Addendum No. 04

March 11, 2026

RFP for Competitive Sealed Proposal

The Construction of Crosby Sixth Grade Campus

Crosby ISD RFP# CSP 2526-0002

Modifications to the RFQ:

1. NA

Modifications to the Drawings:

1. See attached

Modifications to the Specifications:

1. See Attached

Questions and Clarifications:

1. [Question:] On the exterior building sign it calls for carbon steel perforated sign face with aluminum letters and logo, welded to the sign face. You can not weld aluminum to steel so that's going to be a problem. Are you opposed to making this entire sign from aluminum? The letters and logo can be stud mounted to the perforated sign face and attached with nuts on the back side.
   [Response:] Sign can be made from aluminum.

End of Addendum

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

ADDENDUM



Addendum Number Four (04)
TO PLANS AND SPECIFICATIONS for
Crosby Sixth Grade Campus For Crosby ISD
STANTEC Project No. 214001329

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

March 11, 2026

NOTE: If you have questions about this Addendum, please contact Erin Shedd, Senior Project Architect/ Nicole Barrios, Senior Project Manager.

This Addendum is generally seperated 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.

PRE-PROPOSAL QUESTIONS

1. From: Pam Haynes – GAMMA CONSTRUCTION

   Q: Basketball backstops: Drawing E301D shows power to only the 4 side court goals, no power to the 2 main court goals. Are the 4 side court goals forward folding electric? Are the 2 main court stationary or manual forward folding ?

   Bleachers: Drawing E301D shows 3P/30A power for the retractable bleachers Spec 12-66-00 section 2.03, paragraph K, Line 1 calls for manual operation and a portable electric tractor system. Are the retractable bleachers manual or electric fraction drive

   Scoreboards: How many 1 or 2 ? Not shown on the interior elevation drawings.

   R: The power to the basketball goals is correct. The 4 side goals are powered while the 2 end goals are manual forward folding.

Per Owner confirmation, bleachers are to be electric traction drive. Documents have been updated in Addendum 02 to reflect this.

There is only 1 scoreboard. Documents have been updated in Addendum 02 to reflect this.

2. From: Sebastian Vides – SIKA ROOFING

   Q: We noticed that for this project, the specifications list TPO as the membrane type, and Sika is not currently listed among the approved manufacturers. While we don't offer TPO systems, we do provide PVC membranes through our Sikaplan Thermoplastic Roofing line.

   We would greatly appreciate the opportunity for our certified roofing applicators to submit a bid as an alternate, so you can evaluate the cost-effectiveness and performance of our system. If this is something you'd consider, please let me know what documentation or steps you would need from our side to move forward.

   R: Substitution Approved

3. From: Jeff Schafer – ICI Construction Inc.

   Q: We are looking to bid the music and science casework on this project. Can you please let me know if the cabinets for the science casework are to be wood? On the plans it looks like they are wood, but there is no wood spec.

   For the music, there is no information on the plans on what needs to be bid. Same for the elevations. Can you please let me know what they want for the music casework?

   R: Cabinets for the Science casework are PLASTIC LAIMINATE FINISH per A601. Refer to Specification Section 06 20 24 Interior Finish Carpentry and Millwork 2.01 Materials.

   Music: Refer to specification Section 12 35 00. Lockers will be product from one of the listed manufacturers, not casework. [We will relay a count in this response and then indicate a drawing update to show counts that will be part of Addendum 02 on March 11th.

4. From: Jeff Schafer – ICI Construction Inc.

   Q: Are there any specs for fire pump? From my experience at Crosby ISD I would highly suspect that a fire pump will be needed. Where would the proposed fire pump go with in the building? I assume in the large mechanical room in area D.

   R: A flow test was performed and based on the results of the flow test a fire pump is not required for this building based on the current design.

5. From: Brandon Wastson – D1 CONSTRUCTION

   Q: Can you provide details for MS1, MS2 and MS3 metal shelving units?

   R: Please refer to Sheet A141 in Addendum 01 for clarification on MS1, MS2, and MS3 detail and table.

6. From: Jesus Perez Orozco – JohnsManville

   Q: Proposed Substitution: Johns Manville AP Foil-Faced Polyisocyanurate Continuous Insulation in leiu of XCI Class A Hunter Panels

   R: Substitution is approved. Addendum 02 Specifications update reflects this.

7. From: Kerri Harris – J&S Equipment Company

   Q: Hello,
   I am interested in bidding on the library furniture for this project. I have found the specs and the A141B plan that gives me much of the information I need. However, the specs state, "Provide library furniture items with the following details, in sizes, quantities and configurations as scheduled," and I have not found a plan that indicates the sizes, quantities, or specific model numbers to use as a basis of design for any of the manufacturers. Will this be addressed in a future addendum?

   R: Library furniture is FFE on this project. That process will be handled separate from the construction contract by the Owner's Program Manager, LAN.

8. From: Maggie Stetson – VICWEST

   Q: It looks like the owner is calling for a wood look aluminum plank soffit, in which we manufacture a beautiful woodgrain steel soffit/siding that would look great on this project (see attached). We would love to be an alternative for this project, let me know if you have time to connect regarding substitutes/alternates (1/3 the price of aluminum soffit).

   R: This is an acceptable addition to the spec. Steel as an option will be added to the specification in addendum.

9. From: Pam Haynes – GAMMA CONSTRUCTION

   Q: It looks like the owner is calling for a wood look aluminum plank soffit, in which we manufacture a beautiful woodgrain steel soffit/siding that would look great on this project (see attached). We would love to be an alternative for this project, let me know if you have time to connect regarding substitutes/alternates (1/3 the price of aluminum soffit).

   R: This is an acceptable addition to the spec. Steel as an option will be added to the specification in addendum.

10. From: Jim Libke – TK PRODUCTS

    Q: The attached pages is a substitution request of TK-AirMax 2104 Vapor Permeable fluid applied air and weather barrier for Crosby Sixth Grade Campus.

    R: Reviewed by nicole - notes under "internal notes" to run by Ned - overall seems okay to approve

11. From: Pam Haynes – GAMMA CONSTRUCTION

    Q: RFI 1: According to the Plumbing Schedule P602, SK-X2 and SK-X3 will be provided with both cold and hot water; however, the science rooms on P407 and P408 only have cold water available to these items. Please advise.

    RFI 2: According to Drawing P311C, the Storm Drain and Overflow are 8", but the RD-1 and RD-2 that connect to this on P412C are 6". Please advise.

    R: RFI 1: Model number and fixture spec to be revised by addendum 4 for cold water only faucet.

    RFI 2: Storm piping to be revised by addendum to be 6" and not an 8".

12. From: Pam Haynes – GAMMA CONSTRUCTION

    Q: RFI 3: In the Site Plan P100, the northwest corner of Area B indicates the presence of a 4-inch sanitary line adjacent to an 8-inch storm line. However, upon reviewing the Plumbing Underground Plan P201B for the same location, there is no visible indication of a sanitary line. Please advise.

    RFI 4: In the Plumbing Enlarge Plans for Mechanical Rooms P 409, Detail #3, there is a ?" cold water line extending towards the right side of the drawing. However, upon comparison with the Plumbing Plan – Level 1 – Area B, this line does not connect to any points within that section. Please advise.

    R: RFI 3: The 4" sanitary stubout is to be removed. Removal has been coordinated with civil.

    RFI 4: The cold water line extends to serve a roof hydrant. Drawing is updated to indicate this line extension.

13. From: PAULA J. LOGAN – ROOFING SOLUTIONS GROUP

    Q: Good Afternoon , I would like to submit for your review and consideration the attached substitution / comparable product request on the aforementioned project

    R: Substituition Rejected.

14. From: DOREIDI PEREZ – NELSON ADAMS NACO

    Q: Substitution Request to use Nelson Adams for Tackboards.

    R: Approved

15. From: DOREIDI PEREZ – NELSON ADAMS NACO

    Q: Substitution Request to use Nelson Adams for Markerboards.

    R: Approved

16. From: DOREIDI PEREZ – NELSON ADAMS NACO

    Q: Substitution Request to use Nelson Adams for Horizontal Sliding Tack Boards.

    R: Approved

17. From: ANDREW FURCHI - SIPLAST

    Q: After a detailed review of the requirements for Section 07 27 26 – Fluid-Applied Membrane Air Barrier, I would like to propose Siplast WALLcontrol as a high-performance, cost-effective equal to the listed Basis of Design.

    R: This substitution request is not approved. There is a chance for incompatibility with rest of project scope.

18. From: Brandon Watson – D1Construction

    Q: Is water and power readily available, if not, what is the anticipated date it will be?

    R: Estimate for power on site is 6 months after work begins. Water is available on site now, in the ROW of Red Summit Dr.

19. From: Brandon Watson – D1Construction

    Q: According to the Plumbing Schedule P602, SK-X2 and SK-X3 will be provided with both cold and hot water; however, the science rooms on P407 and P408 only have cold water available to these items. Please advise.

    R: Model number and fixture spec to be revised by addendum 4 for cold water only faucet.

20. From: Brandon Watson – D1Construction

    Q: According to Drawing P311C, the Storm Drain and Overflow are 8", but the RD-1 and RD-2 that connect to this on P412C are 6". Please advise.

    R: Storm piping to be revised by addendum to be 6" and not an 8".

21. From: Brandon Watson – D1Construction

    Q: 4. Will a landscaping and irrigation plans be provided?

    R: No. There is only sod and hydromulch in the way of softscape on this project. And there will not be any permanent, designed irrigation as part of the campus.

22. From: Brandon Watson – D1Construction

    Q: What is the status of the permit?

    R: In review for most departmeners. Health Code not submitted yet.

23. From: Brandon Watson – D1Construction

    Q: Will the permits be ready at the time the NTP is issued?

    R: Hopeful, but cannot gurantee.

24. From: Brandon Watson – D1Construction

    Q: In the Site Plan P100, the northwest corner of Area B indicates the presence of a 4-inch sanitary line adjacent to an 8-inch storm line. However, upon reviewing the Plumbing Underground Plan P201B for the same location, there is no visible indication of a sanitary line. Please advise.

    R: The 4" sanitary stubout is to be removed. Removal has been coordinated with civil.

25. From: Brandon Watson – D1Construction

    Q: In the Plumbing Enlarge Plans for Mechanical Rooms P 409, Detail #3, there is a ?" cold water line extending towards the right side of the drawing. However, upon comparison with the Plumbing Plan – Level 1 – Area B, this line does not connect to any points within that section. Please advise.

    R: The cold water line extends to serve a roof hydrant. Drawing is updated to indicate this line extension.

26. From: CAMILLE KNEZEVICH – FRASCH

    Q: For consideration as a comparable product to the specified products below:
    098400 P2.01A (AB-1)
    Autex Frontier Baffles: https://www.autexacoustics.com/products/frontier
    VS
    Frasch Skinny BAFL: https://frasch.com/ceilings/skinny-bafl

    098400 P2.01B (AC-1, 2)
    Autex Horizon Circle: https://www.autexacoustics.com/products/horizon
    VS
    Frasch CLOUD ROUND: https://frasch.com/ceilings/cloud-round

    For review, I have attached a substitution request form with a submittal package following the request where you can quickly access project references, spec sheets & installation instructions, color chart, competitive analysis/competitor comparison chart, and warranty info.

    R: APPROVED - NO EXCEPTIONS TAKEN

27. From: Brandon Watson – D1Construction

    Q: Is badging required

    R: The Crosby Sixth Grade Campus will be built on a green site. No badging will be required during construction. Once students are on campus, badging will be required.

28. From: Brandon Watson – D1Construction

    Q: What jurisdiction is permitting?

    R: Harris County

29. From: Brandon Watson – D1Construction

    Q: Substitution request for Nelson Adams.

    R: Items 14,15, 16 in this document are for Nelson Adams. Acceptable sub request.

30. From: Brandon Watson – D1Construction

    Q: Who is responsible for the cost of the permit?

    R: Contractor

31. From: Brandon Watson – D1Construction

    Q: Who is responsible for utility meter/tap fees?

    R: Plumbing

32. From: Brandon Watson – D1Construction

    Q: Clarify Basis of Design Metal Soffit Panel S-2 - A211 Exterior Material Schedule states Metal Soffit S-2 to be Berridge FW-12 in Medium Bronze finish. - C6/A301 identifies S2 as Wood-Liik Metal Soffit panel by Aluminum Walkway Manufacturer. Confirm Metal Soffit Panel S-2 basis of design panel profile to be Berridge FW-12 provided in Medium Bronze color selection.

    R: Metal Soffit Panel S-2 basis of design is Berridge FW-12 in the Medium Bronze finish.

    Metal Soffit Panel S-1 basis of design is the Hunter Douglas Wood-Look Metal Soffit Panel.

    Provide S-2 at all soffit locations on exterior doors in Areas A, C, and D. Walkway canopies in Area C will not have any soffits.
    Provide S-1 at all soffit locations on exterior doors and canopies in Area B.
    See attached updated RCPs with metal soffit call outs.

33. From: Brandon Watson – D1Construction

    Q: A1/A334 & A6/A334 detail Metal Wall Panels from store front head to soffit conditions at Area B High Roof along Column Lines B1 & Column Line B6. Metal Wall Panels at these conditions are not identified as MP-1 or MP-2 and no Building System type is referenced. Clarify Metal Wall Panels as MP-1 or MP-2. Update sheet A334 to include appropriate Building System nomenclature.

    R: Metal wall system is to be MP-2 in A1/A334 and A6/A334. See attached updated drawing A334.

34. From: Brandon Watson – D1Construction

    Q: Clarify / Confirm extent of S2 noted on C6/A301 is limited to Aluminum Walkway Canopies only. Provide updated Reflected Ceiling plans identifying extent of Metal Soffit Panel S2 not provided by Aluminum Walkway Mfg.

    R: Will be provided in Addendum 4 - RCP sheet A121A, A121B, A121C, and A121D and Aluminum Walkway Cover Sheets G525 and G526 with metal soffit call outs. See attached updated sheet A211 for updated material legend with preferred color and profile or metal soffit S-2.

35. From: Brandon Watson – D1Construction

    Q: Revise Material Legend on sheet A212 to reflect basis of design panel profile.

    R: Sheet A211 submitted for pricing contains the material schedule with MP-1 and MP-2 profiles called out.See updated attached sheet A212 with metal panel profiles called out. (INTERNAL HL IS WORKING WITH BERRIDGE REPS TO GET CORRECT PROFILES)

36. From: Brandon Watson – D1Construction

    Q: Clarify Basis of Design Metal Wall Panel MP-2 - Metal Wall Panel spec section 07 42 13 paragraph 2.02-A. lists basis of design panel to be Berridge Vee-Panel in Faux wood grain finish. - A211 Exterior Material Schedule states MP-2 to be Berridge HS-12 in Deep Red finish. - Material Legend on A212 identified MP-2 BOD panel as Berridge FW-12. Confirm MP-2 basis of design panel profile to be Berridge HS-12 provided in Deep Red color selection. Provide updated spec section 07 42 13.

    R: Confirmed FW-12 is to be the BOD for MP-2. Addendum #4 contains updated material schedule.

37. From: Brandon Watson – D1Construction

    Q: Metal Wall Panel MP-1 Intermixed Panel Elevation Berridge HS-8 has an overall 8" wide coverage and Berridge HR-4 has an overall 4" wide coverage. - A1/A212 Enlarged Metal Panel Elevation identifies 6" wide & 3" wide vertically oriented panel widths which do not align with the 2 panel profiles for MP-1. Revise A1/A212 MP1 Typical Metal Panel Elevation to reflect basis of design panel profile.

    R: Addendum #4 will contain updated drawing A1/A212 using HR-4 and HS-8 panels.

38. From: Brandon Watson – D1Construction

    Q: Revise MP1 Pattern Legend on sheet A212 to reflect basis of design panel profile.

    R: See response from line 37

39. From: Brandon Watson – D1Construction

    Q: Clarify Basis of Design Metal Wall Panel MP-1 - Metal Wall Panel spec section 07 42 13 paragraph 2.02-A. lists basis of design panel to be Berridge Vee-Panel in Faux wood grain finish. - A211 Exterior Material Schedule states MP-1 to be Berridge HS-8 & HR-4 provided in an intermixed profile & color pattern per A212. - A212 "MP1 Pattern Legend:" states BOD panel as Berridge FW-12. Confirm MP-1 basis of design panel profile to be Berridge HS-8 & HS-4. Provide updated spec section 07 42 13.

    R: See response from line 37

40. From: Brandon Watson – D1Construction

    Q: All Architectural plan sheets from original IFP construction documents are plotted incorrectly. All architectural drawings do not scale properly. All Architectural Drawing sheets not revised in Addendum #1 need to be re-issued for accurate bidding purposes

    R: Corrected in Addendum #3

41. From: Pam Haynes – GAMMA CONSTRUCTION

    Q: We have a RFI for the permetier edge height on this project.

    On Sheet A331/ D2. It is showing that the TOS is 115'-4" and the TOW is 117'-4" which equals 2'. The line at the TOW is actually at the bottom of the wood nailer. If you add the wood nailer to the 2' elevation will equal 25 1/2" total thickness of LWIC from TOS. The scale shown on this detail does not correspond with this thickness. What is the correct thickness from TOS to TOW that you would like to have at the perimeter?

    R: TOW elevation intent is identifying top of roof edge steel. Required blocking for fascia/coping would indeed be on top of that height. If necessary for LWIC pour stop and roof detailing depending on manufacturer, that is acceptable and understandable. The design intent above the TOW shown on the details is to be 6-1/2" maximum above to the top of coping. That eventual dimension from TOW to top of coping does not have to be exactly 6-1/2", but it should be consistent at all of the same TOW conditions.

42. From: Pam Haynes – GAMMA CONSTRUCTION

    Q: 1. The detail B2/A631 shows for Schluter "Dilex-AHK" Satin Anodized Aluminum at tile bottom edge, but the specification book (09 30 00 – 6/2.04) calls for Schluter "Dilex-HKS" Stainless Steel. Please Clarify.

    2. The detail A4/A601 shows for Schluter "Dilex-AHK" Satin Anodized Aluminum at the bottom of the wainscot, but the specification book (09 30 00 – 6/2.04) calls for "no base, no trim. Provide sealant joint." Please Clarify.

    R: Dilex-AHK Satin Anodized Aluminum will be used in restrooms, Dilex - HKS Stainless Steel will be used at bottom of wainscot. Corrected in Addendum #4

43. From: Brandon Watson – D1Construction

    Q: Can a spec be provided for the wood flooring at the stage?

    R: Included in Addendum #4

44. From: Brandon Watson – D1Construction

    Q: Can an elevation be provided for the alternate 8 wall panels at the stage?

    R: Yes. Will be provided in Addendum #4.

45. From: Brandon Watson – D1Construction

    Q: RCP for Area B to D or A121B, A121C, and A121D are not to scale. Floor plans are to scale. Please correct by addn.

    R: Corrected in Addendum #3

46. From: Brandon Watson – D1Construction

    Q: B100B is on finish schedule for acoustical ceilings. RCP has wood decking. Please clarify.

    R: B100B is open to the high ceiling which is a wood-look structural roof deck. The area underneath the Level 2 corridor and balcony is acoustical ceiling.

47. From: Brandon Watson – D1Construction

    Q: B111 is APC1 per finish schedule, RCP has ACP2. B1121 is APC1 per finish schedule, RCP has exposed. B140 is APC1 per finish schedule, RCP has drywall. B143 is APC1 per finish schedule, RCP has drywall. C102A is APC1 on finish schedule, RCP does not indicate this room. C111 and C112 is APC2 on finish schedule, should the acoustical ceilings stop at Freezer and refrigerator rooms? Should room D101 Concession receive APC2 ceilings? Finish schedule has ACP1. Please clarify.

    R: B111 will be APC-1, B121 will be exposed, B140 will be Gyp, B143 will be Gyp, C102A has been tagged on ceiling plan, D101 will be APC-1. APC-2 will stop at Freezer and Refrigerator. Updates made in Addendum #4.

48. From: Brandon Watson – D1Construction

    Q: What size edge trim occurs at details C3 and C5/A621 at floating cloud ceilings?

    R: 2" edge trim, corrected in Addendum #4

49. From: Brandon Watson – D1Construction

    Q: Is BIM required on this project?

    R: No it is not. GC's method for coordination among trades is at their discretion.

50. From: Brandon Watson – D1Construction

    Q: Please see attached Substitution Request for GMi companies for review & approval.

    R: Approved

51. From: Pam Haynes – GAMMA CONSTRUCTION

    Q: Please confirm that there is only sod on this project, no landscape and irrigation.

    R: Correct, irrigation will be limited to sod areas just beyond the building line and district maintenance will utilize hose bibs.

52. From: Saira Seldo – O'Keeffe's Inc

    Q: O'Keeffe's Inc. has produced quality aluminum ladders since 1956. O'Keeffe's Inc. respectfully asks for your approval to be included in your Division 5 – Metal Ladders/Fabrication specifications Crosby Sixth Grade Campus project. O'Keeffe's Inc. is the leading and most specified U.S.A. ladder manufacturer. Our product capability brochure is enclosed. On balance, we are less expensive than steel when evaluating long term maintenance free engineered construction.

    R: No objections to this sub request.

53. From: Zechariah Gomez – Aluminum Techniques

    Q: Please see the attached substitution request for the aluminum canopy scope on the Crosby Sixth Grade Campus project, along with product data and a presentation about our company.

    R: Approved

54. From: Pam Haynes – GAMMA CONSTRUCTION

    Q: First Responder Remote Emergency Power Off Station (FREPO Station): Spec Section 26 27 73, Part 3.3 states that FREPO Stations must be provided; however, the bid documents do not specify how many of these stations should be installed, nor how they will be connected to the BMCS Panels. The Electrical Panel Schedule drawings show several BMCS panels. Please advise.

    R: First Responder Remote Emergency Power Off Station (FREPO Station) is not required.

55. From: Pam Haynes – GAMMA CONSTRUCTION

    Q: 1. Lightning Protection System: The bid documents do not specify the lightning protection system; however, it is referenced in other sections of the electrical specifications. Please confirm if the lightning protection system is required for this project.

    R: Lightning protection system is not required.

56. From: Brandon Watson – D1Construction

    Q: Please review the substitution request for East Texas Canopy.

    R: Approved.

57. From: Brandon Watson – D1Construction

    Q: Please review the substitution request for Aluminum Techniques.

    R: Approved.

58. From: Brandon Watson – D1Construction
    Q: 4. Electrical Drawings – Conduits for Low Voltage The electrical drawings do not indicate conduits for access into the rooms for low voltage equipment. Additionally, at locations where data outlets are required, the drawings do not specify responsibility for conduit installation and back box installation. Please confirm that these scope of work is to be provided under Division 26.

    R: Conduits and back-boxes to be provided by Div 26. Refer to technology sheets for additional conduit requirements. All through wall sleeves for technology cabling to be provided by div 26.

59. From: Brandon Wright – D1Construction

    Q: Substitution Request - We would like to propose Verkada as an integrated platform that provides seamless
    integration of Access Control, Intrusion Detection, and as future option Video Surveillance systems within a single environment.

    R: We do not approve this request. Manufacturers as listed in the plans as specifications are in compliance with district standard

60. From: Brandon Wright – D1Construction

    Q: The technological plan for Section A – First Floor is not included in Addendum-1. Only the Second Floor of Section A is provided. Could you please confirm whether Section A – First Floor is excluded from the scope of work for this project?

    R: Addendum 1 was an update to only certain documents within the proposal documents. All documents issued as part of the initial Issue For Permit and Proposal are still relevant. T201A was issued with the initial proposal documents and should still be referenced for the Level 1 Area technology scope.

61. From: Brandon Wright – D1Construction

    Q: Sheet T101 shows an underground pathway connecting the existing school building and the new school building. Please confirm whether a fiber-optic communication link is required between the two campuses.

    R: refer to sheet T101 issued with addendum #4

62. From: Brandon Wright – D1Construction

    Q: Divisions 27 20 00 and 27 30 00 are not listed. Could you please clarify these divisions will be covered and we should prepare a BoM list? If so, we will need to know: Total port amount per MDF/IDF room (includes all potential connections such as - data drops, Servers, NVR, access control items, etc) Preferable vendor for switches, firewall, WAPs, VoIP Routers, Phones (Cisco/Netgear/Ubiquity, etc) Scope of work (Project preparation documentation, Project implementation (scope for imple

    R: Refer tosection 27 10 00 for structured cabling specs

63. From: Brandon Wright – D1Construction

    Q: The proposed system would not require installation of a dedicated server or large on-site storage system. Video data would be retained in the system storage for approximately 30 days. The cameras would be provided with a five-year license, which corresponds to the typical operational lifecycle of the equipment. The system license can be extended in the future if required.

    R: per section 28 20 00 Servers will be provided by owner, installed, and programmed by the system installer.

64. From: Brandon Watson – D1Construction

    Q: Please confirm whether it would be acceptable to propose an alternative CCTV camera manufacturer, provided that the system supports full campus integration and remote monitoring capabilities, allowing operators to access the system through the same operator workstations using a standard web browser interface.

    R: cameras and servers are owner furnished, contractor installed.

65. From: Brandon Watson – D1Construction

    Q: Additionally, please confirm whether it is acceptable to propose an alternative clock system from another manufacturer that operates over Ethernet (PoE) and automatically synchronizes over the network, without the need to install a dedicated master clock unit.

    R: submit a formal substitution request

66. From: Brandon Watson – D1Construction

    Q: Please specify the manufacturer or model for the following components of the clock system: • Master clock system • Secondary clocks with a single/double display

    R: CareHawk CH1000(LT) clock system

67. From: Brandon Watson – D1Construction

    Q: An Intercom button is indicated on the drawings; however, this device is not referenced in the written specifications. Please clarify which specific device (manufacturer or model) is intended to be installed at this location.v

    R: Carehawk CS100 call station

68. From: Brandon Watson – D1Construction

    Q: Please confirm whether speakers, attenuators, and amplifiers from an alternative manufacturer may be proposed, provided that the equipment meets or exceeds the specified performance and technical requirements.

    R: submit a formal substitution request

69. From: Brandon Watson – D1Construction

    Q: In Section 2.9, page 27 41 16.20-8, which describes the equipment for the large areas, the specification indicates the use of an Atlas Sound 300-Series rack. This rack has a maximum depth of 15 inches, while the specified QSC CX-Q series amplifiers have a depth more than 16 inches. Please clarify and specify the appropriate rack model that accommodates the listed equipment configuration.

    R: the 15" is the depth of center section only not the overall depth. Middle Atlantic DWR Series is an acceptable alternative.

70. From: Brandon Watson – D1Construction

    Q: According to the current specification, a USB cable is not included for the wall-mounted projector connection. If the projector is interactive, a USB connection may be required for touch or interactive functionality. Please confirm whether interactive functionality will not be used, and that only HDMI and audio cabling are required for this connection.

    R: USB cables are not required.

71. From: Brandon Watson – D1Construction

    Q: Please confirm that all Flat Panel Displays and wall-mounted projectors will be owner-furnished equipment.

    R: Yes, they will be owner furnished. Cotractor to furnish the wall mounts.

72. From: Brandon Watson – D1Construction

    Q: The drawings do not indicate the required fiber connections between the MDF and IDF rooms. Please specify the required interconnections between MDF and IDF, including the type of cable and quantity of runs.

    R: Provide minimun of 12-strand, OS2 cables between MDF and IDFs.

73. From: Brandon Watson – D1Construction

    Q: Please confirm whether cables installed above the ceiling must be separated by system, for example: • Data / VOIP • Access Control • CCTV • Paging • Security System

    R: Data cabling to be separated from other systems

74. From: Brandon Watson – D1Construction

    Q: Please confirm that all cable pathways above the ceiling are to be installed using J-hooks only, and that no other cable support systems are required.

    R: Properly rated J-hooks are acceptable. Provide conduits above hard ceiling and exposed areas

75. From: Brandon Watson – D1Construction

    Q: The number of racks required for the IDF and MDF rooms is not explicitly indicated on drawing T301. Please confirm that each location requires the following: • Two (2) two-post racks • Three (3) vertical cable managers Additionally, please confirm that the MDF room should utilize two-post racks rather than four-post racks.

    R: The number of racks and vertical cable managers is shown on drawings. Refer to sheet T301 issued with addedum #1 for exact quantity at each space.

76. From: Doug Markle – Sheffield Metals

    Q: I am reaching out to submit a substitution request for Sheffield Metals International for the metal roofing portion of this upcoming project.

    R: Approved

77. From: Jaxson Lynes – Millennium Project Solutions

    Q: Confirm Basis of Design for 8' Tall Anti-Climb is Ameristar Montage Majestic Decorative Fence and not a wirework anti-climb fence.

    R: Approved Fence basis of design is actually being revised to Wireworks and not Majestic. Addendum #4 will update the Specifications.

78. From: Jaxson Lynes – Millennium Project Solutions

    Q: Please specify location of 6' tall Chain Link Fence called out on G510.

    R: Note 5 will be revised in Addendum 4 to clarify fencing location and makeup: fencing will be black vinyl chain link and will be located around the off-site detention pond that is part of the project scope. Refer to Civil drawings for extents and bound of detention pond.

79. From: Jaxson Lynes – Millennium Project Solutions

    Q: The contract drawings for the proposed left turn lane at Red Summit Dr. appear to be incomplete and do not provide sufficient information regarding the extent of work, limits, typical sections, striping, signage, or associated civil improvements. Please provide clarification and any supplemental details necessary to define the full scope of work. Additionally, confirm whether the Contractor is responsible for construction of the left turn lane under the current contract documents.

    R Contractor is responsible for the construction of the left turn lane. Scope and details are laid out on Sheet C7.05 of the contract documents.

80. From: Jaxson Lynes – Millennium Project Solutions

    Q: Per review of Sheet G510, the fence detail appears to indicate installation on a 6-inch curb. Please confirm that the design intent is for the fence to be installed directly on a 6" concrete curb as shown.

    R: Correct. Confirmed. Curb for fence will act as mow strip for turf maintenance.

81. From: Jaxson Lynes – Millennium Project Solutions

    Q: The contract drawings appear to indicate wheel stops at the new parking lot; please confirm if this is something you intend to have in base bid.

    R: Confirmed

82. From: Jaxson Lynes – Millennium Project Solutions

    Q: Please confirm the design on page A334 in reference to the thermal break by deck supplier.

    R: Thermal break of the long span structural metal deck supporting high roof of Area B is to be by decking manufacturer. Basis Of Design manufacturer has thermal break components, which is Design Intent.

83. From: Jaxson Lynes – Millennium Project Solutions

    Q: Please confirm the slope rating for the metal roofing as it is incomplete in the current drawings.

    R: High Roof at Area B is 1-1/2”/12”; Metal Roof at Area C is ¼”/12”; small metal roof at Area B (underneath High Roof) is ¼”/12”.

84. From: Jaxson Lynes – Millennium Project Solutions

    Q: Page A111 note 14 indicates to “Apply bituminous coating to all concealed structural members at Exterior Canopy” Please confirm you want this included in Base Bid pricing of this project.

    R: Confirmed

85. From: Jaxson Lynes – Millennium Project Solutions

    Q: Please confirm whether Johnson Controls International / York International can be listed as an acceptable manufacturer for the Air-Cooled Chiller and AHU alternate equipment.

    R: The manufacturers as listed in the plans and specifications are in compliance with district standards.

86. From: Jaxson Lynes – Millennium Project Solutions

    Q: Index Sheet is missing the following drawings provided in set. Please provide updated index sheet.
    - G524
    - A601
    - A602
    - QF1.6
    - QF1.7

    R: Index will be updated in Addendum #4

87. From: Jaxson Lynes – Millennium Project Solutions

    Q: On the gate schedule it states the gate to be a chain link fence but on page G523 detail A6 it calls for metal panel, please clarify on which we should provide.

    R: Screen on gates is to be chain link. A6/A523 will be updated in Addendum #4

88. From: Jaxson Lynes – Millennium Project Solutions

    Q: Please clarify hardware set # scope for Gates S105 and S106.

    R: Addendum #4 will include Door Hardware Specification update for Gate hardware sets. Sheet G510 will be updated to reflect hardware sets.

89. From: Jaxson Lynes – Millennium Project Solutions

    Q: Please confirm if Aluminum Techniques can be listed as an acceptable manufacturer for the canopy scope. Please see attached substitution request.

    R: Aluminum Techniques is an acceptable substitution. Addendum #4 will be updated to reflect the listed manufacturers.

90. From: Jaxson Lynes – Millennium Project Solutions

    Q: Please clarify where you intend for the security film scope to be located as it is not stated clearly on the drawings.

    R: Impact Resistant Glazing Film is included in specifications in case Design Intent for ground floor exterior glazing cannot be met. There is no specific location calling for the film. Design Intent is laminated impact glazing, type GL-3.

91. From: Jaxson Lynes – Millennium Project Solutions

    Q: Please confirm if Kodiak can be listed as an acceptable manufacturer for the telescoping bleacher scope. Please see attached substitution request.

    R: Kodiak is an acceptable substitution. Addendum #4 will be updated to reflect the listed manufacturers. Please note that Addendum #4 will also updated specifications to reflect bleachers Design Intent is to be electric operated

92. From: Jaxson Lynes – Millennium Project Solutions

    Q: Please clarify where site furnishings are located.

    R: Bike racks are to be located in Area B outside of Door B101, to the west. G521 will be updated in Addendum #4 to illustrate location. Bike Rack (as described in specifications) quantity will be two.

93. From: Jaxson Lynes – Millennium Project Solutions

    Q: Please clarify scoreboard scope on this project.

    R: There will be (1) scoreboard furnished. It is to be located on the south gym wall. There will be infrastructure installed for a second, future, scoreboard on the north gym wall.

94. From: Jaxson Lynes – Millennium Project Solutions

    Q: Page G001 appears to render hardscape, please confirm if this is intended to be in base bid.

    R: There is concrete drive, concrete paving, concrete paving with custom joint layout at north/south/west entrances, and crushed gravel. There is no decorative pavers or other specialty hardscape.

ARCHITECTURAL SPECIFICATION ITEMS

1. Section 00 01 10 – MASTER TABLE OF CONTENTS
   -**Revised** list of sections, cited revisions.
2. Section 03 52 16 – LIGHTWEIGHT INSULATING CONCRETE ROOF FILL (LWIC)
   -**Revised** reference to Structural metal deck thickness requirements.
3. Section 04 20 00 – UNIT MASONRY ASSEMBLIES
   -**Revised** basis of design product information and **removed** reference to king brick accessories (no king brick on project).
4. Section 04 73 00 – MANUFACTURED STONE MASONRY
   -**Revised** basis of design product information and **removed** reference to cast stone (no cast stone on project).
5. Section 05 50 00 – METAL FABRICATIONS
   -**Added** aluminum ladders.
6. Section 06 20 24 – INTERIOR FINISH CARPENTRY AND MILLWORK
   -**Added** oak treads and risers at stairs.
7. Section 07 21 13 – THERMAL WALL INSULATION
   -**Added** Johns Manville as an acceptable manufacturer.

8. Section 07 42 13 – METAL WALL PANELS
   -**Added** aluminum as acceptable base material, thermally broken z-girt rainscreen attachment, soffit framing. **Added** Vicwest as an acceptable manufacturer.
9. Section 07 54 23 – THERMOPLASTIC MEMBRANE ROOFING
   -**Added** PVC roof membrane type.
10. Section 07 61 00 – MANUFACTURED SHEET METAL ROOFING
    -**Added** Sheffield Metals International as an acceptable manufacturer.
11. Section 08 14 16 – FLUSH WOOD DOORS
    -**Revised** door core material.
12. Section 08 71 00 – DOOR HARDWARE
    -**Added** gate hardware.
13. Section 09 30 00 – TILING
    -**Revised** trim and accessories.
14. Section 09 84 00 – SUSPENDED ACOUSTICAL BAFFLES AND CLOUDS
    -**Added** Frasch! as acceptable manufacturer.
15. Section 10 11 00 – VISUAL DISPLAY SURFACES
    -**Added** Nelson Adams and Ghent as acceptable manufacturers.
16. Section 10 73 26 – ALUMINUM WALKWAY COVERS AND ENTRY CANOPIES
    -**Added** Aluminum Techniques and East Texas Canopy as acceptable manufacturers.
17. Section 12 66 00 – TELESCOPING STANDS
    -**Added** Electronic operation, **Added** Royal Steward LTD as acceptable manufacturer.

ARCHITECTURAL DRAWING ITEMS:

1. Sheet G011:
   - **Added** Missing sheets added to Index**.**
2. Sheet G510:
   - **Updated** Note 5 added to indicate general direction of chain link fencing at off-site detention pond.
   - **Revised** note clarifying location of chain link fence.
   - **Revised** to add gate hardware set numbers.
3. Sheet G520:
   - **Updated** Detail callout B4/A062 included on A3/A342.
4. Sheet G521:
   - **Updated** to add bike rack locations.
5. Sheet G523:
   - **Updated** to clarify chain link screen on rolling gate.
6. Sheet G525:
   - **Updated** Soffit panel call out at walkway covers. Ref: RFI note 44
   - **Updated** Detail callout B4/A062 included on A3/A342
   - **Updated** Section callout for walkway canopy added.
7. Sheet G526:
   - **Updated** Soffit panel call out at exterior doors. Ref: RFI note 44.
   - **Updated** Walkway canopy soffit notes updated.
8. Sheet A053:
   - **Updated** Glazing type clarifications.
9. Sheet A066:
   - **Added** METAL BAND ATTACHMENT FOR TERM BAR.
   - **Removed** Detail because not needed
10. Sheet A111D:
    - **Updated** Bleacher Bot cage and gates removed.
    - **Updated** CMU walls between Mech D114 and Corridor C100C updated to be MA8N wall type in lieu of MA12N.

11. Sheet A112C:
    - **Updated** Shifted wall and clerestory window to be face of metal panel at 1'-6" off Grid C7.
12. Sheet A113B:
    - **Clarification** of small R4 roof in Area B.
13. Sheet A121A:
    - **Added** room tag and ceiling tag.
    - **Updated** Soffit panel call out at exterior doors. Ref: RFI note 44.
    - **Updated** Light fixtures line weights updated.
    -
14. Sheet A121B:
    - **Updated** Walkway canopy soffit panel call out at exterior doors. Ref: RFI note 44.
    - **Updated** Ceiling type to match room finish schedule.
    - **Updated** Light fixtures line weights.
    - **Updated** Light fixtures.
    - **Updated** Enlarged plans are added for information.
15. Sheet A121C:
    - **Updated** Soffit panel call out at exterior doors. Ref: RFI note 44.
    - **Added** room tag.
    - **Removed** Ceiling from Refrigerator and Freezer.
    - **Updated** Light fixtures line weights.
16. Sheet A121D:
    - **Updated** Soffit panel call out at exterior doors. Ref: RFI note 44.
17. Sheet A122A:
    - **Updated** Light fixtures line weights.
18. Sheet A123A:
    - **Added** Enlarged plan for information.
19. Sheet A141:
    - **Added** Instrument storage legend.
20. Sheet A141C:
    - **Added** Elevation and note to plan to clarify instrument locker's locations.
21. Sheet A141D:
    - **Added** Additional wall pads.
22. Sheet A142A:
    - **Added** Enlarged plans.
23. Sheet A211:
    - **Updated** soffit panel and metal panel color and profile. Ref: RFI note 44
24. Sheet A212:
    - **Updated** profile of MP-1 on the material legend to match the elevations. Ref: RFI note 45.
    - **Updated** metal panel layout for MP-1
    - **Updated** panel profiles in the MP1 pattern legend.
25. Sheet A334:
    - **Clarification** on metal wall panel material in details A1 and A6 on sheet A334. Ref: RFI note 43
26. Sheet A341:
    - **Added** Insulation within the mullion shown.
27. Sheet A342:
    - **Added** Detail callout B4/A062 included on A3/A342.
28. Sheet A343:
    - **Updated** Adjust air barrier and flashing wrapping.
    -

29. Sheet A391:
    - **Added** Column penetration detail.
30. Sheet A501:
    - **Updated** Sheet reference number.
31. Sheet A502:
    - **Updated** Sheet reference number.
32. Sheet A503:
    - **Updated** Sheet reference number.
33. Sheet A504:
    - **Updated** Enlarged plans added for information.
34. Sheet A512:
    - **Revised** Dimension for clarity.
    - **Updated** Dimension.
    - **Updated** Finish.
    - **Updated** Dimensions.
35. Sheet A516:
    - **Added** Enlarged plan and elevations added for alternate material.
36. Sheet A601:
    - **Updated** View reference.
    - **Updated** Schluter trim and view reference.
    - **Updated** Trim information.
37. Sheet A602:
    - **Updated** Ceiling type to match ceiling plan.
    - **Revised** Ceiling type changed.
38. Sheet A617:
    - **Updated** Scoreboard added, projection screen moved, and additional wall pads added.
39. Sheet A618:
    - **Added** Elevation to plan to clarify instrument locker's locations.
    - **Update** Instrument storage added and acoustic panel sizes updated.
40. Sheet A621:
    - **Updated** Trim size clarified.
41. Sheet A631:
    - **Updated** Schluter trim.
    - **Revised** View added for trim clarification.

STRUCTURAL ITEMS

1. Sheet S001:
    - **Updated** structural steel general note 3.C.1.
2. Sheet S111A
    - **Updated** 2 column rotation
    - **Added** 1 tag for foundation
    - **Revised** Grade beam width
3. Sheet S111B
    - **Revised** Grade beam width
4. Sheet S111C
    - **Updated** grade beam locations and paving note
    - **Updated** canopy column note
5. Sheet S111D
    - **Added** piers below structural CMU walls
6. Sheet S121A
    - **Updated** beam sizes
    - **Updated** EOD values

- **Added** beams at edge condition

7. Sheet S121B
   - **Updated** EOD values
8. Sheet S121C
   - **Updated** connection types
9. Sheet S121D
   - **Updated** canopy connection detail
   - **Added** connection types
10. Sheet S131A
    - **Updated** EOD values
11. Sheet S131B
    - **Updated** EOD values
    - **Updated** connection types
12. Sheet S131C
    - **Updated** EOD values
13. Sheet S131D
    - **Updated** EOD values
14. Sheet S211
    - **Updated** sheet notes
15. Sheet S300
    - **Updated** detail callouts
16. Sheet S302
    - **Updated** detail 3/S302
17. Sheet S304
    - **Updated** detail callout
18. Sheet S306
    - **Updated** detail 3/S306
19. Sheet S711
    - **Updated** Monument Sign section
    - **Updated** Site dumpster plan
20. Sheet S720
    - **Updated** detail 7/S720
21. Sheet S750
    - **Updated** detail 13/S750
22. Sheet S751
    - **Updated** detail 1/S751
    - **Updated** detail 3/S751

CIVIL ITEMS

1. Sheet C4.01:

- **Replaced** sheet in their entirety to revise the sanitary sewer system.

MECHANICAL SPECIFICATION ITEMS

1. Section 23 05 48 – Vibration Isolation, Part 2 Products, Article 2.1 Acceptable Manufacturers, Add paragraph H to read " H. Vibro-Acoustics"

2. Section 26 55 61 – Theatrical Lighting System
   - Article 1.2 Approved Equipment. Items A., B., and C. Add additional approved manufacturer to each: c. Vari-Lite.

MECHANICAL ITEMS

NA

ELECTRICAL ITEMS

1. Sheet E100 - ELECTRICAL SITE PLAN:
   - **Revised** sheet.
2. Sheet E101 - ELECTRICAL COMPOSITE PLAN - LEVEL 1:
   - **Revised** sheet.
3. Sheet E201A - ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA A:
   - **Revised** sheet.
4. Sheet E201B - ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA B:
   - **Revised** sheet.
5. Sheet E201C - ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA C:
   - **Revised** sheet.
6. Sheet E201D - ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA D:
   - **Revised** sheet.
7. Sheet E211A - ELECTRICAL LIGHTING PLAN - LEVEL 2 - AREA A:
   - **Revised** sheet.
8. Sheet E211D - ELECTRICAL LIGHTING PLAN - LEVEL 2 - AREA D:
   - **Revised** sheet.
9. Sheet E220 - ELECTRICAL LIGHTING PLAN - LEVEL 1 – CANOPIES:
   - **Revised** sheet.
10. Sheet E301B - ELECTRICAL POWER PLAN - LEVEL 1 - AREA B:
    - **Revised** sheet.
11. Sheet E311A - ELECTRICAL POWER PLAN - LEVEL 2 - AREA A:
    - **Revised** sheet.
12. Sheet E401 - ELECTRICAL ENLARGED POWER PLAN - CENTRAL PLANT AND SERVICE YARD:
    - **Revised** sheet.
13. Sheet E405 - ELECTRICAL ENLARGED POWER PLAN – KITCHEN:
    - **Revised** sheet.
14. Sheet E501A - ELECTRICAL ROOF PLAN - AREA A:
    - **Revised** sheet.
15. Sheet E501B - ELECTRICAL ROOF PLAN - AREA B:
    - **Revised** sheet.
16. Sheet E501C - ELECTRICAL ROOF PLAN - AREA C:
    - **Revised** sheet.
17. Sheet E501D - ELECTRICAL ROOF PLAN - AREA D:
    - **Revised** sheet.
18. Sheet E601 - ELECTRICAL ONE-LINE DIAGRAM:
    - **Revised** sheet.
19. Sheet E701 - ELECTRICAL PANEL SCHEDULES:
    - **Revised** sheet.
20. Sheet E702 - ELECTRICAL PANEL SCHEDULES:
    - **Revised** sheet.
21. Sheet E704 - ELECTRICAL PANEL SCHEDULES:
    - **Revised** sheet.
22. Sheet E706 - ELECTRICAL PANEL SCHEDULES:
    - **Revised** sheet.
23. Sheet E801 - ELECTRICAL DETAILS, SCHEDULES AND SYMBOL LEGEND:
    - **Revised** sheet.

PLUMBING ITEMS

1. P100 – PLUMBING SITE PLAN:
   - **Revised** gas rounting. Refer to revised sheet.
   - **Removed** sanitary stubout. Refer to revised sheet.
2. P201B – PLUMBING UNDERFLOOR PLAN – AREA B:
   - **Added** floor cleanout in Corridor B100D. Refer to revised sheet.
3. P201C – PLUMBING UNDERFLOOR PLAN – AREA C:
   - **Added** floor cleanout in Corridor C100C. Refer to revised sheet.
4. P201D – PLUMBING UNDERFLOOR PLAN – AREA D:
   - **Added** floor cleanout in Corridor C100C. Refer to revised sheet.
5. P301B – PLUMING PLAN – LEVEL 1 – AREA B:
   - **Added** floor cleanout in Corridor B100D. Refer to revised sheet.
   - **Added** cold water line at Stor B135 and Theater B134. Refer to revised sheet.
6. P301C – PLUMBING PLAN – LEVEL 1 – AREA C:
   - **Added** floor cleanout in Corridor C100C. Refer to revised sheet.
7. P311C – PLUMBING PLAN – LEVEL 2 – AREA C:
   - **Revised** storm piping size. Refer to revised sheet.
8. P410 – PLUMBING ENLARGED PLANS:
   - **Added** floor cleanout in Corridor C100C. Refer to revised sheet.
   - **Revised** extent of View 1. Refer to revised sheet.
9. P602 – PLUMBING SCHEDULES:
   - **Revised** SK-X2 and SK-X3 on the Plumbing Fixture Schedule. Refer to revised sheet.
10. P702 – PLUMBING RISER DIAGRAM AREA B – WASTE AND VENT:
    - **Added** floor cleanout. Refer to revised sheet.
11. P703 – PLUMBING RISER DIAGRAM AREA C – WASTE AND VENT:
    - **Added** floor cleanout. Refer to revised sheet.
12. P704 PLUMBING RISER DIAGRAMN AREA D – WASTE AND VENT:
    - **Added** floor cleanout. Refer to revised sheet.

TECHNOLOGY ITEMS

1. T001 - TECHNOLOGY NOTES AND LEGENDS:
   - **Revised** responsibility matrix as shown
2. T101 - TECHNOLOGY OVERALL SITE PLAN:
   - **Revised** sheet.
3. T201D - TECHNOLOGY PLAN - LEVEL 1 - AREA D:
   - **Removed** (1) 'FSD-1' as shown

FOOD SERVICE SPECIFICATION ITEMS

1. Section 11 40 00 – FOOD SERVICE EQUIPMENT
   -**Revised Item xxx:**
   - xxx

FOOD SERVICE DRAWING ITEMS:

42. Sheet Qxxx:
    - **Revised** xxx

END OF ADDENDUM NUMBER FOUR (04)

DOCUMENT 00 01 10

MASTER TABLE OF CONTENTS

Note: Sections marked by asterisk (*) below are provided by the Owner, Construction Manager (where applies), or consultants to the Architect or Owner, and are not covered by the Architect's seal. Refer to attached supporting Tables of Contents to identify Consultant responsible for a particular section.

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03 52 16 Lightweight Insulating Concrete Roof Fill **ADD #04**
*03 62 00 Non-Shrink Grout

DIVISION 04 – MASONRY
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04 20 00 Unit Masonry Assemblies **ADD #04**
*04 29 00 Engineered Unit Masonry
04 73 00 Manufactured Stone Masonry **ADD #04**

DIVISION 05 – METALS

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06 20 24	**Interior Finish Carpentry and Millwork**	**ADD #04**
06 42 17	Manufactured Decorative Wood Wall Panel System	
06 42 19	Plastic Laminate Wall Panels	
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SECTION 03 52 16

LIGHTWEIGHT INSULATING CONCRETE ROOF FILL (LWIC)

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Insulating concrete fill over structural roof decking.

1.02 REFERENCES

A. Reference Standards

B. ASTM C138/C138M - Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete; 2024a.

C. ASTM C150/C150M - Standard Specification for Portland Cement; 2024.

D. ASTM C172/C172M - Standard Practice for Sampling Freshly Mixed Concrete; 2025.

E. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2022.

F. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2025a.

G. ASTM C332 - Standard Specification for Lightweight Aggregates for Insulating Concrete; 2023.

H. ASTM C495/C495M - Standard Test Method for Compressive Strength of Lightweight Insulating Concrete; 2012 (Reapproved 2019).

I. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2023.

J. ASTM C796/C796M - Standard Test Method for Foaming Agents for Use in Producing Cellular Concrete Using Preformed Foam; 2019.

K. ASTM C869/C869M - Standard Specification for Foaming Agents Used in Making Preformed Foam for Cellular Concrete; 2024.

L. ASTM C1077 - Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation; 2025a.

M. FM (AG) - FM Approval Guide; Current Edition.

1.03 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Include plans, sections, and details showing roof slopes, lightweight concrete roof insulation thicknesses, embedded board insulation, roof penetrations, roof perimeter terminations and curbs, control and expansion joints, and roof drains.

C. Product Data: Provide physical characteristics, thermal values, product limitations and application instructions.

D. Manufacturer's Installation Instructions: Indicate mix instructions.
   1. Provide mix for each lightweight concrete roof insulation mix.

E. Installer's Qualification Statement.

F. Material Test Reports: From a qualified testing agency indicating and interpreting test results of the following for compliance with requirements indicated, based on comprehensive testing of current materials:
   1. Cement.
   2. Admixtures.
   3. Insulation board.

G. Research/Evaluation Reports: Evidence of lightweight insulating concrete roof insulation's compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed cellular lightweight insulating concrete roof installations similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
   1. Installer Qualifications: Company specializing in performing work of the type specified and with at least five years of documented experience . Approved in writing by lightweight insulating concrete manufacturer. Approved in writing by roofing system manufacturer for the specified roof type.

B. Tested Systems:
   1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C1077 and ASTM E329 to conduct the testing indicated, as documented according to ASTM E 548.
   2. ASCE-7: Provide wind uplift standard with a tested assembly to meet uplift calculation where building is located, matched to the roofing system specified FM (AG) Listing: Provide system listed in FM's "Approval Guide" for Class 1 fire rating, listed in UL “Roofing Materials Directory”.

C. Provide aggregates containing no detectable asbestos as determined by the method specified in 40 CFR 763, Subpart E, Appendix E, Section 1, "Polarized Light Microscopy."

D. Provide copy of cellular lightweight insulating concrete fill manufacturer’s 20 year, NDL warranty meeting requirements as specified herein.

E. Installer is responsible for ensuring positive drainage of the cellular lightweight insulating concrete deck. Ponding water shall be cause for rejection of the installation. Prior to installation of the roof system, the installer shall perform a ponding water test on the deck to confirm deck

drainage with no evidence of ponding water. Test shall be conducted in the presence of the Architect.

1.05 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in manufacturer's original undamaged packages or acceptable bulk containers.

B. Store packaged materials to protect them from elements or physical damage.

C. Do not use cement that shows indications of moisture damage, caking, or other deterioration.

1.06 WARRANTY

A. Manufacturer’s Warranty: Insulating concrete roof fill manufacturer shall warrant the insulating concrete roof fill system from the Project date of Substantial Completion as follows:
   1. Refer to roofing system specification section for length of warranty period.Warranty shall be a NDL “No Dollar Limit” / no penal sum type, with total replacement cost.
   2. The warranty shall provide manufacturer’s maximum extended wind rated coverage (up to hurricane force winds) as defined by the Beaufort Scale.
   3. The warranty shall guarantee the entire insulating concrete roof fill system against defective materials and workmanship of installation, with NO exclusion for ponding water.
   4. The full insulating concrete roof fill system warranty shall be guaranteed against failure of workmanship and materials. Repair of the system, including materials and labor, shall be done at no cost to the Owner.
   5. The cellular lightweight insulating concrete assembly R-Value shall be warranted to be stable, with no R-Value drift, and acceptable to the roofing manufacturer, and will be covered under the roofing manufacturer’s warranty for the same period of time.
   6. Installer’s Warranty: Installer shall guarantee that the work performed under this Contract will be free from defects in workmanship and materials, and that the insulating concrete roof fill will remain in good condition for a five-year warranty period from the date of Substantial Completion.

1.07 FIELD CONDITIONS

A. Do not place insulating concrete mix at ambient temperatures lower than 40 degrees F (5 degrees C) without heating mix water to 90 to 110 degrees F (32 to 43 degrees C).

B. Do not place cellular lightweight insulating concrete assembly during rain or snow or on surfaces covered with standing water, snow, or ice.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Coordination: It is the responsibility of Insulating Concrete Roof Fill Bidders to coordinate during the bid period with listed roofing membrane manufacturers in the Roofing Section to ensure that the Insulating Concrete Roof Fill product proposed meets all requirements of the roofing membrane manufacturers for their product and the specified roofing warranty.

B. Lightweight Insulating Concrete:
   1. Elastizell Corp. of America; www.elastizell.com
   2. Celcore Incorporated; www.celcoreinc.com
   3. Siplast Inc.; www.siplast.com
   4. Aerix Industries; aerixindustries.com/mearlcrete/
   5. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 MATERIALS

A. Cement: ASTM C150/C150M, Portland Type I, II or III, gray color.

B. Lightweight Aggregate: ASTM C332; Group I, perlite.

C. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.

D. Foaming Agent: Comply with ASTM C869/C869M, when tested according to ASTM C796/C796M.

E. Prohibited Materials: Vermiculite aggregates, expanded clay, and shales are strictly prohibited for use in this Project.

2.03 CONCRETE MIX

A. Test for compressive strength in accordance with ASTM C495/C495M, for wet density in accordance with ASTM C138/C138M, and for dry density after oven drying.

B. Provide concrete mix with the following minimum properties (provide greater than minimums where required by the roofing membrane manufacturer):
   1. Wet Density: 53 to 63 lb./cu. ft. when tested according to ASTM C138/C138M.
   2. Oven-Dry Density: 31 to 37 lb/cu.ft., when tested according to ASTM C495/C495M.
   3. Compressive Strength: Minimum 350 psi when tested according to ASTM C495/C495M.

C. Polypropylene Linked: 3/4” pre-packaged reinforcing fibers impregnated with a dispersing agent. Brand as recommended by the lightweight insulating concrete manufacturer.

2.04 ACCESSORIES

A. Perimeter Joint Filler: Glass fiber strips, compressible to 50 percent original thickness under load of 25 psi (170 kPa) with full recovery.

B. Curing Compound: Type recommended by manufacturer.

C. Insulation: ASTM C578, Type I molded polystyrene with venting holes to 3 percent of board area, 0.90-lb/cu. ft. (15-kg/cu. m) minimum density.
   1. Products:
      a. *Insulperm* as manufactured by Siplast; www.siplast.com
      b. *Aeroroof Holey Board* as manufactured by Kingspan Industries; www.kingspan.com
      c. *Starrfoam-HB* as manufactured by Starrfoam Manufacturing
      d. Substitutions: See Section 01 60 00 - Product Requirements.

2.05 DESIGN MIXES - GENERAL

A. Prepare design mixes for each type and strength of lightweight concrete roof insulation by either laboratory trial batch or field-test data methods. For trial batch method, use a qualified independent testing agency for preparing and reporting proposed mix designs.

B. Limit water-soluble chloride ions to the maximum percentage by weight of cement or cementitious material permitted by ACI 301.

C. Do not use the same testing agency for field quality-control testing.

D. Do not use Calcium dioxide in lightweight insulating concrete fill.

E. Design mix to produce lightweight concrete roof insulation with the specified minimum physical properties using the minimum amount of water necessary to produce a workable mix. Do not exceed maximum air content recommended by aggregate manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Metal Deck: Ensure that metal deck to receive insulating concrete fill is g-90 galvanized, **minimum** 22-ga.and ventilated to meet or exceed manufacturer's requirements. Lightweight insulating concrete shall not be installed over a non-ventilated deck regardless of whether allowed by manufacturer or submittals.

B. Control Joints: Install control joints at perimeter of roof deck and at junctures with vertical surfaces, including curbs, walls, and vents, for full depth of lightweight concrete roof insulation. Fill control joints with joint filler.
   1. Provide 1 inch (25 mm) wide control joints for roof dimensions up to 100 feet (30 m) in length; 1-1/2 inch (38 mm) wide control joints for roof dimensions exceeding 100 feet (30 m).

C. Verify joints in precast roof members are grouted or taped to prevent seepage of wet insulating concrete.

D. Verify roof deck is free of standing water, dirt, debris, ice, or other detrimental materials.

E. Verify roof slopes and elevations are as shown on the drawings and ready to receive insulating concrete.

F. Notify Architect immediately of conditions that would prevent correct and timely installation.

G. Do not proceed with work until detrimental conditions have been corrected.

3.02 PREPARATION

A. Install 1 inch (25 mm) thick expansion joint filler at:
   1. Perimeter of roof decking.
   2. Around penetrations through deck.
   3. Every 100 ft (30 m) of deck surface dimension.

4. Each change of deck direction on metal roof deck surfaces.

B. Install 1.5 inch (37 mm) thick expansion joint filler for roof dimensions exceeding 100 feet (30

3.03 INSTALLATION

A. Mixing and Placing
   1. Mix and place lightweight concrete roof insulation according to manufacturer's written instructions, using equipment and procedures to avoid segregation of mix and loss of air content.
      a. Add 1-lb./cu. yd. of the specified reinforcing fibers to each batch during mixing operations.
   2. Install insulation board according to lightweight concrete roof insulation manufacturer's written instructions.
      a. Install slurry to fill steel deck to a minimum of 1/4-inch above top of flutes.
      b. Place board insulation in wet slurry and walk board in to ensure full contact of board insulation with slurry. Do not kick the boards into place.
      c. Stagger joints, and tightly butt insulation boards.
      d. Where insulation changes thickness, install insulation boards in a stair-step configuration with a maximum step-down of 1-inch.
   3. Install lightweight concrete and screed to a minimum thickness of 2-inches above top of insulation boards.
   4. Deposit and screed lightweight concrete roof insulation in a continuous operation until an entire panel or section of roof area is completed. Do not vibrate or work mix except for screeding or floating. Place to depths and slopes indicated.
   5. Finish top surface smooth, free of ridges and depressions, and maintain surface in condition to receive subsequent roofing system.
   6. Begin curing operations immediately after placement, and air cure for not less than three days according to manufacturer's written instructions.
   7. If ambient temperature falls below 32-deg F (0 deg C), protect lightweight concrete roof insulation from freezing and maintain temperature recommended by manufacturer for 72 hours after placement.

B. Venting
   1. Ensure metal deck venting remains unobstructed during slurry placement to allow for downward dehydration of the LWIC system.

C. Slope concrete for roof surface drainage as indicated.
   1. Slope top surface to 1/4 inch/foot (1:50) minimum for roof surface drainage.
   2. Deposit and screed lightweight concrete roof insulation in a continuous operation until an entire panel or section of roof area is completed. Do not vibrate or work mix except for screeding or floating. Place to depths and slopes indicated.
   3. Finish top surface smooth, free of ridges and depressions, and maintain surface in condition to receive subsequent roofing system.
   4. Begin curing operations immediately after placement, and air cure for not less than three days according to manufacturer's written instructions.
   5. If ambient temperature falls below 32-deg F (0 deg C), protect lightweight concrete roof insulation from freezing and maintain temperature recommended by manufacturer for 72 hours after placement.

D. Curing
   1. Cure in accordance with lightweight aggregate manufacturer's instructions.
   2. Protect insulating concrete from excess evaporation of surface moisture.
   3. During low humidity conditions, sprinkle water over concrete surface to aid hydration and curing.
   4. Protect installed lightweight concrete from rain until installation of roof membrane.

3.04 FIELD QUALITY CONTROL

A. An independent testing agency, as specified in Section 01 40 00 - Quality Requirements, will perform field inspection and testing for dry density.
   1. Testing Agency: Take three test samples from each 100 cubic yards (76.5 cu m) of insulating concrete placed, daily.
      a. Test 1 cylinder after 7 days and 2 cylinders after 28 days. Report failed tests to Owner immediately.
      b. If needed, final cylinder will be tested after 56 days at the request and expense of the Contractor.
      c. Testing Agency: Take one additional test sample during cold weather concreting.

