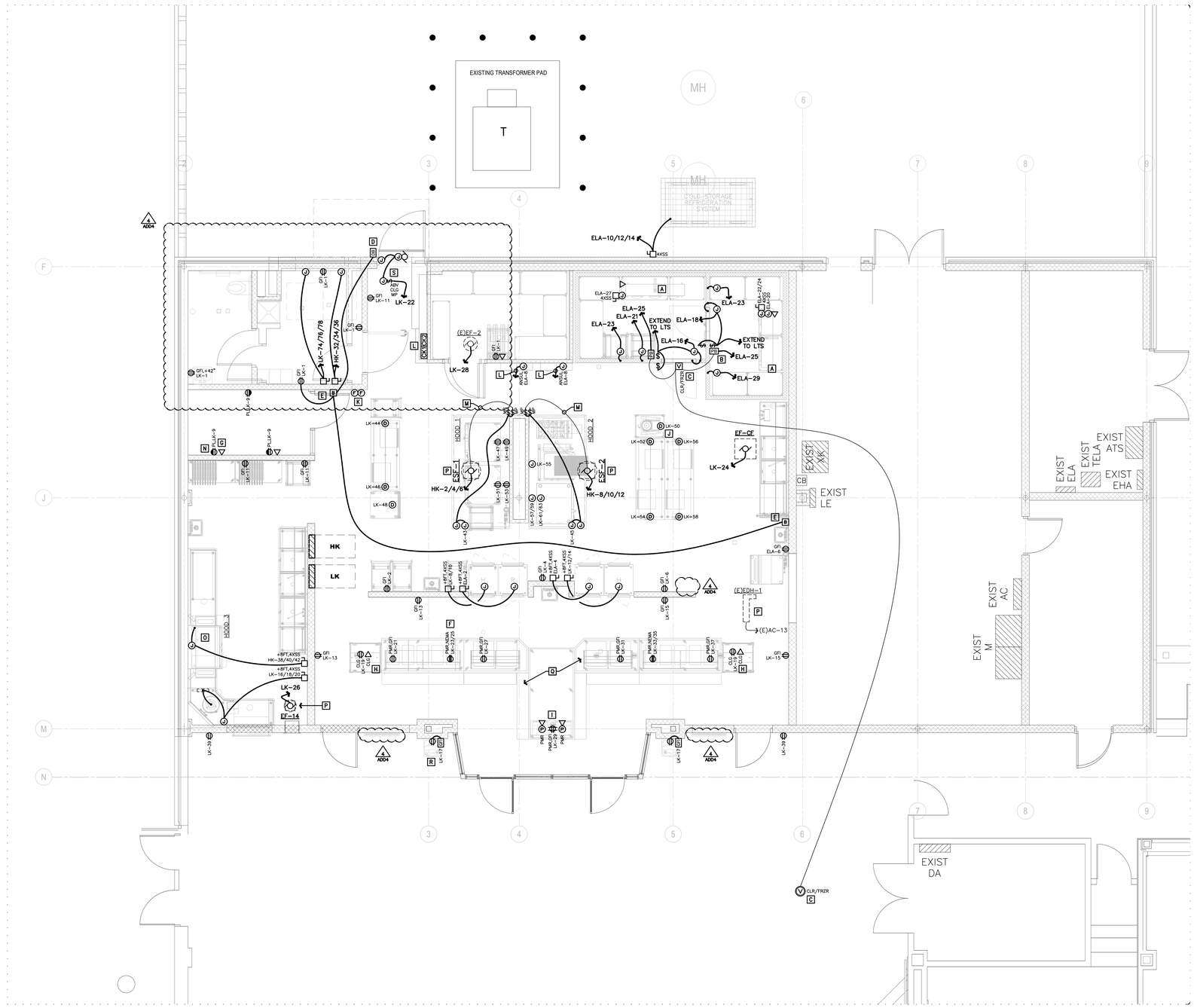

1 ELECTRICAL RENOVATION PLAN

SCALE: 1/4" = 1'- 0"

ELECTRICAL KEYED NOTES

GENERAL NOTES:

- CUT WALLS AS REQUIRED TO FLUSH MOUNT NEW DEVICES IN EXISTING WALLS. PATCH/REPAIR WALLS TO MATCH.

ELECTRICAL RENOVATION NOTES:

A. CONNECT NEW FREEZER/COOLER AND CONDENSER TO EXISTING STANDBY GENERATOR.

B. PROVIDE ILLUMINATED PUSH BUTTON IN COOLER AND FREEZER. WHEN PRESSED RED STROBE DEVICES IN KITCHEN AND CAFETERIA SHALL ACTIVATE. TYPICAL.

C. PROVIDE HORN/STROBE DEVICE TIED TO PUSH BUTTONS IN FREEZER/COOLER.
(EDWARDS 860 SERIES OR EQUAL).

D. PROVIDE NEW DOORBELL BUTTON AT RECEIVING DOOR. DOORBELL BUTTON SHALL BE THE CLOSEST DEVICE TO THE DOOR FRAME.

E. PROVIDE NEW VIBRATING BUZZER TIED TO DOORBELL BUTTON AT RECEIVING DOOR. BUZZER TO BE WALL MOUNTED JUST BELOW THE CEILING.

F. PROVIDE NEW ELECTRICAL DEVICES MATCHING NEW KITCHEN EQUIPMENT AND ROOM LAYOUTS. REFERENCE FOOD SERVICE DRAWINGS. TYPICAL.

G. PROVIDE ROUGH-IN FOR LOW VOLTAGE DEVICES. REFERENCE TECHNOLOGY DRAWINGS, TYPICAL.

H. POWER AND DATA ROUGH-IN FOR KITCHEN MENU BOARD.

I. POWER AND DATA ROUGH-IN FOR POINT OF SALE (POS) LOCATION.

J. PROVIDE DROP CORD RECEPTACLE WITH HUBBELL KELLEMS LIQUIDTIGHT GRIPS FOR STRAIN RELIEF, TYPICAL OF ALL.

K. PROVIDE J-BOXES AND CONDUIT FOR REMOTE FIRE PULLS, SEE FOOD SERVICE DETAIL DRAWING FOR REQUIREMENTS, TYPICAL

L. WIRE ANSUL SYSTEM TO HOOD EQUIPMENT CONTROL CONTRACTOR. UPON ANSUL SYSTEM ACTIVATION ALL POWER TO EQUIPMENT BENEATH THE HOODS SHALL BE DEACTIVATED. MOUNT CONTACTOR CABINET(S) JUST BELOW THE CEILING.

M. PROVIDE SEPARATE SWITCHES TO TURN ON HOOD LIGHTS AND FANS. WIRE HOOD TEMP SENSOR AHEAD OF HOOD LIGHT SWITCH. USE 120V CIRCUIT TO CONTROL HOOD FANS THROUGH EXISTING STARTER. PROVIDE CONTROLS TRANSFORMER AS REQUIRED TO MATCH STARTER CONTROL INPUT VOLTAGE. TYPICAL.

N. PROVIDE PLUG LOAD CONTROLS TIED TO THE LIGHTING IN OFFICE SPACES.

O. INTERCONNECT DISH MACHINE TO VENT CONTROL. INTERCONNECT TABLE LIMIT SWITCH TO DISHMACHINE.

P. EXISTING MECHANICAL EQUIPMENT TO BE REPLACED. CONNECT TO CIRCUIT AS SHOWN. RECONNECT TO EXISTING STARTER/CONTACTORS, FIELD VERIFY.

Q. SAWCUT FLOOR TO INSTALL NEW PEDESTAL MOUNTED DEVICE BENEATH NEW SERVING LINES, DO NOT REUSE EXISTING STUB UPS OR DEVICES. POUR BACK SLAB AND PROVIDE NEW FINISHES, REFERENCE ARCHITECTURAL.

R. REFERENCE EDF GFI PROTECTION DETAIL FOR INSTALLATION REQUIREMENTS, TYPICAL.

S. WIRE MICRO SWITCH IN DOOR FRAME TO AIR SCREEN. COOR W/ FOOD SERVICE CONTRACTOR PRIOR TO ROUGH-IN. LOCATE LOCAL MOTOR RATED SWITCH ABOVE CEILING ADJACENT TO THE AIR SCREEN.

COOLER/FREEZER NOTES:

1. PROVIDE SEALING FOR CONDUIT IN COOLER AND FREEZER. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, CIRCULATION OF AIR FROM WARMER TO A COLDER SECTION SHALL BE PREVENTED PER N.E.C. ARTICLE 300.7 (A).
2. PROVIDE GROUND-FAULT PROTECTION OF EQUIPMENT FOR ELECTRIC HEAT TRACING AND HEATING PANELS IN THE FREEZER PER N.E.C. ARTICLE 427.22.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE LIQUID TIGHT CONDUIT AND WIRING FOR LIGHT FIXTURES AND LIGHT SWITCHES IN WALK-IN COOLER AND FREEZER, SEE FOODSERVICE CONSULTANT'S DRAWINGS.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	ADDENDUM 04

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT

SUGAR MILL ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD.
SUGAR LAND, TX 77498

SEAL

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED
PROFESSIONAL ENGINEER
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL FLOOR PLANS

u-E.200

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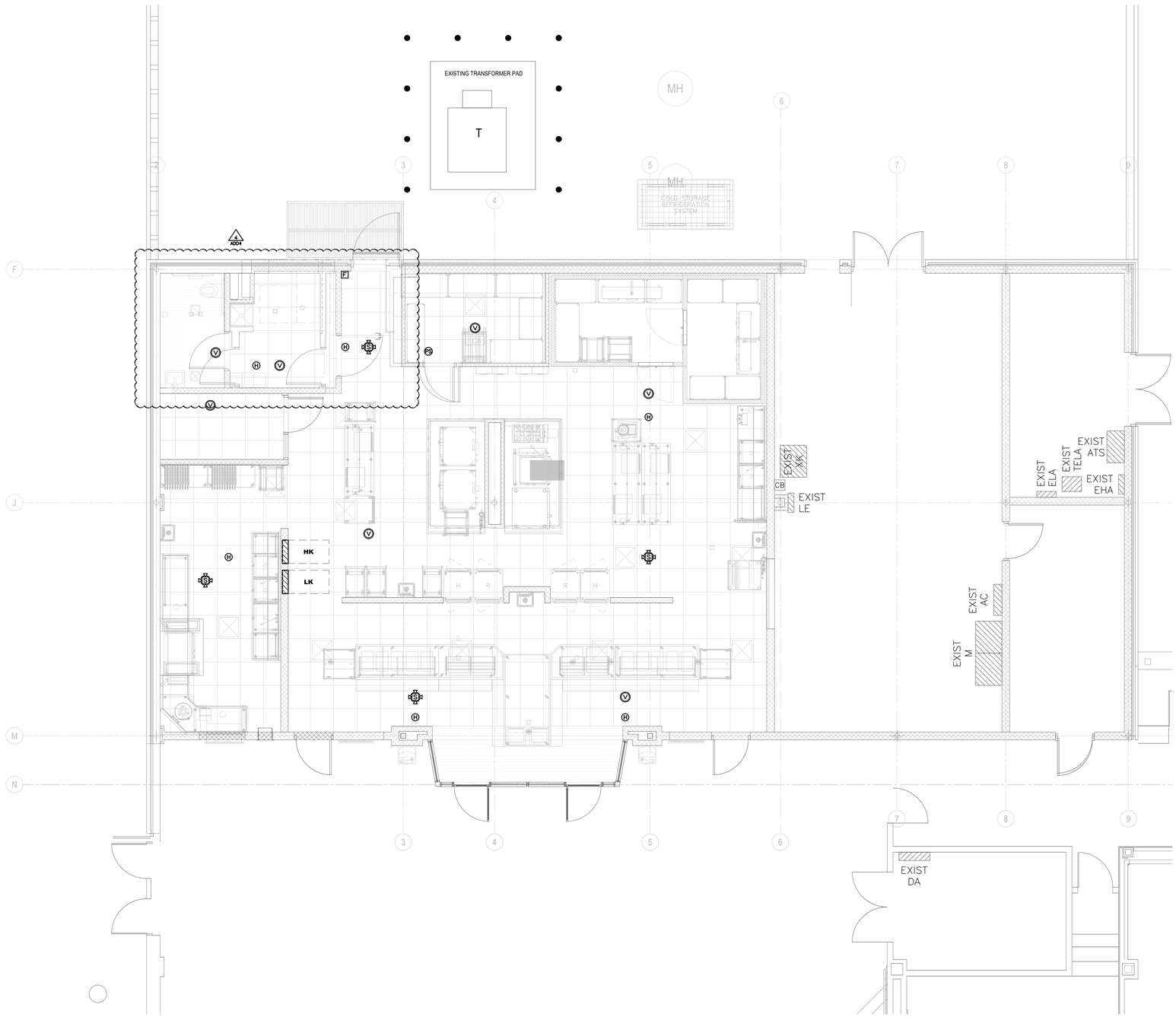

1 FIRE ALARM RENOVATION PLAN
SCALE: 1/4" = 1'- 0"

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FIRE ALARM FLOOR PLANS

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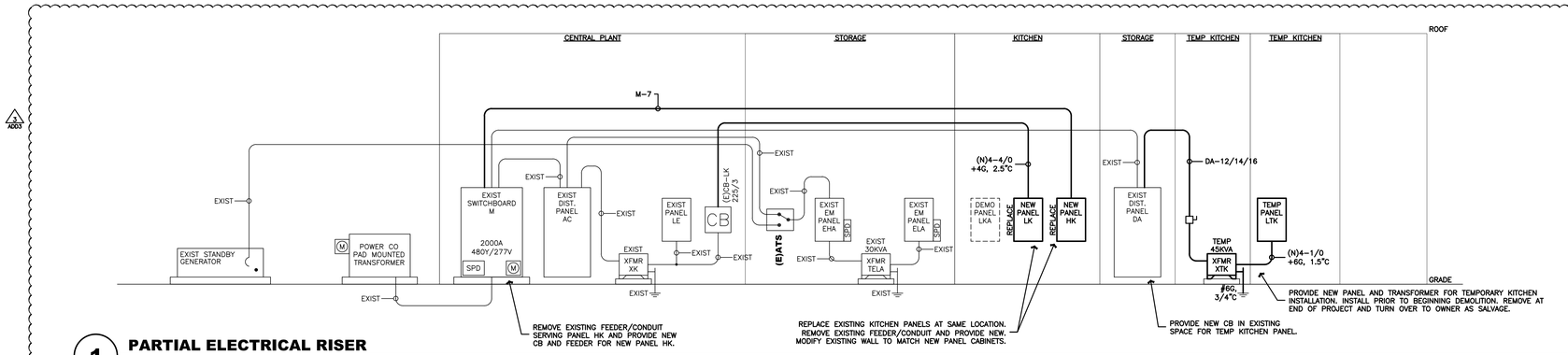

1 PARTIAL ELECTRICAL RISER

NO SCALE

NOTES:
1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED/CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.
5. REFERENCE PANEL SCHEDULES AND SHORT CIRCUIT TABLE FOR AIC AND SCCR VALUES.

NEW KITCHEN PANEL — KITCHEN

PANEL HK — 225A MLO, 480Y/277V, 3ϕ, 4 WIRE — AVAILABLE FAULT: 20,250A — SCCR & AIC: 25,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
		376	KITCHEN ROOM LIGHTS	3–12	20/1	1				2	15/3	3–12	ESF–1	4986		
6		1095	KITCHEN/SERVING LIGHTS	3–12	20/1	3				4	–	+12G	(1.5HP / 1.5HP)	–		
7		84	KITCHEN EXTERIOR LIGHTS	3–12	20/1	5				6	–	3/4"C	–	–		
			SPARE		20/1	7				8	15/3	3–12	ESF–2	4986		
			SPARE		20/1	9				10	–	+12G	(1.5HP / 1.5HP)	–		
			SPARE		20/1	11				12	–	3/4"C	–	–		
			SPARE		20/1	13				14			SPACE			
			SPARE		20/1	15				16			SPACE			
			SPARE		20/1	17				18			SPACE			
			SPARE		20/1	19				20			SPACE			
			SPARE		20/1	21				22			SPACE			
			SPACE			23				24			SPACE			
			SPACE			25				26			SPACE			
			SPACE			27				28			SPACE			
			SPACE			29				30			SPACE			
			SPACE			31				32	45/3	3–8	COMMERCIAL DRYER	28254		
			SPACE			33				34	–	+10G	–	–		
			SPACE			35				36	–	3/4"C	–	–		
			SPACE			37				38	70/3	3–8	DISHMACHINE	42963	E250	
			SPACE			39				40	–	+8G	–	–		
			SPACE			41				42	–	3/4"C	–	–		

TOTAL LOAD @ 100% = 82744VA — TOTAL LOAD @ 100% = 100A — TOTAL LOAD @ 125% = 124A

NEW KITCHEN PANEL — KITCHEN

PANEL LK — 225A MLO, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: RECESSED — STAINLESS STEEL COVER

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
	E10	1000	5 REC – RR/STOR/CUST & BELL	3–12	20/1	1				2	20/1	3–12	1 REC – KITCHEN	180	E10	
			SPARE		20/1GFI	3				4	20/1	3–12	1 REC – KITCHEN	180	E10	
			SPARE		30/2GFI	5				6	20/1	3–12	1 REC – KITCHEN	180	E10	
		–	–	–	–	7				8	20/2	2–10	HEATED CABINET	3224	E187	
		540	3 REC – OFFICE	3–12	20/1	9				10	3/4"C	+10G	–	–		
	E10/E13	540	3 REC – KITCHEN	3–12	20/1	11				12	20/2	2–10	HEATED CABINET	3224	E187	
	E10	360	2 REC – SERVING LINE	3–12	20/1	13				14	3/4"C	+10G	–	–		
	E10	360	2 REC – SERVING LINE	3–12	20/1	15				16	20/3	3–12	DISPOSER	3960	E123	
		1000	2 EDF – CAFETERIA	3–12	20/1	17				18	–	+12G	(3 HP)	–		
	E615	500	2 MENU BOARDS	3–12	20/1	19				20	–	3/4"C	–	–		
	E209	960	MILK COOLER	3–12	20/1	21				22	20/1	3–12	AIR SCREEN	612	E101	
	E201A	5824	HOT FOOD COUNTER	2–8	35/2GFI	23				24	15/1	3–12	EF–CF (1/6HP)	528		
		–	–	+10G	3/4"C	25				26	15/1	3–12	EF–14 (1/3HP)	864		
	E201B	1920	COLD FOOD COUNTER	3–12	20/1	27				28	15/1	3–12	EF–2 (1/6HP)	528		
	E214	360	CASH REGISTERS	3–12	20/1	29				30	20/1		SPARE			
	E201B	1920	COLD FOOD COUNTER	3–12	20/1	31				32	20/1		SPARE			
	E201A	5824	HOT FOOD COUNTER	2–8	35/2GFI	33				34	20/1		SPARE			
		–	–	+10G	3/4"C	35				36	20/1		SPARE			
	E209	960	MILK COOLER	3–12	20/1	37				38	20/1		SPARE			
		360	2 REC – CAFETERIA	3–12	20/1	39				40	20/1		SPARE			
			SPARE		20/1	41				42	20/1		SPARE			
	E153/E153M	250	HOOD LTS & SENSOR	3–12	20/1	43				44	20/1GFI	3–12	DROP CORD	180	E129	
	E153/E153M	250	HOOD LTS & SENSOR	3–12	20/1	45				46	20/1GFI	3–12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	47				48	20/1GFI	3–12	MOBILE PROOFER	1800	E139	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	49				50	20/1GFI	3–12	20QT MIXER	960	E125	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	51				52	20/1GFI	3–12	DROP CORD	180	E129	
8	E161	720	CONVECTION OVEN	3–12	20/1GFI	53				54	20/1GFI	3–12	DROP CORD	180	E129	
8	E163	600	TILT BRAISING PAN	3–12	20/1GFI	55				56	20/1GFI	3–12	DROP CORD	180	E129	
8	E172	3120	COMBI OVEN	2–12	20/2	57				58	20/1GFI	3–12	DROP CORD	180	E129	
		–	–	+12G	3/4"C	59				60	20/1	3–12	EXISTING CIRCUIT	500		5
8	E172	3120	COMBI OVEN	2–12	20/2	61				62	20/2	2–12	EXISTING CIRCUIT	1000		5
		–	–	+12G	3/4"C	63				64	–	+12N+12G	–	–		
5		250	EXISTING CIRCUIT	3–12	20/1	65				66	20/2	2–12	EXISTING CIRCUIT	1000		5
			SPACE			67				68	–	+12N+12G	–	–		
			SPACE			69				70	30/2	2–10	EXISTING CIRCUIT	3000		5
			SPACE			71				72	–	+10N+10G	–	–		
			SPACE			73				74	20/3	3–12	WASHER	3408		
			SPACE			75				76	–	+12G	–	–		
			SPACE			77				78	–	3/4"C	–	–		
			SPACE			79				80			SPACE			
			SPACE			81				82			SPACE			
			SPACE			83				84			SPACE			

TOTAL LOAD @ 100% = 55718VA — TOTAL LOAD @ 100% = 155A — TOTAL LOAD @ 65% = 101A

KITCHEN HOOD CONTACTOR SCHEDULE

POLE	DESCRIPTION	NORMAL CKT	EM CKT	CONTROL ZONE	EQUIPMENT LOCATION	CONTACTOR TYPE
HOOD 1						
CK1–1	CONVECTION OVEN	LK–47	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–2	CONVECTION OVEN	LK–49	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–3	CONVECTION OVEN	LK–51	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–4	CONVECTION OVEN	LK–53	–	HOOD 1	KITCHEN	ELECTRICALLY HELD – NO
CK1–5	SPARE					ELECTRICALLY HELD – NO
CK1–6	SPARE					ELECTRICALLY HELD – NO
CK1–7	SPARE					ELECTRICALLY HELD – NO
CK1–8	SPARE					ELECTRICALLY HELD – NO
HOOD 2						
CK2–1	TILT BRAISING PAN	LK–55	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–2	COMBI–OVEN	LK–57/59	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–3	(2–POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2–4	COMBI–OVEN	LK–61/63	–	HOOD 2	KITCHEN	ELECTRICALLY HELD – NO
CK2–5	(2–POLE)	–	–	–	–	ELECTRICALLY HELD – NO
CK2–6	SPARE					ELECTRICALLY HELD – NO
CK2–7	SPARE					ELECTRICALLY HELD – NO
CK2–8	SPARE					ELECTRICALLY HELD – NO

1. REFERENCE FLOOR PLANS FOR EQUIPMENT LOCATIONS AND ADDITIONAL INFORMATION.
2. EACH KITCHEN HOOD CONTACTOR HALL BE CONTROLLED ON/OFF BY THE APPROPRIATE HOOD ANSUL SYSTEM. WHEN ACTIVATED ALL POWER WITHIN THE COOKING HOOD SHALL BE DE–ENERGIZED.

