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CSP 26-003KB (BP022) – ADDENDUM No.01
Gym Renovations and Additions

FOR

Fort Bend Independent School District
2023 Bond Program

To access the complete Addendum:

https://fortbendisd.bonfirehub.com/portal/

Reviewed By: Signed by: Nancy Lane F77F1A85ABE744F... 10/10/2025
PROJECT MANAGER

Reviewed By: Signed by: Ryan Kiefer 1F973D1CC91A41D... 10/10/2025
DESIGN MANAGER

Reviewed By: Signed by: Brenda Garcia F7F6BD96D7C742E... 10/10/2025
DIRECTOR OF CONSTRUCTION

Approved By: Signed by: Daniel Bankhead AABFCACAE7E9453... 10/10/2025
EXECUTIVE DIRECTOR, DESIGN & CONSTRUCTION

Approved By: Signed by: DF25ADA7E416421... 10/10/2025
DIRECTOR, MATERIALS MANAGEMENT

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Stantec Architecture Inc.
910 Louisiana Street, Suite 2600, Houston TX 77002

ADDENDUM

Addendum Number One (01)
TO PLANS AND SPECIFICATIONS FOR
CSP 26-003KB BP022 Gym Renovations
Fort Bend ISD
STANTEC Project Nos.: 214001246



STANTEC ARCHITECTURE INC.
910 Louisiana Street, Suite 2600
HOUSTON, TEXAS 77002

October 10, 2025

This Addendum is generally separated into sections for convenience; however, all contractors, subcontractors, material suppliers and other involved parties shall be responsible for reading the entire Addendum. Failure to list an item(s) in all affected sections of this Addendum does not relieve any party affected from performing per instructions, provided the information is set forth one time anywhere in the Addendum.

This document shall become attached to and part of the Construction Documents for the aforementioned project.

PRIOR APPROVAL

The following products and/or manufacturers have been approved for bidding on this job. All requirements of the specifications and drawings MUST be met by these products at no additional cost to the Owner. Only those products that are specified, or which are listed below, will be accepted on this project. Any products not meeting these requirements may be submitted via the Deviations Request Form process as described in the Div. 00 section: **Clarification for Package B of Fort Bend ISD CSP.**

GENERAL ITEMS

The following are items that may not be covered by a drawing or specification change

1. Sign in sheet attached from the pre-proposal meeting held on 10/07/2025
2. Sign in sheet attached from the pre-proposal site walk held on 10/08/2025
3. Answers to Questions from Bidders:
    a. Does this project requires Union?
    Answer: Refer to section 01 40 00 section 1.3 for information
    b. Spec sections 012002, 013120.01 & 013120.02 are missing. Please advise.
    Answer: ***Small Business Enterprise Program Procedures***", "***Subcontractor-Subconsultant Utilization Report***", and "***Subcontractor-Suppliers Payment Certification Form***" are all required for the project, and have been included in this Addendum. Master Table of Contents Index has also been updated to reflect this, note there was an adjustment to the numbering of one of the sections.

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SPECIFICATIONS

1. **00 01 10 MASTER TABLE OF CONTENTS:**
    a. REVISED TABLE OF CONTENTS INDEX:
        i. DELETED "01 20 02 SUBCONTRACTOR-SUBCONSULTANT-SUPPLIERS PAYMENT CERT FORM", SECTION WAS NUMBERED INCORRECTLY.
        ii. ADDED "01 31 20 SMALL BUSINESS ENTERPRISE PROGRAM PROCEDURES"
        iii. ADDED "01 31 20.01 SUBCONTRACTOR-SUBCONSULTANT UTILIZATION REPORT"
        iv. ADDED "01 31 20.02 SUBCONTRACTOR-SUPPLIERS PAYMENT CERTIFICATION FORM"
        v. DELETED "08 56 53 OPERABLE SECURITY WINDOWS"
    b. INDICATED REVISIONS TO THE FOLLOWING SECTIONS:
        i. 02 07 00 SELECTIVE DEMOLITION
        ii. 04 20 00 UNIT MASONRY ASSEMBLIES
        iii. 07 52 00 MODIFIED BITUMINOUS MEMBRANE ROOFING
        iv. 08 41 13 ALUMINUM STOREFRONT SYSTEMS
        v. 08 71 00 DOOR HARDWARE
        vi. 08 80 00 GLAZING

2. **01 31 20 SMALL BUSINESS ENTERPRISE PROGRAM PROCEDURES:**
    a. ADDED SECTION IN ITS ENTIRETY.

3. **01 31 20.01 SUBCONTRACTOR-SUBCONSULTANT UTILIZATION REPORT:**
    a. ADDED SECTION IN ITS ENTIRETY.

4. **01 31 20.02 SUBCONTRACTOR-SUPPLIERS PAYMENT CERTIFICATION FORM:**
    a. ADDED SECTION IN ITS ENTIRETY.

5. **02 07 00 SELECTIVE DEMOLITION:**
    a. ADDED REQUIREMENT FOR CONTRACTOR TO REMOVE, STORE, AND RE-INSTALL LOOSE EQUIPMENT, FURNITURE AND FURNISHINGS.

6. **04 20 00 UNIT MASONRY ASSEMBLIES:**
    a. REVISED BRICK BASIS OF DESIGN PRODUCTS.

7. **07 52 00 MODIFIED BITUMINOUS MEMBRANE ROOFING:**
    a. CORRECTED TYPO AT PERFORMANCE CRITERIA.
    b. SPECIFIED ROOF FINISH AS HIGHLY REFLECTIVE.

8. **08 41 13 ALUMINUM STOREFRONT SYSTEMS:**
    a. DELETED STOREFRONT DOORS.

9. **08 71 00 DOOR HARDWARE:**

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a. REPLACED SECTION IN ITS ENTIRETY.

10. 08 80 00 GLAZING:

a. REVISED LOW-E COATING BASIS OF DESIGN PRODUCT.

DRAWINGS

1. **CIVIL**
   a. **No items issued**

2. **LANDSCAPE**

HUNTERS GLEN ES

- **a. L100-HGES DEMOLITION PLAN**
  - i. UPDATED DRAWING TO SHOW DEMOLITION OF EXISTING BACKSTOP
- **b. L200-HGES- PLAYGROUND PLAN**
  - i. UPDATED DRAWING TO SHOW RELOCATED BACKSTOPS

3. **STRUCTURAL**

HUNTERS GLEN ES

- **a. S001-HGES – 3D VIEW AND SHEET LIST**
  - i. 3D VIEW WAS UPDATED TO SHOW NO OPENING AT CMU WALL LOCATION.
- **b. S101-HGES – GENERAL STRUCTURAL CRITERIA**
  - i. WALL LATERAL DIAGRAM WAS UPDATED TO A MONOSLOPE DIAGRAM.
  - ii. NOTE FOR LATERAL DESIGN LOADS WAS ADDED.
- **c. S201-HGES-FOUNDATION PLAN COMPOSITE**
  - i. CONCRETE LUG AT CORNERS WAS MODIFIED.
  - ii. DETAIL 8/S402 (SIM) WAS ADDED TO PLAN.
- **d. S201A-HGES-FOUNDATION PLAN – GYMNASIUM**
  - i. BUILDING DIMENSIONS WERE MODIFIED.
  - ii. SLAB THICKENINGS WERE REMOVED FROM PLAN, SINCE CMU WALL WAS CHANGED TO A CFMF WALL.
  - iii. DETAIL 6/S402 (SIM) WAS ADDED TO PLAN.
  - iv. PAVEMENT NOTE WAS ADDED TO PLAN.
  - v. MP4 NOTE WAS ADDED TO PLAN.
  - vi. NOTE 11 WAS ADDED TO PLAN AND FOUNDATION NOTES.
- **e. S202A-HGES-ROOF FRAMING PLAN - GYMNASIUM**
  - i. MP4 NOTE WAS ADDED TO PLAN.
  - ii. NOTE 6 & 7 WERE ADDED TO PLAN AND FOUNDATION NOTES.
  - iii. DETAIL 12/S501 WAS REMOVED FROM PLAN.
  - iv. BOD WAS CHANGED TO 24' – 1 ½".
- **f. S402-HGES – SOG @ STRUCTURAL STEEL (GB/PIER)**
  - i. NOTES FOR DETAIL 6 WERE MODIFIED.
  - ii. DIMENSION WAS REMOVED FROM DETAIL 2 SINCE WE HAVE THE DIMENSION CALLED OUT ON PLAN.
- **g. S501-PES – TYPICAL CMU WALL DETAILS**

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i. DETAIL 12 IS NO LONGER BEING USED.
ii. DETAIL 16 WAS ADDED
iii. NOTES WERE ADDED TO DETAILS 13-16

PALMER ES

a. **S001-PES-3D VIEW AND SHEET LIST**
   i. 3D VIEW WAS UPDATED TO SHOW NO OPENING AT CMU WALL LOCATION.
   ii. SHEET S201.1 WAS ADDED TO THE INDEX.
b. **S101-PES-GENERAL STRUCTURAL CRITERIA**
   i. WALL LATERAL DIAGRAM WAS UPDATED TO A MONOSLOPE DIAGRAM.
   ii. NOTE FOR LATERAL DESIGN LOADS WAS ADDED.
c. **S201-PES-FOUNDATION PLAN-COMPOSITE**
   i. NOTE WAS ADDED ON PLAN.
   ii. DETAIL 7/S402 WAS MOVED TO PLAN.
d. **S201.1-PES-FOUNDATION PLAN ALTERNATE 3A**
   i. SHEET S201.1 WAS ADDED TO THE SET.
e. **S201A-PES-FOUNDATION PLAN-GYMNASIUM**
   i. BUILDING DIMENSIONS WERE MODIFIED.
   ii. SLAB THICKENINGS WERE REMOVED FROM PLAN, SINCE CMU WALL WAS CHANGED TO A CFMF WALL.
   iii. DETAIL 6/S402 (SIM) WAS ADDED TO PLAN.
   iv. PAVEMENT NOTE WAS ADDED TO PLAN.
   v. MP4 NOTE WAS ADDED TO PLAN.
   vi. NOTE 11 WAS ADDED TO PLAN AND FOUNDATION NOTES.
f. **S202A-PES-ROOF FRAMING PLAN - GYMNASIUM**
   i. MP4 NOTE WAS ADDED TO PLAN.
   ii. NOTE 6 & 7 WAS ADDED TO PLAN AND FOUNDATION NOTES.
   iii. DETAIL 12/S501 WAS REMOVED FROM PLAN.
   iv. BOD WAS CHANGED TO 24' – 1 ½".
g. **S301-PES-FOUNDATION SCHEDULE & TYPICAL SLAB ON GRADE DETAILS**
   i. SPREAD FOOTING SCHEDULE WAS MODIFIED.
h. **S402-PES – SOG @STRUCTURAL STEEL (GB/FOOTING)**
   i. NOTES FOR DETAIL 6 WERE MODIFIED.
   ii. DIMENSION WAS REMOVED FROM DETAIL 2 SINCE WE HAVE THE DIMENSION CALLED OUT ON PLAN.
i. **S501-PES – TYPICAL CMU WALL DETAILS**
   i. DETAIL 12 IS NO LONGER BEING USED.
j. **S301-PES – TYPICAL STEEL & CMU WALL ROOF DETAILS**
   i. DETAIL 9 IS NO LONGER BEING USED.

RIDGEGATE ES

a. **S101-RES – GENERAL STRUCTURAL CRITERIA**
   i. EXCAVATION, BACKFILLING & FOUNDATION NOTES ARE NOT BEING USED.
b. **S201A-RES-FOUNDATION PLAN – EXISTING GYM**
   i. NOTE WAS REMOVED FROM PLAN.
   ii. FOUNDATION NOTE WAS MODIFIED.
   iii. DETAIL 5/S301 WAS MODIFIED.
   iv. DETAIL 13/S301 WAS ADDED.

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c. S301-RES-FOUNDATION SCHEDULE & DETAILS
- i. DETAILS 1, 2, 9 & 10 ARE NOT BEING USED.
- ii. DETAIL 13 WAS ADDED.

ROSA PARKS ES

a. S101-RPES-GENERAL STRUCTURAL CRITERIA
- i. NOTE FOR LATERAL DESIGN LOADS WAS ADDED.
- ii. WIND STORM NOTES ARE NOT BEING USED.
- iii. PORTION OF GENERAL NOTES FOR CONSTRUCTION WAS REMOVED.
- iv. STRUCTURAL STEEL NOTES ARE NOT BEING USED.

b. S102-RPES-GENERAL STRUCTURAL CRITERIA
- i. NOTES FOR MASONRY AND MASONRY LINTEL SCHEDULE WERE REMOVED.

4. **ARCHITECTURAL**

HUNTERS GLEN ES

a. AD100 – HGES – ARCHITECTURAL DEMOLITION PLAN
- i. REMOVED LANGUAGE FROM NOTE 7 IN GENERAL DEMOLITION NOTES – GENERAL
- ii. ADDED NOTE "CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL LOOSE EQUIPMENT FURNITURE AND FURNISHINGS IN ROOMS AFFECTED BY SCOPE OF WORK, PROVIDING BOXES FOR SUCH ITEMS AND MOVING THE EQUIPMENT, FURNITURE AND FIXTURES BACK AT THE END OF CONSTRUCTION."

b. AD602 – HGES – ARCHITECTURAL DEMOLITION REFLECTED CEILING PLAN
- i. ADDED SHEET

c. A102 – HGES FLOOR PLAN EXTENDED DAY LEARNING
- i. REMOVED TWO METAL SHELVING UNITS
- ii. ADDED LOCATION ON DAMAGED VINYL TO BE FIXED
- iii. ADDED INTERIOR ELEVATIONS A3, B3, C3 TO REFLECT EXTENT OF ACOUSTIC WALL FABRIC BEING REPAIRED AND SUPPLY AND DIFFUSERS BEING REPAIRED
- iv. ALTERED NOTES TO CLARIFY BASE BID SCOPE OCCURRING IN EXISTING ELP AND GYM CLASSROOMS

d. A133 – HGES – ROOF PLAN
- i. CHANGED SLOPE TO REFLECT 1.19 DEGREES

e. A201 – HGES – EXTERIOR ELEVATIONS – GYMNASIUM
- i. ADDED DIMENSION FROM EDGE OF LOUVER TO FACE OF WALL
- ii. ADDED EXTERIOR MATERIAL SCHEDULE

f. A300 – HGES – EXTERIOR BUILDING SYSTEMS
- i. UPDATED WALL TYPE XBM8.1 – MECHANICAL YARD SCREEN WALL TO RELFECT CMU BACKUP.

g. A301-HGES – EXTERIOR WALL SECTIONS
- i. ADDED DIMENSIONS, WALL AND ROOF TAGS

h. A302 – HGES – EXTERIOR WALL SECTIONS
- i. ADDED DIMENSIONS, WALL TAGS AND ROOF TAGS
- ii. ADDED A2/A302-HGES

i. A321 – HGES – EXTERIOR SECTION DETAILS AND ROOF DETAILS
- i. ADDED DETAIL A2/A321

j. A501 – HGES – FRAME ELEVATIONS & DOOR SCHEDULE

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i. ADDED DOOR HARDWARE SETS INTO DOOR SCHEDULE
ii. ADDED MATERIALITY TO HG109 & HG119

k. A901 – HGES – ENLARGED GYM FINISH PLAN
i. CHANGED FLOOR MATERIAL TO LVT-1 FROM CPT-1 IN COACHES OFFICE

PALMER ES

a. AD100 – PES – ARCHITECTURAL DEMOLITION PLAN
i. ADDED NOTE "CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL LOOSE EQUIPMENT FURNITURE AND FURNISHINGS IN ROOMS AFFECTED BY SCOPE OF WORK, PROVIDING BOXES FOR SUCH ITEMS AND MOVING THE EQUIPMENT, FURNITURE AND FIXTURES BACK AT THE END OF CONSTRUCTION."

b. AD601 – PES – DEMOLITION REFLECTED CEILING PLAN
i. CLARIFIED THAT HIGH BAY LIGHTS ARE BEING DEMOLISHED IN ELP & EXISTING GYM

c. A101 – PES FLOOR PLAN EXTENDED DAY LEARNING
i. ALTERED NOTES TO CLARIFY BASE BID SCOPE OCCURRING IN EXISTING ELP AND GYM CLASSROOMS

d. A103 – PES FLOOR PLAN GYMNASIUM
i. CHANGED WALL TYPE XB8.1 TO BE XBM8.1 AT MECHANICAL YARD
ii. CHANGED ORIENTATION OF CHASE WALL AT SOUTHEAST CORNER OF GYM

e. A113 – PES GYMNASIUM CLERESTORY PLAN
i. REVISED TWO WINDOWS IN SOUTHEAST CORNER TO BE 6'8" IN DIMENSION

f. A133 – PES – ROOF PLAN
i. I.CHANGED SLOPE TO REFLECT 1.19 DEGREES OR ¼":1'

g. A201 – PES – EXTERIOR ELEVATIONS – GYMNASIUM
i. I.ADDED DIMENSION FROM EDGE OF LOUVER TO FACE OF WALL
ii. ADDED EXTERIOR MATERIAL SCHEDULE

h. A300 – PES – EXTERIOR BUILDING SYSTEMS
i. UPDATED WALL TYPE XBM8.1 – MECHANICAL YARD SCREEN WALL TO RELFECT CMU BACKUP.

i. A301-PES – EXTERIOR WALL SECTIONS
i. ADDED DIMENSIONS, WALL AND ROOF TAGS

j. A302 – PES – EXTERIOR WALL SECTIONS
i. ADDED DIMENSIONS, WALL TAGS AND ROOF TAGS
ii. ADDED A2/A302-HGES

k. A321 – PES – EXTERIOR WALL SECTION DETAILS
i. CLARIFIED BRICK LEDGE DIMENSION ON DETAIL A1 AS 7 1/8"

l. A401 – PES – ENLARGED RESTROOM PLANS AND ELEVATIONS
i. I.RENAMED SHEET
ii. REMOVED DUPLICATE GRID LINES

m. A501 – PES – FRAME ELEVATIONS & DOOR SCHEDULE
i. ADDED DOOR HARDWARE SETS INTO DOOR SCHEDULE
ii. ADDED MATERIALITY TO HG109 & HG119

n. A901 – PES – ENLARGED GYM FINISH PLAN
i. CHANGED FLOOR MATERIAL TO LVT-1 FROM CPT-1 IN COACHES OFFICE

RIDGEGATE ES

a. AD101 – RES – ENLARGED GYMNASIUM DEMOLITION PLAN

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i. ADDED NOTE CONCERNING COORDINATION OF EXISTING SPRINKLER LINES IN EXISTING STORAGE ROOMS TO BE DEMOLISHED.

b. AD100 – RES COMPOSITE ARCHITECTURAL DEMOLITION PLAN
- i. ADDED NOTE 8. UNDER CUTTING AND PATCHING IN GENERAL DEMOLITION REQUIREMENTS
- ii. TO INCLUDE " CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL LOOSE EQUIPMENT FURNITURE AND FURNISHINGS IN ROOMS AFFECTED BY SCOPE OF WORK, PROVIDING BOXES FOR SUCH ITEMS AND MOVING THE EQUIPMENT, FURNITURE AND FIXTURES BACK AT THE END OF CONSTRUCTION."
- iii. ADDED DEMOLITION OF CASEWORK IN COMPUTER ROOM 305

c. AD201 – RES – EXTERIOR ELEVATIONS
- i. ADDED EXTERIOR MATERIAL SCHEDULE
- ii. ADDED CLARIFYING NOTES TO EXTERIOR ELEVATION WHERE DOOR R100B IS BEING ADDED

d. A501 – RES – DOOR HARDWARE SCHEDULE, FRAME TYPES
- i. ADDED DOOR HARDWARE INTO DOOR SCHEDULE

e. A711 – RES – FURNISHINGS AND EQUIPMENT PLAN – CASEWORK
- i. ADDED CASEWORK WITHIN ROOM 305 COMPUTER ROOM TO SCOPE

f. A712 – RES – CASEWORK ELEVATIONS
- i. ADDED CASEWORK ELEVATION C2
- ii. ADDED SOAP AND PAPER TOWEL DISPENSERS TO RELEVANT ELEVATIONS
- iii. ADDED CLARIFYING NOTE ABOUT COUNTERTOP AND BACKSPLASH MATERIALITY

g. A905 – RES – CASEWORK ELEVATIONS
- i. REMOVED NOTE 5 FROM GENERAL NOTES
- ii. ADDED FLOOR FINISH LEGEND
- iii. INCLUDED FLOOR FINISH HATCH PATTERNS

ROSA PARKS ES

a. A101 – RPES – A: ENLARGED STAGE CURTAIN PLAN ALTERNATE #4
- i. ADDED DIMENSIONS TO STAGE CURTAIN PLAN

5. **MEP**

HUNTER GLEN ES

a. SHEET M201 HGES MECHANICAL FLOOR PLANS
- i. CLARIFIED SCOPE FOR GRILLE REPLACEMENT AT EXTENDED DAY.
- ii. ADDED SMOKE DETECTORS AT SRTU-1.
- iii. PROVIDED SUPPLY AIR IN OUTDOOR STORAGE 11.

b. SHEET M301 HGES MECHANICAL SCHEDULE
- i. REVISED SUPPLY AIR CFM FOR SRTU-1.

c. SHEET E100 HGES ELECTRICAL COMPOSITE PLAN
- i. PROVIDED ADDITIONAL CONDUIT FOR FIRE ALARM TO NEW GYMNASIUM BUILDING.

d. SHEET E201 HGES ELECTRICAL FLOOR PLANS
- i. SHOWED EXISTING EGRESS LIGHTING FOR COORDINATION.
- ii. REVISED ELEVATION OF EXTERIOR WALL PACKS.
- iii. REVISED LIGHTING TO MATCH ARCHITECTURAL LAYOUT.
- iv. CLARIFIED LOCATION OF GYMNASIUM RECEPTACLES.

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v. PROVIDED POWER FOR ADDITIONAL EQUIPMENT FROM OTHER TRADES.

e. SHEET E301 HGES – ELECTRICAL FLOOR PLANS – ALTERNATE
- i. REVISED LIGHT FIXTURE SCHEDULE.
- ii. REVISED PANEL AND CONDUCTOR SIZES.
- iii. CLARIFIED ALTERNATE LIGHTING SCOPE TO NOT CONFLICT WITH BASE SCOPE.

f. SHEET E401 HGES ELECTRICAL ONE-LINE AND PANEL SCHEDULES
- i. REVISED BREAKER SIZE AND CONDUCTORS FOR GH, SRTU-1 AND IEWH-2.

g. SHEET E501 HGES ELECTRICAL DETAILS, LEGENDS AND SCHEDULES
- i. REVISED LIGHT FIXTURE SCHEDULE.
- ii. REMOVED EMERGENCY LIGHTING RELAY DETAIL.

h. SHEET P301-HGES _ PLUMBING ENLARGED PLAN – LEVEL 1 NEW GYM
- i. PROVIDED SEPARATE TAG FOR WATER HEATER IN TLT 18.
- ii. REMOVED KEYED NOTE RELATED TO FIRE SCOPE.
- iii. REMOVED FIRE SPRINKLER SYSTEM GENERAL NOTES.

i. SHEET P601-HGES PLUMBING LEGENDS AND SCHEDULES.
- i. ADDED IEWH-2 TO TANKLESS WATER HEATER SCHEDULE.

PALMER ES

a. SHEET M201 PES MECHANICAL FLOOR PLANS
- i. ADDED SMOKE DETECTORS AT SRTU-1.
- ii. PROVIDED SUPPLY AIR IN OUTDOOR STORAGE 11.

b. SHEET M301 PES MECHANICAL SCHEDULES
- i. REVISED SUPPLY AIR CFM FOR SRTU-1.

c. SHEET E100 PES ELECTRICAL COMPOSITE PLAN
- i. PROVIDED ADDITIONAL CONDUIT FOR FIRE ALARM TO NEW GYMNASIUM BUILDING.

d. SHEET E201 PES ELECTRICAL FLOOR PLANS
- i. SHOWED EXISTING EGRESS LIGHTING FOR COORDINATION.
- ii. REVISED ELEVATION OF EXTERIOR WALL PACKS.
- iii. REVISED LIGHTING TO MATCH ARCHITECTURAL LAYOUT.
- iv. CLARIFIED LOCATION OF GYMNASIUM RECEPTACLES.
- v. PROVIDED POWER FOR ADDITIONAL EQUIPMENT FROM OTHER TRADES.

e. SHEET E301 PES – ELECTRICAL FLOOR PLANS – ALTERNATE
- i. REVISED LIGHT FIXTURE SCHEDULE.
- ii. REVISED PANEL AND CONDUCTOR SIZES.
- iii. CLARIFIED ALTERNATE LIGHTING SCOPE TO NOT CONFLICT WITH BASE SCOPE.

f. SHEET E401 PES ELECTRICAL ONE-LINE AND PANEL SCHEDULES
- i. REVISED BREAKER SIZE AND CONDUCTORS FOR GH, SRTU-1 AND IEWH-2.

g. SHEET E501 PES ELECTRICAL DETAILS, LEGENDS AND SCHEDULES
- i. REVISED LIGHT FIXTURE SCHEDULE.

h. SHEET P100-PES PLUMBING COMPOSITE PLAN
- i. REVISED SANITARY AND STORM POINT OF CONNECTION.
- ii. REVISED STORM AND SANITARY INVERTED ELEVATIONS.

i. SHEET P201-PES PLUMBING UNDERFLOOR ENLARGED PLANS – NEW GYM
- i. REVISED SANITARY AND STORM POINT OF CONNECTION.

j. SHEET P301-PES PLUMBING ENLARGED PLAN – LEVEL 1 – NEW GYM
- i. RELOCATED TWO-WAY CLEANOUT LOCATION.
- ii. RELOCATED FLOOR CLEANOUT LOCATION.
- iii. PROVIDED NEW TAG FOR WATER HEATER IN TLT E105.
- iv. REMOVED KEYED NOTE RELATED TO FIRE SCOPE.

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v. REMOVED FIRE SPRINKLER SYSTEM GENERAL NOTES.
vi. REVISED STORM DRAIN SYSTEM.

k. SHEET P601-PES PLUMBING LEGENDS AND SCHEDULES.
i. ADDED IEWH-2 TO TANKLESS WATER HEATER SCHEDULE.

RIDGEGATE ES

a. SHEET M201 RES MECHANICAL FLOOR PLANS
i. ADDED FIRE DAMPERS.
ii. PROVIDED SUPPLY AIR IN OUTDOOR STORAGE 14.
iii. REBALANCED SUPPLY AIR IN GYMNASIUM.

b. SHEET M301 RES MECHANICAL DETAILS
i. REVISED GRILLE SCHEDULE.

c. SHEET E100 RES ELECTRICAL COMPOSITE PLAN
i. REVISED PANEL SCHEDULES.

d. SHEET E201 RES ELECTRICAL LIGHTING PLAN – LEVEL 1 – AREA A
i. REVISED SYMBOLS AND NOTES FOR LIGHTING REPLACEMENT.

e. SHEET E202 RES ELECTRICAL LIGHTING PLAN – LEVEL 1 – AREA B
i. REVISED SYMBOLS AND NOTES FOR LIGHTING REPLACEMENT.
ii. REVISED LIGHTING LAYOUT IN GYMNASIUM SUPPORT SPACES TO MATCH ARCHITECTURAL LAYOUT.

f. SHEET E203 RES ELECTRICAL LIGHTING PLAN – LEVEL 1 – AREA C
i. REVISED SYMBOLS AND NOTES FOR LIGHTING REPLACEMENT.

g. SHEET E302 RES – ELECTRICAL POWER PLAN – LEVEL 1 – AREA B
i. PROVIDED POWER FOR ADDITIONAL EQUIPMENT FROM OTHER TRADES.

h. SHEET E501 RES ELECTRICAL DETAILS, LEGENDS AND SCHEDULES
i. REVISED LIGHT FIXTURE SCHEDULE.
ii. REMOVED EMERGENCY LIGHTING RELAY DETAIL.

i. SHEET P001-RES PLUMBING ENLARGED DEMOLITION FLOOR PLANS.
i. ADDED KEYED NOTE # 2 TO ART 306 SPACE.

j. SHEET P100-RES PLUMBING COMPOSITE PLAN.
i. ADDED SCOPE CALLOUT FOR NEW GYMNASIUM.

k. SHEET P301-RES PLUMBING ENLARGED FLOOR PLANS.
i. REVISED ONE SINK AT CLASSROOM 116 & K CLASSROOM TO NON T.A.S. COMPLIANT.

l. SHEET P302-RES PLUMBING ENLARGED FLOOR PLANS
i. ADD THIS SHEET TO THE SET IN ITS ENTIRETY.

m. SHEET P401-RES PLUMBING SCHEDULES
i. PROVIDED SPECIFICATION FOR SK-4.

6. **TECHNOLOGY**
No items issued

NUMBER OF ATTACHMENTS:

1. Narratives:
   a. Stantec, 8.5x11 = (10) pages
2. PRE-PROPOSAL SIGN IN SHEET 8.5 x 11 = (2) Page
3. PRE-BID WALK SIGN-IN 8.5 x 11 = (2) Pages
4. Specifications: 8.5x11 pages = (75) Pages
5. Drawings: 30" X 42" = (91) sheets

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Stantec Architecture Inc.
910 Louisiana Street, Suite 2600, Houston TX 77002

END OF ADDENDUM NUMBER ONE (01)

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FBISD
INSPIRE • EQUIP • IMAGINE
BUSINESS & FINANCE

CSP 26-003KB BP022 Gym Renovations
Pre-Proposal Meeting Attendance List
Date and Time: 10/7/2025, 2:00 PM

SIGN IN SHEET

	Name	Company Name	Email
1	Alex Cardona	Nash Industries	acardona@nashindustriesinc.com
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14	Jeanette Boleware	FBISD	
15	Antoinette Lewis	FBISD	
16	Nancy Lane	FBISD	
17	Ryan Kiefer	FBISD	
18	Ekaette Etim	FBISD	
19	Prachi Khanna	FBISD	

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Sign-in Sheet
CSP 26-003KB | Fort Bend ISD 2023 Bond | BP022 Gym Renovations
October 08, 2025

Name	Company /Affiliation	Office Phone #	Mobile Phone #	Email Address	Signature
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Sign-in Sheet

CSP 26-003KB | Fort Bend ISD 2023 Bond | BP022 Gym Renovations

October 08, 2025

Name	Company /Affiliation	Office Phone #	Mobile Phone #	Email Address	Signature
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*Fort Bend ISD Package A Base Bid Proposal Form
*Fort Bend ISD Package B Alternates Bid Proposal Form
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Fort Bend Independent School District

Small Business Enterprise Program Procedures
Spring 2023

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FBISD
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I. SUMMARY OF FORT BEND INDEPENDENT SCHOOL DISTRICT'S SMALL BUSINESS ENTERPRISE PROGRAM

Fort Bend Independent School District's Small Business Enterprise Program ("SBEP" or the "Program") was created to provide increased business opportunities for locally certified small businesses to participate in contracting and procurement at Fort Bend Independent School District (FBISD).

Shown below are the key features of the Program.

- The SBEP is a goal-oriented program, requiring contractors to whom FBISD awards prime contracts for design services or construction services to use "Good Faith Efforts" to utilize certified small businesses.

- The Program applies only to SBEP Eligible contracts, defined as all contracts for architectural design services, engineering design services or construction services valued at $50,000 or greater, except contracts for sole-source items, federally funded contracts, contracts with other governmental entities, and those contracts that are other- wise prohibited by applicable law or expressly exempted by FBISD. The SBEP shall not apply to contracts for goods and non-construction services.

- The SBEP is a race and gender-neutral program.

- FBISD has set an annual SBEP participation goal of twenty-five (25%) percent of the dollar amount of all SBEP-Eligible contracts. FBISD recognizes that individual actual participation may vary based on subcontracting opportunities, availability of small businesses, and price competitiveness. The participation goal may change from year to year based on all relevant factors considered.

- To participate, small businesses must be certified by an agency or organization whose certification is recognized by FBISD. Certification is based on the firm's gross revenues or number of employees averaged over the past five years, inclusive of any affiliates as defined by 13 C.F.R. § 121.103, does not exceed the size standards as defined pursuant to Section 3 of the Small Business Act and 13 C.F.R. § 121.201.

- The U.S. Small Business Administration-SBA.gov website Qualifying as a Small Business.

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The Small Business Enterprise Program provides benefits to the small business including:

- Providing assistance to small businesses, by providing information and support.
- Assisting small businesses by offering training and information regarding insurance and surety bonding.
- Requiring prospective vendors to provide written assurance of small business participation in their proposals for SBEP Eligible contracts.
- Providing workshops on issues frequently encountered by small businesses during the proposal process and generally while performing work at FBISD.
- Maintaining an updated small business directory and source list(s) to help identify qualified and available small businesses; providing information on the FBISD website about opportunities to do business with FBISD.
- Providing information on the FBISD website about SBEP Eligible procurements.

II. OPERATIONAL PROCEDURES

The procedures herein are established to govern the program components of the SBEP, including, without limitation, program compliance, certification, specific implementation measures, small business status verification, and reporting of small business participation.

A. SCOPE

These procedures apply to all FBISD Departments, architectural/engineering firms, and general contractors performing work on SBEP Eligible contracts, and all certified Small Business Enterprises. These procedures apply to those SBEP-Eligible contracts as defined herein.

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B. OVERALL ANNUAL SBEP GOAL

1. An overall annual goal for small business participation in architectural design services, engineering design services, and construction services at FBISD is set at twenty-five (25%) percent of the dollar amount of all SBEP-Eligible contracts.

   FBISD staff shall provide updates/reports, when needed, to the FBISD Board of Trustees calculating small business utilization.

2. An SBEP-Eligible contract may otherwise be exempt from a small business goal if it is determined that one or more of the following is present:

   a. A public or administrative emergency exists that requires the goods or services to be provided with unusual immediacy; or

   b. The goods or services requested are of such a specialized, technical, or unique nature as to require FBISD to be able to select its contractor without application of small business provisions; or

   c. The application of small business provisions would impose an unwarranted economic burden or risk on FBISD, would unduly delay acquisition of the labor, goods or services, or would otherwise not be in the best interest of FBISD; or

   d. The possible small business participation level based on small business availability would produce negligible or no small business participation.

   All SBEP exemptions must be approved by an authorized FBISD representative.

C. PROGRAM ACTIVITIES AND RESPONSIBILITIES

In an effort to maximize the Program's activities, the following procedures are in place to maximize opportunities for small business participation:

1. FBISD has designated the Small Business Enterprise Program Coordinator to implement the District's structured small business program under the direction of the FBISD Design and Construction Department.
2. FBISD may designate staff members to act as advisors and to work directly with small businesses and contractors to provide information, assistance, and support. FBISD's Small Business Enterprise Program Coordinator and/or staff will undertake various tasks to make the Program workable, including the following:

   - Coordinate workshops and/or training sessions for small businesses on challenges frequently encountered by small businesses during the proposal process and generally when performing work for FBISD;

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- In coordination with the Purchasing Department, provide specifications and requests for proposals to the small business community in a timely manner, to allow small businesses adequate opportunity to develop responsible and responsive quotations and proposals;
- Enhance the FBISD database to identify SBEP-Certified Small Businesses and assist Contractors in identifying SBEP-Certified Small Businesses with which to subcontract;
- Participate in pre-proposal seminars, when needed, to explain small business requirements, including explanation of the forms that must be submitted with a proposal;
- Coordinate outreach activities for small businesses to ensure access and opportunity to compete;
- Conduct internal information sessions to inform and acquaint FBISD staff with the goals and objectives of the SBEP and to sensitize them to the problems of small businesses;
- Maintain lists of SBEP-Certified Small Businesses and coordinate with listings from other agencies, e.g., Port of Houston Authority SBE Certification, Metropolitan Transit Authority of Harris County (METRO) SBE Certification, and City of Houston SBE Certification. These lists will be offered to contractors and FBISD staff to assist in program implementation;
- Maintain records showing specific efforts to identify and award Contracts to small businesses and establish a monitoring system to ensure that all Contractors, Subcontractors, consultants, and vendors comply with Contract specifications related to small business enterprise utilization;
- Maintain and update the FBISD website on the SBEP proposals and on other opportunities to do business with FBISD; and
- In coordination with the Purchasing Department, inform small businesses of proposal notices and specifications related to their capabilities by placing proposal notices in the appropriate trade bulletins, local newspapers, and other periodicals and informing local trade associations, technical assistance agencies, economic development groups, and small businesses with capabilities relevant to the proposal.

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3. FBISD shall update the website to assist small businesses and Contractors. The website will contain the following:

    - Procedures outlining specific steps regarding how to submit a proposal;
    - Prerequisites for submitting proposals on contracts;
    - Information regarding how plans and specifications can be obtained;
    - Names of persons to contact concerning questions on proposal documents; and
    - Names of Procurement officers and office hours

4. FBISD will maintain and have available an updated small business directory and source list(s) per proposal solicitation to facilitate identifying small businesses with capabilities relevant to general contracting requirements and to particular solicitations. FBISD will make the directory and source list(s) available to contractors to assist their efforts to meet the small business requirements.

D. PURCHASING METHODS

Purchasing methods used by FBISD for construction services may include Competitive Sealed Proposals, Design-Build, Construction Manager-at-Risk, Construction-Manager -Agent and Job Order Contracting. In deciding which purchasing method to utilize, FBISD will determine which purchasing method provides the best value to FBISD, in accordance with the law and Board Policy.

Offeror's who tender a Statement of Qualifications response are required to provide evidence of their intent and ability to fulfill the goals of the Small Business Enterprise Program.

NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, NO CONTRACTOR OR ANY OTHER PERSON OR FIRM IS INTENDED TO OR SHALL DERIVE ANY LEGAL OR EQUITABLE RIGHTS, DIRECTLY OR AS A THIRD PARTY BENEFICIARY, FROM FBISD'S SBEP. NOTHING IN THE SBEP SHOULD BE CONSTRUED TO GIVE A CONTRACTOR OR SUBCONTRACTOR A PROPERTY INTEREST IN A BID, PROPOSAL OR CONTRACT PRIOR TO THE FBISD BOARD OF TRUSTEES' AWARD OF THE CONTRACT AND COMPLIANCE WITH ALL STATUTORY AND OTHER LEGAL REQUIREMENTS.

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E. CERTIFICATION PROCEDURES

Fort Bend Independent School District's SBEP requires prior certification of a small business in order to count the participation of that small business toward program goals.

1. Eligibility Requirements for Certification
   To be eligible for certification as a small business, each applicant must do the following:

   - Demonstrate that the firm's gross revenues or number of employees averaged over the past five years, inclusive of any affiliates as defined by 13 C.F.R. § 121.103, does not exceed the size standards as defined pursuant to Section 3 of the Small Business Act and 13 C.F.R. § 121.201;
   - Complete an SBEP application form for one of the FBISD approved certifying agencies.
   - Obtain certification from one of the FBISD recognized certifying agencies.

2. Certification Process

   a. To be eligible to participate in the SBEP, a small business must have certification of its small business status. Certifications may be obtained from public and private agencies that certify small businesses. FBISD does not represent that any particular agency employs the same definition of "small business" as that used by FBISD. It is the responsibility of the applicant to choose an agency for certification that uses FBISD's definitional criteria for small business.

      FBISD recognizes certification by the following agencies:
      Port of Houston Authority SBE Certification;
      Metropolitan Transit Authority of Harris County (METRO) SBE Certification;
      City of Houston SBE Certification; and
      Small Business Administration–SBA 8a (if authorized by the District for a procurement)

FBISD has the right to revoke acceptance of a business as a certified or qualifying small business and to conduct certification reviews in accordance with these Procedures. If a small business experiences any change in its certification status with its certifying agency (i.e. amendments, decertification, termination, graduation), the small business shall immediately notify FBISD of such change.

When an SBE certificate expires, a notification will be generated and submitted to the business. The business should obtain recertification through one of the certifying agencies accepted by FBISD, and forward the recertification certificate to the FBISD Small Business office within 10 business days.

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3. Recertification Requirement
   A small business application is valid through the certification date provided by the certifying agency. To reapply, a business must submit a renewal application and evidence of continuing eligibility and certification to the FBISD certifying agency.

4. Revocation
   FBISD may revoke a previously approved application if it determines that the business does not meet the definition of a small business, or if the business fails to provide requested information in connection with an application review conducted by FBISD. A business may be disqualified from participation in the SBEP if the business fails to provide evidence of certification to FBISD. FBISD may also revoke a previously approved application if it determines that the small business is operating as a pass-through business or a non-small business affiliate. If a question arises regarding certification, FBISD will continue to count the previously certified small business as a SBEP Certified Small Business until the business's small business certification expires or is officially revoked.

5. Certification Reviews
   FBISD may conduct random certification reviews of certified businesses by auditing them to verify that the information submitted by the business is accurate and that the business remains eligible after certification has been granted. An application approval is subject to revocation if it is determined that a business does not qualify as a SBEP Certified Small Business under the terms of this Program. Certification reviews maybe conducted for any business that FBISD determines a certification review is warranted.

6. Limitations
   Notwithstanding any other provision of this Program, except upon a finding of good cause by FBISD, a firm shall be eligible to participate in the program until it can no longer qualify for reasons of growth or change in status.

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F. PROCEDURES FOR DETERMINING SATISFACTION OF GOOD FAITH EFFORTS REQUIREMENT

1. Each bidder, proposer, or respondent (hereinafter collectively referred to as "Proposer") must acknowledge FBISD's Non-Discrimination and Harassment Policy, which will be published in all solicitation documents. Said acknowledgment must include a statement evidencing the Proposer's awareness of FBISD's policy of nondiscrimination and affirmatively state that the Proposer has not and will not discriminate against any person or company on the basis of age, color, ethnic background, disability, family status, gender, national origin, race, religion, sex, sexual orientation, or veteran status in its participation in any aspect of the SBEP.

2. The Proposer must submit a Contractor's Small Business Plan (the "Plan") setting out how the SBEP goal for the proposed project is to be met. The Plan is to be submitted with the proposal response or within a period designated within the solicitation document, or upon notification of finalist or successful Proposer status. The Plan should be a simple, short statement of small business participation in the SBEP Eligible Contract. The Plan must include a list of SBEP Certified Small Businesses proposed as Subcontractors and suppliers. All small businesses listed must be approved as SBEP Certified Small Businesses by FBISD.

   The Plan must also include an SBE Participation Report for all listed small businesses, including the name of each small business, description of the scope of work to be performed, and the dollar value and percentage amount for each small business Contract.

   Agreements between a Proposer and a small business in which the small business promises not to provide subcontracting quotations to other Proposers shall be prohibited.

3. The Proposer shall adhere to the Plan submitted unless a waiver is received from the Small Business Enterprise Program Coordinator or FBISD authorized representative.

4. If the Proposer is unable to meet the SBEP goal, the Proposer must submit documentation of Good Faith Efforts to meet the small business participation goal. Such documentation shall be presented to the Small Business Enterprise Program Coordinator for review.

5. FBISD may consider future procurements, if a contractor failed to make Good Faith Efforts to meet the contract small business participation goal.

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G. PROCEDURES FOR EVALUATING SMALL BUSINESS PARTICIPATION

Prior to any consideration of a bid or proposal for contract award, FBISD staff shall review submitted bids and proposals for verification of SBEP participation.

The staff evaluation process may utilize a point system based on evaluation criteria set forth in the procurement methods. A designated number of points will be set aside for small business participation, if applicable. Proposers may receive none, some, or all of the designated small business participation points, based on the Proposer's plan to satisfy small business participation goals. If, in the opinion of FBISD staff, the Proposer's response completely meets the stated small business participation goals, the total amount of eligible points will be awarded for small business participation.

The following is a sample point distribution sliding scale to be included in solicitation documents. FBISD reserves the right to adjust the sliding scale values published in a given solicitation, as deemed in the best interest of FBISD for that particular solicitation.

Proposed SBE Subcontracting Goal	Available Points
Less than 5%	0
5% - 9%	1
10% - 14%	2
15% - 19%	3
20% - 24%	4
25% or more	5

Points shall be awarded in accordance with the Proposer's response based on the architectural firm, engineering firm, or general contractor's commitment to small business subcontracting stated in the solicitation document and the point distribution sliding scale.

If the Proposer itself is a Certified Small Business who plans to self-perform work, the value of such self-performed work shall be included in calculating the eligible points for small business participation to the Certified Small Business Proposer, in addition to the value of work subcontracted to another small business.

If the Proposer itself is not a Certified Small Business, but has joint-ventured with another Certified Small Business, only the value of work to be self-performed by the Certified Small Business architectural firm, engineering firm, or general contractor will be included in calculating the eligible points for small business participation to the Small Business Proposer/joint venture, in addition to the value of work subcontracted to another small business.

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H. PROCEDURES FOR REPORTING SMALL BUSINESS PARTICIPATION

1. Once the contract is awarded, the following guidelines should be utilized to report small business participation in the awarded contract, as the measure of its progress in meeting SBEP goals:

    a. If the small business is a subcontractor, FBISD will count toward applicable small business goals the portion of the total dollar value of a contract that is subcontracted to the small business.

    b. If the small business subcontractor is a part of a joint venture, FBISD will count toward applicable small business goals a portion of the total dollar value of a contract with an SBEP-eligible joint venture equal to the percentage of the ownership of the small business partner in the joint venture, or the participation of the small business partner in the contract.

    c. If the solicitation contemplates the use of small business subcontractors and a small business is the prime contractor, FBISD may require the prime contractor small business to utilize other small businesses as subcontractors, and count toward applicable small business goals as provided below.

    d. If the solicitation contemplates the use of small business subcontractors and a small business is the firm or general contractor, FBISD will count small business participation in two separate ways as follows:

        i. FBISD will count the total dollar value of the contract awarded to the SBEP eligible firm or general contractor toward applicable small business goals if the firm or general contractor small business performs 100% of the work itself or subcontracts with other SBEP Certified Small Businesses to complete 100% of the work. However, if the firm or general contractor small business utilizes a non-small business subcontractor, FBISD will count the total dollar value of the awarded contract to the firm or general contractor small business, minus the dollar amount subcontracted to non-small businesses. FBISD will count toward applicable small business goals contract awards where good or services are procured from a small business in the form of a prime contractor and without additional small business subcontracting.

        ii. FBISD will count toward applicable small business goals only expenditures to small businesses that perform a commercially acceptable function in the work of a contract. FBISD will count toward the applicable small business goals only expenditures to SBEP Certified firm or general contractors or SBEP Certified first-tier subcontractors. Expenditures to subcontractors below the first-tier subcontract level will not be counted toward an applicable small business goal.

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e. FBISD will count toward applicable small business goals contract expenditures for materials and supplies obtained from small business distributors and small business manufacturers, provided that these businesses assume the actual and contractual responsibility for the provision of the materials and supplies, and are a first-tier subcontractor/supplier.

f. FBISD will count toward applicable small business goals the following expenditures to small business firms that are not manufacturers or distributors:

   i. The fees or commissions charged for providing a bona fide service, such as professional, technical, consultant, or managerial services, and assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for performance of the contract, provided that the fee or commission is determined by FBISD to be reasonable and not excessive as compared with fees customarily allowed for similar services.

   ii. The fees charged for delivery of materials and supplies required on a job site (but not the cost of the materials and supplies themselves) when the hauler, trucker, or delivery service is not also the manufacturer of, or a regular dealer in, the materials and supplies, provided that the fee is determined by FBISD to be reasonable and not excessive as compared with fees customarily allowed for similar services.

   iii. The fees or commissions charged for providing any bonds or insurance specifically required for the performance of the contract, if the fee or commission is determined by FBISD to be reasonable and not excessive as compared with fees customarily allowed for similar services. SBEP Certified Small Business subcontractors, and shall assure that all such contracts contain the terms set out in all required SBEP provisions.

   2. Prior to award, the firm or general contractor shall designate a SBEP contact person who will administer the firm or general contractor's SBEP commitments and who shall be responsible for maintenance of records of Good Faith Efforts to subcontract with SBEP Certified Small Businesses.

   3. After award, the firm or general contractor shall (1) submit FBISD Small Business Enterprise Program Utilization Reports to the SBEP office; and (2) make timely payments to all persons and entities supplying labor, materials, or equipment for the performance of the contract.

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4. In the event a SBEP Certified Small Business is suspended or removed for any reason, the firm/contractor shall make a Good Faith Effort to replace the small business with another SBEP Certified Small Business.

5. Non-discrimination and Legal Compliance. The SBEP adheres to the FBISD's Non-Discrimination and Harassment Policy. A firm/contractor or SBEP Certified Small Business may be found to have failed to satisfy the Good Faith Efforts of the SBEP if the firm/contractor or SBEP Certified Small Business violates FBISD's Non-Discrimination and Harassment Policy. Furthermore, violations of federal or state law or significant ordinances or regulations of any governmental unit may be deemed a failure to satisfy the Good Faith Efforts of the SBEP.

I. QUALITY CONTROL/QUALITY ASSURANCE

- Architect/Engineer Firm or General Contractor will provide notification to FBISD of SBE subconsultant/subcontractor change.

- Architect/Engineer Firm or GC will provide final SBE Utilization form listing all SBE's used on the project to the FBISD Small Business office.

- Contractor Utilization Report demonstrates the Bidder/Proposer's commitment to prompt payment, non-discrimination practices, the release of retain- age and the inclusion of these clauses in its subcontractor agreements.

  The Pledge must set forth:
  - A pledge that all subcontractors will be paid within FBISD guidelines from the Bidder/Proposer receiving payment from FBISD for amounts previously invoiced.
  - An affirmative statement by the Bidder/Proposer that it has adhered to FBISD Non-discrimination Mandate.
  - For construction contracts only retainage will be released to all sub-contractors within 30 days after satisfactory completion and approval of work performed.
  - Confirmation that the Bidder/Proposer will include the above clauses in its subcontractor agreements.
  - Score Card to constitute SBE Participation goal met.

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FORT BEND INDEPENDENT SCHOOL DISTRICT
SUB-CONTRACTOR/SUB-CONSULTANT (INCLUDING SMALL BUSINESS ENTERPRISES) UTILIZATION REPORT

1. Project Name	2. Project Number	3. Application Number	4. Application Date	5. Reporting Period From: To:	6. SBE Goal	7. Scheduled Completion

This report is required by Fort Bend ISD – Failure to comply may result in FBISD commencing proceedings to impose sanctions on the Contractor/Consultant. In addition to pursing other legal remedies, sanctions may include the withholding of payments for work committed to Small Business Enterprises (SBE) participants and a negative recommendation on future bids by the Contractor/Consultant for Fort Bend ISD.

☐ **Note: SBE reporting for this pay period not applicable.**

8. Prime Contractor/Consultant's Name				9.Phone ( )	10.Fax ( )
11.Contractor/Consultant's Street Address / Suite # City State Zip		12. Project Manager (Prime)		13. PM's Phone # ( )	14. PM.'s Fax ( )
15.Current Contract Amount	16.Total Draw This Month	17. % SBE Billed to Date	18. Total Draw on Project to Date		19. % Complete to Date

20. Federal ID Number	21. Sub-contractor / Sub-consultant	22. SBE Status	23. Work Description	24. Amount for Project	25. Amount of Current Draw	26. Total Billed to Date	27. Actual Start Date	28. Scheduled Completion Date

Commencing contract award, partial release of lien is expected from each Sub-contractor / Sub-consultant and shall accompany any application and certification for payment. Prompt payment to CONTRACTOR/CONSULTANT is dependent on appropriate documentation. The signature below of corporate officer attests to the accuracy of the information.

Company Seal

_____ _____
Signature of Company Officer Date

_____ _____
Title Telephone Number

STATE OF TEXAS, _____COUNTY
IN WITNESS WHEREOF, I have hereunto set my hand and official seal this _____ day of _____, 20__.

Notary Public, State of Texas

My Commission Expires_____

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PROJECT NAME	CONTRACTOR'S NAME

20. Federal ID Number	21. Sub-contractor / Sub-consultant	22. SBE Status	23. Work Description	24. Amount for Project	25. Amount of Current Draw	26. Total Billed to Date	27. Actual Start Date	28. Scheduled Completion Date
	Total Small Business Sub-contractor(s)/Sub-consultant(s)			$	$	$		
	Total Non-Small Business Sub-contractor(s)/Sub-consultant(s)			$	$	$		
	Total Sub-contractor(s)/Sub-consultant(s)			$	$	$		

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INSTRUCTIONS

1. Name of Project
2. Project Number – (If applicable)
3. Application Number – from AIA document G702
4. Application Date is same date as on draw application
5. Reporting Period – from AIA document G702 "From: To:"
6. SBE Goal as set by the prime contractor for this project as applicable
7. Scheduled Completion date for your project per the approved contract or approved change order

8. – 10. Business name of prime contractor – phone & fax

11. Prime contractor mailing address

12.-14. Project Manager's name - phone & fax

15. Amount of contract including original contract amount, change orders and approved alternatives
16. The total of this draw or invoice as authorized on the AIA document G702
17. Percentage of project completed to this date by SBE Sub-contractor/Sub-consultant (Total SBE from Box 26 divided by Box 15)
18. The total amount invoiced on this project to date
19. Total percentage of project completed to date
20. Federal Identification Number
21. Business name of Sub-contractor / Sub-consultant
22. Sub-contractor's / sub-consultant's SBE Certification Designation as applicable (SBE=Small Business Enterprise; N=Non-Small Business Enterprise)
23. Brief description of work each sub will perform. (Roofing, HVAC, trash removal, consulting, etc)
24. List project value total contracted with each sub-contractor / sub-consultant
25. This month's draw amount for each sub-contractor/ sub-consultant
26. To date total billed to each sub-contractor / sub-consultant. The total amount summation must equal the % value listed in box number 17
27. Start date for each sub-contractor / sub-consultant contract
28. Scheduled completion date for each sub-contractor / sub-consultant contract

NOTE:

1. **This form must be submitted with every pay application**
2. **You must submit the partial release of liens with the pay application**
3. **You must have a copy of the SBE certification for <u>every</u> certified SBE sub-contractor/ sub-consultant on the job**
4. **If no SBE for reporting period is required, check the box indicating: "Note: SBE reporting for this pay period not applicable"**
5. **<u>This form must be notarized for each pay application or invoice submitted. The pay application can not be processed without this required certification</u>**

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FORT BEND INDEPENDENT SCHOOL DISTRICT

SUB-CONTRACTORS/SUB-CONSULTANTS/SUPPLIERS PAYMENT CERTIFICATION FORM

Instructions:
1. This form shall be completed and signed by an officer of the Sub-contractor's/Sub-consultant's company for each payment received from the Prime Contractor and shall be returned to the Prime Contractor for its submission to FBISD.
2. The Prime Contractor shall attach this completed form to each application for payment submitted to FBISD.

PROJECT NO./TITLE: _____

NAME OF SUB-CONTRACTOR: _____

ADDRESS: _____

I hereby certify that the above firm has received payment on _____ from _____
(Date) **(Prime Contractor)**

in the amount of $_____ as full payment of our Invoice No. _____ dated _____

for work performed during _____ under Contract/Project No. _____
(Enter Time Period)

Signature: _____

Name (Print or Type): _____

Title: _____

Date: _____

Telephone: _____

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SECTION 02 42 13.10 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Demolition of portions of existing buildings, site structures, and paving indicated on the Drawings and as required to accommodate new construction.
2. ~~Removal and protection~~ **Preparation, temporary removal, protection, storage and return** ~~of~~ existing **furniture,** fixtures, materials, and equipment items.

B. Related Sections:
1. Cutting concrete floors and masonry walls for piping, ducts, and conduits is included with the work of the respective fire suppression, plumbing, mechanical and electrical specification sections in Divisions 21, 22, 23, 26, 27, and 28.
2. Cutting holes in roof deck for installation of new rooftop mechanical equipment is provided under Division 23.
3. Remodeling construction work and patching are included within the respective sections of technical specifications, including removal of materials for reuse and incorporation into remodeling or new construction.
4. Relocation of pipes, conduits, ducts, and other mechanical and electrical work is provided under their respective Sections.

1.2 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or recycled.

B. Remove and Salvage: Detach items from existing construction and deliver them to Owner.

C. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or recycled.

1.3 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
1. Schedule indicating proposed sequence of operations for selective demolition work to Owner's Representative for review prior to start of work. Include coordination for shutoff, capping, and continuation of utility services as required, together with details for dust and noise control protection.
a. Provide detailed sequence of demolition and removal work to ensure uninterrupted progress of Owner's on-site operations.
b. Coordinate with Owner's continuing occupation of portions of existing building and with Owner's partial occupancy of completed new addition.
2. Photographs of existing conditions of structure surfaces, equipment, and adjacent improvements that might be misconstrued as damage related to removal operations. Deliver copies of digital files to the Owner and Architect prior to start of work.

1.4 JOB CONDITIONS

A. Occupancy: Owner may occupy portions of the building immediately adjacent to areas of selective demolition. Conduct selective demolition work in manner that will minimize need for disruption of Owner's normal operations. Provide minimum of 72 hours advance notice to Owner of demolition activities that will affect Owner's normal operations.

B. Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.

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C. Conditions existing at time of inspection for bidding purposes will be maintained by Owner insofar as practicable. However, minor variations within structure may occur by Owner's removal and salvage operations prior to start of selective demolition work.

D. Temporary Removal and Storage:

1. Prior to commencing selective demolition activities in any area, the Contractor shall carefully and temporarily remove all existing furniture, fixtures, materials, and equipment designated to remain that may be affected by the Work. The Contractor shall coordinate with the Owner to identify all such items.

2. The Contractor shall furnish all necessary new packing boxes, containers, and protective materials. Contents shall be packed separately for each room or area of origin. Each box, container, or protected item shall be clearly and legibly labeled to identify the room from which it was removed and provide a general description of its contents.

3. Contractor shall relocate and store all protected items in a secure, on-site storage area designated by the Owner. Protect stored items from damage, dust, moisture, and theft for the duration of the Work

4. Upon completion of the Work in each area and acceptance by the Owner's Representative, the Contractor shall carefully reinstall all removed items to their original locations, restored to their pre-construction condition, to the satisfaction of the Owner.

E. Partial Demolition and Removal: Owner maintains first right of salvage. Items indicated to be removed but of salvageable value to Contractor, and not required to be salvaged for Owner, may be removed from structure as work progresses. Transport salvaged items from site as they are removed.

1. Storage or sale of removed items on site will not be permitted.

F. Protections: Provide temporary barricades and other forms of protection to protect Owner's personnel and general public from injury due to selective demolition work.

1. Provide protective measures as required to provide free and safe passage of Owner's personnel and general public to occupied portions of building.
2. Erect temporary covered passageways as required by authorities having jurisdiction.
3. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of structure or element to be demolished and adjacent facilities or work to remain.
4. Protect from damage existing finish work that is to remain in place and becomes exposed during demolition operations.
5. Protect floors with suitable coverings when necessary.
6. Construct temporary insulated dustproof partitions where required to separate areas where noisy or extensive dirt or dust operations are performed. Equip partitions with dustproof doors and security locks.
7. Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces and installation of new construction to ensure that no water leakage or damage occurs to structure or interior areas of existing building.
8. Remove protections at completion of work.

G. Damages: Promptly repair damages caused to adjacent facilities by demolition work.

H. Traffic: Conduct selective demolition operations and debris removal to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.

1. Do not close, block, or otherwise obstruct streets, walks, or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

I. Flame Cutting: Do not use cutting torches for removal until work area is cleared of

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flammable materials. At concealed spaces, such as interior of ducts and pipe spaces, verify condition of hidden space before starting flame-cutting operations. Maintain portable fire suppression devices during flame-cutting operations.

J. Explosives: Use of explosives will not be permitted.

K. Utility Services: Maintain existing utilities indicated to remain in service and protect them against damage during demolition operations.
   1. Do not interrupt utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.
   2. Maintain fire protection services during selective demolition operations.

L. Environmental Controls: Use water sprinkling, temporary enclosures, and other methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

M. Use particular care when removing existing tennis court slabs which have post-tensioned cables under high tension. It is advised that an independent engineering consultant be consulted by the Contractor to examine existing court prior to beginning work, and to provide safety preparations in demolition of post-tensioned courts to ensure safe removal procedures.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 PREPARATION

A. General: Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of areas to be demolished and adjacent facilities to remain.
   1. Cease operations and notify Owner's Representative immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.

B. Cover and protect furniture, equipment, and fixtures from soiling or damage when demolition work is performed in areas where such items have not been removed.

C. Erect and maintain dust-proof partitions and closures as required to prevent spread of dust or fumes to occupied portions of the building.
   1. Where selective demolition occurs immediately adjacent to occupied portions of the building, construct dust-proof partitions of minimum 4-inch studs, 5/8-inch drywall (joints taped) on occupied side, 1/2-inch fire-retardant plywood on demolition side. Fill partition cavity with sound-deadening insulation.
   2. Provide weatherproof closures for exterior openings resulting from demolition work.

D. Locate, identify, stub off, and disconnect utility services that are not indicated to remain.
   1. Provide bypass connections as necessary to maintain continuity of service to occupied areas of building. Provide minimum of 72 hours advance notice to Owner if shutdown of service is necessary during changeover.

3.2 DEMOLITION

A. General: Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.
   1. Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain using power-driven masonry saw or hand

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tools; do not use power-driven impact tools.

2. Locate demolition equipment throughout structure and promptly remove debris to avoid imposing excessive loads on supporting walls, floors, or framing.
3. Provide services for effective air and water pollution controls as required by local authorities having jurisdiction.
4. Demolish foundation walls to a depth of not less than 12 inches below existing ground surface. Demolish and remove below-grade wood or metal construction. Break up below-grade concrete slabs.
5. For interior slabs on grade, use removal methods that will not crack or structurally disturb adjacent slabs or partitions. Use power saw where possible.
6. Completely fill below-grade areas and voids resulting from demolition work. Provide fill consisting of approved earth, gravel, or sand, free of trash and debris, stones over 6 inches in diameter, roots, or other organic matter.
7. Completely remove any indicated slabs-on-grade and related foundations. Where drilled footings are encountered, remove footings to 24” below existing grade, and stake locations.

B. If unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Owner's Representative in written, accurate detail. Pending receipt of directive from Owner's Representative, rearrange selective demolition schedule as necessary to continue overall job progress without undue delay.

3.3 SALVAGED MATERIALS

A. Salvaged Items: Owner maintains first right of salvage. When directed by Architect or Owner, carefully remove indicated items, clean, store, and turn over to Owner and obtain receipt.

3.4 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove from building site debris, rubbish, and other materials resulting from demolition operations. Transport and legally dispose off site.

B. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.

C. Burning of removed materials is not permitted on project site.

3.5 CLEANUP AND REPAIR

A. General: Upon completion of demolition work, remove tools, equipment, and demolished materials from site. Remove protections and leave interior areas broom clean.

B. Repair demolition performed in excess of that required. Return elements of construction and surfaces to remain to condition existing prior to start operations. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION

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SECTION 04 20 00 - UNIT MASONRY ASSEMBLIES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes:
1. Face brick with weeps and inserts.
2. Concrete masonry units.
3. Masonry joint reinforcement.
4. Ties and anchors.
5. Embedded flashing.
6. Miscellaneous masonry accessories.

B. Related Sections:
1. Section 03 20 00 – Concrete Reinforcement.
2. Section 04 05 03 - Masonry Mortaring and Grouting: Mortar and grout.
3. Section 04 29 00 – Reinforced Unit Masonry.
4. Section 07 27 26 – Fluid-Applied Membrane Air Barrier.
5. Section 07 90 00 - Joint Protection: Rod and sealant at control and expansion joints.

1.2 REFERENCES

A. American Concrete Institute:
1. ACI 530 - Building Code Requirements for Masonry Structures.
2. ACI 530.1 - Specifications for Masonry Structures.

B. ASTM International:
1. ASTM A153/A153M - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
2. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units.
3. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

C. National Fire Protection Association:
1. NFPA 255 - Standard Method of Test of Surface Burning Characteristics of Building Materials.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal requirements.

B. Product Data:
1. Submit data for concrete masonry units, fabricated wire reinforcement, anchors, and other accessories.
2. Submit data for cleaning solutions, including detailed description of methods, materials, equipment and site cleanup procedures to be used. Provide with letters of approval from cleaning material manufacturers regarding the compatibility of proposed use of products together for cleaning purposes.

C. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

D. Shop Drawings:
1. Submit shop drawings for fabrication, bending, and placement of reinforcement bars and for steel templates for layout of dowels for masonry columns and pilasters. Comply with ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures". Show bar schedules, diagrams of bent bars, lateral ties and other arrangements and assemblies as required for fabrication and placement of reinforcement for unit masonry work.

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1.4 QUALITY ASSURANCE

A. Perform Work in accordance with ACI 530 Building Code Requirements for Masonry Structures and ACI 530.1 Specification for Masonry Structures.

B. Fire Rated Wall Construction: Match ratings of any existing walls receiving patching or replacement.
   1. Tested Rating: Determined in accordance with ASTM E119.

1.5 QUALIFICATIONS

A. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

1.6 MOCKUP

A. Section 01 40 00 - Quality Requirements: Mockup requirements.

B. Construct cavity masonry wall mockup, 8 feet long by 8 feet high, including masonry, mortar and accessories, structural backup, flashings, wall insulation, and weeps.
   1. Structural backup wall to be same as building designed backup, whether CMU, steel studs, or other. Verify with Architect where building design utilizes more than one type of backup.
   2. Include a sealant-filled control joint.
   3. Omit masonry above flashing to leave a 12-inch length of the flashing exposed to view.
   4. Clean face of mockup with masonry cleaner using methods anticipated for the Work.

1.7 PRE-INSTALLATION MEETINGS

A. Section 01 81 19 – Project Meetings: Pre-installation meeting.

B. Convene minimum one week prior to commencing work of this section.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.

B. Accept masonry units and accessories on site. Inspect for damage.

1.9 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements.

B. Cold Weather Requirements: In accordance with ACI 530.1 when ambient temperature or temperature of masonry units is less than 40 degrees F.

C. Hot Weather Requirements: In accordance with ACI 530.1 when ambient temperature is greater than 100 degrees F or ambient temperature is greater than 90 degrees F with wind velocity greater than 8 mph.

D. Bracing of Work in Progress:
   1. Where masonry erection may be exposed to high winds, installation shall be adequately braced until masonry construction has attained sufficient strength to resist wind forces.
   2. Shores and forms shall not be removed until masonry construction has attained sufficient strength to support its own weight and all other construction or environmental loads.

1.10 COORDINATION

A. Section 01 31 13 – Project Coordination: Coordination and project conditions.

B. Coordinate work with work of other trades built into or adjoining masonry work.

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PART 2 PRODUCTS

2.1 MASONRY MATERIALS

A. Hollow Load Bearing Concrete Masonry Units (CMU): ASTM C90, lightweight.
1. Size: Nominal modular size of 16 inches long x 8 inches high x thickness indicated.
2. Furnish special units for bond beams and lintels as noted on structural drawings.
3. Furnish bullnose corners at units exposed to interior of building.

B. Face Brick: ASTM C652, Grade SW, Type HBS, HBX, or HBA in accordance with the particular units selected for use, as indicated on Drawings.
1. Size: Modular Size **and King Size** as indicated on the drawings.
2. Manufacturer: As distributed locally by Upchurch-~~**Kimbrow**~~ **Kimbrough**, or approved equivalent as distributed locally by Acme.
3. Furnish special shaped units where indicated on Drawings, and for corners other than 90 degrees, window sills, outside corners of soldier courses, and other locations to ensure against exposed cores or unfinished faces or ends.

C. Glazed Brick: ASTM C126, Grade S, Type I (single-faced units); in accordance with the particular units selected for use, as indicated on Drawings.
1. **Size: As indicated on the drawings.**
2. **Manufacturer: As distributed locally by Upchurch Kimbrough, or approved equivalent as distributed locally by Acme.**
3. **Furnish special shaped units where indicated on Drawings, and for corners other than 90 degrees, window sills, outside corners of soldier courses, and other locations to ensure against exposed cores or unfinished faces or ends.**

D. Mortar and Grout: As specified in Section 04 05 03 and as noted on Structural Drawings.

2.2 ANCHORS, TIES AND REINFORCEMENT

A. Manufacturers:
1. AA Wire Products
2. Heckman Building Products, www.heckmannbuildingprods.com
3. Hohmann & Barnard (Dur-O-Wall), www.h-b.com
4. Masonry Reinforcing Corp. of America (Wire-Bond)
5. Substitutions: Section 01 25 00 – Substitution Procedures.

B. Single Wythe Joint Reinforcement: ASTM A951; ladder type; steel; 9 gage side rods and cross ties; hot dip galvanized

C. Strap Anchors: Bent steel, 1-1/2 inches wide x 24 inches long x 1/4 inch thick, with ends turned up not less than 2 inches; ASTM A153/A153M hot dip galvanized.

D. Reinforcing Steel: Type specified in Section 03 20 00.

E. Anchor Bolts: ASTM A307; Grade A; J-shaped or L-shaped; complete with flat washers and heavy hex nuts; hot-dipped galvanized finish, ASTM A153/A153M.

F. Veneer Ties for CMU Backup Walls: ASTM A82; ladder type joint reinforcement with adjustable eye and pintle type wire ties; ASTM A153/A153M hot dip galvanized.
1. Tie Size: 0.1875 inch diameter wire, length as required to extend to within 1 inch of veneer face.
2. Tie Shape: Rectangular
3. Basis of Design: Hohmann & Barnard, #270 Ladder Eye-Wire.

G. Veneer Ties for Grade Beams and Concrete Backup Walls: Zinc-alloy barrel section with flanged head and eye, fastened with corrosion-resistant, self-drilling screw. Eye designed to receive tie and to serve as head for drilling fastener into concrete. Provide barrel length to suit cavity wall insulation thickness, allowing screw to seat directly against the concrete wall with flanged head covering hole in insulation.

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1. Tie Size: 0.1875 inch diameter wire, length as required to extend to within 1 inch of veneer face.
2. Tie Shape: Triangular
3. Basis of Design: Heckman Building Products, Pos-i-Tie.

H. Dovetail Anchors: Bent steel strap formed from 0.1046 inch thick steel, with 0.1875 inch diameter triangular-shaped wire tie sized to extend within 1 inch of masonry face; ASTM A153/A153M hot dip galvanized.

2.3 EMBEDDED FLASHING MATERIALS

A. Stainless Steel: ASTM A240, Type 304, soft temper; 0.016 inch thick; smooth finish.

B. Sawtooth Metal Flashing: 26 ga. Type 304 stainless steel
1. Basis of Design: Hohmann & Barnard MFL-STF

C. Asphalt-Coated Copper Flashing: 5 oz/sq ft rolled sheet copper coated with flexible asphalt.
1. Manufacturers:
a. Cop-A-Cote; AFCO Products, Inc., www.afcoproducts.com
b. Type ACC-Asphalt Bituminous Coated; Phoenix Building Products.
c. Coated Copper Flashing; Sandell Manufacturing Co., Inc., www.sandellmfg.com
d. Substitutions: Section 01 60 00 - Product Requirements.

D. Rubberized Asphalt Flashing: Composite flashing sheet consisting of self-adhesive rubberized asphalt compound bonded to a high-density cross-laminated polyethylene film; overall thickness of 0.030 inch.
1. Do not install rubberized asphalt flashing adjacent to or in contact with flexible vinyl or PVC products.
2. Manufacturers:
a. Perm-A-Barrier Wall Flashing; W. R. Grace & Co., www.grace.com
b. Vycor V-40; W. R. Grace & Co., www.grace.com
c. Polyguard 400; Polyguard Products, Inc., www.polyguardproducts.com
d. Cloaked Flashing System, Hyload Inc., www.HyloadFlashing.com
e. Substitutions: Section 01 60 00 - Product Requirements.

E. Lap Sealant: Type specified in Section 07 90 00.

2.4 ACCESSORIES

A. Joint Filler: ASTM D1056, Grade 2A1, closed cell neoprene; oversized 50 percent to joint width; self-expanding.

B. Cavity Wall Insulation: Extruded polystyrene board specified in Section 07 21 13.

C. Cavity Drainage Material: Open polyethylene mesh thickness required to fill cavity space, and shaped to ensure moisture drainage to cavity weeps.
1. Manufacturers:
a. Mortar Break; Advanced Building Products Inc., www.advancedflashing.com
b. Mortar Net; Mortar Net USA, Ltd., www.mortarnet.com
c. CavClear Masonry Mat, Archovations, Inc., www.cavclear.com
d. Substitutions: Section 01 25 00 – Substitution Procedures.

D. Weeps and Inserts:
1. Open Head Joints: Full head height for face brick, 3 inches high for CMU. Space at 20” or 24” O.C depending on brick size. All weep joints to receive inserts.
2. Weep Inserts: Install stainless steel inserts at each weep. Inserts as manufactured by Weepa, www.weepa.com or approved equivalent by Rid-O-Mice.

E. Cleaning Solutions:

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1. Job-Mixed Detergent Solution: Solution of 1/2-cup (0.14-L) dry measure tetrasodium polyphosphate and 1/2-cup (0.14-L) dry measure laundry detergent dissolved in 1 gal. (4 L) of water.
2. Proprietary Acidic Cleaner: Standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry and pigmented mortar surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.
   a. Manufacturers:
      1) Diedrich Technologies, Inc.
      2) EaCo Chem, Inc.
      3) ProSoCo, Inc.
      4) AHI Supply
      5) Substitutions: Section 01 25 00 – Substitution Procedures.

F. Steel Lintels: Size as indicated on Drawings, hot-dip galvanized.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 31 13 – Project Coordination: coordination and project conditions.

B. Verify field conditions are acceptable and are ready to receive work.

C. Verify items provided by other sections of work are properly sized and located.

D. Verify built-in items are in proper location, and ready for roughing into masonry work.

3.2 PREPARATION

A. Direct and coordinate placement of metal anchors supplied to other sections.

B. Furnish temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent support.

3.3 INSTALLATION

A. Establish lines, levels, and coursing indicated. Protect from displacement.

B. Maintain masonry courses to uniform dimension. Form bed and head joints of uniform thickness.

C. Lay exposed masonry to match existing bond pattern(s):
1. Coursing of Concrete Masonry Units:
   a. Bond: Running or match existing.
   b. Coursing: One unit and one mortar joint to equal 8 inches.
   c. Mortar Joints: Concave.

D. Placing and Bonding:
1. Lay solid masonry units in full bed of mortar, with full head joints.
2. Lay hollow masonry units with face shell bedding on head and bed joints.
   a. Bed webs in mortar in starting course on footings and in all courses of piers, columns, and pilasters, and where adjacent to cells or cavities to be filled with grout.
   b. For starting course on footings where cells are not grouted, spread out full mortar bed, including areas under cells.
3. Buttering corners of joints or excessive furrowing of mortar joints are not permitted.
4. Remove excess mortar as work progresses.
5. Interlock intersections and external corners.
6. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment is required, remove mortar and replace.

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7. Perform job site cutting of masonry units with motor-driven saws to assure straight, clean, un-chipped edges. Prevent broken masonry unit corners or edges. Where possible, use full-size units without cutting.
8. Install cut units with cut surfaces and edges concealed.
9. Select and arrange exposed units to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.
10. Cut mortar joints flush where wall tile is scheduled or bitumen dampproofing is applied.
11. Isolate masonry from vertical structural framing members.
12. At full-height walls, leave a 1” space between top of masonry and floor or roof structure above. Brace masonry from structure with 16- gauge galvanized steel angles having 4” equal legs and 8” lengths mechanically anchored to the floor or roof structure and spaced not more than 4’-0” on center.
13. Isolate top of masonry from horizontal structural framing members and slabs or decks with compressible joint filler.

E. Stain Prevention: As work progresses, 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 coverings spread 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.

3.4 JOINT REINFORCEMENT AND ANCHORAGE

A. Install horizontal joint reinforcement in CMU walls 16 inches oc.

B. Place joint reinforcement in first and second horizontal joints above and below openings greater than 12 inches wide. Extend minimum 16 inches each side of opening.

C. Place joint reinforcement continuous in first and second joints below tops of walls.

D. Lap joint reinforcement ends minimum 6 inches.

E. Cut or interrupt joint reinforcing at control and expansion joints.

F. At corners, install horizontal joint reinforcement with prefabricated “L” intersections.

G. At intersecting and abutting walls, unless vertical expansion or control joints are shown at juncture, install horizontal joint reinforcement with prefabricated “T” intersections.

H. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.

I. Install anchors attached to concrete and steel structural members:
1. Leave an open space not less than 1 inch in width between back of masonry and face of structural member. Keep open space free of mortar or other rigid materials.
2. Install anchors at maximum 16 inches o.c. vertically and horizontally.

J. Lintels:
1. Install reinforced unit masonry lintels over openings more than 24 inches wide in CMU walls.
a. Reinforce lintels as indicated on Drawings.
b. Do not splice reinforcing bars.
c. Support and secure reinforcing bars from displacement.
d. Place and consolidate grout fill without displacing reinforcing.
e. Allow masonry lintels to attain specified strength before removing temporary

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supports.

2. Maintain minimum 8 inch bearing on each side of opening.

K. Grouted Components:
1. Reinforce bond beams and pilasters as indicated on Drawings.
2. Splice reinforcement in accordance with Section 03 20 00.
3. Support and secure reinforcing bars from displacement.
4. Place and consolidate grout fill without displacing reinforcing.
5. At bearing locations, fill masonry cores with grout for minimum 12 inches both sides of opening.
6. Fill cores in hollow concrete masonry units with grout 24 inches under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.

L. Reinforced Masonry:
1. Lay masonry units with core cells vertically aligned and cavities between wythes clear of mortar and unobstructed.
2. Place reinforcement bars as indicated on Drawings.
3. Splice reinforcement in accordance with Section 03 20 00.
4. Support and secure reinforcement from displacement.
5. Place and consolidate grout fill without displacing reinforcing.
6. Place grout in accordance with ACI 530.1 Specification for Masonry Structures.

M. Control And Expansion Joints:
1. Install control and expansion joints at the following maximum spacings, unless otherwise indicated on Drawings:
   a. Interior Partitions: 25'-0" o.c. horizontally.
   b. Openings in Interior Walls: At CMU lintels, provide control joints in alignment with the outside ends of the lintel continuing to the bed joint and then with horizontal bond breaks at the end bearing.
   c. At changes in wall height.
2. Do not continue horizontal joint reinforcement through control and expansion joints.
3. Form control joint with sheet building paper bond breaker fitted to one side of hollow contour end of block unit. Fill resultant core with grout fill. Rake joint at exposed unit faces for placement of backer rod and sealant.
4. Form expansion joint by omitting mortar and cutting unit to form open joint.

N. Built-In Work:
1. As work progresses, install built-in door and window frames, wood nailing strips, anchor bolts, plates, and other items to be built-in the work and furnished by other sections.
2. Install built-in items plumb and level.
3. Bed anchors of metal door and window frames in adjacent mortar joints. Fill frame voids solid with grout or mortar. Fill adjacent masonry cores with grout minimum 12 inches from framed openings.
4. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath in the joint below and rod mortar or grout into core.
5. Do not build in materials subject to deterioration.

O. Cutting and Fitting:
1. Cut and fit for chases, pipes, conduit, sleeves, grounds, and other items penetrating masonry. Coordinate with other sections of work to provide correct size, shape, and location.
2. Obtain Architect/Engineer’s approval prior to cutting or fitting masonry work not indicated or where appearance or strength of masonry work may be impaired.

3.5 MASONRY FLASHINGS:

A. Provide concealed flashing in masonry work at or above shelf angles, lintels, ledges and other obstructions to the downward flow of water in the wall so as to divert such water to the exterior.

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B. Form flashings from the following materials:
   1. Exposed flashings: Stainless steel.
   2. Concealed flashings: Asphalt-coated copper or rubberized asphalt, at contractor's option.

C. Prepare masonry surfaces smooth and free from projections which could puncture flashing. Place through-wall flashing on sloping bed of mortar and cover with mortar. Seal penetrations in flashing with mastic before covering with mortar.

D. Extend flashings horizontally through exterior face of masonry and trim flush at base of wall.

E. Turn flashing up minimum 8-inches and bed into mortar joint of CMU backup wall or seal to sheathing over CFMF stud backup wall.

F. Lap end joints minimum 6-inches and seal watertight.

G. Extend flashing the full length of lintels and shelf angles and minimum of 4" into masonry each end; turn up ends not less than 2" to form end dams as recommended by BIA and illustrated in BIA Technical Note 7, Figure 21, current edition.

H. Turn flashing, fold, and seal at corners, bends, and interruptions.

I. Lintels:
   1. Install loose steel lintels over openings more than 12 inches wide in brick walls.
   2. Install reinforced unit masonry lintels over openings more than 24 inches wide in CMU walls.
      a. Reinforce lintels as indicated on Drawings.
      b. Do not splice reinforcing bars.
      c. Support and secure reinforcing bars from displacement.
      d. Place and consolidate grout fill without displacing reinforcing.
      e. Allow masonry lintels to attain specified strength before removing temporary supports.
   3. Maintain minimum 8-inch bearing on each side of opening.

J. Grouted Components:
   1. Reinforce bond beams and pilasters as indicated on Drawings.
   2. Splice reinforcement in accordance with Section 03 20 00.
   3. Support and secure reinforcing bars from displacement.
   4. Place and consolidate grout fill without displacing reinforcing.
   5. At bearing locations, fill masonry cores with grout for minimum 12 inches both sides of opening.
   6. Fill cores in hollow concrete masonry units with grout 24 inches under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.

K. Reinforced Masonry:
   1. Lay masonry units with core cells vertically aligned and cavities between wythes clear of mortar and unobstructed.
   2. Place reinforcement bars as indicated on Drawings.
   3. Splice reinforcement in accordance with Section 03 20 00.
   4. Support and secure reinforcement from displacement.
   5. Place and consolidate grout fill without displacing reinforcing.
   6. Place grout in accordance with ACI 530.1 Specification for Masonry Structures.

L. Control and Expansion Joints:
   1. Install control and expansion joints at the following maximum spacings, unless otherwise indicated on Drawings:
      a. Interior Partitions: 25'-0" o.c. horizontally.
      b. Exterior Cavity Walls: 20'-0" o.c. horizontally.
      c. Steel Lintels: Provide horizontal bond breaks as detailed on Drawings at the end bearing to allow for thermal expansion and contraction.
      d. Openings in Exterior and Interior Walls: At masonry with steel lintels, provide

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expansion joints on each side of the opening continuing to the top and bottom of the brick wythe and as specified above. At CMU lintels, provide control joints in alignment with the outside ends of the lintel continuing to the bed joint and then with horizontal bond breaks at the end bearing.

e. Veneer Construction: Provide horizontal pressure relieving joints beneath shelf angles as recommended by BIA Technical Note 28B current edition.

f. At changes in wall height.

2. Do not continue horizontal joint reinforcement through control and expansion joints.
3. Form control joint with sheet building paper bond breaker fitted to one side of hollow contour end of block unit. Fill resultant core with grout fill. Rake joint at exposed unit faces for placement of backer rod and sealant.
4. Form expansion joint by omitting mortar and cutting unit to form open joint.

M. Built-In Work:
1. As work progresses, install built-in door and window frames, wood nailing strips, anchor bolts, plates, and other items to be built-in the work and furnished by other sections.
2. Install built-in items plumb and level.
3. Bed anchors of metal door and window frames in adjacent mortar joints. Fill frame voids solid with grout or mortar. Fill adjacent masonry cores with grout minimum 12 inches from framed openings.
4. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath in the joint below and rod mortar or grout into core.
5. Do not build in materials subject to deterioration.

N. Cutting and Fitting:
1. Cut and fit for chases, pipes, conduit, sleeves, grounds, and other items penetrating masonry. Coordinate with other sections of work to provide correct size, shape, and location.
2. Obtain Architect/Engineer’s approval prior to cutting or fitting masonry work not indicated or where appearance or strength of masonry work may be impaired.

3.6 ERECTION TOLERANCES

A. Section 01 40 00 - Quality Requirements: Tolerances.

B. Maximum Variation From Alignment of Columns and Pilasters: 1/4 inch.

C. Maximum Variation From Unit to Adjacent Unit: 1/16 inch.

D. Maximum Variation from Plane of Wall: 1/4 inch in 10 ft and 1/2 inch in 20 ft or more.

E. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.

F. Maximum Variation from Level Coursing: 1/8 inch in 3 ft; 1/4 inch in 10 ft; 1/2 inch in 30 ft.

G. Maximum Variation of Joint Thickness: 1/8 inch in 3 ft.

H. Maximum Variation from Cross Sectional Thickness of Walls: 1/4 inch.

I. Maximum Variation for Steel Reinforcement:
1. Install reinforcement within the tolerances specified in ACI 530.1 for foundation walls.
2. Plus or minus 1/2 inch when distance from centerline of steel to opposite face of masonry is 8 inches or less.
3. Plus or minus 1 inch when distance is between 8 and 24 inches.
4. Plus or minus 1-1/4 inch when distance is greater than 24 inches.
5. Plus or minus 2 inches from location along face of wall.

3.7 CLEANING

A. Section 01 77 00 – Closeout Procedures: Final cleaning.

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B. Remove excess mortar and mortar smears as work progresses.

C. Replace defective mortar. Match adjacent work.

D. Clean soiled surfaces with cleaning solution.

E. Use non-metallic tools in cleaning operations.

F. 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 non-masonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film or waterproof masking tape.
4. Saturate wall surfaces with water prior to application of cleaners; remove cleaners promptly by rinsing thoroughly with clear water.
5. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2 applicable to type of stain on exposed surfaces.

3.8 DEFECTIVE CONSTRUCTION

A. Correct defects appearing in the finished work for a period of one year after the date of Substantial Completion.

B. Defects shall include, but not be limited to, cracking, separating or color leaching of mortar, cracking, discoloration, or deterioration of masonry units, efflorescence in masonry units or joints.

3.9 PROTECTION OF FINISHED WORK

A. Section 01 77 00 – Closeout Procedures: Requirements for protecting finished Work.

B. Protect exposed external corners subject to damage.

C. Protect masonry and other items built into masonry walls from mortar droppings and staining caused by mortar.

END OF SECTION

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SECTION 07 52 00 - MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 GENERAL

1.1 SUMMARY

A. Section includes: SBS Modified bitumen light-reflecting (“Cool Roof”) membrane roofing installed over insulating concrete roof fill.

B. Related Sections:
1. Section 03 52 16 – Insulating Concrete Roof Fill.
2. Section 07 62 00 - Sheet Metal Flashing and Trim: Metal flashings, counter flashings, fascia and copings.
3. Section 07 71 00 - Roof Specialties.
4. Section 07 72 33 – Roof Hatches.

1.2 REFERENCES

A. ASTM International:
1. ASTM D41 - Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing.
2. ASTM D312 - Standard Specification for Asphalt used in Roofing.
3. ASTM D6163 - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.
4. ASTM D6298 - Standard Specification for Fiberglass Reinforced Styrene-Butadiene-Styrene (SBS) Modified Bituminous Sheet with a Factory Applied Metal Surface.
5. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings.

B. National Roofing Contractors Association:
1. NRCA - The NRCA Roofing and Waterproofing Manual.

C. Underwriters Laboratories Inc.:
1. UL - Fire Resistance Directory.
2. UL 790 - Tests for Fire Resistance of Roof Covering Materials.
3. UL 1256 - Fire Test of Roof Deck Construction.

1.3 SYSTEM DESCRIPTION

A. BASIC COMPONENTS
1. Two-plies SBS modified bituminous membrane set in hot asphalt over base sheet mechanically attached to insulating concrete roof fill.
2. Reflective white finish and foil-faced base flashing.
3. Meet requirements of NRCA Specification Plate: MBS-3-N-M-M.

1.4 PERFORMANCE REQUIREMENTS

A. Wind Uplift: In accordance with ASCE-7 requirements.

B. Roof Surface: Provide finished roofing membrane with minimum total solar reflectance of 0.7 and thermal emittance greater than 0.8 when tested in accordance with the following:
1. Reflectance: Measured in accordance with ASTM C1549-02, ASTM E903, or ASTM E1918.
2. Emittance: Measured in accordance with ASTM C1371, or ASTM E408.

C. Flashings and Fastening: Comply with requirements of Section 07 62 00 - Sheet Metal Flashing and Trim. Provide base flashings, perimeter flashings, detail flashings and

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component materials and installation techniques that comply with requirements and recommendations of the following:

1. ANSI/SPRI ES-1 for Perimeter detail, metal edges and copings, as a minimum design requirement.
2. NRCA Roofing and Waterproofing Manual for construction details and recommendations.
3. SMACNA Architectural Sheet Metal Manual for construction details; latest edition.
4. All sheet metal shall comply as a minimum design requirement.

1.5 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Product Data: Submit data for each product specified, including membrane materials, base flashing materials, asphalt, fasteners, cants and accessories.

C. Samples: Submit two samples of each of the following:
1. 12 x 12 inch samples of each membrane product, including coated membrane.
2. 12 x 12 inch sample of walkway pad.
3. 4 fasteners of each type, length, and finish.

D. Manufacturer's Installation Instructions: Submit manufacturer’s standard installation instructions and details, modified to reflect conditions specific to this installation.

E. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing system.

F. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install specified roofing.

G. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

H. Manufacturer's Field Reports: Indicate procedures followed, and ambient temperatures and wind velocity during application.

1.6 QUALITY ASSURANCE

A. Perform Work in accordance with NRCA Roofing and Waterproofing Manual.

B. Roof Assembly Fire Classification: Class A when tested in accordance with ASTM E108 or UL 790.

C. Furnish materials from a single manufacturer for all roof surfaces.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years’ experience.

B. Applicator: Company specializing in performing Work of this section with minimum three years’ experience and approved by manufacturer.

C. Source Limitations: Obtain components for roofing system from or approved by roofing system manufacturer.

1.8 PRE-INSTALLATION MEETINGS

A. Section 01 30 00 - Administrative Requirements: Pre-installation meetings.

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B. Preliminary Roofing Conference: Before starting roof deck construction, conduct conference at Project site. Meet with the same participants and review the same items listed for the pre-installation conference. In addition, review status of submittals and coordination of work related to roof construction. Notify participants at least 5 working days before conference.

C. Pre-installation Conference: Conduct conference at Project site. Review methods and procedures related to roofing system including, but not limited to, the following:
1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.
2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.

B. Deliver products in manufacturer's original containers, dry, undamaged, seals and labels intact.

C. Store products in weather protected environment, clear of ground and moisture.

D. Stand roll materials on end.

1.10 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements.

B. Do not apply roofing membrane during inclement weather without proper weather protection. Proceed with installation only when current and forecasted weather conditions permit roofing system to be installed in accordance with manufacturer's instructions and warranty requirements.

C. Do not apply roofing membrane to damp or frozen deck surface.

D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day.

1.11 COORDINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

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B. Coordinate Work with installing associated metal flashings as work of this section proceeds.

1.12 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements: Product warranties and product bonds.

B. Manufacturer's No Dollar Limit (NDL) warranty, in which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period. Failure includes roof leaks.
1. Special warranty includes roofing membrane, base flashings, roofing membrane accessories, fasteners, and walkway products and other components of roofing system.
2. Warranty Period: 20-years from date of Substantial Completion.

C. Installer's Warranty: Submit Roofing Installer's Warranty, on warranty form at end of this Section: signed by Installer, covering all Work of this Section including all roofing system components such as roofing membrane; base flashing; metal flashing including counter flashing, roof edging and coping; fasteners; adhesives; and walkway products, for the following warranty period(s):
1. Warranty Period: Five-years from date of Substantial Completion of Project.

PART 2 PRODUCTS

2.1 MODIFIED BITUMINOUS ROOFING

A. Manufacturers:
1. Johns Manville; www.jm.com
2. Siplast; www.siplast.com
3. Soprema; www.soprema.com.
4. Elevate by Holcim; www.holcimelevate.com/us-en
5. Substitutions: No substitutions.

2.2 COMPONENTS

A. Nailed Base Sheet: ASTM D4601 Type II, non-porous, glass fiber-reinforced base sheet, 45 mils thick.

B. Base Ply Membrane: ASTM D6163; Type I, Grade S, styrene-butadiene-styrene (SBS) modified bituminous sheet, reinforced with glass fiber; smooth surfaced; 120 mils thick. Soprema "Elastophene" sanded.

C. Finish Ply Membrane: ASTM D6163; Type I, Grade G, SBS modified bituminous sheet, reinforced with glass fiber; reflective white ceramic granules; minimum 155 mils thick. Soprema "Elastophene" FRGR. Contractor option for installation. System can be torched or fully adhered.

D. Stripping Ply: Same as modified bitumen base ply.

E. Modified Bitumen Flashing Sheet: ASTM D6298; SBS modified bituminous sheet, reinforced with glass fiber; channel-embossed aluminum foil surfaced; 150 mils thick. Soprema "Sopralast 50 TV Alu". "Cool Roof" ~~reflective white~~ **highly reflective white** finish **(SG).**

F. Roof Surface: Minimum total solar reflectance of ~~.70~~ **.69** and thermal emittance of.~~75~~ **.91** when tested in accordance with the following:

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1. Reflectance: Measured in accordance with ASTM C1549, ASTM E903, ASTM E1175, or ASTM E1918.
2. Emittance: Measured in accordance with ASTM C835, ASTM C1371, or ASTM E408

G. Roofing Adhesives:
1. Mopping Asphalt: Asphalt that has been certified for full compliance with the requirements for Low Fume Type IV asphalt listed in Table I, ASTM D312. Each container or bulk shipping ticket shall indicate the equiviscous temperature EVT, the finished blowing temperature FBT, and the flash point FP.
a. Trumbull Low Fume asphalt.
b. Equal product as approved by membrane manufacturer.
2. Cold Adhesive - Soprema “FMA”: An asphalt-based adhesive formulated especially for adhering polymer modified asphalt roofing membranes and base plies, UL and FM listed.

H. Counter-flashings: As specified in Section 07 62 00.

2.3 ACCESSORIES

A. Wood Nailers and Structural Cants: Treated wood complying with local area Fire Marshal requirements and Division 6 Section "Rough Carpentry."

B. Ceramic Granules: No. 11 Grade Specification ceramic granules of color matching granule surfacing of the finish ply.

C. Fasteners:
1. Base Sheet Fasteners: Electro zinc coated steel with 2.7 inch diameter rib-reinforced cap and 1.7 inch long rectangular legs designed to spread when full driven into the lightweight insulating concrete. Meet FM Standard 4470 requirements for corrosion resistance. Olympic Fasteners or equivalent approved by the membrane manufacturer.
2. Flashing Nails: G-90 galvanized or non-ferrous type. Type 304 stainless steel for ACQ treated lumber fastening. Sizes as required for the particular application. Minimum 11-gauge with 3/8” diameter head.

D. Sealants: Single component, high performance elastomeric sealant conforming to ASTM D232 or ASTM C920 requirements, and as approved by membrane manufacturer.

E. Traffic Pads: Bituminous composition, granule finish. Soprema “Soprawalk”.
1. Walk pads shall have contrasting granule color from membrane surfacing.

F. Insulation Cant Strips: ASTM C 728, perlite insulation board.

G. Bituminous Cutback Materials:
1. Primer: A high flash, quick drying, asphalt solvent blend. Meets or exceeds ATM D41 requirements.
2. Plastic Cement: Asphalt cutback mastic, reinforced with non-asbestos fibers, used as a base for setting metal flanges and conforming to ASTM D4586, Type II requirements.
3. Flashing Cement: heavy bodied all weather towel grade mastic, used as a base for laying-up cold process flashing membrane where fast setting adhesives are required.

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PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Verify surfaces and site conditions are ready to receive work.

C. Verify deck is clean and smooth, free of depressions, waves, or projections, and properly sloped to drains valleys, or eaves.

D. Verify deck surfaces are dry and free of snow or ice. Confirm that deck moisture content is acceptable to roofing manufacturer.
1. Foaming Test: Heat one pint of specified bitumen to 350 degrees F and pour on surface to receive roofing membrane. If bitumen foams, deck is too wet to roof.
2. Stripability Test: Cool bitumen poured on deck to ambient temperature and strip from surface. If any portion strips cleanly from deck, surface is too wet to roof.
3. Retest for dryness after any rain.

E. Verify roof openings, curbs, pipes, conduit, sleeves, ducts, and vents through roof are solidly set; and wood cants, nailers, and sheathing are in place.

3.2 PREPARATION

A. Clean deck of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing manufacturer's written instructions. Remove sharp projections.

B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

3.3 INSTALLATION, GENERAL

A. Install roofing system in accordance with roofing system manufacturer's written instructions and NRCA recommendations.

B. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.

C. Where roof slope exceeds 1/2 inch per 12 inches (1:24), install roofing membrane sheets parallel with slope.

D. Cooperate with testing and inspecting agencies engaged or required to perform services for installing roofing system.

E. Coordinate installing roofing system so components of the roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
1. Provide tie-offs at end of each day's work to cover exposed roofing membrane sheets and insulation with a course of coated felt set in roofing cement or hot roofing asphalt with joints and edges sealed.
2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.
3. Remove and discard temporary seals before beginning work on adjoining roofing.

F. Asphalt Heating: Do not raise roofing asphalt temperature above equiviscous temperature range more than one hour before time of application. Do not exceed roofing asphalt manufacturer's recommended temperature limits during roofing asphalt heating. Do not heat roofing asphalt within 25 degrees F of flash point. Discard roofing asphalt

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maintained at a temperature exceeding finished blowing temperature for more than 4 hours.

G. Substrate Joint Penetrations: Prevent roofing asphalt from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.

3.4 CANT STRIPS

A. Fiber Cant Strips: Install and secure preformed 45-degree insulation cant strips at junctures of roofing membrane system with vertical surfaces or angle changes greater than 45 degrees.

B. Use treated wood cant strips where fiber cants are required for structural support of curbs and wood nailers, or where required by the membrane manufacturer.

3.5 MEMBRANE INSTALLATION

A. Base Sheet – Over Insulating Concrete Roof Fill:
1. Beginning at low point of roof, install one ply base sheet over lightweight insulating concrete roof deck, lapping sides a minimum of 3 inches and ends a minimum of 6 inches.
2. Mechanically-fasten base sheet to roof deck in fastening pattern approved by the roofing membrane manufacturer and as required to achieve specified wind uplift rating.

B. Base Membrane Ply: Install one base membrane ply in solid mopping of hot asphalt applied at not less than 425 degrees F, starting at low point of roofing system.
1. Lap sides and ends a minimum of 3 inches. Offset end joints a minimum of 3 feet.
2. Extend base ply over roof edges and down walls a minimum of 4 inches.

C. Finish Membrane Ply: Torch apply or fully adhere one finish membrane ply, starting at low point of roofing system.
1. Lap sides and ends a minimum of 3 inches. Offset end joints a minimum of 3-feet. Stagger laps from base ply laps.

D. Lap and seal edges and ends permanently waterproof.

E. Apply membrane smooth, free from air pockets, wrinkles, or tears. Ensure full bond of membrane to substrate.

F. Mop and seal membrane around base ply roof protrusions and penetrations. Seal around finish ply roof protrusions and penetrations.

G. Provide waterproof cut-off to membrane at end of day's operation. Remove cut-off before resuming roofing.

3.6 FLASHINGS AND ACCESSORIES:

A. Prior to installing final membrane ply, strip in metal flanges of embedded flashings, and reinforce inside corners at parapets, walls, and curbs with base ply membrane.
1. At roof edges, extend stripping a minimum of 4 inches beyond edge of flashing onto roof surface.
2. At parapets and walls, extend stripping a minimum of 4 inches beyond toe of cant onto roof surface and 3 inches above top of cant onto vertical surface.
3. At curbs and penetrations, extend stripping a minimum of 4 inches beyond edge of flashing onto roof surface.

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B. Install base flashing over final membrane ply at roof edges, transitions to vertical surfaces, and at penetrations through roof, and secure to substrates according to roofing system manufacturer's written instructions.
   1. Prime substrates with asphalt primer if required by roofing system manufacturer.
   2. Base Flashing Application: Adhere flashing sheet to substrate in a solid mopping of hot asphalt or roofing cement. Apply asphalt or roofing cement to back of flashing sheet if recommended by roofing system manufacturer.
   3. Extend base flashing up vertical surfaces a minimum of 8 inches above roof surface.
   4. Mechanically fasten top of base flashing securely at terminations and perimeter of roofing.
      a. Seal top termination of base flashing with a strip of glass-fiber fabric set in asphalt roofing cement.

C. Roof Drains: Set 30 x 30 inch metal flashing in bed of asphalt roofing cement on installed base ply membrane. Cover metal flashing with base ply membrane stripping and extend a minimum of 4 inches beyond edge of metal flashing onto field of roofing membrane. Cover with finish ply membrane set in hot asphalt. Clamp roofing membrane, metal flashing, and stripping into roof-drain clamping ring.
   1. Do not set overflow roof drains in sumps. Heights of overflow roof drains shall be established relative to roof plane adjacent to, but outside of, main drain roof sumps.

3.7 TRAFFIC PAD INSTALLATION

A. Traffic Pads: Install traffic pads over roofing membrane in hot asphalt applied at not less than 425 degrees F. Provide open joints at nominal 36” where required to avoid trapping water.

B. Install walk pads at points of roof access, at 36” wide x full length of unit at service sides of all roof mounted equipment requiring periodic maintenance.

C. Install under all pipe supports and in front of all roof top doors and hatches.

D. Seal around perimeter edges of traffic pads in accordance with membrane manufacturer’s recommendations.

3.8 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.

B. Require site attendance of roofing materials manufacturers during installation of the Work.

C. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform roof tests and inspections and to prepare test reports.

D. Test Cuts: Test specimens may be removed to evaluate problems observed during quality-assurance inspections of roofing membrane.
   1. Approximate quantities of components within roofing membrane will be determined according to ASTM D 3617.
   2. Test specimens will be examined for interply voids according to ASTM D 3617 and to comply with criteria established in Appendix 3 of NRCA's "Quality Control Guidelines for the Application of Polymer Modified Bitumen Roofing."

E. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Architect.
   1. Notify Architect or Owner 48 hours in advance of date and time of inspection.

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F. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.

G. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.9 CLEANING

A. Section 01 70 00 - Execution and Closeout Requirements: Final cleaning.

B. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and comply with their instructions.

C. Repair or replace defaced or disfigured finishes caused by work of this section.

3.10 PROTECTION OF INSTALLED CONSTRUCTION

A. Section 01 70 00 - Execution and Closeout Requirements: Protecting installed construction.

B. Protect building surfaces against damage from roofing work.

C. Where traffic must continue over finished roof membrane, protect surfaces.

3.11 ROOFING INSTALLER'S WARRANTY - Installer shall submit warranty prepared using the following format.

A. WHEREAS <Insert name> of <Insert address>, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
1. Owner: <Insert name of Owner.>
2. Address: <Insert address.>
3. Building Name/Type: <Insert information.>
4. Address: <Insert address.>
5. Area of Work: <Insert information.>
6. Acceptance Date: <Insert date.>
7. Warranty Period: <Insert time.>
8. Expiration Date: <Insert date.>

B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,

C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.

D. This Warranty is made subject to the following terms and conditions:
1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
a. lightning;
b. peak gust wind speed exceeding <Insert wind speed> mph;
c. fire;
d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;

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f. vapor condensation on bottom of roofing; and
g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.

2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

IN WITNESS THEREOF, this instrument has been duly executed this <Insert day> day of <Insert month>, <Insert year>.

Authorized Signature: <Insert signature.>
Name: <Insert name.>
Title: <Insert title.>

END OF SECTION

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SECTION 08 41 13 – ALUMINUM STOREFRONT SYSTEMS

PART 1 - GENERAL

A. SUMMARY

A. Section includes:
1. Aluminum-framed storefronts, interior and exterior.
2. ~~Aluminum entrance doors, interior and exterior.~~

B. Related Sections:
1. Section 07 90 00 - Joint Protection: Perimeter sealant at building interface.
2. Section 08 71 00 - Door Hardware.
3. Section 08 80 00 - Glazing.

B. REFERENCES

A. American Architectural Manufacturers Association:
1. AAMA 501 - Methods of Test for Exterior Walls.
2. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
3. AAMA 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections.
4. AAMA CW-10 - Care and Handling of Architectural Aluminum from Shop to Site.
5. AAMA SFM-1 - Aluminum Store Front and Entrance Manual.

B. ASTM International:
1. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
2. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
3. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
4. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
5. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
6. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.

C. SSPC: The Society for Protective Coatings:
1. SSPC Paint 20 - Zinc-Rich Primers (Type I - Inorganic and Type II - Organic).

C. SYSTEM DESCRIPTION

A. Aluminum-framed storefront system includes: tubular aluminum sections; aluminum and glass entrances; shop fabricated, factory finished, with glass and glazing specified in Section 08 80 00 and installed by this Section; related flashings, anchorage and attachment devices.

B. System Assembly: Site assembled.

D. PERFORMANCE REQUIREMENTS

A. System Design: Design and size components to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of wall, including building corners.
1. To design pressure indicated on Drawings, as tested in accordance with ASTM E330.

B. Deflection: Limit mullion deflection to 1/175 for spans under 13’-6” and 1/240 plus 1/4 inch for spans over 13’-6”, with full recovery of glazing materials.

C. System Assembly: Accommodate without damage to components or deterioration of seals, movement within system, movement between system and peripheral construction, dynamic loading and release of loads, deflection of structural support framing.

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D. Air Infiltration: Limit air leakage through assembly to 0.06 cfm/min/sq ft of wall area, measured at reference differential pressure across assembly of 1.57 psf as measured in accordance with AAMA 501.

E. Air and Vapor Seal: Maintain continuous air barrier and vapor retarder throughout assembly, primarily in line with glass.

F. Water Leakage: None, when measured in accordance with AAMA 501 with test pressure difference of 20 percent of design pressure, with minimum differential of 2.86 lbf/sq ft and maximum of 12.00 lbf/sq ft.

G. Thermal Transmittance of Assembly (Excluding Entrances): Maximum U Value of 0.69 Btu/sq ft per hour per deg F when measured in accordance with AAMA 1503.

H. Expansion / Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F over 12 hour period without causing detrimental effect to system components and anchorage.

I. System Internal Drainage: Drain water entering joints, condensation occurring in glazing channels, or migrating moisture occurring within system, to exterior by weep drainage network.

E. SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related Work and expansion and contraction joint location and details.

C. Product Data: Submit component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, door hardware, and internal drainage details.

D. Samples: Submit two samples 12 x 12 inches in size illustrating finished aluminum surface.

E. Design Data: Indicate framing member structural and physical characteristics and dimensional limitations.

F. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

F. QUALITY ASSURANCE

A. Perform Work in accordance with AAMA SFM-1 and AAMA MCWM-1 - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.

B. Manufacturer and Installer: Company specializing in manufacturing aluminum glazing systems with minimum three years’ experience.

G. PRE-INSTALLATION MEETINGS

A. Section 01 81 19 – Project Meetings: Pre-installation meeting.

B. Convene minimum one week prior to commencing work of this section.

H. DELIVERY, STORAGE, AND PROTECTION

A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.

B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings which bond when exposed to sunlight or weather.

I. ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements.

B. Do not install sealants or glazing materials when ambient temperature is less than 40 degrees F during and 48 hours after installation.

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J. WARRANTY

A. Section 01 77 00 – Closeout Procedures: Product warranties and product bonds.

B. Special Assembly Warranty: Written warranty signed by Manufacturer, Contractor, and Installer in which manufacturer agrees to repair or replace components of aluminum-framed systems that do not comply with requirements or that deteriorate as defined in this Section within specified warranty period.
1. Failures include, but are not limited to, the following:
a. Structural failures including, but not limited to, excessive deflection.
b. Noise or vibration caused by thermal movements.
c. Deterioration of metals and other materials beyond normal weathering.
d. Adhesive or cohesive sealant failures.
e. Water leakage through fixed glazing and framing areas.
f. Failure of operating components to function properly.
2. Warranty Period: Two years from date of Substantial Completion.

C. Special Finish Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components on which finishes fail within specified warranty period. Warranty does not include normal weathering.
1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

A. ALUMINUM-FRAMED GLAZING SYSTEMS

A. Manufacturers:
1. Kawneer www.kawneer.com
2. EFCO Corporation www.efcocorp.com
3. Tubelite, Inc. www.tubeliteuse.com
4. Oldcastle Building Envelope www.obe.com
5. Vistawall International. www.vistawall.com/
6. YKK AP America Inc., www.ykkap.com.
7. Substitutions: Section 01 25 00 – Substitution Procedures.

B. Basis-of Design:
1. Exterior Storefront Door and Window Frames: Kawneer *IR501T.*
~~**2. Entrance Doors: Kawneer *Series 500 Tuffline Wide Stile.***~~
3. Interior Storefront Door and Window Frames: Kawneer *Trifab VG 451.*

C. Product Description:
1. Aluminum Frame: Thermally broken at exterior; flush glazing stops; center glazed to accommodate 1-inch thick glazing at exterior and ¼-inch thick glazing at interior.
a. Furnish closed backs at heads and jambs of exterior frames.
2. Profiles:
a. Exterior Frames: 2 1/2-inches wide x 5-inches deep.
b. Interior Frames: 1-3/4 inches wide x 4-1/2 inches deep.
c. Sill Frames: 2-inches high.
~~**3. Doors: Aluminum Framed Glass Doors; 2-inches thick, nominal 10-inch wide top rail 5-inch wide vertical stiles, minimum 10-inch wide bottom rail; 3/16" wall thickness; beveled glazing stops for 9/16" laminated glazing units.**~~

B. COMPONENTS

A. Extruded Aluminum: ASTM B221; 6063 alloy, T5 temper typical, 6061 alloy, T6 temper for extruded structural members.

B. Sheet Aluminum: ASTM B209, 5005 alloy, H15 or H34 temper.

C. Sheet Steel: ASTM A653/A653M; galvanized to minimum G90.

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D. Steel Sections: ASTM A36/A36M; shaped to suit mullion sections, galvanized.

E. Glass: Specified in Section 08 80 00.

F. Glazing Materials: Storefront manufacturer’s standard types to suit application and to achieve weather, moisture, and air infiltration requirements.

G. Flashings: Minimum 0.032-inch thick aluminum to match mullion sections where exposed.

H. Hardware: In accordance with Section 08 71 00 and as follows:
1. Weather Stripping: Manufacturer's standard replaceable components.
a. AAMA 701, made of wool, polypropylene, or nylon woven pile with nylon-fabric or aluminum-strip backing.

I. Flashings: Minimum 0.032-inch thick aluminum to match mullion sections where exposed.

J. Sealant and Backing Materials:
1. Sealant Used Within System (Not Used for Glazing): Manufacturer’s standard materials to achieve weather, moisture, and air infiltration requirements.
2. Perimeter Sealant: Specified in Section 07 90 00.

K. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum brackets and reinforcements. Provide non-staining, nonferrous shims for aligning system components.

L. Fasteners: Manufacturer’s standard stainless steel, compatible with adjacent materials.

M. Bituminous Paint: Cold-applied asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos, formulated for 30-mil thickness per coat.

C. FABRICATION

A. Fabricate components with minimum clearances and shim spacing around perimeter of assembly yet enabling installation and dynamic movement of perimeter seal.

B. Fabricate sill pans with sealed end dams at jambs and changes in sill height.

C. Fabricate frames for glazing from inside.

D. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.

E. Prepare components to receive anchor devices. Fabricate anchors.

F. Arrange fasteners and attachments to conceal from view.

G. Prepare components with internal reinforcement for door hardware.
1. At exterior door frames, provide weatherstripping at fixed stops.
2. At interior door frames, provide weatherstripping or silencers at stops to prevent door-to-frame contact.

H. Reinforce framing members for imposed loads.

D. SHOP FINISHING

A. Anodized Aluminum Surfaces for Framing: AAMA 611, AA-M12C22A44 non-specular as fabricated mechanical finish, medium matte chemical finish, and Architectural Class I, 0.7 mils clear anodized coating. Class II coating allowable for interior systems only.

B. Concealed Steel Items: Galvanized to ASTM A123/A123M; minimum 1.2 oz/sq ft coating thickness; galvanize after fabrication.

C. Apply bituminous paint to concealed aluminum surfaces in contact with cementitious materials or dissimilar metals.

D. Touch-Up Primer for Galvanized Steel Surfaces: SSPC Paint 20 zinc rich.

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E. Extent of Finish:
1. Apply factory coating to surfaces exposed at completed assemblies.
2. Apply touch-up materials recommended by coating manufacturer for field application to cut ends and minor damage to factory applied finish.

PART 3 - EXECUTION

A. EXAMINATION

A. Inspection of Conditions: Contractor shall require the installer or each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Verify dimensions, tolerances, and method of attachment with other Work.

C. Verify wall openings and adjoining air and vapor seal materials are ready to receive Work of this Section.

3.2 INSTALLATION

A. Install wall system in accordance with AAMA MCWM-1 - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.

B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.

C. Provide alignment attachments and shims to permanently fasten system to building structure.

D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent Work.

E. Install sill pans. Turn up ends and edges; seal to adjacent Work to form water tight dam.

F. Coordinate attachment and seal of perimeter air and vapor retarder materials.

G. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.

H. Install integral flashings and integral joint sealers.

I. Set thresholds in sealant and secure.

J. Install hardware using templates provided. Refer to Section 08 71 00 for installation requirements.

K. Coordinate installation of glass and opaque panels with Section 08 80 00; separate panels from metal surfaces.

L. Coordinate installation of perimeter sealants with Section 07 90 00.

3.3 ERECTION TOLERANCES

A. Section 01 40 00 - Quality Requirements: Tolerances.

B. Maximum Variation from Plumb: 0.06 inches every 3 ft non-cumulative or 1/16 inches per 10 ft, whichever is less.

C. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch.

3.4 ADJUSTING

A. Section 01 77 00 – Closeout Procedures: Testing, adjusting and balancing.

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B. Adjust operating hardware and sash for smooth operation

3.5 CLEANING

A. Section 01 77 00 – Closeout Procedures: Final cleaning.

B. Remove protective material from pre-finished aluminum surfaces.

C. Wash down surfaces with solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean

D. Remove excess sealant by method acceptable to sealant manufacturer.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

A. Section 01 77 00 – Closeout Procedures: Protecting installed construction.

B. Protect finished Work from damage.

END OF SECTION

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SECTION 087100

DOOR HARDWARE

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Hardware for hollow steel and plastic laminate doors.

B. Thresholds.

C. Weather-stripping, seals and door gaskets.

1.2 RELATED SECTIONS

A. Section 08 11 00 – Metal Doors and Frames.

B. Section 08 14 00 –Wood Doors.

C. Section 08 33 00 – Coiling doors and Grilles.

D. Section 08 34 00 – Special Function Doors.

E. Section 08 40 00 – Entrances, Storefronts, and Curtain Walls.

1.3 REFERENCES

A. ADA – Americans with Disabilities Act, Accessibility Guidelines.

B. ANSI A117.1 – Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People.

C. NFPA 80 – Fire Doors and Windows.

D. AWI – Architectural Woodwork Institute – Quality Standards.

E. NFPA 101 – Code for Safety to Life from Fire in Buildings and Structures.

F. NFPA 252 – Fire Tests of Door Assemblies.

G. TAS – Texas Accessibility Standards.

H. UL 10B – Fire Tests of Door Assemblies.

I. UL 305 – Panic Hardware

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

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B. Shop Drawings: Indicate locations and mounting heights of each type of hardware.

C. Submit manufacturer's parts lists and templates.

D. Manufacturers Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention.

E. All templates will be included with submittal documents to be turned over to door supplier.

1.5 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Section 01 70 00.

B. Record actual locations of installed cylinders and their master key code.

1.6 OPERATION AND MAINTENANCE DATA

A. Submit under provisions of Section 01 70 00.

B. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

1.7 QUALITY ASSURANCE

A. Perform work in accordance with the following requirements:

1. ADA.

2. ANSI A117.1.

3. NFPA 101.

4. NFPA 80.

5. NFPA 252.

6. TAS.

1.8 QUALIFICATIONS

A. Hardware Supplier Company specializing in supplying commercial door hardware with five years documented experience.

B. Hardware Supplier Personnel: Employ an Architectural Hardware Consultant (AHC) to assist in the work of this section.

1.9 REGULATORY REQUIREMENTS

A. Conform to applicable code for requirements applicable to fire rated doors and frames.

B. Products Requiring Electrical Connection: Listed and classified by Underwriters' Laboratories, Inc., as suitable for the purpose specified and indicated.

1.10 DELIVERY, STORAGE, AND HANDLING

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A. Deliver, store, protect and handle products to site under provisions of Section 01 60 00.

B. Package hardware items individually; label and identify each package with door opening code to match hardware schedule.

C. Deliver keys to Owner by security shipment direct from hardware supplier.

1.11 COORDINATION

A. Coordinate work under provisions of Section 01 03 90.

B. Coordinate the work with other directly affected sections involving manufacture or fabrication of internal reinforcement for door hardware.

1.12 WARRANTY

A. Provide five year warranty under provisions of Section 01 70 00.

B. Warranty: Include coverage for door closers.

1.13 MAINTENANCE MATERIALS

A. Provide maintenance materials under provisions of Section 01 70 00.

B. Provide special wrenches and tools applicable to each different or special hardware component.

C. Provide maintenance tools and accessories supplied by hardware component manufacturer.

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PART 2 – PRODUCTS

2.1 HINGING METHODS:

A. Note: drawings typically depict doors at 90 degrees doors will actually swing to maximum allowable. Use wide-throw conventional or continuous hinges as needed up to 8 inches in width to allow door to stand parallel to wall for true 180-degree opening. Advise architect if 8-inch width is insufficient.

B. Hinges: Steel or stainless steel pins and concealed bearings. Hinge open widths minimum, but of sufficient throw to permit maximum door swing.

1. Three hinges per leaf to 7 foot, 6 inch height. Add one for each additional 30 inches in height, or any fraction thereof.
2. Extra heavy weight hinges on doors over 3 feet, 5 inches in width.
3. Extra-heavy weight hinges on doors with panic hardware or fire exit devices.
4. Outswinging exterior doors: non-ferrous with non-removable (NRP) pins.
5. Non-ferrous material exteriors and at doors subject to corrosive atmospheric conditions.
6. Provide shims and shimming instructions for proper door adjustment.
7. All hinges to be ball bearing type on high use or doors with closers. Plain Bearing hinges are acceptable for any door that is not high traffic without a closer.
8. Use wide-throw units where needed for maximum degree of swing, advise architect if commonly available hinges are insufficient.

Acceptable Manufacturers: Ives, PBB, Hager

C. Continuous Hinges:

1. Pin and barrel stainless steel at all Exterior high traffic (HM) doors 700 Series.
2. Geared-type aluminum at all Exterior high traffic (Aluminum) doors 112XY series.
3. Geared-type aluminum at all Interior high traffic doors 112XY series.

Acceptable Manufacturers: Ives, Markar, Pemko

2.2 LOCKSETS, LATCHSETS, DEADBOLTS:

A. Extra Heavy Duty Mortise Locks and Latches:

1. Chassis: cold-rolled steel. All functions must be available in one body. Case must be multi-function, minimum 10 functions in one case, able to be opened and worked on without voiding the warranty. Functions will be changed by changing the cam on the back of the cylinder. Latch must be all steel. Pot metal on the latch will not be accepted.
2. Latchbolts: 3/4 inch throw, 2 piece stainless steel anti-friction type.
3. Lever Trim: through-bolted, accessible design, cast lever or solid extruded bar type levers as scheduled. Filled hollow tube design unacceptable.
   a. Spindles: security design independent breakaway. Breakage of outside lever does not allow access to inside lever's hubworks to gain wrongful entry.
4. Thumbturns: accessible design not requiring pinching or twisting motions to operate.
5. Deadbolts: stainless steel 1-inch throw.
6. Strikes: 16 gage curved steel, bronze or brass with 1 inch deep box construction, lips of sufficient length to clear trim and protect clothing.

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a. ANSI A156.13, 1994, Grade 1 Operational, Grade 1 Security.
b. ANSI/ASTM F476-84 Grade 31 UL Listed.

B. On renovations smaller than 20 doors, consult district lock shop

BASIS OF DESIGN: SCHLAGE L9000 17A SERIES (NO SUBSTITUTION)

2.3 KEYING REQUIREMENTS:

Key System: All cylinders will be keyed into the district's patented restricted existing small format interchangeable core key system. Cylinders must be compatible across small format interchangeable core and conventional format cylinders keyed to existing district A2 system. A vertical traveling pin will be used for a patent and placement shall be near the front of the cylinder for easy drilling of damaged cores. A restricted order verification system must currently in place to verify orders. A minimum of 5 keyways must be available in the system. Cores must be warrantied in any manufacturer's hardware. All keyways in the family must be able to be operated by one key. System must be patented until 2029. Key system must be UL437 capable. A preliminary key meeting will be held to establish guidelines for the system and a secondary key meeting will be held to review the proposed key system. Permanent cores shall be Contractor Furnished to be shipped directly to the district lock shop for owner installation. A construction key system will be in place during the construction period. Three control keys for the construction key system will be turned over to the district for installation of the permanent cores. Provided CKC Key Control all cores. Furnish (5) GMKS, (5) MKYS per set, (2) Change Keys per core. Bitting list must be provided in Excel spreadsheet format from the manufacturer to be directly input by file transfer into Sitemaster.

BASIS OF DESIGN: SCHLAGE EVEREST 29R (NO SUBSTITUTION)

2.4 EXIT DEVICES / PANIC HARDWARE

A. General features:
1. Independent lab-tested 1,000,000 cycles**.** Must meet ANSI-156.3 – 2014.
2. Push-through push-pad design. No exposed push-pad fasteners, no exposed cavities when operated.
3. Non-handed basic device design with center case interchangeable with all functions, no extra parts required to effect change of function. Center case must be constructed of pressed steel, CAST STEEL ZINC DICHROMATED WILL NOT BE ACCEPTED. Four screws minimum will be required to fasten the center case.
4. Releasable in normal operation with 15-lb. maximum operating force, and with 32 lb. maximum pressure under 250-lb. load to the door.
5. Extruded aluminum grooved body.
6. Both solenoid and motorized electronic latch retraction must be available.

B. Specific features:

1. Supply rim devices with key removable mullion at all openings. *(Surface/Concealed vertical rods WILL NOT be accepted)*.
2. Non-Fire Rated Devices: cylinder dogging.
3. Exit Device Trim: Stainless steel (Exterior/Interior) **vandal resistant trim** thru-bolted to device with plastisol coated grip. Night latch function retracts latch with use of key.
4. Fire-Labeled Devices: UL label indicating "Fire Exit Hardware".
5. Delayed Egress Devices: Function achieved within single exit device component, including latch, delayed locking device, request-to-exit switch, nuisance alarm, remote

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alarm, key switch, indicator lamp, relay, internal horn, door position input, external inhibit input plus fire alarm input. NFPA 101 “Special Locking Arrangement” compliant.

6. Electrically Operated Devices: Single manufacturer source for electric latch retraction devices, electrically controlled trim, power transfers, power supplies, monitoring switches and controls.
7. Removable Mullions: Removable with single turn of building key. Securely reinstalled without need for key. Furnish storage brackets for securely stowing the mullion away from the door when removed.

BASIS OF DESIGN: VON DUPRIN 99 (NO SUBSTITUTION)

2.5 CLOSERS

B. Surface Closers:

1. Full rack-and-pinion type cylinder with molded plastic cover and cast iron body. Pinion must be ¾”. Bearings must be full compliment. Arms must be forged steel. Minimum .625” bearing height required. Body must be powder coated, not spray lacquer. Size adjustment must be verified by visual aid on the end of the cylinder with a numeric dial. Snap on covers are to be standard.
2. Non-sized, non-handed, and adjustable. Place closer inside building, stairs, and rooms.
3. Plates, brackets and special templating when needed for interface with particular header, door and wall conditions and neighboring hardware.
4. Opening pressure: Exterior doors 8.5 lb., interior doors 5 lb., labeled fire doors 15 lb.
5. Separate adjusting valves for closing speed, latching speed and backcheck
6. Parallel Rigid arms (PR) at exterior doors scheduled with parallel arm units.
7. Exterior doors do not require seasonal adjustments in temperatures from 120 degrees F to –30 degrees F, furnish data on request.
8. Pressure Relief Valves (PRV): unsafe, not permitted.
9. Permanent metal templates must be available for installation.

BASIS OF DESIGN: LCN 4040XP SERIES (NO SUBSTITUTION)

2.6 OTHER HARDWARE

A. Automatic Flush Bolts: Low operating force design, “LBR” type where scheduled.

B. Surface Bolts: Shall be used at pairs of doors from non-fire rated Mechanical rooms for the inactive leaf.

C. Overhead Stops: Stainless steel (100 series). Non-plastic mechanisms and finished metal end caps. Field-changeable hold-open, friction and stop-only functions.

D. Kick Plates: Four beveled edges, .050 inches minimum thickness, height and width as scheduled. Sheet-metal screws of bronze or stainless steel to match other hardware.

E. Door Stops: Provide stops to protect walls, casework or other hardware.

1. Unless otherwise noted in Hardware Sets, provide wall type Ives WS406/WS407 series with appropriate fasteners (AND WOOD BLOCKING) provided. Where wall type cannot be used, provide floor type. (Ives FS18S exterior and FS436 Interior) If neither can be used, provide overhead type.
2. Locate overhead stops for maximum possible opening. Consult with Owner for furniture locations. Minimum: 90deg stop / 95deg deadstop. Note degree of opening in submittal.

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F. Seals: Finished to match adjacent frame color. Resilient seal material: polypropylene, nylon brush, or solid high-grade neoprene. UL label applied to seals on rated doors. Substitute products: certify that the products equal or exceed specified material's thickness and durability. Proposed substitutions: submit for approval.

1. Solid neoprene: MIL Spec. R6855-CL III, Grade 40.
2. Non-corroding fasteners at in-swinging exterior doors.
3. Exterior pairs of mechanical room doors: Doors shall be equipped with appropriate seals, astragal, threshold, drip cap and sweeps to prevent the intrusion of rain water. Provide astragals at all interior pairs of doors to mechanical rooms.
4. Sound control openings: Use components tested as a system using nationally accepted standards by independent laboratories. Ensure that the door leafs have the necessary sealed-in-place STC ratings. Adhesive mounted components not acceptable. Fasten applied seals over bead of sealant.
5. Fire-rated Doors, Resilient Seals: UL10C / UBC Standard 7-2 compliant. Coordinate with selected door manufacturers' and selected frame manufacturers' requirements. Where rigid housed resilient seals are scheduled in this section and the selected door manufacturer only requires an adhesive-mounted resilient seal, furnish rigid housed seal at minimum, or both the rigid housed seal plus the adhesive applied seal. Adhesive applied seals alone are deemed insufficient for this project where rigid housed seals are scheduled.
6. Fire-rated Doors, Intumescent Seals: Furnished by selected door manufacturer. Furnish fire-labeled opening assembly complete and in full compliance with UL10C / UBC Standard 7-2. Where required, Intumescent seals vary in requirement by door type and door manufacture -- careful coordination required. Adhesive-applied Intumescent strips are not acceptable, use concealed-in-door-edge type or kerfed-in-frame type.
7. All exposed exterior doors not under a cover are to have a rain drip to extend four inches outside the width of the door.