B. Testing agency shall take samples according to ASTM C172/C172M, Standard Practice for Sampling Freshly Mixed Concrete except as modified by ASTM C495/C495M, Standard Test Method for Compressive Strength of Lightweight Insulating Concrete.
   1. Installed materials shall be considered as non-complying if representative samples do not show test results for the physical properties specified herein, or additional non-specified properties as required by the Insulating Concrete manufacturer.

C. Pull Tests: Reference roofing section for pull test requirements.

3.05 DEFECTIVE WORK

A. Refinish, or remove and replace, insulating concrete roof fill if surfaces are excessively scaled or too rough to receive roofing, according to roofing membrane manufacturer's written requirements.

B. Remove and replace insulating concrete roof fill that fails to comply with compressive-strength and oven-dry unit weight requirements.

3.06 CLEANING

A. Promptly remove all lightweight insulating concrete spillage, overspray, and debris from adjacent surfaces, equipment, and finishes.

B. Do not use cleaning methods or materials that could damage or stain adjacent finished work. If spillage occurs on finished surfaces, consult the surface manufacturer for recommended cleaning procedures.

C. Ensure all roof drains, scuppers, and gutters are clean, open, and free of all installed materials and construction debris.

D. Leave project site and staging areas "broom clean" and free of all packaging, excess materials, and equipment related to this Section.

3.07 PROTECTION

A. Protect installed lightweight insulating concrete from damage, foot traffic, and construction loads. Do not permit traffic of any kind on the deck until it is fully cured per the manufacturer's instructions.

B. After curing, limit access to only essential personnel required for subsequent roofing operations.

C. Provide and maintain temporary walkways, protection boards (e.g., OSB, plywood), or sacrificial high-density insulation boards in all areas subject to foot traffic or material staging to distribute loads and prevent surface damage, indentation, or crushing.

D. Do not allow concentrated loads, sharp objects, or heavy equipment on the surface of the installed deck.

E. Any damage to the cured lightweight insulating concrete system shall be repaired in accordance with the manufacturer's written instructions, prior to the installation of the roofing membrane, at no additional cost to the Owner.

END OF SECTION

SECTION 04 20 00

UNIT MASONRY ASSEMBLIES

PART 1 GENERAL

1.01 SUMMARY

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

B. Related Sections:
   1. Section 04 05 03 - Masonry Mortaring and Grouting: Mortar and grout.
   2. Section 04 29 00 - Engineered Unit Masonry.
   3. Section 05 12 00 - Structural Steel Framing: Product requirements for steel anchors for placement by this section.
   4. Section 05 50 00 - Metal Fabrications: Product requirements for loose steel lintels for placement by this section.
   5. Section 07 27 26 - Fluid-Applied Membrane Air Barrier.
   6. Section 07 90 00 - Joint Protection: Rod and sealant at control and expansion joints.

1.02 REFERENCES

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

B. Masonry Institute:
   1. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures.

C. ASTM International:
   1. ASTM A153/A153M - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
   2. ASTM A240/A240M - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
   3. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.
   4. ASTM C67 - Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
   5. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units.

6. ASTM C652 - Standard Specification for Hollow Brick (Hollow Masonry Units Made From Clay or Shale).
7. ASTM C1364 - Standard Specification for Architectural Cast Stone.
8. ASTM D226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
9. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

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

1.03 SUBMITTALS

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

B. Product Data:
1. Submit data for decorative masonry units, fabricated wire reinforcement, wall ties, anchors, cavity drainage material, 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 brick and cleaning material manufacturers regarding the compatibility of proposed use of products together for cleaning purposes.

C. Samples:
1. Submit four samples of each type of decorative masonry unit and face brick, to illustrate color, texture and full color range. Furnish additional samples when necessary to fully illustrate the complete range of highly variable materials.
2. Submit color samples for glazed units.

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

E. 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.
2. Provide dimensioned plan and details indicating layout, sizes, and shapes, and vertical heights of all structural glazed tile walls.
3. Submit detailed shop drawings for custom sized/shaped units including shaped brick and cast stone.

1.04 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: Rating as indicated on Drawings.

1. Tested Rating: Determined in accordance with ASTM E119.

1.05 QUALIFICATIONS

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

1.06 MOCKUP

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

B. Construct cavity masonry wall mockup, 8 feet (243.84 cm) 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 (304.8 mm) length of the flashing exposed to view.
   4. Clean face of mockup with masonry cleaner using methods anticipated for the Work.
   5. Include representative masonry ties and anchors for each backup substrate to demonstrate proper engagement and fastener installation.

C. Furnish removable cover to protect completed mock-up from rain or other environmental or site conditions that may alter its appearance.

D. Locate where directed by Architect/Engineer. Keep top of mock up wall covered with weighted waterproof tarp.

E. Remove mockup when directed by Architect/Engineer.

1.07 PRE-INSTALLATION MEETINGS

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

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

1.08 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.

1.09 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 Fahrenheit (4.44 degrees Celsius).

C. Hot Weather Requirements: In accordance with ACI 530.1 when ambient temperature is greater than 100 degrees Fahrenheit (37.78 degrees Celsius) or ambient temperature is greater than 90 degrees Fahrenheit (32.22 degrees Celsius) 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 30 00 - Administrative Requirements: Coordination and project conditions.

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

PART 2 PRODUCTS

2.01 MASONRY MATERIALS

A. 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. **Basis of Design: Cloud Ceramics Burgundy Modular (3 5/8" x 2 ¼" x 7 5/8") Velour, Provided By: Upchurch Kimbrough Company, Contact: Holly Harris, 713-957-1520, hollyh@upchurchkimbrough.com.**

B. Hollow Load Bearing Concrete Masonry Units (CMU): ASTM C90, lightweight.
   1. Size: Nominal modular size of 16 inches (406.4 mm) long x 8 inches (203.2 mm) 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.

C. Decorative Concrete Masonry Units: ASTM C90
   1. Ground-Faced with decorative aggregate as manufactured by Headwaters or approved equivalent in color and finish by Best or Boral.
   2. Sizes: Nominal modular size of 16-inches long x 8-inches high x indicated thicknesses.
   3. Integral Water Repellent: Units installed exposed to the exterior shall be fabricated with integral liquid polymeric water-repellent admixture. Admixture shall not reduce flexural bond strength. Units made with integral water repellent, when tested as a wall assembly made with mortar containing integral water-repellent manufacturer's mortar additive according to ASTM E514, with test period extended to 24 hours, show no visible water or leaks on the back of the test specimen.
      a. Manufacturers:
         1) Dry-Block; W. R. Grace & Co., Construction Products Division, www.grace.com
         2) Rheopel; BASF www.basf-admixtures.com
         3) RainBloc; ACM Chemistries, Inc., www.acmchem.com

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

2.02 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 60 00 - Product Requirements.

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 (38 mm) wide x 24 inches (609.6 mm) long x 1/4 inch (6.35 mm) thick, with ends turned up not less than 2 inches (50.8 mm); ASTM A153/A153M hot dip galvanized.

D. Veneer Ties for CFMF Stud Backup Walls: Rib-stiffened sheet metal plate anchors with screw holes top and bottom and projecting tabs with slotted holes for receiving vertical legs of adjustable wire ties; ASTM A153/A153M hot dip galvanized.
   1. Anchor Size: 2-3/4 inches (70 mm) wide by 3 inches (76.2 mm) high.
   2. Tie Size: 0.1875 inch (4.76 mm) diameter wire, length as required to extend to within 1 inch (25.4 mm) of veneer face.
   3. Tie Shape: Rectangular
   4. Fasteners: Type 304 stainless steel hex-washer head screws with carbon drill point as provided by Hohmann & Barnard.
      a. Size: #12 diameter x length required to penetrate steel stud flange by not less than 3 exposed threads.
      b. Complete with stainless steel backed neoprene sealing washer.
   5. Basis of Design:
      a. Running Bond Brick: Running Bond Brick: Hohmann & Barnard HB-213.
      b. Stacked Bond or Soldier Course Brick: Hohmann & Barnard HB-213 SH or 300C/HB-213 Seismic. Provide with hot-dip galvanized 0.1875 inch (4.76 mm) diameter wire reinforcing continuous within horizontal brick joint.

E. 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 (4.76 mm) diameter wire, length as required to extend to within 1 inch (25.4 mm) of veneer face.
   2. Tie Shape: Rectangular
   3. Fasteners: #12 stainless steel screws self-tapping screws.
   4. Basis of Design:
      a. Modular Brick: Hohmann & Barnard, #270 Ladder Eye-Wire.
      b. ~~**King Size Brick: Hohmann & Barnard, 2-SealTM Concrete Seal Tie, wire tie with hot-dip galvanized 0.1875 inch (4.76 mm) diameter wire reinforcing continuous within horizontal brick joint.**~~

F. 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.

1. Tie Size: 0.1875 inch (4.76 mm) diameter wire, length as required to extend to within 1 inch (25.4 mm) of veneer face.
2. Tie Shape: Triangular.
3. Basis of Design: Hohmann & Barnard, 2-SealTM Concrete Seal Tie.

G. Dovetail Anchors: Bent steel strap formed from 0.1046 inch (2.66 mm) thick steel, with 0.1875 inch (4.76 mm) diameter triangular-shaped wire tie sized to extend within 1 inch (25.4 mm) of masonry face; ASTM A153/A153M hot dip galvanized.

H. Steel Beam and Column Anchors: Crimped 1/4 inch (6.35 mm) diameter wire anchor welded to steel member, with 0.1875 inch (4.76 mm) diameter triangular-shaped wire tie for solid masonry and rectangular-shaped wire tie for hollow masonry, sized to extend within 1 inch (25.4 mm) of masonry face; ASTM A153/A153M hot dip galvanized.

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

J. 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.

2.03 EMBEDDED FLASHING MATERIALS

A. Stainless Steel: ASTM A240, Type 304, soft temper; 0.016 inch (0.41 mm) thick; smooth finish.

B. 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.

C. 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 (0.76 mm).
   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.

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

2.04 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 60 00 - Product Requirements.

D. Weeps and Inserts:
   1. Open Head Joints: Full head height for face brick, 3 inches (76.2 mm) 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:
   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 60 00 - Product Requirements.

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

PART 3 EXECUTION

3.01 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: 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.

3.02 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.

C. Wet clay and shale brick before laying when initial rate of absorption is greater than 30 grams when tested in accordance with ASTM C67.

3.03 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 (203.2 mm).
      c. Mortar Joints: Concave.
   2. Typical Coursing of Modular Brick Units:
      a. Bond: 1/2 running.
      b. Coursing: Three units and three mortar joints to equal 8 inches (203.2 mm).
      c. Mortar Joints: Concave.
   3. Typical Coursing of King Size Brick Units:
      a. Bond: 1/3 running.
      b. Coursing: Three units and three mortar joints to equal 9 inches (228.6 mm).
      c. Mortar Joints: Concave.
   4. Coursing of Reinforced Concrete Masonry Units:
      a. Bond: Running.
      b. Coursing: One unit and one mortar joint to equal 8 inches (203.2 mm).
      c. Mortar Joints: Tooled concave.
   5. Coursing of Decorative Concrete Masonry Units:
      a. Bond: Running.
      b. Coursing: One unit and one mortar joint to equal 8 inches (203.2 mm).
      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.

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. Cut mortar fins protruding into cavity from back side of face brick as work progresses.
12. Isolate masonry from vertical structural framing members.
13. 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.
14. Isolate top of masonry from horizontal structural framing members and slabs or decks with compressible joint filler.

E. Weeps and Inserts: Install weeps and inserts in outer wythe at maximum 24 inches (609.6 mm) oc horizontally above through-wall flashing, above shelf angles and lintels, at bottom of walls, and above other obstructions of wall cavity continuity.

F. Cavity Wall: Do not permit mortar to drop or accumulate into cavity air space or to plug weeps. Build inner wythe ahead of outer wythe to receive cavity insulation and bituminous dampproofing.
1. Install cavity drain material, notched end up, continuously at bottom of each cavity above embedded flashing.

G. 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.

H. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
1. Extend cover a minimum of 24 inches (609.6 mm) down both sides and hold cover securely in place.
2. Where one wythe of multi-wythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches (609.6 mm) down face next to unconstructed wythe and hold cover in place.

3.04 JOINT REINFORCEMENT AND ANCHORAGE

A. Install horizontal joint reinforcement in CMU walls 16 inches (406.4 mm) oc.

B. Place joint reinforcement in first and second horizontal joints above and below openings greater than 12 inches (304.8 mm) wide. Extend minimum 16 inches (406.4 mm) 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 (152.4 mm).

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 (12.7 mm) of dimensioned position.

I. Install anchors attached to concrete and steel structural members:
   1. Leave an open space not less than 1 inch (25.4 mm) 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 (406.4 mm) o.c. vertically and horizontally.

J. Install Wall Ties at CMU Backup Walls:
   1. Install wall ties at 16 inches (406.4 mm) oc vertically and maximum 16 inches oc horizontally.
   2. Coordinate ties to accommodate installation of 16 inch (406.4 mm) widths of cavity wall insulation specified in Section 07 21 13.
   3. Place additional wall ties within 12 inches (304.8 mm) of openings at intervals not exceeding 36 inches (914.4 mm).

3.05 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.

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 turn down 1/4 inch (6.35 mm) to form drip.

E. Turn flashing up minimum 8 inches (203.2 mm) 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 (152.4 mm) 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 (304.8 mm) wide in brick walls.
   2. Install reinforced unit masonry lintels over openings more than 24 inches (609.6 mm) 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 (203.2 mm) 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 (304.8 mm) both sides of opening.
   6. Fill cores in hollow concrete masonry units with grout 24 inches (609.6 mm) 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 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 (304.8 mm) 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.

3.06 ERECTION TOLERANCES

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

B. Maximum Variation From Alignment of Columns and Pilasters: 1/4 inch (6.35 mm).

C. Maximum Variation From Unit to Adjacent Unit: 1/16 inch (1.59 mm).

D. Maximum Variation from Plane of Wall: 1/4 inch (6.35 mm) in 10 ft and 1/2 inch (12.7 mm) in 20 ft or more.

E. Maximum Variation from Plumb: 1/4 inch (6.35 mm) per story non-cumulative; 1/2 inch (12.7 mm) in two stories or more.

F. Maximum Variation from Level Coursing: 1/8 inch (3.18 mm) in 3 ft; 1/4 inch (6.35 mm) in 10 ft; 1/2 inch (12.7 mm) in 30 feet (914.4 cm)

G. Maximum Variation of Joint Thickness: 1/8 inch (3.18 mm) in 3 feet (91.44 cm)

H. Maximum Variation from Cross Sectional Thickness of Walls: 1/4 inch (6.35 mm).

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 (12.7 mm) when distance from centerline of steel to opposite face of masonry is 8 inches (203.2 mm) or less.
3. Plus or minus 1 inch (25.4 mm) when distance is between 8 and 24 inches (609.6 mm).
4. Plus or minus 1-1/4 inch (32 mm) when distance is greater than 24 inches (609.6 mm).
5. Plus or minus 2 inches (50.8 mm) from location along face of wall.

3.07 CLEANING

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

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.
3. Saturate wall surfaces with water prior to application of cleaners; remove cleaners promptly by rinsing thoroughly with clear water.
4. Clean brick by the bucket-and-brush hand-cleaning method described in BIA Technical Notes No. 20, using job-mixed detergent solution, or clean masonry with approved cleaner applied according to the brick and the cleaning manufacturer's written instructions and approval.
5. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2 applicable to type of stain on exposed surfaces.
6. Do not use high-pressure washing methods (greater than 700psi as described in BIA Technical Notes No. 20) on single wythe construction, on concrete masonry incorporating integral or applied water repellents, or on sand-finished face brick.

3.08 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, and water penetration through face brick or joints under normal exposure.

3.09 PROTECTION OF FINISHED WORK

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.

B. Protect exposed external corners subject to damage.

C. Protect base of walls from mud and mortar splatter.

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

E. Protect tops of masonry work with waterproof coverings secured in place without damaging masonry. Provide coverings where masonry is exposed to weather when work is not in progress.

END OF SECTION

SECTION 04 73 00

MANUFACTURED STONE MASONRY

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:
   1. Manufactured Stone Masonry: Calcium silicate product**~~; may be identified as "Cast Stone" on the drawings.~~**
   2. Miscellaneous masonry ties, anchors, and accessories related to manufactured stone masonry.

B. Related Sections:
   1. Section 04 05 03 - Masonry Mortaring and Grouting: Mortar and grout for Cast Stone.
   2. Section 04 20 00 – Unit Masonry Assemblies.
   3. Section 07 90 00 - Joint Protection: Rod and sealant at control and expansion joints.

1.02 REFERENCES

A. American Society for Testing and Materials
   1. ASTM C73-14 – Standard Specification for Calcium Silicate Brick (Sand-Lime Brick).

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

C. Masonry Institute:
   1. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures.

1.03 SUBMITTALS

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

B. Product Data:
   1. Submit data for manufactured stone masonry units, fabricated wire reinforcement, wall ties, 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 manufacturer regarding the compatibility of proposed use of products together for cleaning purposes.

C. Samples:
   1. Submit four samples of each type of manufactured stone masonry to illustrate color, texture and extremes of color range. Furnish additional samples when necessary to fully illustrate the complete range of highly variable materials.

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

1.04 QUALITY ASSURANCE

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

1.05 QUALIFICATIONS

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

1.06 MOCKUP

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

B. Construct mockup minimum 4 ft. x 4 ft. unless detailed otherwise in the drawings, including masonry, mortar and accessories, structural backup, flashings, wall insulation, and weeps.
   1. Structural backup wall to consist of CMU and cold formed metal framing.
   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.

C. Furnish removable cover to protect completed mock-up from rain or other environmental or site conditions that may alter its appearance.

D. Locate in well-lit area where approved Architect/Engineer.

E. Remove mockup when directed by Architect/Engineer, unless part of permanent construction.

1.07 PRE-INSTALLATION MEETINGS

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

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

1.08 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.

1.09 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 30 00 - Administrative Requirements: Coordination and project conditions.

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

PART 2 - PRODUCTS

2.01 MATERIALS

A. Manufacturers:
   1. Arriscraft International, distributed by Upchurch Kimbrough Company, www.arriscraft.com.
      a. **Basis of Design: Arriscraft Oakridge (3 5/8" x 3 5/8" x 23 5/8"), (3 5/8" x 7 5/8" x 23 5/8") & (3 5/8" x 11 5/8" x 23 5/8") Smooth, Provided By: Upchurch Kimbrough Company, Contact: Holly Harris 713-957-1520, hollyh@upchurchkimbrough.com**
   2. Substitutions: Section 01 60 00 – Product Requirements.

B. Manufactured Stone Masonry Units: ASTM C1364, architectural manufactured stone masonry units fabricated by dry casting methods, with fine grained texture, simulating natural cut stone.
   1. Type: Calcium silicate masonry units meeting requirements of ASTM C73, Grade SW; solid units that have been pressure-formed and autoclaved to standard and special shapes.
   2. Size(s): As indicated in the drawings.
   3. Reinforce units as indicated and as required by ASTM C1364. Use galvanized or epoxy-coated reinforcement when covered with less than 1-1/2 inches of material.
   4. Curing: Cure units to develop concrete quality, and to minimize appearance blemishes including non-uniformity, staining, or surface cracking.
   5. Colors and Textures: As scheduled.
   6. Mortar Color: As selected by the Architect.

2.02 ANCHORS, TIES AND REINFORCEMENT

A. Manufacturers:
   1. AA Wire Products
   2. Heckman Building Products (Dur-O-Wall), www.heckmannbuildingprods.com
   3. Hohmann & Barnard, www.h-b.com
   4. Masonry Reinforcing Corp. of America (Wire-Bond)

5. Substitutions: Section 01 60 00 - Product Requirements.

B. 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.

C. Veneer Ties for CFMF Stud Backup Walls: Rib-stiffened sheet metal plate anchors with screw holes top and bottom and projecting tabs with slotted holes for receiving vertical legs of adjustable wire ties; ASTM A153/A153M hot dip galvanized.
   1. Anchor Size: 2-3/4 inches wide by 3 inches high.
   2. Tie Size: 0.1875 inch diameter wire, length as required to extend to within 1 inch of veneer face.
   3. Tie Shape: Rectangular
   4. Fasteners: Steel drill screws, #10 diameter x length required to penetrate steel stud flange by not less than 3 exposed threads, complying with ASTM C954 except with hex washer head and neoprene washer, cadmium-plated.
   5. Basis of Design: Hohmann & Barnard HB-200/DA-213.

D. 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.

E. 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.
   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.

F. 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.

G. Steel Beam and Column Anchors: Crimped 1/4 inch diameter wire anchor welded to steel member, with 0.1875 inch diameter triangular-shaped wire tie for solid masonry and rectangular-shaped wire tie for hollow masonry, sized to extend within 1 inch of masonry face; ASTM A153/A153M hot dip galvanized.

2.03 EMBEDDED FLASHING MATERIALS

A. Stainless Steel: Reference Section 07 62 00 Sheet Metal Flashing and Trim for material requirements.
   1. Flexible Flashing: Reference Section 07 11 00 Dampproofing and Flexible Flashing.

B. Pre-Coated Galvanized Steel or Aluminum Sheet: Not allowed for embedment in masonry walls.

C. Galvanized or Precoated Steel Sheet: Not allowed for embedment in masonry walls.

2.04 ACCESSORIES

A. Expansion Joint Filler: ASTM D1056, Grade 2A1, closed cell neoprene; oversized 50 percent to joint width; self-expanding.
   1. Weeps: Open head joints, maximum 3 inches high.
   2. Cleaning Solutions:
   3. 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.
   4. 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.
   5. Manufacturers:
      a. AHI Supply, www.ahi-supply.com.
      b. Diedrich Technologies, Inc., www.diedrichtechnologies.com.
      c. EaCo Chem, Inc., www.eacochem.com.
      d. ProSoCo, Inc., www.prosoco.com.
      e. Substitutions: Section 01 60 00 - Product Requirements.

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

PART 3 - EXECUTION

3.01 EXAMINATION

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

B. Verify field conditions are acceptable and are ready to receive manufactured stone masonry 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.

3.02 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.

3.03 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. Placing And Bonding:
   1. Lay solid manufactured stone masonry units in full bed of mortar, with full head joints.
   2. Buttering corners of joints or excessive furrowing of mortar joints are not permitted.
   3. Remove excess mortar as work progresses.
   4. Do not shift or tap units after mortar has achieved initial set. Where adjustment is required, remove mortar and replace.
   5. Perform job site cutting of units with motor-driven saws to assure straight, clean, unchipped edges. Prevent broken masonry unit corners or edges. Where possible, use full-size units without cutting.
   6. Install cut units with cut surfaces and edges concealed.
   7. 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.

D. Weeps and Vents: Furnish weeps and vents in outer wythe at maximum 24 inches oc horizontally above through-wall flashing, above shelf angles and lintels, at bottom of walls, and above other obstructions of wall cavity continuity.

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.

F. Protection of manufactured stone masonry units: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.

3.04 TIES AND ANCHORS

A. 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.

B. Install Wall Ties at CMU Backup Walls:
   1. Install wall ties at 16 inches oc vertically and maximum 16 inches oc horizontally.
   2. Coordinate ties to accommodate installation of 16 inch widths of cavity wall insulation specified in Section 07 21 13.
   3. Place additional wall ties within 12 inches of openings at intervals not exceeding 36 inches.

C. Install Wall Ties at CFMF Backup Walls:

1. Install wall tie anchor plates at 16 inches oc vertically and maximum 16 inches oc horizontally.
2. Coordinate anchor plates to accommodate installation of 16 inch widths of cavity wall insulation specified in Section 07 21 13.
3. Place additional wall ties within 12 inches of openings at intervals not exceeding 36 inches.
4. Secure wall tie anchor plates through sheathing to CFMF studs.

3.05 EMBEDDED FLASHINGS

A. Flexible Flashings: Ensure flexible flashing is properly installed 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 through masonry weep openings.

B. Sheet Metal Flashings: Coordinate with Division 7 section Sheet Metal Flashing and Trim for sheet metal flashings to be built-in to masonry work. Only specified stainless steel is approved to be built-in to masonry work unless otherwise specifically approved in writing by the Architect.

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 flexible flashings horizontally to exterior face of masonry and neatly trim flush below weep holes.

E. Extend stainless steel flashings horizontally through exterior face of masonry and turn down to form counterflashing to roofing flashing or other flashing materials as indicated in the drawings. .

F. Turn flashings up minimum 8 inches and bed into mortar joint of CMU backup wall. Ensure that vertical leg of flexible flashings are properly sealed to sheathing over CFMF stud backup wall.

G. Lap end joints of flashings minimum 6 inches and seal watertight.

H. Ensure flashings are extended 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.

I. Turn flashings, fold, and seal at corners, bends, and interruptions.

3.06 LOOSE LINTELS

A. Install loose steel lintels for manufactured stone masonry unis for openings more than 12 inches wide.

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

3.07 MISCELLANEOUS

A. Control and Expansion Joints: Continue masonry control and expansion joints through manufactured stone masonry units.

B. 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.

C. 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.

3.08 CLEANING

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

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

C. Replace defective mortar. Match adjacent work.

D. Clean soiled surfaces with cleaning solution.
   1. Use non-metallic tools in cleaning operations.

3.09 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 of mortar, cracking, discoloration, or deterioration of masonry units, efflorescence in masonry units or joints, and water penetration through manufactured stone masonry or joints under normal exposure.

3.10 PROTECTION OF FINISHED WORK

1. Section 01 70 00 - Execution and Closeout Requirements: Requirements for protecting finished Work.
2. Protect exposed external corners subject to damage.
3. Protect base of walls from mud and mortar splatter.
4. Protect masonry and other items built into masonry walls from mortar droppings and staining caused by mortar.
5. Protect tops of masonry work with waterproof coverings secured in place without damaging masonry. Provide coverings where masonry is exposed to weather when work is not in progress.

END OF SECTION

SECTION 05 50 00

METAL FABRICATIONS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes shop fabricated metal items.

B. Performance and design criteria for the delegated design for but not limited to the following:
   1. Supports for overhead doors and grilles.
   2. Elevator hoist beam.

C. Loose lintels.

D. Bollards.

E. Steel ladders.

F. Steel ships ladders.

G. **Aluminum ladders.**

H. Structural supports for miscellaneous attachments.

I. Steel framing and supports for mechanical and electrical equipment.

J. Other miscellaneous steel items indicated or as required for complete installation of indicated work.

K. Performance and design criteria for the delegated design for but not limited to the following:
   1. Supports for overhead doors and grilles.
   2. Elevator and machine hoist beam.

1.02 RELATED SECTIONS:

A. Section 03 30 00 - Cast-In-Place Concrete: Execution requirements for embedded anchors and attachments for metal fabrications specified by this section in concrete.

B. Section 05 12 00 - Structural Steel.

C. Section 05 21 00 - Steel Joists.

D. Section 05 31 13 - Steel Floor Decking.

E. Section 05 31 23 - Steel Roof Decking.

F. Section 09 90 00 - Painting and Coating: Field applied paint finishes.

1.03 REFERENCES

A. ASTM International:

B. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.

C. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.

D. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.

E. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

F. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.

G. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.

H. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts.

I. ASTM F436 - Standard Specification for Hardened Steel Washers.
   1. American Welding Society:

J. AWS D1.1 - Structural Welding Code - Steel.
   1. SSPC: The Society for Protective Coatings:

K. SSPC-Paint 15 - Steel Joist Shop Paint.

L. SSPC-Paint 20 - Zinc-Rich Primers (Type I - Inorganic and Type II - Organic).

1.04 SUBMITTALS

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

B. Submit a Delegated-Design Submittal that includes the following, all of which shall be signed and sealed by the retained professional engineer:
   1. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
      a. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
      b. Design data: Submit drawings and supporting calculations, signed and sealed by a qualified professional structural engineer.
         1) Include the following, as applicable:
            (a) Design criteria.
            (b) Engineering analysis depicting stresses and deflections.
            (c) Member sizes and gauges.
            (d) Details of connections.

(e) Support reactions.
(f) Bracing requirements.

C. Welders Certificates: Certify welders employed on the Work, verifying AWS qualification within previous 12 months.

1.05 QUALIFICATIONS

A. Fabricator Qualifications: A firm experienced in producing metal fabrications similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

B. Compliance Responsibility: The Contractor is responsible for ensuring compliance among suppliers, fabricators, and subcontractors.

C. Delegated Design Engineer: The Professional Engineer performing the delegated design shall be licensed in the State of Texas and shall have a minimum of five (5) years of experience in the design of structural metal fabrications and railing systems.

1.06 DELIVERY, STORAGE, AND HANDLING

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

B. Accept metal fabrications on site in labeled shipments. Inspect for damage.

C. Protect metal fabrications from damage by exposure to weather.

1.07 FIELD MEASUREMENTS

A. Where metal fabrications are indicated to fit walls and other construction, verify dimensions by field measurements before fabrication and indicate measurements on shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

B. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating metal fabrications without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions. Allow for trimming and fitting.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

A. Steel Sections: ASTM A36/A36M.

B. Steel Plate: ASTM A36/A36M.

C. Hollow Structural Sections: ASTM A500, Grade B.

D. Steel Pipe: ASTM A53/A53M, Grade B Schedule 40. .

E. Sheet Steel: ASTM A653/A653M, Grade 33 Structural Quality with galvanized coating.

F. Bolts: ASTM A307; Grade A or B.

G. Nuts: ASTM A563 heavy hex type.

H. Washers: ASTM F436; Type 1.

I. Welding Materials: AWS D1.1; type required for materials being welded.

J. Shop Primer: SSPC-Paint 15, or manufacturer's standard primer complying with performance requirements of SSPC-Paint 15.

K. Touch-Up Primer: Match shop primer.

L. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20.

2.02 LOOSE LINTELS

A. Lintels: Steel sections, size and configuration as indicated on Drawings, length to allow 8 inches (203.2 mm) minimum bearing on both sides of opening.

B. Galvanize loose lintels installed in exterior walls.

2.03 BOLLARDS

A. Fabricate bollards from Schedule 80 steel pipe, size as indicated.

B. Standard Bollards: Fill with 3,000 psi (20684.28 kPa) concrete as specified in Section 03 30 00, with crowned cap.

C. Removable Bollards: Fabricate sleeves from Schedule 40 steel pipe or 1/4 inch (6.35 mm) wall thickness steel tubing with an ID 1/4 inch less than OD of bollards. Match drill sleeve and bollard for 1/2 inch (12.7 mm) steel machine bolt.

D. Cap removable bollards with 1/4 inch (6.35 mm) minimum steel plate. Do not fill with concrete.

2.04 STEEL LADDERS

A. General: Fabricate ladders for locations shown, with dimensions, spacings, details, and anchorages as indicated.

B. Comply with ANSI A14.3, unless otherwise indicated.

C. Provide hot-dip galvanizing after fabrication for exterior ladders.

D. For elevator pit ladders, comply with ASME A17.1.
   1. Unless detailed otherwise in the drawings, provide following fabrication:

E. Side Rails: Continuous 1/2 x 2-1/2 inch (64 mm) flat bars with eased edges, spaced 18 inches (457.2 mm) apart.
   1. Manufactured Bar Rungs: 1-inch round steel bars, spaced 12 inches (304.8 mm) o.c.
      a. Fit bar rungs in centerline of side rails; plug-weld and grind smooth on outer rail faces.

b. Provide nonslip surfaces on top of each bar rung by light coating of abrasive material:
   1) Mebac Anti-Slip Coatings; IKG Borden www.ikgindustries.com
   2) SLIP-NOT; W. S. Molnar Company www.wsmolnar.com .

2. Support each ladder at top and bottom and not more than 60 inches (1524 mm) o.c. with welded or bolted steel brackets. Size brackets to support design loads specified in ANSI A14.3.

2.05 **ALUMINUM LADDERS**

A. **Manufacturer: Subject to compliance with requirements, provide fixed aluminum ladders by O'Keeffe's Inc.; www.okeeffes.com.**

B. **Materials: Extruded Aluminum, ASTM B221, 6063-T5 or 6061-T6 alloy.**

C. **Fixed Vertical Ladders (Standard Access):**
   1. **Basis of Design: O'Keeffe's Model 500.**
   2. **Construction: All-welded aluminum construction with 2-1/2 inch (64 mm) extruded side rails and square serrated rungs.**
   3. **Rungs: 1-inch (25.4 mm) square aluminum extrusions with non-slip serrated surfaces, spaced 12 inches (304.8 mm) o.c.**

2.06 STEEL SHIP'S LADDERS

A. Ship’s Ladders: Fabricate with structural steel channel stringers, steel pipe handrails, and steel bar grating treads with open risers, unless otherwise indicated. Provide brackets and fittings for installation.

B. Dimensions:
   1. Width: 36 inches (914.4 mm) or wider as indicated.
   2. Stringer depth: Minimum 10 inches (254 mm).
   3. Inclination: As indicated.

C. Treads: Minimum 7-in. wide galvanized steel bolt-on bar grate stair treads as manufactured by Borden or approved equivalent.
   1. Riser Height: Maximum 12 inches (304.8 mm) and minimum 9 inches (228.6 mm).

D. Railings: As specified in Section 05 52 00 - Metal Railings.

E. Galvanize ship's ladders, including brackets and fasteners, in exterior locations, and elsewhere where indicated.

2.07 MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Provide steel framing and supports that are not a part of structural steel framework as necessary to complete the Work.

B. Fabricate units from structural steel shapes, plates, and bars of welded construction, unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to

receive adjacent construction retained by framing and supports. Cut, drill, and tap units to receive hardware, hangers, and similar items.

C. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors 1-1/4 inches (32 mm) wide by 1/4 inch (6.35 mm) thick by 8 inches (203.2 mm) long at 24 inches (609.6 mm) o.c., unless otherwise indicated.

D. Furnish inserts if units must be installed after concrete is placed.
   1. Operable Partitions: Fabricate supports for operable partitions of continuous steel shapes of sizes indicated, with attached bearing plates, anchors, and braces. Drill bottom flanges of beams to receive partition track hanger rods; locate holes where indicated on operable partition shop drawings.

2.08 FABRICATION

A. Fit and shop assemble items in largest practical sections, for delivery to site.

B. Fabricate items with joints tightly fitted and secured.

C. Continuously seal joined members by continuous welds.

D. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

E. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.

F. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.09 FACTORY APPLIED FINISHES - STEEL

A. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

B. Galvanizing: Hot-dip galvanize all items exposed to the exterior, ASTM A123/A123M, minimum 2.0 oz/sq ft coating thickness.

C. Galvanize after fabrication.

D. After galvanizing, fill vent holes and grind smooth

E. Do not apply galvanizing using double- dip or progressive processes without Architect’s or Engineer’s written approval.

F. Galvanizing for Fasteners, Connectors, and Anchors:
   1. Hot-Dipped Galvanizing: ASTM A153/A153M.
   2. Mechanical Galvanizing: ASTM B695; Class 50 minimum.
   3. Prime paint items with one coat except where galvanizing or stainless steel to remain unpainted is indicated.

G. Do not prime surfaces in direct contact with concrete or where field welding is required.

H. Do not prime surfaces in direct contact with concrete or where field welding is required.

I. Typical: For items indicated to receive typical interior or exterior acrylic or alkyd finish paint, use Red Oxide or High-performance, lead-and-chromate-free, rust-inhibitive primer compatible with specified finish coatings. Verify compatibility with specified finish paint.

J. Epoxy: For items to receive urethane alkyd enamel, use two-package epoxy primer after power wire-brushing or sandblasting all surfaces to bright steel.

2.10 FABRICATION TOLERANCES

A. Squareness: 1/8 inch (3.18 mm) maximum difference in diagonal measurements.

B. Maximum Offset Between Faces: 1/16 inch (1.59 mm).

C. Maximum Misalignment of Adjacent Members: 1/16 inch (1.59 mm).

D. Maximum Bow: 1/8 inch (3.18 mm) in 48 inches (1219.2 mm).

E. Maximum Deviation From Plane: 1/16 inch (1.59 mm) in 48 inches (1219.2 mm).

PART 3 EXECUTION

3.01 EXAMINATION

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

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

3.02 PREPARATION

A. Clean and strip primed steel items to bare metal where site welding is required.

B. Supply steel items required to be cast into concrete or embedded in masonry with setting templates to appropriate sections.

3.03 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Make provisions for erection stresses. Install temporary bracing to maintain alignment, until permanent bracing and attachments are installed.

C. Field weld components indicated on shop drawings.

D. Perform field welding in accordance with AWS D1.1.

E. Obtain approval of Architect/Engineer prior to site cutting or making adjustments not scheduled.

F. After erection, touch up welds, abrasions, and damaged finishes with prime paint or galvanizing repair paint to match shop finishes.

G. Grind field welds smooth and flush; apply zinc-rich galvanizing repair paint to match shop-applied finish in accordance with ASTM A780

3.04 **INSTALLATION - ALUMINUM LADDERS**

A. **General: Install aluminum ladders in accordance with manufacturer's printed instructions and ANSI A14.3.**

B. **Dissimilar Metals: Apply a heavy coat of bituminous paint or provide non-conductive gaskets to all aluminum surfaces in contact with concrete, masonry, or structural steel to prevent galvanic corrosion.**

C. **Anchorage: Secure aluminum standoff brackets to substrate using Type 304 stainless steel fasteners.**

D. **Coordination: Ensure that top of ladder side rails extend to allow for a safe transition in accordance with OSHA standards.**

3.05 ERECTION TOLERANCES

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

B. Maximum Variation From Plumb: 1/4 inch (6.35 mm) per story or for every 12 ft in height whichever is greater, non-cumulative.

C. Maximum Offset From Alignment: 1/4 inch (6.35 mm).

D. Maximum Out-of-Position: 1/4 inch (6.35 mm).

END OF SECTION

SECTION 06 20 24

INTERIOR FINISH CARPENTRY AND MILLWORK

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes the following:
   1. Miscellaneous wood or plastic laminate clad millwork items that are not included in Section 12 32 16 Plastic Laminate Clad Casework.
   2. **Oak treads and risers at stage.**

B. Related Sections:
   1. Section 06 10 53 - Miscellaneous Rough Carpentry: Wood furring, blocking, shims, and hanging strips required for installing finish carpentry and millwork items.
   2. Section 06 61 19 - Quartz Surfacing Fabrications.

1.02 REFERENCES

A. American Forest and Paper Association:

B. AF&PA - National Design Specifications for Wood Construction.

C. ASTM International:
   1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.03 SUBMITTALS

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

B. Product Data: For each type of product indicated.

C. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

D. Show locations and sizes of required furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
   1. Indicate wood type and finish of each piece of construction.

E. Samples:
   1. Submit three representative samples of each finish carpentry and millwork item, illustrating wood grain, edge and corner condition(s), and finish.

1.04 QUALITY ASSURANCE

A. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards" for interior finish carpentry including wood grades, construction, finishes, and other requirements.

B. Surface Burning Characteristics for Fire Retardant Treated Items: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.
   1. Where required by authority having jurisdiction, apply label from approved agency identifying each item.

1.05 QUALIFICATIONS

A. Installer Qualifications: An experienced installer who has completed finish interior carpentry similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Fabricator Qualifications: A firm experienced in producing finish interior carpentry millwork similar to that indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

1.06 DELIVERY, STORAGE, AND HANDLING

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

B. Protect work from moisture damage.

1.07 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements.

B. Comply with AWI requirements.

C. Maintain temperature and humidity conditions within ranges recommended by AWI. Do not deliver or install millwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

D. Allow materials to acclimate to temperature and humidity conditions recommended by AWI for minimum of 48 hours prior to installation. Maintain same conditions during and after installation.

1.08 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.09 COORDINATION

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

B. Coordinate work with electrical rough-in and installation of associated and adjacent finishes.

C. Coordinate locations and requirements for blocking and backing for support and attachment of work of this section.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Plastic Laminate Surfacing: Comply with NEMA Standard GP50 high pressure laminated plastic as provided by Wilsonart, Formica, or Pionite. Provide 0.053-inch thick material at horizontal surfaces, and 0.033-inch thick laminate on exposed vertical surfaces. Provide backing sheet on bottom or concealed surfaces. Color(s) to be selected by the Architect from manufacturer's full range.

B. Hardwood Plywood and Face Veneers: HPVA HP-1, Grade A, min 7-ply wood veneer core, face species to match hardwood lumber.
   1. Interior Composite Wood Products: Contain no added urea-formaldehyde resins.

C. Concealed Plywood: U.S. Product Standard PSI-66, 7-ply wood veneer core Douglas Fir plywood, grade trademarked DFPA, sanded. A-D grade. Use only in concealed areas or as core for plastic laminate. Use exterior grade at sink cabinets.

D. **Hardwood Treads, Risers, and Stringers: White Oak.**
   1. **Grade: Clear.**
   2. **Cut: Rift Sawn.**
   3. **Moisture Content: 12 to 14 percent.**
   4. **Thickness: 3/4 inch or as indicated.**
   5. **Width: As indicated.**
   6. **Length: One-Piece.**

2.02 ACCESSORIES

A. Fasteners and Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors in masonry walls.

B. Adhesive for High Pressure Decorative Laminates: FS A-A-1936 contact adhesive.

C. PVC Edge Trim (mandatory): Extruded rigid PVC; smooth finish, of width to match component thickness; standard or custom color as required to match plastic laminate; 0.04 inch (1 mm) and 0.12 inch (3 mm) thickness.

D. Glass: Clear tempered double strength, as specified in Section 08 80 00.

E. Fasteners and Anchors:
   1. Fasteners: Hot dipped or Electro galvanized steel for high humidity and treated wood locations, unfinished steel elsewhere.

F. Nails and Staples: ASTM F1667.

G. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application.

H. Concealed Joint Fasteners: Threaded steel.

I. Door and Drawer Pulls: Edge Pull by Tudix,www.tydrix.com

J. Length: 3 inch (76.2 mm)

K. Style:SR

L. Roller Diameter: 1/4 inch (6.35 mm)

M. Finish: Satin Nickel US 15

N. Hinges: European style concealed self-closing type, steel with nickel-plated finish.

O. Grommets:
1. Type: Plastic or nylon 2-1/2” diameter with flip-top tab in cap, in color(s) as selected by the Architect.
2. Locations: Where indicated on the drawings and where needed for data wiring to pass through counter tops, whether or not indicated.
3. Basis of Design: Model #EDP3 as manufactured by Doug Mocket & Co., 800-523-1269.
    a. Workstation Countertop Brackets (Hidden):
        1) Material: Steel.
        2) Finish: Manufacturer's standard, factory-applied powder coat, in black color.
4. Basis of Design: Iron Supports, Hidden Center Mount Countertop Bracket, www.ironsupports.com

2.03 FABRICATION, GENERAL

A. Provide Custom grade interior millwork complying with the referenced quality standard. All work shall be of the highest quality workmanship thoroughly sanded and cleaned, free from tool marks, with all nails properly set, filled and sanded smooth. Moldings and trim shall be furnished in as long lengths as practicable. All pencil and chalk marks shall be removed.

B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.

C. Fabricate millwork to dimensions, profiles, and details indicated.

D. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible, before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

PART 3 - EXECUTION

3.01 PREPARATION

A. Condition millwork to average prevailing humidity conditions in installation areas before installation.

B. Before installing architectural millwork, examine shop-fabricated work for completion and complete work as required, including removal of packaging and.

3.02 **SHOP FINISHING**

A. **Finish System: AWI Finish System 5, Conversion Varnish.**

B. **Color Match: Custom-stain White Oak to match Wilsonart 7921-38 Tuscan Walnut.**

1. **Sample Requirements: Submit three (3) sets of 12-inch long White Oak samples showing the full range of grain and color. Each sample must be physically compared against a 12-inch square piece of the specified Wilsonart laminate for Architect's approval.**
2. **Pre-Stain Conditioner: Provide wood conditioner/sealer prior to staining to ensure uniform color absorption and prevent "blotching" in the White Oak.**

3.03 MISCELLANEOUS MILLWORK INSTALLATION

A. Install miscellaneous millwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch (3.18 mm) in 96 inches (2438.4 mm).

B. Scribe and cut millwork to fit adjoining work and refinish cut surfaces and repair damaged finish at cuts.

C. Anchor millwork to anchors or blocking built in or directly attached to substrates. Secure with concealed fasteners and blind nailing as required for complete installation.

D. Field Finishing:

E. Mask off adjacent surfaces before beginning sanding.

1. Sand to smooth even finish with no evidence of sander marks. Take precautions to contain dust. Remove dust by vacuum.
2. Apply filler and stain and three finish coats.
3. Apply first coat, allow to dry, then buff lightly with steel wool to remove irregularities. Vacuum clean and wipe with damp cloth before applying succeeding coat.
4. Apply second and successive coats. Allow to dry. Lightly buff between coats with steel wool and vacuum clean before applying succeeding coat.

3.04 ADJUSTING AND CLEANING

A. Repair damaged and defective millwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace millwork. Adjust joinery for uniform appearance.

B. Clean millwork on exposed and semi-exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION

SECTION 07 21 13

THERMAL WALL INSULATION

PART 1 GENERAL

1.01 SUMMARY

A. Section includes
   1. Rigid plastic insulation at exterior masonry wall construction.
   2. Rigid mineral fiberboard insulation at exterior masonry wall construction with air spaces exceeding 2-1/2" in clear opening.
   3. Rigid mineral fiberboard insulation at exterior ACM metal panel walls.
   4. Blanket insulation where specifically indicated at detail areas.

1.02 REFERENCE STANDARDS

A. ASTM C553 - Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications; 2013 (Reapproved 2019).

B. ASTM C612 - Standard Specification for Mineral Fiber Block and Board Thermal Insulation; 2014 (Reapproved 2019).

C. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2017.

D. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2022a.

E. ASTM D2842 - Standard Test Method for Water Absorption of Rigid Cellular Plastics; 2019.

F. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2022.

G. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2022.

H. ASTM E136 - Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750 °C; 2022.

I. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components; 2023.

1.03 RELATED SECTIONS:

A. Section 04 20 00 - Unit Masonry Assemblies: Cavity wall construction.

B. Section 04 73 00 – Manufactured Stone Masonry

C. Section 06 10 53 – Miscellaneous Rough Carpentry: Wood stud wall construction.

D. Section 07 27 26 – Fluid-Applied Membrane Air Barrier: Substrate.

E. Section 07 42 13 – Prefinished Metal Wall and Soffit Panels.

F. Section 09 21 16 – Gypsum Board Assemblies: Gypsum sheathing substrate.

1.04 SUBMITTALS

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

B. Product Data: Submit for product characteristics, performance criteria, and limitations.
   1. Provide product data indicating fire-test-response characteristics in accordance with the following, or similar testing and inspecting agency acceptable to authorities having jurisdiction:
      a. Identify materials with appropriate markings of applicable testing and inspecting agency.
         1) Surface-Burning Characteristics tested per ASTM E84.
         2) Fire-Resistance Ratings tested per ASTM E119.
         3) Combustion Characteristics tested per ASTM E136.
      b. Provide product data indicating thermal characteristics.
   2. Provide documentation that the proposed total R-value meets the requirements of ASHRAE 90.1 for project building zone per International Building Code.
   3. Provide coordinated submittal with Air Barrier system and/or other products required to be tested as part of an assembly for meeting requirements of NFPA 285.

C. Manufacturer's Installation Instructions: Submit special environmental conditions required for installation and installation techniques.

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

1.05 QUALITY ASSURANCE

A. Insulation Installed in Concealed Locations Surface Burning Characteristics:
   1. Maximum 75/450 flame spread/smoke developed index when tested in accordance with ASTM E84.
      a. Apply label from agency approved by authority having jurisdiction to identify each foam plastic insulation board.

1.06 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements.
   1. Do not install adhesives when temperature or weather conditions are detrimental to successful installation.

1.07 SEQUENCING

A. Section 01 10 00 - Summary: Work sequence.
   1. Sequence Work to ensure air barrier materials are successfully completed before beginning Work of this section.

1.08 PRE-INSTALLATION MEETINGS

A. Section 01 31 19 – Project Meetings: Schedule and coordinate pre-installation meeting that 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.

1.09 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources.

B. Store inside and in a dry location.
1. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

C. Protect plastic insulation as follows:
1. Do not expose plastic insulation to sunlight, except to extent necessary for period of installation and concealment.
2. Protect against ignition at all times.
3. Do not deliver plastic insulating materials to Project site before installation time.
4. Once started, complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

PART 2 PRODUCTS

2.01 APPLICATIONS

A. Use only insulation board products that have been tested as an assembly with other specific products, including Air Barrier system, per NFPA 285. Coordinate with General Contractor to ensure products are submitted as part of a tested assembly.

B. Protection: All plastic insulation boards must be utilized, detailed, and protected in accordance with requirements of NFPA 285- and applicable governing authorities.

2.02 CAVITY WALL PLASTIC RIGID INSULATION BOARD

A. Manufacturers
1. Thermax; Dow Chemical USA, www.dow.com
2. EnergyGuard; GAF Corp., www.gaf.com
3. XCI Class A; Hunter Panels, www.hunterpanels.com
4. ~~EnergyShield PRO2; Atlas Wall Board~~ Energy Shield XR, wall.atlasrwi.com
5. ThermaSheath; Rmax, www.rmax.com
6. **AP Foil-Faced; Johns Manville, www.jm.com**
7. Substitutions: Section 01 60 00 - Product Requirements.

B. Materials
1. Polyisocyanurate Insulation Board meeting requirements of ASTM C1289 and NFPA 285:

2. Board size: 16 x 96 inches (2438.4 mm).
3. Board Thickness: 2-inches or as indicated in the drawings.
4. Thermal Resistance: 5-year aged R-value of 5.7 per inch thickness or greater.
5. Face Material: Type I foil face or Type II glass mat face as required to meet the specific requirements of ASTM C1289 and NFPA 285 for the tested insulation/air barrier assembly.

C. Accessories
1. Adhesive: Type recommended by insulation manufacturer for application. Ensure compatibility with applied air barrier material.

2.03 FIBERBOARD INSULATION MATERIALS

A. Mineral Fiberboard Insulation: Rigid or semi-rigid mineral fiber, ASTM C612 or ASTM C553; unfaced flame spread index of 0 (zero) when tested in accordance with ASTM E84.
1. Facing: Unfaced, dark.
2. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
3. Smoke Developed Index: 0 (zero), when tested in accordance with ASTM E84.
4. Board Thickness: 3-inches, or as indicated in the drawings.
5. Thermal Resistance: R-value of 4.3 per inch of thickness.
6. Maximum Density: 8 pcf, nominal.
7. Location: Exterior cavity wall, continuous insulation within air space.
8. Products:
a. Rockwool (Roxul, Inc); Cavityrock: www.rockwool.com
b. Thermafiber, Inc; Rainbarrier 45: www.thermafiber.com

2.04 BLANKET INSULATION

A. Manufacturers:
1. CertainTeed Corporation www.certainteed.com
2. Johns Manville Corporation. www.jm.com
3. Owens Corning. www.owens-corning.com
4. Substitutions: Section 01 60 00 - Product Requirements.

B. Type: ASTM C665; preformed glass fiber blankets; friction fit, conforming to the following:
1. Thermal Resistance: Minimum R-value of 19.
2. Thickness: 6 inches (152.4 mm).
3. Width: 12 and 16 inches (406.4 mm) wide, as needed for the particular stud spacing.
4. Facing: Unfaced.

C. Applications:
1. Special applications only where specifically indicated in the drawings at exterior stud wall cavities and parapets.

PART 3 EXECUTION

3.01 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
   1. Verify substrate, adjacent materials, and insulation boards are dry and ready to receive insulation.
   2. Verify all debris has been cleared from wall cavity.

B. Verify wall ties are properly spaced and ready to receive insulation.

3.02 BOARD INSUALTION

A. Apply adhesive to substrate.

B. Install boards horizontally between wall ties.

C. Stagger end joints. Butt edges and ends tight to adjacent boards.

D. Cut and fit insulation tight to protrusions or interruptions to insulation plane.

3.03 BLANKET INSULATION

A. Install only at areas where board insulation or loose fill insulation is not indicated.

B. Use blanket widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill cavity, provide lengths that will produce a snug fit between ends.

C. Place blankets in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.

D. For metal-framed wall cavities where cavity heights exceed 96 inches (2438.4 mm), support unfaced blankets mechanically.

E. Do not compress insulation.
   1. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
   2. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical services within plane of insulation.

3.04 PROTECTION OF INSTALLED CONSTRUCTION

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

B. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION

SECTION 07 42 13

METAL WALL PANELS

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:
1. Prefinished steel **and aluminum** metal panel systems with concealed fasteners.
2. Related flashings and accessory components.
3. **Thermally-broken composite Z-girt rainscreen support system.**
4. **Secondary cold-formed metal framing for exterior soffit support.**

B. Related Sections:
1. Section 05 40 00 - Cold-Formed Metal Framing: Stud wall framing system.
2. Section 05 50 00 – Metal Fabrications: Secondary support framing for perforated screen.
3. Section 07 21 13 – Thermal Wall Insulation.
4. Section 07 27 26 – Fluid-Applied Membrane Air Barrier.
5. Section 07 62 00 – Sheet Metal Flashing and Trim.

1.02 REFERENCES

A. ASTM International:
1. **ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.**
2. ASTM A755/A755M - Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.
3. ASTM A924/A924M - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
4. ASTM D226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.

1.03 PERFORMANCE REQUIREMENTS

A. Components: Design and size components to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of wall as calculated in accordance with applicable code.

B. Maximum Allowable Deflection of Panel: 1/180 of span.

C. Movement: Accommodate movement within system without damage to components or deterioration of seals, movement within system; movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; deflection of structural support framing.

D. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.

E. **Soffit Framing: Design system to withstand specified wind uplift pressures.**
   1. **Delegated Design: Member sizes and spacing indicated are minimums. Contractor's Professional Engineer shall verify framing capacity for project-specific wind loads.**

1.04 SUBMITTALS

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

B. Shop Drawings: Indicate dimensions, layout, joints, expansion joints, construction details, methods of anchorage, and interface with adjacent materials.

C. Product Data: Submit data on panels.

D. Samples:
   1. Submit two samples of each type panel and panel finish, 12 x 12 inch (304.8 mm) in size, illustrating panel profile and finish color, sheen, and texture.
   2. Submit two samples of fasteners, closures, and other accessories.

E. Manufacturer's Installation Instructions: Submit special procedures.

1.05 QUALIFICATIONS

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

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

1.06 DELIVERY, STORAGE, AND HANDLING

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

B. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.

C. Store prefinished material off ground protected from weather, to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

D. Prevent contact with materials capable of causing discoloration or staining.

1.07 COORDINATION

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

B. Coordinate Work with installation of wall sheathing and dampproofing.

C. Coordinate Work with installation of windows, doors, and adjacent components or materials.

1.08 WARRANTY

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

B. Special Fluoropolymer Finish Warranty: Submit a written warranty, signed by manufacturer, covering failure of the factory-applied exterior finish on metal wall panels within the specified warranty period and agreeing to repair finish or replace wall panels that show evidence of finish deterioration. Deterioration of finish includes, but is not limited to, color fade, chalking, cracking, peeling, and loss of film integrity.
   1. Fluoropolymer Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 METAL WALL AND SOFFIT PANELS

A. Manufacturers - Prefinished Galvanized Steel Panels:
   1. Berridge Manufacturing Co. www.berridge.com
   2. Centria www.centria.com
   3. Petersen Aluminum Corp. www.pac-clad.com
   4. **Vicwest; www.vicwest.com**
   5. Substitutions: Section 01 60 00 - Product Requirements.

2.02 STEEL WALL **AND SOFFIT** PANELS

A. **Aluminum or Steel base material is acceptable.**

B. Base Material **(Steel)**: Prefinished galvanized steel sheet. ASTM A755/A755M coil coated. **Base Material (Aluminum): Prefinished Aluminum Sheet: ASTM B209.**
   1. Base Metal: **(Steel)** ASTM A653/A653M; Structural Quality; G90 zinc coating.
   2. **Base Metal: (Aluminum) Ally and Temper: 3003-H14. Thickness: Minimum 0.032 inch (0.81 mm).**
   3. Exposed Finish **as indicated on drawings**: Faux wood grain **or solid color** fluoropolymer coil coating with minimum 70 percent polyvinylidene fluoride resin.
      a. Color to be selected by the Architect.
         1) Color and wood grain pattern shall be the same matched color for all metal panel types, trim, and flashing provided under this Section.
   4. Unexposed Finish: Manufacturer's standard coating.
   5. Trim, Closure Pieces, and Flashings: Same material, thickness and finish as panel sheets; brake formed to required profiles
   6. 20-year finish warranty.
      a. ~~**MWP:**~~ Exterior Wall **and Soffit** Panels:
         1) ~~**Vee-Panel as manufactured by Berridge Manufacturing, Houston, Texas or approved equivalent by specified manufacturer.**~~ **Panel profile type and size as indicated on drawings.**
         2) Minimum 24 gage prefinished steel stock.
         3) Smooth-faced.

4) Install horizontally with overlapping and interlocking long edges in shingle style. Panel ends lapped.
5) Install with stainless steel concealed fasteners.

2.03 ACCESSORIES

A. Sealants: Specified in Section 07 90 00; color to match siding.

B. Fasteners: Manufacturer's standard type to suit application; with soft neoprene washers, stainless steel; fastener cap same color as exterior panel.

C. Field Touch-up Paint: As recommended by panel manufacturer.

D. Slip Sheet: Manufacturer's recommended non-asphaltic, high-perm synthetic slip sheet or drainage mat to prevent adhesion between metal panels and air barrier membrane.

2.04 **SOFFIT FRAMING SYSTEM**

A. **Studs and Tracks: ASTM C645; cold-formed galvanized steel.**
1. **Minimum Size: 4 inch (102 mm) depth.**
2. **Minimum Thickness: 16 gauge (54 mil / 0.0566 inches).**
3. **Coating: G60 hot-dip galvanized minimum; G90 for high-exposure coastal applications.**

B. **Bracing and Bridging: Manufacturer's standard lateral bracing and anti-sag members as required by structural design.**

C. **Fasteners: ASTM C1513; corrosion-resistant self-drilling tapping screws. Use stainless steel fasteners when in direct contact with aluminum soffit panels.**

2.05 **RAINSCREEN SUPPORT SYSTEM**

A. **Basis-of-Design Product:**
1. **Armatherm; *"Armatherm FRP Z-Girt"*; www.armatherm.com**

B. **Acceptable Product Substitutions:**
1. **SmartCI; *"GreenGirt"*; greengirt.com**
2. **Knight Wall Systems; "Knight-FRP-Girt"; knightwallsystems.com**
3. **Substitutions: Section 01 60 00 - Product Requirements.**

C. **Material: Pultruded, high-strength, thermoset fiberglass reinforced polymer (FRP) composite, designed to be non-conductive and thermally broken.**

D. **Profile: "Z" girt shape.**

E. **Depth: As required by engineering calculations and sized to match the specified thickness of the rigid mineral wool insulation.**

F. **Thermal Performance: Girt material shall provide a minimum thermal resistance (R-value) of R-2.0 per inch of thickness.**

G. **Fasteners: Provide high-strength, corrosion-resistant, self-drilling screws as specified by the composite girt manufacturer for fastening girts through the rigid mineral wool insulation and gypsum sheathing and into the structural metal studs.**

2.06 FABRICATION

A. Form sections to shape indicated on Drawings, accurate in size, square, and free from distortion or defects.

B. Form pieces in longest practicable lengths.

PART 3 EXECUTION

3.01 EXAMINATION

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

B. Verify plywood sheathing and bituminous dampproofing are in place and ready to receive metal wall panels.

3.02 BUILDING PAPER – ONLY WHERE SPECIFICALLY REQUIRED BY THE PANEL MANUFACTURER:

A. Install 1 layer building paper over air barrier membrane on walls to receive metal siding.

B. Weather lap edges 6 inches (152.4 mm) and ends minimum 6 inches, minimum.

C. Securely fasten in place.

D. Building paper when required by the panel manufacturer is in addition to specified Air Barrier.

3.03 **SOFFIT FRAMING INSTALLATION**

A. **General: Install framing plumb, level, and true to line.**

B. **Spacing: Install soffit studs at 12 inches (305 mm) o.c. maximum, unless a closer spacing is required by the Delegated Design Engineer.**

C. **Anchoring: Securely anchor tracks to primary building structure using fasteners and spacing as indicated on approved shop drawings.**

D. **Coordination:**
   1. **Ensure framing layout accounts for HVAC grilles and light fixture penetrations.**
   2. **Install supplementary framing (headers/curbs) around all penetrations greater than 6 inches in any direction.**

E. **Tolerances: Maximum variation from level of 1/8 inch in 10 feet.**

3.04 METAL PANEL INSTALLATION

A. **Material Selection: Wall and soffit panels may be provided in either steel or aluminum at the Contractor's option, provided the selected material meets the performance requirements and finish consistency specified herein.**

B. Install panels in accordance with manufacturer’s instructions using manufacturer’s standard flashing and trim details unless modified by Drawings.

C. Protect surfaces in contact with cementitious materials and dissimilar metals with bituminous paint. Allow to dry prior to installation.

D. Fasten wall panels through gypsum sheathing into cold formed metal framing members; space fasteners maximum 16 inches (406.4 mm) on center horizontally and vertically to suit application.

E. Use proper tools to obtain controlled, uniform compression for positive seal without rupture of neoprene washer.

F. Form laps and joints to shed water.

G. Field cutting panels by torch is not permitted.

H. Accessories: Install components necessary for complete wall panel assembly, including trim, flashings, sealants, gaskets, and similar items.