EXIST GE SWITCHBOARD — CENTRAL PLANT

(E)SWBD M — 1600A MCB, 480Y/277V, 3ϕ, 4 WIRE — AVAILABLE FAULT: 37,000A — SCCR & AIC: 100,000A — FREE STANDING

NOTES	CIRCUIT	DESCRIPTION	CB	FEEDER SIZE	AMPS
	1	EXTENDED DAY PANEL H	200/3	EXIST FEEDER	
	2	PFCC	200/3	EXIST FEEDER	
	3	EXIST DISTRIBUTION PANEL DA	400/3	EXIST FEEDER	275A
	4	EXIST DISTRIBUTION PANEL DB	400/3	EXIST FEEDER	
	5	EXIST DISTRIBUTION PANEL AC	800/3	EXIST FEEDER	
	6	EXIST DISTRIBUTION PANEL DC	400/3	EXIST FEEDER	
2,3	7	NEW PANEL HK	225/3	4–4/0 +4G, 2.5"C	100A
	8	XFMR TLCAB	125/3	EXIST FEEDER	
	9	SPD	60/3	EXIST FEEDER	
				TOTAL LOAD @ 100% =	275A
				TOTAL LOAD @ 125% =	344A

1. THE EXISTING 2000A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST WESTINGHOUSE PANELBOARD — STORAGE ROOM

(E)PANEL DA — 400A MLO, 480Y/277V, 3ϕ, 4 WIRE — AVAILABLE FAULT: 27,000A — SCCR & AIC: 35,000A — MOUNTING: SURFACE

NOTES	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	NOTES
	9150	AHU #2	EXIST	20/3	1				2	60/3	EXIST	DUCT HEATER 3	39000	
	–	–	–	–	3				4	–	–	(STAGE)	–	
	–	–	–	–	5				6	–	–	–	–	
	2300	LIGHTS CAFETORIUM RMS	EXIST	20/1	7				8	20/1	EXIST	LTS KITCHEN		2
	3000	LIGHTS CAFETORIUM	EXIST	20/1	9				10	20/1	EXIST	LIGHTS CAFETORIUM RMS	3000	
	4500	HWH MECH RM 029	EXIST	25/1	11				12	70/3	3–6	TEMP KITCHEN PANEL LTK	37918	4
		SPACE			13				14	–	+8G	–	–	
		SPACE			15				16	–	3/4"C	–	–	
		SPACE			17				18			SPACE		
		SPACE			19				20			SPACE		
		SPACE			21				22			SPACE		
		SPACE			23				24			SPACE		
	130000	PANEL PA	EXIST	225/3	25				26	–	–	–	–	
	–	(SUBFEED BREAKER)		–	27				28	–	–	–	–	
	–	–	–	–	29				30	–	–	–	–	

TOTAL LOAD @ 100% = 228868VA — TOTAL LOAD @ 100% = 275A — TOTAL LOAD @ 125% = 344A

1. THE EXISTING 400A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

EXIST EM STANDBY PANELBOARD — STORAGE ROOM

(E)PANEL ELA — 60A MCB, 208Y/120V, 3ϕ, 4 WIRE — AVAILABLE FAULT: <10,000A — SCCR & AIC: 10,000A — MOUNTING: SURFACE

NOTES	EQUIP. NO.	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	EQUIP. NO.	NOTES
		250	FACP	EXIST	20/1	1				2	20/1	3–12	REFRIGERATOR	864	E188	3
		250	FACP	EXIST	20/1	3				4	20/1	3–12	REFRIGERATOR	864	E188	3
		250	FACP	EXIST	20/1	5				6	20/1	3–12	ICE MACHINE	1428	E109	3
		250	FACP	EXIST	20/1	7				8	20/1	3–12	HOOD ANSUL SYSTEMS	240	E151	4
		250	PA SYSTEM	EXIST	20/1	9				10	25/3	3–10	REFRIGERATION SYSTEM	6192	E103	4
		250	SECURITY PANEL	EXIST	20/1	11				12	–	+10G	–	–		
		120	GEN BATTERY CHARGER	EXIST	20/1	13				14	–	3/4"C	–	–		
		1000	GEN COOLANT HEATER	EXIST	20/1	15				16	20/1EGF	3–12	COOLER DOOR HEATER/LTS	600	E102A	4
		300	GEN HEATER	EXIST	20/1	17				18	20/1EGF	3–12	FREEZER DOOR HEATER/LTS	600	E102A	4
		180	GEN RECEPTACLE	EXIST	20/1	19				20	20/1EGF	3–12	FREEZER DRAIN LINE HEATER	600	E103F	4
3	E102B	600	COOLER TEMP. ALARM	3–12	20/1	21				22	20/2	2–10	FREEZER COIL	1893	E103C	4
3	E102C	600	COOLER/FRZR PRESSURE PORT	3–12	20/1	23				24	–	+10G	–	–		
3	E102E	120	PANIC ALARM BUTTONS	3–12	20/1	25				26	30/3	EXIST	SPD	50		
3	E103D	216	COOLER COIL	3–12	20/1	27				28	–	–	–	–		
3	E102B	600	FREEZER TEMP. ALARM	3–12	20/1	29				30	–	–	–	–		

TOTAL LOAD @ 100% = 18567VA — TOTAL LOAD @ 100% = 52A — NEC DIVERSIFIED LOAD = 56A

1. THE EXISTING 60A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. UPDATE PANEL SCHEDULE TO MATCH REVISED EQUIPMENT DESCRIPTION.

GENERAL PANEL REQUIREMENTS:
A. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
B. FIELD VERIFY EXISTING CIRCUITS PRIOR TO BEGINNING WORK.
C. ALL OUTAGES SHALL BE SCHEDULED AND CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
D. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.

PANEL NOTES:
1. REVISE/REWORK WIRING/CONDUIT AS REQUIRED TO ADD/REMOVE DEVICES FROM EXISTING CIRCUIT.
2. EXISTING CIRCUIT TO BE DEMO.
3. REUSE EXISTING SPARE CB AND WIRE NEW CIRCUIT.
4. PROVIDE NEW CB & WIRE NEW CIRCUIT.
5. IDENTIFY ANY CIRCUITS OR PARTIAL CIRCUITS THAT EXTEND BEYOND THE AREA OF RENOVATION. PROVIDE TEMPORARY FEED TO MAINTAIN ALL CIRCUITS SERVING ELEMENTS/SPACES NOT TO BE REMOVED DURING CONSTRUCTION. RECONNECT EXISTING CIRCUITS/DEVICES TO REMAIN TO TEMPORARY KITCHEN PANEL ONCE AVAILABLE USING CB(S) PROVIDED. ALL PARTIAL CIRCUITS SHALL REMAIN AND REMAIN ACTIVE BOTH DURING AND AFTER CONSTRUCTION.
6. KITCHEN LIGHTS TO BE DUAL ZONES WIRED THROUGH LIGHTING CONTACTORS AND CONTROLLED ON/OFF BY THE BAS AND LOCAL LIGHTING SWITCHES.
7. EXTERIOR LIGHTS TO BE WIRED THROUGH LIGHTING CONTACTOR AND CONTROLLED ON/OFF BY THE BAS.
8. WIRE CIRCUITS THROUGH KITCHEN EQUIPMENT CONTROL CONTACTOR. CIRCUITS TO BE DE–ENERGIZED BY HOOD FIRE PROTECTION SYSTEM.
9. RECONNECT EXISTING TEMPORARY LOAD CENTER CIRCUIT TO NEW PANEL LK.

ISSUE:

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03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
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SEAL

STATE OF TEXAS — GEORGE L. STANTON — 38582 — LICENSED PROFESSIONAL ENGINEER
09.04.2025

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PROJ. NO.: 23-25
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ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL SCHEMATIC

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PLUMBING SYMBOLS LEGEND

Symbol	Description
— — — — — —	SANITARY WASTE BELOW SLAB
————————	SANITARY WASTE ABOVE SLAB
—— V ——	VENT PIPING ABOVE SLAB
———— ————	VENT PIPING
—— G ——	GAS PIPING, 4-8oz
—— G5 ——	GAS PIPING, 5LB
—·—·—	DOMESTIC COLD WATER PIPING
—··—··—	DOMESTIC HOT WATER PIPING
—— D ——	DRAIN/RELIEF VENT PIPING
—⋈—	STOP VALVE
2CO	DOUBLE SAN. CLEANOUT (2-WAY)
CO	SANITARY SEWER CLEANOUT
WCO	WALL CLEANOUT
EXIST.	EXISTING
(R)	REMOVE (DEMOLISH)
(D)	DEMOLISH (REMOVE)
(E)	EXISTING - NO WORK

Abbreviation	Description
SAN.	SANITARY
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
WC	WATER CLOSET
UR	URINAL
LAV	LAVATORY
SK	SINK
EDF	ELECTRIC DRINKING FOUNTAIN
WH	WALL HYDRANT
HB	HOSEBIBB
CP	HOT WATER CIRCULATOR PUMP
FD	FLOOR DRAIN
FSINK	FLOOR SINK

PLUMBING FIXTURE NOTES

1. ALL FIXTURES SHALL MEET WATER CONSERVATION PERFORMANCE STANDARDS MANDATED BY SENATE BILL 587. ALL FIXTURES SHALL HAVE FLOW RESTRICTION DEVICES (DRINKING FOUNTAINS SHALL BE SELF-CLOSING) TO COMPLY WITH THESE REQUIREMENTS.
2. ALL FIXTURES SHALL HAVE CONTROLS REQUIRING OPERATING FORCE NO GREATER THAN FIVE (5) POUNDS.
3. FOR LAVATORIES AND SINKS, ALL FAUCETS SHALL BE NO-LEAD SOLID BRASS, MEETING ALL REQUIREMENTS OF ANSI/NSF 61, SECTION 9 AND CERTIFIED AS SUCH. ALSO, INSTALL SYMMONS 7-210 MIXING VALVE ON HOT WATER SUPPLY SIDE OF ALL FAUCETS UNLESS HIGH TEMPERATURE LIMIT IS PROVIDED WITH FAUCET. MAXIMUM WATER TEMPERATURE FOR ALL FAUCETS THAT DELIVER HOT OR TEPID WATER SHALL BE 110°F. ALL METERING FAUCETS SHALL HAVE A MINIMUM TEN (10) SECONDS OF WATER FLOW. AND, INSTALL TRUEBRO HANDI LAV-GUARD VANDAL-PROOF INSULATION KITS OVER P-TRAP, SUPPLIES, STOPS AND ALL SHARP EDGES FOR ALL SINKS AND LAVATORIES (TRAP WRAP FROM BROCAR OR PROWRAP FROM McGUIRE SHALL BE ACCEPTABLE).
4. ALL PLUMBING FIXTURES REFERENCED AS "ADA", "TAS" OR "HANDICAP COMPLIANT" SHALL MEET ALL REQUIREMENTS OF THE ADA AND THE TEXAS ACCESSIBILITY STANDARDS. IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MEET THESE REQUIREMENTS.
5. IN MANY CASES, FIXTURES WITH THE SAME PLUMBING DESIGNATION HAVE DIFFERENT INSTALLATION HEIGHTS - REFERENCE ARCHITECTURAL DRAWINGS FOR ALL INSTALLATION HEIGHTS AND HANDICAP FIXTURE DESIGNATIONS. FIXTURES DESIGNATED AS ADULT HANDICAP SHALL MEET ALL REQUIREMENTS OF THE ADA. FIXTURES DESIGNATED AS CHILD HANDICAP SHALL MEET ALL REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS FOR THE APPROPRIATE CHILDREN'S AGE GROUP (REF. ARCH. DWGS. AND SPECIFICATIONS).

PLUMBING MATERIALS

SANITARY WASTE AND VENT

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

STORM DRAIN PIPING

BELOW SLAB/GRADE: SCHEDULE 40, DWV PVC

ABOVE SLAB, 8" AND UNDER: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

ABOVE SLAB, 10" AND ABOVE: SERVICE WEIGHT, CAST IRON, BELL & SPIGOT.

NATURAL GAS

BELOW GRADE (OUTSIDE): YELLOW POLYETHYLENE PIPE WITH COATED STEEL RISER AND TRACER WIRE.

ABOVE SLAB: SCHEDULE 40 BLACK STEEL. PIPING 2.5" AND LARGER SHALL BE WELDED. PIPING 2" AND SMALLER SHALL HAVE SCREWED FITTINGS.

DOMESTIC WATER

INTERIOR: TYPE L COPPER WITH SOLDER TYPE WROUGHT COPPER FITTINGS, MADE UP WITH LEAD-FREE SOLDER.

EXTERIOR: TYPE K COPPER WITH SWEAT FITTINGS AND LEAD-FREE SOLDER. BEYOND 5 FEET FROM BUILDING, SCHEDULE 40 PVC.

FIRE SPRINKLER SYSTEM NOTES

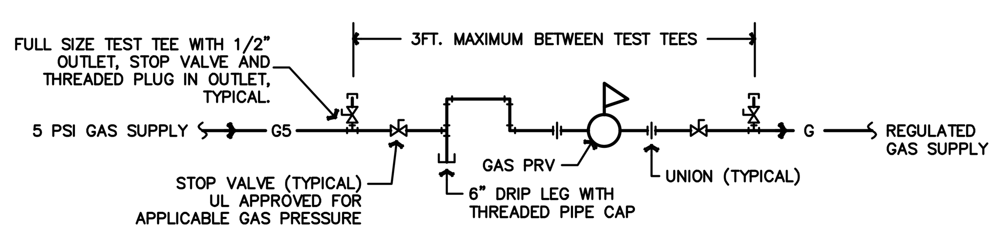
1. THE EXISTING FIRE SPRINKLER SYSTEM SHALL BE MODIFIED AND/OR EXPANDED TO COVER THE AREA OF RENOVATION IN ENTIRETY. ALL NEW AND REVISED PIPING SHALL BE ENGINEERED AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR.
2. REFERENCE THE SPECIFICATIONS, DIVISION 21, FOR MORE INFORMATION.

GENERAL PLUMBING NOTES

1. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL WORK DESCRIPTION. SEE THIS SHEET (P4.00) FOR PLUMBING SYMBOLS LEGEND.
2. COORDINATE PLUMBING SYSTEMS INSTALLATION WITH ARCHITECTURAL, STRUCTURAL, HVAC SYSTEMS, ELECTRICAL SYSTEMS, CONDUITS, ETC.... OFFSET PIPING AS REQUIRED TO PROVIDE A FUNCTIONING SYSTEM WITH ADEQUATE SPACE FOR SERVICING AND REPAIRS.
3. MAKE CONNECTIONS OF NEW PIPE SYSTEMS IN TO EXISTING PIPE SYSTEMS WITH THREADED OR SWEAT JOINTS. PROVIDE ELECTROLYSIS ISOLATING UNIONS AT CONNECTION OF DISSIMILAR MATERIALS. REFERENCE THE SPECIFICATIONS.
4. SITE SERVICES ARE SHOWN FOR REFERENCE ONLY. PLUMBING CONTRACTOR SHALL REFERENCE CIVIL DRAWINGS, INCLUDING LOCATIONS OF SERVICES, SIZES OF PIPES, FLOWLINE ELEVATIONS, ETC..
5. DO NOT INSTALL PLUMBING PIPING OVER ANY ELECTRICAL EQUIPMENT. REFERENCE ELECTRICAL DRAWINGS FOR LOCATIONS OF ELECTRICAL EQUIPMENT AND COORDINATE WITH ELECTRICAL SUBCONTRACTORS ACCORDINGLY. SEE DETAIL 1/P0.02. THIS INCLUDES FIRE SPRINKLER PIPING.
6. ALL PIPES THROUGH WALLS OR FLOORS SHALL BE SLEEVED AND SEALED PER DETAIL 5/P0.02. FIRE CAULK WHERE REQUIRED. THIS INCLUDES ALL WALLS, INTERIOR AND EXTERIOR. THIS INCLUDES FIRE SPRINKLER PIPING.
7. ALL CLEANOUTS SHALL BE CONNECTED TO SANITARY LINES USING WYES AND/OR LONG RADIUS ELLS. SANITARY TEES ARE NOT ACCEPTABLE. 2" MINIMUM SIZE. ALL WALL CLEAN OUTS IN VERTICAL RISERS, OR BANKS OF FIXTURES SHALL BE INSTALLED 4" ABOVE THE FLOOD RIM LEVEL OF THE LOWEST CONNECTED FIXTURE AND A MINIMUM OF 24" AFF.
8. ALL WASTE AND VENT PIPING BELOW SLAB SHALL BE 2" MINIMUM.
9. LOCATE PLUMBING VENTS THROUGH ROOF NOT NEARER THAN SIX (6) FEET AWAY FROM EDGE OF BUILDING AND TEN (10) FEET AWAY FROM ANY FRESH AIR INTAKES. OFFSET VENT PIPING, AS REQUIRED, IN CEILING SPACE BETWEEN CEILING AND ROOF TO MEET THESE REQUIREMENTS. SEE DETAIL 3/P0.02.
10. ALL DOMESTIC WATER PIPING (CW, HW AND HWR) SHALL BE INSULATED PER THE WRITTEN SPECIFICATIONS.
11. TOP OF FLOOR DRAINS IN MECHANICAL, AHU AND BOILER ROOMS SHALL BE SET 1-1/2" BELOW FINISHED FLOOR SURFACE. CONCRETE FLOOR SHALL BE SLOPED TO DRAIN, REFERENCE ARCHITECTURAL DRAWINGS. IN ALL OTHER LOCATIONS, FLOOR DRAINS SHALL BE SET FLUSH WITH FINISHED FLOOR, TAKING INTO ACCOUNT ANY FLOOR SLOPE OR FLOOR FINISH (TILE, TERRAZZO, ETC.) AS SHOWN ON ARCHITECTURAL DRAWINGS.
12. PROVIDE AN ISOLATING VALVE AT EACH WATER TAP OFF HOT AND COLD WATER MAINS TO ALLOW FOR SERVICING. VALVE SHALL BE BALL VALVE IF PIPE SIZE IS 2" OR LESS AND GATE VALVE OR BUTTERFLY VALVE IF LARGER THAN 2". SEE WRITTEN SPECIFICATIONS. VALVES SHALL BE EASILY ACCESSIBLE: PROVIDE 18" X 18", FIRE-RATED, STAINLESS STEEL ACCESS PANELS WITH HINGED, CYLINDER LOCK DOORS WHERE VALVES ARE INSTALLED ABOVE INACCESSIBLE CEILINGS OR IN WALL CHASES (MIFAB MODEL MPFR-SS-C). BALL VALVES AND BUTTERFLY VALVES INSTALLED ABOVE CEILINGS SHALL BE INSTALLED SUCH THAT HANDLE IS ON BOTTOM OF PIPE. ISOLATING WATER VALVES ABOVE CEILINGS SHALL BE INSTALLED NO MORE THAN 24" ABOVE CEILING. VALVES ABOVE INACCESSIBLE CEILINGS SHALL BE INSTALLED WITHIN REASONABLE REACH OF CEILING MOUNTED ACCESS PANEL.
13. WATER HAMMER ARRESTERS SHALL BE INSTALLED IN ADDITION TO AIR CHAMBERS PER THE RISER DIAGRAMS. SEE SPECIFICATIONS.
14. MECHANICALLY CLEAN ALL WASTE LINES WITH ROTARY MACHINE TO PROVE FREE FLOWING, SEE SPECIFICATIONS.
15. PROVIDE VENTED SLEEVE (2 PIPE SIZES LARGER THAN GAS PIPE UNLESS NOTED OTHERWISE) FOR ALL GAS PIPING IN GROUND BELOW PAVING OR SIDEWALKS AND INSIDE BUILDING IN WALLS AND IN UNVENTILATED CEILING SPACES, SEE SPECIFICATIONS.
16. GAS PIPING SHALL BE 1/2" MINIMUM. TAP GAS PIPING ON TOP OR SIDES ONLY. DO NOT INSTALL VALVES IN CEILING PLENUM OR IN ANY INACCESSIBLE LOCATION. ALL GAS VALVES SHALL BE EASILY ACCESSIBLE. REFER TO DETAIL 7/P0.01 FOR TYPICAL GAS CONNECTION INSTALLATION. REFER TO DETAIL 4/P0.01 FOR TYPICAL PRV INSTALLATION.
17. CENTER WALL HYDRANTS IN BRICK PATTERN OF EXTERIOR WALLS, REFERENCE THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
18. ALL REFRIGERATORS WITH ICE MAKERS, COMMERCIAL TYPE COFFEE MAKERS, ICE MAKERS, COFFEE VENDING MACHINES AND OTHER ITEMS PROVIDED BY OTHERS THAT REQUIRE A WATER CONNECTION SHALL HAVE A CW VALVE BOX, "VBOX", INSTALLED TO ALLOW EASY ACCESS AND REMOVAL OF MACHINE. ALSO, INSTALL IN-LINE FILTER IN WATER CONNECTION.
19. REFER TO CIVIL DRAWINGS FOR SITE SANITARY, SITE STORM SEWER, FIRE SERVICE AND DOMESTIC WATER SERVICE. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPING INSIDE BUILDING TO OUTSIDE LOCATIONS SHOWN ON PLUMBING DRAWINGS. PLUMBING CONTRACTOR SHALL INCLUDE COST OF FINAL TIE-INS TO SITE SERVICES.
20. PER THE DRAWINGS, ALL DRAINS (FLOOR DRAINS, FLOOR SINKS, HUB DRAINS, KITCHEN DRAINS, SHOWER DRAINS, ETC.) SHALL BE VENTED AND TRAP PRIMED - NO EXCEPTIONS. TRAP PRIMING SHALL BE ACCOMPLISHED USING WATER CLOSET FLUSH VALVE TRAP PRIMING DEVICES OR PROSET SYSTEMS TRAP GUARD SEWER GAS EMISSION PROTECTION, AS SHOWN ON DRAWINGS. REFERENCE PLUMBING FLOOR PLANS AND RISER DIAGRAMS.
21. ALL PIPING LOCATED ON ROOF (GAS PIPING) SHALL BE INSTALLED ON ROOF PIPE SUPPORTS PER DETAIL 14/P0.02, 6-FOOT ON CENTER. INSTALL ROOF PIPE JACK PER DETAIL 9/P0.02 FOR ALL PIPING THROUGH ROOF.
22. COORDINATE LOCATIONS OF ALL ROOF DRAINS AND OVERFLOW ROOF DRAINS WITH ARCHITECTURAL DRAWINGS.
23. FOR COMBINATION WASTE AND VENT SYSTEMS (WHERE APPLICABLE ON DRAWINGS), DRAIN P-TRAPS SHALL BE SIZE OF PIPE SHOWN ON DRAWINGS (I.E. TWO PIPE SIZES LARGER THAN DRAIN SIZE). FOR EXAMPLE, A 4" FLOOR DRAIN SHALL HAVE A 6" P-TRAP.
24. FOR ALL PLUMBING FIXTURES, IF COPPER PIPING IS STUBBED THROUGH WALL FOR DRAIN CONNECTION, INSTALL MARVEL FITTING AT DRAIN CONNECTION FOR EASE OF SERVICING AND REPAIRS. COPPER DRAIN PIPING WILL ONLY BE ALLOWED FOR DIRECT/STRAIGHT STUB-OUT OF FIXTURE DRAIN PIPING THROUGH WALL.
25. DO NOT INSTALL ANY PIPING BENEATH CVT OR VAV BOXES. THIS INCLUDES FIRE SPRINKLER PIPING.
26. WHERE UNDERGROUND VENT PIPE SIZE IS NOT NOTATED, VENT SHALL BE 2" DIAMETER.
27. WHERE UNDERGROUND SANITARY PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR SIZE. NOT BELOW GRADE SANITARY PIPE SHALL BE SMALLER THAN 2". NO SANITARY LINE OR P-TRAP FOR A DRAIN/FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE DRAIN/FIXTURE SCHEDULE.
28. WHERE ABOVE GROUND VENT PIPE SIZE IS NOT NOTATED, REFER TO THE RISER DIAGRAMS FOR VENT SIZE.
29. WHERE CW/HW PIPING SIZE TO THE FIXTURE IS NOT SHOWN ON THE FLOOR PLAN, REFER TO THE RISER DIAGRAMS FOR CW/HW PIPE SIZE. NO PIPING TO FIXTURE SHALL BE SMALLER THAN THE FIXTURE CONNECTION SIZE SHOWN ON THE FIXTURE SCHEDULE.
30. TO INSTALL NEW PLUMBING SYSTEMS BELOW EXISTING CONCRETE SLABS, FIRST PLUMBING CONTRACTOR SHALL LAY OUT CUT. THEN, DEMOLITION CONTRACTOR SHALL SAW CUT SLAB TO CONTROL CRACKING AND REMOVE ALL CONCRETE. PLUMBING CONTRACTOR SHALL THEN EXCAVATE FILL TO PROPER SLOPE, INSTALL NEW PIPING SYSTEMS AS REQUIRED, THEN BACKFILL AND COMPACT TO PROPER DENSITY. THE CONCRETE CONTRACTOR SHALL THEN INSTALL NEW SIX (6) MIL POLYETHYLENE VAPOR BARRIER AND SEAL, INSTALL NEW REINFORCING STEEL AND WELD ON TO EXISTING, THEN RE-POUR CONCRETE TO NEW LEVEL. DO NOT CUT THROUGH GRADE BEAMS WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
31. ALL ABANDONED FIXTURES, DRAINS AND PIPING (INCLUDING PIPING ABANDONED IN THE PAST) IN AREAS WHERE WORK IS BEING DONE SHALL BE COMPLETELY REMOVED FROM BUILDING (INCLUDING PIPING BELOW SLAB/GRADE - UNLESS SHOWN OTHERWISE ON DRAWINGS). EXISTING WATER PIPING SHALL BE CAPPED AT EXISTING WATER MAIN TAPS AND ALL ABANDONED PIPING REMOVED. ABANDONED VENT PIPING SHALL BE COMPLETELY REMOVED, INCLUDING EXISTING VTR's NOT RE-USED. PATCH AS REQUIRED. ONLY ACTIVE PIPING, FIXTURES AND DRAINS SHALL REMAIN IN BUILDING WHERE WORK IS BEING DONE.
32. FIELD VERIFY EXISTING CONDITIONS PRIOR PROCUREMENT OF EQUIPMENT AND SYSTEMS.
33. PERFORM ALL WORK IN COMPLIANCE WITH GOVERNING CODES, APPLICABLE STANDARDS AND AUTHORITIES HAVING JURISDICTION.
34. PROVIDE INSUALTION WITH R-VALUES MEETING OR EXCEEDING REQUIREMENTS OF THE 2021-IECC. (4 ADD4)
35. SECURE ALL REQUIRED PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.