G. Automatic door bottoms: low operating force units. Doors with automatic door bottoms plus head and jamb seals cannot require more than two pounds operating force to open when closer is disconnected.

H. Thresholds: As scheduled and per details. Substitute products: certify that the products equal or exceed specified material's thickness. Proposed substitutions: submit for approval.

1. Exteriors: Seal perimeter to exclude water and vermin. Use butyl-rubber or polyisobutylene sealant complying with requirements in Division 7 "Thermal and Moisture Protection". Non-ferrous 1/4inch fasteners and lead expansion shield anchors, or Red-Head #SFS-1420 (or approved equivalent) Flat Head Sleeve Anchors (SS/FHSL).
2. Acoustic openings: Set units in full bed of Division-7-compliant butyl-rubber or polyisobutylene sealant, leave no air space between threshold and substrate.
3. Plastic plugs with wood or sheet metal screws are not an acceptable substitute for specified fastening methods.

I. Fasteners: Generally, exposed screws to be Phillips or Robertson drive. Pinned TORX drive at high security areas. Flat head sleeve anchors (FHSL) may be slotted drive. Sheet metal and wood screws: full-thread. Sleeve nuts: full length to prevent door compression.

J. Silencers: Interior hollow metal frames, 3 for single doors, 4 for pairs of doors. Omit where adhesive mounted seal occurs. Leave no unfilled/uncovered pre-punched silencer holes.

K. Wall- & Floor-mounted electromagnetic door holders: LCN's SEM series or approved equivalent. Incorporate into U.L.-listed fire & life-safety system, doors release to allow closure and latching

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when door's zone is in alarm state. Use minimum projection required to allow door to open as widely as allowed by wall conditions and projection of door hardware.

BASIS OF DESIGN: IVES, SUBSTITUTIONS INCLUDE BUT ARE NOT LIMITED TO TRIMCO, HAGER, ROCKWOOD, AND OTHER PRODUCTS MEETING THIS STANDARD.

2.7 FINISH:

A. Generally BHMA 626 Satin Chromium
1. Areas using BHMA 626 to have push-plates, pulls and protection plates of BHMA 630, Satin Stainless Steel, unless otherwise noted.

B. Door closers: factory powder coated to match other hardware, unless otherwise noted.

C. Aluminum items: match predominant adjacent material. Seals to coordinate with frame color.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify site conditions.

B. Verify that doors and frames are ready to receive work and dimensions are as instructed by the manufacturer.

C. Verify that electric power is available to power operated devices and of the correct characteristics.

3.2 INSTALLATION

A. Install hardware in accordance with manufacturer’s instructions.

B. Use templates and fasteners provided by hardware item manufacturer.

C. Use sex bolts to attach panic devices to wood doors and all closers.

D. Hardware installer shall be an entity that specializes in hardware installation and must have a minimum of ten years experience and provide five reference jobs of similar scope. Submit references with hardware submittals/shop drawings.

E. Hardware installer is required to send all personnel that will install on this job shall attend a pre-installation meeting with the manufacturer’s representative to review the install instructions.

F. Contractor will install permanent cores and turn all keys over to the district.

3.3 FIELD QUALITY CONTROL

A. Architectural Hardware Consultant to inspect installation and certify that hardware and installation has been furnished and installed in accordance with manufacturer’s instructions and as specified.

3.4 ADJUSTING

A. Adjust work under provisions of Section 01700.

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B. Adjust hardware for smooth operation.

3.5 PROTECTION OF FINISHED WORK

A. Protect finished Work under provisions of Section 01500.

B. Do not permit adjacent work to damage hardware or finish.

3.6 HARDWARE SETS

130430 OPT0418831 Version 3
Hardware Group No. 103 - SGL OFFICE

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	OFFICE/ENTRY LOCK	L9050HD 17A L583-363	626	SCH
1	EA	SFIC EVEREST PERM CORE	80-037 CKC EV29 R	626	SCH
1	EA	DOOR STOP (TYPE REQD)	WS406/WS407CCV/FS436/OH STOP - AS REQD	626	IVE
1	EA	GASKETING	488S PSA H & J (USE SILENCERS @ NON-RATED DOORS)	BK	ZER

Hardware Group No. 201 - SGL STORAGE CLOSER

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	L9080HD 17A	626	SCH
1	EA	SFIC EVEREST PERM CORE	80-037 CKC EV29 R	626	SCH
1	EA	SURFACE CLOSER	4040XP-RW/PA/EDA-TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	DOOR STOP (TYPE REQD)	WS406/WS407CCV/FS436/OH STOP - AS REQD	626	IVE
1	EA	GASKETING	488S PSA H & J (USE SILENCERS @ NON-RATED DOORS)	BK	ZER

Hardware Group No. 203 - SGL STORAGE

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	L9080HD 17A	626	SCH
1	EA	SFIC EVEREST PERM CORE	80-037 CKC EV29 R	626	SCH
1	EA	DOOR STOP (TYPE REQD)	WS406/WS407CCV/FS436/OH STOP - AS REQD	626	IVE
1	EA	GASKETING	488S PSA H & J (USE SILENCERS @ NON-RATED DOORS)	BK	ZER

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Hardware Group No. 205 - SGL STORAGE EXTERIOR

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	STOREROOM LOCK	L9080HD 17A	626	SCH
1	EA	SFIC EVEREST PERM CORE	80-037 CKC EV29 R	626	SCH
1	EA	SURFACE CLOSER	4040XP-SCUSH-TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	RAIN DRIP	142A DW + 4"	AA	ZER
1	EA	JAMB SEAL	328AA-2PC-JAMB HEIGHT	AA	ZER
1	EA	HEADER SEAL	429AA-1PC-HEADER WIDTH	AA	ZER
1	EA	DOOR SWEEP	39A-DOOR WIDTH	A	ZER
1	EA	THRESHOLD	655A-EV3-FRAME WIDTH (OR AS DETAILED)	A	ZER

Hardware Group No. 205IN - SGL STORAGE EXTERIOR

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	STOREROOM LOCK	L9080HD 17A	626	SCH
1	EA	SFIC EVEREST PERM CORE	80-037 CKC EV29 R	626	SCH
1	EA	SURFACE CLOSER	4040XP-RW/PA/EDA-TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS18L	BLK	IVE
1	EA	RAIN DRIP	142A DW + 4"	AA	ZER
1	EA	JAMB SEAL	328AA-2PC-JAMB HEIGHT	AA	ZER
1	EA	HEADER SEAL	429AA-1PC-HEADER WIDTH	AA	ZER
1	EA	DOOR SWEEP	39A-DOOR WIDTH	A	ZER
1	EA	THRESHOLD	655A-EV3-FRAME WIDTH (OR AS DETAILED)	A	ZER

Hardware Group No. 341 - TYPICAL SGL PRIVATE TOILET - PRIVACY/INDICATOR

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PRIVACY W/COIN TURN W/ OUTSIDE INDICATOR	L9044 17A L583-363 OS-OCC	626	SCH
1	EA	SURFACE CLOSER	4040XP-RW/PA/EDA-TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	DOOR STOP (TYPE REQD)	WS406/WS407CCV/FS436/OH STOP - AS REQD	626	IVE
1	EA	HEADER SEAL	429AA-1PC-HEADER WIDTH	AA	ZER
1	EA	JAMB SEAL	870AA-S (2PCS JAMB HEIGHT)	AA	ZER
1	EA	DOOR BOTTOM	369AA/3551AA-Z49 (WD/MD AS REQ)	AA	ZER
1	EA	COAT AND HAT HOOK	582M	626	IVE

-INDICATOR ON OUTSIDE OF DOOR.

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Hardware Group No. 710M - PAIR PANIC DEV

PROVIDE EACH PR DOOR(S) WITH THE FOLLOWING:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA	CONT. HINGE	112XY HEIGHT AS REQ	628	IVE
1	EA	REMOVABLE MULLION	KR4954-STAB-MT54	689	VON
2	EA	PANIC HARDWARE	CD-99-EO-SNB	626	VON
4	EA	SFIC EVEREST PERM CORE	80-037 CKC EV29 R	626	SCH
3	EA	SFIC MORT CYLINDER	80-132 W/KEYED CONST. CORE	626	SCH
1	EA	SFIC RIM CYLINDER	80-159 W/KEYED CONST. CORE	626	SCH
1	EA	DOOR PULL	VR910 DT SNB	630	IVE
1	EA	DOOR PULL	VR910 NL SNB	630	IVE
2	EA	SURFACE CLOSER	4040XP-RW/PA/EDA-TBSRT	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS WHERE APPROPRIATE	630	IVE
2	EA	DOOR STOP (TYPE REQD)	WS406/WS407CCV/FS436/OH STOP - AS REQD	626	IVE
1	EA	MULLION SEAL	8780NBK PSA	BK	ZER
2	EA	SILENCER	SR64	GRY	IVE

Hardware Group No. C201 - SGL LOCK - ACCESS CONTROLLED (WHERE NOTED AND IDF/MDF)

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	POWER TRANSFER	EPT10 CON	689	VON
1	EA	EU MORTISE LOCK	L9092HDEU 17A CON 12/24 VDC	626	SCH
1	EA	SFIC EVEREST PERM CORE	80-037 CKC EV29 R	626	SCH
1	EA	SURFACE CLOSER	4040XP-RW/PA/EDA-TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	DOOR STOP (TYPE REQD)	WS406/WS407CCV/FS436/OH STOP - AS REQD	626	IVE
1	EA	GASKETING	488S PSA H & J (USE SILENCERS @ NON-RATED DOORS)	BK	ZER
1	EA	VARIABLE LENGTH WIRE HARNESS	CON-XXP LENGTH AS REQ		SCH
1	EA	WIRING HARNESS (6")	CON-6W (FOR CONNECTION TO FIELD WIRING)		SCH
	EA	POWER SUPPLY	BY SECURITY CONTRACTOR		B/O
	EA	CREDENTIAL READER	BY SECURITY CONTRACTOR		B/O
	EA	DOOR CONTACT	BY SECURITY CONTRACTOR		B/O

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Hardware Group No. C714MR - PAIR EXIT RTD DEV EXTERIOR (HM) ACCESS CONTROLLED

PROVIDE EACH PR DOOR(S) WITH THE FOLLOWING:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	700-HEIGHT REQD	630	IVE
1	EA	CONT. HINGE	700 EPT-HEIGHT REQD	630	IVE
1	EA	POWER TRANSFER	EPT10 CON	689	VON
1	EA	FIRE RATED REMOVABLE MULLION	KR9954-154-MT54	689	VON
1	EA	FIRE EXIT HARDWARE	99-EO-F-SNB	626	VON
1	EA	ELEC FIRE EXIT HARDWARE	QEL-99-EO-F-CON-SNB 24 VDC	626	VON
2	EA	SFIC EVEREST PERM CORE	80-037 CKC EV29 R	626	SCH
1	EA	SFIC MORT CYLINDER	80-132 W/KEYED CONST. CORE	626	SCH
1	EA	SFIC RIM CYLINDER	80-159 W/KEYED CONST. CORE	626	SCH
1	EA	DOOR PULL	VR910 DT	630	IVE
1	EA	DOOR PULL	VR910 NL	630	IVE
2	EA	SURFACE CLOSER	4040XP-SCUSH-TBSRT	689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS WHERE APPLICABLE	630	IVE
1	EA	RAIN DRIP	142A DW + 4"	AA	ZER
1	EA	JAMB SEAL	328AA-2PC-JAMB HEIGHT	AA	ZER
1	EA	HEADER SEAL	429AA-1PC-HEADER WIDTH	AA	ZER
1	EA	MULLION SEAL	8780NBK PSA	BK	ZER
2	EA	DOOR SWEEP	39A-DOOR WIDTH	A	ZER
1	EA	THRESHOLD	655A-EV3-FRAME WIDTH (OR AS DETAILED)	A	ZER
1	EA	VARIABLE LENGTH WIRE HARNESS	CON-XXP LENGTH AS REQ		SCH
1	EA	WIRING HARNESS (6")	CON-6W (FOR CONNECTION TO FIELD WIRING)		SCH
	EA	POWER SUPPLY	BY SECURITY CONTRACTOR		B/O
	EA	CREDENTIAL READER	BY SECURITY CONTRACTOR		B/O
	EA	DOOR CONTACT	BY SECURITY CONTRACTOR		B/O

VERIFY ALLOWABLE GLASS SIZE FOR LISTED RATING

Hardware Group No. J-1PL - SGL GATE PADLOCK

PROVIDE EACH SGL DOOR(S) WITH THE FOLLOWING:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	PADLOCK (SFIC)	KS41D1200 / KS43D3200 X 1-1/2" SHACKLE		SCH
1	EA	SFIC EVEREST PERM CORE	80-037 CKC EV29 R	626	SCH
	EA		REMAINDER OF HARDWARE BY GATE FABRICATOR		

PROVIDE MOUNTING ACCESSORIES AS REQUIRED.
GENERAL CONTRACTOR SHALL CONDUCT A COORDINATION MEETING WITH THE HARDWARE SUPPLIER AND GATE/FENCE FABRICATOR PRIOR TO HARDWARE BEING ORDERED - AND FENCE/GATE BEING FABRICATED.

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Hardware Group No. J-2PL - PAIR GATE PADLOCK

PROVIDE EACH PR DOOR(S) WITH THE FOLLOWING:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	PADLOCK (SFIC)	KS41D1200 / KS43D3200 X 1-1/2" SHACKLE		SCH
1	EA	SFIC EVEREST PERM CORE	80-037 CKC EV29 R	626	SCH
	EA		REMAINDER OF HARDWARE BY GATE FABRICATOR		

PROVIDE MOUNTING ACCESSORIES AS REQUIRED.
GENERAL CONTRACTOR SHALL CONDUCT A COORDINATION MEETING WITH THE HARDWARE SUPPLIER AND GATE/FENCE FABRICATOR PRIOR TO HARDWARE BEING ORDERED - AND FENCE/GATE BEING FABRICATED.

END OF SECTION

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OPT0418831 Version 3

Door#	HwSet#
HG100A	C714MR
HG100B	C714MR
HG101	103
HG102	205IN
HG103	C201
HG104	341
HG105	341
HG107	J-2PL
HG108	C201
HG109	J-1PL
HG119	J-1PL
P100A	C714MR
P100B	C714MR
P101	205IN
P102	103
P103	C201
P104	341
P105	341
P108	J-2PL
P109	C201
P113	J-2PL
R100A	710M
R100B	C714MR
R101	103
R102	203
R103	201
R104	205

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SECTION 08 80 00 - GLAZING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes glass and glazing for the following:
1. Insulated, laminated glazing units for exterior aluminum storefronts.
2. Glazing units for door lights.
3. Fire rated glazing units.
4. Insulated, laminated, fire-rated exterior glazing units.
5. Other miscellaneous glass products.

B. Related Sections:
1. Section 07 90 00 - Joint Protection: Requirements for sealant and back-up material other than glazing sealants.
2. Section 08 11 13 - Standard Steel Doors and Frames: Glazing in steel doors, sidelights, and windows.
3. Section 08 14 16 - Flush Wood Doors: Glazing in door-lite frames.
4. Section 08 41 13 - Aluminum Storefront Systems.

1.2 REFERENCES

A. American National Standards Institute:
1. ANSI Z97.1 - Safety Glazing Materials Used in Buildings Safety.

B. American Society of Civil Engineers:
1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.

C. ASTM International:
1. ASTM C509 - Standard Specification for Elastomeric Cellular Preformed Gasket and Sealing Material.
2. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
3. ASTM C1036 - Standard Specification for Flat Glass.
4. ASTM E1300 – Standard Practice for Determining Load Resistance of Glass in Buildings.
5. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation.

D. Consumer Products Safety Commission:
1. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing.

E. Flat Glass Marketing Association:
1. FGMA Glazing Manual: Glazing compounds and preformed glazing sealants.

F. Glass Association of North America:
1. GANA - Sealant Manual.
2. GANA - Glazing Manual.
3. GANA - Laminated Glass Design Guide.

1.3 PERFORMANCE REQUIREMENTS

A. Glass Thickness: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various size openings, but not less than thicknesses conforming to ASTM E1300 and in strengths (annealed or heat treated) required to meet or exceed the following criteria:
1. Wind Loads: As indicated, but not less than wind loads required by ASCE 7 "Minimum Design Loads for Buildings and Other Structures": Section 6.0 "Wind Loads."
2. Probability of Breakage for Vertical Glazing: 8 lites per 1000 for lites set vertically or not more than 15 degrees off vertical and under wind action.

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a. Load Duration: 3 seconds.

3. Maximum Lateral Deflection: For exterior glass supported on all 4 edges, provide thickness required that limits center deflection at design wind pressure to 1/50 times the short side length or 1 inch, whichever is less.
4. Minimum Glass Thickness for Exterior Lites: Not less than 1/4 inch per each pane.

B. Thermal Movements: Provide glazing that allows for noiseless thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on glass framing members and glazing components.
1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

C. Thermal and Solar Optical Performance: Measured or calculated in accordance with the following:
1. U-Values: NFRC 100.
2. Solar Heat Gain Coefficients: NFRC 200.
3. Solar Optical Properties: NFRC 300.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Product Data:
1. Glass: Provide structural, physical, and thermal and solar optical performance characteristics, size limitations, and special handling or installation requirements.
2. Glazing Sealants, Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors where exposed.
3. Glass Film: Provide product data and installation instructions on applied glass film.

C. Samples:
1. Glass: Submit two samples 12x12 inch in size, of each type and color of glass specified, including frosted glass.
2. Glazing Materials: Submit 12-inch long bead of glazing sealant for each color other than black.

D. Manufacturer's Certificate: Certify sealed insulating glass and low-E coated glass meet or exceed specified requirements.

E. Installer's Certificate: Certify glass furnished without identification label is installed in accordance with Construction Documents and applicable code.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with GANA Glazing Manual for glazing installation methods.

B. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201.
1. Obtain safety glazing products permanently marked with certification label of the Safety Glazing Certification Council or another certification agency or manufacturer acceptable to authorities having jurisdiction.
2. Where glazing units are specified for lites more than 9 sq. ft. in exposed surface area, and lites of any size in certain hazardous locations such as sliding glass doors, doors and enclosures for bathtubs, showers, hot tubs, whirlpools, saunas, and steam rooms, provide glazing products that comply with Category II materials; for lites 9 sq. ft. or less in exposed surface area, provide glazing products that comply with Category I or II materials.

1.6 QUALIFICATIONS

A. Installer: Company specializing in performing Work of this section with minimum three years' experience.

1.7 PRE-INSTALLATION MEETINGS

A. Section 01 81 19 – Project Meetings: Schedule and coordinate pre-installation meeting that

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includes the trade(s) for the work of this Section and other trades that whose work is related to the work of this Section.

B. Convene minimum one week prior to commencing work of this Section.

1.8 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements.

B. Do not install liquid glazing sealants when ambient and substrate temperature conditions are outside limits permitted by glazing sealant manufacturer or below 40 deg F.

C. Do not proceed with glazing operations when glazing channel substrates are wet from rain, frost, condensation, or other causes.

1.9 COORDINATION

A. Section 01 31 13 – Project Coordination: Coordination and project conditions.

B. Coordinate installation of graphics film with installation of glass and glazing gaskets to ensure that edges of film are covered by gaskets in final installation.

1.10 WARRANTY

A. Section 01 77 00 – Closeout Procedures: Product warranties and product bonds.

B. Extended Warranties:
1. Furnish 4-year warranty to include coverage for laminated glass units from deterioration or failure, and replacement of same.
2. Furnish 5-year warranty to include coverage for coated glass units from coating deterioration or failure, and replacement of same.
3. Furnish 10-year warranty to include coverage for sealed glass units from seal failure, interpane dusting or misting, and replacement of same.

1.11 PRODUCTS MANUFACTURERS

A. Non-Rated Glazing
1. Guardian Glass, www.guardianglass.com
2. Oldcastle Building Envelope www.oldcastlebe.com
3. Pilkington North America, Inc. www.pilkington.com
4. Viracon www.viracon.com
5. Substitutions: Section 01 25 00 – Substitution Procedures.

B. Fire-Rated Glazing
1. SaftiFirst; safti.com
2. FireLite; www.fireproofglass.com/firelite
3. Substitutions: Section 01 25 00 – Substitution Procedures.

PART 2 - EXECUTION

2.1 MATERIALS

A. Tempered Glass: ASTM C1048, Type 1 transparent flat, Quality Q3, Kind FT fully tempered, Condition A uncoated, float glass with horizontal tempering; furnish tempered glass conforming to CPSC 16 CFR 1201 Category II.

B. Low-E Coating: ASTM C1376, vacuum deposited, Low-Emissivity coating for all exterior insulated glazing units.

C. Fabricated Exterior Insulating Glass Panels: ASTM E2190 certified by Insulating Glass Certification Council (IGCC) with fully tempered Class 1 and 2 glass lites separated by a dehydrated airspace that is hermetically dual sealed with a primary seal of polyisobutylene (PIB), or thermo plastic spacer (TPS) and a secondary seal of silicone or an organic sealant as determined by the manufacturer for the specific application.

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1. Basis of Design: Fully tempered clear with ~~*Sunguard*~~ **SNX 51/23** Low-E coating as manufactured by Guardian Glass or approved equivalent by specified manufacturer.
2. Edge Condition:
   a. Black edge seal.
   b. At typical ~~exterior~~ glazing fabricated for typical ~~aluminum~~ framing conditions with resilient glazing gaskets.
3. Performance, Low-E Insulating Glass Units – Fabricated panels shall provide the following tested values or better:
   a. Visible Light Transmission: ~~62~~ **51**%.
   b. Reflectance: ~~11~~ **14**% outdoor visible light reflectance.
   c. U-Value: Winter nighttime ~~0.29~~**. 0.286 Btu/hr·ft²·F.**
   d. U-Value: Summer Daytime: 0.266 Btu/hr·ft²·F.
   e. Shading Coefficient: ~~0.31~~ **0.26.**
   f. Solar Heat Gain Coefficient: ~~0.27~~ **0.23.**

2.2 SCHEDULED GLAZING TYPES – As indicated in the drawings.

A. Type GL-1: Dual-pane clear glazing units for all exterior glazing, ASTM E2190 certified by Insulating Glass Certification Council; with aluminum and silicone edge seal; black edge seal color; purge interpane core space with dry hermetic air.
   1. Basis of Design: Insulated system manufactured by Guardian or approved equivalent by a specified manufacturer.
   2. Total Unit Thickness: 1-5/16”, including nominal 1/2" dry air core.
   3. Outer Pane: Clear tempered glass 1/4" thickness with specified low-E coating applied to number 2 surface.
   4. Inner Pane: Clear laminated glass consisting of 2-plies of 1/4” annealed clear glass bonded together with 0.080 PVB clear interlayer. Pane thickness nominal 9/16".
   5. Installed system shall meet TEA requirements and UL 972 for Delayed Forced Entry.

B. Type GL-2: Single-pane laminated glass at interior storefront systems, fixed windows, and door lights at security vestibules.
   1. Basis of Design: Insulated system manufactured by Guardian or approved equivalent by a specified manufacturer.
   2. Fabrication: 1/4” clear annealed glass + 0.09” PVB interlayer + 1/4” clear annealed glass.
   3. Total Thickness: Nominal 9/16 inch.
   4. Plastic Interlayer: Clear polyvinyl butyral.
   5. Installed system shall meet TEA requirements and UL 972 for Delayed Forced Entry.

C. TYPE GL-3: Typical Single-pane interior non-rated glazing; ASTM C1048, Type 1 transparent flat, Quality Q3, Kind FT fully tempered, Condition A uncoated, clear float glass with horizontal tempering; furnish tempered glass conforming to CPSC 16 CFR 1201 Category II.
   1. Thickness: 1/4-inch thick unless indicated otherwise.
   2. Locations: Use for all interior glazing except Security Glazing.

D. TYPE GL-4: Fire Rated.
   1. Composed of multiple sheets of clear tempered glass laminated with intumescent interlayers meeting requirements of ASTM E119 and safety standards of ANSI Z97.1 and/or CPSC 16CFR1201 (Cat. I and II).
   2. Basis of Design: *SuperLite II-XL* as manufactured by SaftiFirst or approved equivalent by Firelite.
   3. Thickness minimum 5/8” thick or greater as required to meet indicated rating.
   4. Labeling: Each piece of fire-rated glazing shall be labeled with a permanent logo including name of product, manufacturer, testing laboratory (UL), fire rating period, safety glazing standards, and date of manufacture.

E. Type GL-5: 45-Minute Fire rated, dual-pane clear glazing units. with aluminum and silicone edge seal; black edge seal color; purge interpane core space with dry hermetic air.

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1. Basis of Design: *SuperLite II-XL*-45 as manufactured by SaftiFirst or approved equivalent by Firelite.
2. Total Unit Thickness: 1-3/4”, including nominal 1/2" dry air core and low-E coating applied to No. 2 surface.
3. Impact-Resistant Glazing Film applied to No. 3 surface, refer to Section 08 87 23.

2.3 GLAZING ACCESSORIES

A. Dense Gaskets: Resilient extruded shape to suit glazing channel retaining slot; black color.
   1. Neoprene: ASTM C864.
   2. EPDM: ASTM C864.
   3. Silicone: ASTM C1115.

B. Soft Gaskets: ASTM C509 Type II; resilient extruded shape to suit glazing channel retaining slot; black color.
   1. Neoprene.
   2. EPDM.
   3. Silicone.

C. Pre-Formed Glazing Tape: Size to suit application.
   1. Preformed butyl compound with or without integral resilient tube spacing device; 10 to 15 Shore A durometer hardness; coiled on release paper; black color.
      a. Butyl Corner Sealant: ASTM C920 single component non-skinning butyl compatible with glazing tape; color to match tape.
      b. Interior Sealants and Sealant Primers: Maximum volatile organic compound content in accordance with SCAQMD Rule 1168.
      c. Basis of Design: DAP #1202.

D. Setting Blocks: Elastomeric material recommended by glass manufacturer, 80 to 90 Shore A durometer hardness, length of 0.1 inch for each square foot of glazing or minimum 4-inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.

E. Spacer Shims: Elastomeric material recommended by glass manufacturer, 50 to 60 Shore A durometer hardness, minimum 3-inch long x one half the height of glazing stop x thickness to suit application, self-adhesive on one face.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Verify openings for glazing are correctly sized and within acceptable tolerance.

C. Verify surfaces of glazing channels or recesses are clean, free of obstructions impeding moisture movement, weeps are clear, and ready to receive glazing.

3.2 PREPARATION

A. Clean contact surfaces with solvent and wipe dry.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

C. Prime surfaces scheduled to receive sealant.

3.3 INSTALLATION

A. Perform installation in accordance with GANA Glazing Manual.
   1. Glazing Sealants: Comply with ASTM C1193.
   2. Do not allow metal-to-glass contact.

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B. Exterior Dry Method (Gasket Glazing):
1. Cut glazing gasket to length; install on glazing pane. Seal corners by butting tape and sealing junctions with compatible butyl sealant.
2. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.
3. Rest glazing on setting blocks and push against fixed stop with sufficient pressure to attain full contact.
4. Install removable stops without displacing glazing spline. Exert pressure for full continuous contact.

C. Interior Dry Method (Tape and Tape) Installation:
1. Cut glazing tape to length and set against permanent stops, projecting 1/16 inch above sight line.
2. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners. Provide additional setting blocks where recommended by the glazing panel manufacturer.
3. Rest glazing on setting blocks and push against tape for full contact at perimeter of pane or unit.
4. Place glazing tape on free perimeter of glazing in same manner described above.
5. Install removable stop without displacement of tape. Exert pressure on tape for full continuous contact.
6. Knife trim protruding tape.

3.4 CLEANING

A. Section 01 77 00 – Closeout Procedures: Final cleaning.

B. Remove glazing materials from finish surfaces.

C. Remove labels after Work is complete.

D. Clean glass and adjacent surfaces.

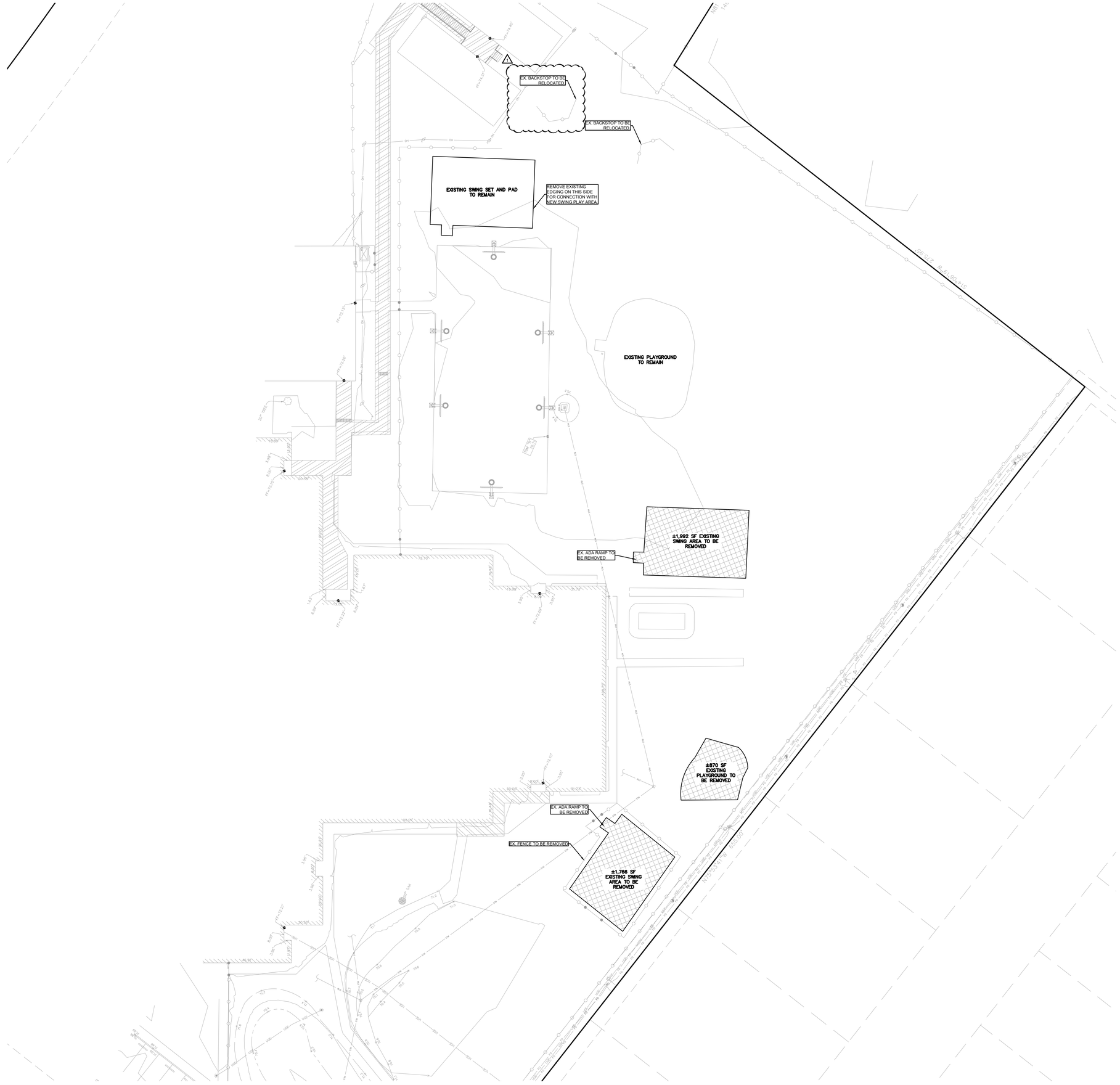
3.5 PROTECTION OF INSTALLED CONSTRUCTION

A. Section 01 77 00 – Closeout Procedures: Protecting installed construction.

B. After installation, mark pane with an 'X' by using removable plastic tape or paste. Do not mark heat absorbing or reflective glass units.

END OF SECTION

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Consultant

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Notes

NORTH

Revision	By	Appd	
1 ADDENDUM #1			10.10.2025

Issued	By	Appd	
100% ISSUE FOR BID AND PERMIT			2025.09.24
File Name: N/A	JZ Dwn.	JZ Dsgn.	EM Chkd. 09/22/25

Permit/Seal

REGISTERED LANDSCAPE ARCHITECT — KENNETH AUSTIN — 2582 — STATE OF TEXAS

10/08/25

Client/Project Logo

2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

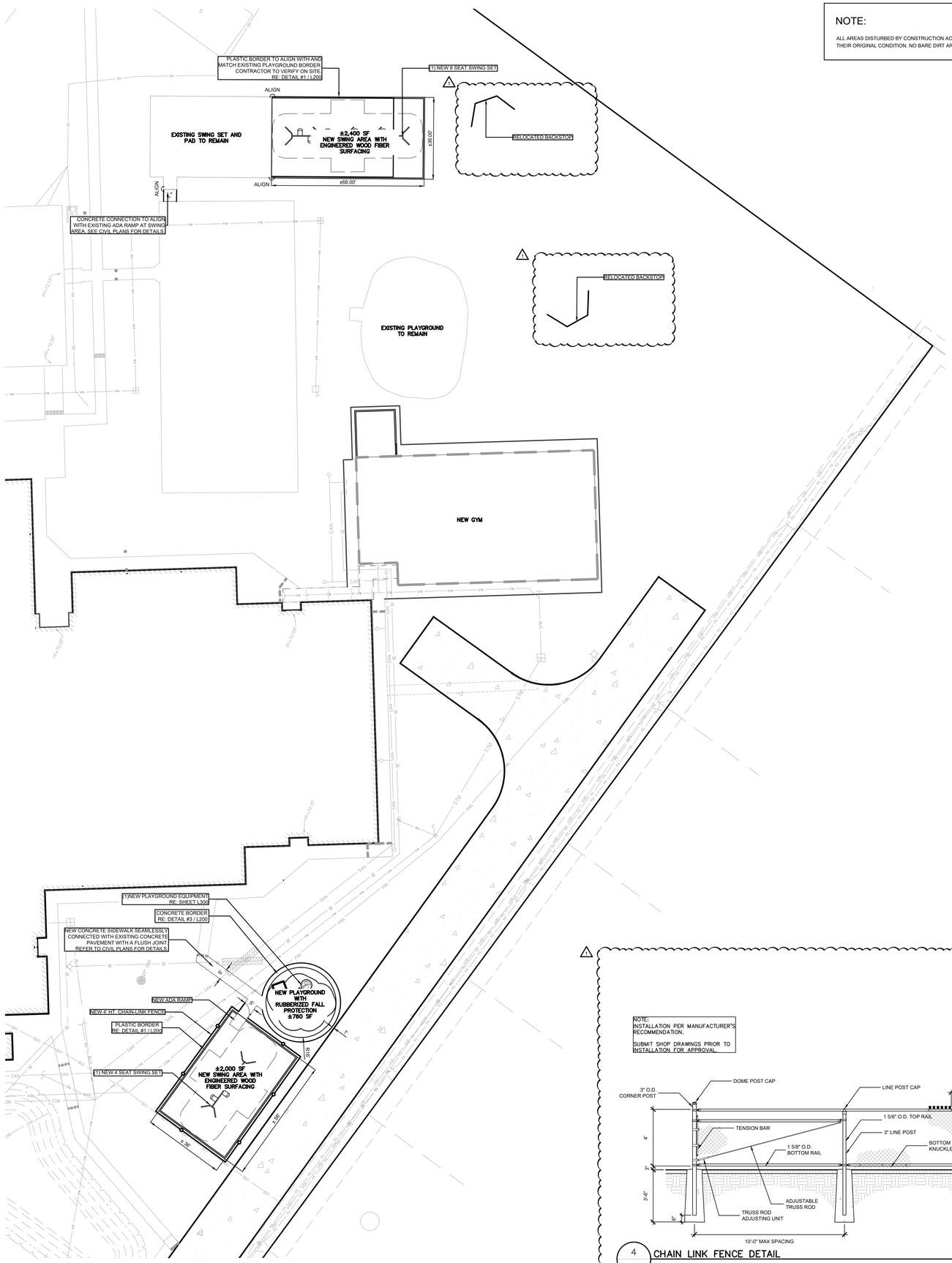
Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS - HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77485

Title
DEMOLITION PLAN

Project No. 214001246
Scale 1" = 20'-0"
Revision
Sheet 1 of 3
Drawing No. L100-HGES

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79



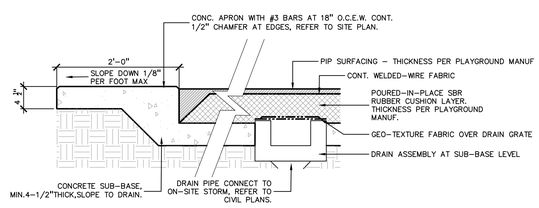
NOTE:

ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE HYDROSEEDED AND RETURNED TO THEIR ORIGINAL CONDITION. NO BARE DIRT AREAS WILL BE ACCEPTED.

PLAYGROUND LEGEND

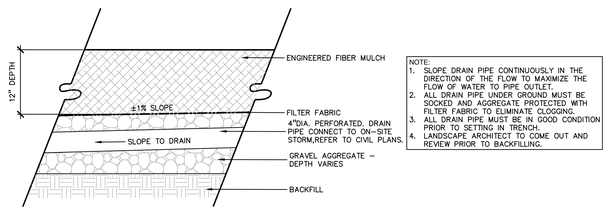
NOTE: MUST MEET FBISD TDG AND TAS MINIMUM ACCESSIBLE ELEMENTS REQUIREMENTS.

PRODUCT	COMPONENT	ESTIMATED QUANTITY	DESCRIPTION
(1) 8 SEATS SWING SET	BELT SEAT	8	
	INCLUSIVE SEAT	2	
(1) 4 SEATS SWING SET	BELT SEAT	4	
	INCLUSIVE SEAT	1	
12" DEPTH ENGINEERED WOOD FIBER SURFACING		±4,800 SF	
12" HT. BLACK PLAYGROUND PLASTIC BORDER		±400 LF	
(1) PLAYGROUND STRUCTURE 2 - 5 YEARS OLD	SPIRAL SLIDE	1	
	FAN CLIMBER	1	
	BOINGO PANEL	1	
	CULVERT CLIMBER	1	
	SLATE WEDGE ROOF	1	
	ELBOW SLIDE	1	
	POST WHEEL PLASTIC	1	
	GEAR PANEL	1	
	TRANSFER STATION	1	
	SAFETY RAIL	1	
	ACTIVITY PANEL W/ A-MAZE-ING INSERT	1	
4' HEIGHT CHAIN-LINK FENCE WITH A 5' WIDE GATE			Galvanized finish
POURED-IN-PLACE SURFACING	INCLUDING: RUBBER PARTICLES (Blend of recycled SBR and EPDM.); BINDER (Weather resistant, UV stabilized polyurethane.); PRIMER / ADHESIVE (Moisture-cured polyurethane primer.); LEVELING AND PATCHING MATERIAL (Portland-cement-based grout or epoxy/polyurethane formulation.).	±900 SF	



3 POURED-IN-PLACE SURFACING DETAIL

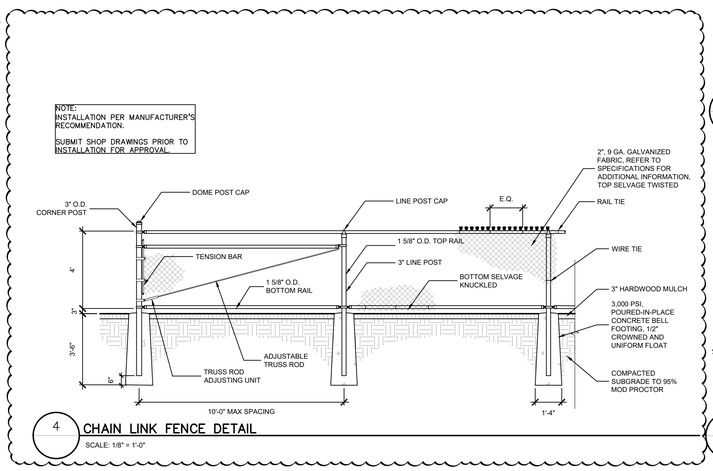
SCALE: 1" = 1'-0"



NOTE:
1. SLOPE DRAIN PIPE CONTINUOUSLY IN THE DIRECTION OF THE FLOW TO MAXIMIZE THE FLOW OF WATER TO PIPE OUTLET.
2. ALL DRAIN PIPE UNDER GROUND MUST BE SOCKED AND AGGREGATE PROTECTED WITH FILTER FABRIC TO ELIMINATE CLOGGING.
3. ALL DRAIN PIPE MUST BE IN GOOD CONDITION PRIOR TO SETTING IN TRENCH.
4. LANDSCAPE ARCHITECT TO COME OUT AND REVIEW PRIOR TO BACKFILLING.

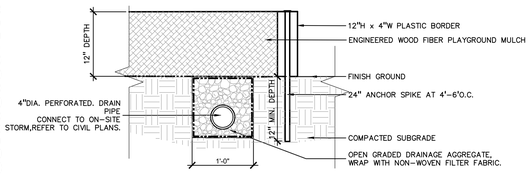
2 SITE DRAINAGE PIPE

SCALE: 1" = 1'-0"



4 CHAIN LINK FENCE DETAIL

SCALE: 1/8" = 1'-0"



1 ENGINEERED WOOD FIBER PLAYGROUND SURFACING DETAIL

SCALE: 1" = 1'-0"

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Consultant

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www.peagroup.com

Notes

NORTH

Revision	By	Appd	
1 ADDENDUM #1			10.10.2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued	By	Appd	YYYY.MM.DD
File Name: N/A	JZ Dwn.	JZ Dsgn.	EM Chkd. 09/22/25 YYYY.MM.DD

Permit/Seal

REGISTERED LANDSCAPE ARCHITECT EMILY ZABRECH AUSTIN 2682 STATE OF TEXAS

10/08/25

Client/Project Logo

2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project

FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS - HUNTERS GLEN ELEMENTARY SCHOOL

695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77485

Title

PLAYGROUND PLAN

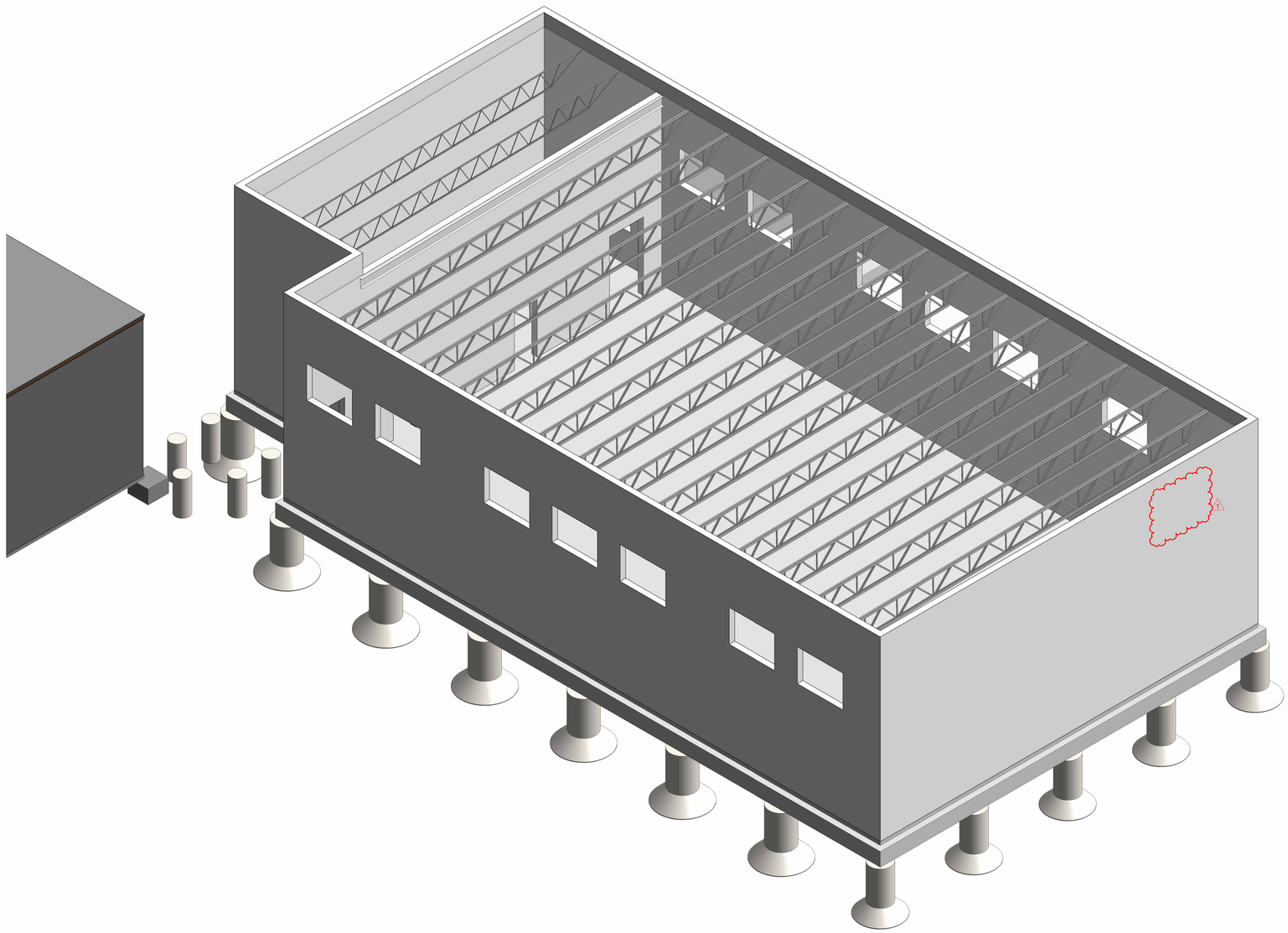
Project No.	Scale
214001246	1" = 20'-0"

Revision Sheet 2 of 3

Drawing No. **L200-HGES**

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

SHEET LIST (WITH REVISIONS)			
SHEET NUMBER	SHEET NAME	DATE	REVISION
S001	3D VIEW AND SHEET LIST	1	10.10.2025
S101	GENERAL STRUCTURAL CRITERIA	1	10.10.2025
S102	GENERAL STRUCTURAL CRITERIA		
S201	FOUNDATION PLAN - COMPOSITE	1	10.10.2025
S201A	FOUNDATION PLAN - GYMNASIUM	1	10.10.2025
S202	ROOF FRAMING PLAN - COMPOSITE		
S202A	ROOF FRAMING PLAN - GYMNASIUM	1	10.10.2025
S301	FOUNDATION SCHEDULE & TYPICAL SLAB ON GRADE DETAILS		
S401	TYPICAL GB AND CF DETAILS		
S402	SOG @ STRUCTURAL STEEL (GB / PIER)	1	10.10.2025
S501	TYPICAL CMU WALL DETAILS	1	10.10.2025
S601	TYPICAL STEEL & CMU WALL ROOF DETAILS		



1 PRESENTATION 3D VIEW - GYMNASIUM

Stantec

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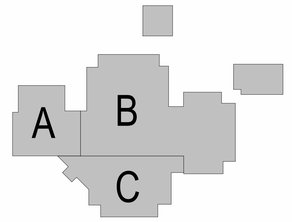
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Texas Registered Engineering Firm
F-003426
D + A PROJECT 24-291-00

Notes



Revision	By	Appd	
1 ADDENDUM #1			10.10.2025 YYYY.MM.DD

Issued	By	Appd	
100% ISSUE FOR BID AND PERMIT			2025.09.24 YYYY.MM.DD

File Name: N/A	JT Dwn.	AR Dsgn.	LMM Chkd. 2024.04.11 YYYY.MM.DD

Permit/Seal



10/10/2025

Client/Project Logo

2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project

FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS - HUNTERS GLEN ELEMENTARY SCHOOL

695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title

3D VIEW AND SHEET LIST

Project No.	Scale
214001246	
Revision	Drawing No.
1	S001-HES

Pick location in Project Information
10/8/2025 4:42:17 PM

ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

STRUCTURAL ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	LLH	LONG LEG HORIZONTAL
		LLV	LONG LEG VERTICAL
ACI	AMERICAN CONCRETE INSTITUTE	LW	LONG WAY
ADDL	ADDITIONAL	MATL	MATERIAL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	MAX	MAXIMUM
		MC	MOMENT CONNECTION, MISCELLANEOUS CHANNEL
AISI	AMERICAN IRON AND STEEL INSTITUTE		
		MECH	MECHANICAL
ANSI	AMERICAN NOTIONAL STANDARD INSTITUTE	MANUF	MANUFACTURER(S)
		MID	MIDDLE
ARCH	ARCHITECTURAL	MISC	MISCELLANEOUS
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	MO	MASONRY OPENING
		NIC	NOT IN CONTRACT
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	NOM	NOMINAL
		NTS	NOT TO SCALE
AWS	AMERICAN WELDING SOCIETY	OC	ON CENTER
BC	BOTTOM CHORD	OD	OUTSIDE DIAMETER
BOD	BOTTOM OF DECK	OPNG	OPENING
BOT	BOTTOM	OPP	OPPOSITE
BP	BASE PLATE	PL	PLATE
BRG	BEARING	PLF	POUNDS PER LINEAR FOOT
C	CHANNEL, COMPRESSION, CAMBER	PROJ	PROJECTION
CIP	CAST IN PLACE	PSI	POUNDS PER SQUARE INCH
CL	CENTER LINE	PSF	POUNDS PER SQUARE FOOT
CLR	CLEAR	R	RADIUS
COL	COLUMN	RD	ROOF DRAIN
CONC	CONCRETE	RE	REFER, REFERENCE
CONT	CONTINUOUS	REINF	REINFORCEMENT (D), (ING), (MENT)
CSJ	CONSTRUCTION JOINT	REQD	REQUIRED
CTJ	CONTROL JOINT	REV	REVISION
DET	DETAIL	RO	ROUGH OPENING
DIA	DIAMETER	SCHED	SCHEDULE(D)
DIAG	DIAGONAL	SDI	STEEL DECK INSTITUTE
DP	DOUBLE PITCHED	SECT	SECTION
DWG	DRAWING	SF	SQUARE FEET
DWL	DOWEL	SIM	SIMILAR
EA	EACH	SJI	STEEL JOIST INSTITUTE
EF	EACH FACE	SPEC	SPECIFICATION(S)
EJ	EXPANSION JOINT	SQ	SQUARE
EL	ELEVATION	STD	STANDARD
ELEC	ELECTRICAL	STIF	STIFFINER
ELEV	ELEVATOR	STL	STEEL
EOD	EDGE OF DECK	STR	STRUCTURAL
EOS	EDGE OF SLAB	T	TOP, TENSION
EQ	EQUAL(LY)	T&B	TOP AND BOTTOM
EXIST	EXISTING	T&G	TONGUE AND GROOVE
EXP	EXPANSION	TEMP	TEMPERATURE
FD	FLOOR DRAIN	THK	THICK(NESS)
FFE	FINISH FLOOR ELEVATION	TOC	TOP OF CONCRETE
FND	FOUNDATION	TOF	TOP OF FOOTING
FS	FAR SIDE	TOJ	TOP OF JOIST
FT	FEET, FOOT	TOL	TOP OF LEDGE
FTG	FOOTING	TOP	TOP OF PANEL
GA	GAUGE	TOS	TOP OF STEEL
GALV	GALVANIZED	TOW	TOP OF WALL
GB	GRADE BEAM	TRD(S)	TREAD(S)
HORIZ	HORIZONTAL	TYP	TYPICAL
HSS	HOLLOW STRUCTURAL SECTION	UL	UNDERWRITERS LABORATORY
ID	INSIDE DIAMETER	UNF	UNIFORM
IN	INCHES	UON	UNLESS OTHERWISE NOTED
JST	JOIST	V	BEAM AND SHEAR
JT	JOINT	VB	VERTICAL BRACE
K	KIPS, JOIST SERIES	VERT	VERTICAL
KB	KNEE BRACE	W	WALL, EST, WIDTH, WIDE FLANGE
L	SPAN, LEFT, STEEL ANGLE	W/	WITH
Ld	DEVELOPMENT LENGTH	WL	WIND LOAD, WATER LEVEL, WORKING LINE
LL	LIVE LOAD		
LLBB	LONG LEG BACK TO BACK	WP	WATER PROOF, WORKING POINT

STRUCTURAL LEGEND

P1	PRECAST CONCRETE PANEL MARK	S1	SPAN DIRECTION OF A MILD REINFORCED CONCRETE SLAB W/ MAIN REINFORCING MARK S1
F1	SPREAD FOOTING MARK	DECK TYPE 1	SPAN OF 5 1/2" THICK CONCRETE SLAB W/ TYPE 1 STEEL DECK
P1	PLINTH MARK	DECK TYPE 1	SPAN DIRECTION OF BARE STEEL DECK TYPE 2 WITH NO CONCRETE TOPPING
C1	COLUMN MARK	20KSP	SPECIAL OPEN WEB K SERIES STEEL JOIST, SEE PLAN NOTES FOR LOAD REQUIREMENTS
CF1	CONTINUOUS FOOTING MARK	W27X84 <24'-0">	STANDARD AISC ROLLED SHAPE OF W27X84 AT ELEVATION 24'-0" ABOVE DATUM
RW1	RETAINING WALL MARK	W27X84 c=1"	STANDARD AISC ROLLED SHAPE OF W27X84 WITH A 1" UPWARD CAMBER
BP1	BASE PLATE MARK	W27X84 (10)	STANDARD AISC ROLLED SHAPE OF W27X84 W/ 10 HSA (EQUALLY SPACED)
A	STRUCTURAL STEEL COLUMN SPLICE TYPE MARK	W27X84 (10, 6, 12) WBEAM	STANDARD AISC ROLLED SHAPE OF W27X84 WITH 28 HSA EQUALLY SPACED FROM BOTTOM TO TOP AS 10 CONNECTORS / 6 CONNECTORS / 12 CONNECTORS
24/24	STRAIGHT SHAFT PIER (SHAFT Ø)	WBEAM	
24/48	DRILLED PIER (SHAFT AND BELL Ø)	BEAM	CONNECTED TO A ROLLED SHAPE COLUMN WITH A STANDARD WELDED MOMENT CONNECTION STANDARD AISC ROLLED SHOPE BEAM
B1 GB1 1B1	MILD REINFORCED CONCRETE BEAM MARK		
J1	MILD REINFORCED CONCRETE JOIST MARK	5"	SLAB DEPRESSION AND AMOUNT

STRUCTURAL CONCEPT, STANDARDS AND LOADS

A. DESIGN CONCEPT:
1. THE STRUCTURE AS SHOWN HAS BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS AND DESIGN STANDARDS TO SUPPORT THE FINAL BUILDING SERVICE LOADS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADDITIONAL SUPPORTS FOR THE STRUCTURE IF NECESSITATED BY THE CONSTRUCTION SEQUENCE OR METHODS OF FABRICATION, HANDLING, ERECTION, AND OTHER CONSTRUCTION OPERATIONS.

B. BUILDING CODES AND DESIGN STANDARDS:
1. INTERNATIONAL BUILDING CODE, 2021 EDITION.
2. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE); MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-22, AS AMENDED.
3. AMERICAN CONCRETE INSTITUTE (ACE), BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318, AS AMENDED.
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, 15TH EDITION (ASD), 2005, AS AMENDED.
5. AMERICAN WELDING SOCIETY (AWS).
6. STEEL JOIST INSTITUTE (SJI), STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOIST AND JOIST GIRDERS.
7. STEEL DECK INSTITUTE (SDI), DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, ROOF DECKS, AND CELLULAR METAL FLOOR DECK WITH ELECTRICAL DISTRIBUTION.
8. AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION.

C. GRAVITY LOADS:
1. SUPER-IMPOSED LOADS ARE GIVEN IN POUNDS PER SQUARE FOOT (PSF)

BUILDING AREA	DEAD LOAD (PSF)	LIVE LOAD (PSF)
SLAB ON GRADE	0	100
ROOF	20	20
MECHANICAL AREAS	10	150 (**)

* INCLUDES ALL ALLOWANCES OF 15 PSF FOR PARTITION WEIGHT
** EQUIPMENT WEIGHT IF LARGER

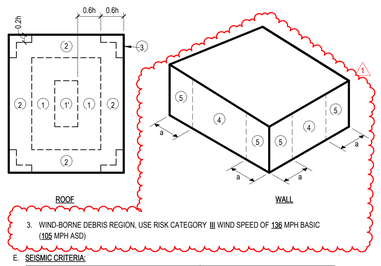
D. LATERAL DESIGN LOADS (CLOSED STRUCTURE):
1. WIND LOADS FOR AN BASIC DESIGN WIND SPEED OF 142 MPH (ASD WIND SPEED OF 110 MPH), 3-SECOND GUST, WITH EXPOSURE B AND A RISK CATEGORY III.
2. COMPONENTS AND CLADDING PRESSURES (PSF) FOR "CLOSED" BUILDINGS:

		ZONE 1		ZONE 1'		ZONE 2		ZONE 3	
ROOF	10 FT²	+16	-55	+30	-32	+16	-73	+16	-99
	100 FT²	+16	-43	+26	-32	+16	-51	+16	-68

		ZONE 4		ZONE 5	
WALLS	10 FT²	+94	-56	+121	-64
	100 FT²	+74	-46	+85	-50

		ZONE 4		ZONE 5	
PARAPETS	10 FT²	+32	-34	+32	-42
	100 FT²	+27	-30	+27	-33

a. RE: IBC FOR DESCRIPTION OF CORNER, PERIMETER AND FIELD.
b. POSITIVE PRESSURES ARE PRESSURES ACTING TOWARDS THE BUILDING.
c. NEGATIVE PRESSURES ARE PRESSURES ACTING AWAY FROM THE BUILDING.
d. VALUES ABOVE ARE FOR BASIC DESIGN WIND PRESSURES THE ASD FACTOR 0.6..
e. ZONE WIDTH DIMENSIONS:
- a (WALLS) = 3FT
- 0.2h = 4.3FT
- 0.6h = 13FT



3. WIND-BORNE DEBRIS REGION, USE RISK CATEGORY III WIND SPEED OF 136 MPH BASIC (105 MPH ASD)

E. SEISMIC CRITERIA:

1. IMPORTANCE FACTOR:	1.25
2. RISK CATEGORY:	III
3. MAPPED SPECTRAL RESPONSE ACCELERATIONS:	Ss: 0.078, S1: 0.042
4. SITE CLASS:	D
5. SPECTRAL RESPONSE COEFFICIENTS:	SDs: 0.071, SD1: 0.064
6. SEISMIC DESIGN CATEGORY:	A

F. SPECIAL LOADS:
1. STAIR TREADS, RAILING AND GUARDRAILS:

ITEM	REQUIRED CAPACITY
TREADS	300 POUNDS AT CENTER
TOP RAILS	50 PLF HORIZONTALLY (DISTRIBUTED)
OTHER RAILS, FILLERS & CONNECTIONS	50 PLF HORIZONTALLY (DISTRIBUTED)
HAND RAILS	200 POUNDS ANY DIRECTION

2. PIPE LOADS WITH WATER

SIZE	WEIGHT MAX	SPACING OF HANGERS
4" Ø	17 PLF	10'-0"
6" Ø	32 PLF	10'-0"
8" Ø	50 PLF	10'-0"
10" Ø	75 PLF	5'-0"
12" Ø	102 PLF	5'-0"
VALUES ASSUME SCHEDULE 40 STEEL PIPE		

G. ROOF RAIN LOAD DATA:
1. RAIN INTENSITY 60 MIN, i = 5.36 IN/HR

H. GROUND SNOW LOADS:
1. GROUND SNOW: 9 PSF

CONCRETE

A. CONCRETE SCHEDULE:

BUILDING COMPONENT	28 DAY CYLINDER COMPRESSIVE STRENGTH POUNDS PER SQUARE INCH (PSI)					
	NORMAL WEIGHT			MAX AGGREGATE SIZE (IN)	SUMP (IN)	W/C RATIO
	3000	3500	4000			
DRILLED PIERS	●			1 1/2"	5-7	0.55
SLAB ON GRADE		●		1"	4-6	0.50
GRADE BEAMS AND PLINTHS		●		1"	4-6	0.50
ALL OTHER CONCRETE	●			1"	4-6	0.52

B. PROVIDE DEFORMED NEW BILLET STEEL BARS CONFORMING TO ASTM A615, GRADE 60. ALL REINFORCING STEEL SHALL BE SECURELY HELD IN PLACE; PROVIDE ADDITIONAL BARS OR STIRRUPS FOR SUPPORT AS REQUIRED.
C. WELDED WIRE FABRIC SHALL CONSIST OF FLAT SHEETS AND SHALL CONFORM TO ASTM A185, WITH A MINIMUM YIELD STRENGTH OF 65.0 KSI
D. PROVIDE FULL EMBEDMENT WITH STANDARD 90 DEGREE HOOKS FOR ALL DOWELS. IF NOT OTHERWISE SPECIFIED, THE DOWEL SIZE AND SPACING SHALL BE THE SAME AS THE MAIN REINFORCING.
E. WHEN REINFORCING STEEL IN GRADE BEAMS, WALLS, SLABS AND BEAMS, IS NOTED AS CONTINUOUS, SPLICE REINFORCING STEEL ONLY WHEN UNAVOIDABLE DUE TO STOCK LENGTHS. STAGGER ALL SPLICES A MINIMUM OF 4'-0". ADJACENT BAR SPLICES ARE NOT ACCEPTABLE.
a. LOCATE THE TOP BAR SPLICES WITHIN THE MIDDLE HALF OF THE SPAN AND LOCATE THE BOTTOM BAR SPLICES AT SUPPORTS OR BETWEEN SUPPORTS AND 1/3 SPAN POINT, UNLESS NOTED OTHERWISE ON PLANS, DETAILS OR SCHEDULES.
F. PROVIDE INTERIOR AND EXTERIOR HORIZONTAL LAPPED CORNER BARS AT ALL CORNERS TO MATCH THE SIZE, TYPE AND SPACING OF THE WALL AND GRADE BEAM HORIZONTAL REINFORCING.
G. UNLESS SPECIFICALLY NOTED, SCHEDULED OR DETAILED OTHERWISE, PROVIDE DEVELOPMENT LENGTH FOR REINFORCING IN CONCRETE COMPONENTS IN ACCORDANCE WITH THE SCHEDULE IN NOTE H. BELOW. THIS SCHEDULE SHALL APPLY TO ALL DEVELOPMENT LENGTHS NOT OTHERWISE NOTED, DETAILED OR SCHEDULED IN THE DRAWINGS OR SPECIFICATIONS.
H. REINFORCING BAR DEVELOPMENT LENGTHS (Ld) IN INCHES FOR VARIOUS CONCRETE STRENGTHS IN POUNDS PER SQUARE INCH (PSI). TOP BARS ARE DEFINED AS HORIZONTAL REINFORCING SO PLACED IN A MEMBER THAT MORE THAN 12 INCHES OF CONCRETE IS CAST BELOW THE BAR. ALL OTHER CONDITIONS ARE CONSIDERED BOTTOM BARS FOR DEVELOPMENT AND SPLICE LENGTH PURPOSES.
1. WHEN TWO BARS OF DIFFERENT SIZES ARE LAPPED, THE SMALLER SIZE SHALL GOVERN THE LAP LENGTH UNLESS SPECIFICALLY NOTED.
2. WELDED OR MECHANICAL SPLICES CAPABLE OF DEVELOPING 125% OF THE BAR YIELD STRENGTH MAY BE USED IN LIEU OF THE LAPS. SUCH SPLICES MAY BE EITHER FULL BUTT WELDS OR SERIES "C CADWELDS OR EQUAL".

BAR SIZE GRADE 60	Ld FOR TOP BARS				Ld FOR BOTTOM BARS			
	28 DAY CYLINDER CONCRETE STRENGTH (PSI)				28 DAY CYLINDER CONCRETE STRENGTH (PSI)			
	3000 / 3500	4000	5000	6000	3000 / 3500	4000	5000	6000
#3	22	19	17	16	17	15	13	12
#4	29	25	23	21	22	19	17	16
#5	36	31	28	26	28	24	22	20
#6	43	37	34	31	33	29	26	24
#7	63	54	49	45	48	42	38	34
#8	72	62	56	51	55	48	43	39
#9	81	70	62	57	62	54	48	44
#10	89	78	69	63	69	60	53	49
#11	98	85	76	70	76	66	59	54

J. AT LAP SPLICES, PROVIDE LAP SPLICE LENGTHS FOR REINFORCING BARS 1.3 TIMES THE Ld SHOWN IN THE TABLE IN NOTE H ABOVE.
K. THE GENERAL NOTES, LAP LENGTHS OR DETAILS PERTAINING TO REINFORCING STEEL AS SHOWN ON THE DETAIL SHEETS OR OTHER SCHEDULES SHALL SUPERSEDE THE NOTES SHOWN ON THIS SHEET.
L. PROVIDE THE FOLLOWING COVER FOR CAST-IN-PLACE CONCRETE REINFORCING.
1. UNIFORMED SURFACES IN CONTACT WITH EARTH: 3 INCHES
2. UNIFORMED SURFACES OVER MOISTURE BARRIER: 2 INCHES
3. FORMED SURFACES EXPOSED TO EARTH OR WEATHER
- #6 AND LARGER: 2 INCHES
- #5 AND SMALLER: 1 1/2 INCHES
4. FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER
- SLABS AND WALLS: 3/4 INCH
- BEAMS AND COLUMNS: 1 1/2 INCHES

GENERAL NOTES FOR CONSTRUCTION

A. CONSTRUCTION METHODS, PROCEDURES AND SEQUENCES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE CONTRACTOR SHALL TAKE ALL THE NECESSARY MEANS TO MAINTAIN AND PROTECT THE STRUCTURAL INTEGRITY OF ALL CONSTRUCTION AT ALL STAGES.
B. ALL PROPOSED SUBSTITUTIONS MUST BE EQUAL OR BETTER AND SHALL BE REVIEWED BY THE ARCHITECT/ENGINEER PRIOR TO ANY PERTINENT WORK AND PRIOR TO THE AWARD OF THE CONTRACT.
C. NOT ALL OPENINGS AND OTHER COMPONENTS THAT ARE REQUIRED HAVE BEEN SHOWN IN THE STRUCTURAL DRAWINGS. COORDINATE WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND VERIFY THE LOCATIONS AND SIZES OF ALL CHASES, INSERTS, OPENINGS, SLEEVES, FINISHES, DEPRESSIONS, PADS AND OTHER PROJECT REQUIREMENTS. FLOOR PLAN WILL BE FURNISHED FOR THAT PURPOSE.
D. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL DRAWINGS TO DETERMINE WHERE OPENINGS ARE REQUIRED IN REINFORCED CONCRETE BEAMS, SLABS AND WALLS.
E. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, DETAILING ALL THE OPENINGS, INCLUDING ADDED REINFORCEMENT AS SHOWN ON THE TYPICAL WALL, SLAB AND BEAM OPENING DETAILS FOR REVIEW.
F. ADDITIONAL REINFORCEMENT ABOVE THAT SHOWN IN THE TYPICAL SLAB AND BEAM OPENING DETAILS MAY BE REQUIRED AND WILL BE REVIEWED ON THE SHOP DRAWINGS.
G. USE THE MANUFACTURER'S CERTIFIED DRAWINGS AND SPECIFICATIONS FOR THE EQUIPMENT ANCHORAGE AND DETAILS.
H. ALL CONSTRUCTION JOINTS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE. ADDITIONAL CONSTRUCTION JOINTS TO FACILITATE CONSTRUCTION SHALL BE LOCATED AND DETAILED ON THE SHOP DRAWINGS FOR REVIEW.
I. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN BEAMS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
J. ALL CONSTRUCTION AND CONTROL JOINTS FOR BEAMS WHICH ARE EXPOSED TO VIEW ARE TO BE LOCATED TO COINCIDE WITH THE ARCHITECTURAL RUSTICATION JOINTS AS SHOWN ON THE BUILDING ELEVATION SHEETS OR AS REVIEWED IN WRITING.
K. SHOP DRAWINGS:
1. THE TERM "SHOP DRAWINGS" INCLUDES FABRICATION, MANUFACTURING, ERECTION AND SETTING DRAWINGS, BROCHURES, CERTIFICATES, AND PRODUCT DATA DESCRIBING MATERIALS AND EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE ALL PERTINENT INFORMATION REQUIRED FOR THE ENGINEER TO FULLY EVALUATE THE MATERIALS BEING REPRESENTED BY THE SUBMITTAL INCLUDING THE PHYSICAL PROPERTIES, DIMENSIONS, LOCATIONS AND METHOD OF INSTALLATION.
2. SHOP DRAWINGS WILL BEAR THE REVIEW STAMP OF THE CONTRACTOR INDICATING THAT HE HAS REVIEWED THE DRAWINGS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS; COORDINATED ITEMS INCLUDED IN THE SUBMITTAL WITH RELATED ITEMS; AND VERIFIED AND COORDINATED DIMENSIONS.
3. REPRODUCTIONS OF THE ENGINEERING DRAWINGS WILL NOT BE ACCEPTABLE AS SHOP DRAWINGS.
4. ANY SHOP DRAWING NOT CONFORMING TO THESE REQUIREMENTS WILL BE CAUSE FOR REJECTION AND WILL BE RETURNED WITHOUT ANY FURTHER ACTION.
5. STRUCTURAL SUBMITTALS REQUIRED FOR APPROVAL INCLUDE, BUT ARE NOT LIMITED TO:
- CONCRETE ACCESSORIES (MANUFACTURERS PRODUCT DATA)
- STEEL REINFORCING
- CONCRETE MIX DESIGN
- CONTROL JOINT LAYOUT
- CONCRETE MATERIAL CERTIFICATES
- STRUCTURAL STEEL FRAMING
- STRUCTURAL STEEL CONNECTION CALCULATIONS
- STEEL ROOF DECK
- COLD FORMED METAL FRAMING
- COLD FORMED METAL FRAMING CALCULATIONS
- MISC. STEEL FABRICATIONS
6. DELEGATED STRUCTURAL DESIGN OF COMPONENTS:
- SEE APPLICABLE SECTIONS OF GENERAL NOTES FOR THE APPROPRIATE DESIGN RESPONSIBILITIES OF THE SUPPLIER AND IT'S LICENSED ENGINEER.

L. THESE NOTES APPLY TO STRUCTURAL DOCUMENTS SEALED BY THE STRUCTURAL ENGINEER AND ARE INTENDED TO BE COMPLEMENTARY TO AND USED IN CONJUNCTION WITH THE PLANS AND SPECIFICATIONS, INCLUDING THOSE PREPARED BY OTHER DISCIPLINES. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT/STRUCTURAL ENGINEER IMMEDIATELY. ANY SUCH DISCREPANCIES SHALL BE RESOLVED TO THE MORE STRINGENT REQUIREMENTS, UNLESS OTHERWISE AUTHORIZED BY THE STRUCTURAL ENGINEER.
M. ANY DISCREPANCIES ON THE STRUCTURAL DOCUMENTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/STRUCTURAL ENGINEER PRIOR TO SUBMISSION OF BIDS OR PROPOSALS, OR IF NOT REASONABLE DISCERNABLE DURING PREPARATION OF BIDS AND PROPOSALS. BEFORE COMMENCING THE WORK IN QUESTIONS. NO FIELD CHANGES OR DIVIATIONS FROM THE DESIGN ARE TO BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT AND/OR STRUCTURAL ENGINEER. NO CHANGE ORDER CONSIDERATION WILL BE GIVEN TO CHANGES FOR WHICH THE ARCHITECT AND/OR ENGINEER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
N. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONSTRUCTION, INCLUDING EXISTING WORK, PRIOR TO COMMENCING WORK. ANY DISCREPANCIES SHALL BE REPORT IMMEDIATELY TO THE ARCHITECT/STRUCTURAL ENGINEER.
O. GENERAL FRAMING NOTES:
1. FOR ALL MISCELLANEOUS STEEL SHOWN ON ARCHITECTURAL AND NOT SHOWN ON STRUCTURAL DRAWINGS, ASSUME THE FOLLOWING AS A MINIMUM AND CONFIRM FINAL ASSUMPTIONS WITH STRUCTURAL ENGINEER:
- EQUAL LEG ANGLES = L4X4X5/16
- LLV ANGLES = L6X4X5/16
- CHANNELS = C8X11.5
- HSS TUBES =HSS6WX3/8
- LSV TUBE = HSS12X8X1/2
- ROUND TUBE = 6" STD PIPE
- WIDE FLANGE = W14X22
- STEEL PLATE = 3/8" THICK
2. FOR ALL MECHANICAL OPENINGS SHOWN ON ARCHITECTURAL OR MEP DRAWINGS AND NOT SHOWN ON STRUCTURAL DRAWINGS, PROVIDE W14X22 PERIMETER BEAMS AS REQUIRED TO FRAME REQUIRED OPENING WHERE OPENING DIMENSIONS EXCEED 5'-0" IN ANY DIRECTION.
3. FOR ALL WINDOWS, STOREFRONTS AND CURTAINWALLS EXCEEDING 10'-0" IN LENGTH WHERE HANGING STEEL TO SUPPORT THE HEADER IS NOT SHOWN ON STRUCTURAL DRAWINGS, PROVIDE C6X8.2 VERTICAL HANGERS WITH L4X4X1/4 KICKERS AT 4'-0" OC AND CONTINUOUS L6X4X5/16 ANGLE ALONG THE BOTTOM. PROVIDE CONTINUOUS HSS6X2X1/4 (LSH) IN LIEU OF L6X4 BOTTOM ANGLE AND GALVANIZE 3/8" BENT LEDGER PLATE WHERE MASONRY WILL BE SUPPORTED.
4. FOR ALL FOLDING PARTITIONS WHERE HANGING STEEL TO SUPPORT HEADER TRACK IS NOT SHOWN ON STRUCTURAL DRAWINGS PROVIDE C6x8.2 VERTICAL HANGERS WITH L4x4x1/4 KICKERS AT 4'-0" AND CONTINUOUS WT6X20 ALONG THE BOTTOM. HANGERS SHALL BE SPACED AT 2'-0" ON CENTER AT STACKED ENDS OF PARTITION.
5. FOR ALL COILING OVERHEAD DOORS AND ROLLING GRILLS EXCEEDING 10'-0" IN WIDTH WHERE TUBE STEEL TO SUPPORT THE DOOR/HOUSING IS NOT SHOWN ON STRUCTURAL DRAWINGS, PROVIDE HSS12X8X3/8 (LSV) INTERMEDIATE STEEL TUBE.
6. ALL STAIR MEMBERS INCLUDING, BUT NOT LIMITED TO, STRINGERS, LANDINGS AND HANDRAILS SHALL BE DESIGNED BY THE STAIR ENGINEER AND STEEL FABRICATOR.

P. GENERAL FOUNDATION NOTES:
1. FOR ALL SLAB ON GRADE SHOWN ON ARCHITECTURAL AND NOT SHOWN ON STRUCTURAL DRAWINGS, ASSUME 5" THICK CONCRETE SLAB WITH #4 REINFORCING BARS AT 14" OC IN EACH DIRECTION.
2. MECHANICAL EQUIPMENT AND LOCKERS SHALL RECEIVE A HOUSEKEEPING PAD AS INDICATED IN MEP OR ARCHITECTURAL DRAWINGS AND PER MANUFACTURER'S RECOMMENDATIONS.
3. THE MAXIMUM GRADE BEAM SPAN IS 20'-0". PROVIDE ADDITIONAL 24/48 PIER AT MID SPAN WHERE PIERS ARE NOT SHOWN ON PLAN AND ALLOWABLE SPAN IS EXCEEDED.
4. ASSUME GRADE BEAM TYPE "GB1" FOR ALL LOCATIONS WHERE CMU WALLS EXCEED 16'-0" IN HEIGHT ARE SHOWN ON PLANS. SUPPLY 24/48 PIER AT 20'-0" OC MAXIMUM UNDER GRADE BEAM.
5. FOR ALL DUMPSTER ENCLOSURES, SCREEN WALLS, AND OTHER MASONRY FENCES NOT SHOWN ON STRUCTURAL DRAWINGS ASSUME 8'-0" TALL MASONRY WALL WITH VENEER ON ONE SIDE SUPPORTED BY CONTINUOUS TYPE GB1 GRADE BEAM ON 24/48 DRILLED PIERS SPACED AT 15'-0" MAXIMUM. STRUCTURAL MASONRY WALL SHALL BE 8" CMU WITH #6 VERTICAL BARS SPACED AT 24" ON CENTER IN FULLY GROUTED CELLS.
6. FOR ALL SPORTS FIELDS WHERE THE BACKSTOP WALL IS NOT SHOWN ON STRUCTURAL DRAWINGS ASSUME 4'-0" TALL MASONRY WALL WITH VENEER ON ONE SIDE SUPPORTED BY CONTINUOUS CONCRETE FOOTING. FOOTING SHALL BE 1'-0" THICK x 3'-0" WIDE BEARING 3'-0" BELOW FINISHED GRADE. STRUCTURAL MASONRY WALL SHALL BE 8" CMU WITH #5 VERTICAL BARS SPACED AT 32" ON CENTER SUPPORTED BY CONCRETE STEM WALL EXTENDING FROM CONTINUOUS FOOTING. REINFORCE FOOTING WITH LONGITUDINAL (4) # 4 BARS AND TRANSVERSE #4 BARS AT 12" ON CENTER. AT STEM WALL PROVIDE #4 DOWELS AT 12" ON CENTER AND (3) #4 CONTINUOUS BARS AT EACH FACE.

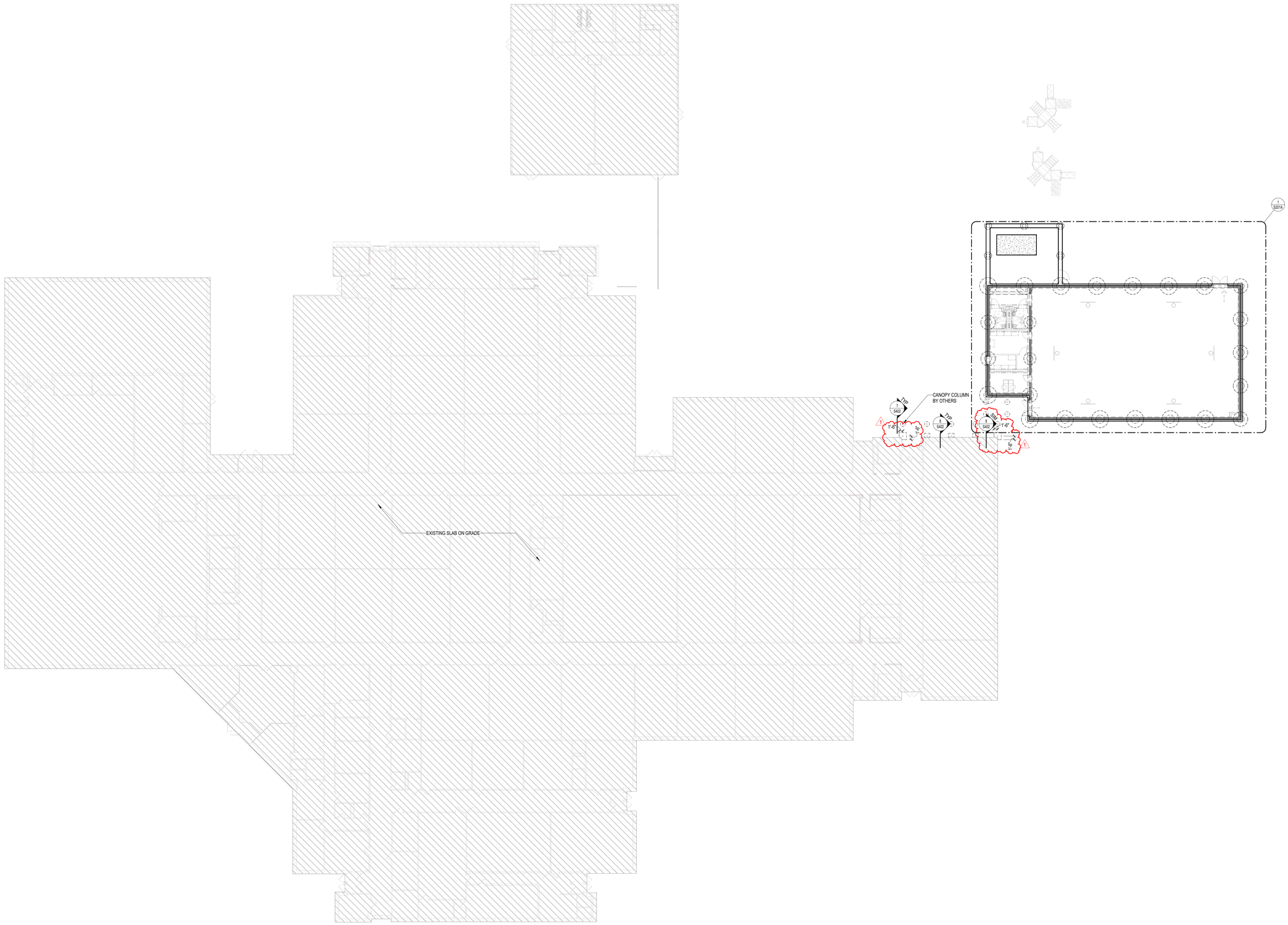
STRUCTURAL STEEL

A. ROLLED SHAPES:
1. ALL STRUCTURAL STEEL FOR ALL THE HORIZONTAL FRAMING MEMBER SHALL CONFORM TO ASTM A992, GRADE 50, UNLESS OTHERWISE NOTED.
2. ALL STRUCTURAL STEEL FOR HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500, GRADE C WITH A MINIMUM YIELD OF 50 KSI, UNLESS OTHERWISE NOTED.
3. ALL STRUCTURAL STEEL FOR PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B, UNLESS OTHERWISE NOTED.
4. ALL STRUCTURAL STEEL FOR ANGLES, PLATES AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36, UNLESS OTHERWISE NOTED.
5. ALL EXPOSED STEEL TO BE HOT DIPPED GALVANIZED.

B. CONNECTIONS:
1. THE DESIGN OF STRUCTURAL STEEL CONNECTIONS IS THE RESPONSIBILITY OF THE CONTRACTOR AND THE STEEL FABRICATOR. THE DESIGN OF THE CONNECTION SHALL BE PERFORMED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY THE STEEL FABRICATOR. THE DETAILS AND CALCULATIONS SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:
- ALL WELD SIZES AND LENGTHS.
- ALL BOLT SIZES, LOCATIONS, QUANTITIES AND GRADES.
- ALL PLATE AND ANGLE SIZES, THICKNESS AND DIMENSIONS
- ALL WORK POINT LOCATIONS AND RELATED INFORMATION.
2. PROVIDE STANDARD BOLTED CONNECTIONS CONFORMING TO AISC BOLTED CONNECTIONS, USING ASTM A325 OR A490 BOLTS. FOR THE BEAM END SHEARS INDICATED IN THE DOCUMENTS. PROVIDE MINIMUM OF TWO BOLTS FOR ALL CONNECTIONS.
3. ALL WELDED CONNECTIONS SHALL CONFORM TO AWS UNLESS OTHERWISE NOTED.
4. SURVEY ALL PLANS, DETAILS, SECTIONS, SCHEDULES AND SPECIFICATIONS FOR SPECIAL CONNECTIONS.
5. UNLESS OTHERWISE NOTED AND/OR SPECIFIED, ALL BEAM CONNECTIONS SHALL BE DESIGNED TO SUPPORT 1/2 THE TOTAL UNIFORM LOAD FOR THE APPLICABLE MEMBER SIZE AND SPAN AS DETERMINED BY THE TABLES FOR ALLOWABLE UNIFORM LOADS ON BEAM IN THE 15TH EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION (ASD)
6. WHERE BEAMS ARE TO RECEIVE HEADED SHEAR CONNECTORS, DESIGN THOSE BEAM CONNECTIONS FOR THE REACTION SHOWN. IF REACTIONS ARE NOT SHOWN, DESIGN THE CONNECTIONS TO SUPPORT 40 PERCENT OF THE MAXIMUM WEB SHEAR, V, FOR THE APPLICABLE MEMBER SIZE AS DETERMINED BY THE TABLES FOR ALLOWABLE UNIFORM LOADS ON BEAMS IN THE 15TH EDITION OF THE AISC MANUAL.
7. MOMENT CONNECTIONS SHOWN SHALL BE DESIGNED TO FULLY DEVELOP THE SECTION IN FLEXURE AND TO SUPPORT 1/2 THE TOTAL UNIFORM LOAD FOR SHEAR AS DESCRIBED IN NOTE 5 ABOVE.
8. WHERE FILLET WELD IS NOT SHOWN ON DETAIL, IT'S SIZE SHALL BE ASSUMED TO BE THE PLATE THICKNESS OF THE THINNEST PIECE MINUS 1/16"

C. WELDS:
1. CONFORM TO "CODE FOR WELDING IN BUILDING CONSTRUCTION" BY THE AMERICAN WELDING SOCIETY, LATEST EDITION.
2. WELDS ON INDICATED ON DRAWINGS ARE TO BE FILLET ALL AROUND AS PRESCRIBED BY AISC SPECIFICATION, PROVIDE WELDING OF CONTINUOUS MEMBERS OF 2 INCHES OF 3/16" INCH

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1 COMPOSITE FOUNDATION PLAN
1/16" = 1'-0"

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Notes

A B C

1 ADDENDUM #1			10.10.2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
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2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

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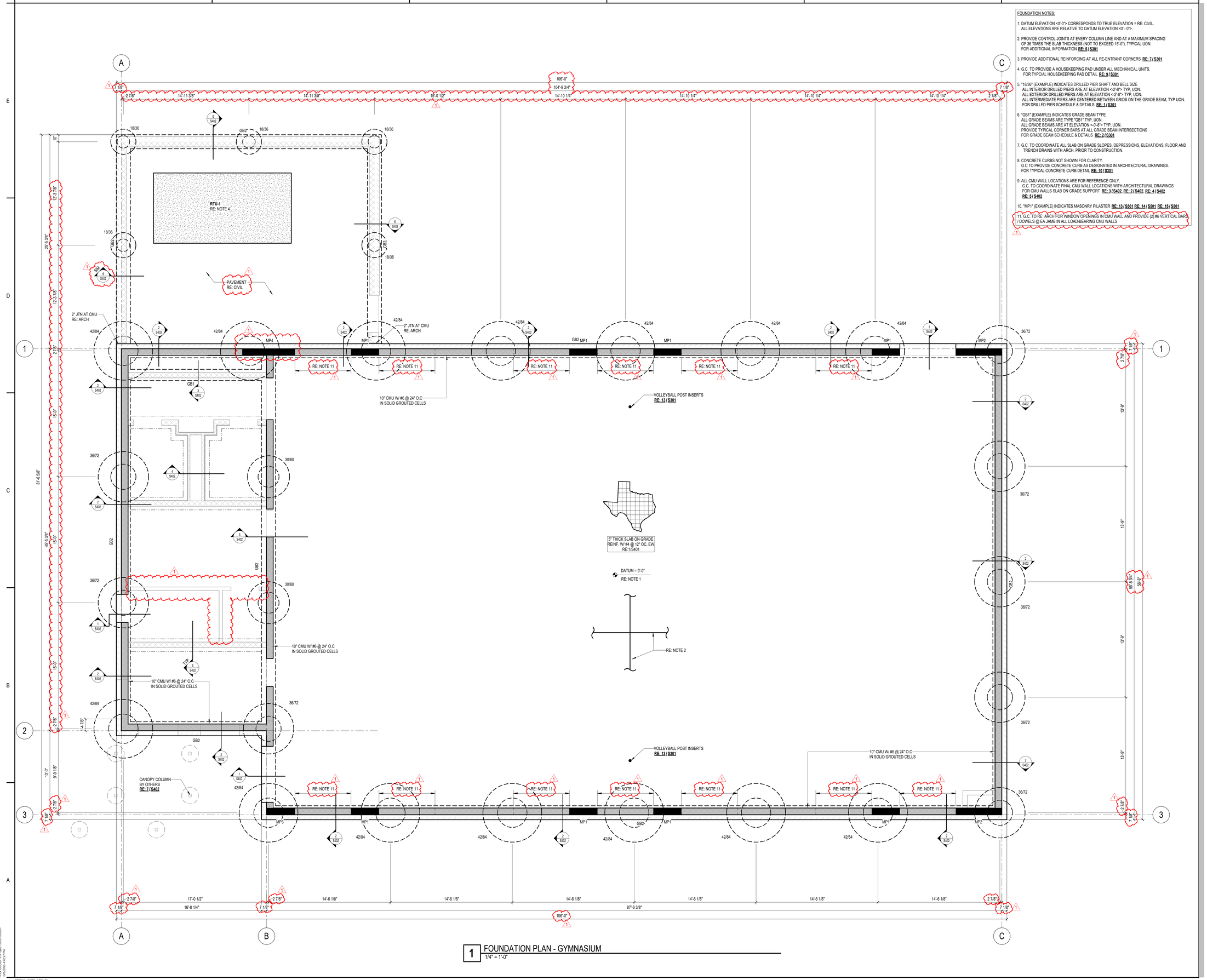
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Revision	Drawing No.
1	S201-HES

ORIGINAL SHEET - ARCH E1

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FOUNDATION NOTES:

1. DATUM ELEVATION <0'-0"> CORRESPONDS TO TRUE ELEVATION = RE: CIVIL.
   ALL ELEVATIONS ARE RELATIVE TO DATUM ELEVATION <0' - 0">.
2. PROVIDE CONTROL JOINTS AT EVERY COLUMN LINE AND AT A MAXIMUM SPACING OF 36 TIMES THE SLAB THICKNESS (NOT TO EXCEED 15'-0"), TYPICAL UON.
   FOR ADDITIONAL INFORMATION **RE: 5 / S301**
3. PROVIDE ADDITIONAL REINFORCING AT ALL RE-ENTRANT CORNERS **RE: 7 / S301**
4. G.C. TO PROVIDE A HOUSEKEEPING PAD UNDER ALL MECHANICAL UNITS.
   FOR TYPCIAL HOUSEKEEPING PAD DETAIL **RE: 9 / S301**
5. "18/36" (EXAMPLE) INDICATES DRILLED PIER SHAFT AND BELL SIZE
   ALL INTERIOR DRILLED PIERS ARE AT ELEVATION <-2'-8"> TYP. UON.
   ALL EXTERIOR DRILLED PIERS ARE AT ELEVATION <-2'-8"> TYP. UON.
   ALL INTERMEDIATE PIERS ARE CENTERED BETWEEN GRIDS ON THE GRADE BEAM, TYP UON.
   FOR DRILLED PIER SCHEDULE & DETAILS **RE: 1 / S301**
6. "GB1" (EXAMPLE) INDICATES GRADE BEAM TYPE
   ALL GRADE BEAMS ARE TYPE "GB1" TYP. UON.
   ALL GRADE BEAMS ARE AT ELEVATION <-0'-8"> TYP. UON.
   PROVIDE TYPICAL CORNER BARS AT ALL GRADE BEAM INTERSECTIONS
   FOR GRADE BEAM SCHEDULE & DETAILS **RE: 2 / S301**
7. G.C. TO COORDINATE ALL SLAB ON GRADE SLOPES, DEPRESSIONS, ELEVATIONS, FLOOR AND TRENCH DRAINS WITH ARCH. PRIOR TO CONSTRUCTION.
8. CONCRETE CURBS NOT SHOWN FOR CLARITY.
   G.C TO PROVIDE CONCRETE CURB AS DESIGNATED IN ARCHITECTURAL DRAWINGS.
   FOR TYPICAL CONCRETE CURB DETAIL **RE: 19 / S301**
9. ALL CMU WALL LOCATIONS ARE FOR REFERENCE ONLY.
   G.C. TO COORDINATE FINAL CMU WALL LOCATIONS WITH ARCHITECTURAL DRAWINGS
   FOR CMU WALLS SLAB ON GRADE SUPPORT **RE: 3 / S402 RE: 2 / S402 RE: 4 / S402 RE: 5 / S402**
10. "MP1" (EXAMPLE) INDICATES MASONRY PILASTER **RE: 13 / S501 RE: 14 / S501 RE: 15 / S501**
11. G.C. TO RE: ARCH FOR WINDOW OPENINGS IN CMU WALL AND PROVIDE (2) #6 VERTICAL BARS / DOWELS @ EA JAMB IN ALL LOAD-BEARING CMU WALLS

1 FOUNDATION PLAN - GYMNASIUM
1/4" = 1'-0"

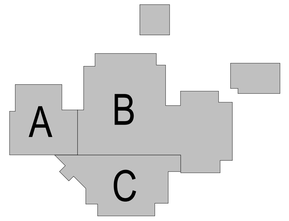
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Revision	By	Appd	
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Issued	By	Appd	
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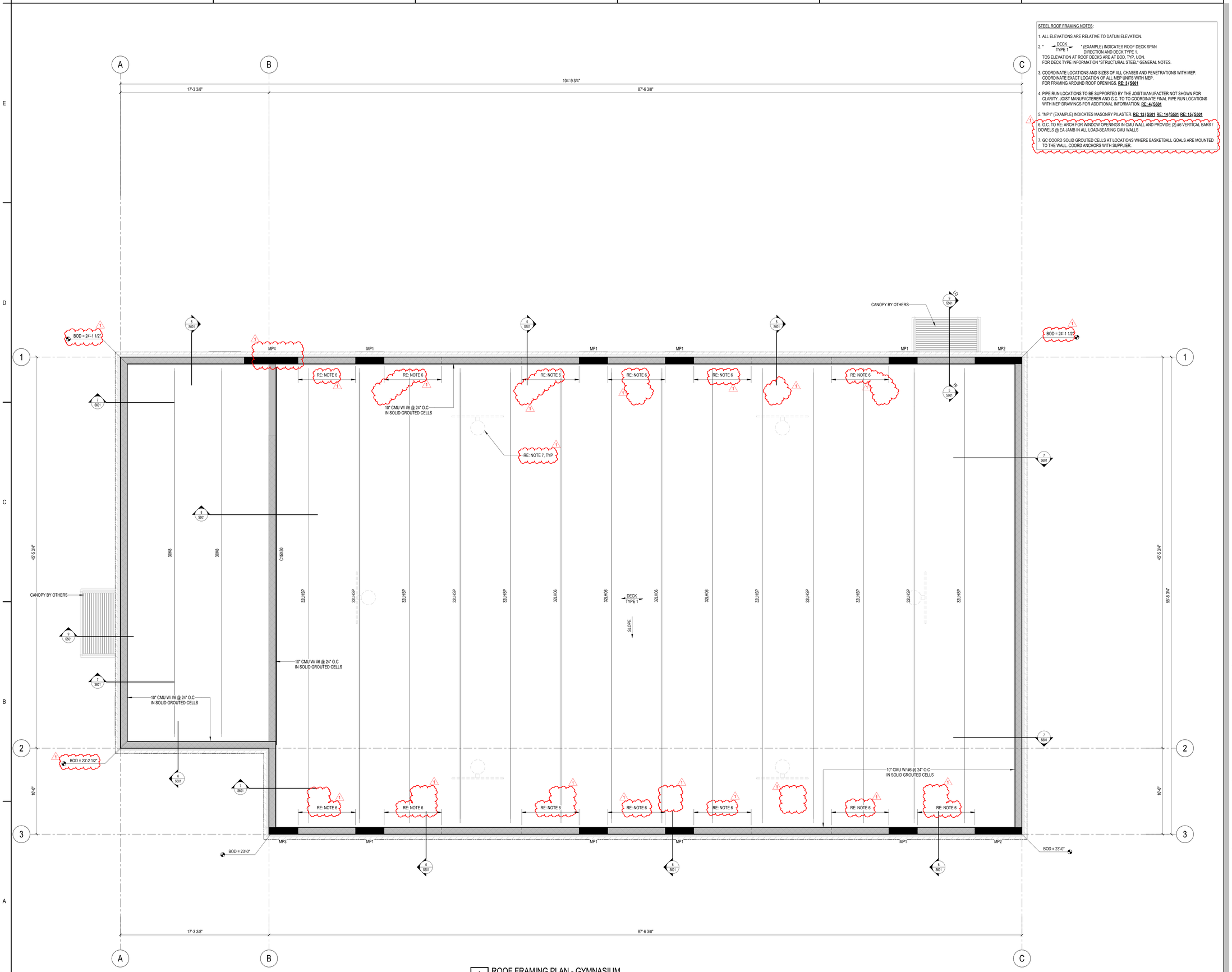
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Title
FOUNDATION PLAN - GYMNASIUM

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	S201A-HES

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ORIGINAL SHEET - ARCH E1

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1 ROOF FRAMING PLAN - GYMNASIUM
1/4" = 1'-0"

STEEL ROOF FRAMING NOTES:

1. ALL ELEVATIONS ARE RELATIVE TO DATUM ELEVATION.
2. " DECK TYPE 1 " (EXAMPLE) INDICATES ROOF DECK SPAN DIRECTION AND DECK TYPE 1.
   TOS ELEVATION AT ROOF DECKS ARE AT BOD, TYP. UON.
   FOR DECK TYPE INFORMATION "STRUCTURAL STEEL" GENERAL NOTES.
3. COORDINATE LOCATIONS AND SIZES OF ALL CHASES AND PENETRATIONS WITH MEP. COORDINATE EXACT LOCATION OF ALL MEP UNITS WITH MEP. FOR FRAMING AROUND ROOF OPENINGS. **RE: 3 / S601**
4. PIPE RUN LOCATIONS TO BE SUPPORTED BY THE JOIST MANUFACTER NOT SHOWN FOR CLARITY. JOIST MANUFACTERER AND G.C. TO TO COORDINATE FINAL PIPE RUN LOCATIONS WITH MEP DRAWINGS FOR ADDITIONAL INFORMATION. **RE: 4 / S601**
5. "MP1" (EXAMPLE) INDICATES MASONRY PILASTER. **RE: 13 / S501 RE: 14 / S501 RE: 15 / S501**
6. G.C. TO RE: ARCH FOR WINDOW OPENINGS IN CMU WALL AND PROVIDE (2) #6 VERTICAL BARS / DOWELS @ EA JAMB IN ALL LOAD-BEARING CMU WALLS
7. GC COORD SOLID GROUTED CELLS AT LOCATIONS WHERE BASKETBALL GOALS ARE MOUNTED TO THE WALL. COORD ANCHORS WITH SUPPLIER.

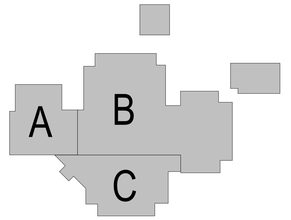
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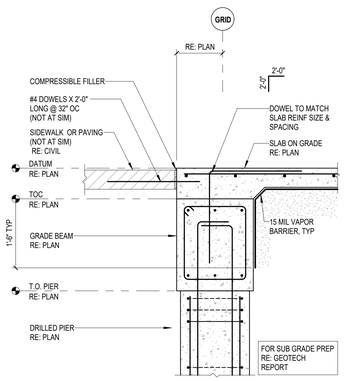
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ROOF FRAMING PLAN - GYMNASIUM

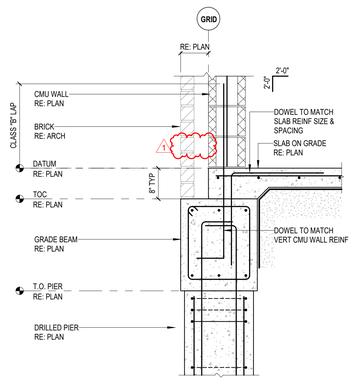
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214001246	As indicated
Revision	Drawing No.
1	S202A-HES

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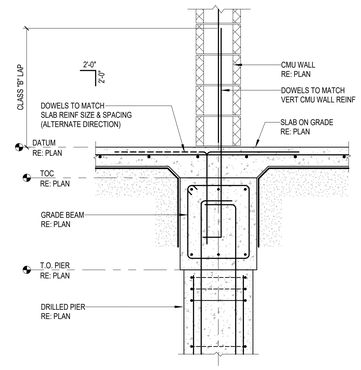
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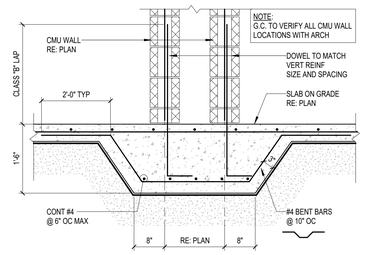
1 FOUNDATION SECTION
3/4" = 1'-0"



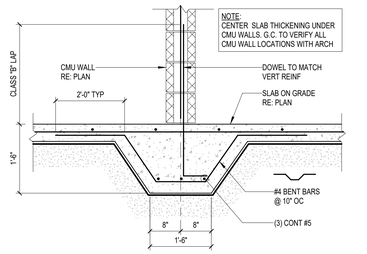
2 FOUNDATION SECTION
3/4" = 1'-0"



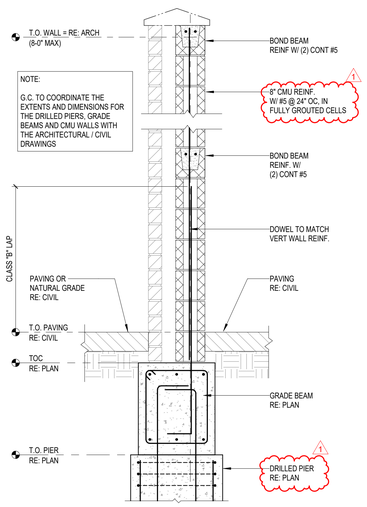
3 FOUNDATION SECTION
3/4" = 1'-0"



4 TYPICAL SLAB THICKEING AT CMU (11'-0" OR LESS)
3/4" = 1'-0"

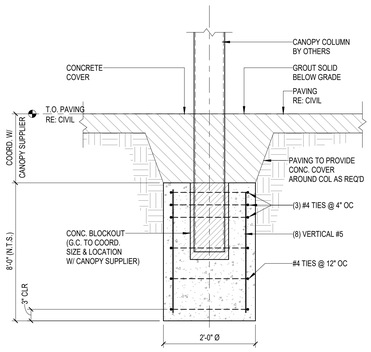


5 TYPICAL SLAB THICKENING AT CMU (11'-0" OR LESS)
3/4" = 1'-0"

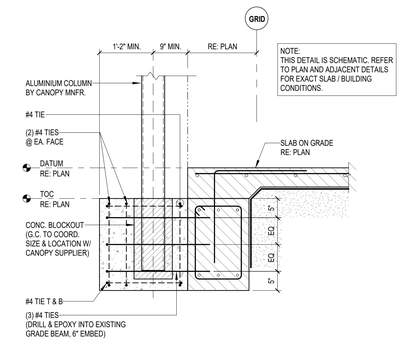


6 TYPICAL CMU SCREEN WALL (8'-0" MAX)
3/4" = 1'-0"

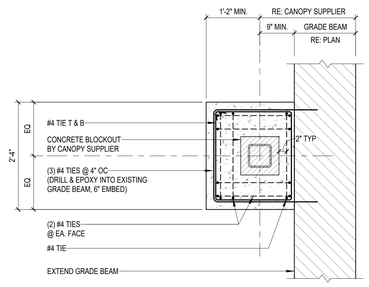
NOTE: THIS CONDITION IS SHOWN FOR PRICING PURPOSES ONLY. G.C. TO COORDINATE FOUNDATION W/ CANOPY SUPPLIER



7 TYPICAL AVADEK CANOPY FOUNDATION
3/4" = 1'-0"



SECTION VIEW OF TYPICAL CONCRETE PLINTH @ CANOPY COLUMNS



PLAN VIEW OF TYPICAL CONCRETE PLINTH @ CANOPY COLUMNS

8 SECTION AT CANOPY COLUMN
3/4" = 1'-0"

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Texas Registered Engineering Firm
F-003426
D + A PROJECT 24-291-00

Notes

1 ADDENDUM #1			10.10.2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued	By	Appd	YYYY.MM.DD
File Name: N/A	JT	AR	LMM 2024.04.11
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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STATE OF TEXAS
FRED DALLY
99904
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

Client/Project Logo

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INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

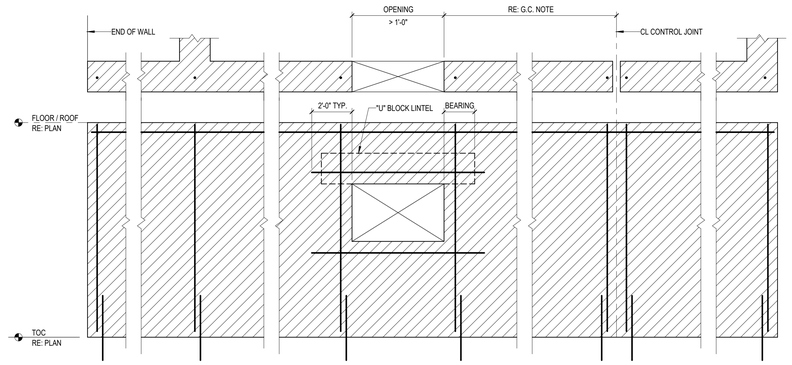
FBISD BP022 GYM RENOVATIONS AND ADDITIONS - HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
SOG @ STRUCTURAL STEEL (GB / PIER)

Project No.	Scale
214001246	3/4" = 1'-0"
Revision	Drawing No.
1	S402-HES

*Plot location in Project Information
10/9/2025 4:43:31 PM
ORIGINAL SHEET - ARCH D1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79



1 TYPICAL CMU WALL ELEVATION
3/4" = 1'-0"

TYPICAL REINFORCED MASONRY NOTES

TYPICAL HORIZONTAL AND VERTICAL REINFORCING BARS SHALL BE AS NOTED ON THE PLAN SHEET. ADDITIONAL REINFORCING SHALL BE AS FOLLOWS

1. (2) #6 VERTICAL REINFORCING BARS SHALL BE PROVIDED, CONTINUOUSLY FROM SUPPORT TO SUPPORT (FINISHED FLOOR TO ROOF) AT:

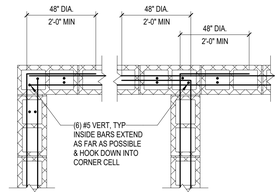
   A. WITHIN 8" OF EACH END OF WALL
   B. EACH WALL INTERSECTION
   C. WITHIN 16" OF EACH SIDE OF A MASONRY OPENING .
   D. WITHIN 8" OF EACH SIDE OF A MASONRY MOVEMENT JOINTS
   E. EACH CORNER OF THE BUILDING
   F. AT 16" OC, FULL HEIGHT

2. (2) #5 HORIZONTAL REINFORCING BARS SHALL BE PROVIDED AT:

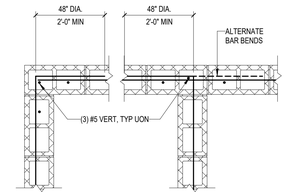
   A. TOP AND BOTTOM OF MASONRY OPENINGS
   B. FLOOR AND ROOF LEVELS, CONTINUOUS
   C. WITHIN 16" OF THE TOP OF MASONRY WALLS, CONTINUOUS.
   D. 8'-0" OC

GC NOTE:
DO NOT LOCATE CONTROL JOINTS WITHIN HALF THE LENGTH OF THE LINTEL (2'-0" MIN) ADJACENT TO THE ROUGH OPENING.

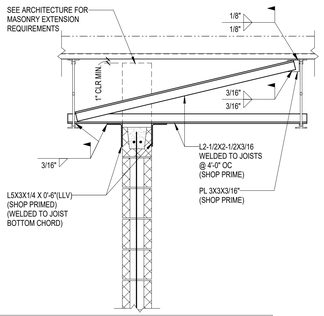
ALL HORIZONTAL REINFORCING WILL BE CONTINUOUS ACROSS CONTROL JOINTS



DOUBLE CURTAIN



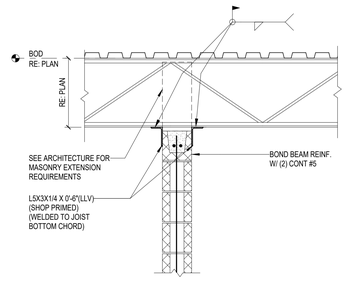
SINGLE CURTAIN



NOTE:

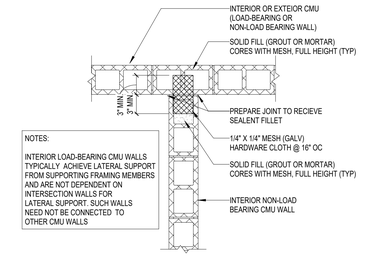
1. THIS DETAIL IS TO BE USED ONLY IF INTEGRAL INTERSECTING SUPPORT WALLS AT EACH END EXCEED A SPACING OF 36 TIMES THE NOMINAL WALL THICKNESS.

2 TYPICAL CMU WALL INTERSECTION
3/4" = 1'-0"

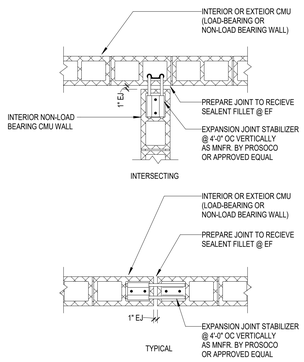


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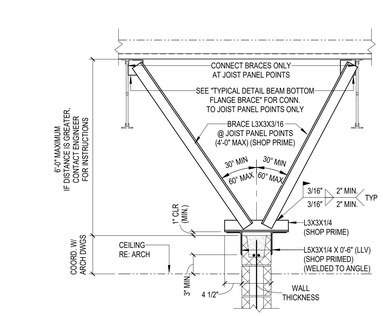
1. THIS DETAIL IS TO BE USED ONLY IF INTEGRAL INTERSECTING SUPPORT WALLS AT EACH END EXCEED A SPACING OF 36 TIMES THE NOMINAL WALL THICKNESS.



3 TYPICAL NON-LOAD BEARING CMU BRACING
3/4" = 1'-0"



4 TYPICAL NON-LOAD BEARING CMU BRACING
3/4" = 1'-0"



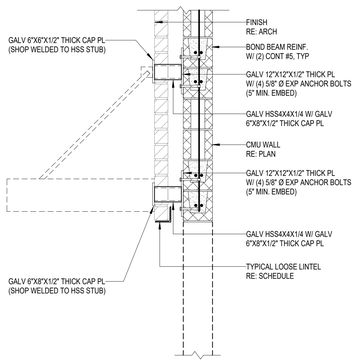
NOTE:
THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 36 TIMES THE NOMINAL WALL THICKNESS.

5 TYPICAL NON-LOAD BEARING CMU BRACING
3/4" = 1'-0"

NOTE:
THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 36 TIMES THE NOMINAL WALL THICKNESS.

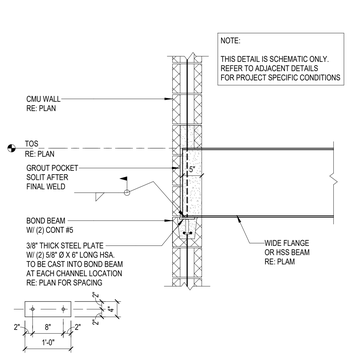
6 TYPICAL NON-LOAD BEARING CMU BRACING
3/4" = 1'-0"

7 52A12 - Typical CMU Expansion Joint
3/4" = 1'-0"

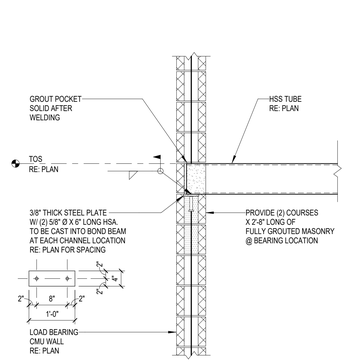


8 TYPICAL CMU EXPANSION JOINT
3/4" = 1'-0"

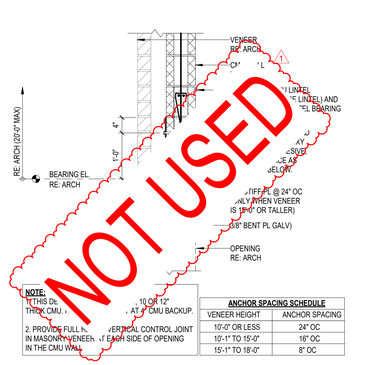
9 TYPICAL CMU @ CANOPY (BRICK)
3/4" = 1'-0"



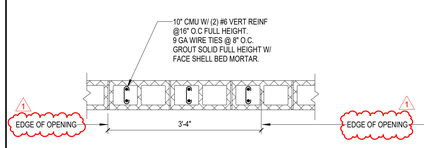
10 TYPICAL LB CMU @ STL BM
3/4" = 1'-0"



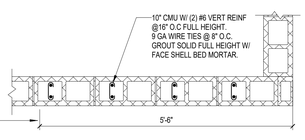
11 TYPICAL LB CMU @ STL BM
3/4" = 1'-0"



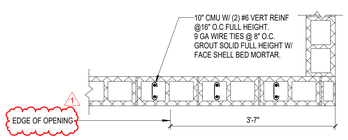
12 CMU BRICK LINTEL
3/4" = 1'-0"



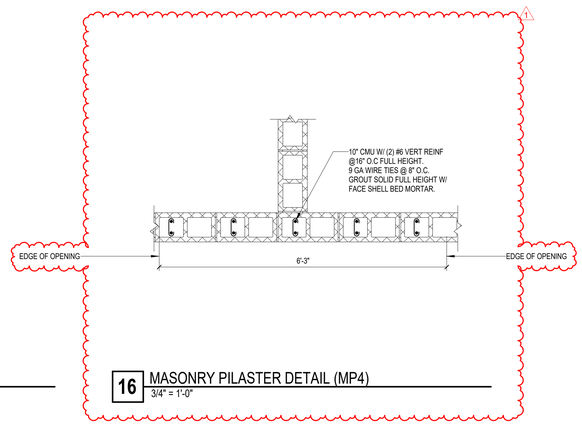
13 MASONRY PILASTER DETAIL (MP1)
3/4" = 1'-0"



14 MASONRY PILASTER DETAIL (MP2)
3/4" = 1'-0"



15 MASONRY PILASTER DETAIL (MP3)
3/4" = 1'-0"



16 MASONRY PILASTER DETAIL (MP4)
3/4" = 1'-0"

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Texas Registered Engineering Firm
F-003426
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Notes

1	ADDENDUM #1			10.10.2025
Revision		By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT				2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		JT	AR	LMM 2024.04.11
		Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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FRED DALLY 99904 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
10/10/2025

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2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

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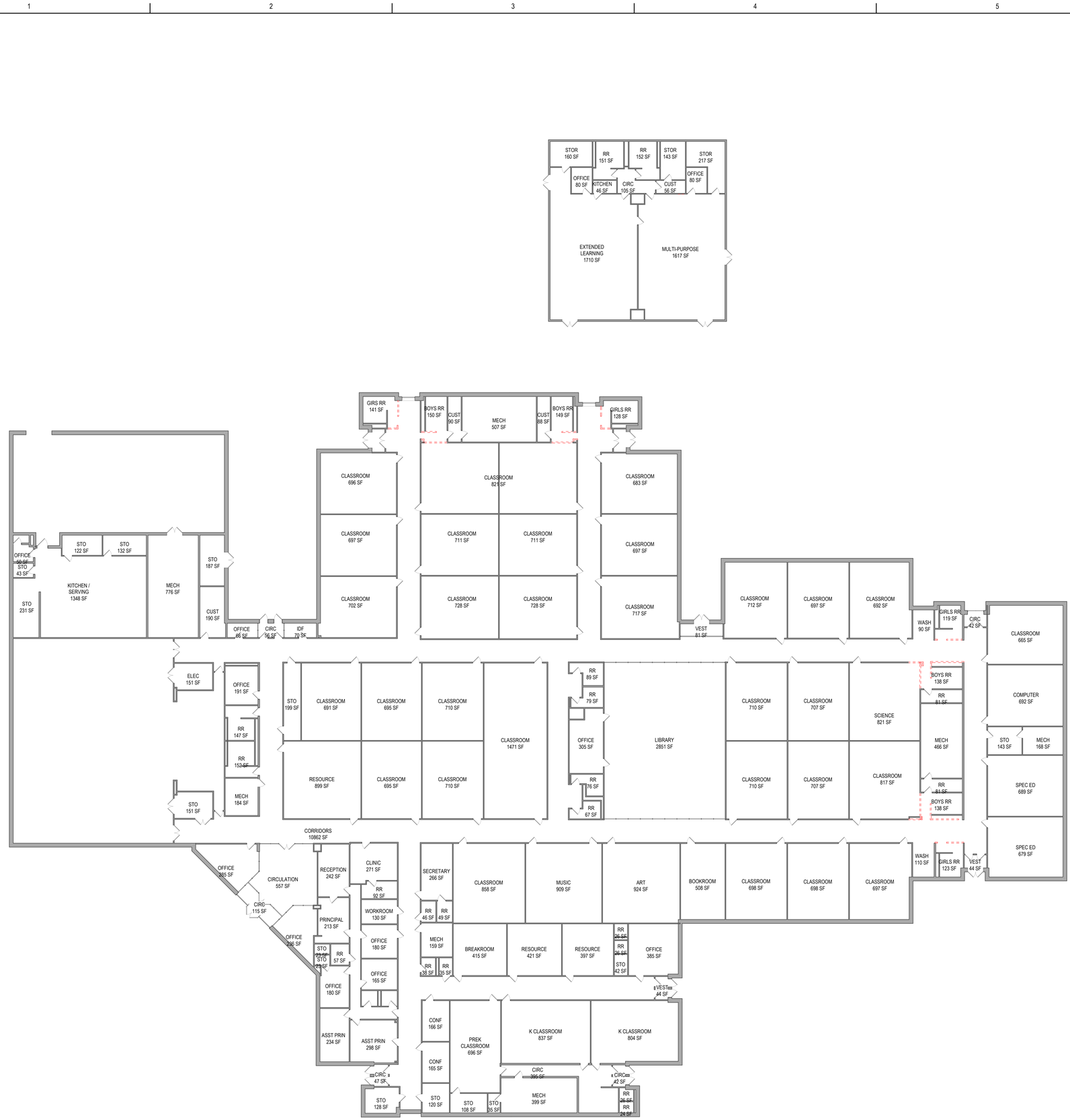
FBISD BP022 GYM RENOVATIONS AND ADDITIONS - HUNTERS GLEN ELEMENTARY SCHOOL
695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
TYPICAL CMU WALL DETAILS

Project No.	Scale
214001246	3/4" = 1'-0"
Revision	Drawing No.
1	S501-HES

*Plot location in Project Information
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ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79



DEMOLITION ARCHITECTURAL FLOOR PLAN

A1 / AD100 — HGES

1/16" = 1'-0"

ORIGINAL SHEET - ARCH E1

eP04 location in Project Information
08/6/2025 7:26:37 PM

LEGEND

- EXISTING WALLS RO REMAIN
- EXISTING PARTITIONS TO BE DEMOLISHED

GENERAL DEMOLITION REQUIREMENTS

GENERAL:

1. VISIT THE SITE TO UNDERSTAND THE SCOPE OF WORK AND TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING THIS PROJECT. REPORT DISCREPANCIES OR AMBIGUOUS ITEMS TO THE ARCHITECT PRIOR TO BIDDING FOR CLARIFICATION.
2. FIELD VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION WORK.
3. COORDINATE DEMOLITION WORK WITH PLAN SHEETS AD100 & ASD100 REFER TO SHEET A501 FOR DOOR AND WINDOW FRAME TYPES AND DETAILS AT NEW OPENINGS IN EXISTING WALLS.
4. REFER TO CIVIL, STRUCTURAL, AND MEP DRAWINGS FOR ADDITIONAL DEMOLITION AND ALTERATION REQUIREMENTS. PATCH WALLS WHERE FIXTURES AND EQUIPMENT ARE DEMOLISHED TO MATCH EXISTING ADJACENT SURFACE.
5. THE OWNER HAS FIRST RIGHTS OF SALVAGE OF ALL FIXTURES, EQUIPMENT AND BUILDING MATERIALS REMOVED AS PART OF THE DEMOLITION AND NOT REUSED IN THE NEW CONSTRUCTION. REMOVE ALL OTHER DEBRIS AND WASTE FROM THE SITE AND DISPOSE OF PROPERLY, IN ACCORDANCE WITH ANY APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
6. PRIOR TO START OF DEMOLITION, SECURE FROM THE OWNER A LIST OF ADDITIONAL EXISTING BUILDING COMPONENTS TO BE SALVAGED AND DELIVERED TO THE OWNER. EXERCISE SUFFICIENT CARE IN $_D$ OPERATIONS SUCH THAT SALVAGED COMPONENTS ARE DELIVERED TO THE OWNER IN THEIR EXISTING UNDAMAGED CONDITION.
7. DEMOLITION WORK IS TO BE DONE IN PHASES.
8. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL LOOSE EQUIPMENT FURNITURE AND FURNISHINGS IN ROOMS AFFECTED BY SCOPE OF WORK, PROVIDING BOXES FOR SUCH ITEMS AND MOVING THE EQUIPMENT, FURNITURE AND FIXTURES BACK AT THE END OF CONSTRUCTION.

STRUCTURAL INTEGRITY:

1. PROVIDE SHORING, BRACING, AND SUPPORTS AS REQUIRED TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE PROJECT BEFORE CUTTING OR ALTERING ANY OPENING IN AN EXISTING LOAD BEARING OR NON-LOAD BEARING WALL, FOOTING, OR ROOF DECK.

CUTTING AND PATCHING:

1. PROVIDE MATERIALS FOR CUTTING AND PATCHING WHICH WILL RESULT IN EQUAL-OR-BETTER WORK THAN THAT BEING CUT OR PATCHED.
2. REMOVE EXISTING CONSTRUCTION SO AS NOT TO DAMAGE EXISTING CONSTRUCTION THAT IS TO REMAIN. PATCH FLOORS, WALLS AND CEILINGS IN A RECTANGULAR PATTERN TO MATCH EXISTING CONDITIONS AND MAKE THEM READY TO RECEIVE ANY NEW FINISHES INDICATED.
3. CAP PLUMBING LINES THAT ARE TO BE REMOVED BELOW FLOOR OR BEHIND WALL, OR REMOVE THEM COMPLETELY. PATCH FLOORS AND WALLS TO MATCH EXISTING CONDITIONS. REFER PLUMBING DOCUMENTS FOR ADDITIONAL REQUIREMENTS.
4. AT AREAS WHERE EXISTING FLOOR MOUNTED TOILET ROOM FIXTURES ARE TO BE REMOVED, ALSO REMOVE APPROXIMATELY 30 SF OF TILE FROM THE FLOOR AND 40 SF OF TILE FROM THE WALL. PREPARE THIS AREA TO RECEIVE NEW TILE. THE LAYOUT AND EXACT AMOUNT OF TILE TO BE REMOVED SHALL BE AT THE DIRECTION OF THE ARCHITECT.
5. AT AREAS WHERE EXISTING WALL MOUNTED TOILET ROOM FIXTURES ARE TO BE REMOVED, ALSO REMOVE APPROXIMATELY 40 SF OF TILE FROM THE WALL. PREPARE THIS AREA TO RECEIVE NEW TILE. THE LAYOUT AND EXACT AMOUNT OF TILE TO BE REMOVED SHALL BE AT THE DIRECTION OF THE ARCHITECT.
6. WHERE EXISTING FLOORING, CEILINGS OR WALL FINISHES ARE TO BE REMOVED AND REPLACED WITH NEW FINISHES, SURFACES TO REMAIN SHALL BE STRIPPED CLEAN OF ALL EXISTING FINISHES AND MADE READY TO RECEIVE NEW FINISHES.
7. INSPECT FLOORS TO RECEIVE NEW FINISHES PRIOR TO BID. COMPLETELY REMOVE FLOOR FINISHES TO BE REPLACED UON. CLEAN AND PROPERLY PREPARE THE EXISTING SUBSTRATE PRIOR TO INSTALLATION OF NEW FINISH MATERIAL. STRIP, PATCH, AND FILL TO PROVIDE A SMOOTH, DURABLE SURFACE FREE OF BURRS AND ADHESIVE AND SUITABLE FOR APPLICATION OF NEW FINISH MATERIAL. UNDER CUT OF DOORS TO ACCOMMODATE NEW FLOOR FINISH WHERE NEW FINISH IS THICKER THAN ORIGINAL FINISH.
8. WHERE NEW CONCRETE TOPPING IS TO BE PLACED OVER EXISTING CONCRETE SLAB, ABRADE EXISTING CONCRETE FINISH FOR BETTER BOND.
9. REMOVE FRAME AND PATCH WALL WITH SAME ADJACENT MATERIAL AND FINISH AS EXISTING WHERE EXISTING DOOR OPENINGS ARE TO BE SEALED. ALIGN NEW AND EXISTING WALLS (UON).
10. REMOVE EXPANSION JOINT COVERS (FLOOR, WALL, AND CEILING) THAT ARE DAMAGED DURING DEMOLITION AND REPLACE WITH NEW COVERS OF THE SAME TYPE AND FINISH (OR WITH NEW AS DETAILED, WHERE INDICATED).
11. COORDINATE WITH ROOF PLAN SHEET A133 AND DETAILS FOR SELECTED DEMOLITION OF ROOF AREAS.
12. EXISTING DOORS, FRAMES, AND HARDWARE THAT ARE REMOVED MAY BE REUSED, WHERE INDICATED ON PLANS, IF IN GOOD CONDITION IN THE OPINION OF THE ARCHITECT AND OWNER.
13. WHERE INDICATED, REMOVE TACKBOARDS, CHALKBOARDS, MISCELLANEOUS DISPLAY RAILS, AND TOILET ROOM ACCESSORIES. SALVAGE REMOVED ITEMS FOR OWNER OR REINSTALL AS INDICATED IN DRAWINGS AND SPECIFICATIONS. CLEAN AND PREPARE WALL AS REQUIRED FOR NEW EQUIPMENT OR TO RECEIVE A NEW FINISH.