I. Seal and place gaskets to prevent weather penetration. Maintain neat appearance.

J. Installation Tolerances: Shim and align panel units within installed tolerance of 1/4 inch (6.35 mm) in 20 feet (609.6 cm) on level, plumb, and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.05 CLEANING

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

B. Remove site cuttings from finish surfaces.

C. Remove protective films from panel surfaces within 60 days of installation.

D. Clean and wash prefinished surfaces with mild soap and water; rinse with clean water.

END OF SECTION

SECTION 07 54 23

THERMOPLASTIC MEMBRANE ROOFING

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:
   1. Fully adhered TPO **or PVC** roof membrane over insulating concrete roof fill.
   2. Walkway pads.

B. Related Sections:
   1. Section 03 52 16 - Insulating Concrete Roof Fill: Roof deck.
   2. Section 06 10 53 - Miscellaneous Rough Carpentry: Wood nailers.
   3. Section 07 62 00 - Sheet Metal Flashing and Trim: Sheet metal flashing and counterflashing.

1.02 REFERENCES

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

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

C. Single Ply Roofing Institute:
   1. SPRI ES-1 - Wind Design Standard for Edge Systems used for Low Slope Roofing Systems.

D. Underwriters Laboratories Inc.:
   1. UL - Fire Resistance Directory.
   2. UL 723 - Tests for Surface Burning Characteristics of Building Materials.
   3. UL 790 - Tests for Fire Resistance of Roof Covering Materials.

1.03 SYSTEM DESCRIPTION

A. Thermoplastic Sheet Membrane Roofing System: One ply fully adhered with base flashing. System meeting “Cool Roof” aged requirements for Solar Reflectance:
   1. **Membrane Type: Contractor’s option of TPO or PVC, provided the system meets all performance and warranty requirements of this Section.**

B. Low Sloped Roofs: Roofs with slopes of 2:12 or less shall have Solar reflectance of not less than 0.64 when tested in accordance with ASTM E903, at 3-years after installation under normal conditions.

C. Steep Sloped Roofs: Roofs with slopes steeper than 2:12: Solar reflectance of not less than 0.16 when tested according to ASTM E903, at 3-years after installation under normal conditions

D. Roof Deck:
   1. Insulating Concrete Roof Fill: NRCA Specification Plate: Lightweight insulating concrete deck - TP-N-A-S

1.04 PERFORMANCE REQUIREMENTS

A. Wind Uplift: In accordance with ASCE 7 requirements. Refer to Structural Drawings for wind design criteria.

B. Flashings and Fastening: Comply with requirements of Section 07 62 00 - Sheet Metal Flashing and Trim. Provide base flashings, perimeter flashings, detail flashings and 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.
   2. NRCA Roofing and Waterproofing Manual for construction details and recommendations.
   3. SMACNA Architectural Sheet Metal Manual for construction details.

1.05 SUBMITTALS

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

B. Shop Drawings: Indicate joint and termination detail conditions for membrane and base flashing. Indicate membrane layout and seam locations.

C. Product Data: Submit characteristics on membrane materials, adhesives, seaming materials, flashing materials, walkway pads, and any other roofing products specified.

D. Samples:
   1. Submit two samples of roof membrane, 12 x 12 inch (304.8 mm) in size, including lap seam.
   2. Submit 6 screw fasteners of each type, length, and finish.

E. Manufacturer's Installation Instructions: Submit special precautions required for seaming membrane.

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

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

H. Research/Evaluation Reports: Evidence of roofing system's compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.

I. Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.

1.06 QUALITY ASSURANCE

A. Perform Work in accordance with NRCA Roofing and Waterproofing Manual and manufacturer's instructions.

B. Fire Rated Roof Construction: Rating as indicated on Drawings.
   1. Tested Rating: Determined in accordance with ASTM E119.

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

D. Apply label from agency approved by authority having jurisdiction to identify each roof assembly component.

1.07 QUALIFICATIONS

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

B. Installer: Experienced and specialized in installing roofing similar to that required for this Project and who is approved, authorized, or licensed by the roofing system manufacturer to install manufacturer's product.

1.08 PRE-INSTALLATION MEETINGS

A. Section 01 31 19 - Project Meetings: Schedule and coordinate pre-installation meeting that 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. 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 preinstallation 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. Preinstallation Conference: Before installing roofing system, conduct meeting at Project site. Notify participants at least 5 working days before meeting.
   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. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
   4. Review loading limitations of deck during and after roofing.
   5. Review flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing.
   6. Review governing regulations and requirements for insurance, certificates, and inspection and testing, if applicable.
   7. Review temporary protection requirements for roofing system during and after installation.
   8. Review roof observation and repair procedures after roofing installation.

9. Document proceedings, including corrective measures or actions required, and furnish copy of record to each participant.

1.09 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

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

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

1.10 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements: Environmental conditions affecting products on site.

B. Do not apply roofing membrane during inclement weather without proper weather protection.

C. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

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.

B. Coordinate Work with installation of associated roof penetrations and metal flashings, as Work of this section proceeds.

1.12 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for warranties.

B. Manufacturer’s Warranty: Furnish 15-year manufacturer's no dollar limit, full system warranty including coverage of materials and installation resulting from failure to resist penetration of moisture.

C. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering Work of this Section, including membrane roofing, sheet flashing, fasteners, and vapor retarders, if any, for the following warranty period:
   1. Warranty Period: 2-years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 SINGLE PLY ROOFING - FULLY ADHERED

A. **TPO** Manufacturers:
   1. EverGuard TPO, GAF, www.gaf.com.

2. JM TPO, Johns Manville, www.specjm.com
3. SureWeld TPO, Carlisle, www.carlisle-syntec.com.
4. Ultra-Ply TPO, Firestone.
5. Substitutions: Section 01 60 00 - Product Requirements.

B. **PVC Manufacturers:**
1. **Sarnafil, Sika Corporation, www.sika.com.**
2. **JM PVC, Johns Manville, www.specjm.com**
3. **Substitutions: Section 01 60 00 - Product Requirements.**

C. Fleece-Back Membrane: TPO, polyester-reinforced, 60 mils (1.524 mm) thick; white color; conforming to the following criteria:

Breaking Strength	AST M D751	330 lbf
Elongation	ASTM D412	30 percent
Seam Strength	ASTM D638	120 lbf
Tear Strength	ASTM D624 ASTM D1004	70 lbf
Permeance	ASTM D96	0.01 Perms
Water Absorption	ASTM D570	0.7 percent
Fleece Backing	Polyester fabric	9 oz per sy.

D. **Fleece-Back PVC Membrane: Polyvinyl Chloride (PVC) with KEE (Ketone Ethylene Ester), polyester-reinforced, fleece-backed, 60 mils (1.524 mm) thick; white color.**
1. **Performance: Minimum Solar Reflectance Index (SRI) of 78 per ASTM E1980.**
2. **PVC Specific Criteria:**
a. **Breaking Strength (ASTM D751): 200 lbf minimum.**
b. **Tear Strength (ASTM D751): 45 lbf minimum.**
c. **Low-Temperature Flex: -40 degrees per ASTM D2136.**

2.02 COMPONENTS

A. General:
1. Base Flashing: Shall be same material as the white TPO **or PVC** fleece-backed adhered 50 mil (1.27 mm) minimum and be installed using the design principles set forth in the National Roofing Association manual.
a. Termination Bars: Aluminum bars, 1 inch (25.4 mm) wide, pre-punched for fasteners 6 inches (152.4 mm) oc.
b. Parapet Caps: Prefinished metal, as specified in Section 07 62 00.
c. Counterflashings: Stainless steel, as specified in Section 07 62 00.
d. Prefabricated Roof Specialties: As specified in Section 07 71 00.
e. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, thickness, and color as sheet membrane.
f. Bonding Adhesives: Manufacturer's standard bonding adhesives for membrane and flashings.
g. Fasteners: Factory-coated steel fasteners and metal plates meeting corrosion-resistance provisions of FM 4470, designed for fastening sheet to substrate, and acceptable to roofing system manufacturer.

h. Fascia, and Edge Flashings: Manufacturer's 2-piece compression edge, 24 gage thick, galvanized G90; prefinished with two coat fluoropolymer coating with minimum 70 percent polyvinylidene fluoride resin.
   1) Color as indicated or selected by Architect from manufacturer's full custom range.

2. Counterflashings: As specified in Section 07 62 00.
   a. Walkway Pads: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads, approximately 3/32 inch (2.38 mm) thick, of materials acceptable to roofing system manufacturer. Provide at the top and bottom of all roof ladders, around the front and sides all roof hatches, around all serviceable rooftop equipment, and along the full width of all doors leading onto roof areas.
   b. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, seam calk, termination reglets, and other accessories recommended by roofing system manufacturer for intended use.
      1) Over insulating concrete deck.
3. Fleece-backed membrane as specified.
4. Roof Insulation: Integral with roof deck and provided under Section 03 52 16 - Insulating Concrete Roof Fill.
5. Roofing Protection Board: Not applicable for insulating concrete unless required by the membrane manufacturer.

PART 3 EXECUTION

3.01 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 supported and secure.

D. Verify deck is clean and smooth, free of depressions, waves, or projections, properly sloped to drains or eaves, and suitable for installation of roof system.

E. Verify deck surfaces are dry and free of snow or ice.

F. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, and wood nailers are in place.

G. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
   1. Conduct fastener pull-out tests to verify that lightweight insulating concrete meets membrane manufacturer's requirements.
   2. Roofing contractor shall provide to the owners testing laboratory the roofing system manufacturers requirements for dryness, walkability, and compressive strength of installed lightweight insulating concrete prior to roofing installation.

H. Verify that wood nailers have been anchored in accordance with SPRI ES-1 requirements and can resist a minimum force of 300 plf in any direction.

I. Moisture Testing: Take moisture readings for the lightweight insulating concrete deck using moisture meter approved by the roofing manufacturer. Do not install roofing system over deck not meeting dryness requirements as determined by the roofing manufacturer.

3.02 PREPARATION

A. Clean substrate of dust, debris, and other substances detrimental to roofing installation according to roofing system 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.

C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of the roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roof areas.

3.03 MEMBRANE INSTALLATION

A. Install roofing membrane over insulating concrete roof fil in accordance with roof manufacturer’s written instructions. Unroll roofing membrane and allow to relax before installing.
   1. Install sheet according to ASTM D5082.
   2. Start installation of roofing membrane in presence of roofing system manufacturer’s technical personnel.
   3. Apply adhesive at rate recommended by membrane manufacturer.
   4. Roll out membrane, free from air pockets, wrinkles, or tears. Roll fleece back membrane sheet into place without stretching per manufacturers guidelines.
   5. Accurately align roofing membrane sheets and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
   6. Apply roofing membrane with side laps shingled with slope of roof deck where possible.
   7. Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer’s written instructions to ensure a watertight seam installation. Seams shall be welded daily, no exceptions.
      a. Test lap edges with probe to verify seam weld continuity.
      b. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
      c. Repair tears, voids, and lapped seams in roofing membrane that does not meet requirements.
      d. **Note: TPO and PVC materials are chemically incompatible; do not intermix membranes or accessories within the same roof area.**
   8. Mechanically fasten membrane around all perimeters, at the base of walls, drains, curbs, vents, and other roof penetrations. Install continuous aluminum termination bar where fully-adhered membrane extends up vertical walls or parapets. Locate as recommended by the membrane manufacturer.
   9. Apply water block sealant under deck drain flange at deck drains and securely seal roofing membrane in place with clamping ring.
   10. Seal membrane around roof penetrations.
   11. Install T-patches over all T-seams.

12. Perimeter Edge: For edge conditions, including parapets, install two-piece compression edge in accordance with manufacturer's instructions to meet SPRI ES-1 requirements.
13. Install and weld pre-fabricated boots on all pipe penetrations.

B. Base Flashing Installation:
1. Install sheet flashings and preformed flashing accessories and adhere to substrate according to roofing system manufacturer's written instructions.
2. Apply bonding adhesive to substrate and underside of flashing sheet at required rate and allow to partially dry. Do not apply bonding adhesive to seam area of flashing.
3. Flash penetrations and field-formed inside and outside corners with sheet flashing as recommended by manufacturer.
4. Clean seam areas, overlap sheets, and firmly roll flashings into the adhesive. Weld side and end laps to ensure a watertight seam installation.
5. Test lap edges with probe to verify seam weld continuity.
6. Terminate and apply water block seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.04 WALKWAY PADS INSTALLATION.

A. Install walkway pads in locations indicated.

B. Adhere walkway pads to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.05 FIELD QUALITY CONTROL

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

B. Verify field strength of seams a minimum of twice daily, according to manufacturer's written instructions, and repair seam sample areas.

C. Site Visits: Manufacturer or manufacturer's representative shall visit the project during process minimum of one time per week for the duration of the installation.

D. Final Roof Inspection: Arrange for membrane manufacturer's technical personnel to inspect roofing installation on completion and submit report to the General Contractor and the Architect.
1. Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.

3.06 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 conform to their documented instructions.
1. Repair or replace defaced or disfigured finishes caused by Work of this section.

C. Pressure wash clean the entire roof area when the project is complete. Utilize minimal pressure as per membrane manufacturer's guidelines.

3.07 PROTECTION OF INSTALLED CONSTRUCTION

A. Section 01 70 00 - Execution and Closeout Requirements: Protecting installed construction.
   1. Protect building surfaces against damage from roofing work.

B. Where rolling traffic such as wheelbarrows, or more than occasional foot traffic must continue over finished roof membrane, protect surfaces using temporary plywood walkways.

C. During installation any roofing system subjected to encroachment of water underneath the membrane will require membrane,through-drying of deck system, and replacement of membrane.

END OF SECTION

SECTION 07 61 00

MANUFACTURED SHEET METAL ROOFING

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Structural standing seam metal roofing for conventional structure.
   2. Board insulation under metal roofing.
   3. Roofing underlayment.
   4. Metal fascias with continuous fastening cleats, flashings, and trim.

B. Related Sections:
   1. Section 06 10 53 - Miscellaneous Rough Carpentry: Wood blocking.
   2. Section 07 62 00 - Sheet Metal Flashing and Trim.
   3. Section 07 90 00 - Joint Protection.
   4. Section 13 34 19 - Metal Building Systems: Matching non-insulated roofing system for metal building.

1.02 REFERENCES

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

B. ASTM International:
   1. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
   2. ASTM A792 Standard Specification for Steel Sheet, 55% Aluminum-Zinc Ally-Coated by the Hot-Dip Process (Galvalume)
   3. ASTM D226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
   4. ASTM E1680 Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel Systems
   5. ASTM E1646 Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference.

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

D. Sheet Metal and Air Conditioning Contractors:
   1. SMACNA - Architectural Sheet Metal Manual.

E. Underwriters Laboratories Inc.:
   1. UL 580 - Tests for Uplift Resistance of Roof Assemblies.

1.03 DESIGN REQUIREMENTS

A. Roof Loads: Design to resist live and dead loads with 1/240 maximum deflection.
   1. Live Loads: As indicated on Drawings.
   2. Dead Loads: Actual weight of materials incorporated into Work.

B. Wind Loads: Design and size components to withstand positive and negative wind loads, including increased loads at building corners.
   1. Design Wind Load: As calculated in accordance with applicable code and ASCE 7.

C. Air Infiltration: Limit air leakage through roof assembly to 1.1 cfm/gross leakage of wall area, measured at reference differential pressure across assembly of 6.24 psf as measured in accordance with ASTM E1680.

D. Water Leakage: None, when measured in accordance with ASTM E1646 with test pressure of 8 psf.

E. Exterior Components: Accommodate the following without damage to system, components or deterioration of seals.
   1. Movement within system.
   2. Movement between system and perimeter framing components.
   3. Dynamic loading and release of loads.
   4. Deflection of structural support framing.
   5. Expansion and contraction from temperature range of 170 degrees Fahrenheit (76.67 degrees Celsius) over 12 hour period.

1.04 SUBMITTALS

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

B. Shop Drawings:
   1. Indicate metal roofing panel profiles, jointing patterns, jointing details, fastening methods, flashings, terminations, and installation details.
   2. Submit additional information as required by manufacturer for special weather-tightness warranty.

C. Product Data:
   1. Submit data on metal types, finishes, and characteristics.
   2. Submit data on roofing panel manufacturer’s recommended corrosion-resistant screw fasteners, including recommended spacing(s) for the specific project.
   3. Submit data on roof insulation and underlayment.
   4. Submit color charts for finish selection.

D. Samples:
   1. Submit two samples illustrating metal roofing mounted on plywood backing illustrating typical seam profile and construction. Include clips, fasteners, seals, and other accessories.
   2. Submit two samples illustrating metal finish color.

E. Design Data:

1. Submit structural design calculations for metal roofing signed and sealed by professional engineer.

F. Manufacturer's Installation Instructions: Submit instructions including special procedures for roofing penetrations, flashings, and perimeter conditions requiring special attention.

G. Manufacturer's Certification: Certify Products meet or exceed specified requirements.

H. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for the following:
1. Metal Roof Panels: Include reports for air infiltration, water penetration, and structural performance.

1.05 QUALITY ASSURANCE

A. Perform Work in accordance with SMACNA Architectural Sheet Metal Manual and The NRCA Roofing and Waterproofing Manual.

1.06 QUALIFICATIONS

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

B. Installer: Company specializing in performing work of this section with minimum years' experience and approved by manufacturer.

C. Design sheet metal roofing system under direct supervision of Professional Engineer experienced in design of this Work and licensed in the State of Texas.

1.07 PRE-INSTALLATION MEETINGS

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

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

1.08 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

B. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

C. Prevent contact with materials causing discoloration or staining.

1.09 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.10 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for warranties.

B. Special Finish Warranty: Submit a written warranty, signed by manufacturer, covering failure of the factory-applied exterior finish on metal wall panels within the specified warranty period and agreeing to repair finish or replace wall panels that show evidence of finish deterioration. Deterioration of finish includes, but is not limited to, color fade, chalking, cracking, peeling, and loss of film integrity.
   1. Finish Warranty Period: 20 years from date of Substantial Completion.

C. Special Weather-tightness Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace metal roof panel assemblies that fail to remain weathertight, including leaks, within specified warranty period.
   1. Weathertight Warranty Period: 10 years from date of Substantial Completion.
   2. Include 2-year installer warranty as required by manufacturer for weathertight warranty.

PART 2 PRODUCTS

2.01 MANUFACTURED SHEET METAL ROOFING

A. Manufacturers:
   1. AEP-Span www.aep-span.com
   2. Architectural Building Components (ABC) www.archmetalroof.com
   3. Berridge Manufacturing Co. www.berridge.com
   4. Centria www.centria.com
   5. Metal Building Components, Inc. www.mbci.com
   6. Petersen Aluminum Corp. www.pac-clad.com
   7. **Sheffield Metals International; www.sheffieldmetals.com**
   8. Substitutions: Section 01 60 00 - Product Requirements.

B. Basis-of-Design: Berridge Zee-Lock Panel with zinc-coated (galvanized) Zee-Clips and vinyl weatherseal.

C. Structural Standing Seam Metal Roofing: Factory formed metal roofing panel system with concealed fasteners, designed for installation over conventional framing.
   1. Panel Materials: Pre-finished galvanized steel sheet, 24 gage base metal thickness.
   2. Panel Width: Nominal 16 inches (406.4 mm).
   3. Panel Profile: Flat panel with striated surface.
   4. Joint Type: Single folded.
   5. Seam Type: Sanding seam, field locked.
   6. Seam Height: 2 inches (50.8 mm).
   7. Color: As selected.

2.02 SHEET METAL MATERIALS

A. Pre-Finished Galvanized Steel Sheet: ASTM A792/A792M; Structural Quality; AZ50 or AZ55 aluminum-zinc alloy-coated steel.

1. Base Metal: ASTM A792/A792M; Structural Quality; AZ50 or AZ55 aluminum-zinc alloy-coated steel.
2. Exposed Finish: Minimum two coat fluoropolymer coating with minimum 70 percent polyvinylidene fluoride resin.
3. Unexposed Finish: Manufacturer's standard coating.

2.03 UNDERLAYMENT

A. Plastic Faced Waterproofing Membrane: Self-adhering, high-temperature sheet; 40-mils thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
   1. Thermal Stability: Stable after testing at 240 degrees Fahrenheit (115.56 degrees Celsius); ASTM D 1970.
   2. Low Temperature Flexibility: Passes after testing at minus 20 degrees Fahrenheit (-6.67 degrees Celsius); ASTM D 1970.
   3. Available Products:
      a. Dri-Start "HR."; Carlisle Coatings & Waterproofing www.carlisle-ccw.com
      b. Grace Ultra; W. R. Grace, & Co. www.grace.com
      c. Perma-Seal PE.; Henry Company www.henry.com
      d. MetShield; Metal-Fab Manufacturing, LLC. www.met-fab.com
      e. WIP 300HT; TC MiraDRI. www.mirafi.com

2.04 INSULATION

A. Polyisocyanurate Board Insulation: Unfaced, preformed, rigid, cellular, polyisocyanurate thermal insulation complying with ASTM C591, Type 2, with aged thermal-resistance values for 1-inch thickness of 6.2 degrees Fahrenheit (-14.33 degrees Celsius) x h x sq. ft./Btu at 75 degrees Fahrenheit (23.89 degrees Celsius).
   1. Total insulation thickness: As required for R-values and thicknesses as indicated in the drawings.

B. Attachment Method: Two-component, low-rise polyurethane foam adhesive specifically formulated for bonding rigid insulation to galvanized steel roof decks.

2.05 ACCESSORIES

A. Individual Standing Seam Clips: galvanized steel clips, height as required to clear insulation thickness, designed for puddle-weld attachment to steel deck flutes.
   1. Clip Attachment: Clips shall be specifically designed for structural puddle-welding to the top flutes of the metal deck.

B. Vinyl Weatherseal: Manufacturer's standard vinyl seal, profile as required to fit panel seams.

C. Fasteners: Puddle welds per AWS D1.3. Mechanical screw fasteners are permitted only for secondary trim-to-trim attachments not visible from the building interior.

D. Sealant: As specified in Section 07 90 00.

E. Sealing Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape.

F. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat, unless otherwise indicated. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.06 FABRICATION

A. Form sections shape as indicated on Drawings, accurate in size, square, and free from distortion or defects.

B. Fabricate fascia, trim, flashing, and other metal components from same material as metal roof panels. Provide exposed metal surfaces with same finish as exposed face of metal roof panels.

C. Fabricate fastening cleats of same material as sheet, to interlock with sheet. Cleats shall be continuous.

D. Fabricate starter strips of same material as sheet, continuous, to interlock with sheet.

E. Form roof panels in single length sheets, continuous from eave to ridge.

F. Hem exposed edges on underside 1/2 inch (12.7 mm); miter and seam corners.

G. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

H. Fabricate corners from one piece with minimum 18-inch long legs; seam for rigidity, seal with sealant.

I. Fabricate vertical faces with bottom edge formed outward 1/4 inch (6.35 mm) and hemmed to form drip.

PART 3 EXECUTION

3.01 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.

B. Steel Deck Substrate:
   1. Inspect roof deck to verify deck is clean and smooth, free of depressions, waves, or projections, and properly sloped to eaves.
   2. Cleanliness: Verify that the top surface of the Epic Deck is free of processing oils, dust, or moisture. Any residue that could impair the bond of the polyurethane adhesive must be removed using a manufacturer-approved solvent or cleaning agent.
   3. Verify deck is dry and free of snow and ice. Verify substrate joints are solidly supported and fastened.
   4. Verify wood nailers are installed and correctly located.

C. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, reglets are in place, and nailing strips located.

D. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 INSTALLATION – SECONDARY STRUCTURAL SUPPORTS

A. Where secondary structural supports for roofing panels are required or indicated, install secondary structural supports in accordance with manufacturer's recommendations and approved shop drawings.

B. Align supports with top surface in plane, uniformly sloped to valleys and eaves.

C. Install supports spaced maximum feet on center. Provide support at roof panel end laps.

D. Secure supports to building structural frame using mechanical fasteners. Welding is not permitted.

3.03 INSTALLATION - ROOF INSULATION

A. Adhesive Application:
   1. Method: Apply insulation adhesive in continuous ribbons (beads) to the top flutes of the metal deck.
   2. Spacing: Bead spacing shall comply with the most stringent requirements of the manufacturer's wind uplift testing for the project's wind zone (typically 6 inches o.c. at corners/perimeters and 12 inches o.c. in the field).
   3. Ribbon Size: Ensure ribbons are sized to achieve a minimum 1-inch wide contact area when the insulation board is set.

B. Setting Boards:
   1. Timing: Place insulation boards into the adhesive while it is still "tacky" and before it begins to skin over.
   2. Compression: Immediately walk-in the boards or use weighted rollers to ensure full contact with the adhesive ribbons.

C. Coordination with Puddle-Welded Clips:
   1. Fitting: Neatly cut and notch insulation boards around the puddle-welded standoff clips.
   2. Gap Control: Ensure gaps around clips do not exceed 1/4 inch; fill any excessive voids with spray-applied polyurethane foam to maintain thermal continuity.

D. Install insulation with long joints in continuous straight lines, perpendicular to roof slope, with end joints staggered between rows.
   1. Cut and fit insulation within 1/4 inch (6.35 mm) of nailers, projections, and penetrations.

E. Where overall insulation thickness is 2-inches or greater, install insulation in two layers with joints of second layer staggered from joints of first layer a minimum of 6 inches (152.4 mm) in each direction.

3.04 INSTALLATION - UNDERLAYMENT

A. Apply one layer plastic-faced waterproof membrane underlayment over entire roof area as follows:
   1. Adhere underlayment to faced insulation.

2. Install parallel to slope with joints lapped minimum 2 inches (50.8 mm).
3. Stagger end joints minimum 8 inches (203.2 mm).
4. Install perpendicular to slope with edges weather lapped minimum 2-inches.

3.05 INSTALLATION - STANDING SEAM METAL ROOFING

A. Conform to SMACNA, NRCA, and manufacturer's instructions.

B. Install continuous Zee Ribs to secure roof panels without deforming roof panels.

C. Install roofing panels with long dimension perpendicular to eaves.

D. Install vinyl weather seal in seam to achieve manufacturer's weather-tightness warranty.

E. Machine lock standing seam between adjacent roofing panels. Hand lock joints where machine locking is not possible.

F. Accessories: Install components required for a complete roof assembly, including trim, copings, fasciae, continuous fastening cleats, ridge closures, flashings, sealants, gaskets, fillers, closure strips, and similar items.

G. Separate dissimilar metals by painting each metal surface in area of contact with a bituminous coating, by applying rubberized-asphalt underlayment to each metal surface, or by other permanent separation as recommended by manufacturers of dissimilar metals.

H. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of panel assemblies. Provide types of gaskets, fillers, and sealants indicated or, if not otherwise indicated, types recommended by panel manufacturer.

3.06 PROTECTION OF INSTALLED CONSTRUCTION

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

B. Do not permit traffic over unprotected roof surface.

END OF SECTION

SECTION 08 14 16

FLUSH WOOD DOORS

PART 1- GENERAL

1.01 SUMMARY

A. Section includes:
   1. Flush wood doors with plastic laminate faces.

B. Related Sections:
   1. Section 08 11 13 - Standard Steel Doors and Frames: Steel frames.
   2. Section 08 71 00 - Door Hardware: Finish hardware requirements for doors.
   3. Section 08 80 00 - Glazing: Glass lights set in door faces.

1.02 REFERENCES

A. ASTM International:
   1. ASTM E413 - Standard Classification for Rating Sound Insulation.

B. Architectural Woodwork Institute:
   1. AWI - Quality Standards Illustrated.

C. National Electrical Manufacturers Association:
   1. NEMA LD 3 - High Pressure Decorative Laminates.

D. National Fire Protection Association:
   1. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2022.

1.03 SUBMITTALS

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

B. Shop Drawings: Illustrate door opening criteria, elevations, sizes, types, swings, undercuts required, special beveling, special blocking for hardware, factory machining criteria, identify cutouts for glazing and louvers.

C. Product Data: Submit information on door core materials and construction.

D. Samples:
   1. Submit two samples of door construction, 12 x 12 inch (304.8 mm) in size, cut from top corner of door.
   2. Submit two samples of plastic laminate illustrating laminate pattern and color.
   3. Submit two samples of lite opening frames, 6 inches (152.4 mm) long, for each material, type, and finish required.

E. Manufacturer's Installation Instructions: Submit special installation instructions.

1.04 QUALITY ASSURANCE

A. Perform Work in accordance with AWI Quality Standard Section 1300, Custom Grade.

B. Finish doors in accordance with AWI Quality Standard Section 1500.

C. Fire Rated Door Construction: Conform to NFPA 252.

D. Attach label from agency approved by authority having jurisdiction to identify each fire rated door.

1.05 QUALIFICATIONS

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

1.06 DELIVERY, STORAGE, AND HANDLING

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

B. Package, deliver and store doors in accordance with AWI Section 1300.

C. Accept doors on site in manufacturer's packaging. Inspect for damage.
   1. Break seal on site to permit ventilation.

1.07 PROJECT CONDITIONS

A. Do not deliver or install doors until building is enclosed, wet work is complete, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.

1.08 COORDINATION

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

B. Coordinate Work with door opening construction, door frame and door hardware installation.

1.09 WARRANTY

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

B. Include coverage for delamination, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

C. Furnish manufacturer's "Life of Installation" warranty for interior doors.

PART 2 - PRODUCTS

2.01 FLUSH WOOD DOORS

A. Manufacturers:
   1. Algoma Hardwoods Inc. www.algomahardwoods.com
   2. Eggers Industries www.eggersind.com
   3. Graham Manufacturing Corp. www.grahamdoors.com
   4. IPIK Door Company www.ipikdoor.com
   5. Marshfield Door Systems Inc. www.marshfielddoors.com
   6. VT Industries www.vtindustries.com
   7. Substitutions: Section 01 60 00 - Product Requirements.

B. Product Description: Solid core flush wood doors; 1-3/4 inches (44 mm) thick, five ply construction, plastic laminate facing material; fire and acoustic rated as indicated on Drawings.

2.02 COMPONENTS

A. Plastic Laminate Doors: Solid core, AWI Section 1300, core as follows:
   1. Non-Rated: ~~**Solid stave wood core.**~~ **Structural Composite Lumber core.**
   2. 20- and 45-Minute Rating: ~~**Solid stave wood core.**~~ **Structural Composite Lumber core.**
   3. 60-Minute Rating: Mineral core.
   4. 90-Minute Rating: Mineral core.

B. Acoustical Doors: Not applicable.

C. Plastic Laminate Facing (Interior): NEMA LD 3, General Purpose Type, 0.050-inch-thick, type as indicated on Drawings.

D. Cross Banding Behind Laminate Finish: 1 ply; manufacturer’s standard construction.

E. Facing Adhesive: Type II - water resistant.

2.03 ACCESSORIES

A. Glazing Stops - Plastic Laminate-Clad Doors:
   1. Rolled steel, factory primed frames.

2.04 FABRICATION

A. Fabricate doors in accordance with AWI Quality Standards requirements.

B. Furnish lock blocks at lock edge and top of door for hardware reinforcement.

C. Vertical Exposed Edge of Stiles: Hardwood painted or stained to match laminate for plastic laminate doors.

D. Factory machine doors for finish hardware in accordance with hardware requirements and dimensions. Do not machine for surface hardware. Furnish solid blocking for through bolted hardware.

E. Factory fit doors for frame opening dimensions identified on shop drawings.

F. Provide edge clearances in accordance with AWI 1300.

2.05 EXTRA MATERIALS

A. Section 01 70 00 - Execution and Closeout Requirements: Spare parts and maintenance products.

B. Furnish direct to the Owner an additional two full 4’ x 8’ sheets of each plastic laminate color used for flush wood doors in the project. Roll and box sheets together for Owner storage.

C. Obtain a receipt from the Owner.

PART 3 - EXECUTION

3.01 EXAMINATION

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

B. Verify opening sizes and tolerances are acceptable.

C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

3.02 INSTALLATION

A. Install doors in accordance with AWI Quality Standards requirements.

B. Trim non-rated door width by cutting equally on both jamb edges.

C. Trim door height by cutting bottom edges to maximum of 3/4 inch (19.05 mm).
   1. Trim fire door height at bottom edge only, in accordance with fire rating requirements.

D. Machine cut doors for hardware installation.

E. Coordinate installation of doors with installation of frames specified in Section 08 11 13 and hardware specified in Section 08 71 00.

F. Coordinate installation of glass and glazing specified in Section 08 80 00.

3.03 INSTALLATION TOLERANCES

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

B. Conform to AWI requirements for fit and clearance tolerances.

C. Conform to AWI Section 1300 requirements for maximum diagonal distortion.

3.04 ADJUSTING

A. Section 01 70 00 - Execution and Closeout Requirements: Testing, adjusting, and balancing.

B. Adjust door for smooth and balanced door movement.

C. Adjust closer for full closure.

END OF SECTION

SECTION 08 71 00
DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Hardware for wood, aluminum, hollow metal, and miscellaneous doors as noted.

B. Hardware for fire-rated doors.

C. Thresholds.

D. Smoke and draft control seals.

E. Weatherstripping and gasketing.

1.02 RELATED REQUIREMENTS

A. Section 06 20 00 - Finish Carpentry.

B. Section 08 11 13 - Hollow Metal Doors and Frames.

C. Section 08 14 16 - Flush Wood Doors.

D. Section 08 43 13 - Aluminum-Framed Storefronts:

E. Division 28 – Security Access

1.03 REFERENCE STANDARDS

A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design 2010.

B. ASTM E283/E283M - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen 2019.

C. DHI (H&S) - Sequence and Format for the Hardware Schedule 2019.

D. DHI (KSN) - Keying Systems and Nomenclature 2019.

E. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames 2004.

F. DHI WDHS.3 - Recommended Locations for Architectural Hardware for Flush Wood Doors 1993; also in WDHS-1/WDHS-5 Series, 1996.

G. ICC (IBC) - International Building Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

H. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.

I. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

J. NFPA 80 - Standard for Fire Doors and Other Opening Protectives 2022.

K. NFPA 101 - Life Safety Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

L. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives 2022.

M. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies 2022.

N. TDI - Texas Department of Insurance.

O. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on.

B. Sequence installation to ensure facility services connections are achieved in an orderly and expeditious manner.

C. Preinstallation Meeting: Convene a preinstallation meeting one week prior to commencing work of this section; require attendance by affected installers and the following:
   1. Architect.
   2. Hardware Supplier’s Architectural Hardware Consultant (AHC).
   3. Hardware Installer.
   4. Owner's Security Consultant.

D. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.

E. Keying Requirements Meeting:
   1. Schedule meeting at project site prior to Contractor occupancy.
   2. Attendance Required:
      a. Contractor.
      b. Owner.
      c. Hardware Supplier’s Architectural Hardware Consultant (AHC).
      d. Door Hardware Installer.
      e. Owner's Security Consultant.
      f. Cylinder Manufacturer’s Keying Consultant
   3. Agenda:
      a. Establish keying requirements.
      b. Verify locksets and locking hardware are functionally correct for project requirements.
      c. Verify that keying and programming complies with project requirements.
      d. Establish keying submittal schedule and update requirements.
   4. Incorporate "Keying Requirements Meeting" decisions into keying submittal upon review of door hardware keying system including, but not limited to, the following:
      a. Access control requirements.
      b. Key control system requirements.
   5. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.
   6. Deliver established keying requirements to manufacturers.

1.05 SUBMITTALS

A. See Division 1 - Administrative Requirements for submittal procedures.

B. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions, finishes, and dimensions and profiles of individual components.

C. Shop Drawings - Door Hardware Schedule: A detailed listing that includes each item of hardware to be installed on each door.
   1. Prepared by or under supervision of Architectural Hardware Consultant (AHC).
   2. Comply with DHI (H&S) using door numbering scheme and hardware set numbers as indicated in Contract Documents.
      a. Submit in vertical format.
   3. List groups and suffixes in proper sequence.
   4. Include complete description for each door listed.
   5. Include manufacturer's and product names, and catalog numbers; include functions, types, styles, sizes and finishes of each item.
   6. Include account of abbreviations and symbols used in schedule.

D. Shop Drawings - Electrified Door Hardware: Include diagrams for power, signal, and control wiring for electrified door hardware that include details of interface with building safety and security systems. Provide elevations and diagrams for each electrified door opening as follows:
   1. Prepared by or under supervision of Architectural Hardware Consultant (AHC) and/or Electrified Hardware Consultant (EHC).

2. Elevations: Include front and back elevations of each door opening showing electrified devices with connections installed and an operations narrative describing how opening operates from either side at any given time.
3. Diagrams: Include point-to-point wiring diagrams that show each device in door opening system with related colored wire connections to each device.

E. Samples for Verification:
1. If requested, submit one (1) sample of any hardware items illustrating style, color, and finish.
2. Architect will return full-size samples to Contractor.
3. Include product description with samples.

F. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

G. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
1. Bitting List: List of combinations as furnished.

H. Keying Schedule:
1. Submit three (3) copies of Keying Schedule in compliance with requirements established during Keying Requirements Meeting unless otherwise indicated.

I. Warranty: Submit manufacturer's warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

J. Maintenance Materials and Tools: Furnish the following for Owner's use in maintenance of project.
1. See Division 1 - Product Requirements, for additional provisions.
2. Tools: One set of each special wrench or tool applicable for each different or special hardware component, whether supplied by hardware component manufacturer or not.

1.06 QUALITY ASSURANCE

A. Standards for Fire-Rated Doors: Maintain one copy of each referenced standard on site, for use by Architect and Contractor.

B. Installer Qualifications: Company specializing in performing work of the type specified for commercial door hardware with at least three years of documented experience.

C. Supplier Qualifications: Company with certified Architectural Hardware Consultant (AHC) and Electrified Hardware Consultant (EHC) to assist in work of this section.

1.07 DELIVERY, STORAGE, AND HANDLING

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

1.08 WARRANTY

A. Manufacturer Warranty: Provide manufacturer warranty against defects in material and workmanship for period indicated, from Date of Substantial Completion. Complete forms in Owner's name and register with manufacturer.
1. Closers: Thirty Five, minimum.
2. Exit Devices: Five years, minimum.
3. Locksets and Cylinders: Five years, minimum.
4. Other Hardware: Two years, minimum.
5. Where the manufacturer’s standard warranty does not meet the above requirements, provide a letter of compliance from the manufacturer or the manufacturer’s representative for the owner’s use.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.

B. Door Pulls and Push Plates:

1. Provide door pulls and push plates on doors without a lockset, latchset, exit device, or auxiliary lock unless otherwise indicated.

C. Closers:
   1. Provide door closer on each exterior door, unless otherwise indicated.
   2. Provide door closer on each fire-rated and smoke-rated door.

D. Thresholds:
   1. Exterior Applications: Provide at each exterior door, unless otherwise indicated.

E. Smoke and Draft Control Seals:
   1. Provide gasketing for smoke and draft control doors (Indicated as "S" on Drawings) that complies with local codes, requirements of assemblies tested in accordance with UL 1784.

F. Weatherstripping and Gasketing:
   1. Provide weatherstripping on each exterior door at head, jambs, and meeting stiles of door pairs, unless otherwise indicated.
   2. Provide door bottom sweep on each exterior door, unless otherwise indicated.
   3. Fabricate as continuous gasketing, do not cut or notch gasketing material.

G. Electrically Operated and/or Controlled Hardware: Provide necessary power supplies, power transfer hinges, relays, and interfaces as required for proper operation; provide wiring between hardware and control components and to building power connection in compliance with NFPA 70.

H. Fasteners:
   1. Provide fasteners of proper type, size, quantity, and finish that comply with commercially recognized standards for proposed applications.
   2. Provide machine screws for attachment to reinforced hollow metal and aluminum frames.
   3. Provide stainless steel machine screws and lead expansion shields for concrete and masonry substrates.
   4. Provide wall grip inserts for hollow wall construction.
   5. Fire-Resistance-Rated Applications: Comply with NFPA 80.
   6. Concealed Fasteners: Do not use through or sex bolt type fasteners on door panel sides indicated as concealed fastener locations, unless otherwise indicated or required per manufacturer's testing requirements.

2.02 PERFORMANCE REQUIREMENTS

A. Provide door hardware products that comply with the following requirements:
   1. Applicable provisions of federal, state, and local codes.
      a. ICC (IBC).
      b. NFPA 101.
      c. Local codes as required.
   2. Accessibility: ADA Standards and ICC A117.1.
   3. Fire-Resistance-Rated Doors: NFPA 80, listed and labeled by qualified testing agency for fire protection ratings indicated, based on testing at positive pressure in accordance with NFPA 252 or UL 10C.
   4. Hardware Preparation for Steel Doors and Steel Frames: BHMA A156.115.
   5. Hardware Preparation for Wood Doors with Wood or Steel Frames: BHMA A156.115W.
   6. Regulatory and Operational Requirements:
      a. Provide hardware for all openings, whether specified or not, in compliance with NFPA Standard No. 80, proper operation and local building code requirements. Where required, provide only hardware which has been tested and listed by UL or FM for types and sizes of doors required and complies with requirements of door and door frame labels. Label hardware, as required, for compliance with pressure testing criteria as dictated in IBC.
      b. Provide hardware which meets or exceeds handicap accessibility per local building code requirements. Conform to the Americans with Disabilities Act (ADA)

of 1990 as amended by the D.O.J. September 15, 2010, as adopted by the Authority Having Jurisdiction (AHJ).

c. At smoke partition doors, verify with local jurisdiction that doors specified with gaskets and latching do not need to be self-closing. Refer to hardware sets and provide door closers if required.

7. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for the purpose specified.

2.03 HINGES

A. Manufacturers:
1. Listed in Door Hardware Schedule: Best
2. Substitutions: Hager, McKinney
3. Continuous hinges are as manufactured by Best. Equal products by ABH or Select are acceptable.

B. Butt Hinges: As applicable to each item specified.
a. Standard Weight Hinges: Minimum of two (2) permanently lubricated non-detachable bearings.
b. Heavy Weight Hinges: Minimum of four (4) permanently lubricated bearings on heavy weight hinges.
c. Template screw hole locations.
d. Pins: Easily seated, non-rising pins.
e. UL 10C listed for fire-resistance-rated doors.

C. Continuous Hinges: As applicable to each item specified.
a. Geared Continuous Hinges: As applicable to each item specified.
1) Non-handed.
2) UL 10C listed for fire-resistance-rated doors.
3) Sufficient size to permit door to swing 180 degrees

D. Finishes: See Door Hardware Schedule.

E. Grades:
1. Butt Hinges: Comply with BHMA A156.1 and BHMA A156.7 for templated hinges.
2. Continuous Hinges: Comply with BHMA A156.26, Grade 1.

F. Types:
1. Butt Hinges: Include full mortise hinges.
2. Continuous Hinges: Include geared hinges.

G. Options: As applicable to each item specified.

H. Quantities:
1. Butt Hinges: Three (3) hinges per leaves up to 90 inches in height. Add one (1) for each additional 30 inches in height or fraction thereof.
a. Hinge weight and size unless otherwise indicated in hardware sets:
1) For doors up to 36 inches wide and up to 1-3/4 inches thick provide hinges with a minimum thickness of 0.134 inch and a minimum of 4-1/2 inches in height.
2) For doors from 36 inches wide up to 42 inches wide and up to 1-3/4 inches thick provide hinges with a minimum thickness of 0.145 inch and a minimum of 4-1/2 inches in height.
3) For doors from 42 inches wide up to 48 inches wide and up to 1-3/4 inches thick provide hinges with a minimum thickness of 0.180 inch and a minimum of 5 inches in height.
4) For doors greater than 1-3/4 inches thick provide hinges with a minimum thickness of 0.180 inch and a minimum of 5 inches in height.
2. Continuous Hinges: One per door leaf.

I. Applications: At swinging doors.
1. Provide non-removable pins at out-swinging doors with locking hardware and all exterior doors.

J. Products:
1. Butt Hinges:
a. Concealed or Exposed bearing, five (5) knuckle.
b. Plain Bearing, Five (5) Knuckle.
2. Continuous Hinges:
a. Aluminum geared hinges.

2.04 BOLTS

A. Manufacturers:
1. Listed in Door Hardware Schedule: Trimco
2. Substitutions: ABH, Glynn Johnson, as approved per division 1

B. Properties:
1. Flush Bolts:
a. Pairs of Swing Doors: At inactive leaves, provide flush bolts of type as required to comply with code.
b. Manual Flush Bolts: Manually latching upon closing of door leaf.
1) Bolt Throw: 3/4 inch, minimum.
c. Provide automatic flush bolts where required by code.

C. Options:
1. Flush Bolts: In leading edge of door, one bolt into floor, one bolt into top of frame. Fire bolt if required or as specified.

D. Products:
1. Manual flush bolts.
2. Automatic flush bolts.

2.05 LOCK CYLINDERS

A. Manufacturers:
1. Listed in Door Hardware Schedule: Best
2. Substitutions: None – facility standard

B. Properties:
1. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.
a. Provide cylinders from same manufacturer as locking device.
b. Provide cams and/or tailpieces as required for locking devices.
c. Provide cylinders with appropriate format interchangeable cores where indicated.

C. Material:
1. Manufacturer's standard corrosion-resistant brass alloy.

D. Products:
1. Rim/mortise.

2.06 KEYS AND CORES

A. Manufacturers:
1. Listed in Door Hardware Schedule: Best Cormax Patented
2. Substitutions: None – facility standard

B. Properties: Complying with guidelines of BHMA A156.28.
1. Provide small format interchangeable core.
2. Provide keying information in compliance with DHI (KSN) standards.
3. Keying Schedule: Arrange for a keying meeting, with Architect, Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying complies with project requirements.
4. Keying: Master keyed.
a. Contractor to coordinate all hardware delivery schedules and end user key meetings.
5. Include construction keying and control keying with removable core cylinders.

6. Do not make brass construction cores and construction control and operating keys a part of Owner's permanent keying system, nor furnish in the same keyway (or key section) as Owner, permanent keying system.
7. Key to new keying system.
8. Supply keys in following quantities:
   a. Master Keys: 4 each.
   b. Construction Keys: 20 each.
   c. Construction Control Keys: 2 each.
   d. Control Keys: 2 each.
   e. Change Keys: 2 each for each keyed core.
   f. Spare Cylinder Cores: 20 each
9. Deliver keys with identifying tags to Owner by security shipment direct from manufacturer.
10. Permanent Keys and Cores: Stamped with applicable key marking for identification. Do not include actual key cuts within visual key control marks or codes. Stamp permanent keys "Do Not Duplicate."

2.07 MORTISE LOCKS

A. Manufacturers:
   1. Listed in Door Hardware Schedule: Best 45H
   2. Substitutions: None – facility standard

B. Properties:
   1. Mechanical Locks: Manufacturer's standard.
      a. Fitting modified ANSI A115.1 door preparation.
      b. Door Thickness Coordination Fitting 1-3/4 inch to 2-1/4 inch thick doors.
      c. Latch: Solid, one-piece, anti-friction, self-lubricating stainless steel or manufacturer’s standard anti friction as required.
         1) Latchbolt Throw: 3/4 inch, minimum.
      d. Auxiliary Deadlatch: One piece stainless steel, permanently lubricated.
      e. Backset: 2-3/4 inch.
      f. Lever Trim:
         1) Functionality: Allow the lever handle to move up to 45 degrees from horizontal position prior to engaging the latchbolt assembly.
         2) Strength: Locksets outside locked lever designed to withstand minimum 1,400 inch-lbs of torque. In excess of that, a replaceable part will shear. Key from outside and/or inside lever will still operate lockset.
         3) Spindle: Designed to prevent forced entry from attacking of lever.
         4) Independent spring mechanism for each lever.
            (a) Trim to be self-aligning and thru bolted.
   2. Electrified Locks: Same properties as standard locks, and as follows:
      a. Voltage: 24 VDC.
      b. Function: Electrically locked (Fail Safe) or unlocked (Fail Secure), as indicated for each lock in Door Hardware Schedule.

C. Finishes: See Door Hardware Schedule.
   1. Core Faces: Match finish of lockset.

D. Products: Mortise locks, including standard and electrified types.

2.08 EXIT DEVICES

A. Manufacturers:
   1. Listed in Door Hardware Schedule: Precision 2000
   2. Substitutions: None – facility standard

B. Properties:
   1. Touchpads: “T” style metal touchpads and rail assemblies with matching chassis covers end caps.
   2. Latch Bolts: Stainless steel deadlocking with 3/4 inch projection using latch bolt.

3. Cylinder: Include where cylinder dogging or locking trim is indicated.
4. Strike as recommended by manufacturer for application indicated.
5. Sound dampening on touch bar.
6. Dogging:
   a. Non-Fire-Resistance-Rated Devices: Manual dogging feature UNO
   b. Fire-Resistance-Rated Devices: Manual dogging not permitted.
7. Handing: Field-reversible.

C. Grades: Complying with BHMA A156.3, Grade 1.

D. Standards Compliance:
1. Provide UL (DIR) listed exit device assemblies for fire-resistance-rated doors.
2. Comply with UL 10C.

E. Code Compliance: As required by authorities having jurisdiction in the State in which the Project is located.

2.09 REMOVABLE MULLIONS

A. Manufacturers:
1. Listed in Door Hardware Schedule: Precision 2000
2. Substitutions: None – facility standard

B. Properties:
1. Rectangular shape 3 inches by 2 inches tubes with minimum 1/8 inch wall thickness.
2. Furnished by the same manufacturer as exit devices.
3. Spacers: Provide as required for proper installation, based on frame profile and dimensions.

C. Grades: Complying with BHMA A156.3.

D. Materials: Manufacturer's standard for items specified.
1. Top and Bottom Brackets: Investment-cast steel.

E. Options:

F. Applications: As indicated on drawings and in Door Hardware Schedule.

2.10 DOOR PULLS, PUSH/PULL SETS AND PUSH PLATES

A. Manufacturers:
1. Listed in Door Hardware Schedule: Trimco
2. Substitutions: Rockwood, Ives, per Division 1

B. Properties:
1. Pull Type: Straight, unless otherwise indicated.
2. Push Plate Type: Flat, with square corners, unless otherwise indicated.

C. Grades: Comply with BHMA A156.6.

D. Material: Stainless steel, unless otherwise indicated.

E. Products:
1. Push-Pull Systems.

2.11 CLOSERS

A. Manufacturers:
1. Listed in Door Hardware Schedule: Best 8016 Series
2. Substitutions: None – facility standard

B. Properties:
1. Surface Mounted Closers: Manufacturer's standard.
   a. Construction: R14 high silicon aluminum alloy or cast iron.
   b. Covers:
      1) Type: Standard for product selected.
         (a) Full.
      2) Material: Plastic.

3) Finish: Painted.

C. Grades:
1. Closers: Comply with BHMA A156.4, Grade 1.
a. Underwriters Laboratories Compliance:
b. Testing Standards Compliance: Meeting requirements of UL 10C for positive pressure.

D. Code Compliance: As required by authorities having jurisdiction in the State in which the Project is located.

E. Types:
1. Rack-and-pinion, surface-mounted. 36MM minimum bore.

F. Installation:
1. Mounting: Includes surface mounted installations.
2. Mount closers on non-public side of door and stair side of stair doors unless otherwise noted in hardware sets.
3. At outswinging exterior doors, mount closer on interior side of door.
4. Provide adapter plates, shim spacers, and blade stop spacers as required by frame and door conditions.
5. Where an overlapping astragal is included on pairs of swinging doors, provide coordinator to ensure door leaves close in proper order when automatic flush bolts are used

2.12 PROTECTION PLATES

A. Manufacturers:
1. Listed in Door Hardware Schedule: Trimco
2. Substitutions: Rockwood, Ives, per Division 1

B. Properties:
1. Plates:
a. Kick Plates: Provide along bottom edge of push side of every wood door with closer, except aluminum storefront and glass entry doors, unless otherwise indicated.
b. Edges: Beveled, on four (4) unless otherwise indicated.
2. Provide UL fire rated stamp/sticker where required.

C. Grades: Comply with BHMA A156.6.

D. Material: As indicated for each item by BHMA material and finish designation.
1. Metal Properties: Stainless steel.

E. Installation:
1. Fasteners: Countersunk screw fasteners
2. .

2.13 STOPS AND HOLDERS

A. Manufacturers:
1. Listed in Door Hardware Schedule: Trimco
2. Substitutions: Rockwood, Ives, per Division 1

B. General: Provide overhead stop/holder when wall or floor stop is not feasible.

C. Grades:
1. Door Holders, Wall Bumpers, and Floor Stops: Comply with BHMA A156.16 and Resilient Material Retention Test as described in this standard.

D. Material: Base metal as indicated for each item by BHMA material and finish designation.

E. Types:
1. Wall Bumpers: Bumper, concave, wall stop.
2. Floor Stops: Provide with rubber bumper floor stop, heavy duty as specified.

F. Installation:

1. Non-Masonry Walls: Confirm adequate wall reinforcement has been installed to allow lasting installation of wall bumpers.

2.14 THRESHOLDS

A. Manufacturers:
   1. Listed in Door Hardware Schedule: National Guard
   2. Substitutions: Reese, Pemko, per Division 1

B. Properties:
   1. Threshold Surface: Fluted horizontal grooves across full width.

C. Grades: Thresholds: Comply with BHMA A156.21.

D. Types: As applicable to project conditions. Provide barrier-free type at every location where specified.

2.15 WEATHERSTRIPPING AND GASKETING

A. Manufacturers:
   1. Listed in Door Hardware Schedule: National Guard
   2. Substitutions: Reese, Pemko, per Division 1

B. Grades: Comply with BHMA A156.22.

C. Products:
   1. Weatherstripping: See Door Hardware Schedule.
   2. Door Bottom Seals:
      a. Door Sweeps: See Door Hardware Schedule.
      b. Door Shoes: See Door Hardware Schedule.

2.16 MISCELLANEOUS ELECTRIFIED HARDWARE

A. Manufacturers:
   1. Listed in Door Hardware Schedule: Best/RCI
   2. Substitutions: Rixson, ABH, per Division 1

B. Properties:
   1. Wire Harnesses: Of sufficient length, with quick connectors.
      a. Wire Harness End Connection to Power Supply or Junction Box: One end with bare leads.

C. Products:
   1. Power Supplies:
      a. RCI DKPS as noted
   2. Wire Harnesses:
      a. BEST wire harnesses as noted

2.17 FINISHES

A. Finishes: Provide door hardware of same finish, unless otherwise indicated.
   1. Finish: 630; satin stainless steel. 652; satin chromium plated with steel base material, 626, satin chromium plated with brass/bronze base material and 689; aluminum painted, with any base material

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that doors and frames are ready to receive this work; labeled, fire-rated doors and frames are properly installed, and dimensions are as indicated on shop drawings.

B. Correct all defects prior to proceeding with installation.

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

3.02 INSTALLATION

A. Install hardware in accordance with manufacturer's instructions and applicable codes.

B. Install hardware using the manufacturer's fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.

C. Install hardware on fire-rated doors and frames in accordance with applicable codes and NFPA 80.

D. Install hardware for smoke and draft control doors in accordance with NFPA 105.

E. Use templates provided by hardware item manufacturer.

F. Do not install surface mounted items until application of finishes to substrate are fully completed.

G. Wash down masonry walls and complete painting or staining of doors and frames.

H. Complete finish flooring prior to installation of thresholds.

I. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list; unless noted otherwise in Door Hardware Schedule or on drawings.
   1. For Steel Doors and Frames: Install in compliance with DHI (LOCS) recommendations.
   2. For Wood Doors: Install in compliance with DHI WDHS.3 recommendations.
   3. Mounting heights in compliance with operational and ADA Standards:

J. Set exterior door thresholds with full-width bead of elastomeric sealant at each point of contact with floor providing a continuous weather seal; anchor thresholds with stainless steel countersunk screws.

K. Include in installation for existing doors and frames any necessary field modification and field preparation of doors and frames for new hardware. Provide necessary fillers, reinforcements, and fasteners for mounting new hardware and to cover existing door and frame preparations.

3.03 FIELD QUALITY CONTROL

A. Perform field inspection and testing under provisions of Division 1 - Quality Requirements.

B. Provide an Architectural Hardware Consultant (AHC) to inspect installation and certify that hardware and installation has been furnished and installed in accordance with manufacturer's instructions and as specified.

3.04 ADJUSTING

A. Adjust work under provisions of Division 1 - Execution and Closeout Requirements.

3.05 CLEANING

A. Clean finished hardware in accordance with manufacturer's written instructions after final adjustments have been made.

B. Clean adjacent surfaces soiled by hardware installation activities.

C. Replace items that cannot be cleaned to manufacturer's level of finish quality at no additional cost.

D. See Division 1 - Construction Waste Management and Disposal, for additional requirements.

3.06 PROTECTION

A. Protect finished Work under provisions of Division 1 - Execution and Closeout Requirements.

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

3.07 MAINTENANCE

A. Approximately six months after the acceptance of hardware in each area, the hardware installer shall:
   1. Return to the project and re-adjust every item of hardware to restore proper function of doors and hardware.

2. Consult with and instruct Owner's personnel in recommended additions to the maintenance procedures.
3. Replace hardware items which have deteriorated or failed due to faulty design, materials or installation of hardware units.
4. Prepare a written report of current and predictable problems (of substantial nature) in the performance of the hardware and submit to the Architect.

3.08 HARDWARE SCHEDULE

Manufacturer list

ABH	Architectural Builders Hardware
BES	Best
PRE	BEST (Precision)
BRN	Burns Manufacturing
NGP	National Guard Products
SIM	Simplex
TRI	Trimco

Option list

Code:	Name:
R	Classroom Function
TS	Touchbar Monitoring Switch
N	Passage Function
16	16 adjustable size 1-6
7	7 Pin
50	50
B	I/C Best and Equivalents
14	No label saved for the current or all languages
20	1 1/2"
VD	Anti-Vandal Pull without Astragal For Von Duprin 98/99
SDS90	SDS90 HD comp
WL	Winston Lever
RQE	Request to Exit
D	Storeroom Function
FL	Fire Rated Hardware
VIBE	Double Visual Indicator
PATD	Patented keyed core
CE	CONCEALED ELECTRIC WIRES
TD	Dormitory Function
2	Standard Length
NCA-03	Cylinder Attachment Kit
3	Push Plate 4" x 16"
PHI	Anti-Vandal Pull without Astragal For Precision PHI Apex 2000 Series
MLR	Motorized Latch Retraction
4" ODW	4" Over Door Width
C	Pre-Terminated Quick Connect Plug

L	Privacy Function
PATD	Patented
Head & Jambs (2)	Provide at the head and both jambs
3B	Pull Plate 4" x 16" with 10" CTC Pull
LAR	Length As Required
A	Office Function
1	Cyl. 1/2" TL, FFP, 2 3/4" BS.
2	Cylindrical Lock
NRP	NON-REMOVABLE PINS
DEU	Single Key Latch Fail Secure
STC 2 x PR	Sound seal

Finish list

Code:	Name:
B	Brown
689	Aluminum
32D	Satin Stainless Steel
US26D	Satin Chrome
630	Satin stainless steel
626	Satin chromium plated
26D	Satin Chrome (626)
US27	Mill Aluminum
A	Anodized Aluminum
S1	Painted Aluminum
AL	ALUM CLEAR COATED

Specification Report

Set #101

Doors: B127.1, B127.2, B131.1, B131.2

2.0	Hinge	661HD	AL	BES
1.0	Removeable Mullion	KR822	689	PRE
1.0	Exit Device	2403 NCA-03	630	PRE
1.0	Exit Device	2402	630	PRE
1.0	Pull	1097 PHI-NC	630	TRI
1.0	Pull	1097 PHI	630	TRI
2.0	Rim Cylinder	12E 7 2 PATD	626	BES
2.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Gasketing	BY ALUMINUM DOOR/FRAME MANUFACTURER		

Set #102

Doors: C100B.2

2.0	Hinge	661HD	AL	BES
1.0	Removeable Mullion	KR822	689	PRE
1.0	Exit Device	2403 NCA-03	630	PRE
1.0	Exit Device	2402	630	PRE
1.0	Pull	1097 PHI	630	TRI
1.0	Pull	1097 PHI-NC	630	TRI
2.0	Rim Cylinder	12E 7 2 PATD	626	BES
2.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Drip Cap	16 4" ODW	A	NGP
1.0	Gasketing	BY ALUMINUM DOOR/FRAME MANUFACTURER		
2.0	Sweep	200S LAR	A	NGP
1.0	Threshold	426 LAR	A	NGP

Set #103

Doors: B102.2

2.0	Hinge	CE 661HD 12EA	AL	BES
1.0	Removeable Mullion	KR822	689	PRE
1.0	Exit Device	2403 C MLR TS NCA-03	630	PRE
1.0	Exit Device	C MLR TS 2402	630	PRE
1.0	Pull	1097 PHI	630	TRI
1.0	Pull	1097 PHI-NC	630	TRI
2.0	Rim Cylinder	12E 7 2 PATD	626	BES
2.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Gasketing	BY ALUMINUM DOOR/FRAME MANUFACTURER		
1.0	Power Supply	BY SECURITY CONTRACTOR		
2.0	Door Position Switch	BY SECURITY CONTRACTOR		

1.0	Card Reader	BY SECURITY CONTRACTOR		
2.0	Wiring Harness	WH-XXP		BES
2.0	Wiring Harness	WH-192P		BES
2.0	Wiring Harness	WH-6E		BES

NOTE: DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL RETRACTS LATCH AND ALLOWS FOR INGRESS. EMERGENCY KEY OVERRIDE. TS SWITCH IN PUSHBAR TO SHUNT ALARM. FREE EGRESS AT ALL TIMES.