GAS PRV SCHEDULE

MARK	PRV-K	PRV-K2 (4 ADD4)
LOCATION	MECH. YARD	MECH. YARD
SERVES	KITCHEN	KITCHEN
GAS LOAD	585 CFH	585 CFH
DISTANCE FROM METER	150 FT	150 FT
DISTANCE TO LAST OUTLET	200 FT	200 FT
INLET (SIZE/PRESSURE)	1" / 5 PSI	1" / 5 PSI
OUTLET (SIZE/PRESSURE)	2" / 7-12 IN WC	2" / 7-12 IN WC



4 GAS PRESSURE REGULATOR DETAIL (PRV)

NO SCALE

NOTES:
1. GAS REGULATOR SHALL BE ANSI Z21.80 CERTIFIED FOR LINE PRESSURE REGULATION BETWEEN THE SERVICE REGULATOR AND CONNECTED EQUIPMENT.
2. ALL GAS REGULATORS WITH INLET PRESSURE ABOVE 2 PSI SHALL BE EQUIPPED WITH A FACTORY INSTALLED OVERPRESSURE PROTECTION DEVICE, AS PART OF THE ANSI Z21.80 CERTIFICATION.
3. GAS REGULATOR SHALL BE EQUIPPED WITH A VENT LIMITING DEVICE, SIZED IN ACCORDANCE WITH THE REGULATOR OUTLET PRESSURE.
4. ALL REGULATORS INSTALLED OUTDOORS SHALL BE RATED FOR OUTDOOR INSTALLATION.
5. BASIS OF DESIGN IN THE MAXITROL 325-L SERIES OF REGULATORS

PLUMBING DRAINS, CLEANOUTS AND HYDRANTS

MARK	MIN. CONNECTION SIZES (IN.) SAN	VENT	CW	HW	DESCRIPTION/SPECIFICATION FOR FIXTURE OR EQUIPMENT
FD	4	2	1/2	–	TOILET FLOOR DRAIN – TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 1/2" TRAP PRIMER TAP, 6" SQUARE, NICKEL BRONZE HSTRAINER AND SECURITY SCREWS JR SMITH MODEL 2005-03-K06PB-P050-U.
FD2	4	2	1/2	–	EQUIPMENT FLOOR DRAIN – CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, DUCTILE IRON TRUE-FIT SEDIMENT BUCKET WITH 12" STAINLESS STEEL RIM LESS GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS-540-LG-P. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD3	4	2	1/2	–	GRATED MECHANICAL ROOM FLOOR DRAIN – CAST IRON WITH FLANGE, SEEPAGE OPENINGS, 9" HEAVY-DUTY DUCTILE IRON GRATE WITH STAINLESS STEEL VENEER, CLAMPING DEVICE AND 1/2" TRAP PRIMER TAP ZURN MODEL ZS-550-C-P
FD4	4	2	1/2	–	CANWASH FLOOR DRAIN – ALL GALVANIZED CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, GALVANIZED SUR-SET SEDIMENT BUCKET WITH 12" GALVANIZED DUCTILE IRON RIM AND GRATE, 1/2" TRAP PRIMER TAP ZURN MODEL ZS-540-P-G-HD. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD5	4	2	1/2	–	KITCHEN FLOOR DRAINS SHALL BE SIMILAR EXCEPT WITH 7" SQUARE, BRONZE GRATE JR SMITH MODEL 2005-03-K07PB-P050-U. PROVIDE 4" DIAMETER STAINLESS STEEL FUNNEL WHERE SHOWN ON DRAWINGS. REFERENCE KITCHEN CONNECTION SCHEDULE ON PLUMBING RENOVATION FLOOR PLAN SHEET.
FS KITCHEN FS	4	2	1/2	–	FLOOR SINK – CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY STAINLESS STEEL TRACTOR DUTY FRAME WITH 3/4-TRACTOR GRATE AND 1/2" TRAP PRIMER TAP JR SMITH MODEL 3150Y-04-C-13.
FS2 (4 ADD4)	4	2	1/2	–	DEEP FLOOR SINK – FABRICATED STEEL RECEPTOR, 12" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, STAINLESS STEEL MESH LINED BUCKET AND 24X12 NICKEL BRONZE FRAME WITH 3/4 SOLID COVER. JR SMITH MODEL 3250Y-C-BS-43
CO	VARIES	–	–	–	FLOOR CLEANOUT – ADJUSTABLE EXTENSION HOUSING, CAST IRON FERRULE WITH FULL-LINE-SIZE BRASS PLUG (UP TO 4"), 5" DIAMETER STAINLESS STEEL ACCESS COVER WITH VANDAL-PROOF SECURITY SCREWS, ROUND FRAME AND TOP STYLE COMPATIBLE WITH FLOOR TYPE (REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR TYPES) ZURN MODEL ZS-1400-VP. PROVIDE CARPET FLANGE FOR CARPETED AREAS (CARPET MARKER SHALL NOT BE ACCEPTABLE) AND TERRAZZO RECESS FOR TERRAZZO FLOORS. OUTDOOR CLEANOUT – SAME AS TYPE "CO" EXCEPT WITH HEAVY-DUTY NICKEL BRONZE TOP ZURN MODEL ZN-1400-HD-VP. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
WCO	VARIES	–	–	–	WALL CLEANOUT – CAST IRON FERRULE WITH COUNTERSUNK HEAD (FULL-LINE-SIZE PVC PLUG UP TO 4") MI-FAB MODEL C1450. ACCESS COVER SHALL BE 8" SQUARE, SURFACE MOUNT, FLUSH INSTALLATION, 16-GAUGE STAINLESS STEEL ACCESS DOOR WITH FLANGED FRAME AND VANDAL-PROOF OPTION MI-FAB MODEL UA-SS-VP. ACID WASTE CLEANOUT (AWCO) SHALL BE SAME EXCEPT ACID WASTE PIPING. INSIDE CABINETWORK WHERE CLEANOUT IS NOT VISIBLE, ACCESS PANEL MAY BE ROUND STAINLESS STEEL TYPE WITH VANDAL-PROOF CENTER SCREW MI-FAB MODEL C1450-RD-3-6.
2CO	4	–	–	–	DOUBLE CLEANOUTS – SAME AS OUTDOOR CLEANOUTS. INSTALLED FOR TWO-WAY RODDING. SINGLE CLEANOUT WITH 2-WAY FITTING IS NOT ACCEPTABLE, PROVIDE TWO SEPARATE CLEANOUTS. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
HB	–	–	3/4	–	HOSEBIBB – 3/4" HOSE THREAD, INTEGRAL VACUUM BREAKER SPOUT, ROUGH CHROME FINISH WITH REMOVABLE KEYED HANDLE, WALL FLANGE CHICAGO MODEL 952.
WH	–	–	3/4	–	RESTROOM WALL HYDRANT – NARROW WALL, WARM CLIMATE TYPE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5518
WH2	–	–	3/4	–	EXTERIOR WALL HYDRANT – NON-FREEZE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR WITH KEY LOCK AND WALL CLAMP JR SMITH MODEL 5519
WH3	–	–	3/4	3/4	CANWASH WALL HYDRANT – NON-FREEZE HOSE BOX WITH STRAIGHT INLET CONNECTION, HOT AND COLD MIXING, REMOVABLE KEYED HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL BACKFLOW PREVENTER WITH 3/4" HOSE CONNECTION, HEAVY DUTY BRASS CASING, POLISHED BRONZE HYDRANT BOX WITH HINGED COVER, "WATER" CAST ON COVER, DRIP LIP AND WALL CLAMP J.R. SMITH MODEL 5560-QT-WC-H-W-PB.
WASH (4 ADD4)	–	–	3/4	3/4	CLOTHES WASHER HOSE CONNECTION – STUB OUT OF WALL WITH ELBOW TO LEAD FREE DOUBLE CHECK BACKFLOW PREVENTER WITH QUARTER TURN VALVES, WATTS LF007M3-QT-FZ 3/4; PROVIDE FEMALE NIPPLE WITH 3/4" HOSE CONNECTION FOR CONNECTION OF WASHER JUMPER HOSE. SUPPORT ASSEMBLY FROM WALL WITH UNISTRUT AND PIPE CLAMPS. ASSEMBLY SHALL BE PROVIDED FOR BOTH COLD AND HOT WATER OUTLETS. WASHER HAS INTEGRAL AIR GAP CERTIFIED TO EUROPEAN STANDARDS AND THUS REQURIES AN EXTERNAL MEANS OF BACKFLOW PREVENTION TO MEET US STANDARDS.

PLUMBING FIXTURES AND EQUIPMENT

MARK	MIN. CONNECTION SIZES (IN.) SAN	VENT	CW	HW	DESCRIPTION/SPECIFICATION
WC	4	2	1	–	WATER CLOSET – WALL MOUNTED, WHITE VITREOUS CHINA, SIPHON JET ACTION, 1.28 GPF, ELONGATED BOWL, TOP SPUD, ADA/TAS COMPLIANT, AMERICAN STANDARD AFWALL; SLOAN ROYAL 111-1.28 FLUSH VALVE WITH VANDAL-PROOF FREE-SPINNING TOP CAP, 1.28 GPF, VANDAL-PROOF STOP AND ADA/TAS COMPLIANT LEVER ACTUATOR WITH LEVER INSTALLED ON LEFT SIDE (FOR FIXTURES DESIGNATED AS "HANDICAP", INSTALL LEVER ON "WIDE-SIDE" OF TOILET STALL); BEMIS 1655-SS/C EXTRA HEAVY DUTY, WHITE, OPEN FRONT SEAT LESS COVER WITH SELF-SUSTAINING, STAINLESS STEEL CHECK HINGE; AND, FLOOR MOUNTED CARRIER.
LV	1-1/4	1-1/4	1/2	1/2	LAVATORY GOOSENECK FAUCET – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; DECK MOUNTED FAUCET, 4" CENTERS, FIXED, CHROME PLATED, 5.25" GOOSENECK SPOUT, PRESSURE COMPENSATING LAMINAR FLOW NON-AERATING 0.5 GPM OUTLET, 4" WRISTBLADE HANDLES, REBUILDABLE COMPRESSION CARTRIDGES, CHICAGO 895-317GN2AE72ABCP; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170-LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
LV2	1-1/4	1-1/4	1/2	1/2	LAVATORY – WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", ADA/TAS COMPLIANT AMERICAN STANDARD LUCERNE 0355.012; CHROME PLATED, ALL CAST BRASS CONSTRUCTION, ADA/TAS COMPLIANT, VANDAL-PROOF FAUCET WITH 4" WRIST BLADE HANDLES, COMPRESSION STYLE CARTRIDGES, CHROME DECK PLATE, VANDAL-PROOF AERATOR, COPPER SUPPLIES AND CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9 CHICAGO MARATHON MODEL 802-E70-317ABCP; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. PROVIDE ASSE 1070 LISTED MIXING VALVE, LEONARD 170-LF OR EQUAL (MUST BE CAPABLE OF ADJUSTMENT ABOVE 130°F).
EDF	1-1/2	1-1/2	1/2	–	BI-LEVEL ELECTRIC DRINKING FOUNTAINS WITH BOTTLE FILLER – WALL MOUNTED, ALL STAINLESS STEEL, ADA AND TAS COMPLIANT FOR ALL AGES, 8 GPH AT ARI STANDARDS, 2-STREAM ALL METAL BUBBLER FITTING WITH VANDAL-RESISTANT KIT AND FRONT PUSH BUTTON ACTUATION, PUSH BUTTON ACTIVATED BOTTLE FILLER WITH 1.1GPM FILL RATE AND ANIT-MICROBIAL COATING, INTEGRAL WATER FILTER, LEAD-FREE (CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9), REFRIGERANT HFC-134a, MAINTENANCE ACCESS PANEL, HALSEY-TAYLOR MODEL HTHBHVR8BL; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; FLOOR MOUNTED CHAIR CARRIER; AND, STAINLESS STEEL ADA APRON FOR LOCATIONS REQUIRED BY ADA OR TAS.
MB	3	2	3/4	3/4	MOP BASIN – 24" X 24" X 12" DEEP TERRAZZO, TWO (2) STAINLESS STEEL SPLASH CATCHER PANELS, 6" DROP FRONT WITH STAINLESS STEEL CAP, CAST BRASS DRAIN WITH STAINLESS STEEL STRAINER STERN WILLIAMS HILOW MODEL HL-1800-BP; FAUCET SHALL BE POLISHED CHROME PLATED SERVICE SINK TYPE WITH VACUUM BREAKER, INTEGRAL SUPPLY CHECK STOPS, SPOUT WITH PAIL HOOK, HOSE END AND TOP BRACE CHICAGO MODEL 897-CCF (INSTALL BACKING/BRACING INSIDE WALL TO SUPPORT FAUCET AND TOP BRACE).
LP-1	3	2	3/4	3/4	LAVATORY PUMP – FACTORY BUILT, LIFT PUMP FOR GRAY WATER WASTE, TOP ACCESS TO INTERNAL 1/6HP PUMP AND FLOAT SWITCH, 1.5" TOP AND SIDE INLETS, 1.5" TOP OUTLET, INTEGRAL CHECK VALVE AT BOTTOM INLET CONNECTIONS, 9FT POWER CORD WITH GROUNDED PLUG; LIBERTY PUMPS MODEL 406

KITCHEN PLUMBING CONNECTION SCHEDULE

MARK	DESCRIPTION
P5	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO MOP BASIN ("MB") FAUCET. REFERENCE PLUMBING FIXTURE SCHEDULE.
P6	3" DRAIN IN FLOOR FOR MOP BASIN ("MB") DRAIN. REFERENCE PLUMBING FIXTURE SCHEDULE.
P7	3/4" CW AND 3/4" HW – IN WALL, 18" AFF, TO HOSE BIBB.
P10	FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" SQUARE HEAVY-DUTY POLISHED BRONZE GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 2005-03-K07PB-P050-U.
P11C	1/2" CW AND 1/2" HW – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P11D	2" DRAIN – IN WALL, FOR HAND LAVATORY WITH FOOT CONTROLS ("LV"). REFERENCE PLUMBING FIXTURE SCHEDULE.
P12	FLOOR SINK – 4" OUTLET; FLUSH WITH FLOOR; CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR, INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY NICKEL BRONZE FRAME WITH 3/4-TRACTOR GRATE, 1/2" TRAP PRIMER TAP, AND TRAP SEAL DEVICE (MODEL 2692) JR SMITH MODEL 3150Y-04-C-13.
P12A	EQUIPMENT FLOOR DRAIN – SIMILAR TO MARK P10, BUT WITH 4" OUTLET.
P15	FUNNEL FLOOR DRAIN – 3" OUTLET; FLUSH WITH FLOOR; TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" DIAMATER HEAVY-DUTY STAINLESS STEEL TRACTOR DUTY GRATE AND SECURITY SCREWS, 4" ROUND FUNNEL ASSEMBLY (MODEL 3580), 1/2" TRAP PRIMER TAP JR SMITH MODEL 2005-03-K07PB-P050-U
P109	3/4" CW – IN WALL, 60" AFF, TO ICE MAKER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO ICE MAKER FROM CHECK VALVE, THROUGH FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P109A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12, BUT WITH FULL GRATE. SEE DESCRIPTION ABOVE.
P110	1/2" CW AND 1/2" HW – IN WALL, 36" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO-CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P110A	2" DRAIN – IN WALL, 48" AFF, FOR CLOTHES WASHER. PROVIDE AND INSTALL RECESSED WALL VALVE AND DRAIN BOX WITH WATTS DUO-CLOZ VALVE ("WBOX" – GUY GRAY WB200).
P122	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET AT TWO COMPARTMENT SINK. INSTALL LEONARD 370-LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P122A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P123	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO PRE-RINSE. 1/2" CW TO DISPOSER.
P123A	2" DRAIN – IN WALL, 10" AFF, TO DISPOSER (BYPASS GREASE TRAP).
P161	(2)3/4" GAS CONNECTION – 18"/36" AFF, TO CONVECTION OVEN, 60 CFH (EACH).
P163A	3/4" GAS CONNECTION – 18" AFF, TO TILT BRAISING PAN, 104 CFH.
P163B	3/4" CW AND 3/4" HW – IN WALL, 36" AFF, TO TILT BRAISING PAN.
P165	1" GAS CONNECTION – 18" AFF, TO RANGE, 70 CFH.
P172	(2) 3/4" CW – IN WALL, 24" AFF & 48" AFF, TO COMBI OVEN. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND OVEN. PROVIDE WATTS 9MD2 OR EQUAL. EXTEND VENT LINE TO FLOOR SINK SERVING CONNECTED FIXTURE. CONNECT TO EQUIPMENT FROM CHECK VALVE, THROUGH FILTER BANK (REF P172D & E), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172A	SIMILAR TO PLUMBING CONNECTION P172, BUT ONLY ONE 3/4" CW – IN WALL, 48" AFF. SEE DESCRIPTION ABOVE.
P172B	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P172C	(2) 3/4" GAS CONNECTION – 18"/36" AFF, TO COMBI OVEN, 105 CFH (EACH).
P172D	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO INLET OF FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS.
P172E	3/4" CW – IN WALL, 66" AFF, TO WATER FILTER. EXTEND OUTLET OF FILTER BANK BACK INTO THE WALL. TRANSITION OUT OF WALL WITH CHROME PLATED COPPER ELBOW AND ESCUTCHEON PLATE, CONNECT TO FILTER BANK (BY OTHERS), WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PIPING WITHIN THE WALL SHALL EXTEND TO AND SERVE TWO (2) CONNECTIONS TAGGED P172.
P249	3/4" CW AND 3/4" HW – IN WALL, 13" AFF, TO FAUCET. INSTALL LEONARD 370-LF MIXING VALVE ON HW SUPPLY SIDE OF FAUCET, SET TO A MINIMUM OF 120°F PER DETAIL 2/P0.02.
P249A	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.
P250A	3/4" HW – IN WALL, 18" AFF, TO BOOSTER HEATER. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND ICE MAKER AND CONNECT THROUGH FILTER (BY OTHERS) WITH TYGON TUBING & STAINLESS STEEL FITTINGS. PROVIDE WATTS 9MD2 OR EQUAL – 140°F MINIMUM (INTERCONNECT WITH DISH MACHINE).
P250B	3/4" CW – IN WALL, 18" AFF, TO DISH MACHINE. PROVIDE DOUBLE CHECK BACKFLOW ASSEMBLY WITH INTERMEDIATE RELIEF VENT, SUPPORTED FROM WALL BEHIND DISH MACHINE. PROVIDE WATTS 9MD2 OR EQUAL (INTERCONNECT WITH DISH MACHINE).
P614	1/2" CW AND 1/2" HW – IN WALL, 42" AFF, TO FILL FAUCET.
P800	FLOOR SINK – SAME AS PLUMBING CONNECTION P12. SEE DESCRIPTION ABOVE.