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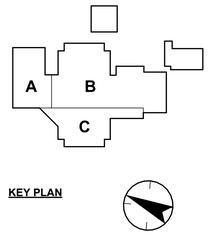
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Revision	By	Appd	YYYY.MM.DD

Issued	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24

File Name: N/A	Author	Designer	Checker	12/03/24
	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

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REGISTERED ARCHITECT — DANIELLE PUNA — 28296 — STATE OF TEXAS

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2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
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FBISD BP022 GYM RENOVATIONS AND ADDITIONS

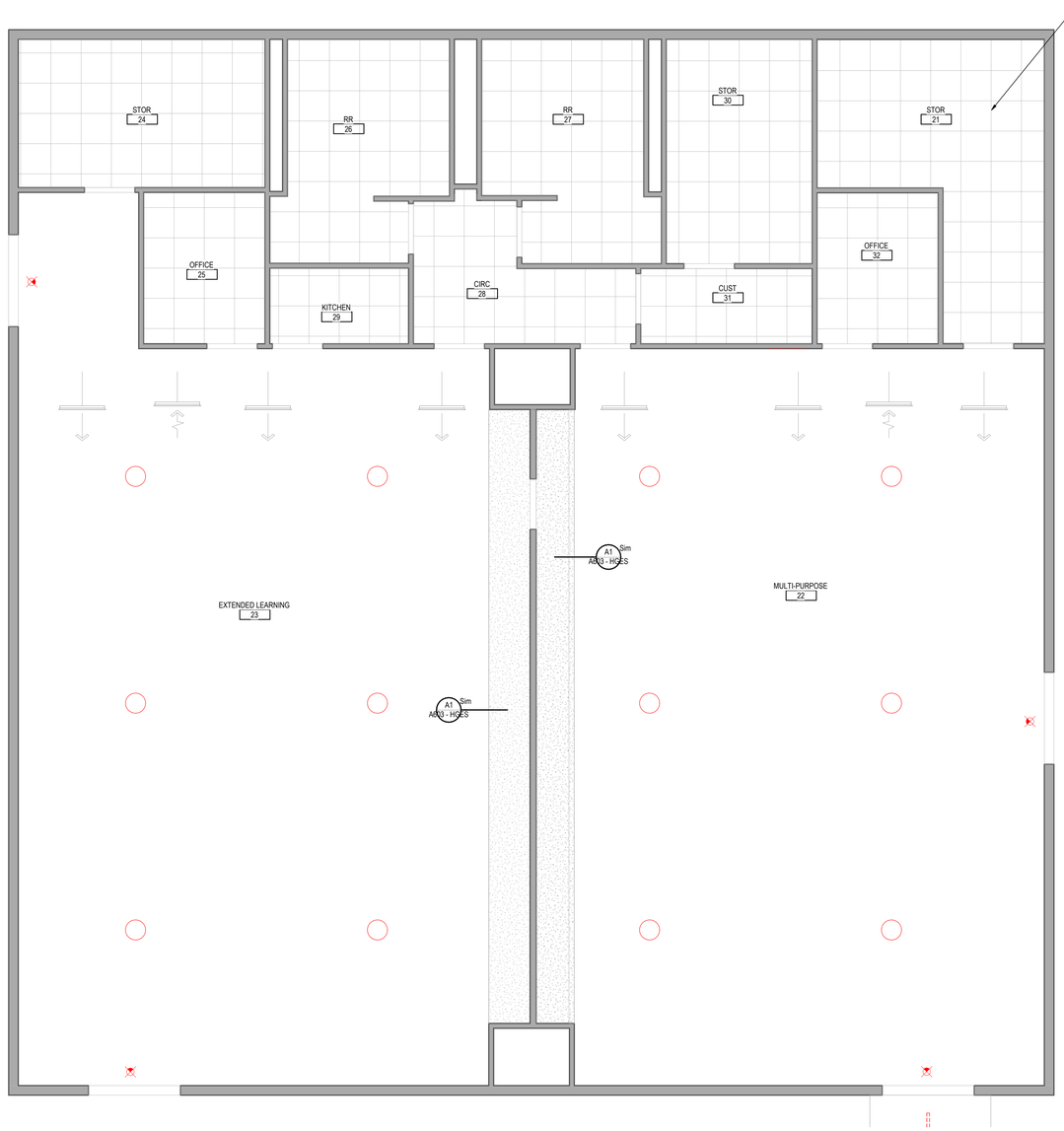
695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
ARCHITECTURAL DEMOLITION PLAN

Project No.	Scale
214001246	As indicated
Revision	Drawing No.

AD100 - HGES

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79



A1 AD602 HGES

DEMOLITION REFLECTED CEILING PLAN - ELP

1/4" = 1'-0"

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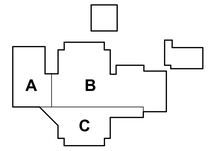
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1	Addenda #1			10.09.2025
Revision		By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT				2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		Author Dwn.	Designer Dsgn.	Checker Chkd.	12/03/24 YYYY.MM.DD

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2024 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project

FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title

ARCHITECTURAL DEMOLITION PLAN
REFLECTED CEILING PLAN - ELP

Project No.	Scale
214001246	1/4" = 1'-0"

Revision 1

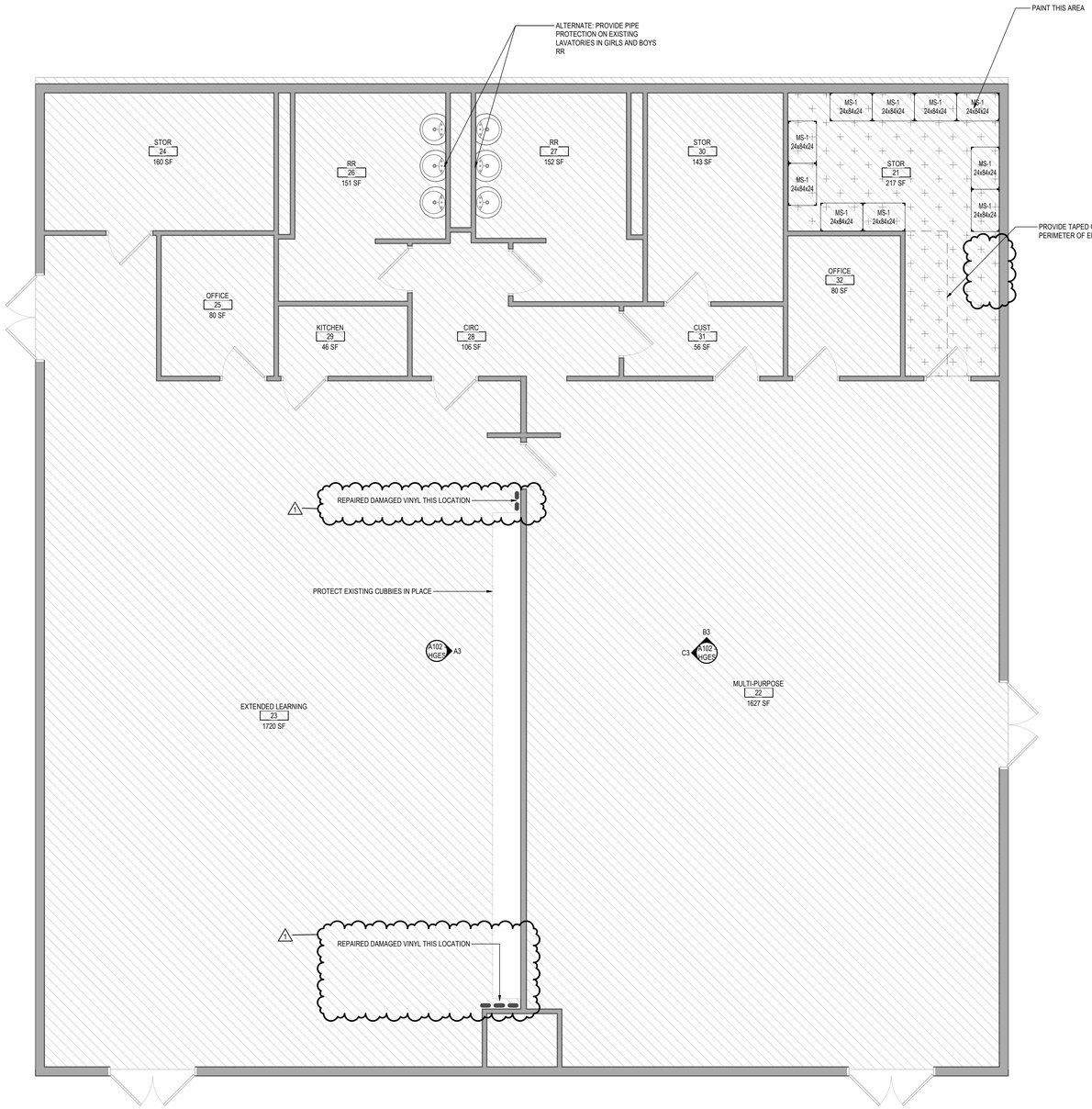
Drawing No.

AD602 - HGES

ORIGINAL SHEET - ARCH E1

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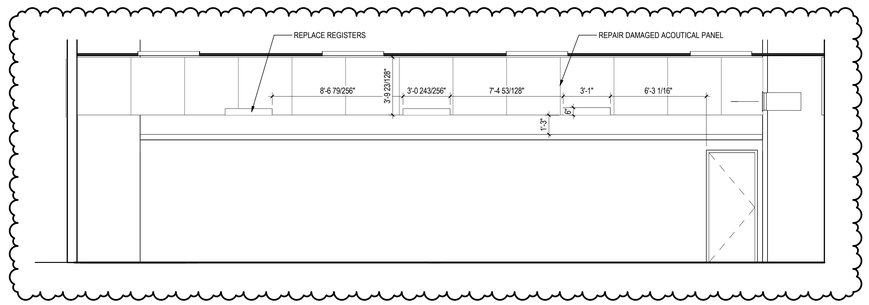
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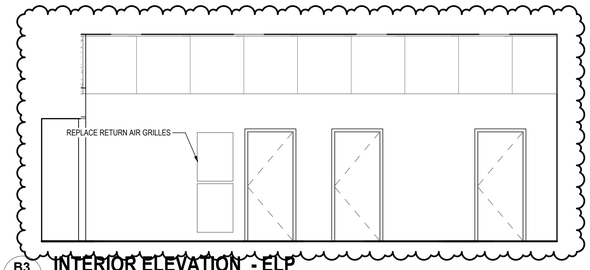
A1 A102 — **EXTENDED DAY LEARNING FLOOR PLAN**
1/4" = 1'-0"
HGES

GENERAL NOTES

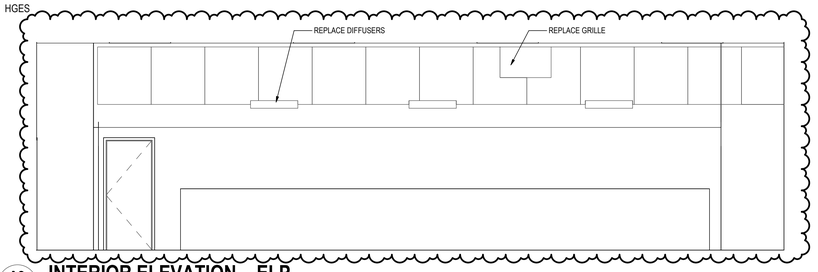
1. PROVIDE INSULATING PIPE PROTECTION AROUND EXISTING LAVATORIES IN GIRLS AND BOYS RESTROOMS. RE: PLUMBING
2. REPLACE DIFFUSERS (6) AND (3) RETURN AIR GRILLES. RE: MEP
3. FIX DAMAGED FABRIC WRAPPED ACOUSTICAL PANELS
4. REPAIR VINYL FACING ON WALLS
5. REPLACE DAMAGED EXIT SIGN
6. REPAIR ANY ACOUSTIC FABRIC THAT COMES ALOOSE DURING COURSE OF CONSTRUCTION AND DURING REPLACEMENT OF GRILLES/REGISTERS.
7. LOCATIONS OF AIR GRILLES AND SUPPLY DIFFUSERS, AND ACOUSTIC PANELS ARE APPROXIMATIONS. CONTRACTOR RESPONSIBLE FOR CONFIRMING LOCATION AND SIZE.



C3 A102 — **INTERIOR ELEVATION - ELP**
1/4" = 1'-0"
HGES



B3 A102 — **INTERIOR ELEVATION - ELP**
1/4" = 1'-0"
HGES



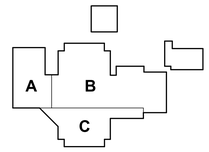
A3 A102 — **INTERIOR ELEVATION - ELP**
1/4" = 1'-0"
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Notes



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1 Addenda #1			10.09.2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued	By	Appd	YYYY.MM.DD
File Name: N/A	Author Dwn.	Designer Dsgn.	Checker Chkd. 11/13/24 YYYY.MM.DD

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2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

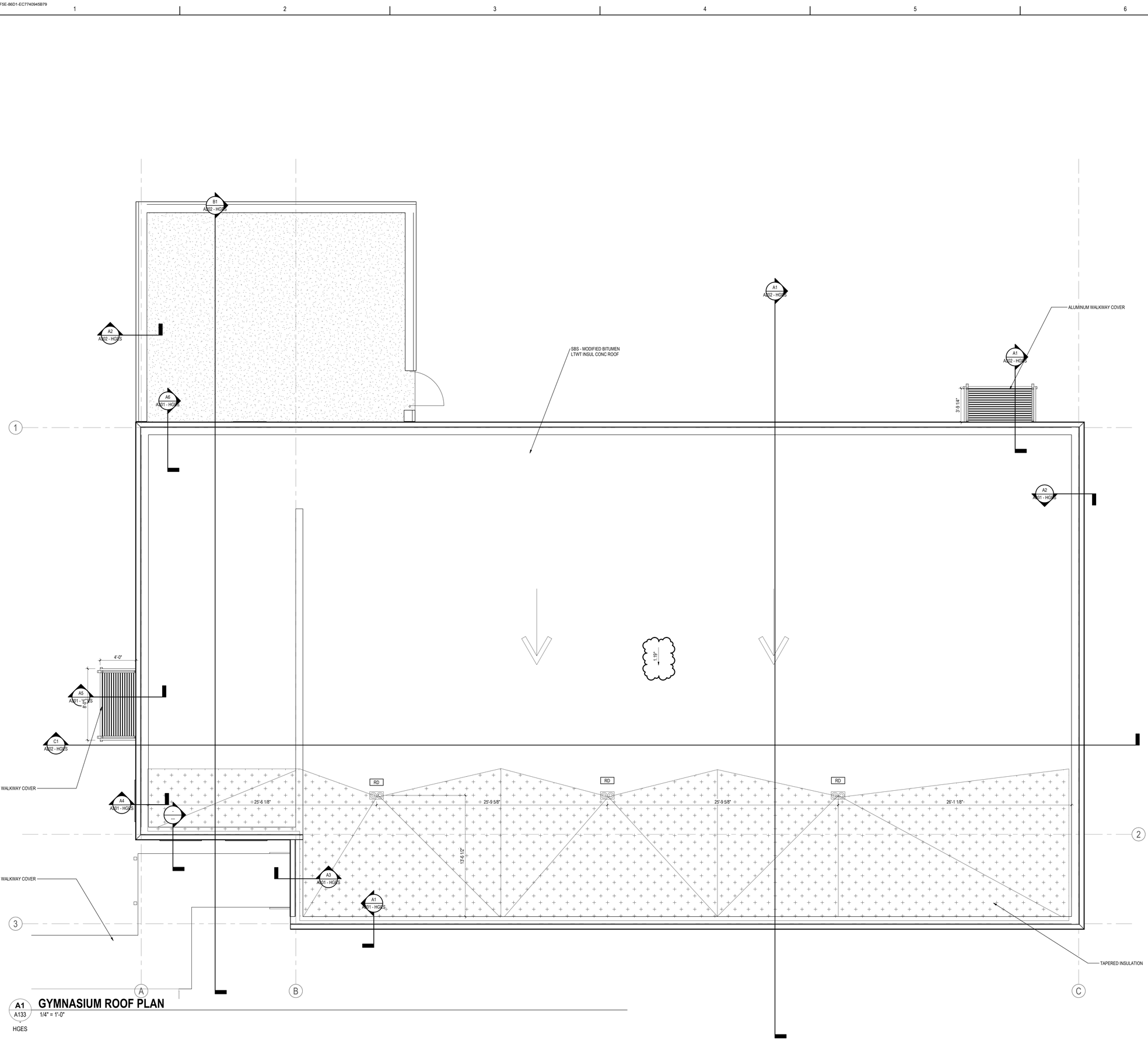
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Title
FLOOR PLAN - EXTENDED DAY LEARNING

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	A102 - HGES

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A1 / A133 — **GYMNASIUM ROOF PLAN**
1/4" = 1'-0"
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Notes

A
B
C

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1	Addenda #1			10.09.2025 YYYY.MM.DD

	Issued	By	Appd	
100%	ISSUE FOR BID AND PERMIT			2025.09.24 YYYY.MM.DD

File Name: N/A — Author: Dwn. — Designer: Dsgn. — Checker: Chkd. — 04/18/25 YYYY.MM.DD

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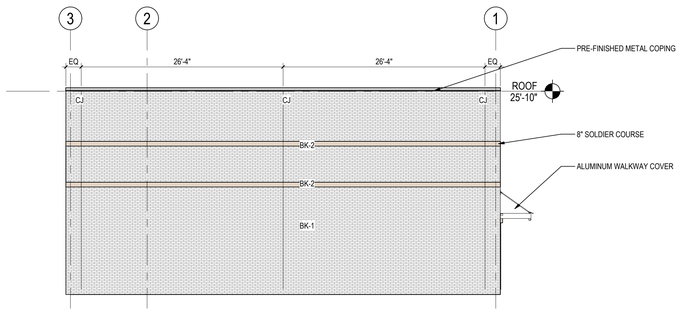
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ROOF PLAN

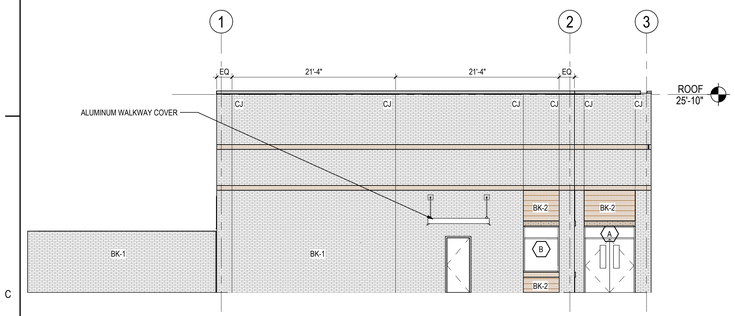
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Revision 1
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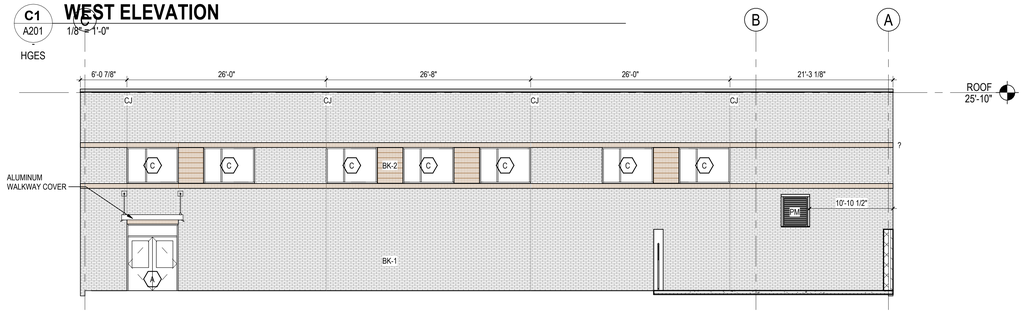
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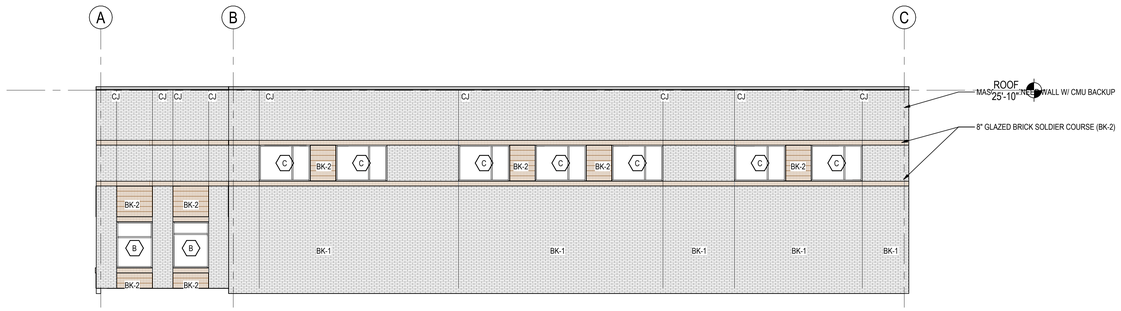
D1 A201 EAST ELEVATION
1/8" = 1'-0"
HGES



C1 A201 WEST ELEVATION
1/8" = 1'-0"
HGES



B1 A201 NORTH ELEVATION
1/8" = 1'-0"
HGES



A1 A201 SOUTH ELEVATION
1/8" = 1'-0"
HGES

MATERIAL SCHEDULE - EXTERIOR

MATERIAL	MARK	MANUFACTURER	COLOR	STYLE	REMARKS	E P D	H P D	CLASSIFICATION
ALUMINUM FRAMES	-	KAWNEER	-	IR501T	-			
BRICK	BK1	INTERSTATE	TUMBLEWEED	MODULAR/ @RIDGEGATE KING SIZED	RUNNING BOND			
BRICK	BK2	BELDEN	DOLPHIN GRAY	MODULAR GLAZED	RUNNING BOND/VERTICAL STACKED BOND RE: ELEV			
BRICK	BK3	BELDEN	CRANBERRY	MODULAR GLAZED	RUNNING BOND/VERTICAL STACKED BOND RE: ELEV			
BRICK	BK4	CLOUD CERAMICS	DOVE GREY	MODULAR	RUNNING BOND			
GLAZING	GL -1	GUARDIAN	CLEAR	1-5/16" INSULATED LAMINATED GLAZING				
GLAZING	GL-2	GUARDIAN	CLEAR	9/16" LAMINATED GLASS				
GLAZING	GL-3	GUARDIAN	CLEAR	1/4" TEMPERED INTERIOR				
GLAZING	GL-4	FIRELITE	CLEAR	SUPERLITEII -XL - 5/8" FIRE RATED LAMINATED GLAZING				
GLAZING	GL- 5	FIRELITE	CLEAR	SUPERLITE-II - X- 45 1-3/4" INSULATED LAMINATED FIRE RATED GLAZING				
HOLLOW METAL FRAMES	-		PAINTED					NFPA 285
METAL PANEL	MP-1			METAL PANEL	BERRIDGE			
MORTAR	-	-	-	-	-			

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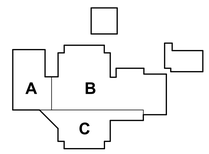
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	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

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Title
EXTERIOR ELEVATIONS - GYMNASIUM

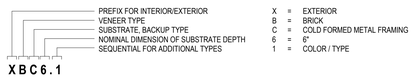
Project No.	Scale
214001246	1/8" = 1'-0"
Revision	Drawing No.
1	A201 - HGES

*Plot location in Project Information
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ORIGINAL SHEET - ARCH E1

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BUILDING SYSTEMS TYPES TABLE



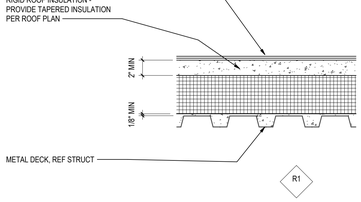
PREFIX	
X	= EXTERIOR

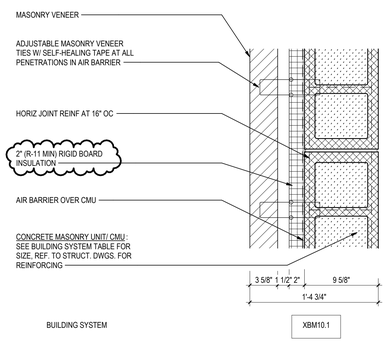
VENEER TYPES	
B	= BRICK
M	= CMU (MASONRY)
0	= NO VENEER

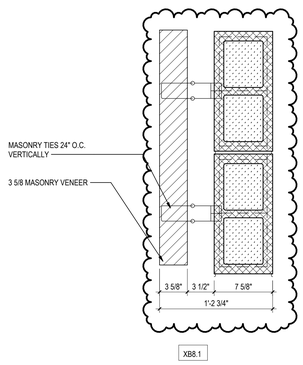
SUBSTRATE		NOMINAL DEPTH	
C	= COLD FORMED METAL FRAMING (CFMF)	4 = 4"	
		6 = 6"	: 6" x 16 GA. @ 16" O.C. - 12" O.C. AT 10'-0" FROM ALL CORNERS
		8 = 8"	: 8" x 16 GA. @ 16" O.C. - 12" O.C. AT 10'-0" FROM ALL CORNERS
M	= CONCRETE MASONRY UNIT (CMU)	6 = 5 5/8 "	
		8 = 7 5/8 "	
		10 = 9 5/8 "	
		12 = 11 5/8 "	

WALL ASSEMBLY LEGEND

1" = 1'-0"







GENERAL NOTES - WALL SECTIONS:

GENERAL

1. THE SECTIONS DO NOT INDICATE ALL INSTANCES OF MASONRY BANDING, CORBELLING, AND OTHER VENEER CONDITIONS. REFER TO SECTION DETAILS AND EXTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.

ROOF / FLASHING AND MISC CONSTR

1. MULTI-PLY ROOF WORK NOT SPECIFICALLY DETAILED SHALL BE DESIGNED AND EXECUTED IN ACCORDANCE WITH 'NRCA' MANUAL REQUIREMENTS.
2. SHEET METAL WORK NOT SPECIFICALLY DETAILED SHALL BE DESIGNED AND EXECUTED IN ACCORDANCE WITH 'SMACNA' MANUAL REQUIREMENTS.
3. WHERE 'SMACNA' MANUAL IS REFERENCED, THESE DOCUMENTS REFER TO THE 7TH EDITION, 2012.
4. JOINTS FOR COPINGS, ROOF EDGES AND EXPOSED FLASHING SHALL BE PER 'SMACNA', TABLE 3-1, PROVIDE JOINT J5 FOR PREFINISHED MATERIAL FOR COPING (24 GA UP TO 18" WIDE AND 22 GA UP TO 18" WIDE) AND JOINT J8 FOR GALVALUM AND GALV MATERIAL TOP BACK OF PARAPET.
5. THROUGH-WALL COUNTERFLASHINGS SHALL BE TWO-PIECE PREFIN GALV STL IAW 'SMACNA' MANUAL FIG 4-4C, W/ HOLD-DOWN CLIPS 32" OC UON.
6. WEEPS SHALL BE AT 24" OC AT MASONRY VENEER UON. WEEPS SHALL BE AT 32" OC WHERE MASONRY VENEER IS CMU.
7. PROVIDE CONT WATERSTOPS AT ALL EXTERIOR WALLS THAT DO NOT HAVE A BRICK LEDGE. WATERSTOP SHALL BE CONT EMBEDDED SST FLASHING W/ 1" MIN EMBED INTO CONC SLAB AND SHALL LAP 6" MIN OVER EXT GYP SHEATHING/UNDER VAPOR PERMEABLE AIR BARRIER -OR- SHALL LAP 6" MIN OVER CMU BACKUP/UNDER RIGID INSUL AND VAPOR PERMEABLE AIR BARRIER. ALIGN WATERSTOP W/ OUTSIDE FACE OF EXT GYP SHEATHING OR CMU BACKUP.
8. ALL PENETRATIONS IN RATED WALLS AND FLOORS SHALL HAVE FIRESTOPPING AS REQUIRED PER CODE.
9. REFER TO 'LOOSE STEEL ANGLE LINTEL FOR MASONRY VENEER' SCHEDULE, SHEET A003 FOR UNDESIGNATED, UNBRACED VENEER, PER SPAN, AT WALL OPENINGS.
10. REFER TO 'MISC STEEL BRACING' SCHEDULE AT SHEET A006 FOR UNDESIGNATED MISC STL BRACING FOR WALLS.
11. REFER TO STRUCT DOCS FOR EXACT LOCATIONS AND TYPES OF STRUCT MEMBERS FOR JOIST BEARING , TOP OF STEEL/BOTTOM OF DECK ELEVATIONS, AND FOR COMPLETE DETAILS OF ALL STRUCT CONNECTIONS. INDICATIONS IN WALL SECTIONS ARE FOR COORDINATION PURPOSES ONLY. NOTIFY ARCHITECT OF ANY DISCREPANCIES
12. REFER TO ELEVATIONS AND STRUCT DOCS FOR MASONRY VENEER PATTERNS, BRICK LEDGES AND STEPS IN PARAPETS.
13. SUSP/BRACED AND FRAMED PCP SOFFITS THAT MEET WALLS SHALL HAVE CONT PERIMETER SOFFIT VENTS, UON.
14. REFER TO FLOOR PLANS FOR EXACT PLACEMENT OF WINDOWS.
15. REFER TO CODE SHEETS (G-SERIES) FOR FIRE ASSEMBLY REQUIREMENTS AND EXTENTS.
16. PROVIDE SPRAYED-ON FIRE PROOFING IAW ASSEMBLIES INDICATED ON CODE SHEET G101 - G10X AS REQUIRED TO COMPLY WITH LOCAL CODE REQUIREMENTS INDICATED.
17. REFER TO INTERIOR ELEVATIONS FOR LOCATIONS OF SOUND ABSORBING CMU IN GYMNASIUMS.

CFMF, STL STUD AND GYP BD SYSTEM CONSTR

1. METAL FRAMING FOR EXTERIOR WALLS SHALL BE CFMF AND INTERIOR METAL FRAMING SHALL BE STL STUDS, UON.
2. UNDESIGNATED CFMF SHALL BE 16GA MIN W/ 1 5/8" MIN WIDE FLANGES AT 16"OC MIN (12"OC MAX FOR 10'-0" EA SIDE AT OUTSIDE CORNERS). REFER TO BUILDING SYSTEM TYPES AND DETAILS FOR MEMBER DEPTHS. CFMF SYSTEMS SUPPORTING MASONRY VENEER SHALL RESIST CODE REQUIRED WIND PRESSURES AT DEFLECTION LESS THAN OR EQUAL TO L/600. CFMF SYSTEMS NOT SUPPORTING MASONRY VENEER SHALL RESIST CODE REQUIRED WIND PRESSURES AT DEFLECTION LESS THAN OR EQUAL TO L/360. NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN THESE CRITERIA AND INDICATED CFMF MEMBER SIZES AND SPACINGS.
3. CFMF AND STUD MEMBERS SHALL HAVE BOTH FLANGES BRACED - WHERE THERE IS NO SHEATHING OR FINISH MATERIAL CALLED OUT, PROVIDE V-BAR BRACING OR BRIDGING AT 24"OC MAX.
4. CFMF BRIDGING SHALL BE 6"x18GA CFMF AT 24"OC, UON.
5. WHERE CFMF ARE 12"OC, VENEER TIES SHALL BE 16"OC VERT AND 12"OC HORIZONTAL
6. ALL BATT INSUL IN EXT WALLS SHALL BE UNFACED. WHERE CFMF STUD DEPTH EXCEED INSUL THICKNESS, INSUL SHALL BE PLACED AT EXT SIDE OF STUD.
7. PROVIDE CONT SPECIFIED VAPOR PERMEABLE AIR BARRIER ON OUTSIDE FACE OF GYP SHEATHING OR OUTSIDE FACE OF CMU BACK-UP AS REQUIRED BY BUILDING SYSTEM TYPE.
8. AT RADIUSED SURFACES IN GYP BD BULKHEADS USE APPROPRIATE THICKNESS OF GYP BOARD TO ACHIEVE INDICATED RADIUS. USE APPROPRIATE NUMBER OF LAYERS OF GYP BD TO MAINTAIN THICKNESS OF WALLBOARD INDICATED IN DETAILS AND PARTITION TYPES. PREVENT FLAT AREAS BETWEEN FRAMING BY SPACING STUDS CLOSER THAN NORMAL. WORK SHALL BE PERFORMED IN ACCORDANCE WITH GYPSUM ASSOCIATION PUBLICATION GA-226.
9. CFMF SHALL BE BRACED AS REQUIRED TO MAINTAIN STUD SPANS PER MFR HEIGHT LIMITING TABLES. STUD BRACING SHALL OCCUR ABOVE CEILINGS ONLY. WHEN THIS IS NOT POSSIBLE PROVIDE STUDS OF AN APPROPRIATE GAUGE OR DEPTH FOR THE CONDITION.
10. REFER TO 'DOOR AND WINDOW JAMB SCHEDULE' ON SHEET A006 FOR NUMBER OF STUDS AT JAMBS IN CFMF AND STL STUD AND GYP BD CONSTR.

CMU CONSTR

1. CMUMASONRY MULTI-WYTHE CAVITY WALLS SHALL HAVE LADDER DESIGN HORIZ REINF AT 16" OC.
2. ALL INTERIOR SINGLE WYTHE CMU WALLS SHALL HAVE HORIZONTAL JOINT REINFORECEMENT AT 16" OC.
3. REFER STRUCT DOCS FOR DESIGN OF LOAD-BEARING WALL AND EXTERIOR NON-LOADBEARING WALLS.
4. UNDESIGNATED CMU BOND BEAMS SHALL HAVE CONT #5 BARS AT TOP AND BOTTOM AND SHALL BE GROUTED SOLID.
5. PROVIDE CONT BOND BEAMS AT TOPS OF ALL CMU WALLS UNLESS OTHERWISE INDICATED. PROVIDE STEPS AS REQUIRED FOR SLOPES.
6. WHERE A BOND BEAM IS INTERRUPTED BY A WALL OPENING, THE BOND BEAM SHALL CONTINUE ABOVE THE OPENING AND SHALL BE ANCHORED TO CONT GROUTED AND VERT REINFORCED JAMB CELLS AT EA SIDE ON HORIZONTAL SPANNING WALLS.
7. REFER TO 'CONCRETE 'U' BLOCK LINTELS' SCHEDULE SHEET A### FOR UNDESIGNATED LINTELS, PER SPAN AT CMU WALL OPENINGS.
8. NON LOAD-BEARING MASONRY WALL PARAPETS SHALL BE REINF W/ No 5 BARS AT 32" OC VERT IN FULLY GROUTED CELLS, EXTENDING BELOW BRACE POINT EQUAL DISTANCE TO PARAPET ABOVE BRACE POINT

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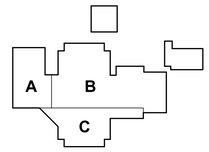
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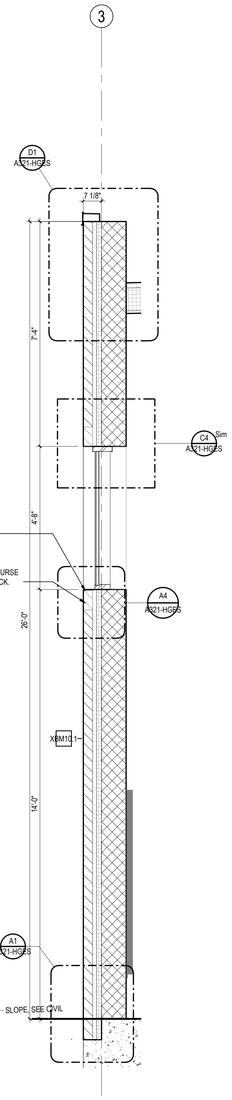
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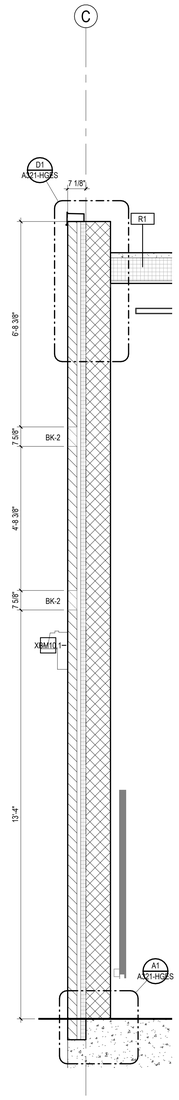
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Revision 1
Drawing No. A300 - HGES

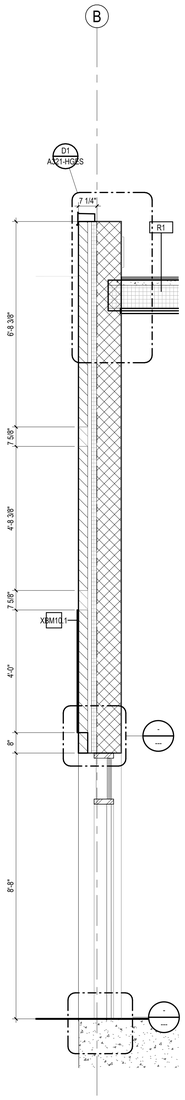
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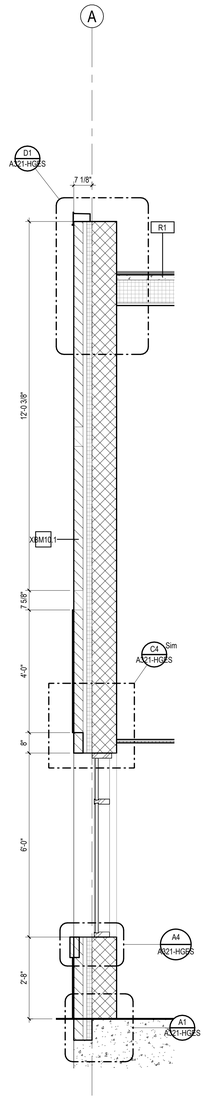
ORIGINAL SHEET - ARCH E1

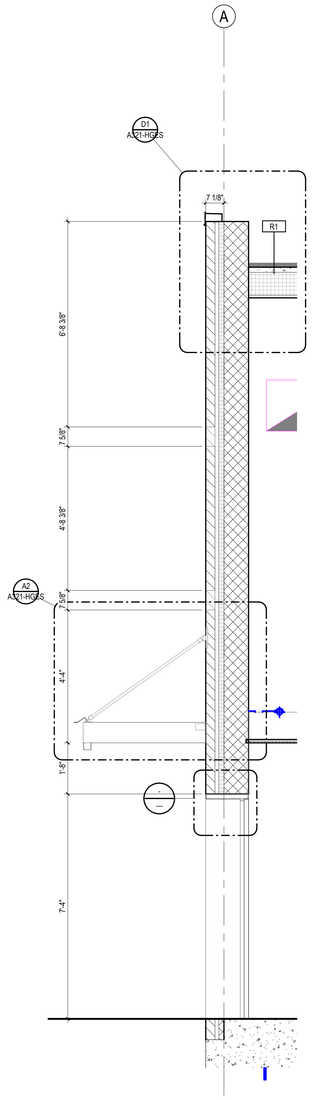
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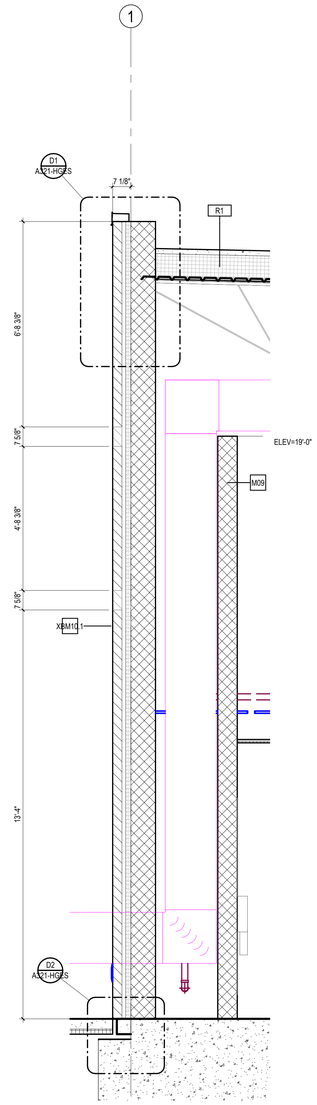












A1 WALL SECTION — A301 — 1/2" = 1'-0" — HGES

A2 WALL SECTION — A301 — 1/2" = 1'-0" — HGES

A3 WALL SECTION — A301 — 1/2" = 1'-0" — HGES

A4 WALL SECTION — A301 — 1/2" = 1'-0" — HGES

A5 WALL SECTION — A301 — 1/2" = 1'-0" — HGES

A6 WALL SECTION — A301 — 1/2" = 1'-0" — HGES

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ORIGINAL SHEET - ARCH E1

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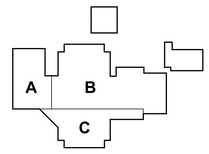
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1 Addenda #1				10.09.2025
Revision		By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT				2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		Author	Designer	Checker 04/18/25
		Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT — DANIELLE DUNN — 28298 — STATE OF TEXAS

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2024 BOND — FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project

FORT BEND ISD

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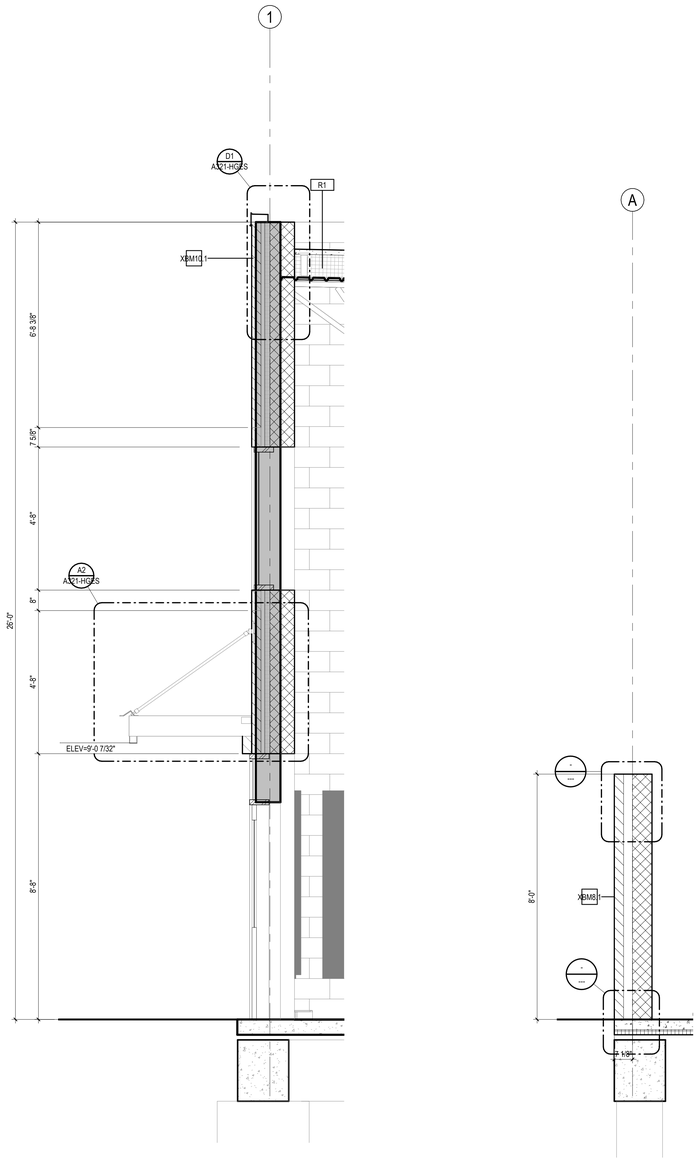
695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title

EXTERIOR WALL SECTIONS

Project No. 214001246	Scale 1/2" = 1'-0"
Revision 1	Drawing No. A301 - HGES

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79



A1 A302 **WALL SECTION**
1/2" = 1'-0"
HGES

A2 A302 **WALL SECTION**
1/2" = 1'-0"
HGES

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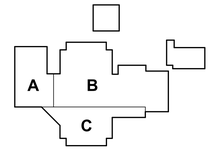
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File Name: N/A		Author	Designer	Checker	04/18/25
		Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

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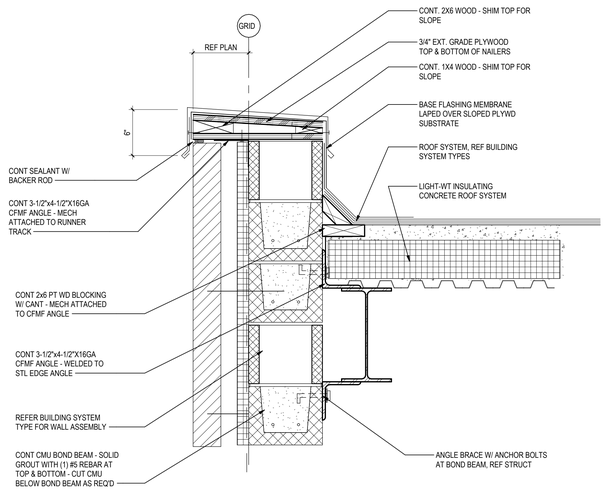
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EXTERIOR WALL SECTIONS

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214001246	1/2" = 1'-0"
Revision	Drawing No.
1	A302 - HGES

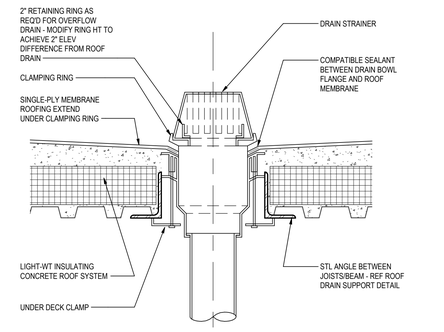
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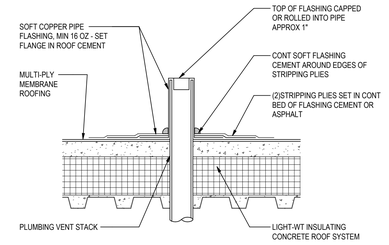
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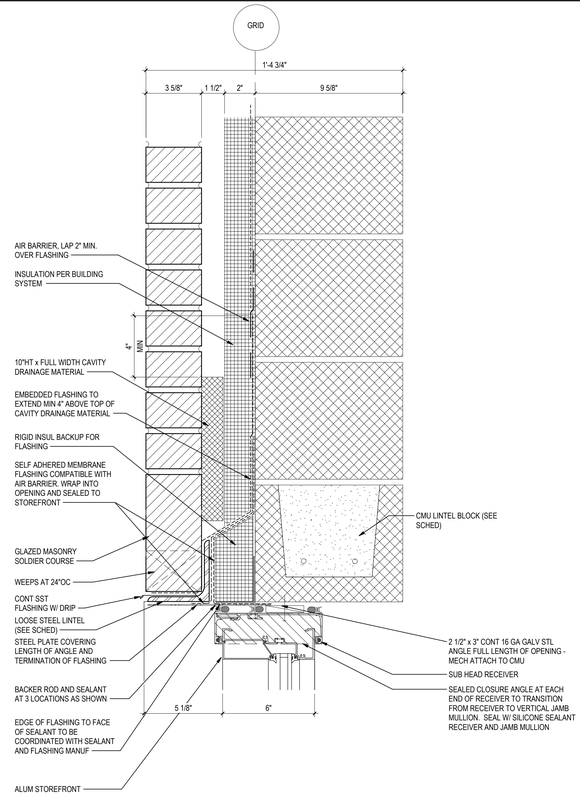
D1 DETAIL @ PARAPET
A321-HGES 1 1/2" = 1'-0"



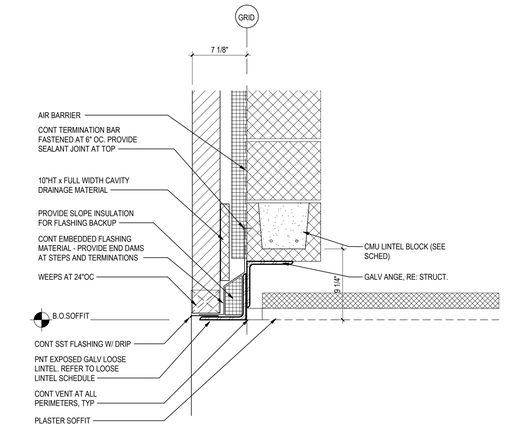
D2 DETAIL @ ROOF DRAIN
A321-HGES 1 1/2" = 1'-0"



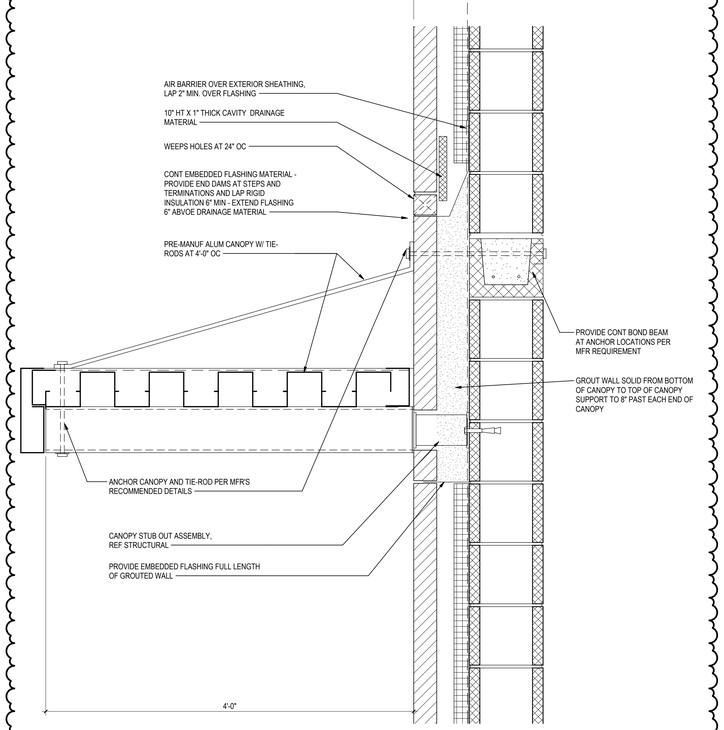
C2 DETAIL @ VENT STACK
A321-HGES 1 1/2" = 1'-0"



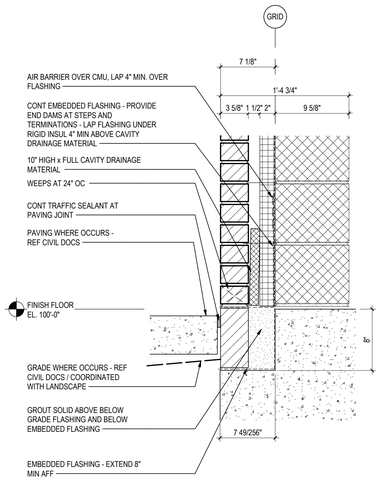
C4 DETAIL @ WINDOW HEAD
A321-HGES 3" = 1'-0"



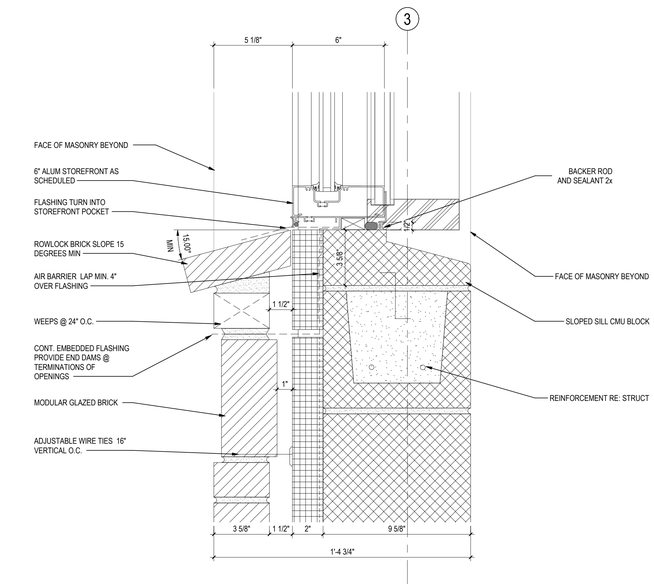
B1 DETAIL @ SOFFIT
A321-HGES 1 1/2" = 1'-0"



A2 DETAIL @ CANOPY
A321-HGES 1 1/2" = 1'-0"



A1 DETAIL @ BRICK LEDGE
A321-HGES 1 1/2" = 1'-0"



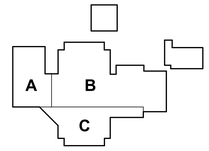
A4 DETAIL @ CLERESTORY WINDOW
A321-HGES 3" = 1'-0"

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		Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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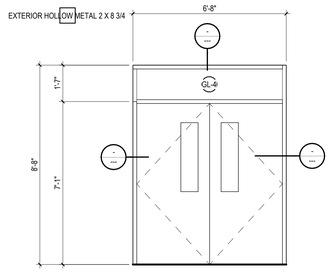
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Title
EXTERIOR SECTION DETAILS AND ROOF DETAILS

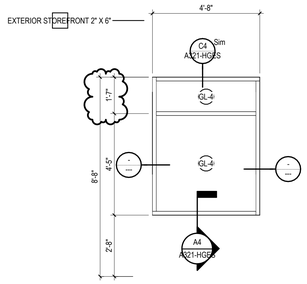
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Revision	Drawing No.
1	A321-HGES

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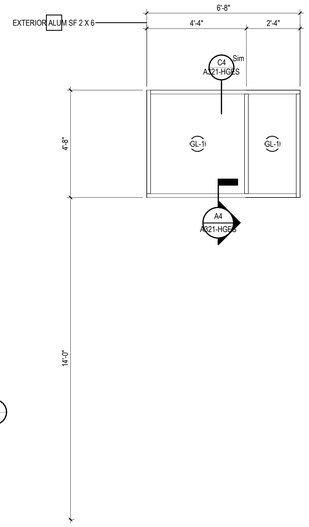
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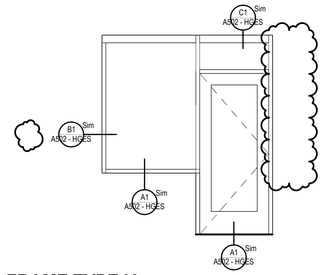
D1 A501 — **FRAME TYPE A**
3/8" = 1'-0"
HGES



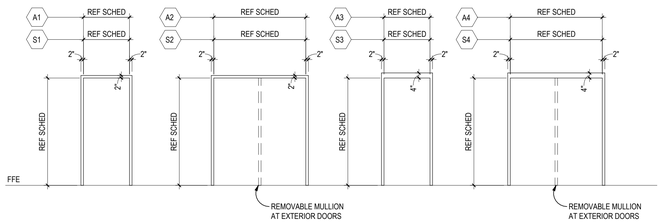
D2 A501 — **FRAME TYPE B**
3/8" = 1'-0"
HGES



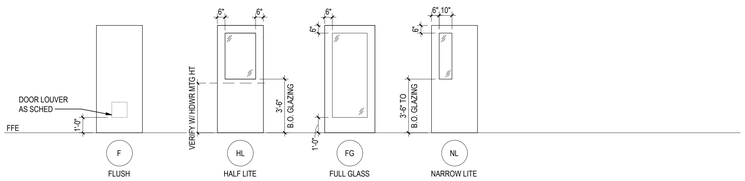
D3 A501 — **FRAME TYPE C**
3/8" = 1'-0"
HGES



D4 A501 — **FRAME TYPE iA**
3/8" = 1'-0"
HGES



5 A501 — **Frame Types**
1/4" = 1'-0"
HGES

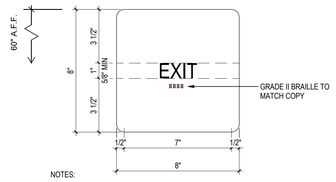


NOTES:
1. PROVIDE INSULATED LAMINATED GLAZING UNITS IN ALL EXTERIOR DOORS, UNO
2. PROVIDE ¼" CLEAR TEMPERED SAFETY GLASS IN ALL INTERIOR DOORS, UNO
3. AT DOORS MARKED AS ACOUSTICAL DOORS, PROVIDE SOUND SEALS FOR AN EQUIVALENT STC 47 DOOR

6 A501 — **Door Types**
1/4" = 1'-0"
HGES

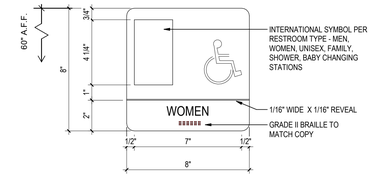
DOOR SCHEDULE-BY NUMBER

NO.	ROOM NAME	ROOM NO.	DOOR WIDTH	DOOR HEIGHT	DOOR THICK	DOOR TYPE	DOOR MAT'L	DOOR FIN	FRAME Frame Type	FRAME MAT'L	FRAME FIN	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	FIRE LABEL	HDWR SET	DOOR COMMENTS
Level 1																	
HG100A			6'-4"	7'-0"	1 3/4"	NL	STL	PNT	RE: FRAME ELEV	STL	PNT				45 MIN	C714MR	2,3
HG100B			6'-4"	7'-0"	1 3/4"	HL	STL	PNT	RE: FRAME ELEV	STL	STL				45 MIN	C714MR	2,3
HG101	OFFICE	HG101	3'-0"	7'-0"	1 3/4"	FL	STL	PLAM	RE: ELEV	STL	PNT	1/A502	4/A502	5/A502		103	
HG102	OUTDOOR STOR	HG102	3'-0"	7'-2"	1 3/4"	F	STL	PLAM	S1	STL	PNT			5/A502	45 MIN	205N	
HG103	PE STOR	HG103	3'-0"	7'-2"	1 3/4"	F	STL	PLAM	S1	STL	PNT	2/A502	4/A502	5/A502		C201	
HG104	HALL	HG106	3'-0"	7'-2"	1 3/4"	F	STL	PLAM	S1	STL	PNT	2/A502	4/A502			341	
HG105	HALL	HG106	3'-0"	7'-2"	1 3/4"	F	STL	PLAM	S1	STL	PNT	2/A502	4/A502			341	
HG107			26'-0"	8'-0"			CHAINLINK	CHAINLINK		CHAINLINK		B1/AS102	B1/AS102	B1/AS102		J-2PL	GATE; PROVIDE KNOXBOX
HG108	IDF	HG108	3'-0"	7'-2"	1 3/4"	F	STL	PLAM	S1	STL	PNT	5/A502	7/A502	5/A502		C201	
HG109			4'-0"	6'-0"			CHAINLINK	CHAINLINK		CHAINLINK	CHAINLINK					J-1PL	GATE
HG119			5'-0"	6'-0"			VC CHAINLINK	BLACK VINYL		VC CHAINLINK	BLACK VINYL					J-1PL	GATE
HG121	OFFICE	HG101	3'-0"	7'-0"	1 3/4"	FL	STL	PLAM	RE: ELEV	STL	PNT	1/A502	4/A502	5/A502		103	

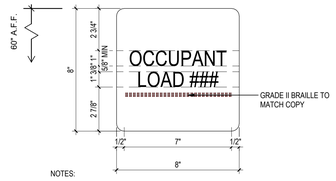


NOTES:
1. INCLUDE LOCATION SUCH AS STAIR NUMBER WHERE APPLICABLE
2. INCLUDE AREA OF REFUGE WHERE APPLICABLE, REFER TO SIGN TYPE E2

B3 A501 — **EXIT SIGN**
3" = 1'-0"
HGES

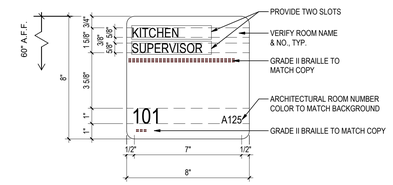


B4 A501 — **RESTROOM SIGN**
3" = 1'-0"
HGES



NOTES:
1. PROVIDE SIGN AT EACH EXIT POINT.
2. COORDINATE ON SITE TO COMPLY WITH THE REQUIREMENTS

A3 A501 — **OCCUPANT LOAD SIGN**
3" = 1'-0"
HGES



A4 A501 — **TYP. ROOM SIGNAGE**
3" = 1'-0"
HGES

GENERAL NOTES - DOORS AND WINDOWS:

1. REFER TO SHEET A501 FOR DOOR SCHEDULE.
2. REFER TO SHEET A006 AND A005 FOR LINTEL SCHEDULES AND DOOR AND WINDOW JAMB STUD FRAMING SCHEDULE.
3. ALL INTERIOR DOORS TO BE 1 ¾" THICK *(UNO)*. EXTERIOR STOREFRONT DOORS SHALL BE 2" THICK, THERMALLY BROKEN. EXTERIOR HOLLOW METAL DOORS TO BE 1 ¾" THICK, INSULATED WITH THERMALLY BROKEN FRAMES
4. ALL STL FRAMES TO HAVE A 2" FACE DIMENSION UNO, W/ ⅝" STOP. ¾" STOP REQUIRED FOR FIRE RATED FRAMES.
5. STEEL FRAME DEPTHS INDICATED IN THE DETAILS ARE NOMINAL. PROVIDE STANDARD WIDTH FRAME WITH THROAT OPENING APPROPRIATE TO PARTITION TYPE.
6. COORDINATE WITH MECH DOCUMENTS FOR DOOR UNDERCUTS AND DOOR LOUVERS, IF ANY.
7. ALL LITES IN DOORS TO HAVE INSULATED LAMINATED GLAZING *(UNO)*.
8. FIELD VERIFY DIMENSIONS PRIOR TO FABRICATING FRAMES.
9. PROVIDE WD BLKG IN GYP BD WALLS BEHIND DOORS SCHEDULED TO HAVE WALL MOUNTED DOOR STOPS. *(REFER HARDWARE SCHEDULE SUBMITTAL)*.
10. REFER DTLS A1/A006 FOR TYP WINDOW AND DOOR CONTROL JOINTS IN MASONRY WALLS. REFER DTLS A2/A006 FOR TYP WINDOW AND DOOR CONTROL JOINTS IN STEEL STUD FRAMED WALLS.
11. FLOOR MATERIAL CHANGES BETWEEN ROOMS TO OCCUR UNDER DOOR.
12. PROVIDE WATER RESISTANT TREATED WOOD BLOCKING AT WINDOW SURROUND MEMBERS AS REQUIRED FOR PROPER ATTACHMENT WHERE ALUMINUM WINDOWS ARE TO BE INSTALLED.
13. AT ALL EXISTING STL FRAMES WHERE DOOR SWING IS TO BE CHANGED, PATCH, REPAIR AND GRIND SMOOTH EXISTING STL DOOR FRAME. PRIME AND USE ONLY IF FRAME IS TO BE RETAINED. PAINT ACCORDING TO FINISH SCHEDULE SHEET A801.
14. DOOR HARDWARE *(CLOSERS, LEVERS, PANIC HARDWARE, ETC.)* SHALL NOT CONFLICT WITH THE GLASS OR TRIM FOR THE LITE.

GLAZING LEGEND

GL-1 - 1 5/16" INSULATED LAMINATED GLAZING

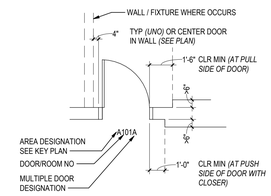
GL-2 - 9/16" LAMINATED GLAZING

GL-3 - 1/4" CLEAR TEMPERED GLAZING

GL-4 5/8" FIRE RATED LAMINATED INSULATED GLAZING UNIT

GL-5 1-3/4" 45 MIN INSULATED LAMINATED GLAZING

DOOR MARK KEY



DOOR SCHEDULE REMARKS:

1. PROVIDE REMOVABLE MULLION.
2. REFER TO ELECTRICAL DOCUMENTS FOR POWER FOR CARD KEY ACCESS. AT DOUBLE DOORS PROVIDE ELECTRIC STRIKE AT REMOVABLE MULLION.
3. PROVIDE DRIP AT HEAD OF DOOR
4. MANUAL OPERATED, TYPICAL.
5. MOTOR OPERATED, TYPICAL. REFER TO MEP DOC.
6. PREMANUFACTURED DOOR AND FRAME ASSEMBLY. PROVIDE PLAM FACING COLOR AS SCHEDULED ON SHEET A601. REFER TO ELECTRICAL DOCUMENTS FOR HOLD-OPEN DEVICES.
7. PROVIDE 2" WIDE ADA COMPLIANT MARBLE THRESHOLD WITH CHAMFERED EDGES AT ENTRY DOOR.
8. FIELD VERIFY ROUGH OPENING PRIOR TO DOOR FABRICATION.

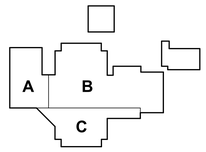
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File Name: N/A	Author	Designer	Checker	06/02/25
	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

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FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

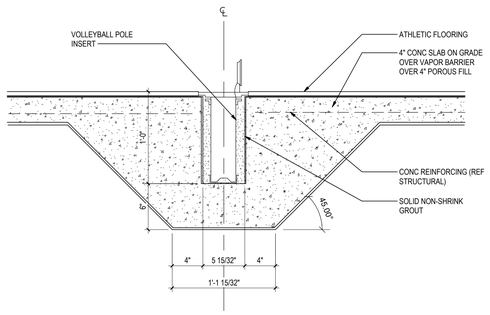
695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
FRAME ELEVATIONS & DOOR SCHEDULE

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	A501 - HGES

ORIGINAL SHEET - ARCH E1
<Dra tion in Project Information>
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D1 VOLLEYBALL POLE INSERTS

A901-HGES 1 1/2" = 1'-0"

GYM FLOOR NOTES:

1. ALL DIMENSION LINES ARE TO THE INSIDE FACE OF THE LINE (U.O.N.).

2. ALL BASKETBALL COURT MARKINGS AND LINES SHALL BE 2" WIDE (U.O.N.).

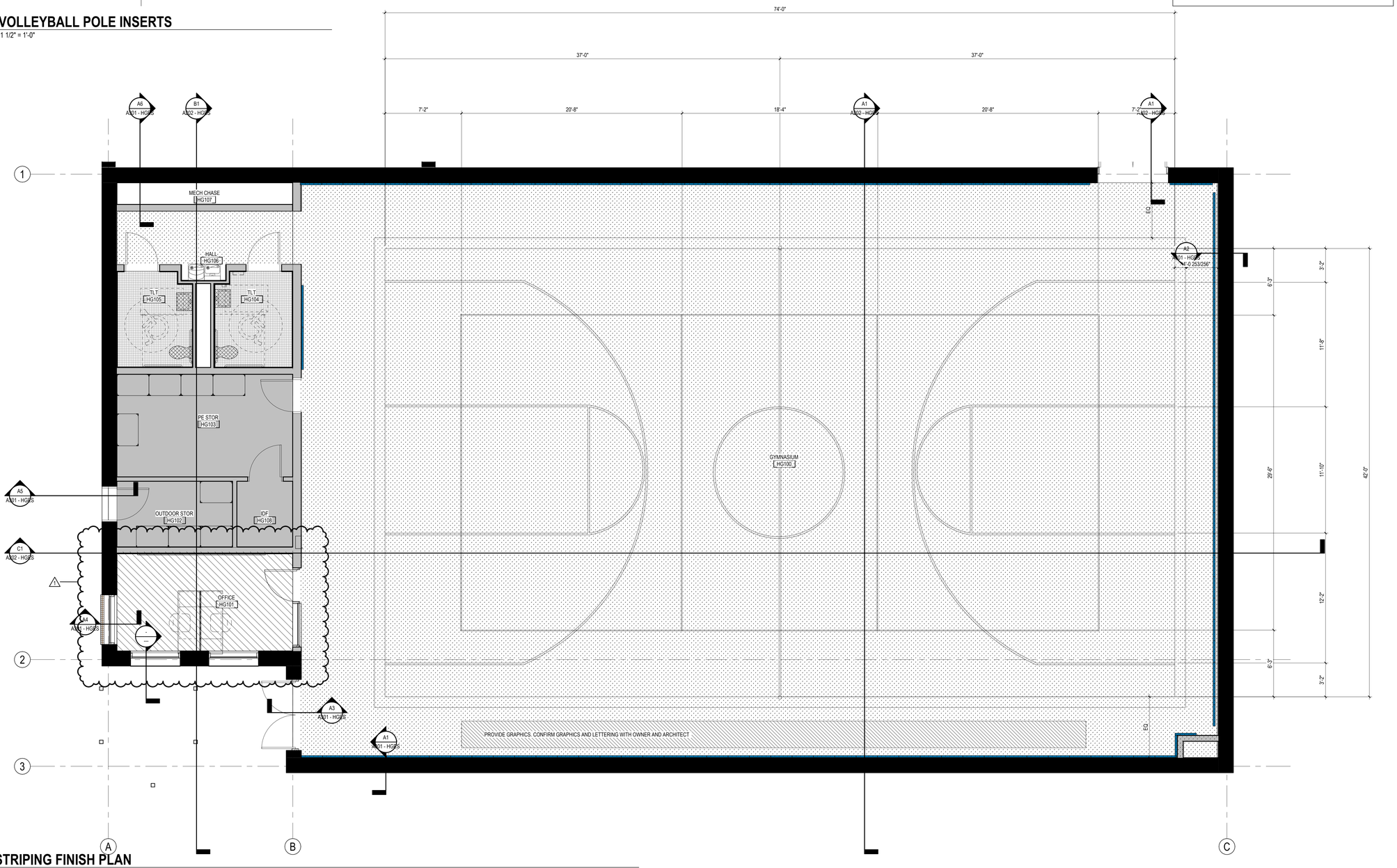
3. FIELD VERIFY EXACT LOCATIONS OF BACKBOARDS PRIOR TO PERFORMING ANY COURT MARKING/STRIPING, TYP.

4. STRIPING AND FLOOR GRAPHICS PAINT SHALL BE PROVIDED BY FLOORING INSTALLATION VENDOR FOLLOWING ALL MANUFACTURER'S RECOMMENDATIONS. COLORS TO BE CONFIRMED WITH OWNER/ARCHITECT BY 6" X 6" MATERIAL SAMPLES PRIOR TO INSTALLATION. COLORS SHALL BE SELECTED FROM VENDOR'S STANDARD AVAILABLE COLORS.

5. COURT STRIPING COLORS SHALL MATCH FLOOR COLOR LEGEND PROVIDED. EXTERIOR STRIPING COLORS SHOULD BE PAINTED TO MATCH FLOOR COLOR LEGEND PROVIDED.

MATERIAL LEGEND

- RAF-1 RESILIENT ATHLETIC FLOORING
- LVT-1
- PT-3
- SC-1



A1 GYM STRIPING FINISH PLAN

A901-HGES 1/4" = 1'-0"

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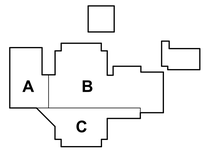
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Notes



KEY PLAN

1 Addenda #1				10.09.2025
Revision		By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT				2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		Author	Designer	Checker
		Dwn.	Dsgn.	Chkd.
				11/13/24
				YYYY.MM.DD

Permit/Seal



Client/Project Logo

2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
ENLARGED GYM FINISH PLAN

Project No. 214001246	Scale As indicated
Revision 1	Drawing No. A901-HGES

•P:\Ji location in Project Information\
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ORIGINAL SHEET - ARCH E1

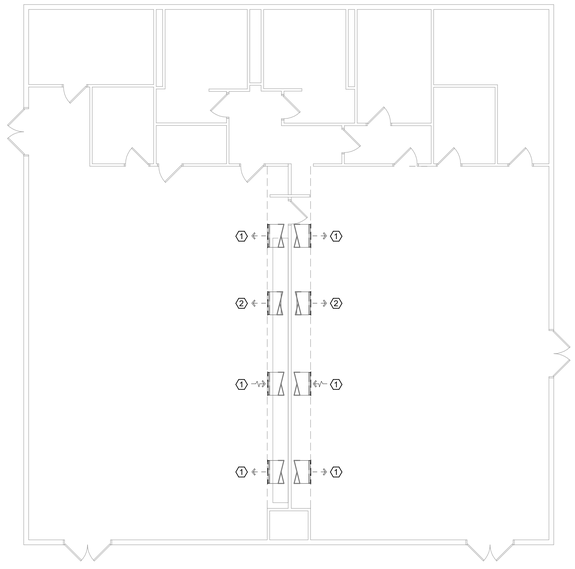
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GENERAL NOTES:

1. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CHILLERS, AIR HANDLING UNITS, FANS, CONDENSING UNITS, BMCS CONTROL PANELS, TEMPERATURE SENSORS, AND CONTROL VALVES.
2. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
3. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING DRAWINGS AND PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.

DEMOLITION KEYED NOTES:

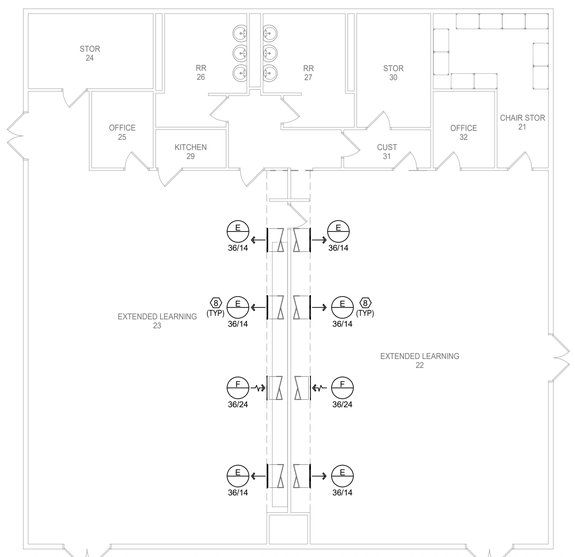
1. REMOVE EXISTING SUPPLY GRILLE, EXISTING DUCTWORK SHALL REMAIN AND BE REUSED.
2. REMOVE EXISTING RETURN GRILLE, EXISTING DUCTWORK SHALL REMAIN AND BE REUSED.



N

3 MECHANICAL DEMOLITION PLAN - LEVEL 1 - EXTENDED DAY LEARNING

Scale: 1/8" = 1'-0"



N

2 MECHANICAL PLAN - LEVEL 1 - EXTENDED DAY LEARNING

Scale: 1/8" = 1'-0"

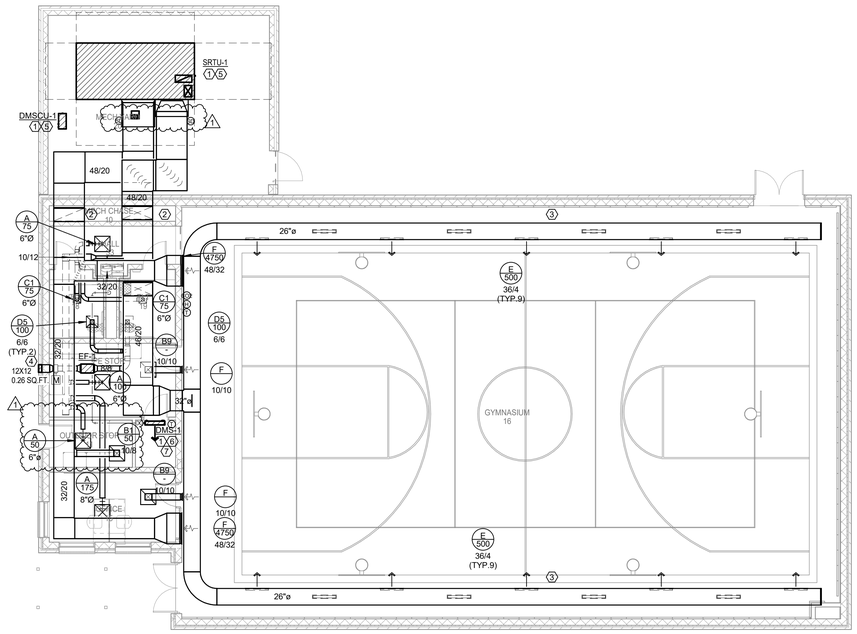
RENOVATIONS	
⊕	POINT OF CONNECTION FROM NEW TO EXISTING
▭	ITEM TO REMAIN
▭ (dashed)	ITEM TO BE REMOVED

GENERAL NOTES:

1. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CHILLERS, AIR HANDLING UNITS, FANS, CONDENSING UNITS, BMCS CONTROL PANELS, TEMPERATURE SENSORS, AND CONTROL VALVES.
2. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
3. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING DRAWINGS AND PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.

MECHANICAL KEYED NOTES:

1. VERIFY SERVICE CLEARANCE WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. ROUTE DUCTWORK WITHIN CHASE AND UP TO PLENUM SPACE AS INDICATED.
3. SPIRAL INSULATED DOUBLE WALL DUCTWORK PAINTED BY ARCHITECT. DUCTWORK SHALL BE TIGHTS TO STRUCTURE.
4. PROVIDE RUSKIN MODEL HZ700 WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER OR APPROVED EQUAL WITH MINIMUM FREE AREA INDICATED. PROVIDE WITH BIRD SCREEN AND PAINT TO MATCH WALL OR AS SPECIFIED BY ARCHITECT.
5. PROVIDE 4" THICK CONCRETE HOUSEKEEPING PAD.
6. ROUTE FULL SIZE CONDENSATE DRAIN PIPE TO LAVATORY WYE TAILPIECE LOCATED IN TLT 18. REFER TO PLUMBING DRAWINGS FOR MORE INFORMATION.
7. ROUTE REFRIGERANT PIPING TO ASSOCIATED OUTDOOR UNIT. REFRIGERANT PIPE ELEVATION INSIDE THE BUILDING SHALL NOT BE LESS THAN 73" AFF.
8. MAINTAIN EXISTING CFM WITH NEW GRILLLE REPLACEMENT. (1)



N

1 MECHANICAL PLAN - LEVEL 1 - NEW GYM

Scale: 1/8" = 1'-0"

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Project No: 2023-04376-00

Notes

Revision	By	Appd	YYYY.MM.DD
1 Addendum 01			10/10/2025
Issued			
100% ISSUE FOR BID AND PERMIT			2025.09.24
File Name: N/A	ER Dwn.	ER Dsgn.	VP Chkd. 11/27/24 YYYY.MM.DD

Permit/Seal

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-10-2025

Client/Project Logo

2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project

FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title

MECHANICAL FLOOR PLANS

Project No. 214001246
Scale As indicated
Revision 1
Drawing No. M201-HGES

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ORIGINAL SHEET - ARCH E1

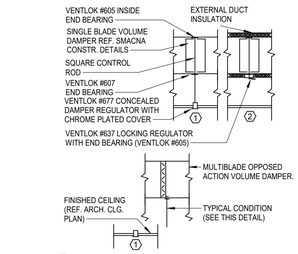
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SYMBOL LEGEND

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
GENERAL	
(#)	KEY NOTE TAG
(A)	REVISION TAG
	NEW EQUIPMENT
DUCTWORK	
	SUPPLY AIR DUCTWORK
	RETURN AIR AND OUTSIDE AIR DUCTWORK
	EXHAUST AIR DUCTWORK
	FLEXIBLE DUCTWORK
	SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	RETURN AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	FIRE DAMPER (VERTICAL)
	FIRE DAMPER (HORIZONTAL)
(S)	SMOKE DAMPER (VERTICAL)
(S)	SMOKE DAMPER (HORIZONTAL)
(FS)	COMBINATION FIRE & SMOKE DAMPER (VERTICAL)
FS	COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL)
M	MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE)
M	MOTORIZED DAMPER (SEE DAMPER SCHEDULE)
SENSORS	
(T)	THERMOSTAT AND TEMPERATURE SENSOR
(H)	HUMIDISTAT
SD	SMOKE DETECTOR
HEAT	HEAT DETECTOR
AIR DEVICES	
	GRILLE SIZE TAG (REFER TO GRILLE SIZE LEGEND)
	SUPPLY AIR GRILLE WITH FOUR-WAY THROW
	SUPPLY AIR GRILLE WITH THREE-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY CORNER THROW
	SUPPLY AIR GRILLE WITH ONE-WAY THROW
	RETURN AIR GRILLE
	RETURN AIR GRILLE WITH SOUND BOOT
	EXHAUST AIR GRILLE
	SUPPLY AIR SIDEWALL GRILLE
	RETURN AIR SIDEWALL GRILLE
20X12	RETURN AIR OPENING ABOVE CEILING
PIPING	
–CWS&R–	CONDENSER WATER SUPPLY & RETURN (TOTAL OF TWO PIPES. ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–CWS–	CONDENSER WATER SUPPLY
–CWR–	CONDENSER WATER RETURN
–CHWS&R–	CHILLED WATER SUPPLY & RETURN (TOTAL OF TWO PIPES. ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–CHWS–	CHILLED WATER SUPPLY
–CHWR–	CHILLED WATER RETURN
–HWS&R–	HOT WATER FOR HYDRONIC HEATING SUPPLY & RETURN (TOTAL OF TWO PIPES. ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–HWS–	HOT WATER FOR HYDRONIC HEATING SUPPLY
–HWR–	HOT WATER FOR HYDRONIC HEATING RETURN
—D—	CONDENSATE DRAIN LINE
—AD—	AUXILIARY CONDENSATE DRAIN LINE
—RLR—	REFRIGERANT LIQUID & GAS RECIRCULATION LINE (TOTAL OF TWO PIPES. ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—RL—	REFRIGERANT LIQUID LINE
—HG—	REFRIGERANT HOT GAS LINE
—RS—	REFRIGERANT SUCTION LINE
	ELBOW UP
	ELBOW DOWN
	90° ELBOW
	45° ELBOW
	TEE
	TEE DOWN
	TEE UP
	TOP BRANCH CONNECTION
	BOTTOM BRANCH CONNECTION
	FLANGE
	CAP
	CONTINUATION
	FLOOR DRAIN (REFER TO PLUMBING DRAWINGS)
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	BUTTERFLY VALVE WITH OPERATOR
	PLUG VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	BALL VALVE
	STRAINER
	THERMOMETER WELL
	UNION
	PETE'S PLUG
	PRESSURE GAUGE
	TEMPERATURE SENSOR IN PIPE
	VENTURI FLOW METER
	FLOW SWITCH
FM	FLOW MEASURING STATION
	EXPANSION JOINT
	FLEXIBLE CONNECTION
LG.C.	GAUGE COCK
	SITE GLASS
	DIFFERENTIAL PRESSURE SENSOR
	TURBINE FLOW METER
	ANCHOR
	PIPE GUIDE

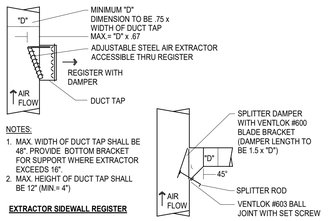
SUBSCRIPTS AND ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
BBS	BELOW BOTTOM OF STRUCTURE
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CA	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
EA	EXHAUST AIR
FPM	FEET PER MINUTE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
RA	RETURN AIR
SA	SUPPLY AIR

DUCTWORK CONSTRUCTION DETAILS



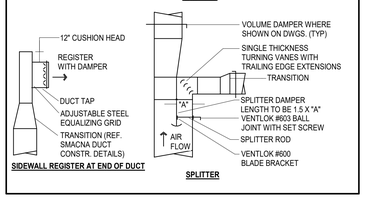
1 **DAMPER ABOVE INACCESSIBLE CEILING**

2 **DAMPER ABOVE LIFT-OUT CEILING**



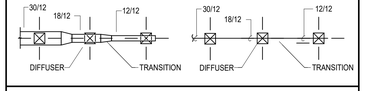
NOTES:
1. MAX. WIDTH OF DUCT TAP SHALL BE 48". PROVIDE BOTTOM BRACKET FOR SUPPORT WHERE EXTRACTOR EXCEEDS 16".
2. MAX. HEIGHT OF DUCT TAP SHALL BE 12" (MIN.= 4")

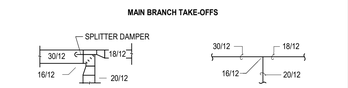
EXTRACTOR SIDEWALL REGISTER | **DUCT TAP**

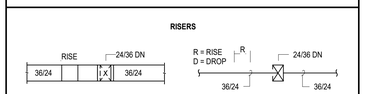


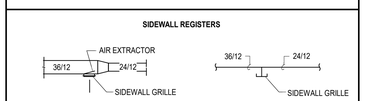
SIDEWALL REGISTER AT END OF DUCT | **SPLITTER**

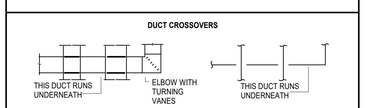
DUCTWORK SYMBOLS LEGEND

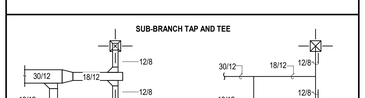


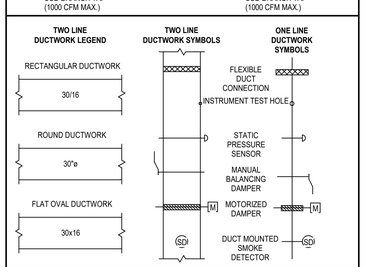




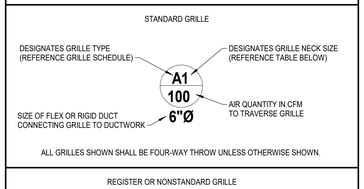




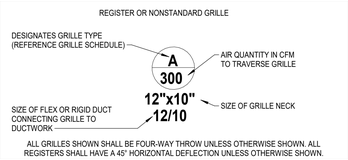




GRILLE SIZING SCHEDULE



ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN.



ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN. ALL REGISTERS SHALL HAVE A 45° HORIZONTAL DEFLECTION UNLESS OTHERWISE SHOWN.

GRILLE SIZE DESIGNATION	GRILLE NECK SIZE	GRILLE SIZE DESIGNATION	GRILLE NECK SIZE
1	6" x 6"	7	15" x 15"
2	8" x 8"	8	16" x 16"
3	9" x 9"	9	18" x 18"
4	10" x 10"	10	20" x 20"
5	12" x 12"	11	22" x 22"
6	14" x 14"	12	24" x 24"

DUCTLESS MINI-SPLIT - INDOOR UNIT

MARK	SUPPLY AIR CFM	WATTS	CURRENT CHARAC. V	P	F	AIR TEMPERATURE (°F) ENTERING DRY BULB	ENTERING WET BULB	COOLING MIN. TOTAL CAPACITY (BTUH)	MIN. SENS. CAPACITY (BTUH)	MINIMUM EER/ SEER	REMARKS
DMS-1	370	40.0	208	1	60	75.0	62.5	17,105	11,628	-/15.0	(1,2,3,4,5,6)

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. DUCTLESS WALL MOUNTED UNIT.
2. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. CONTROLLED BY PROGRAMMABLE WIRED THERMOSTAT.
4. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
5. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.
6. PROVIDE ASPEN MINI AQUA PUMP TO BE INSTALLED INSIDE UNIT.

DUCTLESS MINI-SPLIT - OUTDOOR UNIT

MARK	MIN. TOTAL CAPACITY (BTUH)	OUTDOOR AIR TEMP (°F)	MINIMUM EER/ SEER	CURRENT CHARAC. V	PH	F	RELATED UNIT MARK	REMARKS
DMSCU-1	17,100	95	-/15.0	208	1	60	DMS-1	(1,2,3)

GENERAL NOTES:
1. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITHLOW AMBIENT CONTROL DOWN TO 20°F.
2. PROVIDE WITH DISCONNECT SWITCH.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.

SPECIALIZED PACKAGED ROOFTOP UNIT - ELECTRIC HEAT

MARK	FAN SUPPLY AIR CFM	FAN OUTSIDE AIR CFM	FAN EXT.STATIC PRESSURE (IN. W.C.)	FAN HORSE POWER	FAN CURRENT CHARAC. V	P	F	COOLING AIR TEMPERATURE (°F) ENTERING DRY BULB	ENTERING WET BULB	COOLING AMBIENT TEMP	COOLING MIN. TOTAL CAPACITY (BTUH)	COOLING MIN. SENS. CAPACITY (BTUH)	MINIMUM EER/ IEER	ELECTRIC HEATING ENTERING AIR TEMP.(°F)	ELECTRIC HEATING MINIMUM CAPACITY (BTUH)	KW	NUMBER OF STAGES	REMARKS
SRTU-1	9,550	2,000	1.15	10.0	480	3	60	79.9	66.6	98.0	335,100	251,200	10.0/13.2	61.8	245,664	72	SCR	(1,2,3,4,5,6,7,8,9,10)

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE SRTU FOR GROUND MOUNT WITH SIDE DISCHARGE AND DISCONNECT SWITCH.
2. PROVIDE UNIT WITH FACTORY MOUNTED GFCI RECEPTACLE FOR UNIT WITH LOW AMBIENT CONTROL. ELECTRICIAN TO WIRE TO SEPARATE CIRCUIT.
3. PROVIDE FACTORY MOUNTED DDC CONTROLLER.
4. PROVIDE DIGITAL COMPRESSOR AND PREMIUM EFFICIENT MOTORS.
5. PROVIDE METAL MESH OUTSIDE AIR PRE FILTER WITH 2" PLEATED AND 4" FINAL FILTERS.
6. PROVIDE FAN CYCLING AND ADJUSTABLE COMPRESSOR LOCKOUT FOR LOW AMBIENT OPERATION.
7. PROVIDE MODULATING HOT GAS REHEAT.
8. PROVIDE A WATER LEVEL SENSING DEVICE IN THE PRIMARY DRAIN PAN. THIS DEVICE SHALL SHUT OFF THE APPLIANCE IN THE EVENT THE PRIMARY DRAIN LINE BECOMES RESTRICTED.
9. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRICAL COSTS IF ALTERNATE UNIT IS PROVIDED WITH GREATER ELECTRICAL CHARACTERISTICS THAN SHOWN.
10. SRTU SHALL PROVIDE A MINIMUM OF 850 CFM OF OUTSIDE AIR TO SPACE.

FAN SCHEDULE

TAG	LOCATION	CFM	EXT. STATIC PRESSURE (IN.W.C.)	MAX RPM	HORSE POWER	CURRENT CHAR V	P	F	LOCALLY SWITCHED	INTERLOCK WITH	FAN TYPE	DRIVE TYPE	MANUFACTURER	MODEL NUMBER	REMARKS
EF-1	RESTROOMS	200	0.55	1800	0.5	120	1	60	-	SRTU-1	INLINE	DIRECT	COOK	SQN	(1,2,3)

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MINIMUM RECOMMENDED CLEARANCE AROUND UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH DISCONNECT.
2. PROVIDE WITH MOTORIZED DAMPER.
3. SUSPEND UNIT WITH FOUR THREADED HANGER RODS ATTACHED TO UNISTRUT RUNNERS SECURED TO STRUCTURE. PROVIDE SPRING ISOLATION. REFER TO MANUFACTURER FOR MORE DETAILS.

GRILLE

MARK	SERVICE	TYPE	DAMPER	CONSTRUCTION MATERIAL	FINISH COLOR	MANUFACTURER	MODEL NUMBER	DESCRIPTION
A	SUPPLY AIR	DIFFUSER	-	STEEL	WHITE	TITUS	OMNI	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" OR 12"X12" FACE.
B	RETURN AIR	DIFFUSER	-	STEEL	WHITE	TITUS	PAR	SURFACE MOUNT CEILING FRAME STYLE WITH 24"X24".
C	SUPPLY AIR	DIFFUSER	-	STEEL	WHITE	TITUS	OMNI	SURFACE MOUNT CEILING FRAME STYLE WITH 18"X18" OR 12"X12" FACE.
D	EXHAUST AIR	DIFFUSER	-	STEEL	WHITE	TITUS	50F	SURFACE MOUNT CEILING FRAME STYLE WITH 18"X18" OR 12"X12" FACE. PERFERATED FACE.
E	GRILLE	SUPPLY AIR	-	STEEL	WHITE	TITUS	S300F	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1)
F	GRILLE	SUPPLY AIR	-	STEEL	WHITE	TITUS	350RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1)

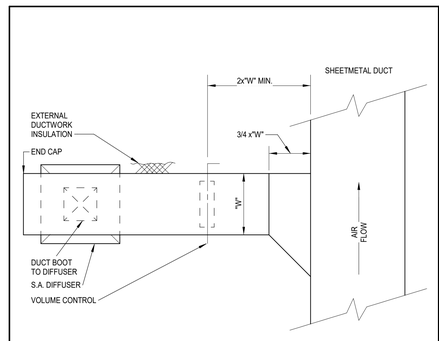
GENERAL NOTES:
1. DAMPERS NOTED AS U.L. SHALLBE A 'U.L.' CLASSIFIED CEILING RADIATION DAMPER WITH THERMAL BLANKET.
2. COORDINATE FINAL AIR DEVICE LOCATION AND FINISH COLOR WITH ARCHITECT.

REMARKS:
1. N/A

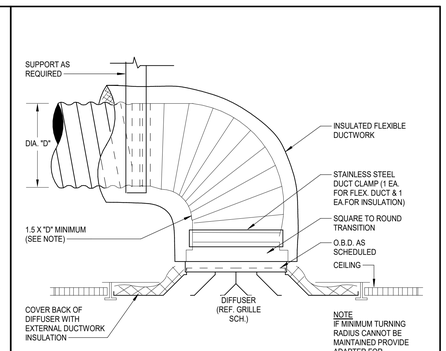
DAMPER

MARK	ACTUATOR	DUTY	BLADE ACTION	MANUFACTURER	MODEL NUMBER	REMARKS
D-1	MANUAL BALANCING	UNDER 9" WIDE	N/A	N/A	N/A	SEE SMACNA CONSTRUCTION DETAILS REFERENCED "TYPICAL CONSTRUCTION DETAILS FOR LOW VELOCITY DUCTS."
D-2	MANUAL BALANCING	OVER 9" WIDE	OPPOSED	RUSKIN	MD-35	MANUAL DAMPER WITH STANDARD CONSTRUCTION FEATURES AND VENTLOCK #639 LOCKING REGULATOR.
D-3	MOTORIZED	OVER 9" WIDE	OPPOSED	RUSKIN	CD-60	LOW LEAKAGE DAMPER WITH BLADE SEALS

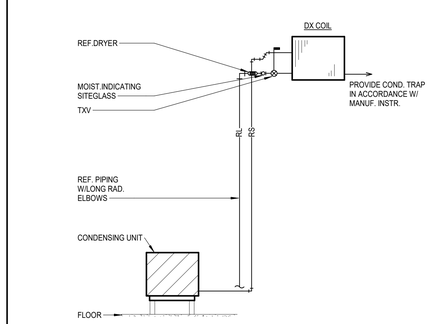
NOTES:
N/A - NOT APPLICABLE



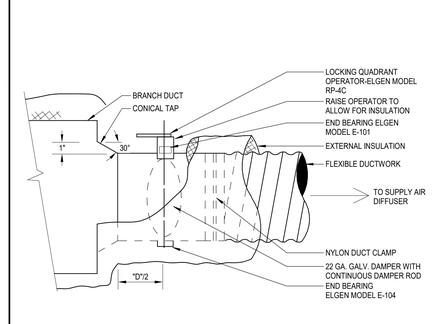
4 RIGID DUCT TAP TO SINGLE SUPPLY AIR DIFFUSER
SCALE: NONE



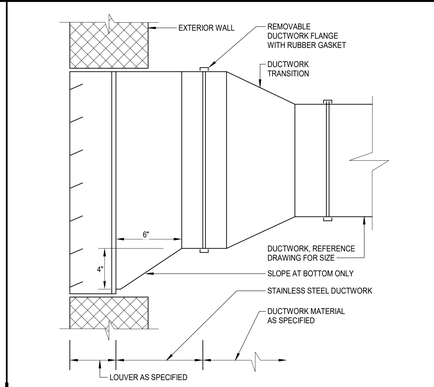
2 FLEX DUCT CONNECTION AT SUPPLY AIR DIFFUSER
SCALE: NONE



5 REFRIGERANT PIPING DIAGRAM
SCALE: NONE



3 FLEXIBLE DUCT TAP - CONICAL
SCALE: NONE



1 DUCTWORK AT LOUVER
SCALE: NONE

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Notes

1 Addendum 01			10/10/2025
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File Name: N/A	ER Dwn.	ER Dsgn.	VP Chkd. 11/27/24 YYYY.MM.DD

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10-10-2025

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS

695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
MECHANICAL SCHEDULE

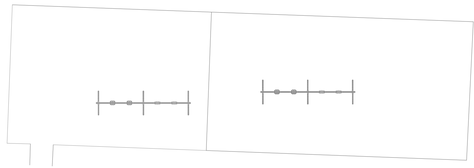
Project No.	Scale
214001246	12" = 1'-0"
Revision	Drawing No.
1	M301-HGES

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ORIGINAL SHEET - ARCH E1

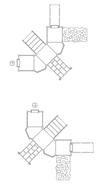
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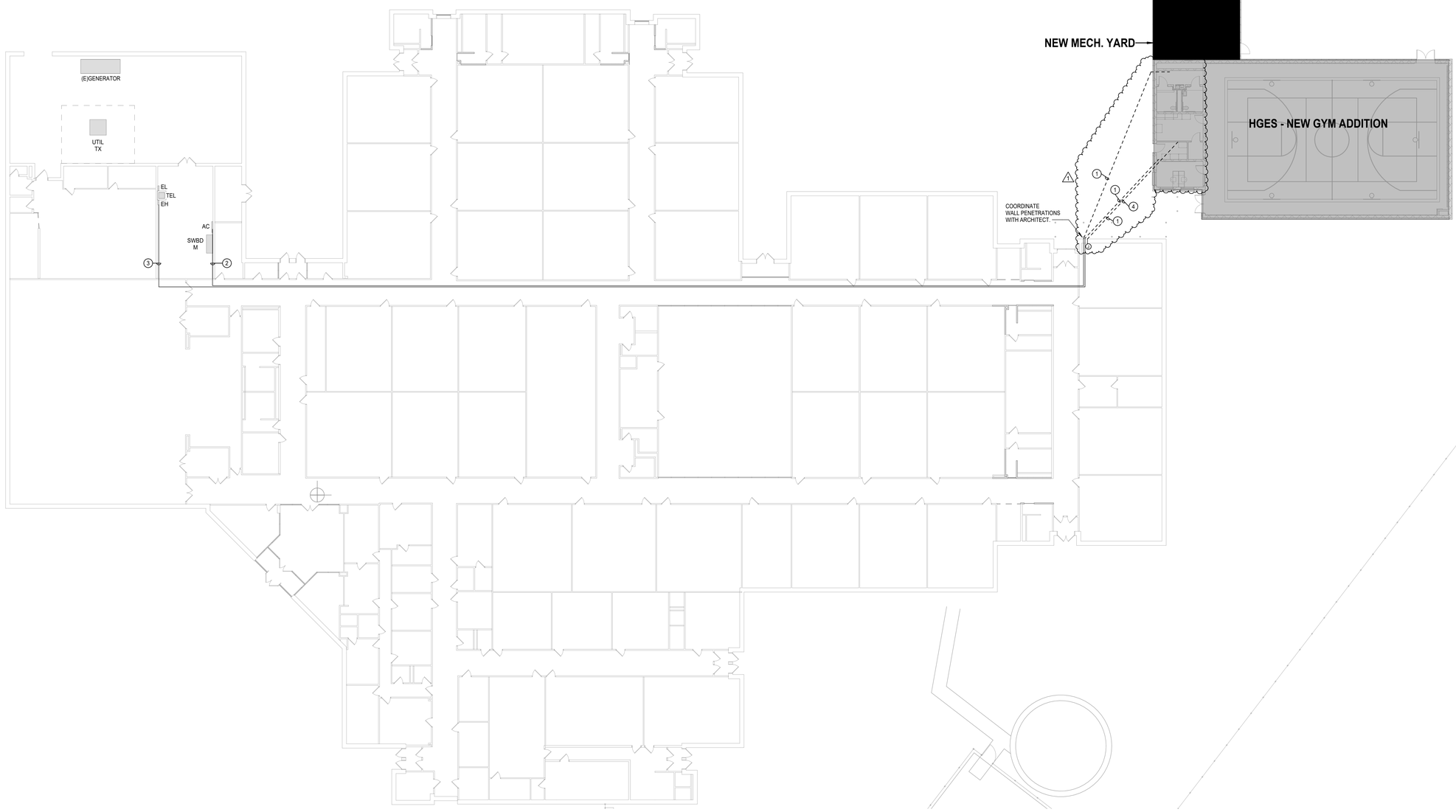
ELECTRICAL KEYED NOTES

KEYED NOTE	Description
1	COORDINATE LOCATION OF WALL PENETRATION WITH ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
2	SUGGESTED ROUTING OF FEEDER TO NEW GYM ADDITION. ROUTE FEEDER THROUGH INTERIOR BUILDING ABOVE CEILING TO EXTERIOR WALL. COORDINATE WALL PENETRATION LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. REFER TO ONE-LINE DIAGRAM FOR MORE INFORMATION.
3	BY ALTERNATE - ROUTE NEW EMERGENCY FEEDER TO GYM ADDITIONS. ROUTE FEEDER THROUGH INTERIOR BUILDING ABOVE CEILING TO EXTERIOR WALL. COORDINATE WALL PENETRATION LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. REFER TO ALTERNATE ONE-LINE DIAGRAM FOR MORE INFORMATION.
4	PROVIDE AND ROUTE (2)2"C. FROM NEW J-BOX TO BE PROVIDED ABOVE ACCESSIBLE CEILING IN EXISTING BUILDING, ROUTE UNDERGROUND, TO NEW F/A LOCATION FOR EXPANSION OF EXISTING F/A SYSTEM.



HGES - EXISTING
ELP BUILDING RENOVATIONS





N

1 **ELECTRICAL COMPOSITE PLAN**
Scale: 1/16" = 1'-0"

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File Name: N/A	KJ	KJ	JZ 11/27/24
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-10-2025

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FORT BEND
INDEPENDENT SCHOOL DISTRICT

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS

695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
ELECTRICAL COMPOSITE PLAN

Project No.	Scale
214001246	1/16" = 1'-0"
Revision	Drawing No.
1	E100-HGES

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ORIGINAL SHEET - ARCH E1

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ELECTRICAL KEYED NOTES

KEYED NOTE	Description
1	MOUNT AT +54" AFF. FOR BMCS CONNECTION.
2	MOUNT AT +54" AFF. FOR F/A CONNECTION.
3	POWER FOR MOTORIZED DAMPERS. COORDINATE WITH DIVISION 23 FOR FINAL QUANTITY AND LOCATION. PROVIDE FINAL CONNECTION TO EACH FIRE/SMOKE DAMPER WITH 2#12, 1#12G, 3/4"C.
4	ROUTE #4 "C" TO ASSOCIATED OUTDOOR UNIT. ROUTE PARALLEL WITH REFRIGERATION LINES.
5	RECEPTACLE TO BE MOUNTED HORIZONTALLY BELOW GYM WALL PADDING AT 12" A.F.F. COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN.

ELECTRICAL GENERAL NOTES

1. CONNECT NEW LIGHT FIXTURES AND/OR EXIT SIGNS TO EXISTING CIRCUITS LEFT IN PLACE AFTER DEMOLITION OR NEW AS SHOWN. PROVIDE EMERGENCY CIRCUIT FOR HATCHED FIXTURE AND/OR EXIT SIGNS. EXTEND WIRING WITH MATCHING CONDUCTORS/CONDUIT TO EXISTING LOCATION AND/OR NEW FIXTURES. FIELD VERIFY CONNECTED LOAD NOT TO EXCEED 3500 W @ 277V. TYPICAL.

2. LOCATION OF NEW LIGHT FIXTURES SHALL REUSE EXISTING J-BOX AND EXISTING LIGHT FIXTURE WHIPS AS PRACTICAL. EXTEND WIRING WITH MATCHING CONDUCTORS/CONDUIT AND PROVIDE NEW J-BOX ABOVE ACCESSIBLE CEILING WITH ½-INCH FLEXIBLE STEEL CONDUIT OR STEEL MC CABLE, LENGTH NOT TO EXCEED 6-FEET, "DAISY CHAINING" LIGHT FIXTURES INSTALLED FOR LAY-IN CEILING AREAS IS NOT ALLOWED. FOR NON-ACCESSIBLE CEILINGS, LIGHT FIXTURE WHIPS SHALL BE ½-INCH FLEXIBLE STEEL CONDUIT, LENGTH AS REQUIRED TO MAKE A TAP AT AN ACCESSIBLE J-BOX. RECESSED LIGHT FIXTURES IN NON-ACCESSIBLE CEILINGS MAY BE DAISY CHAINED USING THE LIGHT FIXTURE'S INTEGRAL, UL LISTED J-BOX OR INTERNAL WIRE WAY THAT IS ACCESSIBLE THROUGH FIXTURE FROM BELOW THE CEILING. REFER TO 26 05 33 CONDUIT SYSTEMS.

3. PROVIDE NEW LIGHTING CONTROLS, SENSORS AND ASSOCIATED DEVICES, AND 20A EMERGENCY LOAD CONTROL RELAYS/TRANSFER DEVICES. REFER TO 26 09 24 LIGHTING CONTROLS.

4. OCCUPANCY/VACANCY SENSOR AND DAYLIGHTING SENSOR LOCATIONS INDICATE SPACE OR AREA CONTROLLED, CONTRACTOR TO PROVIDE ACTUAL QUANTITIES, TYPES, AND MOUNTING LOCATIONS AS RECOMMENDED BY MANUFACTURER AND IECC-2015 C405.

5. SPACES WITH MULTIPLE OCCUPANCY/VACANCY SENSORS OR WHERE LINE OF SIGHT MAY BE OBSCURED, SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.

6. CONTRACTOR SHALL MAINTAIN CONSTANT UNSWITCHED CIRCUITS FROM EXISTING SOURCE AND/OR NEW AS SHOWN FOR EMERGENCY FIXTURES, EMERGENCY LOAD RELAYS, TRANSFER SWITCHES AND EXIT SIGNS.

7. COORDINATE LOCATION OF LIGHT FIXTURES IN ALL MECHANICAL AND ELECTRICAL ROOMS WITH MECHANICAL EQUIPMENT, PIPING, AND ALL OTHER TRADES.

8. REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.

LINETYPE LEGEND

———	EXISTING TO REMAIN
— — —	DISCONNECT AND REMOVE
———	NEW WORK

IN NON-ACCESSIBLE AND/OR HIGH CEILING AREAS, LOCATE DIGITAL LIGHTING CONTROLLER AND/OR EMERGENCY LOAD CONTROL RELAY/TRANSFER SWITCH IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING; IN AREAS WITH NO CEILING AND/OR IN EXTERIOR APPLICATIONS LOCATE ADJACENT TO NORMAL POWER PANEL SERVING THE LOAD. PROVIDE LABEL WITH WORDING PER SPECIFICATIONS.

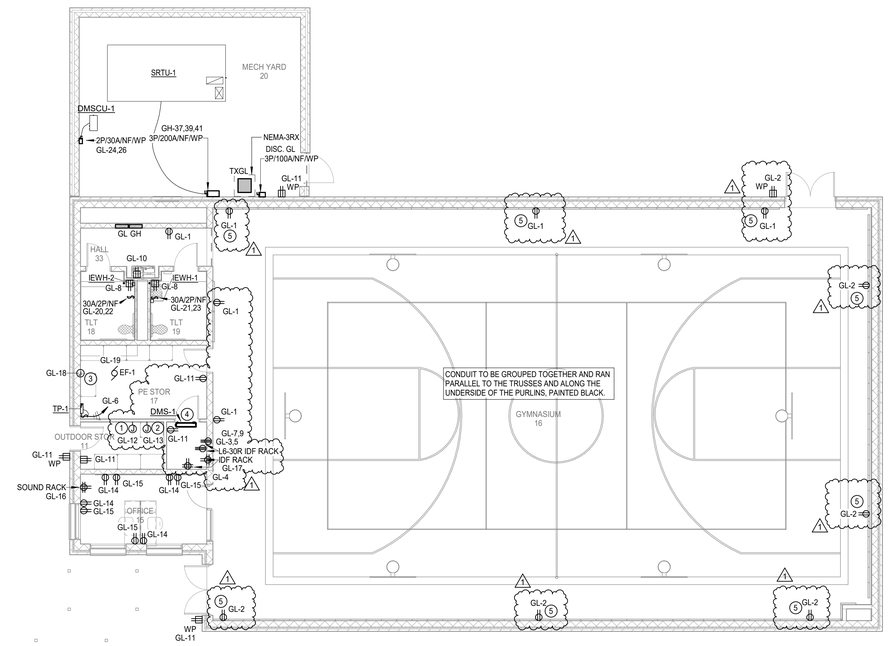
FIRE ALARM SYSTEM SHALL COMPLY WITH ALL CITY OF HOUSTON IBC AMENDMENTS. SMOKE DETECTORS SHALL BE PROVIDED IN ALL APPLICABLE ROOMS LISTED IN SECTION 907.2.3.1 OF THE 2021 IBC CITY OF HOUSTON AMENDMENTS.

DEMOLITION / EXISTING DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION, AND WHEN AVAILABLE, EXISTING RECORD DOCUMENTS. REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION, AND IMMEDIATELY AFTER SUCH DISCREPANCIES ARE DISCOVERED. CONTRACTOR TO VERIFY EXISTING CONDITIONS ON FIELD AND NOTIFY ENGINEER IF THERE ARE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL REMOVE SUCH EXISTING WORK AS CALLED FOR ON THE DRAWINGS OR AS REQUIRED TO CLEAR THE AREAS OF NEW CONSTRUCTION.

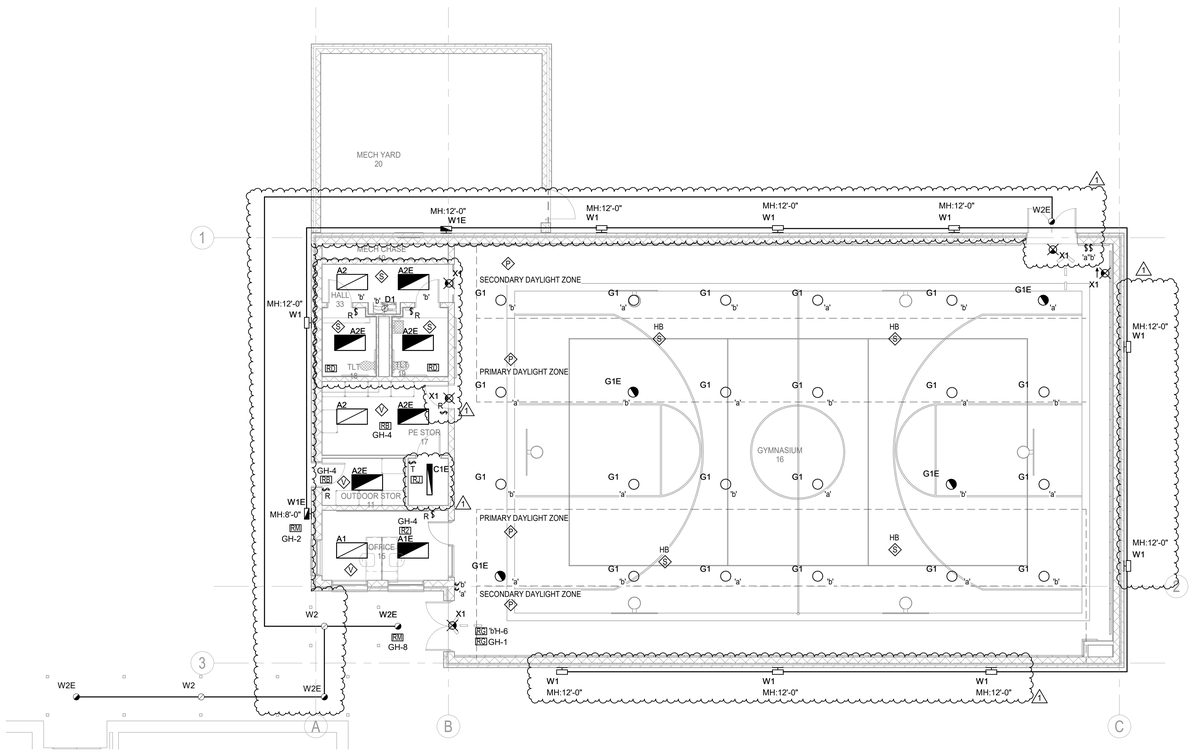
PROVIDE NEW LIGHTING DEVICES AND SWITCH BOX EXTENSIONS IN ALL AREAS WHERE GYPSUM BOARD OR OTHER WALL COVERING ADDS TO THE THICKNESS OF WALLS. SEE ARCHITECTURAL DRAWINGS FOR AREAS AFFECTED.

EXISTING RACEWAYS AND LOCATION OF ELECTRICAL OUTLETS ON EXISTING WALLS TO REMAIN SHALL BE RE-USED AS PRACTICAL FOR NEW DEVICES AS PART OF NEW WORK.

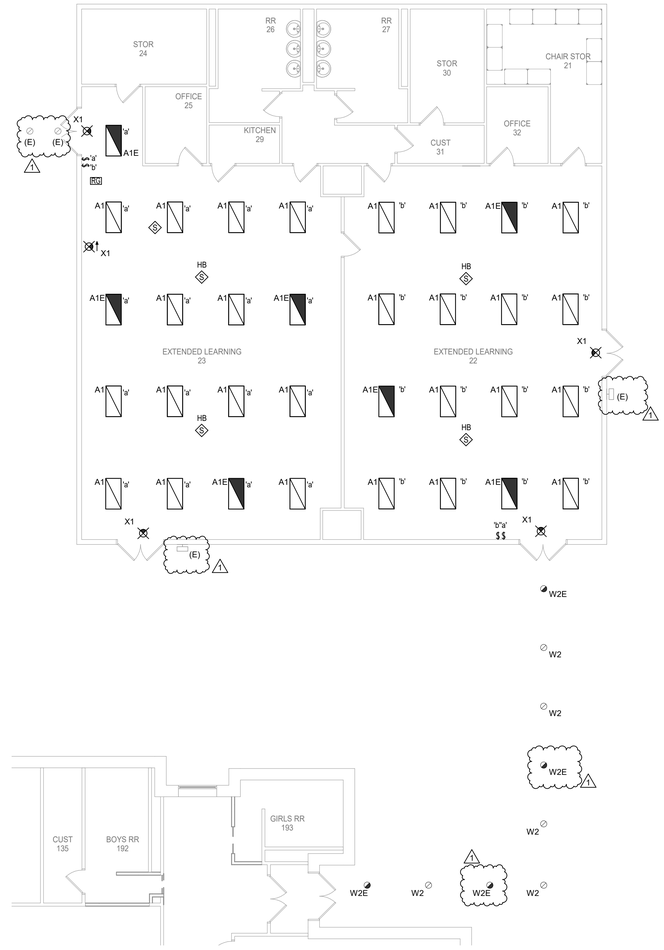
IECC-2021, C405.11 AUTOMATIC RECEPTACLE CONTROL. AT LEAST 50 PERCENT OF ALL 125V, 15-AMP AND 20-AMP RECEPTACLES INSTALLED IN ENCLOSED OFFICES, CONFERENCE ROOMS, ROOMS USED PRIMARILY FOR COPY OR PRINT FUNCTIONS, BREAKROOMS, CLASSROOMS AND INDIVIDUAL WORKSTATIONS, INCLUDING THOSE INSTALLED IN MODULAR PARTITIONS AND MODULE OFFICE WORKSTATION SYSTEMS SHALL HAVE AUTOMATIC RECEPTACLE CONTROL, AN OCCUPANT SENSOR SHALL TURN OFF INDICATED RECEPTACLES WITHIN 20 MINUTES AFTER DETERMINING THAT THE AREA IS UNOCCUPIED.



1 ELECTRICAL POWER PLAN - LEVEL 1 - NEW GYM
Scale: 1/8" = 1'-0"



2 ELECTRICAL LIGHTING PLAN - LEVEL 1 - NEW GYM
Scale: 1/8" = 1'-0"



3 ELECTRICAL LIGHTING PLAN - LEVEL 1 - EXTENDED DAY LEARNING
Scale: 1/8" = 1'-0"

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BRADLEY KALMANS 80219 LICENSED PROFESSIONAL ENGINEER
10-10-2025

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS

695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
ELECTRICAL FLOOR PLANS

Project No.	Scale
214001246	1/8" = 1'-0"
Revision	Drawing No.
1	E201-HGES

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

GENERATOR LOAD ANALYSIS
EXIST. PANEL GH

277/480, 3PH, 4W
40kVA/32kW - 60A

LOAD DESCRIPTION	LOAD KVA
EXISTING CALCULATED LOAD	1.3
CALCULATED EXISTING LOAD (125%)	1.7
NEW LOAD:	
RECEPTACLES (CONNECTED NEC 220.44)	11.4
1ST 10KVA @100% (NEC 220.44)	10
REMAINDER @50% (NEC 220.44)	0.7
HVAC - FANS, AHU'S (NEC 220)	--
LIGHTING	0.5
LIGHTING @ 125%	0.6
TOTAL KVA	13
TOTAL AMPS	15.6

TWO-HOUR FIRE RATED CABLE:

1. TWO-HOUR FIRE RATED POWER CABLE SHALL BE APPROVED BY THE LOCAL AHJ AND INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS IN COMPLIANCE WITH UL FIRE RESISTANCE DIRECTORY, ELECTRICAL CIRCUIT PROTECTIVE SYSTEMS (FHIT), AND SYSTEM 27.

2. TWO-HOUR FIRE RATED POWER CABLE SHALL BE INSTALLED AS APPROVED BY THE LOCAL AHJ IN STEEL EMT OR STEEL RIGID CONDUIT WITH STEEL SET SCREW OR THREADED FITTINGS. UL LISTED FLEXIBLE METALLIC STEEL CONDUIT MAY BE USED IN LENGTHS NOT TO EXCEED 6-FEET. SUPPORT CONDUIT EVERY 5-FEET ON CONCRETE OR MASONRY WALLS OR A CONCRETE FLOOR-CEILING ASSEMBLY. THE FIRE RATING OF THE WALL OR FLOOR-CEILING ASSEMBLY MUST BE EQUAL TO OR GREATER THAN THE RATING OF THE ELECTRICAL CIRCUIT PROTECTIVE SYSTEM. PROVIDE J-BOX AT EACH END OF THE FIRE RATED CABLES IN THE FIRE RATED ROOM TO ALLOW SPLICE TO STANDARD BUILDING CABLE TO THE EQUIPMENT. PROVIDE SEALANT TO THE END OF THE RACEWAY TO PREVENT GASES FROM MIGRATING FROM THE FIRE RATED CABLE DOWN INTO THE EQUIPMENT.

INSULATION FOR TWO-HOUR FIRE RATED POWER CABLE:

1. INSULATION SHALL MEET OR EXCEED THE REQUIREMENTS OF UL 2196 FIRE TEST FOR CIRCUIT INTEGRITY OF FIRE-RESISTIVE POWER, INSTRUMENTATION, CONTROL AND DATA CABLES, AND UL 44, THERMOSET INSULATED WIRES AND CABLES.

a. INSULATION FOR CONDUCTORS SHALL BE UL TYPE RHW-2 OR RW90, 90 DEGREES C FOR WET LOCATIONS AND 90 DEGREES C FOR DRY LOCATIONS.
b. ELECTRICAL CIRCUIT PROTECTIVE SYSTEMS (FHIT) – SYSTEM 27 OF THE UL FIRE RESISTANCE DIRECTORY.

FEEDER SCHEDULE-GENERATOR

AMPERAGE	# SETS	CONDUCTOR (QTY.)/SIZE	GROUND (QTY.)/SIZE	CONDUIT
100A	1	(4) #3	#8	1-1/2"C

TRANSFORMER SCHEDULE

PRIMARY (480V 3PH 3W +GND)			SECONDARY (120/208V 3PH 4W +GND)		
KVA	WIRE & CONDUIT	CIRCUIT BREAKER	WIRE & CONDUIT	CIRCUIT BREAKER	GROUNDING ELECTRODE CONDUCTOR
30KVA	3#6, 1-1/4"C, 1#10G	3P-50A	4#2, 1-1/2"C, 1#8G	3P-100A	#8

LIGHTING CONTROLS SCHEDULE - ALTERNATE

Type	Sensor Operation	Description
ER	-	UL924 LOAD CONTROL RELAY, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM
ES	-	UL1008 GENERATOR TRANSFER DEVICE, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM

LIGHTING FIXTURE SCHEDULE-ALTERNATE

Type Mark	CATALOG NUMBER MANUFACTURER	MODEL	MOUNTING	LAMP TYPE	CCT	CRI	VOLTAGE	LOAD	REMARKS
A1	METALUX	24CGT5540C	T-GRID/GYP	5500L LED	4000 K	80	277 V	50 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED.
A2	METALUX	24CGT4540C	T-GRID/GYP	4500L LED	4000 K	80	277 V	40 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED.
C1	METALUX	4SNLED-LD5-LN-41SL-LN-UNV-L840-CD1-U	SUSPENDED/SURFACE	4100L LED	4000 K	80	277 V	35 W	1x4 SUSPENDED/SURFACE STRIP.
G1	METALUX	SSLED-LD5-12-M-UNV-L84	SUSPENDED/SURFACE	12000L LED	4000 K	80	277 V	100 W	ROUND HIGH BAY FIXTURE .
W1	GARDCO	GWM-A09-840-T3M-UNV	WALL	6000L LED	4000 K	80	277 V	40 W	LED ARCHITECTURAL WALLPAK, ALUMINUM HOUSING. COORDINATE FINISH WITH EXISTING EXTERIOR FIXTURES. DLC CERTIFIED.
W2	FAIL-SAFE	TRO11-LD4-25W-40-OPL-XX-UNV-EDC1	SURFACE	1695L LED	4000 K	80	277 V	25 W	LED 11-INCH ARCHITECTURAL ROUND FIXTURE, SURFACE MOUNTED, WET LOCATION LISTED, ALUMINUM HOUSING, POLYCARBONATE LENS. COORDINATE FINISH WITH ARCHITECT. DLC CERTIFIED.
XG	SURE-LITES	LPXW6-W	CEILING	LED	4000 K	0	277 V	5 W	VANDAL PROOF POLYCARBONATE UNIVERSAL LED EXIT SIGN WITH WHITE HOUSING, RED LETTERING AND EMERGENCY BATTERY BACK-UP.

1

Branch Panel: GHE

Location: OUTDOOR STOR 11
Supply From:
Mounting: Surface
Volts: 277/480 Wye
Phases: 3
Wires: 4
Phase in kVA

NEW PANEL
A.I.C. Rating: 18,000
Enclosure: Type 1
Mains: 60A MCB LSI
1

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Lighting	#12	20 1	0.1 / 0.0			1	-- --	SPACE	2	
	3	Lighting	#12	20 1		0.1 / 0.0		1	-- --	SPACE	4	
	5	Room 17, 11, 15, 33, 16, 19, 18	#12	20 1			0.7 / 0.0	1	-- --	SPACE	6	
	7	SPARE	--	20 1	0.0 / 0.0			1	-- --	SPACE	8	
	9	SPARE	--	20 1		0.0 / 0.0		1	-- --	SPACE	10	
	11	SPARE	--	20 1			0.0 / 0.0	1	-- --	SPACE	12	
	13				5.1 / 0.0						14	
	15	TGLE	ONE LINE	50 3		3.3 / 0.0		3	30 --	SPDL	16	
	17						3.0 / 0.0				18	
			Total Load:		5.1 kVA	3.4 kVA	3.7 kVA					
			Total Amps:		19 A	12 A	14 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	0.9 kVA	125.00%	1.1 kVA		
Motor	0.3 kVA	100.00%	0.3 kVA	Total Conn. Load:	12.2 kVA
Receptacles	11.1 kVA	95.21%	10.5 kVA	Total Est. Demand:	11.9 kVA
				Total Conn. Current:	15 A
				Total Est. Demand Current:	14 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: GLE

Location: OUTDOOR STOR 11
Supply From: TGLE
Mounting: Surface
Volts: 120/208 Wye
Phases: 3
Wires: 4
Phase in kVA

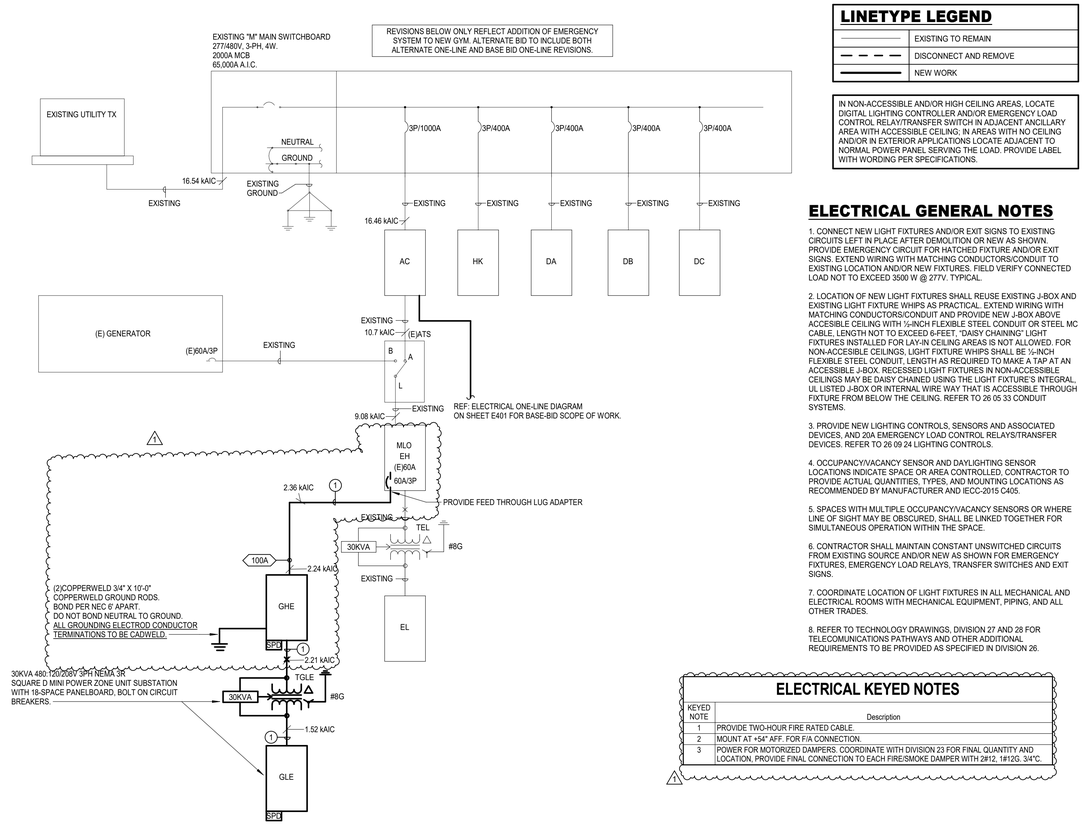
NEW PANEL
A.I.C. Rating: 10,000
Enclosure: Type 1
Mains: 100A MCB LSI
1

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	IDF Rack L6-30R PE STOR 17	#10	30 2	1.8 / 1.2			1	20 #12	Receptacles PE STOR 17	2	
	3					1.8 / 1.0		1	20 #12	Sound Rack OFFICE 15	4	
	5	IDF Rack PE STOR 17	#12	20 1			1.2 / 1.8	2	30 #10	IDF Rack L6-30R PE STOR 17	6	
LO	7	Motorized Dampers PE STOR 17	#12	20 1	0.3 / 1.8						8	
LO	9	F/A OUTDOOR STOR 11	#12	20 1		0.5 / 0.0		1	-- --	SPACE	10	
	11	SPACE	--	-- 1			0.0 / 0.0	1	-- --	SPACE	12	
	13	SPARE	--	20 1	0.0 / 0.0						14	
	15	SPARE	--	20 1		0.0 / 0.0		3	30 --	SPDL	16	
	17	SPARE	--	20 1			0.0 / 0.0				18	
			Total Load:		5.1 kVA	3.3 kVA	3.0 kVA					
			Total Amps:		42 A	28 A	25 A					

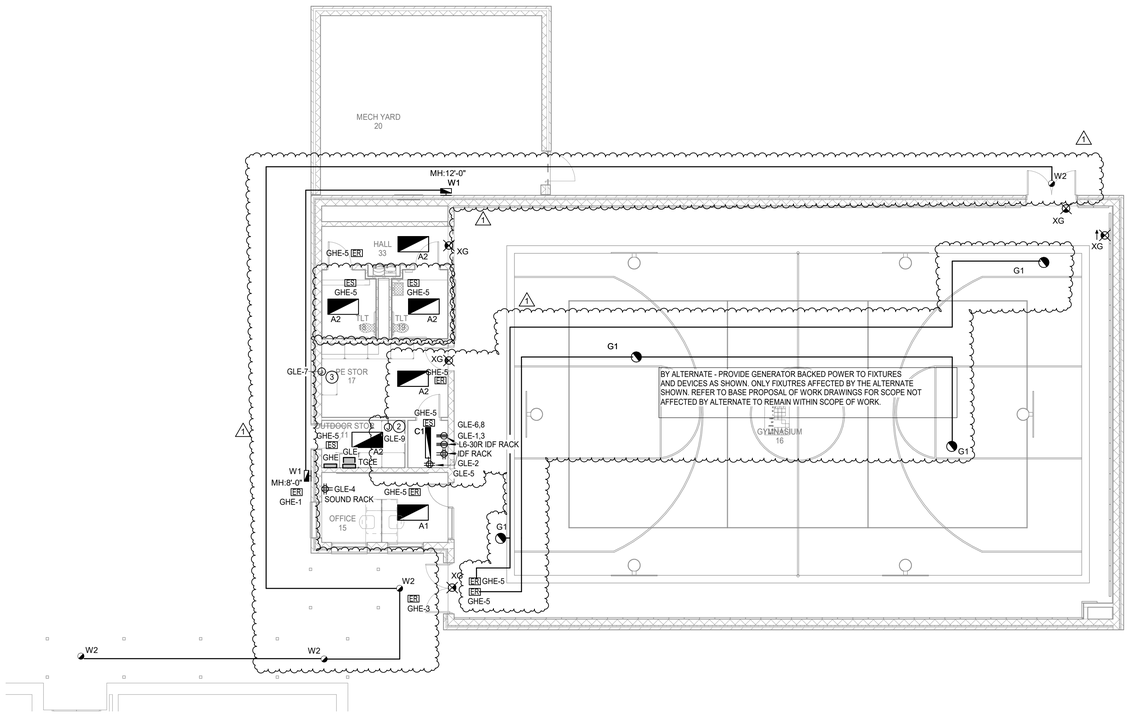
Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	0.3 kVA	100.00%	0.3 kVA		
Receptacles	11.1 kVA	95.21%	10.5 kVA	Total Conn. Load:	11.3 kVA
				Total Est. Demand:	10.8 kVA
				Total Conn. Current:	31 A
				Total Est. Demand Current:	30 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE



ELECTRICAL ONE-LINE DIAGRAM - ALTERNATE
2 Scale: N.T.S.