Set #104

Doors: A100A, A100C

2.0	Hinge	CE 661HD 12EA	AL	BES
1.0	Removeable Mullion	KR822	689	PRE
1.0	Exit Device	2403 C MLR TS NCA-03	630	PRE
1.0	Exit Device	C MLR TS 2402	630	PRE
1.0	Pull	1097 PHI	630	TRI
1.0	Pull	1097 PHI-NC	630	TRI
2.0	Rim Cylinder	12E 7 2 PATD	626	BES
2.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Gasketing	BY ALUMINUM DOOR/FRAME MANUFACTURER		
2.0	Sweep	200S LAR	A	NGP
1.0	Drip Cap	16 4" ODW	A	NGP
1.0	Threshold	426 LAR	A	NGP
1.0	Power Supply	BY SECURITY CONTRACTOR		
1.0	Card Reader	BY SECURITY CONTRACTOR		
2.0	Door Position Switch	BY SECURITY CONTRACTOR		
2.0	Wiring Harness	WH-XXP		BES
2.0	Wiring Harness	WH-6E		BES
2.0	Wiring Harness	WH-192P		BES

NOTE: DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL RETRACTS LATCH AND ALLOWS FOR INGRESS. EMERGENCY KEY OVERRIDE. TS SWITCH IN PUSHBAR TO SHUNT ALARM. FREE EGRESS AT ALL TIMES.

Set #105

Doors: B101, B102.1, B140.1, B140.2, C100B.1, C100C

2.0	Hinge	CE 661HD 12EA	AL	BES
1.0	Removeable Mullion	KR822	689	PRE
1.0	Exit Device	C MLR TS 2402	630	PRE
1.0	Exit Device	2403 C MLR TS NCA-03	630	PRE
1.0	Pull	1097 PHI	630	TRI
1.0	Pull	1097 PHI-NC	630	TRI
2.0	Rim Cylinder	12E 7 2 PATD	626	BES

2.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Gasketing	BY ALUMINUM DOOR/FRAME MANUFACTURER		
1.0	Drip Cap	16 4" ODW	A	NGP
2.0	Sweep	200S LAR	A	NGP
1.0	Threshold	426 LAR	A	NGP
1.0	Power Supply	BY SECURITY CONTRACTOR		
2.0	Door Position Switch	BY SECURITY CONTRACTOR		
1.0	Card Reader	BY SECURITY CONTRACTOR		
2.0	Wiring Harness	WH-XXP		BES
2.0	Wiring Harness	WH-6E		BES
2.0	Wiring Harness	WH-192P		BES

NOTE: DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL RETRACTS LATCH AND ALLOWS FOR INGRESS. EMERGENCY KEY OVERRIDE. TS SWITCH IN PUSHBAR TO SHUNT ALARM. FREE EGRESS AT ALL TIMES.

Set #106

Doors: B128, D114.1, D114.2, D114.3

6.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Flushbolt	1860P	US26D	ABH
1.0	Dust Proof Strike	1870	US26D	ABH
1.0	Mortise Lock	45H 7 D 14 H PATD	630	BES
2.0	Door Closer	EHD90 16 SDS90	689	BES
2.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Coordinator	3721	S1	ABH
2.0	Mounting Bracket	3751/3752 AS REQ'D	S1	ABH
1.0	Astragal	1390SP-83		NGP
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP

Set #107

Doors: B147, B147.2

6.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Removeable Mullion	KR822	689	PRE
1.0	Exit Device	2103 CA-03	630	PRE
1.0	Exit Device	2102	630	PRE
1.0	Pull	1097 PHI-NC	630	TRI
1.0	Pull	1097 PHI	630	TRI
2.0	Rim Cylinder	12E 7 2 PATD	626	BES
2.0	Door Closer	EHD90 16 SDS90	689	BES
2.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Gasketing	5100N Head & Jambs (2)		NGP

Set #108

Doors: D100.1, D100.2

6.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Removeable Mullion	KR822	689	PRE
1.0	Exit Device	2103 CA-03	630	PRE
1.0	Exit Device	2102	630	PRE
2.0	Rim Cylinder	12E 7 2 PATD	626	BES
1.0	Pull	1097 PHI-NC	630	TRI
1.0	Pull	1097 PHI	630	TRI
2.0	Door Closer	EHD90 16 SDS90	689	BES
2.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5100N Head & Jambs (2)		NGP
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP

Set #109

Doors: A102, A102.1, A102.2, B133, B135, B137, D111, A202.1, A202.2

6.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Flushbolt	1860P	US26D	ABH
1.0	Dust Proof Strike	1870	US26D	ABH
1.0	Mortise Lock	45H 7 D 14 H PATD	630	BES
2.0	Door Closer	EHD90 16 SIS90	689	BES
2.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Coordinator	3721	S1	ABH
2.0	Mounting Bracket	3751/3752 AS REQ'D	S1	ABH
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Astragal	1390SP-83		NGP

Set #110

Doors: D200

3.0	Hinge	FBB199 NRP 45X45	32D	BES
1.0	Flushbolt	1860P	US26D	ABH
1.0	Dust Proof Strike	1870	US26D	ABH
1.0	Mortise Lock	45H 7 D 14 H PATD	630	BES
2.0	Door Closer	EHD90 16 SDS90	689	BES
2.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Coordinator	3721	S1	ABH
2.0	Mounting Bracket	3751/3752 AS REQ'D	S1	ABH
1.0	Astragal	1390SP-83		NGP
1.0	Drip Cap	16 4" ODW	A	NGP
1.0	Gasketing	700S Head & Jambs (2)	A	NGP
2.0	Sweep	200S LAR	A	NGP

1.0	Threshold	426 LAR	A	NGP

Set #111

Doors: A115.1, A115.2

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Exit Device	FL 2103 CA-03	630	PRE
1.0	Pull	1097 PHI	630	TRI
1.0	Rim Cylinder	12E 7 2 PATD	626	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Wall Stop	575	630	BRN

Set #112

Doors: C107

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 R 14 H PATD	630	BES
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Wall Stop	575	630	BRN

Set #113

Doors: B103.4, B103

1.0	Hinge	CE 661HD 12EA	AL	BES
1.0	Electromechanical Lock	45HW 7 DEU 14 H PATD RQE	630	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Gasketing	BY ALUMINUM DOOR/FRAME MANUFACTURER		
1.0	Power Supply	BY SECURITY CONTRACTOR		
1.0	Door Position Switch	BY SECURITY CONTRACTOR		
1.0	Card Reader	BY SECURITY CONTRACTOR		
1.0	Wiring Harness	WH-6E		BES
1.0	Wiring Harness	WH-XXP		BES
1.0	Wiring Harness	WH-192P		BES

NOTE: DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL RELEASES LEVER AND ALLOWS FOR INGRESS. EMERGENCY KEY OVERRIDE. RQE SWITCH IN LEVERSET TO SHUNT ALARM. FREE EGRESS AT ALL TIMES.

Set #114

Doors: A132, B122.2, B123, C103, A232

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Power Transfer	EPT-12C		PRE
1.0	Electromechanical Lock	45HW 7 DEU 14 H PATD RQE	630	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Power Supply	BY SECURITY CONTRACTOR		
1.0	Card Reader	BY SECURITY CONTRACTOR		
1.0	Door Position Switch	BY SECURITY CONTRACTOR		
1.0	Wiring Harness	WH-6E		BES
1.0	Wiring Harness	WH-192P		BES
1.0	Wiring Harness	WH-XXP		BES

NOTE: DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL RELEASES LEVER AND ALLOWS FOR INGRESS. EMERGENCY KEY OVERRIDE. RQE SWITCH IN LEVERSET TO SHUNT ALARM. FREE EGRESS AT ALL TIMES.

Set #115

Doors: B108,1

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Power Transfer	EPT-12C		PRE
1.0	Electromechanical Lock	45HW 7 DEU 14 H PATD RQE	630	BES
1.0	Door Closer	EHD90 16 SIS90	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Power Supply	BY SECURITY CONTRACTOR		
1.0	Door Position Switch	BY SECURITY CONTRACTOR		
1.0	Card Reader	BY SECURITY CONTRACTOR		
1.0	Wiring Harness	WH-XXP		BES
1.0	Wiring Harness	WH-192P		BES
1.0	Wiring Harness	WH-6E		BES

NOTE: DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL RELEASES LEVER AND ALLOWS FOR INGRESS. EMERGENCY KEY OVERRIDE. RQE SWITCH IN LEVERSET TO SHUNT ALARM. FREE EGRESS AT ALL TIMES.

Set #116

Doors: B107.2, B122.1, D102

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Power Transfer	EPT-12C		PRE
1.0	Electromechanical Lock	45HW 7 DEU 14 H PATD RQE	630	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Card Reader	BY SECURITY CONTRACTOR		
1.0	Door Position Switch	BY SECURITY CONTRACTOR		
1.0	Power Supply	BY SECURITY CONTRACTOR		
1.0	Wiring Harness	WH-6E		BES
1.0	Wiring Harness	WH-192P		BES
1.0	Wiring Harness	WH-XXP		BES

NOTE: DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL RELEASES LEVER AND ALLOWS FOR INGRESS. EMERGENCY KEY OVERRIDE. RQE SWITCH IN LEVERSET TO SHUNT ALARM. FREE EGRESS AT ALL TIMES.

Set #117

Doors: A102.5

1.0	Hinge	CE 661HD 12EA	AL	BES
1.0	Exit Device	2403 C MLR TS NCA-03	630	PRE
1.0	Pull	1097 PHI	630	TRI
1.0	Rim Cylinder	12E 7 2 PATD	626	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Gasketing	BY ALUMINUM DOOR/FRAME MANUFACTURER		
1.0	Drip Cap	16 4" ODW	A	NGP
1.0	Sweep	200S LAR	A	NGP
1.0	Threshold	426 LAR	A	NGP
1.0	Wiring Harness	WH-6E		BES
1.0	Wiring Harness	WH-192P		BES
1.0	Wiring Harness	WH-XXP		BES
1.0	Card Reader	BY SECURITY CONTRACTOR		
1.0	Power Supply	BY SECURITY CONTRACTOR		
1.0	Door Position Switch	BY SECURITY CONTRACTOR		

NOTE: DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL RETRACTS LATCH AND ALLOWS FOR INGRESS. EMERGENCY KEY OVERRIDE. TS SWITCH TO SHUNT ALARM. FREE EGRESS AT ALL TIMES.

Set #119

Doors: C102.2, D100.3, D100.4

1.0	Hinge	661HD	AL	BES
1.0	Exit Device	2403 NCA-03	630	PRE
1.0	Pull	1097 PHI	630	TRI
1.0	Rim Cylinder	12E 7 2 PATD	626	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Gasketing	BY ALUMINUM DOOR/FRAME MANUFACTURER		
1.0	Sweep	200S LAR	A	NGP
1.0	Threshold	426 LAR	A	NGP

Set #120

Doors: B138.2

3.0	Hinge	FBB199 NRP 45X45	32D	BES
1.0	Exit Device	2103 CA-03	630	PRE
1.0	Pull	1097 PHI	630	TRI
1.0	Rim Cylinder	12E 7 2 PATD	626	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Drip Cap	16 4" ODW	A	NGP
1.0	Gasketing	700S Head & Jambs (2)	A	NGP
1.0	Sweep	200S LAR	A	NGP
1.0	Threshold	426 LAR	A	NGP

Set #121

Doors: A112, D114.4

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Exit Device	2103 CA-03	630	PRE
1.0	Pull	1097 PHI	630	TRI
1.0	Rim Cylinder	12E 7 2 PATD	626	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP

Set #122

Doors: C109

3.0	Hinge	FBB168 45X45	26D	BES
1.0	Mortise Lock	45H 0 N 14 H	630	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN

1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Wall Stop	575	630	BRN

Set #123

Doors: C108, C113, B118, B107.1, B111

3.0	Hinge	FBB168 45X45	26D	BES
1.0	Mortise Lock	45H 0 N 14 H	630	BES
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Wall Stop	575	630	BRN

Set #124

Doors: B143.1, B143.2

3.0	Hinge	FBB168 45X45	26D	BES
1.0	Mortise Lock	45H 0 N 14 H	630	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP

Set #125

Doors: B104.1, B104.2, B105, B109, B113, B114, B115, B116, B117, B132, B149, D107

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 A 14 H PATD	630	BES
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Wall Stop	575	630	BRN

Set #126

Doors: B106, B112, B119, B120, C110

3.0	Hinge	FBB168 45X45	26D	BES
1.0	Mortise Lock	45H 0 L 14 H VIBE	630	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Wall Stop	575	630	BRN

Set #127

Doors: D105, D106

3.0	Hinge	FBB168 45X45	26D	BES

1.0	Push Plate	AB70C 4" x 16"	630	TRI
1.0	Pull Plate	AB111 X AB70C 4" x 16"	630	TRI
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Wall Stop	575	630	BRN

Set #128

Doors: D110

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 TD 14 H PATD VIBE	630	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP

Set #129

Doors: B144.1, B144.2, A122, A222

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 TD 14 H PATD VIBE	630	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Wall Stop	575	630	BRN

Set #130

Doors: B146

1.0	Hinge	661HD	AL	BES
1.0	Mortise Lock	45H 7 D 14 H PATD	630	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Gasketing	BY ALUMINUM DOOR/FRAME MANUFACTURER		
1.0	Wall Stop	575	630	BRN

Set #131

Doors: D103, D109, A212

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 D 14 H PATD	630	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN

1.0	Gasketing	5050 Head & Jambs (2)	B	NGP

Set #132

Doors: B108.2

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 D 14 H PATD	630	BES
1.0	Door Closer	EHD90 16 SIS90	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP

Set #133

Doors: B124, B126, B134, B136

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 D 14 H PATD	630	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5075 Head & Jambs (2)	B	NGP
1.0	Gasketing	5060 Head & Jambs (2)	B	NGP
1.0	Automatic Door Bottom	225S STC 2 x PR	US27	NGP
2.0	Gasketing	60FP		NGP
1.0	Threshold	8144 LAR | Smooth Side Up	A	NGP
1.0	Wall Stop	575	630	BRN

Set #134

Doors: A100, A101, A103, A104, A105, A107, A109, A110, A113, A114, A118, A119, A120, A121, A123, A124, A125, A128, A129, A131, A133, A134, A135, A136, A137, A138, B125, B138.1, B139, B141, B142.1, B142.2, B145, B148, C102.1, C104, D101, D104, D108, A200, A201, A203, A204, A205, A207, A209, A210, A213, A214, A218, A219, A220, A221, A223, A224, A225, A226, A229, A231, A233, A234, A235, A236, A237, A238

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 D 14 H PATD	630	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Wall Stop	575	630	BRN

Set #135

Doors: B110, B121, B146A

3.0	Hinge	FBB168 45X45	26D	BES
1.0	Mortise Lock	45H 7 D 14 H PATD	630	BES
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Wall Stop	575	630	BRN

Set #136

Doors: C106, C105.1, C101, C105

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Mortise Lock	45H 7 R 14 H PATD	630	BES
1.0	Door Closer	EHD90 16 SDS90	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP

Set #137

Doors: A106.1, A106.2, A108.1, A108.2, A206.1, A206.2, A208.1, A208.2, A215.1, A215.2

3.0	Hinge	FBB168 NRP 45X45	26D	BES
1.0	Exit Device	2103 CA-03	630	PRE
1.0	Pull	1097 PHI	630	TRI
1.0	Rim Cylinder	12E 7 2 PATD	626	BES
1.0	Door Closer	EHD90 16 AF90P	689	BES
1.0	Kick Plate	KP50 10" LDW CSK B4E	630	BRN
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Wall Stop	575	630	BRN

Set #138 NOT USED

Set #139

Doors: C105.2, C105.3, C105.4, B100C, B100E, D101.1

1.0	Padlock	11B 7 20 PATD	626	BES

Set #140

Doors: Swing Gates

3.0	**Hinges**	**BY GATE SUPPLIER**		**B/O**
1.0	**Exit Device**	**CD-98-EO-WH**	**630**	**VON**
1.0	**Mortise Cylinder**	**80-132 XQ11-948**	**626**	**SCH**
1.0	**Rim Cylinder**	**80-159**	**626**	**SCH**
1.0	**Core**	**CB807**	**626**	**FAL**

1.0	**Door Pull**	**VR910 NL**	**630**	**IVE**
1.0	**Surface Closer**	**4040XP SCUSH SRI TBSRT**	**689**	**LCN**
1.0	**Transom Bracket**	**4040XP-419 SRI**	**689**	**LCN**

***Surface Closer and Exit Device to receive mounting bracket, spacers, and plate as required.**

Set #141

Doors: Swing Gates - Pair

3.0	**Hinges**	**BY GATE SUPPLIER**		**B/O**
1.0	**Center Mullion/Post**	**BY GATE SUPPLIER**		**B/O**
2.0	**Exit Device**	**CD-98-EO-WH**	**630**	**VON**
2.0	**SFIC Mortise Cyl.**	**80-132 XQ11-948**	**626**	**SCH**
1.0	**SFIC Rim Cyl.**	**80-159**	**626**	**SCH**
1.0	**SFIC Core**	**CB807**	**626**	**FAL**
1.0	**Door Pull**	**VR910 NL**	**630**	**IVE**
1.0	**Door Pull**	**VR910 DT**	**630**	**IVE**
2.0	**Surface CLoser**	**4040XP SCUSH SRI TBSRT**	**689**	**LCN**
2.0	**Transom Bracket**	**4040XP-419 SRI**	**689**	**LCN**

***Surface Closers and Exit Devices to receive mounting bracket, spacers, and plate as required.**

Set #142

Doors: Rolling/Sliding Gates

All hardware by Gate Manufacturer/Supplier.

END OF SECTION

SECTION 09 30 00

TILING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Tile for floor applications.

B. Tile for wall applications.

C. Miscellaneous Trim.

D. Thinset mortar installation method.

E. Mortar Bed installation method.

1.02 REFERENCE STANDARDS

A. ANSI A108.1a - American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar; 2023.

B. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2018.

C. ANSI A118.4 - American National Standard Specifications for Modified Dry-Set Cement Mortar; 2019.

D. ANSI A118.4e - ANSI for Modified Dry-Set Cement Mortar - Extended Open Time; 2024.

E. ANSI A118.6 - American National Standard Specifications for Standard Cement Grouts for Tile Installation; 2019.

F. ANSI A137.1 - American National Standard Specifications for Ceramic Tile; 2022.

G. ASTM C373 - Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products; 2018 (Reapproved 2023).

H. ASTM C627 - Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester; 2018.

I. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation; 2023.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this section; require attendance by affected installers.

1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements for submittal procedures.

B. Product Data: Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.

C. Shop Drawings: Indicate tile layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.
   1. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.

D. Samples for Initial Selection: For each type of tile and grout indicated. Include Samples of accessories involving color selection.

E. Samples for Verification:
   1. Full-size units of each type and composition of tile and for each color and finish required.
   2. Assembled samples mounted on a rigid panel, with grouted joints, for each type and composition of tile and for each color and finish required. Make samples at least 12 inches square, but not fewer than 4 tiles. Use grout of type and in color or colors approved for completed Work.
   3. Submit two full-size units of each type of trim and accessory for each color and finish required.
   4. Stone thresholds in 6-inch lengths.
   5. Metal edge strips in 6-inch lengths.

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

G. Master Grade Certificate: Submit for each type of tile, signed by the tile manufacturer and tile installer.

H. Material Test Reports: For each tile-setting and -grouting product.

I. Installer's Qualification Statement:

J. Maintenance Data: Include recommended cleaning methods, cleaning materials, and stain removal methods.

1.05 QUALITY ASSURANCE

A. Source Limitations for Tile: Obtain tile of each type from one source or producer.
   1. Obtain tile of each type and color or finish from same production run and of consistent quality in appearance and physical properties for each contiguous area.

B. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from one manufacturer and each aggregate from one source or producer.

C. Source Limitations for Other Products: Obtain each of the following products specified in this Section from a single manufacturer for each product:
   1. Stone thresholds.

2. Waterproof membrane.
3. Crack isolation membrane.
4. Joint sealants.
5. Metal edge strips.

D. Perform Work in accordance with TCNA Handbook and ANSI A108 Series/A118 Series.

E. To ensure warranty requirements and compatibility of products provide all tile grout, setting materials, additives, accessories, and factory-prepared dry-set mortars from the same manufacturer.

F. Manufacturer Qualifications: Company specializing in manufacturing the types of products specified in this section, with minimum threeyears of documented experience.

G. Installer Qualifications:
1. Company specializing in performing tile installation, with minimum of three years of documented experience.

1.06 MOCK-UPS

A. See Section 01 40 00 - Quality Requirements for general requirements for mock-up.

B. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
1. Build integrated mockup of floor tile installation per Division 01 Section “Quality Requirements”.
2. Build integrated mockup of wall tile installation per Division 01 Section “Quality Requirements”.
3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.08 FIELD CONDITIONS

A. Do not install solvent-based products in an unventilated environment.

B. Maintain ambient and substrate temperature above 50 degrees F (10 degrees C) and below 100 degrees F (38 degrees C) during installation and curing of setting materials.

1.09 EXTRA MATERIALS

A. Furnish one unopened box of each type and color of ceramic tile installed, including accent colors, to the Owner. Obtain receipt.

B. Furnish four unopened boxes of each type and color of porcelain tile installed, including accent colors, to the Owner. Obtain receipt.

C. Furnish one unopened box of each type and color of quarry tile installed, including accent colors, to the Owner. Obtain receipt.

PART 2 - PRODUCTS

2.01 GENERAL

A. ANSI Ceramic Tile Standards:
   1. Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.
      a. Provide tile complying with Standard grade requirements unless otherwise indicated.

B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCA installation methods specified in tile installation schedules, and other requirements specified.

C. FloorScore Compliance: Tile for floors shall comply with requirements of FloorScore Standard.

D. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.

E. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise indicated.
   1. Where tile is indicated for installation in wet areas, do not use back- or edge-mounted tile assemblies unless tile manufacturer specifies in writing that this type of mounting is suitable for installation indicated and has a record of successful in-service performance.

2.02 PERFORMANCE REQUIREMENTS

A. Static Coefficient of Friction: For tile installed on walkway surfaces, provide products with the following values as determined by testing identical products per ASTM C 1028:
   1. Level Surfaces: Minimum 0.6.

B. Dynamic Coefficient of Friction of Hard Surface Flooring Materials: For tile installed on walkway surfaces, provide products Tile to conform to requirements of ANSI A326.3.

C. Load Bearing Performance: for ceramic tile installed on walkway surfaces, provide installations rated for the following load-bearing performance level based on testing assemblies according to ASTM C627 that are representative of those indicated for this Project:
   1. Heavy: Passes cycles 1 through 12.

2.03 TILE

A. Tile Manufacturers: Refer to specific manufacturers and products indicated in the Drawings to determine the Project requirements. Subject to compliance with requirements, provide products indicated or equal product by one of the following manufacturers, unless a specific product is referenced as “No Substitutions”.
   1. Acceptance of products other than those indicated is contingent upon submittal of proposed alternate products to the Architect. Submittal of proposed alternate products

must occur prior to bidding as described in Division One specification section “Product Substitutions”.

2. Submittals must demonstrate to the Architect that the proposed alternate product line has colors that match the basis-of-design indicated. The Architect may reject the proposed product for technical non-compliance or, at his discretion, on the basis of lack of color match alone.

B. Manufacturers:
   1. Manzarri; https://www.marazziusa.com/
   2. Concept Surfaces; https://www.conceptsurfaces.com/
   3. Crossville, Inc.; https://www.crossville.com/
   4. Summitville Tile, Inc.; https://summitville.com/
   5. Trinity Tile; https://www.trinitytile.com/
   6. American Olean Corporation: www.americanolean.com/
   7. Dal-Tile Corporation: www.daltile.com/
   8. Additional manufacturers as may be listed in the Finish/Color Schedule.

C. Types: Tile Types correspond to Types indicated on the Finish/Color Schedule:
   1. Porcelain Mosaic Floor Tile
      a. Basis of Design: As scheduled.
      b. Moisture Absorption: 0 to 0.5 percent.
      c. Size(s): As scheduled.
      d. Edge: Square, rectified.
      e. Surface Finish: Unglazed.
      f. Joint Size: 1/8”.
      g. Type: Through-color.
      h. Use sanded acid-resistant Portland cement grout, sealed at restroom floors.
      i. Use epoxy emulsion grout at shower floors.
   2. Quarry Tile: ANSI A137.1 standard grade.
      a. Size: 6 by 6 inch (152 by 152 mm), nominal.
      b. Thickness: 1/2 inch (12.7 mm), nominal.
      c. Edges: Square.
      d. Surface Finish: Non-slip.
      e. Joint Size: 3/8"
      f. Base:
         1) Size: 5" high x 6" long.
         2) Top Edge: Bullnose.
         3) Toe: Cove flush with floor tile.
      g. Use eposy emulsion grout.
   3. Porcelain Tile: ANSI A137.1 standard grade.
      a. Moisture Absorption: 0 to 0.5 percent as tested in accordance with ASTM C373.
      b. Size: As scheduled, rectified.
      c. Edges: Square.
      d. Surface Finish: Unglazed.
      e. Type: Through-color.

f. Joint Size: 1/8"
g. Color(s): As indicated on drawings.
h. Use sanded acid-resistant Portland cement grout, sealed at restroom walls.

2.04 TRIM AND ACCESSORIES

A. Miscellaneous Trim: Satin natural anodized extruded aluminum or as otherwise noted below and on drawings, style and dimensions to suit application, for setting using tile mortar or adhesive.
1. Applications:
a. Porcelain floor tile to porcelain floor tile transition.
b. Continuous cove strip between restroom wall tile and floor tile where no base is indicated:
1) **Typical, at Corridors: Schluter DILEX-HKS stainless steel.**
2) **Restrooms or other areas where specifically indicated on drawings: SCHLUTER DILEX-AHK, satin anodized aluminum.**
c. Tile to concrete floor, hard-surface floor, and resilient flooring: Schluter-RENO-U, aluminum.
d. Tile to Carpet: Schluter SCHIENE same-height, aluminum
e. Top of Wainscot Edge Strip: Schluter-JOLLY, extruded clear satin anodized aluminum.
f. Corridor Wainscot Tile to Floor Tile: No base, not trim. Provide sealant joint.
g. Floor Transition at Restrooms: prefabricated marble threshold.
h. Floor Transition from Curbless Shower to Adjacent Floor: Schluter ShowerProfile WSK + WSC set on clear silicone bead.
2. Manufacturers:
a. Schluter-Systems: www.schluter.com/#sle.
b. Genesis APS International: www.genesis-aps.com/#sle.

B. Thresholds: 2 inches (51 mm) wide by full width of wall or frame opening; beveled edge on both long edges; without holes, cracks, or open seams. Provide at each entry door or framed opening to restrooms or restroom vestibules.
1. Material: Carrara white marble, Grade A.
2. Configuration: One-piece material, 2-in. wide x full width of door. ADA compliant with long edges beveled and top surface of threshold 3/8” – 1/2” higher than finish flooring on either side.
3. Finish: Sealed with clear non-yellowing penetrating sealer.
4. Location:
a. Door: Center threshold on door.
b. Opening without door: Center on wall opening or frame.

C. Steel Reinforcing Mesh: 2 x 2 inch size weave of 16/16 wire size, galvanized welded fabric for mortar beds. Optional as recommended by the mortar manufacturer for the particular conditions.

2.05 SETTING MATERIALS

A. Provide setting and grout materials from same manufacturer.

B. Manufacturers:
   1. ARDEX Engineered Cements: www.ardexamericas.com/
   2. Bostik Inc: www.bostik-us.com/
   3. Mapei Corporation; www.mapei.com
   4. TEC Specialty Products, Inc.; www.tecspecialty.com/products/
   5. LATICRETE International, Inc: www.laticrete.com/
   6. Substitutions: See Section 01 60 00 - Product Requirements.

C. Mortar Bed Materials at Recessed Slabs: ANSI A108.1A; Portland cement, sand, latex additive, and water; proportioned in accordance with TCNA specifications.

D. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.
   1. Cleavage Membrane: Asphalt felt, ASTM D 226, Type I (No. 15); or polyethylene sheeting, ASTM D 4397, 4.0 mils (0.1 mm) thick.
   2. Reinforced Wire Fabric: Galvanized, welded wire fabric, 2 by 2 inches by 0.062-inch diameter; comply with ASTM A 185 and ASTM A 82 except for minimum wire size.
   3. Latex Additive: Manufacturer's standard water emulsion, serving as replacement for part or all of gaging water, of type specifically recommended by latex-additive manufacturer for use with field-mixed portland cement and aggregate mortar bed.

E. Large-Format Floor and Wall Tile Mortar (Medium Set): ANSI A118.4HTE & A118.11.
   1. Provide prepackaged, dry-mortar mix combined with required additives at Project site.
   2. See Evaluations for discussion on difference between normal and nonsagging mortar.
   3. For wall applications, provide mortar that complies with requirements for nonsagging mortar in addition to the other requirements in ANSI A118.4.

F. Latex-Portland Cement Mortar Bond Coat, single-component type polymer-modified thin-set or medium bed mortar.: ANSI A118.4e
   1. Provide prepackaged, dry-mortar mix combined with acrylic resin or styrene-butadiene-rubber liquid-latex additive at Project site.
   2. For wall applications, provide mortar that complies with requirements for nonsagging mortar in addition to the other requirements in ANSI A118.4e.
   3. Basis of Design:
      a. Small Format Floor or Wall Tile (all dimensions less than 15”): *Ultraflex-2* thin-set as manufactured by Mapei or approved equivalent by specified manufacturer; meets or exceeds requirements of ANSI A118.4E, ANSI A118.11, and ISO C2TE.
      b. Large Format Floor Tile (any dimension 15” or greater): *Ultraflex-LFT* medium bed as manufactured by Mapei or approved equivalent by specified manufacturer; meets or exceeds requirements of ANSI A118.4, ISO 13007 C2TES1P1, and TE and ANSI A118.11.
      c. Large Format Wall Tile (any dimension 12” or greater): *Ultralite Pro* non-sag type as manufactured by Mapei or approved equivalent by specified manufacturer; meets or exceeds requirements of ANSI A118.4TE, ANSI A118.4TE, and ISO 13007 C2TE.

2.06 GROUTS

A. Provide setting and grout materials from same manufacturer.

B. Manufacturers:

1. ARDEX Engineered Cements: www.ardexamericas.com/
2. Bostik Inc: www.bostik-us.com/
3. Mapei Corporation; www.mapei.com
4. TEC Specialty Products, Inc.; www.tecspecialty.com/products/
5. LATICRETE International, Inc; LATICRETE PERMACOLOR Grout: www.laticrete.com/
6. Substitutions: See Section 01 60 00 - Product Requirements.

C. Standard Grout: ANSI A118.6 standard cement grout.
1. Applications: Use this type of grout where indicated and where no other type of grout is indicated.
2. Use sanded grout for joints 1/8 inch (3.2 mm) wide and larger; use unsanded grout for joints less than 1/16 inch (3.2 mm) wide.
a. Sanded Grout: Calcium Aluminate Cement type that meets or exceeds requirements of ANSI A118.6.
1) Color: As selected.
2) Basis of Design: *Ultracolor Plus FA* as manufactured by Mapei or approved equivalent by specified manufacturer.
b. Non-Sanded Grout: Latex-Portland cement polymer-modified type that meets or exceeds requirements of ANSI A118.6.
1) Color: As selected.
2) Basis of Design: *Keracolor-U* as manufactured by Mapei or approved equivalent by specified manufacturer.
3. Color(s): As selected by Architect from manufacturer's full line.

2.07 MAINTENANCE MATERIALS

A. Grout Sealer: Liquid-applied, moisture and stain protection for existing or new Portland cement grout. Manufacturer's standard silicone product for sealing grout joints and that does not change color or appearance of grout.
1. Composition: Water-based colorless silicone.
2. Products: Subject to compliance with requirements, provide one of the following:
a. Bonsal American; an Oldcastle company; Grout Sealer.
b. Bostik, Inc.; CeramaSeal Grout & Tile Sealer.
c. C-Cure; Penetrating Sealer 978.
d. Custom Building Products; Grout Sealer.
e. MAPEI Corporation; KER 003, Silicone Spray Sealer for Cementitious Tile Grout
f. Southern Grouts & Mortars, Inc.; Silicone Grout Sealer.
g. Summitville Tiles, Inc.; SL-15, Invisible Seal Penetrating Grout and Tile Sealer.
h. TEC; a subsidiary of H. B. Fuller Company; TA-256 Penetrating Silicone or TA-257 Silicone Grout Sealer.
i. Substitutions: See Section 01 60 00 - Product Requirements.

B. Tile Sealer: Stain protection for ceramic tile and natural stone tile.

C. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.

1. MAPEI *Ultracare Stone, Tile & Grout Care* Solutions or approved equivalent.

2.08 ACCESSORY MATERIALS

A. Concrete Floor Slab Crack Isolation Membrane: Manufacturer's standard product,complying with ANSI A118.12; not intended as waterproofing, and is recommended by the manufactuer for the application intended. Include reinforcement and accessories recommended by manufacturer.
   1. For Covering Shrinkage Cracking and Non-Structural Cracks to less than 1/8” - Use one of the following:
      a. Mapelastic C1 as manufactured by MAPEI: Liquid-applied.
      b. Blue 92 as manufactured by Laticrete: Liquid-applied.
      c. Mapeguard 2 with SM Primer as manufactured by MAPEI: Sheet
      d. NobleSeal CIS as manufactured by Noble Corp: Sheet.
   2. For Bridging Construction Joints and Any Cracks 1/8” or greater– Use one of the following membrane sheets meeting or exceeding requirements of ASTM C627-*Extra Heavy*:
      a. Mapeguard 2 with SM Primer as manufactured by MAPEI.
      b. Crack Isolation Mat as manufactured by Laticrete.
      c. NobleSeal CIS as manufactured by Noble Corp.
   3. In addition install sealant-filled control joint at or within 12” of construction joints or any joints exceeding 1/4” in width.

B. Cleavage Membrane Under Thick Mortar Bed:
   1. Material: No. 15 (6.9 kg) asphalt saturated felt.

C. Underlayment at Floors: Specifically designed for bonding to thin-set setting mortar; not primarily a waterproofing material and having the following characteristics:
   1. Type: Fluid or Trowel Applied.
      a. Products:
         1) Planiprep SC by Mapei: www.mapei.com
         2) LATICRETE International, Inc; LATICRETE 125 Sound and Crack Adhesive: www.laticrete.com/
         3) Merkrete, by Parex USA, Inc; Merkrete Fracture Guard: www.merkrete.com/
         4) Proflex Products, Inc; Hydra-Seal: www.proflex.us/

D. Cementitious Backer Board: As specified in Section 09 21 16 for use at shower walls and wet walls behind lavatories, toilets, and urinals, and side walls adjacent to these fixtures.

E. Sealants
   1. Interior Non-Traffic Joints: Vertical expansion joints up to 1/4” wide and less than 25% movement; for filling joints where tile abuts dissimilar surfaces such as countertops; at inside corners of wall tile; for dry or occasionally wet surfaces.
      a. Single-component siliconized acrylic in color(s) to match adjacent grout(s).
      b. Mold and mildew resistant.
      c. Paintable.
      d. Non-structural.
      e. Meets ASTM C834 for low-movement sealant.

f. *Keracaulk* sanded or unsanded as manufactured by Mapei, or approved equivalent by Laticrete. Match tile joint colors.

2. Interior Tile Floors: Floor expansion joints; joints exceeding 25% movement; perimeter floor joints at wall Interface or other vertical interruptions; for all vertical or horizontal sealant joints in showers, pool decks, dressing rooms, and other areas continually wet.
   a. High performance, single-component, neutral cure, 100% silicone formulated for ceramic tile and stone applications. In color(s) matching adjacent grout(s).
   b. Low Sheen to match finish of grout joints.
   c. Mold and mildew resistant.
   d. Non-structural.
   e. *Mapesil-T* as manufactured by Mapei or approved equivalent by Laticrete. Match tile joint colors.
3. Exterior Tile Walls, Floors, Expansion Joints, and Other Surfaces: *Mapesil-T* as manufactured by Mapei or approved equivalent by Laticrete. Match tile joint colors.
4. Backer Rods and Strips: Closed-cell compressible foam polyurethane as recommended by sealant manufacturer and sized to:
   a. Fit snugly within the joint without compressing.
   b. Provide a sealant depth of 1/2 the dimensional width of the joint.
   c. Prevent adhesion to the backup surface.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that subfloor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.

C. Verify that subfloor surfaces are dust free and free of substances that could impair bonding of setting materials to subfloor surfaces.

D. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

A. Protect surrounding work from damage.

B. Vacuum clean surfaces and damp clean.

C. Seal substrate surface cracks, holes, depressions and inconsistancies with filler. Level existing substrate surfaces to acceptable flatness tolerances.
   1. Use trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.

D. Install crack control membrane at substrate cracking and construction/expansion joints in accordance with membrane manufacturer’s printed recommendations.

E. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1a and is sloped 1/4 inch per foot (1:50) toward drains.

F. Install specified liquid-applied membrane over walls and mortar bed at showers, and over entire concrete substrate at upper-floor restrooms prior to installing tile.
   1. Apply two-coats over entire concrete floor area. Allowing recommended drying time between coats.
   2. Where floor interfaces with masonry walls turn membrane up wall 3”.
   3. Where floor interfaces with stud walls, apply membrane manufacturer’s recommended sealant between concrete floor and bottom of drywall, allow to cure and turn membrane up wall 3”.
   4. Allow membrane to cure thoroughly in accordance with membrane manufacturer’s recommendations prior to beginning tile work.

G. Blending of Ceramic Tile: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

H. Install backer board in accordance with ANSI A108.11 and board manufacturer's instructions. Tape joints and corners, cover with skim coat of setting material to a feather edge.

3.03 INSTALLATION - GENERAL

A. Install tile, thresholds, and stair treads and grout in accordance with applicable requirements of ANSI A108.1a through ANSI A108.20, manufacturer's instructions, and TCNA (HB) recommendations.

B. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.

C. For the following installations, follow procedures in the ANSI A108 Series of tile installation standards for providing 95 percent mortar coverage:
   1. Tile floors in wet areas.
   2. Tile floors composed of tiles 8 by 8 inches (200 by 200 mm) or larger.
   3. Tile floors composed of rib-backed tiles.

D. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.

E. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.

F. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.

G. Place metal edge strips at exposed tile edges.

H. Form internal angles square and external angles bullnosed.

I. Install non-ceramic trim in accordance with manufacturer's instructions.

J. Install thresholds where indicated.

K. Sound tile after setting. Replace hollow sounding units.

L. Keep control and expansion joints free of mortar, grout, and adhesive.

M. Prior to grouting, allow installation to completely cure; minimum of 48 hours.

N. Grout tile joints unless otherwise indicated. Use standard grout unless otherwise indicated.

O. At changes in plane and tile-to-tile control joints, use tile sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three-sided bonding.

P. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

Q. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

R. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.

S. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.
   1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so joints between sheets are not apparent in finished work.
   2. Where adjoining tiles on floor, base, walls, or trim are specified or indicated to be same size, align joints.
   3. Where tiles are specified or indicated to be whole integer multiples of adjoining tiles on floor, base, walls, or trim, align joints unless otherwise indicated.

T. Joints: Place tile with joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.
   1. Ceramic or Porcelain Floor or Wall Tile:
      a. 1” x 1” to 4” x 4” Tile: 1/16-inch.
      b. 6” x 6” to 12” x 12” Tile: 1/8-inch
      c. Large Format Tile, Rectified: 1/8 inch.
      d. Large Format Tile, Non-Rectified: 1/4 inch.
   2. Glass Wall Tile: 1/16 inch.
   3. Quarry Tile: 1/4 inch - 3/8 inch.

U. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.

V. Match tiles within each space by selecting tiles to achieve uiformaity of color and pattern, consistant with design intent shown on drawings and reviewed tile samples. Reject or relocate tiles that do not match color and pattern of adjacent tiles.

W. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.

1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.
2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."

X. Stone Thresholds: Install stone thresholds in same type of setting bed as adjacent floor unless otherwise indicated.
1. At locations where mortar bed (thickset) would otherwise be exposed above adjacent floor finishes, set thresholds in latex-portland cement mortar (thin set).
2. Do not extend cleavage membrane, waterproofing, or crack isolation membrane under thresholds set in latex-portland cement mortar. Fill joints between such thresholds and adjoining tile set on cleavage membrane, waterproofing, or crack isolation membrane with elastomeric sealant.

Y. Metal Edge Strips: Where exposed edge of tile flooring meets carpet, or other flooring that finishes flush with or below top of tile; at joints between wall bases and floor; and where indicated. Provide and install all profiles, setting and accessory materials as required by manufacturer for complete, durable, and water-resistant assembly.

Z. Door Transitions/Thresholds: Reference Door Schedule for type:
1. Metal Edge Strips:
a. Install floor transition strips at all floor tile terminations where stone or solid surfacing thresholds are not scheduled.
b. Install wall edge strips at exposed edges of tile where wall tile terminates away from inside corners.

AA. Grout Sealer: Apply grout sealer to cementitious grout joints in tile floors according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

BB. When bonding large-format tiles, install in accordance with TCNA and tile manufacturer’s recommendations to achieve full coverage of mortar bed under tile surface. Back-butter tiles as necessary to ensure full coverage.

3.04 WATERPROOFING INSTALLATION

A. Install waterproofing to comply with ANSI A108.13 and manufacturer's written instructions to produce waterproof membrane of uniform thickness and bonded securely to substrate.

B. Do not install tile or setting materials over waterproofing until waterproofing has cured and been tested to determine that it is watertight.

3.05 CRACK ISOLATION MEMBRANE INSTALLATION

A. Install crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to produce membrane of uniform thickness and bonded securely to substrate.

B. Do not install tile or setting materials over crack isolation membrane until membrane has cured.

3.06 INSTALLATION - FLOORS - THIN-SET METHODS

A. Over interior concrete substrates, install in accordance with TCNA (HB) Method F113, dry-set or latex-Portland cement bond coat, with standard grout, unless otherwise indicated.
   1. Where waterproofing membrane is indicated, install in accordance with TCNA (HB) Method F122, with latex-Portland cement grout.
   2. Where epoxy bond coat and grout are indicated, install in accordance with TCNA (HB) Method F131.

B. At upper-floor restrooms apply specified liquid-applied membrane over concrete subfloor before installing tile. install in accordance with TCNA Handbook Method F122, using specified latex-Portland cement mortar compatible with the cured membrane.

C. Install tile-to-tile floor movement joints in accordance with TCNA (HB) Method EJ171F.

3.07 INSTALLATION - FLOORS - MORTAR BED METHODS

A. Over interior concrete substrates, install in accordance with TCNA (HB) Method F112, bonded with latex-Portland cement bonding mortar.
   1. Install over mortar bed at recessed slabs, align with adjacent floor level.
   2. Where waterproofing membrane is indicated, with standard grout or no mention of grout type, install in accordance with TCNA (HB) Method F121.
   3. At quarry tile installations, install in accordance with TCNA Handbook Method F112, with epoxy grout.

B. Cleavage Membrane: Lap edges and ends.

C. Mortar Bed Thickness: Minimum 5/8 inch (15.9 mm), unless otherwise indicated.

3.08 INSTALLATION - WALL TILE

A. On exterior walls install in accordance with TCNA (HB) Method W244, thin-set over cementitious backer units, with waterproofing membrane.

B. Over cementitious backer units on studs, install in accordance with TCNA (HB) Method W244, using membrane at toilet rooms.

C. Over coated glass mat backer board on studs, install in accordance with TCNA (HB) Method W245.

D. Over gypsum wallboard on wood or metal studs install in accordance with TCNA (HB) Method W243, thin-set with dry-set or latex-Portland cement bond coat, unless otherwise indicated.
   1. Where mortar bed is indicated, install in accordance with TCNA (HB) Method W222, one coat method.
   2. Where waterproofing membrane is indicated other than at showers and bathtub walls, install in accordance with TCNA (HB) Method W222, one coat method.

E. Over interior concrete and masonry install in accordance with TCNA (HB) Method W202, thin-set with dry-set or latex-Portland cement bond coat.

F. Over metal studs without backer install in accordance with TCNA (HB) Method W241, mortar bed, with membrane where indicated.

3.09 CLEANING

A. Clean tile and grout surfaces.
   1. Broom clean and cover tiled floors with heavy non-staining, non-asphaltic building paper taped in place until just prior to final clean and polish for Owner acceptance.

3.10 PROTECTION

A. Do not permit traffic over finished floor surface for 4 days after installation.
   1. Where temporary access across tiled floors cannot be avoided, cover traffic path with 3/4” plywood or lumber.

B. Keep epoxy grout free of construction and drywall dust until fully cured, as determined by the epoxy grout manufacturer.

END OF SECTION

SECTION 09 84 00

SUSPENDED ACOUSTICAL BAFFLES AND CLOUDS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Prefabricated modular acoustical baffle system in wave pattern suspended from overhead building structure.
   2. Prefabricated two-dimensional cloud circles suspended from overhead building structure.

B. Related Sections:
   1. 09 90 00 Painting and Coating: Finish painting of exposed and partially exposed floor or roof structure and decking prior to beginning work under this Section.

1.02 REFERENCES

A. ASTM International:
   1. ASTM C423 Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
   2. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
   3. ASTM E795 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.

1.03 PERFORMANCE DATA

A. Surface Burning Characteristics ASTM E84-15a:
   1. Rated Class A
   2. Flamespread: 0.
   3. Smoke Developed: 45.

B. Acoustics
   1. Noise Reduction Coefficient: Manufacture’s published NRC rating of minimum 0.50.

1.04 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures.

B. Product Data:
   1. Submit product data sheet for specified products. Include performance criteria.
   2. Submit certified test reports showing compliance with specified performance requirements

C. Shop Drawings: Submit shop drawings showing layout and components, including suspension method, accessories, finish colors and textures.

D. Samples: Submit selection and verification samples of finishes, colors and textures.

1.05 DELIVERY, STORAGE & HANDLING

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

B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

1.06 PROJECT CONDITIONS

A. A. Environmental Requirements: Do not install baffles or clouds until overhead work, including finish painting, is complete.

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

A. Autex Acoustics, www.autexacoustics.com

B. **Frasch!, www.frasch.com**

C. Substitutions: Section 01 60 00 - Product Requirements.

2.02 COMPONENTS

A. **Basis of Design:** Acoustical Baffles: Frontier Talus™ Acoustic Fins as manufactured by Autex.
   1. Thickness: 1/2 inches (12 mm) unless indicated otherwise.
   2. Length: As indicated.
   3. Depth: Varies with wave pattern.
   4. Construction: Formed from 100% polyester fiber (PET) using minimum 60% recycled material.
   5. Color and Pattern: As indicated.
   6. End Caps: At open ends of suspension channels, provide manufacturer's color-matching PET end caps.
   7. **Substitutions: Section 01 60 00 - Product Requirements.**

B. **Basis of Design:** Acoustical Circles: Frontier Horizon™ prefabricated circles as manufactured by Autex.
   1. Thickness: 1- inch.
   2. Construction: Formed from 100% polyester fiber (PET) using minimum 80% recycled material.
   3. Color and Pattern: As indicated.
   4. **Substitutions: Section 01 60 00 - Product Requirements.**

C. Mounting Accessories: All-threaded steel rods and manufacturer's mounting clips, aluminum channels, and cross rails.

2.03 LAYOUT

A. Parallel continuous panels at 12" centers unless indicated otherwise.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

A. Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

3.02 EXAMINATION

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

B. Site Verification of Conditions: Verify that the supporting structure for suspension of acoustical baffles and clouds is acceptable for product installation in accordance with manufacturer's instructions.
   1. Do not install baffles or clouds until unsatisfactory conditions are corrected.
      a. Ensure that hangers are fastened as intended at each panel, are secured to panel core, and are fully capable of supporting at least 3 times the weight of the panel.

3.03 INSTALLATION

A. Suspend system manufacturer's 24 mm aluminum mounting channels from roof or floor structure using manufacturer's adjustable suspension set composed of fully-threaded steel rods or stainless steel aircraft cable as determined by the manufacturer for the particular installation. Utilize manufacturer's custom aluminum or stainless steel connectors. Mount channels perpendicular to planned run of acoustical baffles. For installations near exterior entries or HVAC vents, always use threaded rods to avoid wind movement of baffles or clouds.
   1. Space mounting channels at maximum 48". Provide suspension cables to each channel at maximum 48" spacing. Provide closer spacing of channels and or suspension cables where recommended by the system manufacturer for the specific substrate or system weight.
   2. Where floor or roof joist locations permit, suspend wires or threaded rods from bottom chord of joists. For cable installation, loop end of each wire around bottom chord of joists and secure loop with crimped sleeves. Use beam clamps where connecting wires or rods to "H"-shaped beam with flange.
   3. Where joist spacing does not allow for fastening to joists, use system manufacturer's recommended screws to fasten system mounting clips securely to metal floor or roof deck.

B. Anchor aluminum top cap of each baffle to suspended channels at 12" centers using manufacturer's removable twist-clips. as recommended by the manufacturer for the panel weight and length.

C. Suspend baffle panels at uniform height, with top edges of panels level and in-plane.

D. Suspend cloud panels at heigh(s) and locations as indicated.

3.04 CLEANING

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

B. Follow manufacturer's instructions for cleaning materials soiled during installation. Replace baffles and clouds that cannot be cleaned and repaired to as-new condition.

END OF SECTION

SECTION 10 11 00

VISUAL DISPLAY SURFACES

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:
   1. Fixed Porcelain-Enamel Markerboards.
   2. Fixed Vinyl-Faced Tackboards.
   3. Sliding Visual Display Units: Custom horizontal-sliding vinyl tackboard panels.

B. Related Sections:
   1. Section 06 10 53 - Miscellaneous Rough Carpentry: Wood grounds.
   2. Section 09 77 12 – Special Wall Coverings: Dry-erase vinyl wall coverings and laminated tackable wall coverings.

1.02 REFERENCES

A. ASTM International:
   1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.03 SUBMITTALS

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

B. Shop Drawings: Indicate wall elevations, dimensions, joint locations, and special anchor details and accessories.
   1. Include elevations and sections of sliding units showing track attachment to walls and clearance from interior storefront glass plane.

C. Product Data: Submit data on each type of visual display surface specified.

D. Samples:
   1. Submit two panels, 8-1/2 x 11 inches (279.4 mm) in size, illustrating materials, colors, and textures of each visual display system specified.
   2. Submit two 6-inch long sections of each piece of aluminum trim specified, illustrating profile, color, and texture.

E. Manufacturer’s Certificates: Certify that vinyl tackboard coverings comply with surface burning characteristics specifies.

1.04 CLOSEOUT SUBMITTALS

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

B. Operation and Maintenance Data: Submit Operation and Maintenance Data.

1.05 QUALITY ASSURANCE

A. Surface Burning Characteristics: Maximum 200/450 flame spread/smoke developed index when tested in accordance with ASTM E84.

B. Flame Resistant Fabric: Passes when tested in accordance with NFPA 701, Test 1 or Test 2.

C. Source Limitations: Obtain all visual display surfaces from a single manufacturer.

1.06 QUALIFICATIONS

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

1.07 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.08 WARRANTY

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

B. Furnish 50-year manufacturer warranty for magnetic markerboards.

C. Warranty: Include coverage of markerboard surface from discoloration due to cleaning, crazing or cracking, staining, and failing to retain original writing and erasing qualities.

PART 2 - PRODUCTS

2.01 VISUAL DISPLAY BOARDS

A. Manufacturers:
1. American Visual Display Products, LLC. www.americanvisualdisplay.com
2. Best-Rite Chalkboard Co. www.bestrite.com
3. Claridge Products and Equipment, Inc. www.claridgeproducts.com
4. General Binding Corporation, www.GBC.com
5. Lemco, Inc. www.adplemco.com
6. New Line Products www.newlineproduct.com.
7. Platinum Visual Systems www.pvsusa.com.
8. **Nelson Adams nelsonadamsnaco.com.**
9. **Ghent Manufacturing; ghent.com**
10. Substitutions: Section 01 60 00 - Product Requirements.

2.02 COMPONENTS

A. Markerboards: Balanced, high-pressure-laminated, magnetic markerboards.
1. Basis-of-Design: LCS3 Series Porcelain as manufactured by Claridge.

2. Face Sheet: 28 gauge (0.0157 inch) enameling grade steel... Coat exposed face... with a 3-coat process... Fuse cover and ground coats to steel at manufacturer's standard firing temperatures, but not less than 1200 degrees Fahrenheit.
3. Cover Coat: For magnetic markerboards, provide manufacturer's standard, light-colored, special writing surface with gloss finish intended for use with erasable dry markers.
4. Panel Construction:
    a. Core: 1/2-inch thick, particleboard core material complying with requirements of ANSI A208.1, Grade 1-M-1.
    b. Backing Sheet: Manufacturer's standard 0.005-inch aluminum foil moisture barrier.
    c. Laminating Adhesive: Manufacturer's standard, moisture-resistant adhesive, factory laminated.
5. Panel Thickness: 1/2-inch, nominal.

B. Vinyl Faced Tackboards:
1. Basis-of-Design: As provided by Claridge or approved equivalent by specified manufacturer. Provide 4-VCS Panel for sliding units.
2. Vinyl-Fabric-Faced Tackboards: Mildew-resistant, washable vinyl fabric complying with FS CCC-W-408, Type II, weighing not less than 13 oz./sq. yd., laminated to [1/8] inch ([3.18] mm) thick cork sheet.
3. Factory laminate cork face sheet under pressure to 3/8-inch thick fiberboard core to produce a nominal 1/2-inch thick panel.
4. Provide fabric with a flame-spread rating of 25 or less when tested according to ASTM E84. Provide color and texture as scheduled or as selected from manufacturer's standards.

C. Sliding Systems: Sliding tackboard panel in normal position is adjacent to framed interior window. Tackboard will be used to slide over window, providing full window coverage, and exposed slider track on adjacent wall..
    a. Sliding Panel: Specified vinyl-faced tackboard panel laminated to 3/8” honeycomb core. overall thickness nominal 1/2”.
    b. Frames: Provide custom 1-1/2 inch wide clear anodized box frames to match corridor window frames.
    c. Panel Sizes: As indicated in the drawings.
    d. Configuration(s) as indicated in the drawings

2.03 ACCESSORIES

A. Metal Trim and Accessories: Fabricate frames and trim of not less than 0.062 inch (1.57 mm) thick extruded aluminum alloy, size and shape as indicated, to suit type of installation. Provide straight, single-length units. Keep joints to a minimum. Miter corners to a neat, hairline closure. Where tackboards are combined with magnetic markerboards, chalk trays and map rails shall be continuous across width of combination unit.
1. Where size of visual display boards or other conditions require support in addition to normal trim, provide structural supports or modify trim as indicated or as selected by Architect from manufacturer's standard structural support accessories to suit conditions indicated.
2. Map Rail: Furnish map rail at top of each unit, complete with the following accessories:
    a. Display Rail: Provide continuous cork display rail, 2 inches (50.8 mm) wide, integral with map rail.

b. End Stops: Provide one end stop at each end of map rail.

c. Map Hooks: Provide 2 map hooks with flexible metal clips for every 48 inches (1219.2 mm) of map rail or fraction thereof. Provide a minimum of 6 map hooks per classroom.

B. Adhesives: Type used by manufacturer, waterproof.

C. Music Staff Lines: If indicated provide manufacturer's permanently fused music staff lines where indicated or directed; 5 lines each staff with 1" between each line; 5" between each staff and 3" boarder at top and bottom; Line thickness 1/16".

2.04 FABRICATION

A. Magnetic Markerboards: Laminate facing sheet and backing sheet to core material under pressure with manufacturer's recommended flexible, waterproof adhesive.

1. Cut joints straight and true. Space joints symmetrically. Fit and match panels before shipment to provide a continuous, uniform writing surface.
2. Length: Furnish panels approximately equal in length with permissible variation not more than 3 inches (76.2 mm) in either direction of equal spacing. Allow 1/4 inch (6.35 mm) clearance at trim in length and width for fitting. Provide lengths of panels in each space as follows:
   a. Up to 16 feet (487.68 cm), 1 panel.
   b. More than 16 feet (487.68 cm) but less than 32 feet (975.36 cm), 2 panels.

B. Assembly: Provide factory-assembled chalkboard and tackboard units, unless field-assembled units are required.

1. Make joints only where total length exceeds maximum manufactured length. Fabricate with minimum number of joints, balanced around center of board, as acceptable to Architect.
2. Provide manufacturer's standard vertical joint system between abutting sections of chalkboards.
3. Provide manufacturer's standard mullion trim at joints between chalkboards and tackboards.

2.05 FACTORY FINISHING

A. Porcelain Enamel: Glass fibered enamel, baked to vitreous surfaces; Porcelain Enamel Institute Type A; white color.

B. Aluminum Frame, Chalk Rail, and Accessories: Class II clear anodized finish.

PART 3 - EXECUTION

3.01 EXAMINATION

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

B. Verify internal wall blocking is ready to receive Work and positioning dimensions are as indicated on shop drawings.

3.02 INSTALLATION

A. Deliver and install visual display boards completely assembled in one piece without joints, where possible. If dimensions exceed panel size, install in 2 or more pieces of equal length as acceptable to Architect. When installation requires delivery in separate units, pre-fit components at the factory, disassemble for delivery, and make final joints at the site. Use splines at joints to maintain surface alignment.

B. Establish top of chalk rail and bottom of perimeter frame at height indicated on Drawings.

C. Secure units level and plumb.

D. Coordinate units with grounds, trim, and accessories. Join parts with a neat, precision fit.

3.03 CLEANING

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

B. Clean units in accordance with manufacturer’s instructions.

END OF SECTION

SECTION 10 73 26

ALUMINUM WALKWAY COVERS AND ENTRY CANOPIES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Aluminum walkway covers.
   2. Aluminum entry canopies.
   3. Prefinished metal canopy soffits.
   4. Flashing where connections to buildings are made.

B. Related Work:
   1. Section 04 20 00 - Unit Masonry: Items built into masonry walls.
   2. Section 07 90 00 - Joint Protection: Joint sealants.
   3. Section 07 62 00 - Sheet Metal Flashing and Trim.

1.02 QUALITY ASSURANCE

A. Installer Qualifications: Use for installation, only personnel who are skilled in the work required, familiar with the manufacturer's recommended methods of installation and the requirements of the work.

1.03 SUBMITTALS:

A. Shop Drawings: Submit Shop Drawings in accordance with Division 1 Section "Submittals".

B. Contractor shall submit shop drawings for approval by the Architect prior to fabrication of any materials. Shop Drawings shall clearly illustrate all details including but not limited to: Plan views, column layout and measurements, footing sizing and details, drainage locations and details, building wall condition details, flashing details, Canopy component sizing and thickness, Fastener sizing, large scale assembly details, and finishes by component.
   1. Contractor shall verify all dimensions and elevations prior to submittal to Architect and are to be checked by Manufacturer prior to fabrication.
      a. The site specific shop drawings and calculations shall bear the seal of a Civil or Structural engineer authorized to practice in the state of Texas where the project is located.
      b. Design loads for live load, wind uplift, and wind load shall be identified in the submittal.

C. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available for units with factory-applied color finishes.

D. Samples for Verification: Of each type of exposed finish required in manufacturer's standard sizes. Where finishes involve normal color and texture variations, include Sample sets showing the full range of variations expected.

E. Installation Methods: Submit two copies of manufacturer's recommended installation methods.

1.04 PRE-INSTALLATION MEETINGS

A. Section 01 31 19 – Project Meetings: Schedule and coordinate pre-installation meeting that includes the trade(s) for the work of this Section and other trades that whose work is related to the work of this Section.
   1. Convene minimum one week prior to commencing work of this Section.

1.05 PRODUCT HANDLING

A. Protection: Protect walkway covers before, during and after installation. Protect installed work of other trades.

B. Replacements: In the event of damage, make repairs or replacements as necessary.

PART 2 - PRODUCTS

2.01 GENERAL

A. Designs are based on the product of AVAdek Walkway Cover Systems.

B. Manufacturers: Subject to compliance with requirements, provide products of one of the following manufacturers.
   1. ASA Builders, Inc., www.asabuildersinc.com.
   2. AVAdek Walkway Cover Systems & Canopies www.avadek.com
   3. Dittmer Architectural Aluminum; Ditt-Deck Extruded Aluminum Walkway Covers www.ditt-deck.com
   4. E.L. Burns Company, Inc.; Burns Walkway Covers www.burnscovers.com
   5. Peachtree Protective Covers www.peachtreecovers.com
   6. **Aluminum Techniques; http://www.aluminumtechniques.com**
   7. **East Texas Canopy; www.easttexascanopy.com**
   8. Substitutions: Section 01 60 00 - Product Requirements.

C. Design Requirements:
   1. Systems shall be designed for a minimum 20 psf Live load and 25 psf Wind Uplift Load, or additional should state or local building codes require.
   2. Systems shall be designed to withstand a 150-mph wind event.
   3. It is the responsibility of the walkway cover/canopy manufacturer to verify the design meets the structural load requirements as specified.

2.02 MATERIALS

A. Beams: “U” Beams sized by manufacturer to meet all required design loads, including wind loads, (minimum 6” x 4” x .125”) Alloy 6063-T6 temper

B. Columns: 8” diameter Schedule 40 extruded aluminum round Alloy 6063-T6 temper.

C. Deck: Sized by manufacturer to meet all required design loads, including wind loads, (minimum 2-3/4" ht. x 6" x .078" thickness); extruded aluminum, Alloy 6063-T6 temper; roll-formed not acceptable.

D. Fascia / Trim: Extruded Aluminum 12"-18" ht. X 3" x 0.125" "G" Alloy 6063-T6 temper

E. Aluminum Soffit Panels: Standard 12" wide flat soffit panels as manufactured by AVAdek.
   1. Basis-of-Design: AVAdek "Flat Panel" Soffit System, or approved equivalent by specified manufacturer.
   2. Material: Smooth, non-vented aluminum panels, minimum 0.032-inch thickness.
   3. Profile: 12-inch wide (nominal) flat-face panel with interlocking side joints.
   4. Suspension: Manufacturer's standard proprietary concealed suspension system, designed to attach to the underside of the structural deck.
   5. Finish: As indicated on drawings. If not indicated, match finish specified for Decking and Fascia or as indicated

F. The component sizes noted above are minimums and shall be precluded by component sizes called out on the drawings, or larger components as required to achieve the required structural performance.