KITCHEN PLUMBING CONNECTION NOTES
1. KITCHEN CONNECTION SCHEDULE IS APPLICABLE TO ALL SCHOOLS IN THIS DRAWING SET.
2. REFERENCE KITCHEN CONSULTANT'S DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL EQUIPMENT AND INSTALLATION REQUIREMENTS.
3. ALL WATER PIPING INSTALLED EXPOSED BENEATH KITCHEN EQUIPMENT, INCLUDING PIPING INSTALLED BY DIVISION 11 (I.E. UNDER SINK COUNTERTOPS, SERVING TABLES, ETC.) SHALL BE INSULATED BY THE PLUMBING CONTRACTOR PER THE SPECIFICATIONS (INCLUDE ALUMINUM JACKETING FOR ALL PIPE INSULATION, PER SPECIFICATIONS).
4. INDIRECT WASTE PIPING FROM KITCHEN EQUIPMENT IS NOT SHOWN; HOWEVER, PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING THIS PIPING PER THE REQUIREMENTS OF THE KITCHEN CONSULTANT'S CONTRACT DOCUMENTS, PER THE REQUIREMENTS OF THE VARIOUS EQUIPMENT MANUFACTURERS PROVIDED AND PER THE IPC-2021, SECTION 802. ALL INDIRECT WASTE PIPING SHALL BE TYPE L COPPER. INSTALL 45°F ELBOW AT END OF EACH INDIRECT WASTE PIPE TO DIRECT FLOW OF WATER INTO FLOOR SINK.
   - 4.1. IPC 2015 – SECTION 802.1.1 FOOD HANDLING – EQUIPMENT AND FIXTURES UTILIZED FOR THE STORAGE, PREPARATION AND HANDLING OF FOOD SHALL DISCHARGE THROUGH AN INDIRECT WASTE PIPE BY MEANS OF AN AIR GAP. EACH WELL OF A MULTIPLE-COMPARTMENT SINK SHALL DISCHARGE INDEPENDENTLY TO A WASTE RECEPTOR. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P121, P122 AND P126.
   - 4.2. IPC 2015 – SECTION 8802.1.8 FOOD UTENSILS, DISHES, POTS AND PANS SINKS – SINKS, USED FOR THE WASHING, RINSING, OR SANITIZING OF UTENSILS, DISHES, POTS, PANS OR SERVICE WARE USED IN THE PREPARATION, SERVING OR EATING OF FOOD SHALL DISCHARGE INDIRECTLY THROUGH AN AIR GAP OR AN AIR BREAK TO THE DRAINAGE SYSTEM. THIS IS APPLICABLE TO DRAINS SERVED BY FIXTURE CONNECTIONS P249.

PRELIMINARY
NOT FOR CONSTRUCTION OR BIDDING PURPOSES

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ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025 (4 ADD4)	ADDENDUM 04

u

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILL ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD.
SUGAR LAND, TX 77498

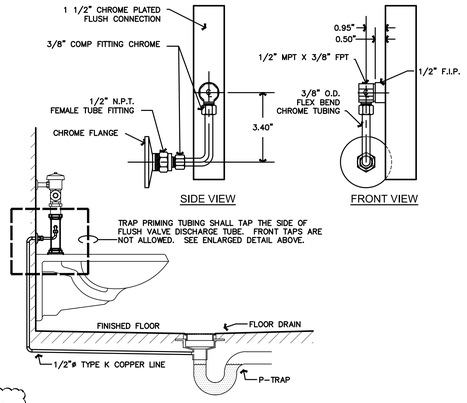
SEAL

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

PLUMBING NOTES & SCHEDULES

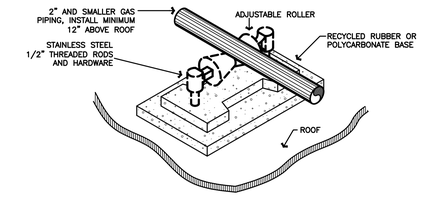
u-P0.01



12 FLUSH VALVE TRAP PRIMING TUBE DETAIL

NO SCALE

MI-FAB MODEL MI-702-MOD FLUSH VALVE TRAP PRIMER, OR EQUAL

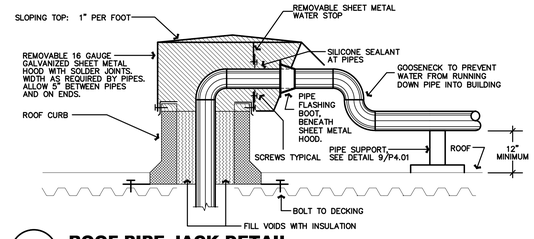


14 GAS PIPING ROOF SUPPORT DETAIL

NO SCALE

NOTES:

1. GAS PIPING SUPPORT SHALL BE PORTABLE PIPE HANGERS, INC. MODEL PP10-R. PIPING SHALL BE INSTALLED 12" ABOVE FINISHED ROOF. PROVIDE 18" X 18" CAREY TREAD-TYPE MATERIAL BENEATH EACH PIPE SUPPORT.
2. FIELD LOCATE ROOF STRUCTURAL SUPPORTS AND PLACE BASE OF PIPE SUPPORT OVER ROOF SUPPORTS ONLY. PROVIDE BASE OF ADEQUATE LENGTH TO SPAN ROOF JOIST TO PREVENT SUPPORTS SETTING ON ROOF DECK ONLY.
3. INSTALL SIX (6) FOOT-ON-CENTERS.
4. PIPE SUPPORT MANUFACTURER'S REPRESENTATIVE SHALL PERSONALLY INSPECT INSTALLATIONS OF PIPE SUPPORTS AND MAKE CORRECTIONS AND HEIGHT ADJUSTMENTS TO INSTALLATIONS, AS REQUIRED, DURING INSPECTION.

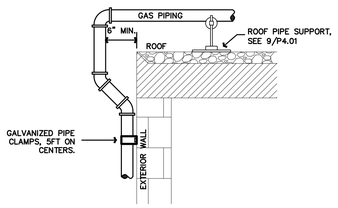


9 ROOF PIPE JACK DETAIL

NO SCALE

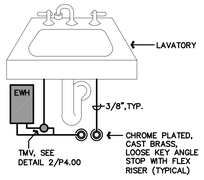
NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.

TANKLESS WATER HEATER SCHED.		
MARK	IEWH-1	
SERVES	LAVATORY	
LOCATION	BELOW COUNTER	
HEATER KW	1.8 KW	
TEMP RISE (@ 0.5 GPM)	25°F	
VOLTAGE/PHASE	120V/1PH	
EEMAX MODEL	SPEX1812T	



13 GAS PIPING WALL-TO-ROOF TRANSITION DETAIL

NO SCALE

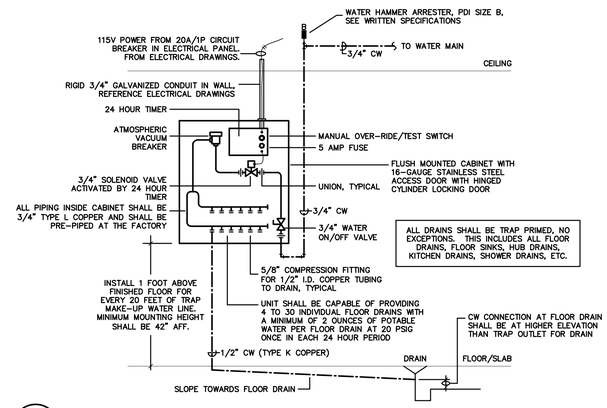


11 TANKLESS WATER HEATER

NO SCALE

NOTES:

1. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FURNISH & INSTALL 0.5-GPM AERATOR ON FAUCET COMPATIBLE WITH TANKLESS EWH REQUIREMENTS.
5. WATER HEATER SHALL HAVE INTEGRAL ASSE-1070 COMPLIANT TEMPERED MIXING VALVE.

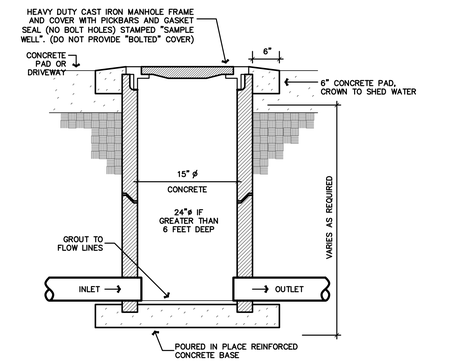


10 ELECTRONIC TRAP PRIMING MANIFOLD DETAIL (TP)

NO SCALE

NOTES:

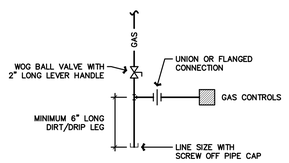
1. REFERENCE SCHEDULE ON SHEET P3.00



8 SAMPLE TEST WELL DETAIL (STW)

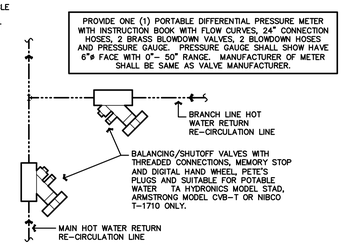
NO SCALE

NOTES:



7 TYPICAL GAS CONNECTION

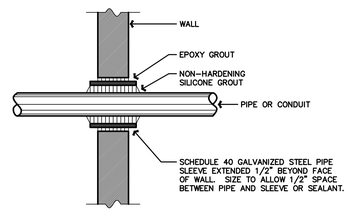
NO SCALE



6 HOT WATER BALANCING STATION

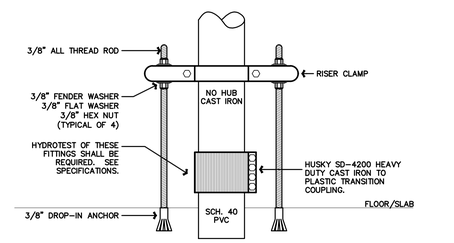
NO SCALE

PROVIDE AT EACH JUNCTION OF BRANCH HOT WATER RETURN LOOPS TO MAIN CIRCULATING HOT WATER LINE, SEE PLUMBING PLANS.



5 WALL PENETRATION DETAIL

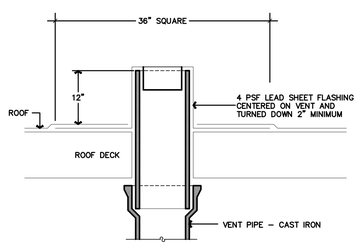
NO SCALE



4 PVC-TO-CAST IRON INSTALLATION DETAIL

NO SCALE

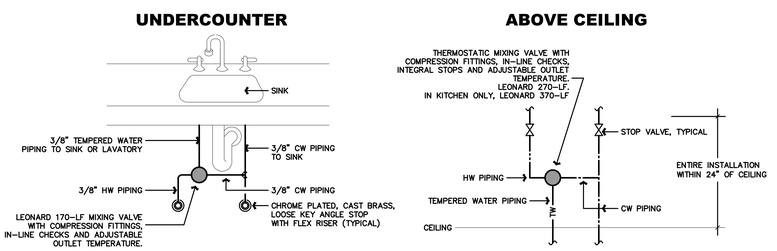
MISSION TRANSITION COUPLING DESIGNED AND CERTIFIED FOR THIS SPECIFIC APPLICATION SHALL BE ACCEPTABLE IN LIEU OF HUSKY COUPLING IN THIS DETAIL.



3 ROOF VENT DETAIL

NO SCALE

COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

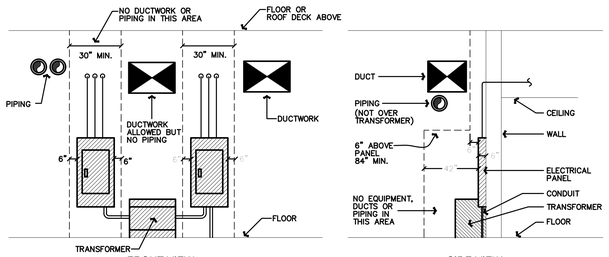


2 MIXING VALVE DETAIL

NO SCALE

NOTES

1. UNDERCOUNTER MIXING VALVE SHALL BE MOUNTED ON WALL IN FIXTURE KNEE-SPACE. LOCATION OF VALVE AND PIPING SHALL NOT INTERFERE WITH ANY ADA/HANDICAP KNEE-SPACE CLEARANCE REQUIREMENTS.
2. ALL PIPING SHALL BE CHROME PLATED CAST BRASS AND SHALL BE INSULATED BY TRUEBRO HANDI LAV-GUARD INSULATION KITS. INSULATION KITS SHALL COVER P-TRAP, MIXING VALVE, WATER STOPS, PIPING AND ALL SHARP EDGES (ONLY WHERE CABINETWORK KNEESPACE SCREEN NOT PROVIDED).
3. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
4. FOR ABOVE CEILING INSTALLATION, VALVE SHALL BE INSTALLED IN AN EASILY/READILY ACCESSIBLE LOCATION. SEE KITCHEN PLUMBING CONNECTION SCHEDULE FOR REQUIRED KITCHEN LOCATIONS.
5. LAVATORY MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 130°F.
   SINK MIXING VALVES SHALL HAVE AN OUTPUT ADJUSTMENT RANGE UP TO OR ABOVE 140°F.



1 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

DO NOT INSTALL ANY PIPING BENEATH CVT BOXES. DO NOT INSTALL ANY PIPING (EXCEPT FIRE SPRINKLER PIPING AND OTHER PIPES SHOWN SPECIFICALLY ON THE PLUMBING FLOOR PLANS) OVER COMPUTER CLASSROOMS, BOOKROOMS, IDF/MDF/SERVER ROOMS OR OTHER ROOMS NOTED ON THE PLUMBING FLOOR PLANS.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
4 09/04/2025	ADDENDUM 04

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT

SEAL

STATE OF TEXAS
INTERIM REVIEW
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF TODD A. STANTON, P.E. TEXAS REGISTRATION NO. 122333 ON 09.04.2025. IT IS NOT TO BE USED FOR BIDDING, PERMIT OR CONSTRUCTION PURPOSES.
09.04.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

PLUMBING SCHEDULES & DETAILS

u-P0.02

PRELIMINARY
NOT FOR CONSTRUCTION OR BIDDING PURPOSES

STANTON ENGINEERING GROUP
INFORMATION@STANTONEG.COM | (713) 300-6080

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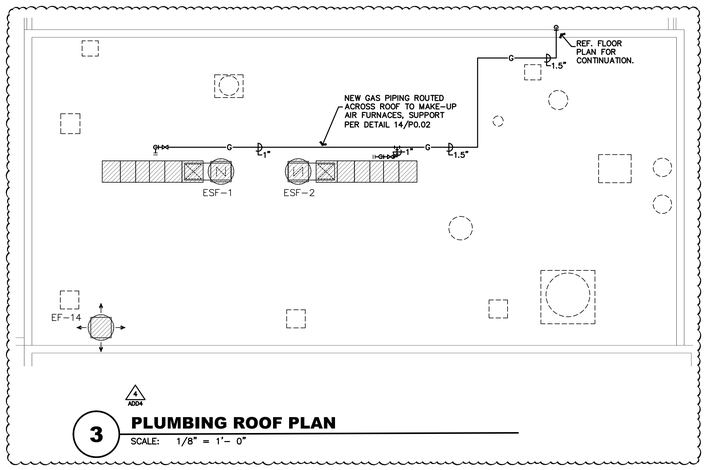
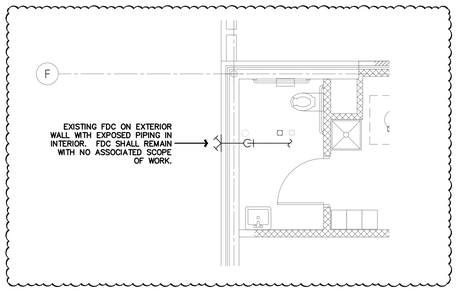


ADD4

3 PLUMBING ROOF PLAN

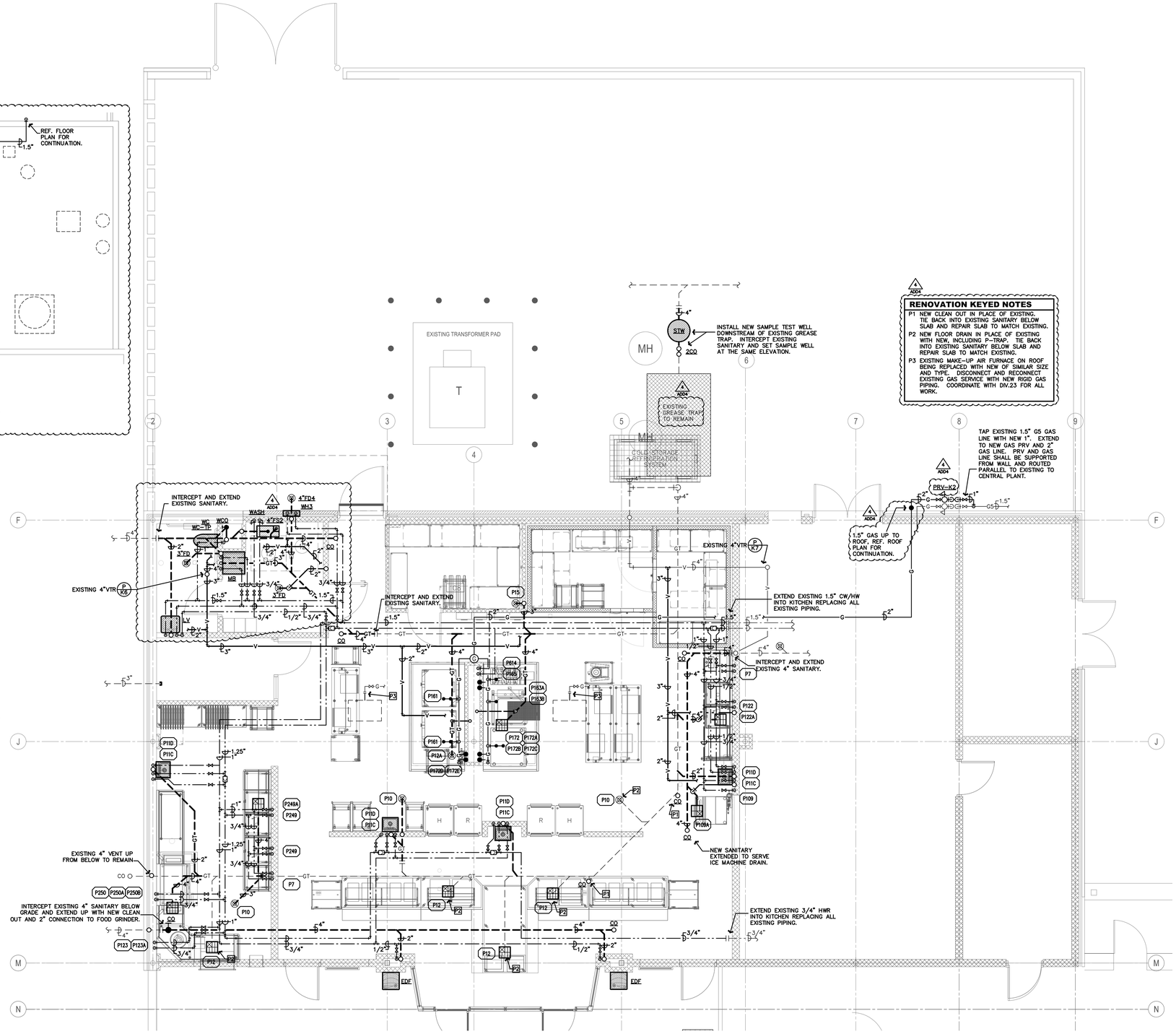
SCALE: 1/8" = 1'- 0"



ADD4

2 FIRE SPRINKLER - FDC - ETR

SCALE: 1/4" = 1'- 0"



RENOVATION KEYED NOTES

P1 NEW CLEAN OUT IN PLACE OF EXISTING. TIE BACK INTO EXISTING SANITARY BELOW SLAB AND REPAIR SLAB TO MATCH EXISTING.