N

ELECTRICAL POWER PLAN - LEVEL 1 - NEW GYM -ALTERNATE
1 Scale: 1/8" = 1'-0"

LINETYPE LEGEND

———	EXISTING TO REMAIN
— — — —	DISCONNECT AND REMOVE
———	NEW WORK

IN NON-ACCESSIBLE AND/OR HIGH CEILING AREAS, LOCATE DIGITAL LIGHTING CONTROLLER AND/OR EMERGENCY LOAD CONTROL RELAY/TRANSFER SWITCH IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING; IN AREAS WITH NO CEILING AND/OR IN EXTERIOR APPLICATIONS LOCATE ADJACENT TO NORMAL POWER PANEL SERVING THE LOAD. PROVIDE LABEL WITH WORDING PER SPECIFICATIONS.

ELECTRICAL GENERAL NOTES

1. CONNECT NEW LIGHT FIXTURES AND/OR EXIT SIGNS TO EXISTING CIRCUITS LEFT IN PLACE AFTER DEMOLITION OR NEW AS SHOWN. PROVIDE EMERGENCY CIRCUIT FOR HATCHED FIXTURE AND/OR EXIT SIGNS. EXTEND WIRING WITH MATCHING CONDUCTORS/CONDUIT TO EXISTING LOCATION AND/OR NEW FIXTURES. FIELD VERIFY CONNECTED LOAD NOT TO EXCEED 3500 W @ 277V, TYPICAL.

2. LOCATION OF NEW LIGHT FIXTURES SHALL REUSE EXISTING J-BOX AND EXISTING LIGHT FIXTURE WHIPS AS PRACTICAL. EXTEND WIRING WITH MATCHING CONDUCTORS/CONDUIT AND PROVIDE NEW J-BOX ABOVE ACCESIBLE CEILING WITH ½-INCH FLEXIBLE STEEL CONDUIT OR STEEL MC CABLE, LENGTH NOT TO EXCEED 6-FEET, "DAISY CHAINING" LIGHT FIXTURES INSTALLED FOR LAY-IN CEILING AREAS IS NOT ALLOWED. FOR NON-ACCESIBLE CEILINGS, LIGHT FIXTURE WHIPS SHALL BE ½-INCH FLEXIBLE STEEL CONDUIT, LENGTH AS REQUIRED TO MAKE A TAP AT AN ACCESSIBLE J-BOX. RECESSED LIGHT FIXTURES IN NON-ACCESSIBLE CEILINGS MAY BE DAISY CHAINED USING THE LIGHT FIXTURE'S INTEGRAL, UL LISTED J-BOX OR INTERNAL WIRE WAY THAT IS ACCESSIBLE THROUGH FIXTURE FROM BELOW THE CEILING. REFER TO 26 05 33 CONDUIT SYSTEMS.

3. PROVIDE NEW LIGHTING CONTROLS, SENSORS AND ASSOCIATED DEVICES, AND 20A EMERGENCY LOAD CONTROL RELAYS/TRANSFER DEVICES. REFER TO 26 09 24 LIGHTING CONTROLS.

4. OCCUPANCY/VACANCY SENSOR AND DAYLIGHTING SENSOR LOCATIONS INDICATE SPACE OR AREA CONTROLLED. CONTRACTOR TO PROVIDE ACTUAL QUANTITIES, TYPES, AND MOUNTING LOCATIONS AS RECOMMENDED BY MANUFACTURER AND IECC-2015 C405.

5. SPACES WITH MULTIPLE OCCUPANCY/VACANCY SENSORS OR WHERE LINE OF SIGHT MAY BE OBSCURED, SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.

6. CONTRACTOR SHALL MAINTAIN CONSTANT UNSWITCHED CIRCUITS FROM EXISTING SOURCE AND/OR NEW AS SHOWN FOR EMERGENCY FIXTURES, EMERGENCY LOAD RELAYS, TRANSFER SWITCHES AND EXIT SIGNS.

7. COORDINATE LOCATION OF LIGHT FIXTURES IN ALL MECHANICAL AND ELECTRICAL ROOMS WITH MECHANICAL EQUIPMENT, PIPING, AND ALL OTHER TRADES.

8. REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.

ELECTRICAL KEYED NOTES

KEYED NOTE	Description
1	PROVIDE TWO-HOUR FIRE RATED CABLE.
2	MOUNT AT +54" AFF. FOR F/A CONNECTION.
3	POWER FOR MOTORIZED DAMPERS. COORDINATE WITH DIVISION 23 FOR FINAL QUANTITY AND LOCATION, PROVIDE FINAL CONNECTION TO EACH FIRE/SMOKE DAMPER WITH 2#12, 1#12G, 3/4"C.

1

Stantec
OFFICE LEGAL ENTITY
OFFICE ADDRESS LINE 1
OFFICE ADDRESS LINE 2
OFFICE CITY, XX XXX XXX
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Notes

No.	Revision	By	Appd	
1	Addendum 01			10/10/2025

	Revision	By	Appd	
	100% ISSUE FOR BID AND PERMIT			2025.09.24

Issued

File Name: N/A	Dwn.	Dsgn.	Chkd.	
	KJ	KJ	JZ	11/27/24

Permit/Seal



Client/Project Logo

2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
ELECTRICAL FLOOR PLANS - ALTERNATE

Project No. 214001246
Scale As indicated
Revision 1
Drawing No. E301-HGES

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

Branch Panel: AC

EXISTING PANEL

Location: MECH 115 **Volts:** 277/480 Wye **A.I.C. Rating:** 25,000
Supply From: SWBD M **Phases:** 3 **Enclosure:** Type 1
Mounting: Surface **Wires:** 4 **Mains:** 1000A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CKT	Note
	1					44.3 / 44.3							2	
	3	CHILLER #1	--	225	3		44.3 / 44.3		3	225	--	CHILLER #2	4	
	5							44.3 / 44.3					6	
	7					24.9 / 1.4							8	
	9	XFMR XK	--	125	3		24.9 / 1.4		3	15	--	CONT. COMP.	10	
	11							24.9 / 1.4					12	
	13					5.8 / 5.8							14	
	15	CHP-1	--	40	3		5.8 / 5.8		3	40	--	CHP-2	16	
	17							5.8 / 5.8					18	
	19					3.0 / 3.0							20	
	21	CWP-1	--	40	3		3.0 / 3.0		3	40	--	CWP-2	22	
	23							3.0 / 3.0					24	
	25					7.4 / 2.2							26	
	27	COOLING TOWER	--	60	3		7.4 / 2.2		3	15	--	AHU-1	28	
	29							7.4 / 2.2					30	
	31					2.2 / 0.2							32	
	33	WATER HEATER	--	15	3		2.2 / 0.2		3	15	--	SF-1	34	
	35							2.2 / 0.2					36	
	37					45.8 / 3.3							38	
1	39	GH	ONE LINE	250	3		45.9 / 3.3		3	20	--	EOH-1	40	
	41							44.2 / 3.3					42	
		Total Load:				193.6 kVA	193.7 kVA	192.0 kVA						
		Total Amps:				700 A	700 A	693 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	104.2 kVA	100.00%	104.2 kVA		
Lighting	3.4 kVA	125.00%	4.3 kVA	**Total Conn. Load:**	579.3 kVA
Power	0.0 kVA	0.00%	0.0 kVA	**Total Est. Demand:**	576.3 kVA
Receptacles	17.7 kVA	78.28%	13.8 kVA	**Total Conn. Current:**	697 A
Kitchen Equipment	0.0 kVA	0.00%	0.0 kVA	**Total Est. Demand Current:**	693 A
Miscellaneous	0.0 kVA	0.00%	0.0 kVA		

Existing Loads	Existing Connected	Existing Demand...	Existing Demand
Existing Load	443.4 kVA	100.00%	443.4 kVA

Notes:
EXISTING PANEL - Total Calculated Existing load shown in calculations.

1 - NEW CIRCUIT

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
E - EXISTING LOAD

Branch Panel: GH

NEW PANEL

Location: HALL 33 **Volts:** 277/480 Wye **A.I.C. Rating:** 18,000
Supply From: AC **Phases:** 3 **Enclosure:** Type 1
Mounting: Recessed **Wires:** 4 **Mains:** 250A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CKT	Note
	1	GYMNASIUM 16	#12	20	1	1.2 / 0.4			1	20	#12	Exterior Lighting	2	C
	3	SPACE	--	--	1		0.0 / 0.5		1	20	#12	Lighting Room 8, 17, 11, 15	4	
	5	SPACE	--	--	1			0.0 / 1.2	1	20	#12	GYMNASIUM 16	6	
	7	SPACE	--	--	1	0.0 / 0.2			1	20	#12	Exterior Lighting	8	C
	9	SPACE	--	--	1		0.0 / 0.0		1	--	--	SPACE	10	
	11	SPACE	--	--	1			0.0 / 0.0	1	--	--	SPACE	12	
	13	SPACE	--	--	1	0.0 / 0.0			1	--	--	SPACE	14	
	15	SPACE	--	--	1		0.0 / 0.0		1	--	--	SPACE	16	
	17	SPACE	--	--	1			0.0 / 0.0	1	--	--	SPACE	18	
	19	SPACE	--	--	1	0.0 / 0.0			1	--	--	SPACE	20	
	21	SPACE	--	--	1		0.0 / 0.0		1	--	--	SPACE	22	
	23	SPARE	--	20	1			0.0 / 0.0	1	--	--	SPACE	24	
	25	SPARE	--	20	1	0.0 / 0.0			1	--	--	SPACE	26	
	27	SPARE	--	20	1		0.0 / 0.0		1	20	--	SPARE	28	
	29	SPARE	--	20	1			0.0 / 0.0	1	20	--	SPARE	30	
	31					10.8 / 0.0			1	20	--	SPARE	32	
	33	TXGL	ONE LINE	50	3		12.2 / 0.0		1	20	--	SPARE	34	
	35							9.8 / 0.0	1	20	--	SPARE	36	
	37					33.2 / 0.0							38	
	39	SRTU-1 MECH YARD	#1/0	150	3		33.2 / 0.0		3	30	--	SPDL	40	
	41							33.2 / 0.0					42	
		Total Load:				45.8 kVA	45.9 kVA	44.2 kVA						
		Total Amps:				166 A	166 A	160 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	104.2 kVA	100.00%	104.2 kVA		
Heating	9.8 kVA	100.00%	9.8 kVA	**Total Conn. Load:**	135.9 kVA
Lighting	3.4 kVA	125.00%	4.3 kVA	**Total Est. Demand:**	132.9 kVA
Motor	0.8 kVA	100.00%	0.8 kVA	**Total Conn. Current:**	163 A
Receptacles	17.7 kVA	78.28%	13.8 kVA	**Total Est. Demand Current:**	160 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
C - CONTROLLED VIA CONTACTOR

Branch Panel: GL

NEW PANEL

Location: HALL 33 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: TXGL **Phases:** 3 **Enclosure:** Type 1
Mounting: Recessed **Wires:** 4 **Mains:** 100A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CKT	Note
	1	Receptacle GYMNASIUM 16	#12	20	1	1.1 / 1.1			1	20	#12	Receptacle, GFCI Receptacle, GYMNASIUM 16	2	
	3	IDF Rack L6-30R	#10	30	2		1.8 / 1.2		1	20	#12	IDF Rack	4	
	5							1.8 / 0.3	1	20	#12	Trap Primer PE STOR 17	6	
	7	IDF Rack L6-30R	#10	30	2	1.8 / 0.4			1	20	#12	GFCI Receptacle	8	
	9						1.8 / 0.8		1	20	#12	EDF TLT 11	10	
	11	GFCI Receptacle, Receptacle PE STOR 11,...	#12	20	1			1.1 / 0.5	1	20	#12	BMCS PE STOR 11	12	
LO	13	F/A PE STOR 11	#12	20	1	0.5 / 0.7			1	20	#12	Receptacle OFFICE 15, PE STOR 11	14	
	15	Receptacles OFFICE 15	#12	20	1		0.7 / 1.0		1	20	#12	Sound Rack PE STOR 11	16	
	17	IDF Rack PE STOR 17	#12	20	1			1.2 / 0.3	1	20	#12	Mplayer2 Campers PE STOR 17	18	LO
	19	EF-1 TLT 18	#12	20	1	0.5 / 2.5			2	30	#10	IEWH-2 TLT 18	20	
	21	IEWH-1 TLT 19	#10	30	2		2.5 / 2.5						22	
	23							2.5 / 2.3	2	30	#10	DMSCU-1 MECH YARD 20	24	
	25	SPACE	--	--	1	0.0 / 2.3			1	--	--	SPACE	26	
	27	SPACE	--	--	1		0.0 / 0.0		1	--	--	SPACE	28	
	29	SPACE	--	--	1			0.0 / 0.0	1	--	--	SPACE	30	
	31	SPACE	--	--	1	0.0 / 0.0			1	--	--	SPACE	32	
	33	SPARE	--	20	1		0.0 / 0.0		1	20	--	SPARE	34	
	35	SPARE	--	20	1			0.0 / 0.0	1	20	--	SPARE	36	
	37	SPARE	--	20	1	0.0 / 0.0							38	
	39	SPARE	--	20	1		0.0 / 0.0		3	30	--	SPDL	40	
	41	SPARE	--	20	1			0.0 / 0.0					42	
		Total Load:				10.8 kVA	12.2 kVA	9.8 kVA						
		Total Amps:				91 A	103 A	82 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	4.6 kVA	100.00%	4.6 kVA		
Heating	9.8 kVA	100.00%	9.8 kVA	**Total Conn. Load:**	32.8 kVA
Motor	0.8 kVA	100.00%	0.8 kVA	**Total Est. Demand:**	29.0 kVA
Receptacles	17.7 kVA	78.28%	13.8 kVA	**Total Conn. Current:**	91 A
				Total Est. Demand Current:	80 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

DEMOLITION / EXISTING DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION, AND WHEN AVAILABLE, EXISTING RECORD DOCUMENTS. REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION, AND IMMEDIATELY AFTER SUCH DISCREPANCIES ARE DISCOVERED. CONTRACTOR TO VERIFY EXISTING CONDITIONS ON FIELD AND NOTIFY ENGINEER IF THERE ARE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL REMOVE SUCH EXISTING WORK AS CALLED FOR ON THE DRAWINGS OR AS REQUIRED TO CLEAR THE AREAS OF NEW CONSTRUCTION. OWNER OR ITS REPRESENTATIVE SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED FROM THIS PROJECT. CONTRACTOR TO NOTIFY CAREY RAMSEYWITH DISTRICT PRIOR TO DEMOLITION WORK TO DISCUSS ALL RETURNED ITEMS TO DISTRICT.

UNLESS NOTED OTHERWISE, RETAIN IN PLACE ALL EXISTING CIRCUITS AND FEEDER FROM SOURCE FOR ALL EXISTING PANELS LABELED TO BE REPLACED AND / OR RELOCATED. EXTEND / RE-ROUTE EXISTING BRANCH CIRCUITS AND FEEDER LEFT IN PLACE AFTER DEMOLITION FROM EXISTING PANELS TO BE RELOCATED AND / OR REPLACED.

CONTRACTOR TO FIELD VERIFY INTERRUPTING FAULT CURRENT CAPACITY OF EXISTING PANELS AND / OR SWITCHBOARDS AND TO PROVIDE NEW BREAKERS/FUSES TO MATCH EXISTING.

PANELBOARD CIRCUIT DIRECTORY:

CONTRACTOR SHALL RECORD AND/OR PRESERVE THE EXISTING CIRCUIT DIRECTORY, IF ANY, FOR THE SOLE PURPOSE UPON COMPLETION OF NEW WORK OF PRODUCING A NEW CIRCUIT DIRECTORY.

CONTRACTOR SHALL PROVIDE AS PART OF THE CONSTRUCTION DOCUMENTS A NEW, NEATLY TYPED DIRECTORY. CONTRACTOR SHALL TRACE ALL EXISTING CIRCUITS AND SHALL LEGIBLY IDENTIFY AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE, LOADS SERVED AND LOCATION AND/OR THE PANELBOARD SCHEDULE ON THE DRAWINGS. THE WORD "EXISTING" SHALL NOT BE USED ON PANELBOARD DIRECTORIES. SPARE BREAKERS ARE TO BE LISTED AS "SPARE". SPACES WITH NO BREAKERS ARE TO BE LEFT BLANK. REFER TO NEC-2023: 408.4(A) FOR DETAILS.

CONTRACTOR SHALL PERMANENTLY LABEL AS PART OF THE CONSTRUCTION DOCUMENTS ALL SWITCHBOARDS, SWITCHGEAR AND PANELBOARDS TO INDICATE EACH POWER SOURCE. REFER TO NEC-2023: 408.4(B) FOR DETAILS.

ELECTRICAL LOAD ANALYSIS

EXIST. M

277/480, 3PH, 4W
2000A

LOAD DESCRIPTION	LOAD KVA
CALCULATED EXISTING LOAD - EXIST. DWGS	1183
NEW LOAD:	
RECEPTACLES (CONNECTED NEC 220.44)	17.7
1ST 10KVA @100% (NEC 220.44)	10
REMAINDER @50% (NEC 220.44)	3.9
HVAC - FANS, AHU'S (NEC 220)	104.2
MOTOR	.8
HEATING	9.8
LIGHTING	5.9
LIGHTING @ 125%	7.4
TOTAL KVA	1319.1
TOTAL AMPS	1587.4

ELECTRICAL KEYED NOTES

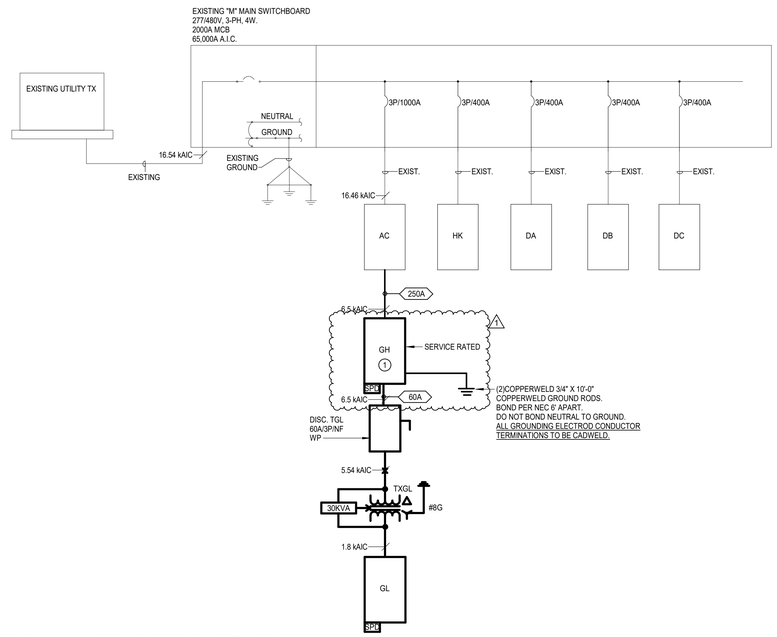
KEYED NOTE	Description
1	CLEARLY MARK COVER OF PANEL AS BUILDING SERVICE DISCONNECT.

TRANSFORMER SCHEDULE

PRIMARY (480V 3PH 3W +GND)			SECONDARY (120/208V 3PH 4W +GND)		
KVA	WIRE & CONDUIT	CIRCUIT BREAKER	WIRE & CONDUIT	CIRCUIT BREAKER	GROUNDING ELECTRODE CONDUCTOR
30KVA	3#6, 3/4"C, 1#10G	3P-50A	4#2, 1-1/4"C, 1#8G	3P-100A	#8

FEEDER SCHEDULE

AMPERAGE	# SETS	CONDUCTOR (QTY.)/SIZE	GROUND (QTY.)/SIZE	CONDUIT
250A	1	(4) #250KCMIL	#4	3"C
60A	1	(4) #6	#10	1"C



1 **ELECTRICAL ONE-LINE DIAGRAM**
Scale: N.T.S.

LINETYPE LEGEND

———	EXISTING TO REMAIN
— — — —	DISCONNECT AND REMOVE
———	NEW WORK

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Notes

No.	Revision	By	Appd	YYYY.MM.DD
1	Addendum 01			10/10/2025

Issued	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24

File Name: N/A — Dwn. KJ — Dsgn. KJ — Chkd. JZ — 11/27/24 YYYY.MM.DD

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS

695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
ELECTRICAL ONE-LINE AND PANEL SCHEDULES

Project No. 214001246 — Scale N.T.S.
Revision 1 — Drawing No. **E401-HGES**

11/27/2025 2:20:55 PM

ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

LIGHTING FIXTURE SCHEDULE

Type Mark	CATALOG NUMBER MANUFACTURER	CATALOG NUMBER MODEL	MOUNTING	LAMP TYPE	CCT	CRI	VOLTAGE	LOAD	REMARKS
A1	METALUX	24CGT5540C	T-GRID/GYP	5500L LED	4000 K	80	277 V	50 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED.
A1E	METALUX	24CGT5540C - EL14W	T-GRID/GYP	5500L LED	4000 K	80	277 V	50 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED. PROVIDE INTEGRAL EMERGENCY BATTERY BACKUP.
A2	METALUX	24CGT4540C	T-GRID/GYP	4500L LED	4000 K	80	277 V	40 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED.
A2E	METALUX	24CGT4540C - EL14W	T-GRID/GYP	4500L LED	4000 K	80	277 V	40 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED. PROVIDE INTEGRAL EMERGENCY BATTERY BACKUP.
C1	METALUX	4SNLED-LD5-LN-41SL-LN-UNV-L840-CD1-U	SUSPENDED/SURFACE	4100L LED	4000 K	80	277 V	35 W	1x4 SUSPENDED/SURFACE STRIP.
C1E	METALUX	4SNLED-LD5-LN-41SL - EL14W	SUSPENDED/SURFACE	4100L LED	4000 K	80	277 V	35 W	1x4 SUSPENDED/SURFACE STRIP. PROVIDE INTEGRAL EMERGENCY BATTERY BACKUP.
D1	HALO	HC640D010-HM63040840-81MDH	RECESSED	4000L LED	4000 K	80	277 V	45 W	LED 6" RECESSED CAN LIGHT.0-10V DIMMING DRIVER. DLC CERTIFIED.
G1	METALUX	SSLED-LD5-12-M-UNV-L84	SUSPENDED/SURFACE	12000L LED	4000 K	80	277 V	100 W	ROUND HIGH BAY FIXTURE .
G1E	METALUX	SSLED-LD5-12-M-UNV-L840-EL20WREM	SUSPENDED/SURFACE	12000L LED	4000 K	80	277 V	100 W	ROUND HIGH BAY FIXTURE . PROVIDE INTEGRAL EMERGENCY BATTERY PACK.
W1	GARDCO	GWM-A09-840-T3M-UNV	WALL	6000L LED	4000 K	80	277 V	40 W	LED ARCHITECTURAL WALLPAK, ALUMINUM HOUSING. COORDINATE FINISH WITH EXISTING EXTERIOR FIXTURES. DLC CERTIFIED.
W1E	GARDCO	GWM-A09-840-T3M-UNV-EC	WALL	6000L LED	4000 K	80	277 V	40 W	LED ARCHITECTURAL WALLPAK, ALUMINUM HOUSING. COORDINATE FINISH WITH EXISTING EXTERIOR FIXTURES. DLC CERTIFIED. PROVIDE INTEGRAL EMERGENCY BATTERY PACK.
W2	FAIL-SAFE	TRO11-LD4-25W-40-OPL-XX-UNV-EDC1	SURFACE	1695L LED	4000 K	80	277 V	25 W	LED 11-INCH ARCHITECTURAL ROUND FIXTURE, SURFACE MOUNTED, WET LOCATION LISTED, ALUMINUM HOUSING, POLYCARBONATE LENS. COORDINATE FINISH WITH ARCHITECT. DLC CERTIFIED.
W2E	FAIL-SAFE	TRO11-LD4-25W-40-OPL-XX-UNV-EDC1-EL5W	SURFACE	1695L LED	4000 K	80	277 V	25 W	LED 11-INCH ARCHITECTURAL ROUND FIXTURE, SURFACE MOUNTED, WET LOCATION LISTED, ALUMINUM HOUSING, POLYCARBONATE LENS. COORDINATE FINISH WITH ARCHITECT. DLC CERTIFIED.
X1	SURE-LITES	LPXW7-W	UNIVERSAL	LED	4000 K	0	277 V	5 W	VANDAL PROOF POLYCARBONATE UNIVERSAL LED EXIT SIGN WITH WHITE HOUSING, RED LETTERING AND EMERGENCY BATTERY BACK-UP.

1

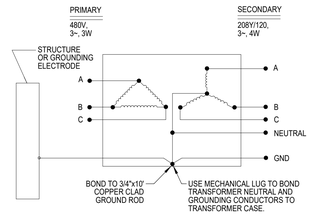
APPROVED LIGHTING MANUFACTURERS:
PHILLIPS, COOPER (METALUX), LITHONIA, OR LUTRON

NOTES:
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT INDICATED IN THE LIGHT FIXTURE SCHEDULE. WHERE THERE IS AN INCONSISTENCY BETWEEN THE LIGHT SCHEDULE AND THE SPECIFICATIONS, THE BETTER QUALITY OF WORK SHALL BE INCLUDED IN THE PROPOSAL.
THE ABOVE LIGHTING MANUFACTURERS SUBSTITUTION LIST DOES NOT GUARANTEE APPROVAL. APPROVAL WILL BE DETERMINED AFTER REVIEW OF SHOP DRAWING TO DETERMINE IF THE FIXTURE OR POLE SUBMITTED MEETS OR EXCEEDS THE DESIGN STANDARDS AND PERFORMANCE REQUIRED OF THE ACTUAL FIXTURE SPECIFIED IN THE LIGHT FIXTURE SCHEDULE. IT SHALL BE THE RESPONSIBILITY OF THECONTRACTOR TO CAREFULLY SELECT SUBSTITUTIONS FOR THE SPECIFIED LIGHT FIXTURES FROM THE APPROVED LIGHTING MANUFACTURERS LISTED ABOVE. WHERE SPECIFIC OPTIONS / ACCESSORIES ARE SPECIFIED, THEY SHALL BE PROVIDED AS SPECIFIED WITH THE SUBSTITUION.
DUE TO THE WIDE RANGE OF FIXTURE QUALITIES OFFERED BY EACH MANUFACTURER, THE APPROVED LIGHTING MANUFACTURERS SUBSTITUTION LIST IS NOT INTENDED TO INDICATE THAT ANY OR ALL MANUFACTURERS LISTED WILL HAVE SUITABLE SUBSTITUTIONS FOR THE LIGHT FIXTURES OR POLES SPECIFIED IN THE LIGHT FIXTURE SCHEDULE. SHOP DRAWING DELAYS AS A RESULT OF INAPPROPRIATE SUBSTITUTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

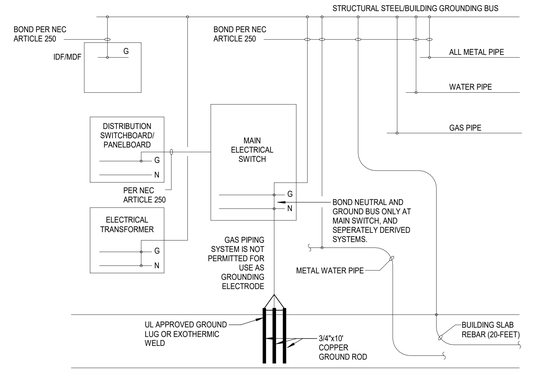
LIGHTING CONTROLS SCHEDULE

Type	Sensor Operation	# of Lighting Zones	# of Plug Load Zones	# of Total Zones	Description
R2	VACANCY - MANUAL ON / AUTO OFF 20 MINUTES TIMEOUT	1	2	3	ROOM CONTROLLER, 0-10V DIMMING.
RA	VACANCY - MANUAL ON / AUTO OFF 20 MINUTES TIMEOUT	1	0	1	ROOM CONTROLLER, 0-10V DIMMING.
RB	VACANCY - MANUAL ON / AUTO OFF 20 MINUTES TIMEOUT	1	0	1	ROOM CONTROLLER, NO DIMMING.
RD	OCCUPANCY - AUTO ON 100% / AUTO OFF 20 MINUTES TIMEOUT	1	0	1	ROOM CONTROLLER, NO DIMMING.
RE	OCCUPANCY - AUTO ON 100% / AUTO OFF 20 MINUTES TIMEOUT	1	0	1	CORRIDOR ROOM CONTROLLER, NO DIMMING. BMCS ON/OFF INTERFACE FOR OCCUPIED / UNOCCUPIED BUILDING OPERATION. PROVIDE OCCUPANCY BASED SENSORS WHERE SHOWN. LOCATE (1) KEYED SWITCH AT MAIN ENTRY DOOR ADJACENT TO SECURITY KEYPAD.
RG	OCCUPANCY - AUTO ON 50% / AUTO OFF 20 MINUTES TIMEOUT	2	0	1	GYM ROOM CONTROLLER, 0-10V DIMMING. BMCS ON/OFF INTERFACE FOR OCCUPIED / UNOCCUPIED BUILDING OPERATION. LOCATE 0-10 V DIMMING SWITCHES AT EACH ENTRY FOR DUAL-LEVEL CONTROL WITH ALTERNATE FIXTURES.
RJ	NONE	1	0	1	ON/OFF DIGITAL TIMER SWITCH. WATTSTOPPER TS-400. WHERE MULTIPLE SWITCHES ARE USED, THESE SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.
RM	NONE	1	0	1	CONTACTOR CONTROLLED WITH BMCS ON/OFF INTERFACE FOR PHOTOSENSOR / SCHEDULE. EXTERIOR LIGHTING SHALL BE TURNED OFF FROM 12:00AM TO 6:00AM OR FROM 1 HOUR AFTER CLOSING TO 1 HOUR BEFORE OPENING. MANUAL OVERRIDE LOCATED IN MDF ROOM.
ER	-	-	-	-	UL924 LOAD CONTROL RELAY. PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM
ES	-	-	-	-	UL1008 GENERATOR TRANSFER DEVICE, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM

NOTES:
- PER 2021 IECC C405, AREAS / ROOMS WHERE AUTOMATIC SHUTOFF FOR LIGHTING WOULD ENDANGER OCCUPANT SAFETY ARE EXEMPT FROM AUTOMATIC CONTROLS.
- REFER TO LIGHTING CONTROL DETAILS FOR TYPICAL INSTALLATION.
- PROVIDE PHOTOCELL WITHIN DAYLIGHT ZONE ONLY WHERE SHOWN ON FLOORPLANS.
- CONTRACTOR TO COORDINATE EXACT PROGRAMING OF TIME-SCHEDULE WITH OWNER REPRESENTATIVE.
-ACCEPTABLE LIGHTING CONTROLS MANUFACTURERS: INTELLIGENT LIGHTING CONTROLS (ILC), COOPER, ACUITY, LUTRON
-LIGHTING CONTROLS CATEGORY DATA CABLES TO BE LIME GREEN.



4 **GROUNDING FOR TRANSFORMERS**
Scale: 12" = 1'-0"



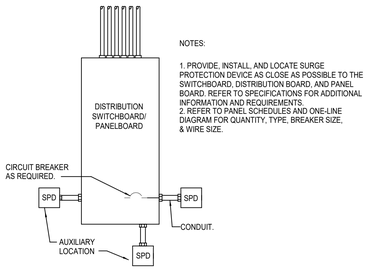
5 **SYSTEM GROUNDING DETAIL**
Scale: 12" = 1'-0"

SYMBOL SCHEDULE

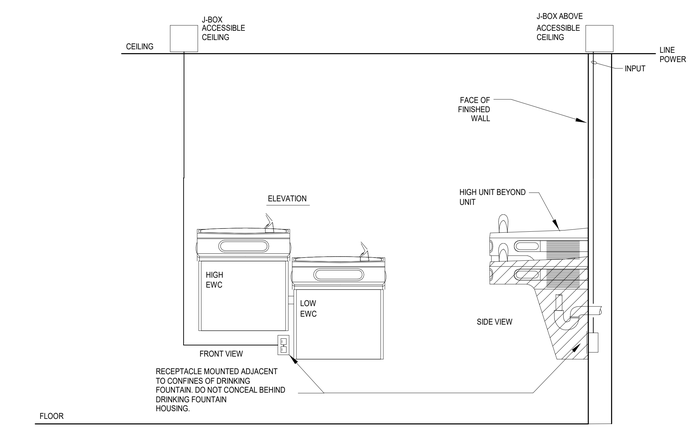
SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE)	
	LIGHT FIXTURE
	FIXTURE ON EMERGENCY CIRCUIT
	DOWNLIGHT FIXTURE
	LIGHT FIXTURE - WALL MOUNTED
	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT
	LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT
	EXIT LIGHT-CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED
	EXIT LIGHT-WALL MTD WITH DIRECTIONAL ARROWS AS REQUIRED
SWITCHES	
$	LINE VOLTAGE SINGLE POLE SWITCH
$2	LINE VOLTAGE 2-POLE SWITCH
$3	LINE VOLTAGE 3-WAY SWITCH
$4	LINE VOLTAGE 4-WAY SWITCH
$K	LINE VOLTAGE KEYED SWITCH
$3K	LINE VOLTAGE KEYED 3-WAY SWITCH
$D	LINE VOLTAGE WALL DIMMER SWITCH, SIZE AND TYPE AS REQUIRED
$VD	LINE VOLTAGE WALL MOUNTED DIMMER SWITCH WITH VACANCY SENSOR. MANUAL ON / AUTO OFF.
$V	LINE VOLTAGE WALL MOUNTED SWITCH WITH VACANCY SENSOR. MANUAL ON / AUTO OFF.
$OC	LINE VOLTAGE WALL MOUNTED SWITCH WITH VACANCY SENSOR. AUTO ON / AUTO OFF.
$P	LINE VOLTAGE SWITCH WITH PILOT LIGHT
$MC	MOMENTARY CONTACT SWITCH
[B]	PUSH BUTTON
$TH	6-HOUR TIMER SWITCH WITH HOLD
$T	6-HOUR TIMER SWITCH WITH NO HOLD
	20 AMP GENERATOR TRANSFER DEVICE
LOW VOLTAGE LIGHTING CONTROLS	
$R	LOW VOLTAGE LIGHTING CONTROLLER WALL SWITCH
$B	BMCS TIMER LOCAL OVERRIDE SWITCH
	CEILING MOUNTED PHOTO SENSOR
	CEILING MOUNTED VACANCY SENSOR, MANUAL ON / AUTO OFF
	CEILING MOUNTED OCCUPANCY SENSOR, AUTO ON / AUTO OFF
	LIGHTING CONTROLLER WITH GTD. ZONES AS REQUIRED.
RECEPTACLES AND OUTLETS	
	SIMPLEX RECEPTACLE
	DUPLEX RECEPTACLE
	ISOLATED GROUND RECEPTACLE
	POWER POLE
	125/250 VOLT, 1 PHASE, 3-WIRE, 20 AMPS UNLESS NOTED OTHERWISE
	DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE
	DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
	FLUSH FLOOR DUPLEX RECEPTACLE OUTLET
	FLUSH FLOOR DOUBLE DUPLEX RECEPTACLE OUTLET
	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH WIRING DEVICES AS INDICATED ON DRAWINGS. SIZE TO MATCH DEVICE QUANTITIES.
[R]	REMOTE BLANK FACE GFCI DEVICE.
U	PROVIDE DUPLEX RECEPTACLE WITH (2) USB CHARGING PORTS.
CR	E.C. TO PROVIDE ROUGH-IN FOR CARD READER JUNCTION BOX. REFER TO TECHNOLOGY SHEETS FOR ADDITIONAL INFORMATION.
SR	SWITCH CONTROLLED RECEPTACLE WITH THE TOP RECEPTACLE LOAD CONTROLLED VIA PLUG LOAD SWITCH MEETING 2021 IECC 405.11 REQUIREMENTS. SPLIT LOAD-CONTROLLED RECEPTACLES SHALL BE PERMANENTLY FACTORY MARKED AS CONTROLLED.

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
MISCELLANEOUS EQUIPMENT	
[FACP]	FIRE ALARM CONTROL PANEL
[ANNC]	FIRE ALARM REMOTE ANNUCIATOR
[T]	TRANSFORMER FOR DOOR BELL/BUZZER
	CHIME/BUZZER
MOTOR CONTROLLERS AND EQUIPMENT	
	MOTOR, MAKE FINAL MOTOR CONNECTION
	3-PHASE MOTOR, MAKE FINAL MOTOR CONNECTION
	DISCONNECT SWITCH AS REQUIRED
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED
	MOTOR STARTER
$M	MANUAL MOTOR SWITCH AS REQUIRED
	PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS
VFD	VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26
PB	IN-GROUND PULL BOX
ELECTRICAL EQUIPMENT	
	ELECTRICAL DISTRIBUTION OR PANELBOARD
	ELECTRICAL EMERGENCY LIFE SAFETY DISTRIBUTION OR PANELBOARD
	DRY TYPE TRANSFORMER
CIRCUITING	
	CONDUIT
	CONDUIT BELOW FLOOR, SLAB, OR GRADE
SUBSCRIPTS AND ABBREVIATIONS	
WP	INDICATES WEATHERPROOF
WG	INDICATES WIREGUARD
H	INDICATES HORIZONTAL
TL	INDICATES TWIST LOCK
NL	LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH
1-L	REFER TO ONE-LINE DIAGRAM
	INDICATES WALL MOUNTED DEVICE
	NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES

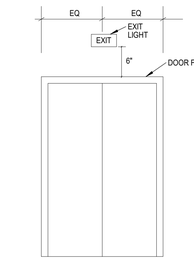
GENERAL NOTES:
-ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-3R MINIMUM.



1 **SURGE PROTECTION DEVICE DETAIL**
Scale: 12" = 1'-0"



2 **ELECTRIC DRINKING FOUNTAIN POWER REQUIREMENTS**
Scale: 12" = 1'-0"



3 **TYPICAL EXIT SIGN LOCATION**
Scale: 12" = 1'-0"

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Notes

1 Addendum 01			10/10/2025
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File Name:: N/A	KJ	KJ	JZ 03/11/25
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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Client/Project Logo

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FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
ELECTRICAL DETAILS, LEGENDS, AND SCHEDULES

Project No.	Scale
214001246	12" = 1'-0"
Revision	Drawing No.
1	E501-HGES

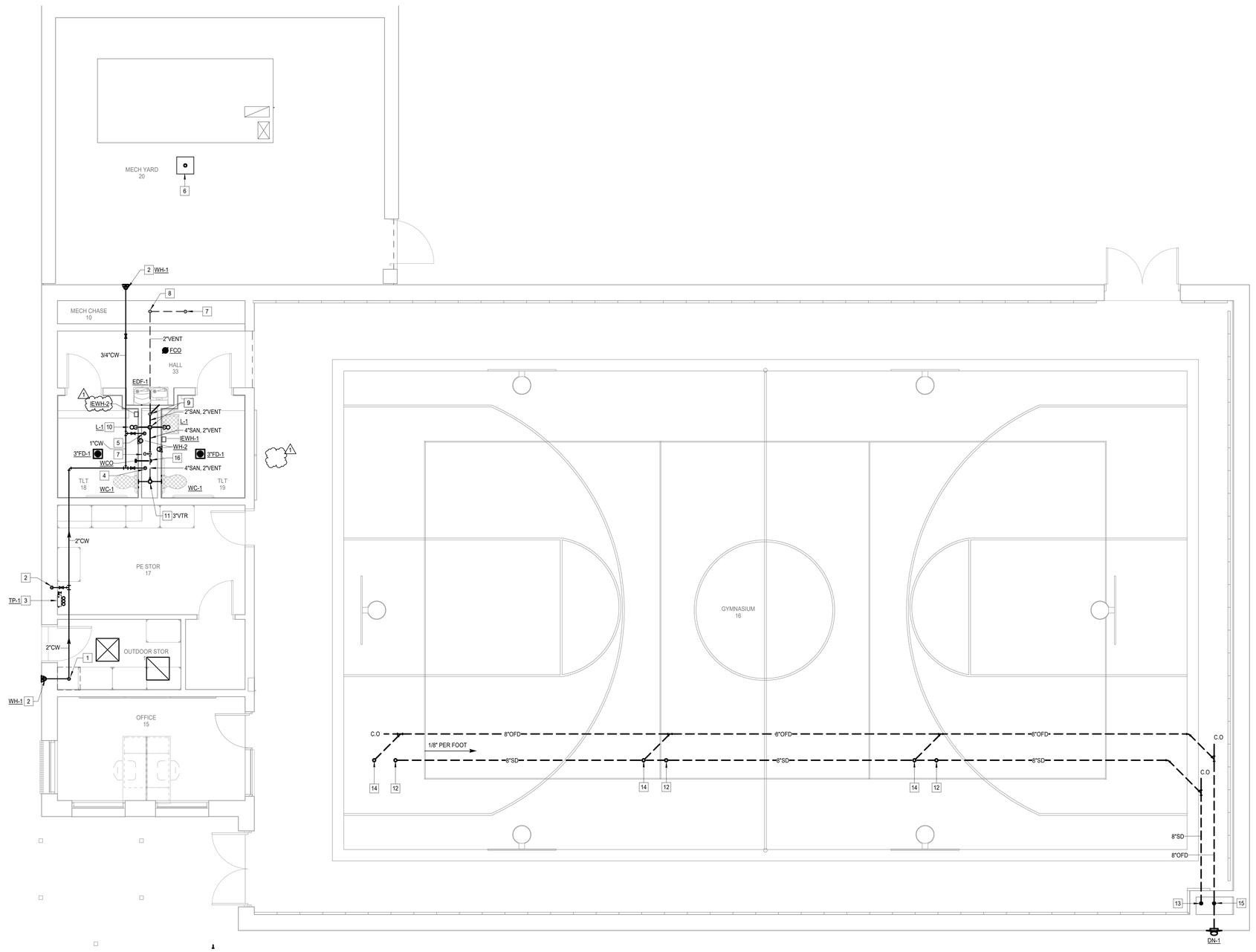
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PLUMBING GENERAL NOTES

1. CONTRACT DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION, AND WHEN AVAILABLE, EXISTING RECORD DOCUMENTS. CONTRACTOR TO VERIFY AT SITE EXACT LOCATIONS, AND SIZES OF EXISTING PIPING. REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION, AND IMMEDIATELY AFTER SUCH DISCREPANCIES ARE DISCOVERED. CONTRACTOR TO VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF THERE ARE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE WORK. ANY ITEMS WHICH ARE NOT COVERED IN THE BID DOCUMENTS OR ANY PROPOSED SUBSTITUTIONS SHALL BE LISTED SEPARATELY AND QUALIFIED IN THE CONTRACTORS BID. SUBMITTAL OF BID SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. FAILURE TO VISIT THE SITE DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY IN PERFORMANCE OF WORK.
3. PLUMBING FIXTURES/EQUIPMENT SHOWN ON PLAN THAT ARE NOT IDENTIFIED AND DO NOT HAVE A FIXTURE DESIGNATION ARE EXISTING AND ARE TO REMAIN.
4. REFER TO ARCHITECTS DRAWING FOR EXACT LOCATION OF FLOOR DRAINS.
5. DO NOT SCALE THE PLUMBING DRAWINGS, REFER TO THE DIMENSIONED ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONAL DATA.
6. REFER TO PLUMBING SCHEDULES, AND DETAILS.

PLUMBING KEYED NOTES

1 2" CW FROM BELOW SLAB. 2" WATER ENTRY. REFER TO PLUMBING DETAILS SHEET.
2 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.
3 PROVIDE AND INSTALL NEW TRAP PRIMER AT 5'-0" ABOVE GRADE. RE: PLUMBING SCHEDULES AND DETAILS SHEETS FOR MORE INFORMATION.
4 2" COLD WATER DOWN IN CHASE. EXTEND 1-1/2" LINE TO EACH WATER CLOSET.
5 1" COLD WATER DOWN IN CHASE. EXTEND 1" LINE TO SERVE WALL HYDRANTS, INSTANTANEOUS WATER HEATERS, AND LAVATORIES. EXTEND 3/4" LINE TO SERVE ELECTRIC WATER FOUNTAIN.
6 ELEVATED CONDENSATE FLOOR SINK. RE: PLUMBING DETAILS SHEET FOR MORE INFORMATION.
7 2" VENT FROM BELOW.
8 2" VENT UP.
9 2" SANITARY DOWN, 2" VENT UP.
10 PROVIDE WYE-TAILPIECE FOR DMS-1 CONDENSATE DRAIN. RE: M201 FOR ADDITIONAL INFORMATION.
11 4" SANITARY DOWN THROUGH SLAB, 2" VENT UP. UPSIZE VENT PIPE TO 3" AT THE TEE AND VENT THROUGH ROOF.
12 8" STORM FROM ROOF DRAIN ABOVE.
13 8" STORM DOWN TO BELOW SLAB.
14 8" STORM OVERFLOW FROM OVERFLOW DRAIN ABOVE.
15 8" STORM OVERFLOW DOWN TO DOWNSPOUT NOZZLE. REFER TO ARCHITECTURAL DRAWING FOR EXACT ELEVATION.
16 4" SANITARY DOWN FROM WCO ABOVE.



N

1 **PLUMBING PLAN - LEVEL 1 - ENLARGED - NEW GYM**
Scale: 1/4" = 1'-0"

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1 Addendum 01			10/10/2025
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100% ISSUE FOR BID AND PERMIT			2025.09.24
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File Name: N/A	AA Dwn.	AA Dsgn.	EH Chkd. 11/27/24 YYYY.MM.DD

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2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
PLUMBING ENLARGED PLAN - LEVEL 1 - NEW GYM

Project No. 214001246	Scale As indicated
Revision 1	Drawing No. P301-HGES

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PLUMBING GENERAL NOTES

1. WITHIN THE EXISTING BUILDING, EXISTING WATER, WASTE AND VENT SERVICES ARE TO BE MODIFIED AS REQUIRED AND REUSED FOR THE INSTALLATION OF NEW AND/OR RELOCATED PLUMBING FIXTURES. REFER TO PLUMBING FLOOR PLANS FOR POINTS OF CONNECTION.
2. WITHIN THE EXISTING BUILDING, SAWCUT AND REMOVE EXISTING FLOOR SLAB AS REQUIRED TO PROVIDE NEW AND/OR RELOCATED PLUMBING FIXTURES, CLEANOUTS, AND UNDERSLAB WASTE AND VENT PIPING. PATCH AND REFINISH FLOOR TO MATCH EXISTING.
3. IN AREAS WHERE THE FLOOR SLAB IS REMOVED, CONTRACTOR SHALL ALSO REMOVE UNDERSLAB WASTE AND VENT PIPING WHICH SERVES FIXTURES DESIGNATED FOR REMOVAL. PRIOR TO ANY REMOVAL, FIELD VERIFY THAT LINES TO BE REMOVED DO NOT SERVE ANY EXISTING FIXTURES TO REMAIN OR NEW FIXTURES TO BE INSTALLED.
4. IN AREAS WHERE THE FLOOR SLAB IS NOT REMOVED, CONTRACTOR SHALL ABANDON IN PLACE ANY UNDERSLAB WASTE AND VENT PIPING NO LONGER NEEDED, UNLESS THE PIPING MUST BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION. IF NEW WORK DOES NOT NECESSITATE THEIR REMOVAL, CUT AND PLUG SUCH LINES BELOW SLAB, AND PATCH FLOOR TO MATCH EXISTING.
5. FIELD VERIFY EXACT LOCATION, SIZE, DEPTH, DIRECTION OF FLOW, CAPACITY, PIPE MATERIAL AND CONDITION OF EXISTING WASTE PIPING PRIOR TO BEGINNING CONSTRUCTION. ENSURE THAT PROPER CONNECTIONS TO AND EXTENSION OF SUCH UTILITIES CAN BE MADE.
6. WASTE LINES TO BE RE-USED OR RECONNECTED TO SHALL BE THOROUGHLY RODDED OUT AND FLUSHED TO ENSURE THEY ARE FREE FROM BLOCKAGES.
7. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING BELOW SLAB WITH COLUMN FOOTINGS, GRADE BEAMS, UNDERGROUND PLUMBING AND ELECTRICAL UTILITIES, AND OTHER SUB-SURFACE BUILDING ELEMENTS.
8. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND CONDUIT. SHOULD A CONFLICT OCCUR THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
9. CONTRACTOR TO COORDINATE ALL REMODEL WORK WITH THE WORK OF OTHER TRADES TO AVOID CONFLICTS AND TO MINIMIZE INTERRUPTION OF SERVICES.
10. COORDINATE ALL FIXTURE AND EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS WITH LATEST ARCHITECTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO ANY ROUGH-INS.
11. DO NOT ROUGH-IN FROM THESE DRAWINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS.
12. CONTRACTOR TO FIELD VERIFY AS NECESSARY THE EXACT ROUTING AND SIZES OF ALL PIPING.
13. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE, INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
14. THE PROPER INSTALLATION OF NEW FIXTURES AND THE PROPER CONTINUED OPERATION OF EXISTING FIXTURES TO REMAIN SHALL DETERMINE THE EXTENT AND NATURE OF PLUMBING REMODEL WORK.
15. EACH VENT SHALL TERMINATE VERTICALLY NOT LESS THAN 6" ABOVE ROOF, MAINTAIN MINIMUM 10'-0" DISTANCE BETWEEN VENT TERMINALS THROUGH ROOF AND ALL FRESH AIR INTAKES, AND A MINIMUM 5'-0" FROM ANY EXTERIOR WALL.
16. PRIOR TO BEGINNING CONSTRUCTION, COORDINATE BUILDING BACKFLOW PREVENTION REQUIREMENTS WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PROVIDE AS DIRECTED.

SHOCK ARRESTOR SCHEDULE

P.D.I. SYMBOLS:	FIXTURE UNITS:	THREADED CONNECTION	CERTIFICATION
A	1 - 11	1/2"	ASSE 1010
B	12 - 32	3/4"	ASSE 1010
C	33 - 60	1"	ASSE 1010
D	61 - 113	1"	ASSE 1010
E	114 - 154	1"	ASSE 1010
F	155 - 330	1"	ASSE 1010

TANKLESS ELECTRIC WATER HEATER SCHEDULE

ITEM NO.	TEMP RISE AT 0.5 GPM (°F)	WATER TEMP MAXIMUM (°F)	STORAGE CAPACITY	ACTIVATION FLOW (GPM)	TOTAL KW INPUT	VOLT/PHASE	MANUFACTURER / COMMENTS
IEWH-1	66	120	NA	0.3	4.9	208V/1PH.	Eemax, AccuMixII AM007240T
1 IEWH-2	66	120	NA	0.3	4.9	208V/1PH.	Eemax, AccuMixII AM007240T

NOTES:

1. 30 PSI MINIMUM OPERATING PRESSURE REQUIRED. CONTRACTOR SHALL VERIFY AVAILABLE WATER PRESSURE PRIOR TO PURCHASING AND INSTALLING EQUIPMENT.
2. INSTALL HEATER AND ROUTE PIPING BASED ON MANUFACTURERS RECOMMENDATIONS.
3. UNIT SHALL HAVE REPLACEABLE FILTER IN THE INTEL CONNECTOR.
4. HEATER SHALL BE PROVIDED WITH ASSE 1070 APPROVED INTEGRATED MIXING VALVE TO CONFORM TO UPC 407.3.
5. MOUNTING LOCATION MUST BE LOCATED WITHIN TWO FEET OF FIXTURE.

PLUMBING FIXTURE SCHEDULE

TYPE: WC-1 (T.A.S. COMPLIANT)
DESCRIPTION: WATER CLOSET, WALL HUNG, WHITE VITREOUS CHINA WITH EVERCLEAN, 1.28 GALLON PER FLUSH SIPHON JET ACTION, ELONGATED CLOSET BOWL WITH 1-1/2" TOP SPUD AND BOLT COVERS. AMERICAN STANDARD "AFWALL" #3351.101
SEAT: ELONGATED OPEN FRONT WHITE PLASTIC SEAT WITH SELF SUSTAINING CONCEALED CHECK HINGES. BEMIS #1955SSCT.
FLUSH VALVE: 1.28 GALLON FLUSH CYCLE. EXPOSED, DIAPHRAGM TYPE, CHROME PLATED CLOSET FLUSHOMETER, VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD. SLOAN ROAYL #111-1.28.
CARRIER: WADE #311 AND #330 SERIES -AM1.
ROUGH-IN: 4" WASTE, 2" VENT, 1" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: L-1 (T.A.S. COMPLIANT) METERED - STUDENT - TEMPERED
DESCRIPTION: LAVATORY, WALL HUNG, WHITE VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, 4" FAUCET SPREAD. AMERICAN STANDARD "LUCERNE" #0355.012.
FAUCET: CHROME PLATED BRASS DECK MOUNTED, 4" FIXED CENTERS LAVATORY FAUCET WITH COVER PLATE, 4-1/8" SPOUT, AND PUSH BUTTON HANDLE INDEXED "PUSH", SELF CLOSING METERING CARTRIDGE, VANDAL PROOF 0.5 GPM LAMINAR SPRAY. CHICAGO MODEL #857-E280S-665PSHAB.
MIXING VALVE: ASSE 1070 CERTIFIED POINT OF USE MIXING VALVE, LEAD FREE BRONZE BODY, INTEGRAL CHECK VALVES, COMPRESSION FITTINGS, COPPER ENCAPSULATED THERMOSTAT ASSEMBLY WITH POLYMER THERMOPLASTIC SHUTTLE. LEONARD 170-LF-BRKT. (105 F).
STRAINER: 1-1/4". 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TAILPIECE. MCGUIRE #155A.
P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE #8872.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE #2165LK.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS. WADE #520-08.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER - TEMPERED OUT. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: EDF-1 (T.A.S. COMPLIANT) - INTERIOR
DESCRIPTION: WALL HUNG, BOTTLE FILLING STATION AND BI-LEVEL VANDAL-RESISTANT COOLER HIGH EFFICIENCY NON-FILTERED REFRIGERATED STAINLESS. CHILLING CAPACITY OF 8.0 GPH (GALLONS PER HOUR) OF 50F DRINKING WATER, BASED ON 80F INLET WATER AND 90F AMBIENT, PER ASHRAE 18 TESTING. FEATURES SHALL INCLUDE ANTIMICROBIAL, GREEN COUNTER, HIGH EFFICIENCY, LAMINAR FLOW, REAL DRAIN, SANITARY SENSOR ACTIVATED, VANDAL RESISTANT SMARTFLOW BUBBLER. ELECTRONIC BOTTLE FILLER SENSOR WITH MECHANICAL FRONT BUBBLER BUTTON ACTIVATION. PRODUCT SHALL BE WALL MOUNT. HALSEY TAYLOR #HTHB-HVRGRNBL-NF. PROVIDE CANE TOUCH APRON IN ALL STAINLESS STEEL ON ALL UNITS MOUNTED WITH A CLEAR KNEE SPACE GREATER THAN 27" HIGH. ELKAY APRON #98324C.
P-TRAP: 1-1/4" CHROME PLATED CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON. MCGUIRE #8872.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE #2165LK.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE SLAB WITH (4) 1/2" BOLTS. ADJUSTABLE SLEEVE FOR CONNECTION TO HANGER PLATE PROVIDED BY FIXTURE MANUFACTURER. WADE #403-BL.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: FS-1
SERVICE: MECHANICAL ROOM EQUIPMENT CONDENSATE.
DESCRIPTION: CAST IRON FLANGED RECEPTOR WITH SEEPAGE HOLES, ACID RESISTANT COATED INTERIOR, NICKEL BRONZE RIM AND SECURED ADA GRATE. 12" SQUARE FLOOR SINK WITH 8" DEEP DOME BOTTOM STAINER. WHITE ABS SEDIMENT BUCKET. FLASHING CLAMP. NB RIM AND ½ STAINLESS STEEL GRATE, TRAP PRIMER. JAY R SMITH # 3150-C-12-NBSS-P
TRAP PRIMER: SERVED BY ELECTRONIC TRAP PRIMER, REFER TO PLANS.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH EQUIPMENT PLACEMENT.

TYPE: FD-1
SERVICE: TOILET ROOMS AND GENERAL USE
DESCRIPTION: FLOOR DRAIN, DUCO CAST IRON BODY WITH FLASHING COLLAR AND ADJUSTABLE STRAINER HEAD WITH ADA GRATE. 6" ROUND TOP, NICKLE BRONZE STRAINER WITH STAINLESS STEEL GRATE, TRAP PRIMER CONNECTION 1/2", WITH VANDAL PROOF SCREWS. JAY R SMITH #2005-A06NBSS-P050-U
TRAP PRIMER: SERVED BY ELECTRONIC TRAP PRIMER, REFER TO PLANS.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS / FLOOR CONSTRUCTION.

TYPE: TP-1 (FLUSH MOUNT)
SERVICE: TLT 18, TLT 19, AND MECH YARD 20
DESCRIPTION: ELECTRONIC TRAP PRIMER WITH FLUSH MOUNT CABINET AND STAINLESS STEEL ACCESS DOOR, SOLENOID VALVE, 1/2" COMPRESSION FITTING ATMOSPHERIC VACUUM BREAKER, CIRCUIT BREAKER, AND TIMER. 120V. PRECISION PLUMBING PRODUCTS "PRIME-TIME" #PT-4.
ROUGH-IN: 3/4" COLD WATER.

TYPE: RD-1
DESCRIPTION: ROOF DRAIN, DUCO CAST IRON BODY WITH COMBINED FLASHING CLAMP AND GRAVEL STOP WITH ALUMINUM DOME. SUMP RECEIVER AND UNDERDECK CLAMP. JAY R SMITH # 1010-AD-R-C FOR 8" AND SMALLER. #1010-20" DIA-AD-R-C FOR 10" AND LARGER
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

TYPE: RD-2
DESCRIPTION: OVERFLOW ROOF DRAIN. DUCO CAST IRON BODY, FLASHING CLAMP AND GRAVEL STOP WITH ALUMINUM DOME, AND CAST IRON WATER DAM. SUMP RECEIVER, UNDERDECK CLAMP. JAY R SMITH # 1080-AD-R-C FOR 8" AND SMALLER OUTLET. # 1080-20" DIA-AD-R-C FOR 10" AND LARGER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

TYPE: DN-1
DESCRIPTION: OVERFLOW DOWNSPOUT NOZZLE WITH HINGED PERFORATED COVER. VANDAL PROOF. FABRICATED STAINLESS STEEL WITH NO HUB OUTLET AND FLANGE TO SECURE NOZZLE TO WALL. INSTALL AT 12" ABOVE FINISHED SLAB OR AS DIRECTED BY ARCHITECT. JAY R SMITH : 1775 - U
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

TYPE: WH-1 - COLD WATER - NON FREEZ
DESCRIPTION: ENCASED, LEAD-FREE, NON-FREEZ WALL HYDRANT. INTEGRAL BACKFLOW PREVENTER WITH ANTI-SIPHON TECHNOLOGY, COPPER CASING, ALL-BRONZE INTERIOR COMPONENTS WITH 1/2 TURN CERAMIC CARTRIDGE, COMBINATION 3/4" FEMALE SOLDER AND 3/4" MALE PIPE THREAD INLET CONNECTION, AND 3/4" MALE HOSE CONNECTION. 304 SS HOUSING WITH LOCKING HINGED. INSTALL WITH BOTTOM OF HYDRANT 18" A.F.F. WADE #8701-L6.
ROUGH-IN: 3/4" COLD WATER.

TYPE: WH-2 - COLD WATER - RESTROOMS
DESCRIPTION: ENCASED, LEAD-FREE, INTERIOR WALL HYDRANT. INTEGRAL BACKFLOW PREVENTER WITH ANTI-SIPHON TECHNOLOGY, COPPER CASING, ALL-BRONZE INTERIOR COMPONENTS WITH 1/2 TURN CERAMIC CARTRIDGE, COMBINATION 3/4" FEMALE SOLDER AND 3/4" MALE PIPE THREAD INLET CONNECTION, AND 3/4" MALE HOSE CONNECTION. 304 SS FLANGED BOX WITH LOCKING HINGED COVER. INSTALL WITH BOTTOM OF HYDRANT 18" A.F.F. WADE #8708
ROUGH-IN: 3/4" COLD WATER.

TYPE: WCO
DESCRIPTION: WALL CLEANOUT. CAST IRON CLEANOUT FERRULE WITH COUNTERSUNK BRONZE PLUG AND ROUND STAINLESS COVER PLATE WITH CENTER SECURING SCREW. WADE #8550-75 WITH #8304-VP. PROVIDE WADE #8560 CAST IRON CLEANOUT TEE IN LIEU OF FERRULE AS REQUIRED FOR WALL CONSTRUCTION.

TYPE: FCO
DESCRIPTION: FLOOR CLEANOUT, PAINTED CAST IRON ADJUSTABLE FLOOR CLEANOUT WITH ABS THREADED ADJUSTABLE HOUSINGS, FLANGED CAST IRON FERRULE, INTEGRAL CLAMPING COLLAR, GASKETED ABS THREADED PLUG AND SCORIATED STAINLESS STEEL TOP. WADE #6000-85. FOR CARPETED FLOORS PROVIDE WADE #6000-85-CM. FOR TERRAZO TILES #6000-85-U, FOR RECESSED TILE #6000-85-T. FOR VCT TILES COORDINATE WITH MANUFACTURER FOR INSTALLATION INSTRUCTIONS.

TYPE: ECO
DESCRIPTION: EXTERIOR CLEANOUT TO GRADE, PAINTED CAST IRON BODY WITH ANCHOR FLANGE ADJUSTABLE TOP ASSEMBLY, AND ROUND SCORIATED VANDAL RESISTANT DUCTILE IRON TRACTOR TYPE COVER. IF LOCATED IN ASPHALT OR DIRT PROVIDE 18"X18"X12" CONCRETE PAD. WADE #6000-Z.

GENERAL NOTES

ALL LAVATORIES AND SINKS SHALL BE SUPPLIED WITH HOT AND COLD WATER (UNLESS NOTED TO BE COLD WATER ONLY) TO FAUCETS AS INDICATED ON PLANS AND FIXTURE SCHEDULE. PROVIDE CHROME PLATED BRASS SUPPLY STOPS WITH LOOSE KEYS AND WALL ESCUTCHEONS. PROVIDE CHROME PLATED FLEXIBLE RISERS OF SIZE REQUIRED TO PROPERLY CONNECT FIXTURES. PROVIDE 17 GAUGE CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON (UNLESS NOTED TO BE AN ACID WASTE FIXTURE). REFER TO FIXTURE SCHEDULE FOR MINIMUM SIZES OF PLUMBING FIXTURE ROUGH-INS.

INSULATION KITS AT ALL LAVATORIES AND SINKS REQUIRED TO BE T.A.S. ACCESSIBLE (MCGUIRE OR TRUEBRO). ALL SUCH FIXTURES AND FINAL INSTALLATIONS SHALL COMPLY WITH THE STATE ACCESSIBILITY STANDARDS REQUIREMENTS.

INSERT TRAP GUARDS AFTER FINAL RODDING OF DRAINS. INSTALL TRAP GUARD WITH CLEAR SILICONE CAULK FOR GAS-TIGHT SEAL. FOR DRAIN RODDING AFTER INSTALLATION. INSERT SEWER TAPE THROUGH LIGHTLY GREASED 1-1/2" PVC PIPE TO PROTECT TRAP GUARD.

PLUMBING PIPING LEGEND

SYMBOLS	DESCRIPTION
SAN	SANITARY OR WASTE PIPING ABOVE GRADE (SAN)
SAN	SANITARY OR WASTE PIPING BELOW GRADE (SAN)
GW	GREASE WASTE PIPING (GW)
GW	GREASE WASTE PIPING BELOW GRADE (GW)
SD	STORM DRAIN PIPING (SD)
SD	STORM DRAIN PIPING BELOW GRADE (GW)
SSD	SUB-SOIL DRAIN OR FOOTING DRAIN (SSD)
AW	ACID WASTE PIPING (AW)
AW	ACID WASTE PIPING BELOW GRADE (AW)
PD	PUMPED DISCHARGE (PD)
CD	CONDENSTATE DRAIN PIPING (CD)
D	CONDENSTATE - INDIRECT DRAIN PIPING (D)
	VENT PIPING (V)
CW	COLD WATER PIPING (CW)
HW	HOT WATER PIPING (HW)
HWR	HOT WATER RETURN PIPING (HWR)
SCW	SOFT COLD WATER PIPING (SCW)
CDW	CHILLED DRINKING WATER PIPING (CDW)
TP	TRAP PRIMER LINE (TP)
F	FIRE PROTECTION PIPING (F)
AS	AUTOMATIC SPRINKLER PIPING (AS)
GAS	NATURAL GAS PIPING (G)
GV	GAS VENT PIPING (GV)
AIR	COMPRESSED AIR PIPING (A)
	FLOW DIRECTIONAL ARROW
	SHUT-OFF VALVE
	BALANCING VALVE (BV)
	SOLENOID VALVE (SV)
	BALL VALVE (BV)
	BUTTERFLY VALVE
	LUBRICATED PACKED PLUG STOP STOP COCK (PC)
	HORIZONTAL SWING CHECK
	UNION
	HORIZONTAL SWING CHECK
	REDUCER OR INCREASER
	ECCENTRIC REDUCER
	REDUCED PRESSURE BACKFLOW PREVENTER (RPBFP)
	PIPING DOWN
	RISE OR DROP PIPING
	PIPING UP -OR- PIPING UP & DOWN
	CAP ON END OF PIPE
	CLEANOUT (WALL OR CEILING) (CO)
	FLOOR CLEANOUT (FCO)
	EXTERIOR CLEANOUT WITH 18"x18"x4" CONCRETE PAD (ECO)
	TWO-WAY CLEANOUT (PROVIDE 18"x24"x4" CONCRETE PAD OUTSIDE)
	FIRE DEPARTMENT VALVE AT RISER
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
	PRESSURE REDUCING VALVE (PRV)
	BRANCH CONNECTION OUT OF TOP
	BRANCH CONNECTION OUT OF BOTTOM
	BRANCH CONNECTION OUT OF SIDE
	WYE & 1/8TH BEND BRANCH CONNECTION
	WYE BRANCH CONNECTION
	HOSE BIBB
	PRESSURE GAUGE WITH COCK
	THERMOMETER
	GAS PRESSURE REGULATOR
	TEST COCK
	GAS METER
	WALL HYDRANT
	VALVE IN RISE
	ASME TEMPERATURE & PRESSURE RELIEF VALVE
	VACUUM RELIEF VALVE
	ANGLE VALVE
	OS&Y VALVE
	ROOF DRAIN
1	REFER TO KEYED NOTE
FS	FLOW SWITCH
	FLOOR SINK (FS)
	FLOOR DRAIN (FD)
	FLOOR DRAIN WITH P-TRAP (FD)
	FLOOR DRAIN WITH P-TRAP AT 45° ANGLE (FD)
	HUB DRAIN (HD)
	ACCESS PANEL FOR TRAP PRIMER OR SHOCK ABSORBER
AP	ACCESS PANEL LOCATION SYMBOL
A	SHOCK ABSORBER
	AIR CHAMBER
(E)	EXISTING
(N)	NEW
VTR	VENT THRU ROOF
B.F.F.	BELOW FINISHED FLOOR
A.F.F.	ABOVE FINISHED FLOOR
	NEW CONNECTION
IE=100.00'	INVERT ELEVATION
1	DELTA CHANGE SYMBOL
P / 1	4" VTR RISER FLAG

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Notes

1 Addendum 01			10/10/2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued	By	Appd	YYYY.MM.DD
File Name: N/A	AA	AA	EH 11/27/24
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

BRADLEY KALMANS — 80219 — LICENSED PROFESSIONAL ENGINEER — STATE OF TEXAS
10-10-2025

Client/Project Logo

2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

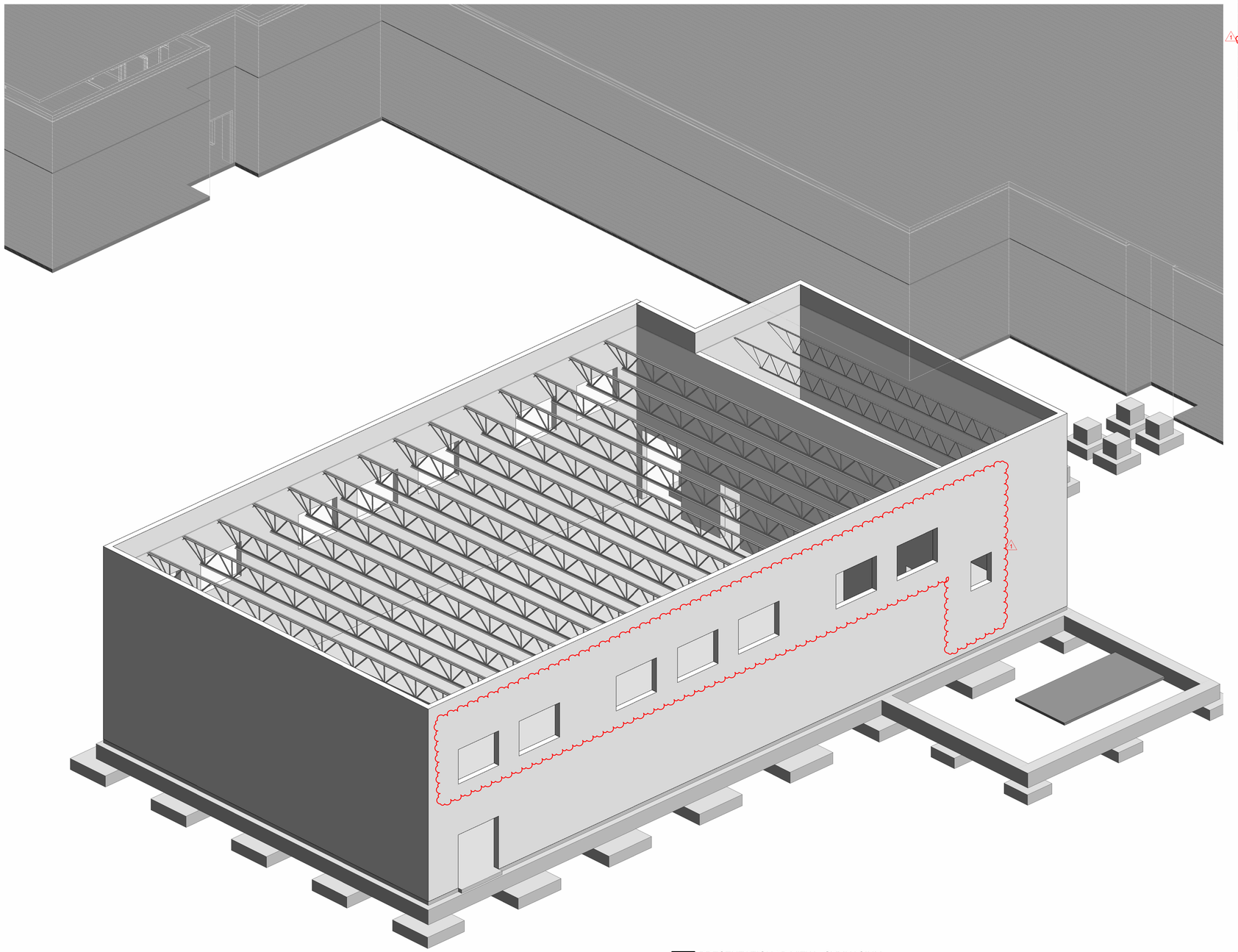
695 INDEPENDENCE BLVD, MISSOURI CITY, TX 77489

Title
PLUMBING LEGENDS AND SCHEDULES

Project No. 214001246
Scale 12" = 1'-0"
Revision 1
Drawing No. P601-HGES

ORIGINAL SHEET - ARCH E1

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1 PRESENTATION 3D VIEW - GYMNASIUM

SHEET LIST (WITH REVISIONS)			
SHEET NUMBER	SHEET NAME	DATE	REVISION
S001	3D VIEW AND SHEET LIST	1	10.10.2025
S101	GENERAL STRUCTURAL CRITERIA	1	10.10.2025
S102	GENERAL STRUCTURAL CRITERIA		
S201	FOUNDATION PLAN - COMPOSITE	1	10.10.2025
S201.1	FOUNDATION PLAN - COMPOSITE ALTERNATE 3A	1	10.10.2025
S201A	FOUNDATION PLAN - GYMNASIUM	1	10.10.2025
S202	ROOF FRAMING PLAN - COMPOSITE		
S202A	ROOF FRAMING PLAN - GYMNASIUM	1	10.10.2025
S301	FOUNDATION SCHEDULE & TYPICAL SLAB ON GRADE DETAILS	1	10.10.2025
S401	TYPICAL GB AND CF DETAILS		
S402	SOG @ STRUCTURAL STEEL (GB / FOOTING)	1	10.10.2025
S501	TYPICAL CMU WALL DETAILS	1	10.10.2025
S601	TYPICAL STEEL & CMU WALL ROOF DETAILS	1	10.10.2025

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D + A PROJECT 24-291-00

Notes

Revision	By	Appd	
1 ADDENDUM #1			10.10.2025 YYYY.MM.DD

Issued	By	Appd	
100% ISSUE FOR BID AND PERMIT			2025.09.24 YYYY.MM.DD

File Name: N/A	JT Dwn.	AR Dsgn.	LMM Chkd.	2025.04.11 YYYY.MM.DD

Permit/Seal



10/10/2025

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2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS - PALMER ELEMENTARY SCHOOL

4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
3D VIEW AND SHEET LIST

Project No.	Scale
214001246	
Revision	Drawing No.
1	S001-PES

ORIGINAL SHEET - ARCH E1

<Pick location in Project Information>
10/9/2025 4:30:32 PM

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STRUCTURAL ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	LLH	LONG LEG HORIZONTAL
		LLV	LONG LEG VERTICAL
ACI	AMERICAN CONCRETE INSTITUTE	LW	LONG WAY
ADDL	ADDITIONAL	MATL	MATERIAL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	MAX	MAXIMUM
		MC	MOMENT CONNECTION, MISCELLANEOUS CHANNEL
AISI	AMERICAN IRON AND STEEL INSTITUTE		
		MECH	MECHANICAL
ANSI	AMERICAN NOTIONAL STANDARD INSTITUTE	MANUF	MANUFACTURER(S)
		MID	MIDDLE
ARCH	ARCHITECTURAL	MISC	MISCELLANEOUS
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	MO	MASONRY OPENING
		NIC	NOT IN CONTRACT
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	NOM	NOMINAL
		NTS	NOT TO SCALE
AWS	AMERICAN WELDING SOCIETY	OC	ON CENTER
BC	BOTTOM CHORD	OD	OUTSIDE DIAMETER
BOD	BOTTOM OF DECK	OPNG	OPENING
BOT	BOTTOM	OPP	OPPOSITE
BP	BASE PLATE	PL	PLATE
BRG	BEARING	PLF	POUNDS PER LINEAR FOOT
C	CHANNEL, COMPRESSION, CAMBER	PROJ	PROJECTION
CIP	CAST IN PLACE	PSI	POUNDS PER SQUARE INCH
CL	CENTER LINE	PSF	POUNDS PER SQUARE FOOT
CLR	CLEAR	R	RADIUS
COL	COLUMN	RD	ROOF DRAIN
CONC	CONCRETE	RE	REFER, REFERENCE
CONT	CONTINUOUS	REINF	REINFORCEMENT (D), (ING), (MENT)
CSJ	CONSTRUCTION JOINT	REQD	REQUIRED
CTJ	CONTROL JOINT	REV	REVISION
DET	DETAIL	RO	ROUGH OPENING
DIA	DIAMETER	SCHED	SCHEDULE(D)
DIAG	DIAGONAL	SDI	STEEL DECK INSTITUTE
DP	DOUBLE PITCHED	SECT	SECTION
DWG	DRAWING	SF	SQUARE FEET
DWL	DOWEL	SIM	SIMILAR
EA	EACH	SJI	STEEL JOIST INSTITUTE
EF	EACH FACE	SPEC	SPECIFICATION(S)
EJ	EXPANSION JOINT	SQ	SQUARE
EL	ELEVATION	STD	STANDARD
ELEC	ELECTRICAL	STIF	STIFFINER
ELEV	ELEVATOR	STL	STEEL
EOD	EDGE OF DECK	STR	STRUCTURAL
EOS	EDGE OF SLAB	T	TOP, TENSION
EQ	EQUAL(LY)	T&B	TOP AND BOTTOM
EXIST	EXISTING	T&G	TONGUE AND GROOVE
EXP	EXPANSION	TEMP	TEMPERATURE
FD	FLOOR DRAIN	THK	THICK(NESS)
FFE	FINISH FLOOR ELEVATION	TOC	TOP OF CONCRETE
FND	FOUNDATION	TOF	TOP OF FOOTING
FS	FAR SIDE	TOJ	TOP OF JOIST
FT	FEET, FOOT	TOL	TOP OF LEDGE
FTG	FOOTING	TOP	TOP OF PANEL
GA	GAUGE	TOS	TOP OF STEEL
GALV	GALVANIZED	TOW	TOP OF WALL
GB	GRADE BEAM	TRD(S)	TREAD(S)
HORIZ	HORIZONTAL	TYP	TYPICAL
HSS	HOLLOW STRUCTURAL SECTION	UL	UNDERWRITERS LABORATORY
ID	INSIDE DIAMETER	UNF	UNIFORM
IN	INCHES	UON	UNLESS OTHERWISE NOTED
JST	JOIST	V	BEAM AND SHEAR
JT	JOINT	VB	VERTICAL BRACE
K	KIPS, JOIST SERIES	VERT	VERTICAL
KB	KNEE BRACE	W	WALL, EST, WIDTH, WIDE FLANGE
L	SPAN, LEFT, STEEL ANGLE	W/	WITH
Ld	DEVELOPMENT LENGTH	WL	WIND LOAD, WATER LEVEL, WORKING LINE
LL	LIVE LOAD		
LLBB	LONG LEG BACK TO BACK	WP	WATER PROOF, WORKING POINT

STRUCTURAL LEGEND

P1	PRECAST CONCRETE PANEL MARK	S1	SPAN DIRECTION OF A MILD REINFORCED CONCRETE SLAB W/ MAIN REINFORCING MARK S1
F1	SPREAD FOOTING MARK	DECK TYPE 1	SPAN OF 5 1/2" THICK CONCRETE SLAB W/ TYPE 1 STEEL DECK
P1	PLINTH MARK	DECK TYPE 1	SPAN DIRECTION OF BARE STEEL DECK TYPE 2 WITH NO CONCRETE TOPPING
C1	COLUMN MARK	20KSP	SPECIAL OPEN WEB K SERIES STEEL JOIST, SEE PLAN NOTES FOR LOAD REQUIREMENTS
CF1	CONTINUOUS FOOTING MARK	W27X84 <24'-0">	STANDARD AISC ROLLED SHAPE OF W27X84 AT ELEVATION 24'-0" ABOVE DATUM
RW1	RETAINING WALL MARK	W27X84 c=1"	STANDARD AISC ROLLED SHAPE OF W27X84 WITH A 1" UPWARD CAMBER
BP1	BASE PLATE MARK	W27X84 (10)	STANDARD AISC ROLLED SHAPE OF W27X84 W/ 10 HSA (EQUALLY SPACED)
A	STRUCTURAL STEEL COLUMN SPLICE TYPE MARK	W27X84 (10, 6, 12) WBEAM	STANDARD AISC ROLLED SHAPE OF W27X84 WITH 28 HSA EQUALLY SPACED FROM BOTTOM TO TOP AS 10 CONNECTORS / 6 CONNECTORS / 12 CONNECTORS
24/24	STRAIGHT SHAFT PIER (SHAFT Ø)	WBEAM	
24/48	DRILLED PIER (SHAFT AND BELL Ø)	BEAM	CONNECTED TO A ROLLED SHAPE COLUMN WITH A STANDARD WELDED MOMENT CONNECTION STANDARD AISC ROLLED SHOPE BEAM
B1 GB1 1B1	MILD REINFORCED CONCRETE BEAM MARK		
J1	MILD REINFORCED CONCRETE JOIST MARK	6"	SLAB DEPRESSION AND AMOUNT

STRUCTURAL CONCEPT, STANDARDS AND LOADS

A. DESIGN CONCEPT:
1. THE STRUCTURE AS SHOWN HAS BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS AND DESIGN STANDARDS TO SUPPORT THE FINAL BUILDING SERVICE LOADS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADDITIONAL SUPPORTS FOR THE STRUCTURE IF NECESSITATED BY THE CONSTRUCTION SEQUENCE OR METHODS OF FABRICATION, HANDLING, ERECTION, AND OTHER CONSTRUCTION OPERATIONS.

B. BUILDING CODES AND DESIGN STANDARDS:
1. INTERNATIONAL BUILDING CODE, 2021 EDITION.
2. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE); MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-22, AS AMENDED.
3. AMERICAN CONCRETE INSTITUTE (ACE), BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318, AS AMENDED.
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, 15TH EDITION (ASD), 2005, AS AMENDED.
5. AMERICAN WELDING SOCIETY (AWS).
6. STEEL JOIST INSTITUTE (SJI), STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOIST AND JOIST GIRDERS.
7. STEEL DECK INSTITUTE (SDI), DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, ROOF DECKS, AND CELLULAR METAL FLOOR DECK WITH ELECTRICAL DISTRIBUTION.
8. AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION.

C. GRAVITY LOADS:
1. SUPER-IMPOSED LOADS ARE GIVEN IN POUNDS PER SQUARE FOOT (PSF)

BUILDING AREA	DEAD LOAD (PSF)	LIVE LOAD (PSF)
SLAB ON GRADE	0	100
ROOF	20	20
MECHANICAL AREAS	10	150 (**)

* INCLUDES ALL ALLOWANCES OF 15 PSF FOR PARTITION WEIGHT
** EQUIPMENT WEIGHT IF LARGER

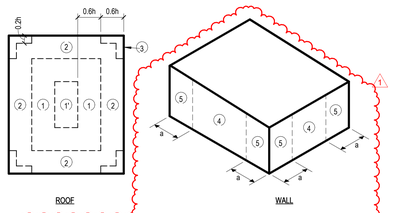
D. LATERAL DESIGN LOADS (CLOSED STRUCTURE):
1. WIND LOADS FOR AN BASIC DESIGN WIND SPEED OF 143 MPH (ASD WIND SPEED OF 111 MPH), 3-SECOND GUST, WITH EXPOSURE B AND A RISK CATEGORY III.
2. COMPONENTS AND CLADDING PRESSURES (PSF) FOR "CLOSED" BUILDINGS:

		ZONE 1		ZONE 1'		ZONE 2		ZONE 3	
ROOF	10 FT²	+16	-56	+30	-32	+16	-74	+16	-100
	100 FT²	+16	-44	+26	-32	+16	-58	+16	-69

		ZONE 4		ZONE 5	
WALLS	10 FT²	+96	-57	+123	-65
	100 FT²	+75	-47	+86	-50

		ZONE 4		ZONE 5	
PARAPETS	10 FT²	+32	-35	+32	-43
	100 FT²	+27	-30	+27	-33

a. RE: 2021 IBC FOR DESCRIPTION OF CORNER, PERIMETER AND FIELD.
b. POSITIVE PRESSURES ARE PRESSURES ACTING TOWARDS THE BUILDING.
c. NEGATIVE PRESSURES ARE PRESSURES ACTING AWAY FROM THE BUILDING.
d. VALUES ABOVE ARE FOR BASIC DESIGN WIND PRESSURES THE ASD FACTOR 0.6..
e. ZONE WIDTH DIMENSIONS:
- a (WALLS) = 3FT
- 0.2h = 4.3FT
- 0.6h = 13FT



3. WIND-BORNE DEBRIS REGION, USE RISK CATEGORY III WIND SPEED OF 137 MPH BASIC (106 MPH ASD)

E. SEISMIC CRITERIA:

1. IMPORTANCE FACTOR:	1.25
2. RISK CATEGORY:	III
3. MAPPED SPECTRAL RESPONSE ACCELERATIONS:	Ss: 0.078, S1: 0.042
4. SITE CLASS:	D
5. SPECTRAL RESPONSE COEFFICIENTS:	SDs: 0.071, SD1: 0.063
6. SEISMIC DESIGN CATEGORY:	A

F. SPECIAL LOADS:
1. STAIR TREADS, RAILING AND GUARDRAILS:

ITEM	REQUIRED CAPACITY
TREADS	300 POUNDS AT CENTER
TOP RAILS	50 PLF HORIZONTALLY (DISTRIBUTED)
OTHER RAILS, FILLERS & CONNECTIONS	50 PLF HORIZONTALLY (DISTRIBUTED)
HAND RAILS	200 POUNDS ANY DIRECTION

2. PIPE LOADS WITH WATER

SIZE	WEIGHT MAX	SPACING OF HANGERS
4" Ø	17 PLF	10'-0"
6" Ø	32 PLF	10'-0"
8" Ø	50 PLF	10'-0"
10" Ø	75 PLF	5'-0"
12" Ø	102 PLF	5'-0"
VALUES ASSUME SCHEDULE 40 STEEL PIPE		

G. ROOF RAIN LOAD DATA:
1. RAIN INTENSITY 60 MIN, i = 5.32 IN/HR

H. GROUND SNOW LOADS:
1. GROUND SNOW: 9 PSF

CONCRETE

A. CONCRETE SCHEDULE:

BUILDING COMPONENT	28 DAY CYLINDER COMPRESSIVE STRENGTH POUNDS PER SQUARE INCH (PSI)					
	NORMAL WEIGHT			MAX AGGREGATE SIZE (IN)	SUMP (IN)	W/C RATIO
	3000	3500	4000			
SPREAD FOOTINGS	●			1 1/2"	5-7	0.55
SLAB ON GRADE		●		1"	4-6	0.50
SLAB ON DECK		●		1"	4-6	0.50
GRADE BEAMS AND PLINTHS		●		1"	4-6	0.50
ALL OTHER CONCRETE	●			1"	4-6	0.52

B. PROVIDE DEFORMED NEW BILLET STEEL BARS CONFORMING TO ASTM A615, GRADE 60. ALL REINFORCING STEEL SHALL BE SECURELY HELD IN PLACE; PROVIDE ADDITIONAL BARS OR STIRRUPS FOR SUPPORT AS REQUIRED.
C. WELDED WIRE FABRIC SHALL CONSIST OF FLAT SHEETS AND SHALL CONFORM TO ASTM A185, WITH A MINIMUM YIELD STRENGTH OF 65.0 KSI
D. PROVIDE FULL EMBEDMENT WITH STANDARD 90 DEGREE HOOKS FOR ALL DOWELS. IF NOT OTHERWISE SPECIFIED, THE DOWEL SIZE AND SPACING SHALL BE THE SAME AS THE MAIN REINFORCING.
E. WHEN REINFORCING STEEL IN GRADE BEAMS, WALLS, SLABS AND BEAMS, IS NOTED AS CONTINUOUS, SPLICE REINFORCING STEEL ONLY WHEN UNAVOIDABLE DUE TO STOCK LENGTHS. STAGGER ALL SPLICES A MINIMUM OF 4'-0". ADJACENT BAR SPLICES ARE NOT ACCEPTABLE.
a. LOCATE THE TOP BAR SPLICES WITHIN THE MIDDLE HALF OF THE SPAN AND LOCATE THE BOTTOM BAR SPLICES AT SUPPORTS OR BETWEEN SUPPORTS AND 1/3 SPAN POINT, UNLESS NOTED OTHERWISE ON PLANS, DETAILS OR SCHEDULES.
F. PROVIDE INTERIOR AND EXTERIOR HORIZONTAL LAPPED CORNER BARS AT ALL CORNERS TO MATCH THE SIZE, TYPE AND SPACING OF THE WALL AND GRADE BEAM HORIZONTAL REINFORCING.
G. UNLESS SPECIFICALLY NOTED, SCHEDULED OR DETAILED OTHERWISE, PROVIDE DEVELOPMENT LENGTH FOR REINFORCING IN CONCRETE COMPONENTS IN ACCORDANCE WITH TIME SCHEDULE IN NOTE H. BELOW. THIS SCHEDULE SHALL APPLY TO ALL DEVELOPMENT LENGTHS NOT OTHERWISE NOTED, DETAILED OR SCHEDULED IN THE DRAWINGS OR SPECIFICATIONS.
H. REINFORCING BAR DEVELOPMENT LENGTHS (Ld) IN INCHES FOR VARIOUS CONCRETE STRENGTHS IN POUNDS PER SQUARE INCH (PSI). TOP BARS ARE DEFINED AS HORIZONTAL REINFORCING SO PLACED IN A MEMBER THAT MORE THAN 12 INCHES OF CONCRETE IS CAST BELOW THE BAR. ALL OTHER CONDITIONS ARE CONSIDERED BOTTOM BARS FOR DEVELOPMENT AND SPLICE LENGTH PURPOSES.
1. WHEN TWO BARS OF DIFFERENT SIZES ARE LAPPED, THE SMALLER SIZE SHALL GOVERN THE LAP LENGTH UNLESS SPECIFICALLY NOTED.
2. WELDED OR MECHANICAL SPLICES CAPABLE OF DEVELOPING 125% OF THE BAR YIELD STRENGTH MAY BE USED IN LIEU OF THE LAPS. SUCH SPLICES MAY BE EITHER FULL BUTT WELDS OR SERIES "C CADWELDS OR EQUAL".

BAR SIZE GRADE 60	Ld FOR TOP BARS				Ld FOR BOTTOM BARS			
	28 DAY CYLINDER CONCRETE STRENGTH (PSI)				28 DAY CYLINDER CONCRETE STRENGTH (PSI)			
	3000 / 3500	4000	5000	6000	3000 / 3500	4000	5000	6000
#3	22	19	17	16	17	15	13	12
#4	29	25	23	21	22	19	17	16
#5	36	31	28	26	28	24	22	20
#6	43	37	34	31	33	29	26	24
#7	63	54	49	45	48	42	38	34
#8	72	62	56	51	55	48	43	39
#9	81	70	62	57	62	54	48	44
#10	89	78	69	63	69	60	53	49
#11	98	85	76	70	76	66	59	54

J. AT LAP SPLICES, PROVIDE LAP SPLICE LENGTHS FOR REINFORCING BARS 1.3 TIMES THE Ld SHOWN IN THE TABLE IN NOTE H ABOVE.
K. THE GENERAL NOTES, LAP LENGTHS OR DETAILS PERTAINING TO REINFORCING STEEL AS SHOWN ON THE DETAIL SHEETS OR OTHER SCHEDULES SHALL SUPERSEDE THE NOTES SHOWN ON THIS SHEET.
L. PROVIDE THE FOLLOWING COVER FOR CAST-IN-PLACE CONCRETE REINFORCING.
1. UNIFORMED SURFACES IN CONTACT WITH EARTH: 3 INCHES
2. UNIFORMED SURFACES OVER MOISTURE BARRIER: 2 INCHES
3. FORMED SURFACES EXPOSED TO EARTH OR WEATHER
- #6 AND LARGER: 2 INCHES
- #5 AND SMALLER: 1 1/2 INCHES
4. FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER
- SLABS AND WALLS: 3/4 INCH
- BEAMS AND COLUMNS: 1 1/2 INCHES

GENERAL NOTES FOR CONSTRUCTION

A. CONSTRUCTION METHODS, PROCEDURES AND SEQUENCES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE CONTRACTOR SHALL TAKE ALL THE NECESSARY MEANS TO MAINTAIN AND PROTECT THE STRUCTURAL INTEGRITY OF ALL CONSTRUCTION AT ALL STAGES.
B. ALL PROPOSED SUBSTITUTIONS MUST BE EQUAL OR BETTER AND SHALL BE REVIEWED BY THE ARCHITECT/ENGINEER PRIOR TO ANY PERTINENT WORK AND PRIOR TO THE AWARD OF THE CONTRACT.
C. NOT ALL OPENINGS AND OTHER COMPONENTS THAT ARE REQUIRED HAVE BEEN SHOWN IN THE STRUCTURAL DRAWINGS. COORDINATE WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND VERIFY THE LOCATIONS AND SIZES OF ALL CHASSES, INSERTS, OPENINGS, SLEEVES, FINISHES, DEPRESSIONS, PADS AND OTHER PROJECT REQUIREMENTS. FLOOR PLAN WILL BE FURNISHED FOR THAT PURPOSE.
D. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL DRAWINGS TO DETERMINE WHERE OPENINGS ARE REQUIRED IN REINFORCED CONCRETE BEAMS, SLABS AND WALLS.
E. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, DETAILING ALL THE OPENINGS, INCLUDING ADDED REINFORCEMENT AS SHOWN ON THE TYPICAL WALL, SLAB AND BEAM OPENING DETAILS FOR REVIEW.
F. ADDITIONAL REINFORCEMENT ABOVE THAT SHOWN IN THE TYPICAL SLAB AND BEAM OPENING DETAILS MAY BE REQUIRED AND WILL BE REVIEWED ON THE SHOP DRAWINGS.
G. USE THE MANUFACTURER'S CERTIFIED DRAWINGS AND SPECIFICATIONS FOR THE EQUIPMENT ANCHORAGE AND DETAILS.
H. ALL CONSTRUCTION JOINTS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE. ADDITIONAL CONSTRUCTION JOINTS TO FACILITATE CONSTRUCTION SHALL BE LOCATED AND DETAILED ON THE SHOP DRAWINGS FOR REVIEW.
I. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN BEAMS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
J. ALL CONSTRUCTION AND CONTROL JOINTS FOR BEAMS WHICH ARE EXPOSED TO VIEW ARE TO BE LOCATED TO COINCIDE WITH THE ARCHITECTURAL RUSTICATION JOINTS AS SHOWN ON THE BUILDING ELEVATION SHEETS OR AS REVIEWED IN WRITING.
K. SHOP DRAWINGS:
1. THE TERM "SHOP DRAWINGS" INCLUDES FABRICATION, MANUFACTURING, ERECTION AND SETTING DRAWINGS, BROCHURES, CERTIFICATES, AND PRODUCT DATA DESCRIBING MATERIALS AND EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE ALL PERTINENT INFORMATION REQUIRED FOR THE ENGINEER TO FULLY EVALUATE THE MATERIALS BEING REPRESENTED BY THE SUBMITTAL INCLUDING THE PHYSICAL PROPERTIES, DIMENSIONS, LOCATIONS AND METHOD OF INSTALLATION.
2. SHOP DRAWINGS WILL BEAR THE REVIEW STAMP OF THE CONTRACTOR INDICATING THAT HE HAS REVIEWED THE DRAWINGS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS; COORDINATED ITEMS INCLUDED IN THE SUBMITTAL WITH RELATED ITEMS; AND VERIFIED AND COORDINATED DIMENSIONS.
3. REPRODUCTIONS OF THE ENGINEERING DRAWINGS WILL NOT BE ACCEPTABLE AS SHOP DRAWINGS.
4. ANY SHOP DRAWING NOT CONFORMING TO THESE REQUIREMENTS WILL BE CAUSE FOR REJECTION AND WILL BE RETURNED WITHOUT ANY FURTHER ACTION.
5. STRUCTURAL SUBMITTALS REQUIRED FOR APPROVAL INCLUDE, BUT ARE NOT LIMITED TO:
- CONCRETE ACCESSORIES (MANUFACTURERS PRODUCT DATA)
- STEEL REINFORCING
- CONCRETE MIX DESIGN
- CONTROL JOINT LAYOUT
- CONCRETE MATERIAL CERTIFICATES
- STRUCTURAL STEEL FRAMING
- STRUCTURAL STEEL CONNECTION CALCULATIONS
- STEEL ROOF DECK
- COLD FORMED METAL FRAMING
- COLD FORMED METAL FRAMING CALCULATIONS
- MISC. STEEL FABRICATIONS
6. DELEGATED STRUCTURAL DESIGN OF COMPONENTS:
- SEE APPLICABLE SECTIONS OF GENERAL NOTES FOR THE APPROPRIATE DESIGN RESPONSIBILITIES OF THE SUPPLIER AND IT'S LICENSED ENGINEER.

L. THESE NOTES APPLY TO STRUCTURAL DOCUMENTS SEALED BY THE STRUCTURAL ENGINEER AND ARE INTENDED TO BE COMPLEMENTARY TO AND USED IN CONJUNCTION WITH THE PLANS AND SPECIFICATIONS, INCLUDING THOSE PREPARED BY OTHER DISCIPLINES. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT/STRUCTURAL ENGINEER IMMEDIATELY. ANY SUCH DISCREPANCIES SHALL BE RESOLVED TO THE MORE STRINGENT REQUIREMENTS, UNLESS OTHERWISE AUTHORIZED BY THE STRUCTURAL ENGINEER.
M. ANY DISCREPANCIES ON THE STRUCTURAL DOCUMENTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/STRUCTURAL ENGINEER PRIOR TO SUBMISSION OF BIDS OR PROPOSALS, OR IF NOT REASONABLE DISCERNABLE DURING PREPARATION OF BIDS AND PROPOSALS. BEFORE COMMENCING THE WORK IN QUESTIONS. NO FIELD CHANGES OR DIVIATIONS FROM THE DESIGN ARE TO BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT AND/OR STRUCTURAL ENGINEER. NO CHANGE ORDER CONSIDERATION WILL BE GIVEN TO CHANGES FOR WHICH THE ARCHITECT AND/OR ENGINEER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
N. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONSTRUCTION, INCLUDING EXISTING WORK, PRIOR TO COMMENCING WORK. ANY DISCREPANCIES SHALL BE REPORT IMMEDIATELY TO THE ARCHITECT/STRUCTURAL ENGINEER.
O. GENERAL FRAMING NOTES:
1. FOR ALL MISCELLANEOUS STEEL SHOWN ON ARCHITECTURAL AND NOT SHOWN ON STRUCTURAL DRAWINGS, ASSUME THE FOLLOWING AS A MINIMUM AND CONFIRM FINAL ASSUMPTIONS WITH STRUCTURAL ENGINEER:
- EQUAL LEG ANGLES = L4X4X5/16
- LLV ANGLES = L6X4X5/16
- CHANNELS = C8X11.5
- HSS TUBES =HSS6X6X3/8
- LSV TUBE = HSS12X8X1/2
- ROUND TUBE = 6" STD PIPE
- WIDE FLANGE = W14X22
- STEEL PLATE = 3/8" THICK
2. FOR ALL MECHANICAL OPENINGS SHOWN ON ARCHITECTURAL OR MEP DRAWINGS AND NOT SHOWN ON STRUCTURAL DRAWINGS, PROVIDE W14X22 PERIMETER BEAMS AS REQUIRED TO FRAME REQUIRED OPENING WHERE OPENING DIMENSIONS EXCEED 5'-0" IN ANY DIRECTION.
3. FOR ALL WINDOWS, STOREFRONTS AND CURTAINWALLS EXCEEDING 10'-0" IN LENGTH WHERE HANGING STEEL TO SUPPORT THE HEADER IS NOT SHOWN ON STRUCTURAL DRAWINGS, PROVIDE C6X8.2 VERTICAL HANGERS WITH L4X4X1/4 KICKERS AT 4'-0" OC AND CONTINUOUS L6X4X5/16 ANGLE ALONG THE BOTTOM. PROVIDE CONTINUOUS HSS6X2X1/4 (LSH) IN LIEU OF L6X4 BOTTOM ANGLE AND GALVANIZE 3/8" BENT LEDGER PLATE WHERE MASONRY WILL BE SUPPORTED.
4. FOR ALL FOLDING PARTITIONS WHERE HANGING STEEL TO SUPPORT HEADER TRACK IS NOT SHOWN ON STRUCTURAL DRAWINGS PROVIDE C6x8.2 VERTICAL HANGERS WITH L4x4x1/4 KICKERS AT 4'-0" AND CONTINUOUS WT6X20 ALONG THE BOTTOM. HANGERS SHALL BE SPACED AT 2'-0" ON CENTER AT STACKED ENDS OF PARTITION.
5. FOR ALL COILING OVERHEAD DOORS AND ROLLING GRILLS EXCEEDING 10'-0" IN WIDTH WHERE TUBE STEEL TO SUPPORT THE DOOR/HOUSING IS NOT SHOWN ON STRUCTURAL DRAWINGS, PROVIDE HSS12X8X3/8 (LSV) INTERMEDIATE STEEL TUBE.
6. ALL STAIR MEMBERS INCLUDING, BUT NOT LIMITED TO, STRINGERS, LANDINGS AND HANDRAILS SHALL BE DESIGNED BY THE STAIR ENGINEER AND STEEL FABRICATOR.
P. GENERAL FOUNDATION NOTES:
1. FOR ALL SLAB ON GRADE SHOWN ON ARCHITECTURAL AND NOT SHOWN ON STRUCTURAL DRAWINGS, ASSUME 5" THICK CONCRETE SLAB WITH #4 REINFORCING BARS AT 14" OC IN EACH DIRECTION.
2. MECHANICAL EQUIPMENT AND LOCKERS SHALL RECEIVE A HOUSEKEEPING PAD AS INDICATED IN MEP OR ARCHITECTURAL DRAWINGS AND PER MANUFACTURER'S RECOMMENDATIONS.
3. THE MAXIMUM GRADE BEAM SPAN IS 20'-0". PROVIDE ADDITIONAL 24/48 PIER AT MID SPAN WHERE PIERS ARE NOT SHOWN ON PLAN AND ALLOWABLE SPAN IS EXCEEDED.
4. ASSUME GRADE BEAM TYPE "GB1" FOR ALL LOCATIONS WHERE CMU WALLS EXCEED 16'-0" IN HEIGHT ARE SHOWN ON PLANS. SUPPLY 24/48 PIER AT 20'-0" OC MAXIMUM UNDER GRADE BEAM.
5. FOR ALL DUMPSTER ENCLOSURES, SCREEN WALLS, AND OTHER MASONRY FENCES NOT SHOWN ON STRUCTURAL DRAWINGS ASSUME 8'-0" TALL MASONRY WALL WITH VENEER ON ONE SIDE SUPPORTED BY CONTINUOUS TYPE GB1' GRADE BEAM ON 24/48 DRILLED PIERS SPACED AT 15'-0" MAXIMUM. STRUCTURAL MASONRY WALL SHALL BE 8" CMU WITH #6 VERTICAL BARS SPACED AT 24" ON CENTER IN FULLY GROUTED CELLS.
6. FOR ALL SPORTS FIELDS WHERE THE BACKSTOP WALL IS NOT SHOWN ON STRUCTURAL DRAWINGS ASSUME 4'-0" TALL MASONRY WALL WITH VENEER ON ONE SIDE SUPPORTED BY CONTINUOUS CONCRETE FOOTING. FOOTING SHALL BE 1'-0" THICK x 3'-0" WIDE BEARING 3'-0" BELOW FINISHED GRADE. STRUCTURAL MASONRY WALL SHALL BE 8" CMU WITH #5 VERTICAL BARS SPACED AT 32" ON CENTER SUPPORTED BY CONCRETE STEM WALL EXTENDING FROM CONTINUOUS FOOTING. REINFORCE FOOTING WITH LONGITUDINAL (4) # 4 BARS AND TRANSVERSE #4 BARS AT 12" ON CENTER. AT STEM WALL PROVIDE #4 DOWELS AT 12" ON CENTER AND (3) #4 CONTINUOUS BARS AT EACH FACE.

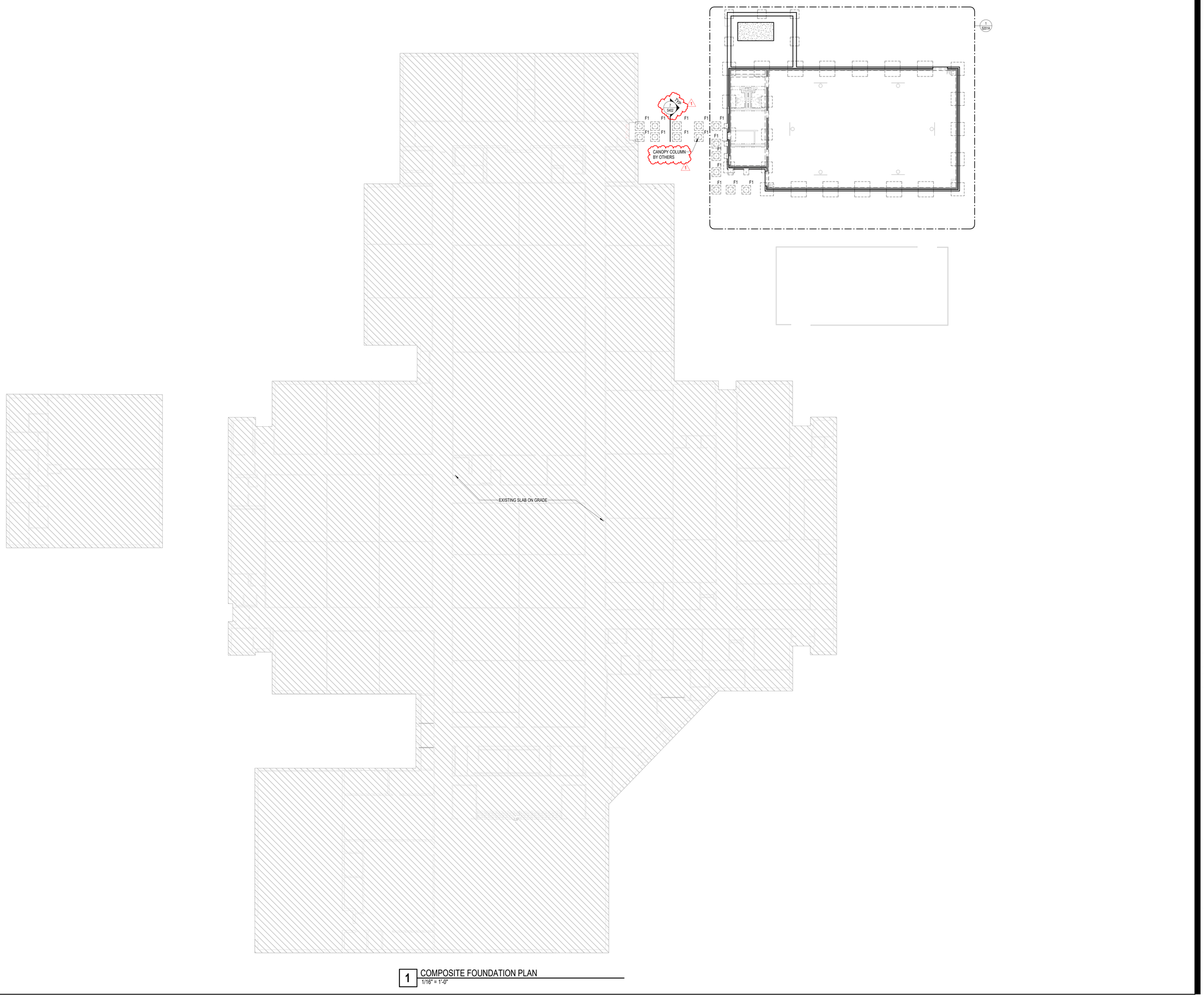
STRUCTURAL STEEL

A. ROLLED SHAPES:
1. ALL STRUCTURAL STEEL FOR ALL THE HORIZONTAL FRAMING MEMBER SHALL CONFORM TO ASTM A992, GRADE 50, UNLESS OTHERWISE NOTED.
2. ALL STRUCTURAL STEEL FOR HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500, GRADE C WITH A MINIMUM YIELD OF 50 KSI, UNLESS OTHERWISE NOTED.
3. ALL STRUCTURAL STEEL FOR PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B, UNLESS OTHERWISE NOTED.
4. ALL STRUCTURAL STEEL FOR ANGLES, PLATES AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36, UNLESS OTHERWISE NOTED.
5. ALL EXPOSED STEEL TO BE HOT DIPPED GALVANIZED.

B. CONNECTIONS:
1. THE DESIGN OF STRUCTURAL STEEL CONNECTIONS IS THE RESPONSIBILITY OF THE CONTRACTOR AND THE STEEL FABRICATOR. THE DESIGN OF THE CONNECTION SHALL BE PERFORMED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY THE STEEL FABRICATOR. THE DETAILS AND CALCULATIONS SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:
- ALL WELD SIZES AND LENGTHS.
- ALL BOLT SIZES, LOCATIONS, QUANTITIES AND GRADES.
- ALL PLATE AND ANGLE SIZES, THICKNESS AND DIMENSIONS
- ALL WORK POINT LOCATIONS AND RELATED INFORMATION.
2. PROVIDE STANDARD BOLTED CONNECTIONS CONFORMING TO AISC BOLTED CONNECTIONS, USING ASTM A325 OR A490 BOLTS. FOR THE BEAM END SHEARS INDICATED IN THE DOCUMENTS. PROVIDE MINIMUM OF TWO BOLTS FOR ALL CONNECTIONS.
3. ALL WELDED CONNECTIONS SHALL CONFORM TO AWS UNLESS OTHERWISE NOTED.
4. SURVEY ALL PLANS, DETAILS, SECTIONS, SCHEDULES AND SPECIFICATIONS FOR SPECIAL CONNECTIONS.
5. UNLESS OTHERWISE NOTED AND/OR SPECIFIED, ALL BEAM CONNECTIONS SHALL BE DESIGNED TO SUPPORT 1/2 THE TOTAL UNIFORM LOAD FOR THE APPLICABLE MEMBER SIZE AND SPAN AS DETERMINED BY THE TABLES FOR ALLOWABLE UNIFORM LOADS ON BEAM IN THE 15TH EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION (ASD)
6. WHERE BEAMS ARE TO RECEIVE HEADED SHEAR CONNECTORS, DESIGN THOSE BEAM CONNECTIONS FOR THE REACTION SHOWN. IF REACTIONS ARE NOT SHOWN, DESIGN THE CONNECTIONS TO SUPPORT 40 PERCENT OF THE MAXIMUM WEB SHEAR, V, FOR THE APPLICABLE MEMBER SIZE AS DETERMINED BY THE TABLES FOR ALLOWABLE UNIFORM LOADS ON BEAMS IN THE 15TH EDITION OF THE AISC MANUAL.
7. MOMENT CONNECTIONS SHOWN SHALL BE DESIGNED TO FULLY DEVELOP THE SECTION IN FLEXURE AND TO SUPPORT 1/2 THE TOTAL UNIFORM LOAD FOR SHEAR AS DESCRIBED IN NOTE 5 ABOVE.
8. WHERE FILLET WELD IS NOT SHOWN ON DETAIL, ITS SIZE SHALL BE ASSUMED TO BE THE PLATE THICKNESS OF THE THINNEST PIECE MINUS 1/16"

C. WELDS:
1. CONFORM TO "CODE FOR WELDING IN BUILDING CONSTRUCTION" BY THE AMERICAN WELDING SOCIETY, LATEST EDITION.
2. WELDS ON INDICATED ON DRAWINGS ARE TO BE FILLET ALL AROUND AS PRESCRIBED BY AISC SPECI

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1 COMPOSITE FOUNDATION PLAN
1/16" = 1'-0"

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F-003426
D + A PROJECT 24-291-00

Notes

1 ADDENDUM #1			10.10.2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
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Permit/Seal

FRED DALLY 90904 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS

10/10/2025

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS - PALMER ELEMENTARY SCHOOL

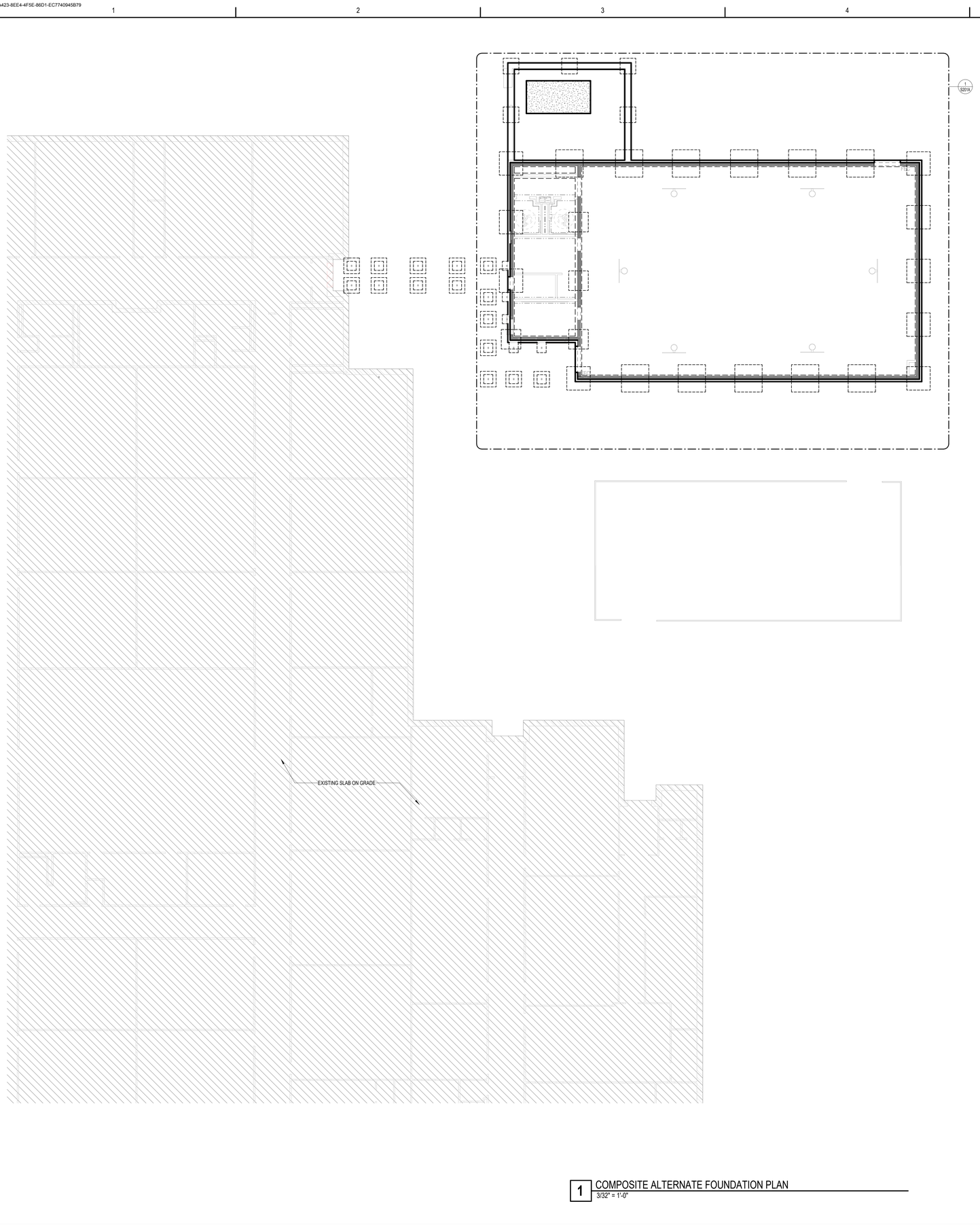
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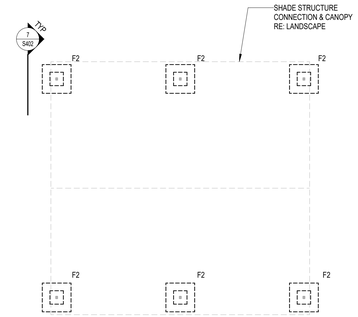
Title
FOUNDATION PLAN - COMPOSITE

Project No.	Scale
214001246	1/16" = 1'-0"
Revision	Drawing No.
1	S201-PES

ORIGINAL SHEET - ARCH E1
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1 COMPOSITE ALTERNATE FOUNDATION PLAN
3/32" = 1'-0"

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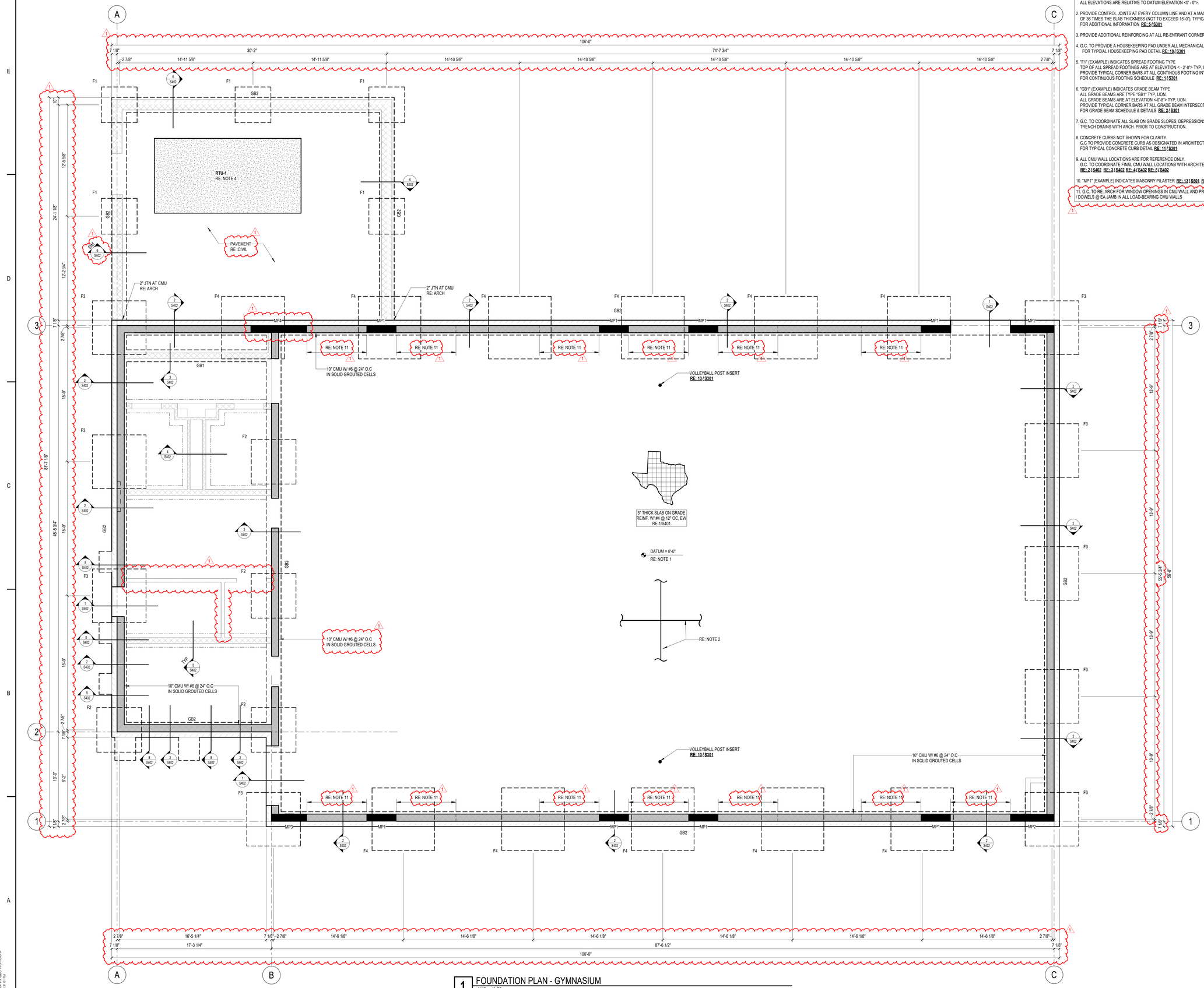
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Title
FOUNDATION PLAN - COMPOSITE ALTERNATE 3A

Project No.	Scale
214001246	3/32" = 1'-0"
Revision	Drawing No.
1	S201.1-PES

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1 FOUNDATION PLAN - GYMNASIUM
1/4" = 1'-0"

FOUNDATION NOTES:

1. DATUM ELEVATION <0'-0"> CORRESPONDS TO TRUE ELEVATION = RE: CIVIL.
   ALL ELEVATIONS ARE RELATIVE TO DATUM ELEVATION <0' - 0">.
2. PROVIDE CONTROL JOINTS AT EVERY COLUMN LINE AND AT A MAXIMUM SPACING OF 36 TIMES THE SLAB THICKNESS (NOT TO EXCEED 15'-0"), TYPICAL UON.
   FOR ADDITIONAL INFORMATION **RE: 5 / S201**
3. PROVIDE ADDITIONAL REINFORCING AT ALL RE-ENTRANT CORNERS **RE: 7 / S301**
4. G.C. TO PROVIDE A HOUSEKEEPING PAD UNDER ALL MECHANICAL UNITS.
   FOR TYPICIAL HOUSEKEEPING PAD DETAIL **RE: 10 / S301**
5. "F1" (EXAMPLE) INDICATES SPREAD FOOTING TYPE
   TOP OF ALL SPREAD FOOTINGS ARE AT ELEVATION < - 2'-8"> TYP, UON.
   PROVIDE TYPICAL CORNER BARS AT ALL CONTINOUS FOOTING INTERSECTIONS
   FOR CONTINUOUS FOOTING SCHEDULE **RE: 1 / S301**
6. "GB1" (EXAMPLE) INDICATES GRADE BEAM TYPE
   ALL GRADE BEAMS ARE TYPE "GB1" TYP, UON.
   ALL GRADE BEAMS ARE AT ELEVATION <-0'-8"> TYP, UON.
   PROVIDE TYPICAL CORNER BARS AT ALL GRADE BEAM INTERSECTIONS
   FOR GRADE BEAM SCHEDULE & DETAILS **RE: 2 / S301**
7. G.C. TO COORDINATE ALL SLAB ON GRADE SLOPES, DEPRESSIONS, ELEVATIONS, FLOOR AND TRENCH DRAINS WITH ARCH. PRIOR TO CONSTRUCTION.
8. CONCRETE CURBS NOT SHOWN FOR CLARITY.
   G.C TO PROVIDE CONCRETE CURB AS DESIGNATED IN ARCHITECTURAL DRAWINGS.
   FOR TYPICAL CONCRETE CURB DETAIL **RE: 11 / S301**
9. ALL CMU WALL LOCATIONS ARE FOR REFERENCE ONLY.
   G.C. TO COORDINATE FINAL CMU WALL LOCATIONS WITH ARCHITECTURAL DRAWINGS
   RE: 2 / S402 RE: 3 / S402 RE: 4 / S402 RE: 9 / S402
10. "MP1" (EXAMPLE) INDICATES MASONRY PILASTER **RE: 13 / S301 RE: 14 / S301 RE: 15 / S301**
11. G.C. TO RE: ARCH FOR WINDOW OPENINGS IN CMU WALL AND PROVIDE (2) #6 VERTICAL BARS / DOWELS @ EA JAMB IN ALL LOAD-BEARING CMU WALLS

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	JT	AR	LMM	2025.04.11

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10/10/2025

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Title
FOUNDATION PLAN - GYMNASIUM

Project No.	Scale
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Revision	Drawing No.
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STEEL ROOF FRAMING NOTES:

1. ALL ELEVATIONS ARE RELATIVE TO DATUM ELEVATION.
2. " DECK TYPE 1 " (EXAMPLE) INDICATES ROOF DECK SPAN DIRECTION AND DECK TYPE 2.
   TOS ELEVATION AT ROOF DECKS ARE AT BOD, TYP. U/O.
   FOR DECK TYPE INFORMATION "STRUCTURAL STEEL" GENERAL NOTES.
3. COORDINATE LOCATIONS AND SIZES OF ALL CHASES AND PENETRATIONS WITH MEP.
   COORDINATE EXACT LOCATION OF ALL MEP UNITS WITH MEP.
   FOR FRAMING AROUND ROOF OPENINGS **RE: 3 / S601**
4. PIPE RUN LOCATIONS TO BE SUPPORTED BY THE JOIST MANUFACTER NOT SHOWN FOR CLARITY. JOIST MANUFACTERER AND G.C. TO TO COORDINATE FINAL PIPE RUN LOCATIONS WITH MEP DRAWINGS FOR ADDITIONAL INFORMATION **RE: 4 / S601**
5. "MP1" (EXAMPLE) INDICATES MASONRY PILASTER **RE: 13 / S501 RE: 14 / S501 RE: 15 / S501**
6. G.C. TO RE: ARCH FOR WINDOW OPENINGS IN CMU WALL AND PROVIDE (2) #6 VERTICAL BARS / DOWELS @ EA JAMB IN ALL LOAD-BEARING CMU WALLS
7. GC COORD SOLID GROUTED CELLS AT LOCATIONS WHERE BASKETBALL GOALS ARE MOUNTED TO THE WALL. COORD ANCHORS WITH SUPPLIER.