G. Fasteners: Stainless Steel

H. Bituminous Paint: Cold-applied asphalt-mastic paint complying with SSPC-Paint 12 requirements, except containing no asbestos, formulated for 30-mil (0.762-mm) thickness per coat.

I. Miscellaneous:
   1. Provide fasteners, sealant, flashing, additional components, etc., to match bents, deck, and trim as required to provide for a complete and finished system.

2.03 ALUMINUM FINISHES

A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations relative to applying and designating finishes.

B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

C. Aluminum Finishes: Finish designations prefixed by "AA" conform to the system established by the Aluminum Association for designating aluminum finishes.
   1. Typical: Class I, Clear Anodic Finish: AA-M12C22A41 Anodic coating, Architectural Class I, clear coating 0 inch (0.02 mm) or thicker) complying with AAMA 607.1
   2. Drop-Off Canopies: As indicated.
      a. Fascia: Two-coat, factory applied, baked-on fluoropolymer coil-coating system; Kynar 500 as manufactured by PPG Industries.
         1) Coating system shall provide minimum 1.0 mil (0.0254 mm) dry film thickness consisting of minimum 0.20 mil (0.00508 mm) primer and minimum 0.80 mil (0.02032 mm) color coating.

2) Color: Custom as selected by the Architect.

b. Soffit Panels:

1) Faux Wood Finish: Factory polyester powder coat finish meeting AAMA 2604 in faux wood-grain design. Color(s) as selected by the Architect. Product as manufactured by Quality Powder Coating, www.qualitypowdercoating.com.

2) Finish electrostatically applied to 2-4 mil thickness and polymerized along with ink printing film for faux wood grain by baking at 400-degrees F for 20-minutes.

3. Remaining Canopies: As indicated.

a. Fascia: Specified medium bronze color anodic coating.

b. Soffit Panels (not faux wood):.

1) Two-coat, factory applied, baked-on fluoropolymer coil-coating system in solid color; Kynar 500 as manufactured by PPG Industries.

2) Color: Custom as selected by the Architect.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances, foundation locations, and other conditions affecting performance of the Work.

B. Verify that concrete footings are properly located, dimensioned, cured, and ready to receive canopy columns.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Verify all field measurements prior to beginning installation.

B. Clean all component surfaces thoroughly prior to assembly and installation.

3.03 INSTALLATION

A. Install canopy system in strict accordance with manufacturer's written instructions and approved shop drawings.

B. Install components plumb, level, and true to line, with no visible distortion or warping.

C. Coordinate installation with scheduled concrete, masonry and roofing work.

1. Metal Protection: Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
2. Erection shall be by manufacturer in accordance with approved Shop Drawings.

D. Anchor columns securely to concrete footings. After final alignment, place non-shrink grout at column bases to provide uniform bearing.

E. Assemble components with manufacturer's standard stainless steel fasteners. Conceal fasteners where possible.

F. Isolate Dissimilar Materials:
   1. At connections to dissimilar metals, apply a heavy coat of zinc-chromate primer or other manufacturer-approved separation coating.
   2. At contact surfaces with concrete or masonry, apply a heavy coat of bituminous paint.
   3. Install flashing at connections to adjacent building walls to provide a watertight installation. Coordinate with Section 07 62 00 - Sheet Metal Flashing and Trim.

G. Soffit System Installation:
   1. Install proprietary suspension carriers securely to the underside of the structural deck, per manufacturer's instructions.
   2. Engage soffit panels into carriers and adjacent panels, ensuring full, positive interlock.
   3. Cut and trim panels neatly to fit at perimeters, columns, and penetrations. Install perimeter trim for a finished appearance.

3.04 CLEANING

A. Clean all exposed surfaces promptly after installation using mild detergent and clean water, in accordance with manufacturer's recommendations.

B. Do not use abrasive, acid, or caustic cleaners.

C. Remove and replace any damaged components that cannot be repaired to the Architect's satisfaction.

3.05 PROTECTION

A. Protect installed canopy and soffit systems from damage during subsequent construction.

END OF SECTION

SECTION 12 66 00

TELESCOPING STANDS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
   1. **Electronically Operated,** Wall-attached telescoping stands.
   2. Molded plastic bench seating modules.
   3. Delegated-design of the complete telescoping stand system, including all platforms, understructure, seating, and anchorage to the building structure.

B. Related Sections:
   1. Division 26 Sections: Power outlets for power-assistance unit.

1.02 DEFINITIONS

A. Operable systems of multiple-tiered bench seating on interconnected folding platforms that close, without being dismantled, into a nested vertical stack for storing or moving.

1.03 PERFORMANCE REQUIREMENTS

A. Structural Performance Characteristics: Engineer, fabricate, and install telescoping stands to withstand the design loads specified in NFPA 102, "Standard for Assembly Seating, Tents, and Membrane Structures," Chapter 5, "Folding and Telescopic Seating," without exceeding the allowable design working stresses of the materials involved, including anchors and connections. Apply each load to produce the maximum stress in each respective component of each telescoping stand unit.

1.04 PRODUCT-SPECIFIC SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.

B. Delegated-Design Submittal: Submit a comprehensive package for the telescoping stands, signed and sealed by the qualified professional engineer specified in the "Quality Assurance" article. The submittal shall include:
   1. Shop Drawings: Show plans, elevations, sections, fabrication details, anchorage details, and all attachments to building structure.
   2. Structural Calculations: Provide a comprehensive structural analysis demonstrating compliance with NFPA 102 and all other specified performance requirements and design loads.

C. Product Data for each type of telescoping stand specified, including details of construction relative to materials, dimensions of individual components, profiles, and finishes.

D. Shop Drawings showing fabrication and installation of telescoping stands including plans, elevations, sections, details of components, and attachments to other units of Work.
   1. For installed products indicated to comply with certain design loadings, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

E. Samples for initial selection in the form of manufacturer's color charts consisting of actual units or sections of units showing the full range of colors, textures, and patterns available for each exposed material involving color selection.

F. Samples for verification of the following items, in the size indicated below. Prepare Samples from the same material to be used for the Work. Where finishes involve normal color and texture variations, include Sample sets showing the full range of variations expected.
   1. Plywood: 12 inch (304.8 mm) square samples of finished material.
      a. Painted Steel: 6-inch square sample of painted steel sheet.
      b. Colors for Plastic Benches: Manufacturer’s chain of plastic samples in full range of available colors.
      c. Molded-Plastic Benches: (2) 6”x6” plastic sample panels per each color selected.

G. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

H. Maintenance data for telescoping stands, including detailed instructions for operation and annual inspection requirements of authorities having jurisdiction, to include in the operation and maintenance manual specified in Division 1.

1.05 QUALITY ASSURANCE

A. NFPA Standard: Comply with requirements of NFPA 102, "Standard for Assembly Seating, Tents, and Membrane Structures," Chapter 5, "Folding and Telescopic Seating," except where more stringent requirements are indicated or imposed by authorities having jurisdiction.

B. Installer Qualifications: Engage an experienced Installer to perform work of this Section who has specialized in installing types of telescoping stands similar to those required for this Project and who is acceptable to, or certified by, manufacturer of telescoping stands.

C. Professional Engineer Qualifications: A professional engineer who is legally authorized to practice in the jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of telescoping stands that are similar to that indicated for this Project in material, design, and extent.

D. Welding Standards: Comply with applicable provisions of AWS D1.1 "Structural Welding Code--Steel" and AWS D1.3 "Structural Welding Code - Sheet Steel."
   1. Engage certified welders that have satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, have undergone recertification.

1.06 PROJECT CONDITIONS

A. Field Measurements: Check actual dimensions of construction affecting telescoping stands by accurate field measurements before fabrication and show recorded measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.07 ADDITIONAL MATERIALS

A. Provide to Owner boxed and sealed ten (10) additional plastic seat tops matcing those installed in the Project.

PART 2 PRODUCTS

2.01 TELESCOPING STANDS

A. Manufacturers
   1. Basis-of-Design: Sheridan Seating, Inc.; www.sheridanseating.com
   2. Hussey Seating Co.; www.husseyseating.com
   3. Interkal Inc.; www.interkal.com
   4. Irwin Seating Company; Folding Bleacher Company Subsidiary; www.foldingbleacher.com
   5. **Royal Stewart LTD.; royalstewart.com**
   6. Substitutions: Section 01 60 00 - Product Requirements.

2.02 MATERIALS

A. Plywood: Softwood plywood panels, **5/8-**inch nominal thickness, 5-ply construction with grade designation American Plywood Association (APA) A-C Exterior, with solid cross bands, Group 1 veneer species for plies, and exterior glue, APA grade trademarked, complying with DOC PS 1 requirements, unless otherwise noted.

B. Structural Steel Shapes, Plates, and Bars: ASTM A-6, except where higher strength steel is indicated or standard with manufacturer.

C. Commercial-Quality Uncoated Steel Sheet: ASTM A366 cold-rolled steel sheet, or ASTM A569 hot-rolled steel sheet, stretcher leveled.

D. Structural-Quality Uncoated Steel Sheet: ASTM A570 hot-rolled steel sheet, or ASTM A 611 cold-rolled steel sheet, stretcher leveled.

E. High-Strength Uncoated Steel Sheet: ASTM A-607 hot or cold-rolled steel sheet, stretcher leveled.

F. Galvanized Steel Sheet: ASTM A 653, G60 coating designation, phosphatized, stretcher leveled.

G. Steel Tubing: ASTM A-500, cold formed; or ASTM A-501, hot formed.

H. Extruded Aluminum: ASTM B221, alloy as standard for manufacturer.

I. Polyethylene Plastic: ASTM D1248, Type III, Class B; molded, color-pigmented, textured, impact-resistant, structural formulation.

J. Fasteners: Vibration proof, of size and material standard with manufacturer.

2.03 COMPONENTS

A. General: Provide manufacturer's standard telescoping stands fabricated to comply with requirements indicated. Smoothly round corners, edges, and exposed fasteners to eliminate snagging and pinching hazards. Form exposed sheet metal with flat, flush surfaces, true to line and level, and without cracking and grain separation. Perform welding by operators and processes complying with AWS requirements.

B. Bench Seats and Skirts: Bench Seats and Skirts: Provide seats with a uniform height of manufacturer's standard 17 to 18 inches (432 to 457 mm), complying with NFPA 102.
   1. Material: Polyethylene plastic in color selected by Architect from manufacturer's full range of colors.
   2. Profile: Contoured Seat Module, as standard with Basis of Design manufacturer.
   3. Depth: Nominal 10-inches unless otherwise indicated.

C. Cutouts for wheelchair accessible seating at first tier locations indicated. Provide front rails attached to front of second tier at rear of wheelchair accessible seating area. Provide full-width front closure panel at cutout that matches decking construction and finish and extends from underside of second tier to 1-1/2 inches (38 mm) from finished floor.

D. Footrests: Fabricate fully cosed footrests from plywood, with finish selected by Architect.

E. Understructure: Fabricate understructure from structural steel members of size, spacing, and form required to support design loads.

F. Cantilever bench seat supports to produce toe space uninterrupted by vertical bracing.

G. Support Column Wheels: Provide manufacturer's non-marring, soft, rubber-face wheel assembly under each support column. Include wheels of size, number, and design required to support stands and to achieve smooth operation without damage to flooring surface, but not less than 4 per column or less than 3-1/2 inches (89 mm) in diameter and 1 inch (25.4 mm) wide.

H. Aisles: Fabricate stands with the following aisle configuration, at locations and of widths indicated:
   1. Footrest-Level Configuration: Interrupt seats to provide aisle walking surfaces at footrest level.

I. Row-Spacing: Fabricate units with row spacing of manufacturer's standard nominal [26 inches (660 mm).

J. Row-Rise: Fabricate units with row rise of manufacturer's standard nominal 9-5/8 to 10-1/2 inches (244 to 267 mm).

K. Operation: Provide telescoping stands incorporating manufacturer's standard system of seating and understructure members that permit opening and closing of adjacent rows, allow individual and collective rows to be locked open for use, and close with vertical faces of upper skirts in the same vertical plane.

1. **Non-tractive Electric Operation: Provide manufacturer's standard integral power operation of telescoping stands by electric-motor-operated pusher linkage and reel system that does not apply tractive force to floor. Provide linkage system fitted with rollers on every link to allow chains to roll smoothly across floor. Control units by plug-in, walk-along pendant switch or remotely, by key-operated switch in wall-mounted control station, as standard with manufacturer.**
2. ~~**Manual Operation: Provide manufacturer's standard pair of operating handles to attach under the first-row kick board for manual operation.**~~
    a. ~~**Provide manufacturer's portable electric tractor system ("mule") for stand-up power-assist for opening and closing of seating sections.**~~

L. Types of Telescoping Stands: Provide assemblies of the following types, fabricated in lengths and number of rows indicated:
1. Wall-Attached Type: Construct stands to provide for permanent attachment of rear of understructure to wall construction.
2. Manual-rotate end and aisle railings.

M. Accessories: Provide the following accessories of manufacturer's standard design and construction at locations indicated or required to comply with referenced code standard:
1. Nonslip abrasive tread surfaces at vertical aisles.
2. Intermediate aisle steps, fully enclosed, at each vertical aisle.
3. Hinged front steps, fully enclosed, at each vertical aisle, that flip up on hinges and store between first and second row of seating.
4. Non-removable folding aisle handrails located at centerline of each vertical aisle and discontinuous with gaps or breaks at intervals not exceeding 5 rows.
5. End railings of non-removable, self-storing type.

2.04 **ELECTRIC OPERATION**

A. **Integral Friction Power System: Provide a built-in, non-tractive electric power system designed for opening and closing the telescoping stands.**
1. **Drive Units: Provide a minimum of two (2) heavy-duty, high-torque gear motors per bank of seating, mounted under the first row.**
2. **Friction Drive: Drive units shall utilize large-diameter, non-marring rubber rollers that provide continuous traction on the finished floor surface.**
3. **Limit Switches: Provide factory-set limit switches to automatically stop the system at the fully open and fully closed positions.**
4. **Standard of Quality: Ensure the system allows for independent operation of each bank of seating.**

B. **Control Station:**
1. **Type: Provide a removable, handheld pendant control with a "dead-man" style constant-pressure switch.**
2. **Safety Key: System shall be activated only by a keyed master switch located at the main power panel or the handheld pendant to prevent unauthorized use.**

C. **Electrical Requirements: Coordinate with Division 26 for the final connection of power as required by manufacturer to the junction boxes at the rear wall.**

2.05 STEEL FINISHES

A. Surface Preparation: Solvent-clean surfaces to comply with SSPC-SP 1 to remove dirt, oil, grease, and other contaminants that could impair paint bond. Remove mill scale and rust, if present, from uncoated steel complying with SSPC-SP 5 (White Metal Blast Cleaning) or SSPC-SP 8 (Pickling).

B. Rust-Inhibitive Finish: Immediately after cleaning and pretreating, apply manufacturer's standard rust-inhibitive finish to exposed and concealed metal surfaces including understructure, except where other types of finishes are indicated.

1. Powder-Coat Finish: Immediately after cleaning and pretreating, apply a factory-applied, thermoset powder-coat finish to all exposed and concealed metal surfaces of the understructure. Color as selected by Architect from manufacturer's standard range.

2.06 WOOD FINISHES

A. Transparent Finish: Prepare surfaces by machine sanding, supplemented by hand sanding where required, followed by application of sealer coats and transparent topcoats of type, in number, and by process standard with manufacturer. Apply to wood surfaces, except where otherwise indicated.

B. Painted Plywood: Manufacturer's standard wear-resistant finish in manufacturer's standard color.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine areas where telescoping stands are to be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of telescoping stands. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Install telescoping stands to comply with manufacturer's instructions and Shop Drawings. Provide accessories indicated and anchors, fasteners, inserts, and other items required for installing and attaching units to adjoining construction.

B. **Electrical Coordination:**

1. **Verify that the power assistance unit is properly grounded and that all wiring is protected from abrasion during the telescoping movement.**
2. **Ensure that the flexible power cord from the wall to the first-row drive motor is of sufficient length to allow for full extension without tension.**

3.03 ADJUSTING AND CLEANING

A. On completion of installation, including work of other trades, lubricate, test, and adjust each telescoping stand unit to operate easily and to comply with manufacturer's specifications.

B. Clean installed telescoping stands on exposed and semi-exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

3.04 DEMONSTRATION

A. Engage a factory-authorized service representative to demonstrate and train Owner's maintenance personnel as specified below.
   1. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
   2. Train Owner's maintenance personnel on procedures and schedules related to operation, troubleshooting, servicing, inspection, and maintenance.

B. Review data in the operation and maintenance manuals. Refer to Division 1 Section "Contract Closeout."

C. Schedule training with Owner, through Architect, with at least 7 days' advance notice.

3.05 PROTECTION

A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer that ensure telescoping stands are without damage or deterioration at the time of Substantial Completion.

END OF SECTION

SECTION 23 05 48 - VIBRATION ISOLATION

PART 1 - GENERAL

1.1 SCOPE

A. Furnish, install, and adjust vibration isolation.

1.2 RELATED WORK

A. Division 23 Mechanical.
   1. Refer to the Section on Ductwork for flexible connections between fans and ducts.
   2. Refer to the Section on Equipment Supports for equipment foundation pads.

1.3 SUBMITTALS

A. Submit product data showing type, size, load, deflection and other information required. Include clearly outlined procedures for installing and adjusting isolators.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Amber Booth
B. Kinetics
C. Mason
D. Korfund
E. VSI.
F. Vibration Eliminator Co., Inc.
G. Metraflex
H. Vibro-Acoustics

2.2 ISOLATOR TYPES

A. Neoprene mountings shall have a minimum static deflection of 0.35 inches (9mm). All metal surfaces shall be neoprene covered and have friction pads both top and bottom. Bolt holes shall be provided on the bottom and a tapped hole and cap screw on top. Steel rails shall be used above the mountings under equipment such as small vent sets to compensate for the overhang.

B. Spring isolators shall be free standing and laterally stable without any housing and complete with a molded neoprene cup or ¼ inch (6mm) neoprene acoustical friction pad between the base plate and the support. All mountings shall have leveling bolts that must be rigidly bolted to the equipment. Installed and operating heights shall be equal. The ratio of the spring diameter divided by the compressed spring height shall be no less than 0.8. Springs shall have a minimum additional travel to solid equal to 50% of the rated deflection. Submittals shall include spring diameters, deflection, compressed spring height and solid spring height.

C. Hangers shall consist of rigid steel frames containing minimum 1-1/4 inch (32mm) thick neoprene elements at the top and a steel spring with general characteristics as in specification B seated in a steel washer reinforced neoprene cup on the bottom. The neoprene element and the cup shall have neoprene bushings projecting through the steel box. In order to maintain stability the boxes shall not be articulated as clevis hangers nor the neoprene element stacked on top of the spring. Spring diameters and hanger box lower hole sizes shall be large enough to permit the hanger rod to swing through a 30-degree arc from

side to side before contacting the cup bushing and short circuiting the spring. Submittals shall include a hanger drawing showing the 30-degree capability.

D. Flexible spherical expansion joints shall employ Peroxide cured EPDM in the covers, tubes and frictioning of the reinforcement. Reinforcement must be DuPont Kevlar. Solid steel rings shall be used within the raised face rubber ends to prevent pullout. No substitutions for the DuPont Kevlar or the solid steel embedded flange rings are acceptable. Sizes 2 inch (50mm) and larger shall have two spheres reinforced with a metal ring between spheres to maintain shape and complete with split ductile iron or steel flanges with hooked or similar interlocks. Sizes 16 inch (400m) to 24 inch (600mm) may be single sphere. Sizes 3/4 inch (20mm) to 1-1/2 inch (40mm) may have threaded bolted flange assemblies, one sphere and cable retention. 14 inch (300mm) and smaller connectors shall be rated at 250 psi (17 BAR) up to 190°F (88°C) with a uniform drop in allowable pressure to 190 psi (13 BAR) at 250°F (121°C). 16 inch (400mm) and larger connectors are rated 180 psi (12 BAR) at 190°F (88°C) and 135 psi (9 BAR) at 250°F (121°C). Safety factors to burst and flange pullout shall be a minimum of 3/1. All joints must have permanent markings verifying a 5 minute factory test at twice the rated pressure. Concentric reducers to the above specifications may be substituted for equal ended expansion joints.

High pressure joints shall be substituted for the above where operating pressures are higher than standard. Expansion joints shall be installed in piping gaps equal to the length of the expansion joints under pressure. Control rods need only be used in unanchored piping locations where the manufacturer determines the installation exceeds the pressure requirement without control rods. Control rods are not desirable in seismic work. If control rods are used, they must have ½- inch (12mm) thick Neoprene washer bushings large enough in area to take the thrust at 1000 psi (6.9 N/mm5) maximum on the washer area. Standard diameter bolt washers are not acceptable.

Submittals shall include two test reports by independent consultants showing minimum reductions of 20 DB in vibration accelerations and 10 DB in sound pressure levels at typical blade passage frequencies on this or a similar product by the same manufacturer. All expansion joints shall be installed on the equipment side of the shut off valves.

E. Flexible stainless steel hose shall have stainless steel braid and carbon steel fittings. Sizes 3 inch (75mm) and larger shall be flanged. Smaller sizes shall have male nipples. Hoses shall be installed on the equipment side of the shut-off valves horizontally and parallel to the equipment shafts wherever possible.

2.3 ISOLATOR APPLICATION

EQUIPMENT	ISOLATOR TYPE	MINIMUM DEFLECTION
Chiller	A	0.35”
Pump	B	1.5”
Condensing Units	A	0.35”
In-Line Fans	C	0.5”
Suspended Fan Coil Units	C	0.5”

2.4 PIPING ISOLATOR APPLICATIONS

EQUIPMENT	ISOLATOR TYPE
Floor Mounted Pumps	D
Suspended Pumps	D
Chiller Pipe Connections	D
Chiller Refrigerant Relief	E

2.5 FLEXIBLE CONNECTIONS IN PIPING AT PUMPS

A. Provide flexible connections at suction and discharge of chilled water, and hot water pumps, piping connections on chillers and where indicated on drawings. Refer to schedule above.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Stock Requirements. The isolation manufacturer's representative shall maintain an adequate stock of springs and isolators of type used so that changes required during construction and installation can be made.

B. Factory Representation. After installation, furnish factory-trained representative of the isolation manufacturer to check various isolators and report measured versus anticipated deflection on all isolators. Have the representative certify that isolators have been installed in accordance with manufacturer's recommendations and approved submittals. Provide written report to Engineer indicating compliance prior to final acceptance.

END OF SECTION

SECTION 26 55 61 – THEATRICAL LIGHTING SYSTEM

GENERAL

1.1 INTENT

A. The intent of this specification is to define parameters for furnishing and installing a complete and working new theatrical dimming and control system. Performance deviations will not be accepted.

B. All work must be done in compliance with the National Electric Code and applicable local codes.

C. Contractor is responsible for providing a complete working system. All items needed for a complete working system meeting the design intent of the plans and specifications are to be included, even if not specifically listed.

1.2 APPROVED EQUIPMENT

A. Dimming and control equipment: Approved manufacturers:
   a. Basis of design: Electronic Theatre Controls
   b. Lehigh
   c. Vari-Lite

B. Distribution: Approved Manufacturers:
   a. Electronic Theatre Controls
   b. Lehigh
   c. Vari-Lite

C. Lighting Fixtures: Approved manufacturers:
   a. Electronic Theatre Controls
   b. Lehigh
   c. Vari-Lite

1.3 SUBSTITUTIONS

A. Specific items of equipment are listed by trade names. It is neither the purpose nor intent of these documents to eliminate competitive proposals. In order to allow proper and fair comparison of pricing, each contractor is required to submit his base bid price on the specified equipment.

B. A substitution will not relieve the contractor from the responsibility of meeting all specification criteria. If an approval of a substitution is granted, the Contractor shall be fully responsible for any and all changes such substitution shall require.

C. Equipment physical dimensions and weights indicated are nominal and any substitution shall be similar in size and weight to fit the required space and present similar aesthetics if in public view.

D. Electrical and other performance specifications shall be reasonably the same withing a 10-percent tolerance or exceed the performance parameters specified acceptable to the Architect, Engineer, and Owner.

1.4 QUALITY ASSURANCE

A. To ensure a uniform installation and single responsibility, one manufacturer shall provide all dimming and control system components. Mixing of equipment brands will not be accepted.

B. Manufacturer shall provide local on-site service for the system for a period of two years from date of acceptance by the Owner. This person or firm must be regularly engaged in the service of dimmers. A salesperson or sales agent or distributor without dedicated service personnel does not meet this requirement.

C. This specification details specific operational and functional needs of the system. Deviations from the performance requirements will not be accepted from any supplier. Contractor assumes the responsibility of removing any non-complying material discovered during the warranty period and replacing it with specification compliant equipment.

D. Due to the specialty nature of theatrical lighting equipment, a Theatrical Systems Contractor shall provide the theatrical dimming and control equipment to the Project Electrical Contractor, as well as providing support and coordination services to ensure a complete working system.

E. Riggers shall be ETCP Certified Riggers for Theatre.

F. The Theatrical Systems Contractor shall be an authorized dealer of the specified manufacturers and have been actively engaged in the sales, installation, repair and maintenance of theatrical lighting equipment for no less than five full (5) years. Evidence of experience for projects of similar size and scope shall be submitted if requested. This evidence shall include a reference list for a minimum of five projects including: job name, contact name and phone number, scope and contract value.

1.5 SERVICES

A. Services of a qualified technician, representing the manufacturer, and employed full-time in the service of control systems, shall be provided. This technician shall terminate all low voltage control wiring, inspect the installation, and energize the system. He shall also instruct the Owner in proper operation and maintenance of the system.

B. During the warranty period, the manufacturer shall provide a 24-hour per-day number for telephone technical support and service requests.

C. The Theatrical Systems Lighting Contractor shall be responsible for the following due to the specific technical nature of theatrical lighting control systems:
1. Provide all dimming, control, and distribution equipment as detailed and required in these specifications and associated drawings
2. Provide shop drawings indicating system layout, control wiring, physical mounting locations, and mounting techniques of all equipment
3. Provide and install dead hung pipes, pipe mounted circuit boxes, and raceways as required. Provide rated mounting hardware as required for hanging positions.
4. Provide Factory Authorized Service Technician to perform system commissioning, low voltage terminations, installation of control plates, system programming, and minimum 4 hours dedicated system training to Owner’s Representative.
5. Provide all lighting fixtures and accessories as indicated or required. All fixtures shall be unboxed, addressed, hung, and focused.
6. Setup the controls with several basic looks appropriate for the following: (a) Assembly or speaking event (b) Choir concert or orchestral performance (c) a

theatrical performance. Provide training to the Owner on how to adjust the light levels and colors, and how to create record additional looks into control system.

7 The theatrical lighting control console shall be set up, patched, and sample cues written as part of the training.

D. The Project Electrical Contractor shall be responsible for the following:

1. Installation of all dimming and control racks and equipment, including mounting of racks on walls, power feeds as required, and installation of custom back boxes.
2. Provision and installation of all standard back boxes
3. Provision and installation of all 120 Volt distribution circuits, and all 120/208 Volt feeder circuits for the theatrical lighting system
4. Terminating of all 120 Volt and 120/208 Volt power and distribution circuits, both in the dimmer cabinet, and at the circuit distribution.
5. Provision and installation of all conduits, junction boxes, electrical wire ways, and cable trays as required for the lighting systems, including low voltage control systems conduits.
6. Pulling all high and low voltage cables into conduit
7. Clean all racks, panels, and boxes of dirt, dust, and debris, reassemble all equipment, and replace all panels, covers, and screws prior to time of system factory energization and training
8. Coordination with the Theatrical Systems Lighting Contractor on all aspects of the rigging and electrical installation and low voltage cable runs. Follow all manufacturer submittal plans and installation recommendations. Actively facilitate coordination with the General Contractor and Structural Engineer for all structural attachment needs. Schedule adequate time at the end of the job for Theatrical Systems Contractor to commission the system prior to project substantial completion.
9. At time of System Commissioning, Project Electrical Contractor is responsible for providing access to all low voltage termination points for termination and testing to the Service Technician. This includes lifts, ladders, and personnel required to reach any position the Service Technician needs access to. Electrical Contractor shall also provide personnel as needed to the Service Technician for troubleshooting and any needed wiring changes, terminations, or testing. These personnel shall be made available whenever the service technician is on the job site.
10. Electrical Contractor is responsible for advanced scheduling with the Theatrical Systems Contractor. Theatrical Systems Contractor shall be given at least 21 days' notice of request for system startup. Electrical Contractor is responsible for having all equipment installed and wiring pulled & terminated prior to the arrival of the Theatrical Systems Contractor Service Technician for commissioning.

1.6 DRAWINGS

A. Submittals shall be in .pdf format and consist of:

1. Specification section line-by-line compliance, refer to Electrical Shop and Coordination Drawings specification section for additional requirements.
2. Detailed bill of materials and services
3. Control riser showing system layout and point to point wiring diagrams
4. Scaled drawing indicating system layout, control wiring, physical mounting locations off all fixtures.
5. Manufacturer data sheets with provided equipment and accessories marked.
6. ETCP Certifications for individuals installing rigging.

B. Submittal drawings will be updated with “As Built” conditions after installation and turned over at the close of the project in .pdf format shall be provided with the Operations and Maintenance Manuals.

C. Operations and maintenance manuals, covering all major items installed, shall be provided with the Operations and Maintenance Manuals.

D. All Drawing requirements for submittals and as built detailed general sections of specification shall apply.

1.7 WARRANTY

A. The dimming manufacturer shall provide a two (2) year warranty on the entire theatrical lighting system from date of acceptance.

B. The dimming manufacturer shall provide a five (5) year warranty on all LED light fixtures. The LED light array shall have a ten (10) year warranty.

PART 2 - PRODUCTS

2.1 DIGITAL MINI PANELS

A. Product: Unison Foundry DMX Mini Control Panels by ETC, Inc. DMX controlled lighting. Fully rated 20 Amp relays and optional 0 to 10 Volt control per zone. Demand Response input for energy saving integration and UL 924 emergency lighting control bypass with power loss sense. Flush or surface mount.
   1. Model UFMP4: 4-zone DMX Mini Panel.
      a. Relays: 4. For switching for lighting and plug loads.
      b. Dimming Outputs 0 to 10 Volt.
   2. Model UFMP8: 8-zone DMX Mini Panel.
      a. Relays: 8. For switching for lighting and plug loads.
      b. Dimming Outputs 0 to 10 Volt.
   3. Standards Compliance: cULus and UL 924 Listed. Rated for plenum installation.
      a. Suitable for plug load control.
   4. Functional:
      a. Emergency Lighting Control: UL 924 via contact closure and power loss sense feed terminal.
      b. Demand Response Input.
      c. Supports USITT DMX512-A; ANSI E1.11.
      d. Supports RDM; ANSI E1.20.
   5. Mechanical:
      a. Finish: Black powder coat.
      b. Mounting: Wall, Flush-mount. Rated for installation in plenum air space.
      c. Mounting: Wall, Surface-mount. Rated for installation in plenum air space.
      d. Voltage Divider: Allows for separation of normal and emergency circuits in a single controller were allowed by local codes.
   6. Electrical:
      a. Power Input: 100 to 277 VAC, 50/60 Hz per circuit with support for passing thru to multiple circuits.
      b. Single Phase Sense Feed Input: 100 to 277 VAC.
      c. Supports 120 VAC and 277 VAC circuits within the same panel.
      d. Fully Rated Bi-State Latching Relay per Output: 20 A.
      e. Control Rated: 0 to 10 VDC for up to 100 mA sink per output.
         1) Outputs 0 to 10 V: Fully isolated from ground to 2500 V RMS.

f. Demand Response input supports Normally Open (NO) operation.
g. UL 924 contact closure input supports normally open (NO) or normally closed (NC) operation.
h. Onboard status indicators for controller power, DMX signal, Demand Response input, and UL 924 emergency lighting control.
i. Slide Switch Configuration For:
1) UL 924 operation; NO/NC.
2) UL 924 inclusion per circuit; On/Off.

7. Relays: Mechanically held.
8. DMX Input Port:
a. Integrated DMX/RDM termination.
9. Thermal: Operating range limits.
a. Temperature: 32 to 122 degrees F (0 to 50 degrees C).
b. Humidity non-condensing: 5 to 95 percent

2.2 FIXTURE-MOUNTING TRACK System

A. Track System
1. The track system shall be OneTrack by ETC and OneTrack Backbone as supplied by ETC, Inc.
2. Track system shall provide two 20-Amp circuits with discrete neutrals and a data bus that supports DMX, DALI, or 0-10V control.
3. System shall allow for power and data to be supplied via end feeds our couplers
4. Track shall support up to 35 pounds per foot of connected equipment when properly supported.
5. System shall include rigid Backbone mounting option:
a. OneTrack shall mount securely into Backbone
b. Backbone shall support suspension mounting with a maximum unsupported span of 10’
c. Backbone shall support maximum point loads of 100 lbs.
d. Backbone shall support a maximum distributed load of 800 lbs. if supported at a minimum of 2’ on center
e. Backbone shall support installation of non-track-mounted luminaires; track within Backbone shall support installation of track-mount luminaires and pigtail adapters

B. Mechanical - Track
1. Tracks shall be constructed out of extruded aluminum.
2. Track sections shall be available in various lengths and shall support being cut in the field if required
3. Track shall have pre-punched holes for surface mounting
4. Track shall be UL Listed for wall mount, vertical mount, and angled mount applications
5. Tracks shall be available in black and white. Custom color options shall be available

C. Mechanical - Backbone
1. Backbone shall be constructed out of extruded aluminum alloy.
2. Backbone sections shall be available in various lengths and shall support being cut in the field if required.
3. Backbone shall support standard Unistrut mounting hardware for installation
4. Backbone shall be available in black, white, and silver. Custom color options shall be available

D. Accessories – Track

1. A variety of track feeds and couplers shall be available including:
   a. End Feed
   b. I-Coupler
   c. L-Coupler
   d. T-Coupler
   e. X-Coupler
   f. Flex-Coupler
   g. Current Limiting End Feed
   h. Current Limiting I-Coupler
   i. Electrical Straight Coupler
2. Track fixture adapters and couplers shall be made of a polycarbonate material and shall be available in black and white
   a. Track fixture adapters shall support up to 11 lbs. on standard track or 22 lbs. when used on Backbone with a retaining collar
   b. Track fixture adapters shall provide a mechanical lock to the track and shall provide a set screw for securing fixture stems within the adapter collar
   c. Track feed and coupler accessories shall provide a set screw to hold the part securely in the track after installation
3. Installation kits and accessories shall be available including:
   a. Wire Rope suspension mounting kits
   b. Pendant stem suspension mounting kits
   c. Threaded rod suspension mounting adapters
   d. T-bar mounting clips
   e. Canopy covers

E. Accessories - Backbone
1. Coupler Housings:
   1) L-Coupler
   2) T-Coupler
   3) X-Coupler
2. Coupler Housings with Pull Boxes
   1) End Feed
   2) I-Coupler
   3) T-Coupler
   4) X-Coupler
3. Fixture Hanger Brackets
4. Straight locking joint
5. Fixture Pigtail Adapters to include 24” cables in the following plug combinations:
   1) powerCON and 5-pin XLR for DMX data transmission
   2) TRUE1 TOP and 5-pin XLR for DMX data transmission
   3) TRUE1 TOP only for use with luminaires that have integrated wireless DMX capability
6. Track adapters fitted with general-purpose receptacles that violate NEC requirements shall not be accepted.

F. Electrical
1. Track shall be rated for 120VAC power input of two 20 A circuits with a maximum load of 16 A per circuit.

G. Circuits shall have individual neutral conductors
1. Track shall support a low voltage circuit up to 60 Volt for low voltage control.
2. Fixture adapters shall be capable of supplying both power and low voltage control circuits from the track to the fixture.

3. Track system low voltage circuit shall support DMX-512A and bi-directional RDM data transmission:
   1) Up to 32 DMX devices on up to 60-foot of track
   2) Up to 20 DMX/RDM devices on up to 60-foot of track
   3) A DMX terminator accessory with a 120 Ohm resistor shall be available.

2.3 ECHO TOUCH CONTROLLER STATION

A. Touchscreen Control Stations to be Unison Echo EchoTouch Controller Mk2 by ETC, Inc. Controls 512 DMX addresses on up to 80 control zones.
   1. Standards Compliance: cULus Listed and CE Compliant. FCC Compliant.
   2. Operation: Graphic buttons, faders, and images on at least 7 user programmable default and fully graphical control pages.
   3. Touchscreen: Integrated with ETC Unison Echo Controls.
      a. Seven-inch, backlit liquid crystal display. Resolution: 800 by 400 pixels minimum, with capacitive multi-touch interface.
      b. Bezels: Cast aluminum. Finish: Fine texture powder coat.
         1) Four colors: Cream, Gray, Black, or Signal White.
         2) No visible means of attachment.
      c. Supports Surface, Flush and Rack Mounting.
         1) Flush-mount: To industry standard 3 gang back box.
         2) Surface Back Box as required.
         3) Rack Mounting: Fit in standard 19 inch (483 mm) racks, no taller than 3 EIA rack units.
   4. Electrical:
      a. RJ45 Ethernet Port: Connection to lighting system and Power over Ethernet.
      b. Control Wiring: EchoConnect Connection terminals.
         1) Low-voltage, Class II unshielded twisted pair, type Belden 8471 and one No. 14 ESD drain wire, when not installed in grounded metal conduit.
         2) Topology free. Point-to-point, bus, loop, home run, or any combination.
      c. Power Input, Non-PoE: Two, No. 16 AWG stranded wires for 24 VDC.
      d. Typical Power Draw: 400 mA.
      e. Firmware Maintenance: USB type A connector.
      f. Network:
         1) Network Cabling: Category 5 or better. Conform to TIA-568A/B. Installed by qualified network installers.
      g. Functional System:
         1) Presets: Contained in non-volatile electronic memory.
         2) Internal sequences: Record user-selected zone levels.
         3) Touchscreen: Equipped with on-board help system.
         4) Software upgrades: Via USB drive only.
         5) USB Port: Show data to be saved for archival or transfer to other consoles or a personal computer.
      h. Patching: Facilities for dimmers and multi-parameter devices via built in library of fixture definitions.
         1) Fixture Library: Updated via software-based updates. Create custom fixture definitions using offline application.
         2) Touchscreen: Support patching, address setting, and mode changes using Remote Device Management (RDM) on local DMX/RDM port.
      i. Playback Control: Customizable zone display. Rearrange graphical representations for control channels to mimic fixture positions in

installation.
1) Seven user customizable interactive pages.
2) Color and white pickers.
3) Touch-based parameter controls with reference-based palettes.
4) Virtual level wheel.

j. Layout and Configuration: View and modify layout of user pages.
1) Add, remove, or edit the following items: Preset buttons, Off buttons, Sequence buttons, Zone and space modifier button, Space combine buttons, and Zone fader.
2) Three Options for Inactivity: dim screen to low run of show brightness level, turn screen off, or display user chosen inactivity image.
3) Multiple Configurations: May be stored within an LCD Station.

5. Time Clock: Touchscreen built-in astronomical and real time event engine allowing presets and sequences activation.
a. Support 80 Events: Astronomical, real-time, and manual control events in 16 control spaces.
b. Timed Events: Programmable via Touchscreen.
1) Assigned to day types.
a) Day Types: everyday, weekday, weekend, and day of week.
2) Activation: Based on sunrise, sunset, time of day, opened and closed events and configurable state-based engine.
3) Compensate for regions using daylight saving time.
4) Assignment to events via time clock user interface.
5) Resumes automatically after power loss.
c. Support timed event hold. Meet CA Title 24 requirements.

6. External Control: Control of lighting system through built-in UDP integration.
a. Supports full control of lighting systems using UDP strings.
1) Security settings to limit incoming control strings to subscribers-only.
b. Supports up to two subscribers for receiving status messages.
c. Control and status integrations from 3rd party systems include:
1) Zones.
2) Channels.
3) Presets.
4) Spaces.
5) Sequences.
6) Lockout.

2.4 DATA PLUG-IN STATIONS

A. Provide Data Plug in stations as indicated.

B. General
1. The Plug-in Stations shall consist of the appropriate connectors required for the functional intent of the system. These stations shall be available with DMX input or output, network, architectural control connectors, or diplex outlet. Custom control connectors shall be available.

C. Connector Options
1. The following standard components shall be available for Plug-in Stations:
5-Pin male XLR connectors for DMX input
5-Pin female XLR connectors for DMX output
RJ45 connectors for Network connections - Twisted Pair

6-Pin female DIN connectors for Unison connections
DB9 female serial connector for architectural control from a computer
NEMA 5-15 duplex receptacle for power connection

2. Custom combinations and custom control connections shall be available.

D. Physical
1. Station faceplates shall be aluminum, finished in fine texture, scratch-resistant black powder coat. Silk-screened graphics shall be white.
2. The station panel shall mount into an industry standard back box. Depending on size and quantity of connectors, a terminal block shall be supplied for contractor termination.
3. When AC Power is present, a voltage divider shall be provided
4. Optional Backbox and U-bolt kit shall be provided for installations where mounting to pipes

2.5 DISTRIBUTION

A. Connectors shall be available as 20A, 50A and 100A grounded stage pin, 20A twist lock and 20A “U” ground (dual rated “T-slot”); other connectors shall be available as specified.

B. Pigtails shall be three-wire type “SOW” rubber jacketed cable sized for the maximum circuit ampacity.

C. Pigtails with 20-Amp stage pin connectors shall be terminated using 12-gauge 4 way indent crimp (with inspection window) type where the wire is inserted and crimped directly in the socket.

D. Terminations for pigtail connectors shall utilize feed- through terminals individually labeled with corresponding circuit numbers. Terminals that place a screw directly on the wire are not acceptable.

E. Outlet and pigtail boxes shall be supplied with appropriate brackets and hardware for mounting as shown on the drawings

F. A low voltage distribution system shall be available to incorporate DMX, Ethernet or other protocols as specified in the power distribution box. A voltage barrier shall be used to separate the low voltage wiring for the electrical circuits.

G. Power distribution equipment shall be listed by a nationally recognized test lab.

H. Outlet and pigtail boxes shall be 6.25” H x 3.3” D and fabricated from 18-gauge galvanized steel and finished in black fine-texture powder coat paint. Covers shall be fabricated from 16-gauge galvanized steel

I. Outlet and pigtail boxes shall be available in any length specified in increments of 3-inches with a maximum length of up to 3-foot.

J. Pigtails and outlets shall be spaced on 18” centers, or as otherwise specified.

K. Outlets shall be mounted on individual 3” panels.

L. Circuits shall be labeled with 1.25” lettering.

M. Wiring devices shall be Listed by UL Laboratories.

2.6 ENTERTAINMENT CONTROLS - RESPONSE

A. Gateway Series:
1. Product: Response Mk2 DIN Gateways by ETC Inc. DIN Gateway provides data distribution using the quality and reliability of ETC's network technology. Built for Net3 using industry-standard sACN, DMX and RDM.
a. Model: RSN-DMX1-DIN Response MK2 1-port Gateway - DIN Rail.
b. Model: RSN-DMX2-DIN Response MK2 2-port Gateway - DIN Rail.
c. Model: RSN-DMX4-DIN Response MK2 4-port Gateway - DIN Rail.
d. Standards Compliance: cETLus Listed, CE compliant, UKCA compliant, RoHS compliant, WEEE.
e. Functional:
1) Supports Net3/ACN (ANSI E1.31 and E1.17), RDM (ANSI E1.20), and USITT DMX512-A (ANSI E1.11).
2) Compliance: USITT DMX512 and ANSI E1.11 DMX512-A.
3) Flexible Output Patch: Allows a 512-address universe to begin at any output address.
4) Advanced Input Patch.
5) Support for per-address- or per-universe-level priority.
6) Delay Time from Input to Output: Not greater than one packet time.
7) Selectable DMX Refresh Rate: Maximum of 40 Hz.
8) Supports 255 total RDM devices.
f. Mechanical:
1) Intuitive four-button interface.
2) Onboard display for identification, status, and configuration.
3) Molded plastic enclosure.
4) Mounting: Complies with DIN43880 (35/7.5 rail).
5) DIN installation enclosure available.
6) Network, power, and data activity LED indicators.
a) Blue power indicator, green network activity indicator.
b) Bi-color DMX activity indicator.
7) RJ45 connector for connection to lighting network.
8) Reset button for hard reset or forced reboot.
g. Environmental:
1) Ambient operating temperature: 32 to 104 degrees F (0 to 40 degrees C).
2) Operating Humidity: 5 to 95 percent non-condensing.
3) Storage temperature: Minus 40 to 158 degrees F (Minus 40 to 70 degrees C).
h. Electrical:
1) Compliant with IEEE 802.3i for 10BASE-T, 802.3u for 100BASE-TX and 802.3af for Power over Ethernet.
2) Power Input: 12-24 VDC for use with non-PoE systems.
3) Pluggable terminals for solid and stranded cable provided.
i. Configuration:
1) Local configuration options.
2) Remote configuration by Net3 Concert.
a) Supports 512 DMX addresses per port.
b) Supports 63,999 Streaming ACN universes.
3) DMX data input or output configurable by user.
4) Multiple sources may be combined to the network with each

source or address allowed an independent priority.
5) Individual port start addresses and offsets.
6) User-configurable labeling.

B. Opto-Splitter Series:
1. Product: Response Opto-Splitter by ETC Inc. Provides quality and reliable DMX data distribution using industry-standard DMX and RDM.
a. Model: RSN-OPTO-8DIN. 8 Port DIN rail - Terminal.
b. Standards Compliance: cETLus Listed, CE compliant, UKCA compliant, RoHS compliant, WEEE.
c. Functional:
1) No configuration required.
2) Supports DMX512, DMX512 (1990), DMX512-A, ANSI E1.20 Remote Device Management (RDM).
3) Supports 256 total RDM devices.
d. Mechanical:
1) Rack-mount form factor:
a) Fabricated from aluminum.
b) Black, Fine-textured, powder-coat finish.
c) Full 19-inch equipment rack width.
d) Front or rear facing mounting options.
2) DIN rail form factor:
a) Molded plastic enclosure.
b) Mounting complies with DIN43880 (35/7.5 rail).
c) Unit is 9 DIN units wide.
d) DIN installation enclosure available.
3) Power and data activity LED indicators.
a) Blue power indicator.
b) Green DMX activity indicator.
e. Environmental:
1) Ambient operating temperature: 32 to 104 degrees F (0 to 40 degrees C).
2) Operating Humidity: 5 to 95 percent non-condensing.
3) Storage temperature: Minus 40 to 158 degrees F (Minus 40 to 70 degrees C).
f. Electrical:
1) Supports DMX input and DMX thru.
2) Provides optically isolated DMX/RDM outputs.
3) Rack-mount form factor:
a) Power Unit: 100-240 VAC 50/60 Hz.
b) User configurable front or rear IEC C13 power connector position.
c) Power Draw: 35 W max
d) XLR, RJ45 and Terminal connector options.
4) DIN rail form factor:
a) Power Input: 12-48 VDC power input.
b) Power Draw: 8 W max
c) Wiring connections use pluggable clamp style terminals for solid and stranded cables.
5) DIN Box form factors include a suitable power supply.

2.7 ENTERTAINMENT CONTROLS (COLORSOURCE)

A. Product: ColorSource Consoles manufactured by ETC Inc.

1. Model CS40: 40 Fader ColorSource console; 80 Channels or Devices.
   a. 80 channels / multi-parameter devices.
   b. 40 Channel / Playback faders with color indication.
   c. DMX/RDM Port: One.
   d. USB Port: One.
   e. Onboard Storage for Show Files: 2 GB.
2. Mechanical:
   a. One home and five configurable soft key buttons.
   b. Four configurable function faders.
   c. Color Multi-Touch Touchscreen: 7 inch.
3. Playback Controls:
   a. One cue list with 999 cues.
   b. 10 pages of 20 or 40 playbacks.
      1) Static memories or sequences.
   c. Playback Toy for filtered and timed execution of playbacks.
   d. Multiple bump modes: Flash, Solo, Solo Change, Move/Go.
   e. Full-history rubber banding for playbacks.
   f. On-board help system.
   g. Extensive library for controlling moving lights.
4. Media:
   a. Audio Input Type:
      1) 1/8-inch (3.5 mm) TRS, Stereo, unbalanced.
      2) Line in: -10 dBV (316 mV RMS).
      3) Input Impedance: 29k ohms.
   b. Audio Output Type:
      1) 1/8-inch (3.5 mm) TRS, Stereo, unbalanced.
      2) Line Out: -10 dBV (316 mV RMS) at 10k ohms "Line Level".
      3) Load Impedance: 10k to 200k ohms.
   c. Supported Media File Formats: Visual output is limited to still images and effects from the VideoToy feature of the ColorSource AV console. Movie files are not supported.
      1) Audio: mp3, aac and wav files. 44.1 kHz sample rate, 4 GB max file.
      2) Image: jpg, png, tiff, and bmp files. 1280 x 720 max resolution.
5. Regulatory and Compliance: cETLus Listed. CE Compliant.
6. Programming Tools:
   a. Color and white pickers.
   b. Reference based Position, Color and Beam palettes.
   c. Innovative touch-based parameter controls.
   d. Auto fixture selection on fader moves.
   e. Virtual Level/Rate wheel.
   f. Customizable Channel display using Stage Map.
   g. Effects: Intensity, color, shape, and parameter.
   h. Fixture Tags for Quick Selects.
   i. 27 Quick Select groupings.
   j. Two independent channels.
   k. Virtual keypad for level entry.

2.8 COLOR MIXING LIGHT EMITTING DIODE PROFILE

A. Basis of Design: ColorSource Spot V and ColorSource Spot VXT as manufactured by ETC Inc. Brings together a five-color light engine with the build-quality and support of an ETC product. Uses a mix of red, green, blue, indigo and lime LED emitters. ETC optics, adapters, and accessories.

B. Standards Compliance:
   1. Listed: cETLus, UL 1598, UL 924, CSA C22.2 No. 250.0.
   2. Compliance: CE.

C. Model ColorSource Spot V with shutter barrel, black.

D. Source:
   1. LED Details: 60 Lumileds LUXEON Rebel and LUXEON C LEDs.
   2. Max Lumens: 9300.
   3. Lumens per Watt: 47.2.
   4. L70 Rating: Greater than 54000 hours.

E. Colors:
   1. Colors Used Spot: Red, green, blue, indigo, lime.
   2. Color temperature Range: Color mixing.
   3. Calibrated Array: Yes.
   4. Red Shift: No.

F. Optical:
   1. Beam Angle Range: 5 to 90 degrees. Swappable lens tubes.
   2. Gate Size: 80 mm.
   3. Aperture Size: 6.25 to 14 inches depending on lend tube.
   4. Pattern Projection: Yes.
   5. Pattern Size: A or B.
   6. Camera Flicker Control/Hz Range: 5 kHz and 25 kHz.

G. Control:
   1. Input Method
      a. DMX-512 via 5-pin XLR connector. Protocols: DMX512, RDM.
      b. City Theatrical Multiverse. Protocols: DMX512, RDM.
   2. NFC Configuration: Yes, via Set Light app.
   3. RDM Configuration: Yes.
   4. User Interface Type:
      a. ColorSource Spot V: 7-segment 3 button interface.
   b. ColorSource Spot VXT: No UI on Fixture.
   5. Local Control: Yes. ColorSource Spot V only.
   6. Onboard Presets: Yes, 12. Onboard Sequences: Yes, 5. Onboard Effects: No.
   7. Fixture-to-Fixture Control: Yes.
   8. 15-bit virtual dimming engine.

H. Electrical:
   1. Voltage: 100 to 240 VAC, 50 to 60 Hz.
   2. Input Method: powerCON TRUE1 TOP in and thru.
   3. Inrush First Half Cycle: 55 A at 120 V. 59 A at 240 V.
   4. Fixtures per Circuit: Eight. (R20 module or similar).
   5. Wattage: Typical: 197. Standby: 2 at 120 V.
   6. Current Draw at 120 VAC: Typical: 1.65 A. Standby: 0.08 A.

I. Thermal: Operating Temperature: 32 to 104 degrees F.
   1. Fan: Yes. Controllable.
   2. Droop Compensation: Yes.
   3. BTUs/hour: 671.77.

J. Physical: IP Rating: ColorSource Spot V: IP20. ColorSource Spot VXT: IP65.

1. Materials: Die-cast aluminum. Colors: Black, white, silver, or custom.
2. Mounting Options: Yoke.
3. Included Accessories: Hanging yoke, 39-inch power cable, soft-focus diffuser in an A-size gobo holder.

2.9 COLOR MIXING LIGHT EMITTING DIODE WASH FIXTURE

A. Basis of Design: ColorSource PAR V Zoom as manufactured by ETC Inc. RGBIL color system.

B. Standards Compliance:
1. Listed: cETLus, UL 1573, CSA C22.2 No. 166.
2. Compliance: CE and EAC.

C. Model ColorSource PAR V Zoom: Black.

D. Arrays:
1. RGBIL (Red/Green/Blue/Indigo/Lime).

E. Source:
1. LED Details: 34 Lumileds LUXEON C LEDs.
2. Max. Lumens: 5,780.
3. Lumens per Watt: 36.
4. L70 rating: Greater than 54,000 hours.

F. Color:
1. Color temperature Range: Color mixing.
2. Calibrated Array: Yes.
3. Red Shift: No.

G. Optical:
1. Beam Angle Range: 19.1 to 40.8 degrees; Manual zoom.
2. Gate Size: N/A.
3. Aperture Size: 7 inches.
4. Pattern Projection: No.
5. Pattern Size: N/A.
6. Camera Flicker Control/Hz Range: Default: 5kHz. RDM: 25,000 Hz.

H. Control:
1. Input Method: DMX-512 via 5-pin XLR connector. Protocols: DMX512, RDM, City Theatrical Multiverse, NFC.
2. RDM Configuration: Yes.
3. NFC Configuration: Yes.
4. User Interface Type: 7-segment 3 button, single encoder interface.
5. Local Control: Yes.
6. Onboard Presets: Yes, 12. Onboard Sequences: Yes, 5. Onboard Effects: No.
7. Fixture-to-Fixture Control: Yes.
8. 15-bit virtual dimming engine.

I. Electrical:
1. Voltage: 100 to 240 VAC, 50 to 60 Hz. Input Method: powerCON TRUE1 in and thru.
2. Inrush First Half-Cycle:
3. Fixtures per Circuit:
1. 20 Amp Power-Thru Connector: Quantity of 5.

2. R20 Module or Similar: Quantity of 6.
3. Wattage at 120 Volts: 162 W.
4. Current Draw at 120 Volts: 1.27 Amps.

J. Thermal: Operating Temperature: 32 to 104 degrees F.
1. Fan: Yes. Not controllable. dB Range: 21.2 dBA average at 39 inches.
2. Droop Compensation: Yes.

K. Physical: IP Rating: IP-20.
1. Materials: Die-cast aluminum. Colors: Black, white, silver, or custom.
2. Mounting Options: Yoke.
3. Included Accessories: Power cable and hanging yoke.
4. Seven-segment, three-button Interface.

2.10 RIGGING

A. All rigging shall be performed by ETCP Certified Riggers for Theatre, no exception.
B. Stage Contractor shall install lighting positions as shown on plans, which may include FOH (front of house) 1st electric, 2nd Electric, and Pipe Grid.

C. Pipe shall be 1.5” ID Schedule 40. Pipe shall be mounted to structure such that pipe will not twist or turn

D. Contractor shall coordinate all pipe positions with curtain locations and any other equipment locations to ensure stage lighting meets the intent of the design.

E. Pipe Battens:
1. Pipe battens shall be 1-1/2" in diameter schedule 40 pipe.
2. All battens shall be painted black to prevent rusting.
3. Where splicing is required, a pin, 18" long and the same diameter as the inside diameter as the pipe shall be used. This pin shall be held in place with no less than four (4) rivets or bolts. Threaded couplers are not acceptable.
4. Mark the center of each batten with a 1” wide yellow stripe

F. DEAD HUNG RIGGING Standards
1. All turnbuckles, clips, tracks, chains and other items of incidental hardware shall be furnished, plated or painted. Wire rope shall be galvanized aircraft cable. Fasteners, chains, and other miscellaneous hardware shall be either cadmium or zinc plated.
2. All materials used in this project shall be new, unused and of the latest design. Refurbished materials are not permitted.
3. In order to establish minimum standards of safety, a minimum safety factor of 5 shall be used for all equipment and hardware used on this project
4. Minimum design load rating for a hang point shall be 350 lbs.
5. Top hanging hardware shall be either beam clamp sized for the beam, or 3/16” Proof Coil chain wrap
6. Connections to chain or bottom hanging hardware shall be made with ¼-inch screw pin shackle. Pin shall be wired to prevent loosening.
7. Batten Clamps shall be sized for the pipe batten. Chain wrapping the batten is not acceptable.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install all new equipment and rewire existing equipment, all in compliance with national and local electrical codes. Auxiliary equipment required to make this installation comply with codes, even if not listed in the specification, is the responsibility of the bidder and must be included in the bid price.

B. All wiring shall be done in a craftsman-like manner. When conductors must be spliced to extend length, it shall be done with a terminal strip or suitable type compression fittings.

C. Equipment shall be kept clear of all metal shavings, wire scraps, and miscellaneous trash. Any abandoned holes in the floor shall be patched.

D. Any existing conduit emanating from the floor shall be dressed in such a manner as to eliminate any trip hazard. Conduits shall be re-routed or terminated into wire-ways to ensure a neat installation.

E. All equipment shall be installed in compliance with applicable local and national codes. It shall also be installed in accordance with the manufacturer's recommendations. Prior to initial energizing, a factory certified technician shall inspect the system, and any errors shall be corrected.