P2 NEW FLOOR DRAIN IN PLACE OF EXISTING WITH NEW, INCLUDING P-TRAP. TIE BACK INTO EXISTING SANITARY BELOW SLAB AND REPAIR SLAB TO MATCH EXISTING.

P3 EXISTING MAKE-UP AIR FURNACE ON ROOF BEING REPLACED WITH NEW OF SIMILAR SIZE AND TYPE. DISCONNECT AND RECONNECT EXISTING GAS SERVICE WITH NEW RIGID GAS PIPING. COORDINATE WITH DIV.23 FOR ALL WORK.

1 PLUMBING RENOVATION FLOOR PLAN

SCALE: 1/4" = 1'- 0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
ADD4 09/04/2025	ADDENDUM 04

u

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILL ELEMENTARY SCHOOL
13707 JESS PIRTLE BLVD.
SUGAR LAND, TX 77498

SEAL

STATE OF TEXAS
TYLER W. HERRING
106052
LICENSED
PROFESSIONAL
ENGINEER
09.04.2025

MWA ARCHITECTS

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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

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DATE: 07/18/2025
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PLUMBING FLOOR PLAN

u-P1.01

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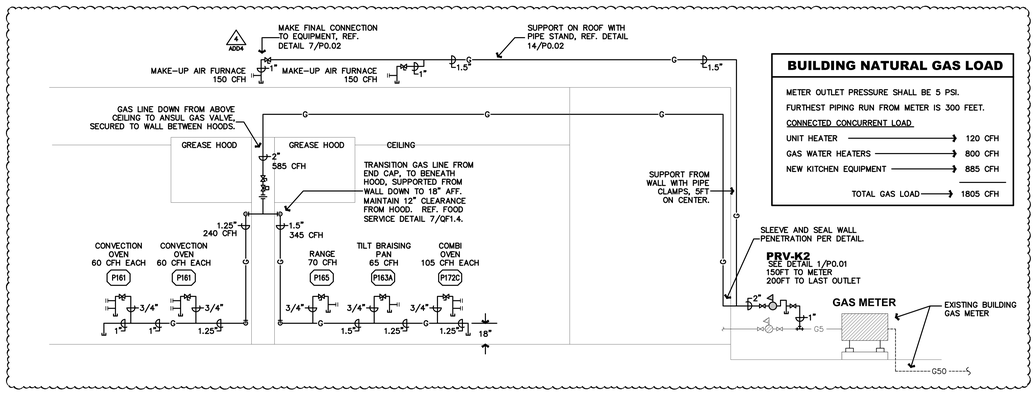
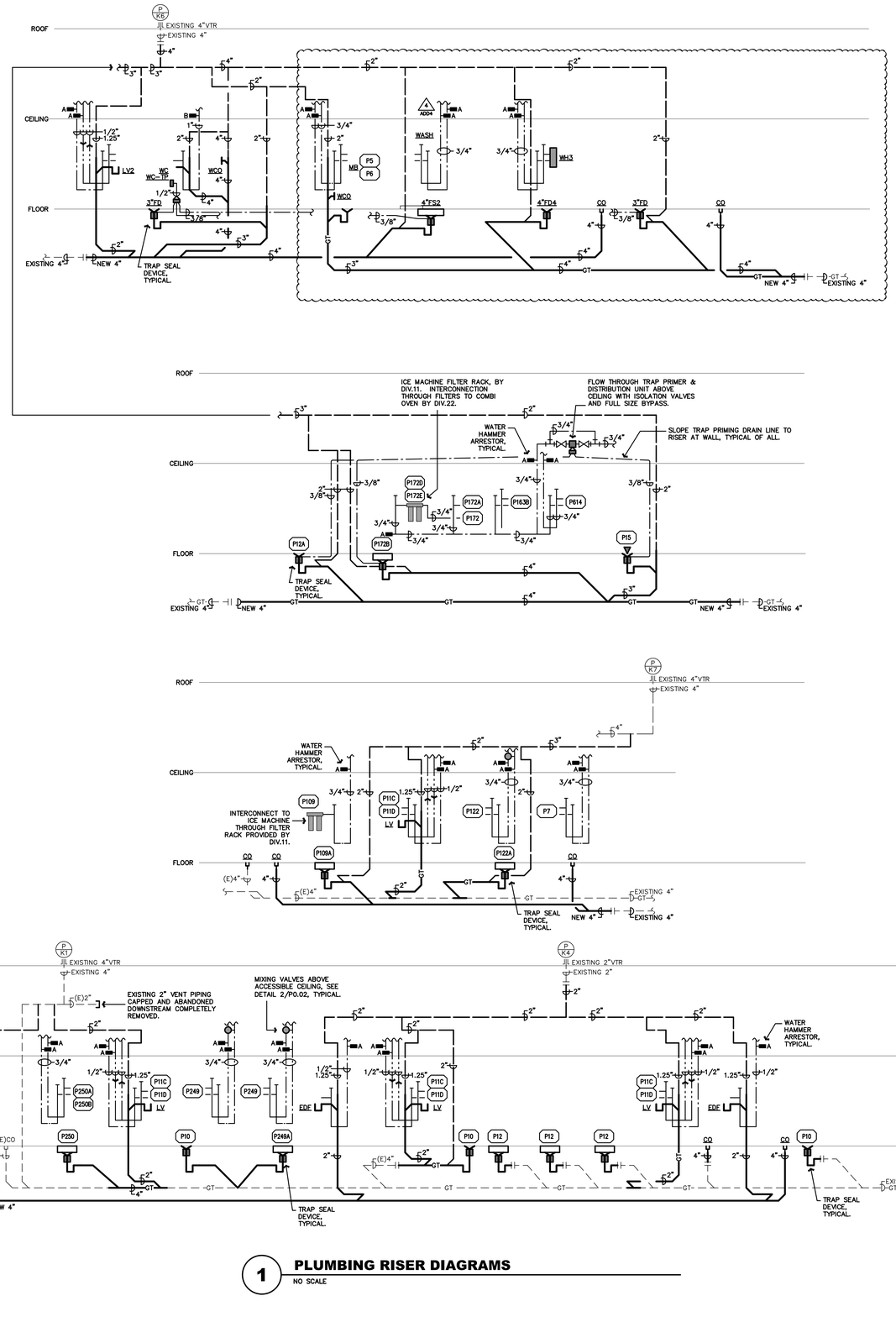


2 NATURAL GAS RISER DIAGRAM

NO SCALE



1 PLUMBING RISER DIAGRAMS

NO SCALE

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u

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PLUMBING RISER DIAGRAMS

u-P2.00

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TECHNOLOGY DEMOLITION PLAN GENERAL NOTES

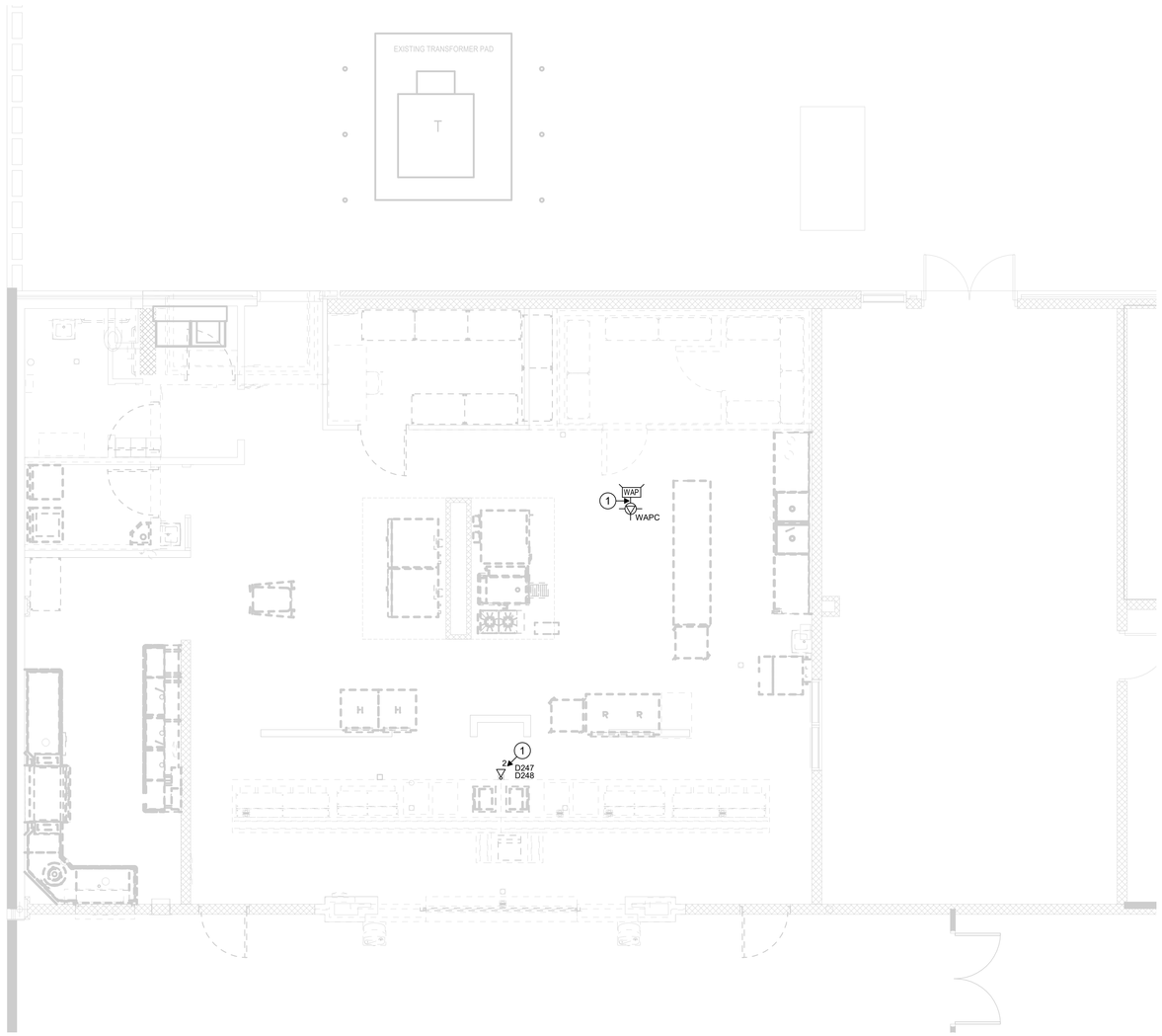
1. ALL DATA, VOICE, VIDEO AND SECURITY SYSTEMS SHALL REMAIN OPERATIONAL AT ALL TIMES DURING BUSINESS HOURS UNLESS OTHERWISE NOTED. ANY SYSTEM DOWNTIME SHALL BE SCHEDULED WITH THE ARCHITECT/ENGINEER AND OWNER AT LEAST TEN (10) WORKING DAYS IN ADVANCE. CONTRACTOR SHALL DEVELOP A PHASING PLAN AND SCHEDULE OF ANY REQUIRED SYSTEM DOWNTIME FOR REVIEW AND APPROVAL BY THE ARCHITECT/ENGINEER AND OWNER PRIOR TO ANY CONSTRUCTION ACTIVITIES.
2. OWNER SHALL BE RESPONSIBLE FOR POWER DOWN AND START-UP OF ALL DATA, VOICE, VIDEO AND SECURITY SYSTEMS. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT/ENGINEER AND OWNER AND PROVIDE A MINIMUM OF TEN (10) WORKING DAYS NOTICE FOR SCHEDULING OF ANY REQUIRED DOWNTIME.
3. ALL EXISTING WIRELESS ACCESS POINTS ARE TO BE REMOVED AND RETURNED TO OWNER. CONTRACTOR SHALL RE-INSTALL ALL EXISTING AND NEW WIRELESS ACCESS POINTS AT COMPLETION OF PROJECT.
4. COORDINATE REMOVAL OF EXISTING CAMERA WITH OWNER/ARCHITECT DURING CONSTRUCTION.

TECHNOLOGY DEMOLITION PLAN KEYED NOTES

NOT ALL KEYED BELOW APPLY TO THIS SHEET

(1) EXISTING DATA/VOICE/WIRELESS ACCESS POINT OUTLET TO BE REMOVED. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL 4-PAIR CABLES AND WORKSTATION CONNECTING HARDWARE TERMINATED AT THIS LOCATION. IF LOCATION IS NOT RE-USED, CONTRACTOR SHALL SUPPLY AND INSTALL BLANK COVER. CONTRACTOR IS TO REMOVE EACH CABLE TO BE DEMOLISHED FROM THE PATCH PANEL OR TERMINATION BLOCK IN THE TELECOMMUNICATIONS ROOM. REMOVE THE ENTIRE LENGTH OF THE CABLE AND THE CORRESPONDING MODULAR CONNECTOR, FACEPLATE AND ACCESSORIES. NO ABANDONED CABLING IS TO BE LEFT ABOVE CEILING. CONTRACTOR SHALL INSTALL ALL EXISTING AND NEW WIRELESS ACCESS POINTS AT COMPLETION OF PROJECT.

(2) EXISTING VIDEO SURVEILLANCE CAMERA. CONTRACTOR SHALL REMOVE AND RETURN TO OWNER.



1 TECHNOLOGY DEMOLITION FLOOR PLAN
u-TD201 1/4" = 1'-0"

ISSUE:

12/05/2024	DD PACKAGE
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09/04/2025 3	ADDENDUM NO. 4

u

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILL ELEMENTARY SCHOOL
3707 JESS PIRTLE BLVD.
SUGAR LAND, TX 77498

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 12-31-25
RCDD
07/18/2025

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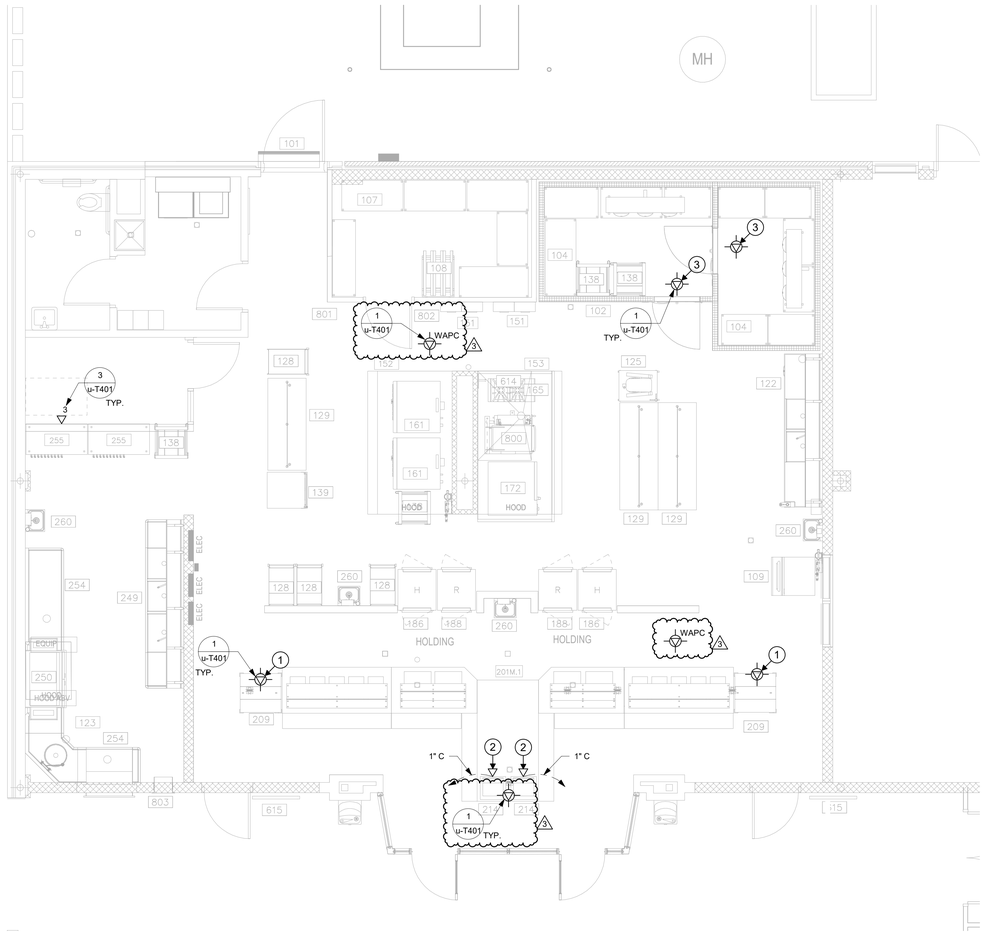
TECHNOLOGY DEMOLITION FLOOR PLAN

SHEET NO. 3
u-TD201



1 u-T201 TECHNOLOGY NEW/RENOVATION KITCHEN PLAN
1/4" = 1'-0"

TECHNOLOGY FLOOR PLANS GENRAL NOTES:

1. THE TECHNOLOGY REGION / WIRING BOUNDARIES ARE IDENTIFIED ON THE OVERALL SHEETS ONLY AND NOT ON THE ENLARGED SHEETS. CONTRACTOR SHALL REFER TO THE OVERALL SHEETS FOR ALL TECHNOLOGY REGIONS / WIRING BOUNDARIES.
2. ALL CONDUIT PATHWAYS, ROUGH-INS, BACKBOXES, FLOOR BOXES, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
6. TECHNOLOGY CABLING SHALL BE ROUTED IN SEPARATE PATHWAYS IN J-HOOKS, CONDUITS, CONDUIT SLEEVES, CORES, ETC. THROUGHOUT THE ENTIRE PATHWAY. DIFFERENT MEDIA TYPES (DATA, VIDEO, SECURITY, ETC.) SHALL NOT SHARE THE SAME J-HOOK, CONDUIT, CONDUIT SLEEVE, CORE, ETC.
7. UNLESS NOTED OTHERWISE, ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE AN ACCESSIBLE CEILING (AN OPEN CEILING OR CLOUD TYPE CEILING IS NOT CONSIDERED AN ACCESSIBLE CEILING) IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF / IDF ROOM TO MINIMIZE THE CABLE LENGTH ENSURING CABLE LENGTH DOES NOT EXCEED 275 FEET.
8. UNLESS NOTED OTHERWISE ALL CONDUITS SHALL BE HOMERUN FROM THE DEVICE LOCATION AND NO DAISY CHAINING OF DEVICES/ ROUGH-INS SHALL BE ALLOWED.
9. CONDUIT SEGMENTS SHALL BE NO MORE THAN 100-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
10. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.
13. EQUIPMENT NOT RELATED TO THE SUPPORT OF THE TELECOMMUNICATIONS ROOM (E.G., PIPING, DUCTWORK, PNEUMATIC TUBING) SHALL NOT BE INSTALLED IN, PASS THROUGH, OR ENTER THE TELECOMMUNICATIONS ROOM.
14. ALL CONDUITS FOR TECHNOLOGY DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE A LAY-IN TYPE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE A LAY- IN TYPE CEILING TO PREVENT THE CABLES FROM BEING EXPOSED, THE CONDUIT SHALL ROUTE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR OR NEAREST MDF/IDF. THE CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE MAIN CORRIDOR OR NEAREST MDF/IDF TO MINIMIZE THE CABLE LENGTH ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. CONDUIT, CONNECTIONS, J-BOXES, SUSPENSION, ANCHORAGES, AND OTHER CONDUIT COMPONENTS EXPOSED TO VIEW IN PUBLIC SPACES SHALL BE ROUTED AND INSTALLED CAREFULLY TO MINIMIZE VISUAL IMPACT AND SHALL BE FULLY PAINTED TO MATCH UNLESS NOTED OTHERWISE.
15. CONDUIT(S) INSTALLED IN-SLAB OR UNDER-SLAB TO FLOOR BOXES, POKE-THURS, AND TO WORKAREA OUTLETS, ETC. SHALL BE INSTALLED WITH WET RATED CABLE(S).
16. NO GRID WIRE SHALL BE UTILIZED FOR SUPPORTS ONLY USE SOLID SUPPORTS (CLIPS, ALL-THREAD, ANCHORS, ETC.).

TECHNOLOGY PLAN KEYED NOTES

NOT ALL KEYED BELOW APPLY TO THIS SHEET

1. DATA CABLE FOR CONTRACTOR FURNISHED / CONTRACTOR INSTALLED MENU BOARD. REFERENCE ARCHITECTURAL AND FOOD SERVICE DRAWINGS FOR MOUNTING HEIGHT AND ADDITIONAL INFORMATION. BUILDING POWER ADJACENT TO DATA RECEPTACLE IS REQUIRED.
2. INDOOR / OUTDOOR RATED DATA CABLE FOR POINT OF SALE LOCATION. PROVIDE (1) 1-INCH CONDUIT FOR DATA TO THE WALL BEHIND POINT OF SALE LOCATION AND UP WALL TO ABOVE ACCESSIBLE CEILING. CONDUITS SHALL TERMINATE INSIDE A DOUBLE GANG BOX THAT IS SECURED TO THE POINT OF SALE LOCATION. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS.
3. DATA CABLE FOR TEMPERATURE MONITORING OF FREEZER COOLER. REFER TO FOOD SERVICE / KITCHEN DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS AND TERMINATION POINT AND CONNECTIVITY NEEDS IN FREEZER / COOLER CONTROL UNIT.
4. DATA CABLE FOR TEMPORARY POINT OF SALES CASH REGISTER. COORDINATE WITH OWNER, ARCHITECT, AND CONSULTANT FOR ROUTING OF CABLES TO POINT OF SALE CASH REGISTER PRIOR TO INSTALLATION

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09/04/2025 3	ADDENDUM NO. 4

u

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILL ELEMENTARY SCHOOL
3707 JESS PIRTLE BLVD.
SUGAR LAND, TX 77498

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Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 10-25
RCDD

07/18/2025

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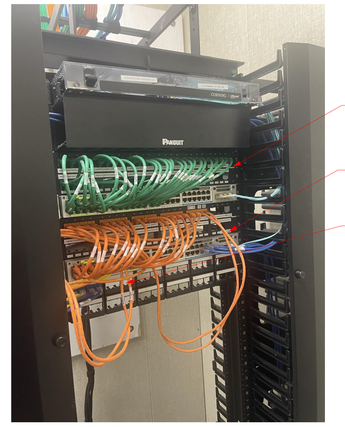
TECHNOLOGY NEW/RENOVATION KITCHEN PLAN

SHEET NO.
u-T201



1 u-T300 SUGAR MILL ES EXISTING IDF RACK
N.T.S

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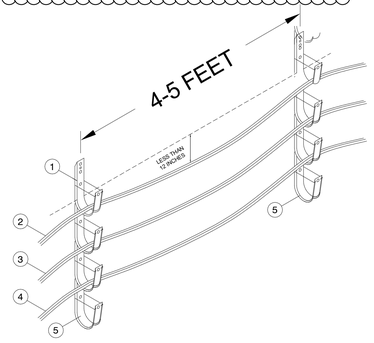
TECHNOLOGY ENLARGED VIEWS

SHEET NO.
u-T300

NOTE TO CONTRACTOR:

UNLESS OTHERWISE NOTED, LOW VOLTAGE CABLING SHALL BE INSTALLED WITHIN 6-INCHES OF THE CEILING AND ACCESSIBLE BY A TECHNICIAN ON A STANDARD A-FRAME LADDER.