104'-9 3/4"
17'-3 1/4"
87'-6 1/2"
45'-5 3/4"
55'-5 3/4"
10'-0"
30K8
C15X50
32LH06
32LH08
32LHSP
DECK TYPE 1
SLOPE
CANOPY BY OTHERS
BOD = 24'-1 1/2"
BOD = 23'-2 1/2"
BOD = 23'-0"
MP1
MP2
MP3
MP4
RE: NOTE 6
RE: NOTE 7, TYP.
10" CMU W/ #6 @ 24" O.C IN SOLID GROUTED CELLS

1 ROOF FRAMING PLAN - GYMNASIUM
1/4" = 1'-0"

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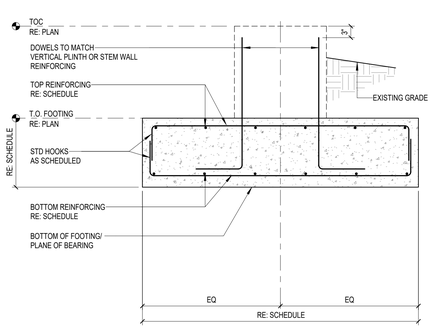
Title
ROOF FRAMING PLAN - GYMNASIUM

Project No. 214001246
Scale As indicated
Revision 1
Drawing No. S202A-PES

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8/8/2025 4:31:34 PM
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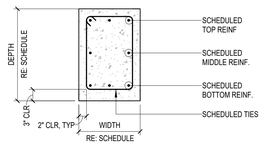
SPREAD / CONTINUOUS FOOTING SCHEDULE						
MARK	DIMENSIONS			REINFORCING		REMARKS
	LENGTH	WIDTH	THICKNESS	BOTTOM	TOP	
F1	4'-0"	4'-0"	1'-5"	#5 @ 12" OC, EW		
F2	5'-0"	5'-0"	1'-5"	#5 @ 12" OC, EW	#5 @ 12" OC, EW	PROVIDE TOP REINF ONLY @ CANOPY FOOTINGS
F3	6'-0"	6'-0"	1'-5"	#5 @ 12" OC, EW		
F4	7'-0"	7'-0"	1'-5"	#5 @ 12" OC, EW		



1. A GEOTECHNICAL REPORT IS AVAILABLE FOR REVIEW
2. THE INDEPENDENT TESTING LABORATORY SHALL CONFIRM THE ALLOWABLE SOIL BEARING CAPACITY IN THE FIELD AT THE ELEVATION DESIGNATED AS THE PLANE OF BEARING FOR THE FOOTING.
   A. ALLOWABLE BEARING PRESSURE OF **2700 PSF** FOR SUSTAINED LOAD.
   B. ALLOWABLE BEARING PRESSURE OF **4500 PSF** FOR TOTAL LOAD.
3. THE INDEPENDENT TESTING LABORATORY SHALL INSPECT THE BOTTOM AND SIDES OF THE FOOTING PRIOR TO PLACING REINFORCING AND CONCRETE.
4. CENTER ALL SPREAD FOOTINGS UNDER THEIR COLUMNS, WALLS, OR GRADE BEAMS U.O.N.
5. PUMP OUT ANY STANDING WATER AND IMMEDIATELY PLACE REINFORCING STEEL AND CONCRETE.
6. PROVIDE NEW DEFORMED BILLET REINFORCING STEEL FOR FOOTINGS CONFORMING TO ASTM A615, GRADE 60.
7. UNIFORMLY DISTRIBUTE ALL SCHEDULE REINFORCING.
8. PROVIDE (2) #5 X 6'-0" LONG BARS @ 6" OC, TYPICAL AT EACH RE-ENTRANT CORNER.

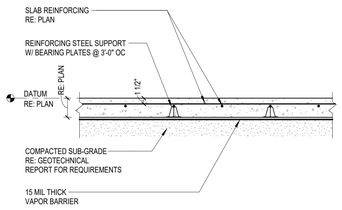
1 SPREAD FOOTING SCHEDULE
3/4" = 1'-0"

GRADE BEAM SCHEDULE						
MARK	WIDTH	DEPTH	TOP REINF.	MIDDLE REINF.	BOTTOM REINF.	TIES (OC, TYP)
GB1	1'-4"	2'-0"	(3) #7	-	(3) #7	#4 @ 10"
GB2	1'-8"	2'-0"	(3) #7	-	(3) #7	#4 @ 10"

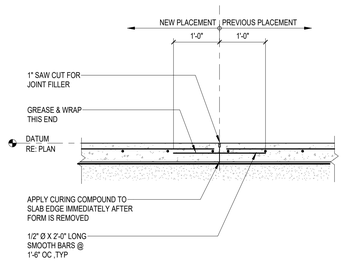


TYPICAL SECTION

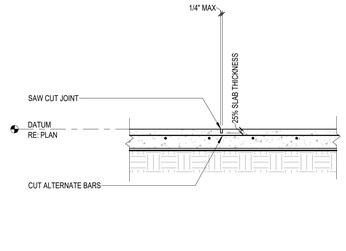
2 GRADE BEAM SCHEDULE
3/4" = 1'-0"



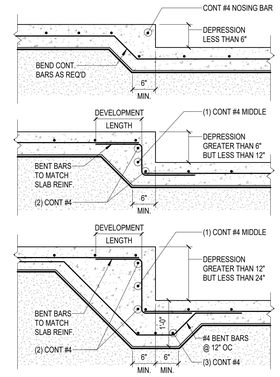
3 TYPICAL SLAB SECTION
3/4" = 1'-0"



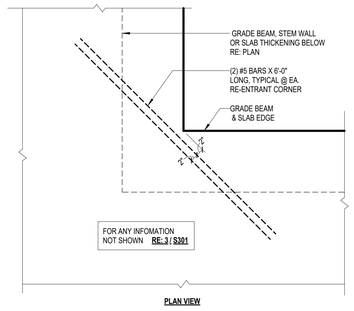
4 TYPICAL SECTION - CONSTRUCTION JOINT
3/4" = 1'-0"



5 TYPICAL SECTION - CONTROL JOINT
3/4" = 1'-0"

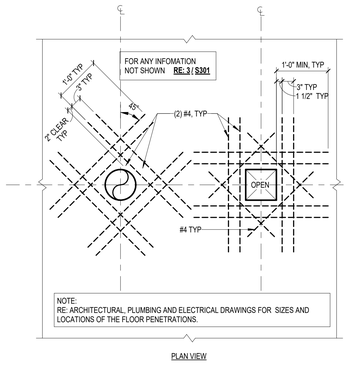


6 TYPICAL SLAB DEPRESSION DETAILS
3/4" = 1'-0"



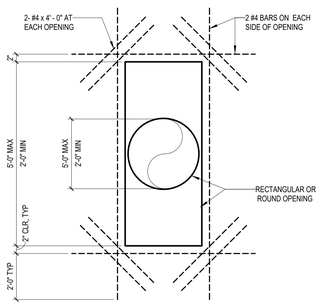
PLAN VIEW

7 TYPICAL RE-ENTRANT CORNER REINF.
3/4" = 1'-0"

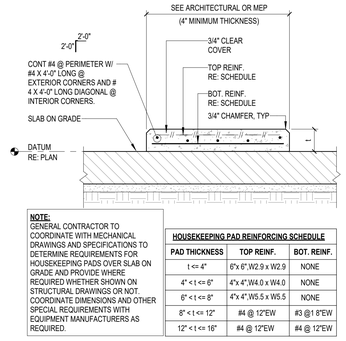


PLAN VIEW

8 SLAB REINF. AT OPENING 2'-0" OR LESS
3/4" = 1'-0"



9 SLAB REINF. AT OPENING 5'-0" OR LESS
3/4" = 1'-0"

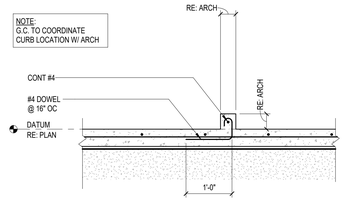


NOTE:
GENERAL CONTRACTOR TO COORDINATE WITH MECHANICAL DRAWINGS AND SPECIFICATIONS TO DETERMINE REQUIREMENTS FOR HOUSEKEEPING PADS OVER SLAB ON GRADE AND PROVIDE WHERE REQUIRED WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT. COORDINATE DIMENSIONS AND OTHER SPECIAL REQUIREMENTS WITH EQUIPMENT MANUFACTURERS AS REQUIRED.

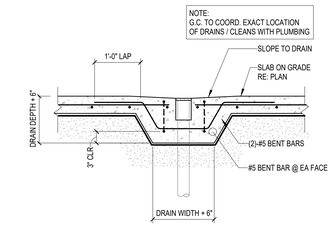
HOUSEKEEPING PAD REINFORCING SCHEDULE

PAD THICKNESS	TOP REINF.	BOT. REINF.
t <= 4"	6"x 6",W2.9 x W2.9	NONE
4" < t <= 6"	4"x 4",W4.0 x W4.0	NONE
6" < t <= 8"	4"x 4",W5.5 x W5.5	NONE
8" < t <= 12"	#4 @ 12"EW	#3 @1 8"EW
12" < t <= 16"	#4 @ 12"EW	#4 @ 12"EW

10 TYPICAL HOUSEKEEPING PAD DETAIL
3/4" = 1'-0"



11 TYPICAL CURB DETAIL
3/4" = 1'-0"



12 TYPICAL SLAB THICKENING AT SINK DRAIN
3/4" = 1'-0"

13 FOUNDATION @ VOLLEYBALL SLEEVE
3/4" = 1'-0"

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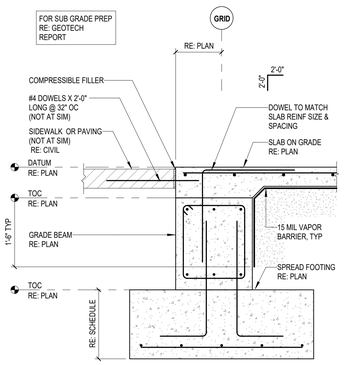
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Title
FOUNDATION SCHEDULE & TYPICAL SLAB ON GRADE DETAILS

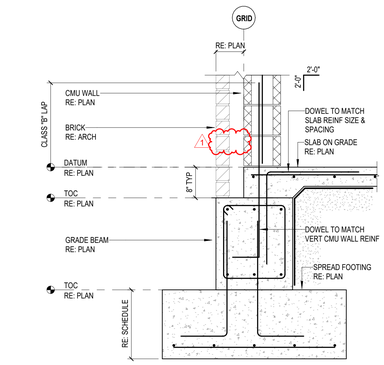
Project No. 214001246
Scale 3/4" = 1'-0"
Revision 1
Drawing No. **S301-PES**

*Plot location in Project Information
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ORIGINAL SHEET - ARCH E1

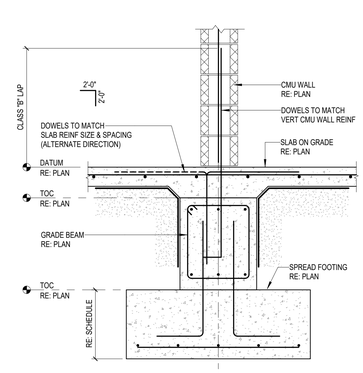
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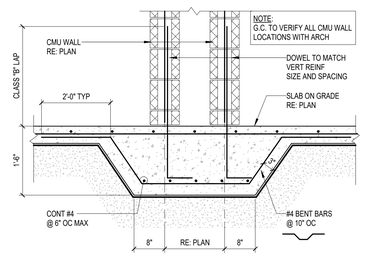
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3/4" = 1'-0"



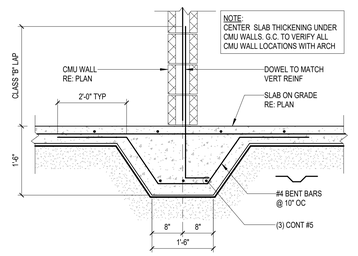
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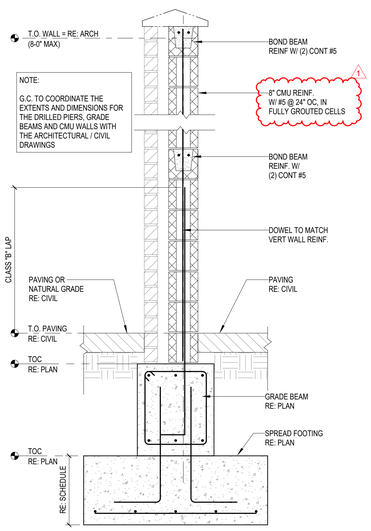
3 FOUNDATION SECTION
3/4" = 1'-0"



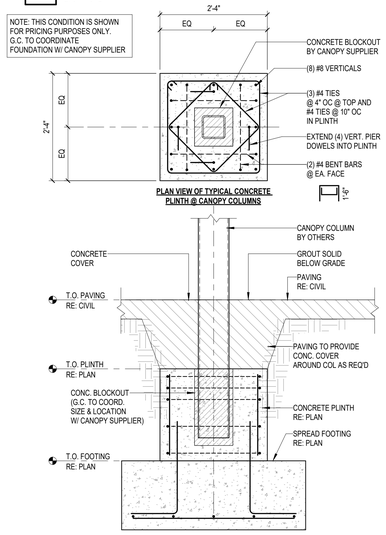
4 TYPICAL SLAB THICKEING AT CMU (11'-0" OR LESS)
3/4" = 1'-0"



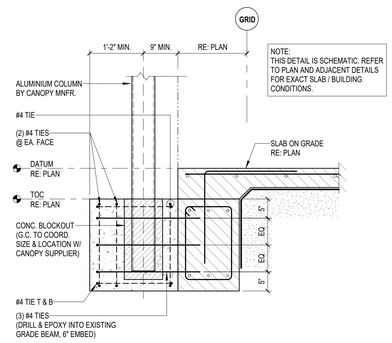
5 TYPICAL SLAB THICKENING AT CMU (11'-0" OR LESS)
3/4" = 1'-0"



6 TYPICAL CMU SCREEN WALL (8'-0" MAX)
3/4" = 1'-0"

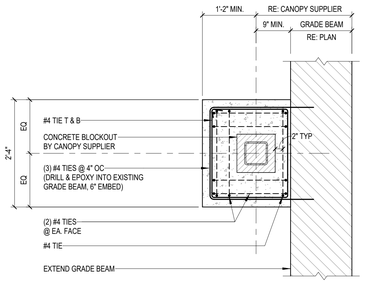


7 TYPICAL AVADEK CANOPY FOUNDATION FOOTING
3/4" = 1'-0"



SECTION VIEW OF TYPICAL CONCRETE
PLINTH @ CANOPY COLUMNS

8 SECTION AT CANOPY COLUMN
3/4" = 1'-0"



PLAN VIEW OF TYPICAL CONCRETE
PLINTH @ CANOPY COLUMNS

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Consultant

Dally + Associates Structural Corp
9800 Richmond Avenue, Suite 460
Houston, Texas 77042
t 713 337 8881
Texas Registered Engineering Firm
F-003426

D + A PROJECT 24-291-00

Notes

1	ADDENDUM #1			10.10.2025
Revision		By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT				2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		JT	AR	LMM 2025.04.11
		Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal



10/10/2025

Client/Project Logo

2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS - PALMER ELEMENTARY SCHOOL

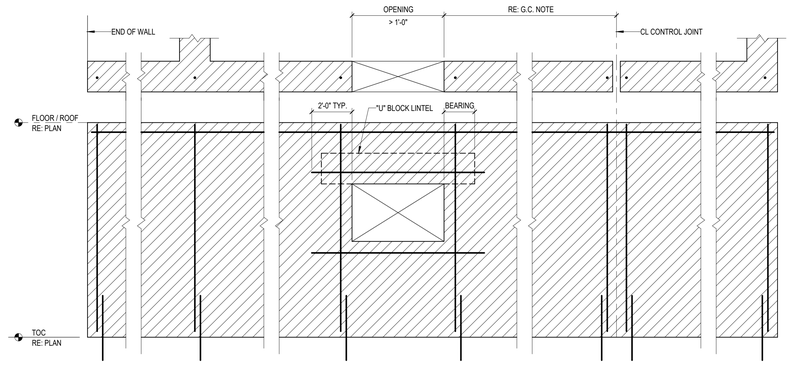
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
SOG @ STRUCTURAL STEEL (GB / FOOTING)

Project No.	Scale
214001246	3/4" = 1'-0"
Revision	Drawing No.
1	S402-PES

ORIGINAL SHEET - ARCH E1
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1 TYPICAL CMU WALL ELEVATION
3/4" = 1'-0"

TYPICAL REINFORCED MASONRY NOTES

TYPICAL HORIZONTAL AND VERTICAL REINFORCING BARS SHALL BE AS NOTED ON THE PLAN SHEET. ADDITIONAL REINFORCING SHALL BE AS FOLLOWS

1. (2) #6 VERTICAL REINFORCING BARS SHALL BE PROVIDED, CONTINUOUSLY FROM SUPPORT TO SUPPORT (FINISHED FLOOR TO ROOF) AT:

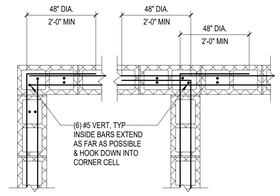
   A. WITHIN 8" OF EACH END OF WALL
   B. EACH WALL INTERSECTION
   C. WITHIN 16" OF EACH SIDE OF A MASONRY OPENING .
   D. WITHIN 8" OF EACH SIDE OF A MASONRY MOVEMENT JOINTS
   E. EACH CORNER OF THE BUILDING
   F. AT 16" OC, FULL HEIGHT

2. (2) #5 HORIZONTAL REINFORCING BARS SHALL BE PROVIDED AT:

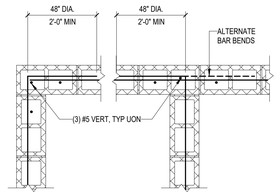
   A. TOP AND BOTTOM OF MASONRY OPENINGS
   B. FLOOR AND ROOF LEVELS, CONTINUOUS
   C. WITHIN 16" OF THE TOP OF MASONRY WALLS, CONTINUOUS.
   D. 8'-0" OC

GC NOTE:
DO NOT LOCATE CONTROL JOINTS WITHIN HALF THE LENGTH OF THE LINTEL (2'-0" MIN) ADJACENT TO THE ROUGH OPENING.

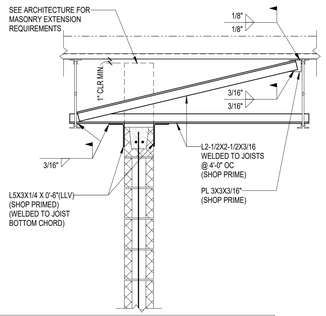
ALL HORIZONTAL REINFORCING WILL BE CONTINUOUS ACROSS CONTROL JOINTS



DOUBLE CURTAIN



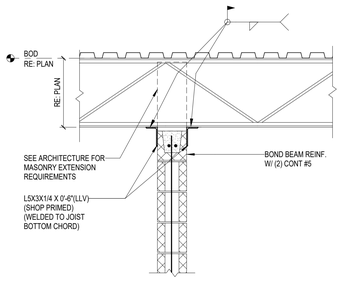
SINGLE CURTAIN



NOTE:

1. THIS DETAIL IS TO BE USED ONLY IF INTEGRAL INTERSECTING SUPPORT WALLS AT EACH END EXCEED A SPACING OF 36 TIMES THE NOMINAL WALL THICKNESS.

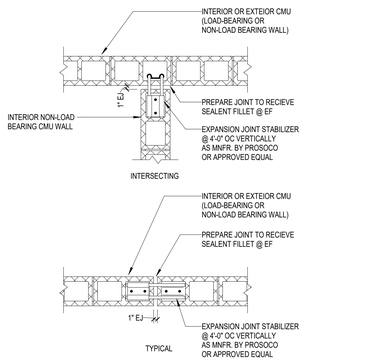
2 TYPICAL CMU WALL INTERSECTION
3/4" = 1'-0"



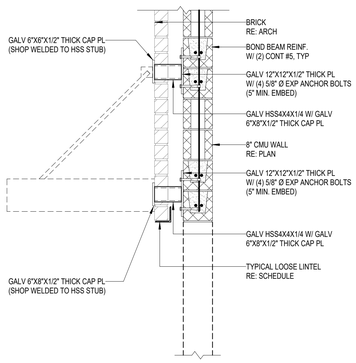
NOTE:

1. THIS DETAIL IS TO BE USED ONLY IF INTEGRAL INTERSECTING SUPPORT WALLS AT EACH END EXCEED A SPACING OF 36 TIMES THE NOMINAL WALL THICKNESS.

3 TYPICAL NON-LOAD BEARING CMU BRACING
3/4" = 1'-0"

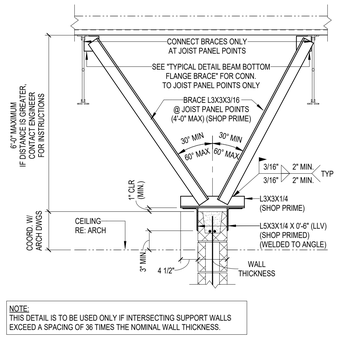


4 TYPICAL NON-LOAD BEARING CMU BRACING
3/4" = 1'-0"



NOTE:
THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 36 TIMES THE NOMINAL WALL THICKNESS.

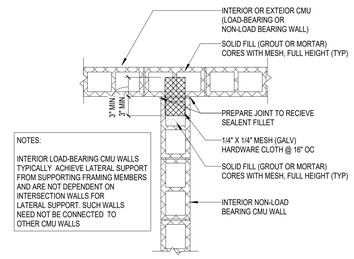
5 TYPICAL NON-LOAD BEARING CMU BRACING
3/4" = 1'-0"



NOTE:
THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 36 TIMES THE NOMINAL WALL THICKNESS.

6 TYPICAL NON-LOAD BEARING CMU BRACING
3/4" = 1'-0"

7 TYPICAL CMU EXPANSION JOINT
3/4" = 1'-0"



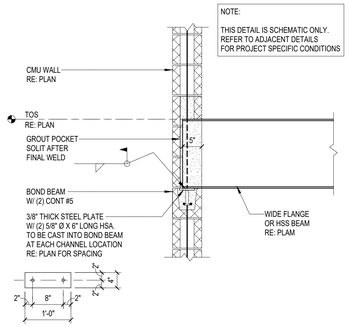
NOTES:

INTERIOR LOAD-BEARING CMU WALLS TYPICALLY ACHIEVE LATERAL SUPPORT FROM SUPPORTING FRAMING MEMBERS AND ARE NOT DEPENDENT ON INTERSECTION WALLS FOR LATERAL SUPPORT. SUCH WALLS NEED NOT BE CONNECTED TO OTHER CMU WALLS

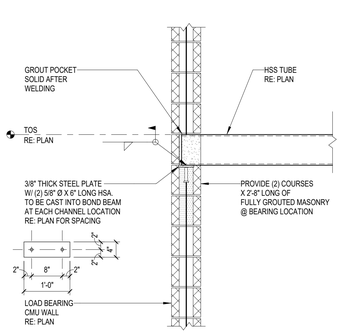
8 TYPICAL CMU EXPANSION JOINT
3/4" = 1'-0"

9 TYPICAL CMU @ CANOPY (BRICK)
3/4" = 1'-0"

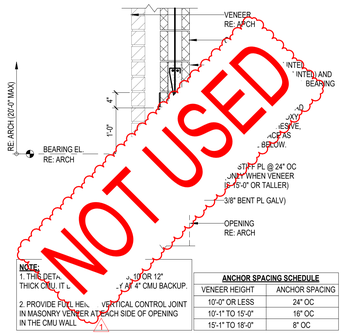
10 TYPICAL LB CMU @ STL BM
3/4" = 1'-0"



11 TYPICAL LB CMU @ STL BM
3/4" = 1'-0"

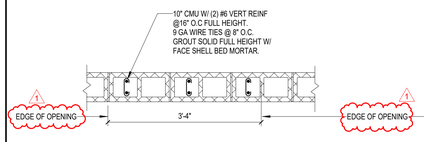


12 CMU BRICK LINTEL
3/4" = 1'-0"

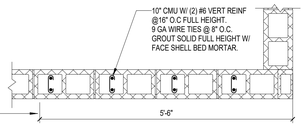


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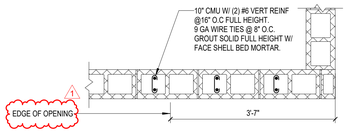
13 MASONRY PILASTER DETAIL (MP1)
3/4" = 1'-0"



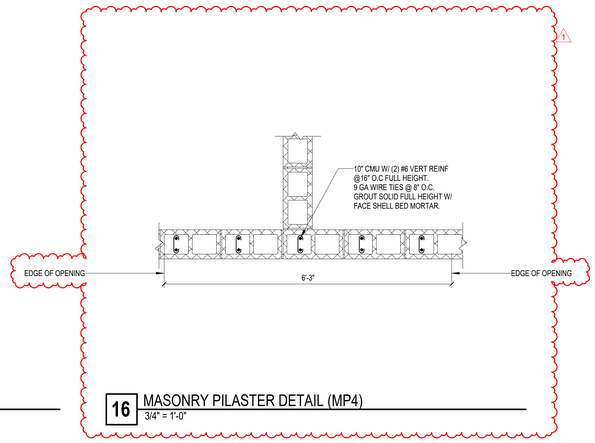
14 MASONRY PILASTER DETAIL (MP2)
3/4" = 1'-0"



15 MASONRY PILASTER DETAIL (MP3)
3/4" = 1'-0"



16 MASONRY PILASTER DETAIL (MP4)
3/4" = 1'-0"



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9800 Richmond Avenue, Suite 460
Houston, Texas 77042
t 713 337 8881
Texas Registered Engineering Firm
F-003426
D + A PROJECT 24-291-00

Notes

1	ADDENDUM #1			10.10.2025
Revision		By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT				2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		JT	AR	LMM 2025.04.11
		Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal



Client/Project Logo

2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
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FBISD BP022 GYM RENOVATIONS AND ADDITIONS - PALMER ELEMENTARY SCHOOL

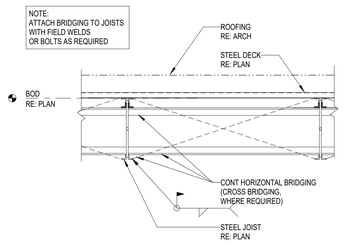
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
TYPICAL CMU WALL DETAILS

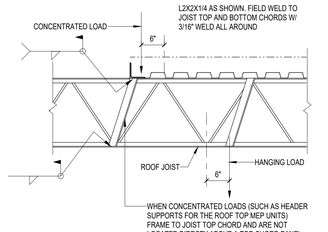
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214001246	3/4" = 1'-0"
Revision	Drawing No.
1	S501-PES

*Plot location in Project Information
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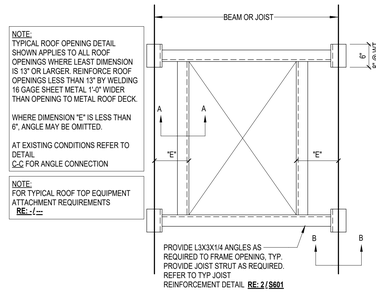
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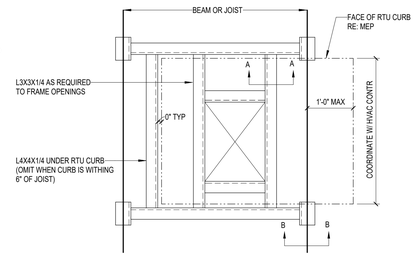
1 TYPICAL JOIST BRIDGING
3/4" = 1'-0"



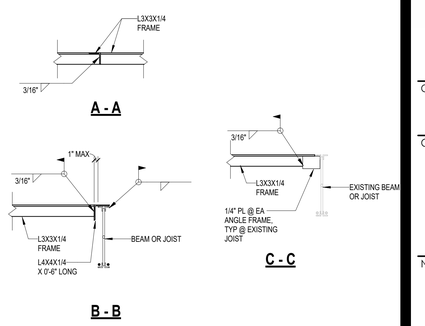
2 TYPICAL OFFSET LOAD JOIST SUPPORT
3/4" = 1'-0"



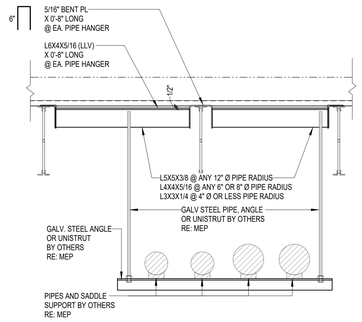
TYPICAL ROOF OPENING - PLAN VIEW



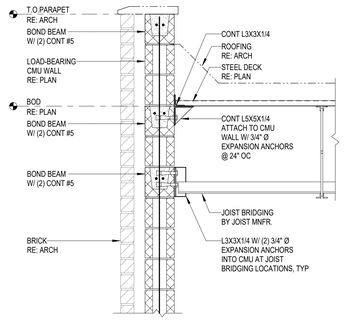
TYPICAL RTU SUPPORT DETAILS



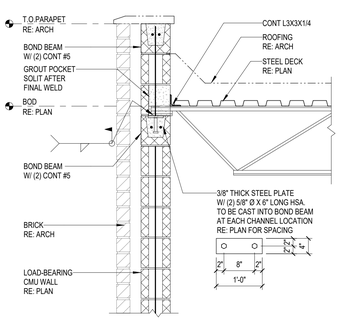
3 TYPICAL RTU CURB OPENING
3/4" = 1'-0"



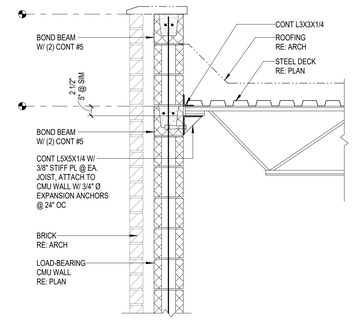
4 TYPICAL PIPE LOAD SECTION
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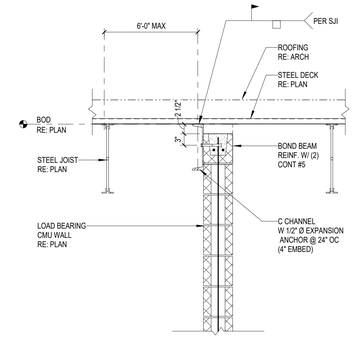
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3/4" = 1'-0"



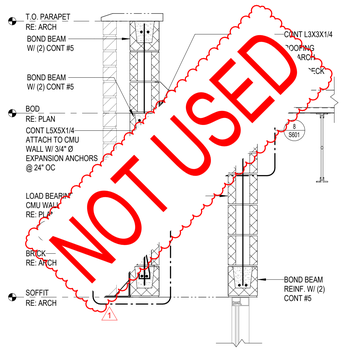
6 LOAD BEARING CMU ROOF SECTION
3/4" = 1'-0"



7 LOAD BEARING CMU ROOF SECTION
3/4" = 1'-0"



8 LOAD BEARING CMU INTERIOR
3/4" = 1'-0"



9 LOAD BEARING CMU ROOF SECTION
3/4" = 1'-0"

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Texas Registered Engineering Firm F-003426
D + A PROJECT 24-291-00

Notes

No.	Revision	By	Appd	YYYY.MM.DD
1	ADDENDUM #1			10.10.2025

Issued	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24

File Name: N/A	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD
	JT	AR	LMM	2025.04.11

Permit/Seal



10/10/2025

Client/Project Logo

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS - PALMER ELEMENTARY SCHOOL

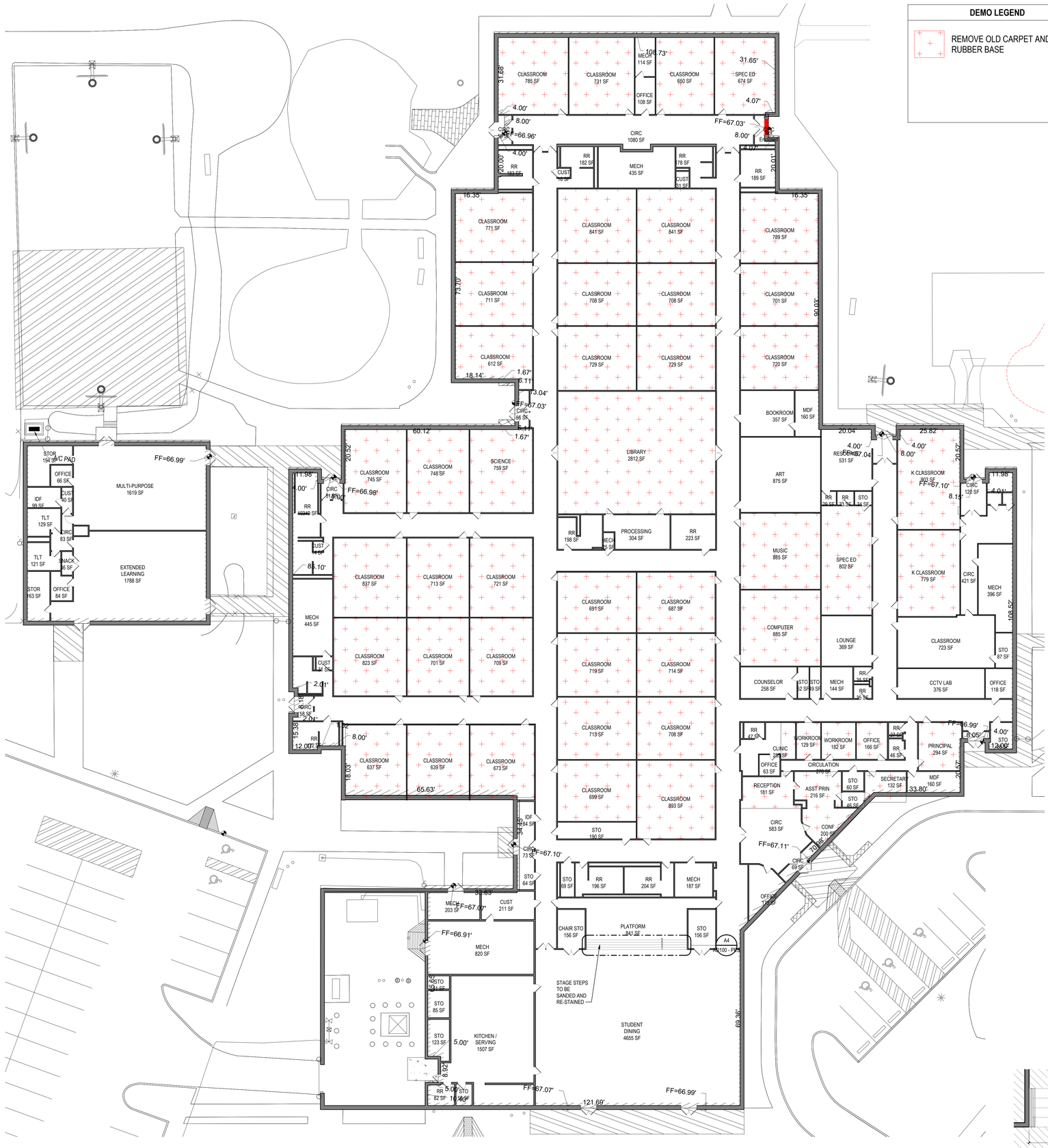
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
TYPICAL STEEL & CMU WALL ROOF DETAILS

Project No.	Scale
214001246	3/4" = 1'-0"
Revision	Drawing No.
1	S601-PES

*Plot location in Project Information
10/9/2025 4:31:13 PM
ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79



DEMO LEGEND

REMOVE OLD CARPET AND RUBBER BASE

GENERAL DEMOLITION REQUIREMENTS

GENERAL:

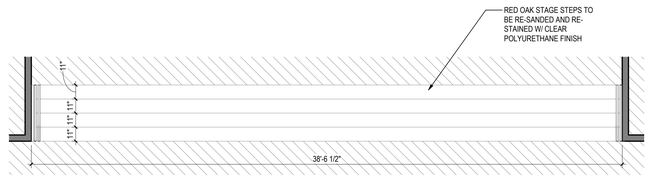
1. VISIT THE SITE TO UNDERSTAND THE SCOPE OF WORK AND TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING THIS PROJECT. REPORT DISCREPANCIES OR AMBIGUOUS ITEMS TO THE ARCHITECT PRIOR TO BIDDING FOR CLARIFICATION.
2. FIELD VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION WORK.
3. COORDINATE DEMOLITION WORK WITH PLAN SHEETS ASD100. AD100, A0601. REFER TO SHEET A501 FOR DOOR AND WINDOW FRAME TYPES AND DETAILS AT NEW OPENINGS IN EXISTING WALLS.
4. REFER TO CIVIL, STRUCTURAL, AND MEP DRAWINGS FOR ADDITIONAL DEMOLITION AND ALTERATION REQUIREMENTS. PATCH WALLS WHERE FIXTURES AND EQUIPMENT ARE DEMOLISHED TO MATCH EXISTING ADJACENT SURFACE.
5. THE OWNER HAS FIRST RIGHTS OF SALVAGE OF ALL FIXTURES, EQUIPMENT AND BUILDING MATERIALS REMOVED AS PART OF THE DEMOLITION AND NOT REUSED IN THE NEW CONSTRUCTION. REMOVE ALL OTHER DEBRIS AND WASTE FROM THE SITE AND DISPOSE OF PROPERLY, IN ACCORDANCE WITH ANY APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
6. PRIOR TO START OF DEMOLITION, SECURE FROM THE OWNER A LIST OF ADDITIONAL EXISTING BUILDING COMPONENTS TO BE SALVAGED AND DELIVERED TO THE OWNER. EXERCISE SUFFICIENT CARE IN SALVAGE OPERATIONS SUCH THAT SALVAGED COMPONENTS ARE DELIVERED TO THE OWNER IN THEIR EXISTING UNDAMAGED CONDITION.
7. DEMOLITION WORK IS TO BE DONE IN PHASES.
8. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL LOOSE EQUIPMENT FURNITURE AND FURNISHINGS IN ROOMS AFFECTED BY SCOPE OF WORK, PROVIDING BOXES FOR SUCH ITEMS AND MOVING THE EQUIPMENT, FURNITURE AND FIXTURES BACK AT THE END OF CONSTRUCTION.

STRUCTURAL INTEGRITY:

1. PROVIDE SHORING, BRACING, AND SUPPORTS AS REQUIRED TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE PROJECT BEFORE CUTTING OR ALTERING ANY OPENING IN AN EXISTING LOAD BEARING OR NON-LOAD BEARING WALL, FOOTING, OR ROOF DECK.

CUTTING AND PATCHING:

1. PROVIDE MATERIALS FOR CUTTING AND PATCHING WHICH WILL RESULT IN EQUAL-OR-BETTER WORK THAN THAT BEING CUT OR PATCHED.
2. REMOVE EXISTING CONSTRUCTION SO AS NOT TO DAMAGE EXISTING CONSTRUCTION THAT IS TO REMAIN. PATCH FLOORS, WALLS AND CEILINGS IN A RECTANGULAR PATTERN TO MATCH EXISTING CONDITIONS AND MAKE THEM READY TO RECEIVE ANY NEW FINISHES INDICATED.
3. CAP PLUMBING LINES THAT ARE TO BE REMOVED BELOW FLOOR OR BEHIND WALL. OR REMOVE THEM COMPLETELY. PATCH FLOORS AND WALLS TO MATCH EXISTING CONDITIONS. REFER PLUMBING DOCUMENTS FOR ADDITIONAL REQUIREMENTS.
4. AT AREAS WHERE EXISTING FLOOR MOUNTED TOILET ROOM FIXTURES ARE TO BE REMOVED, ALSO REMOVE APPROXIMATELY 30 SF OF TILE FROM THE FLOOR AND 40 SF OF TILE FROM THE WALL. PREPARE THIS AREA TO RECEIVE NEW TILE. THE LAYOUT AND EXACT AMOUNT OF TILE TO BE REMOVED SHALL BE AT THE DIRECTION OF THE ARCHITECT.
5. AT AREAS WHERE EXISTING WALL MOUNTED TOILET ROOM FIXTURES ARE TO BE REMOVED, ALSO REMOVE APPROXIMATELY 40 SF OF TILE FROM THE WALL. PREPARE THIS AREA TO RECEIVE NEW TILE. THE LAYOUT AND EXACT AMOUNT OF TILE TO BE REMOVED SHALL BE AT THE DIRECTION OF THE ARCHITECT.
6. WHERE EXISTING FLOORING, CEILINGS OR WALL FINISHES ARE TO BE REMOVED AND REPLACED WITH NEW FINISHES, SURFACES TO REMAIN SHALL BE STRIPPED CLEAN OF ALL EXISTING FINISHES AND MADE READY TO RECEIVE NEW FINISHES.
7. INSPECT FLOORS TO RECEIVE NEW FINISHES PRIOR TO BID. COMPLETELY REMOVE FLOOR FINISHES TO BE REPLACED UON. CLEAN AND PROPERLY PREPARE THE EXISTING SUBSTRATE PRIOR TO INSTALLATION OF NEW FINISH MATERIAL. STRIP, PATCH, AND FILL TO PROVIDE A SMOOTH, DURABLE SURFACE FREE OF BURRS AND ADHESIVE AND SUITABLE FOR APPLICATION OF NEW FINISH MATERIAL UNDER CUT OF DOORS TO ACCOMMODATE NEW FLOOR FINISH WHERE NEW FINISH IS THICKER THAN ORIGINAL FINISH.
8. WHERE NEW CONCRETE TOPPING IS TO BE PLACED OVER EXISTING CONCRETE SLAB, ABRADE EXISTING CONCRETE FINISH FOR BETTER BOND.
9. TOOTH IN MASONRY WHERE EXISTING MASONRY ABUTS NEW MASONRY IN THE SAME WALL PLANE. NEW MASONRY SHALL MATCH EXISTING COURSING AND BOND PATTERN.
10. PROVIDE A FINISHED EDGE BY TOOTHING IN NEW MASONRY TO MATCH EXISTING WHERE A PORTION OF AN EXISTING MASONRY WALL IS TO BE REMOVED (UON).
11. REMOVE FRAME AND PATCH WALL WITH SAME ADJACENT MATERIAL AND FINISH AS EXISTING WHERE EXISTING DOOR OPENINGS ARE TO BE SEALED. ALIGN NEW AND EXISTING WALLS (UON).
12. REMOVE EXPANSION JOINT COVERS (FLOOR, WALL, AND CEILING) THAT ARE DAMAGED DURING DEMOLITION AND REPLACE WITH NEW COVERS OF THE SAME TYPE AND FINISH (OR WITH NEW AS DETAILED, WHERE INDICATED).
13. EXISTING DOORS, FRAMES, AND HARDWARE THAT ARE REMOVED MAY BE REUSED, WHERE INDICATED ON PLANS, IF IN GOOD CONDITION IN THE OPINION OF THE ARCHITECT AND OWNER.
14. WHERE INDICATED, REMOVE TACKBOARDS, CHALKBOARDS, MISCELLANEOUS DISPLAY RAILS, AND TOILET ROOM ACCESSORIES. SALVAGE REMOVED ITEMS FOR OWNER OR REINSTALL AS INDICATED IN DRAWINGS AND SPECIFICATIONS. CLEAN AND PREPARE WALL AS REQUIRED FOR NEW EQUIPMENT OR TO RECEIVE A NEW FINISH.



A1 AD100 PES — **ARCHITECTURAL DEMOLITION**
1/16" = 1'-0"

A4 AD100 PES — **ENLARGED PLAN - STAGE STAIRS**
1/4" = 1'-0"

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Revision	By	Appd	
1 ADDENDUM #1			10.10.2025
Issued			
100% ISSUE FOR BID AND PERMIT			2025.09.24
File Name: N/A	Author	Designer	Checker 12/07/24
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS

4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
ARCHITECTURAL DEMOLITION PLAN

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	AD100 - PES

•Pick location in Project Information•
10/8/2025 8:37:44 PM

ORIGINAL SHEET - ARCH E1

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A1 AD601 PES

DEMOLITION CEILING PLAN - ELP

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Revision		By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT				2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		Author	Designer	Checker	06/01/25
		Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

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Title

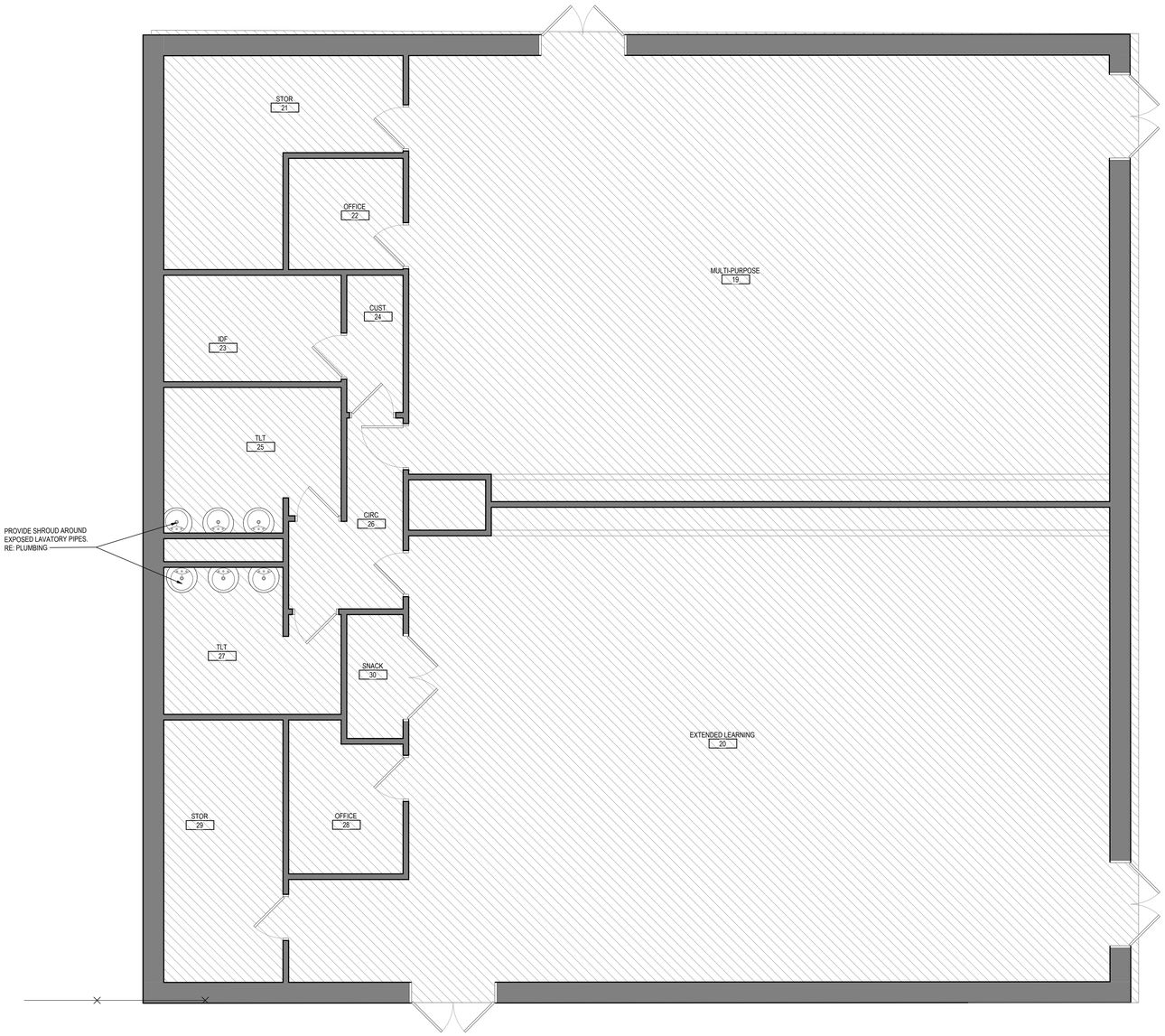
DEMOLITION REFLECTED CEILING PLAN

Project No.	Scale
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Revision	Drawing No.
1	AD601 - PES

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12/5/2025 8:57:46 PM

ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79



GENERAL NOTES

1. REPLACE HALOGEN LIGHTING IN EXTENDED DAY ROOM AND OLD GYM WITH LED HIGH BAY LIGHTS. RE: ELECTRICAL

2. PROVIDE INSULATING PIPE PROTECTION AROUND EXISTING LAVATORIES IN GIRLS AND BOYS RESTROOMS RE: PLUMBING

A1 / A101 ENLARGED FLOOR PLAN - ELP

1/4" = 1'-0"

PES

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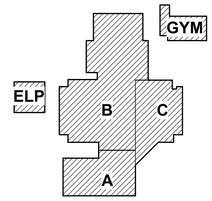
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KEY PLAN

PROJECT NORTH

Revision	By	Appd	YYYY.MM.DD

Issued	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24

File Name: N/A	Author Dwn.	Designer Dsgn.	Checker Chkd.	12/07/24 YYYY.MM.DD

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Title

FLOOR PLAN - ELP

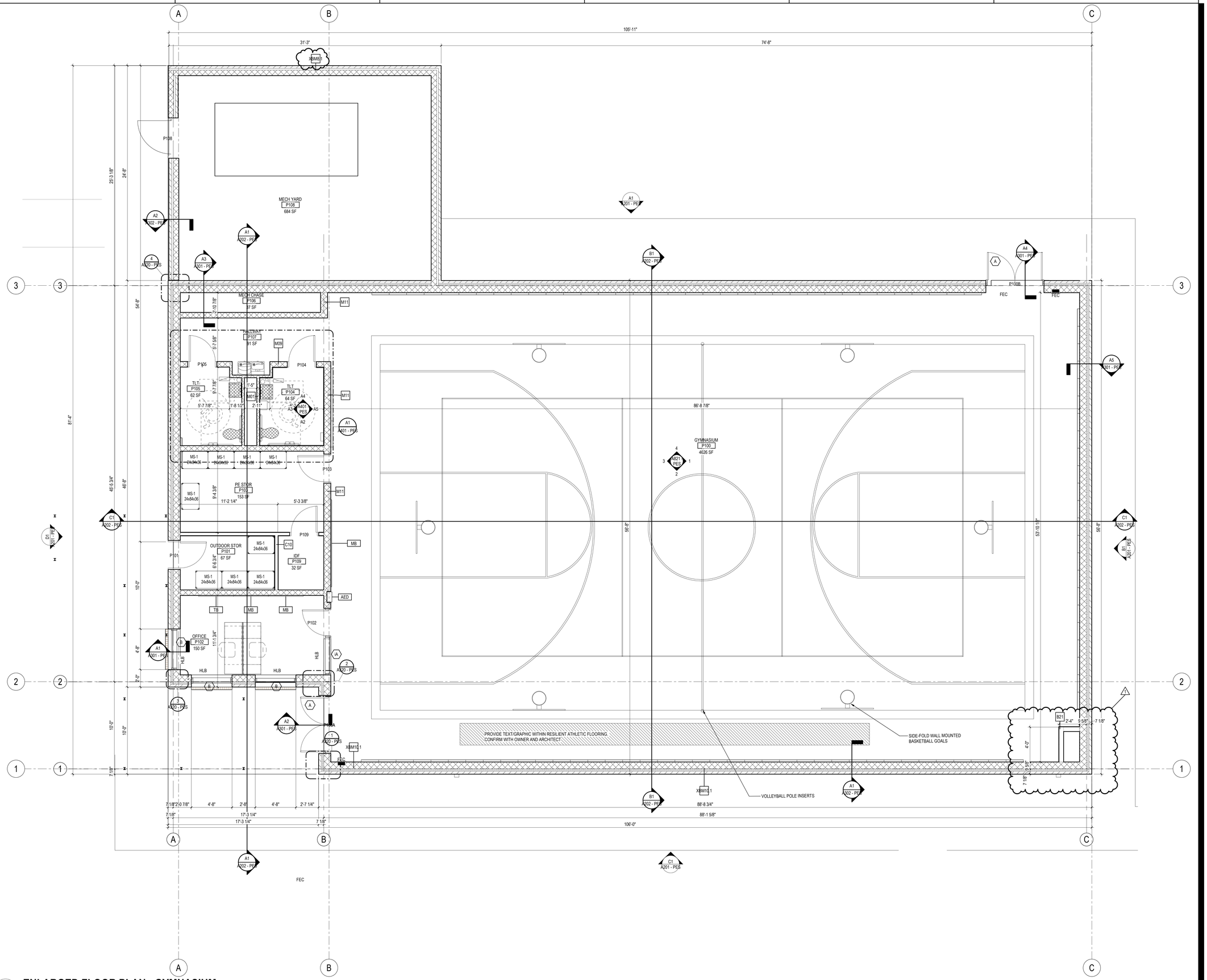
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214001246	As indicated
Revision	Drawing No.

A101 - PES

*Plot location in Project Information
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ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79



A1 A103 — **ENLARGED FLOOR PLAN - GYMNASIUM**
1/4" = 1'-0"
PES

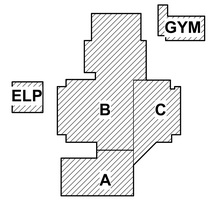
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KEY PLAN

PROJECT NORTH

1	ADDENDUM #1			10.10.2025
Revision		By	Appd	YYYY.MM.DD
	100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		Author	Designer	Checker 12/07/24
		Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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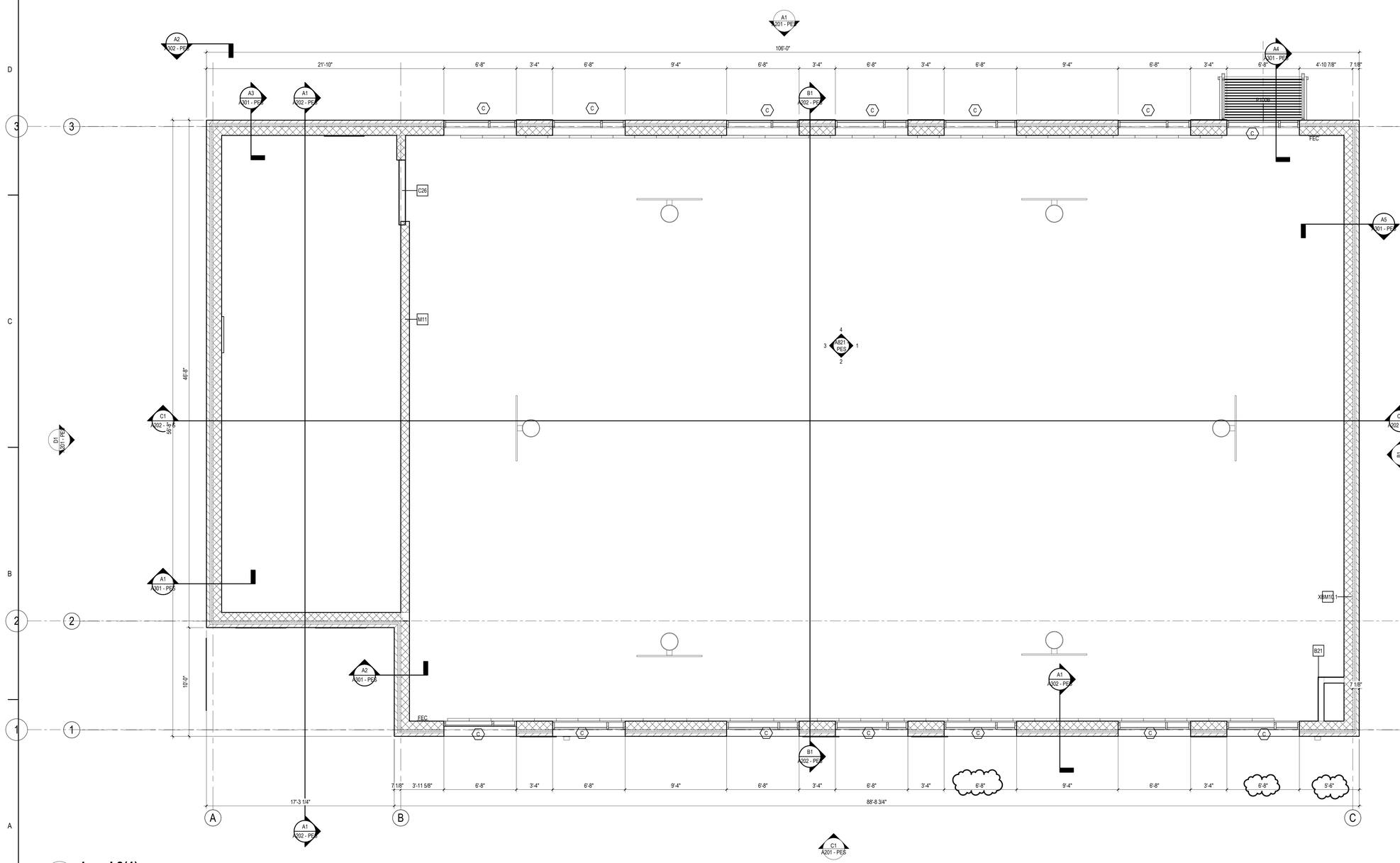
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
FLOOR PLAN - GYMNASIUM

Project No.	Scale
214001246	1/4" = 1'-0"
Revision	Drawing No.
1	A103 - PES

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1 A113 **Level 2(1)**
1/4" = 1'-0"
PES

*Plot location in Project Information
12/9/2025 2:51:38 PM

ORIGINAL SHEET - ARCH E1

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	Issued	By		
File Name: N/A		Author Dwn.	Designer Dsgn.	Checker Chkd. 12/07/24 YYYY.MM.DD

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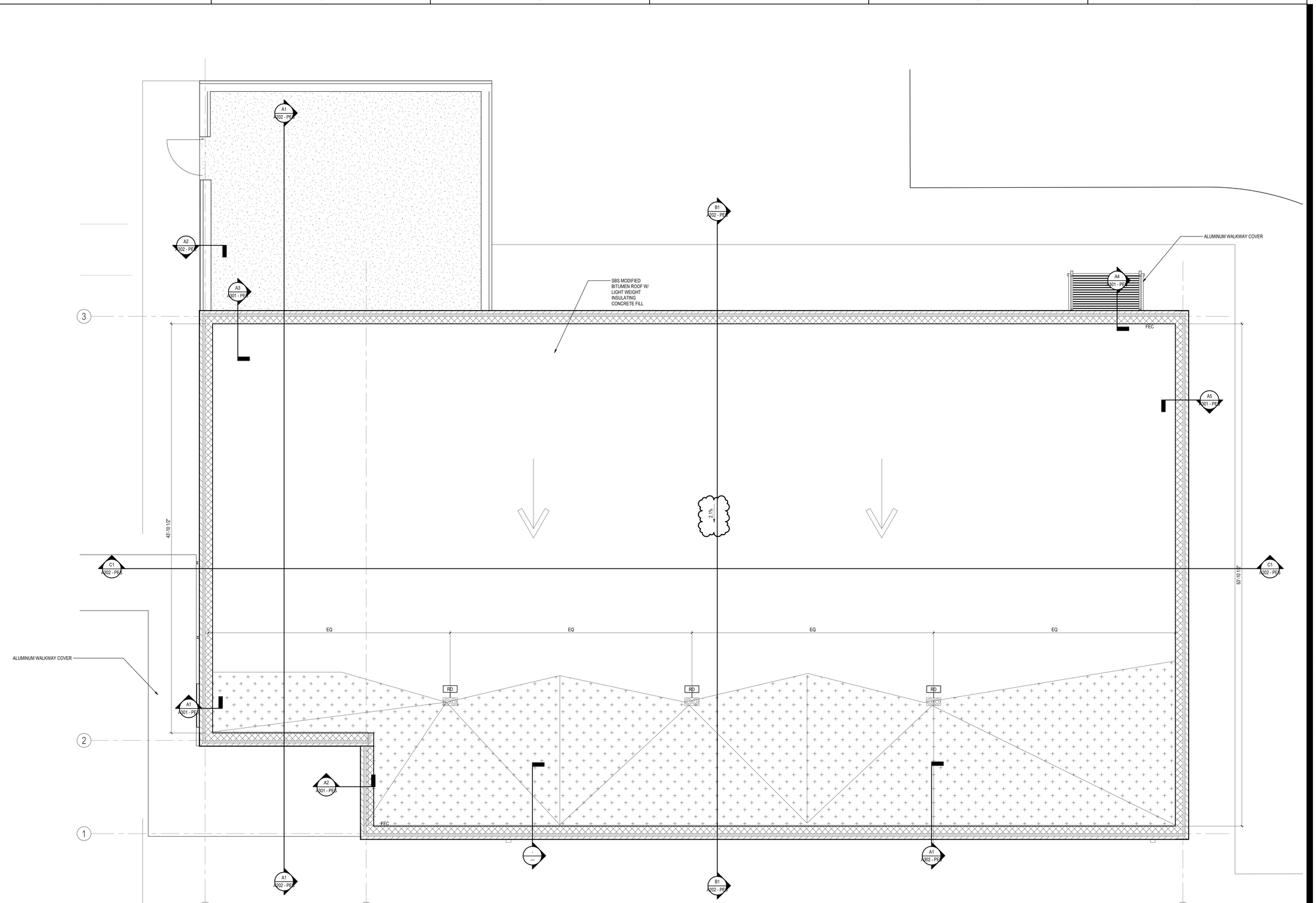
FBISD BP022 GYM RENOVATIONS AND ADDITIONS

4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
GYMNASIUM CLERESTORY PLAN

Project No.	Scale
214001246	1/4" = 1'-0"
Revision	Drawing No.
1	A113 - PES

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A1 / A133 — **ROOF PLAN**
1/4" = 1'-0"
PES

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Title
ROOF PLAN

Project No.
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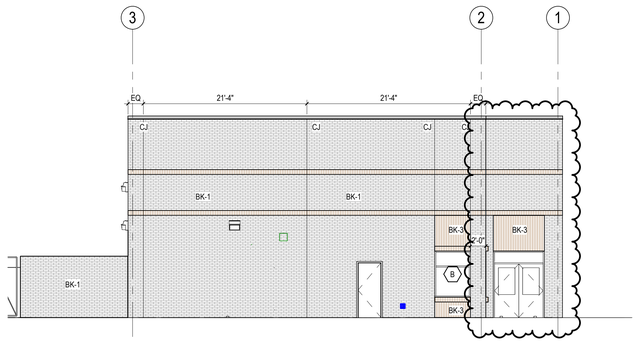
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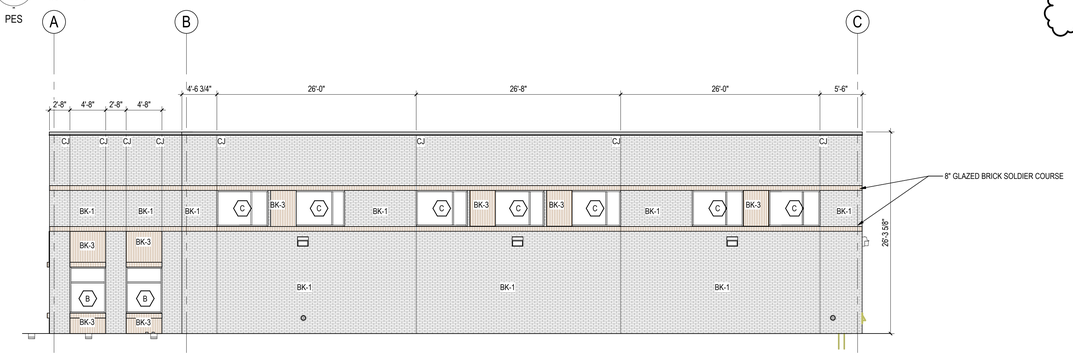
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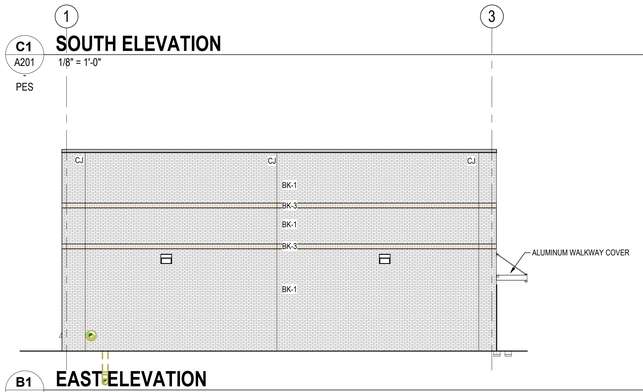
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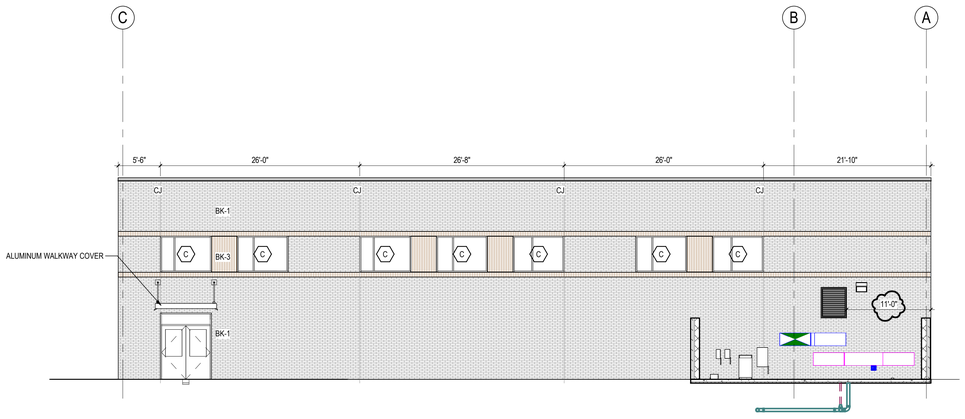
D1 A201 — **WEST ELEVATION**
1/8" = 1'-0"
PES



C1 A201 — **SOUTH ELEVATION**
1/8" = 1'-0"
PES



B1 A201 — **EAST ELEVATION**
1/8" = 1'-0"
PES



A1 A201 — **NORTH ELEVATION**
1/8" = 1'-0"
PES

MATERIAL SCHEDULE - EXTERIOR

MATERIAL	MARK	MANUFACTURER	COLOR	STYLE	REMARKS	EPD	HPD	CLASSIFICATION
ALUMINUM FRAMES	-	KAWNEER	-	IR501T	-			
BRICK	BK1	INTERSTATE	TUMBLEWEED	MODULAR/ @RIDGEGATE KING SIZED	RUNNING BOND			
BRICK	BK2	BELDEN	DOLPHIN GRAY	MODULAR GLAZED	RUNNING BOND/VERTICAL STACKED BOND RE: ELEV			
BRICK	BK3	BELDEN	CRANBERRY	MODULAR GLAZED	RUNNING BOND/VERTICAL STACKED BOND RE: ELEV			
BRICK	BK4	CLOUD CERAMICS	DOVE GREY	MODULAR	RUNNING BOND			
GLAZING	GL -1	GUARDIAN	CLEAR	1-5/16" INSULATED LAMINATED GLAZING				
GLAZING	GL-2	GUARDIAN	CLEAR	9/16" LAMINATED GLASS				
GLAZING	GL-3	GUARDIAN	CLEAR	1/4" TEMPERED INTERIOR				
GLAZING	GL-4	FIRELITE	CLEAR	SUPERLITEII -XL - 5/8" FIRE RATED LAMINATED GLAZING				
GLAZING	GL- 5	FIRELITE	CLEAR	SUPERLITE-II - X- 45 1-3/4" INSULATED LAMINATED FIRE RATED GLAZING				
HOLLOW METAL FRAMES	-		PAINTED					NFPA 285
METAL PANEL	MP-1			METAL PANEL	BERRIDGE			
MORTAR	-	-	-	-	-			

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Issued	By	Appd	YYYY.MM.DD
File Name: N/A	Author Dwn.	Designer Dsgn.	Checker Chkd. 12/07/24 YYYY.MM.DD

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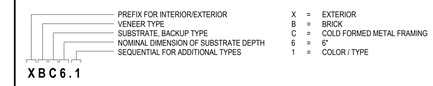
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EXTERIOR ELEVATIONS - GYMNASIUM

Project No.	Scale
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Revision	Drawing No.
1	A201 - PES

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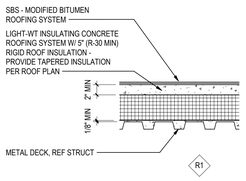
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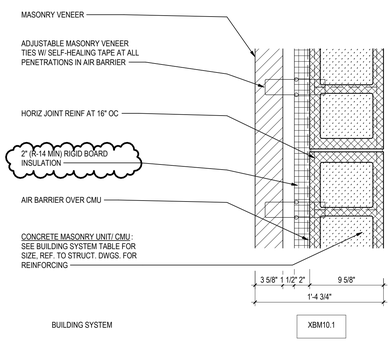


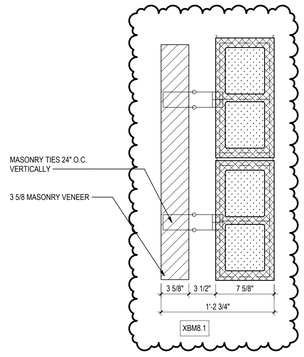
PREFIX	
X	= EXTERIOR

VENEER TYPES	
B	= BRICK
M	= CMU (MASONRY)
0	= NO VENEER

SUBSTRATE		NOMINAL DEPTH		
C	= COLD FORMED METAL FRAMING (CFMF)	4	= 4"	
		6	= 6 "	: 6" x 16 GA. @ 16" O.C. - 12" O.C. AT 10'-0" FROM ALL CORNERS
		8	= 8 "	: 8" x 16 GA. @ 16" O.C. - 12" O.C. AT 10'-0" FROM ALL CORNERS
M	= CONCRETE MASONRY UNIT (CMU)	6	= 5 5/8 "	
		8	= 7 5/8 "	
		10	= 9 5/8 "	
		12	= 11 5/8 "	







GENERAL NOTES - WALL SECTIONS:

GENERAL

1. THE SECTIONS DO NOT INDICATE ALL INSTANCES OF MASONRY BANDING, CORBELLING, AND OTHER VENEER CONDITIONS. REFER TO SECTION DETAILS AND EXTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.

ROOF / FLASHING AND MISC CONSTR

1. MULTI-PLY ROOF WORK NOT SPECIFICALLY DETAILED SHALL BE DESIGNED AND EXECUTED IN ACCORDANCE WITH 'NRCA' MANUAL REQUIREMENTS.
2. SHEET METAL WORK NOT SPECIFICALLY DETAILED SHALL BE DESIGNED AND EXECUTED IN ACCORDANCE WITH 'SMACNA' MANUAL REQUIREMENTS.
3. WHERE 'SMACNA' MANUAL IS REFERENCED, THESE DOCUMENTS REFER TO THE 7TH EDITION, 2012.
4. JOINTS FOR COPINGS, ROOF EDGES AND EXPOSED FLASHING SHALL BE PER 'SMACNA', TABLE 3-1. PROVIDE JOINT J5 FOR PREFINISHED MATERIAL FOR COPING (24 GA UP TO 18" WIDE AND 22 GA UP TO 18" WIDE) AND JOINT J8 FOR GALVALUM AND GALV MATERIAL TOP BACK OF PARAPET.
5. THROUGH-WALL COUNTERFLASHINGS SHALL BE TWO-PIECE PREFIN GALV STL IAW 'SMACNA' MANUAL FIG 4-4C, W/ HOLD-DOWN CLIPS 32" OC UON.
6. WEEPS SHALL BE AT 24" OC AT MASONRY VENEER UON. WEEPS SHALL BE AT 32" OC WHERE MASONRY VENEER IS CMU.
7. PROVIDE CONT WATERSTOPS AT ALL EXTERIOR WALLS THAT DO NOT HAVE A BRICK LEDGE. WATERSTOP SHALL BE CONT EMBEDDED SST FLASHING W/ 1" MIN EMBED INTO CONC SLAB AND SHALL LAP 6" MIN OVER EXT GYP SHEATHING/UNDER VAPOR PERMEABLE AIR BARRIER -OR- SHALL LAP 6" MIN OVER CMU BACKUP/UNDER RIGID INSUL AND VAPOR PERMEABLE AIR BARRIER. ALIGN WATERSTOP W/ OUTSIDE FACE OF EXT GYP SHEATHING OR CMU BACKUP.
8. ALL PENETRATIONS IN RATED WALLS AND FLOORS SHALL HAVE FIRESTOPPING AS REQUIRED PER CODE.
9. REFER TO 'LOOSE STEEL ANGLE LINTEL FOR MASONRY VENEER' SCHEDULE, SHEET A003 FOR UNDESIGNATED, UNBRACED VENEER, PER SPAN, AT WALL OPENINGS.
10. REFER TO 'MISC STEEL BRACING' SCHEDULE AT SHEET A006 FOR UNDESIGNATED MISC STL BRACING FOR WALLS.
11. REFER TO STRUCT DOCS FOR EXACT LOCATIONS AND TYPES OF STRUCT MEMBERS FOR JOIST BEARING , TOP OF STEEL/BOTTOM OF DECK ELEVATIONS, AND FOR COMPLETE DETAILS OF ALL STRUCT CONNECTIONS. INDICATIONS IN WALL SECTIONS ARE FOR COORDINATION PURPOSES ONLY. NOTIFY ARCHITECT OF ANY DISCREPANCIES
12. REFER TO ELEVATIONS AND STRUCT DOCS FOR MASONRY VENEER PATTERNS, BRICK LEDGES AND STEPS IN PARAPETS.
13. SUSP/BRACED AND FRAMED PCP SOFFITS THAT MEET WALLS SHALL HAVE CONT PERIMETER SOFFIT VENTS, UON.
14. REFER TO FLOOR PLANS FOR EXACT PLACEMENT OF WINDOWS.
15. REFER TO CODE SHEETS (G-SERIES) FOR FIRE ASSEMBLY REQUIREMENTS AND EXTENTS.
16. PROVIDE SPRAYED-ON FIRE PROOFING IAW ASSEMBLIES INDICATED ON CODE SHEET G101 - G10X AS REQUIRED TO COMPLY WITH LOCAL CODE REQUIREMENTS INDICATED.
17. REFER TO INTERIOR ELEVATIONS FOR LOCATIONS OF SOUND ABSORBING CMU IN GYMNASIUMS.

CFMF, STL STUD AND GYP BD SYSTEM CONSTR

1. METAL FRAMING FOR EXTERIOR WALLS SHALL BE CFMF AND INTERIOR METAL FRAMING SHALL BE STL STUDS, UON.
2. UNDESIGNATED CFMF SHALL BE 16GA MIN W/ 1 5/8" MIN WIDE FLANGES AT 16"OC MIN (12"OC MAX FOR 10'-0" EA SIDE AT OUTSIDE CORNERS). REFER TO BUILDING SYSTEM TYPES AND DETAILS FOR MEMBER DEPTHS. CFMF SYSTEMS SUPPORTING MASONRY VENEER SHALL RESIST CODE REQUIRED WIND PRESSURES AT DEFLECTION LESS THAN OR EQUAL TO L/600. CFMF SYSTEMS NOT SUPPORTING MASONRY VENEER SHALL RESIST CODE REQUIRED WIND PRESSURES AT DEFLECTION LESS THAN OR EQUAL TO L/360. NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN THESE CRITERIA AND INDICATED CFMF MEMBER SIZES AND SPACINGS.
3. CFMF AND STUD MEMBERS SHALL HAVE BOTH FLANGES BRACED - WHERE THERE IS NO SHEATHING OR FINISH MATERIAL CALLED OUT, PROVIDE V-BAR BRACING OR BRIDGING AT 24"OC MAX.
4. CFMF BRIDGING SHALL BE 6"x18GA CFMF AT 24"OC, UON.
5. WHERE CFMF ARE 12"OC, VENEER TIES SHALL BE 16"OC VERT AND 12"OC HORIZONTAL
6. ALL BATT INSUL IN EXT WALLS SHALL BE UNFACED. WHERE CFMF STUD DEPTH EXCEED INSUL THICKNESS, INSUL SHALL BE PLACED AT EXT SIDE OF STUD.
7. PROVIDE CONT SPECIFIED VAPOR PERMEABLE AIR BARRIER ON OUTSIDE FACE OF GYP SHEATHING OR OUTSIDE FACE OF CMU BACK-UP AS REQUIRED BY BUILDING SYSTEM TYPE.
8. AT RADIUSED SURFACES IN GYP BD BULKHEADS USE APPROPRIATE THICKNESS OF GYP BOARD TO ACHIEVE INDICATED RADIUS. USE APPROPRIATE NUMBER OF LAYERS OF GYP BD TO MAINTAIN THICKNESS OF WALLBOARD INDICATED IN DETAILS AND PARTITION TYPES. PREVENT FLAT AREAS BETWEEN FRAMING BY SPACING STUDS CLOSER THAN NORMAL. WORK SHALL BE PERFORMED IN ACCORDANCE WITH GYPSUM ASSOCIATION PUBLICATION GA-226.
9. CFMF SHALL BE BRACED AS REQUIRED TO MAINTAIN STUD SPANS PER MFR HEIGHT LIMITING TABLES. STUD BRACING SHALL OCCUR ABOVE CEILINGS ONLY. WHEN THIS IS NOT POSSIBLE PROVIDE STUDS OF AN APPROPRIATE GAUGE OR DEPTH FOR THE CONDITION.
10. REFER TO 'DOOR AND WINDOW JAMB SCHEDULE' ON SHEET A006 FOR NUMBER OF STUDS AT JAMBS IN CFMF AND STL STUD AND GYP BD CONSTR.

CMU CONSTR

1. CMUMASONRY MULTI-WYTHE CAVITY WALLS SHALL HAVE LADDER DESIGN HORIZ REINF AT 16" OC.
2. ALL INTERIOR SINGLE WYTHE CMU WALLS SHALL HAVE HORIZONTAL JOINT REINFORECEMENT AT 16" OC.
3. REFER STRUCT DOCS FOR DESIGN OF LOAD-BEARING WALL AND EXTERIOR NON-LOADBEARING WALLS.
4. UNDESIGNATED CMU BOND BEAMS SHALL HAVE CONT #5 BARS AT TOP AND BOTTOM AND SHALL BE GROUTED SOLID.
5. PROVIDE CONT BOND BEAMS AT TOPS OF ALL CMU WALLS UNLESS OTHERWISE INDICATED. PROVIDE STEPS AS REQUIRED FOR SLOPES.
6. WHERE A BOND BEAM IS INTERRUPTED BY A WALL OPENING, THE BOND BEAM SHALL CONTINUE ABOVE THE OPENING AND SHALL BE ANCHORED TO CONT GROUTED AND VERT REINFORCED JAMB CELLS AT EA SIDE ON HORIZONTAL SPANNING WALLS.
7. REFER TO 'CONCRETE 'U' BLOCK LINTELS' SCHEDULE SHEET A### FOR UNDESIGNATED LINTELS, PER SPAN AT CMU WALL OPENINGS.
8. NON LOAD-BEARING MASONRY WALL PARAPETS SHALL BE REINF W/ No 5 BARS AT 32" OC VERT IN FULLY GROUTED CELLS. EXTENDING BELOW BRACE POINT EQUAL DISTANCE TO PARAPET ABOVE BRACE POINT

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Revision	By	Appd	YYYY.MM.DD
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File Name: N/A	Author	Designer	Checker 12/27/24
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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Client/Project

FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title

EXTERIOR WALL & ROOFING TYPES

Project No. 214001246

Scale As indicated

Revision 1

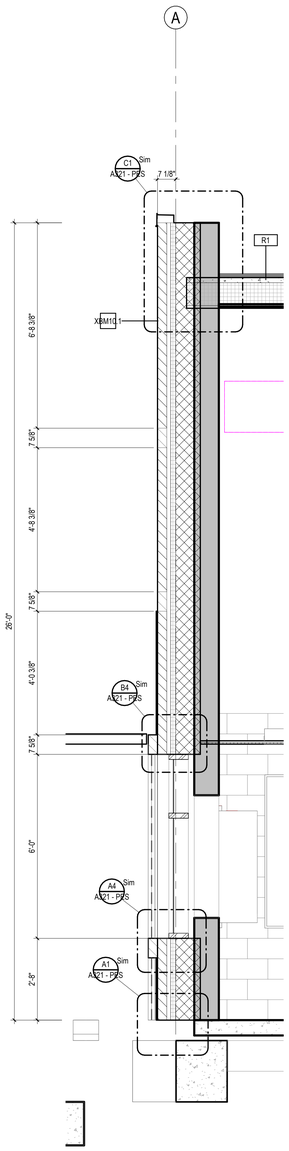
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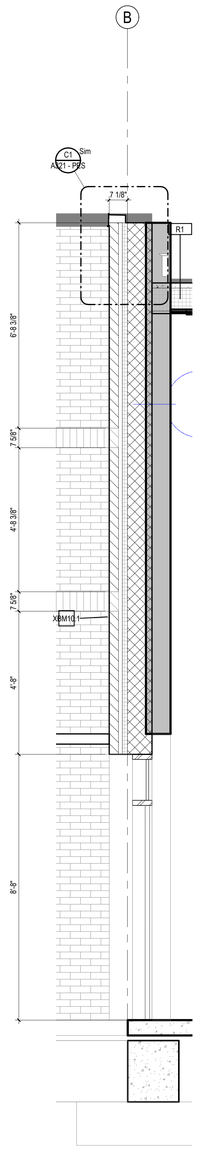
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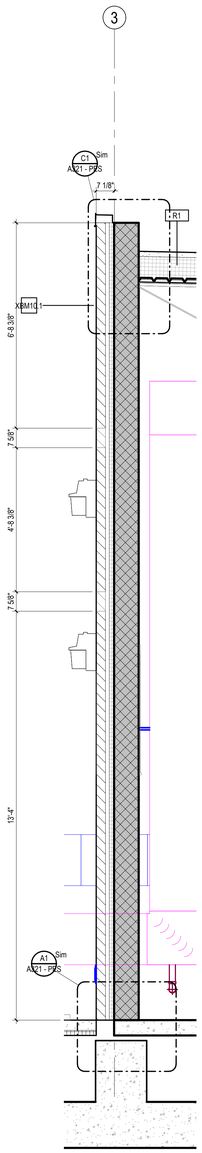
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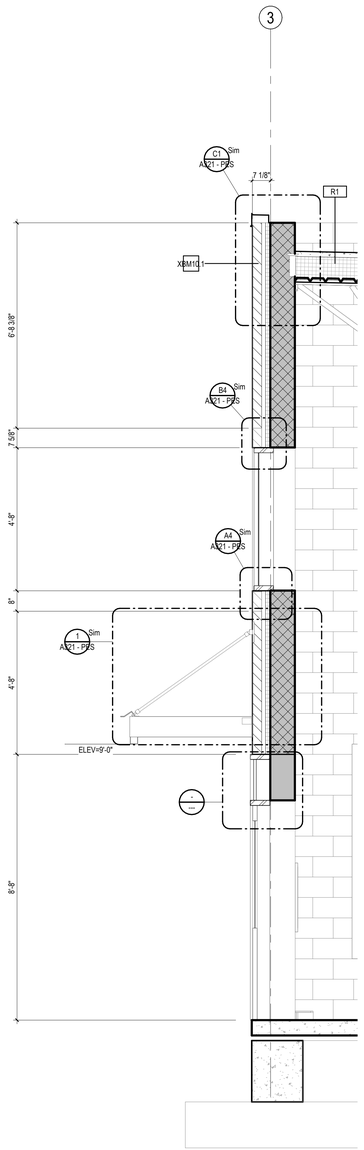
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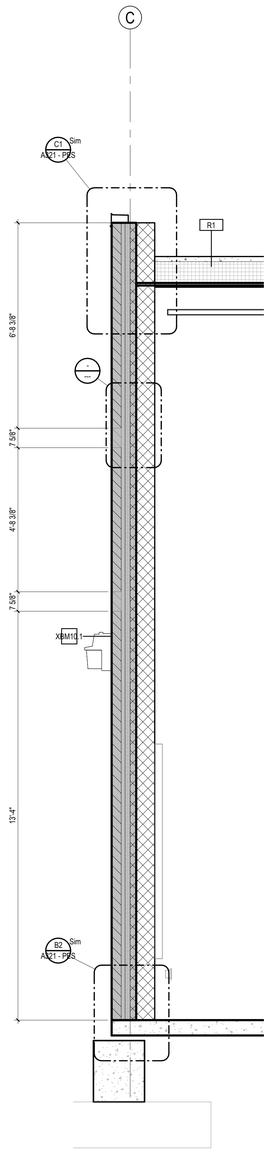
A2 WALL SECTION
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A3 WALL SECTION
1/2" = 1'-0"
PES



A4 WALL SECTION
1/2" = 1'-0"
PES



A5 WALL SECTION
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PES

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Issued			YYYY.MM.DD

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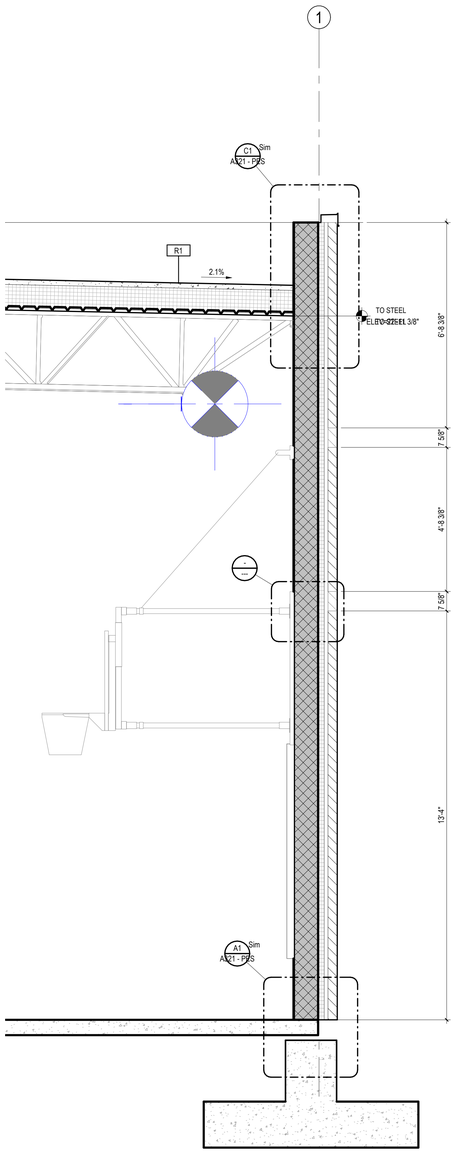
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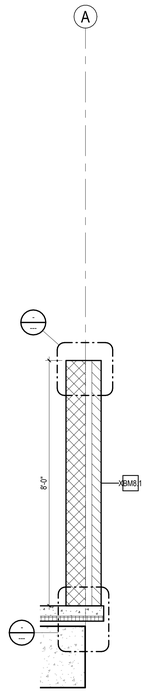
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A1 WALL SECTION
1/2" = 1'-0"
A302
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A2 Detail 19
1/2" = 1'-0"
A302
PES

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File Name: N/A	Author	Designer	Checker	12/07/24
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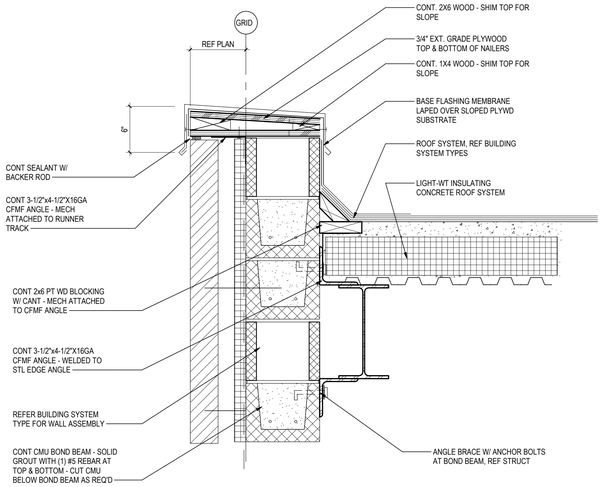
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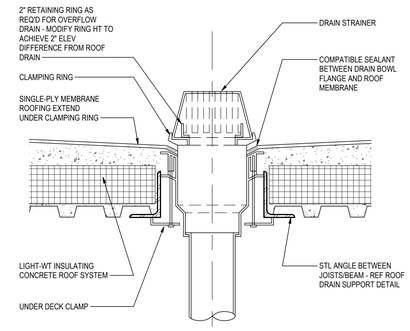
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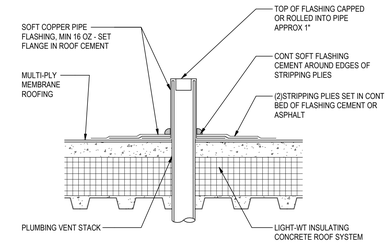
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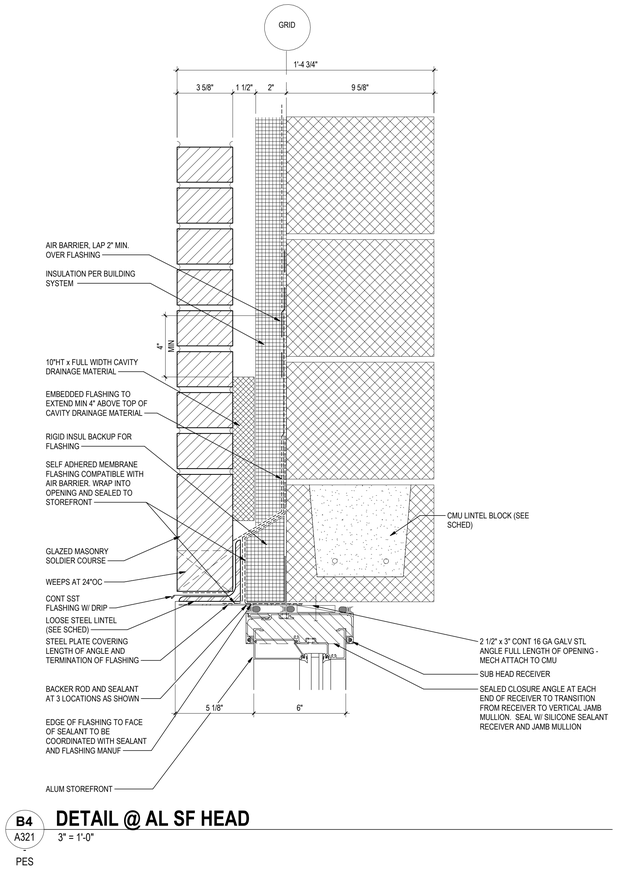
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1 1/2" = 1'-0"
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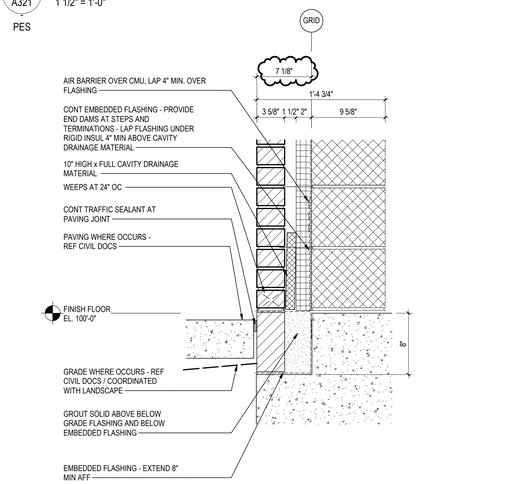
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1 1/2" = 1'-0"
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B2 A321 — **DETAIL @ ROOF STACK**
1 1/2" = 1'-0"
PES

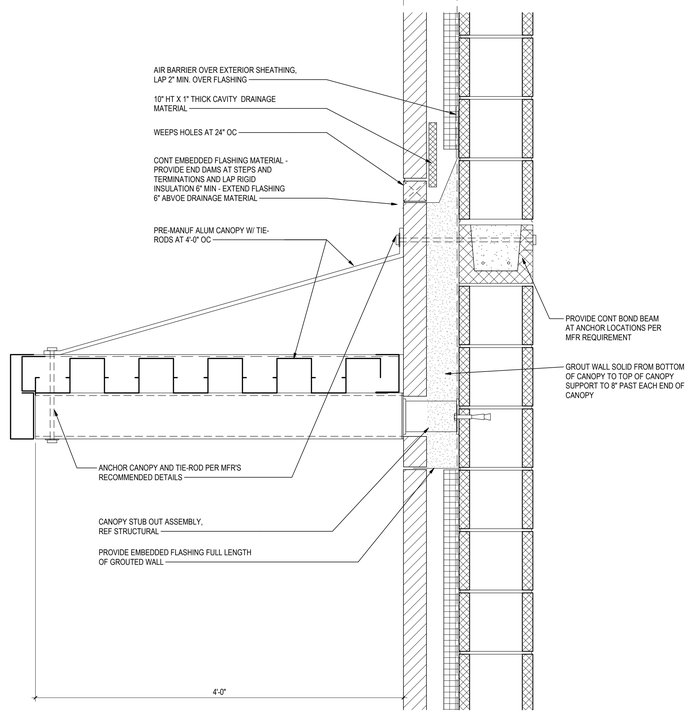


B4 A321 — **DETAIL @ AL SF HEAD**
3" = 1'-0"
PES

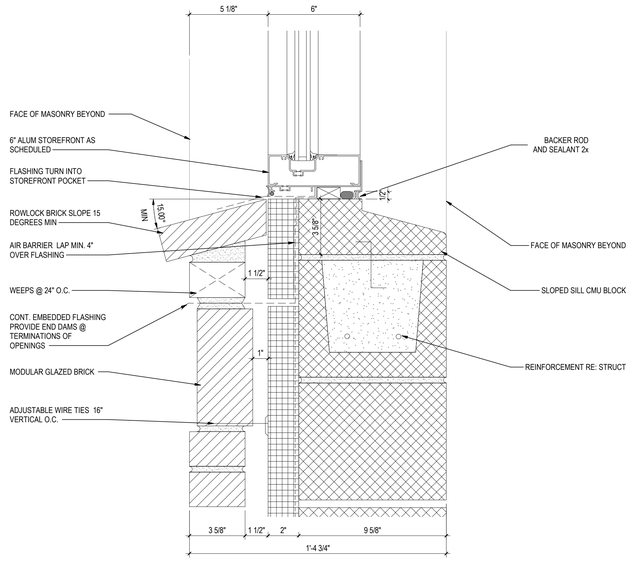


B1 A321 — **DETAIL @ SOFFIT**
1 1/2" = 1'-0"
PES

A1 A321 — **DETAIL @ BRICK LEDGE**
1 1/2" = 1'-0"
PES



1 A321 — **DETAIL @ WALKWAY COVER**
1 1/2" = 1'-0"
PES



A4 A321 — **DETAIL @ AL SF SILL**
3" = 1'-0"
PES

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File Name: N/A	Author Dwn.	Designer Dsgn.	Checker Chkd. 12/07/24 YYYY.MM.DD

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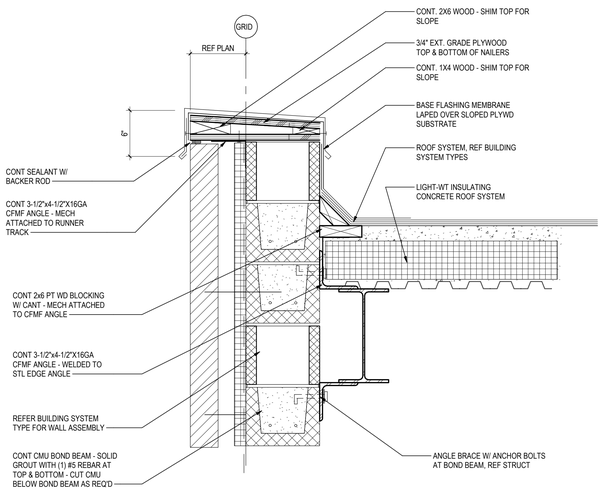
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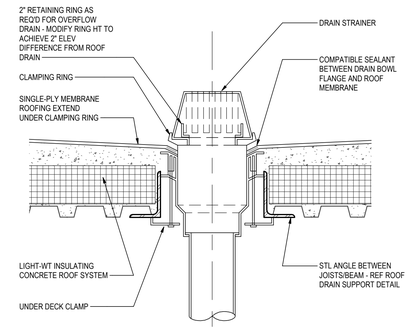
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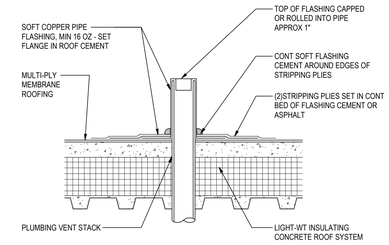
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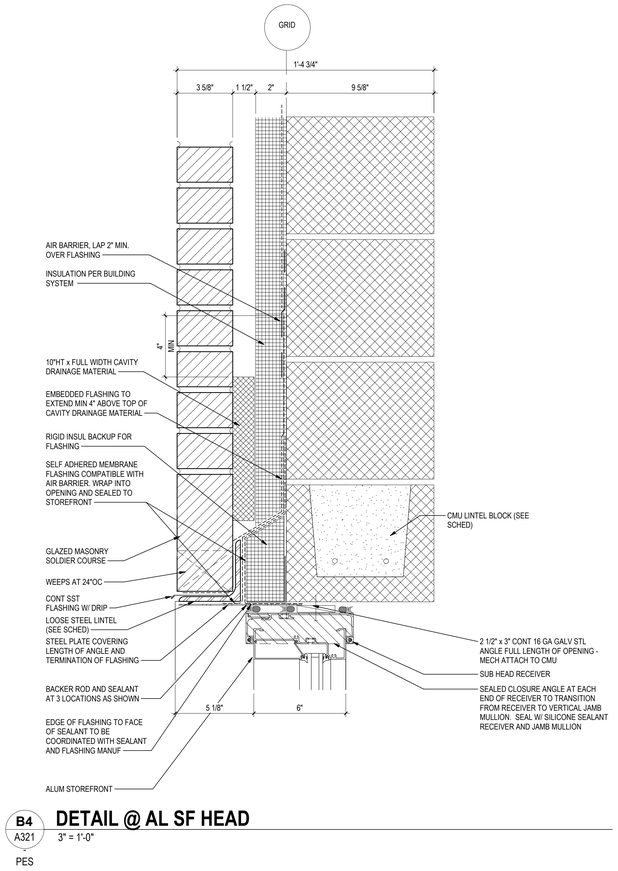
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1 1/2" = 1'-0"
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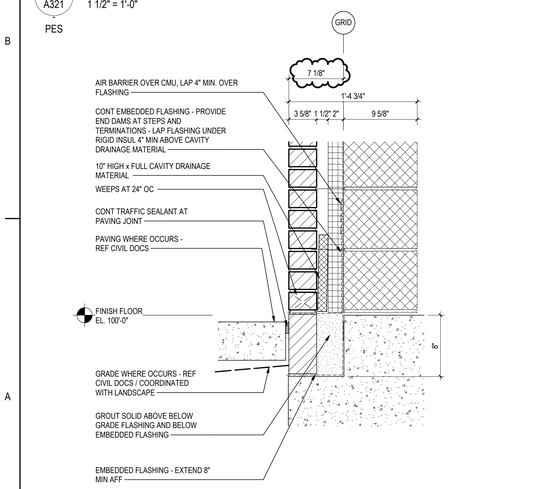
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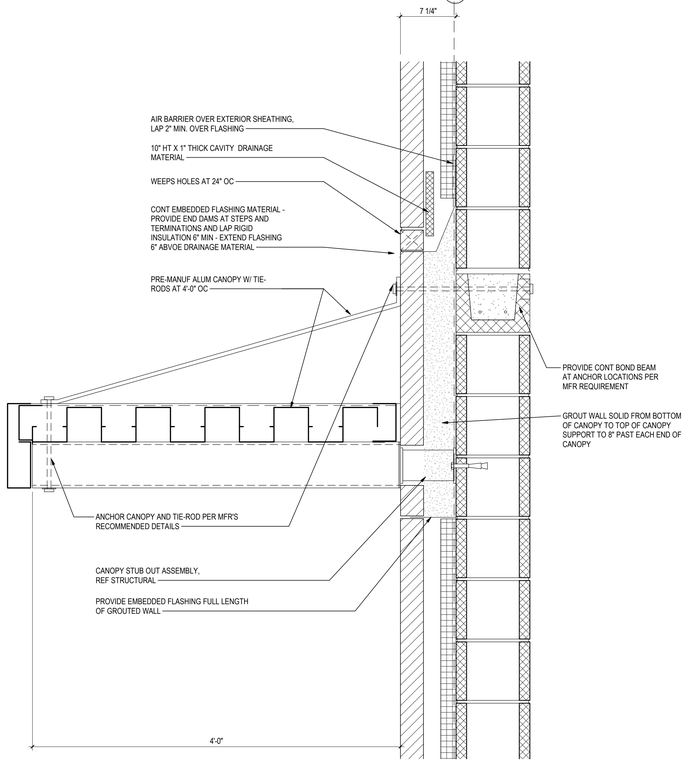
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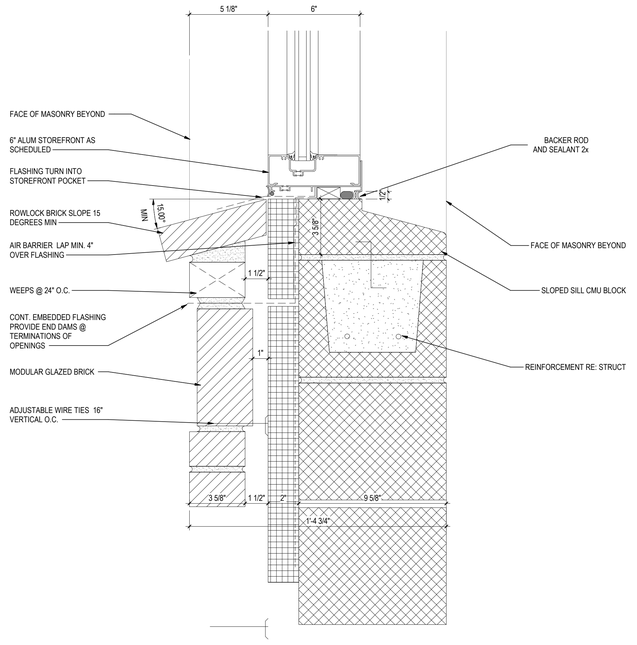
B4 A321 — **DETAIL @ AL SF HEAD**
3" = 1'-0"
PES



B1 A321 — **DETAIL @ SOFFIT**
1 1/2" = 1'-0"
PES



1 A321 — **DETAIL @ WALKWAY COVER**
1 1/2" = 1'-0"
PES



A4 A321 — **DETAIL @ AL SF SILL**
3" = 1'-0"
PES

A1 A321 — **DETAIL @ BRICK LEDGE**
1 1/2" = 1'-0"
PES

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File Name: N/A	Author Dwn.	Designer Dsgn.	Checker Chkd. 12/07/24 YYYY.MM.DD

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Title
EXTERIOR WALL SECTIONS DETAILS

Project No. 214001246
Scale As indicated
Revision 1
Drawing No. A321 - PES

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CWY2025 2.08.07 Pat
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GENERAL NOTES - TOILET PLANS:

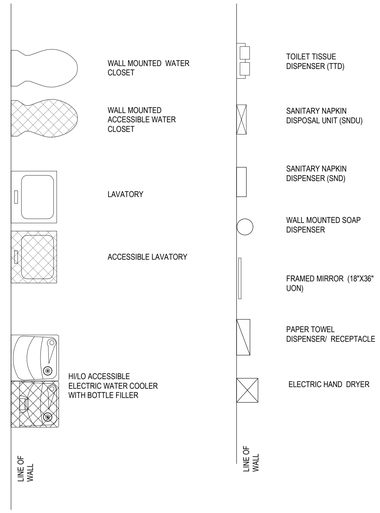
1. REFER TO A007 FOR PARTITION TYPES.
2. REFER TO A100 FOR ADDITIONAL GENERAL PLAN NOTES.
3. ALL TOILET ROOM WALLS TO GO TO DECK UNO.
4. PROVIDE WALL MOUNTED DOOR STOPS IN RESTROOMS.
5. REFER TO A800's FOR INTERIOR FINISHES.
6. PROVIDE 90 DEGREE OUTSIDE CMU CORNERS BEHIND CERAMIC TILE WRAPPING AROUND OUTSIDE CORNERS.
7. TERMINATE CERAMIC TILE 2" SHORT OF CMU BULLNOSE CORNERS WHERE TILE FINISH STOPS AT OUTSIDE CORNERS.
8. EXTEND CERAMIC TILE UP TO AND AROUND MIRRORS ON WALLS WITH CERAMIC TILE WAINSCOT.

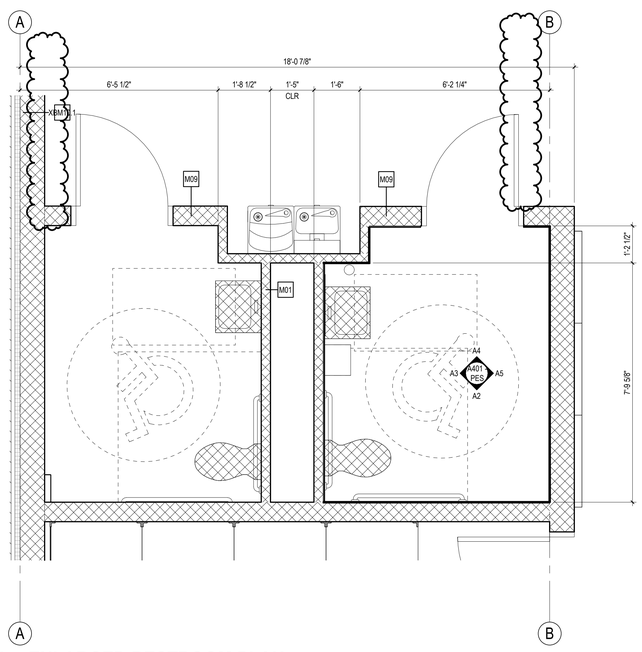
ACCESSORIES:

1. REFER TO SHEET A002 FOR TYPICAL TOILET ROOM ACCESSORIES AND FIXTURE / ACCESSORY MOUNTING HEIGHT INFO.
2. PROVIDE FIXTURES AND ACCESSORIES AT ALL SINGLE ACCESSIBLE TOILET ROOMS AND ALL TOILET STALLS AS INDICATED ON THE 'TYPICAL TOILET ROOM LAYOUTS' ON SHEET A421
3. COORDINATE INSTALLATION OF REQ'D BLOCKING AND STABILIZING FOR FIXTURES.
4. THE STRUCTURAL STRENGTH OF GRAB BARS AT ACCESSIBLE WATER CLOSETS SHALL COMPLY WITH ADA/TAS 609.8.

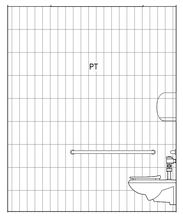
MIRRORS MOUNTED ABOVE SINKS OR CABINETS SHALL BE CENTERED ON FIXTURE. LOCATE THE TOPS OF THESE MIRRORS (MEASURED FROM FLOOR TO TOP MOST EDGE) AT 74" AFF

TOILET ROOM ACCESSORY LEGEND:

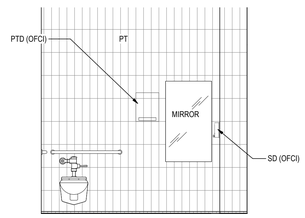




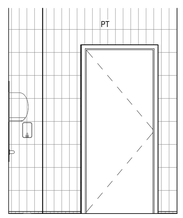
A1 A401 — **ENLARGED RESTROOM PLAN**
1/2" = 1'-0"
PES



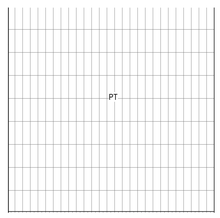
A2 A401 — **INTERIOR ELEVATION**
3/8" = 1'-0"
PES



A3 A401 — **INTERIOR ELEVATION**
3/8" = 1'-0"
PES



A4 A401 — **INTERIOR ELEVATION**
3/8" = 1'-0"
PES



A5 A401 — **INTERIOR ELEVATION**
3/8" = 1'-0"
PES

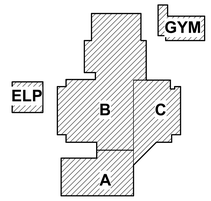
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KEY PLAN

PROJECT NORTH

1	ADDENDUM #1			10.10.2025
Revision		By	Appd	YYYY.MM.DD
	100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		Author Dwn.	Designer Dsgn.	Checker Chkd. 12/07/24 YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT DANIELLE DUNN 28295 STATE OF TEXAS

Client/Project Logo

2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

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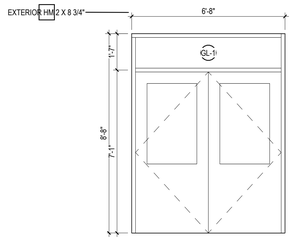
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ENLARGED RESTROOM DETAILS

Project No. 214001246
Scale As indicated
Revision 1
Drawing No. **A401 - PES**

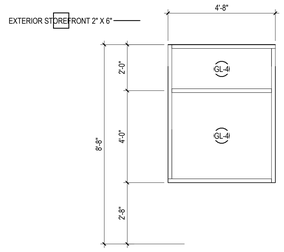
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ORIGINAL SHEET - ARCH E1

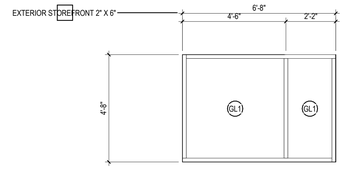
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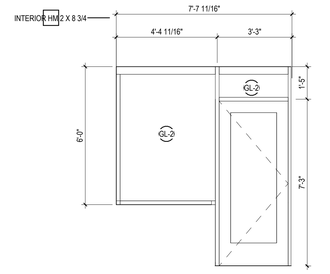
D1 A501 — **FRAME TYPE A**
3/8" = 1'-0"
PES



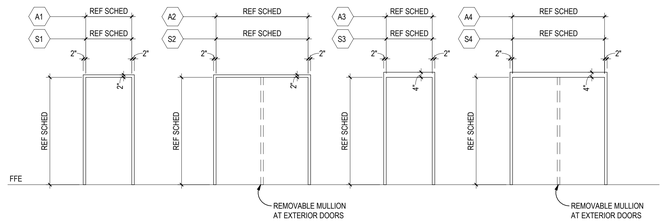
D2 A501 — **FRAME TYPE B**
3/8" = 1'-0"
PES



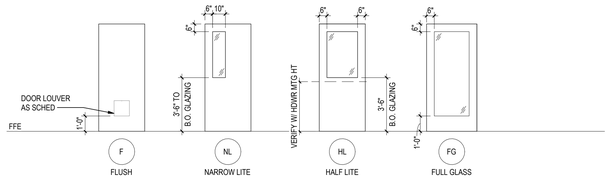
D3 A501 — **FRAME TYPE C**
3/8" = 1'-0"
PES



D4 A501 — **FRAME TYPE iA**
3/8" = 1'-0"
PES

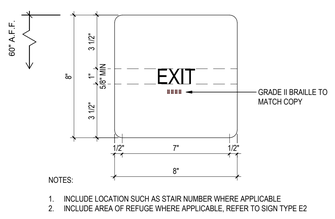


C1 A501 — **DOOR FRAME TYPES**
1/4" = 1'-0"
PES



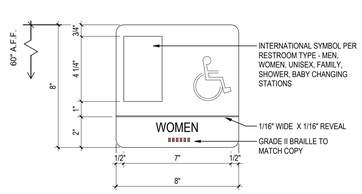
NOTES:
1. PROVIDE INSULATED LAMINATED GLAZING UNITS IN ALL EXTERIOR DOORS, UNO
2. PROVIDE ¼" CLEAR TEMPERED SAFETY GLASS IN ALL INTERIOR DOORS, UNO
3. AT DOORS MARKED AS ACOUSTICAL DOORS, PROVIDE SOUND SEALS FOR AN EQUIVALENT STC 47 DOOR

B1 A501 — **A041_DOOR TYPES**
1/4" = 1'-0"
PES

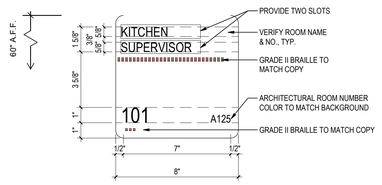


NOTES:
1. INCLUDE LOCATION SUCH AS STAIR NUMBER WHERE APPLICABLE
2. INCLUDE AREA OF REFUGE WHERE APPLICABLE, REFER TO SIGN TYPE E2

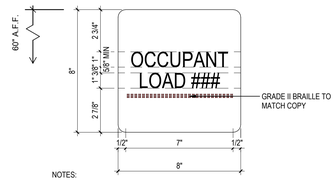
C3 A501 — **INTERIOR ROOM EXIT SIGN**
3" = 1'-0"
PES



C4 A501 — **RESTROOM SIGN**
3" = 1'-0"
PES



B3 A501 — **TYPICAL ROOM SIGN**
3" = 1'-0"
PES



NOTES:
1. PROVIDE SIGN AT EACH EXIT POINT.
2. COORDINATE ON SITE TO COMPLY WITH THE REQUIREMENTS

B4 A501 — **OCCUPANT LOAD SIGN**
3" = 1'-0"
PES

GLAZING LEGEND

GL-1 - 1 5/16" INSULATED LAMINATED GLAZING

GL-2 - 9/16" LAMINATED GLAZING

GL-3 - 1/4" CLEAR TEMPERED GLAZING

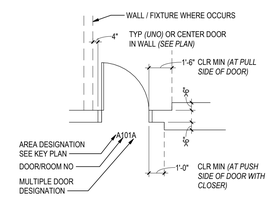
GL-4 5/8" FIRE RATED LAMINATED INSULATED GLAZING UNIT

GL-5 1-3/4" 45 MIN INSULATED LAMINATED GLAZING

GENERAL NOTES - DOORS AND WINDOWS:

1. REFER TO SHEET A501 FOR DOOR SCHEDULE.
2. REFER TO SHEET A006 AND A005 FOR LINTEL SCHEDULES AND DOOR AND WINDOW JAMB STUD FRAMING SCHEDULE.
3. ALL INTERIOR DOORS TO BE 1 ¾" THICK *(UNO)*. EXTERIOR STOREFRONT DOORS SHALL BE 2" THICK, THERMALLY BROKEN. EXTERIOR HOLLOW METAL DOORS TO BE 1 ¾" THICK, INSULATED WITH THERMALLY BROKEN FRAMES
4. ALL STL FRAMES TO HAVE A 2" FACE DIMENSION UNO, W/ ½" STOP. ¾" STOP REQUIRED FOR FIRE RATED FRAMES.
5. STEEL FRAME DEPTHS INDICATED IN THE DETAILS ARE NOMINAL. PROVIDE STANDARD WIDTH FRAME WITH THROAT OPENING APPROPRIATE TO PARTITION TYPE.
6. COORDINATE WITH MECH DOCUMENTS FOR DOOR UNDERCUTS AND DOOR LOUVERS, IF ANY.
7. ALL LITES IN DOORS TO HAVE INSULATED LAMINATED GLAZING *(UNO)*.
8. FIELD VERIFY DIMENSIONS PRIOR TO FABRICATING FRAMES.
9. PROVIDE WD BLKG IN GYP BD WALLS BEHIND DOORS SCHEDULED TO HAVE WALL MOUNTED DOOR STOPS. *(REFER HARDWARE SCHEDULE SUBMITTAL)*.
10. REFER DTLS A1/A006 FOR TYP WINDOW AND DOOR CONTROL JOINTS IN MASONRY WALLS. REFER DTLS A2/A006 FOR TYP WINDOW AND DOOR CONTROL JOINTS IN STEEL STUD FRAMED WALLS.
11. FLOOR MATERIAL CHANGES BETWEEN ROOMS TO OCCUR UNDER DOOR.
12. PROVIDE WATER RESISTANT TREATED WOOD BLOCKING AT WINDOW SURROUND MEMBERS AS REQUIRED FOR PROPER ATTACHMENT WHERE ALUMINUM WINDOWS ARE TO BE INSTALLED.
13. AT ALL EXISTING STL FRAMES WHERE DOOR SWING IS TO BE CHANGED, PATCH, REPAIR AND GRIND SMOOTH EXISTING STL DOOR FRAME. PRIME AND USE ONLY IF FRAME IS TO BE RETAINED. PAINT ACCORDING TO FINISH SCHEDULE SHEET A801.
14. DOOR HARDWARE *(CLOSERS, LEVERS, PANIC HARDWARE, ETC.)* SHALL NOT CONFLICT WITH THE GLASS OR TRIM FOR THE LITE.

DOOR MARK KEY



DOOR SCHEDULE REMARKS:

1. PROVIDE REMOVABLE MULLION.
2. REFER TO ELECTRICAL DOCUMENTS FOR POWER FOR CARD KEY ACCESS. AT DOUBLE DOORS PROVIDE ELECTRIC STRIKE AT REMOVABLE MULLION.
3. PROVIDE DRIP AT HEAD OF DOOR
4. MANUAL OPERATED, TYPICAL.
5. MOTOR OPERATED, TYPICAL. REFER TO MEP DOC.
6. PREMANUFACTURED DOOR AND FRAME ASSEMBLY. PROVIDE PLAM FACING COLOR AS SCHEDULED ON SHEET A601. REFER TO ELECTRICAL DOCUMENTS FOR HOLD-OPEN DEVICES.
7. PROVIDE 2" WIDE ADA COMPLIANT MARBLE THRESHOLD WITH CHAMFERED EDGES AT ENTRY DOOR.
8. FIELD VERIFY ROUGH OPENING PRIOR TO DOOR FABRICATION.

DOOR SCHEDULE-BY NUMBER

NO.	ROOM NAME	ROOM NO.	DOOR WIDTH	DOOR HEIGHT	DOOR THICK	DOOR TYPE	DOOR MAT'L	DOOR FIN	DOOR GLAZ	FRAME Frame Type	FRAME MAT'L	FRAME FIN	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS SILL	FIRE LABEL	HDWR SET	DOOR COMMENTS
Level 1																		
P100A			6'-4"	7'-0"	1 3/4"	HL	STL	PNT		RE; FRAME ELEV	STL	PNT				45 MIN	C714MR	1,2,3
P100B			6'-4"	7'-0"	1 3/4"	HL	STL	PNT		RE; FRAME ELEV	STL	PNT				45 MIN	C714MR	1,2,3
P101	OUTDOOR STOR	P101	3'-0"	7'-2"	1 3/4"	F	STL	PNT		S1	STL	PNT				45 MIN	205IN	3
P102	OFFICE	P102	3'-0"	7'-2"	1 3/4"	FL	STL	PLAM		RE: ELEV	STL	PNT	C2/A502-PES	B1/A502-PES	A1/A502-PES		103	
P103	GYMNASIUM	P100	3'-0"	7'-2"	1 3/4"	F	STL	PLAM		S1	STL	PNT	C1/A502-PES	B1/A502-PES	A1/A502-PES		C201	2
P104	HALLWAY	P107	3'-0"	7'-2"	1 3/4"	F	STL	PLAM		S1	STL	PNT	C1/A502-PES	B1/A502-PES	A1/A502-PES		341	7
P105	HALLWAY	P107	3'-0"	7'-2"	1 3/4"	F	STL	PLAM		S1	STL	PNT	C1/A502-PES	B1/A502-PES	A1-A502-PES		341	7
P108			4'-0"	8'-0"			STL	CHAINLINK				CHAINLINK	A1/AS102-PES	A1/AS102-PES	A1/AS102-PES		J-2PL	GATE
P109	PE STOR	P103	3'-0"	7'-2"	1 3/4"	F	STL	PLAM		S1	STL	PNT	C1/A502-PES	B1/A502-PES	A1/A502-PES		C201	2
P113			26'-0"	8'-0"			STL	CHAINLINK				CHAINLINK	B1/AS102-PES	B1/AS102-PES	B1/AS102		J-2PL	GATE

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1 ADDENDUM #1			10.10.2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued	By	Appd	YYYY.MM.DD
File Name: N/A	Author	Designer	Checker 12/07/24
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT DANIELLE DUNN 28296 STATE OF TEXAS

Client/Project Logo

2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

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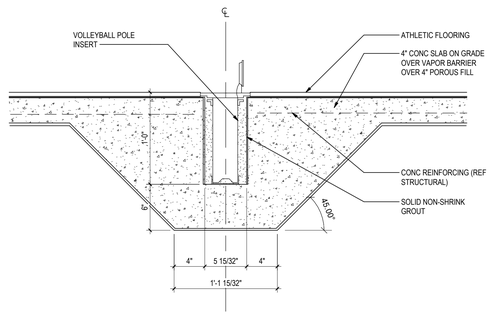
Title
DOOR SCHEDULE, INFO, AND FRAME TYPES

Project No. 214001246
Scale As indicated
Revision 1
Drawing No. **A501 - PES**

ePlot location in Project Information
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ORIGINAL SHEET - ARCH E1

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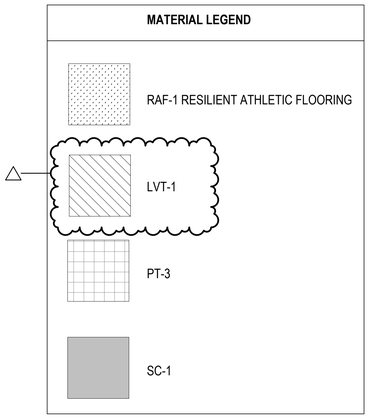


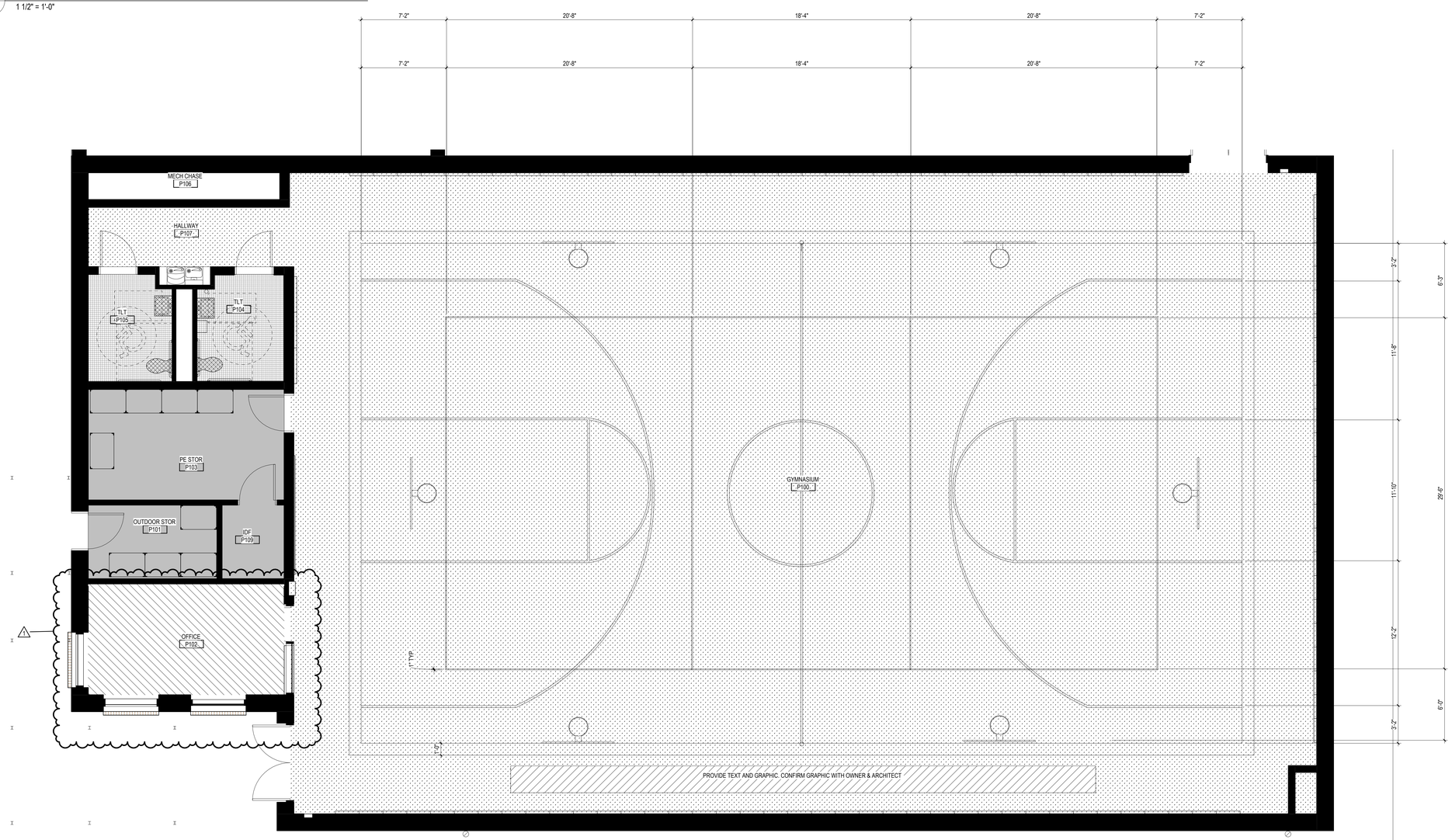
D1 VOLLEYBALL POLE INSERT

D1 / A901

1 1/2" = 1'-0"

PES





A1 GYM STRIPING FINISH PLAN

A1 / A901

1/4" = 1'-0"

PES

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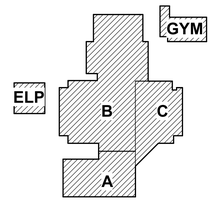
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KEY PLAN

PROJECT NORTH

1	ADDENDUM #1		Appd	10.10.2025
Revision		By		YYYY.MM.DD

100% ISSUE FOR BID AND PERMIT			Appd	2025.09.24
Issued		By		YYYY.MM.DD
File Name: N/A	Author	Designer	Checker	11/12/24
	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal



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2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project

FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

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Title

ENLARGED GYM FINISH PLAN

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	A901 - PES

<Fix location in Project Information>
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ORIGINAL SHEET - ARCH E1

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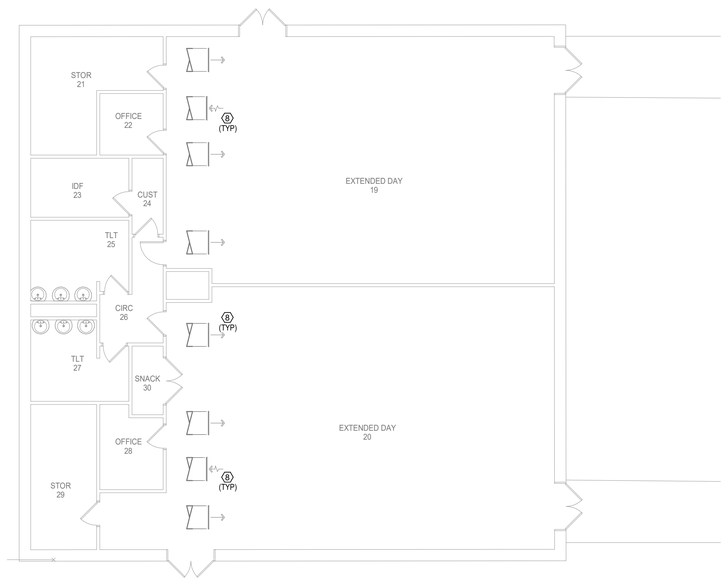
RENOVATIONS	
⊕	POINT OF CONNECTION FROM NEW TO EXISTING
▭	ITEM TO REMAIN
▭	ITEM TO BE REMOVED

GENERAL NOTES:

1. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CHILLERS, AIR HANDLING UNITS, FANS, CONDENSING UNITS, BMCS CONTROL PANELS, TEMPERATURE SENSORS, AND CONTROL VALVES.
2. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
3. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING DRAWINGS AND PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.