END OF SECTION

DRAWING LIST

NO.	DRAWING NAME
GENERAL	
G001	PROJECT COVER SHEET
G011	SHEET INDEX AND MAPS
G101	HARRIS COUNTY FIRE CODE REVIEW
G102	CODE ANALYSIS
G103	CODE ANALYSIS - LEVEL 2
G111	LIFE SAFETY PLAN AND SCHEDULES - LEVEL 1
G121	LIFE SAFETY PLAN AND SCHEDULES - LEVEL 2
G201	FIRE RATED CONSTRUCTION DETAILS
G202	FIRE RATED CONSTRUCTION DETAILS
G301	COMCheck COMPLIANCE
G500	BUILDING LOCATION PLAN
G510	ARCHITECTURAL SITE PLAN
G511	ARCHITECTURAL SITE PLAN - ALTERNATES
G520	ENLARGED SITE PLANS
G521	ENLARGED SITE PLANS
G522	SITE SIGNAGE DETAILS
G523	SITE DETAILS
G524	SITE WALL AND FENCE DETAILS
G525	ALUMINUM WALKWAY COVERS AND CANOPIES
CIVIL	
C0.00	COVER
C0.01	CIVIL GENERAL CONSTRUCTION NOTES
C0.02	HARRIS COUNTY EXPRESS REVIEW SHEET
C0.03	HARRIS COUNTY FLOOD CONTROL DISTRICT REVIEW SHEET
C1.01	PLAT
C1.02	TOPOGRAPHIC SURVEY (1 OF 4)
C1.03	TOPOGRAPHIC SURVEY (2 OF 4)
C1.04	TOPOGRAPHIC SURVEY (3 OF 4)
C1.05	TOPOGRAPHIC SURVEY (4 OF 4)
C1.06	SITE DEMOLITION
C2.01	OVERALL CIVIL SITE PLAN
C2.02	SITE PAVING & DIMENSIONAL CONTROL PLAN (1 OF 3)
C2.03	SITE PAVING & DIMENSIONAL CONTROL PLAN (2 OF 3)
C2.04	SITE PAVING & DIMENSIONAL CONTROL PLAN (3 OF 3)
C2.05	SITE EROSION CONTROL PLAN
C2.06	FIRE APPARATUS ACCESS PLAN
C2.07	DETENTION PLAN AND CALCULATIONS
C3.01	OVERALL SITE GRADING
C3.02	SITE GRADING PAN (1 OF 3)
C3.03	SITE GRADING PAN (2 OF 3)
C3.04	SITE GRADING PAN (3 OF 3)
C4.01	OVERALL SITE UTILITY PLAN
C5.01	OVERALL DRAINAGE PLAN
C5.02	DETAILED DRAINAGE PLAN (1 OF 3)
C5.03	DETAILED DRAINAGE PLAN (2 OF 3)
C5.04	DETAILED DRAINAGE PLAN (3 OF 3)
C6.01	EXISTING DRAINAGE AREA MAP
C6.02	PROPOSED DRAINAGE AREA MAP & CALCULATIONS
C7.01	CIVIL DETAILS (1 OF 3)
C7.02	CIVIL DETAILS (2 OF 3)
C7.03	CIVIL DETAILS (3 OF 3)
C7.04	TRAFFIC CONTROL DETAILS
C7.05	TURN LANE AND DETAILS
C7.06	HARRIS COUNTY PAVEMENT DETAILS
STRUCTURE	
S000	INDEX, SYMBOLS, AND ABBREVIATIONS
S001	GENERAL NOTES
S002	GENERAL NOTES
S021	WIND UPLIFT DIAGRAM
S111	LEVEL 1 COMPOSITE FOUNDATION PLAN
S111A	LEVEL 1 FOUNDATION PLAN - AREA A
S111B	LEVEL 1 FOUNDATION PLAN - AREA B
S111C	LEVEL 1 FOUNDATION PLAN - AREA C
S111D	LEVEL 1 FOUNDATION PLAN - AREA D
S121	LOW ROOF FRAMING AND LEVEL 2 COMPOSITE FLOOR FRAMING PLAN
S121A	LEVEL 2 FLOOR FRAMING PLAN - AREA A
S121B	LOW ROOF AND LEVEL 2 FLOOR FRAMING PLAN - AREA B
S121C	LOW ROOF FRAMING PLAN - AREA C
S121D	LOW ROOF FRAMING PLAN - AREA D
S131	COMPOSITE ROOF FRAMING PLAN
S131A	ROOF FRAMING PLAN - AREA A
S131B	ROOF FRAMING PLAN - AREA B
S131C	ROOF FRAMING PLAN - AREA C
S131D	ROOF FRAMING PLAN - AREA D
S211	BRACING ELEVATIONS
S212	LATERAL BRACE DETAILS
S300	STRUCTURAL WALL SECTIONS - AREA A
S301	STRUCTURAL WALL SECTIONS - AREA A/B
S302	STRUCTURAL WALL SECTIONS - AREA B
S303	STRUCTURAL WALL SECTIONS - AREA B/C
S304	STRUCTURAL WALL SECTIONS - AREA C
S305	STRUCTURAL WALL SECTIONS - AREA C/D
S306	STRUCTURAL WALL SECTIONS - AREA D
S310	WALL SECTION DETAILS
S701	TYPICAL FOUNDATION DETAILS
S702	TYPICAL FOUNDATION DETAILS
S703	TYPICAL FOUNDATION DETAILS
S711	TYPICAL MISC. SITE FOUNDATION DETAILS
S720	TYPICAL ENGINEERED MASONRY DETAILS
S721	TYPICAL LOAD BEARING MASONRY DETAILS
S730	TYPICAL STEEL DETAILS
S731	TYPICAL STEEL DETAILS
S740	TYPICAL STEEL FLOOR FRAMING DETAILS
S750	TYPICAL STEEL ROOF FRAMING DETAILS
S751	TYPICAL STEEL ROOF FRAMING DETAILS

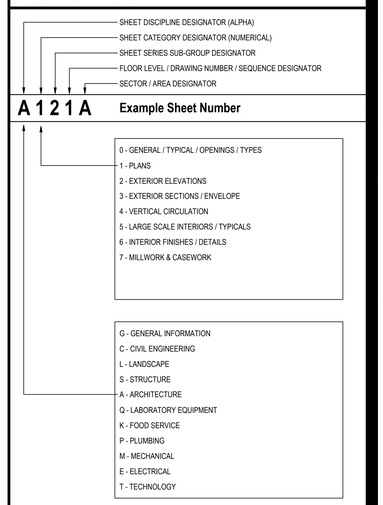
DRAWING LIST

NO.	DRAWING NAME
G526	ALUMINUM WALKWAY COVERS AND CANOPIES
ARCHITECTURAL	
A001	ABBV., MATERIAL LEGEND AND SYMBOLS
A011	TYPICAL MOUNTING HEIGHTS AND TOILET LAYOUT (ADULT & K-8)
A021	WALL SPANS EXTERIOR
A022	WALL SPANS INTERIOR AND WALL TO DECK DETAILS
A023	WALL SPANS INTERIOR AND WALL TO DECK DETAILS
A031	INTERIOR PARTITION TYPES
A032	INTERIOR PARTITION TYPES
A041	DOOR SCHEDULE, INFO, AND FRAME TYPES
A051	INTERIOR GLAZING TYPES
A052	INTERIOR GLAZING TYPES
A053	EXTERIOR GLAZING TYPES
A054	EXTERIOR GLAZING TYPES
A055	EXTERIOR GLAZING TYPES
A061	INTERIOR HU/S DETAILS
A062	EXTERIOR HU/S DETAILS
A063	EXTERIOR HU/S DETAILS
A064	EXTERIOR HU/S DETAILS
A065	EXTERIOR HU/S DETAILS
A066	EXTERIOR HU/S DETAILS
A101	LEVEL 1 COMPOSITE EDGE OF SLAB PLAN
A102	LEVEL 2 COMPOSITE EDGE OF SLAB PLAN
A111	LEVEL 1 COMPOSITE FLOOR PLAN
A111A	LEVEL 1 FLOOR PLAN - AREA A
A111B	LEVEL 1 FLOOR PLAN - AREA B
A111C	LEVEL 1 FLOOR PLAN - AREA C
A111D	LEVEL 1 FLOOR PLAN - AREA D
A112	LEVEL 2 COMPOSITE FLOOR PLAN
A112A	LEVEL 2 FLOOR PLAN - AREA A
A112B	LEVEL 2 CLERESTORY PLAN - MEDIA CENTER
A112C	LEVEL 2 CLERESTORY PLAN - DINING, DANCE, AND BAND
A112D	LEVEL 2 FLOOR PLAN - AREA D
A113	COMPOSITE ROOF PLAN
A113A	ROOF PLAN - AREA A
A113B	ROOF PLAN - AREA B
A113C	ROOF PLAN - AREA C
A113D	ROOF PLAN - AREA D
A114B	ROOF PLAN - AREA B HIGH ROOF
A121	LEVEL 1 CEILING PLAN - OVERALL
A121A	LEVEL 1 CEILING PLAN - AREA A
A121B	LEVEL 1 CEILING PLAN - AREA B
A121C	LEVEL 1 CEILING PLAN - AREA C
A121D	LEVEL 1 CEILING PLAN - AREA D
A122	LEVEL 2 CEILING PLAN - OVERALL
A122A	LEVEL 2 CEILING PLAN - AREA A
A122B	LEVEL 2 CEILING PLAN - AREA B
A122C	LEVEL 2 CEILING PLAN - AREA C
A122D	LEVEL 2 CEILING PLAN - AREA D
A123A	LEVEL 2 CEILING PLAN - MEDIA CENTER HIGH CEILING
A131	LEVEL 1 FINISH PLAN - OVERALL
A131A	LEVEL 1 FINISH PLAN - AREA A
A131B	LEVEL 1 FINISH PLAN - AREA B
A131C	LEVEL 1 FINISH PLAN - AREA C
A131D	LEVEL 1 FINISH PLAN - AREA D
A132	LEVEL 2 FINISH PLAN - OVERALL
A132A	LEVEL 2 FINISH PLAN - AREA A
A132D	LEVEL 2 FINISH PLAN - AREA D
A141	LEVEL 1 EQUIPMENT AND FURNISHING PLAN - OVERALL
A141A	LEVEL 1 EQUIPMENT AND FURNISHING PLAN - AREA A
A141B	LEVEL 1 EQUIPMENT AND FURNISHING PLAN - AREA B
A141C	LEVEL 1 EQUIPMENT AND FURNISHING PLAN - AREA C
A141D	LEVEL 1 EQUIPMENT AND FURNISHING PLAN - AREA D
A142	LEVEL 2 EQUIPMENT AND FURNISHING PLAN - OVERALL
A142A	LEVEL 2 EQUIPMENT AND FURNISHING PLAN - AREA A
A211	EXTERIOR ELEVATIONS
A212	ENLARGED ELEVATIONS
A213	ENLARGED ELEVATIONS
A214	ENLARGED ELEVATIONS
A215	ENLARGED ELEVATIONS AND DETAILS- BUILDING SIGN
A301	BUILDING SYSTEM TYPES
A302	PROJECT MOCK-UP WALL
A311	BUILDING SECTIONS
A320	EXTERIOR WALL SECTIONS
A321	EXTERIOR WALL SECTIONS
A322	EXTERIOR WALL SECTIONS
A323	EXTERIOR WALL SECTIONS
A324	EXTERIOR WALL SECTIONS
A325	EXTERIOR WALL SECTIONS
A326	EXTERIOR WALL SECTIONS
A327	EXTERIOR WALL SECTIONS
A328	EXTERIOR WALL SECTIONS
A331	EXTERIOR SECTION DETAILS
A332	EXTERIOR SECTION DETAILS
A333	EXTERIOR SECTION DETAILS
A334	EXTERIOR SECTION DETAILS
A341	EXTERIOR PLAN DETAILS
A342	EXTERIOR PLAN DETAILS
A343	EXPANSION JOINT PLAN DETAILS
A371	AXONOMETRICS
A391	ROOF DETAILS
A392	ROOF DETAILS
A401	ENLARGED ELEVATOR PLANS
A410	ENLARGED STAIR PLANS
A411	ENLARGED STAIR PLANS
A412	STAIR DETAILS
A413	STAIR DETAILS
A501	ENLARGED TOILET ROOMS & ELEVATIONS
A502	ENLARGED TOILET ROOMS & ELEVATIONS
A503	ENLARGED TOILET ROOMS & ELEVATIONS
A504	ENLARGED TOILET ROOMS & ELEVATIONS
A510	ENLARGED PLANS & ELEVATIONS
A511	ENLARGED PLANS & ELEVATIONS - MEDIA CENTER
A512	ENLARGED PLANS & ELEVATIONS - PROSCENIUM
A513	ENLARGED PLANS & ELEVATIONS - RECEPTION DESK
A514	ENLARGED PLANS & ELEVATIONS - CIRCULATION DESK
A515	ENLARGED PLANS & ELEVATIONS - GYM STRIPING
A516	ENLARGED PLANS & ELEVATIONS - PROSCENIUM ALTERNATE
A601	FINISH SCHEDULES
A602	ROOM FINISH SCHEDULE
A611	INTERIOR ELEVATIONS
A612	INTERIOR ELEVATIONS
A613	INTERIOR ELEVATIONS
A614	INTERIOR ELEVATIONS
A615	INTERIOR ELEVATIONS
A616	INTERIOR ELEVATIONS
A617	INTERIOR ELEVATIONS
A618	INTERIOR ELEVATIONS
A619	INTERIOR ELEVATIONS
A621	CEILING DETAILS
A631	INTERIOR DETAILS, PLAN & SECTIONS
A632	INTERIOR DETAILS, PLAN & SECTIONS
A661	SIGNAGE
A701	CASEWORK ELEVATIONS

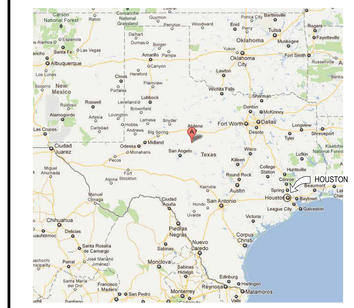
DRAWING LIST

NO.	DRAWING NAME
PLUMBING	
P001	PLUMBING DEMOLITION SITE PLAN
P100	PLUMBING SITE PLAN
P201A	PLUMBING UNDERFLOOR PLAN - AREA A
P201B	PLUMBING UNDERFLOOR PLAN - AREA B
P201C	PLUMBING UNDERFLOOR PLAN - AREA C
P201D	PLUMBING UNDERFLOOR PLAN - AREA D
P202	PLUMBING ENLARGED UNDERFLOOR PLAN - KITCHEN
P301A	PLUMBING PLAN - L1 - AREA A
P301B	PLUMBING PLAN - L1 - AREA B
P301C	PLUMBING PLAN - L1 - AREA C
P301D	PLUMBING PLAN - L1 - AREA D
P311A	PLUMBING PLAN - L2 - AREA A
P311B	PLUMBING PLAN - L2 - AREA B
P311C	PLUMBING PLAN - L2 - AREA C
P311D	PLUMBING PLAN - L2 - AREA D
P401	PLUMBING ENLARGED PLAN - D200
P404	PLUMBING ENLARGED PLAN - CENTRAL PLANT
P405	PLUMBING ENLARGED PLAN - SERVICE YARD
P406	PLUMBING ENLARGED PLAN - KITCHEN
P407	PLUMBING ENLARGED PLANS - LEVEL 1 - SCIENCE ROOMS
P408	PLUMBING ENLARGED PLANS - LEVEL 2 - SCIENCE ROOMS
P409	PLUMBING ENLARGED PLANS - MECHANICAL ROOMS
P410	PLUMBING ENLARGED PLANS
P411	PLUMBING ENLARGED PLANS
P412A	PLUMBING ROOF PLAN - R1 - AREA A
P412B	PLUMBING ROOF PLAN - R1 - AREA B
P412C	PLUMBING ROOF PLAN - R1 - AREA C
P412D	PLUMBING ROOF PLAN - R1 - AREA D
P501	PLUMBING DETAILS
P502	PLUMBING DETAILS
P503	PLUMBING DETAILS
P504	PLUMBING DETAILS
P601	PLUMBING LEGEND AND SCHEDULES
P602	PLUMBING SCHEDULES
P701	PLUMBING RISER DIAGRAM AREA A - WASTE AND VENT
P702	PLUMBING RISER DIAGRAM AREA B - WASTE AND VENT
P703	PLUMBING RISER DIAGRAM AREA C - WASTE AND VENT
P704	PLUMBING RISER DIAGRAM AREA D - WASTE AND VENT
P705	PLUMBING RISER DIAGRAM AREA A - DOMESTIC WATER
P706	PLUMBING RISER DIAGRAM AREA B - DOMESTIC WATER
P707	PLUMBING RISER DIAGRAM AREA C - DOMESTIC WATER
P708	PLUMBING RISER DIAGRAM AREA D - DOMESTIC WATER
P709	PLUMBING RISER DIAGRAM AREA A - STORM DRAIN
P710	PLUMBING RISER DIAGRAM AREA B - STORM DRAIN
P711	PLUMBING RISER DIAGRAM AREA C - STORM DRAIN
P712	PLUMBING RISER DIAGRAM AREA D - STORM DRAIN
P713	PLUMBING GAS RISER DIAGRAM
MECHANICAL	
M101	MECHANICAL COMPOSITE PLAN - L1
M102	MECHANICAL COMPOSITE PLAN - L2
M201A	MECHANICAL PLAN - L1 - AREA A
M201B	MECHANICAL PLAN - L1 - AREA B
M201C	MECHANICAL PLAN - L1 - AREA C
M201D	MECHANICAL PLAN - L1 - AREA D
M211A	MECHANICAL PLAN - L2 - AREA A
M301	MECHANICAL ENLARGED PLAN - CENTRAL PLANT
M302	MECHANICAL ENLARGED PLAN - MECHANICAL MEZZANINE D200
M303	MECHANICAL ENLARGED PLANS
M304	MECHANICAL ENLARGED PLANS
M305	MECHANICAL ENLARGED PLAN - KITCHEN
M401A	MECHANICAL ROOF PLAN - AREA A
M401B	MECHANICAL ROOF PLAN - AREA B
M401C	MECHANICAL ROOF PLAN - AREA C
M401D	MECHANICAL ROOF PLAN - AREA D
M501	MECHANICAL PIPING DIAGRAMS
M601	MECHANICAL LEGENDS AND DETAILS
M602	MECHANICAL DETAILS
M603	MECHANICAL DETAILS
M701	MECHANICAL SCHEDULES
ELECTRICAL	
E100	ELECTRICAL SITE PLAN
E101	ELECTRICAL COMPOSITE PLAN - L1
E102	ELECTRICAL COMPOSITE PLAN - L2
E201A	ELECTRICAL LIGHTING PLAN - L1 - AREA A
E201B	ELECTRICAL LIGHTING PLAN - L1 - AREA B
E201C	ELECTRICAL LIGHTING PLAN - L1 - AREA C
E201D	ELECTRICAL LIGHTING PLAN - L1 - AREA D
E211A	ELECTRICAL LIGHTING PLAN - L2 - AREA A
E211D	ELECTRICAL LIGHTING PLAN - L2 - AREA D
E220	ELECTRICAL LIGHTING PLAN - L1 - CANOPIES
E301A	ELECTRICAL POWER PLAN - L1 - AREA A
E301B	ELECTRICAL POWER PLAN - L1 - AREA B
E301C	ELECTRICAL POWER PLAN - L1 - AREA C
E301D	ELECTRICAL POWER PLAN - L1 - AREA D
E311A	ELECTRICAL POWER PLAN - L2 - AREA A
E401	ELECTRICAL ENLARGED POWER PLAN - CENTRAL PLANT AND SERVICE YARD
E402	ELECTRICAL ENLARGED POWER PLAN - MECHANICAL MEZZANINE D200
E403	ELECTRICAL ENLARGED PLANS
E404	ELECTRICAL ENLARGED PLANS
E405	ELECTRICAL ENLARGED POWER PLAN - KITCHEN
E501A	ELECTRICAL ROOF PLAN - AREA A
E501B	ELECTRICAL ROOF PLAN - AREA B
E501C	ELECTRICAL ROOF PLAN - AREA C
E501D	ELECTRICAL ROOF PLAN - AREA D
E601	ELECTRICAL ONE-LINE DIAGRAM
E701	ELECTRICAL PANEL SCHEDULES
E702	ELECTRICAL PANEL SCHEDULES
E703	ELECTRICAL PANEL SCHEDULES
E704	ELECTRICAL PANEL SCHEDULES
E705	ELECTRICAL PANEL SCHEDULES
E706	ELECTRICAL PANEL SCHEDULES
E801	ELECTRICAL DETAILS, SCHEDULES, AND SYMBOL LEGEND
TECHNOLOGY	
T001	TECHNOLOGY NOTES AND LEGENDS
T100	TECHNOLOGY PARTIAL SITE PLAN
T101	TECHNOLOGY OVERALL SITE PLAN
T102	TECHNOLOGY COMPOSITE PLAN - L1
T103	TECHNOLOGY COMPOSITE PLAN - L2
T201A	TECHNOLOGY PLAN - L1 - AREA A
T201B	TECHNOLOGY PLAN - L1 - AREA B
T201C	TECHNOLOGY PLAN - L1 - AREA C
T201D	TECHNOLOGY PLAN - L1 - AREA D
T211A	TECHNOLOGY PLAN - L2 - AREA A
T211D	TECHNOLOGY PLAN - L2 - AREA D
T301	TECHNOLOGY ENLARGED PLANS
T401	TECHNOLOGY DETAILS
T402	TECHNOLOGY DETAILS
T403	TECHNOLOGY DETAILS
T404	TECHNOLOGY DETAILS
FOOD SERVICE	
QF1	FS GENERAL COORDINATION NOTES
QF1.0	FS EQUIPMENT PLAN
QF1.1	FS FACILITY MODEL
QF1.2	FS EQUIPMENT MODEL
QF1.3	FS SPECIAL CONDITIONS & MECHANICAL PLAN
QF1.4	FS PLUMBING PLAN
QF1.5	FS ELECTRICAL PLAN
QF1.6	FS EXHAUST HOODS
QF1.7	FS CONDENSING UNITS
QF1.8	FS WALK-INS
QF1.9	FS SERVING COUNTERS
QF1.9.1	FS SERVING COUNTERS
QF1.9.2	FS SERVING COUNTERS
QF1.9.3	FS SERVING COUNTERS
QF1.9.4	FS SERVING COUNTERS
QF1.10	FS ELEVATIONS
QF1.11	FS SECTIONS & DETAILS
QF1.12	FS DETAILS
QF1.13	FS DETAILS

SHEET NUMBERING KEY:



LOCATION MAP:



VICINITY MAP



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Revision	By	Appd	YYYY.MM.DD
2 ADDENDUM #4			2026.03.11
1 ADDENDUM #1			2026.02.13

Issued	By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

Permit/Seal



Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
SHEET INDEX AND MAPS

Project No.
214001329

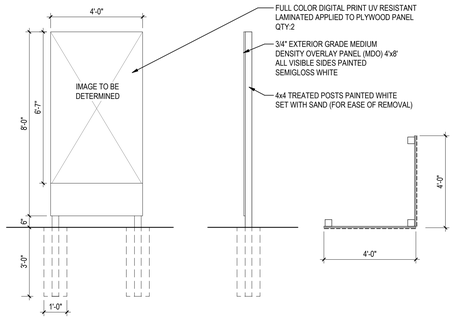
Scale
1 : 1

Revision
2

Drawing No.
G011

•Pick location in Project Information•
1/15/2026 2:46:37 PM

ORIGINAL SHEET - ARCH E1



NOTE: SIGN TO BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND REMAIN UNTIL PROJECT COMPLETION. CONTRACTOR TO PROPOSE LOCATION WHERE SIGN WILL NOT INTERFERE WITH CONSTRUCTION ACTIVITIES & VERIFY WITH ARCHITECT / OWNER FOR APPROVAL

E6 / G510 SITE SIGNAGE PROJECT SIGN

3/8" = 1'-0"

GATE SCHEDULE - SITE

No.	Door			REFER TO DETAIL	HDWR Set	Description
	Clear Dim. Width	Clear Dim. Height	Mat'l			
LEVEL 1						
S101	4'-0"	7'-0"	CHAINLINK PANEL		140	MANUAL SWING GATE - PROVIDE LOCK
S102	18'-2"	8'-0"	CHAINLINK PANEL		142	MANUAL ROLLING SWING GATE - PROVIDE LOCK
S103	6'-0"	7'-0"	CHAINLINK PANEL		141	MANUAL SWING GATE - PROVIDE LOCK
S104	18'-2"	8'-0"	CHAINLINK PANEL		142	MANUAL ROLLING SWING GATE - PROVIDE LOCK
S105	2'-8"	4'-0"	DECORATIVE STEEL PANEL		140	PROVIDE PANIC HARDWARE
S106	3'-0"	4'-0"	DECORATIVE STEEL PANEL		140	PROVIDE PANIC HARDWARE
S107	3'-0"	7'-0"	CHAINLINK PANEL		140	MANUAL SWING GATE - PROVIDE LOCK

SITE PLAN KEYED NOTES

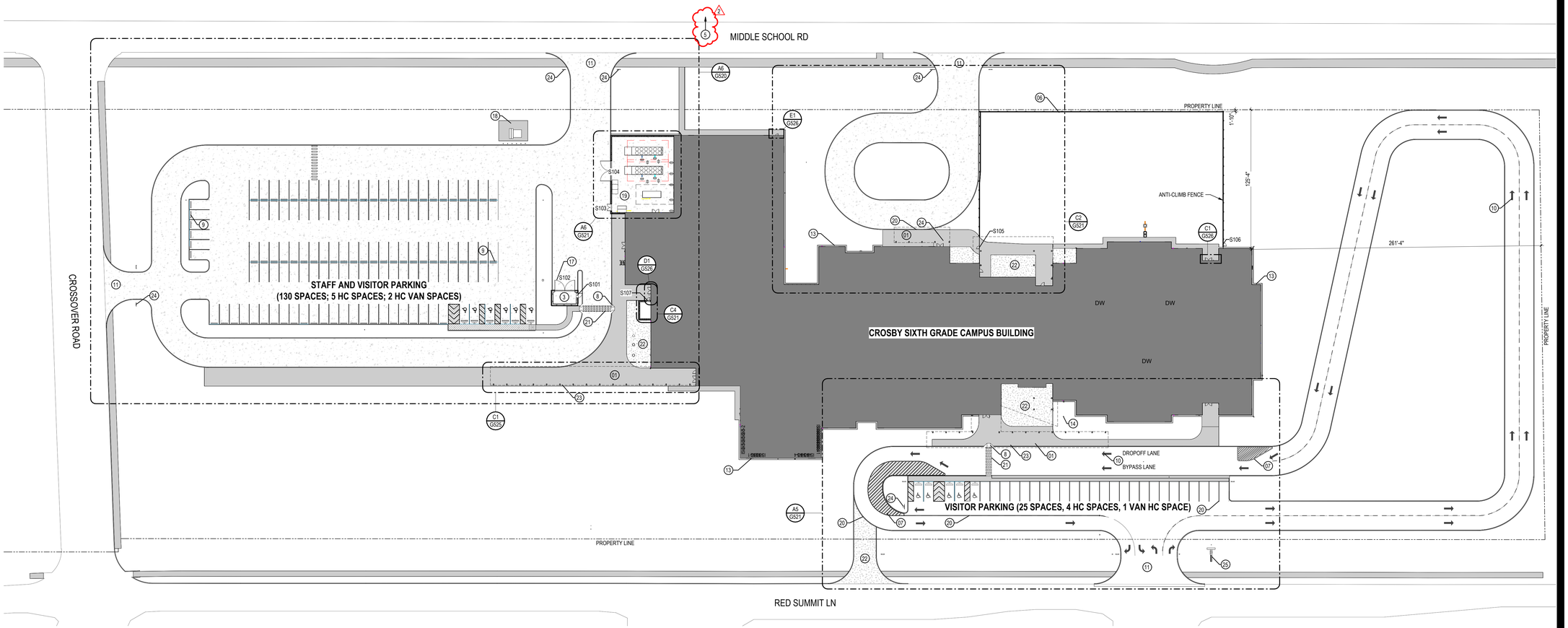
1.	PROP. CONCRETE SIDEWALK PAVING
2.	PROP. PARKING LOT LIGHT FIXTURE RE: E100
3.	DUMPSTER / RECYCLE BIN
4.	NEW PIPE BOLLARD
5.	NEW 8' TALL BLACK VINYL CHAIN LINK FENCE - REFER TO CIVIL BOUNDS OF DETENTION POND FOR LENGTH OF FENCE
6.	NEW 8' TALL ANTI CLIMB FENCE ON 6" CONCRETE CURB
7.	PROP. PAINT/ STRIPED AREA, TYP.
8.	PROP. TAS (ADA) COMPLIANT PEDESTRIAN CURB RAMP; REF.
9.	NEW CONCRETE WHEEL STOP RE: CIVIL
10.	NEW TRAFFIC CONTROL ARROWS - YELLOW TYP.
11.	PROP. CONCRETE DRIVEWAY TYP.
12.	PROP. FIRE LAN STRIPING RE: CIVIL
13.	PROP. 15" CONCRETE MOW STRIP RE: CIVIL
14.	NEW 25' TALL FLAGPOLE RE: C1/G523
15.	NEW PAIR 4'-0" WIDE CHAIN LINK (GALV) SWING GATES TYPE G2
16.	SITE SIGNAGE RE: G522 COORDINATION LOCATION WITH OWNER
17.	TRASH ENCLOSURE GATE RE: C2/G522
18.	PAD MOUNTED TRANSFORMER RE: E100
19.	MECHANICAL YARD RE: MECH
20.	LAY DOWN CURB RE: CIVIL
21.	PROP. STRIPED CROSSWALK
22.	PROP. CRUSHED GRANITE LANDSCAPING
23.	ALUMINUM COVER WALKWAY
24.	POST AND PANEL SIGN TYP.
25.	MARQUEE SIGNAGE
26.	ACCESSIBLE ROUTE
27.	BICYCLE RACKS
28.	PROP. KNOX BOX LOCATION

GENERAL NOTES - SITE:

1. PROVIDE 1/2" EXPANSION JOINTS WITH NON-EXTRUDING, COMPRESSIBLE FILLER AND TRAFFIC GRADE NON-TRACKING SEALANT WHERE PAVEMENT MEETS WITH BUILDING STRUCTURES, TYP.
2. SIDEWALKS ARE 5' - 0" WIDE, TYP. UON.
3. ALIGN AND/OR CENTER SIDEWALKS ON BUILDING OPENING, TYP. UON.
4. ALL SIDEWALKS SHOULD HAVE 5'-0" x 5'-0" SAWCUT, UON. CONTRACTOR TO SUBMIT DRAWINGS INDICATING SAWCUT LOCATIONS.
5. REPAIR OR REPLACE ALL EXISTING ITEMS TO REMAIN, OR TO BE SALVAGED, AND/OR RELOCATED THAT HAS BEEN DAMAGED DUE TO WORK UNDER THIS CONTRACT.

SITE PLAN LEGEND:

- PROPOSED BUILDING
- NEW SIDEWALK PAVING
- NEW CONCRETE DRIVE PAVING
- NEW CRUSHED GRANITE
- NEW GRAVEL DRIVE
- ALUMINUM CANOPY / WALKWAY COVER OVERHEAD



A6 / G510 ARCHITECTURAL SITE PLAN

1" = 40'-0"

ORIGINAL SHEET - ARCH E1

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KEY PLAN

PROJECT NORTH

Revision	By	Appd	YYYY.MM.DD
2 ADDENDUM #4			2026.03.11
1 ADDENDUM #3			2026.03.04
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

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Title
ARCHITECTURAL SITE PLAN

Project No.
214001329

Scale
As indicated

Revision
2

Drawing No.
G510

•Plot location in Project Information
3/10/2026 2:45:09 PM

SITE PLAN KEYED NOTES

1.	PROP. CONCRETE SIDEWALK PAVING
2.	PROP. PARKING LOT LIGHT FIXTURE RE: E100
3.	DUMPSTER / RECYCLE BIN
4.	NEW PIPE BOLLARD.
5.	NEW 8' TALL BLACK VINYL CHAIN LINK FENCE - REFER TO CIVIL BOUNDS OF DETENTION POND FOR LENGTH OF FENCE.
6.	NEW 8' TALL ANTI CLIMB FENCE ON 6" CONCRETE CURB
7.	PROP. PAINT/ STRIPED AREA, TYP.
8.	PROP. TAS (ADA) COMPLIANT PEDESTRIAN CURB RAMP; REF
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11.	PROP. CONCRETE DRIVEWAY TYP.
12.	PROP. FIRE LAN STRIPING RE: CIVIL
13.	PROP. 15" CONCRETE MOW STRIP RE: CIVIL
14.	NEW 25' TALL FLAGPOLE RE: C1/G523
15.	NEW PAIR 4'-0" WIDE CHAIN LINK (GALV) SWING GATES TYPE G2
16.	SITE SIGNAGE RE: G522 COORDINATION LOCATION WITH OWNER
17.	TRASH ENCLOSURE GATE RE: C2/G522
18.	PAD MOUNTED TRANSFORMER RE: E100
19.	MECHANICAL YARD RE: MECH
20.	LAY DOWN CURB RE: CIVIL
21.	PROP. STRIPED CROSSWALK
22.	PROP. CRUSHED GRANITE LANDSCAPING
23.	ALUMINUM COVER WALKWAY
24.	POST AND PANEL SIGN TYP.
25.	MARQUEE SIGNAGE
26.	ACCESSIBLE ROUTE
27.	BICYCLE RACKS
28.	PROP. KNOX BOX LOCATION

NEW CROSBY SIXTH GRADE CAMPUS

A6 / G520 ENLARGED SITE PLAN - BUS LOOP AND PARKING

1/16" = 1'-0"

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PROJECT NORTH

	Revision	By	Appd	YYYY.MM.DD
2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13
	ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

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03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

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Crosby, TX 77532

Title
ENLARGED SITE PLANS

Project No.
214001329

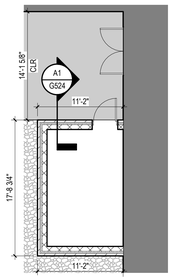
Scale
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Revision
2

Drawing No.
G520

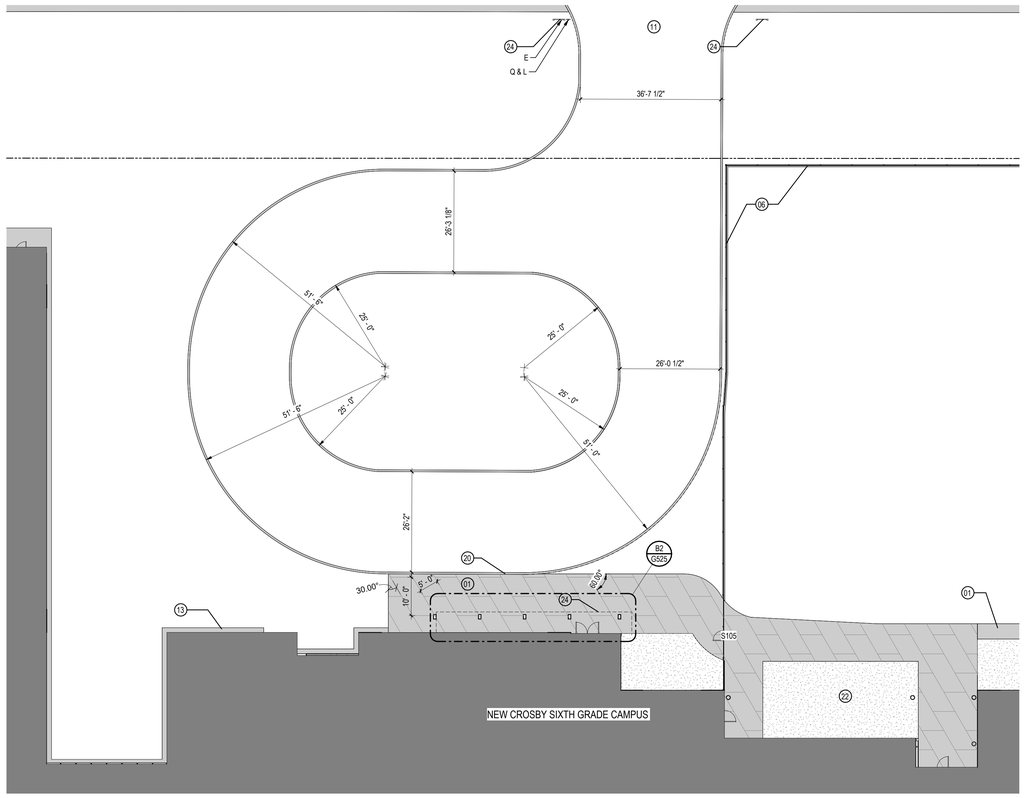
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ORIGINAL SHEET - ARCH E1



C4 G521 ENLARGED PLAN - SITE WALLS

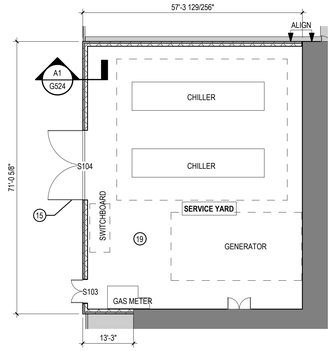
1/8" = 1'-0"



C2 G521 ENLARGED SITE PLAN - SECONDARY ENTRANCE

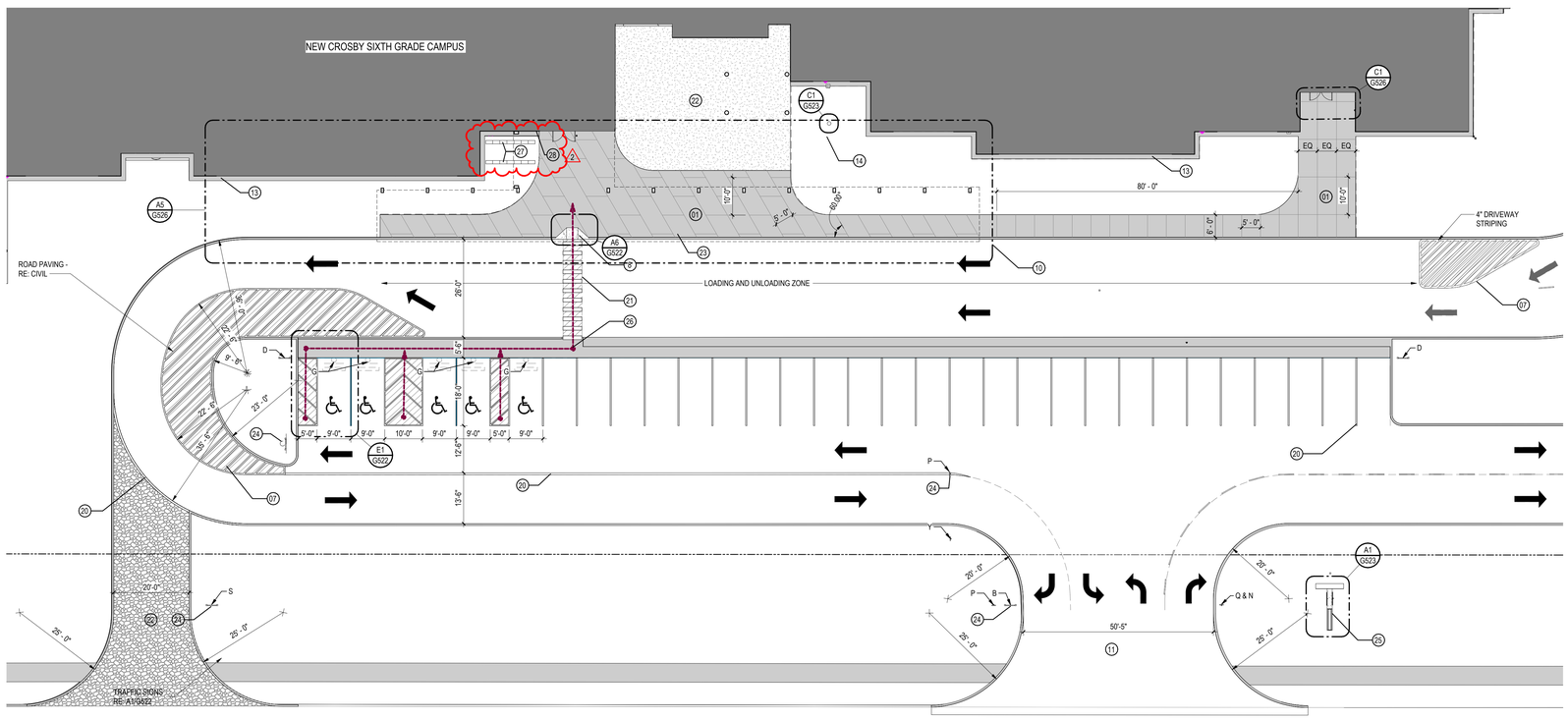
1/16" = 1'-0"

SITE PLAN KEYED NOTES	
1.	PROP. CONCRETE SIDEWALK PAVING
2.	PROP. PARKING LOT LIGHT FIXTURE RE: E100
3.	DUMPSTER / RECYCLE BIN
4.	NEW PIPE BOLLARD.
5.	NEW 8' TALL BLACK VINYL CHAIN LINK FENCE - REFER TO CIVIL BOUNDS OF DETENTION POND FOR LENGTH OF FENCE.
6.	NEW 8' TALL ANTI CLIMB FENCE ON 6" CONCRETE CURB
7.	PROP. PAINT/ STRIPED AREA, TYP.
8.	PROP. TAS (ADA) COMPLIANT PEDESTRIAN CURB RAMP, REF
9.	NEW CONCRETE WHEEL STOP RE: CIVIL
10.	NEW TRAFFIC CONTROL ARROWS - YELLOW TYP.
11.	PROP. CONCRETE DRIVEWAY TYP.
12.	PROP. FIRE LAN STRIPING RE: CIVIL
13.	PROP. 15" CONCRETE MOW STRIP RE: CIVIL
14.	NEW 25' TALL FLAGPOLE RE: C1/G523
15.	NEW PAIR 4'-0" WIDE CHAIN LINK (GALV) SWING GATES TYPE G2
16.	SITE SIGNAGE RE: G522 COORDINATION LOCATION WITH OWNER
17.	TRASH ENCLOSURE GATE RE: C2/G522
18.	PAD MOUNTED TRANSFORMER RE: E100
19.	MECHANICAL YARD RE: MECH
20.	LAY DOWN CURB RE: CIVIL
21.	PROP. STRIPED CROSSWALK
22.	PROP. CRUSHED GRANITE LANDSCAPING
23.	ALUMINUM COVER WALKWAY
24.	POST AND PANEL SIGN TYP.
25.	MARQUEE SIGNAGE
26.	ACCESSIBLE ROUTE
27.	BICYCLE RACKS
28.	PROP. KNOX BOX LOCATION



A6 G521 ENLARGED PLAN - MECHANICAL YARD

1/16" = 1'-0"



A5 G521 ENLARGED SITE PLAN - MAIN ENTRANCE

1/16" = 1'-0"

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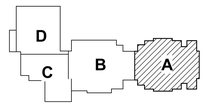
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PROJECT NORTH

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd YYYY.MM.DD

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03/10/2026

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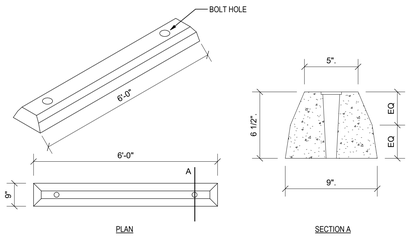
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Crosby, TX 77532

Title
ENLARGED SITE PLANS

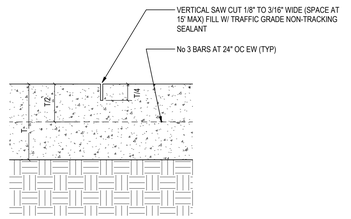
Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	G521

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ORIGINAL SHEET - ARCH E1



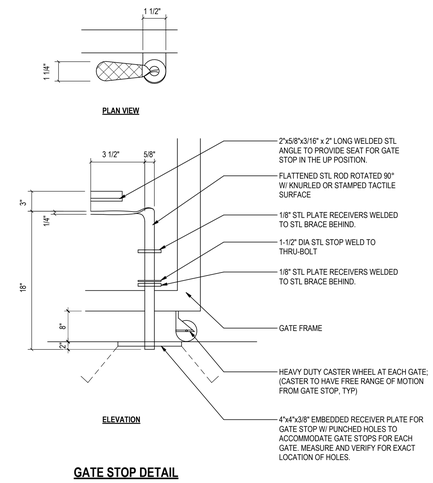
E7 CONCRETE WHEEL STOP
G523 1/2" = 1'-0"



NOTE:
ALIGN W/ EXPANSION JOINT PATTERNS.
SPACE AT 5'-0" OC MAX IN SIDEWALK PAVING.
SPACE AT 15'-0" OC MAX IN VEHICULAR PAVING.

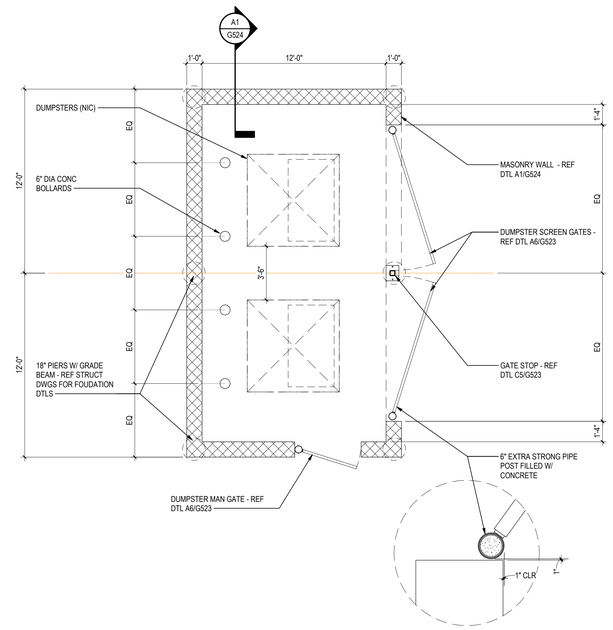
TYPICAL CONTROL JOINT

C7 PAVING CONTROL JOINT
G523 3/4" = 1'-0"

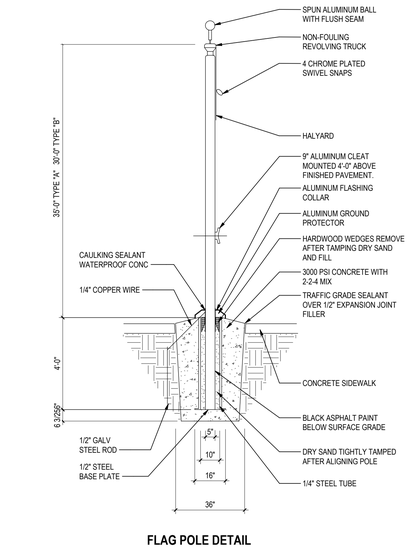


GATE STOP DETAIL

C5 GATE STOP
G523 3/4" = 1'-0"

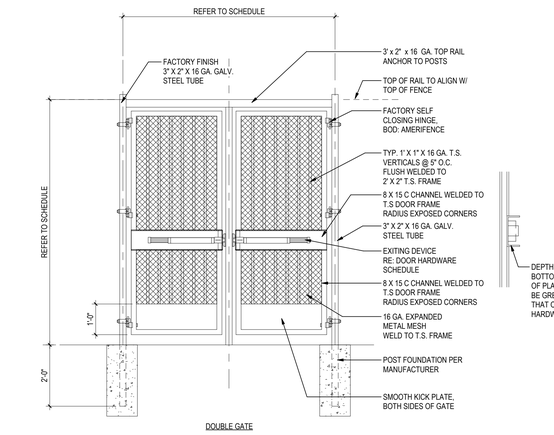


C4 DUMPSTER PLAN
G523 1/4" = 1'-0"

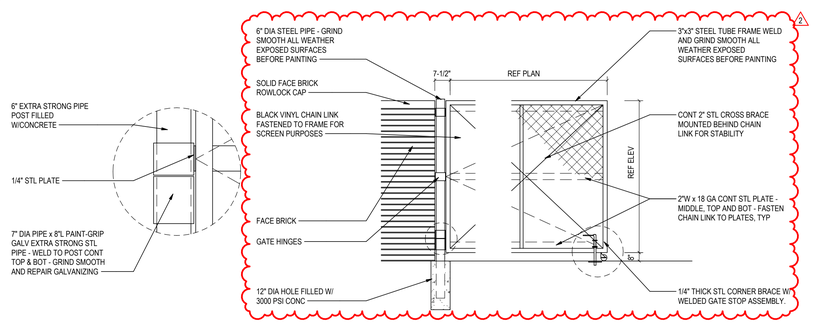


FLAG POLE DETAIL

C1 FLAG POLE DETAIL
G523 3/8" = 1'-0"

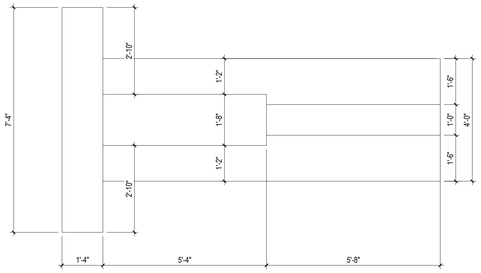


B8 PREMANUFACTURED STEEL GATE DETAIL
G523 1/2" = 1'-0"

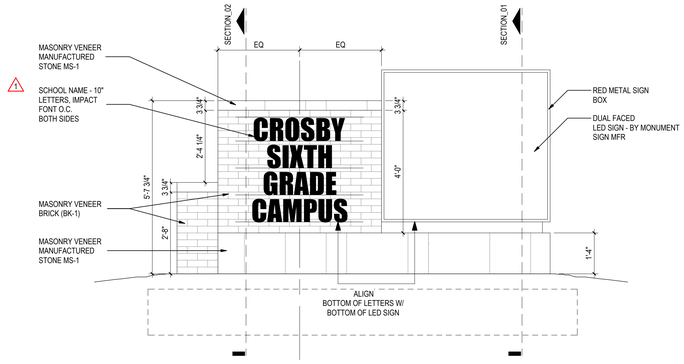


TYPICAL ELEVATION OF GATE/SCREEN WALL

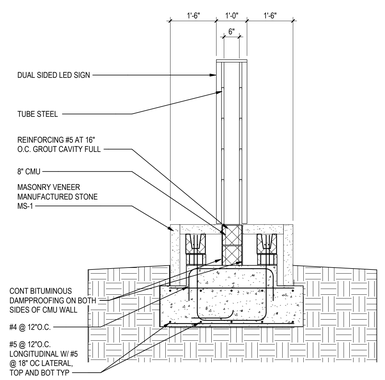
A6 GATE SWING
G523 3/4" = 1'-0"



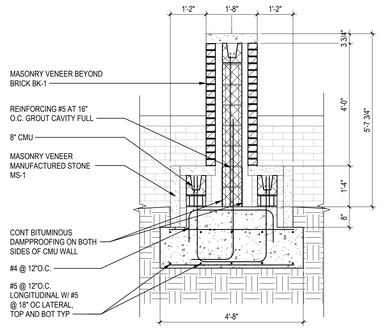
MARQUEE SIGN PLAN



MARQUEE SIGN ELEVATION



MARQUEE SIGN SECTION_02



MARQUEE SIGN SECTION_01

A1 MARQUEE SIGN
G523 1/2" = 1'-0"

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D
C B A

KEY PLAN

PROJECT NORTH

2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13
Revision		By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL				2026.01.26
Issued		By	Appd	YYYY.MM.DD

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03/10/2026

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Crosby Sixth Grade Campus

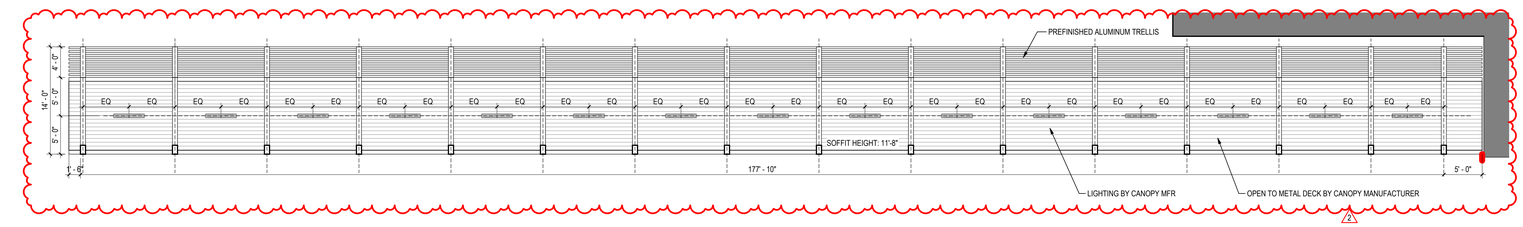
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Crosby, TX 77532

Title
SITE DETAILS

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	G523

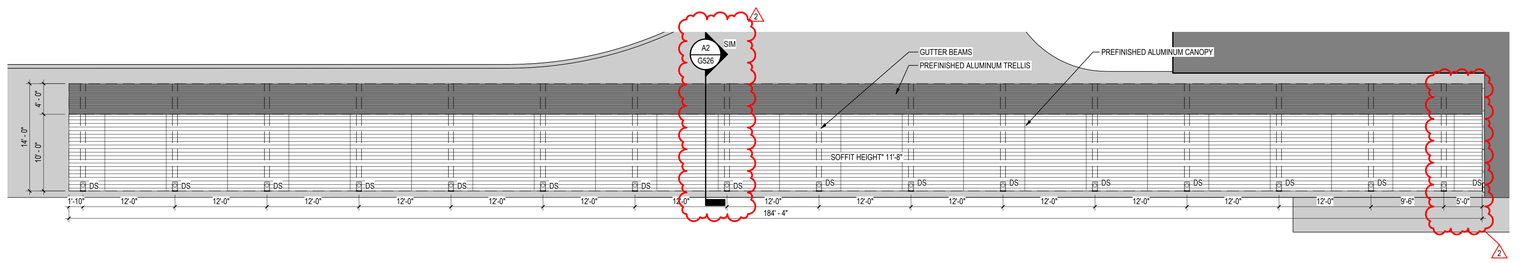
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ORIGINAL SHEET - ARCH E1



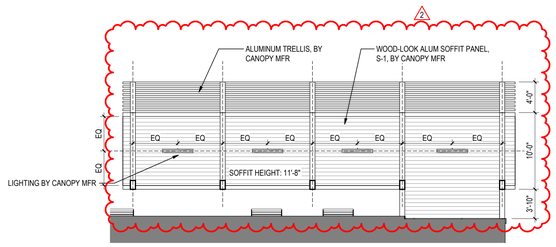
C2 BUS DROP OFF CANOPY RCP

G525 — 1/8" = 1'-0"



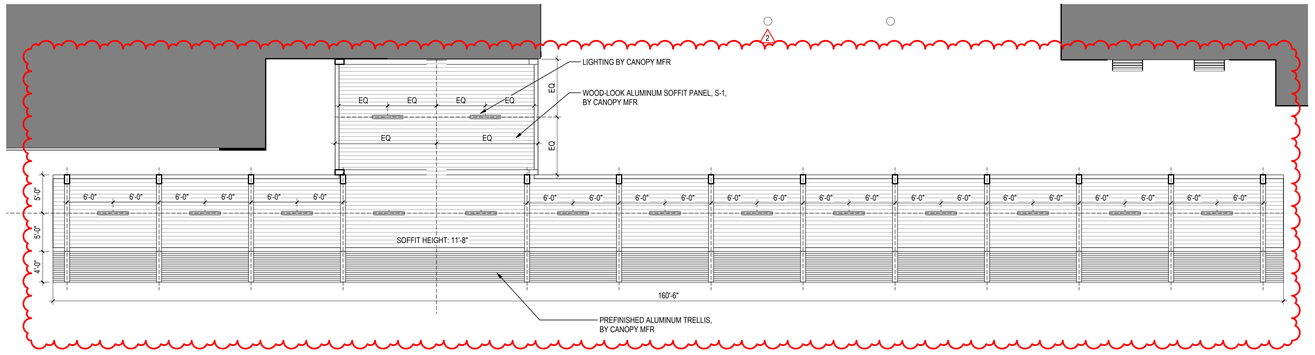
C1 BUS DROP OFF CANOPY PLAN

G525 — 1/8" = 1'-0"



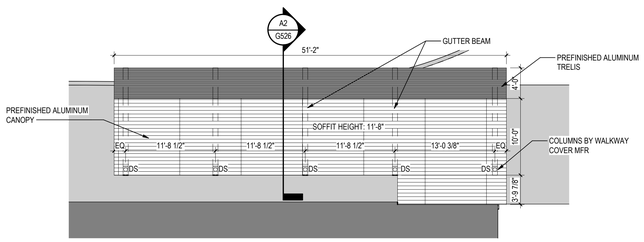
B4 ENLARGED SPED CANOPY RCP

G525 — 1/8" = 1'-0"



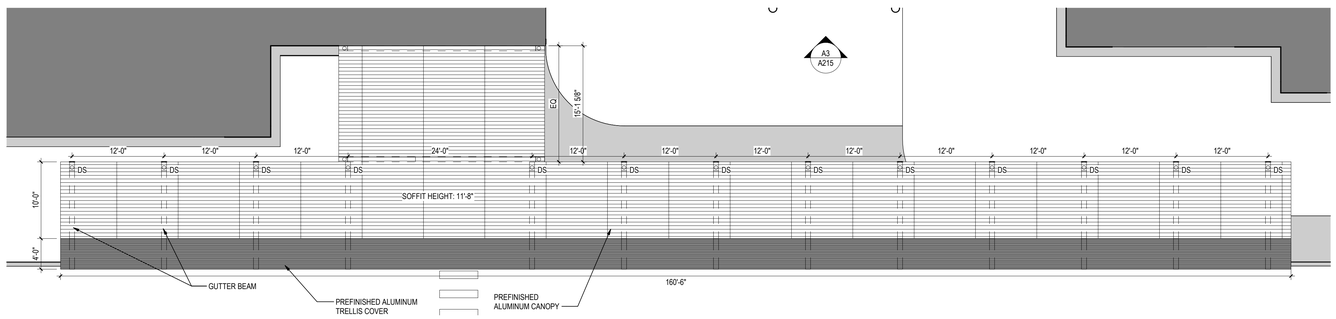
B3 ENLARGED ENTRY CANOPY RCP

G525 — 1/8" = 1'-0"



B2 ENLARGED SPED CANOPY PLAN

G525 — 1/8" = 1'-0"



B1 ENLARGED ENTRY CANOPY PLAN

G525 — 1/8" = 1'-0"

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Notes

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #3		2026.03.04
Revision		By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal



Client/Project Logo

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ALUMINUM WALKWAY COVERS AND CANOPIES

Project No.
214001329

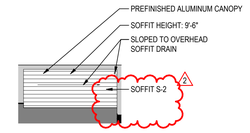
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Revision
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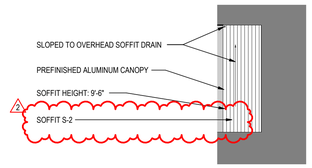
Drawing No.
G525

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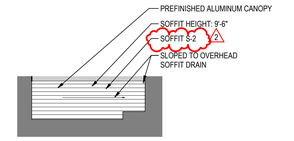
ORIGINAL SHEET - ARCH E1



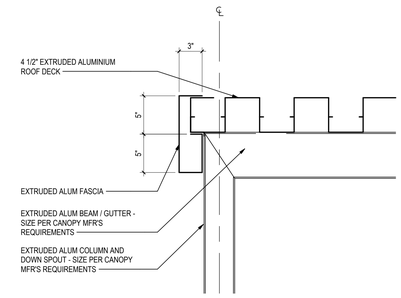
E1 G526 **ENLARGED GYM DOOR CANOPY PLAN**
1/8" = 1'-0"



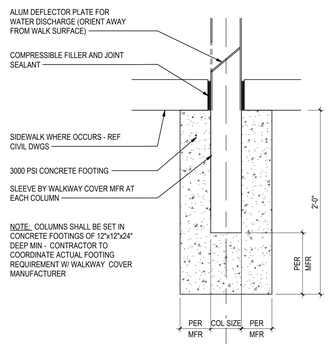
D1 G526 **ENLARGED KITCHEN DOOR CANOPY PLAN**
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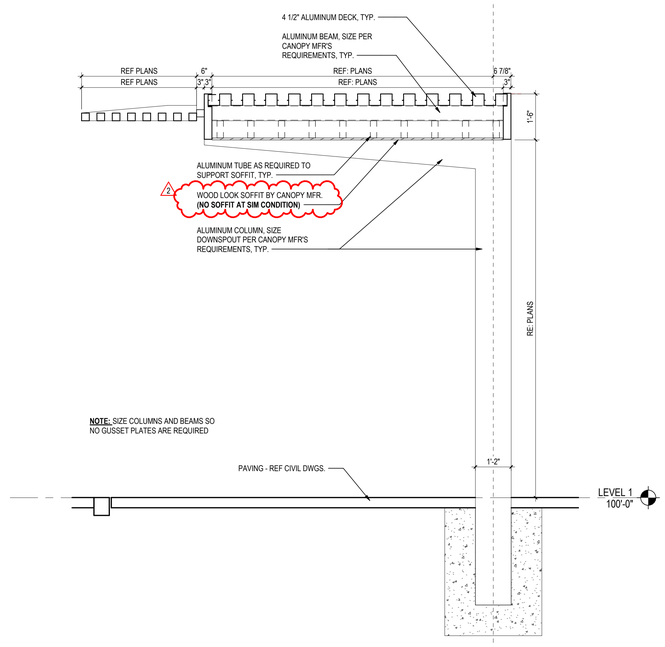
C1 G526 **ENLARGED EXIT DOOR CANOPY PLAN**
1/8" = 1'-0"



A4 G526 **EDGE TRIM DETAIL**
1 1/2" = 1'-0"



A5 G526 **COLUMN FOOTING**
1 1/2" = 1'-0"



A2 G526 **TYP CANOPY SECTION**
1/2" = 1'-0"

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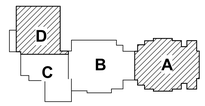
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Notes



KEY PLAN

PROJECT NORTH

2	ADDENDUM #4			2026.03.11
1	ADDENDUM #3			2026.03.04
Revision		By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL				2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT
BRIN J SHEDD
23796
STATE OF TEXAS
03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

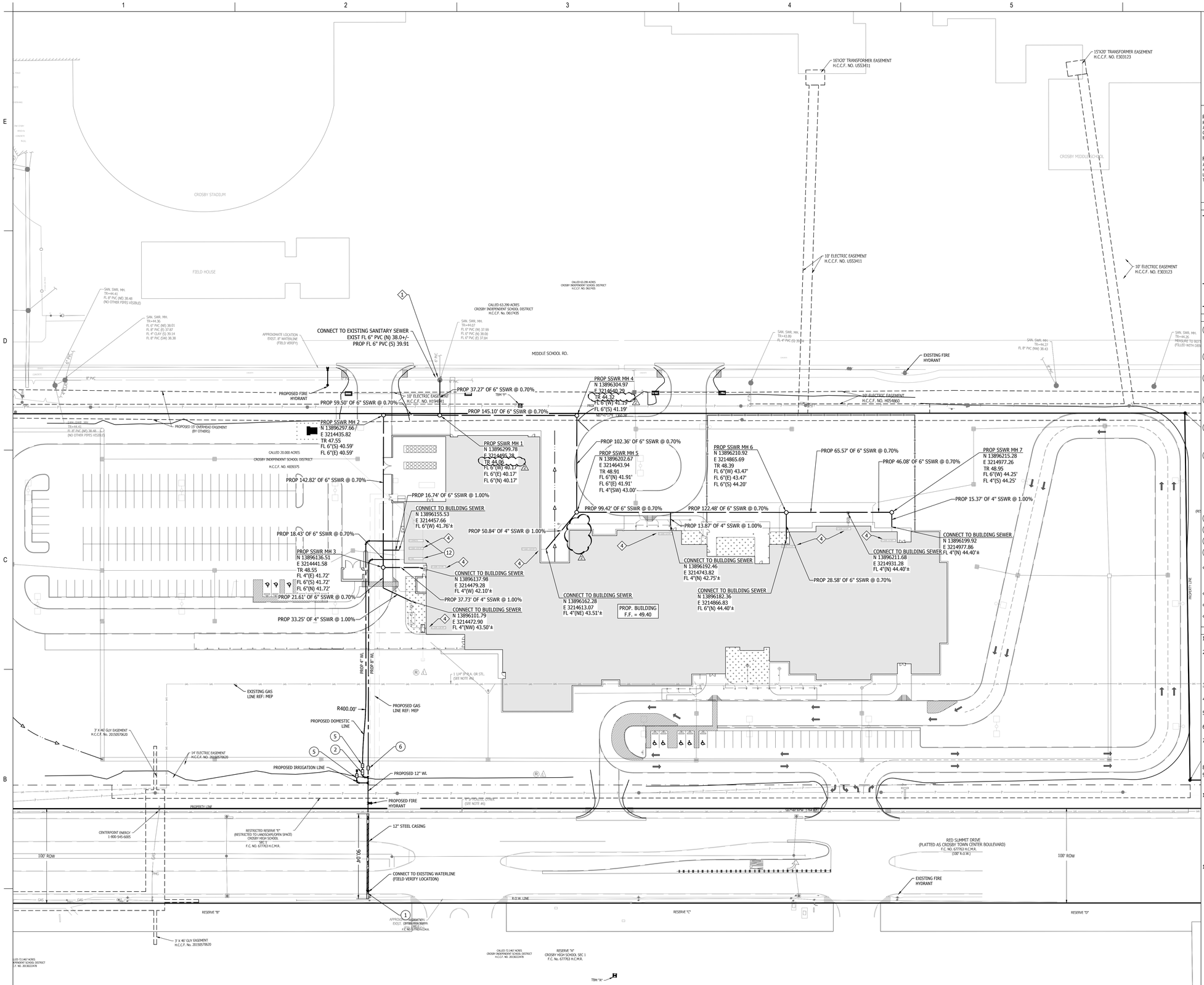
202 Red Summit Dr
Crosby, TX 77532

Title
ALUMINUM WALKWAY COVERS AND CANOPIES

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	G526

*Pick location in Project Information
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ORIGINAL SHEET - ARCH E1





BENCHMARK AND FLOODPLAIN INFORMATION

PROJECT BENCHMARK:
RM170125 - HARRIS COUNTY FLOODPLAIN REFERENCE MARKER 170125 IS AN ALUMINUM DISC LOCATED ON THE EAST SIDE OF FM 2100 1.1 MILES NORTH OF US 90 ON A HEADWALL OVER STREAM NO. R103-00-00.
ELEV. = 46.11 FT NAVD 88, 2001

FLOODPLAIN INFORMATION:
ACCORDING TO F.I.R.M. MAP NO. 48028705401 (COMMUNITY-PANEL NO. 48201C0540L), MAP REVISED DATE: JUNE 18, 2007. THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED. DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD.