CONTRACTOR SHALL MAINTAIN AT LEAST 6-INCHES OF SEPRATION BETWEEN CABLING BUNDLES AND MECHANICAL DUCTWORKS, EQUIPMENT, PIPIING OR OTHER SYSTEMS IN THE CEILING PLENUM. 3

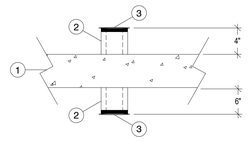


KEYED NOTES:

1. J-HOOK WITH RETAINER CLIP ABOVE ACCESSIBLE CEILING (BY DIV 27).
2. DATA CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
3. A/V CABLE ABOVE ACCESSIBLE CEILING (BY DIV 27).
4. SECURITY CABLE ABOVE ACCESSIBLE CEILING (BY DIV 28).
5. SPARE J-HOOK (BY DIV 27).

1 T400 TYPICAL J-HOOK CABLE PATHWAY

SCALE: N.T.S.

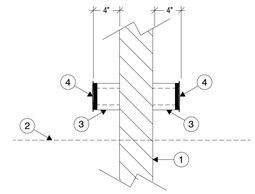


KEYED NOTES:

1. SCHEDULED FLOOR OR DECK.
2. CONDUIT SLEEVE (BY DIV 26).
3. NYLON BUSHING (BY DIV 26).

2 T400 TYPICAL CONDUIT SLEEVE THROUGH FLOOR OR DECK DETAIL

SCALE: N.T.S.

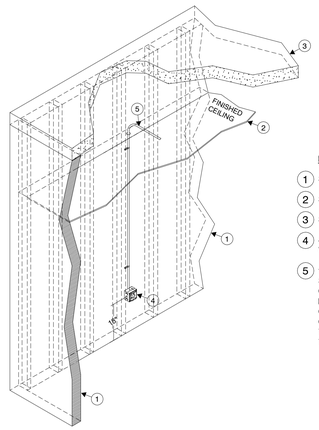


KEYED NOTES:

1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. CONDUIT SLEEVE (BY DIV 26).
4. NYLON BUSHING (BY DIV 26).

3 T400 TYPICAL CONDUIT SLEEVE GOING THROUGH WALL

SCALE: N.T.S.



KEYED NOTES:

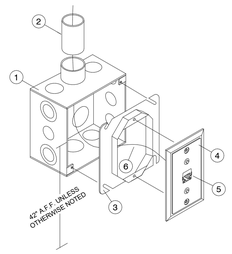
1. SCHEDULED WALL.
2. SCHEDULED CEILING.
3. SCHEDULED DECK ABOVE.
4. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX WITH DOUBLE GANG PLASTER RING (BY DIV 26).
5. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH. (BY DIV 26).

4 T400 TYPICAL TECHNOLOGY CONDUIT ROUGH-IN

SCALE: N.T.S.

DETAIL DELETED SPACE LEFT INTENTIONALLY BLANK

3

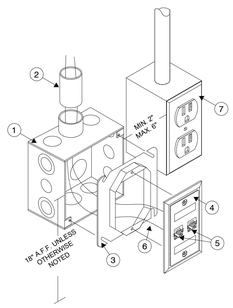


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH PHONE STUDS (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).

6 T400 TYPICAL WALL PHONE OUTLET CONFIGURATION

SCALE: N.T.S.

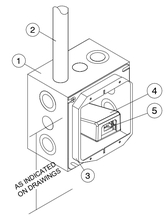


KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. CABLE AS SPECIFIED (BY DIV 27).
7. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

7 T400 TYPICAL DUAL DATA OUTLET CONFIGURATION

SCALE: N.T.S.

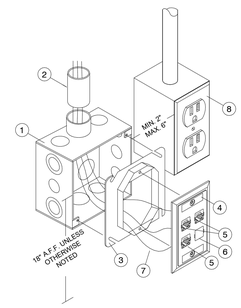


KEYED NOTES:

1. 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. DOUBLE GANG PLASTER RING (BY DIV 26).
4. SURFACE MOUNT BOX INSIDE THE 4 11/16-INCH X 4 11/16-INCH X 2 1/8-INCH DOUBLE GANG BOX (BY DIV 27).
5. RJ-45 INSERT (BY DIV 27).

8 T400 TYPICAL WALL-MOUNTED WIRELESS ACCESS POINT

SCALE: N.T.S.



KEYED NOTES:

1. 4 11/16-INCH x 4 11/16-INCH x 2 1/8-INCH RECESSED DOUBLE GANG BOX (BY DIV 26).
2. 1-INCH EMT CONDUIT FROM DOUBLE GANG BOX WITH 200 LBS PULL STRING AND NYLON BUSHING STUBBED OUT ABOVE ACCESSIBLE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE AN ACCESSIBLE CEILING, THE CONDUIT SHALL ROUTE TO THE NEAREST ACCESSIBLE CEILING OFF OF A MAIN CORRIDOR. CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE APPLICABLE MDF/IDF ROOM TO MINIMIZE THE CABLE LENGTH (BY DIV 26).
3. SINGLE GANG REDUCER RING (BY DIV 26).
4. SINGLE GANG WALL PLATE WITH DESIGNATION IN WINDOW (BY DIV 27).
5. DATA INSERT (BY DIV 27).
6. BLANK INSERT (BY DIV 27).
7. CABLE AS SPECIFIED (BY DIV 27).
8. ELECTRICAL RECEPTACLE, GANG BOX AND CONDUIT SHOWN FOR REFERENCE ONLY (REFER TO DIV 26).

9 T400 TYPICAL THREE DATA OUTLET CONFIGURATION

SCALE: N.T.S.

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/16/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025 3	ADDENDUM NO. 4

u

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILL ELEMENTARY SCHOOL
3707 JESS PIRTLE BLVD.
SUGAR LAND, TX 77498

SEAL

LICENSED ENGINEERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Jason Gonzalez Jr
BICSI ID # 364970
EXPIRES 03-30-25
RCDD

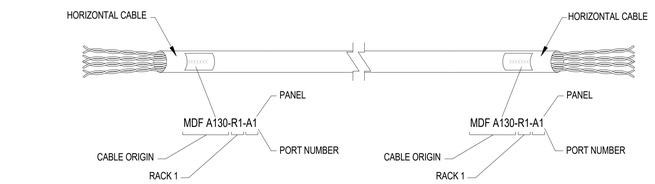
07/18/2025

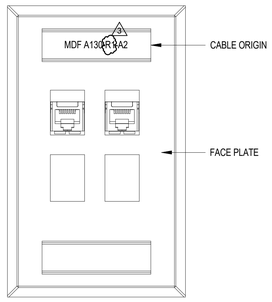
MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

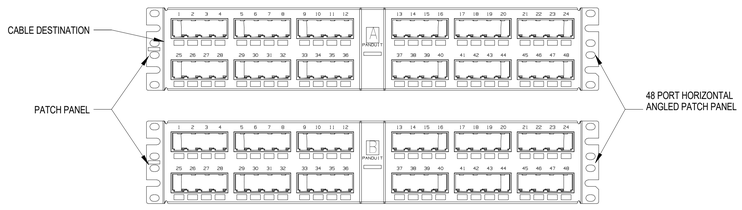
PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

TECHNOLOGY TYPICAL DETAILS

SHEET NO.
u-T400

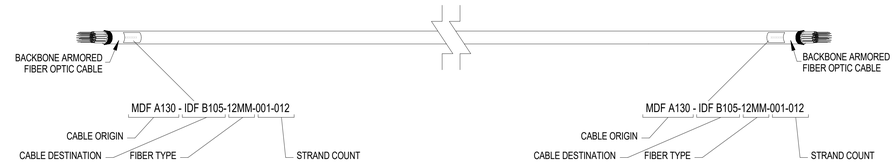


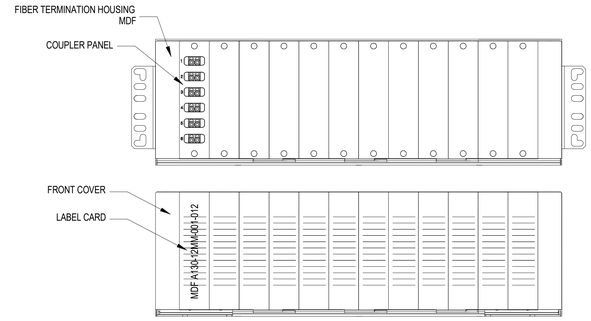




1 T500 TYPICAL HORIZONTAL DATA CABLE LABELING SCHEME

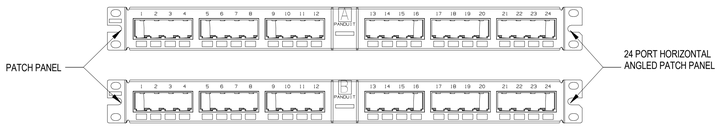
SCALE: N.T.S.





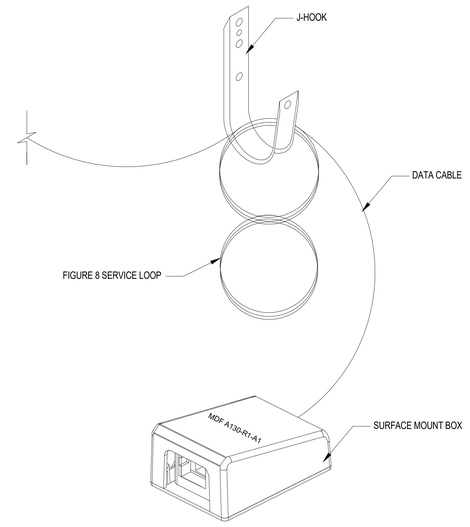
2 T500 TYPICAL FIBER BACKBONE LABELING SCHEME

SCALE: N.T.S.



3 T500 TYPICAL COPPER BACKBONE LABELING SCHEME

SCALE: N.T.S.



4 T500 ABOVE ASSESSIBLE CEILING LABELING SCHEME

SCALE: N.T.S.

ISSUE:

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09/04/2025 3	ADDENDUM NO. 4

u

FBISD PKG 13 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SUGAR MILL ELEMENTARY SCHOOL
3707 JESS PIRTLE BLVD.
SUGAR LAND, TX 77498

SEAL

07/18/2025

ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

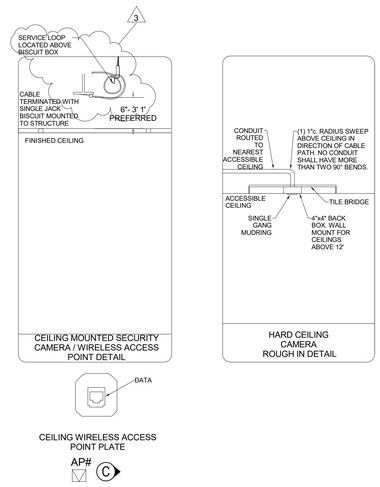
PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

TECHNOLOGY TYPICAL DETAILS

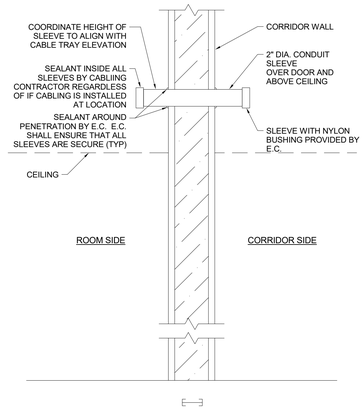
SHEET NO.
u-T500

GENERAL NOTE

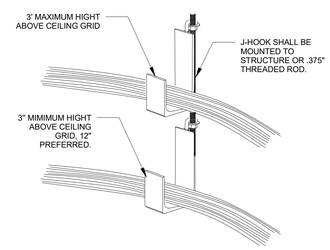
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



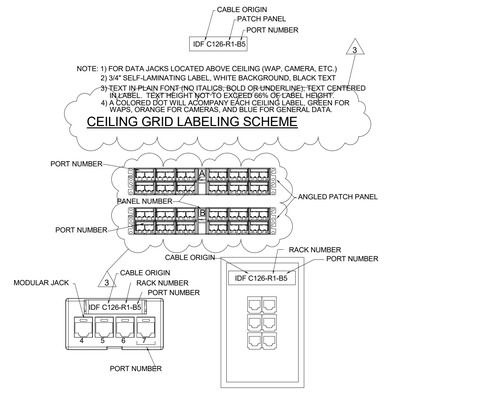
1 DATA ROUGH-IN DETAILS
SCALE: NS



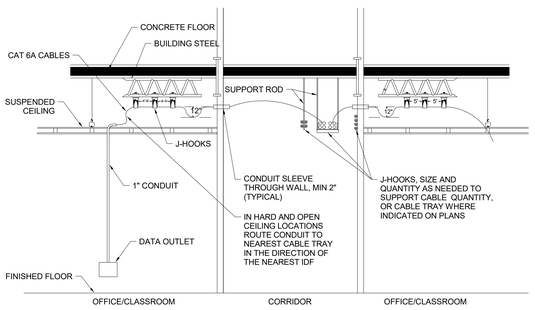
2 TYPICAL CABLING SLEEVE
SCALE: NTS



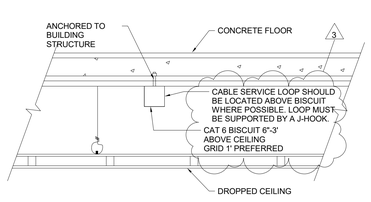
3 PANDUIT J-HOOK DETAIL
SCALE: NTS



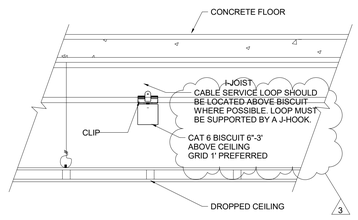
4 LABELING & CABLING SCHEMES
SCALE: NTS



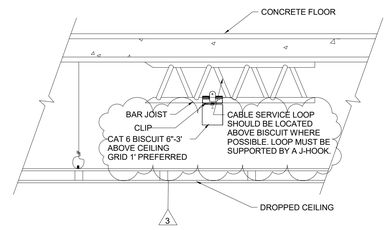
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH
A PMY COMPANY

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08/28/2025	3 ADDENDUM NO. 3

u

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Sugar Mill Elementary School
13707 Jess Pirtle Blvd, Sugar Land, TX 77498

SEAL

BICSI REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 256957
EXPIRES 12-31-27
RCDD

07-18-25

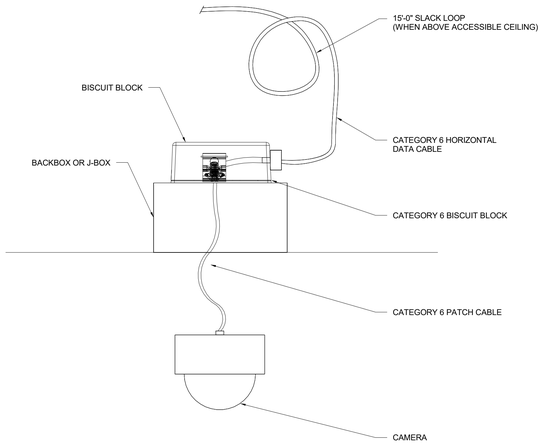
MVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Sugar Mill ES - DETAILS

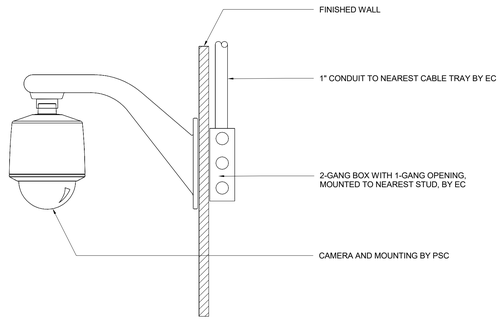
u-TN.500

GENERAL NOTES:

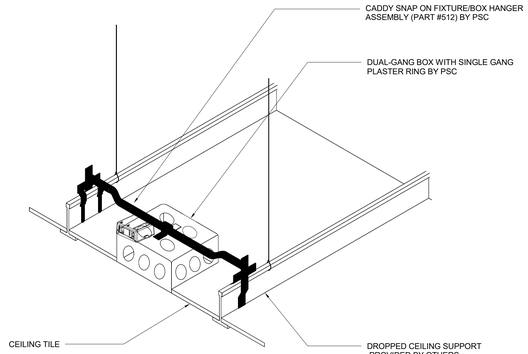
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



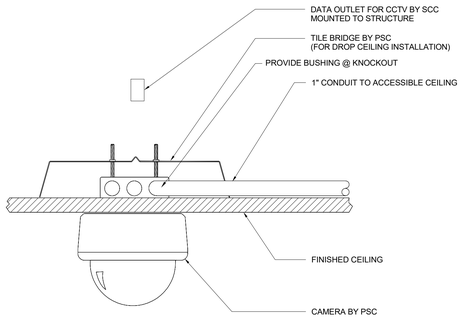
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

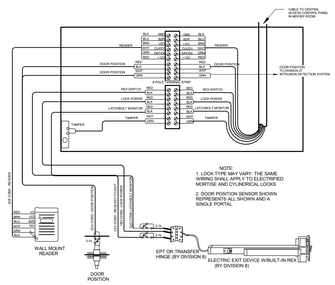


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

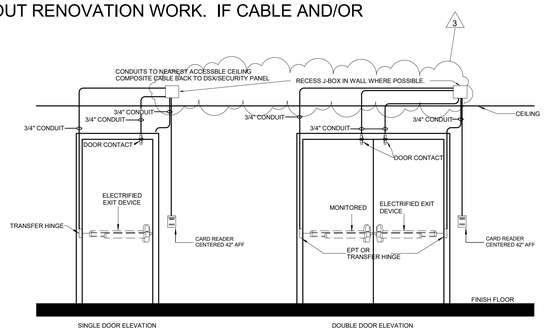
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

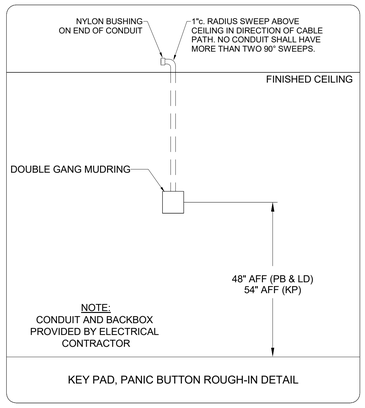
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

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08/28/2025	ADDENDUM NO. 3

u

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Sugar Mill Elementary School
13707 Jess Pirtle Blvd, Sugar Land, TX 77498

SEAL

07-18-25

MWA ARCHITECTS
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11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
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AND
PERMITTING
TECHNOLOGY - Sugar Mill ES
- SECURITY DETAILS

u-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

Sheet List Table	
Sheet Number	Sheet Title
School: v-Sullivan ES	
v-A.000	COVER AND INDEX
v-A00-01	GENERAL NOTES AND ABBREVIATIONS
v-D.101	REFERENCE PHOTOS PLAN
v-A.101	SITE PLAN
v-A.201	OVERALL FLOOR PLAN
v-A.301	CAFETERIA PLAN
v-A.501	FINISH FLOOR PLAN
v-E.200	ELECTRICAL FLOOR PLAN & SCHEDULE
V-TN-000	TECHNOLOGY - INDEX SHEET
V-TN-100	TECHNOLOGY - OVERALL
V-TN-101	TECHNOLOGY - KITCHEN
V-TN-500	TECHNOLOGY - DETAILS
V-TN-600	TECHNOLOGY - SECURITY DETAILS

REGISTERED ARCHITECT
MWA ARCHITECTS
22651
STATE OF TEXAS
04SEP.2025

ADDENDUM NO. 4 - SEP 04, 2025

FORT BEND INDEPENDENT SCHOOL DISTRICT

FORT BEND INDEPENDENT SCHOOL DISTRICT

ANNE SULLIVAN ELEMENTARY SCHOOL
17828 WINDING WATERS LN, SUGAR LAND, TX 77479

ADMINISTRATION

DR. MARC SMITH	SUPERINTENDENT OF FBISD
DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

BOARD OF TRUSTEES

KRISTIN K. TASSIN	PRESIDENT
ANGIE HANAN	VICE PRESIDENT
DR. SHIRLEY ROSE-GILLIAM	SECRETARY
AFSHI CHARANIA	BOARD MEMBER
ADAM SCHOOF	BOARD MEMBER
ANGIE WIERZBICKI	BOARD MEMBER

PROJECT DESIGN TEAM

PROGRAM MANAGEMENT
FBISD 2023 Bond Team
2323 Texas Parkway
Missouri City, TX 77489
Phone Number: 281-327-5481

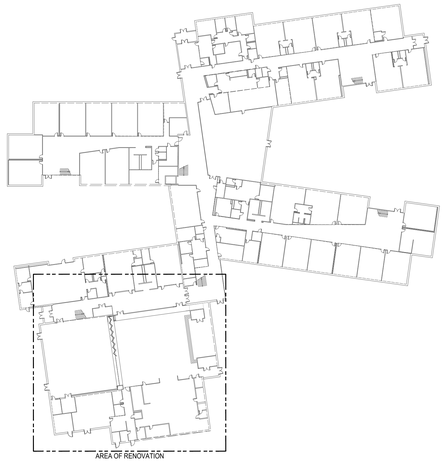
ARCHITECT
MWA Architects
11767 Katy Freeway, Suite 430
Houston, Texas 77079
Phone Number: 713-782-8188

FOOD SERVICE
Food Design Professionals
26215 Oak Ridge Drive
The Woodlands, Texas 77380
Phone Number: 281-350-2323

MEP ENGINEERS
Stanton Engineering Group
1300 W. Sam Houston Pkwy South, Suite 121
Houston, Texas 77042
Phone Number: 713-300-9292

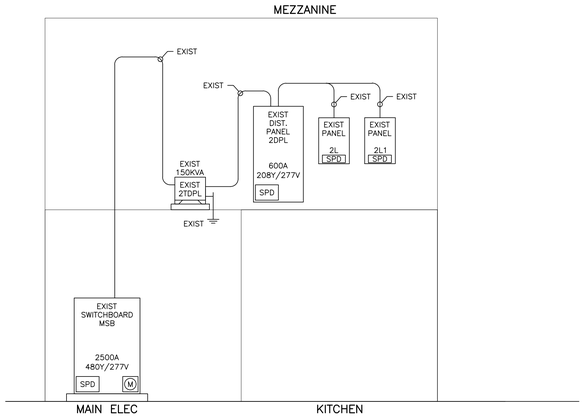
STRUCTURAL ENGINEER
Stanley Spurling & Hamilton
3301 Edloe Street, Suite 200
Houston, Texas 77027
Phone Number: 713-776-9433

V



2 OVERALL FLOOR PLAN

SCALE: 1" = 60'– 0"



3 PARTIAL ELECTRICAL RISER - SULLIVAN ELEMENTARY

NO SCALE

NOTES:

1. FIELD VERIFY ALL EXISTING ELECTRICAL PANELS AND FEEDERS SHOWN ON DRAWINGS.
2. REF ELECTRICAL FLOOR PLANS FOR PANEL LOCATIONS.
3. ALL OUTAGES SHALL BE SCHEDULED/CONFIRMED IN WRITING WITH THE OWNER A MINIMUM OF TWO WEEKS PRIOR TO ANY OUTAGE.
4. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN PANEL SCHEDULE USING BUILDING ROOM NUMBERS FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT.
5. REFERENCE PANEL SCHEDULES AND SHORT CIRCUIT TABLE FOR AIC AND SCCR VALUES.