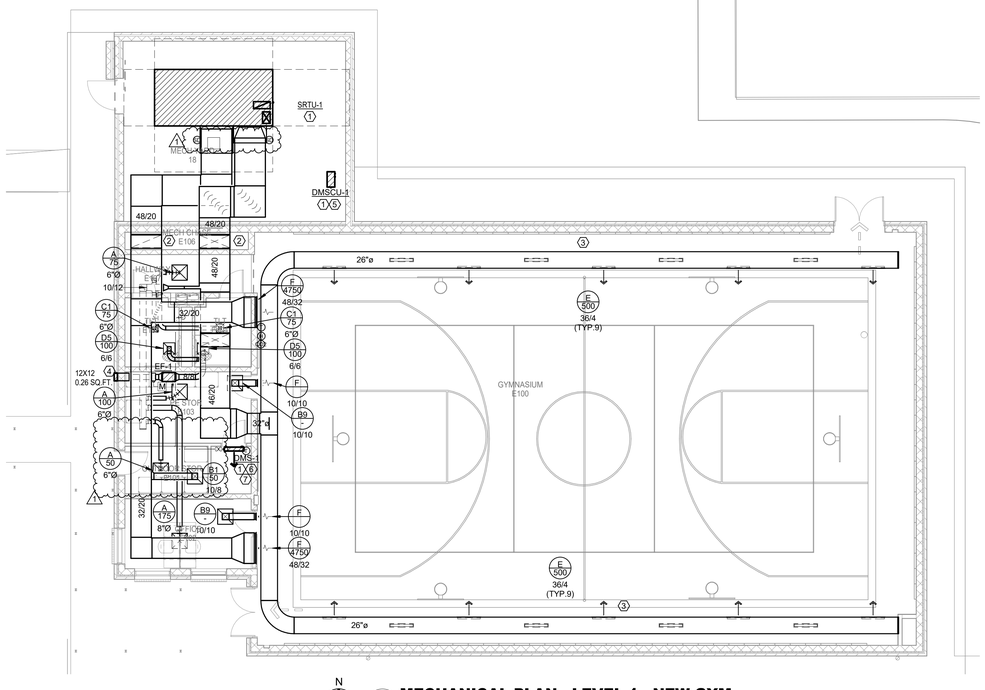
MECHANICAL KEYED NOTES:

1. VERIFY SERVICE CLEARANCE WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. ROUTE DUCTWORK WITHIN CHASE AND UP TO PLENUM SPACE AS INDICATED.
3. SPIRAL INSULATED DOUBLE WALL DUCTWORK PAINTED BY ARCHITECT. DUCTWORK SHALL BE TIGHTS TO STRUCTURE.
4. PROVIDE RUSKIN MODEL HZ700 WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER OR APPROVED EQUAL WITH MINIMUM FREE AREA INDICATED. PROVIDE WITH BIRD SCREEN AND PAINT TO MATCH WALL OR AS SPECIFIED BY ARCHITECT.
5. PROVIDE 4" THICK CONCRETE HOUSEKEEPING PAD.
6. ROUTE FULL SIZE CONDENSATE DRAIN PIPE TO LAVATORY WYE TAILPIECE LOCATED IN TLT E105. REFER TO PLUMBING DRAWINGS FOR MORE INFORMATION.
7. ROUTE REFRIGERANT PIPING TO ASSOCIATED OUTDOOR UNIT. REFRIGERANT PIPE ELEVATION INSIDE THE BUILDING SHALL NOT BE LESS THAN 7'3" AFF.
8. EXISTING SUPPLY AND RETURN AIR GRILLES TO REMAIN.



N

2 MECHANICAL PLAN - LEVEL 1 - EXTENDED DAY LEARNING
Scale: 1/8" = 1'-0"



N

1 MECHANICAL PLAN - LEVEL 1 - NEW GYM
Scale: 1/8" = 1'-0"

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Notes

1 Addendum 01			10/10/2025
Revision	By	Appd	YYYY.MM.DD
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File Name: N/A	IP	IP	VP 11/27/24
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BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-10-2025

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INDEPENDENT SCHOOL DISTRICT

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FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
MECHANICAL FLOOR PLANS

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	M201-PES

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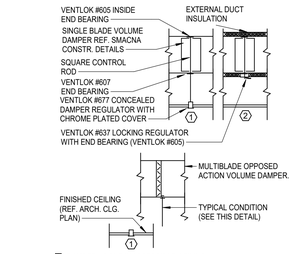
ORIGINAL SHEET - ARCH E1

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SYMBOL LEGEND

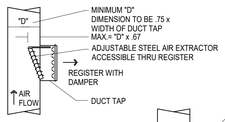
SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
GENERAL	
(#)	KEY NOTE TAG
(A)	REVISION TAG
	NEW EQUIPMENT
DUCTWORK	
	SUPPLY AIR DUCTWORK
	RETURN AIR AND OUTSIDE AIR DUCTWORK
	EXHAUST AIR DUCTWORK
	FLEXIBLE DUCTWORK
	SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	RETURN AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	FIRE DAMPER (VERTICAL)
	FIRE DAMPER (HORIZONTAL)
(SD)	SMOKE DAMPER (VERTICAL)
(SD)	SMOKE DAMPER (HORIZONTAL)
(FSD)	COMBINATION FIRE & SMOKE DAMPER (VERTICAL)
(FS)	COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL)
	MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE)
(M)	MOTORIZED DAMPER (SEE DAMPER SCHEDULE)
SENSORS	
(T)	THERMOSTAT AND TEMPERATURE SENSOR
(H)	HUMIDISTAT
(SDI)	SMOKE DETECTOR
(HD)	HEAT DETECTOR
AIR DEVICES	
	GRILLE SIZE TAG (REFER TO GRILLE SIZE LEGEND)
	SUPPLY AIR GRILLE WITH FOUR-WAY THROW
	SUPPLY AIR GRILLE WITH THREE-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY CORNER THROW
	SUPPLY AIR GRILLE WITH ONE-WAY THROW
	RETURN AIR GRILLE
	RETURN AIR GRILLE WITH SOUND BOOT
	EXHAUST AIR GRILLE
	SUPPLY AIR SIDEWALL GRILLE
	RETURN AIR SIDEWALL GRILLE
20X12	RETURN AIR OPENING ABOVE CEILING
PIPING	
–CWS&R–	CONDENSER WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–CWS–	CONDENSER WATER SUPPLY
–CWR–	CONDENSER WATER RETURN
–CHWS&R–	CHILLED WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–CHWS–	CHILLED WATER SUPPLY
–CHWR–	CHILLED WATER RETURN
–HWS&R–	HOT WATER FOR HYDRONIC HEATING SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–HWS–	HOT WATER FOR HYDRONIC HEATING SUPPLY
–HWR–	HOT WATER FOR HYDRONIC HEATING RETURN
—D—	CONDENSATE DRAIN LINE
—AD—	AUXILIARY CONDENSATE DRAIN LINE
—RLR—	REFRIGERANT LIQUID & GAS RECIRCULATION LINE (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—RL—	REFRIGERANT LIQUID LINE
—HG—	REFRIGERANT HOT GAS LINE
—RS—	REFRIGERANT SUCTION LINE
—O	ELBOW UP
—D	ELBOW DOWN
	90° ELBOW
	45° ELBOW
	TEE
	TEE DOWN
	TEE UP
	TOP BRANCH CONNECTION
	BOTTOM BRANCH CONNECTION
	FLANGE
	CAP
	CONTINUATION
	FLOOR DRAIN (REFER TO PLUMBING DRAWINGS)
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	BUTTERFLY VALVE WITH OPERATOR
	PLUG VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	BALL VALVE
	STRAINER
	UNION
	THERMOMETER WELL
	PETE'S PLUG
	PRESSURE GAUGE
	TEMPERATURE SENSOR IN PIPE
	VENTURI FLOW METER
	FLOW SWITCH
(FM)	FLOW MEASURING STATION
	EXPANSION JOINT
	FLEXIBLE CONNECTION
G.C.	GAUGE COCK
	SITE GLASS
	DIFFERENTIAL PRESSURE SENSOR
	TURBINE FLOW METER
	ANCHOR
	PIPE GUIDE
SUBSCRIPTS AND ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
BBS	BELOW BOTTOM OF STRUCTURE
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CA	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
EA	EXHAUST AIR
FPM	FEET PER MINUTE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
RA	RETURN AIR
SA	SUPPLY AIR

DUCTWORK CONSTRUCTION DETAILS



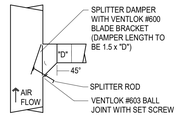
1 **DAMPER ABOVE INACCESSIBLE CEILING**

2 **DAMPER ABOVE LIFT-OUT CEILING**

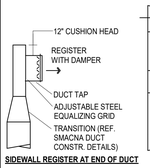


NOTES:
1. MAX. WIDTH OF DUCT TAP SHALL BE 48". PROVIDE BOTTOM BRACKET FOR SUPPORT WHERE EXTRACTOR EXCEEDS 16".
2. MAX. HEIGHT OF DUCT TAP SHALL BE 12". (MIN.= 4")

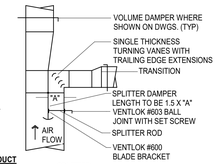
EXTRACTOR SIDEWALL REGISTER



DUCT TAP

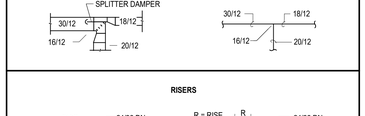


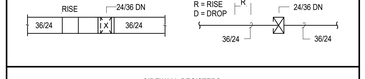
SIDEWALL REGISTER AT END OF DUCT

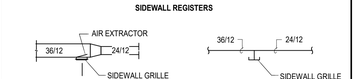


SPLITTER

DUCTWORK SYMBOLS LEGEND



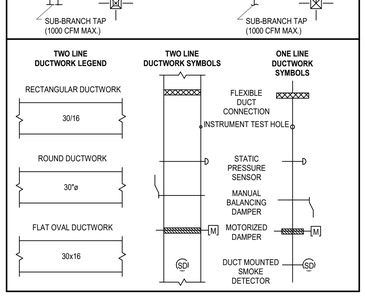




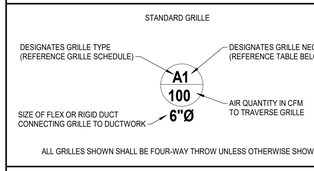




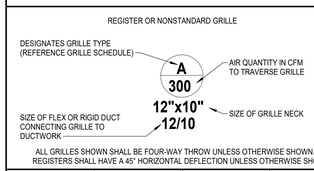




GRILLE SIZING SCHEDULE



ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN.



ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN. ALL REGISTERS SHALL HAVE A 45° HORIZONTAL DEFLECTION UNLESS OTHERWISE SHOWN.

GRILLE SIZE DESIGNATION	GRILLE NECK SIZE	GRILLE SIZE DESIGNATION	GRILLE NECK SIZE
1	6" x 6"	7	15" x 15"
2	8" x 8"	8	16" x 16"
3	9" x 9"	9	18" x 18"
4	10" x 10"	10	20" x 20"
5	12" x 12"	11	22" x 22"
6	14" x 14"	12	24" x 24"

DUCTLESS MINI-SPLIT - INDOOR UNIT

MARK	SUPPLY AIR CFM	WATTS	CURRENT CHARAC. V	P	F	AIR TEMPERATURE (°F) ENTERING DRY BULB	ENTERING WET BULB	COOLING MIN. TOTAL CAPACITY (BTUH)	MIN. SENS. CAPACITY (BTUH)	MINIMUM EER/ SEER	REMARKS
DMS-1	370	40.0	208	1	60	75.0	62.5	17,105	11,628	-/15.0	(1,2,3,4,5,6)

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. DUCTLESS WALL MOUNTED UNIT.
2. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. CONTROLLED BY PROGRAMMABLE WIRED THERMOSTAT.
4. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
5. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.
6. PROVIDE ASPEN MINI AQUA PUMP TO BE INSTALLED INSIDE UNIT.

DUCTLESS MINI-SPLIT - OUTDOOR UNIT

MARK	MIN. TOTAL CAPACITY (BTUH)	OUTDOOR AIR TEMP (°F)	MINIMUM EER/ SEER	CURRENT CHARAC. V	PH	F	RELATED UNIT MARK	REMARKS
DMSCU-1	17,100	95	-/15.0	208	1	60	DMS-1	(1,2,3)

GENERAL NOTES:
1. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITHLOW AMBIENT CONTROL DOWN TO 20°F.
2. PROVIDE WITH DISCONNECT SWITCH.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.

SPECIALIZED PACKAGED ROOFTOP UNIT - ELECTRIC HEAT

MARK	FAN SUPPLY AIR CFM	FAN OUTSIDE AIR CFM	FAN EXT.STATIC PRESSURE (IN. W.C.)	FAN HORSE POWER	FAN CURRENT CHARAC. V	P	F	COOLING AIR TEMPERATURE (°F) ENTERING DRY BULB	ENTERING WET BULB	COOLING AMBIENT TEMP	COOLING MIN. TOTAL CAPACITY (BTUH)	COOLING MIN. SENS. CAPACITY (BTUH)	COOLING MINIMUM EER/ IEER	ELECTRIC HEATING ENTERING AIR TEMP.(°F)	ELECTRIC HEATING MINIMUM CAPACITY (BTUH)	ELECTRIC HEATING KW	ELECTRIC HEATING NUMBER OF STAGES	REMARKS
SRTU-1	9,550	2,000	1.15	10.0	480	3	60	79.9	66.6	98.0	335,100	251,200	10.0/13.2	61.8	245,664	72	SCR	(1,2,3,4,5,6,7,8,9,10)

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE SRTU FOR GROUND MOUNT WITH SIDE DISCHARGE AND DISCONNECT SWITCH.
2. PROVIDE UNIT WITH FACTORY MOUNTED GFCI RECEPTACLE FOR UNIT WITH LOW AMBIENT CONTROL. ELECTRICIAN TO WIRE TO SEPARATE CIRCUIT.
3. PROVIDE FACTORY MOUNTED DDC CONTROLLER.
4. PROVIDE DIGITAL COMPRESSOR AND PREMIUM EFFICIENT MOTORS.
5. PROVIDE METAL MESH OUTSIDE AIR PRE FILTER WITH 2" PLEATED AND 4" FINAL FILTERS.
6. PROVIDE FAN CYCLING AND ADJUSTABLE COMPRESSOR LOCKOUT FOR LOW AMBIENT OPERATION.
7. PROVIDE MODULATING HOT GAS REHEAT.
8. PROVIDE A WATER LEVEL SENSING DEVICE IN THE PRIMARY DRAIN PAN. THIS DEVICE SHALL SHUT OFF THE APPLIANCE IN THE EVENT THE PRIMARY DRAIN LINE BECOMES RESTRICTED.
9. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRICAL COSTS IF ALTERNATE UNIT IS PROVIDED WITH GREATER ELECTRICAL CHARACTERISTICS THAN SHOWN.
10. SRTU SHALL PROVIDE A MINIMUM OF 850 CFM OF OUTSIDE AIR TO SPACE.

FAN SCHEDULE

TAG	LOCATION	CFM	EXT. STATIC PRESSURE (IN.W.C.)	MAX RPM	HORSE POWER	CURRENT CHAR V	P	F	LOCALLY SWITCHED	INTERLOCK WITH	FAN TYPE	DRIVE TYPE	MANUFACTURER	MODEL NUMBER	REMARKS
EF-1	-	200	0.55	1800	0.5	120	1	60	-	SRTU-1	INLINE	BELT	COOK	SQN	(1,2,3)

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MINIMUM RECOMMENDED CLEARANCE AROUND UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH DISCONNECT.
2. PROVIDE WITH MOTORIZED DAMPER.
3. SUSPEND UNIT WITH FOUR THREADED HANGER RODS ATTACHED TO UNISTRUT RUNNERS SECURED TO STRUCTURE. PROVIDE SPRING ISOLATION. REFER TO MANUFACTURER FOR MORE DETAILS.

GRILLE

MARK	SERVICE	TYPE	DAMPER	CONSTRUCTION MATERIAL	FINISH COLOR	MANUFACTURER	MODEL NUMBER	DESCRIPTION
A	SUPPLY AIR	DIFFUSER	-	STEEL	WHITE	TITUS	OMNI	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" OR 12"X12" FACE.
B	RETURN AIR	DIFFUSER	-	STEEL	WHITE	TITUS	PAR	SURFACE MOUNT CEILING FRAME STYLE WITH 24"X24".
C	SUPPLY AIR	DIFFUSER	-	STEEL	WHITE	TITUS	OMNI	SURFACE MOUNT CEILING FRAME STYLE WITH 18"X18" OR 12"X12" FACE.
D	EXHAUST AIR	DIFFUSER	-	STEEL	WHITE	TITUS	50F	SURFACE MOUNT CEILING FRAME STYLE WITH 18"X18" OR 12"X12" FACE. PERFERATED FACE.
E	GRILLE	SUPPLY AIR	-	STEEL	WHITE	TITUS	300RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1)
F	GRILLE	SUPPLY AIR	-	STEEL	WHITE	TITUS	350RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1)

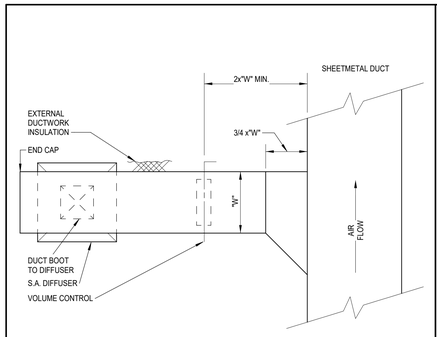
GENERAL NOTES:
1. DAMPERS NOTED AS U.L. SHALLBE A 'U.L.' CLASSIFIED CEILING RADIATION DAMPER WITH THERMAL BLANKET.
2. COORDINATE FINAL AIR DEVICE LOCATION AND FINISH COLOR WITH ARCHITECT.

REMARKS:
1. N/A

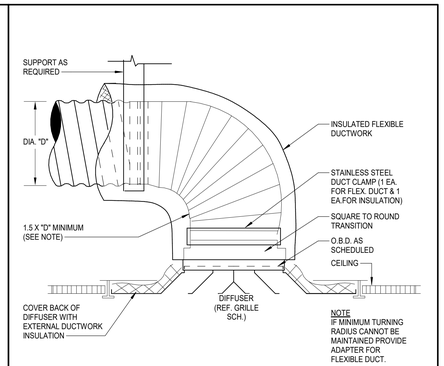
DAMPER

MARK	ACTUATOR	DUTY	BLADE ACTION	MANUFACTURER	MODEL NUMBER	REMARKS
D-1	MANUAL BALANCING	UNDER 9" WIDE	N/A	N/A	N/A	SEE SMACNA CONSTRUCTION DETAILS REFERENCED "TYPICAL CONSTRUCTION DETAILS FOR LOW VELOCITY DUCTS."
D-2	MANUAL BALANCING	OVER 9" WIDE	OPPOSED	RUSKIN	MD-35	MANUAL DAMPER WITH STANDARD CONSTRUCTION FEATURES AND VENTLOCK #639 LOCKING REGULATOR.
D-3	MOTORIZED	OVER 9" WIDE	OPPOSED	RUSKIN	CD-60	LOW LEAKAGE DAMPER WITH BLADE SEALS

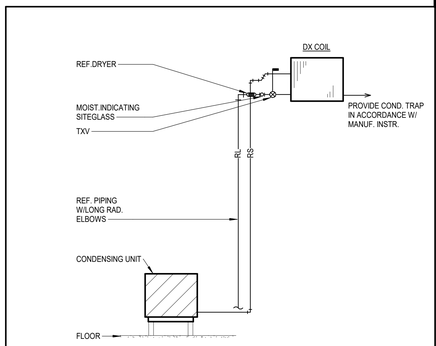
NOTES:
N/A - NOT APPLICABLE



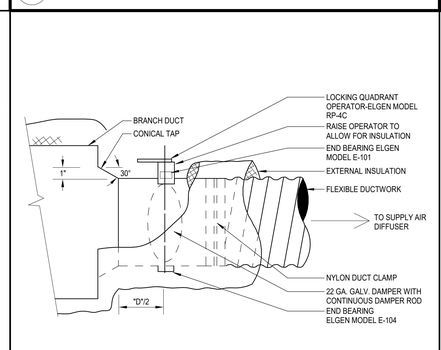
RIGID DUCT TAP TO SINGLE SUPPLY AIR DIFFUSER
4 SCALE: NONE



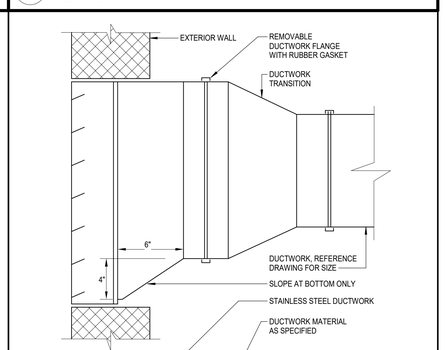
FLEX DUCT CONNECTION AT SUPPLY AIR DIFFUSER
2 SCALE: NONE



REFRIGERANT PIPING DIAGRAM
5 SCALE: NONE



FLEXIBLE DUCT TAP - CONICAL
3 SCALE: NONE



DUCTWORK AT LOUVER
1 SCALE: NONE

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Notes

1 Addendum 01			10/10/2025
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FBISD BP022 GYM RENOVATIONS AND ADDITIONS
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
MECHANICAL SCHEDULES

Project No.	Scale
214001246	12" = 1'-0"
Revision	Drawing No.
1	M301-PES

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

ELECTRICAL KEYED NOTES

KEYED NOTE	Description
1	COORDINATE LOCATION OF WALL PENETRATION WITH ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
2	SUGGESTED ROUTING OF NEW FEEDERS ABOVE INTERIOR CEILING THROUGH EXISTING BUILDING TO NEW PANELS. REFER TO ELECTRICAL RISER DIAGRAM FOR NEW PANEL AND FEEDER INFORMATION.
3	BY ALTERNATE - ROUTE NEW EMERGENCY FEEDER TO GYM ADDITIONS. ROUTE FEEDER THROUGH INTERIOR BUILDING ABOVE CEILING TO EXTERIOR WALL. COORDINATE WALL PENETRATION LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. REFER TO ALTERNATE ONE-LINE DIAGRAM FOR MORE INFORMATION.
4	EXISTING PANEL TO BE REPLACED. EXISTING BRANCH CIRCUITS TO BE RE-FED FROM NEW PANEL.
5	PROVIDE AND ROUTE (2)2"C. FROM NEW J-BOX TO BE PROVIDED ABOVE ACCESSIBLE CEILING IN EXISTING BUILDING, ROUTE UNDERGROUND, TO NEW F/A LOCATION FOR EXPANSION OF EXISTING F/A SYSTEM.

NEW MECH. YARD

PES - NEW GYM ADDITION

PES -EXISTING
ELP BUILDING RENOVATIONS

(E)GENERATOR

UTIL

TXEL
EL EH

AC
SWBD
M

N

1 **ELECTRICAL COMPOSITE PLAN**
Scale: 1/16" = 1'-0"

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Project No: 2023-04376-00

Notes

1 Addendum 01			10/10/2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued	By	Appd	YYYY.MM.DD
File Name: N/A	KJ	KJ	JZ 11/27/24
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
10-10-2025

Client/Project Logo

2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
ELECTRICAL COMPOSITE PLAN

Project No.	Scale
214001246	1/16" = 1'-0"
Revision	Drawing No.
1	E100-PES

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ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

ELECTRICAL KEYED NOTES

KEYED NOTE	Description
1	MOUNT AT +54" AFF. FOR BMCS CONNECTION.
2	MOUNT AT +54" AFF. FOR FIA CONNECTION.
3	POWER FOR MOTORIZED DAMPERS. COORDINATE WITH DIVISION 23 FOR FINAL QUANTITY AND LOCATION. PROVIDE FINAL CONNECTION TO EACH FIRE/SMOKE DAMPER WITH 2#12, 1#12G, 3/4"C.
4	ROUTE 4"C TO ASSOCIATED OUTDOOR UNIT. ROUTE PARALLEL WITH REFRIGERATION LINES.
5	RECEPTACLE TO BE MOUNTED HORIZONTALLY BELOW GYM WALL PADDING AT 12" A.F.F. COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN.

ELECTRICAL GENERAL NOTES

1. CONNECT NEW LIGHT FIXTURES AND/OR EXIT SIGNS TO EXISTING CIRCUITS LEFT IN PLACE AFTER DEMOLITION OR NEW AS SHOWN. PROVIDE EMERGENCY CIRCUIT FOR HATCHED FIXTURE AND/OR EXIT SIGNS. EXTEND WIRING WITH MATCHING CONDUCTORS/CONDUIT TO EXISTING LOCATION AND/OR NEW FIXTURES. FIELD VERIFY CONNECTED LOAD NOT TO EXCEED 3500 W @ 277V. TYPICAL.

2. LOCATION OF NEW LIGHT FIXTURES SHALL REUSE EXISTING J-BOX AND EXISTING LIGHT FIXTURE WHIPS AS PRACTICAL. EXTEND WIRING WITH MATCHING CONDUCTORS/CONDUIT AND PROVIDE NEW J-BOX ABOVE ACCESIBLE CEILING WITH ½-INCH FLEXIBLE STEEL CONDUIT OR STEEL MC CABLE. LENGTH NOT TO EXCEED 6-FEET, "DAISY CHAINING" LIGHT FIXTURES INSTALLED FOR LAY-IN CEILING AREAS IS NOT ALLOWED. FOR NON-ACCESIBLE CEILINGS, LIGHT FIXTURE WHIPS SHALL BE ½-INCH FLEXIBLE STEEL CONDUIT, LENGTH AS REQUIRED TO MAKE A TAP AT AN ACCESSIBLE J-BOX. RECESSED LIGHT FIXTURES IN NON-ACCESSIBLE CEILINGS MAY BE DAISY CHAINED USING THE LIGHT FIXTURE'S INTEGRAL, UL LISTED J-BOX OR INTERNAL WIRE WAY THAT IS ACCESSIBLE THROUGH FIXTURE FROM BELOW THE CEILING. REFER TO 26 05 33 CONDUIT SYSTEMS.

3. PROVIDE NEW LIGHTING CONTROLS, SENSORS AND ASSOCIATED DEVICES, AND 20A EMERGENCY LOAD CONTROL RELAYS/TRANSFER DEVICES. REFER TO 26 09 24 LIGHTING CONTROLS.

4. OCCUPANCY/VACANCY SENSOR AND DAYLIGHTING SENSOR LOCATIONS INDICATE SPACE OR AREA CONTROLLED, CONTRACTOR TO PROVIDE ACTUAL QUANTITIES, TYPES, AND MOUNTING LOCATIONS AS RECOMMENDED BY MANUFACTURER AND IECC-2015 C405.

5. SPACES WITH MULTIPLE OCCUPANCY/VACANCY SENSORS OR WHERE LINE OF SIGHT MAY BE OBSCURED, SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.

6. CONTRACTOR SHALL MAINTAIN CONSTANT UNSWITCHED CIRCUITS FROM EXISTING SOURCE AND/OR NEW AS SHOWN FOR EMERGENCY FIXTURES, EMERGENCY LOAD RELAYS, TRANSFER SWITCHES AND EXIT SIGNS.

7. COORDINATE LOCATION OF LIGHT FIXTURES IN ALL MECHANICAL AND ELECTRICAL ROOMS WITH MECHANICAL EQUIPMENT, PIPING, AND ALL OTHER TRADES.

8. REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.

LINETYPE LEGEND

———	EXISTING TO REMAIN
- - - -	DISCONNECT AND REMOVE
———	NEW WORK

IN NON-ACCESSIBLE AND/OR HIGH CEILING AREAS, LOCATE DIGITAL LIGHTING CONTROLLER AND/OR EMERGENCY LOAD CONTROL RELAY/TRANSFER SWITCH IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING. IN AREAS WITH NO CEILING AND/OR IN EXTERIOR APPLICATIONS LOCATE ADJACENT TO NORMAL POWER PANEL SERVING THE LOAD. PROVIDE LABEL WITH WORDING PER SPECIFICATIONS.

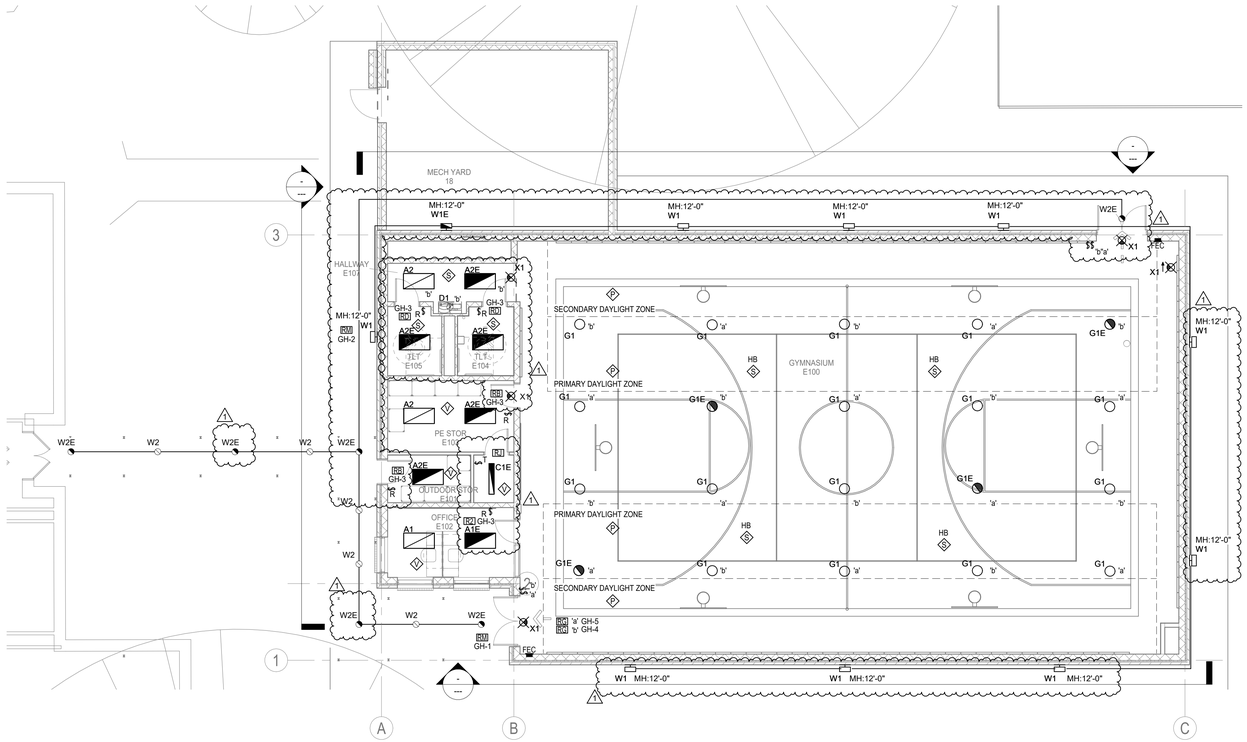
FIRE ALARM SYSTEM SHALL COMPLY WITH ALL CITY OF HOUSTON IBC AMENDMENTS. SMOKE DETECTORS SHALL BE PROVIDED IN ALL APPLICABLE ROOMS LISTED IN SECTION 907.2.3.1 OF THE 2021 IBC CITY OF HOUSTON AMENDMENTS.

DEMOLITION / EXISTING DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION, AND WHEN AVAILABLE, EXISTING RECORD DOCUMENTS. REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION, AND IMMEDIATELY AFTER SUCH DISCREPANCIES ARE DISCOVERED. CONTRACTOR TO VERIFY EXISTING CONDITIONS ON FIELD AND NOTIFY ENGINEER IF THERE ARE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL REMOVE SUCH EXISTING WORK AS CALLED FOR ON THE DRAWINGS OR AS REQUIRED TO CLEAR THE AREAS OF NEW CONSTRUCTION.

PROVIDE NEW LIGHTING DEVICES AND SWITCH BOX EXTENSIONS IN ALL AREAS WHERE GYPSUM BOARD OR OTHER WALL COVERING ADDS TO THE THICKNESS OF WALLS. SEE ARCHITECTURAL DRAWINGS FOR AREAS AFFECTED.

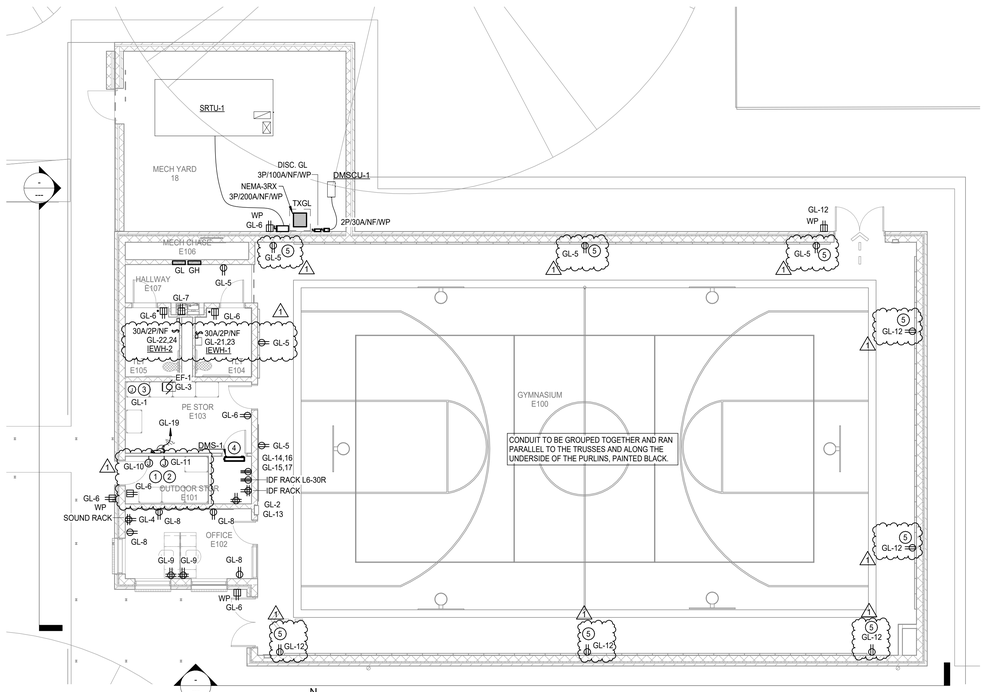
EXISTING RACEWAYS AND LOCATION OF ELECTRICAL OUTLETS ON EXISTING WALLS TO REMAIN SHALL BE RE-USED AS PRACTICAL FOR NEW DEVICES AS PART OF NEW WORK.

IECC-2021, C405.11 AUTOMATIC RECEPTACLE CONTROL. AT LEAST 50 PERCENT OF ALL 125V, 15-AMP AND 20-AMP RECEPTACLES INSTALLED IN ENCLOSED OFFICES, CONFERENCE ROOMS, ROOMS USED PRIMARILY FOR COPY OR PRINT FUNCTIONS, BREAKROOMS, CLASSROOMS AND INDIVIDUAL WORKSTATIONS, INCLUDING THOSE INSTALLED IN MODULAR PARTITIONS AND MODULE OFFICE WORKSTATION SYSTEMS SHALL HAVE AUTOMATIC RECEPTACLE CONTROL, AN OCCUPANT SENSOR SHALL TURN OFF INDICATED RECEPTACLES WITHIN 20 MINUTES AFTER DETERMINING THAT THE AREA IS UNOCCUPIED.



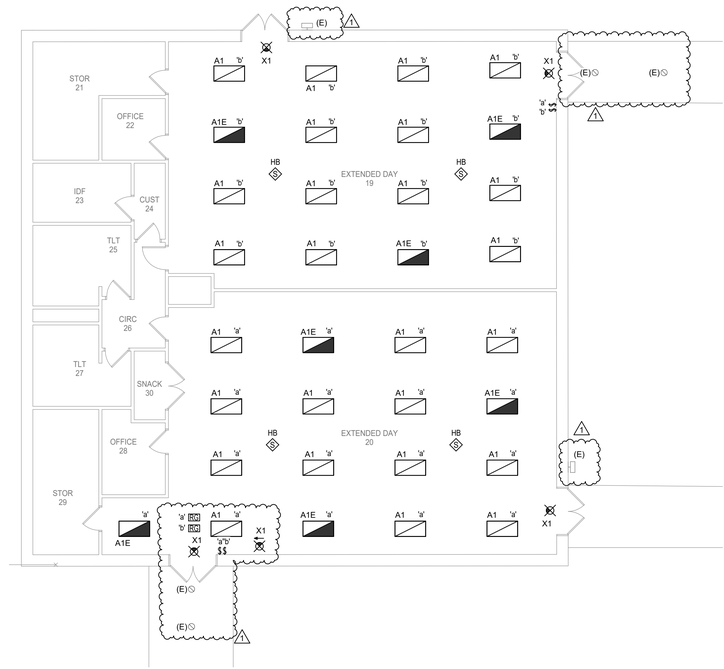
1 ELECTRICAL LIGHTING PLAN - LEVEL 1 - NEW GYM

Scale: 1/8" = 1'-0"



2 ELECTRICAL POWER PLAN - LEVEL 1 - NEW GYM

Scale: 1/8" = 1'-0"



3 ELECTRICAL LIGHTING PLAN - LEVEL 1 - EXTENDED DAY LEARNING

Scale: 1/8" = 1'-0"

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Registration: F-4111
Project No: 2023-04376-00

Notes

Revision	By	Appd	
1 Addendum 01			10/10/2025 YYYY.MM.DD
Issued	By	Appd	2025.09.24 YYYY.MM.DD
File Name: N/A	KJ Dwn.	KJ Dsgn.	JZ 03/20/25 Chkd. YYYY.MM.DD

Permit/Seal

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80219
LICENSED
PROFESSIONAL ENGINEER
10-10-2025

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INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
ELECTRICAL FLOOR PLANS

Project No.	Scale
214001246	1/8" = 1'-0"
Revision	Drawing No.
1	E201-PES

10/7/2025 2:25:08 PM
ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

GENERATOR LOAD ANALYSIS
EXIST. PANEL EH

277/480, 3PH, 4W
40kVA/32kW - 60A

LOAD DESCRIPTION	LOAD KVA
EXISTING LOAD	1.9
CALCULATED EXISTING LOAD (125%)	2.38
NEW LOAD:	
RECEPTACLES (CONNECTED NEC 220.44)	10.6
1ST 10KVA @100% (NEC 220.44)	10
REMAINDER @50% (NEC 220.44)	0.3
HVAC - FANS, AHU'S (NEC 220)	--
LIGHTING	1.3
LIGHTING @ 125%	1.6
TOTAL KVA	14.3
TOTAL AMPS	17.2

TWO-HOUR FIRE RATED CABLE:

1. TWO-HOUR FIRE RATED POWER CABLE SHALL BE APPROVED BY THE LOCAL AHJ AND INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS IN COMPLIANCE WITH UL FIRE RESISTANCE DIRECTORY, ELECTRICAL CIRCUIT PROTECTIVE SYSTEMS (FHIT), AND SYSTEM 27.

2. TWO-HOUR FIRE RATED POWER CABLE SHALL BE INSTALLED AS APPROVED BY THE LOCAL AHJ IN STEEL EMT OR STEEL RIGID CONDUIT WITH STEEL SET SCREW OR THREADED FITTINGS. UL LISTED FLEXIBLE METALLIC STEEL CONDUIT MAY BE USED IN LENGTHS NOT TO EXCEED 6-FEET. SUPPORT CONDUIT EVERY 5-FEET ON CONCRETE OR MASONRY WALLS OR A CONCRETE FLOOR-CEILING ASSEMBLY. THE FIRE RATING OF THE WALL OR FLOOR-CEILING ASSEMBLY MUST BE EQUAL TO OR GREATER THAN THE RATING OF THE ELECTRICAL CIRCUIT PROTECTIVE SYSTEM. PROVIDE J-BOX AT EACH END OF THE FIRE RATED CABLES IN THE FIRE RATED ROOM TO ALLOW SPLICE TO STANDARD BUILDING CABLE TO THE EQUIPMENT. PROVIDE SEALANT TO THE END OF THE RACEWAY TO PREVENT GASES FROM MIGRATING FROM THE FIRE RATED CABLE DOWN INTO THE EQUIPMENT.

INSULATION FOR TWO-HOUR FIRE RATED POWER CABLE:

1. INSULATION SHALL MEET OR EXCEED THE REQUIREMENTS OF UL 2196 FIRE TEST FOR CIRCUIT INTEGRITY OF FIRE-RESISTIVE POWER, INSTRUMENTATION, CONTROL AND DATA CABLES, AND UL 44, THERMOSET INSULATED WIRES AND CABLES.

   a. INSULATION FOR CONDUCTORS SHALL BE UL TYPE RHW-2 OR RW90. 90 DEGREES C FOR WET LOCATIONS AND 90 DEGREES C FOR DRY LOCATIONS.
   b. ELECTRICAL CIRCUIT PROTECTIVE SYSTEMS (FHIT) – SYSTEM 27 OF THE UL FIRE RESISTANCE DIRECTORY.

FEEDER SCHEDULE

AMPERAGE	# SETS	CONDUCTOR (QTY.)/SIZE	GROUND (QTY.)/SIZE	CONDUIT
100A	1	(4) #3	#8	1-1/2"C

TRANSFORMER SCHEDULE

PRIMARY (480V 3PH 3W +GND)			SECONDARY (120/208V 3PH 4W +GND)		
KVA	WIRE & CONDUIT	CIRCUIT BREAKER	WIRE & CONDUIT	CIRCUIT BREAKER	GROUNDING ELECTRODE CONDUCTOR
30KVA	3#6, 1-1/4"C, 1#10G	3P-50A	4#2, 1-1/2"C, 1#6G	3P-100A	#6

LIGHTING CONTROLS SCHEDULE - ALTERNATE

Type	Sensor Operation	# of Lighting Zones	# of Plug Load Zones	# of Total Zones	Description
ER	-	-	-	-	UL924 LOAD CONTROL RELAY, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM
ES	-	-	-	-	UL1008 GENERATOR TRANSFER DEVICE, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM

LIGHTING FIXTURE SCHEDULE - ALTERNATE

Type Mark	CATALOG NUMBER MANUFACTURER	CATALOG NUMBER MODEL	MOUNTING	LAMP TYPE	CCT	CRI	VOLTAGE	LOAD	REMARKS
A1	METALUX	24CGT5540C	T-GRID/GYP	5500L LED	4000 K	80	277 V	50 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED.
A2	METALUX	24CGT4540C	T-GRID/GYP	4500L LED	4000 K	80	277 V	40 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED.
C1	METALUX	4SNLED-LD5-LN-41SL-LN-UNV-L840-CD1-U	SUSPENDED/SURFACE	4100L LED	4000 K	80	277 V	35 W	1x4 SUSPENDED/SURFACE STRIP.
G1	METALUX	SSLED-LD5-12-M-UNV-L840	SUSPENDED/SURFACE	12000L LED	4000 K	80	277 V	100 W	ROUND HIGH BAY FIXTURE .
W1	GARDCO	GWM-A09-840-T3M-UNV	WALL	6000L LED	4000 K	80	277 V	40 W	LED ARCHITECTURAL WALLPAK, ALUMINUM HOUSING. COORDINATE FINISH WITH EXISTING EXTERIOR FIXTURES. DLC CERTIFIED.
XG	SURE-LITES	LPX6-W-WG10	UNIVERSAL	LED	4000 K	0	277 V	5 W	UNIVERSAL LED EXIT SIGN WITH WHITE HOUSING, RED LETTERING. PROVIDE WIRE GUARD.

Branch Panel: GHE — NEW PANEL

Location: OUTDOOR STOR E101 — **Volts:** 277/480 Wye
Supply From: — **Phases:** 3
Mounting: Surface — **Wires:** 4
Phase in kVA

A.I.C. Rating: 18,000 **Enclosure:** Type 1 **Mains:** 60A MCB LSI

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker	Wire		Circuit Description	CKT	Note
	1	Lighting	#12	20	1	0.0 / 0.2			1	20	#12	Lighting	2	
	3	Lighting Room E103, E101, E102, E107	#12	20	1		0.7 / 0.0		1	--	--	SPACE	4	
	5	SPACE	--	--	1			0.0 / 0.0	1	--	--	SPACE	6	
	7	SPACE	--	--	1	0.0 / 0.0			1	--	--	SPACE	8	
	9	SPACE	--	--	1		0.0 / 0.0		1	--	--	SPACE	10	
	11	SPACE	--	--	1			0.0 / 0.0	1	--	--	SPACE	12	
	13					5.1 / 0.0							14	
	15	TGLE	ONE LINE	50	3		3.3 / 0.0		3	30	--	SPDL	16	
	17							2.8 / 0.0					18	
			Total Load:			5.3 kVA	4.0 kVA	2.8 kVA						
			Total Amps:			20 A	15 A	10 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	0.9 kVA	125.00%	1.1 kVA		
Motor	0.5 kVA	100.00%	0.5 kVA	**Total Conn. Load:**	12.0 kVA
Receptacles	10.6 kVA	97.26%	10.3 kVA	**Total Est. Demand:**	11.9 kVA
				Total Conn. Current:	14 A
				Total Est. Demand Current:	14 A

Notes:

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: GLE — NEW PANEL

Location: OUTDOOR STOR E101 — **Volts:** 120/208 Wye
Supply From: TGLE — **Phases:** 3
Mounting: Surface — **Wires:** 4
Phase in kVA

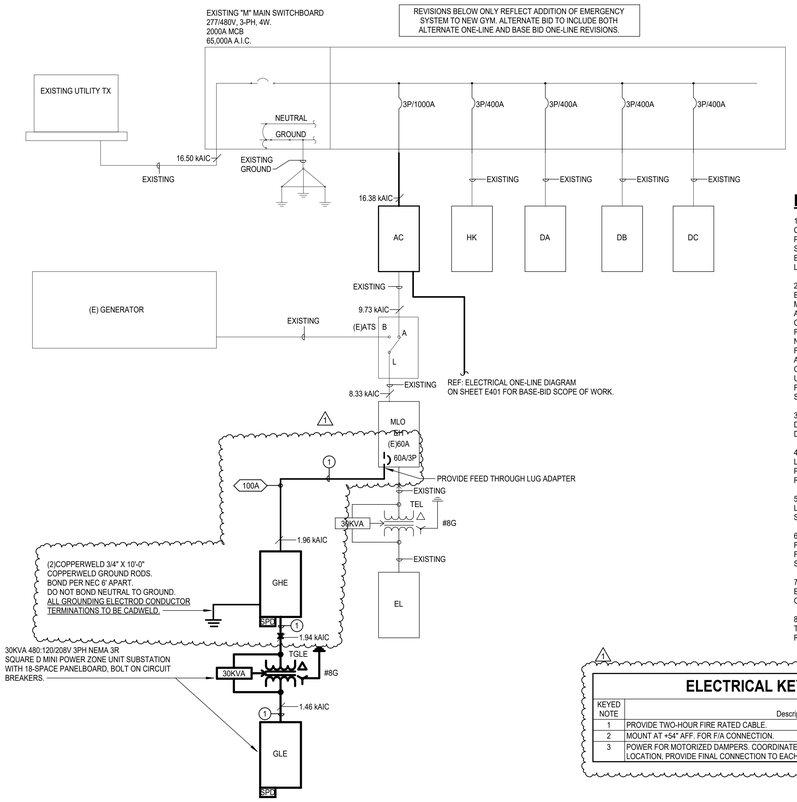
A.I.C. Rating: 10,000 **Enclosure:** Type 1 **Mains:** 100A MCB LSI

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker	Wire		Circuit Description	CKT	Note
	1	IDF Rack PE STOR E103	#10	30	2	1.8 / 1.0			1	20	#12	IDF Rack PE STOR E103	2	
	3						1.8 / 1.0		1	20	#12	Sound Rack OFFICE E102	4	
	5	IDF Rack PE STOR E103	#10	30	2			1.8 / 1.0	1	20	#12	IDF Rack PE STOR E103	6	
	7					1.8 / 0.5			1	20	#12	Motorized Damper PE STOR E103	8	LO
LO	9	F/A OUTDOOR STOR E101	#12	20	1		0.5 / 0.0		1	--	--	SPACE	10	
	11	SPACE	--	--	1			0.0 / 0.0	1	--	--	SPACE	12	
	13	SPARE	--	20	1	0.0 / 0.0							14	
	15	SPARE	--	20	1		0.0 / 0.0		3	30	--	SPDL	16	
	17	SPARE	--	20	1			0.0 / 0.0					18	
			Total Load:			5.1 kVA	3.3 kVA	2.8 kVA						
			Total Amps:			43 A	28 A	23 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	0.5 kVA	100.00%	0.5 kVA		
Receptacles	10.6 kVA	97.26%	10.3 kVA	**Total Conn. Load:**	11.1 kVA
				Total Est. Demand:	10.8 kVA
				Total Conn. Current:	31 A
				Total Est. Demand Current:	30 A

Notes:

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
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2 ELECTRICAL ONE-LINE DIAGRAM - ALTERNATE
Scale: N.T.S.

LINETYPE LEGEND

———	EXISTING TO REMAIN
— — — —	DISCONNECT AND REMOVE
———	NEW WORK

IN NON-ACCESSIBLE AND/OR HIGH CEILING AREAS, LOCATE DIGITAL LIGHTING CONTROLLER AND/OR EMERGENCY LOAD CONTROL RELAY/TRANSFER SWITCH IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING; IN AREAS WITH NO CEILING AND/OR IN EXTERIOR APPLICATIONS LOCATE ADJACENT TO NORMAL POWER PANEL SERVING THE LOAD. PROVIDE LABEL WITH WORDING PER SPECIFICATIONS.

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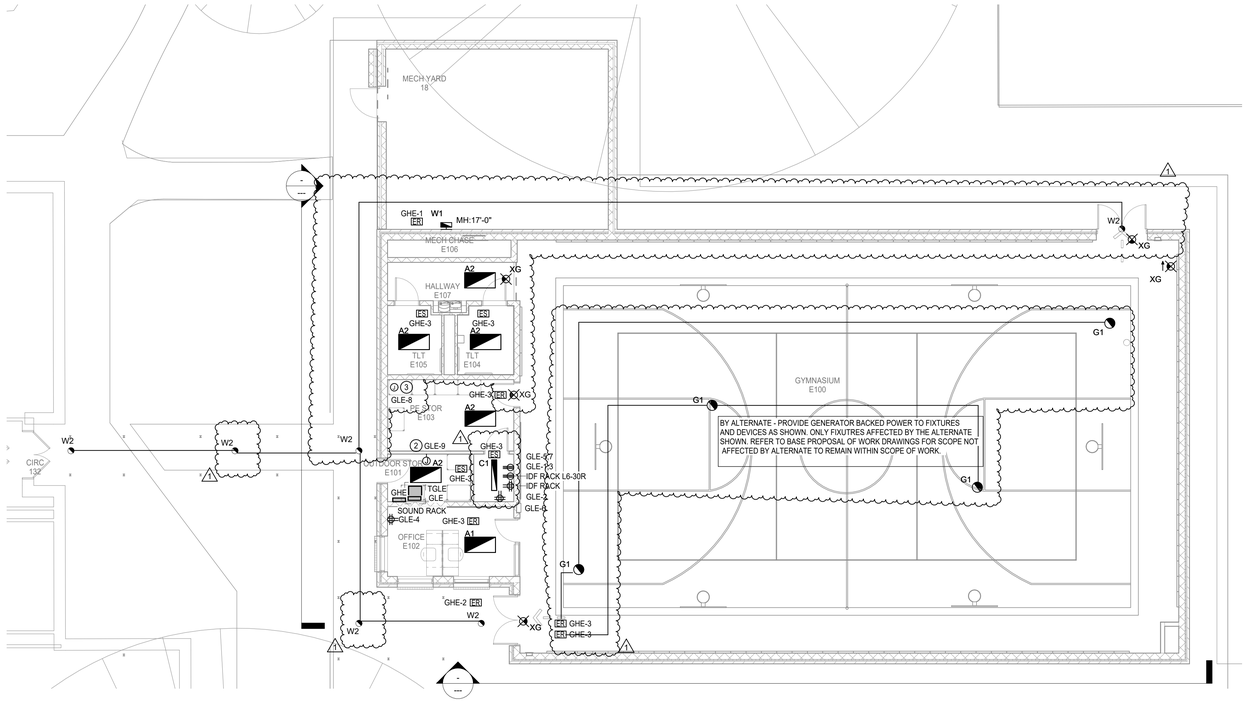
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1	PROVIDE TWO-HOUR FIRE RATED CABLE.
2	MOUNT AT +54" AFF. FOR F/A CONNECTION.
3	POWER FOR MOTORIZED DAMPERS. COORDINATE WITH DIVISION 23 FOR FINAL QUANTITY AND LOCATION. PROVIDE FINAL CONNECTION TO EACH FIRE/SMOKE DAMPER WITH 2#12, 1#12G, 3/4" C.



1 ELECTRICAL POWER PLAN - LEVEL 1 - NEW GYM - ALTERNATE
Scale: 1/8" = 1'-0"

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Registration: F-4111
Project No: 2023-04376-00

Notes

No.	Revision	By	Appd	
1	Addendum 01			10/10/2025 YYYY.MM.DD

100% ISSUE FOR BID AND PERMIT				2025.09.24 YYYY.MM.DD
Issued		By	Appd	
File Name: N/A	KJ	KJ	JJ	03/20/25 YYYY.MM.DD
	Dwn.	Dsgn.	Chkd.	

Permit/Seal

BRADLEY KALMANS — 80219 — LICENSED — CENSED — 10-10-2025

Client/Project Logo

BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
ELECTRICAL FLOOR PLANS - ALTERNATE

Project No. 214001246
Scale As indicated
Revision 1
Drawing No. **E301-PES**

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

Branch Panel: AC

REPLACEMENT - NEW...

Location: MECH 65 | **Supply From:** SWBD M | **Mounting:** Surface
Volts: 277/480 Wye | **Phases:** 3 | **Wires:** 4
A.I.C. Rating: 42,000 | **Enclosure:** Type 1 | **Mains:** 1000A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1				44.3 / 44.3						2	
R	3	CHILLER #1	--	225	3		44.3 / 44.3		3	225	--	CHILLER #2	4	R
	5							44.3 / 44.3					6	
	7				24.9 / 7.5						8	
R	9	TRANSFORMER XK	--	125	3		24.9 / 7.5		3	60	--	COOLING TOWER	10	R
	11							24.9 / 7.5					12	
	13				5.8 / 5.8						14	
R	15	CHP-2	--	50	3		5.8 / 5.8		3	50	--	CHP-1	16	R
	17							5.8 / 5.8					18	
	19				3.0 / 3.0						20			
R	21	CWP-2	--	30	3		3.0 / 3.0		3	30	--	CWP-1	22	R
	23							3.0 / 3.0					24	
	25				3.3 / 2.2						26			
R	27	EDH-39	--	20	3		3.3 / 2.2		3	15	--	AHU-1	28	R
	29							3.3 / 2.2					30	
	31				0.8 / 1.0						32			
R	33	ATS	--	60	3		0.8 / 1.0		3	15	--	CT HEATER	34	R
	35							0.8 / 1.0					36	
	37				0.0 / 0.0						38			
R	39	WATER HEATER	--	15	3		0.0 / 0.0		3	125	--	PANEL HP - DAYCARE BLDG.	40	R
	41							0.0 / 0.0					42	
	43				0.0 / 0.0						44			
R	45	TLCA	--	70	3		0.0 / 0.0		3	150	--	P.E. & DAY CARE	46	R
	47							0.0 / 0.0					48	
	49				41.9 / 0.0						50			
1	51	GH	ONE LINE	250	3		45.9 / 0.0		3	250	--	SPARE	52	
	53							47.1 / 0.0					54	
			Total Load:		187.8 kVA	191.8 kVA	193.0 kVA							
			Total Amps:		678 A	695 A	699 A							

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	99.6 kVA	100.00%	99.6 kVA		
Lighting	3.2 kVA	125.00%	4.0 kVA	**Total Conn. Load:**	572.7 kVA
Power	0.0 kVA	0.00%	0.0 kVA	**Total Est. Demand:**	570.1 kVA
Receptacles	16.8 kVA	79.82%	13.4 kVA	**Total Conn. Current:**	689 A
				Total Est. Demand Current:	686 A

Existing Loads	Existing Connected	Existing Demand...	Existing Demand
Existing Load	437.7 kVA	100.00%	437.7 kVA

Notes:
R - CIRCUIT RELOCATED FROM EXISTING PANEL, PROVIDE NEW BREAKERS IN NEW PANEL CONTRACTOR TO EXTEND CONDUIT AND WIRING MATCHING EXISTING SIZE TO NEW PANEL.
1- NEW CIRCUIT

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: GH

NEW PANEL

Location: HALLWAY E107 | **Supply From:** AC | **Mounting:** Recessed
Volts: 277/480 Wye | **Phases:** 3 | **Wires:** 4
A.I.C. Rating: 18,000 | **Enclosure:** Type 1 | **Mains:** 250A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
C	1	Exterior Lighting	#12	20 1	0.3 / 0.4			1	20 #12	Exterior Lighting	2	C
	3	Lighting Room E103, E101, E102	#12	20 1		0.3 / 1.2		1	20 #12	Lighting	4	
	5	Lighting	#12	20 1			1.0 / 0.0	1	-- --	SPACE	6	
	7	SPACE	--	-- 1	0.0 / 0.0			1	-- --	SPACE	8	
	9	SPACE	--	-- 1		0.0 / 0.0		1	-- --	SPACE	10	
	11	SPACE	--	-- 1			0.0 / 0.0	1	-- --	SPACE	12	
	13	SPACE	--	-- 1	0.0 / 0.0			1	-- --	SPACE	14	
	15	SPACE	--	-- 1		0.0 / 0.0		1	-- --	SPACE	16	
	17	SPACE	--	-- 1			0.0 / 0.0	1	-- --	SPACE	18	
	19	SPACE	--	-- 1	0.0 / 0.0			1	-- --	SPACE	20	
	21	SPACE	--	-- 1		0.0 / 0.0		1	-- --	SPACE	22	
	23	SPARE	--	20 1			0.0 / 0.0	1	-- --	SPACE	24	
	25	SPARE	--	20 1	0.0 / 0.0			1	-- --	SPACE	26	
	27	SPARE	--	20 1		0.0 / 0.0		1	-- --	SPACE	28	
	29	SPARE	--	20 1			0.0 / 0.0	1	20 --	SPARE	30	
	31				8.1 / 0.0			1	20 --	SPARE	32	
	33	TXGL	ONE LINE	50 3		11.2 / 0.0		1	20 --	SPARE	34	
	35						12.9 / 0.0	1	20 --	SPARE	36	
	37				33.2 / 0.0						38	
	39	SRTU-1 MECH YARD 18	#1/0	150 3		33.2 / 0.0		3	30 --	SPDL	40	
	41						33.2 / 0.0				42	
			Total Load:		41.9 kVA	45.9 kVA	47.1 kVA					
			Total Amps:		151 A	168 A	172 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	99.6 kVA	100.00%	99.6 kVA		
Heating	9.8 kVA	100.00%	9.8 kVA	**Total Conn. Load:**	135.0 kVA
Lighting	3.2 kVA	125.00%	4.0 kVA	**Total Est. Demand:**	132.4 kVA
Miscellaneous	4.6 kVA	100.00%	4.6 kVA	**Total Conn. Current:**	162 A
Motor	1.0 kVA	100.00%	1.0 kVA	**Total Est. Demand Current:**	159 A
Receptacles	16.8 kVA	79.82%	13.4 kVA		

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
C - CONTROLLED VIA CONTACTOR

Branch Panel: GL

NEW PANEL

Location: HALLWAY E107 | **Supply From:** TXGL | **Mounting:** Recessed
Volts: 120/208 Wye | **Phases:** 3 | **Wires:** 4
A.I.C. Rating: 10,000 | **Enclosure:** Type 1 | **Mains:** 100A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
LO	1	Motorized Dampers PE STOR E103	#12	20 1	0.5 / 1.0			1	20 #12	IDF Rack PE STOR E103	2	
	3	EF-1 TLT E105	#12	20 1		0.5 / 1.0		1	20 #12	Sound Rack PE STOR E103	4	
	5	Receptacles Room E100, E107	#12	20 1			1.1 / 1.3	1	20 #12	Receptacles Room E105, E104	6	
	7	EDF HALLWAY E107	#12	20 1	0.8 / 0.7			1	20 #12	Receptacles OFFICE E102	8	
	9	Receptacles OFFICE E102	#12	20 1		0.7 / 0.5		1	20 #12	BMCS OUTDOOR STOR E101	10	
LO	11	F/A OUTDOOR STOR E101	#12	20 1			0.5 / 1.1	1	20 #12	Receptacles GYMNASIUM E100	12	
	13	IDF Rack PE STOR E103	#12	20 1	1.0 / 1.8						14	
	15	L6-30R IDF Rack PE STOR E103	#10	30 2		1.8 / 1.8		2	30 #10	L6-30R IDF Rack PE STOR E103	16	
	17						1.8 / 2.3				18	
	19	Trap Primer PE STOR E103	#12	20 1	0.0 / 2.3						20	
	21	IEWH-1 TLT E104	#10	30 2		2.5 / 2.5		2	30 #10	IEWH-2 TLT E104	22	
	23						2.5 / 2.5				24	
	25	SPACE	--	-- 1	0.0 / 0.0			1	-- --	SPACE	26	
	27	SPACE	--	-- 1		0.0 / 0.0		1	-- --	SPACE	28	
	29	SPACE	--	-- 1			0.0 / 0.0	1	-- --	SPACE	30	
	31	SPACE	--	-- 1	0.0 / 0.0			1	-- --	SPACE	32	
	33	SPARE	--	20 1		0.0 / 0.0		1	20 --	SPARE	34	
	35	SPARE	--	20 1			0.0 / 0.0	1	20 --	SPARE	36	
	37	SPARE	--	20 1	0.0 / 0.0						38	
	39	SPARE	--	20 1		0.0 / 0.0		3	30 --	SPDL	40	
	41	SPARE	--	20 1			0.0 / 0.0				42	
			Total Load:		8.1 kVA	11.2 kVA	12.9 kVA					
			Total Amps:		67 A	97 A	112 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Heating	9.8 kVA	100.00%	9.8 kVA		
Miscellaneous	4.6 kVA	100.00%	4.6 kVA	**Total Conn. Load:**	32.2 kVA
Motor	1.0 kVA	100.00%	1.0 kVA	**Total Est. Demand:**	28.8 kVA
Receptacles	16.8 kVA	79.82%	13.4 kVA	**Total Conn. Current:**	89 A
				Total Est. Demand Current:	80 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

DEMOLITION / EXISTING DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION, AND WHEN AVAILABLE, EXISTING RECORD DOCUMENTS. REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION, AND IMMEDIATELY AFTER SUCH DISCREPANCIES ARE DISCOVERED. CONTRACTOR TO VERIFY EXISTING CONDITIONS ON FIELD AND NOTIFY ENGINEER IF THERE ARE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL REMOVE SUCH EXISTING WORK AS CALLED FOR ON THE DRAWINGS OR AS REQUIRED TO CLEAR THE AREAS OF NEW CONSTRUCTION. OWNER OR ITS REPRESENTATIVE SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED FROM THIS PROJECT. CONTRACTOR TO NOTIFY CAREY RAMSEYWITH DISTRICT PRIOR TO DEMOLITION WORK TO DISCUSS ALL RETURNED ITEMS TO DISTRICT.

UNLESS NOTED OTHERWISE, RETAIN IN PLACE ALL EXISTING CIRCUITS AND FEEDER FROM SOURCE FOR ALL EXISTING PANELS LABELED TO BE REPLACED AND / OR RELOCATED. EXTEND / RE-ROUTE EXISTING BRANCH CIRCUITS AND FEEDER LEFT IN PLACE AFTER DEMOLITION FROM EXISTING PANELS TO BE RELOCATED AND / OR REPLACED.

CONTRACTOR TO FIELD VERIFY INTERRUPTING FAULT CURRENT CAPACITY OF EXISTING PANELS AND / OR SWITCHBOARDS AND TO PROVIDE NEW BREAKERS/FUSES TO MATCH EXISTING.

PANELBOARD CIRCUIT DIRECTORY:

CONTRACTOR SHALL RECORD AND/OR PRESERVE THE EXISTING CIRCUIT DIRECTORY, IF ANY, FOR THE SOLE PURPOSE UPON COMPLETION OF NEW WORK OF PRODUCING A NEW CIRCUIT DIRECTORY.

CONTRACTOR SHALL PROVIDE AS PART OF THE CONSTRUCTION DOCUMENTS A NEW, NEATLY TYPED DIRECTORY. CONTRACTOR SHALL TRACE ALL EXISTING CIRCUITS AND SHALL LEGIBLY IDENTIFY AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE. LOADS SERVED AND LOCATION AND/OR THE PANELBOARD SCHEDULE ON THE DRAWINGS. THE WORD "EXISTING" SHALL NOT BE USED ON PANELBOARD DIRECTORIES. SPARE BREAKERS ARE TO BE LISTED AS "SPARE". SPACES WITH NO BREAKERS ARE TO BE LEFT BLANK. REFER TO NEC-2023: 408.4(A) FOR DETAILS.

CONTRACTOR SHALL PERMANENTLY LABEL AS PART OF THE CONSTRUCTION DOCUMENTS ALL SWITCHBOARDS, SWITCHGEAR AND PANELBOARDS TO INDICATE EACH POWER SOURCE. REFER TO NEC-2023: 408.4(B) FOR DETAILS.

ELECTRICAL LOAD ANALYSIS
EXIST. M

277/480, 3PH, 4W
2000A

LOAD DESCRIPTION	LOAD KVA
CALCULATED EXISTING LOAD - EXIST. DWGS	1183
NEW LOAD:	
RECEPTACLES (CONNECTED NEC 220.44)	16.8
1ST 10KVA @100% (NEC 220.44)	10
REMAINDER @50% (NEC 220.44)	3.4
HVAC - FANS, AHU'S (NEC 220)	104.2
MOTOR	1
HEATING	9.8
LIGHTING	5.2
LIGHTING @ 125%	6.5
TOTAL KVA	1317.9
TOTAL AMPS	1585.9

ELECTRICAL KEYED NOTES

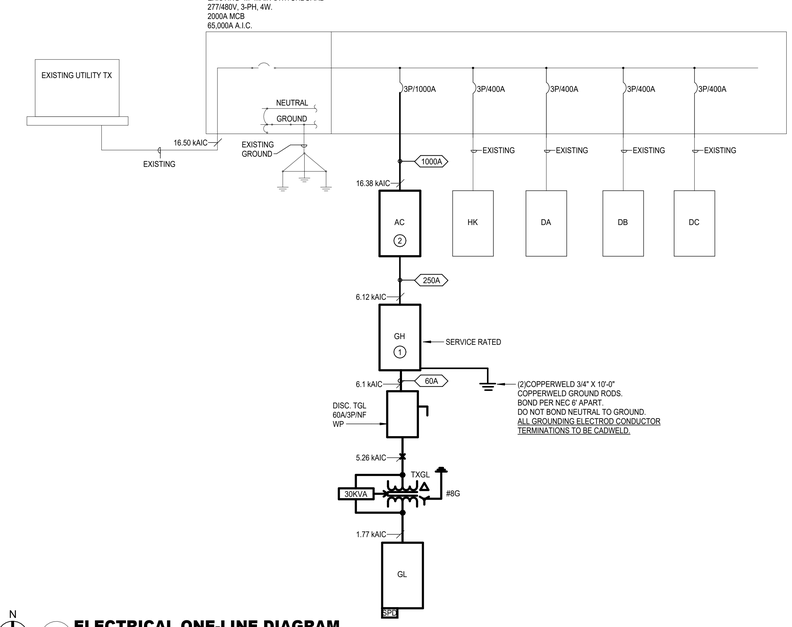
KEYED NOTE	Description
1	CLEARLY MARK COVER OF PANEL AS BUILDING SERVICE DISCONNECT.
2	REPLACMENT PANEL. CONTRACTOR TO ENSURE NEW PANEL WILL FIT IN EXISTING PANEL LOCATION.

FEEDER SCHEDULE

AMPERAGE	# SETS	CONDUCTOR (QTY.)/SIZE	GROUND (QTY.)/SIZE	CONDUIT
60A	1	(4) #6	#10	1"C
250A	1	(4) #250KCMIL	#4	3"C
1000A	3	(4) #400KCMIL	#2/0	3"C

TRANSFORMER SCHEDULE

PRIMARY (480V 3PH 3W +GND)			SECONDARY (120/208V 3PH 4W +GND)		
KVA	WIRE & CONDUIT	CIRCUIT BREAKER	WIRE & CONDUIT	CIRCUIT BREAKER	GROUNDING ELECTRODE CONDUCTOR
30KVA	3#6, 3/4"C, 1#10G	3P-50A	4#2, 1-1/4"C, 1#8G	3P-100A	#8



N

1 **ELECTRICAL ONE-LINE DIAGRAM**
Scale: N.T.S.

LINETYPE LEGEND

————	EXISTING TO REMAIN
— — — —	DISCONNECT AND REMOVE
————	NEW WORK

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Project No: 2023-04376-00

Notes

1	Addendum 01			10/10/2025
Revision		By	Appd	YYYY.MM.DD
	100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		KJ	KJ	JZ	03/20/25
		Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal



10-10-2025

Client/Project Logo

2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
ELECTRICAL ONE-LINE AND PANEL SCHEDULES

Project No.	Scale
214001246	N.T.S.
Revision	Drawing No.
1	E401-PES

10/9/2025 2:38:11 PM
ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

LIGHTING FIXTURE SCHEDULE

Type Mark	CATALOG NUMBER MANUFACTURER	CATALOG NUMBER MODEL	MOUNTING	LAMP TYPE	CCT	CRI	VOLTAGE	LOAD	REMARKS
A1	METALUX	24CGT5540C	T-GRID/GYP	5500L LED	4000 K	80	277 V	50 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED.
A1E	METALUX	24CGT5540C - EL14W	T-GRID/GYP	5500L LED	4000 K	80	277 V	50 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED. PROVIDE INTEGRAL EMERGENCY BATTERY BACKUP.
A2	METALUX	24CGT4540C	T-GRID/GYP	4500L LED	4000 K	80	277 V	40 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED.
A2E	METALUX	24CGT4540C - EL14W	T-GRID/GYP	4500L LED	4000 K	80	277 V	40 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED. PROVIDE INTEGRAL EMERGENCY BATTERY BACKUP.
C1	METALUX	4SNLED-LD5-LN-41SL-LN-UNV-L840-CD1-U	SUSPENDED/SURFACE	4100L LED	4000 K	80	277 V	35 W	1x4 SUSPENDED/SURFACE STRIP.
C1E	METALUX	4SNLED-LD5-LN-41SL - EL14W	SUSPENDED/SURFACE	4100L LED	4000 K	80	277 V	35 W	1x4 SUSPENDED/SURFACE STRIP. PROVIDE INTEGRAL EMERGENCY BATTERY BACKUP
D1	HALO	HC640D010-HM63040840-61MDH	RECESSED	4000L LED	4000 K	80	277 V	45 W	LED 6" RECESSED CAN LIGHT.0-10V DIMMING DRIVER. DLC CERTIFIED.
G1	METALUX	SSLED-LD5-12-M-UNV-L840	SUSPENDED/SURFACE	12000L LED	4000 K	80	277 V	100 W	ROUND HIGH BAY FIXTURE .
G1E	METALUX	SSLED-LD5-12-M-UNV-L840-EL20WREM	SUSPENDED/SURFACE	12000L LED	4000 K	80	277 V	100 W	ROUND HIGH BAY FIXTURE. PROVIDE INTEGRAL EMERGENCY BATTERY PACK.
W1	GARDCO	GWM-A09-840-T3M-UNV	WALL	6000L LED	4000 K	80	277 V	40 W	LED ARCHITECTURAL WALLPAK, ALUMINUM HOUSING. COORDINATE FINISH WITH EXISTING EXTERIOR FIXTURES. DLC CERTIFIED.
W1E	GARDCO	GWM-A09-840-T3M-UNV	WALL	6000L LED	4000 K	80	277 V	40 W	LED ARCHITECTURAL WALLPAK, ALUMINUM HOUSING. COORDINATE FINISH WITH EXISTING EXTERIOR FIXTURES. DLC CERTIFIED. PROVIDE INTEGRAL EMERGENCY BATTERY PACK.
W2	FAIL-SAFE	TRO11-LD4-25W-40-OPL-XX-UNV-EDC1	SURFACE	1695L LED	4000 K	80	277 V	25 W	LED 11-INCH ARCHITECTURAL ROUND FIXTURE, SURFACE MOUNTED, WET LOCATION LISTED, ALUMINUM HOUSING, POLYCARBONATE LENS. COORDINATE FINISH WITH ARCHITECT. DLC CERTIFIED.
W2E	FAIL-SAFE	TRO11-LD4-25W-40-OPL-XX-UNV-EDC1-EL5W	SURFACE	1695L LED	4000 K	80	277 V	25 W	LED 11-INCH ARCHITECTURAL ROUND FIXTURE, SURFACE MOUNTED, WET LOCATION LISTED, ALUMINUM HOUSING, POLYCARBONATE LENS. COORDINATE FINISH WITH ARCHITECT. DLC CERTIFIED PROVIDE INTEGRAL EMERGENCY BATTERY PACK..
X1	SURE-LITES	LPXW7-W	UNIVERSAL	LED	4000 K	0	277 V	5 W	VANDAL PROOF POLYCARBONATE UNIVERSAL LED EXIT SIGN WITH WHITE HOUSING, RED LETTERING AND EMERGENCY BATTERY BACK-UP.
XG	SURE-LITES	LPX6-W-WG10	UNIVERSAL	LED	4000 K	0	277 V	5 W	UNIVERSAL LED EXIT SIGN WITH WHITE HOUSING, RED LETTERING. PROVIDE WIRE GUARD.
XG	SURE-LITES	LPXW6-W	UNIVERSAL	LED	4000 K	0	277 V	5 W	VANDAL PROOF POLYCARBONATE UNIVERSAL LED EXIT SIGN WITH WHITE HOUSING, RED LETTERING AND EMERGENCY BATTERY BACK-UP.

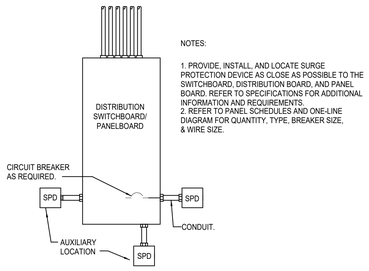
APPROVED LIGHTING MANUFACTURERS:
PHILLIPS, COOPER (METALUX), LITHONIA, OR LUTRON

NOTES:
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT INDICATED IN THE LIGHT FIXTURE SCHEDULE. WHERE THERE IS AN INCONSISTENCY BETWEEN THE LIGHT SCHEDULE AND THE SPECIFICATIONS, THE BETTER QUALITY OF WORK SHALL BE INCLUDED IN THE PROPOSAL.
THE ABOVE LIGHTING MANUFACTURERS SUBSTITUTION LIST DOES NOT GUARANTEE APPROVAL. APPROVAL WILL BE DETERMINED AFTER REVIEW OF SHOP DRAWING TO DETERMINE IF THE FIXTURE OR POLE SUBMITTED MEETS OR EXCEEDS THE DESIGN STANDARDS AND PERFORMANCE REQUIRED OF THE ACTUAL FIXTURE SPECIFIED IN THE LIGHT FIXTURE SCHEDULE. IT SHALL BE THE RESPONSIBILITY OF THECONTRACTOR TO CAREFULLY SELECT SUBSTITUTIONS FOR THE SPECIFIED LIGHT FIXTURES FROM THE APPROVED LIGHTING MANUFACTURERS LISTED ABOVE. WHERE SPECIFIC OPTIONS / ACCESSORIES ARE SPECIFIED, THEY SHALL BE PROVIDED AS SPECIFIED WITH THE SUBSTITUION.
DUE TO THE WIDE RANGE OF FIXTURE QUALITIES OFFERED BY EACH MANUFACTURER, THE APPROVED LIGHTING MANUFACTURERS SUBSTITUTION LIST IS NOT INTENDED TO INDICATE THAT ANY OR ALL MANUFACTURERS LISTED WILL HAVE SUITABLE SUBSTITUTIONS FOR THE LIGHT FIXTURES OR POLES SPECIFIED IN THE LIGHT FIXTURE SCHEDULE. SHOP DRAWING DELAYS AS A RESULT OF INAPPROPRIATE SUBSTITUTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

LIGHTING CONTROLS SCHEDULE

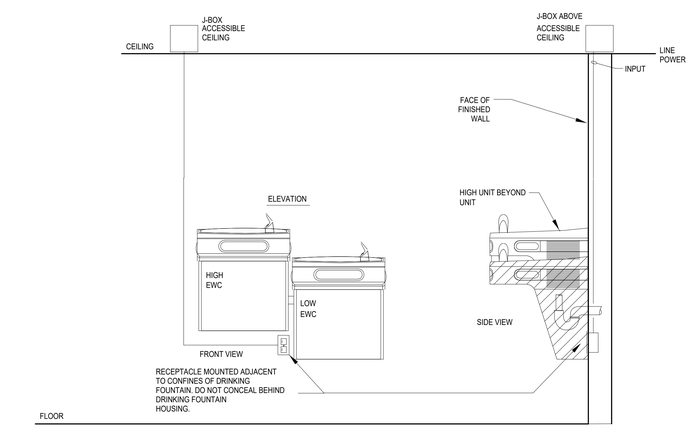
Type	Sensor Operation	# of Lighting Zones	# of Plug Load Zones	# of Total Zones	Description
R2	VACANCY - MANUAL ON / AUTO OFF 20 MINUTES TIMEOUT	1	2	3	ROOM CONTROLLER, 0-10V DIMMING.
RA	VACANCY - MANUAL ON / AUTO OFF 20 MINUTES TIMEOUT	1	0	1	ROOM CONTROLLER, 0-10V DIMMING.
RB	VACANCY - MANUAL ON / AUTO OFF 20 MINUTES TIMEOUT	1	0	1	ROOM CONTROLLER, NO DIMMING.
RD	OCCUPANCY - AUTO ON 100% / AUTO OFF 20 MINUTES TIMEOUT	1	0	1	ROOM CONTROLLER, NO DIMMING.
RE	OCCUPANCY - AUTO ON 100% / AUTO OFF 20 MINUTES TIMEOUT	1	0	1	CORRIDOR ROOM CONTROLLER, NO DIMMING. BMCS ON/OFF INTERFACE FOR OCCUPIED / UNOCCUPIED BUILDING OPERATION. PROVIDE OCCUPANCY BASED SENSORS WHERE SHOWN. LOCATE (1) KEYED SWITCH AT MAIN ENTRY DOOR ADJACENT TO SECURITY KEYPAD.
RG	OCCUPANCY - AUTO ON 50% / AUTO OFF 20 MINUTES TIMEOUT	1	0	1	GYM ROOM CONTROLLER, 0-10V DIMMING. BMCS ON/OFF INTERFACE FOR OCCUPIED / UNOCCUPIED BUILDING OPERATION. LOCATE 0-10 V DIMMING SWITCHES AT EACH ENTRY FOR DUAL-LEVEL CONTROL WITH ALTERNATE FIXTURES.
RJ	NONE	1	0	1	ON/OFF DIGITAL TIMER SWITCH. WATTSTOPPER TS-400. WHERE MULTIPLE SWITCHES ARE USED, THESE SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.
RL	NONE	1	0	1	CONTACTOR CONTROLLED WITH BMCS ON/OFF INTERFACE FOR PHOTOSENSOR / SCHEDULE. MANUAL OVERRIDE LOCATED ADJACENT TO PANEL FEEDING LOAD.
RM	NONE	1	0	1	CONTACTOR CONTROLLED WITH BMCS ON/OFF INTERFACE FOR PHOTOSENSOR / SCHEDULE. EXTERIOR LIGHTING SHALL BE TURNED OFF FROM 12:00AM TO 6:00AM OR FROM 1 HOUR AFTER CLOSING TO 1 HOUR BEFORE OPENING. MANUAL OVERRIDE LOCATED IN MDF ROOM.
ER	-	-	-	-	UL924 LOAD CONTROL RELAY, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM
ES	-	-	-	-	UL1008 GENERATOR TRANSFER DEVICE, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM

NOTES:
- PER 2021 IECC C405, AREAS / ROOMS WHERE AUTOMATIC SHUTOFF FOR LIGHTING WOULD ENDANGER OCCUPANT SAFETY ARE EXEMPT FROM AUTOMATIC CONTROLS.
- REFER TO LIGHTING CONTROL DETAILS FOR TYPICAL INSTALLATION.
- PROVIDE PHOTOCELL WITHIN DAYLIGHT ZONE ONLY WHERE SHOWN ON FLOORPLANS.
- CONTRACTOR TO COORDINATE EXACT PROGRAMING OF TIME-SCHEDULE WITH OWNER REPRESENTATIVE.
-ACCEPTABLE LIGHTING CONTROLS MANUFACTURERS: INTELLIGENT LIGHTING CONTROLS (ILC), COOPER, ACUITY, LUTRON
-LIGHTING CONTROLS CATEGORY DATA CABLES TO BE LIME GREEN.

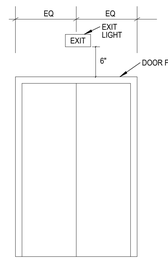


NOTES:
1. PROVIDE, INSTALL, AND LOCATE SURGE PROTECTION DEVICE AS CLOSE AS POSSIBLE TO THE SWITCHBOARD, DISTRIBUTION BOARD, AND PANEL BOARD. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
2. REFER TO PANEL SCHEDULES AND ONE-LINE DIAGRAM FOR QUANTITY, TYPE, BREAKER SIZE, & WIRE SIZE.

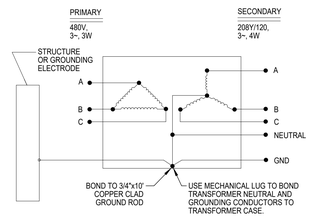
1 SURGE PROTECTION DEVICE DETAIL
Scale: N.T.S.



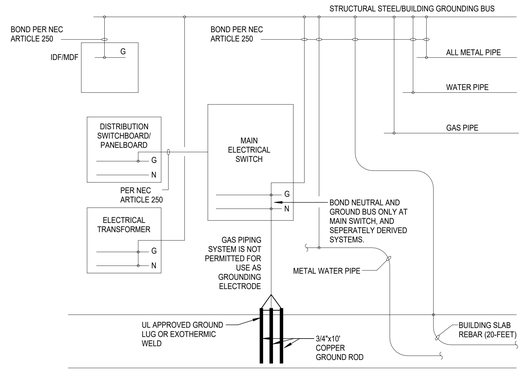
2 ELECTRIC DRINKING FOUNTAIN POWER REQUIREMENTS
Scale: N.T.S.



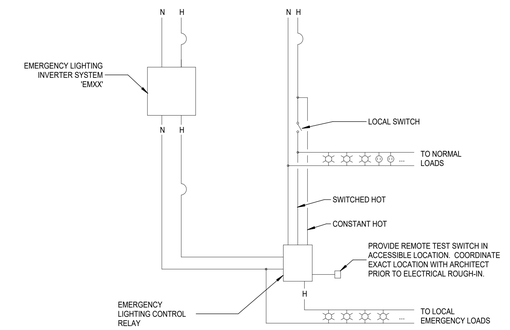
3 TYPICAL EXIT SIGN LOCATION
Scale: N.T.S.



4 GROUNDING FOR TRANSFORMERS
Scale: N.T.S.



5 SYSTEM GROUNDING DETAIL
Scale: N.T.S.



REFER TO MANUFACTURER'S WIRING DETAILS AND INSTALLATION MANUALS PRIOR TO ELECTRICAL ROUGH-IN . ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC AND MANUFACTURER'S REQUIREMENTS.

6 EMERGENCY LIGHTING CONTROL RELAY
Scale: N.T.S.

SYMBOL SCHEDULE

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE)	
	LIGHT FIXTURE
	FIXTURE ON EMERGENCY CIRCUIT
	DOWNLIGHT FIXTURE
	LIGHT FIXTURE - WALL MOUNTED
	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT
	LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT
	EXIT LIGHT-CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED
	EXIT LIGHT-WALL MTD WITH DIRECTIONAL ARROWS AS REQUIRED
SWITCHES	
$	LINE VOLTAGE SINGLE POLE SWITCH
$2	LINE VOLTAGE 2-POLE SWITCH
$3	LINE VOLTAGE 3-WAY SWITCH
$4	LINE VOLTAGE 4-WAY SWITCH
$K	LINE VOLTAGE KEYED SWITCH
$3K	LINE VOLTAGE KEYED 3-WAY SWITCH
$D	LINE VOLTAGE WALL DIMMER SWITCH, SIZE AND TYPE AS REQUIRED
$VD	LINE VOLTAGE WALL MOUNTED DIMMER SWITCH WITH VACANCY SENSOR. MANUAL ON / AUTO OFF.
$V	LINE VOLTAGE WALL MOUNTED SWITCH WITH VACANCY SENSOR. MANUAL ON / AUTO OFF.
$OC	LINE VOLTAGE WALL MOUNTED SWITCH WITH VACANCY SENSOR. AUTO ON / AUTO OFF.
$P	LINE VOLTAGE SWITCH WITH PILOT LIGHT
$MC	MOMENTARY CONTACT SWITCH
[B]	PUSH BUTTON
$TH	6-HOUR TIMER SWITCH WITH HOLD
$T	6-HOUR TIMER SWITCH WITH NO HOLD
	20 AMP GENERATOR TRANSFER DEVICE
LOW VOLTAGE LIGHTING CONTROLS	
$R	LOW VOLTAGE LIGHTING CONTROLLER WALL SWITCH
$B	BMCS TIMER LOCAL OVERRIDE SWITCH
P	CEILING MOUNTED PHOTO SENSOR
V	CEILING MOUNTED VACANCY SENSOR, MANUAL ON / AUTO OFF
S	CEILING MOUNTED OCCUPANCY SENSOR, AUTO ON / AUTO OFF
R	LIGHTING CONTROLLER WITH GTD. ZONES AS REQUIRED.
RECEPTACLES AND OUTLETS	
	SIMPLEX RECEPTACLE
	DUPLEX RECEPTACLE
	ISOLATED GROUND RECEPTACLE
	POWER POLE
	125/250 VOLT, 1 PHASE, 3-WIRE, 20 AMPS UNLESS NOTED OTHERWISE
	DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE
	DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
	FLUSH FLOOR DUPLEX RECEPTACLE OUTLET
	FLUSH FLOOR DOUBLE DUPLEX RECEPTACLE OUTLET
	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH WIRING DEVICES AS INDICATED ON DRAWINGS. SIZE TO MATCH DEVICE QUANTITIES.
[R]	REMOTE BLANK FACE GFCI DEVICE.
U	PROVIDE DUPLEX RECEPTACLE WITH (2) USB CHARGING PORTS.
CR	E.C. TO PROVIDE ROUGH-IN FOR CARD READER JUNCTION BOX. REFER TO TECHNOLOGY SHEETS FOR ADDITIONAL INFORMATION.
SR	SWITCH CONTROLLED RECEPTACLE WITH THE TOP RECEPTACLE LOAD CONTROLLED VIA PLUG LOAD SWITCH MEETING 2021 IECC 405.11 REQUIREMENTS. SPLIT LOAD-CONTROLLED RECEPTACLES SHALL BE PERMANENTLY FACTORY MARKED AS CONTROLLED.

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
MISCELLANEOUS EQUIPMENT	
FACP	FIRE ALARM CONTROL PANEL
ANNC	FIRE ALARM REMOTE ANNUCIATOR
[T]	TRANSFORMER FOR DOOR BELL/BUZZER
	CHIME/BUZZER
MOTOR CONTROLLERS AND EQUIPMENT	
	MOTOR, MAKE FINAL MOTOR CONNECTION
	3-PHASE MOTOR, MAKE FINAL MOTOR CONNECTION
J	DISCONNECT SWITCH AS REQUIRED
J	COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED
	MOTOR STARTER
M	MANUAL MOTOR SWITCH AS REQUIRED
	PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS
VFD	VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26
PB	IN-GROUND PULL BOX
ELECTRICAL EQUIPMENT	
	ELECTRICAL DISTRIBUTION OR PANELBOARD
	ELECTRICAL EMERGENCY LIFE SAFETY DISTRIBUTION OR PANELBOARD
	DRY TYPE TRANSFORMER
CIRCUITING	
	CONDUIT
	CONDUIT BELOW FLOOR, SLAB, OR GRADE
SUBSCRIPTS AND ABBREVIATIONS	
WP	INDICATES WEATHERPROOF
WG	INDICATES WIREGUARD
H	INDICATES HORIZONTAL
TL	INDICATES TWIST LOCK
NL	LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH
1-L	REFER TO ONE-LINE DIAGRAM
	INDICATES WALL MOUNTED DEVICE
•	NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES

GENERAL NOTES:
-ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-3R MINIMUM.

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Notes

Revision	By	Appd	
1 Addendum 01			10/10/2025 YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24 YYYY.MM.DD
Issued	By	Appd	

File Name: N/A	Author	Designer	Checker	
	Dwn.	Dsgn.	Chkd.	06/18/25 YYYY.MM.DD

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Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

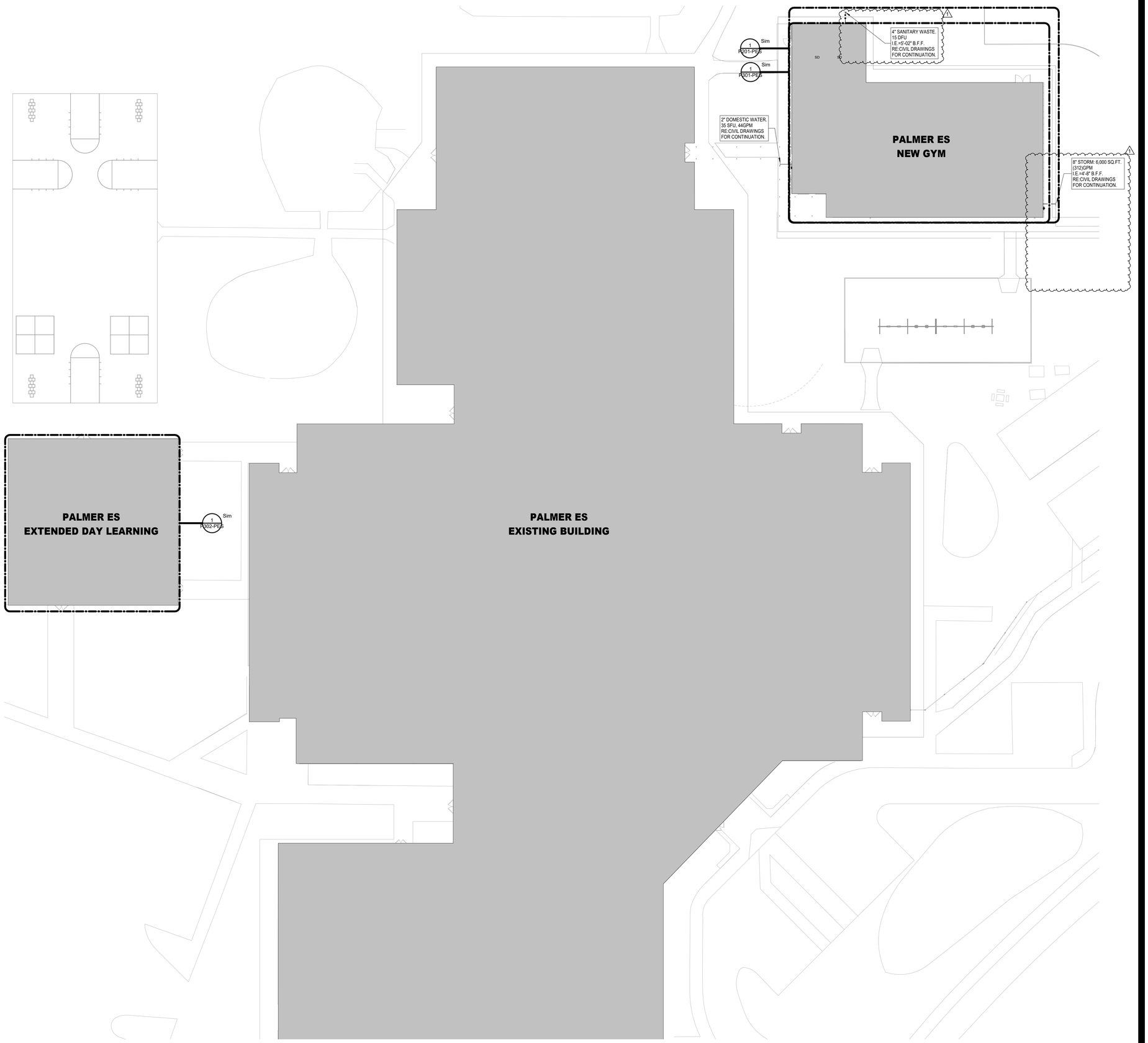
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
ELECTRICAL DETAILS, LEGENDS, AND SCHEDULES

Project No.	Scale
214001246	N.T.S.
Revision	Drawing No.
1	E501-PES

ORIGINAL SHEET - ARCH E1
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N

1 **PLUMBING COMPOSITE PLAN**
Scale: 1/16" = 1'-0"

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Project No: 2023-04376-00

Notes

1 Addendum 01			10/10/2025
Revision	By	Appd	YYYY.MM.DD
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Issued	By	Appd	YYYY.MM.DD
File Name: N/A	AA	AA	EH 11/27/24
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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STATE OF TEXAS
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PROFESSIONAL ENGINEER
10-10-2025

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2023 BOND
FORT BEND
INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

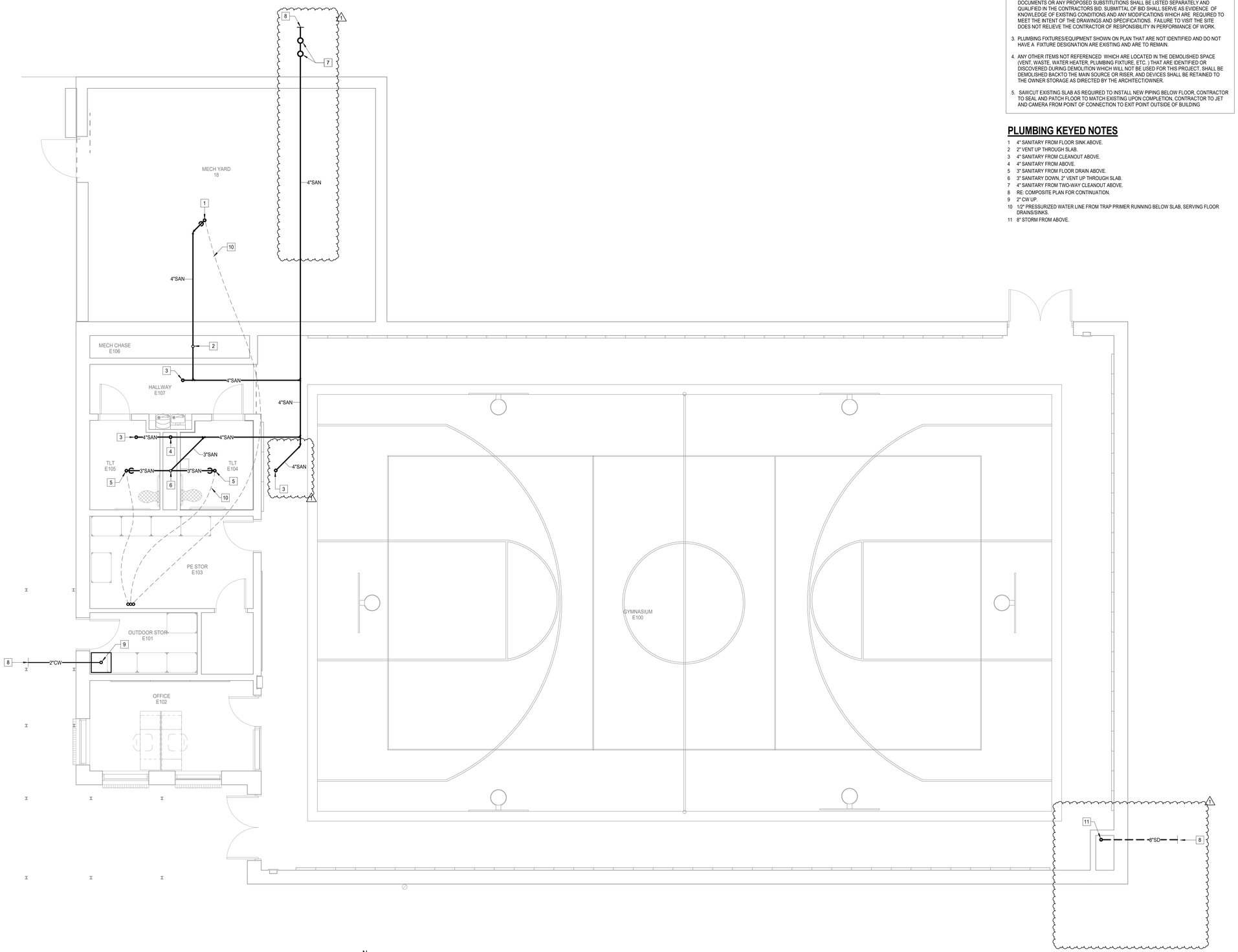
FBISD BP022 GYM RENOVATIONS AND ADDITIONS
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
PLUMBING COMPOSITE PLAN

Project No.	Scale
214001246	1/16" = 1'-0"
Revision	Drawing No.
1	P100-PES

ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79



N

1 **PLUMBING UNDERFLOOR PLAN - LEVEL 0 - ENLARGED - NEW GYM**
Scale: 1/4" = 1'-0"

PLUMBING GENERAL NOTES

1. CONTRACT DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION, AND WHEN AVAILABLE, EXISTING RECORD DOCUMENTS. CONTRACTOR TO VERIFY AT SITE EXACT LOCATIONS, AND SIZES OF EXISTING PIPING. REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION, AND IMMEDIATELY AFTER SUCH DISCREPANCIES ARE DISCOVERED. CONTRACTOR TO VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF THERE ARE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE WORK. ANY ITEMS WHICH ARE NOT COVERED IN THE BID DOCUMENTS OR ANY PROPOSED SUBSTITUTIONS SHALL BE LISTED SEPARATELY AND QUALIFIED IN THE CONTRACTORS BID. SUBMITTAL OF BID SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. FAILURE TO VISIT THE SITE DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY IN PERFORMANCE OF WORK.
3. PLUMBING FIXTURES/EQUIPMENT SHOWN ON PLAN THAT ARE NOT IDENTIFIED AND DO NOT HAVE A FIXTURE DESIGNATION ARE EXISTING AND ARE TO REMAIN.
4. ANY OTHER ITEMS NOT REFERENCED WHICH ARE LOCATED IN THE DEMOLISHED SPACE (VENT, WASTE, WATER HEATER, PLUMBING FIXTURE, ETC.) THAT ARE IDENTIFIED OR DISCOVERED DURING DEMOLITION WHICH WILL NOT BE USED FOR THIS PROJECT, SHALL BE DEMOLISHED BACKTO THE MAIN SOURCE OR RISER, AND DEVICES SHALL BE RETAINED TO THE OWNER STORAGE AS DIRECTED BY THE ARCHITECT/OWNER.
5. SAWCUT EXISTING SLAB AS REQUIRED TO INSTALL NEW PIPING BELOW FLOOR, CONTRACTOR TO SEAL AND PATCH FLOOR TO MATCH EXISTING UPON COMPLETION, CONTRACTOR TO JET AND CAMERA FROM POINT OF CONNECTION TO EXIT POINT OUTSIDE OF BUILDING

PLUMBING KEYED NOTES

1 4" SANITARY FROM FLOOR SINK ABOVE.
2 2" VENT UP THROUGH SLAB.
3 4" SANITARY FROM CLEANOUT ABOVE.
4 4" SANITARY FROM ABOVE.
5 3" SANITARY FROM FLOOR DRAIN ABOVE.
6 3" SANITARY DOWN, 2" VENT UP THROUGH SLAB.
7 4" SANITARY FROM TWO-WAY CLEANOUT ABOVE.
8 RE: COMPOSITE PLAN FOR CONTINUATION.
9 2" CW UP.
10 1/2" PRESSURIZED WATER LINE FROM TRAP PRIMER RUNNING BELOW SLAB, SERVING FLOOR DRAINS/SINKS.
11 8" STORM FROM ABOVE.

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Notes

1 Addenda 01				10/10/2025
Revision	By	Appd		YYYY.MM.DD
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STATE OF TEXAS
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80219
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10-10-2025

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2022 BOND
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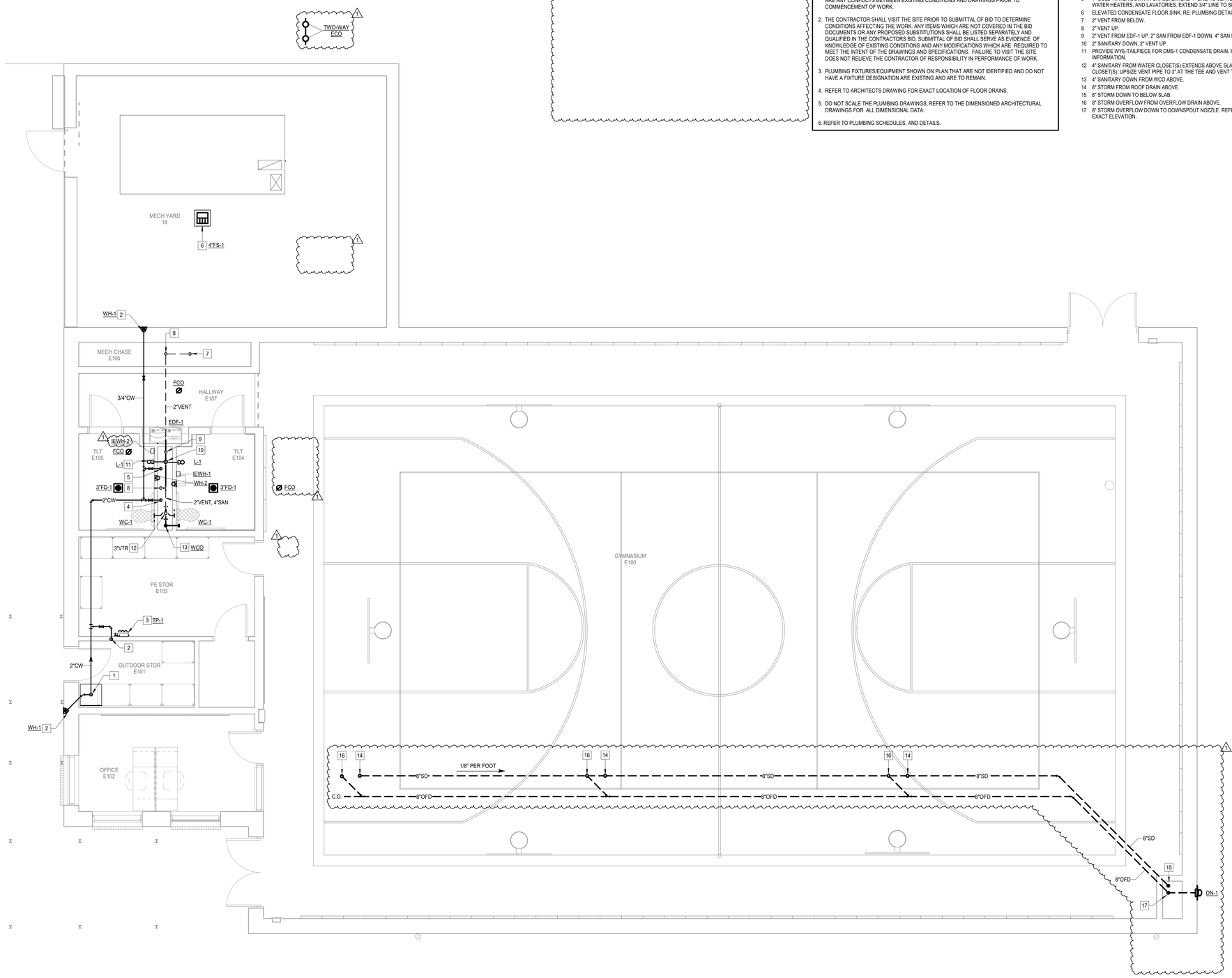
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FBISD BP022 GYM RENOVATIONS AND ADDITIONS
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
PLUMBING UNDERFLOOR ENLARGED PLANS - NEW GYM

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	P201-PES

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79



PLUMBING GENERAL NOTES

1. CONTRACT DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION, AND WHEN AVAILABLE, EXISTING RECORD DOCUMENTS. CONTRACTOR TO VERIFY AT SITE EXACT LOCATIONS, AND SIZES OF EXISTING PIPING. REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION, AND IMMEDIATELY AFTER SUCH DISCREPANCIES ARE DISCOVERED. CONTRACTOR TO VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF THERE ARE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE WORK. ANY ITEMS WHICH ARE NOT COVERED IN THE BID DOCUMENTS OR ANY PROPOSED SUBSTITUTIONS SHALL BE LISTED SEPARATELY AND QUALIFIED IN THE CONTRACTORS BID. SUBMITTAL OF BID SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. FAILURE TO VISIT THE SITE DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY IN PERFORMANCE OF WORK.
3. PLUMBING FIXTURES/EQUIPMENT SHOWN ON PLAN THAT ARE NOT IDENTIFIED AND DO NOT HAVE A FIXTURE DESIGNATION ARE EXISTING AND ARE TO REMAIN.
4. REFER TO ARCHITECTS DRAWING FOR EXACT LOCATION OF FLOOR DRAINS.
5. DO NOT SCALE THE PLUMBING DRAWINGS, REFER TO THE DIMENSIONED ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONAL DATA.
6. REFER TO PLUMBING SCHEDULES, AND DETAILS.

PLUMBING KEYED NOTES

1 2" CW FROM BELOW SLAB. 2" WATER ENTRY. REFER TO PLUMBING DETAILS SHEET.
2 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.
3 PROVIDE AND INSTALL NEW TRAP PRIMER AT 5'-0" ABOVE GRADE. RE: PLUMBING SCHEDULES AND DETAILS SHEETS FOR MORE INFORMATION.
4 2" COLD WATER DOWN IN CHASE. EXTEND 1-1/2" LINE TO EACH WATER CLOSET.
5 1" COLD WATER DOWN IN CHASE. EXTEND 1" LINE TO SERVE WALL HYDRANTS, INSTANTANEOUS WATER HEATERS, AND LAVATORIES. EXTEND 3/4" LINE TO SERVE ELECTRIC WATER FOUNTAIN.
6 ELEVATED CONDENSATE FLOOR SINK. RE: PLUMBING DETAILS SHEET FOR MORE INFORMATION.
7 2" VENT FROM BELOW.
8 2" VENT UP.
9 2" VENT FROM EDF-1 UP. 2" SAN FROM EDF-1 DOWN. 4" SAN DOWN THROUGH SLAB.
10 2" SANITARY DOWN, 2" VENT UP.
11 PROVIDE WYE-TAILPIECE FOR DMS-1 CONDENSATE DRAIN. RE: M201 FOR ADDITIONAL INFORMATION.
12 4" SANITARY FROM WATER CLOSET(S) EXTENDS ABOVE SLAB, 2" VENT UP FROM WATER CLOSET(S). UPSIZE VENT PIPE TO 3" AT THE TEE AND VENT THROUGH ROOF.
13 4" SANITARY DOWN FROM WCO ABOVE.
14 8" STORM FROM ROOF DRAIN ABOVE.
15 8" STORM DOWN TO BELOW SLAB.
16 8" STORM OVERFLOW FROM OVERFLOW DRAIN ABOVE.
17 8" STORM OVERFLOW DOWN TO DOWNSPOUT NOZZLE. REFER TO ARCHITECTURAL DRAWING FOR EXACT ELEVATION.

N

1 **PLUMBING PLAN - LEVEL 1 - ENLARGED - NEW GYM**
Scale: 1/4" = 1'-0"

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	Dwn.	Dsgn.	Ckkd. YYYY.MM.DD

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
PLUMBING ENLARGED PLAN - LEVEL1 - NEW GYM

Project No. 214001246
Scale As indicated
Revision 1
Drawing No. P301-PES

10/7/2025 2:26:23 PM
ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

PLUMBING GENERAL NOTES

1. WITHIN THE EXISTING BUILDING, EXISTING WATER, WASTE AND VENT SERVICES ARE TO BE MODIFIED AS REQUIRED AND REUSED FOR THE INSTALLATION OF NEW AND/OR RELOCATED PLUMBING FIXTURES. REFER TO PLUMBING FLOOR PLANS FOR POINTS OF CONNECTION.
2. WITHIN THE EXISTING BUILDING, SAWCUT AND REMOVE EXISTING FLOOR SLAB AS REQUIRED TO PROVIDE NEW AND/OR RELOCATED PLUMBING FIXTURES, CLEANOUTS, AND UNDERSLAB WASTE AND VENT PIPING. PATCH AND REFINISH FLOOR TO MATCH EXISTING.
3. IN AREAS WHERE THE FLOOR SLAB IS REMOVED, CONTRACTOR SHALL ALSO REMOVE UNDERSLAB WASTE AND VENT PIPING WHICH SERVES FIXTURES DESIGNATED FOR REMOVAL. PRIOR TO ANY REMOVAL, FIELD VERIFY THAT LINES TO BE REMOVED DO NOT SERVE ANY EXISTING FIXTURES TO REMAIN OR NEW FIXTURES TO BE INSTALLED.
4. IN AREAS WHERE THE FLOOR SLAB IS NOT REMOVED, CONTRACTOR SHALL ABANDON IN PLACE ANY UNDERSLAB WASTE AND VENT PIPING NO LONGER NEEDED, UNLESS THE PIPING MUST BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION. IF NEW WORK DOES NOT NECESSITATE THEIR REMOVAL, CUT AND PLUG SUCH LINES BELOW SLAB, AND PATCH FLOOR TO MATCH EXISTING.
5. FIELD VERIFY EXACT LOCATION, SIZE, DEPTH, DIRECTION OF FLOW, CAPACITY, PIPE MATERIAL AND CONDITION OF EXISTING WASTE PIPING PRIOR TO BEGINNING CONSTRUCTION. ENSURE THAT PROPER CONNECTIONS TO AND EXTENSION OF SUCH UTILITIES CAN BE MADE.
6. WASTE LINES TO BE RE-USED OR RECONNECTED TO SHALL BE THOROUGHLY RODDED OUT AND FLUSHED TO ENSURE THEY ARE FREE FROM BLOCKAGES.
7. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING BELOW SLAB WITH COLUMN FOOTINGS, GRADE BEAMS, UNDERGROUND PLUMBING AND ELECTRICAL UTILITIES, AND OTHER SUB-SURFACE BUILDING ELEMENTS.
8. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND CONDUIT. SHOULD A CONFLICT OCCUR THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
9. CONTRACTOR TO COORDINATE ALL REMODEL WORK WITH THE WORK OF OTHER TRADES TO AVOID CONFLICTS AND TO MINIMIZE INTERRUPTION OF SERVICES.
10. COORDINATE ALL FIXTURE AND EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS WITH LATEST ARCHITECTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO ANY ROUGH-INS.
11. DO NOT ROUGH-IN FROM THESE DRAWINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS.
12. CONTRACTOR TO FIELD VERIFY AS NECESSARY THE EXACT ROUTING AND SIZES OF ALL PIPING.
13. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE, INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
14. THE PROPER INSTALLATION OF NEW FIXTURES AND THE PROPER CONTINUED OPERATION OF EXISTING FIXTURES TO REMAIN SHALL DETERMINE THE EXTENT AND NATURE OF PLUMBING REMODEL WORK.
15. EACH VENT SHALL TERMINATE VERTICALLY NOT LESS THAN 6" ABOVE ROOF, MAINTAIN MINIMUM 10'-0" DISTANCE BETWEEN VENT TERMINALS THROUGH ROOF AND ALL FRESH AIR INTAKES, AND A MINIMUM 5'-0" FROM ANY EXTERIOR WALL.
16. PRIOR TO BEGINNING CONSTRUCTION, COORDINATE BUILDING BACKFLOW PREVENTION REQUIREMENTS WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PROVIDE AS DIRECTED.

SHOCK ARRESTOR SCHEDULE

P.D.I. SYMBOLS:	FIXTURE UNITS:	THREADED CONNECTION	CERTIFICATION
A	1 - 11	1/2"	ASSE 1010
B	12 - 32	3/4"	ASSE 1010
C	33 - 60	1"	ASSE 1010
D	61 - 113	1"	ASSE 1010
E	114 - 154	1"	ASSE 1010
F	155 - 330	1"	ASSE 1010

TANKLESS ELECTRIC WATER HEATER SCHEDULE

ITEM NO.	TEMP RISE AT 0.5 GPM (°F)	WATER TEMP MAXIMUM (°F)	STORAGE CAPACITY	ACTIVATION FLOW (GPM)	TOTAL KW INPUT	VOLT/PHASE	MANUFACTURER / COMMENTS
IEWH-1	66	120	NA	0.3	4.9	208V/1PH.	Eemax, AccuMix® AM007240T
1 IEWH-2	66	120	NA	0.3	4.9	208V/1PH.	Eemax, AccuMix® AM007240T

NOTES:

1. 30 PSI MINIMUM OPERATING PRESSURE REQUIRED. CONTRACTOR SHALL VERIFY AVAILABLE WATER PRESSURE PRIOR TO PURCHASING AND INSTALLING EQUIPMENT.
2. INSTALL HEATER AND ROUTE PIPING BASED ON MANUFACTURERS RECOMMENDATIONS.
3. UNIT SHALL HAVE REPLACEABLE FILTER IN THE INTEL CONNECTOR.
4. HEATER SHALL BE PROVIDED WITH ASSE 1070 APPROVED INTEGRATED MIXING VALVE TO CONFORM TO UPC 407.3.
5. MOUNTING LOCATION MUST BE LOCATED WITHIN TWO FEET OF FIXTURE.

PLUMBING FIXTURE SCHEDULE

TYPE: WC-1 (T.A.S. COMPLIANT)
DESCRIPTION: WATER CLOSET, WALL HUNG, WHITE VITREOUS CHINA WITH EVERCLEAN, 1.28 GALLON PER FLUSH SIPHON JET ACTION, ELONGATED CLOSET BOWL WITH 1-1/2" TOP SPUD AND BOLT COVERS. AMERICAN STANDARD "AFWALL" #3351.101
SEAT: ELONGATED OPEN FRONT WHITE PLASTIC SEAT WITH SELF SUSTAINING CONCEALED CHECK HINGES. BEMIS #1955SSCT.
FLUSH VALVE: 1.28 GALLON FLUSH CYCLE. EXPOSED, DIAPHRAGM TYPE, CHROME PLATED CLOSET FLUSHOMETER, VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD. SLOAN ROYAL #111-1.28.
CARRIER: WADE #311 AND #330 SERIES -AM1.
ROUGH-IN: 4" WASTE, 2" VENT, 1" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: L-1 (T.A.S. COMPLIANT) METERED - STUDENT - TEMPERED
DESCRIPTION: LAVATORY, WALL HUNG, WHITE VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, 4" FAUCET SPREAD. AMERICAN STANDARD "LUCERNE" #0355.012.
FAUCET: CHROME PLATED BRASS DECK MOUNTED, 4" FIXED CENTERS LAVATORY FAUCET WITH COVER PLATE, 4-1/8" SPOUT, AND PUSH BUTTON HANDLE INDEXED "PUSH". SELF CLOSING METERING CARTRIDGE, VANDAL PROOF 0.5 GPM LAMINAR SPRAY. CHICAGO MODEL #857-E280S-665PSHAB.
MIXING VALVE: ASSE 1070 CERTIFIED POINT OF USE MIXING VALVE, LEAD FREE BRONZE BODY, INTEGRAL CHECK VALVES, COMPRESSION FITTINGS, COPPER ENCAPSULATED THERMOSTAT ASSEMBLY WITH POLYMER THERMOPLASTIC SHUTTLE. LEONARD 170-LF-BRKT. (105 F)
STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TAILPIECE. MCGUIRE #155A.
P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE #8872.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE #2165LK.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS. WADE #520-08.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER - TEMPERED OUT. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: EDF-1 (T.A.S. COMPLIANT) - INTERIOR
DESCRIPTION: WALL HUNG, BOTTLE FILLING STATION AND BI-LEVEL VANDAL-RESISTANT COOLER HIGH EFFICIENCY NON-FILTERED REFRIGERATED STAINLESS. CHILLING CAPACITY OF 8.0 GPH (GALLONS PER HOUR) OF 50F DRINKING WATER, BASED ON 80F INLET WATER AND 90F AMBIENT, PER ASHRAE 18 TESTING. FEATURES SHALL INCLUDE ANTIMICROBIAL GREEN COUNTER, HIGH EFFICIENCY, LAMINAR FLOW, REAL DRAIN, SANITARY SENSOR ACTIVATED, VANDAL RESISTANT SMARTFLOW BUBBLER. ELECTRONIC BOTTLE FILLER SENSOR WITH MECHANICAL FRONT BUBBLER BUTTON ACTIVATION. PRODUCT SHALL BE WALL MOUNT. HALSEY TAYLOR #HTHB-HVRGRN8BL-NF. PROVIDE CANE TOUCH APRON IN ALL STAINLESS STEEL ON ALL UNITS MOUNTED WITH A CLEAR KNEE SPACE GREATER THAN 27" HIGH. ELKAY APRON #98324C.
P-TRAP: 1-1/4" CHROME PLATED CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON. MCGUIRE #8872.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE #2165LK.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE SLAB WITH (4) 1/2" BOLTS. ADJUSTABLE SLEEVE FOR CONNECTION TO HANGER PLATE PROVIDED BY FIXTURE MANUFACTURER. WADE #403-BL.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: FS-1
SERVICE: MECHANICAL ROOM EQUIPMENT CONDENSATE.
DESCRIPTION: CAST IRON FLANGED RECEPTOR WITH SEEPAGE HOLES, ACID RESISTANT COATED INTERIOR, NICKEL BRONZE RIM AND SECURED ADA GRATE. 12" SQUARE FLOOR SINK WITH 8" DEEP DOME BOTTOM STAINER. WHITE ABS SEDIMENT BUCKET. FLASHING CLAMP, NB RIM AND ½ STAINLESS STEEL GRATE. TRAP PRIMER. JAY R SMITH # 3150-C-12-NBSS-P
TRAP PRIMER: SERVED BY ELECTRONIC TRAP PRIMER, REFER TO PLANS.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH EQUIPMENT PLACEMENT.

TYPE: FD-1
SERVICE: TOILET ROOMS AND GENERAL USE
DESCRIPTION: FLOOR DRAIN, DUCO CAST IRON BODY WITH FLASHING COLLAR AND ADJUSTABLE STRAINER HEAD WITH ADA GRATE. 6" ROUND TOP, NICKLE BRONZE STRAINER WITH STAINLESS STEEL GRATE, TRAP PRIMER CONNECTION 1/2", WITH VANDAL PROOF SCREWS. JAY R SMITH #2005-A06NBSS-P050-U
TRAP PRIMER: SERVED BY ELECTRONIC TRAP PRIMER, REFER TO PLANS.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS / FLOOR CONSTRUCTION.

TYPE: TP-1 (FLUSH MOUNT)
SERVICE: E104, E105, AND MECH YARD 18.
DESCRIPTION: ELECTRONIC TRAP PRIMER WITH FLUSH MOUNT CABINET AND STAINLESS STEEL ACCESS DOOR, SOLENOID VALVE, 1/2" COMPRESSION FITTING ATMOSPHERIC VACUUM BREAKER, CIRCUIT BREAKER, AND TIMER. 120V. PRECISION PLUMBING PRODUCTS "PRIME-TIME" #PT-4.
ROUGH-IN: 3/4" COLD WATER.

TYPE: RD-1
DESCRIPTION: ROOF DRAIN, DUCO CAST IRON BODY WITH COMBINED FLASHING CLAMP AND GRAVEL STOP WITH ALUMINUM DOME. SUMP RECEIVER AND UNDERDECK CLAMP. JAY R SMITH # 1010-AD-R-C FOR 8" AND SMALLER. #1010-20" DIA-AD-R-C FOR 10" AND LARGER
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

TYPE: RD-2
DESCRIPTION: OVERFLOW ROOF DRAIN. DUCO CAST IRON BODY, FLASHING CLAMP AND GRAVEL STOP WITH ALUMINUM DOME, AND CAST IRON WATER DAM. SUMP RECEIVER, UNDERDECK CLAMP. JAY R SMITH # 1080-AD-R-C FOR 8" AND SMALLER OUTLET. # 1080-20" DIA-AD-R-C FOR 10" AND LARGER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

TYPE: DN-1
DESCRIPTION: OVERFLOW DOWNSPOUT NOZZLE WITH HINGED PERFORATED COVER. VANDAL PROOF. FABRICATED STAINLESS STEEL WITH NO HUB OUTLET AND FLANGE TO SECURE NOZZLE TO WALL. INSTALL AT 12" ABOVE FINISHED SLAB OR AS DIRECTED BY ARCHITECT. JAY R SMITH : 1775 - U
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

TYPE: WH-1 - COLD WATER - NON FREEZ
DESCRIPTION: ENCASED, LEAD-FREE, NON-FREEZ WALL HYDRANT. INTEGRAL BACKFLOW PREVENTER WITH ANTI-SIPHON TECHNOLOGY, COPPER CASING, ALL-BRONZE INTERIOR COMPONENTS WITH 1/2 TURN CERAMIC CARTRIDGE, COMBINATION 3/4" FEMALE SOLDER AND 3/4" MALE PIPE THREAD INLET CONNECTION, AND 3/4" MALE HOSE CONNECTION. 304 SS HOUSING WITH LOCKING HINGED. INSTALL WITH BOTTOM OF HYDRANT 18" A.F.F. WADE #8701-L6.
ROUGH-IN: 3/4" COLD WATER.

TYPE: WH-2 - COLD WATER - RESTROOMS
DESCRIPTION: ENCASED, LEAD-FREE, INTERIOR WALL HYDRANT. INTEGRAL BACKFLOW PREVENTER WITH ANTI-SIPHON TECHNOLOGY, COPPER CASING, ALL-BRONZE INTERIOR COMPONENTS WITH 1/2 TURN CERAMIC CARTRIDGE, COMBINATION 3/4" FEMALE SOLDER AND 3/4" MALE PIPE THREAD INLET CONNECTION, AND 3/4" MALE HOSE CONNECTION. 304 SS FLANGED BOX WITH LOCKING HINGED COVER. INSTALL WITH BOTTOM OF HYDRANT 18" A.F.F. WADE #8708
ROUGH-IN: 3/4" COLD WATER.

TYPE: WCO
DESCRIPTION: WALL CLEANOUT. CAST IRON CLEANOUT FERRULE WITH COUNTERSUNK BRONZE PLUG AND ROUND STAINLESS COVER PLATE WITH CENTER SECURING SCREW. WADE #6550-75 WITH #8304-VP. PROVIDE WADE #8560 CAST IRON CLEANOUT TEE IN LIEU OF FERRULE AS REQUIRED FOR WALL CONSTRUCTION.