LEGEND

- PROP. WATER LINE
- PROP. TAPPING SLEEVE AND VALVE
- PROP. WATER METER
- PROP. BACKFLOW PREVENTER
- PROP. FIRE VAULT
- PROP. GATE VALVE
- PROP. FIRE HYDRANT WITH GATE VALVE
- PROP. REDUCER
- PROP. F.D.C.
- PROP. PLUG
- PROP. BLOW-OFF
- PROP. SANITARY SEWER LINE
- PROP. SANITARY SEWER MANHOLE
- PROP. SANITARY SEWER CLEAN-OUT
- PROP. WATER LINE AND SEWER LINE CROSSING

KEY NOTES

1. CONTRACTOR SHALL LOCATE AND CONNECT TO THE EXISTING WATERLINE. CONNECTION SHALL BE MADE PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
2. 4" WATER METER FOR DOMESTIC SERVICE, PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
3. 8" WATER METER FOR FIRE SERVICE, PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
4. 1.5" WATER METER FOR IRRIGATION SERVICE, PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION AND CONTINUATION)
5. REDUCED PRESSURE ZONE BACKFLOW PREVENTER WITH ENCLOSURE, MATCH SIZE OF WATERLINE, PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)
6. DOUBLE DETECTOR CHECK BACKFLOW PREVENTER, MATCH SIZE OF WATERLINE, PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

   POST INDICATOR VALVE (PIV), PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

   FIRE DEPARTMENT CONNECTION (FDC), PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF: DETAILS)

9. 2" WATER LINE
10. 3" WATER LINE
11. 4" WATER LINE
12. CONNECT TO BUILDING WATER ENTRY. (REF: M.E.P. PLANS FOR LINE SIZE AND CONNECTION LOCATION)

1. CONTRACTOR SHALL LOCATE AND CONNECT TO THE EXISTING SANITARY SEWER SYSTEM. CONNECTION SHALL BE MADE PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. (REF. DETAILS)
2. 4" SSSWR @ 1.00% MIN.
3. 6" SSWR @ 1.00% MIN.
4. CONNECT TO BUILDING SEWER. (REF: M.E.P. PLANS FOR LINE SIZE, PIPE TYPE AND CONNECTION LOCATION)

NOTES

1. CONTRACTOR SHALL REFERENCE CIVIL CONSTRUCTION NOTES FOR ADDITIONAL REQUIREMENTS.
2. LOCATION AND SIZES OF EXISTING LINES AND CONNECTIONS TO BUILDING STUBS ARE PROVIDED FOR REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATION AND SIZE OF ALL CONNECTIONS BEFORE BEGINNING CONSTRUCTION.
3. 2" THROUGH 3" WATER LINES SHALL BE ASTM D-2241 SDR 21 PVC PIPE.
4. 4" THROUGH 12" WATER LINES SHALL BE AWWA C-900 PVC DR-18 BLUE PRESSURE RATED WATER MAIN.
5. 2" AND LARGER WATER LINE FITTINGS SHALL BE MECHANICAL JOINT FITTINGS PER AWWA C-153.
6. WATER LINES AND FITTINGS SMALLER THAN 2" SHALL CONFORM TO ASTM D-1784 SCH 40.
7. WATER LINES TO HAVE 4' MINIMUM COVER TO FINISHED GRADE. WHERE WATER LINES AND SEWER LINES CROSS THEY MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) OR 30 TAC §290.44(E).
8. ALL MANHOLES SHALL BE PRECAST CONCRETE.
9. SANITARY SEWER PIPE SHALL CONFORM WITH ASTM D3034 SDR 26, ASTM D2241 SDR 26 OR AWWA C-900 DR-18 BASED ON CONSTRUCTION CONDITION REQUIREMENTS.
10. WHERE UTILITY LINES AND/OR MASS FILLS ARE MORE THAN 10' DEEP, THE FILL/BACKFILL BELOW 10' SHOULD BE COMPACTED TO AT LEAST 100 PERCENT STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) AND WITHIN -2 TO +2 PERCENTAGE POINTS OF THE MATERIAL'S OPTIMUM MOISTURE CONTENT. THE PORTION OF THE FILL/BACKFILL SHALLOWER THAN 10' SHOULD BE COMPACTED AS PREVIOUSLY OUTLINED. DENSITY TESTS SHOULD BE PERFORMED ON EACH LIFT (MAXIMUM 12" THICK) AND SHOULD BE PERFORMED AS THE TRENCH IS BEING BACKFILLED.
11. TESTING: SOIL COMPACTION TESTING SHOULD BE ONE TEST PER LIFT PER 100 LINEAR FEET OF UTILITY BACKFILL.

Texas 811
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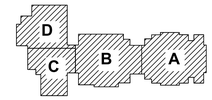
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520 POST OAK SUITE 895
HOUSTON, TEXAS 77027

NOTES



KEY PLAN

PROJECT NORTH

Revision	By	Appd	YYYY.MM.DD
ADDENDUM NO. 4			2026.03.11
ADDENDUM NO. 1			2026.02.13
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

Issued

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Client/Project Logo

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 RED SUMMIT DR
Crosby, TX 77532

Title
OVERALL SITE UTILITY PLAN

Project No. 214001329
Scale AS INDICATED
Revision
Sheet 22 of 34
Drawing No. C4.01

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ORIGINAL SHEET - ARCH E1

GENERAL NOTES

1. THE CONTENT OF THESE STRUCTURAL DOCUMENTS ARE INTENDED TO BE USED IN CONJUNCTION WITH CIVIL, LANDSCAPE, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK ASSOCIATED WITH THE DOCUMENT SET, ALBEIT NOT SPECIFICALLY DETAILED IN THE STRUCTURAL DOCUMENTS, AND SHALL BE INCORPORATED INTO THE CONTRACTOR'S (AND SUBCONTRACTOR'S) SCOPE OF WORK.

2. THERE SHALL BE NO DEVIATIONS FROM THESE CONSTRUCTION DOCUMENTS UNLESS APPROVED BY THE ENGINEER OF RECORD IN WRITING. ANY DEVIATION FROM, ADDITION TO, SUBSTITUTION FOR, OR MODIFICATION TO ANY PART OF THE STRUCTURE SHOWN IN THESE DOCUMENTS SHALL BE SUBMITTED IN WRITING TO THE ENGINEER OF RECORD FOR REVIEW. SHOP DRAWINGS THAT ARE SUBMITTED FOR REVIEW DO NOT CONSTITUTE "IN-WRITING" UNLESS IT IS CLEARLY NOTED THAT SPECIFIC CHANGES ARE BEING SUGGESTED.

3. NO MODIFICATIONS, ALTERATIONS, OR REPAIRS SHALL BE MADE WITHOUT PRIOR FORMAL REVIEW BY THE STRUCTURAL ENGINEER. THE CONTRACTOR SHALL SUBMIT DETAILS AND CALCULATIONS PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND EMPLOYED BY CONTRACTORS.

4. CONTRACTOR TO VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, CONCRETE THICKNESS AND CONCRETE CONDITIONS PRIOR TO BEGINNING ANY CONSTRUCTION. IF CONSTRUCTED ELEMENTS PREVENT THE CONTRACTOR FROM PERFORMING WORK AS SHOWN IN THE CONSTRUCTION DOCUMENTS, THE ENGINEER OF RECORD SHALL BE NOTIFIED (IN WRITING). NO WORK SHALL BE PERFORMED PRIOR TO THE ENGINEER OF RECORD'S REVIEW OF THE EXISTING CONDITION(S) AND ALLOWED THE OPPORTUNITY TO PROVIDE AN AGREED UPON SOLUTION. ANY WORK PERFORMED PRIOR TO THE ISSUANCE OF THE ENGINEERED SOLUTION WILL BE AT THE CONTRACTOR'S RISK AND IS SUBJECT TO REMOVAL AT THE EXPENSE OF THE CONTRACTOR.

5. ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS, OR AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. PLANS AND/OR SPECIFICATIONS WILL BE CORRECTED, OR WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ARCHITECT AND/OR ENGINEER BEFORE THE AFFECTED WORK PROCEEDS.

6. THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.

7. UNLESS OTHERWISE NOTED, FIRE PROOFING METHODS AND MATERIALS FOR STRUCTURAL MEMBERS ARE NOT SHOWN ON STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRE RATING REQUIREMENTS, FIRE PROOFING METHODS AND MATERIALS.

8. CONTRACTOR IS TO VERIFY MECHANICAL LOADINGS AND LOCATIONS. NOTIFY ARCHITECT IF WEIGHTS AND LOCATIONS OF MECHANICAL UNITS DIFFER FROM THOSE SHOWN ON PLAN. MECHANICAL EQUIPMENT MANUFACTURER/INSTALLER SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ANCHORAGE OF ALL ROOFTOP EQUIPMENT. THE ANCHORAGE SHALL BE DESIGNED TO MEET THE INTERNATIONAL BUILDING CODE MINIMUM WIND AND SEISMIC LOADS.

9. PRINCIPAL OPENINGS ARE INDICATED ON THE DRAWINGS. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR SLEEVES, BLOCK-OUTS AND CURBS.

10. REFER TO ARCHITECTURAL, MECHANICAL PLUMBING, TECHNOLOGY AND ELECTRICAL DRAWINGS FOR ANCHORS, INSERTS, REGLETS AND EMBEDDED ITEMS NOT SHOWN ON STRUCTURAL DRAWINGS.

11. THESE DOCUMENTS SHALL NOT BE SCALED. CONTRACTOR SHALL UTILIZE THE DIMENSIONS PROVIDED ON THE CONTRACT DOCUMENTS.

12. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.

13. DETAILS LABELED "TYPICAL DETAILS" ON THE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS APPLY WHETHER OR NOT THEY ARE CUT AT EACH LOCATION. QUESTIONS REGARDING APPLICABILITY OF TYPICAL DETAILS SHALL BE DETERMINED BY THE ENGINEER.

    A. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

14. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:

    SIZE AND LOCATION OF DOORS AND WINDOW OPENINGS, SIZE AND LOCATION OF INTERIOR AND EXTERIOR NON-LOAD BEARING PARTITIONS, SIZE AND LOCATION OF CONCRETE CURBS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHAMFERS, GROOVES, INSERTS, ETC., SIZE AND LOCATION OF FLOOR AND ROOF OPENINGS, FLOOR AND ROOF FINISHES, STAIR FRAMING AND DETAILS, DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS, CEILING AND EXTERIOR WALL ASSEMBLIES.

15. SEE THE MECHANICAL, PLUMBING, TECHNOLOGY AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:

    PIPES, SLEEVES, HANGERS, TRENCHES, WALL, FLOOR AND ROOF OPENINGS, DUCT PENETRATIONS, ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS, CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL, OR PLUMBING FIXTURES, SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES AND ANCHOR BOLTS FOR MOUNTS.

MEANS AND METHODS OF CONSTRUCTION

1. STANTEC SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE MEANS AND METHODS OF CONSTRUCTION, SEQUENCES, TECHNIQUES AND/OR PROCEDURES.

2. STANTEC SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULE OR CONTRACTOR'S FAILURE TO COMPLY WITH THE CONTRACT DOCUMENTS.

3. STANTEC SHALL NOT HAVE ANY CONTROL OVER ACTIONS OF CONTRACTOR, SUBCONTRACTOR, AND ANY OF THEIR AGENTS/EMPLOYEES PERFORMING ANY CONSTRUCTION ACTIVITIES.

4. THE DESIGN DOCUMENTS REFLECT THE FINAL COMPLETED STATE OF THE STRUCTURAL SYSTEMS AND ELEMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION RELATED ENGINEERING TO INCLUDE, BUT NOT LIMITED TO, CONSTRUCTION MEANS AND METHODS, TEMPORARY SUPPORTS, SHORING AND BRACING, TEMPORARY USE OF STRUCTURES, PARTIALLY CONSTRUCTED STRUCTURES, AND INCOMPLETE STRUCTURES. ALL CONSTRUCTION AND RELATED ENGINEERING SHALL BE IN ACCORDANCE WITH ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION" AND ANY TEMPORARY CABLE BRACING DESIGNED PER ASCE/SEI 19-16 "STRUCTURAL APPLICATIONS OF STEEL CABLES FOR BUILDINGS."

5. CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD. EXPANSION JOINTS SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED TO ACCOMMODATE ANTICIPATED THERMAL MOVEMENT AFTER THE BUILDING IS COMPLETE.

6. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON THE STRUCTURE. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION EQUIPMENT INCLUDING, BUT NOT LIMITED TO:

    A. CONCRETE TRUCKS, CRANES, OR OTHER CONSTRUCTION VEHICLES WITH A WHEEL LOAD GREATER THAN 1000 POUNDS ACTING ON AN AREA NOT LESS THAN 4.5 INCHES SQUARE SHALL NOT BE PERMITTED ON THE STRUCTURAL SLAB WITHOUT PRIOR WRITTEN AGREEMENT OF THE ARCHITECT/ENGINEER. EQUIPMENT EXCEEDING THE ABOVE REFERENCED LOADING SHALL BE EVALUATED ACCORDING TO NOTE E BELOW.
    B. CONCURRENT USE OR STORAGE OF MORE THAN ONE VEHICLE ON THE STRUCTURAL SLAB SHALL NOT BE PERMITTED WITHOUT PRIOR WRITTEN AGREEMENT OF THE ARCHITECT/ENGINEER.
    C. CONSTRUCTION EQUIPMENT WITH A TOTAL LOADED WEIGHT OF MORE THAN 3000 POUNDS IS NOT PERMITTED ON THE COMPOSITE FLOOR SLAB WITHOUT PRIOR WRITTEN AGREEMENT OF THE ARCHITECT/ENGINEER.
    D. STATIONARY CONSTRUCTION EQUIPMENT AND MATERIALS ARE TO BE EVENLY DISTRIBUTED IF PLACED ON STRUCTURAL FLOOR FRAMING/SLABS OR ROOF FRAMING/DECK. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT OBTAINED DESIGN STRENGTH.
    E. SUBMISSIONS FOR PROPOSED CONSTRUCTION VEHICLES AND CONSTRUCTION PHASE EQUIPMENT SHALL BE PREPARED BY A THIRD-PARTY ENGINEER (LICENSED IN THE STATE IN WHICH THE PROJECT IS BEING PERFORMED) INDICATING CODE COMPLIANCE OF THE CONSTRUCTION LOADS ACTING ON THE STRUCTURE, INCLUDING THE DESIGN OF CONSTRUCTION BRACING AND/OR SHORING AS REQUIRED.

DESIGN CRITERIA

CODES

ALL WORK ASSOCIATED WITH THE PROJECT SCOPE SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS:

1. BUILDING CODE: INTERNATIONAL BUILDING CODE (IBC) 2021 INCLUDING APPLICABLE AMENDMENTS.
2. DESIGN LOADS: MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES, AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) 7-16.
3. STRUCTURAL CONCRETE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY, AMERICAN CONCRETE INSTITUTE (ACI) 318-19.
4. STRUCTURAL MASONRY: BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES AND COMPANION COMMENTARIES, THE MASONRY SOCIETY (TMS) 402/602-16.
5. STRUCTURAL STEEL: SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AMERICAN INSTITUTE OF STEEL CONSTRUCTION (ANSI) 360-16
6. STRUCTURAL LUMBER: NATIONAL DESIGN SPECIFICATION, AMERICAN WOOD COUNCIL (ANSI/AWC/NDS) 2018.
7. STRUCTURAL COLD-FORMED FRAMING: NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, AMERICAN IRON AND STEEL INSTITUTE (AISI) 2020.

DESIGN DEAD LOADS

ARE SELF-WEIGHT OF THE STRUCTURE PLUS SUPERIMPOSED LOADING.

DESIGN LIVE LOADS

ARE IN POUNDS PER SQUARE FOOT (PSF) UNO:

1. ROOF.....20 PSF, 300 LBS
2. STAIRS AND EXITS..... 100
3. GROUND LEVEL UNO..... 100
4. ELEVATED FLOORS
    A. SCHOOL CORRIDORS..... 80
    B. CLASSROOM..... 40
    C. OFFICE..... 50
5. AUDITORIUM/CAFETERIA..... 100
6. GYMNASIUM..... 100
7. KITCHEN..... 150
8. LIBRARY (STACK)..... 100
9. MECHANICAL AREAS..... 150
    A. FIXED EQUIPMENT: DESIGNED FOR ACTUAL WEIGHT OF EQUIPMENT
10. LIGHT STORAGE AREAS..... 125
11. TOILET AREA..... 60
12. HAND RAILS & GRAB BARS..... 50 PLF, 200 LBS

NOTE: FLOOR LIVE LOADS HAVE BEEN REDUCED IN ACCORDANCE WITH THE METHOD PRESCRIBED IN THE ABOVE REFERENCED BUILDING CODE. ROOF LIVE LOADS HAVE NOT BEEN REDUCED.

DESIGN SEISMIC LOADS

DATA FOR DESIGN OF THE STRUCTURE IS AS FOLLOWS:

1. IMPORTANCE FACTOR..... 1.25
2. BUILDING RISK CATEGORY..... III
3. SPECTRAL RESPONSE ACCELERATION (Ss)..... 7.00%g
4. SPECTRAL RESPONSE ACCELERATION (S1)..... 4.10%g
5. SEISMIC SITE CLASS..... D
6. SPECTRAL RESPONSE COEFFICIENT (Sds)..... 0.075
7. SPECTRAL RESPONSE COEFFICIENT (Sd1)..... 0.065
8. SEISMIC DESIGN CATEGORY..... A
9. BASIC SEISMIC FORCE RESISTING SYSTEM(S): STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
10. RESPONSE MODIFICATION FACTOR (R)..... 3
11. SEISMIC RESPONSE COEFFICIENT (Cs)..... 0.031
12. DESIGN BASE SHEAR..... 0.01W
13. ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE

DESIGN SNOW LOADS

DATA FOR DESIGN OF THE STRUCTURE IS AS FOLLOWS:

1. GROUND SNOW LOAD (Pg)..... 0 PSF

RAIN LOADS

DATA FOR DESIGN OF THE STRUCTURE IS AS FOLLOWS:

1. RAIN INTENSITY (i).....5.18 in/Hr

DESIGN WIND LOADS

DATA FOR DESIGN OF THE STRUCTURE IS AS FOLLOWS:

A. DESIGN WIND SPEED (THREE-SECOND GUSTS).....Vult=145 MPH (ULTIMATE)
    Vasd=112.3 MPH (NOMINAL)
B. RISK CATEGORY.....III
C. EXPOSURE CATEGORY.....C
D. INTERNAL PRESSURE COEFFICIENT.....±0.18
E. COMPONENTS/CLADDING EXTERIOR WALLS AND ROOFS:.....SEE S021

FOUNDATIONS

1. FOUNDATION DESIGN IS IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE FOLLOWING GEOTECHNICAL REPORT:
    A. GEOTECHNICAL ENGINEER.....UES PROFESSIONAL SOLUTIONS 44, LLC
    B. DATE OF REPORT.....DECEMBER 5, 2025 ⚠1
    C. REPORT NUMBER.....H254405
2. THE OWNER HAS OBTAINED THE AFOREMENTIONED GEOTECHNICAL REPORT AS PART OF THE BID DOCUMENTS FOR INFORMATION ONLY. NEITHER THE OWNER NOR THE CONSULTANTS WARRANT THE ACCURACY OR THE COMPLETENESS OF THE REPORT. IN SUBMITTING A TENDER, THE BIDDER ACKNOWLEDGES AND REPRESENTS THAT IT HAS REVIEWED THE REPORT AND HAS MADE ITS OWN INDEPENDENT ASSESSMENT OF THE CONDITIONS OF THE SITE AND THE REQUIREMENTS OF THE WORK, AND THAT IT IS SOLELY RESPONSIBLE FOR DECISIONS PERTAINING TO IMPLEMENTATION OF THE GEOTECHNICAL RECOMMENDATIONS.
3. REFER TO THE AFOREMENTIONED GEOTECHNICAL REPORT FOR FOUNDATION, PAVING, AND SUBSURFACE DESIGN INFORMATION. THE CONTRACTOR SHALL REFERENCE THIS REPORT IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS FOR GUIDELINES AND RECOMMENDATIONS FOR FOUNDATION AND SUBSURFACE PREPARATION, EXCAVATION, AND CONSTRUCTION.
4. ESTABLISH THE BOTTOM OF FOUNDATIONS AT ELEVATIONS SHOWN IN THE CONSTRUCTION DOCUMENTS. IF FIELD CONDITIONS REQUIRE CHANGES TO REACH DESIRED STRATUM, ADJUSTMENTS TO CONTRACT ARE TO BE MADE ON A UNIT PRICE BASIS.

DRILLED PIERS-BELLED/UNDERREAMED

1. PIER DESIGN IS BASED UPON THE FOLLOWING CRITERIA:
    A. ALLOWABLE END BEARING PRESSURE.....2600 PSF (SUSTAINED LIVE LOAD)
        3900 PSF (TOTAL LOAD)
    B. MINIMUM DEPTH.....10 FT (BELOW EXISTING GRADE)
2. DRILLED HOLES ARE TO BE EXCAVATED, CLEANED, REINFORCED, AND FILLED WITH CONCRETE DURING THE SAME DAY. NO HOLE IS TO BE LEFT OPEN OVERNIGHT.
3. REINFORCING CAGE SHALL BE HELD SECURELY AWAY FROM EARTH AT SIDES AND BOTTOM BY SETS OF 3 OR MORE SPACERS AT A MAXIMUM SPACING OF 5 FEET ALONG THE LENGTH OF THE CAGE AND 1 FOOT FROM THE BOTTOM.
4. TOP OF PIERS SHALL BE OF THE SPECIFIED DIAMETER, AND SHALL NOT BE ENLARGED TO FORM A MUSHROOM UNDER ANY CIRCUMSTANCE. FORM TOP OF PIER IF REQUIRED TO MAINTAIN THE SPECIFIED DIAMETER. ANY CONCRETE EXTENDING BEYOND THE SPECIFIED DIAMETER SHALL BE REMOVED.
5. CONTRACTOR SHALL PROVIDE IN HIS BID A UNIT PRICE ADD AND UNIT PRICE DEDUCT FOR EACH PIER SIZE UTILIZED ON THE PROJECT.
6. REDUCING THE POTENTIAL FOR CAVING OF THE BELL CAN BE ACHIEVED BY LIMITING THE BELL TO SHAFT DIAMETER RATIO TO 2:1 OR TO INSTALL STRAIGHT SHAFT FOOTINGS THE SIZE OF THE BELL DIMENSION.
7. THE GROUNDWATER LEVELS MAY FLUCTUATE SEASONALLY AND WITH CLIMATIC CHANGES. SEEPAGE OF GROUNDWATER INTO THE EXCAVATIONS IS POSSIBLE AND SEEPAGE FROM "PERCHED" WATER TRAPPED IN THE SOILS MAY ALSO OCCUR. THE CONTRACTOR SHALL MAKE PROVISIONS FOR DEWATERING THE PIER EXCAVATION IF GROUNDWATER IS ENCOUNTERED.
8. TEMPORARY STEEL CASING MAY BE REQUIRED DURING PIER DRILLING OPERATIONS. PRIOR TO THE PLACEMENT OF CONCRETE, ANY SEEPAGE WATER SHALL BE REMOVED FROM THE PIER HOLES. SPECIAL CONSTRUCTION PROCEDURES IN ACCORDANCE WITH ACI 336 AND SPECIFICATIONS SHALL BE FOLLOWED DURING EXTRACTION OF THE CASING AND DURING CONCRETE PLACEMENT.
    A. CONTRACTOR SHALL PROVIDE AN ALLOWANCE FOR 100% CASING OF DRILLED PIERS. CONTRACTOR SHALL ALSO PROVIDE UNIT PRICE FOR EACH SIZE OF CASING UTILIZED ON THE PROJECT. PAYMENT FOR CASING SHALL BE BASED UPON NET LENGTH OF CASING UTILIZED MULTIPLIED BY THE UNIT PRICE.

SLAB-ON-GRADE SUBGRADE PREPARATION

1. FOR SUBGRADE PREPARATION WITHIN THE BUILDING AREA, REFER TO THE ABOVE MENTIONED GEOTECHNICAL REPORT. THIS WORK IS TO BE PERFORMED AS DIRECTED BY THE OWNER'S SOILS TESTING LAB. OBSERVATION REPORTS AND TEST REPORTS OF THE SOIL COMPACTION ARE TO BE SUBMITTED TO THE ARCHITECT/ENGINEER TO VERIFY THE WORK IS IN GENERAL CONFORMANCE PRIOR TO PLACEMENT OF CONCRETE.
2. REMOVE AND REPLACE AT LEAST 5.5 FT OF EXISTING SUBGRADE TO ACHIEVE PVR OF 1 INCH OR LESS AND REPLACE WITH IMPORTED SELECT FILL BELOW SLAB PER GEOTECHNICAL REPORT RECOMMENDATIONS.
3. TOP SOIL AND VEGETATION IS TO BE STRIPPED TO DEPTHS ENCOUNTERED AND AS DIRECTED BY THE OWNER'S SOILS TESTING LAB PRIOR TO DRILLING PIERS, REFER TO SOIL REPORT FOR SITE PREPARATION.

CONCRETE

1. ALL CONCRETE WORK ASSOCIATED WITH THE PROJECTED SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:
    A. ACI 301 – SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
    B. ACI 318 – BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
    C. CRSI MANUAL OF STANDARD PRACTICE
2. UNLESS NOTED OTHERWISE, CONCRETE AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET THE REQUIREMENTS OF ASTM C33.
3. CAST IN PLACE CONCRETE FOR BUILDING FOUNDATION STRUCTURES SHALL MEET THE FOLLOWING PROPERTIES UNLESS NOTED OTHERWISE:
    A. UNDERREAMED DRILLED PIERS:
        1. 28 DAY STRENGTH..... 3,000 PSI
        2. MAXIMUM AGGREGATE SIZE..... 1-1/2 INCH
        3. MAXIMUM WATER/CEMENT RATIO..... 0.50
        4. ACI 318 EXPOSURE CLASS..... F0, S0, W0, C1
    B. GRADE BEAMS, PLINTHS AND PILASTERS:
        1. 28 DAY STRENGTH..... 4,500 PSI
        2. MAXIMUM AGGREGATE SIZE..... 1 INCH
        3. MAXIMUM WATER/CEMENT RATIO..... 0.45
        4. ACI 318 EXPOSURE CLASS..... F1, S0, W0, C1
4. CAST IN PLACE CONCRETE FOR BUILDING HORIZONTAL, VERTICAL, AND ABOVE-GRADE STRUCTURES SHALL MEET THE FOLLOWING PROPERTIES UNLESS NOTED OTHERWISE:
    A. SLABS ON GRADE:
        1. 28 DAY STRENGTH..... 4,000 PSI
        2. MAXIMUM AGGREGATE SIZE..... 1 INCH
        3. MAXIMUM WATER/CEMENT RATIO..... 0.45
        4. ACI 318 EXPOSURE CLASS..... F0, S0, W0, C0
    B. SLABS ON METAL DECK:
        1. 28 DAY STRENGTH..... 4,000 PSI
        2. MAXIMUM AGGREGATE SIZE..... 3/4 INCH
        3. MAXIMUM WATER/CEMENT RATIO..... 0.45
        4. ACI 318 EXPOSURE CLASS..... F0, S0, W0, C0
5. SUPPLEMENTAL CEMENTITIOUS MATERIALS (SCM) MEETING THE REQUIREMENTS OF ASTM C618 SHALL BE ALLOWED WITH A MINIMUM REPLACEMENT (BY MASS OF CEMENTITIOUS MATERIAL) OF FIFTEEN (15) PERCENT.
6. HORIZONTAL CONSTRUCTION JOINTS IN CONCRETE POURS SHALL BE PERMITTED ONLY WHERE INDICATED ON THE DRAWINGS. ALL VERTICAL CONSTRUCTION JOINTS SHALL BE MADE AT THIRD POINTS IN ACCORDANCE WITH TYPICAL DETAILS. CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS FOR CONSTRUCTION JOINTS NOT SHOWN ON DRAWINGS FOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER. ADDITIONAL CONSTRUCTION JOINTS MAY REQUIRE ADDITIONAL REINFORCING AS SPECIFIED BY THE ENGINEER WHICH SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
7. ROUGHEN THE SURFACE OF ALL CONSTRUCTION JOINTS SO THAT THE AGGREGATE IS EXPOSED UNIFORMLY, LEAVING NO LAITANCE, LOOSENED PARTICLES, OR DAMAGED CONCRETE.
8. ALL CONCRETE SHALL BE DESIGNED, MIXED, TRANSPORTED, AND PLACED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE.
9. SLEEVES OR OTHER PENETRATIONS CAN BE ALLOWED THROUGH STRUCTURAL MEMBERS ONLY WITH PRIOR WRITTEN AGREEMENT OF ARCHITECT/ENGINEER. REQUESTS FOR REVIEW ARE TO BE SUBMITTED IN WRITING A MINIMUM OF FIVE WORKING DAYS PRIOR TO THE CONCRETE POUR.
    A. CONTINUOUS WATERSTOP ARE TO BE USED AT JOINTS WHERE DETAILED AND AT OTHER CONSTRUCTION JOINTS IN CONCRETE ELEMENTS BELOW FINISH GRADE.
    B. EMBEDDED CONDUITS, PIPES, AND SLEEVES SHALL MEET THE REQUIREMENTS OF ACI 318-19, ACI 318-19(22) SECTION 20.6 AND 26.8, INCLUDING THE FOLLOWING:
        1. CONDUITS AND PIPES EMBEDDED WITHIN A SLAB, WALL, OR BEAM (OTHER THAN THOSE PASSING THROUGH) SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, WALL, OR BEAM IN WHICH THEY ARE EMBEDDED.
        2. CONDUITS, PIPES AND SLEEVES SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS OR WIDTHS ON CENTER.

OPEN WEB STEEL JOISTS

1. STEEL JOISTS ARE TO CONFORM TO THE LATEST AISC-SJI SPECIFICATIONS AND AS OTHERWISE SPECIFIED.
2. ALL STEEL SHALL BE DOMESTICALLY (INCLUDING CANADA) MILLED AND FABRICATED. FOREIGN STEEL SHALL NOT BE UTILIZED WITH OUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER. THE APPROVAL PROCESS SHALL TAKE PLACE DURING BIDDING TIME. ANY REQUEST TO UTILIZE FOREIGN STEEL MADE AFTER BIDDING SHALL BE REJECTED.
3. PROVIDE BRIDGING AND CAMBER FOR STEEL JOISTS IN COMPLIANCE WITH MANUFACTURER'S REQUIREMENTS. CAMBER SHALL BE KEPT TO A MINIMUM AND USED ONLY WHERE REQUIRED.
4. WHERE AIR DUCTS OR OTHER EQUIPMENT INTERRUPTS HORIZONTAL BRIDGING, SUPPLY DIAGONAL BRIDGING IN BAYS AFFECTED TO INTERRUPTED BAY. CONTRACTOR TO COORDINATE LOCATIONS WITH MECHANICAL PRIOR TO FABRICATION.
5. JOIST GIRDERS ARE TO CONFORM TO THE LATEST AISC-SJI SPECIFICATIONS. BOTTOM CHORDS OF JOIST GIRDERS ARE TO BE STABILIZED DURING ERECTION TO PREVENT OVERTURNING PER MANUFACTURER'S RECOMMENDATION OR METHOD RECOMMENDED BY THE ARCHITECT/ENGINEER.
6. BOTTOM CHORDS OF JOISTS IN LINE WITH COLUMNS ARE TO BE EXTENDED AS DETAILED.
7. TOP AND BOTTOM CHORDS OF JOISTS SHALL BE HOT-ROLLED SECTIONS.
8. OPEN WEB STEEL JOISTS ARE TO BE DESIGNED FOR A NET UNFACTORED WIND UPLIFT LOAD NORMAL TO THE SURFACE OF THE ROOF PER THE DIAGRAM ON SHEET S021.
9. OPEN WEB STEEL JOIST SUPPLIER IS TO SUBMIT SHOP DRAWINGS PREPARED UNDER THE SUPERVISION OF A LICENSED ENGINEER IN THE STATE IN WHICH THE PROJECT IS BEING PERFORMED TO THE ARCHITECT/ENGINEER FOR REVIEW FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. SEE THE SPECIFICATIONS FOR OTHER SUBMITTAL REQUIREMENTS.
10. JOISTS ADJACENT TO STRUCTURAL STEEL MEMBERS SHALL BE DESIGNED TO HAVE ZERO CAMBER.

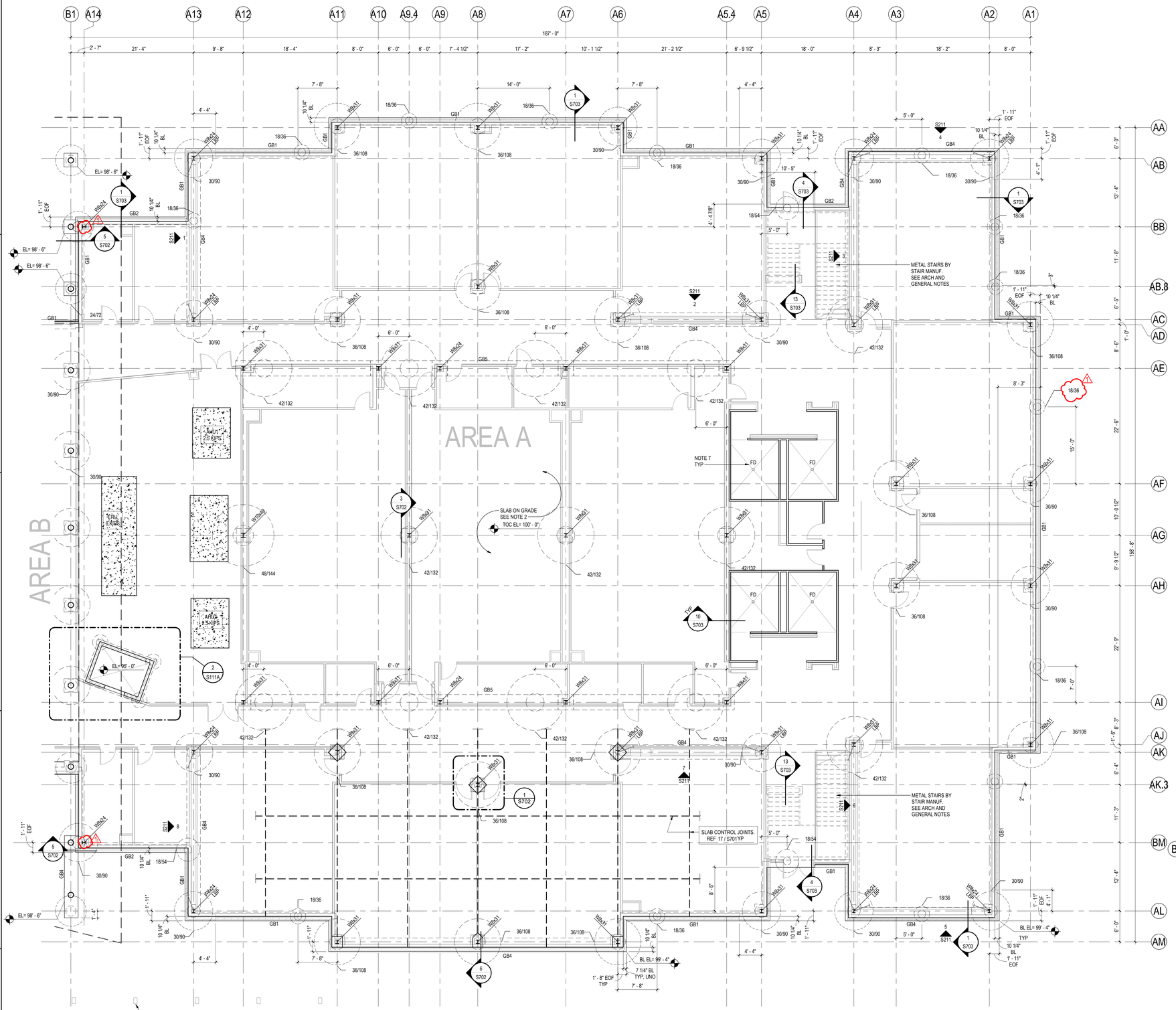
REINFORCING STEEL

1. DEFORMED BAR CONCRETE REINFORCEMENT FOR STRUCTURES IS TO CONFORM TO ASTM A615 GRADE 60 UNLESS OTHERWISE NOTED.
2. ELECTRICALLY-WELDED WIRE FABRIC OF COLD-DRAWN WIRE SHALL CONFORM TO ASTM A1064 (70,000 PSI) UNLESS OTHERWISE NOTED.
3. REINFORCEMENT IS TO BE DESIGNED AND DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE CRSI "MANUAL OF STANDARD PRACTICE" AND THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" (ACI 315).
4. ALL STEEL SHALL BE DOMESTICALLY (INCLUDING CANADA) MILLED AND FABRICATED. FOREIGN STEEL SHALL NOT BE UTILIZED WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER. THE APPROVAL PROCESS SHALL TAKE PLACE DURING BIDDING TIME. ANY REQUEST TO UTILIZE FOREIGN STEEL MADE AFTER BIDDING SHALL BE REJECTED.
5. REINFORCEMENT BAR BENDS ARE TO BE MADE COLD.
6. WELDING OF REINFORCING STEEL IS NOT PERMITTED.
7. DEFORMED BAR ANCHORS (DBA'S) SHALL BE WELDED BY A METHOD IN WHICH THE CONNECTION CAN DEVELOP THE FULL TENSION AND SHEAR CAPACITY OF THE BAR.
8. REINFORCEMENT IS TO BE SUPPORTED ON CHAIRS PROVIDING THE FOLLOWING MINIMUM CONCRETE COVER:

    CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3IN
    FORMED, EXPOSED TO EARTH OR WEATHER
    #6 THROUGH #18 BARS.....2IN
    #5 BAR, W31 OR D31 WIRE, AND SMALLER.....1 1/2IN
    FORMED, NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND
    SLABS, WALLS, JOISTS
    #14 AND #18 BARS.....1 1/2IN
    #11 AND SMALLER.....3/4 IN
    BEAMS, GIRDERS, COLUMNS
    PRIMARY REINF, TIES, STIRRUPS, SPIRALS.....1 1/2IN
    SHELL, FOLDED PLATE MEMBERS
    #6 BAR AND LARGER.....3/4IN
    #5 BAR, W31 OR D31 WIRE, AND SMALLER.....1/2IN
9. CONTINUOUS REINFORCEMENT MAY BE USED IN PLACE OF SCHEDULED REINFORCEMENT AS LONG AS THE SCHEDULED SIZE AND SPACING IS SATISFIED. WHERE SPLICES ARE NECESSARY, THEY ARE TO BE MADE AT LOCATIONS SHOWN IN THE SCHEDULES.
10. CONTINUOUS REINFORCEMENT MAY BE USED IN PLACE OF SCHEDULED REINFORCEMENT AS LONG AS THE SCHEDULED SIZE AND SPACING IS SATISFIED. WHERE SPLICES ARE NECESSARY, THEY ARE TO BE MADE AT LOCATIONS SHOWN IN THE SCHEDULES.
11. UNLESS OTHERWISE DETAILED, HOOKS ARE TO BE ACI STANDARD 90-DEGREE HOOKS.
12. HOOK TOP AND SIDE REINFORCING BARS AT DISCONTINUOUS ENDS.
13. UNLESS OTHERWISE SHOWN OR NOTED, CORNER BARS OF THE SAME SIZE AS MAIN TOP AND BOTTOM REINFORCEMENT ARE TO BE PROVIDED AT CORNERS OF BEAMS AND INTERSECTIONS OF BEAMS IN WHICH ONE MEMBER IS DISCONTINUOUS. SEE SHEET S301 AND DETAILS FOR TYPICAL GRADE BEAM CORNER BARS AND REINFORCEMENT LAP SPLICES.
14. STIRRUPS OF THE SIZE AND SPACING DETAILED ARE TO PROVIDE THE COVER LISTED ABOVE. HOOKS ON STIRRUPS ARE TO BE 90 DEGREES AND ARE TO HAVE 4" MINIMUM EXTENSIONS UNLESS OTHERWISE NOTED.
15. MINIMUM LAP OF WELDED WIRE FABRIC IS TO BE 6" OR ONE MESH AND ONE-HALF, WHICHEVER IS GREATER.

STRUCTURAL STEEL

1. STRUCTURAL STEEL IS TO CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS UNLESS NOTED OTHERWISE, AND IS TO BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE REFERENCED EDITION OF THE AISC SPECIFICATIONS:
    A. WIDE FLANGE SECTIONS.....AS



GRADE BEAM SCHEDULE

TYPE	WIDTH	DEPTH	TOP BARS	BOT BARS	STIRRUPS	COMMENTS
GB1	1' - 5"	2' - 6"	(3) #8	(3) #8	#4 AT 12" OC	TYP UNO
GB2	1' - 6"	2' - 6"	(3) #8	(3) #8	#4 AT 12" OC	8 IN MASONRY WALLS, UNO
GB3	2' - 0"	2' - 6"	(4) #8	(4) #8	#4 AT 12" OC	TYP AT 12" CMU WALLS
GB4	2' - 8"	2' - 6"	(8) #8	(6) #8	#4 AT 12" OC	BRACES AND LBP LOCATIONS
GB5	3' - 0"	2' - 6"	(9) #9	(5) #9	4 LG #4 AT 10" OC	STRAP BEAM IN AREA A

SLAB-ON-GRADE (SOG) PLAN NOTES

1. REFERENCE ELEVATION 100' - 0" CORRESPONDS TO CIVIL ELEVATION 48.50, UON. VERIFY WITH CIVIL.
2. SLAB-ON-GRADE SHALL BE FIVE (5) INCHES THICK W/ #3 BARS @ 18" OC EACH WAY, UON.
3. SEE GENERAL NOTES FOR ADDITIONAL SLAB REQUIREMENTS.
4. PROVIDE CONTROL JOINTS AND ADDITIONAL SLAB REINFORCING AS SHOWN ON S701. PROVIDE SUBMITTAL PER GENERAL NOTES.
5. ALL DEPRESSIONS THAT ARE DIMENSIONED ON PLAN ARE FOR REFERENCE ONLY. VERIFY EXACT LOCATIONS OF ALL DEPRESSIONS WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.
6. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF RAMPS, STAIRS, CURBS, AND OTHER EDGE OF SLAB CONDITIONS SHOWN AND NOT SHOWN IN STRUCTURAL DOCUMENTS.
7. SLOPE ALL BATHROOM AND SHOWER FLOOR SLABS TO DRAINS WHERE REQUIRED. SEE ARCHITECTURAL AND PLUMBING DWGS.
8. VERIFY/COORDINATE ALL BRICK LEDGES WITH ARCHITECTURAL DRAWINGS.
9. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO FABRICATION AND CONSTRUCTION.
10. CMU WALLS
    A. SEE ARCHITECTURAL PLANS FOR LOCATION OF INTERIOR PARTITION/NON-STRUCTURAL MASONRY WALLS AND ALL MASONRY OPENINGS. REF A005.
       a. PROVIDE THICKENED/TURNDOWN SLAB AT ALL LOCATIONS UON PER DETAIL 11 / S701 .
    B. MASONRY WALLS THAT ARE DARK HATCHED CMU ARE STRUCTURAL/ENGINEERED MASONRY WALLS.
       a. STRUCTURAL MASONRY DETAILS APPLY TO STRUCTURAL MASONRY WALLS ONLY. REFER TO S720 FOR ADDL INFO. WALL TYPE 'BWT1' IS TYPICAL UON.

FOUNDATION PLAN NOTES (DRILLED & UNDER-REAMED PIERS)

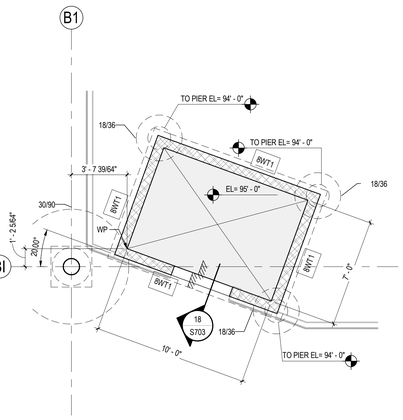
1. REF 1 / S701 FOR ALL PIER REQUIREMENTS.
2. CENTER DRILLED PIER BELOW GRADE BEAM, PLINTH OR STEEL COLUMN UON.
3. CENTER GRADE BEAMS AND THICKENED SLABS BELOW INTERIOR WALLS WHERE SHOWN UON.
4. TOP OF GRADE BEAM = BRICK LEDGE ELEVATION UON.
5. REF 15 / S701 FOR TYPICAL DETAIL OF PENETRATIONS THROUGH GRADE BEAMS.
6. REF 1 / S730 FOR COLUMN BASE PLATES.

ELEVATOR FOUNDATION PLAN NOTES

1. ELEVATOR
   A. CONTRACTOR SHALL VERIFY ELEVATOR PITS AND SUMP PIT DIMENSIONS, LOCATIONS, AND REQUIREMENTS WITH CONTRACTED ELEVATOR MANUFACTURER AND ARCHITECTURAL DOCUMENTS BEFORE ANY WORK BEGINS.

1 LEVEL 1 FOUNDATION PLAN - AREA A
S111A — 1/8" = 1'-0"

2 ENLARGED ELEVATOR PLAN
S111A — 1/4" = 1'-0"



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Consultant

Notes

KEY PLAN

PROJECT NORTH

	Revision	By	Appd	
1	ADDENDUM #4			2026.03.11
	ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
	Issued	By	Appd	YYYY.MM.DD

Permit/Seal

STATE OF TEXAS — BRITNEY R. WEIDERT — 132908 — LICENSED PROFESSIONAL ENGINEER
2026.03.11

Client/Project Logo

Client/Project
Crosby ISD

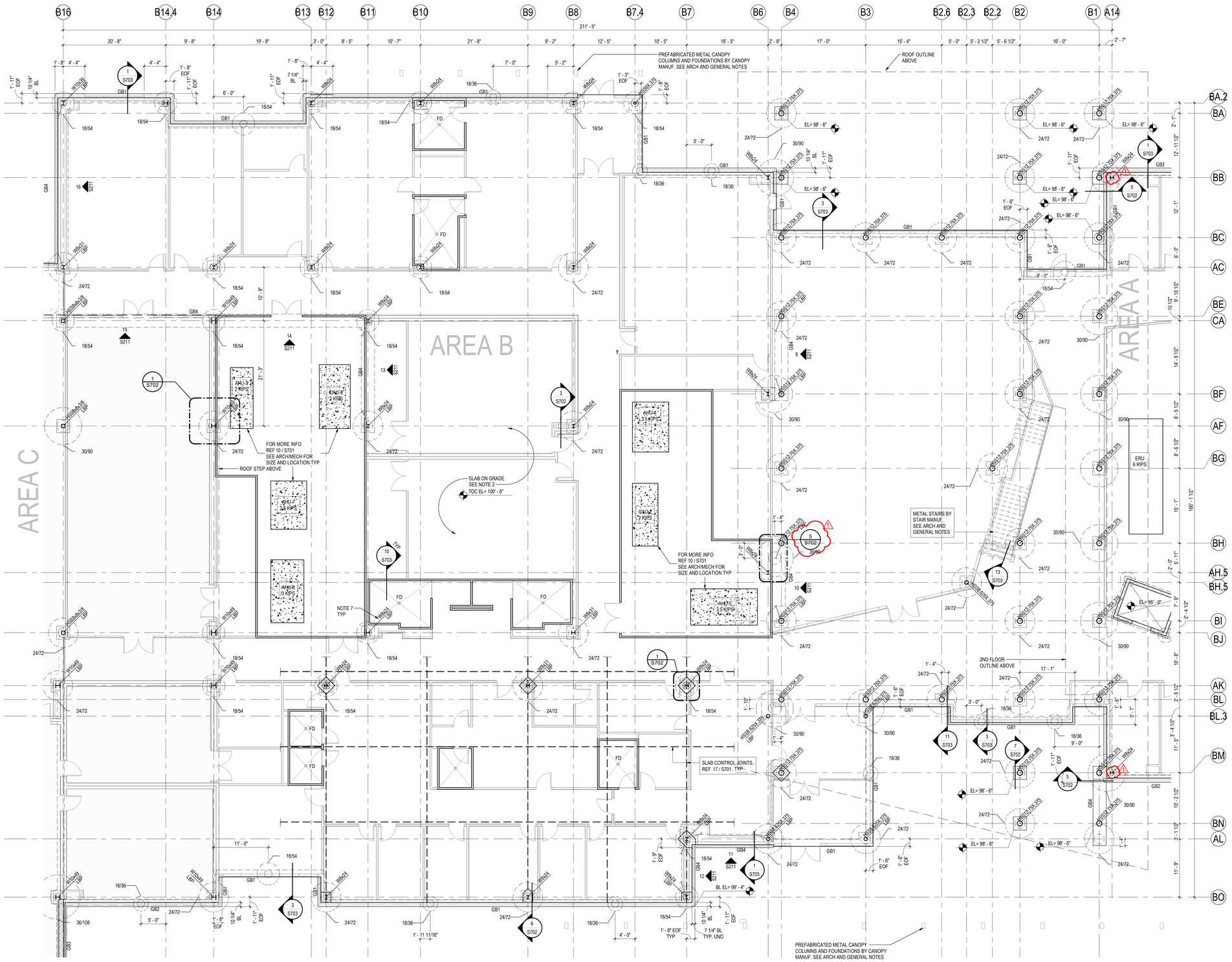
CROSBY SIXTH GRADE CAMPUS

202 Red Summit Dr
Crosby, TX 77532

Title
LEVEL 1 FOUNDATION PLAN - AREA A

Project No. 214001329
Scale As indicated
Revision 1
Drawing No. **S111A**

ORIGINAL SHEET - ARCH E1



GRADE BEAM SCHEDULE

TYPE	WIDTH	DEPTH	TOP BARS	BOT BARS	STIRRUPS	COMMENTS
GB1	1' - 5"	2' - 6"	(3) #8	(3) #8	#4 AT 12" OC	TYP UNO
GB2	1' - 5"	2' - 6"	(3) #8	(3) #8	#4 AT 12" OC	8 IN MASONRY WALLS, UNO
GB3	2' - 0"	2' - 6"	(4) #8	(4) #8	#4 AT 12" OC	TYP AT 12" CMU WALLS
GB4	2' - 8"	2' - 6"	(8) #8	(8) #8	#4 AT 12" OC	BRACES AND LBP LOCATIONS
GB5	3' - 0"	2' - 6"	(9) #9	(9) #9	4 LG #4 AT 10" OC	STRAP BEAM IN AREA A

SLAB-ON-GRADE (SOG) PLAN NOTES

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2. SLAB-ON-GRADE SHALL BE FIVE (5) INCHES THICK W/ #3 BARS @ 18" OC EACH WAY, UON.
3. SEE GENERAL NOTES FOR ADDITIONAL SLAB REQUIREMENTS.
4. PROVIDE CONTROL JOINTS AND ADDITIONAL SLAB REINFORCING AS SHOWN ON S701. PROVIDE SUBMITTAL PER GENERAL NOTES.
5. ALL DEPRESSIONS THAT ARE DIMENSIONED ON PLAN ARE FOR REFERENCE ONLY. VERIFY EXACT LOCATIONS OF ALL DEPRESSIONS WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.
6. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF RAMPS, STAIRS, CURBS, AND OTHER EDGE OF SLAB CONDITIONS SHOWN AND NOT SHOWN IN STRUCTURAL DOCUMENTS.
7. SLOPE ALL BATHROOM AND SHOWER FLOOR SLABS TO DRAINS WHERE REQUIRED. SEE ARCHITECTURAL AND PLUMBING DWGS.
8. VERIFY/COORDINATE ALL BRICK LEDGES WITH ARCHITECTURAL DRAWINGS.
9. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO FABRICATION AND CONSTRUCTION.
10. CMU WALLS
    A. SEE ARCHITECTURAL PLANS FOR LOCATION OF INTERIOR PARTITION/NON-STRUCTURAL MASONRY WALLS AND ALL MASONRY OPENINGS. REF A005.
       a. PROVIDE THICKENED/TURNDOWN SLAB AT ALL LOCATIONS UON PER DETAIL 11 / S701.
    B. MASONRY WALLS THAT ARE DARK HATCHED CMU ARE STRUCTURAL/ENGINEERED MASONRY WALLS.
       a. STRUCTURAL MASONRY DETAILS APPLY TO STRUCTURAL MASONRY WALLS ONLY. REFER TO S720 FOR ADDL INFO. WALL TYPE 'BWT1' IS TYPICAL UON.

FOUNDATION PLAN NOTES (DRILLED & UNDER-REAMED PIERS)

1. REF 1 / S701 FOR ALL PIER REQUIREMENTS.
2. CENTER DRILLED PIER BELOW GRADE BEAM, PLINTH OR STEEL COLUMN UON.
3. CENTER GRADE BEAMS AND THICKENED SLABS BELOW INTERIOR WALLS WHERE SHOWN UON.
4. TOP OF GRADE BEAM = BRICK LEDGE ELEVATION UON.
5. REF 15 / S701FOR TYPICAL DETAIL OF PENETRATIONS THROUGH GRADE BEAMS.
6. REF 1 / S730 FOR COLUMN BASE PLATES.

1 S111B LEVEL 1 FOUNDATION PLAN - AREA B

1/8" = 1'-0"

<Pick location in Project Information>
3/17/2026 2:25:51 PM
ORIGINAL SHEET - ARCH E1

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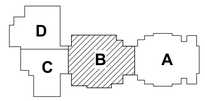
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PROJECT NORTH

1	ADDENDUM #4			2026.03.11
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	ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
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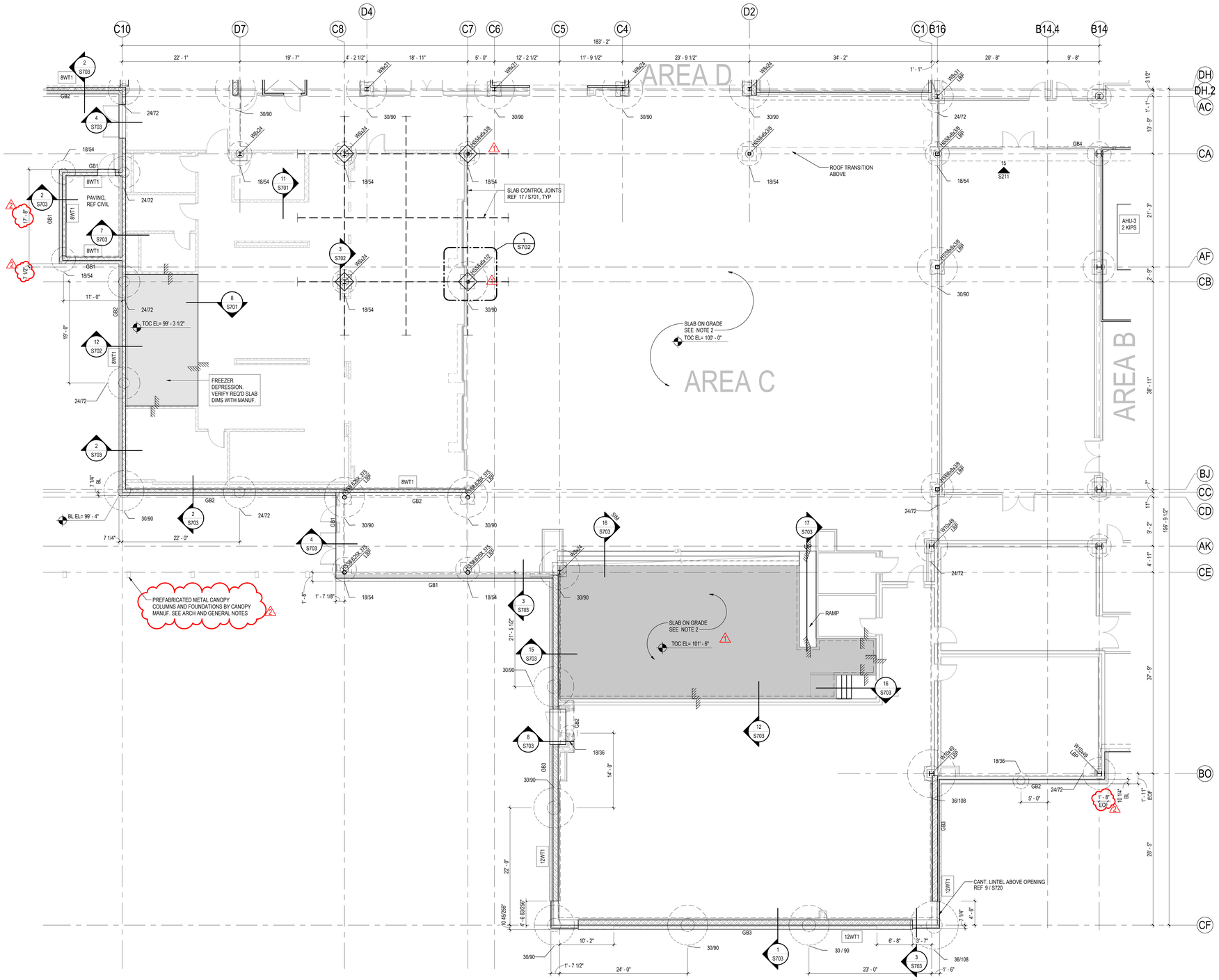
Title
LEVEL 1 FOUNDATION PLAN - AREA B

Project No.
214001329

Scale
As indicated

Revision
1

Drawing No.
S111B



GRADE BEAM SCHEDULE

TYPE	WIDTH	DEPTH	TOP BARS	BOT BARS	STIRRUPS	COMMENTS
GB1	1' - 5"	2' - 6"	(3) #8	(3) #8	#4 AT 12" OC	TYP UNO
GB2	1' - 6"	2' - 6"	(3) #8	(3) #8	#4 AT 12" OC	8 IN MASONRY WALLS, UNO
GB3	2' - 0"	2' - 6"	(4) #8	(4) #8	#4 AT 12" OC	TYP AT 12" CMU WALLS
GB4	2' - 8"	2' - 6"	(8) #8	(6) #8	#4 AT 12" OC	BRACES AND LBP LOCATIONS
GB5	3' - 0"	2' - 6"	(9) #9	(5) #9	4 LG #4 AT 10" OC	STRAP BEAM IN AREA A

SLAB-ON-GRADE (SOG) PLAN NOTES

1. REFERENCE ELEVATION 100' - 0" CORRESPONDS TO CIVIL ELEVATION 48.50, UON. VERIFY WITH CIVIL.
2. SLAB-ON-GRADE SHALL BE FIVE (5) INCHES THICK W/ #3 BARS @ 18" OC EACH WAY, UON.
3. SEE GENERAL NOTES FOR ADDITIONAL SLAB REQUIREMENTS.
4. PROVIDE CONTROL JOINTS AND ADDITIONAL SLAB REINFORCING AS SHOWN ON S701. PROVIDE SUBMITTAL PER GENERAL NOTES.
5. ALL DEPRESSIONS THAT ARE DIMENSIONED ON PLAN ARE FOR REFERENCE ONLY. VERIFY EXACT LOCATIONS OF ALL DEPRESSIONS WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.
6. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF RAMPS, STAIRS, CURBS, AND OTHER EDGE OF SLAB CONDITIONS SHOWN AND NOT SHOWN IN STRUCTURAL DOCUMENTS.
7. SLOPE ALL BATHROOM AND SHOWER FLOOR SLABS TO DRAINS WHERE REQUIRED. SEE ARCHITECTURAL AND PLUMBING DWGS.
8. VERIFY/COORDINATE ALL BRICK LEDGES WITH ARCHITECTURAL DRAWINGS.
9. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO FABRICATION AND CONSTRUCTION.
10. CMU WALLS
    A. SEE ARCHITECTURAL PLANS FOR LOCATION OF INTERIOR PARTITION/NON-STRUCTURAL MASONRY WALLS AND ALL MASONRY OPENINGS. REF A005.
       a. PROVIDE THICKENED/TURNDOWN SLAB AT ALL LOCATIONS UON PER DETAIL 11 / S701.
    B. MASONRY WALLS THAT ARE DARK HATCHED CMU ARE STRUCTURAL/ENGINEERED MASONRY WALLS.
       a. STRUCTURAL MASONRY DETAILS APPLY TO STRUCTURAL MASONRY WALLS ONLY. REFER TO S720 FOR ADDL INFO. WALL TYPE '8WT1' IS TYPICAL UON.