EXIST PANELBOARD — MECH MEZZ E200

(E)PANEL 2L1 — 225A MLO, 208Y/120V, 3Φ, 4 WIRE — AVAILABLE FAULT: SCCR & AIC: <10,000A / 22,000A — MOUNTING: SURFACE — DOOR–IN–DOOR HINGE TO BOX

NOTES	LOAD	DESCRIPTION	WIRE	CB	CKT	A	B	C	CKT	CB	WIRE	DESCRIPTION	LOAD	NOTES
	1656	POWER GYM E103	EXIST	20/1	1				2	20/1	EXIST	POWER GYM E103	1656	
	1656	POWER GYM E103	EXIST	20/1	3				4	20/1	EXIST	POWER GYM E103	1656	
	1656	POWER GYM E103	EXIST	20/1	5				6	20/1	EXIST	POWER GYM E103	1656	
	1656	POWER GYM E103	EXIST	20/1	7				8	20/1	EXIST	POWER GYM E103	1656	
	1656	POWER GYM E103	EXIST	20/1	9				10	20/1	EXIST	POWER GYM E103	1656	
	1656	POWER GYM E103	EXIST	20/1	11				12	20/1	EXIST	POWER GYM E103	1656	
	1012	PROJECTION SCRN CAFE E108	EXIST	20/1	13				14	20/1	EXIST	REC RM E103,E108,E102	900	
	1080	REC RM E103,E104	EXIST	20/1	15				16	20/1	EXIST	REC RM E104,E105	720	
	360	GYM SOUND RACK STOR E105	EXIST	20/1	17				18	20/1	EXIST	EWC REC GYM E103	600	
	360	REC MECH E107	EXIST	20/1	19				20	20/1	EXIST	REC MECH E107	900	
	720	REC OUTDOOR EQUIP E118	EXIST	20/1	21				22	20/1	EXIST	BAS PANEL MECH E107	500	
	1000	FRIDGE BREAK AREA E116	EXIST	20/1	23				24	20/1	EXIST	REC BREAK AREA E116	540	
	1000	REC BREAK AREA E116	EXIST	20/1	25				26	20/1	EXIST	REC BREAK AREA E116	1000	
	1080	REC RM E115,E116	EXIST	20/1	27				28	20/1	EXIST	REC RM E108,E112,E109	720	
	720	REC STAGE E109	EXIST	20/1	29				30	20/1	EXIST	REC RM A135,E108	900	
	360	CAFE SOUND RACK	EXIST	20/1	31				32	20/1	EXIST	ROOM E108,E109	740	
	560	POWER CAFETERIA E108	EXIST	20/1	33				34	20/1	EXIST	REC IRRIGATION CONTROLLER	180	
	180	REC CAFETERIA E108	EXIST	20/1	35				36	20/1	EXIST	POWER CAFETERIA E108	250	
	360	REC SERVICE CORR E113	EXIST	20/1	37				38	20/1	EXIST	REC RM E103,E108,E114	1080	
	1000	THEATRICAL LIGHTING	EXIST	20/1	39				40	20/1	EXIST	THEATRICAL LIGHTING	1000	
	1000	THEATRICAL LIGHTING	EXIST	20/1	41				42	20/1	EXIST	THEATRICAL LIGHTING	1000	
	1000	THEATRICAL LIGHTING	EXIST	20/1	43				44	20/1	EXIST	THEATRICAL LIGHTING	1000	
	200	STAGE MANAGERS PANEL	EXIST	20/1	45				46	20/1		EXIST SPARE		
		EXIST SPARE		20/1	47				48	20/1		EXIST SPARE		
	100	POWER METER #1	EXIST	20/1	49				50	20/1		EXIST SPARE		
	100	POWER METER #2	EXIST	20/1	51				52	20/1		EXIST SPARE		
	100	POWER METER #3	EXIST	20/1	53				54	20/1		EXIST SPARE		
		EXIST SPARE		20/1	55				56	20/1		EXIST SPARE		
		EXIST SPARE		20/1	57				58	20/1		EXIST SPARE		
		SPACE			59				60	20/1		EXIST SPARE		
	2000	EXIST CIRCUIT	EXIST	20/3	61				62	20/1		EXIST SPARE		
	–	–	–	–	63				64			SPACE		
	–	–	–	–	65				66			SPACE		
		SPACE			67				68			SPACE		
		SPACE			69				70			SPACE		
		SPACE			71				72			SPACE		
		SPACE			73				74	15/3	3–12	MOTORIZED PARTITION – CAFE	1728	2
		SPACE			75				76	–	+12G	–	–	
		SPACE			77				78	–	3/4"C	–	–	
		SPACE			79				80	30/3	EXIST	SPD	50	
		SPACE			81				82	–	–	–	–	
		SPACE			83				84	–	–	–	–	
	TOTAL LOAD @ 100% =		47972VA			TOTAL LOAD @ 100% =				133A		TOTAL LOAD @ 125% =	167A	

1. THE EXISTING 225A FEEDER IS SUFFICIENT FOR THE REVISED LOAD.
2. PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE AND WIRE CIRCUIT AS SHOWN.

SYMBOL LEGEND

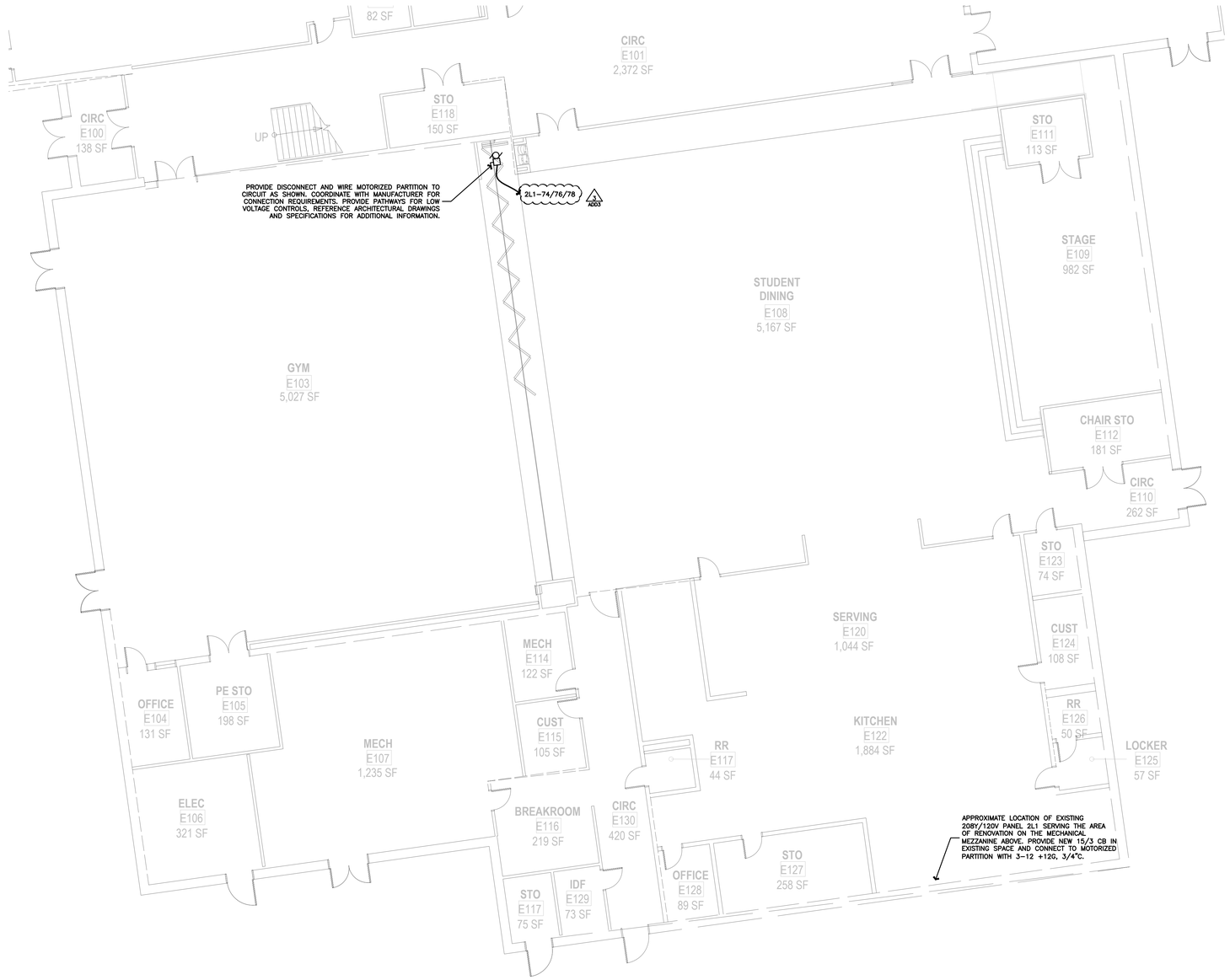
①/①/①:	SIMPLEX/DUPLEX/QUAD – 5361/2 REC
GFI ①	DUPLEX W/ GFCI PROTECTION–P&S 2097
J	J–BOX
	CEILING MOUNTED J–BOX
M	MOTOR
	HEAVY DUTY, NON–FUSED DISCONNECT. MIN RATING OF CIRCUIT OCPD/VOLTAGE.
	ELECTRICAL PANEL
	HOMERUN TO CIRCUIT NOTED
E	EXISTING DEVICES TO REMAIN
R	EXISTING DEVICES TO BE RELOCATED
D	EXISTING DEVICES TO BE DEMO/REMOVED
RDP	EXISTING DEVICES TO BE REPLACED
S	INDICATES SURFACE MOUNTED
SR	INDICATES SURFACE RACEWAY
*	INDICATES ABOVE COUNTER DEVICE
+	INDICATES DEVICE AT +30–60"
++	INDICATES DEVICE AT +80–96"
CLG	INDICATES DEVICES MOUNTED IN CEILING
WP	INDICATES WEATHERPROOF COVER
3R	INDICATES 3R RATED DEVICE
(C)LA–X	CONNECT(ED) TO EXIST CIRCUIT LA–X
(D)LA–X	DEMO PORTION OF EXIST CIRCUIT LA–X
(N)LA–X	CONNECT(ED) TO NEW CIRCUIT LA–X

GENERAL ELECTRICAL NOTES:

1. INSTALL SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION INCLUDING ALL AMENDMENTS.
2. PROVIDE CONDUIT FOR ALL DEVICES INSTALLED IN WALLS.
   - 2.A. 3/4"C FOR POWER AND 1"C FOR LOW VOLTAGE/DATA UNLESS NOTED OTHERWISE.
   - 2.B. PROVIDE PROTECTIVE BUSHING ON END OF ALL LOW VOLTAGE CONDUITS.
   - 2.C. ALL ELECTRICAL HOMERUNS SHALL BE IN CONDUIT, MIN 3/4"C.
   - 2.D. USE INSULATED THROAT FITTINGS FOR CONNECTIONS TO HOUSINGS, BOXES, ENCLOSURES, ETC.
   - 2.E. MAX LENGTH FOR FLEX CONDUIT SHALL BE 6FT AND MIN. SIZE SHALL BE 1/2". ALL FLEX CONDUIT SHALL BE LISTED FOR GROUNDING.
3. CONDUIT TYPES:
   - 3.A. INSIDE BUILDINGS: GALVANIZED STEEL EMT.
     - 3.A.A. ALL LOW VOLTAGE CABLING SHALL BE INSTALLED IN CONDUIT IN EXPOSED CEILING AREAS. ROUTE TO NEAREST ACCESSIBLE CEILING WITH CONTINUOUS PATHWAYS TO LOW VOLTAGE SOURCE/DEVICE.
     - 3.A.B. ALL LOW VOLTAGE CABLING SHALL BE INSTALLED IN CONDUIT ABOVE INACCESSIBLE CEILINGS. ROUTE TO NEAREST ACCESSIBLE CEILING WITH CONTINUOUS PATHWAYS TO LOW VOLTAGE SOURCE/DEVICE.
   - 3.B. NO MC CABLE SHALL BE ALLOWED.
   - 3.C. PROVIDE FLEXIBLE CONNECTIONS TO MOTORS, PUMPS, TRANSFORMERS, OR SIMILAR EQUIPMENT.
4. PROVIDE GALVANIZED STEEL, ONE–PIECE CONSTRUCTION, OUTLET BOXES IN ALL CASES SUITABLE FOR INTENDED USE.
   - 4.A. BOXES OUTSIDE SHALL BE STEEL, NEMA 3 TYPE.
   - 4.B. PROVIDE CEILING BRACKET TO SUPPORT CEILING MOUNTED DEVICES FROM CEILING TEES.
5. 20 AMP, SINGLE PHASE BRANCH CIRCUITS SERVING LIGHTING AND GENERAL RECEPTACLES MAY BE GROUPED IN A SINGLE RACEWAY PROVIDED A NEUTRAL CONDUCTOR IS INSTALLED FOR EACH CIRCUIT REQUIRING A NEUTRAL.
   - 5.A. DO NOT INSTALL MORE THAN FOUR CURRENT CARRYING CONDUCTORS IN A CONDUIT EXCEPT SIX #12 OR #10 CURRENT CARRYING CONDUCTORS MAY BE INSTALLED IN 3/4" OR LARGER CONDUIT FOR 20A CIRCUITS.
   - 5.B. DO NOT INSTALL 480/277 VOLT CONDUCTORS IN THE SAME CONDUIT WITH 240/208/120 VOLT CONDUCTORS.
   - 5.C. DO NOT COMBINE NEUTRALS. PROVIDE DEDICATED NEUTRALS FOR EACH BRANCH CIRCUIT.
   - 5.D. MULTIPLE DEVICES ON A CIRCUIT SUCH AS RECEPTACLES SHALL BE WIRED WITH A PIGTAIL SO THE DEVICE DOES NOT PROVIDE THE CONTINUITY PATH FEED THROUGH CONNECTIONS FOR GFCI RECEPTACLES SHALL NOT BE USED FOR PROTECTION OF DOWNSTREAM DEVICES.
6. PROVIDE GREEN GROUND WIRE WITH ALL CIRCUITS SIZED PER NEC. BOND GREEN GROUND WIRE TO EACH END OF CONDUIT.
7. PROVIDE J–BOXES, CONDUIT AND SLEEVES THRU ALL FIRE WALLS FOR DATA, TELEPHONE, SECURITY, FIRE ALARM, SOUND SYSTEM, LOW VOLTAGE WIRING, ETC. PROVIDE PROTECTIVE BUSHINGS ON ENDS OF ALL LOW VOLTAGE CONDUITS.
8. PROVIDE PULL BOXES, JUNCTION BOXES, WIRING TROUGHS AND CABINETS WHEREVER REQUIRED FOR PROPER INSTALLATION OF VARIOUS ELECTRICAL SYSTEMS. ALL JUNCTION/PULL BOXES INSTALLED ABOVE ACCESSIBLE CEILINGS SHALL BE MOUNTED SO THAT THE ACCESS PANEL IS NO HIGHER THAN 18" ABOVE THE CEILING.
9. PROVIDE CIRCUIT LABELS IN PERMANENT MARKER ON ALL NEW AND EXISTING J–BOX COVERS UTILIZED IN THE AREA OF RENOVATION.
10. PROVIDE CIRCUIT LABEL ON ALL ABOVE CEILING J–BOXES, EQUIPMENT, ETC. IDENTIFYING THE CIRCUITS CONTAINED/CONNECTED.
11. ALL WIRING SHALL BE 600 VOLT, SOFT DRAWN ANNEALED COPPER, 98% CONDUCTIVITY, CONTINUOUS FROM OUTLET TO OUTLET. MINIMUM WIRE SIZE #12.
    - 11.A. TYPICAL BUILDING WIRE SHALL BE STRANDED TYPE THHN, THWN–2 (WET RATED FOR 60°C), OR XHHW–2. MINIMUM WIRE SIZE SHALL BE #12.
    - 11.B. ALL BUILDING WIRE SHALL BE COLOR CODED WITH THE SAME COLOR CONNECTED TO THE SAME UNGROUNDED PHASE THROUGHOUT THE INSTALLATION MATCHING THE EXISTING BUILDING COLOR CODE SCHEME.
12. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, PROVIDE AIR SEAL PER NEC TO PREVENT CIRCULATION OF AIR FROM WARMER TO COOLER SECTIONS.
13. DRAWINGS, SCHEDULES, NOTES, AND DETAILS ARE INTENDED TO BE COMPLIMENTARY. ANY WORK DESCRIBED IN ANY OF THEM, WILL BE WORK REQUIRED UNDER THIS CONTRACT. WHERE THERE IS A CONFLICT BETWEEN DIFFERENT PORTIONS OF THE DESIGN DOCUMENTS IT SHALL BE CLARIFIED BY RFI BIDDING CLARIFICATION PRIOR TO BIDDING THE MOST EXPENSIVE OPTION SHALL BE INCLUDED AND CLARIFICATION SHALL BE MADE DURING CONSTRUCTION.
14. SHOULD ANY WORK REQUIRED BY THE DRAWINGS AND SPECIFICATIONS BE IN VIOLATION OF ANY FEDERAL, STATE, COUNTY OR CITY LAWS, ORDINANCE OR REGULATION, THOSE LAWS AND REGULATIONS SHALL PREVAIL, AND SHALL BE COMPLIED WITH BY THE CONTRACTOR AS A PART OF THIS WORK WITH NO EXTRA COMPENSATION.
15. ALL MATERIAL MUST BE NEW AND OF GOOD QUALITY AND SHALL BEAR THE STAMP OF APPROVAL OF THE UNDERWRITERS' LABORATORIES, INC. (U.L.).

GENERAL RENOVATION AND REMODELING NOTES:

1. THESE ELECTRICAL DRAWINGS ONLY SHOW SOME EXISTING ELECTRICAL PANELS, DEVICES AND LIGHT FIXTURES IN AREAS OF RENOVATION. ALL OTHER ELECTRICAL EQUIPMENT, WIRING DEVICES, LOW VOLTAGE SYSTEMS, J–BOXES AND CONDUITS SHALL BE LOCATED AND FIELD VERIFIED BY CONTRACTOR.
2. ALL REMOVED DEVICES SHALL BE OFFERED TO THE OWNER AS SALVAGE.
3. RELOCATE CONDUIT AS NECESSARY TO ALLOW NEW OR MODIFIED CONSTRUCTION. RESUPPORT EXISTING CABLING/CONDUIT TO REMAIN TO MEET CURRENTLY ADOPTED CODE REQUIREMENTS. REMOVE ALL ABANDONED CONDUIT AND WIRE. REPAIR EXISTING ELECTRICAL SYSTEMS DAMAGED BY CONSTRUCTION ACTIVITIES.
4. ANY DAMAGE TO EXISTING BUILDING, ELECTRICAL EQUIPMENT, WIRING DEVICES, CONDUIT, WIRING, ETC. SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER. ALL MATERIALS USED FOR THE REPLACEMENT MUST MEET RENOVATION PROJECT STANDARDS.
5. ELECTRICAL CONTRACTOR SHALL BEGIN FIELD VERIFYING ALL EXISTING BRANCH CIRCUITS FOR EXISTING AREAS TO BE RENOVATED IMMEDIATELY AFTER THE CONTRACT IS ISSUED.
6. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CIRCUITS WITH OWNER'S MAINTENANCE PERSONNEL AFTER NORMAL BUILDING HOURS AS REQUIRED.
7. ANY CIRCUIT OR PARTIAL CIRCUIT TO REMAIN OR BE REUSED SHALL REMAIN ACTIVE.
8. ELECTRICAL CONTRACTOR SHALL INCLUDE COST RELATED TO FIELD VERIFY EXISTING CIRCUITS IN BASE PROPOSAL.
9. FIND AND RECORD ALL EXISTING DEVICES IN CEILINGS, WALLS AND CASEWORK IN AREAS TO BE RENOVATED. PROVIDE A COPY OF THE FIELD VERIFIED DEVICE DRAWINGS TO OWNER PRIOR TO BEGINNING WORK.
10. AT THE END OF THE PROJECT PROVIDE A NEW TYPEWRITTEN AS–BUILT PANEL SCHEDULE FOR ALL PANELS WITH CIRCUITS ADDED, REMOVED, OR MODIFIED AS PART OF THE PROJECT USING BUILDING ROOM NUMBERS.