TYPE: FCO
DESCRIPTION: FLOOR CLEANOUT, PAINTED CAST IRON ADJUSTABLE FLOOR CLEANOUT WITH ABS THREADED ADJUSTABLE HOUSINGS, FLANGED CAST IRON FERRULE, INTEGRAL CLAMPING COLLAR, GASKETED ABS THREADED PLUG AND SCORIATED STAINLESS STEEL TOP. WADE #6000-85. FOR CARPETED FLOORS PROVIDE WADE #6000-85-CM. FOR TERRAZO TILES #6000-85-U, FOR RECESSED TILE #6000-85-T. FOR VCT TILES COORDINATE WITH MANUFACTURER FOR INSTALLATION INSTRUCTIONS.

TYPE: ECO
DESCRIPTION: EXTERIOR CLEANOUT TO GRADE, PAINTED CAST IRON BODY WITH ANCHOR FLANGE ADJUSTABLE TOP ASSEMBLY, AND ROUND SCORIATED VANDAL RESISTANT DUCTILE IRON TRACTOR TYPE COVER. IF LOCATED IN ASPHALT OR DIRT PROVIDE 18"X18"X12" CONCRETE PAD. WADE #6000-Z.

GENERAL NOTES

ALL LAVATORIES AND SINKS SHALL BE SUPPLIED WITH HOT AND COLD WATER (UNLESS NOTED TO BE COLD WATER ONLY) TO FAUCETS AS INDICATED ON PLANS AND FIXTURE SCHEDULE. PROVIDE CHROME PLATED BRASS SUPPLY STOPS WITH LOOSE KEYS AND WALL ESCUTCHEONS. PROVIDE CHROME PLATED FLEXIBLE RISERS OF SIZE REQUIRED TO PROPERLY CONNECT FIXTURES. PROVIDE 17 GAUGE CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON (UNLESS NOTED TO BE AN ACID WASTE FIXTURE). REFER TO FIXTURE SCHEDULE FOR MINIMUM SIZES OF PLUMBING FIXTURE ROUGH-INS.

INSULATION KITS AT ALL LAVATORIES AND SINKS REQUIRED TO BE T.A.S. ACCESSIBLE (MCGUIRE OR TRUEBRO). ALL SUCH FIXTURES AND FINAL INSTALLATIONS SHALL COMPLY WITH THE STATE ACCESSIBILITY STANDARDS REQUIREMENTS.

INSERT TRAP GUARDS AFTER FINAL RODDING OF DRAINS. INSTALL TRAP GUARD WITH CLEAR SILICONE CAULK FOR GAS-TIGHT SEAL. FOR DRAIN RODDING AFTER INSTALLATION. INSERT SEWER TAPE THROUGH LIGHTLY GREASED 1-1/2" PVC PIPE TO PROTECT TRAP GUARD.

PLUMBING PIPING LEGEND

SYMBOLS	DESCRIPTION
SAN	SANITARY OR WASTE PIPING ABOVE GRADE (SAN)
SAN	SANITARY OR WASTE PIPING BELOW GRADE (SAN)
GW	GREASE WASTE PIPING (GW)
GW	GREASE WASTE PIPING BELOW GRADE (GW)
SD	STORM DRAIN PIPING (SD)
SD	STORM DRAIN PIPING BELOW GRADE (GW)
SSD	SUB-SOIL DRAIN OR FOOTING DRAIN (SSD)
AW	ACID WASTE PIPING (AW)
AW	ACID WASTE PIPING BELOW GRADE (AW)
PD	PUMPED DISCHARGE (PD)
CD	CONDENSTATE DRAIN PIPING (CD)
D	CONDENSTATE - INDIRECT DRAIN PIPING (D)
	VENT PIPING (V)
CW	COLD WATER PIPING (CW)
HW	HOT WATER PIPING (HW)
HWR	HOT WATER RETURN PIPING (HWR)
SCW	SOFT COLD WATER PIPING (SCW)
CDW	CHILLED DRINKING WATER PIPING (CDW)
TP	TRAP PRIMER LINE (TP)
F	FIRE PROTECTION PIPING (F)
AS	AUTOMATIC SPRINKLER PIPING (AS)
GAS	NATURAL GAS PIPING (G)
GV	GAS VENT PIPING (GV)
AIR	COMPRESSED AIR PIPING (A)
	FLOW DIRECTIONAL ARROW
	SHUT-OFF VALVE
	BALANCING VALVE (BV)
SV	SOLENOID VALVE (SV)
	BALL VALVE (BV)
	BUTTERFLY VALVE
	LUBRICATED PACKED PLUG STOP STOP COCK (PC)
	HORIZONTAL SWING CHECK
	UNION
	HORIZONTAL SWING CHECK
	REDUCER OR INCREASER
	ECCENTRIC REDUCER
	REDUCED PRESSURE BACKFLOW PREVENTER (RPBFP)
	PIPING DOWN
	RISE OR DROP PIPING
	PIPING UP -OR- PIPING UP & DOWN
	CAP ON END OF PIPE
	CLEANOUT (WALL OR CEILING) (CO)
	FLOOR CLEANOUT (FCO)
	EXTERIOR CLEANOUT WITH 18"x18"x4" CONCRETE PAD (ECO)
	TWO-WAY CLEANOUT (PROVIDE 18"x24"x4" CONCRETE PAD OUTSIDE)
	FIRE DEPARTMENT VALVE AT RISER
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
PRV	PRESSURE REDUCING VALVE (PRV)
	BRANCH CONNECTION OUT OF TOP
	BRANCH CONNECTION OUT OF BOTTOM
	BRANCH CONNECTION OUT OF SIDE
	WYE & 1/8TH BEND BRANCH CONNECTION
	WYE BRANCH CONNECTION
	HOSE BIBB
	PRESSURE GAUGE WITH COCK
	THERMOMETER
	GAS PRESSURE REGULATOR
	TEST COCK
	GAS METER
	WALL HYDRANT
	VALVE IN RISE
	ASME TEMPERATURE & PRESSURE RELIEF VALVE
	VACUUM RELIEF VALVE
	ANGLE VALVE
	OS&Y VALVE
	ROOF DRAIN
1	REFER TO KEYED NOTE
FS	FLOW SWITCH
	FLOOR SINK (FS)
	FLOOR DRAIN (FD)
	FLOOR DRAIN WITH P-TRAP (FD)
	FLOOR DRAIN WITH P-TRAP AT 45° ANGLE (FD)
	HUB DRAIN (HD)
	ACCESS PANEL FOR TRAP PRIMER OR SHOCK ABSORBER
AP1	ACCESS PANEL LOCATION SYMBOL
A	SHOCK ABSORBER
	AIR CHAMBER
(E)	EXISTING
(N)	NEW
VTR	VENT THRU ROOF
B.F.F.	BELOW FINISHED FLOOR
A.F.F.	ABOVE FINISHED FLOOR
	NEW CONNECTION
IE=100.00'	INVERT ELEVATION
1	DELTA CHANGE SYMBOL
P 1 4" VTR	RISER FLAG

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Notes

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Permit/Seal

BRADLEY KALMANS — 80219 — LICENSED — PROFESSIONAL ENGINEER
10-10-2025

Client/Project Logo

2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS
4208 CROW VALLEY DR, MISSOURI CITY, TX 77459

Title
PLUMBING LEGENDS AND SCHEDULES

Project No. 214001246
Scale 1/2" = 1'-0"
Revision 1
Drawing No. P601-PES

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STRUCTURAL ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	LLH	LONG LEG HORIZONTAL
		LLV	LONG LEG VERTICAL
ACI	AMERICAN CONCRETE INSTITUTE	LW	LONG WAY
ADDL	ADDITIONAL	MATL	MATERIAL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	MAX	MAXIMUM
		MC	MOMENT CONNECTION, MISCELLANEOUS CHANNEL
AISI	AMERICAN IRON AND STEEL INSTITUTE		
		MECH	MECHANICAL
ANSI	AMERICAN NOTIONAL STANDARD INSTITUTE	MANUF	MANUFACTURER(S)
		MID	MIDDLE
ARCH	ARCHITECTURAL	MISC	MISCELLANEOUS
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	MO	MASONRY OPENING
		NIC	NOT IN CONTRACT
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	NOM	NOMINAL
		NTS	NOT TO SCALE
AWS	AMERICAN WELDING SOCIETY	OC	ON CENTER
BC	BOTTOM CHORD	OD	OUTSIDE DIAMETER
BOD	BOTTOM OF DECK	OPNG	OPENING
BOT	BOTTOM	OPP	OPPOSITE
BP	BASE PLATE	PL	PLATE
BRG	BEARING	PLF	POUNDS PER LINEAR FOOT
C	CHANNEL, COMPRESSION, CAMBER	PROJ	PROJECTION
CIP	CAST IN PLACE	PSI	POUNDS PER SQUARE INCH
CL	CENTER LINE	PSF	POUNDS PER SQUARE FOOT
CLR	CLEAR	R	RADIUS
COL	COLUMN	RD	ROOF DRAIN
CONC	CONCRETE	RE	REFER, REFERENCE
CONT	CONTINUOUS	REINF	REINFORCEMENT (D), (ING), (MENT)
CSJ	CONSTRUCTION JOINT	REQD	REQUIRED
CTJ	CONTROL JOINT	REV	REVISION
DET	DETAIL	RO	ROUGH OPENING
DIA	DIAMETER	SCHED	SCHEDULE(D)
DIAG	DIAGONAL	SDI	STEEL DECK INSTITUTE
DP	DOUBLE PITCHED	SECT	SECTION
DWG	DRAWING	SF	SQUARE FEET
DWL	DOWEL	SIM	SIMILAR
EA	EACH	SJI	STEEL JOIST INSTITUTE
EF	EACH FACE	SPEC	SPECIFICATION(S)
EJ	EXPANSION JOINT	SQ	SQUARE
EL	ELEVATION	STD	STANDARD
ELEC	ELECTRICAL	STIF	STIFFINER
ELEV	ELEVATOR	STL	STEEL
EOD	EDGE OF DECK	STR	STRUCTURAL
EOS	EDGE OF SLAB	T	TOP, TENSION
EQ	EQUAL(LY)	T&B	TOP AND BOTTOM
EXIST	EXISTING	T&G	TONGUE AND GROOVE
EXP	EXPANSION	TEMP	TEMPERATURE
FD	FLOOR DRAIN	THK	THICK(NESS)
FFE	FINISH FLOOR ELEVATION	TOC	TOP OF CONCRETE
FND	FOUNDATION	TOF	TOP OF FOOTING
FS	FAR SIDE	TOJ	TOP OF JOIST
FT	FEET, FOOT	TOL	TOP OF LEDGE
FTG	FOOTING	TOP	TOP OF PANEL
GA	GAUGE	TOS	TOP OF STEEL
GALV	GALVANIZED	TOW	TOP OF WALL
GB	GRADE BEAM	TRD(S)	TREAD(S)
HORIZ	HORIZONTAL	TYP	TYPICAL
HSS	HOLLOW STRUCTURAL SECTION	UL	UNDERWRITERS LABORATORY
ID	INSIDE DIAMETER	UNF	UNIFORM
IN	INCHES	UON	UNLESS OTHERWISE NOTED
JST	JOIST	V	BEAM AND SHEAR
JT	JOINT	VB	VERTICAL BRACE
K	KIPS, JOIST SERIES	VERT	VERTICAL
KB	KNEE BRACE	W	WALL, EST, WIDTH, WIDE FLANGE
L	SPAN, LEFT, STEEL ANGLE	W/	WITH
Ld	DEVELOPMENT LENGTH	WL	WIND LOAD, WATER LEVEL, WORKING LINE
LL	LIVE LOAD		
LLBB	LONG LEG BACK TO BACK	WP	WATER PROOF, WORKING POINT

STRUCTURAL LEGEND

P1	PRECAST CONCRETE PANEL MARK	S1	SPAN DIRECTION OF A MILD REINFORCED CONCRETE SLAB W/ MAIN REINFORCING MARK S1
F1	SPREAD FOOTING MARK	DECK TYPE 1	SPAN OF 5 1/2" THICK CONCRETE SLAB W/ TYPE 1 STEEL DECK
P1	PLINTH MARK	DECK TYPE 1	SPAN DIRECTION OF BARE STEEL DECK TYPE 2 WITH NO CONCRETE TOPPING
C1	COLUMN MARK	20KSP	SPECIAL OPEN WEB K SERIES STEEL JOIST, SEE PLAN NOTES FOR LOAD REQUIREMENTS
CF1	CONTINUOUS FOOTING MARK	W27X84 <24'-0">	STANDARD AISC ROLLED SHAPE OF W27X84 AT ELEVATION 24'-0" ABOVE DATUM
RW1	RETAINING WALL MARK	W27X84 cr1"	STANDARD AISC ROLLED SHAPE OF W27X84 WITH A 1" UPWARD CAMBER
BP1	BASE PLATE MARK	W27X84 (10)	STANDARD AISC ROLLED SHAPE OF W27X84 W/ 10 HSA (EQUALLY SPACED)
A	STRUCTURAL STEEL COLUMN SPLICE TYPE MARK	W27X84 (10, 6, 12) WBEAM / WBEAM	STANDARD AISC ROLLED SHAPE OF W27X84 WITH 28 HSA EQUALLY SPACED FROM BOTTOM TO TOP AS 10 CONNECTORS / 6 CONNECTORS / 12 CONNECTORS
24/24	STRAIGHT SHAFT PIER (SHAFT Ø)		
24/48	DRILLED PIER (SHAFT AND BELL Ø)	BEAM	CONNECTED TO A ROLLED SHAPE COLUMN WITH A STANDARD WELDED MOMENT CONNECTION STANDARD AISC ROLLED SHOPE BEAM
B1 GB1 1B1	MILD REINFORCED CONCRETE BEAM MARK		
J1	MILD REINFORCED CONCRETE JOIST MARK	6"	SLAB DEPRESSION AND AMOUNT

STRUCTURAL CONCEPT, STANDARDS AND LOADS

A. DESIGN CONCEPT:
1. THE STRUCTURE AS SHOWN HAS BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS AND DESIGN STANDARDS TO SUPPORT THE FINAL BUILDING SERVICE LOADS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADDITIONAL SUPPORTS FOR THE STRUCTURE IF NECESSITATED BY THE CONSTRUCTION SEQUENCE OR METHODS OF FABRICATION, HANDLING, ERECTION, AND OTHER CONSTRUCTION OPERATIONS.

B. BUILDING CODES AND DESIGN STANDARDS:
1. INTERNATIONAL BUILDING CODE, 2021 EDITION.
2. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE); MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-22, AS AMENDED.
3. AMERICAN CONCRETE INSTITUTE (ACE), BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318, AS AMENDED.
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, 15TH EDITION (ASD), 2005, AS AMENDED.
5. AMERICAN WELDING SOCIETY (AWS).
6. STEEL JOIST INSTITUTE (SJI), STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOIST AND JOIST GIRDERS.
7. STEEL DECK INSTITUTE (SDI), DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, ROOF DECKS, AND CELLULAR METAL FLOOR DECK WITH ELECTRICAL DISTRIBUTION.
8. AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION.

C. GRAVITY LOADS:
1. SUPER-IMPOSED LOADS ARE GIVEN IN POUNDS PER SQUARE FOOT (PSF)

BUILDING AREA	DEAD LOAD (PSF)	LIVE LOAD (PSF)
SLAB ON GRADE	0	100

D. LATERAL DESIGN LOADS (CLOSED STRUCTURE):
1. WIND LOADS FOR AN BASIC DESIGN WIND SPEED OF 143 MPH (ASD WIND SPEED OF 110 MPH), 3-SECOND GUST, WITH EXPOSURE B AND A RISK CATEGORY III.

CONCRETE

A. CONCRETE SCHEDULE:

BUILDING COMPONENT	28 DAY CYLINDER COMPRESSIVE STRENGTH POUNDS PER SQUARE INCH (PSI)					
	NORMAL WEIGHT			MAX AGGREGATE SIZE (IN)	SUMP (IN)	W/C RATIO
	3000	3500	4000			
DRILLED PIERS	●			1 1/2"	5-7	0.55
SLAB ON GRADE		●		1"	4-6	0.50
GRADE BEAMS AND PLINTHS		●		1"	4-6	0.50
ALL OTHER CONCRETE	●			1"	4-6	0.52

B. PROVIDE DEFORMED NEW BILLET STEEL BARS CONFORMING TO ASTM A615, GRADE 60. ALL REINFORCING STEEL SHALL BE SECURELY HELD IN PLACE; PROVIDE ADDITIONAL BARS OR STIRRUPS FOR SUPPORT AS REQUIRED.
C. WELDED WIRE FABRIC SHALL CONSIST OF FLAT SHEETS AND SHALL CONFORM TO ASTM A185, WITH A MINIMUM YIELD STRENGTH OF 65.0 KSI
D. PROVIDE FULL EMBEDMENT WITH STANDARD 90 DEGREE HOOKS FOR ALL DOWELS. IF NOT OTHERWISE SPECIFIED, THE DOWEL SIZE AND SPACING SHALL BE THE SAME AS THE MAIN REINFORCING.
E. WHEN REINFORCING STEEL IN GRADE BEAMS, WALLS, SLABS AND BEAMS, IS NOTED AS CONTINUOUS, SPLICE REINFORCING STEEL ONLY WHEN UNAVOIDABLE DUE TO STOCK LENGTHS. STAGGER ALL SPLICES A MINIMUM OF 4'-0", ADJACENT BAR SPLICES ARE NOT ACCEPTABLE.
a. LOCATE THE TOP BAR SPLICES WITHIN THE MIDDLE HALF OF THE SPAN AND LOCATE THE BOTTOM BAR SPLICES AT SUPPORTS OR BETWEEN SUPPORTS AND 1/3 SPAN POINT, UNLESS NOTED OTHERWISE ON PLANS, DETAILS OR SCHEDULES.
F. PROVIDE INTERIOR AND EXTERIOR HORIZONTAL LAPPED CORNER BARS AT ALL CORNERS TO MATCH THE SIZE, TYPE AND SPACING OF THE WALL AND GRADE BEAM HORIZONTAL REINFORCING.
G. UNLESS SPECIFICALLY NOTED, SCHEDULED OR DETAILED OTHERWISE, PROVIDE DEVELOPMENT LENGTH FOR REINFORCING IN CONCRETE COMPONENTS IN ACCORDANCE WITH THE SCHEDULE IN NOTE H. BELOW. THIS SCHEDULE SHALL APPLY TO ALL DEVELOPMENT LENGTHS NOT OTHERWISE NOTED, DETAILED OR SCHEDULED IN THE DRAWINGS OR SPECIFICATIONS.
H. REINFORCING BAR DEVELOPMENT LENGTHS (Ld) IN INCHES FOR VARIOUS CONCRETE STRENGTHS IN POUNDS PER SQUARE INCH (PSI). TOP BARS ARE DEFINED AS HORIZONTAL REINFORCING SO PLACED IN A MEMBER THAT MORE THAN 12 INCHES OF CONCRETE IS CAST BELOW THE BAR. ALL OTHER CONDITIONS ARE CONSIDERED BOTTOM BARS FOR DEVELOPMENT AND SPLICE LENGTH PURPOSES.
1. WHEN TWO BARS OF DIFFERENT SIZES ARE LAPPED, THE SMALLER SIZE SHALL GOVERN THE LAP LENGTH UNLESS SPECIFICALLY NOTED.
2. WELDED OR MECHANICAL SPLICES CAPABLE OF DEVELOPING 125% OF THE BAR YIELD STRENGTH MAY BE USED IN LIEU OF THE LAPS. SUCH SPLICES MAY BE EITHER FULL BUTT WELDS OR SERIES "C CADWELDS OR EQUAL".

BAR SIZE GRADE 60	Ld FOR TOP BARS 28 DAY CYLINDER CONCRETE STRENGTH (PSI)				Ld FOR BOTTOM BARS 28 DAY CYLINDER CONCRETE STRENGTH (PSI)			
	3000 / 3500	4000	5000	6000	3000 / 3500	4000	5000	6000
#3	22	19	17	16	17	15	13	12
#4	29	25	23	21	22	19	17	16
#5	36	31	28	26	28	24	22	20
#6	43	37	34	31	33	29	26	24
#7	63	54	49	45	48	42	38	34
#8	72	62	56	51	55	48	43	39
#9	81	70	62	57	62	54	48	44
#10	89	78	69	63	69	60	53	49
#11	98	85	76	70	76	66	59	54

J. AT LAP SPLICES, PROVIDE LAP SPLICE LENGTHS FOR REINFORCING BARS 1.3 TIMES THE Ld SHOWN IN THE TABLE IN NOTE H ABOVE.
K. THE GENERAL NOTES, LAP LENGTHS OR DETAILS PERTAINING TO REINFORCING STEEL AS SHOWN ON THE DETAIL SHEETS OR OTHER SCHEDULES SHALL SUPERSEDE THE NOTES SHOWN ON THIS SHEET.
L. PROVIDE THE FOLLOWING COVER FOR CAST-IN-PLACE CONCRETE REINFORCING.
1. UNIFORMED SURFACES IN CONTACT WITH EARTH: 3 INCHES
2. UNIFORMED SURFACES OVER MOISTURE BARRIER: 2 INCHES
3. FORMED SURFACES EXPOSED TO EARTH OR WEATHER
- #6 AND LARGER: 2 INCHES
- #5 AND SMALLER: 1 1/2 INCHES
4. FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER
- SLABS AND WALLS: 3/4 INCH
- BEAMS AND COLUMNS: 1 1/2 INCHES

GENERAL NOTES FOR CONSTRUCTION

A. CONSTRUCTION METHODS, PROCEDURES AND SEQUENCES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE CONTRACTOR SHALL TAKE ALL THE NECESSARY MEANS TO MAINTAIN AND PROTECT THE STRUCTURAL INTEGRITY OF ALL CONSTRUCTION AT ALL STAGES.
B. ALL PROPOSED SUBSTITUTIONS MUST BE EQUAL OR BETTER AND SHALL BE REVIEWED BY THE ARCHITECT/ENGINEER PRIOR TO ANY PERTINENT WORK AND PRIOR TO THE AWARD OF THE CONTRACT.
C. NOT ALL OPENINGS AND OTHER COMPONENTS THAT ARE REQUIRED HAVE BEEN SHOWN IN THE STRUCTURAL DRAWINGS. COORDINATE WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND VERIFY THE LOCATIONS AND SIZES OF ALL CHASES, INSERTS, OPENINGS, SLEEVES, FINISHES, DEPRESSIONS, PADS AND OTHER PROJECT REQUIREMENTS. FLOOR PLAN WILL BE FURNISHED FOR THAT PURPOSE.
D. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL DRAWINGS TO DETERMINE WHERE OPENINGS ARE REQUIRED IN REINFORCED CONCRETE BEAMS, SLABS AND WALLS.
E. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, DETAILING ALL THE OPENINGS, INCLUDING ADDED REINFORCEMENT AS SHOWN ON THE TYPICAL WALL, SLAB AND BEAM OPENING DETAILS FOR REVIEW.
F. ADDITIONAL REINFORCEMENT ABOVE THAT SHOWN IN THE TYPICAL SLAB AND BEAM OPENING DETAILS MAY BE REQUIRED AND WILL BE REVIEWED ON THE SHOP DRAWINGS.
G. USE THE MANUFACTURER'S CERTIFIED DRAWINGS AND SPECIFICATIONS FOR THE EQUIPMENT ANCHORAGE AND DETAILS.
H. ALL CONSTRUCTION JOINTS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE. ADDITIONAL CONSTRUCTION JOINTS TO FACILITATE CONSTRUCTION SHALL BE LOCATED AND DETAILED ON THE SHOP DRAWINGS FOR REVIEW.
I. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN BEAMS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
J. ALL CONSTRUCTION AND CONTROL JOINTS FOR BEAMS WHICH ARE EXPOSED TO VIEW ARE TO BE LOCATED TO COINCIDE WITH THE ARCHITECTURAL RUSTICATION JOINTS AS SHOWN ON THE BUILDING ELEVATION SHEETS OR AS REVIEWED IN WRITING.
K. SHOP DRAWINGS:
1. THE TERM "SHOP DRAWINGS" INCLUDES FABRICATION, MANUFACTURING, ERECTION AND SETTING DRAWINGS, BROCHURES, CERTIFICATES, AND PRODUCT DATA DESCRIBING MATERIALS AND EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE ALL PERTINENT INFORMATION REQUIRED FOR THE ENGINEER TO FULLY EVALUATE THE MATERIALS BEING REPRESENTED BY THE SUBMITTAL INCLUDING THE PHYSICAL PROPERTIES, DIMENSIONS, LOCATIONS AND METHOD OF INSTALLATION.
2. SHOP DRAWINGS WILL BEAR THE REVIEW STAMP OF THE CONTRACTOR INDICATING THAT HE HAS REVIEWED THE DRAWINGS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS; COORDINATED ITEMS INCLUDED IN THE SUBMITTAL WITH RELATED ITEMS; AND VERIFIED AND COORDINATED DIMENSIONS.
3. REPRODUCTIONS OF THE ENGINEERING DRAWINGS WILL NOT BE ACCEPTABLE AS SHOP DRAWINGS.
4. ANY SHOP DRAWING NOT CONFORMING TO THESE REQUIREMENTS WILL BE CAUSE FOR REJECTION AND WILL BE RETURNED WITHOUT ANY FURTHER ACTION.
5. STRUCTURAL SUBMITTALS REQUIRED FOR APPROVAL INCLUDE, BUT ARE NOT LIMITED TO:
- CONCRETE ACCESSORIES (MANUFACTURERS PRODUCT DATA)
- STEEL REINFORCING
- CONCRETE MIX DESIGN
- CONTROL JOINT LAYOUT
- CONCRETE MATERIAL CERTIFICATES
- STRUCTURAL STEEL FRAMING
- STRUCTURAL STEEL CONNECTION CALCULATIONS
- STEEL ROOF DECK
- COLD FORMED METAL FRAMING
- COLD FORMED METAL FRAMING CALCULATIONS
- MISC. STEEL FABRICATIONS
6. DELEGATED STRUCTURAL DESIGN OF COMPONENTS:
- SEE APPLICABLE SECTIONS OF GENERAL NOTES FOR THE APPROPRIATE DESIGN RESPONSIBILITIES OF THE SUPPLIER AND IT'S LICENSED ENGINEER.

L. THESE NOTES APPLY TO STRUCTURAL DOCUMENTS SEALED BY THE STRUCTURAL ENGINEER AND ARE INTENDED TO BE COMPLEMENTARY TO AND USED IN CONJUNCTION WITH THE PLANS AND SPECIFICATIONS, INCLUDING THOSE PREPARED BY OTHER DISCIPLINES. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT/STRUCTURAL ENGINEER IMMEDIATELY. ANY SUCH DISCREPANCIES SHALL BE RESOLVED TO THE MORE STRINGENT REQUIREMENTS, UNLESS OTHERWISE AUTHORIZED BY THE STRUCTURAL ENGINEER.
M. ANY DISCREPANCIES ON THE STRUCTURAL DOCUMENTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/STRUCTURAL ENGINEER PRIOR TO SUBMISSION OF BIDS OR PROPOSALS, OR IF NOT REASONABLE DISCERNABLE DURING PREPARATION OF BIDS AND PROPOSALS, BEFORE COMMENCING THE WORK IN QUESTIONS. NO FIELD CHANGES OR DIVIATIONS FROM THE DESIGN ARE TO BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT AND/OR STRUCTURAL ENGINEER. NO CHANGE ORDER CONSIDERATION WILL BE GIVEN TO CHANGES FOR WHICH THE ARCHITECT AND/OR ENGINEER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
N. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONSTRUCTION, INCLUDING EXISTING WORK, PRIOR TO COMMENCING WORK. ANY DISCREPANCIES SHALL BE REPORT IMMEDIATELY TO THE ARCHITECT/STRUCTURAL ENGINEER.

STRUCTURAL STEEL

A. ROLLED SHAPES:
1. ALL STRUCTURAL STEEL FOR ALL THE HORIZONTAL FRAMING MEMBER SHALL CONFORM TO ASTM A992, GRADE 50, UNLESS OTHERWISE NOTED.
2. ALL STRUCTURAL STEEL FOR HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500, GRADE C WITH A MINIMUM YIELD OF 50 KSI, UNLESS OTHERWISE NOTED.
3. ALL STRUCTURAL STEEL FOR PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B, UNLESS OTHERWISE NOTED.
4. ALL STRUCTURAL STEEL FOR ANGLES, PLATES AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36, UNLESS OTHERWISE NOTED.
5. ALL EXPOSED STEEL TO BE HOT DIPPED GALVANIZED.

B. CONNECTIONS:
1. THE DESIGN OF STRUCTURAL STEEL CONNECTIONS IS THE RESPONSIBILITY OF THE CONTRACTOR AND THE STEEL FABRICATOR. THE DESIGN OF THE CONNECTION SHALL BE PERFORMED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY THE STEEL FABRICATOR. THE DETAILS AND CALCULATIONS SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:
- ALL WELD SIZES AND LENGTHS
- ALL BOLT SIZES, LOCATIONS, QUANTITIES AND GRADES
- ALL PLATE AND ANGLE SIZES, THICKNESS AND DIMENSIONS
- ALL WORK POINT LOCATIONS AND RELATED INFORMATION
2. PROVIDE STANDARD BOLTED CONNECTIONS CONFORMING TO AISC BOLTED CONNECTIONS, USING ASTM A325 OR A490 BOLTS, FOR THE BEAM END SHEARS INDICATED IN THE DOCUMENTS. PROVIDE MINIMUM OF TWO BOLTS FOR ALL CONNECTIONS.
3. ALL WELDED CONNECTIONS SHALL CONFORM TO AWS UNLESS OTHERWISE NOTED.
4. SURVEY ALL PLANS, DETAILS, SECTIONS, SCHEDULES AND SPECIFICATIONS FOR SPECIAL CONNECTIONS.
5. UNLESS OTHERWISE NOTED AND/OR SPECIFIED, ALL BEAM CONNECTIONS SHALL BE DESIGNED TO SUPPORT 1/2 THE TOTAL UNIFORM LOAD FOR THE APPLICABLE MEMBER SIZE AND SPAN AS DETERMINED BY THE TABLES FOR ALLOWABLE UNIFORM LOADS ON BEAM IN THE 15TH EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION (ASD)
6. WHERE BEAMS ARE TO RECEIVE HEADED SHEAR CONNECTORS, DESIGN THOSE BEAM CONNECTIONS FOR THE REACTION SHOWN. IF REACTIONS ARE NOT SHOWN, DESIGN THE CONNECTIONS TO SUPPORT 40 PERCENT OF THE MAXIMUM WEB SHEAR, V, FOR THE APPLICABLE MEMBER SIZE AS DETERMINED BY THE TABLES FOR ALLOWABLE UNIFORM LOADS ON BEAMS IN THE 15TH EDITION OF THE AISC MANUAL.
7. MOMENT CONNECTIONS SHOWN SHALL BE DESIGNED TO FULLY DEVELOP THE SECTION IN FLEXURE AND TO SUPPORT 1/2 THE TOTAL UNIFORM LOAD FOR SHEAR AS DESCRIBED IN NOTE 5 ABOVE.
8. WHERE FILLET WELD IS NOT SHOWN ON DETAIL, ITS SIZE SHALL BE ASSUMED TO BE THE PLATE THICKNESS OF THE THINNEST PIECE MINUS 1/16"

C. WELDS:
1. CONFORM TO "CODE FOR WELDING IN BUILDING CONSTRUCTION" BY THE AMERICAN WELDING SOCIETY, LATEST EDITION.
2. WELDS ON INDICATED ON DRAWINGS ARE TO BE FILLET ALL AROUND AS PRESCRIBED BY AISC SPECIFICATION, PROVIDE WELDING OF CONTINUOUS MEMBERS OF 2 INCHES OF 3/16" INCH FILLET STITCH WELDS AT 12 INCHES OC, STAGGERED EACH SIDE, UNLESS OTHERWISE NOTED.
3. FIELD PAINT ALL WELDS W/ "GALVILITE" BY Z.R.C. OR APPROVED EQUAL ARC WELDING ELECTRODES.
4. METAL DECK - E60XX
5. STRUCTURAL STUDS - E6022 OR E6011, 3/32" RODS.
6. ALL OTHER - E70XX LOW HYDROGEN, 250 DEGREE MIN. OVEN TEMP.
7. SIZE - ALL FILLETS ARE 1/16" LESS THAN MINIMUM THICKNESS TO BE WELDED.
8. PROVIDE ULTRASONIC INSPECTION BY THE TESTING LABORATORY FOR ALL WELDS INDICATED AS PENETRATION WELDS.\

EXCAVATION, BACKFILLING & FOUNDATIONS

A. A GEOTECHNICAL EXPLORATION OF SUBSURFACE CONDITIONS, CONTAINING TEST BORINGS, LABORATORY TEST, ENGINEERING ANALYSIS AND FOUNDATION RECOMMENDATIONS PERFORMED BY EARTH ENGINEERING, INC. DATED NOVEMBER 20[illegible] REPORT NO. EE-2321009-G-R IS AVAILABLE FOR REVIEW.
B. MAINTAIN PROPER SITE DRAINAGE DURING [illegible] DOES NOT OCCUR IN THE [illegible]
C. SIDE SLOPE[illegible]
D. [illegible] DESIGNED FOR [illegible] ALLOWABLE BEARING CAPACITY OF 3,600 POUNDS PER SQUARE FOOT (PSF) FOR SUSTAINED LOADS AND AN ALLOWABLE BEARING CAPACITY OF 5,400 PSF FOR TOTAL LOADS [illegible] AT A MINIMUM OF 95% OF [illegible] DRY WEIGHT AT A MOISTURE CONTENT [illegible] ABOVE OPTIMUM.

NOT USED

SHEET LIST	
Sheet Number	Sheet Name
S101	GENERAL STRUCTURAL CRITERIA
S102	GENERAL STRUCTURAL CRITERIA
S201	FOUNDATION PLAN - COMPOSITE
S201A	FOUNDATION PLAN - EXISTING GYM
S301	FOUNDATION SCHEDULE & DETAILS

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D + A PROJECT 24-291-00

Notes

No.	Revision	By	Appd	
1	ADDENDUM #1			10.10.2025 YYYY.MM.DD
	100% ISSUE FOR BID AND PERMIT			2025.09.24 YYYY.MM.DD

Issued

File Name: N/A — Dwn. JT — Dsgn. AR — Chkd. LMM — 2025.04.11 YYYY.MM.DD

Permit/Seal
REGISTERED PROFESSIONAL ENGINEER FRED DALLY 90904 LICENSED STATE OF TEXAS
10/10/2025

Client/Project Logo
2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

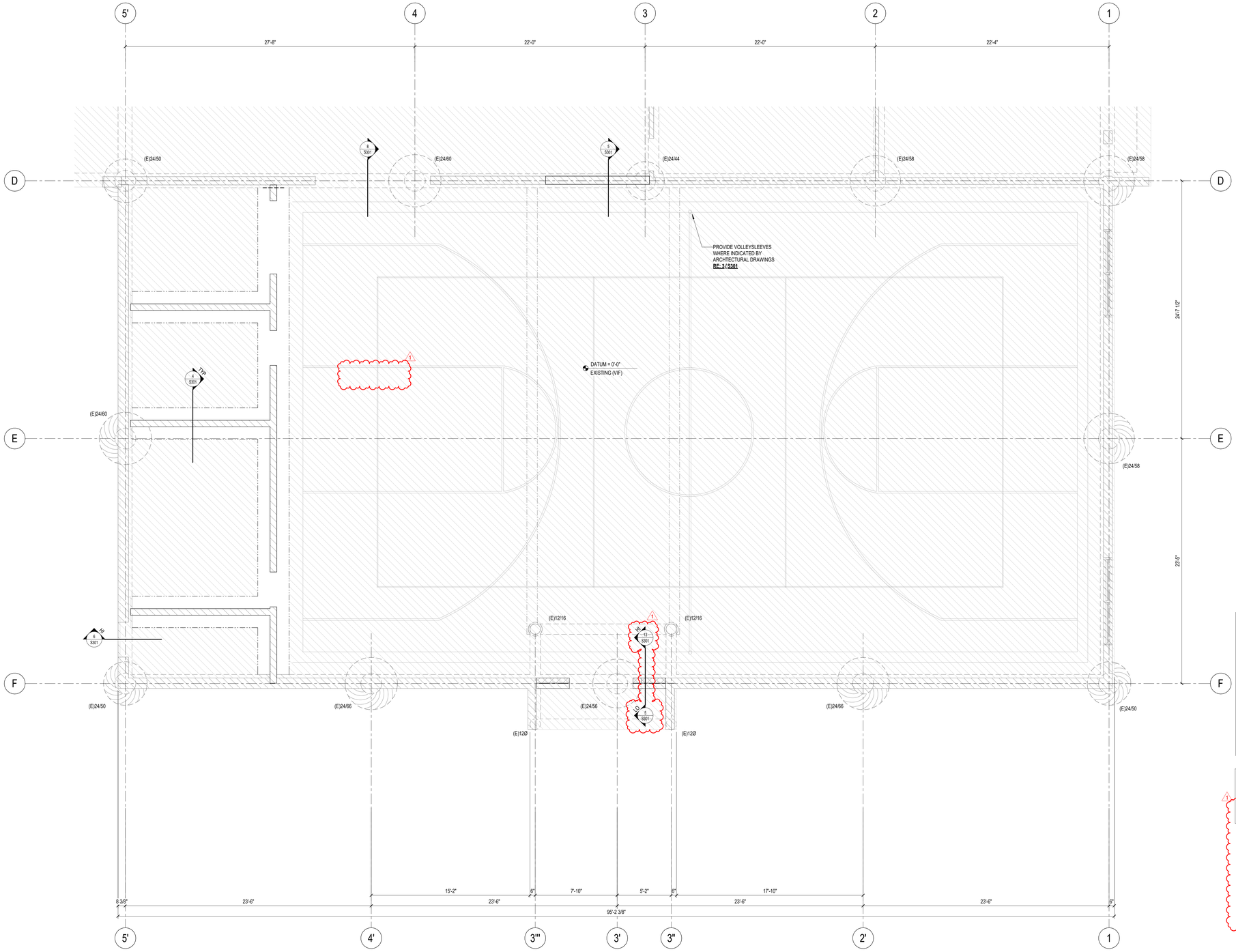
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Title
GENERAL STRUCTURAL CRITERIA

Project No. 214001246
Scale 1 1/2" = 1'-0"
Revision 1
Drawing No. S101-RES

*Plot location in Project Information
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ORIGINAL SHEET - ARCH E1

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1 FOUNDATION PLAN - GYMNASIUM
1/4" = 1'-0"

EXISTING CONDITIONS NOTES TO G.C.:

1. EXISTING STRUCTURAL INFORMATION IS BASED ON EXISTING DRAWINGS RECEIVED DATED 07/06/1992. ALL EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS SHALL BE FIELD VERIFIED PRIOR TO PREPARING THE SHOP DRAWINGS AND START OF CONSTRUCTION.
2. THE GENERAL CONTRACTOR SHALL VERIFY THE LOCATION AND SIZE OF ALL STRUCTURAL MEMBERS PRIOR TO BEGINNING ANY DEMOLITION.
3. DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER OF RECORD IF MODIFICATIONS TO THE DESIGN ARE REQUIRED DUE TO FIELD VERIFIED DIMENSIONS AND CONDITIONS.
4. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE DESIGN OF ANY TEMPORARY SHORING OR BRACING REQUIRED BETWEEN DEMOLITION AND THE INSTALLATION OF THE NEW STRUCTURE.
5. ONLY CMU PARTITIONS TO BE DEMOLISHED ARE NOTED ON STRUCTURAL DEMOLITION PLANS. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL PARTITIONS NOT SHOWN THAT REQUIRE DEMOLITION. COORDINATE EXTENTS WITH ARCH PRIOR TO CONSTRUCTION.

FOUNDATION NOTES:

1. DATUM ELEVATION <0'-0"> CORRESPONDS TO TRUE ELEVATION = RE: CIVIL. ALL ELEVATIONS ARE RELATIVE TO DATUM ELEVATION <0' - 0">.
2. ALL CMU WALL LOCATIONS ARE FOR REFERENCE ONLY. G.C. TO COORDINATE FINAL CMU WALL LOCATIONS WITH ARCHITECTURAL DRAWINGS FOR CMU WALLS SLAB ON GRADE SUPPORT RE: 4 / S301 RE: 5 / S301

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D + A PROJECT 24-291-00

Notes

1	ADDENDUM #1			10.10.2025
Revision		By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT				2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		Author	Designer	Checker 07/18/25
		Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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STATE OF TEXAS
FRED DALLY
90904
LICENSED
PROFESSIONAL ENGINEER
10/10/2025

Client/Project Logo

2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS

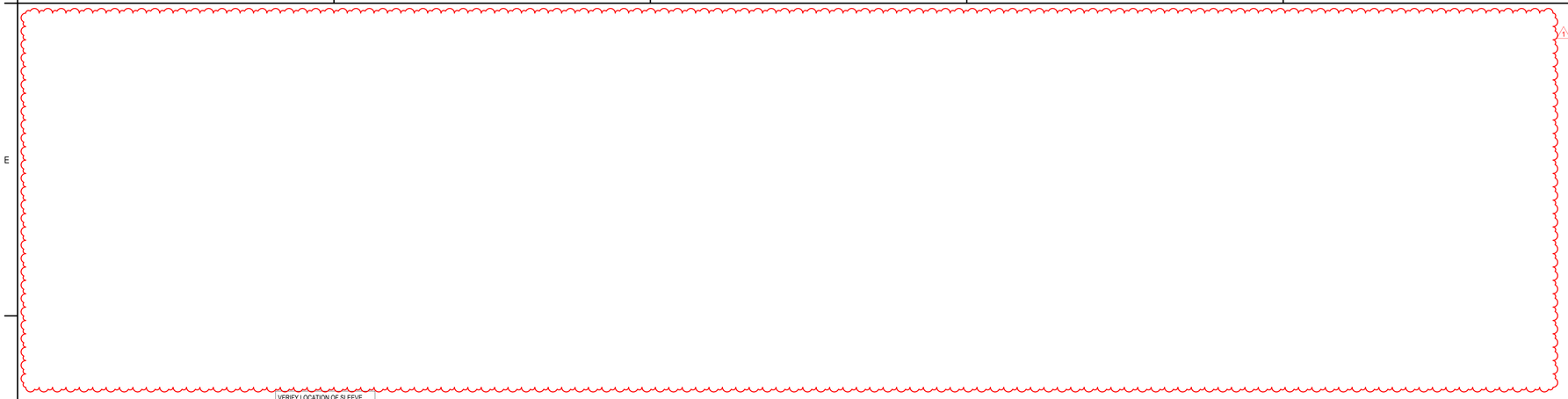
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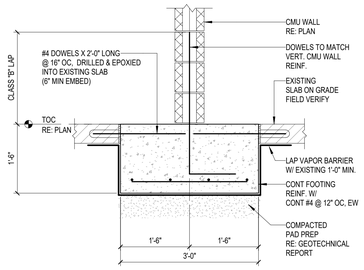
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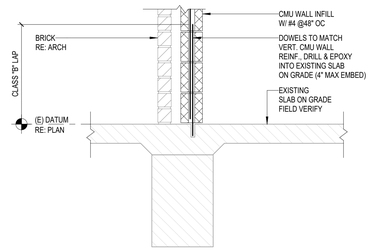
Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	S201A-RES

*Plot location in Project Information
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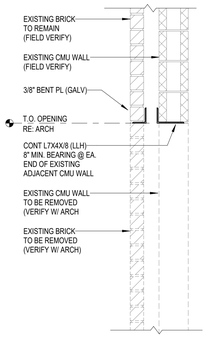
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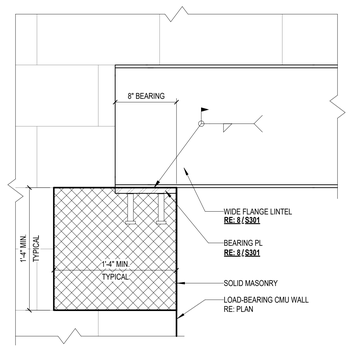




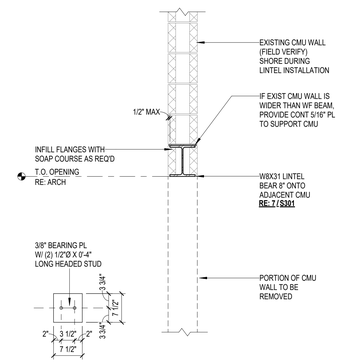
3 EXISTING WITH NEW VOLLEYBALL SLEEVE
3/4" = 1'-0"

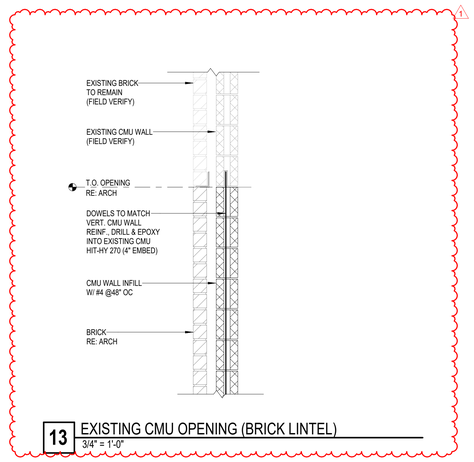


4 EXISTING WITH NEW CMU WALL
3/4" = 1'-0"

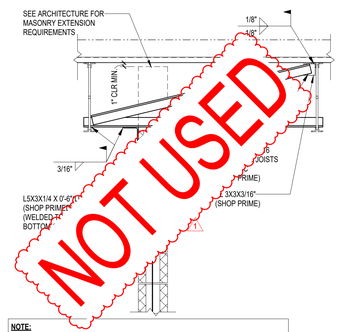


5 EXISTING WITH NEW CMU WALL AT OPENING
3/4" = 1'-0"





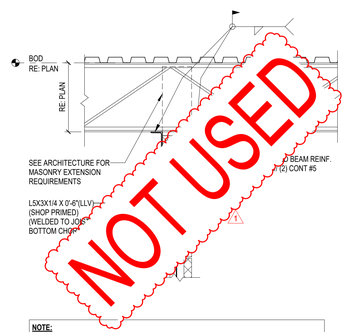
6 EXISTING CMU OPENING (BRICK LINTEL)
3/4" = 1'-0"



NOTE:

1. THIS DETAIL IS TO BE USED ONLY IF INTEGRAL INTERSECTING SUPPORT WALLS AT EACH END EXCEED A SPACING OF 36 TIMES THE NOMINAL WALL THICKNESS.

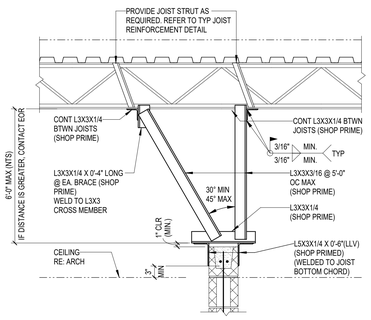
7 TYPICAL LB CMU @ OPENING
1 1/2" = 1'-0"



NOTE:

1. THIS DETAIL IS TO BE USED ONLY IF INTEGRAL INTERSECTING SUPPORT WALLS AT EACH END EXCEED A SPACING OF 36 TIMES THE NOMINAL WALL THICKNESS.

8 EXISTING CMU OPENING SECTION
3/4" = 1'-0"



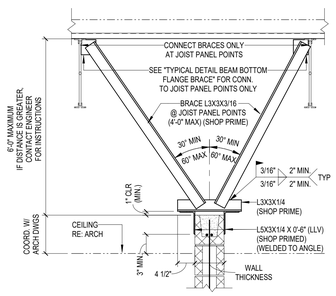
NOTE:
THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 36 TIMES THE NOMINAL WALL THICKNESS.

13 EXISTING CMU OPENING (BRICK LINTEL)
3/4" = 1'-0"

9 TYPICAL CMU BRACING
3/4" = 1'-0"

10 TYPICAL CMU BRACING
3/4" = 1'-0"

11 TYPICAL CMU BRACING
3/4" = 1'-0"



NOTE:
THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 36 TIMES THE NOMINAL WALL THICKNESS.

12 TYPICAL CMU BRACING
3/4" = 1'-0"

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Consultant

Dally + ASSOCIATES
9800 Richmond Avenue, Suite 400
Houston, Texas 77042
1 713 337 8881
Texas Registered Engineering Firm
F-003426
D + A PROJECT 24-291-00

Notes

1 ADDENDUM #1			10.10.2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued	By	Appd	YYYY.MM.DD
File Name: N/A	JT Dwn.	AR Dsgn.	LMM Chkd. 2025.04.11 YYYY.MM.DD

Permit/Seal

REGISTERED FRED DALLY 90904 ARCHITECT STATE OF TEXAS
10/10/2025

Client/Project Logo

2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

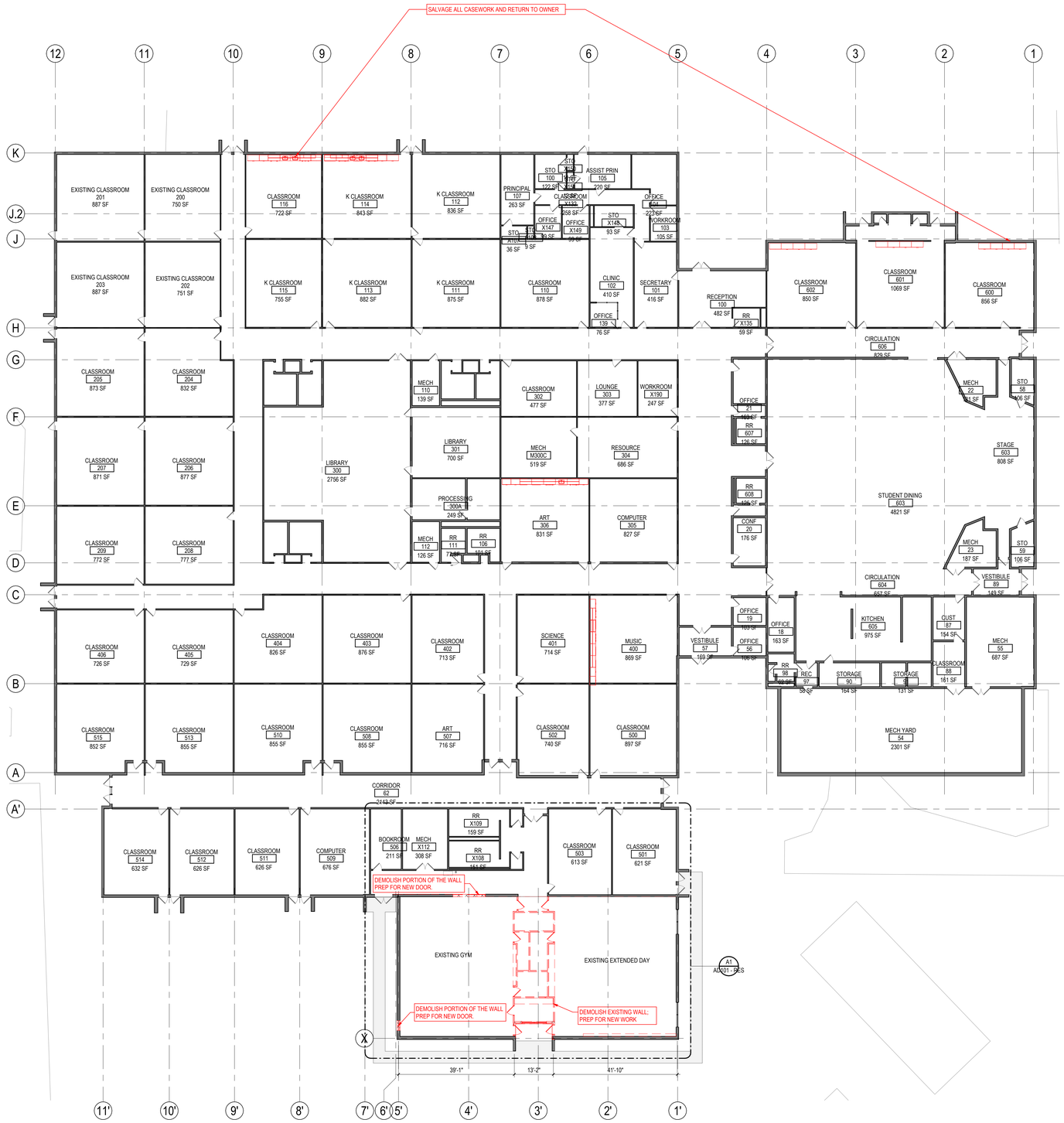
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Title
FOUNDATION SCHEDULE & DETAILS

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	S301-RES

*Pick location in Project Information
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ORIGINAL SHEET - ARCH E1

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DEMOLITION LEGEND

- EXISTING / NO WORK IN THIS AREA
- EXISTING WALLS TO REMAIN
- EXISTING WALL TO BE REMOVED. PATCH ADJACENT AREAS TO MATCH EXISTING CONDITIONS.
- REMOVE EXISTING DOORS, FIXTURES, AND MISC IN DEMOLITION
- ALL EXISTING ACOUSTICAL CEILING TILE, GRID AND LIGHT FIXTURES TO BE DEMOLISHED EXCEPT AS NOTED IN MEP AND TECHNOLOGY DRAWINGS AND SPECS. CEILING MOUNTED DEVICES, WAP's, ETC. (VERIFY WITH OWNER IF BEING RE-USED)
- EXISTING 2X4 RECESSED LIGHTS TO BE DEMOLISHED AND REPLACED WITH NEW 2X4 RECESSED LED LIGHTS
- EXISTING CASEWORK TO BE DEMOLISHED. SALVAGE AND RETURN TO OWNER.

GENERAL DEMOLITION REQUIREMENTS

GENERAL:

1. VISIT THE SITE TO UNDERSTAND THE SCOPE OF WORK AND TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING THIS PROJECT. REPORT DISCREPANCIES OR AMBIGUOUS ITEMS TO THE ARCHITECT PRIOR TO BIDDING FOR CLARIFICATION.
2. FIELD VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION WORK.
3. COORDINATE DEMOLITION WORK WITH PLAN SHEETS.
4. REFER TO CIVIL, STRUCTURAL, AND MEP DRAWINGS FOR ADDITIONAL DEMOLITION AND ALTERATION REQUIREMENTS. PATCH WALLS WHERE FIXTURES AND EQUIPMENT ARE DEMOLISHED TO MATCH EXISTING ADJACENT SURFACE.
5. THE OWNER HAS FIRST RIGHTS OF SALVAGE OF ALL FIXTURES, EQUIPMENT AND BUILDING MATERIALS REMOVED AS PART OF THE DEMOLITION AND NOT REUSED IN THE NEW CONSTRUCTION. REMOVE ALL OTHER DEBRIS AND WASTE FROM THE SITE AND DISPOSE OF PROPERLY, IN ACCORDANCE WITH ANY APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
6. PRIOR TO START OF DEMOLITION, SECURE FROM THE OWNER A LIST OF ADDITIONAL EXISTING BUILDING COMPONENTS TO BE SALVAGED AND DELIVERED TO THE OWNER. EXERCISE SUFFICIENT CARE IN SALVAGE OPERATIONS SUCH THAT SALVAGED COMPONENTS ARE DELIVERED TO THE OWNER IN THEIR EXISTING UNDAMAGED CONDITION.
7. DEMOLITION WORK IS TO BE DONE IN PHASES. CONTRACTOR TO COORDINATE PHASING OF DEMOLITION WORK.
8. CONTRACTOR SHALL PROTECT ALL EXISTING TO REMAIN ITEMS INCLUDING BUT NOT LIMITED TO FLOORING, WALLS & CEILINGS, DURING CONSTRUCTION ACTIVITIES. SHOULD THE CONTRACTOR DAMAGE ANY OF THESE ITEMS, THEY SHALL REPAIR AT NO ADDITIONAL COST TO THE OWNER.

STRUCTURAL INTEGRITY:

1. PROVIDE SHORING, BRACING, AND SUPPORTS AS REQUIRED TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE PROJECT BEFORE CUTTING OR ALTERING ANY OPENING IN AN EXISTING LOAD BEARING OR NON-LOAD BEARING WALL, FOOTING, OR ROOF DECK.
2. UNLESS OTHERWISE INDICATED ON THE STRUCTURAL OR ARCHITECTURAL DRAWINGS, PROVIDE TEMPORARY STEEL ANGLE MASONRY SUPPORT AT NEW OPENINGS CUT IN EXISTING MASONRY WALLS. WHETHER BEARING OR NON-BEARING, WITH MINIMUM BEARING AS INDICATED IN STRUCTURAL DRAWINGS.

CUTTING AND PATCHING:

1. PROVIDE MATERIALS FOR CUTTING AND PATCHING WHICH WILL RESULT IN EQUAL-OR-BETTER WORK THAN THAT BEING CUT OR PATCHED.
2. REMOVE EXISTING CONSTRUCTION SO AS NOT TO DAMAGE EXISTING CONSTRUCTION THAT IS TO REMAIN. PATCH FLOORS, WALLS AND CEILINGS IN A RECTANGULAR PATTERN TO MATCH EXISTING CONDITIONS AND MAKE THEM READY TO RECEIVE ANY NEW FINISHES INDICATED.
3. CAP PLUMBING LINES THAT ARE TO BE REMOVED BELOW FLOOR OR BEHIND WALL, OR REMOVE THEM COMPLETELY. PATCH FLOORS AND WALLS TO MATCH EXISTING CONDITIONS. REFER PLUMBING DOCUMENTS FOR ADDITIONAL REQUIREMENTS.
4. WHERE EXISTING FLOORING, CEILINGS OR WALL FINISHES ARE TO BE REMOVED AND REPLACED WITH NEW FINISHES, SURFACES TO REMAIN SHALL BE STRIPPED CLEAN OF ALL EXISTING FINISHES AND MADE READY TO RECEIVE NEW FINISHES.
5. INSPECT FLOORS TO RECEIVE NEW FINISHES PRIOR TO BID. COMPLETELY REMOVE FLOOR FINISHES TO BE REPLACED UON. CLEAN AND PROPERLY PREPARE THE EXISTING SUBSTRATE PRIOR TO INSTALLATION OF NEW FINISH MATERIAL. STRIP, PATCH, AND FILL TO PROVIDE A SMOOTH, DURABLE SURFACE FREE OF BURRS AND ADHESIVE AND SUITABLE FOR APPLICATION OF NEW FINISH MATERIAL UNDER CUT OF DOORS TO ACCOMMODATE NEW FLOOR FINISH WHERE NEW FINISH IS THICKER THAN ORIGINAL FINISH.
6. WHERE NEW CONCRETE TOPPING IS TO BE PLACED OVER EXISTING CONCRETE SLAB, ABRADE EXISTING CONCRETE FINISH FOR BETTER BOND.
7. TOOTH IN MASONRY WHERE EXISTING MASONRY ABUTS NEW MASONRY IN THE SAME WALL PLANE. NEW MASONRY SHALL MATCH EXISTING COURSING AND BOND PATTERN.
8. PROVIDE A FINISHED EDGE BY TOOTHING IN NEW MASONRY TO MATCH EXISTING WHERE A PORTION OF AN EXISTING MASONRY WALL IS TO BE REMOVED (UON).
9. REMOVE EXISTING WINDOWS AND SILLS COMPLETELY PRIOR TO SEALING OPENINGS (UON).
10. REMOVE FRAME AND PATCH WALL WITH SAME ADJACENT MATERIAL AND FINISH AS EXISTING WHERE EXISTING DOOR OPENINGS ARE TO BE SEALED. ALIGN NEW AND EXISTING WALLS (UON).

1. REMOVE EXPANSION JOINT COVERS (FLOOR, WALL, AND CEILING) THAT ARE DAMAGED DURING DEMOLITION AND REPLACE WITH NEW COVERS OF THE SAME TYPE AND FINISH (OR WITH NEW AS DETAILED, WHERE INDICATED).
2. EXISTING DOORS, FRAMES, AND HARDWARE THAT ARE REMOVED MAY BE REUSED, WHERE INDICATED ON PLANS, IF IN GOOD CONDITION IN THE OPINION OF THE ARCHITECT AND OWNER.
3. WHERE INDICATED, REMOVE TACKBOARDS, CHALKBOARDS, MISCELLANEOUS DISPLAY RAILS, AND TOILET ROOM ACCESSORIES. SALVAGE REMOVED ITEMS FOR OWNER OR REINSTALL AS INDICATED IN DRAWINGS AND SPECIFICATIONS. CLEAN AND PREPARE WALL AS REQUIRED FOR NEW EQUIPMENT OR TO RECEIVE A NEW FINISH.
4. REMOVE WOOD FRAME AND WOOD AT TRANSOM OPENINGS ABOVE DOORS. PATCH WALL TO MATCH EXISTING (MATCH ADJACENT FIRE CONSTRUCTION).
5. REMOVE ALL EXISTING WINDOW FRAMES, GLAZING, GYP BOARD AND INSULATED PANELS OVER WINDOWS.
6. REMOVE ALL LIGHTING FIXTURES FROM CLASSROOMS (COORDINATE WITH LIGHTING DRAWINGS).
7. REMOVE EXISTING LAY-IN CEILING AND GRID FROM AREAS WHERE THERE IS NEW CONSTRUCTION FOR REINSTALLATION IN NEW CONFIGURATION.
8. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL LOOSE EQUIPMENT FURNITURE AND FURNISHINGS IN ROOMS AFFECTED BY SCOPE OF WORK, PROVIDING BOXES FOR SUCH ITEMS AND MOVING THE EQUIPMENT, FURNITURE AND FIXTURES BACK AT THE END OF CONSTRUCTION.



A1 AD100 RES — COMPOSITE DEMOLITION FLOOR PLAN

1/16" = 1'-0"

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Notes

1	Addendo 1			10.03.2025
Revision		By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT				2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A	Author: Dwn.	Designer: Dsgn.	Checker: Chkd.	11/12/24 YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT DANIELLE QUINN 28298 STATE OF TEXAS

Client/Project Logo

2024 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

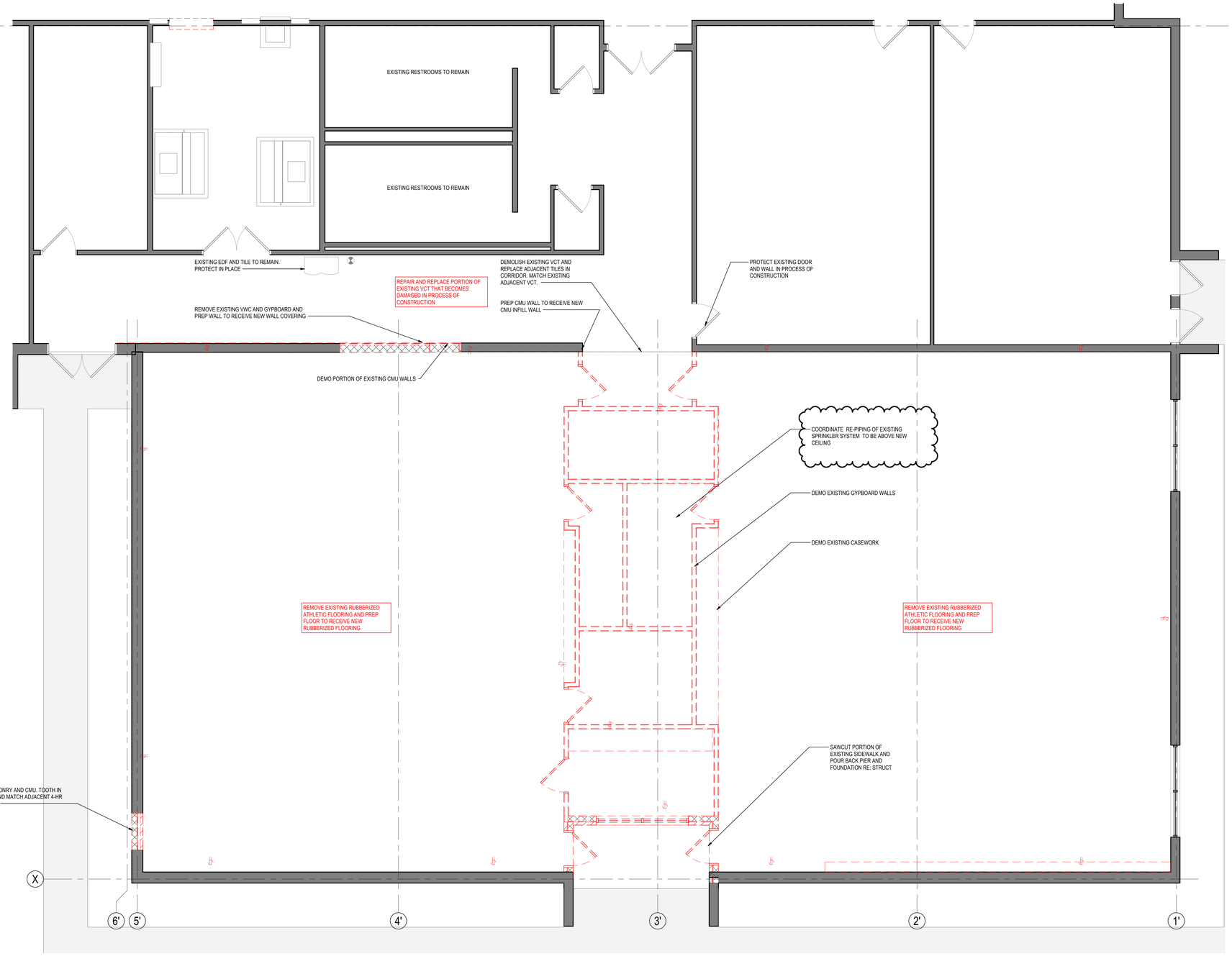
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Title
COMPOSITE ARCHITECTURAL DEMOLITION PLAN

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	AD100 - RES

ORIGINAL SHEET - ARCH E1

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A1 AD101 — RES

DEMOLITION FLOOR PLAN

1/4" = 1'-0"

GENERAL DEMOLITION REQUIREMENTS

GENERAL:

1. VISIT THE SITE TO UNDERSTAND THE SCOPE OF WORK AND TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING THIS PROJECT. REPORT DISCREPANCIES OR AMBIGUOUS ITEMS TO THE ARCHITECT PRIOR TO BIDDING FOR CLARIFICATION.
2. FIELD VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION WORK.
3. COORDINATE DEMOLITION WORK WITH PLAN SHEETS.
4. REFFER TO CIVIL, STRUCTURAL, AND MEP DRAWINGS FOR ADDITIONAL DEMOLITION AND ALTERATION REQUIREMENTS. PATCH WALLS WHERE FIXTURES AND EQUIPMENT ARE DEMOLISHED TO MATCH EXISTING ADJACENT SURFACE.
5. THE OWNER HAS FIRST RIGHTS OF SALVAGE OF ALL FIXTURES, EQUIPMENT AND BUILDING MATERIALS REMOVED AS PART OF THE DEMOLITION AND NOT REUSED IN THE NEW CONSTRUCTION. REMOVE ALL OTHER DEBRIS AND WASTE FROM THE SITE AND DISPOSE OF PROPERLY, IN ACCORDANCE WITH ANY APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
6. PRIOR TO START OF DEMOLITION, SECURE FROM THE OWNER A LIST OF ADDITIONAL EXISTING BUILDING COMPONENTS TO BE SALVAGED AND DELIVERED TO THE OWNER. EXERCISE SUFFICIENT CARE IN SALVAGE OPERATIONS SUCH THAT SALVAGED COMPONENTS ARE DELIVERED TO THE OWNER IN THEIR EXISTING UNDAMAGED CONDITION.
7. DEMOLITION WORK IS TO BE DONE IN PHASES. CONTRACTOR TO COORDINATE PHASING OF DEMOLITION WORK.
8. CONTRACTOR SHALL PROTECT ALL EXISTING TO REMAIN ITEMS INCLUDING BUT NOT LIMITED TO FLOORING, WALLS & CEILINGS, DURING CONSTRUCTION ACTIVITIES. SHOULD THE CONTRACTOR DAMAGE ANY OF THESE ITEMS, THEY SHALL REPAIR AT NO ADDITIONAL COST TO THE OWNER.

STRUCTURAL INTEGRITY:

1. PROVIDE SHORING, BRACING, AND SUPPORTS AS REQUIRED TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE PROJECT BEFORE CUTTING OR ALTERING ANY OPENING IN AN EXISTING LOAD BEARING OR NON-LOAD BEARING WALL, FOOTING, OR ROOF DECK.
2. UNLESS OTHERWISE INDICATED ON THE STRUCTURAL OR ARCHITECTURAL DRAWINGS, PROVIDE TEMPORARY STEEL ANGLE MASONRY SUPPORT AT NEW OPENINGS CUT IN EXISTING MASONRY WALLS, WHETHER BEARING OR NON-BEARING, WITH MINIMUM BEARING AS INDICATED IN STRUCTURAL DRAWINGS.

CUTTING AND PATCHING:

1. PROVIDE MATERIALS FOR CUTTING AND PATCHING WHICH WILL RESULT IN EQUAL-OR-BETTER WORK THAN THAT BEING CUT OR PATCHED.
2. REMOVE EXISTING CONSTRUCTION SO AS NOT TO DAMAGE EXISTING CONSTRUCTION THAT IS TO REMAIN. PATCH FLOORS, WALLS AND CEILINGS IN A RECTANGULAR PATTERN TO MATCH EXISTING CONDITIONS AND MAKE THEM READY TO RECEIVE ANY NEW FINISHES INDICATED.
3. CAP PLUMBING LINES THAT ARE TO BE REMOVED BELOW FLOOR OR BEHIND WALL, OR REMOVE THEM COMPLETELY. PATCH FLOORS AND WALLS TO MATCH EXISTING CONDITIONS. REFER PLUMBING DOCUMENTS FOR ADDITIONAL REQUIREMENTS.
4. WHERE EXISTING FLOORING, CEILINGS OR WALL FINISHES ARE TO BE REMOVED AND REPLACED WITH NEW FINISHES, SURFACES TO REMAIN SHALL BE STRIPPED CLEAN OF ALL EXISTING FINISHES AND MADE READY TO RECEIVE NEW FINISHES.
5. INSPECT FLOORS TO RECEIVE NEW FINISHES PRIOR TO BID. COMPLETELY REMOVE FLOOR FINISHES TO BE REPLACED UON. CLEAN AND PROPERLY PREPARE THE EXISTING SUBSTRATE PRIOR TO INSTALLATION OF NEW FINISH MATERIAL. STRIP, PATCH, AND FILL TO PROVIDE A SMOOTH, DURABLE SURFACE FREE OF BURRS AND ADHESIVE AND SUITABLE FOR APPLICATION OF NEW FINISH MATERIAL. UNDER CUT OF DOORS TO ACCOMODATE NEW FLOOR FINISH WHERE NEW FINISH IS THICKER THAN ORIGINAL FINISH.
6. WHERE NEW CONCRETE TOPPING IS TO BE PLACED OVER EXISTING CONCRETE SLAB, ABRADE EXISTING CONCRETE FINISH FOR BETTER BOND.
7. TOOTH IN MASONRY WHERE EXISTING MASONRY ABUTS NEW MASONRY IN THE SAME WALL PLANE. NEW MASONRY SHALL MATCH EXISTING COURSING AND BOND PATTERN.
8. PROVIDE A FINISHED EDGE BY TOOTHING IN NEW MASONRY TO MATCH EXISTING WHERE A PORTION OF AN EXISTING MASONRY WALL IS TO BE REMOVED (UON).
9. REMOVE EXISTING WINDOWS AND SILLS COMPLETELY PRIOR TO SEALING OPENINGS (UON).
10. REMOVE FRAME AND PATCH WALL WITH SAME ADJACENT MATERIAL AND FINISH AS EXISTING WHERE EXISTING DOOR OPENINGS ARE TO BE SEALED. ALIGN NEW AND EXISTING WALLS (UON).

1. REMOVE EXPANSION JOINT COVERS (FLOOR, WALL, AND CEILING) THAT ARE DAMAGED DURING DEMOLITION AND REPLACE WITH NEW COVERS OF THE SAME TYPE AND FINISH (OR WITH NEW AS DETAILED, WHERE INDICATED)..
2. EXISTING DOORS, FRAMES, AND HARDWARE THAT ARE REMOVED MAY BE REUSED, WHERE INDICATED ON PLANS, IF IN GOOD CONDITION IN THE OPINION OF THE ARCHITECT AND OWNER.
3. WHERE INDICATED, REMOVE TACKBOARDS, CHALKBOARDS, MISCELLANEOUS DISPLAY RAILS, AND TOILET ROOM ACCESSORIES. SALVAGE REMOVED ITEMS FOR OWNER OR REINSTALL AS INDICATED IN DRAWINGS AND SPECIFICATIONS. CLEAN AND PREPARE WALL AS REQUIRED FOR NEW EQUIPMENT OR TO RECEIVE A NEW FINISH.
4. REMOVE WOOD FRAME AND WOOD AT TRANSOM OPENINGS ABOVE DOORS. PATCH WALL TO MATCH EXISTING (1 HR CONSTRUCTION).
5. REMOVE EXISTING FRAMES, GLAZING, GYP BOARD AND INSULATED PANELS OVER WINDOWS AS NOTED.
6. REMOVE ALL LIGHTING FIXTURES FROM CLASSROOMS (COORDINATE WITH LIGHTING DRAWINGS).
7. REPAIR AND REPLACE ADJACENT CEILING GRID AND TILE THAT IS DAMAGED/AFFECTED IN COURSE OF CONSTRUCTION.
8. REPAIR ADJACENT VINYL COMPOSITION FLOORING THAT IS AFFECTED BY CONSTRUCTION AND REPLACE TO MATCH EXISTING.
9. PREP ENTIRE LENGTH OF CORRIDOR ALONG GYMNASIUM SIDE TO RECIEVE VINYL AND INSTALL NEW VINYL WALL COVERING
10. WHERE REPLACING CASEWORK REPLACE DAMAGED OR DISPLACED DATA AND OUTLETS
11. WHERE REPLACING CASEWORK AND ADJACENT FLOOR IS AFFECTED, REPAIR AND REPLACE FLOORING WITH NEW FLOORING TO MATCH EXISTING
12. RE-INSTALL EXISTING SOAP AND PAPER TOWEL DISPENSERS AT NEW SINKS IN NEW CASEWORK

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Notes

1	Addendo 1			10.03.2025
Revision		By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT				2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		Author	Designer	Checker	11/12/24
		Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS

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Title
ENLARGED GYMNASIUM DEMOLITION PLAN

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	AD101 - RES

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ORIGINAL SHEET - ARCH E1

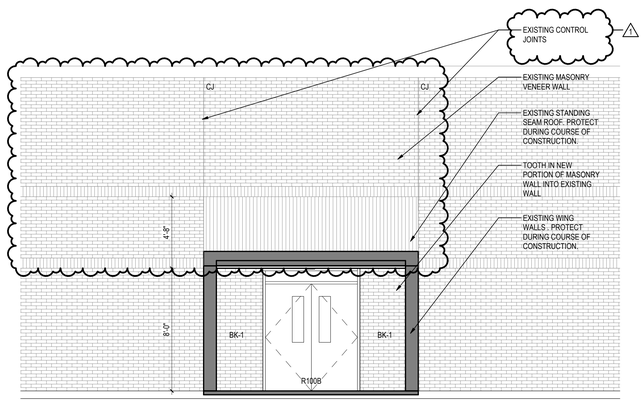
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MATERIAL SCHEDULE - EXTERIOR

MATERIAL	MARK	MANUFACTURER	COLOR	STYLE	REMARKS	E P D	H P D	CLASSIFICATION
ALUMINUM FRAMES	-	KAWNEER	-	IR501T	-			
BRICK	BK1	INTERSTATE	TUMBLEWEED	MODULAR/ @RIDGEGATE KING SIZED	RUNNING BOND			
BRICK	BK2	BELDEN	DOLPHIN GRAY	MODULAR GLAZED	RUNNING BOND/VERTICAL STACKED BOND RE: ELEV			
BRICK	BK3	BELDEN	CRANBERRY	MODULAR GLAZED	RUNNING BOND/VERTICAL STACKED BOND RE: ELEV			
BRICK	BK4	CLOUD CERAMICS	DOVE GREY	MODULAR	RUNNING BOND			
GLAZING	GL -1	GUARDIAN	CLEAR	1-5/16" INSULATED LAMINATED GLAZING				
GLAZING	GL-2	GUARDIAN	CLEAR	9/16" LAMINATED GLASS				
GLAZING	GL-3	GUARDIAN	CLEAR	1/4" TEMPERED INTERIOR				
GLAZING	GL-4	FIRELITE	CLEAR	SUPERLITEII -XL - 5/8" FIRE RATED LAMINATED GLAZING				
GLAZING	GL- 5	FIRELITE	CLEAR	SUPERLITE-II - X- 45 1-3/4" INSULATED LAMINATED FIRE RATED GLAZING				
HOLLOW METAL FRAMES	-		PAINTED					NFPA 285
METAL PANEL	MP-1			METAL PANEL	BERRIDGE			
MORTAR	-	-	-	-	-			

GENERAL NOTES - EXTERIOR ELEVATIONS

1. WHERE INFILLING EXTERIOR WALL ASSEMBLIES MATCH SIZE, RATING, COURSING AND COLOR OF ADJACENT EXISTING MASONRY (EXTERIOR MASONRY IN FINISH SCHEDULE IS AN APPROXIMATION OF EXISTING MASONRY VENEER)
2. DEMOLISH EXISTING OUTLET AND CAP OFF
3. EXTERIOR PLYWOOD SOFFIT, RECESSED CAN LIGHT, AND SIGNAGE
4. RE: STRUCTURAL FOR ADDITIONAL GRADE BEAM UNDER INFILL WALL
5. PROVIDE METAL TRIM BETWEEN NEW EDGES OF METAL SOFFIT AND EXISTING STANDING SEAM ROOF
6. RE-PAINT ANY PAINTED AREAS DAMAGED DURING PROCESS OF DESIGN



A1 / A201 — **SOUTH ELEVATION**
1/4" = 1'-0"
RES



A3 / A201 — **WEST ELEVATION**
1/4" = 1'-0"
RES

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Notes

1 Addendo 1			10.03.2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued	By	Appd	YYYY.MM.DD
File Name: N/A	Author	Designer	Checker 09/22/25
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT — DANIELLE DUNN — 28298 — STATE OF TEXAS

Client/Project Logo

2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

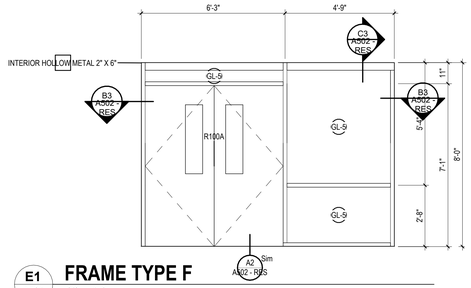
6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
EXTERIOR ELEVATIONS

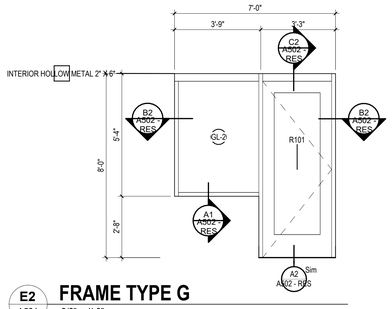
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Revision	Drawing No.
1	A201 - RES

*Plot location in Project Information
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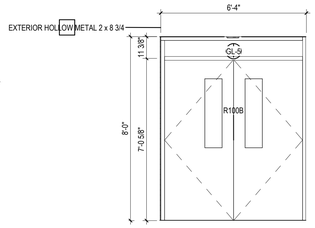
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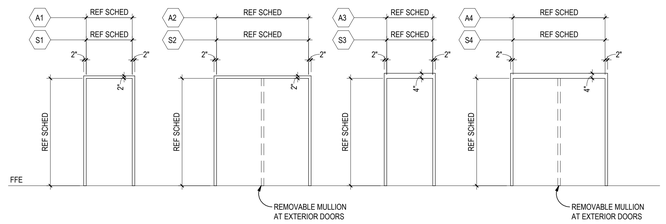
E1 A501 — **FRAME TYPE F**
3/8" = 1'-0"
RES



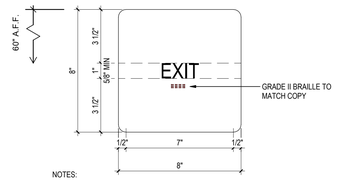
E2 A501 — **FRAME TYPE G**
3/8" = 1'-0"
RES



E3 A501 — **FRAME TYPE H**
3/8" = 1'-0"
RES

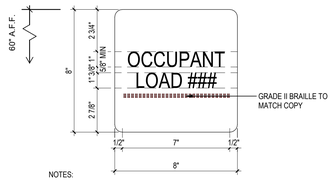


C1 A501 — **A041_DOOR FRAME TYPES**
1/4" = 1'-0"
RES



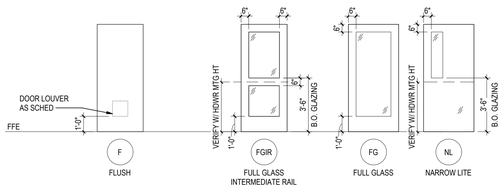
NOTES:
1. INCLUDE LOCATION SUCH AS STAIR NUMBER WHERE APPLICABLE
2. INCLUDE AREA OF REFUGE WHERE APPLICABLE, REFER TO SIGN TYPE E2

C3 A501 — **EXIT SIGN**
3" = 1'-0"
RES



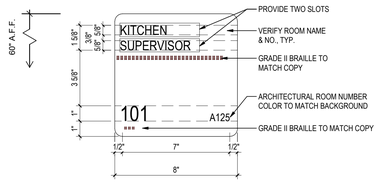
NOTES:
1. PROVIDE SIGN AT EACH EXIT POINT.
2. COORDINATE ON SITE TO COMPLY WITH THE REQUIREMENTS

C4 A501 — **OCCUPANT SIGN**
3" = 1'-0"
RES



NOTES:
1. PROVIDE INSULATED LAMINATED GLAZING UNITS IN ALL EXTERIOR DOORS, UNO
2. PROVIDE ¼" CLEAR TEMPERED SAFETY GLASS IN ALL INTERIOR DOORS, UNO
3. AT DOORS MARKED AS ACOUSTICAL DOORS, PROVIDE SOUND SEALS FOR AN EQUIVALENT STC 47 DOOR
4. PROVIDE 45 MIN FIRE PROTECTIVE GLAZING IN 45 MIN RATED DOORS AND ADJOINING SIDELITES AND TRANSOMS

B1 A501 — **A041_DOOR TYPES**
1/4" = 1'-0"
RES



B3 A501 — **TYP. ROOM SIGN**
3" = 1'-0"
RES

DOOR SCHEDULE-BY NUMBER

NO.	ROOM NAME	ROOM NO.	DOOR WIDTH	DOOR HEIGHT	DOOR THICK	DOOR TYPE	DOOR MAT'L	DOOR FIN	DOOR GLAZ	FRAME Frame Type	FRAME MAT'L	FRAME FIN	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS SILL	FIRE LABEL	HDWR SET	DOOR COMMENTS
Level 1																		
R100A	CORRIDOR	R121	6'-0"	7'-0"	1 3/4"	NL	STL	PLAM			STL	STL		B3/A502-RES	A2/A502-RES	180	710M	
R100B			6'-0"	7'-0"	1 3/4"	NL	STL	PNT			STL	STL			A2/A502-RES	180	C714MR	2,3
R101	OFFICE	R101	3'-0"	7'-8"	1 3/4"	FL	STL	PLAM			STL	STL		B2/A502-RES	A2/A502-RES		103	
R102	GYMNASIUM	R100	3'-0"	7'-2"	1 3/4"	F	STL	PLAM		S1	STL	STL	C1/A502-RES	B1/A502-RES	A2/A502-RES		203	
R103	MECH.	R103	3'-0"	7'-2"	1 3/4"	F	STL	PLAM		S1	STL	STL	C1/A502-RES	B1/A502-RES	A2/A502-RES		201	
R104			3'-0"	7'-0"	1 3/4"	F	STL	PNT		S3	STL	STL				180	205	

GLAZING LEGEND

GL-1 - 1 5/16" INSULATED LAMINATED GLAZING

GL-2 - 9/16" LAMINATED GLAZING

GL-3 - 1/4" CLEAR TEMPERED GLAZING

GL-4 5/8" FIRE RATED LAMINATED INSULATED GLAZING UNIT

GL-5 1-3/4" 45 MIN INSULATED LAMINATED GLAZING

GENERAL NOTES - DOORS AND WINDOWS:

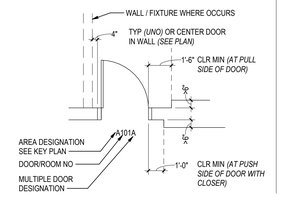
1. REFER TO SHEET A501 FOR DOOR SCHEDULE.
2. REFER TO SHEET A003 & A004 FOR LINTEL SCHEDULES AND DOOR AND WINDOW JAMB STUD FRAMING SCHEDULE
3. ALL INTERIOR DOORS TO BE 1 ¾" THICK *(UNO)*. EXTERIOR STOREFRONT DOORS SHALL BE 2" THICK, THERMALLY BROKEN. EXTERIOR HOLLOW METAL DOORS TO BE 1 ¾" THICK, INSULATED WITH THERMALLY BROKEN FRAMES
4. ALL STL FRAMES TO HAVE A 2" FACE DIMENSION UNO, W/ ⅝" STOP. ¾" STOP REQUIRED FOR FIRE RATED FRAMES.
5. STEEL FRAME DEPTHS INDICATED IN THE DETAILS ARE NOMINAL. PROVIDE STANDARD WIDTH FRAME WITH THROAT OPENING APPROPRIATE TO PARTITION TYPE.
6. COORDINATE WITH MECH DOCUMENTS FOR DOOR UNDERCUTS AND DOOR LOUVERS, IF ANY.
7. ALL LITES IN DOORS TO HAVE SAFETY GLAZING *(UNO)*.
8. EXTERIOR DOORS TO HAVE INSULATED LAMINATED GLAZING UNITS AND INTERIOR DOORS TO HAVE ½ LAMINATED GLAZING, UNO
9. FIELD VERIFY DIMENSIONS PRIOR TO FABRICATING FRAMES.
10. PROVIDE WD BLKG IN GYP BD WALLS BEHIND DOORS SCHEDULED TO HAVE WALL MOUNTED DOOR STOPS. *(REFER HARDWARE SCHEDULE SUBMITTAL)*.
11. REFER DTLS A003 FOR TYP WINDOW AND DOOR CONTROL JOINTS IN MASONRY WALLS. REFER DTLS A004 FOR TYP WINDOW AND DOOR CONTROL JOINTS IN STEEL STUD FRAMED WALLS.
12. FLOOR MATERIAL CHANGES BETWEEN ROOMS TO OCCUR UNDER DOOR.
13. PROVIDE WATER RESISTANT TREATED WOOD BLOCKING AT WINDOW SURROUND MEMBERS AS REQUIRED FOR PROPER ATTACHMENT WHERE ALUMINUM WINDOWS ARE TO BE INSTALLED IN EXISTING MASONRY OPENINGS.
14. FIELD VERIFY DIMENSIONS OF EXISTING FRAMES TO REMAIN.
15. AT ALL EXISTING STL FRAMES WHERE DOOR SWING IS TO BE CHANGED, PATCH, REPAIR AND GRIND SMOOTH EXISTING STL DOOR FRAME. PRIME AND USE ONLY IF FRAME IS TO BE RETAINED. PAINT ACCORDING TO FINISH SCHEDULE SHEET A801.
16. DOOR HARDWARE *(CLOSERS, LEVERS, PANIC HARDWARE, ETC.)* SHALL NOT CONFLICT WITH THE GLASS OR TRIM FOR THE LITE.
17. PROVIDE 45 MIN RATED PROTECTIVE GLASS IN 45 MIN RATED DOORS, ADJOINING SIDELITES AND TRANSOMS.
18. PROVIDE 45 MIN RATED GLASS IN 1 HOUR RATED ASSEMBLIES

FRAME TYPE LEGEND:

S# STEEL (HM) FRAME TYPE

A# ALUMINUM (STOREFRONT) FRAME TYPE

DOOR MARK KEY



DOOR SCHEDULE REMARKS:

1. PROVIDE REMOVABLE MULLION.
2. REFER TO ELECTRICAL DOCUMENTS FOR POWER FOR CARD KEY ACCESS. AT DOUBLE DOORS PROVIDE ELECTRIC STRIKE AT REMOVABLE MULLION.
3. PROVIDE DRIP AT HEAD OF DOOR
4. MANUAL OPERATED, TYPICAL.
5. MOTOR OPERATED, TYPICAL. REFER TO MEP DOC.
6. PREMANUFACTURED DOOR AND FRAME ASSEMBLY. PROVIDE PLAM FACING COLOR AS SCHEDULED ON SHEET A801. REFER TO ELECTRICAL DOCUMENTS FOR HOLD-OPEN DEVICES.
7. PROVIDE LOUVER IN EA DOOR. REF MEP DOCS FOR SIZE
8. FILL, REPAIR AND PAINT EXISTING DOOR FRAME AND PROVIDE NEW HARDWARE FOR NEW DOOR *(REFER HARDWARE SCHEDULE)*
9. FIELD VERIFY ROUGH OPENING PRIOR TO DOOR FABRICATION.

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Notes

1	Addendo 1			10.03.2025
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File Name: N/A		Author	Designer	Checker	08/22/25
		Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT DANIELLE DUNN 18298 STATE OF TEXAS

Client/Project Logo

2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
DOOR HARDWARE SCHEDULE, FRAME TYPES

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	A501 - RES

ORIGINAL SHEET - ARCH E1

<PCK location in Project Information>
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REPLACE FULL LENGTH OF CASEWORK TYP.

REPLACE FULL LENGTH OF CASEWORK TYP.

REPLACE FULL LENGTH OF CASEWORK TYP.

CLASSROOM R105 860 SF
CLASSROOM R118 739 SF
CLASSROOM R119 845 SF
CLASSROOM R120 727 SF
CLASSROOM 205 873 SF
CLASSROOM 204 832 SF
CLASSROOM 207 871 SF
CLASSROOM 206 877 SF
CLASSROOM 209 772 SF
CLASSROOM 208 777 SF
CLASSROOM 116 722 SF
K CLASSROOM 114 843 SF
K CLASSROOM 115 755 SF
K CLASSROOM 113 882 SF
K CLASSROOM 112 836 SF
K CLASSROOM 111 875 SF
CLASSROOM 110 878 SF
PRINCIPAL 107 263 SF
STO 100 122 SF
STO X150 13 SF
STO X151 12 SF
CLASSROOM X132 258 SF
ASSIST PRIN 105 220 SF
OFFICE 104 223 SF
OFFICE X147 99 SF
OFFICE X149 99 SF
STO A107 36 SF
STO X106 9 SF
STO X148 12 SF
WORKROOM 105 SF
CLINIC 102 410 SF
SECRETARY 101 416 SF
OFFICE 139 75 SF
RECEPTION 100 482 SF
A3 A712 - RES
CLASSROOM 602 850 SF
A2 A712 - RES
CLASSROOM 601 1069 SF
A1 A712 - RES
CLASSROOM 600 856 SF
CIRCULATION 829 SF
MECH 110 139 SF
CLASSROOM 302 477 SF
LOUNGE 303 377 SF
WORKROOM X190 247 SF
LIBRARY 300 2756 SF
LIBRARY 301 700 SF
MECH M300C 519 SF
RESOURCE 304 686 SF
PROCESSING 300A 249 SF
MDF 152 SF
MECH 112 126 SF
B3 A712 - RES
ART 306 831 SF
A712 - RES
COMPUTER 305 827 SF
OFFICE 21 163 SF
RR 126 SF
RR 125 SF
CONF 20 176 SF
STUDENT DINING 603 4821 SF
MECH 22 181 SF
STO 58 106 SF
STAGE 808 SF
MECH 23 187 SF
STO 59 106 SF
VESTIBULE 89 149 SF
CIRCULATION 657 SF
CLASSROOM 406 726 SF
CLASSROOM 405 729 SF
CLASSROOM 404 826 SF
CLASSROOM 403 876 SF
CLASSROOM 402 713 SF
SCIENCE 401 714 SF
MUSIC 400 869 SF
VESTIBULE 57 169 SF
OFFICE 19 103 SF
OFFICE 18 163 SF
OFFICE 56 106 SF
KITCHEN 975 SF
CUST 87 154 SF
MECH 55 687 SF
CLASSROOM 88 161 SF
REC 97 58 SF
STORAGE 90 164 SF
STORAGE 91 133 SF
MECH YARD 54 2301 SF
CLASSROOM 515 852 SF
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CLASSROOM 508 855 SF
ART 507 716 SF
CLASSROOM 502 740 SF
CLASSROOM 500 897 SF
CORRIDOR 62 2143 SF
CLASSROOM 514 632 SF
CLASSROOM 512 626 SF
CLASSROOM 511 626 SF
COMPUTER 509 676 SF
BOOKROOM 506 211 SF
MECH X112 308 SF
OFFICE R101 162 SF
STOR R102 140 SF
MECH. R103 232 SF
OUTDOOR STORAGE R104 84 SF
GYMNASIUM R100 3747 SF

A1 A711 - RES
3/32" = 1'-0"

FURNISHINS AND EQUIPMENT PLAN - CASEWORK

ORIGINAL SHEET - ARCH E1

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Notes

1 Addenda 1	By	Appd	10.03.2025
Revision			YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT	By	Appd	2025.09.24
Issued			YYYY.MM.DD
File Name: N/A	Author	Designer	Checker	11/12/24
	Dwn.	Dsgn.	Ckkd.	YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT DANIELLE DUNN 28295 STATE OF TEXAS

Client/Project Logo

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Client/Project

FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

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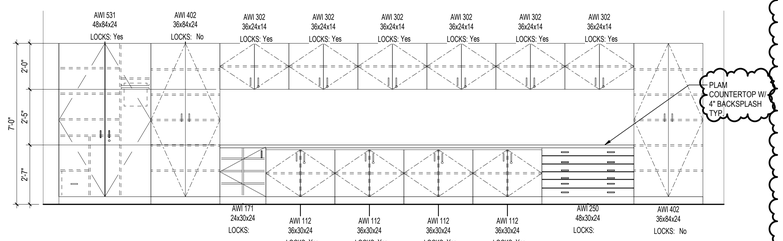
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FURNISHINGS AND EQUIPMENT PLAN - CASEWORK

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Revision	Drawing No.
1	A711 - RES

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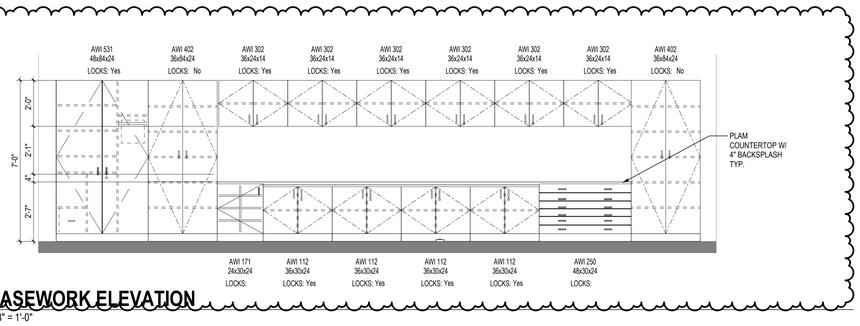
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C1 A712 **CASEWORK ELEVATION - MUSIC**

3/8" = 1'-0"

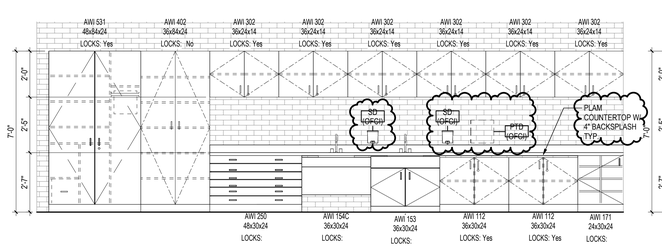
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C2 A712 **CASEWORK ELEVATION**

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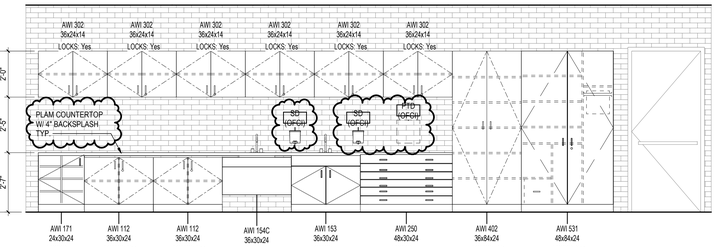
RES



B1 A712 **CASEWORK ELEVATION - CLASSROOM 116**

3/8" = 1'-0"

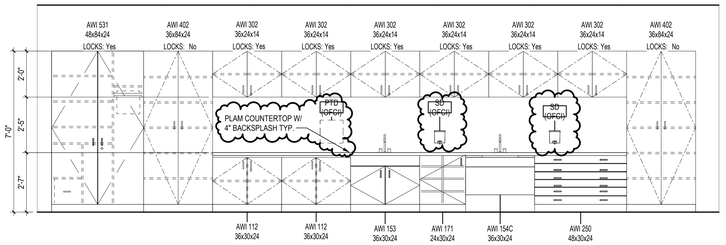
RES



B2 A712 **CASEWORK ELEVATION - CLASSROOM 114**

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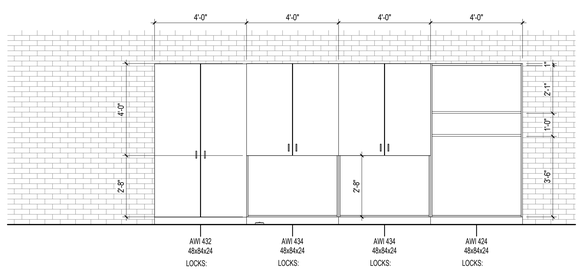
RES



B3 A712 **CASEWORK ELEVATION - ART**

3/8" = 1'-0"

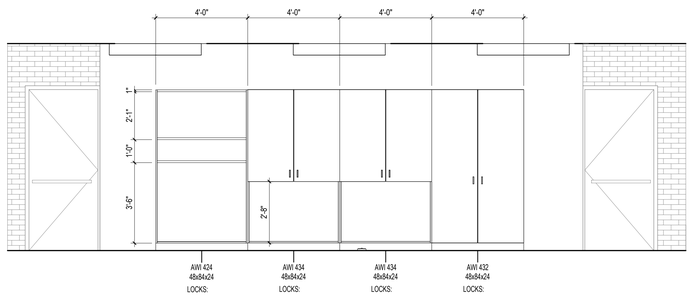
RES



A1 A712 **CASEWORK ELEVATION - CLASSROOM 600**

3/8" = 1'-0"

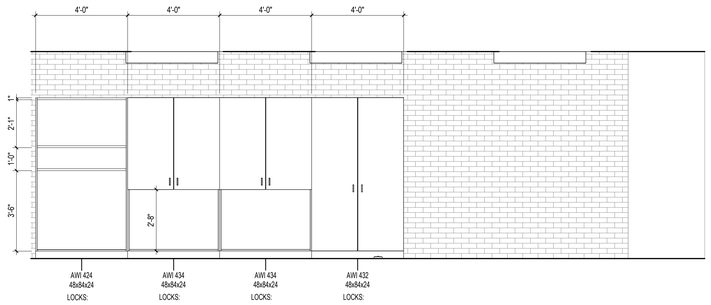
RES



A2 A712 **CASEWORK ELEVATION - CLASSROOM 601**

3/8" = 1'-0"

RES



A3 A712 **CASEWORK ELEVATION - CLASSROOM 602**

3/8" = 1'-0"

RES

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS

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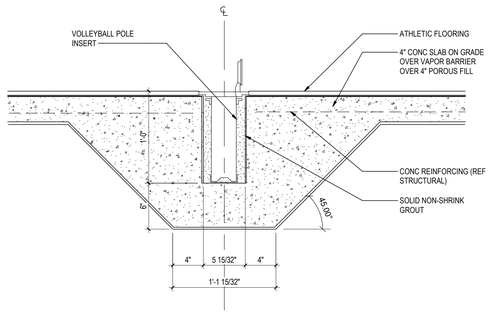
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CASEWORK ELEVATIONS

Project No.	Scale
214001246	3/8" = 1'-0"
Revision	Drawing No.
1	A712 - RES

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ORIGINAL SHEET - ARCH E1

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D1 / A905 — **VOLLEYBALL INSERTS**
1 1/2" = 1'-0"
RES

GYM FLOOR NOTES:

1. ALL DIMENSION LINES ARE TO THE INSIDE FACE OF THE LINE (U.O.N.).

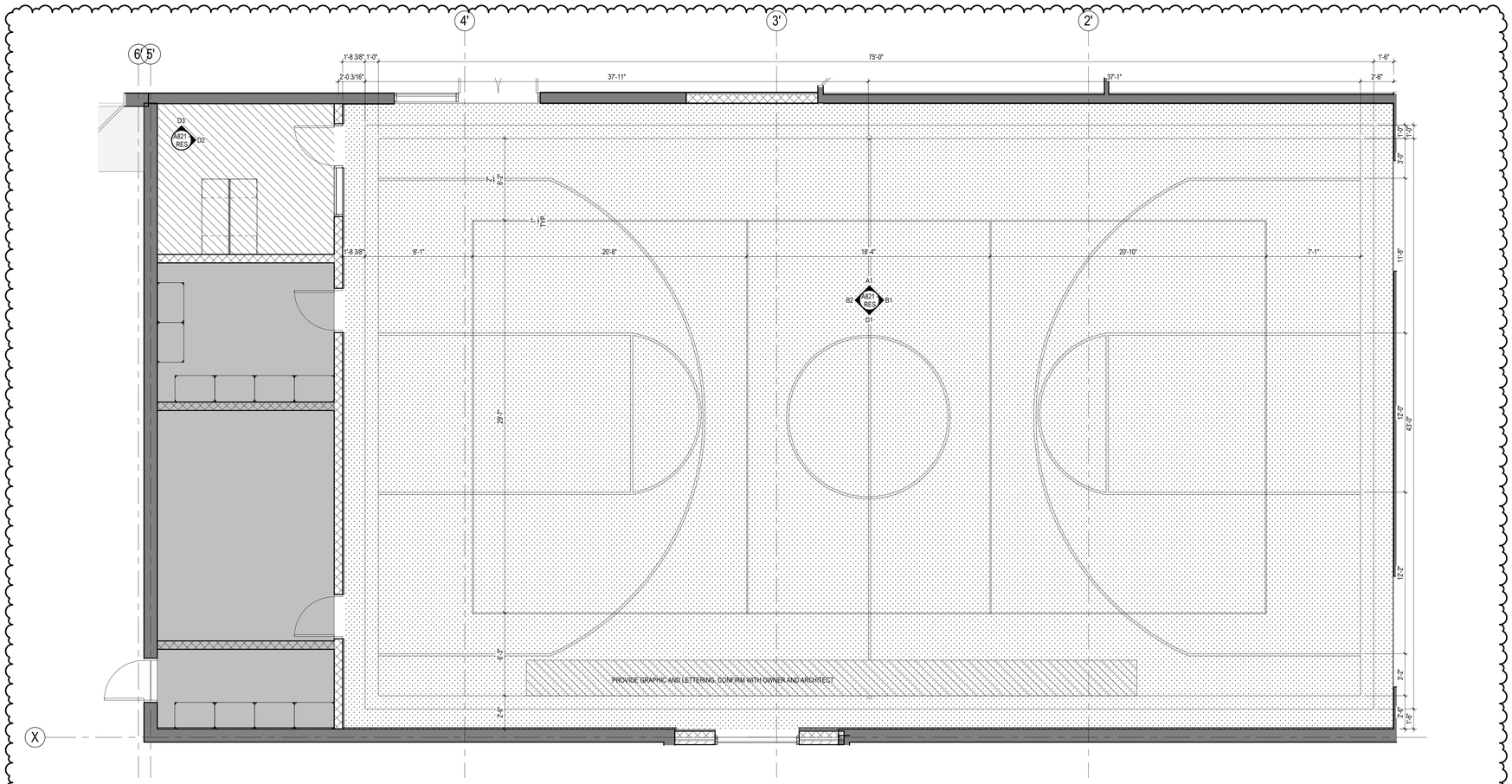
2. ALL BASKETBALL COURT MARKINGS AND LINES SHALL BE 2" WIDE (U.O.N.).

3. FIELD VERIFY EXACT LOCATIONS OF BACKBOARDS PRIOR TO PERFORMING ANY COURT MARKING/STRIPING, TYP.

4. STRIPING AND FLOOR GRAPHICS PAINT SHALL BE PROVIDED BY FLOORING INSTALLATION VENDOR FOLLOWING ALL MANUFACTURER'S RECOMMENDATIONS. COLORS TO BE CONFIRMED WITH OWNER/ARCHITECT BY 6" X 6" MATERIAL SAMPLES PRIOR TO INSTALLATION. COLORS SHALL BE SELECTED FROM VENDOR'S STANDARD AVAILABLE COLORS.

MATERIAL LEGEND

- RAF-1 RESILIENT ATHLETIC FLOORING
- LVT-1
- SC-1



A1 / A905 — **GYM STRIPING PLAN**
1/4" = 1'-0"
RES

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Notes

1 Addenda 1	By	Appd	10.03.2025
Revision			YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT	By	Appd	2025.09.24
Issued			YYYY.MM.DD
File Name: N/A	Author	Designer	Checker 11/12/24
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal



Client/Project Logo

2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
FINISH PLAN - GYM FLOOR STRIPING PLAN

Project No. 214001246	Scale As indicated
Revision 1	Drawing No. A905 - RES

<Pick location in Project Information>
10/9/2025 3:09:45 PM
ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

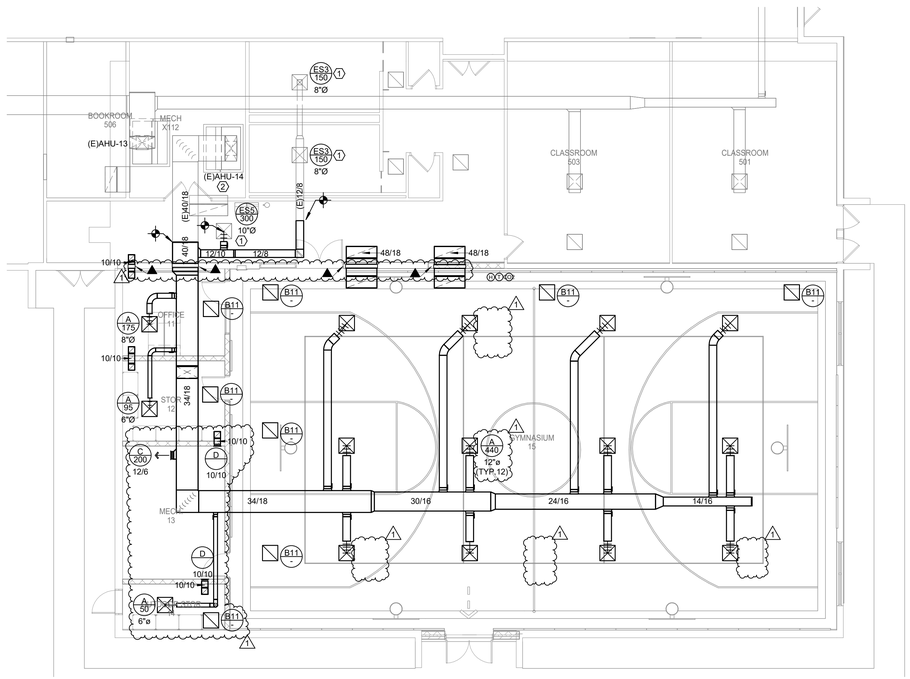
RENOVATIONS	
⊕	POINT OF CONNECTION FROM NEW TO EXISTING
▭	ITEM TO REMAIN
⬚	ITEM TO BE REMOVED

GENERAL NOTES:

1. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CHILLERS, AIR HANDLING UNITS, FANS, CONDENSING UNITS, BMCS CONTROL PANELS, TEMPERATURE SENSORS, AND CONTROL VALVES.
2. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
3. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING DRAWINGS AND PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.

MECHANICAL KEYED NOTES:

1. RE-BALANCE EXISTING SUPPLY AIR DEVICE TO CFM INDICATED.
2. UNIT (E)AHU-14 SHALL PROVIDE A MINIMUM OF 680 CFM OF OUTSIDE AIR TO SPACE.



N

1 **MECHANICAL PLAN - LEVEL 1 - NEW GYM**
Scale: 1/8" = 1'-0"

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Notes

1 Addendum 01			10/10/2025
Revision	By	Appd	YYYY.MM.DD
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File Name: N/A	ER	ER	VP 11/27/24
	Dwn.	Dsgn.	Ckkd. YYYY.MM.DD

Permit/Seal



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INDEPENDENT SCHOOL DISTRICT

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS
6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
MECHANICAL FLOOR PLANS

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	M201-RES

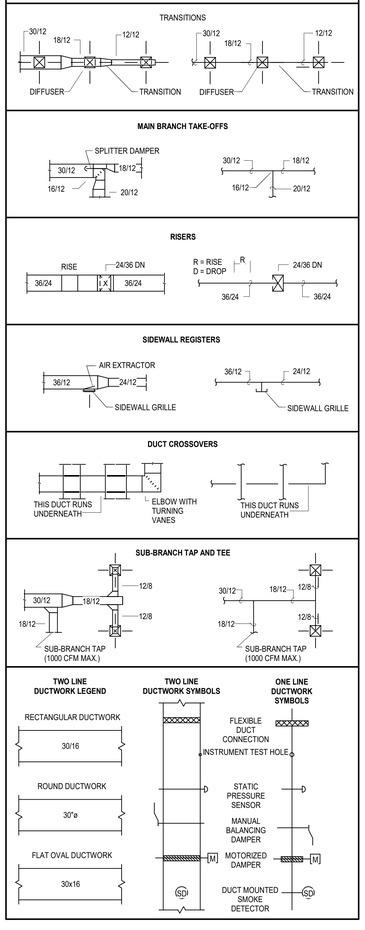
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ORIGINAL SHEET - ARCH E1

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SYMBOL LEGEND

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
GENERAL	
(#)	KEY NOTE TAG
/#\	REVISION TAG
	NEW EQUIPMENT
DUCTWORK	
	SUPPLY AIR DUCTWORK
	RETURN AIR AND OUTSIDE AIR DUCTWORK
	EXHAUST AIR DUCTWORK
	FLEXIBLE DUCTWORK
	SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	RETURN AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	FIRE DAMPER (VERTICAL)
	FIRE DAMPER (HORIZONTAL)
S	SMOKE DAMPER (VERTICAL)
S	SMOKE DAMPER (HORIZONTAL)
FSD	COMBINATION FIRE & SMOKE DAMPER (VERTICAL)
FSD	COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL)
	MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE)
M	MOTORIZED DAMPER (SEE DAMPER SCHEDULE)
SENSORS	
T	THERMOSTAT AND TEMPERATURE SENSOR
H	HUMIDISTAT
SD	SMOKE DETECTOR
HD	HEAT DETECTOR
AIR DEVICES	
	GRILLE SIZE TAG (REFER TO GRILLE SIZE LEGEND)
	SUPPLY AIR GRILLE WITH FOUR-WAY THROW
	SUPPLY AIR GRILLE WITH THREE-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY CORNER THROW
	SUPPLY AIR GRILLE WITH ONE-WAY THROW
	RETURN AIR GRILLE
	RETURN AIR GRILLE WITH SOUND BOOT
	EXHAUST AIR GRILLE
	SUPPLY AIR SIDEWALL GRILLE
	RETURN AIR SIDEWALL GRILLE
20X12	RETURN AIR OPENING ABOVE CEILING
PIPING	
–CWS&R–	CONDENSER WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–CWS–	CONDENSER WATER SUPPLY
–CWR–	CONDENSER WATER RETURN
–CHWS&R–	CHILLED WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–CHWS–	CHILLED WATER SUPPLY
–CHWR–	CHILLED WATER RETURN
–HWS&R–	HOT WATER FOR HYDRONIC HEATING SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–HWS–	HOT WATER FOR HYDRONIC HEATING SUPPLY
–HWR–	HOT WATER FOR HYDRONIC HEATING RETURN
–D–	CONDENSATE DRAIN LINE
–AD–	AUXILIARY CONDENSATE DRAIN LINE
–RLR–	REFRIGERANT LIQUID & GAS RECIRCULATION LINE (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–RL–	REFRIGERANT LIQUID LINE
–HG–	REFRIGERANT HOT GAS LINE
–RS–	REFRIGERANT SUCTION LINE
	ELBOW UP
	ELBOW DOWN
	90° ELBOW
	45° ELBOW
	TEE
	TEE DOWN
	TEE UP
	TOP BRANCH CONNECTION
	BOTTOM BRANCH CONNECTION
	FLANGE
	CAP
	CONTINUATION
	FLOOR DRAIN (REFER TO PLUMBING DRAWINGS)
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	BUTTERFLY VALVE WITH OPERATOR
	PLUG VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
PR	PRESSURE RELIEF VALVE
	BALL VALVE
	STRAINER
	UNION
	THERMOMETER WELL
	PETE'S PLUG
	PRESSURE GAUGE
	TEMPERATURE SENSOR IN PIPE
	VENTURI FLOW METER
	FLOW SWITCH
FM	FLOW MEASURING STATION
	EXPANSION JOINT
	FLEXIBLE CONNECTION
G.C.	GAUGE COCK
	SITE GLASS
	DIFFERENTIAL PRESSURE SENSOR
	TURBINE FLOW METER
	ANCHOR
	PIPE GUIDE
SUBSCRIPTS AND ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
BBS	BELOW BOTTOM OF STRUCTURE
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CA	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
EA	EXHAUST AIR
FPM	FEET PER MINUTE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
RA	RETURN AIR
SA	SUPPLY AIR

DUCTWORK SYMBOLS LEGEND



GRILLE

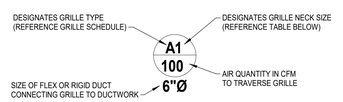
MARK	SERVICE	TYPE	DAMPER	CONSTRUCTION MATERIAL	FINISH COLOR	MANUFACTURER	MODEL NUMBER	DESCRIPTION
A	SUPPLY AIR	DIFFUSER	-	STEEL	WHITE	TITUS	OMNI	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" OR 12"X12" FACE.
B	RETURN AIR	DIFFUSER	-	STEEL	WHITE	TITUS	PAR	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" FACE.
C	SUPPLY AIR	GRILLE	-	STEEL	WHITE	TITUS	300RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1)
D	RETURN AIR	GRILLE	-	STEEL	WHITE	TITUS	350RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1)

GENERAL NOTES:
1. DAMPERS NOTED AS U.L. SHALLBE A 'U.L.' CLASSIFIED CEILING RADIATION DAMPER WITH THERMAL BLANKET.
2. COORDINATE FINAL AIR DEVICE LOCATION AND FINISH COLOR WITH ARCHITECT.

REMARKS:
1. N/A

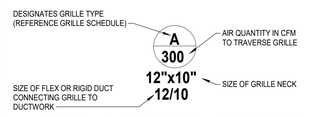
GRILLE SIZING SCHEDULE

STANDARD GRILLE



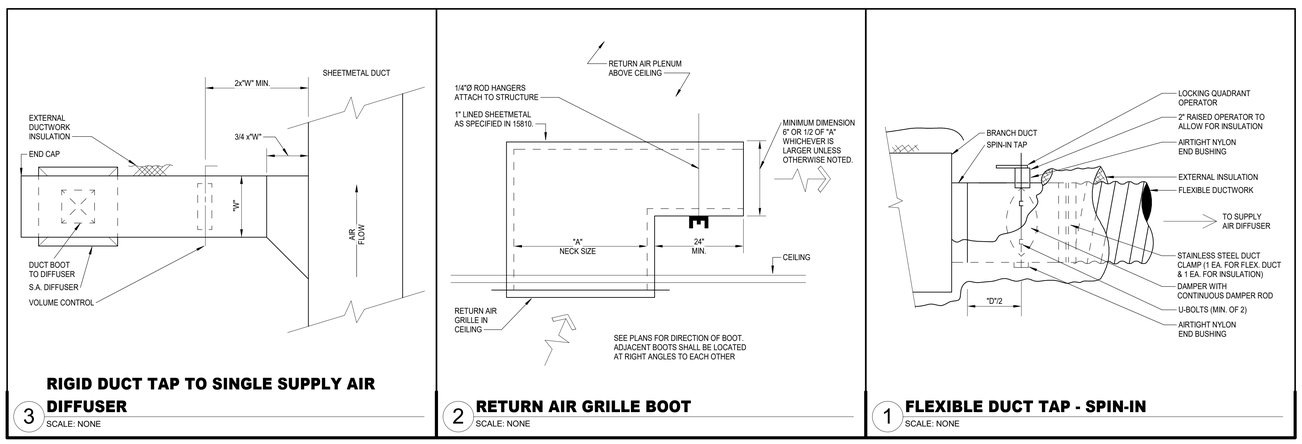
ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN.

REGISTER OR NONSTANDARD GRILLE



ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN. ALL REGISTERS SHALL HAVE A 45° HORIZONTAL DEFLECTION UNLESS OTHERWISE SHOWN.

GRILLE SIZE DESIGNATION	GRILLE NECK SIZE	GRILLE SIZE DESIGNATION	GRILLE NECK SIZE
1	6" x 6"	7	15" x 15"
2	8" x 8"	8	16" x 16"
3	9" x 9"	9	18" x 18"
4	10" x 10"	10	20" x 20"
5	12" x 12"	11	22" x 22"
6	14" x 14"	12	24" x 24"



3 **RIGID DUCT TAP TO SINGLE SUPPLY AIR DIFFUSER**
SCALE: NONE

2 **RETURN AIR GRILLE BOOT**
SCALE: NONE

1 **FLEXIBLE DUCT TAP - SPIN-IN**
SCALE: NONE

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Notes

1 Addendum 01				10/10/2025
Revision		By	Appd	YYYY.MM.DD
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File Name: N/A	ER	ER	VP	11/27/24
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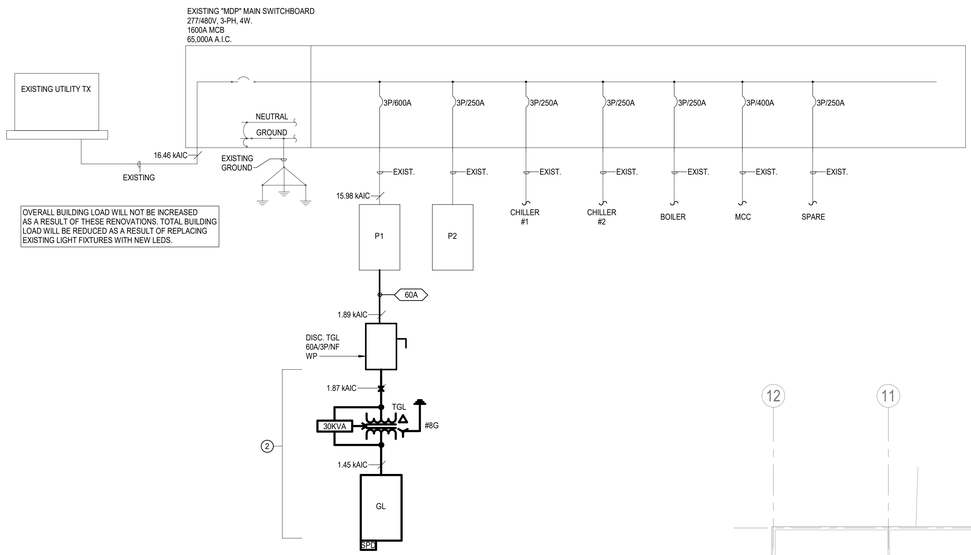
FBISD BP022 GYM RENOVATIONS AND ADDITIONS
6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
MECHANICAL DETAILS

Project No.	Scale
214001246	12" = 1'-0"
Revision	Drawing No.
1	M301-RES

•Plot location in Project Information
10/7/2025 2:41:23 PM
ORIGINAL SHEET - ARCH E1

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2 ONE LINE DIAGRAM

Scale: N.T.S.

ELECTRICAL GENERAL NOTES

1. CONNECT NEW LIGHT FIXTURES AND/OR EXIT SIGNS TO EXISTING CIRCUITS LEFT IN PLACE AFTER DEMOLITION OR NEW AS SHOWN PROVIDE EMERGENCY CIRCUIT FOR HATCHED FIXTURE AND/OR EXIT SIGNS. EXTEND WIRING WITH MATCHING CONDUCTORS/CONDUIT TO EXISTING LOCATION AND/OR NEW FIXTURES. FIELD VERIFY CONNECTED LOAD NOT TO EXCEED 3500 W @ 277V. TYPICAL.

2. LOCATION OF NEW LIGHT FIXTURES SHALL REUSE EXISTING J-BOX AND EXISTING LIGHT FIXTURE WHIPS AS PRACTICAL. EXTEND WIRING WITH MATCHING CONDUCTORS/CONDUIT AND PROVIDE NEW J-BOX ABOVE ACCESIBLE CEILING WITH ½-INCH FLEXIBLE STEEL CONDUIT OR STEEL MC CABLE, LENGTH NOT TO EXCEED 6-FEET, "DAISY CHAINING" LIGHT FIXTURES INSTALLED FOR LAY-IN CEILING AREAS IS NOT ALLOWED. FOR
NON-ACCESIBLE CEILINGS, LIGHT FIXTURE WHIPS SHALL BE ½-INCH FLEXIBLE STEEL CONDUIT, LENGTH AS REQUIRED TO MAKE A TAP AT AN ACCESSIBLE J-BOX. RECESSED LIGHT FIXTURES IN NON-ACCESSIBLE CEILINGS MAY BE DAISY CHAINED USING THE LIGHT FIXTURE'S INTEGRAL, UL LISTED J-BOX OR INTERNAL WIRE WAY THAT IS ACCESSIBLE THROUGH FIXTURE FROM BELOW THE CEILING. REFER TO 26 05 33 CONDUIT SYSTEMS.

3. PROVIDE NEW LIGHTING CONTROLS, SENSORS AND ASSOCIATED DEVICES, AND 20A EMERGENCY LOAD CONTROL RELAYS/TRANSFER DEVICES. REFER TO 26 09 24 LIGHTING CONTROLS.

4. OCCUPANCY/VACANCY SENSOR AND DAYLIGHTING SENSOR LOCATIONS INDICATE SPACE OR AREA CONTROLLED. CONTRACTOR TO PROVIDE ACTUAL QUANTITIES, TYPES, AND MOUNTING LOCATIONS AS RECOMMENDED BY MANUFACTURER AND IECC-2015 C405.

5. SPACES WITH MULTIPLE OCCUPANCY/VACANCY SENSORS OR WHERE LINE OF SIGHT MAY BE OBSCURED, SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.

6. CONTRACTOR SHALL MAINTAIN CONSTANT UNSWITCHED CIRCUITS FROM EXISTING SOURCE AND/OR NEW AS SHOWN FOR EMERGENCY FIXTURES, EMERGENCY LOAD RELAYS, TRANSFER SWITCHES AND EXIT SIGNS.

7. COORDINATE LOCATION OF LIGHT FIXTURES IN ALL MECHANICAL AND ELECTRICAL ROOMS WITH MECHANICAL EQUIPMENT, PIPING, AND ALL OTHER TRADES.

8. REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.

ELECTRICAL KEYED NOTES

KEYED NOTE	Description
1	PROVIDE NEW 30KVA 480:120/208V 3PH NEMA 1 TRANSFORMER WITH 42-SPACE PANELBOARD 120/208V 3PH 4W PANEL, BOLT ON CIRCUIT BREAKERS. ROUTE CONDUIT CONCEALED ABOVE CEILING. SUGGESTED ROUTE SHOWN.
2	PROVIDE NEW 30KVA 480:120/208V 3PH NEMA 1 TRANSFORMER WITH 42-SPACE PANELBOARD 120/208V 3PH 4W PANEL, BOLT ON CIRCUIT BREAKERS.

Branch Panel: P1 — EXISTING PANEL

Location: MECH 55 **Supply From:** **Mounting:** Surface
Volts: 277/480 Wye **Phases:** 3 **Wires:** 4
A.I.C. Rating: 18,000 **Enclosure:** Type 1 **Mains:** 600A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker			Circuit Description	CKT	Note
	1					30.4 / 24.6							2	
	3	PANEL HK	--	225	3		30.4 / 24.6		3	200	--	XFMR TK	4	
	5							30.4 / 24.6					6	
	7					30.0 / 0.0							8	
	9	TEMP BUILDINGS	--	250	3		30.0 / 0.0		3	--	--	SPACE	10	
	11							30.0 / 0.0					12	
	13					22.1 / 0.0			1	20	--	EXIT LTG	14	
	15	T-SHACKS	--	125	3		22.1 / 0.0		1	--	--	SPACE	16	
	17							22.1 / 0.0	1	--	--	SPACE	18	
	19					11.0 / 16.6							20	
	21	XFMR TEM	--	70	3		11.0 / 16.6		3	100	--	NEW XFMR TEM	22	
	23							11.0 / 16.6					24	
	25					0.0 / 0.0			1	--	--	SPACE	26	
1	27	SPARE	--	100	3		0.0 / 0.0		1	--	--	SPACE	28	
	29							0.0 / 0.0	1	--	--	SPACE	30	
	31	SPACE	--	--	1	0.0 / 0.0			1	--	--	SPACE	32	
	33	SPACE	--	--	1		0.0 / 0.0		1	--	--	SPACE	34	
	35	SPACE	--	--	1			0.0 / 0.0	1	--	--	SPACE	36	
	37					3.5 / 0.0			1	--	--	SPACE	38	
1	39	TGL	ONE LINE	50	3		1.4 / 0.0		1	--	--	SPACE	40	
	41							1.2 / 0.0	1	--	--	SPACE	42	
		Total Load:				138.2 kVA	136.1 kVA	135.9 kVA						
		Total Amps:				499 A	491 A	491 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	0.0 kVA	0.00%	0.0 kVA	
Lighting	0.0 kVA	0.00%	0.0 kVA	**Total Conn. Load:** 410.2 kVA
Power	0.0 kVA	0.00%	0.0 kVA	**Total Est. Demand:** 410.2 kVA
Receptacles	6.1 kVA	100.00%	6.1 kVA	**Total Conn. Current:** 493 A
Kitchen Equipment	0.0 kVA	0.00%	0.0 kVA	**Total Est. Demand Current:** 493 A
Miscellaneous	0.0 kVA	0.00%	0.0 kVA	

Existing Loads	Existing Connected	Existing Demand...	Existing Demand
Existing Load	404.1 kVA	100.00%	404.1 kVA

Notes:
EXISTING PANEL - Total Calculated Existing load shown in calculations.

1 - NEW CIRCUIT

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
E - EXISTING LOAD

Branch Panel: GL — NEW PANEL

Location: MECH X112 **Supply From:** TGL **Mounting:** Surface
Volts: 120/208 Wye **Phases:** 3 **Wires:** 4
A.I.C. Rating: 18,000 **Enclosure:** Type 1 **Mains:** 100A MCB

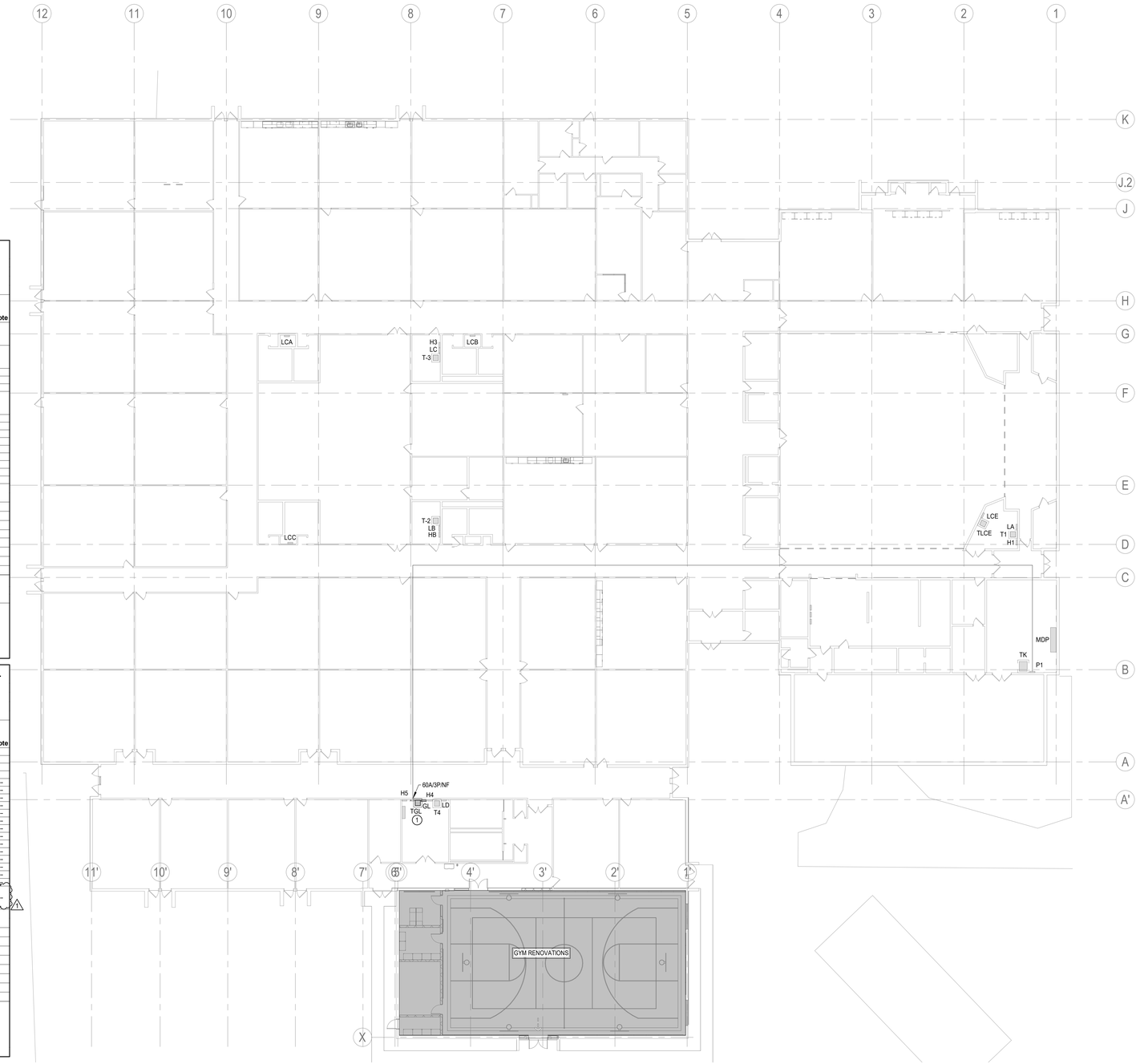
Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker			Circuit Description	CKT	Note
	1	Receptacles Room 12, 11	#12	20	1	1.5 / 0.7			1	20	#12	Receptacles OFFICE 11	2	
	3	Receptacles Room 12, 13, 14	#12	20	1		0.9 / 0.5		1	20	#12	Receptacles MECH. 13	4	
	5	Receptacles MECH. 13	#12	20	1			0.5 / 0.7	1	20	#12	Receptacles GYMNASIUM 15	6	
	7	Receptacles GYMNASIUM 15	#12	20	1	0.7 / 0.5			1	20	#12	Receptacles GYMNASIUM 15	8	
--	9	SPACE	--	--	1		0.0 / 0.0		1	--	--	SPACE	10	--
--	11	SPACE	--	--	1			0.0 / 0.0	1	--	--	SPACE	12	--
--	13	SPACE	--	--	1	0.0 / 0.0			1	--	--	SPACE	14	--
--	15	SPACE	--	--	1		0.0 / 0.0		1	--	--	SPACE	16	--
--	17	SPACE	--	--	1			0.0 / 0.0	1	--	--	SPACE	18	--
--	19	SPACE	--	--	1	0.0 / 0.0			1	--	--	SPACE	20	--
--	21	SPACE	--	--	1		0.0 / 0.0		1	--	--	SPACE	22	--
--	23	SPACE	--	--	1			0.0 / 0.0	1	--	--	SPACE	24	--
--	25	SPACE	--	--	1	0.0 / 0.0			1	--	--	SPACE	26	--
--	27	SPACE	--	--	1		0.0 / 0.0		1	--	--	SPACE	28	--
--	29	SPACE	--	--	1			0.0 / 0.0	1	--	--	SPACE	30	--
--	31	SPACE	--	--	1	0.0 / 0.0			1	--	--	SPACE	32	--
--	33	SPARE	--	20	1		0.0 / 0.0		1	20	--	SPARE	34	--
--	35	SPARE	--	20	1			0.0 / 0.0	1	20	--	SPARE	36	--
--	37	SPARE	--	20	1	0.0 / 0.0							38	
--	39	SPARE	--	20	1		0.0 / 0.0		3	30	--	SPDL	40	--
--	41	SPARE	--	20	1			0.0 / 0.0					42	
		Total Load:				3.5 kVA	1.4 kVA	1.2 kVA						
		Total Amps:				29 A	12 A	10 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Receptacles	6.1 kVA	100.00%	6.1 kVA	
				Total Conn. Load: 6.1 kVA
				Total Est. Demand: 6.1 kVA
				Total Conn. Current: 17 A
				Total Est. Demand Current: 17 A

Notes:
1 - THROUGH SUBFEED LUGS

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE



N

1 ELECTRICAL COMPOSITE PLAN

Scale: 1/16" = 1'-0"

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Registration: F-4111
Project No: 2023-04376-00

Notes

Revision	By	Appd	
1 Addendum 01			10/10/2025 YYYY.MM.DD

Issued	By	Appd	
100% ISSUE FOR BID AND PERMIT			2025.09.24 YYYY.MM.DD
File Name: N/A	KJ Dwn.	KJ Dsgn.	JJ Chkd. 11/27/24 YYYY.MM.DD

Permit/Seal

BRADLEY KALMANS 80219 LICENSED PROFESSIONAL ENGINEER
10-10-2025

Client/Project Logo

2022 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS
6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
ELECTRICAL COMPOSITE PLAN

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	E100-RES

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10/1/2025 2:44:54 PM
ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

ELECTRICAL KEYED NOTES

KEYED NOTE	Description
1	PROVIDE POWER TO NEW LIGHTING IN THIS SPACE FROM EXISTING CIRCUITS LEFT IN PLACE AFTER DEMOLITION. EXTEND EXISTING CONDUCTORS/CONDUIT WITH MATCHING SIZE AS NECESSARY.
2	EXISTING LIGHTING CONTROLS ARE BI-LEVEL SWITCHING AT EACH FIXTURE UTILIZING TWO SWITCHES FOR IN-BOARD AND OUTBOARD LAMPS. NEW STEP-DIMMING LIGHT FIXTURES SHALL BE WIRED TO ONE EXISTING SWITCH. REMOVE EXCESS SWITCH AND PROVIDE NEW TWO-GANG SINGLE DEVICE COVER PLATE AT SWITCH LOCATION. CONTRACTOR LOCATE AND COORDINATE WITH ALL EXISTING SWITCH LOCATIONS IN THE SPACE.

ELECTRICAL GENERAL NOTES

1. CONNECT NEW LIGHT FIXTURES AND/OR EXIT SIGNS TO EXISTING CIRCUITS LEFT IN PLACE AFTER DEMOLITION OR NEW AS SHOWN PROVIDE EMERGENCY CIRCUIT FOR HATCHED FIXTURE AND/OR EXIT SIGNS. EXTEND WIRING WITH MATCHING CONDUCTORS/CONDUIT TO EXISTING LOCATION AND/OR NEW FIXTURES. FIELD VERIFY CONNECTED LOAD NOT TO EXCEED 3500 W @ 277V. TYPICAL.

2. LOCATION OF NEW LIGHT FIXTURES SHALL REUSE EXISTING J-BOX AND EXISTING LIGHT FIXTURE WHIPS AS PRACTICAL. EXTEND WIRING WITH MATCHING CONDUCTORS/CONDUIT AND PROVIDE NEW J-BOX ABOVE ACCESSIBLE CEILING WITH ½-INCH FLEXIBLE STEEL CONDUIT OR STEEL MC CABLE, LENGTH NOT TO EXCEED 6-FEET, "DAISY CHAINING" LIGHT FIXTURES INSTALLED FOR LAY-IN CEILING AREAS IS NOT ALLOWED. FOR
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5. SPACES WITH MULTIPLE OCCUPANCY/VACANCY SENSORS OR WHERE LINE OF SIGHT MAY BE OBSCURED, SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.

6. CONTRACTOR SHALL MAINTAIN CONSTANT UNSWITCHED CIRCUITS FROM EXISTING SOURCE AND/OR NEW AS SHOWN FOR EMERGENCY FIXTURES, EMERGENCY LOAD RELAYS, TRANSFER SWITCHES AND EXIT SIGNS.

7. COORDINATE LOCATION OF LIGHT FIXTURES IN ALL MECHANICAL AND ELECTRICAL ROOMS WITH MECHANICAL EQUIPMENT, PIPING, AND ALL OTHER TRADES.

8. REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.

LINETYPE LEGEND

———	EXISTING TO REMAIN
– – – –	DISCONNECT AND REMOVE
———	NEW WORK

DEMOLITION / EXISTING DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION, AND WHEN AVAILABLE, EXISTING RECORD DOCUMENTS. REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION, AND IMMEDIATELY AFTER SUCH DISCREPANCIES ARE DISCOVERED. CONTRACTOR TO VERIFY EXISTING CONDITIONS ON FIELD AND NOTIFY ENGINEER IF THERE ARE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL REMOVE SUCH EXISTING WORK AS CALLED FOR ON THE DRAWINGS OR AS REQUIRED TO CLEAR THE AREAS OF NEW CONSTRUCTION.

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N

1 **ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA A**
Scale: 1/8" = 1'-0"

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	Issued	By	Appd	YYYY.MM.DD
	100% ISSUE FOR BID AND PERMIT			2025.09.24

File Name: N/A — Dwn. KJ — Dsgn. KJ — Chkd. JJ — 03/20/25 YYYY.MM.DD

Permit/Seal



10-10-2025

Client/Project Logo

2025 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS
6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA A

Project No. 214001246
Scale 1/8" = 1'-0"
Revision 1
Drawing No. **E201-RES**

ORIGINAL SHEET - ARCH E1
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LINETYPE LEGEND

———	EXISTING TO REMAIN
- - - -	DISCONNECT AND REMOVE
———	NEW WORK

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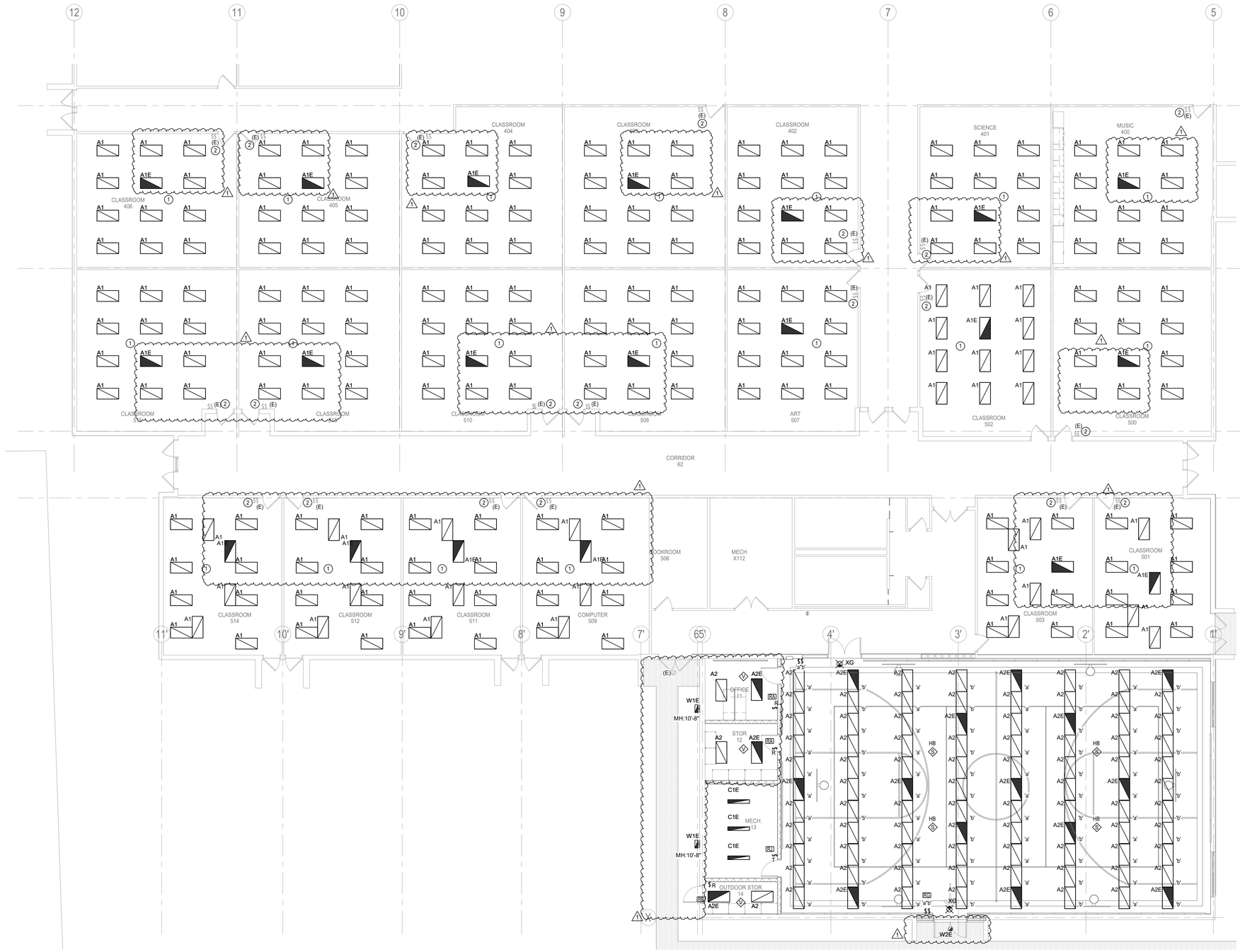
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N

1 **ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA B**
Scale: 1/8" = 1'-0"

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1 Addendum 01			10/10/2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued	By	Appd	YYYY.MM.DD
File Name: N/A	KJ	KJ	JZ 03/20/25
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

BRADLEY KALMANS 80219 LICENSED PROFESSIONAL ENGINEER
10-10-2025

Client/Project Logo

2022 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

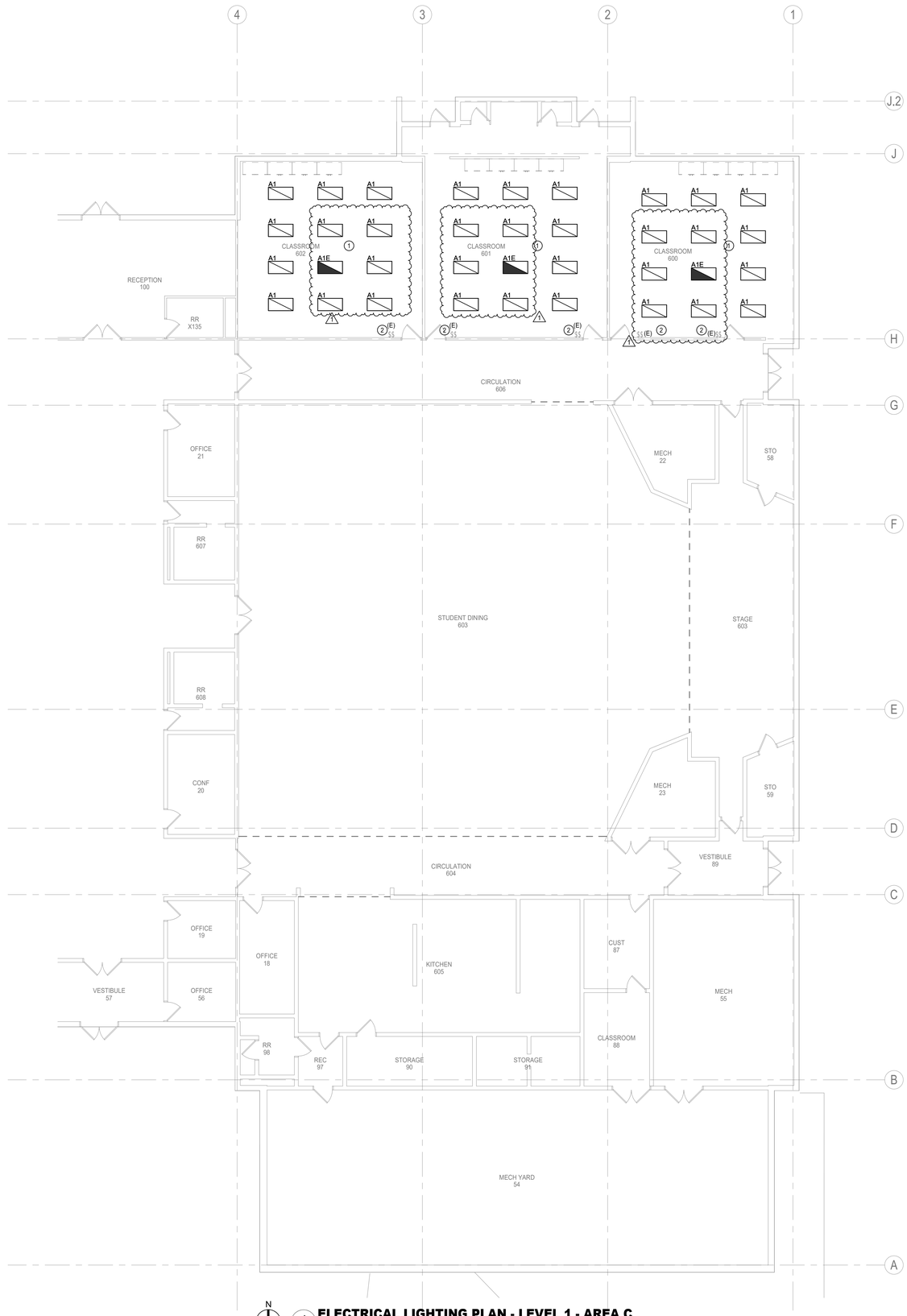
FBISD BP022 GYM RENOVATIONS AND ADDITIONS
6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA B

Project No. 214001246
Scale 1/8" = 1'-0"
Revision 1
Drawing No. **E202-RES**

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1 **ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA C**
Scale: 1/8" = 1'-0"

ELECTRICAL GENERAL NOTES

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LINETYPE LEGEND

———	EXISTING TO REMAIN
- - - -	DISCONNECT AND REMOVE
———	NEW WORK

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1	Addendum 01			10/10/2025
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Permit/Seal
LICENSED PROFESSIONAL ENGINEER
BRADLEY KALMANS
80219
CENSED
10-10-2025

Client/Project Logo
2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS
6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA C

Project No. 214001246
Scale 1/8" = 1'-0"
Revision 1
Drawing No. E203-RES

•Pick location in Project Information•
10/9/2025 2:24:00 PM
ORIGINAL SHEET - ARCH E1

Docusign Envelope ID: E7E4A423-8EE4-4F5E-86D1-EC7740945B79

ELECTRICAL KEYED NOTES

KEYED NOTE	Description
1	MOUNT AT +54" AFF. FOR BMCS CONNECTION.
2	MOUNT AT +54" AFF. FOR F/A CONNECTION.
3	PROVIDE KEYED SWITCH BANK TO CONTROL THE BASKETBALL GOALS AND BLEACHERS. CONTRACTOR SHALL GANG SWITCHES AND MOUNT AT THE SAME ELEVATION AS LIGHT SWITCH BANK. COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN FOR EXACT MOUNTING HEIGHT.
4	PROVIDE NEW DEVICE AND NEW CIRCUIT IN EXISTING BACKBOX LOCATION AS SHOWN. EXTEND CONDUIT MATCHING EXISTING SIZE TO NEW PANEL LOCATION.

ELECTRICAL GENERAL NOTES

1. ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROBLEMS PERTAINING TO CIRCUIT AVAILABILITY OR LOAD CAPACITY PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATION OF MECHANICAL AND PLUMBING EQUIPMENT AND SCHEDULES. CONTRACTOR SHALL PROVIDE ALL ELECTRICAL DISCONNECTS, BRANCH CIRCUITRY, STARTERS/CONTROLS, CIRCUIT BREAKERS AND CONNECTIONS REQUIRED TO POWER EQUIPMENT.
3. CONTRACTOR TO COORDINATE EXACT LOCATION OF DISCONNECT SWITCHES, JUNCTION BOXES AND SINGLE POLE TOGGLE SWITCHES FOR MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
4. ALL RECEPTACLES LOCATED WITHIN OF SINK SHALL BE CFC' TYPE.
5. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF RECEPTACLES AND SWITCHES WITH ARCHITECTURAL ELEVATIONS PRIOR TO ELECTRICAL ROUGH-IN. ADJUST DEVICES AS REQUIRED SO THAT NO DEVICES ARE INSTALLED BEHIND CABINETS OR SHELVES.
6. ALL BLANK FACE GFCI DEVICES SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION AND NOT BEHIND EQUIPMENT.
7. CONTRACTOR SHALL REFER TO TECHNOLOGY SERIES CONSTRUCTION DOCUMENTS FOR EXACT LOCATION AND REQUIREMENTS OF ALL LOW VOLTAGE BACK BOXES. FITTINGS, AND CONDUITS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

ALL EXTERIOR OUTLETS SHALL BE wp GFI IN METAL WHILE-IN -USE LOCKABLE ENCLOSURE.

LINETYPE LEGEND

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- - - -	DISCONNECT AND REMOVE
———	NEW WORK

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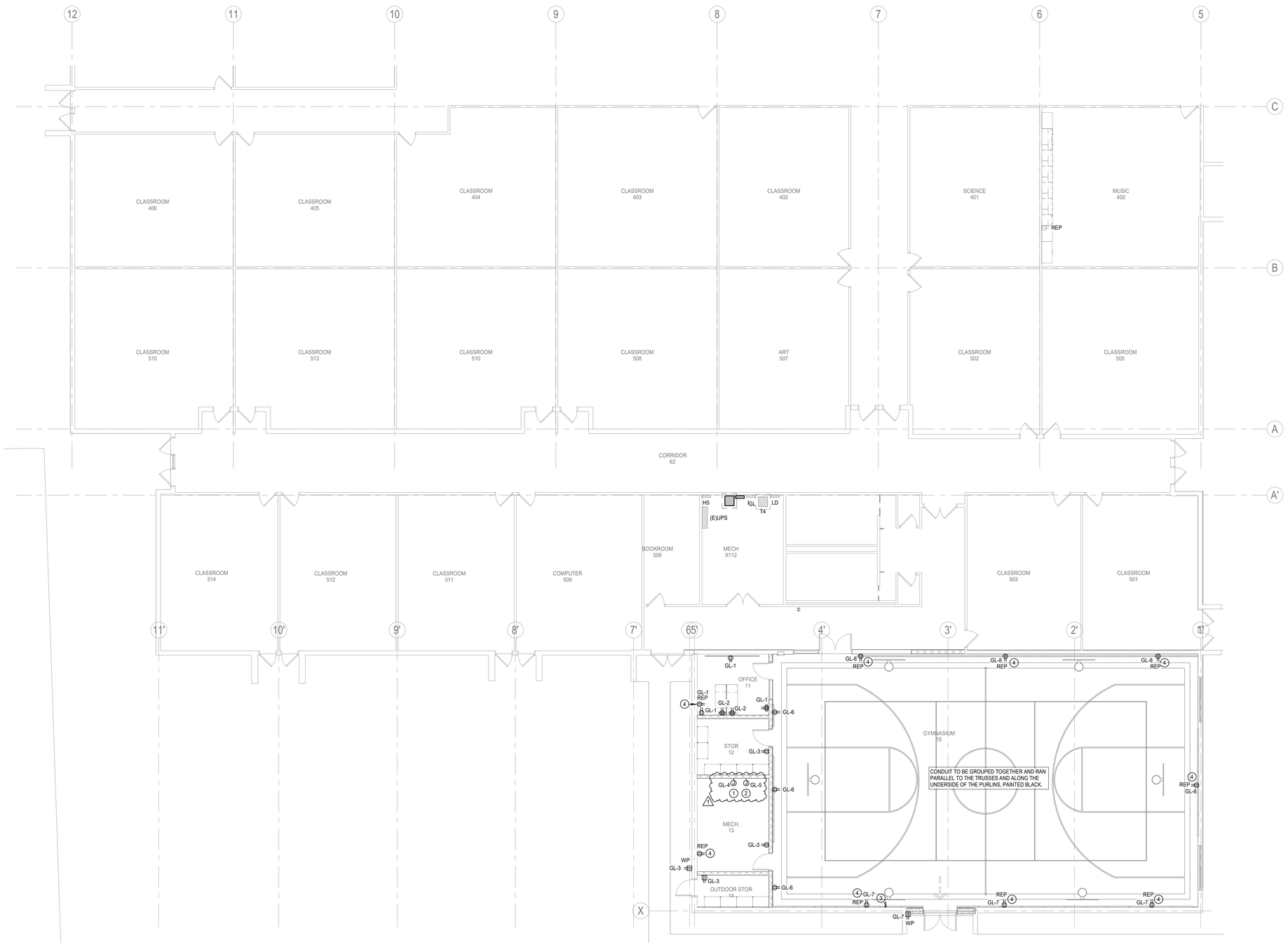
EXISTING RACEWAYS AND LOCATION OF ELECTRICAL OUTLETS ON EXISTING WALLS TO REMAIN SHALL BE RE-USED AS PRACTICAL FOR NEW DEVICES AS PART OF NEW WORK.

PROVIDE NEW LIGHTING DEVICES AND SWITCH BOX EXTENSIONS IN ALL AREAS WHERE GYPSUM BOARD OR OTHER WALL COVERING ADDS TO THE THICKNESS OF WALLS. SEE ARCHITECTURAL DRAWINGS FOR AREAS AFFECTED.

IN NON-ACCESSIBLE AND/OR HIGH CEILING AREAS, LOCATE DIGITAL LIGHTING CONTROLLER AND/OR EMERGENCY LOAD CONTROL RELAY/TRANSFER SWITCH IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING; IN AREAS WITH NO CEILING AND/OR IN EXTERIOR APPLICATIONS LOCATE ADJACENT TO NORMAL POWER PANEL SERVING THE LOAD. PROVIDE LABEL WITH WORDING PER SPECIFICATIONS.

EXISTING RACEWAYS AND LOCATION OF ELECTRICAL OUTLETS ON EXISTING WALLS TO REMAIN SHALL BE RE-USED AS PRACTICAL FOR NEW DEVICES AS PART OF NEW WORK.

FIRE ALARM SYSTEM SHALL COMPLY WITH ALL CITY OF HOUSTON IBC AMENDMENTS. SMOKE DETECTORS SHALL BE PROVIDED IN ALL APPLICABLE ROOMS LISTED IN SECTION 907.2.3.1 OF THE 2021 IBC CITY OF HOUSTON AMENDMENTS.



N

1 **ELECTRICAL POWER PLAN - LEVEL 1 - AREA B**
Scale: 1/8" = 1'-0"

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Project No: 2023-04376-00

Notes

No.	Revision	By	Appd	YYYY.MM.DD
1	Addendum 01			10/10/2025

Issued	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24

File Name: N/A — KJ Dwn. — KJ Dsgn. — JZ Chkd. — 03/20/25 YYYY.MM.DD

Permit/Seal



Client/Project Logo

2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS
6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
ELECTRICAL POWER PLAN - LEVEL 1 - AREA B

Project No. 214001246
Scale 1/8" = 1'-0"
Revision 1
Drawing No. **E302-RES**

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LIGHTING FIXTURE SCHEDULE

Type Mark	CATALOG NUMBER MANUFACTURER	CATALOG NUMBER MODEL	MOUNTING	LAMP TYPE	CCT	CRI	VOLTAGE	LOAD	REMARKS
A1	METALUX	24CGTX-45-UNV-L840-SD	T-GRID	4500L LED	4000 K	80	277 V	45 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. STEP DIMMING DRIVER (50%-100% DIMMING). DLC CERTIFIED.
A1E	METALUX	24CGTX-45-UNV-L840-SD-EL14W	T-GRID	4500L LED	4000 K	80	277 V	45 W	2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. STEP DIMMING DRIVER (50%-100% DIMMING). DLC CERTIFIED. PROVIDE INTEGRAL BATTERY PACK.
A2	METALUX	24CGT4540C	T-GRID	4000L LED	4000 K	80	277 V	50 W	ECONOMY 2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED.
A2E	METALUX	24CGT4540C - EL14W	T-GRID	4000L LED	4000 K	80	277 V	50 W	ECONOMY 2X4 FLAT LENSED TROFFER, ACRYLIC DIFFUSER. 0-10V DIMMING DRIVER. DLC CERTIFIED. PROVIDE INTEGRAL EMERGENCY BATTERY BACKUP.
C1E	METALUX	4SNLED-LD5-LN-41SL - EL14W	SUSPENDED/SURFACE	4800L LED	4000 K	80	277 V	20 W	1x4 SUSPENDED/SURFACE STRIP. PROVIDE INTEGRAL EMERGENCY BATTERY BACKUP.
W1E	GARDCO	GWM-A09-840-T3M-UNV-EC	WALL	6000L LED	4000 K	80	277 V	40 W	LED ARCHITECTURAL WALLPAK, ALUMINUM HOUSING. COORDINATE FINISH WITH EXISTING EXTERIOR FIXTURES. DLC CERTIFIED. PROVIDE INTEGRAL EMERGENCY BATTERY PACK.
W2E	FAIL-SAFE	TRO11-LD4-25W-40-OPL-XX-UNV-EDC1-EL5W	RECESSED	3265L LED	4000 K	80	277 V	30 W	LED 11-INCH ARCHITECTURAL ROUND FIXTURE. SURFACE MOUNTED, WET LOCATION LISTED, ALUMINUM HOUSING, POLYCARBONATE LENS. COORDINATE FINISH WITH ARCHITECT. DLC CERTIFIED. PROVIDE INTEGRAL BATTERY BACKUP.
XG	SURE-LITES	LPXW7-W	UNIVERSAL	LED	4000 K	0	277 V	5 W	UNIVERSAL LED EXIT SIGN WITH WHITE HOUSING, RED LETTERING, AND EMERGENCY BATTERY BACK-UP.

APPROVED LIGHTING MANUFACTURERS:
PHILLIPS, COOPER (METALUX), LITHONIA, OR LUTRON

NOTES:
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT INDICATED IN THE LIGHT FIXTURE SCHEDULE. WHERE THERE IS AN INCONSISTENCY BETWEEN THE LIGHT SCHEDULE AND THE SPECIFICATIONS, THE BETTER QUALITY OF WORK SHALL BE INCLUDED IN THE PROPOSAL.
THE ABOVE LIGHTING MANUFACTURERS SUBSTITUTION LIST DOES NOT GUARANTEE APPROVAL. APPROVAL WILL BE DETERMINED AFTER REVIEW OF SHOP DRAWING TO DETERMINE IF THE FIXTURE OR POLE SUBMITTED MEETS OR EXCEEDS THE DESIGN STANDARDS AND PERFORMANCE REQUIRED OF THE ACTUAL FIXTURE SPECIFIED IN THE LIGHT FIXTURE SCHEDULE. IT SHALL BE THE RESPONSIBILITY OF THECONTRACTOR TO CAREFULLY SELECT SUBSTITUTIONS FOR THE SPECIFIED LIGHT FIXTURES FROM THE APPROVED LIGHTING MANUFACTURERS LISTED ABOVE. WHERE SPECIFIC OPTIONS / ACCESSORIES ARE SPECIFIED, THEY SHALL BE PROVIDED AS SPECIFIED WITH THE SUBSTITUION.
DUE TO THE WIDE RANGE OF FIXTURE QUALITIES OFFERED BY EACH MANUFACTURER, THE APPROVED LIGHTING MANUFACTURERS SUBSTITUTION LIST IS NOT INTENDED TO INDICATE THAT ANY OR ALL MANUFACTURERS LISTED WILL HAVE SUITABLE SUBSTITUTIONS FOR THE LIGHT FIXTURES OR POLES SPECIFIED IN THE LIGHT FIXTURE SCHEDULE. SHOP DRAWING DELAYS AS A RESULT OF INAPPROPRIATE SUBSTITUTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

LIGHTING CONTROLS SCHEDULE

Type	Sensor Operation	# of Lighting Zones	Description
RA	VACANCY - MANUAL ON / AUTO OFF 20 MINUTES TIMEOUT	1	ROOM CONTROLLER, 0-10V DIMMING.
RB	VACANCY - MANUAL ON / AUTO OFF 20 MINUTES TIMEOUT	1	ROOM CONTROLLER, NO DIMMING.
RD	OCCUPANCY - AUTO ON 100% / AUTO OFF 20 MINUTES TIMEOUT	1	ROOM CONTROLLER, NO DIMMING.
RG	OCCUPANCY - AUTO ON 50% / AUTO OFF 20 MINUTES TIMEOUT	1	GYM ROOM CONTROLLER, 0-10V DIMMING. BMCS ON/OFF INTERFACE FOR OCCUPIED / UNOCCUPIED BUILDING OPERATION. LOCATE 0-10 V DIMMING SWITCHES AT EACH ENTRY FOR DUAL-LEVEL CONTROL WITH ALTERNATE FIXTURES.
RJ	NONE	1	MECHANICALLY WOUND TIMER SWITCH. WATTSTOPPER TS-400. WHERE MULTIPLE SWITCHES ARE USED, THESE SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.

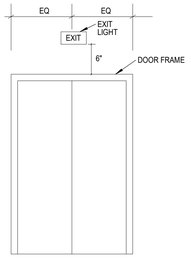
NOTES:
- PER 2021 IECC C405, AREAS / ROOMS WHERE AUTOMATIC SHUTOFF FOR LIGHTING WOULD ENDANGER OCCUPANT SAFETY ARE EXEMPT FROM AUTOMATIC CONTROLS.
- REFER TO LIGHTING CONTROL DETAILS FOR TYPICAL INSTALLATION.
- PROVIDE PHOTOCELL WITHIN DAYLIGHT ZONE ONLY WHERE SHOWN ON FLOORPLANS.
- CONTRACTOR TO COORDINATE EXACT PROGRAMING OF TIME-SCHEDULE WITH OWNER REPRESENTATIVE.
-ACCEPTABLE LIGHTING CONTROLS MANUFACTURERS: INTELLIGENT LIGHTING CONTROLS (ILC), COOPER, ACUITY, LUTRON

SYMBOL SCHEDULE

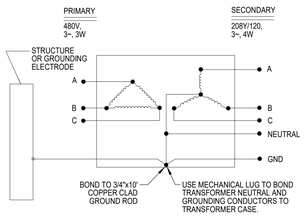
SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE)	
	LIGHT FIXTURE
	FIXTURE ON EMERGENCY CIRCUIT
	DOWNLIGHT FIXTURE
	LIGHT FIXTURE - WALL MOUNTED
	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT
	LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT
	EXIT LIGHT-CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED
	EXIT LIGHT-WALL MTD WITH DIRECTIONAL ARROWS AS REQUIRED
SWITCHES	
$	LINE VOLTAGE SINGLE POLE SWITCH
$2	LINE VOLTAGE 2-POLE SWITCH
$3	LINE VOLTAGE 3-WAY SWITCH
$4	LINE VOLTAGE 4-WAY SWITCH
$K	LINE VOLTAGE KEYED SWITCH
$3K	LINE VOLTAGE KEYED 3-WAY SWITCH
$D	LINE VOLTAGE WALL DIMMER SWITCH, SIZE AND TYPE AS REQUIRED
$VD	LINE VOLTAGE WALL MOUNTED DIMMER SWITCH WITH VACANCY SENSOR. MANUAL ON / AUTO OFF.
$V	LINE VOLTAGE WALL MOUNTED SWITCH WITH VACANCY SENSOR. MANUAL ON / AUTO OFF.
$OC	LINE VOLTAGE WALL MOUNTED SWITCH WITH VACANCY SENSOR. AUTO ON / AUTO OFF.
$P	LINE VOLTAGE SWITCH WITH PILOT LIGHT
$MC	MOMENTARY CONTACT SWITCH
[B]	PUSH BUTTON
$TH	6-HOUR TIMER SWITCH WITH HOLD
$T	6-HOUR TIMER SWITCH WITH NO HOLD
	20 AMP GENERATOR TRANSFER DEVICE
LOW VOLTAGE LIGHTING CONTROLS	
$R	LOW VOLTAGE LIGHTING CONTROLLER WALL SWITCH
$B	BMCS TIMER LOCAL OVERRIDE SWITCH
P	CEILING MOUNTED PHOTO SENSOR
V	CEILING MOUNTED VACANCY SENSOR, MANUAL ON / AUTO OFF
O	CEILING MOUNTED OCCUPANCY SENSOR, AUTO ON / AUTO OFF
R	LIGHTING CONTROLLER WITH GTD. ZONES AS REQUIRED.
RECEPTACLES AND OUTLETS	
	SIMPLEX RECEPTACLE
	DUPLEX RECEPTACLE
	POWER POLE
	125/250 VOLT, 1 PHASE, 3-WIRE, 20 AMPS UNLESS NOTED OTHERWISE
	CEILING MOUNTED RECEPTACLE
	DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE
	DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
	FLUSH FLOOR CONCEALED SERVICE DUPLEX RECEPTACLE OUTLET
	FLUSH FLOOR CONCEALED SERVICE DOUBLE DUPLEX RECEPTACLE OUTLET
	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH WIRING DEVICES AS INDICATED ON DRAWINGS. SIZE TO MATCH DEVICE QUANTITIES.
[R]	REMOTE BLANK FACE GFCI DEVICE.
U	PROVIDE DUPLEX RECEPTACLE WITH (2) USB CHARGING PORTS.
CR	E.C. TO PROVIDE ROUGH-IN FOR CARD READER JUNCTION BOX. REFER TO TECHNOLOGY SHEETS FOR ADDITIONAL INFORMATION.
SR	SWITCH CONTROLLED RECEPTACLE WITH THE TOP RECEPTACLE LOAD CONTROLLED VIA PLUG LOAD SWITCH MEETING 2021 IECC 405.11 REQUIREMENTS. SPLIT LOAD-CONTROLLED RECEPTACLES SHALL BE PERMANENTLY FACTORY MARKED AS CONTROLLED.

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
MISCELLANEOUS EQUIPMENT	
FACP	FIRE ALARM CONTROL PANEL
ANNC	FIRE ALARM REMOTE ANNUCIATOR
[T]	TRANSFORMER FOR DOOR BELL/BUZZER
	CHIME/BUZZER
MOTOR CONTROLLERS AND EQUIPMENT	
	MOTOR, MAKE FINAL MOTOR CONNECTION
	3-PHASE MOTOR, MAKE FINAL MOTOR CONNECTION
J	DISCONNECT SWITCH AS REQUIRED
J	FUSED DISCONNECT SWITCH AS REQUIRED
J	COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED
	MOTOR STARTER
$M	MANUAL MOTOR SWITCH AS REQUIRED
	PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS
	VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26
ELECTRICAL EQUIPMENT	
	ELECTRICAL DISTRIBUTION OR PANELBOARD
	DRY TYPE TRANSFORMER
CIRCUITING	
	CONDUIT
	CONDUIT BELOW FLOOR, SLAB, OR GRADE
SUBSCRIPTS AND ABBREVIATIONS	
WP	INDICATES WEATHERPROOF
WG	INDICATES WIREGUARD
H	INDICATES HORIZONTAL
TL	INDICATES TWIST LOCK
NL	LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH
1-L	REFER TO ONE-LINE DIAGRAM
	INDICATES WALL MOUNTED DEVICE
•	NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES

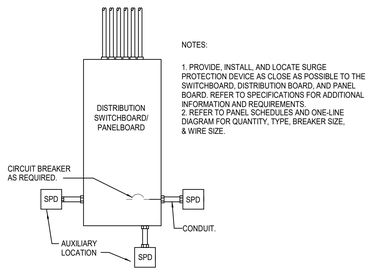
GENERAL NOTES:
-ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-3R MINIMUM.



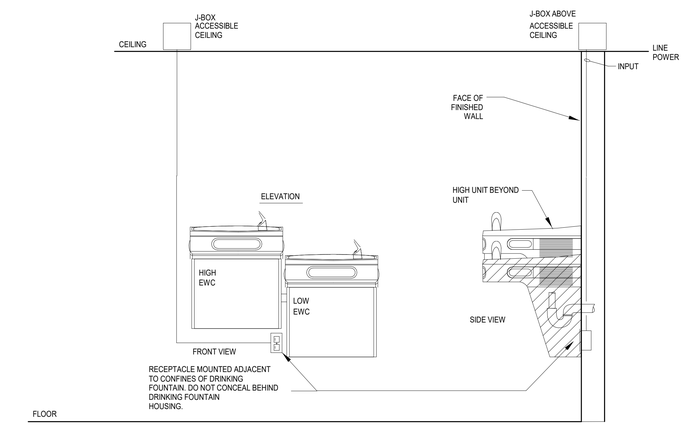
1 TYPICAL EXIT SIGN LOCATION
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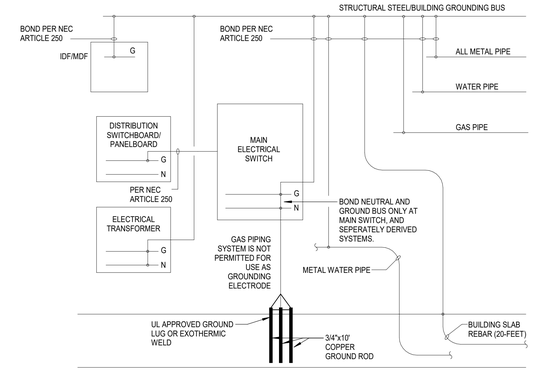
2 GROUNDING FOR TRANSFORMERS
Scale: N.T.S.



3 SURGE PROTECTION DEVICE DETAIL
Scale: N.T.S.



4 ELECTRIC DRINKING FOUNTAIN POWER REQUIREMENTS
Scale: N.T.S.



5 SYSTEM GROUNDING DETAIL
Scale: N.T.S.

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Notes

1 Addendum 01			10/10/2025
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File Name: N/A	KJ Dwn.	KJ Dsgn.	JZ 03/20/25 Chkd. YYYY.MM.DD

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10-10-2025

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS
6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
ELECTRICAL DETAILS, LEGENDS, AND SCHEDULES

Project No. 214001246
Scale 12" = 1'-0"
Revision 1
Drawing No. E501-RES

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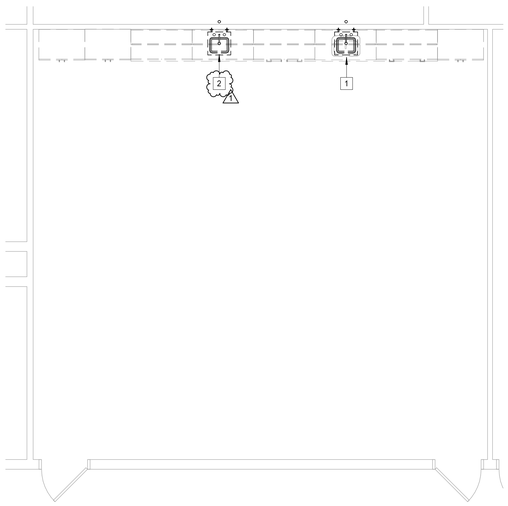
PLUMBING GENERAL NOTES

1. CONTRACT DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION, AND WHEN AVAILABLE, EXISTING RECORD DOCUMENTS. CONTRACTOR TO VERIFY AT SITE EXACT LOCATIONS, AND SIZES OF EXISTING PIPING. REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION, AND IMMEDIATELY AFTER SUCH DISCREPANCIES ARE DISCOVERED. CONTRACTOR TO VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF THERE ARE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE WORK. ANY ITEMS WHICH ARE NOT COVERED IN THE BID DOCUMENTS OR ANY PROPOSED SUBSTITUTIONS SHALL BE LISTED SEPARATELY AND QUALIFIED IN THE CONTRACTORS BID. SUBMITTAL OF BID SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. FAILURE TO VISIT THE SITE DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY IN PERFORMANCE OF WORK.
3. PLUMBING FIXTURES/EQUIPMENT SHOWN ON PLAN THAT ARE NOT IDENTIFIED AND DO NOT HAVE A FIXTURE DESIGNATION ARE EXISTING AND ARE TO REMAIN.
4. ANY OTHER ITEMS NOT REFERENCED WHICH ARE LOCATED IN THE DEMOLISHED SPACE (VENT, WASTE, WATER HEATER, PLUMBING FIXTURE, ETC.) THAT ARE IDENTIFIED OR DISCOVERED DURING DEMOLITION WHICH WILL NOT BE USED FOR THIS PROJECT, SHALL BE DEMOLISHED BACK TO THE MAIN SOURCE OR RISER, AND DEVICES SHALL BE RETAINED TO THE OWNER STORAGE AS DIRECTED BY THE ARCHITECT/OWNER.
5. OWNER OR ITS REPRESENTATIVE SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL PLUMBING FIXTURES/ EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO PUMPS, HEATERS, AND STAINLESS STEEL SINKS. CONTRACTOR TO NOTIFY DISTRICT PRIOR TO DEMOLITION WORK TO DISCUSS ALL RETURNED ITEMS TO DISTRICT.

PLUMBING KEYED NOTES

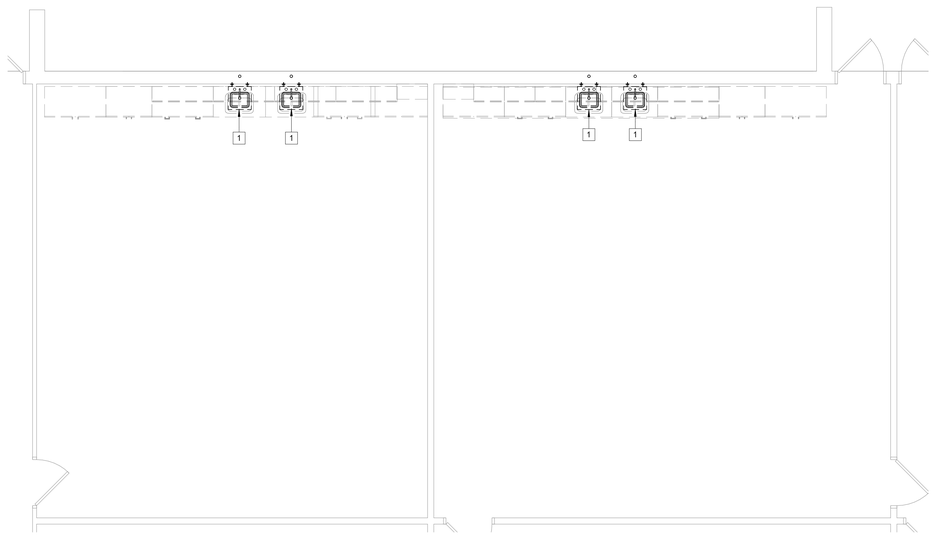
1 EXISTING SINK TO BE REMOVED AND REPLACED WITH A NEW ONE. MAINTAIN EXISTING UTILITIES/ROUGH-IN TO SERVE NEW FIXTURE(S). FIELD VERIFY THE EXACT LOCATION, SIZE, AND CONDITION OF EXISTING PIPING. REPARE EXISTING PIPING IF NEEDED AND PREPARE FOR NEW CONNECTION.

2 EXISTING SINK TO BE REMOVED. REMOVE CW, HW, AND VENT BACK TO MAIN; CAP AND SEAL TIGHT. REMOVE SANITARY DOWN TO AS LOW AS POSSIBLE ABOVE SLAB, CAP AND SEAL TIGHT.



N

2 **PLUMBING ENLARGED DEMOLITION PLAN - LEVEL 1 - ART 306**
Scale: 1/4" = 1'-0"



N

1 **PLUMBING ENLARGED DEMOLITION PLAN - LEVEL 1 - K CLASSROOM**
Scale: 1/4" = 1'-0"

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Project No: 2023-04376-00

Notes

1 Addendum 01			10/10/2025
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File Name: N/A	AA	AA	EH 11/27/24
	Dwn.	Dsgn.	Ckkd. YYYY.MM.DD

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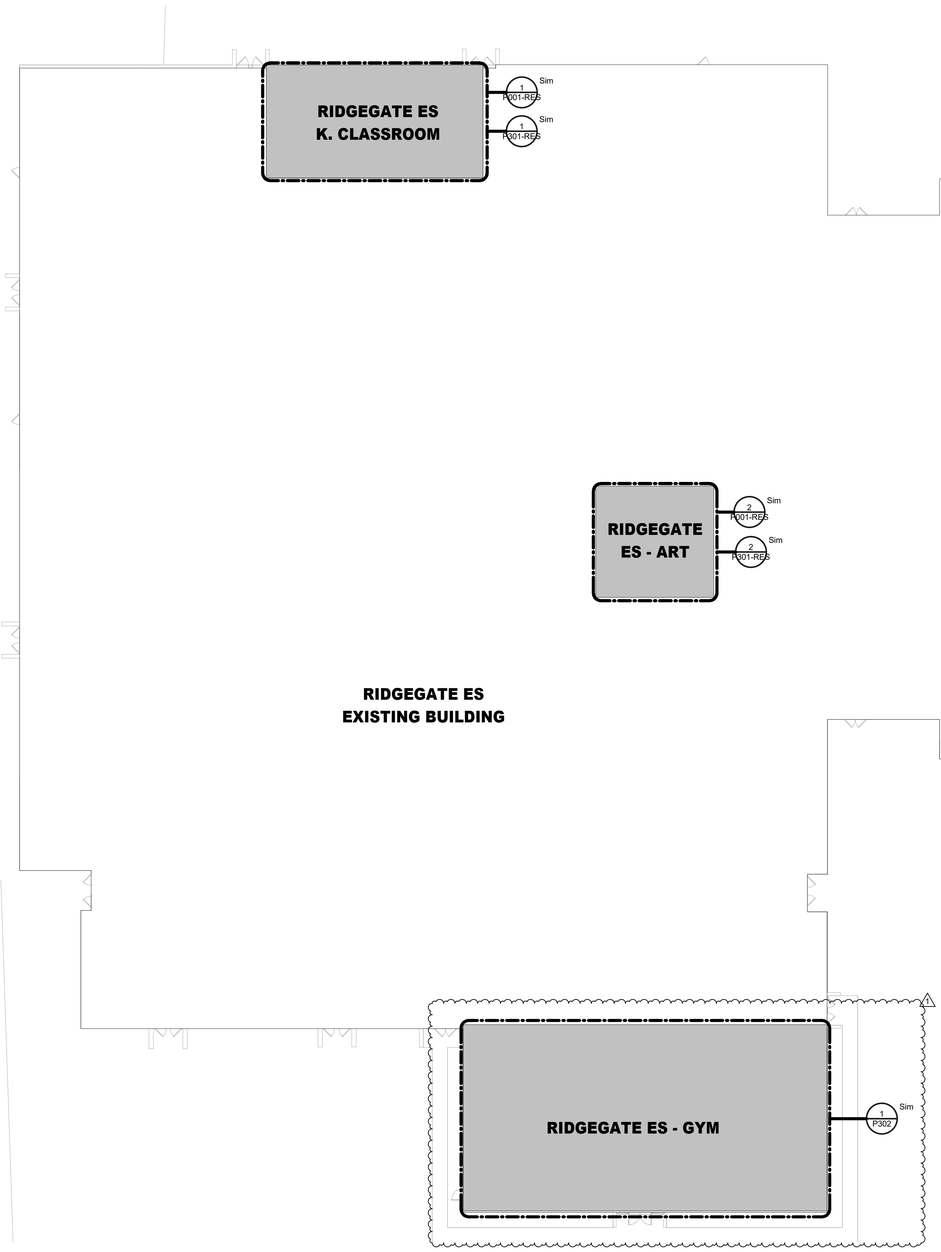
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Title
PLUMBING ENLARGED DEMOLITION FLOOR PLANS

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	P001-RES

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1 **PLUMBING COMPOSITE PLAN**
Scale: 1/16" = 1'-0"

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Project No: 2023-04376-00

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File Name: N/A	AA	AA	EH 11/27/24
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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STATE OF TEXAS
10-10-2025

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FBISD BP022 GYM RENOVATIONS AND ADDITIONS
6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
PLUMBING COMPOSITE PLAN

Project No.	Scale
214001246	1/16" = 1'-0"
Revision	Drawing No.
1	P100-RES

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FIRE SPRINKLER SYSTEM NOTES

A. EXISTING FIRE SPRINKLER SYSTEM TO BE MAINTAINED IN FULL OPERATING ORDER FOR ENTIRE BUILDING AT ALL TIMES. LICENSED SPRINKLER ENGINEER OR LICENSED SPRINKLER CONTRACTOR, TO PROVIDE DRAWINGS AND HYDRAULIC CALCULATIONS FOR CHANGES TO EXISTING SYSTEM AND TO COMPLY WITH NEW SPACE LAYOUT, NFPA 13, ALL STATE AND LOCAL REQUIRMENTS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

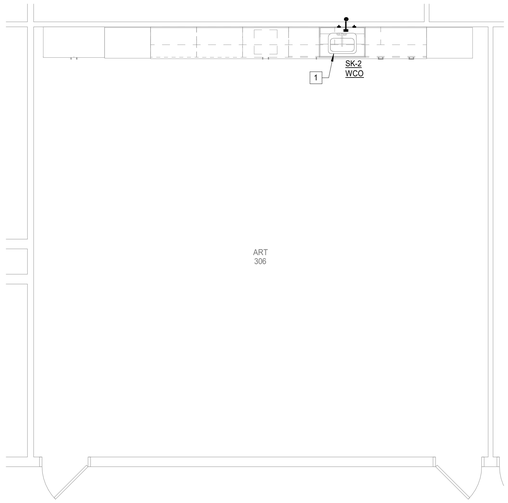
B. REFER TO SPECIFICATIONS FOR PIPE MATERIALS.

PLUMBING GENERAL NOTES

1. CONTRACT DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION, AND WHEN AVAILABLE, EXISTING RECORD DOCUMENTS. CONTRACTOR TO VERIFY AT SITE EXACT LOCATIONS, AND SIZES OF EXISTING PIPING. REPORT DISCREPANCIES TO ARCHITECT BEFORE DISTURBING EXISTING INSTALLATION, AND IMMEDIATELY AFTER SUCH DISCREPANCIES ARE DISCOVERED. CONTRACTOR TO VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF THERE ARE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE WORK. ANY ITEMS WHICH ARE NOT COVERED IN THE BID DOCUMENTS OR ANY PROPOSED SUBSTITUTIONS SHALL BE LISTED SEPARATELY AND QUALIFIED IN THE CONTRACTORS BID. SUBMITTAL OF BID SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. FAILURE TO VISIT THE SITE DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY IN PERFORMANCE OF WORK.
3. PLUMBING FIXTURES/EQUIPMENT SHOWN ON PLAN THAT ARE NOT IDENTIFIED AND DO NOT HAVE A FIXTURE DESIGNATION ARE EXISTING AND ARE TO REMAIN.
4. REFER TO ARCHITECTS DRAWING FOR EXACT LOCATION OF FLOOR DRAINS.
5. DO NOT SCALE THE PLUMBING DRAWINGS, REFER TO THE DIMENSIONED ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONAL DATA.
6. REFER TO PLUMBING DETAILS AND SCHEDULES SHEET(S).

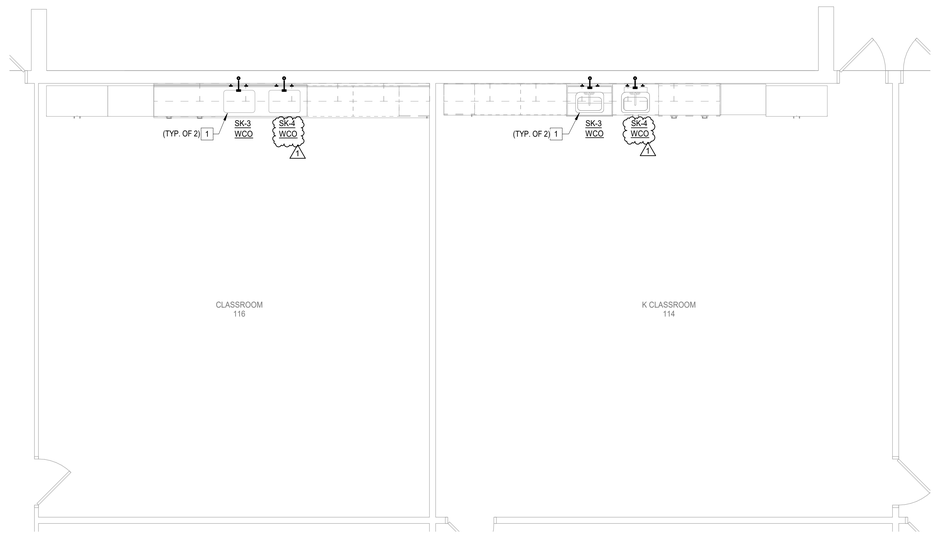
PLUMBING KEYED NOTES

1 PROVIDE NEW PLUMBING FIXURE(S) AS INDICATED. CONNECT TO EXISTING UTILITIES, CW, HW (IF APPLICABLE), SANITARY AND VENT.



N

2 **PLUMBING ENLARGED PLAN - LEVEL 1 - ART 306**
Scale: 1/4" = 1'-0"



N

1 **PLUMBING ENLARGED PLAN - LEVEL 1 - K CLASSROOM**
Scale: 1/4" = 1'-0"

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Notes

1 Addendum 01			10/10/2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued	By	Appd	YYYY.MM.DD
File Name: N/A	AA	AA	BH 11/27/24
	Dwn.	Dsgn.	Ckkd. YYYY.MM.DD

Permit/Seal



Client/Project Logo

BOND
FORT BEND
INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS
6015 W RIDGECREEK DR, HOUSTON, TX 77053

Title
PLUMBING ENLARGED FLOOR PLANS

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	P301-RES

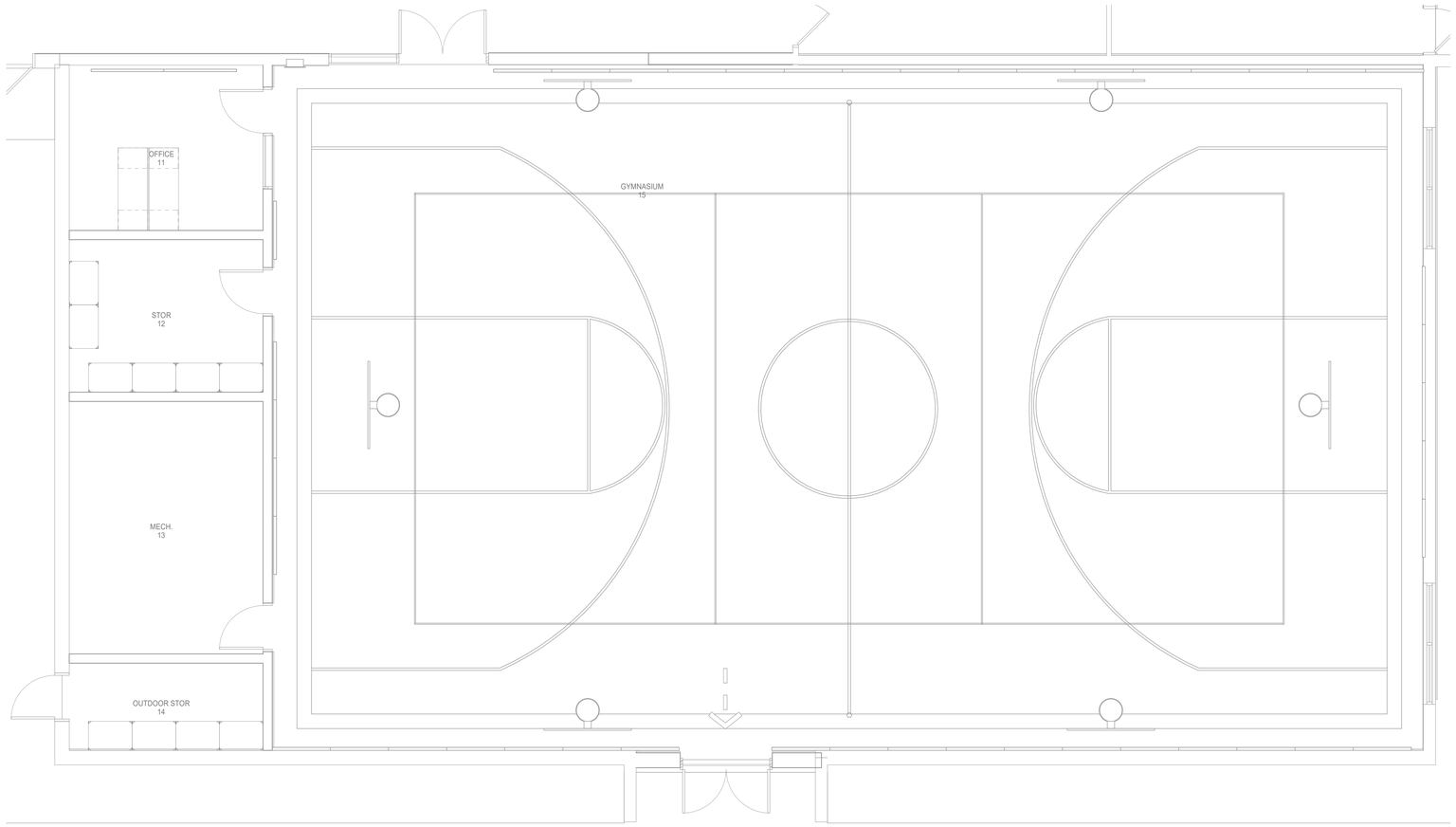
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B. REFER TO SPECIFICATIONS FOR PIPE MATERIALS.



N

1 **PLUMBING ENLARGED PLAN - LEVEL 1 - GYM**
Scale: 1/4" = 1'-0"

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File Name: N/A	AA Dwn.	AA Dsgn.	EH Chkd. 11/27/24 YYYY.MM.DD

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10-10-2025

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Title
PLUMBING ENLARGED FLOOR PLANS

Project No.	Scale
214001246	As indicated
Revision	Drawing No.
1	P302

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PLUMBING GENERAL NOTES

1. WITHIN THE EXISTING BUILDING, EXISTING WATER, WASTE AND VENT SERVICES ARE TO BE MODIFIED AS REQUIRED AND REUSED FOR THE INSTALLATION OF NEW AND/OR RELOCATED PLUMBING FIXTURES. REFER TO PLUMBING FLOOR PLANS FOR POINTS OF CONNECTION.
2. WITHIN THE EXISTING BUILDING, SAWCUT AND REMOVE EXISTING FLOOR SLAB AS REQUIRED TO PROVIDE NEW AND/OR RELOCATED PLUMBING FIXTURES, CLEANOUTS, AND UNDERSLAB WASTE AND VENT PIPING. PATCH AND REFINISH FLOOR TO MATCH EXISTING.
3. IN AREAS WHERE THE FLOOR SLAB IS REMOVED, CONTRACTOR SHALL ALSO REMOVE UNDERSLAB WASTE AND VENT PIPING WHICH SERVES FIXTURES DESIGNATED FOR REMOVAL. PRIOR TO ANY REMOVAL, FIELD VERIFY THAT LINES TO BE REMOVED DO NOT SERVE ANY EXISTING FIXTURES TO REMAIN OR NEW FIXTURES TO BE INSTALLED.
4. IN AREAS WHERE THE FLOOR SLAB IS NOT REMOVED, CONTRACTOR SHALL ABANDON IN PLACE ANY UNDERSLAB WASTE AND VENT PIPING NO LONGER NEEDED, UNLESS THE PIPING MUST BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION. IF NEW WORK DOES NOT NECESSITATE THEIR REMOVAL, CUT AND PLUG SUCH LINES BELOW SLAB, AND PATCH FLOOR TO MATCH EXISTING.
5. FIELD VERIFY EXACT LOCATION, SIZE, DEPTH, DIRECTION OF FLOW, CAPACITY, PIPE MATERIAL AND CONDITION OF EXISTING WASTE PIPING PRIOR TO BEGINNING CONSTRUCTION. ENSURE THAT PROPER CONNECTIONS TO AND EXTENSION OF SUCH UTILITIES CAN BE MADE.
6. WASTE LINES TO BE RE-USED OR RECONNECTED TO SHALL BE THOROUGHLY RODDED OUT AND FLUSHED TO ENSURE THEY ARE FREE FROM BLOCKAGES.
7. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING BELOW SLAB WITH COLUMN FOOTINGS, GRADE BEAMS, UNDERGROUND PLUMBING AND ELECTRICAL UTILITIES, AND OTHER SUB-SURFACE BUILDING ELEMENTS.
8. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND CONDUIT. SHOULD A CONFLICT OCCUR THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
9. CONTRACTOR TO COORDINATE ALL REMODEL WORK WITH THE WORK OF OTHER TRADES TO AVOID CONFLICTS AND TO MINIMIZE INTERRUPTION OF SERVICES.
10. COORDINATE ALL FIXTURE AND EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS WITH LATEST ARCHITECTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO ANY ROUGH-INS.
11. DO NOT ROUGH-IN FROM THESE DRAWINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS.
12. CONTRACTOR TO FIELD VERIFY AS NECESSARY THE EXACT ROUTING AND SIZES OF ALL PIPING.
13. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE, INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
14. THE PROPER INSTALLATION OF NEW FIXTURES AND THE PROPER CONTINUED OPERATION OF EXISTING FIXTURES TO REMAIN SHALL DETERMINE THE EXTENT AND NATURE OF PLUMBING REMODEL WORK.
15. EACH VENT SHALL TERMINATE VERTICALLY NOT LESS THAN 6" ABOVE ROOF, MAINTAIN MINIMUM 10'-0" DISTANCE BETWEEN VENT TERMINALS THROUGH ROOF AND ALL FRESH AIR INTAKES, AND A MINIMUM 5'-0" FROM ANY EXTERIOR WALL.
16. PRIOR TO BEGINNING CONSTRUCTION, COORDINATE BUILDING BACKFLOW PREVENTION REQUIREMENTS WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PROVIDE AS DIRECTED.

SHOCK ARRESTOR SCHEDULE

P.D.I. SYMBOLS:	FIXTURE UNITS:	THREADED CONNECTION	CERTIFICATION
A	1 - 11	1/2"	ASSE 1010
B	12 - 32	3/4"	ASSE 1010
C	33 - 60	1"	ASSE 1010
D	61 - 113	1"	ASSE 1010
E	114 - 154	1"	ASSE 1010
F	155 - 330	1"	ASSE 1010

PLUMBING FIXTURE SCHEDULE

TYPE: SK-2 (T.A.S. COMPLIANT)
SERVES: ART 306
DESCRIPTION: SINK, COUNTER MOUNTED, SELF-RIMMING, 18 GAUGE TYPE 304 STAINLESS STEEL, 22" X 19-1/2" X 4" DEEP, SINGLE COMPARTMENT WITH FAUCET DECK. THREE FAUCET HOLES ON 4" CENTERS. ELKAY #LRAD221940.
FAUCET: CHROME PLATED CONCEALED DECK-MOUNT FAUCET, 8" ON CENTERS, 8" RIGID/SWING GOOSENECK SPOUT AND 4" WRIST BLADE HANDLES ON 8" CENTERS. QUARTER TURN CERAMIC DISC OPERATING CARTRIDGES, 1.5 GPM LAMINAR FLOW, VANDAL PROOF. CHICAGO MODEL #786-GNBAE36XKABCP.
MIXING VALVE: ASSE 1070 CERTIFIED POINT OF USE MIXING VALVE, LEAD FREE BRONZE BODY, INTEGRAL CHECK VALVES, COMPRESSION FITTINGS, COPPER ENCAPSULATED THERMOSTAT ASSEMBLY WITH POLYMER THERMOPLASTIC SHUTTLE. LEONARD 170-LF-BRKT. (105 F)
STRAINER: CHROME PLATED WROUGHT BRASS 4-1/2" WIDE GRID SINK STRAINER, 1-1/2" 17 GAUGE CHROME PLATED BRASS TAILPIECE. MCGUIRE #152.
INTERCEPTOR: A.R.C. CAST ALUMINUM TOP ACCESS SOLIDS INTERCEPTOR, GASKETED COVER, REMOVABLE SEDIMENT BUCKET. 15 GPM FLOW RATE. WADE 5720.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE #2165LK.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: SK-3 (T.A.S. COMPLIANT)
SERVES: K CLASSROOM 114, CLASSROOM 116
DESCRIPTION: SINK, COUNTER MOUNTED, SELF-RIMMING, 18 GAUGE TYPE 304 STAINLESS STEEL, 22" X 19-1/2" X 4" DEEP, SINGLE COMPARTMENT WITH FAUCET DECK. THREE FAUCET HOLES ON 4" CENTERS. ELKAY #LRAD221940.
FAUCET: CHROME PLATED CONCEALED DECK-MOUNT FAUCET, 8" ON CENTERS, 8" RIGID/SWING GOOSENECK SPOUT AND 4" WRIST BLADE HANDLES ON 8" CENTERS. QUARTER TURN CERAMIC DISC OPERATING CARTRIDGES, 1.5 GPM LAMINAR FLOW, VANDAL PROOF. CHICAGO MODEL #786-GNBAE36XKABCP.
MIXING VALVE: ASSE 1070 CERTIFIED POINT OF USE MIXING VALVE, LEAD FREE BRONZE BODY, INTEGRAL CHECK VALVES, COMPRESSION FITTINGS, COPPER ENCAPSULATED THERMOSTAT ASSEMBLY WITH POLYMER THERMOPLASTIC SHUTTLE. LEONARD 170-LF-BRKT. (105 F)
STRAINER: CHROME PLATED WROUGHT BRASS 4-1/2" WIDE GRID SINK STRAINER, 1-1/2" 17 GAUGE CHROME PLATED BRASS TAILPIECE. MCGUIRE #152.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE #2165LK.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

1
TYPE: SK-4 (NON T.A.S. COMPLIANT)
SERVES: K CLASSROOM 114, CLASSROOM 116
DESCRIPTION: SINK, COUNTER MOUNTED, SELF-RIMMING, 18 GAUGE TYPE 304 STAINLESS STEEL, 22" X 19-1/2" X 7-5/8" DEEP, SINGLE COMPARTMENT WITH FAUCET DECK. THREE FAUCET HOLES ON 4" CENTERS. ELKAY #LRAD2219PD.
FAUCET: CHROME PLATED CONCEALED DECK-MOUNT FAUCET, 8" ON CENTERS, 8" RIGID/SWING GOOSENECK SPOUT AND 4" WRIST BLADE HANDLES ON 8" CENTERS. QUARTER TURN CERAMIC DISC OPERATING CARTRIDGES, 1.5 GPM LAMINAR FLOW, VANDAL PROOF. CHICAGO MODEL #786-GNBAE36XKABCP.
MIXING VALVE: ASSE 1070 CERTIFIED POINT OF USE MIXING VALVE, LEAD FREE BRONZE BODY, INTEGRAL CHECK VALVES, COMPRESSION FITTINGS, COPPER ENCAPSULATED THERMOSTAT ASSEMBLY WITH POLYMER THERMOPLASTIC SHUTTLE. LEONARD 170-LF-BRKT. (105 F)
STRAINER: CHROME PLATED WROUGHT BRASS 4-1/2" WIDE GRID SINK STRAINER, 1-1/2" 17 GAUGE CHROME PLATED BRASS TAILPIECE. MCGUIRE #152.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE #2165LK.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: WCO
DESCRIPTION: WALL CLEANOUT. CAST IRON CLEANOUT FERRULE WITH COUNTERSUNK BRONZE PLUG AND ROUND STAINLESS COVER PLATE WITH CENTER SECURING SCREW. WADE #8550-75 WITH #8304-VP. PROVIDE WADE #8560 CAST IRON CLEANOUT TEE IN LIEU OF FERRULE AS REQUIRED FOR WALL CONSTRUCTION.

GENERAL NOTES

ALL LAVATORIES AND SINKS SHALL BE SUPPLIED WITH HOT AND COLD WATER (UNLESS NOTED TO BE COLD WATER ONLY) TO FAUCETS AS INDICATED ON PLANS AND FIXTURE SCHEDULE. PROVIDE CHROME PLATED BRASS SUPPLY STOPS WITH LOOSE KEYS AND WALL ESCUTCHEONS. PROVIDE CHROME PLATED FLEXIBLE RISERS OF SIZE REQUIRED TO PROPERLY CONNECT FIXTURES. PROVIDE 17 GAUGE CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON (UNLESS NOTED TO BE AN ACID WASTE FIXTURE). REFER TO FIXTURE SCHEDULE FOR MINIMUM SIZES OF PLUMBING FIXTURE ROUGH-INS.

INSULATION KITS AT ALL LAVATORIES AND SINKS REQUIRED TO BE T.A.S. ACCESSIBLE (MCGUIRE OR TRUEBRO). ALL SUCH FIXTURES AND FINAL INSTALLATIONS SHALL COMPLY WITH THE STATE ACCESSIBILITY STANDARDS REQUIREMENTS.

INSERT TRAP GUARDS AFTER FINAL RODDING OF DRAINS. INSTALL TRAP GUARD WITH CLEAR SILICONE CAULK FOR GAS-TIGHT SEAL. FOR DRAIN RODDING AFTER INSTALLATION. INSERT SEWER TAPE THROUGH LIGHTLY GREASED 1-1/2" PVC PIPE TO PROTECT TRAP GUARD.

PLUMBING PIPING LEGEND

SYMBOLS	DESCRIPTION
SAN	SANITARY OR WASTE PIPING ABOVE GRADE (SAN)
SAN	SANITARY OR WASTE PIPING BELOW GRADE (SAN)
GW	GREASE WASTE PIPING (GW)
GW	GREASE WASTE PIPING BELOW GRADE (GW)
SD	STORM DRAIN PIPING (SD)
SD	STORM DRAIN PIPING BELOW GRADE (GW)
SSD	SUB-SOIL DRAIN OR FOOTING DRAIN (SSD)
AW	ACID WASTE PIPING (AW)
AW	ACID WASTE PIPING BELOW GRADE (AW)
PD	PUMPED DISCHARGE (PD)
CD	CONDENSTATE DRAIN PIPING (CD)
D	CONDENSTATE - INDIRECT DRAIN PIPING (D)
	VENT PIPING (V)
CW	COLD WATER PIPING (CW)
HW	HOT WATER PIPING (HW)
HWR	HOT WATER RETURN PIPING (HWR)
SCW	SOFT COLD WATER PIPING (SCW)
CDW	CHILLED DRINKING WATER PIPING (CDW)
TP	TRAP PRIMER LINE (TP)
F	FIRE PROTECTION PIPING (F)
AS	AUTOMATIC SPRINKLER PIPING (AS)
GAS	NATURAL GAS PIPING (G)
GV	GAS VENT PIPING (GV)
AIR	COMPRESSED AIR PIPING (A)
	FLOW DIRECTIONAL ARROW
	SHUT-OFF VALVE
	BALANCING VALVE (BV)
S	SOLENOID VALVE (SV)
	BALL VALVE (BV)
	BUTTERFLY VALVE
	LUBRICATED PACKED PLUG STOP STOP COCK (PC)
	HORIZONTAL SWING CHECK
	UNION
	HORIZONTAL SWING CHECK
	REDUCER OR INCREASER
	ECCENTRIC REDUCER
	REDUCED PRESSURE BACKFLOW PREVENTER (RPBFP)
	PIPING DOWN
	RISE OR DROP PIPING
	PIPING UP -OR- PIPING UP & DOWN
	CAP ON END OF PIPE
CO	CLEANOUT (WALL OR CEILING) (CO)
FCO	FLOOR CLEANOUT (FCO)
ECO	EXTERIOR CLEANOUT WITH 18"x18"x4" CONCRETE PAD (ECO)
	TWO-WAY CLEANOUT (PROVIDE 18"x24"x4" CONCRETE PAD OUTSIDE)
	FIRE DEPARTMENT VALVE AT RISER
	FIRE HYDRANT
FDC	FIRE DEPARTMENT CONNECTION
PRV	PRESSURE REDUCING VALVE (PRV)
	BRANCH CONNECTION OUT OF TOP
	BRANCH CONNECTION OUT OF BOTTOM
	BRANCH CONNECTION OUT OF SIDE
	WYE & 1/8TH BEND BRANCH CONNECTION
	WYE BRANCH CONNECTION
	HOSE BIBB
	PRESSURE GAUGE WITH COCK
	THERMOMETER
	GAS PRESSURE REGULATOR
	TEST COCK
	GAS METER
	WALL HYDRANT
	VALVE IN RISE
	ASME TEMPERATURE & PRESSURE RELIEF VALVE
	VACUUM RELIEF VALVE
	ANGLE VALVE
	OS&Y VALVE
	ROOF DRAIN
1	REFER TO KEYED NOTE
FS	FLOW SWITCH
	FLOOR SINK (FS)
	FLOOR DRAIN (FD)
	FLOOR DRAIN WITH P-TRAP (FD)
	FLOOR DRAIN WITH P-TRAP AT 45° ANGLE (FD)
	HUB DRAIN (HD)
	ACCESS PANEL FOR TRAP PRIMER OR SHOCK ABSORBER
AP	ACCESS PANEL LOCATION SYMBOL
A	SHOCK ABSORBER
	AIR CHAMBER
(E)	EXISTING
(N)	NEW
VTR	VENT THRU ROOF
B.F.F.	BELOW FINISHED FLOOR
A.F.F.	ABOVE FINISHED FLOOR
	NEW CONNECTION
IE=100.00'	INVERT ELEVATION
1	DELTA CHANGE SYMBOL
P 1	4" VTR RISER FLAG

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Title
PLUMBING SCHEDULES

Project No. 214001246
Scale 12" = 1'-0"
Revision 1
Drawing No. P401-RES

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STRUCTURAL ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	LLH	LONG LEG HORIZONTAL
		LLV	LONG LEG VERTICAL
ACI	AMERICAN CONCRETE INSTITUTE	LW	LONG WAY
ADDL	ADDITIONAL	MATL	MATERIAL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	MAX	MAXIMUM
		MC	MOMENT CONNECTION, MISCELLANEOUS CHANNEL
AISI	AMERICAN IRON AND STEEL INSTITUTE		
		MECH	MECHANICAL
ANSI	AMERICAN NOTIONAL STANDARD INSTITUTE	MANUF	MANUFACTURER(S)
		MID	MIDDLE
ARCH	ARCHITECTURAL	MISC	MISCELLANEOUS
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	MO	MASONRY OPENING
		NIC	NOT IN CONTRACT
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	NOM	NOMINAL
		NTS	NOT TO SCALE
AWS	AMERICAN WELDING SOCIETY	OC	ON CENTER
BC	BOTTOM CHORD	OD	OUTSIDE DIAMETER
BOD	BOTTOM OF DECK	OPNG	OPENING
BOT	BOTTOM	OPP	OPPOSITE
BP	BASE PLATE	PL	PLATE
BRG	BEARING	PLF	POUNDS PER LINEAR FOOT
C	CHANNEL, COMPRESSION, CAMBER	PROJ	PROJECTION
CIP	CAST IN PLACE	PSI	POUNDS PER SQUARE INCH
CL	CENTER LINE	PSF	POUNDS PER SQUARE FOOT
CLR	CLEAR	R	RADIUS
COL	COLUMN	RD	ROOF DRAIN
CONC	CONCRETE	RE	REFER, REFERENCE
CONT	CONTINUOUS	REINF	REINFORCEMENT (D), (ING), (MENT)
CSJ	CONSTRUCTION JOINT	REQD	REQUIRED
CTJ	CONTROL JOINT	REV	REVISION
DET	DETAIL	RO	ROUGH OPENING
DIA	DIAMETER	SCHED	SCHEDULE(D)
DIAG	DIAGONAL	SDI	STEEL DECK INSTITUTE
DP	DOUBLE PITCHED	SECT	SECTION
DWG	DRAWING	SF	SQUARE FEET
DWL	DOWEL	SIM	SIMILAR
EA	EACH	SJI	STEEL JOIST INSTITUTE
EF	EACH FACE	SPEC	SPECIFICATION(S)
EJ	EXPANSION JOINT	SQ	SQUARE
EL	ELEVATION	STD	STANDARD
ELEC	ELECTRICAL	STIF	STIFFINER
ELEV	ELEVATOR	STL	STEEL
EOD	EDGE OF DECK	STR	STRUCTURAL
EOS	EDGE OF SLAB	T	TOP, TENSION
EQ	EQUAL(LY)	T&B	TOP AND BOTTOM
EXIST	EXISTING	T&G	TONGUE AND GROOVE
EXP	EXPANSION	TEMP	TEMPERATURE
FD	FLOOR DRAIN	THK	THICK(NESS)
FFE	FINISH FLOOR ELEVATION	TOC	TOP OF CONCRETE
FND	FOUNDATION	TOF	TOP OF FOOTING
FS	FAR SIDE	TOJ	TOP OF JOIST
FT	FEET, FOOT	TOL	TOP OF LEDGE
FTG	FOOTING	TOP	TOP OF PANEL
GA	GAUGE	TOS	TOP OF STEEL
GALV	GALVANIZED	TOW	TOP OF WALL
GB	GRADE BEAM	TRD(S)	TREAD(S)
HORIZ	HORIZONTAL	TYP	TYPICAL
HSS	HOLLOW STRUCTURAL SECTION	UL	UNDERWRITERS LABORATORY
ID	INSIDE DIAMETER	UNF	UNIFORM
IN	INCHES	UON	UNLESS OTHERWISE NOTED
JST	JOIST	V	BEAM AND SHEAR
JT	JOINT	VB	VERTICAL BRACE
K	KIPS, JOIST SERIES	VERT	VERTICAL
KB	KNEE BRACE	W	WALL, EST, WIDTH, WIDE FLANGE
L	SPAN, LEFT, STEEL ANGLE	W/	WITH
Ld	DEVELOPMENT LENGTH	WL	WIND LOAD, WATER LEVEL, WORKING LINE
LL	LIVE LOAD		
LLBB	LONG LEG BACK TO BACK	WP	WATER PROOF, WORKING POINT

STRUCTURAL LEGEND

P1	PRECAST CONCRETE PANEL MARK	S1	SPAN DIRECTION OF A MILD REINFORCED CONCRETE SLAB W/ MAIN REINFORCING MARK S1
F1	SPREAD FOOTING MARK	DECK TYPE 1	SPAN OF 5 1/2" THICK CONCRETE SLAB W/ TYPE 1 STEEL DECK
P1	PLINTH MARK	DECK TYPE 1	SPAN DIRECTION OF BARE STEEL DECK TYPE 2 WITH NO CONCRETE TOPPING
C1	COLUMN MARK	20KSP	SPECIAL OPEN WEB K SERIES STEEL JOIST, SEE PLAN NOTES FOR LOAD REQUIREMENTS
CF1	CONTINUOUS FOOTING MARK	W27X84 <24'-0">	STANDARD AISC ROLLED SHAPE OF W27X84 AT ELEVATION 24'-0" ABOVE DATUM
RW1	RETAINING WALL MARK	W27X84 c=1"	STANDARD AISC ROLLED SHAPE OF W27X84 WITH A 1" UPWARD CAMBER
BP1	BASE PLATE MARK	W27X84 (10)	STANDARD AISC ROLLED SHAPE OF W27X84 W/ 10 HSA (EQUALLY SPACED)
A	STRUCTURAL STEEL COLUMN SPLICE TYPE MARK	W27X84 (10, 6, 12) WBEAM	STANDARD AISC ROLLED SHAPE OF W27X84 WITH 28 HSA EQUALLY SPACED FROM BOTTOM TO TOP AS 10 CONNECTORS / 6 CONNECTORS / 12 CONNECTORS
24/24	STRAIGHT SHAFT PIER (SHAFT Ø)	WBEAM	
24/48	DRILLED PIER (SHAFT AND BELL Ø)	BEAM	CONNECTED TO A ROLLED SHAPE COLUMN WITH A STANDARD WELDED MOMENT CONNECTION STANDARD AISC ROLLED SHOPE BEAM
B1 GB1 1B1	MILD REINFORCED CONCRETE BEAM MARK		
J1	MILD REINFORCED CONCRETE JOIST MARK	6"	SLAB DEPRESSION AND AMOUNT

STRUCTURAL CONCEPT, STANDARDS AND LOADS

A. DESIGN CONCEPT:
1. THE STRUCTURE AS SHOWN HAS BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS AND DESIGN STANDARDS TO SUPPORT THE FINAL BUILDING SERVICE LOADS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADDITIONAL SUPPORTS FOR THE STRUCTURE IF NECESSITATED BY THE CONSTRUCTION SEQUENCE OR METHODS OF FABRICATION, HANDLING, ERECTION, AND OTHER CONSTRUCTION OPERATIONS.

B. BUILDING CODES AND DESIGN STANDARDS:
1. INTERNATIONAL BUILDING CODE, 2021 EDITION.
2. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE); MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-22, AS AMENDED.
3. AMERICAN CONCRETE INSTITUTE (ACE), BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318, AS AMENDED.
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, 15TH EDITION (ASD), 2005, AS AMENDED.
5. AMERICAN WELDING SOCIETY (AWS).
6. STEEL JOIST INSTITUTE (SJI), STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOIST AND JOIST GIRDERS.
7. STEEL DECK INSTITUTE (SDI), DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, ROOF DECKS, AND CELLULAR METAL FLOOR DECK WITH ELECTRICAL DISTRIBUTION.
8. AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION.

C. GRAVITY LOADS:
1. SUPER-IMPOSED LOADS ARE GIVEN IN POUNDS PER SQUARE FOOT (PSF)

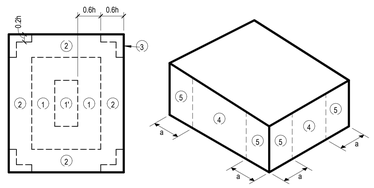
BUILDING AREA	DEAD LOAD (PSF)	LIVE LOAD (PSF)
SLAB ON GRADE	0	100
ROOF	20	20
MECHANICAL AREAS	10	150 (**)

* INCLUDES ALL ALLOWANCES OF 15 PSF FOR PARTITION WEIGHT
** EQUIPMENT WEIGHT IF LARGER

D. LATERAL DESIGN LOADS (CLOSED STRUCTURE):
1. WIND LOADS FOR AN BASIC DESIGN WIND SPEED OF 144 MPH (ASD WIND SPEED OF 112 MPH), 3-SECOND GUST, WITH EXPOSURE B AND A RISK CATEGORY III.
2. COMPONENTS AND CLADDING PRESSURES (PSF) FOR "CLOSED" BUILDINGS:

	EFFECTIVE WIND AREA	CLEAR WIND FLOW					
		ZONE 3		ZONE 2		ZONE 1	
		POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
WIND PRESSURE	≤46.2 SF	58.3 PSF	-84.8 PSF	44.1 PSF	-43.2 PSF	29.2 PSF	-28.3 PSF
	>46.2, ≤185 SF	44.1 PSF	-43.2 PSF	44.1 PSF	-43.2 PSF	29.2 PSF	-28.3 PSF
	>185 SF	29.2 PSF	-28.3 PSF	29.2 PSF	-28.3 PSF	29.2 PSF	-28.3 PSF

a. RE: 2021 IBC FOR DESCRIPTION OF CORNER, PERIMETER AND FIELD.
b. POSITIVE PRESSURES ARE PRESSURES ACTING TOWARDS THE BUILDING.
c. NEGATIVE PRESSURES ARE PRESSURES ACTING AWAY FROM THE BUILDING.
d. VALUES ABOVE ARE FOR BASIC DESIGN WIND PRESSURES THE ASD FACTOR 0.6..
e. ZONE WIDTH DIMENSIONS:
- a (WALLS) = 6.8FT
- 0.2h = 4.6FT
- 0.6h = 14FT



1 3. WIND-BORNE DEBRIS REGION, USE RISK CATEGORY III WIND SPEED OF 138 MPH BASIC (107 MPH ASD)

E. SEISMIC CRITERIA:

1. IMPORTANCE FACTOR:	1.25
2. RISK CATEGORY:	III
3. MAPPED SPECTRAL RESPONSE ACCELERATIONS:	Ss: 0.077, S1: 0.042
4. SITE CLASS:	X
5. SPECTRAL RESPONSE COEFFICIENTS:	SDs: 0.068, SD1: 0.042
6. SEISMIC DESIGN CATEGORY:	A

F. SPECIAL LOADS:
1. STAIR TREADS, RAILING AND GUARDRAILS:

ITEM	REQUIRED CAPACITY
TREADS	300 POUNDS AT CENTER
TOP RAILS	50 PLF HORIZONTALLY (DISTRIBUTED)
OTHER RAILS, FILLERS & CONNECTIONS	50 PLF HORIZONTALLY (DISTRIBUTED)
HAND RAILS	200 POUNDS ANY DIRECTION

2. PIPE LOADS WITH WATER

SIZE	WEIGHT MAX	SPACING OF HANGERS
4" Ø	17 PLF	10'-0"
6" Ø	32 PLF	10'-0"
8" Ø	50 PLF	10'-0"
10" Ø	75 PLF	5'-0"
12" Ø	102 PLF	5'-0"
VALUES ASSUME SCHEDULE 40 STEEL PIPE		

G. ROOF RAIN LOAD DATA:
1. RAIN INTENSITY 60MIN, i = 5.32 IN/HR

H. GROUND SNOW LOADS:
1. GROUND SNOW: 9 PSF
2. FLAT-ROOF SNOW LOAD: X PSF
3. SNOW EXPOSURE FACTOR: X
4. SNOW IMPORTANCE FACTOR: X
5. THERMAL FACTOR: X
6. SLOPE FACTOR(S): X
7. DRIFT SURCHARGE LOADS AND WIDTH OF SNOW DRIFTS SEE FRAMING PLANS

WIND STORM

A. WIND STORM CRITERIA:
1. BUILDING TYPE: EDUCATIONAL
2. BASIC WIND SPEED:
   A. 144 MPH (EQUIVALENT NOMINAL: 112 MPH)
   B. 3 SECOND GUST
   C. EXPOSURE B
3. COUNTY: FORT BEND
4. BUILDING CODE: 2021 IBC WITH LOCAL AMENDMENTS [illegible] BEING PERMITTED
5. IMPACT RESISTANCE: YES / NO
6. SHUTTERS: YES / NO

B. WIND STORM SUBMITTALS:
1. DOORS
2. WINDOWS
3. CURTAIN WALL / STOREFRONT
4. TRANSLUCENT WALL / SKY
5. EXTERIOR COVERING
6. GARAGE DOORS
7. LOUVERS
8. ROOFING
9. ROOFING
10. SHUTTERS
11. [illegible]
12. [illegible]
13. PE[illegible]

IMPACT RES[illegible] EXTERIOR GLAZING IN DOORS, OVERHEAD DOORS, WINDOWS, CURT[illegible] STEMS AND SKYLIGHTS (SMALL MISSILE ABOVE 30'-0" ABOVE GROUND, LARGE MIS[illegible] BELOW 30'-0" ABOVE GROUND)

GC TO SUBMIT SHOP DRAWINGS FOR APPROVAL TO THE WINDSTORM CERTIFICATION ENGINEER PRIOR TO PURCHASING MATERIALS. ANY ITEM NOT MEETING PRE-APPROVED TEXAS DEPARTMENT OF INSURANCE (TDI) CERTIFICATIONS SHALL BE REJECTED. THE ABOVE COMPONENTS SHALL INCLUDE SIGNED AND SEALED SUBMITTALS SHOWING THEY MEET THE WINDSTORM CRITERIA.

NOT USED

CONCRETE

A. CONCRETE SCHEDULE:

BUILDING COMPONENT	28 DAY CYLINDER COMPRESSIVE STRENGTH POUNDS PER SQUARE INCH (PSI)					
	NORMAL WEIGHT			MAX AGGREGATE SIZE (IN)	SUMP (IN)	W/C RATIO
	3000	3500	4000			
DRILLED PIERS	●			1 1/2"	5-7	0.55
SLAB ON GRADE		●		1"	4-6	0.50
SLAB ON DECK		●		1"	4-6	0.50
GRADE BEAMS AND PLINTHS		●		1"	4-6	0.50
ALL OTHER CONCRETE	●			1"	4-6	0.52

B. PROVIDE DEFORMED NEW BILLET STEEL BARS CONFORMING TO ASTM A615, GRADE 60. ALL REINFORCING STEEL SHALL BE SECURELY HELD IN PLACE; PROVIDE ADDITIONAL BARS OR STIRRUPS FOR SUPPORT AS REQUIRED.
C. WELDED WIRE FABRIC SHALL CONSIST OF FLAT SHEETS AND SHALL CONFORM TO ASTM A185, WITH A MINIMUM YIELD STRENGTH OF 65.0 KSI
D. PROVIDE FULL EMBEDMENT WITH STANDARD 90 DEGREE HOOKS FOR ALL DOWELS. IF NOT OTHERWISE SPECIFIED, THE DOWEL SIZE AND SPACING SHALL BE THE SAME AS THE MAIN REINFORCING.
E. WHEN REINFORCING STEEL IN GRADE BEAMS, WALLS, SLABS AND BEAMS, IS NOTED AS CONTINUOUS, SPLICE REINFORCING STEEL ONLY WHEN UNAVOIDABLE DUE TO STOCK LENGTHS. STAGGER ALL SPLICES A MINIMUM OF 4'-0". ADJACENT BAR SPLICES ARE NOT ACCEPTABLE.
   a. LOCATE THE TOP BAR SPLICES WITHIN THE MIDDLE HALF OF THE SPAN AND LOCATE THE BOTTOM BAR SPLICES AT SUPPORTS OR BETWEEN SUPPORTS AND 1/3 SPAN POINT, UNLESS NOTED OTHERWISE ON PLANS, DETAILS OR SCHEDULES.
F. PROVIDE INTERIOR AND EXTERIOR HORIZONTAL LAPPED CORNER BARS AT ALL CORNERS TO MATCH THE SIZE, TYPE AND SPACING OF THE WALL AND GRADE BEAM HORIZONTAL REINFORCING.
G. UNLESS SPECIFICALLY NOTED, SCHEDULED OR DETAILED OTHERWISE, PROVIDE DEVELOPMENT LENGTH FOR REINFORCING IN CONCRETE COMPONENTS IN ACCORDANCE WITH THE SCHEDULE IN NOTE H. BELOW. THIS SCHEDULE SHALL APPLY TO ALL DEVELOPMENT LENGTHS NOT OTHERWISE NOTED, DETAILED OR SCHEDULED IN THE DRAWINGS OR SPECIFICATIONS.
H. REINFORCING BAR DEVELOPMENT LENGTHS (Ld) IN INCHES FOR VARIOUS CONCRETE STRENGTHS IN POUNDS PER SQUARE INCH (PSI). TOP BARS ARE DEFINED AS HORIZONTAL REINFORCING SO PLACED IN A MEMBER THAT MORE THAN 12 INCHES OF CONCRETE IS CAST BELOW THE BAR. ALL OTHER CONDITIONS ARE CONSIDERED BOTTOM BARS FOR DEVELOPMENT AND SPLICE LENGTH PURPOSES.
   1. WHEN TWO BARS OF DIFFERENT SIZES ARE LAPPED, THE SMALLER SIZE SHALL GOVERN THE LAP LENGTH UNLESS SPECIFICALLY NOTED.
   2. WELDED OR MECHANICAL SPLICES CAPABLE OF DEVELOPING 125% OF THE BAR YIELD STRENGTH MAY BE USED IN LIEU OF THE LAPS. SUCH SPLICES MAY BE EITHER FULL BUTT WELDS OR SERIES "C CADWELDS OR EQUAL".

BAR SIZE GRADE 60	Ld FOR TOP BARS				Ld FOR BOTTOM BARS			
	28 DAY CYLINDER CONCRETE STRENGTH (PSI)				28 DAY CYLINDER CONCRETE STRENGTH (PSI)			
	3000 / 3500	4000	5000	6000	3000 / 3500	4000	5000	6000
#3	22	19	17	16	17	15	13	12
#4	29	25	23	21	22	19	17	16
#5	36	31	28	26	28	24	22	20
#6	43	37	34	31	33	29	26	24
#7	63	54	49	45	48	42	38	34
#8	72	62	56	51	55	48	43	39
#9	81	70	62	57	62	54	48	44
#10	89	78	69	63	69	60	53	49
#11	98	85	76	70	76	66	59	54

J. AT LAP SPLICES, PROVIDE LAP SPLICE LENGTHS FOR REINFORCING BARS 1.3 TIMES THE Ld SHOWN IN THE TABLE IN NOTE H ABOVE.
K. THE GENERAL NOTES, LAP LENGTHS OR DETAILS PERTAINING TO REINFORCING STEEL AS SHOWN ON THE DETAIL SHEETS OR OTHER SCHEDULES SHALL SUPERSEDE THE NOTES SHOWN ON THIS SHEET.
L. PROVIDE THE FOLLOWING COVER FOR CAST-IN-PLACE CONCRETE REINFORCING.
1. UNIFORMED SURFACES IN CONTACT WITH EARTH: 3 INCHES
2. UNIFORMED SURFACES OVER MOISTURE BARRIER: 2 INCHES
3. FORMED SURFACES EXPOSED TO EARTH OR WEATHER
   - #6 AND LARGER: 2 INCHES
   - #5 AND SMALLER: 1 1/2 INCHES
4. FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER
   - SLABS AND WALLS: 3/4 INCH
   - BEAMS AND COLUMNS: 1 1/2 INCHES

SHEET LIST	
Sheet Number	Sheet Name

S101	GENERAL STRUCTURAL CRITERIA
S102	GENERAL STRUCTURAL CRITERIA
S201	FOUNDATION PLAN - COMPOSITE
S301	FOUNDATION SCHEDULE & DETAILS

GENERAL NOTES FOR CONSTRUCTION

A. CONSTRUCTION METHODS, PROCEDURES AND SEQUENCES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE CONTRACTOR SHALL TAKE ALL THE NECESSARY MEANS TO MAINTAIN AND PROTECT THE STRUCTURAL INTEGRITY OF ALL CONSTRUCTION AT ALL STAGES.
B. ALL PROPOSED SUBSTITUTIONS MUST BE EQUAL OR BETTER AND SHALL BE REVIEWED BY THE ARCHITECT/ENGINEER PRIOR TO ANY PERTINENT WORK AND PRIOR TO THE AWARD OF THE CONTRACT.
C. NOT ALL OPENINGS AND OTHER COMPONENTS THAT ARE REQUIRED HAVE BEEN SHOWN IN THE STRUCTURAL DRAWINGS. COORDINATE WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND VERIFY THE LOCATIONS AND SIZES OF ALL CHASES, INSERTS, OPENINGS, SLEEVES, FINISHES, DEPRESSIONS, PADS AND OTHER PROJECT REQUIREMENTS. FLOOR PLAN WILL BE FURNISHED FOR THAT PURPOSE.
D. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL DRAWINGS TO DETERMINE WHERE OPENINGS ARE REQUIRED IN REINFORCED CONCRETE BEAMS, SLABS AND WALLS.
E. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, DETAILING ALL THE OPENINGS, INCLUDING ADDED REINFORCEMENT AS SHOWN ON THE TYPICAL WALL, SLAB AND BEAM OPENING DETAILS FOR REVIEW.
F. ADDITIONAL REINFORCEMENT ABOVE THAT SHOWN IN THE TYPICAL SLAB AND BEAM OPENING DETAILS MAY BE REQUIRED AND WILL BE REVIEWED ON THE SHOP DRAWINGS.
G. USE THE MANUFACTURER'S CERTIFIED DRAWINGS AND SPECIFICATIONS FOR THE EQUIPMENT ANCHORAGE AND DETAILS.
H. ALL CONSTRUCTION JOINTS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE. ADDITIONAL CONSTRUCTION JOINTS TO FACILITATE CONSTRUCTION SHALL BE LOCATED AND DETAILED ON THE SHOP DRAWINGS FOR REVIEW.
I. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN BEAMS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
J. ALL CONSTRUCTION AND CONTROL JOINTS FOR BEAMS WHICH ARE EXPOSED TO VIEW ARE TO BE LOCATED TO COINCIDE WITH THE ARCHITECTURAL RUSTICATION JOINTS AS SHOWN ON THE BUILDING ELEVATION SHEETS OR AS REVIEWED IN WRITING.
K. SHOP DRAWINGS:
   1. THE TERM "SHOP DRAWINGS" INCLUDES FABRICATION, MANUFACTURING, ERECTION AND SETTING DRAWINGS, BROCHURES, CERTIFICATES, AND PRODUCT DATA DESCRIBING MATERIALS AND EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE ALL PERTINENT INFORMATION REQUIRED FOR THE ENGINEER TO FULLY EVALUATE THE MATERIALS BEING REPRESENTED BY THE SUBMITTAL INCLUDING THE PHYSICAL PROPERTIES, DIMENSIONS, LOCATIONS AND METHOD OF INSTALLATION.
   2. SHOP DRAWINGS WILL BEAR THE REVIEW STAMP OF THE CONTRACTOR INDICATING THAT HE HAS REVIEWED THE DRAWINGS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS; COORDINATED ITEMS INCLUDED IN THE SUBMITTAL WITH RELATED ITEMS; AND VERIFIED AND COORDINATED DIMENSIONS.
   3. REPRODUCTIONS OF THE ENGINEERING DRAWINGS WILL NOT BE ACCEPTABLE AS SHOP DRAWINGS.
   4. ANY SHOP DRAWING NOT CONFORMING TO THESE REQUIREMENTS WILL BE CAUSE FOR REJECTION AND WILL BE RETURNED WITHOUT ANY FURTHER ACTION.
   5. STRUCTURAL SUBMITTALS REQUIRED FOR APPROVAL INCLUDE, BUT ARE NOT LIMITED TO:
      - CONCRETE ACCESSORIES (MANUFACTURERS PRODUCT DATA)
      - STEEL REINFORCING
      - CONCRETE MIX DESIGN
      - CONTROL JOINT LAYOUT
      - CONCRETE MATERIAL CERTIFICATES
      - STRUCTURAL STEEL FRAMING
      - STRUCTURAL STEEL CONNECTION CALCULATIONS
      - STEEL ROOF DECK
      - COLD FORMED METAL FRAMING
      - COLD FORMED METAL FRAMING CALCULATIONS
      - MISC. STEEL FABRICATIONS
   6. DELEGATED STRUCTURAL DESIGN OF COMPONENTS:
      - SEE APPLICABLE SECTIONS OF GENERAL NOTES FOR THE APPROPRIATE DESIGN RESPONSIBILITIES OF THE SUPPLIER AND IT'S LICENSED ENGINEER.
L. THESE NOTES APPLY TO STRUCTURAL DOCUMENTS SEALED BY THE STRUCTURAL ENGINEER AND ARE INTENDED TO BE COMPLEMENTARY TO AND USED IN CONJUNCTION WITH THE PLANS AND SPECIFICATIONS, INCLUDING THOSE PREPARED BY OTHER DISCIPLINES. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT/STRUCTURAL ENGINEER IMMEDIATELY. ANY SUCH DISCREPANCIES SHALL BE RESOLVED TO THE MORE STRINGENT REQUIREMENTS, UNLESS OTHERWISE AUTHORIZED BY THE STRUCTURAL ENGINEER.
M. ANY DISCREPANCIES ON THE STRUCTURAL DOCUMENTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/STRUCTURAL ENGINEER PRIOR TO SUBMISSION OF BIDS OR PROPOSALS, OR IF NOT REASONABLE DISCERNABLE DURING PREPARATION OF BIDS AND PROPOSALS. BEFORE COMMENCING THE WORK IN QUESTIONS. NO FIELD CHANGES OR DIVIATIONS FROM THE DESIGN ARE TO BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT AND/OR STRUCTURAL ENGINEER. NO CHANGE ORDER CONSIDERATION WILL BE GIVEN TO CHANGES FOR WHICH THE ARCHITECT AND/OR ENGINEER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
N. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONSTRUCTION, INCLUDING EXISTING WORK, PRIOR TO COMMENCING WORK. ANY DISCREPANCIES SHALL BE REPORT IMMEDIATELY TO THE ARCHITECT/STRUCTURAL ENGINEER.

1

EXCAVATION, BACKFILLING & FOUNDATIONS

A. A GEOTECHNICAL EXPLORATION OF SUBSURFACE CONDITIONS, CONTAINING TEST BORINGS, LABORATORY TEST, ENGINEERING ANALYSIS AND FOUNDATION RECOMMENDATIONS, PERFORMED BY AVILES ENGINEERING CORPORATION DATED MAY 2025 REPORT NO. REPORT NO. G103-25C (Draft) IS AVAILABLE FOR REVIEW.
B. MAINTAIN PROPER SITE DRAINAGE DURING CONSTRUCTION SO THAT PONDING OF WATER DOES NOT OCCUR IN THE BUILDING AREA.
C. SUB-GRADE PREPARTION:
   a. PERFORM DEMOLITION OF EXISTING STRUCTURES AS REQUIRED BY THE GEOTECHNICAL REPORT. THE ENTIRE VOLUME OF THE EXCAVATIONS CREATED BY DEMOLITION AND REMOVAL OF EXISTING STRUCTURES SHOULD BE BACKFILLED WITH ENGINEERED (SELECT) FILL THAT IS PROPERLY PLACED AND COMPACTED.
   b. EXCAVATE EXISTING SOILS AS REQUIRED TO REMOVE ALL EXISTING VEGETATION, ROOTS AND DELETERIOUS MATERIALS FROM THE PROPOSED BUILDING AREA, AND AS REQUIRED BY GEOTECHNICAL REPORT. THE CLEARING SHOULD EXTEND BEYOND THE BUILDING EDGES. ONCE ROUGH GRADE IS ESTABLISHED, THE EXPOSED SURFACE SHOULD BE PROOF-ROLLED. ANY SOFT POCKETS OF SOFT OR WEAK SOILS ENCOUNTERED SHOULD BE REMOVED. BUILD BUILDING PAD AS REQUIRED BY GEOTECHNICAL REPORT.
   c. BUILDING PAD UNDER SLAB ON GRADE SHALL BE PREPARED TO PROVIDE AN OWNER APPROVED PVR OF 1" OR LESS BASED ON RECOMMENDATIONS IN THE PROJECT GEOTECHNICAL REPORT.
D. FOUNDATIONS HAVE BEEN DESIGNED FOR
   1) ALLOWABLE BEARING CAPACITY OF 3,600 POUNDS PER SQUARE FOOT (PSF) FOR SUSTAINED LOADS AND
   2)AN ALLOWABLE BEARING CAPACITY OF 5,400 PSF FOR TOTAL LOADS
E. REFER TO THE GEOTECHNICAL EXPLORATION FOR ADDITIONAL INFORMATION.

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D + A PROJECT 24-291-00

Notes

1	ADDENDUM #1			10.10.2025
Revision		By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT				2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A		JT	AR	LMM 2025.04.11
		Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

FRED DALLY 90904 REGISTERED ENGINEER STATE OF TEXAS
10/10/2025

Client/Project Logo

2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS - ROSA PARKS ELEMENTARY SCHOOL

19101 CHIMNEY ROCK RD, FRESNO, TX 77545

Title
GENERAL STRUCTURAL CRITERIA

Project No.	Scale
214001246	1 1/2" = 1'-0"
Revision	Drawing No.
1	S101-RPES

<PW location in Project Information>
10/9/2025 4:48:39 PM
ORIGINAL SHEET - ARCH E1

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INDEPENDENT TESTING LABORATORY & SPECIAL INSPECTIONS

A. EMPLOYMENT OF A TESTING LABORATORY IN NO WAY RELIEVES THE CONTRACTOR OF ANY OBLIGATION TOPERFORM WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
B. CONTRACTOR RESPONSIBILITIES:
   1. DELIVER TO LABORATORY AT DESIGNATED LOCATION ADEQUATE SAMPLES OF MATERIALS PROPOSED TO BE USED WHICH REQUIRE TESTING, TOGETHER WITH PROPOSED MIX DESIGNS.
   2. COOPERATE WITH LABORATORY PERSONNEL AND PROVIDE ACCESS TO WORK AND TO MANUFACTURER'S FACILITIES.
   3. PROVIDE INCIDENTAL LABOR AND FACILITIES TO PROVIDE ACCESS TO WORK TO BE TESTED, TO OBTAIN AND HANDLE SAMPLES AT THE SITE OR AT SOURCE OF PRODUCTS TO BE TESTED, TO FACILITATE TEST AND INSPECTIONS AND FOR STORAGE AND CURING OF TEST SAMPLES.
   4. NOTIFY LABORATORY OF MATERIAL SOURCES AND FURNISH NECESSARY QUANTITIES OF REPRESENTATIVE SAMPLES OF MATERIALS PROPOSED FOR USE WHICH ARE REQUIRED TO BE TESTED.
   5. NOTIFY ARCHITECT AND LABORATORY 24 HOURS PRIOR TO EXPECTED TIME FOR OPERATIONS REQUIRING INSPECTION AND TESTING SERVICES.
   6. ADVISE LABORATORY IN A TIMELY FASHION TO COMPLETE REQUIRED INSPECTION AND TESTING PRIOR TO SUBSEQUENT WORK BEING PERFORMED.
   7. PAY FOR ALL SUBSEQUENT RE-TESTING OF PRODUCTS OR SYSTEMS FOUND TO BE DEFECTIVE OR OTHERWISE NOT IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS. REMOVE REJECTED PRODUCTS AND REPLACE WITH PRODUCTS OF SPECIFIED QUALITY.
C. SPECIAL INSPECTIONS:
   1. THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTOR(S) TO PROVIDE INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF CONSTRUCTION LISTED IN THIS SECTIONS. HE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE TO THE INSPECTIONS BEING PERFORMED TO THE SATISFACTION OF THE ENGINEER OF RECORD AND THE BUILDING OFFICIAL THE SPECIAL INSPECTOR SHALL HAVE EXPERIENCE WITH AT LEAST FIVE OTHER PROJECTS SIMILAR IN NATURE.
   2. THE PURPOSE OF THE INSPECTIONS SHALL BE TO ENFORCE COMPLIANCE WITH THE CONSTRUCTION DRAWINGS, SPECIFICATIONS, GEOTECHNICAL REPORT AND THE INTERNATIONAL BUILDING CODE, SECTION 1704.
   3. THE FOLLOWING ITEMS REQUIRE INSPECTION BY THE SPECIAL INSPECTOR:

REFERENCE STANDARD	FREQUENCY

STRUCTURAL REINFORCING STEEL:
- a. HIGH STRENGTH BOLTING
  - BEARING TYPE CONNECTIONS: PERIODIC
  - SLIP CRITICAL CONNECTIONS: PERIODIC
- b. WELDING OF STRUCTURAL STEEL:
  - FULL PENETRATION GROOVE WELDS: CONTINUOUS
  - MULTI-PASS FILLET WELDS: CONTINUOUS
  - SINGLE-PASS FILLET WELDS > 5/16": CONTINUOUS
  - SINGLE PASS FILL WELDS <= 5/16": PERIODIC
  - FLOOR AND DECK WELDS: PERIODIC
- c. WELDING OF REINFORCING STEEL
  - WELDABILITY OF STEEL OTHER THAN ASTM A706: PERIODIC
  - SHEAR REINFORCEMENT: CONTINUOUS
  - OTHER REINFORCEMENT: PERIODIC
- d. INSPECTION OF STEEL FRAME AND JOISTS:
  - DETAILS SUCH AS BRACING AND STIFFENING: PERIODIC
  - MEMBER SIZES AND LOCATION: PERIODIC
  - APPLICATION OF CONNECTION DETAIL: PERIODIC
- e. CONCRETE CONSTRUCTION:
  - REINFORCING STEEL: PERIODIC (RANDOMLY AT 20%)
  - CONCRETE MIX DESIGN: PERIODIC AT EACH CONCRETE POUR
  - SAMPLING OF FRESH CONCRETE: CONTINUOUS (SEE NOTE 1)
  - MAINTENANCE OF SPECIFIED CURING TEMPS AND TECHNIQUES: PERIODIC AT EACH POUR
  - INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION OF TECHNIQUES: CONTINUOUS
  - INSPECTING OF FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS: PERIODIC
- f. SOILS (SLAB ON GRADE):
  - VISUAL OBSERVATIONS: PERIODIC
  - PROOF ROLLING OBSERVATION: CONTINUOUS
  - MOISTURE CONDITIOINING & RECOMPACTION: CONTINUOUS OR PERIODIC (ONE DENSITY TEST FOR EACH 2,000 SF)
  - DURING FILL PLACEMENT: CONTINUOUS OR PERIODIC
  - EVALUATION OF IN PLACE DENSITY FILL: CONTINUOUS OR PERIODIC
- g. PIERS:
  - OBSERVE DRILLING OPERATIONS AND COMPLETE RECORD OF DRILLING: CONTINUOUS
  - VERIFY PLACEMENTS LOCATIONS AND PLUMBNESS, LNEGTH, EMBEDMENT AND ADEQUATE BEARING STRENGTH CAPACITY, CONFIRM PIER DIAMETER, REINFORCING STEEL (RE: CONCRETE ABOVE): CONTINUOUS
- h. MASONRY:
  - VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS: PERIODIC
  - AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:
    1. PROPORTIONS OF SITE-PREPARED MORTAR: PERIODIC
    2. CONSTRUCTION OF MORTAR JOINTS: PERIODIC
    3. LOCATION OF REINFORCEMENT, CONNECTORS AND ANCHORAGES: PERIODIC
  - PRIOR TO GROUTING, VERIFY THE FOLLOWING ARE IN COMPLIANCE:
    1. GROUT SPACE: PERIODIC
    2. GRADE, TYPE AND SIZE REINFORCEMENT AND ANCHOR BOLTS, AND ANCHORAGES: PERIODIC
    3. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHORAGES: PERIODIC.
    4. PROPORTIONS OF SITE-PREPARED GROUT: PERIODIC.
    5. CONSTRUCTION OF MORTAR JOINTS: PERIODIC
  - VERIFY DURING CONSTRUCTION:
    1. SIZE AND LOCATION OF STRUCTURAL ELEMENTS: PERIODIC.
    2. TYPE, SIZE AND LOCATION OF ANCHORS INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION: PERIODIC.
    3. WELDING OF REINFORCMENT: CONTINUOUS
    4. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C)): PERIODIC
  - OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS: PERIODIC

NOTES:

- PROVIDE A SET OF 4 FOR EVERY 75 CY OF BUT NOT LESS THAN 1 5,000 SF OF SLAB OR WALL SURFACE AREA. MONITOR SLUMP AND AIR CONTENT OF CONC. AND NOTIFY DELIVERY DRIVER IF SLUMP DEVIATES MORE THAN 1" FROM SPECD VALUE.
- ALL DRILLED AND EPOXIED ANCHORS (REBAR, BOLTS, THREADED RODS ETC.) SHALL BE PULL TESTED TO 110% FOR NO LESS THAN 3 MIN.
- ADDITIONAL TESTS AT THE CONTRACTOR'S EXPENSE WILL BE PERFORMED TO DETERMINE COMPLIANCE OF REPLACED OR ADDITIONAL WORK WITH SPECIFIED REQUIREMENTS.
- CORRECT DEFICIENCIES IN WORK THAT TEST REPORTS AND INSPECTIONS INDICATE DO NOT COMPLY WITH THE CONTRACT DOCUMENTS.
- PROVIDE THE ENGINEER OF RECORD (EOR) COPIES OF ALL SPECIAL INSPECTIONS SO A SPECIAL INSPECTIONS REPORT CAN BE PREPARED FOR OBTAINING A CERTIFICATE OF OCCUPANCY.

1

DEMOLITION

A. CONDUCT DEMOLITION OPERATIONS IN EXTREMELY CAREFUL MANNER IN ORDER TO PREVENT ANY DAMAGES TO ALL EXISTING CONSTRUCTION AND TO MINIMIZE INTERFERENCE WITH ADJACENT **STRUCTURES**
B. PREVENT THE MOVEMENT, SETTLEMENT, DAMAGE OR INJURY TO ADJACENT STRUCTURES, PROVIDE & PLACE BRACING OR SHORING & BE RESPONSIBLE FOR THE SAFETY AND SUPPORT OF THE ADJACENT STRUCTURES. ASSUME FULL LIABILITY FOR SUCH MOVEMENT, SETTLEMENT, DAMAGE, OR INJURY.
C. CEASE OPERATIONS & NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY IF SAFETY ADJACENT STRUCTURES APPEARS TO BE ENDANGERED. TAKE PRECAUTIONS TO SUPPORT EXISTING STRUCTURES PROPERLY. DO NOT RESUME OPERATIONS UNTIL THE FULL SAFETY IS RESTORED.
D. PREVENT MOVEMENT, SETTLEMENT OR COLLAPSE OF ADJACENT SERVICES, SIDEWALKS, DRIVEWAYS & TREES. ASSUME FULL LIABILITY FOR SUCH MOVEMENT, SETTLEMENT OR COLLAPSE. REPAIR DAMAGE PROMPTLY AT NO COST TO THE OWNER.
E. DEMOLISH INDICATED STRUCTURES & APPURTENANCE IN AN ORDERLY AND CAREFUL MANNER.
F. PERFORM DEMOLITION IN ACCORDANCE WITH THE APPLICABLE AUTHORITIES HAVING JURISDICTION.
G. REMOVE FOUNDATION WALLS & FOOTINGS AS INDICATED ON DEMOLITION DRAWINGS TO A MINIMUM 3' FEET BELOW FINISH GRADE.
H. REPAIR ANY DEMOLITION PERFORMED IN EXCESS OF THAT INDICATED, AT NO COST TO THE OWNER OR THE ARCHITECT/ENGINEER.
I. REPAIR DAMAGE TO ADJACENT STRUCTURES CAUSED AS THE RESULT OF THIS WORK AT NO COST TO THE OWNER OF THE ARCHITECT/ENGINEER.

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1 713 337 8881
Texas Registered Engineering Firm F-003426
D + A PROJECT 24-291-00

Notes

1 ADDENDUM #1			10.10.2025
Revision	By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND PERMIT			2025.09.24
Issued	By	Appd	YYYY.MM.DD
File Name: N/A	JT	AR	LMM 2025.04.11
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal
LICENSED PROFESSIONAL ENGINEER
FRED DALLY
90904
STATE OF TEXAS
10/10/2025

Client/Project Logo
2023 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS - ROSA PARKS ELEMENTARY SCHOOL

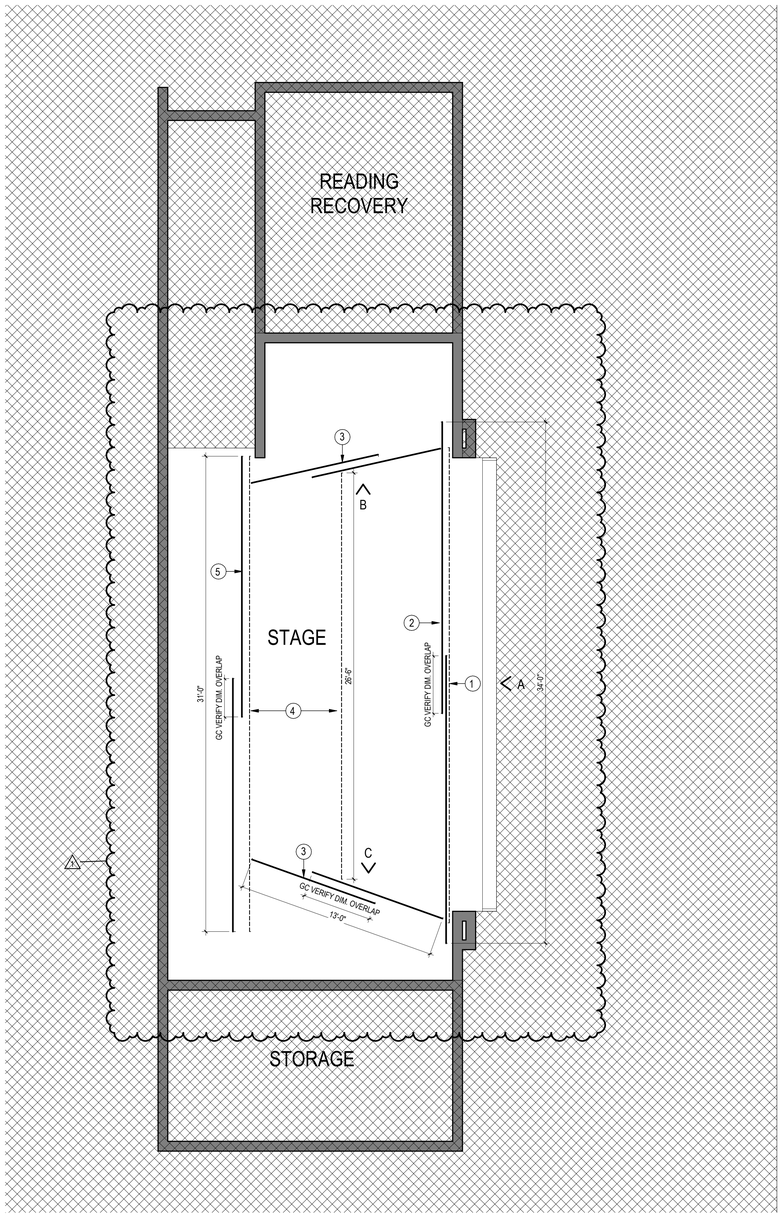
19101 CHIMNEY ROCK RD, FRESNO, TX 77545

Title
GENERAL STRUCTURAL CRITERIA

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Revision	Drawing No.
1	S102-RPES

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A1 A101 — **NEW STAGE CURTAIN ENLARGED PLAN**
1/4" = 1'-0"
RPES - A



A



B



C

CONSTRUCTION LEGEND

- NEW STAGE CURTAIN
- NEW VALANCE / BORDER CURTAIN
- EXISTING WALLS TO REMAIN
- AREA OUTSIDE OF SCOPE OF WORK
- < X PHOTOGRAPH LOCATION, DIRECTION & NUMBER

KEYED NOTES

1. PROVIDE NEW VALANCE CURTAIN APPROX. 3'-0" H. (+/-) GC VIF
2. PROVIDE NEW FRONT CURTAINS APPROX. 11'-03" H. (+/-) GC VIF
3. PROVIDE NEW SIDE LEG CURTAINS APPROX. 11'-0" H. (+/-) GC VIF
4. PROVIDE NEW BORDER CURTAINS APPROX. 3'-0" H. (+/-) GC VIF
5. PROVIDE NEW REAR TRAVELER CURTAINS APPROX. 11'-0" H. (+/-) GC VIF

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Notes

1 Revision 1				Date 1
Revision		By	Appd	YYYY.MM.DD
100% ISSUE FOR BID AND CONSTRUCTION				2025.09.24
Issued		By	Appd	YYYY.MM.DD
File Name: N/A	Author	Designer	Checker	12/08/24
	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT DANIELLE DUNN 28295 STATE OF TEXAS

Client/Project Logo

2022 BOND FORT BEND INDEPENDENT SCHOOL DISTRICT

Client/Project
FORT BEND ISD

FBISD BP022 GYM RENOVATIONS AND ADDITIONS

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Title
ENLARGED STAGE CURTAIN PLAN - ALTERNATE #4

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Revision	Drawing No.
1	A101 - RPES - A

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Certificate Of Completion

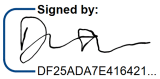
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Signatures: 5
Certificate Pages: 3
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Envelope Originator:
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16431 Lexington Blvd
Sugar Land, TX 77479
christine.manrique@fortbendisd.gov
IP Address: 161.51.248.19

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christine.manrique@fortbendisd.gov
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Brenda Garcia brenda.garcia@fortbendisd.gov Security Level: Email, Account Authentication (None)	Signed by: Brenda Garcia F7F6BD96D7C742E... Signature Adoption: Pre-selected Style Using IP Address: 161.51.248.19	Sent: 10/10/2025 9:41:38 AM Viewed: 10/10/2025 9:45:33 AM Signed: 10/10/2025 9:45:38 AM
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Daniel Bankhead daniel.bankhead@fortbendisd.gov Exec. Dir. Security Level: Email, Account Authentication (None)	Signed by: Daniel Bankhead AABFCACAF7E9453... Signature Adoption: Pre-selected Style Using IP Address: 161.51.248.19	Sent: 10/10/2025 9:45:52 AM Viewed: 10/10/2025 9:51:31 AM Signed: 10/10/2025 9:51:50 AM
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Antoinette Lewis Antoinette.Lewis1@fortbendisd.gov Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via Docusign	COPIED	Sent: 10/10/2025 11:57:48 AM
Kathleen Booker Kathleen.Booker@fortbendisd.gov Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via Docusign	COPIED	Sent: 10/10/2025 11:57:48 AM Viewed: 10/10/2025 11:58:51 AM
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