1 ELECTRICAL RENOVATION PLAN

SCALE: 1/8" = 1'– 0"

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
08/28/2025	ADDENDUM NO. 3

V

FBISD BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
SULLIVAN ELEMENTARY SCHOOL
17828 WINDING WATERS LANE
SUGAR LAND, TX 77479

SEAL

STATE OF TEXAS
GEORGE L. STANTON
38582
REGISTERED PROFESSIONAL ENGINEER
08.28.2025

MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07/18/2025
ISSUED FOR BIDDING AND PERMITTING

ELECTRICAL FLOOR PLAN & SCHEDULES

v-E.200

STANTON ENGINEERING GROUP
INFORMATION–DESIGN (713)305–6282 | TEXAS ENG. FIRM REG. NO. F–01833/7140

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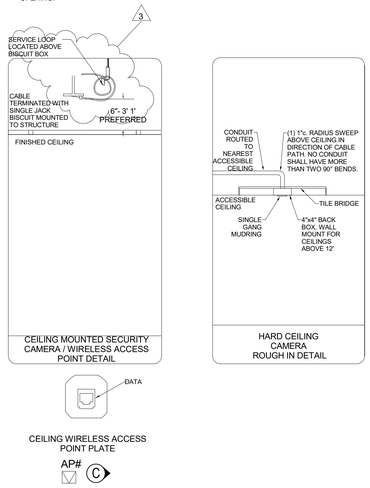
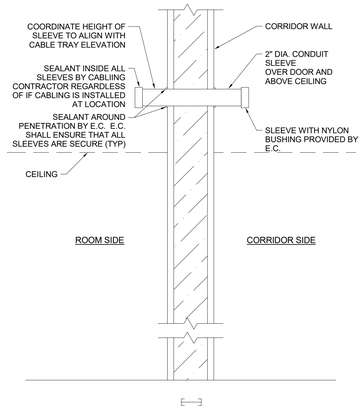
1300 W. SAM HOUSTON PARKWAY N., SUITE 125, HOUSTON, TX 77043

GENERAL NOTE

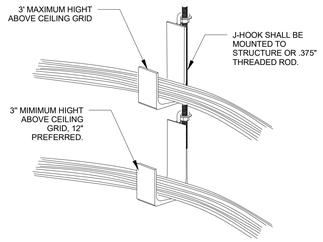
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



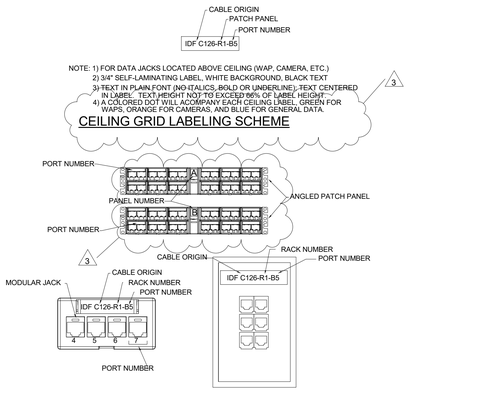
1 DATA ROUGH-IN DETAILS
SCALE: NS



2 TYPICAL CABLING SLEEVE
SCALE: NTS

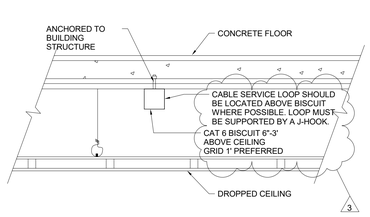


3 PANDUIT J-HOOK DETAIL
SCALE: NTS

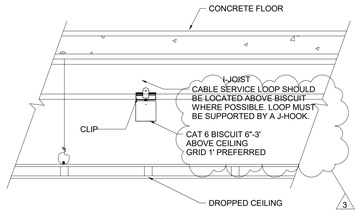


4 LABELING & CABLING SCHEMES
SCALE: NTS

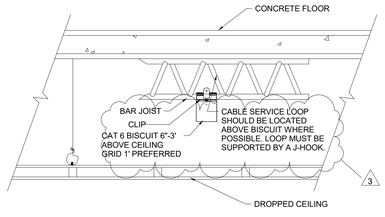
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	3 ADDENDUM NO. 4

V

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Sullivan Elementary School
17926 Winding Waters Ln, Sugar Land, TX 77479

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian D Porter
BICSI ID # 256657
EXPIRES 12-31-27

07-18-25

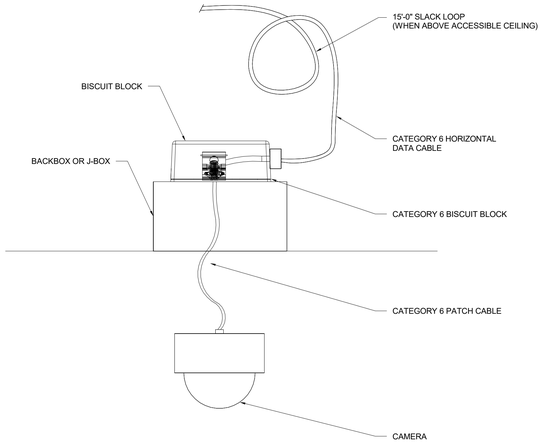
MWA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING
TECHNOLOGY - Sullivan ES - DETAILS

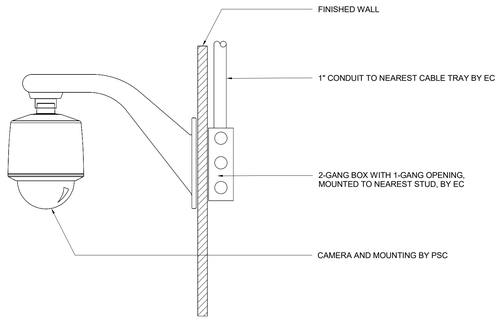
v-TN.500

GENERAL NOTES:

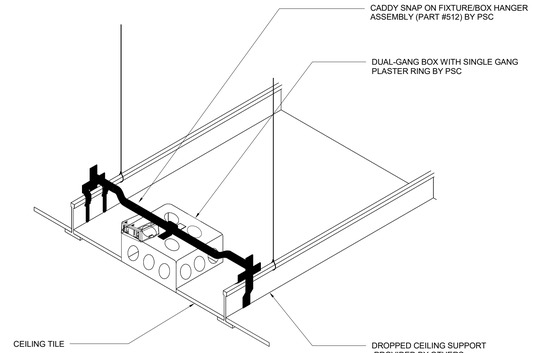
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



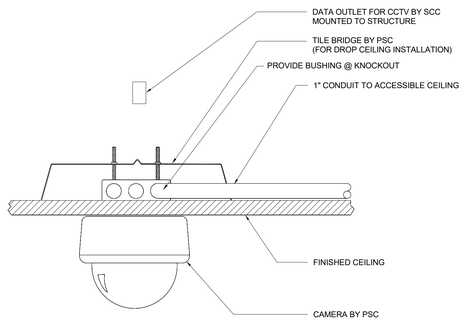
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

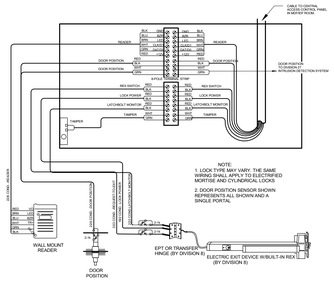


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

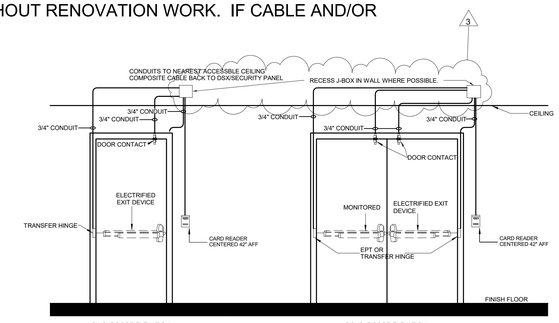
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

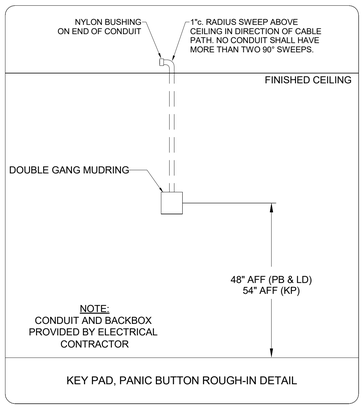
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

TRUENORTH
A PMY COMPANY

ISSUE:

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08/28/2025	ADDENDUM NO. 3

V

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Sullivan Elementary School
17928 Winding Waters Ln, Sugar Land, TX 77479

SEAL

07-18-25

MVA ARCHITECTS
ARCHITECTS
AND PLANNING
CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING
AND
PERMITTING
TECHNOLOGY - Sullivan ES - SECURITY DETAILS

v-TN.600

FBISD BP013 KITCHEN RENOVATIONS ES

Sheet List Table	
Sheet Number	Sheet Title
School: w-TOWNEWEST ES	
W-A.000	COVER AND INDEX
w-TN-000	TECHNOLOGY - INDEX SHEET
w-TN-100	TECHNOLOGY - OVERALL
w-TN-101	TECHNOLOGY - KITCHEN
w-TN-501	TECHNOLOGY - DETAILS
w-TN-600	TECHNOLOGY - SECURITY DETAILS

FORT BEND INDEPENDENT SCHOOL DISTRICT BOND 2023

FORT BEND INDEPENDENT SCHOOL DISTRICT

TOWNEWEST ELEMENTARY SCHOOL
13927 OLD RICHMOND ROAD, SUGAR LAND, TX 77498

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DR. ANDRIA SCHUR, Ed.D.	CHIEF OF SCHOOLS

BOARD OF TRUSTEES

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DR. SHIRLEY ROSE-GILLIAM	SECRETARY
AFSHI CHARANIA	BOARD MEMBER
ADAM SCHOOF	BOARD MEMBER
ANGIE WIERZBICKI	BOARD MEMBER

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The Woodlands, Texas 77380
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Phone Number: 713-300-9292

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Stanley Spurling & Hamilton
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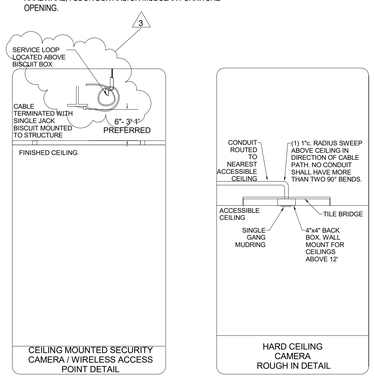
Houston, Texas 77027
Phone Number: 713-776-9433

ADDENDUM NO. 4 - SEP 04, 2025

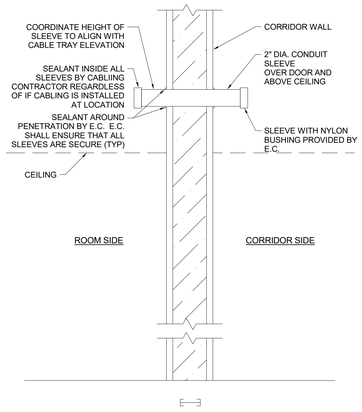
W

GENERAL NOTE

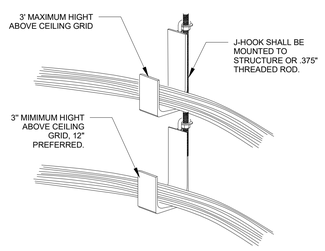
1. FACE PLATE DETAIL FOR OUTLET CONFIGURATION PURPOSES ONLY. CONTRACTOR TO SELECT TYPE OF FACE PLATE TO MATCH CONNECTIVITY HARDWARE, FLOOR BOX AND/OR MODULAR FURNITURE OPENING.



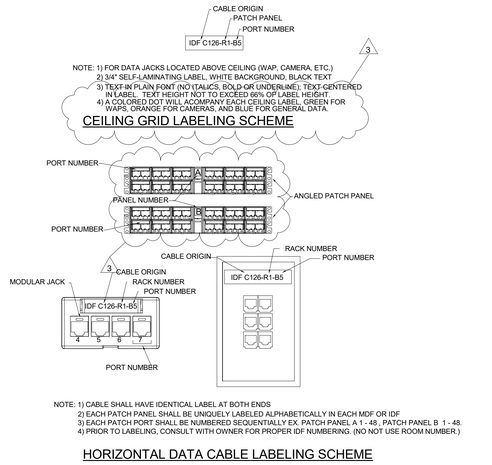
1 DATA ROUGH-IN DETAILS
SCALE: NS



2 TYPICAL CABLING SLEEVE
SCALE: NTS

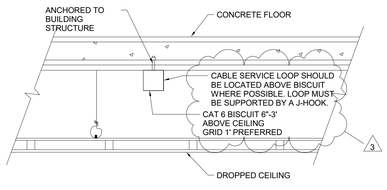


3 PANDUIT J-HOOK DETAIL
SCALE: NTS

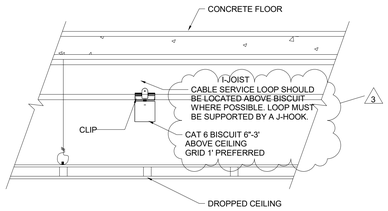


4 LABELING & CABLING SCHEMES
SCALE: NTS

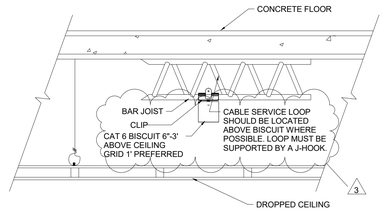
5 CABLE PATHWAY CROSS SECTION
SCALE: NTS



6 DROPPED CEILING MOUNTING DETAIL
SCALE: NS



7 I-JOIST MOUNTING DETAIL
SCALE: NS



8 BAR JOIST MOUNTING DETAIL
SCALE: NS

CAMERA TYPE	MANUFACTURER	MODEL NUMBER	GENERAL DESCRIPTION
C1	iPro	WV-S8574L	4x4K (33MP) EXTERIOR MULTI-SENSOR - PARKING LOTS, STADIUM
C2	iPro	WV-S8544L	4x4MP (16MP) EXTERIOR MULTI-SENSOR - BUILDING PERIMETER
C3	iPro	WV-S25500-V3LN	5MP EXTERIOR VANDAL DOME
C4	iPro	WV-S22500-V3L	5MP INTERIOR VANDAL DOME - CORR., COMMON, SPED
C5	iPro	WV-S4156A	5MP 360 (FISHEYE) - STAIRWELLS

9 CAMERA SCHEDULE
SCALE: NTS

Symbol	Purpose	Size	Mount	Backbox	Notes
FP1	Digital Signage/Menu Boards	+49"	Ceiling Pole	N/A	Data and Power Outlets on ceiling

10 DISPLAY SCHEDULE
SCALE: NTS

TRUENORTH A PMY COMPANY

ISSUE:

12/05/2024	DD PACKAGE
03/11/2025	50% CD PKG.
05/23/2025	90% CD PKG.
07/18/2025	ISSUED FOR BIDDING AND PERMITTING
09/04/2025	3 ADDENDUM NO. 4

W

FORT BEND BP 013 KITCHEN RENOVATIONS
FORT BEND INDEPENDENT SCHOOL DISTRICT
Townewest Elementary School
13927 Old Richmond Rd West, Sugar Land, TX 77498

SEAL

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Brian C Porter
BICSI ID # 256557
EXPIRES 12-31-27

07-18-25

MVA ARCHITECTS
ARCHITECTS AND PLANNING CONSULTANTS
11767 KATY FREEWAY, SUITE 430
HOUSTON, TEXAS 77079

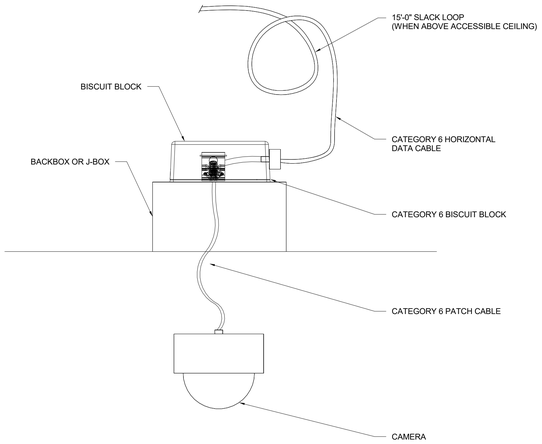
PROJ. NO.: 23-25
DATE: 07-18-25
ISSUED FOR BIDDING AND PERMITTING

TECHNOLOGY - TOWNEWEST ES - DETAILS

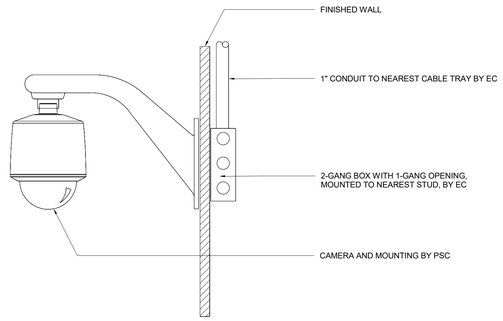
w-TN.500

GENERAL NOTES:

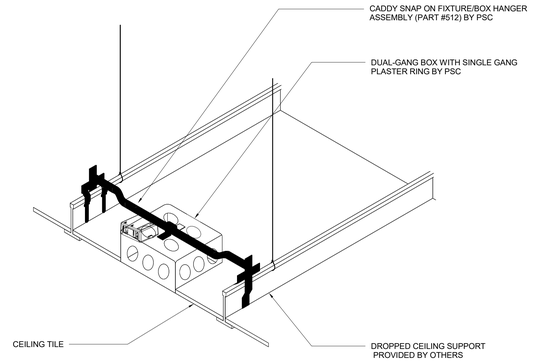
1. REFER TO SECURITY SCHEDULE AND WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL MOUNTING DETAILS ARE REFERENCE FOR ALL FIXED DOME, 180°, 360°, PTZ, AND "BULLET/BOX" CAMERAS.



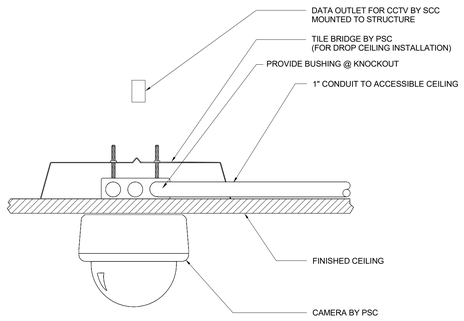
1 TYPICAL CAMERA INSTALLATION SECTION DETAIL
SCALE: NS



6 WALL MOUNTED CAMERA DETAIL
SCALE: NS



4 TILE BRIDGE DETAIL
SCALE: NS

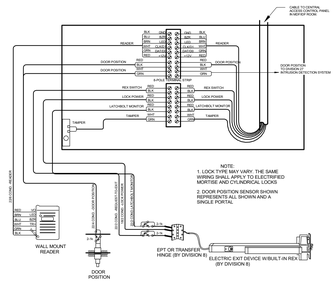


5 CEILING MOUNTED CAMERA DETAIL
SCALE: NS

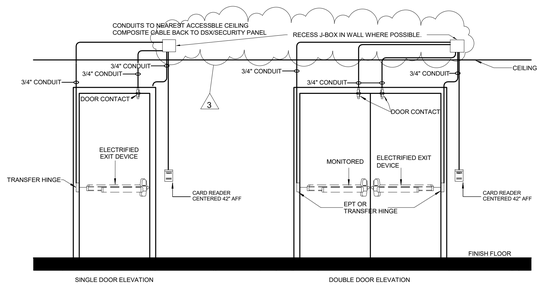
ACCESS CONROL DETAILS AND GENERAL NOTES:

1. CONDUIT ROUGH-IN IS A GUIDE FOR WHAT WILL BE REQUIRED FOR EACH DOOR. AS DOOR COMPONENTS CHANGE, EXACT CONDUIT LOCATION WILL ALSO NEED TO BE ADJUSTED.

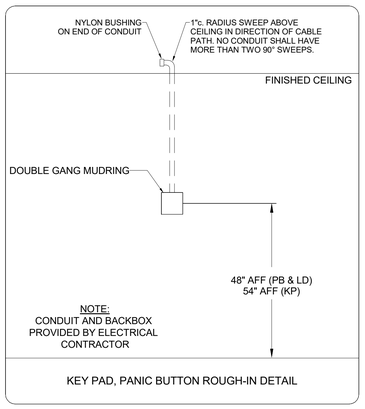
2. PROTECT EXISTING-TO-REMAIN ACCESS CONTROL DEVICES AND CABLE THROUGHOUT RENOVATION WORK. IF CABLE AND/OR DEVICES ARE DAMAGED, SECURITY CONTRACTOR TO REPLACE WITH NEW.



1 ACCESS CONTROL - WIRING DETAIL - EXIT DEVICE W/ BUILT-IN REX
SCALE: NTS



2 ACCESS CONTROL - STEEL/HOLLOW METAL DOOR.
SCALE: NTS



KP PB LD

3 ROUGH-IN DETAILS: KP, PB, LD
SCALE: NTS

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TECHNOLOGY -
TOWNEWEST ES - SECURITY
DETAILS

w-TN.600