FOUNDATION PLAN NOTES (DRILLED & UNDER-REAMED PIERS)

1. REF 1 / S701 FOR ALL PIER REQUIREMENTS.
2. CENTER DRILLED PIER BELOW GRADE BEAM, PLINTH OR STEEL COLUMN UON.
3. CENTER GRADE BEAMS AND THICKENED SLABS BELOW INTERIOR WALLS WHERE SHOWN UON.
4. TOP OF GRADE BEAM = BRICK LEDGE ELEVATION UON.
5. REF 15 / S701FOR TYPICAL DETAIL OF PENETRATIONS THROUGH GRADE BEAMS.
6. REF 1 / S730 FOR COLUMN BASE PLATES.

1 S111C **LEVEL 1 FOUNDATION PLAN - AREA C**
1/8" = 1'-0"

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KEY PLAN

PROJECT NORTH

Revision	By	Appd	YYYY.MM.DD
2 ADDENDUM #4			2026.03.11
1 ADDENDUM #1			2026.02.13
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

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STATE OF TEXAS
BRITNEY R. WEIDERT
112969
LICENSED PROFESSIONAL ENGINEER
2026.03.11

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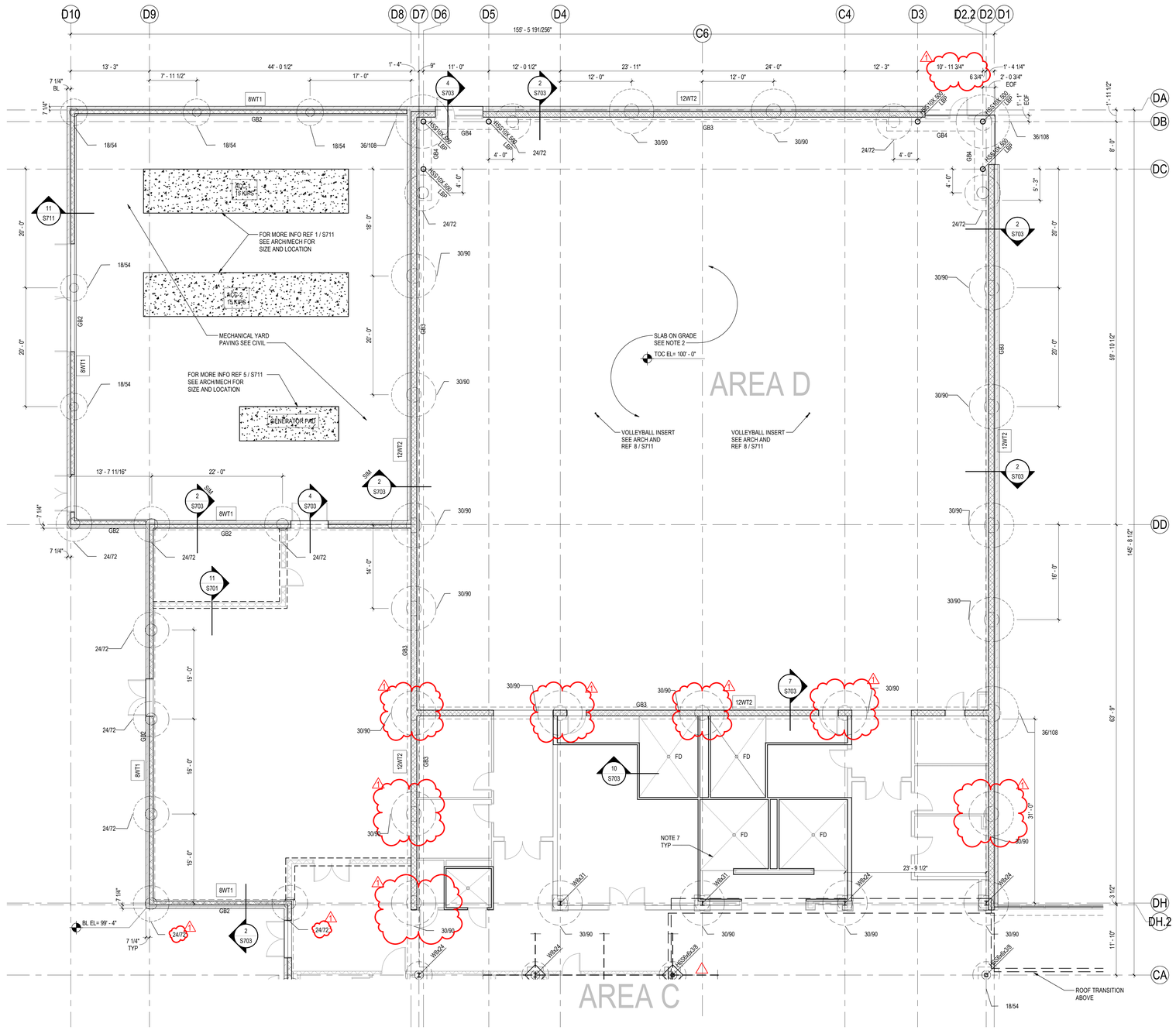
Title
LEVEL 1 FOUNDATION PLAN - AREA C

Project No.
214001329

Scale
As indicated

Revision
2

Drawing No.
S111C



GRADE BEAM SCHEDULE

TYPE	WIDTH	DEPTH	TOP BARS	BOT BARS	STIRRUPS	COMMENTS
GB1	1' - 5"	2' - 6"	(3) #8	(3) #8	#4 AT 12" OC	TYP UNO
GB2	1' - 5"	2' - 6"	(3) #8	(3) #8	#4 AT 12" OC	8 IN MASONRY WALLS, UNO
GB3	2' - 0"	2' - 6"	(4) #8	(4) #8	#4 AT 12" OC	TYP AT 12" CMU WALLS
GB4	2' - 8"	2' - 6"	(8) #8	(6) #8	#4 AT 12" OC	BRACES AND LBP LOCATIONS
GB5	3' - 0"	2' - 6"	(9) #9	(5) #9	4 LG #4 AT 10" OC	STRAP BEAM IN AREA A

SLAB-ON-GRADE (SOG) PLAN NOTES

1. REFERENCE ELEVATION 100' - 0" CORRESPONDS TO CIVIL ELEVATION 48.50, UON. VERIFY WITH CIVIL.
2. SLAB-ON-GRADE SHALL BE FIVE (5) INCHES THICK W/ #3 BARS @ 18" OC EACH WAY, UON.
3. SEE GENERAL NOTES FOR ADDITIONAL SLAB REQUIREMENTS.
4. PROVIDE CONTROL JOINTS AND ADDITIONAL SLAB REINFORCING AS SHOWN ON S701. PROVIDE SUBMITTAL PER GENERAL NOTES.
5. ALL DEPRESSIONS THAT ARE DIMENSIONED ON PLAN ARE FOR REFERENCE ONLY. VERIFY EXACT LOCATIONS OF ALL DEPRESSIONS WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.
6. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF RAMPS, STAIRS, CURBS, AND OTHER EDGE OF SLAB CONDITIONS SHOWN AND NOT SHOWN IN STRUCTURAL DOCUMENTS.
7. SLOPE ALL BATHROOM AND SHOWER FLOOR SLABS TO DRAINS WHERE REQUIRED. SEE ARCHITECTURAL AND PLUMBING DWGS.
8. VERIFY/COORDINATE ALL BRICK LEDGES WITH ARCHITECTURAL DRAWINGS.
9. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO FABRICATION AND CONSTRUCTION.
10. CMU WALLS
    A. SEE ARCHITECTURAL PLANS FOR LOCATION OF INTERIOR PARTITION/NON-STRUCTURAL MASONRY WALLS AND ALL MASONRY OPENINGS. REF A005.
        a. PROVIDE THICKENED/TURNDOWN SLAB AT ALL LOCATIONS UON PER DETAIL 11 / S701.
    B. MASONRY WALLS THAT ARE DARK HATCHED CMU ARE STRUCTURAL/ENGINEERED MASONRY WALLS.
        a. STRUCTURAL MASONRY DETAILS APPLY TO STRUCTURAL MASONRY WALLS ONLY. REFER TO S720 FOR ADDL INFO. WALL TYPE '8WT1' IS TYPICAL UON.

FOUNDATION PLAN NOTES (DRILLED & UNDER-REAMED PIERS)

1. REF 1 / S701 FOR ALL PIER REQUIREMENTS.
2. CENTER DRILLED PIER BELOW GRADE BEAM, PLINTH OR STEEL COLUMN UON.
3. CENTER GRADE BEAMS AND THICKENED SLABS BELOW INTERIOR WALLS WHERE SHOWN UON.
4. TOP OF GRADE BEAM = BRICK LEDGE ELEVATION UON.
5. REF 15 / S701 FOR TYPICAL DETAIL OF PENETRATIONS THROUGH GRADE BEAMS.
6. REF 1 / S730 FOR COLUMN BASE PLATES.

1 S111D **LEVEL 1 FOUNDATION PLAN - AREA D**
1/8" = 1'-0"

<Pick location in Project Information>
3/30/2026 2:55:54 PM
ORIGINAL SHEET - ARCH E1

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KEY PLAN

PROJECT NORTH

	Revision	By	Appd	YYYY.MM.DD
1	ADDENDUM #4			2026.03.11
	ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

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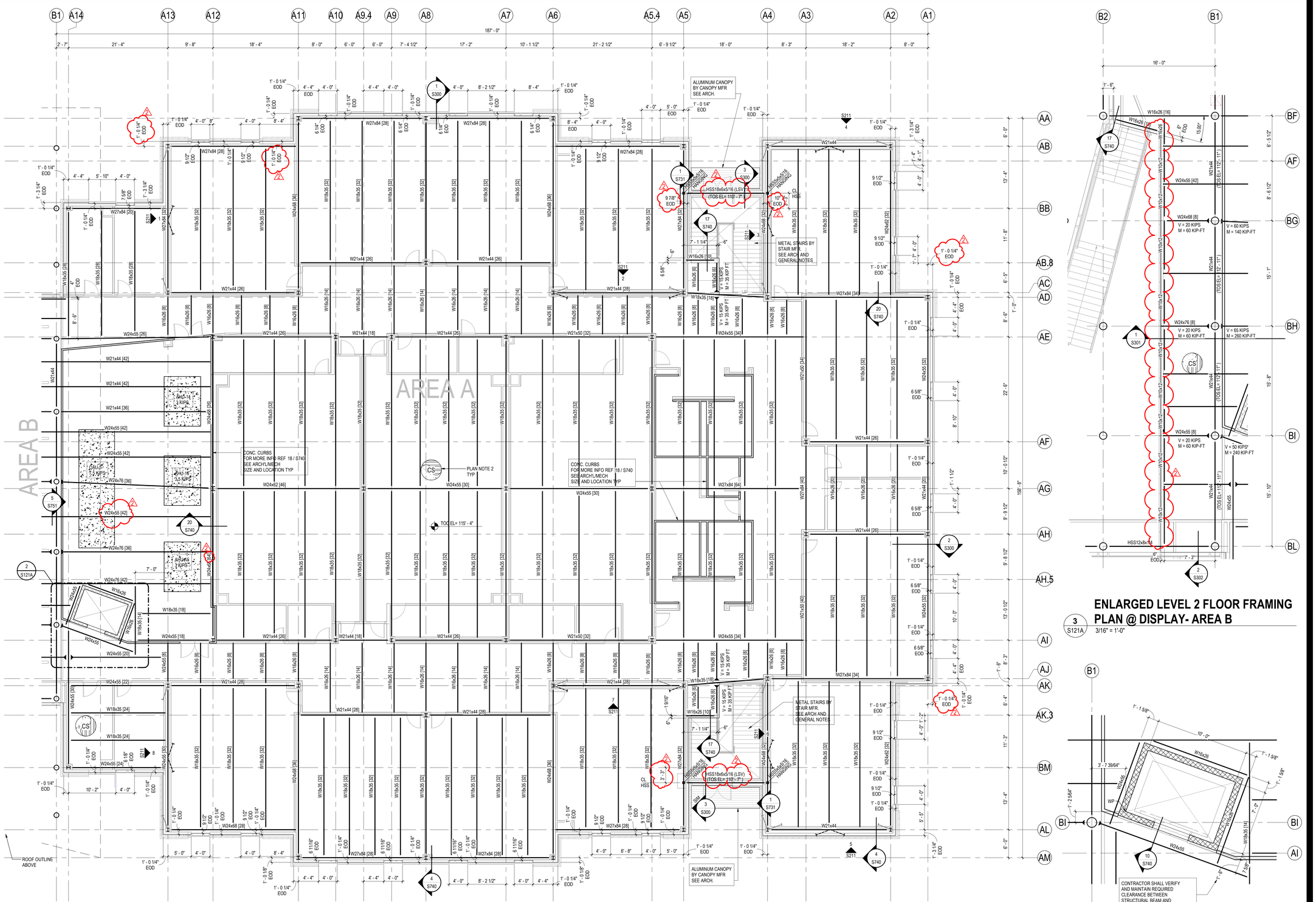
Title
LEVEL 1 FOUNDATION PLAN - AREA D

Project No.
214001329

Scale
As indicated

Revision
1

Drawing No.
S111D



1 S121A LEVEL 2 FLOOR FRAMING PLAN - AREA A
1/8" = 1'-0"

3 S121A ENLARGED LEVEL 2 FLOOR FRAMING PLAN @ DISPLAY- AREA B
3/16" = 1'-0"

2 S121A ENLARGED ELEVATOR PLAN
1/4" = 1'-0"

ELEVATED FLOOR FRAMING PLAN NOTES - COMPOSITE SLAB/BEAM:

1. TOP OF CONCRETE ELEVATION = SEE PLAN. (TOP OF STRUCTURAL STEEL = BOTTOM OF DECK.)
2. FLOOR SLAB
   A. UNLESS NOTED OTHERWISE, PROVIDE 3 1/2" INCHES OF NORMAL WEIGHT CONCRETE OVER 1 1/2" INCH COMPOSITE METAL DECK . (5 INCH TOTAL SLAB THICKNESS.) SEE GENERAL NOTES FOR CONCRETE, METAL DECK PROPERTIES, AND ATTACHMENT TO STRUCTURE.
   B. REINFORCE CONCRETE SLABS WITH #3 @18" OC EA. WAY UNLESS NOTED OTHERWISE.
      a. SEE S740 FOR OTHER REINFORCING REQUIREMENTS.
3. FLOOR PENETRATIONS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE SIZE AND LOCATION WITH ALL TRADES PRIOR TO CONSTRUCTION OR FABRICATION. SEE 11 / S740 FOR TYPICAL SLAB OPENING DETAIL.
4. SPACE BEAMS EQUALLY BETWEEN COLUMNS UON.

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2	ADDENDUM #4		2026.03.11
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Revision		By	Appd	YYYY.MM.DD
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113968
LICENSED
PROFESSIONAL ENGINEER
2026.03.11

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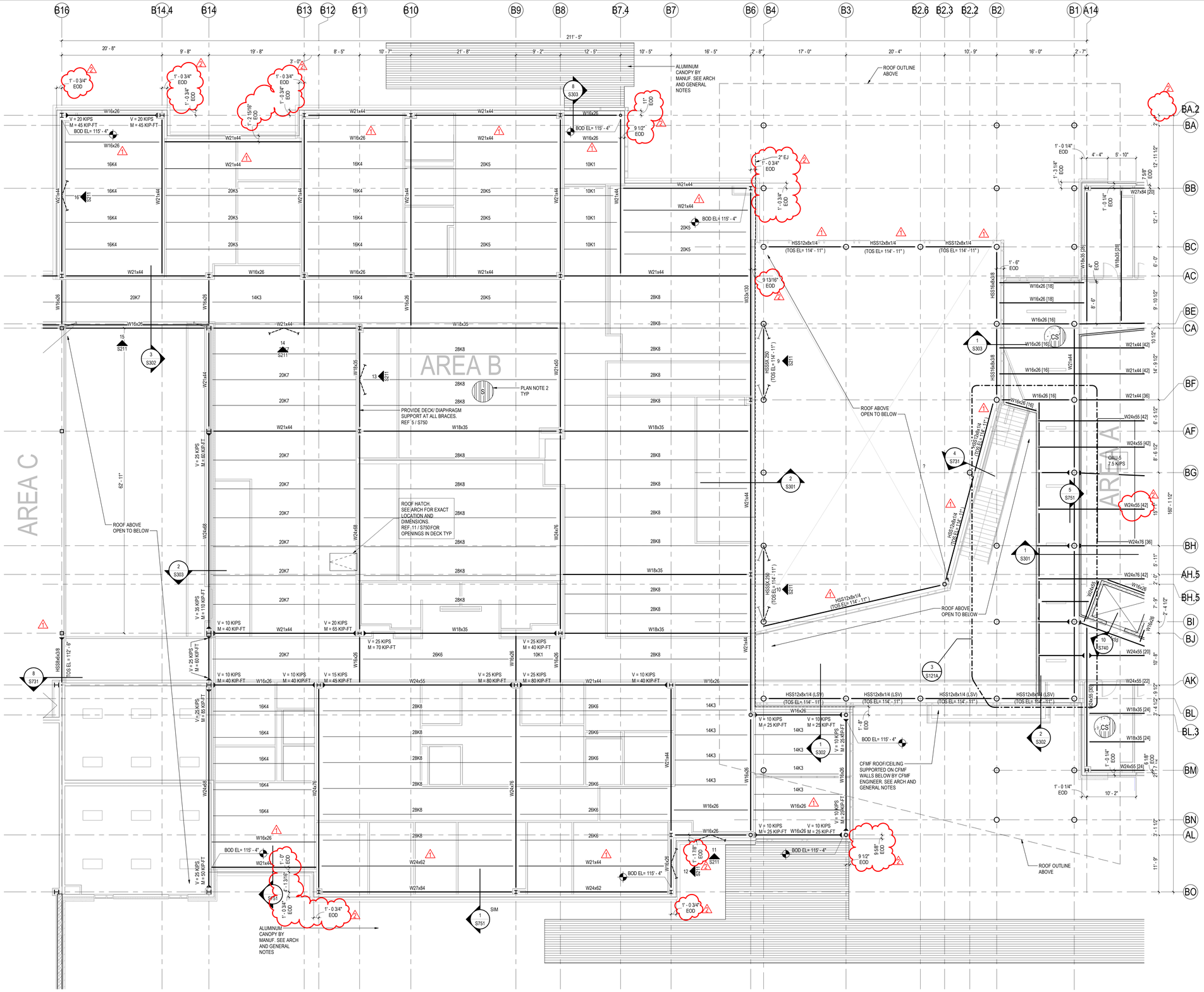
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Title
LEVEL 2 FLOOR FRAMING PLAN - AREA A

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	**S121A**

ORIGINAL SHEET - ARCH E1



ROOF FRAMING PLAN NOTES (OPEN WEB ROOF JOISTS)

1. TOP OF STEEL= BOTTOM OF DECK ELEVATION= SEE PLAN.
2. ROOF DECK IS 1.0 TYPE C ROOF DECK, UON. SEE GENERAL NOTES.
3. REFER TO ARCHITECTURAL AND MEP FOR LOCATIONS OF ROOF AND OVERFLOW DRAINS, OTHER OPENINGS, ROOFING, AND TAPERED INSULATION.
4. JOISTS OR BEAMS SPACED EQUALLY BETWEEN COLUMNS UON.
5. OPEN WEB STEEL JOISTS
   A. K & LH JOIST SEAT DEPTH SHALL BE 5" UON.
   B. JOIST MANUFACTURER SHALL DESIGN ROOF JOISTS FOR ADDITIONAL ROOF LOADS SHOWN ON PLAN OR DETAILS AND SUBMIT TO ENGINEER FOR REVIEW DURING SHOP DRAWING STAGE.
   C. ALL OPEN WEB STEEL JOISTS SHALL BE DESIGNED FOR A UPLIFT LOAD SHOWN ON S021.
   D. ROOF JOISTS MAY BE OFFSET NO MORE THAN SIX (6) INCHES TO MEET MINIMUM BEARING REQUIREMENTS.
   E. ROOFTOP EQUIPMENT AND PENETRATIONS HAVE BEEN SHOWN FOR JOIST LOADING AND COORDINATION PURPOSES ONLY. CONTRACTOR SHALL VERIFY FINAL SUPPORT REQUIREMENTS FOR EQUIPMENT AND PENETRATION SIZE AND LOCATION WITH ALL TRADES. ANY SUBSEQUENT SUPPORT FRAMING NOT SHOWN IN THE STRUCTURAL DOCUMENTS SHALL BE PROVIDED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND COMMENT.
   F. REFER TO MECHANICAL DRAWINGS FOR CONDITIONS WHERE DUCTWORK RUNS ARE ABOVE BOTTOM OF JOIST CHORD. SEE GENERAL NOTES FOR BRIDGING ADJUSTMENTS.
   G. HSS MEMBERS LSV UON.

ELEVATED FLOOR FRAMING PLAN NOTES - COMPOSITE SLAB/BEAM:

1. TOP OF CONCRETE ELEVATION = SEE PLAN. (TOP OF STRUCTURAL STEEL = BOTTOM OF DECK.)
2. FLOOR SLAB
   A. UNLESS NOTED OTHERWISE, PROVIDE 3 1/2" INCHES OF NORMAL WEIGHT CONCRETE OVER 1 1/2" INCH COMPOSITE METAL DECK . (5 INCH TOTAL SLAB THICKNESS.) SEE GENERAL NOTES FOR CONCRETE, METAL DECK PROPERTIES, AND ATTACHMENT TO STRUCTURE.
   B. REINFORCE CONCRETE SLABS WITH #3 @18" OC EA. WAY UNLESS NOTED OTHERWISE.
      a. SEE S740 FOR OTHER REINFORCING REQUIREMENTS.
3. FLOOR PENETRATIONS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE SIZE AND LOCATION WITH ALL TRADES PRIOR TO CONSTRUCTION OR FABRICATION. SEE 11 / S740 FOR TYPICAL SLAB OPENING DETAIL.
4. SPACE BEAMS EQUALLY BETWEEN COLUMNS UON.

1 S121B — **LOW ROOF AND LEVEL 2 FLOOR FRAMING PLAN - AREA B**

1/8" = 1'-0"

ORIGINAL SHEET - ARCH E1

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2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd	YYYY.MM.DD

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Crosby ISD

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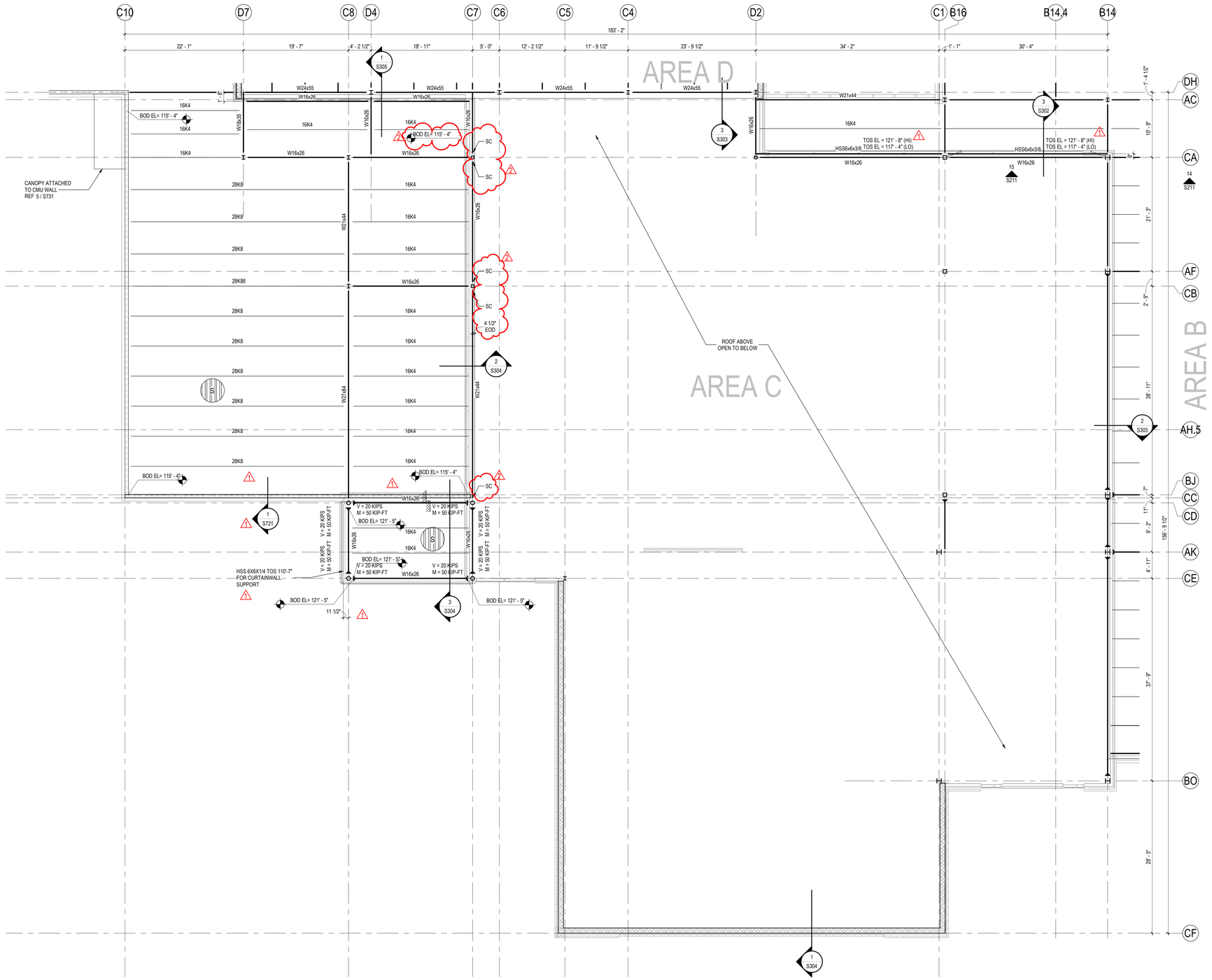
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Title

LOW ROOF AND LEVEL 2 FLOOR FRAMING PLAN - AREA B

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214001329	As indicated
Revision	Drawing No.
2	S121B

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ROOF FRAMING PLAN NOTES (OPEN WEB ROOF JOISTS)

1. TOP OF STEEL= BOTTOM OF DECK ELEVATION= SEE PLAN.
2. ROOF DECK IS 1.0 TYPE C ROOF DECK, UON. SEE GENERAL NOTES.
3. REFER TO ARCHITECTURAL AND MEP FOR LOCATIONS OF ROOF AND OVERFLOW DRAINS, OTHER OPENINGS, ROOFING, AND TAPERED INSULATION.
4. JOISTS OR BEAMS SPACED EQUALLY BETWEEN COLUMNS UON.
5. OPEN WEB STEEL JOISTS
   A. K & LH JOIST SEAT DEPTH SHALL BE 5" UON.
   B. JOIST MANUFACTURER SHALL DESIGN ROOF JOISTS FOR ADDITIONAL ROOF LOADS SHOWN ON PLAN OR DETAILS AND SUBMIT TO ENGINEER FOR REVIEW DURING SHOP DRAWING STAGE.
   C. ALL OPEN WEB STEEL JOISTS SHALL BE DESIGNED FOR A UPLIFT LOAD SHOWN ON S021.
   D. ROOF JOISTS MAY BE OFFSET NO MORE THAN SIX (6) INCHES TO MEET MINIMUM BEARING REQUIREMENTS.
   E. ROOFTOP EQUIPMENT AND PENETRATIONS HAVE BEEN SHOWN FOR JOIST LOADING AND COORDINATION PURPOSES ONLY. CONTRACTOR SHALL VERIFY FINAL SUPPORT REQUIREMENTS FOR EQUIPMENT AND PENETRATION SIZE AND LOCATION WITH ALL TRADES. ANY SUBSEQUENT SUPPORT FRAMING NOT SHOWN IN THE STRUCTURAL DOCUMENTS SHALL BE PROVIDED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND COMMENT.
   F. REFER TO MECHANICAL DRAWINGS FOR CONDITIONS WHERE DUCTWORK RUNS ARE ABOVE BOTTOM OF JOIST CHORD. SEE GENERAL NOTES FOR BRIDGING ADJUSTMENTS.

1 HSS MEMBERS LSV UON.

1 S121C **LOW ROOF FRAMING PLAN - AREA C**
1/8" = 1'-0"

ORIGINAL SHEET - ARCH E1

<Pick location in Project Information>
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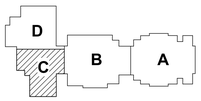
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PROJECT NORTH

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd	YYYY.MM.DD
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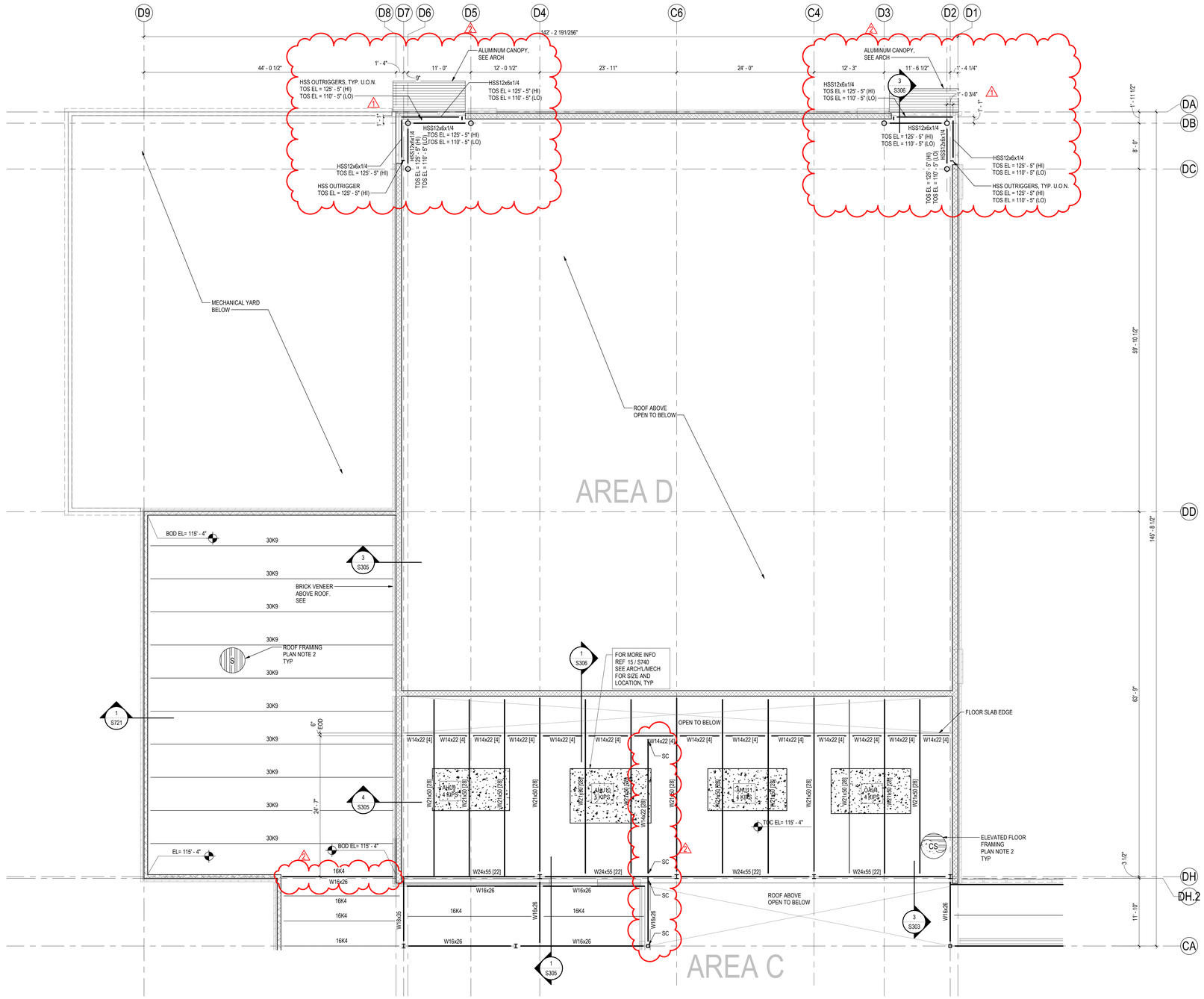
Title
LOW ROOF FRAMING PLAN - AREA C

Project No.
214001329

Scale
As indicated

Revision
2

Drawing No.
S121C



ROOF FRAMING PLAN NOTES (OPEN WEB ROOF JOISTS)

1. TOP OF STEEL= BOTTOM OF DECK ELEVATION= SEE PLAN.
2. ROOF DECK IS 1.0 TYPE C ROOF DECK, UON. SEE GENERAL NOTES.
3. REFER TO ARCHITECTURAL AND MEP FOR LOCATIONS OF ROOF AND OVERFLOW DRAINS, OTHER OPENINGS, ROOFING, AND TAPERED INSULATION.
4. JOISTS OR BEAMS SPACED EQUALLY BETWEEN COLUMNS UON.
5. OPEN WEB STEEL JOISTS
   A. K & LH-JOIST SEAT DEPTH SHALL BE 5" UON.
   B. JOIST MANUFACTURER SHALL DESIGN ROOF JOISTS FOR ADDITIONAL ROOF LOADS SHOWN ON PLAN OR DETAILS AND SUBMIT TO ENGINEER FOR REVIEW DURING SHOP DRAWING STAGE.
   C. ALL OPEN WEB STEEL JOISTS SHALL BE DESIGNED FOR A UPLIFT LOAD SHOWN ON S021.
   D. ROOF JOISTS MAY BE OFFSET NO MORE THAN SIX (6) INCHES TO MEET MINIMUM BEARING REQUIREMENTS.
   E. ROOFTOP EQUIPMENT AND PENETRATIONS HAVE BEEN SHOWN FOR JOIST LOADING AND COORDINATION PURPOSES ONLY. CONTRACTOR SHALL VERIFY FINAL SUPPORT REQUIREMENTS FOR EQUIPMENT AND PENETRATION SIZE AND LOCATION WITH ALL TRADES. ANY SUBSEQUENT SUPPORT FRAMING NOT SHOWN IN THE STRUCTURAL DOCUMENTS SHALL BE PROVIDED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND COMMENT.
   F. REFER TO MECHANICAL DRAWINGS FOR CONDITIONS WHERE DUCTWORK RUNS ARE ABOVE BOTTOM OF JOIST CHORD. SEE GENERAL NOTES FOR BRIDGING ADJUSTMENTS.
6. HSS MEMBERS LSV UON.

ELEVATED FLOOR FRAMING PLAN NOTES - COMPOSITE SLAB/BEAM:

1. TOP OF CONCRETE ELEVATION = SEE PLAN. (TOP OF STRUCTURAL STEEL = BOTTOM OF DECK.)
2. FLOOR SLAB
   A. UNLESS NOTED OTHERWISE, PROVIDE 3 1/2" INCHES OF NORMAL WEIGHT CONCRETE OVER 1 1/2" INCH COMPOSITE METAL DECK . (5 INCH TOTAL SLAB THICKNESS.) SEE GENERAL NOTES FOR CONCRETE, METAL DECK PROPERTIES, AND ATTACHMENT TO STRUCTURE.
   B. REINFORCE CONCRETE SLABS WITH #3 @18" OC EA. WAY UNLESS NOTED OTHERWISE.
      a. SEE S740 FOR OTHER REINFORCING REQUIREMENTS.
3. FLOOR PENETRATIONS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE SIZE AND LOCATION WITH ALL TRADES PRIOR TO CONSTRUCTION OR FABRICATION. SEE 11 / S740 FOR TYPICAL SLAB OPENING DETAIL.
4. SPACE BEAMS EQUALLY BETWEEN COLUMNS UON.

1 S121D

LOW ROOF FRAMING AND MEZZANINE PLAN - AREA D

1/8" = 1'-0"

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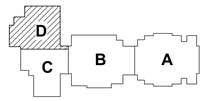
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KEY PLAN



PROJECT NORTH

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd	YYYY.MM.DD

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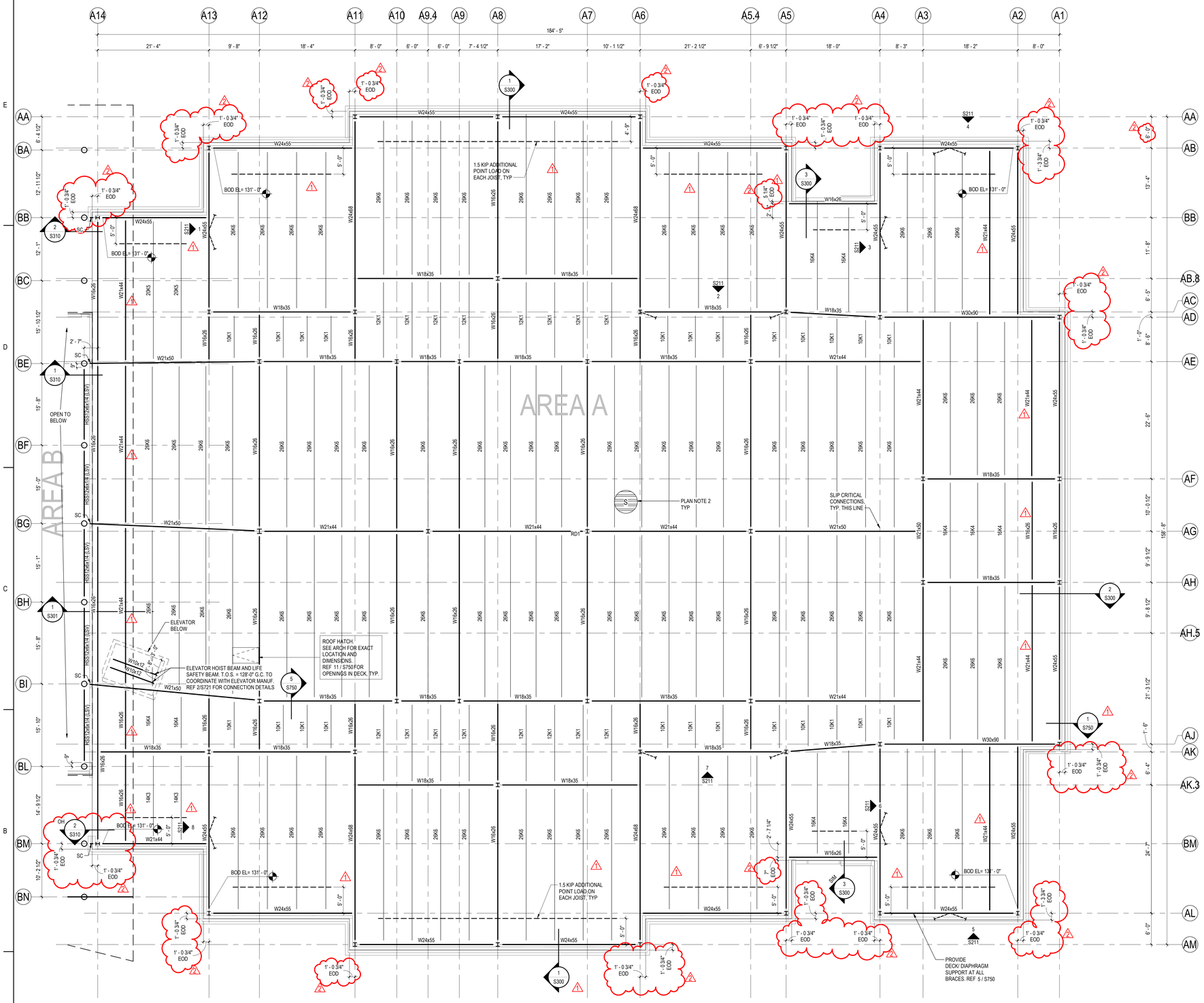
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Crosby, TX 77532

Title
LOW ROOF FRAMING PLAN - AREA D

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	S121D

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ORIGINAL SHEET - ARCH E1



ROOF FRAMING PLAN - AREA A

1/8" = 1'-0"

ROOF FRAMING PLAN NOTES (OPEN WEB ROOF JOISTS)

1. TOP OF STEEL= BOTTOM OF DECK ELEVATION= SEE PLAN.
2. ROOF DECK IS 1.0 TYPE C ROOF DECK, UON. SEE GENERAL NOTES.
3. REFER TO ARCHITECTURAL AND MEP FOR LOCATIONS OF ROOF AND OVERFLOW DRAINS, OTHER OPENINGS, ROOFING, AND TAPERED INSULATION.
4. JOISTS OR BEAMS SPACED EQUALLY BETWEEN COLUMNS UON.
5. OPEN WEB STEEL JOISTS
   A. K & LH JOIST SEAT DEPTH SHALL BE 5" UON.
   B. JOIST MANUFACTURER SHALL DESIGN ROOF JOISTS FOR ADDITIONAL ROOF LOADS SHOWN ON PLAN OR DETAILS AND SUBMIT TO ENGINEER FOR REVIEW DURING SHOP DRAWING STAGE.
   C. ALL OPEN WEB STEEL JOISTS SHALL BE DESIGNED FOR A UPLIFT LOAD SHOWN ON S021.
   D. ROOF JOISTS MAY BE OFFSET NO MORE THAN SIX (6) INCHES TO MEET MINIMUM BEARING REQUIREMENTS.
   E. ROOFTOP EQUIPMENT AND PENETRATIONS HAVE BEEN SHOWN FOR JOIST LOADING AND COORDINATION PURPOSES ONLY. CONTRACTOR SHALL VERIFY FINAL SUPPORT REQUIREMENTS FOR EQUIPMENT AND PENETRATION SIZE AND LOCATION WITH ALL TRADES. ANY SUBSEQUENT SUPPORT FRAMING NOT SHOWN IN THE STRUCTURAL DOCUMENTS SHALL BE PROVIDED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND COMMENT.
   F. REFER TO MECHANICAL DRAWINGS FOR CONDITIONS WHERE DUCTWORK RUNS ARE ABOVE BOTTOM OF JOIST CHORD. SEE GENERAL NOTES FOR BRIDGING ADJUSTMENTS.
6. HSS MEMBERS LSV UON.

ELEVATOR NOTES:

1. ALL ELEVATOR HOIST BEAM ELEVATIONS, QUANTITY, AND LOCATION SHALL BE COORDINATED WITH ELEVATOR MANUFACTURER PRIOR TO FABRICATION AND CONSTRUCTION.

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PROJECT NORTH

	Revision	By	Appd	YYYY.MM.DD
2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13
	ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

Issued

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STATE OF TEXAS
BRITNEY R. WEIDERT
117908
LICENSED
PROFESSIONAL ENGINEER
2026.03.11

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

CROSBY SIXTH GRADE CAMPUS

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Title
ROOF FRAMING PLAN - AREA A

Project No.
214001329

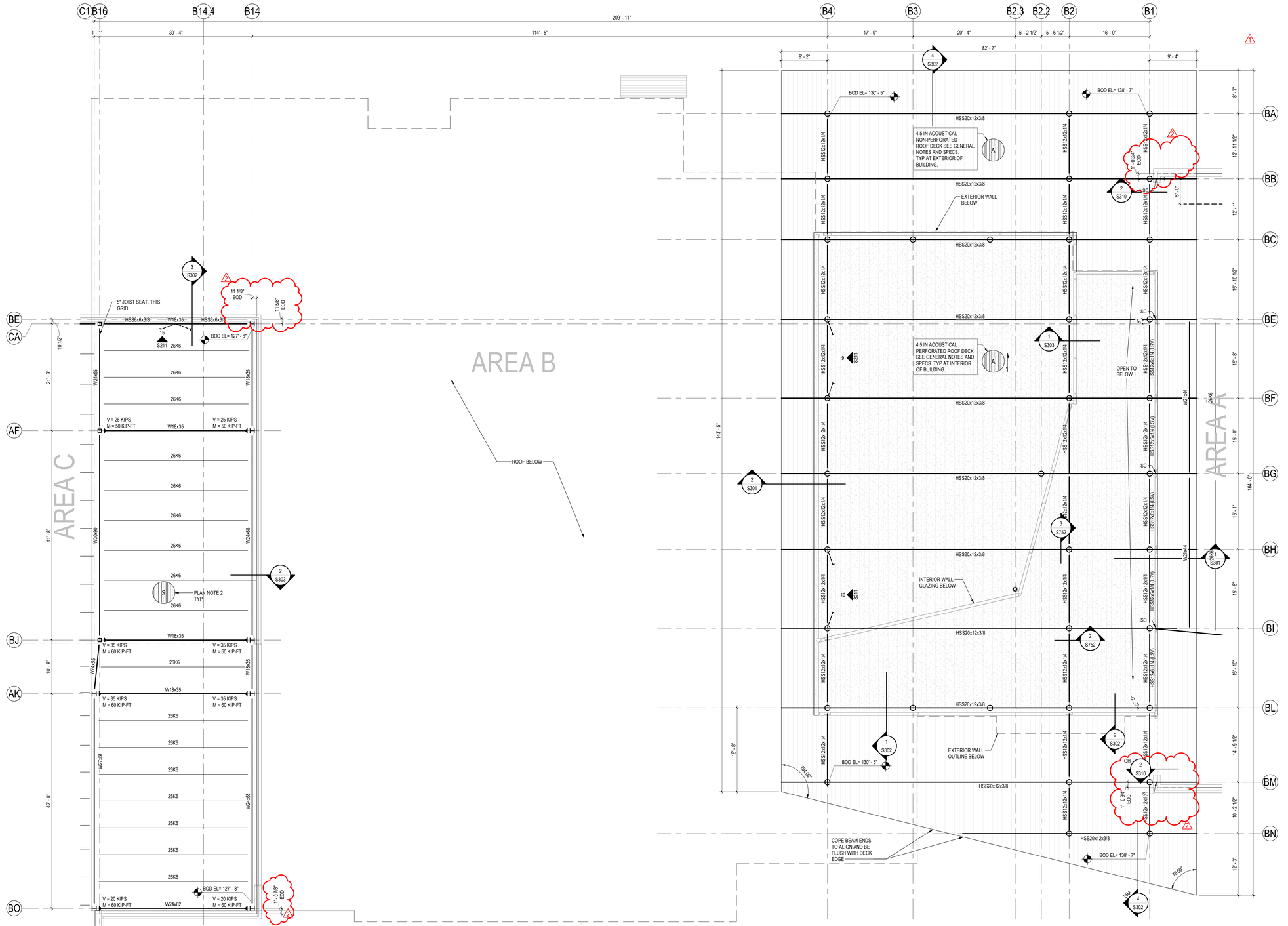
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Revision
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Drawing No.
S131A

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ORIGINAL SHEET - ARCH E1



*NOTE ALL HSS MEMBERS ARE LSV UON.

ROOF FRAMING PLAN NOTES (OPEN WEB ROOF JOISTS)

1. TOP OF STEEL= BOTTOM OF DECK ELEVATION= SEE PLAN.
2. ROOF DECK IS 1.0 TYPE C ROOF DECK, UON. SEE GENERAL NOTES.
3. REFER TO ARCHITECTURAL AND MEP FOR LOCATIONS OF ROOF AND OVERFLOW DRAINS, OTHER OPENINGS, ROOFING, AND TAPERED INSULATION.
4. JOISTS OR BEAMS SPACED EQUALLY BETWEEN COLUMNS UON.
5. OPEN WEB STEEL JOISTS
   - A. K & LH JOIST SEAT DEPTH SHALL BE 5" UON.
   - B. JOIST MANUFACTURER SHALL DESIGN ROOF JOISTS FOR ADDITIONAL ROOF LOADS SHOWN ON PLAN OR DETAILS AND SUBMIT TO ENGINEER FOR REVIEW DURING SHOP DRAWING STAGE.
   - C. ALL OPEN WEB STEEL JOISTS SHALL BE DESIGNED FOR A UPLIFT LOAD SHOWN ON S021.
   - D. ROOF JOISTS MAY BE OFFSET NO MORE THAN SIX (6) INCHES TO MEET MINIMUM BEARING REQUIREMENTS.
   - E. ROOFTOP EQUIPMENT AND PENETRATIONS HAVE BEEN SHOWN FOR JOIST LOADING AND COORDINATION PURPOSES ONLY. CONTRACTOR SHALL VERIFY FINAL SUPPORT REQUIREMENTS FOR EQUIPMENT AND PENETRATION SIZE AND LOCATION WITH ALL TRADES. ANY SUBSEQUENT SUPPORT FRAMING NOT SHOWN IN THE STRUCTURAL DOCUMENTS SHALL BE PROVIDED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND COMMENT.
   - F. REFER TO MECHANICAL DRAWINGS FOR CONDITIONS WHERE DUCTWORK RUNS ARE ABOVE BOTTOM OF JOIST CHORD. SEE GENERAL NOTES FOR BRIDGING ADJUSTMENTS.
6. HSS MEMBERS LSV UON.

1 S131B ROOF FRAMING PLAN - AREA B

1/8" = 1'-0"

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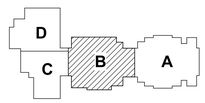
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2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
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ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd	YYYY.MM.DD

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STATE OF TEXAS
BRITNEY R. WEIDERT
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ENGINEER
2026.03.11

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

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Crosby, TX 77532

Title
ROOF FRAMING PLAN - AREA B

Project No.
214001329

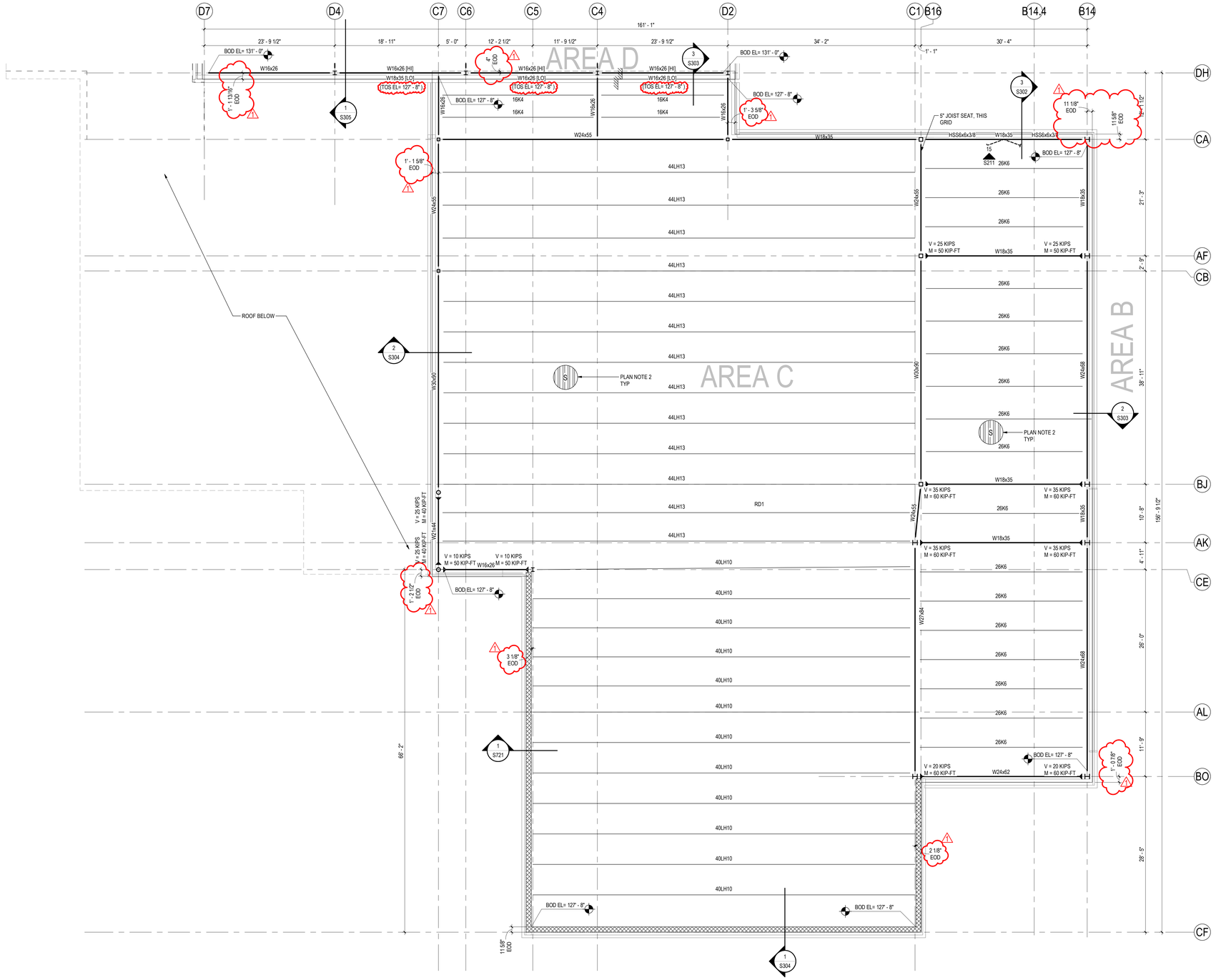
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Revision
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Drawing No.
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ORIGINAL SHEET - ARCH E1



ROOF FRAMING PLAN NOTES (OPEN WEB ROOF JOISTS)

1. TOP OF STEEL= BOTTOM OF DECK ELEVATION= SEE PLAN.
2. ROOF DECK IS 1.0 TYPE C ROOF DECK, UON. SEE GENERAL NOTES.
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   E. ROOFTOP EQUIPMENT AND PENETRATIONS HAVE BEEN SHOWN FOR JOIST LOADING AND COORDINATION PURPOSES ONLY. CONTRACTOR SHALL VERIFY FINAL SUPPORT REQUIREMENTS FOR EQUIPMENT AND PENETRATION SIZE AND LOCATION WITH ALL TRADES. ANY SUBSEQUENT SUPPORT FRAMING NOT SHOWN IN THE STRUCTURAL DOCUMENTS SHALL BE PROVIDED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND COMMENT.
   F. REFER TO MECHANICAL DRAWINGS FOR CONDITIONS WHERE DUCTWORK RUNS ARE ABOVE BOTTOM OF JOIST CHORD. SEE GENERAL NOTES FOR BRIDGING ADJUSTMENTS.
6. HSS MEMBERS LSV UON.

A1 / S131C — **ROOF FRAMING PLAN - AREA C**

1/8" = 1'-0"

ORIGINAL SHEET - ARCH E1

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1 ADDENDUM #4			2026.03.11

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ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

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STATE OF TEXAS
BRITNEY R. WEIDERT
117268
ENGINEER
2026.03.11

Client/Project Logo

Crosby Independent School District

Client/Project

Crosby ISD

CROSBY SIXTH GRADE CAMPUS

202 Red Summit Dr
Crosby, TX 77532

Title

ROOF FRAMING PLAN - AREA C

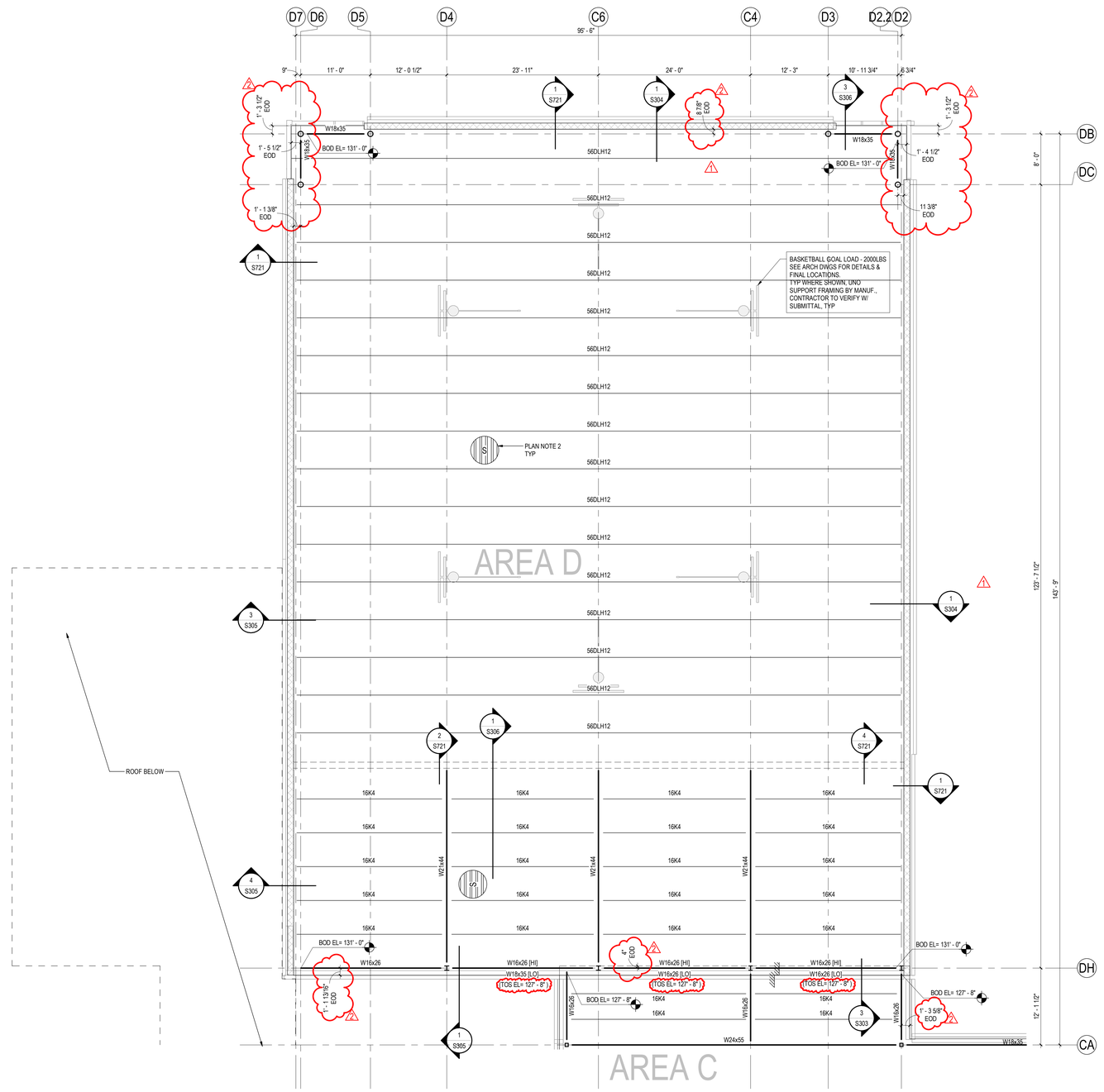
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Scale
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Revision
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Drawing No.
S131C

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ROOF FRAMING PLAN NOTES (OPEN WEB ROOF JOISTS)

1. TOP OF STEEL= BOTTOM OF DECK ELEVATION= SEE PLAN.
2. ROOF DECK IS 1.0 TYPE C ROOF DECK, UON. SEE GENERAL NOTES.
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   F. REFER TO MECHANICAL DRAWINGS FOR CONDITIONS WHERE DUCTWORK RUNS ARE ABOVE BOTTOM OF JOIST CHORD. SEE GENERAL NOTES FOR BRIDGING ADJUSTMENTS.
6. HSS MEMBERS LSV UON.

A1 / S131D **ROOF FRAMING PLAN - AREA D**

1/8" = 1'-0"

ORIGINAL SHEET - ARCH E1

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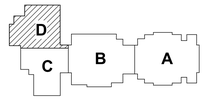
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PROJECT NORTH

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd	YYYY.MM.DD
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Issued		By	Appd	YYYY.MM.DD

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STATE OF TEXAS
2026.03.11

Client/Project Logo

Crosby Independent School District

Client/Project

Crosby ISD

CROSBY SIXTH GRADE CAMPUS

202 Red Summit Dr
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Title

ROOF FRAMING PLAN - AREA D

Project No.
214001329

Scale
As indicated

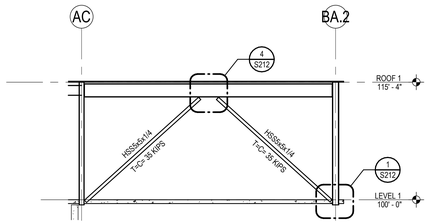
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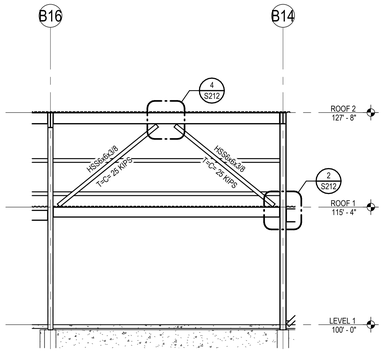
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BRACING NOTES

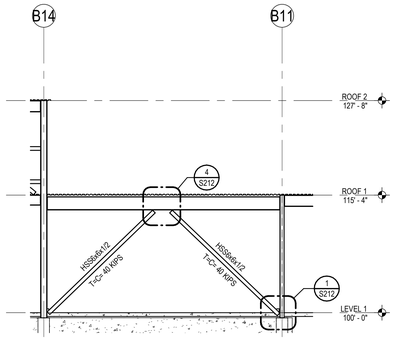
1. CONNECTION OF DIAGONAL BRACES, GUSSET PLATES, AND WELDS SHALL BE DESIGNED BY THE CONTRACTOR/STEEL DETAILER FOR THE UNFACTORED FORCES INDICATED OR THE FULL TENSION CAPACITY OF MEMBERS WHEN FORCES ARE NOT INDICATED.
2. BOLTED CONNECTIONS IN BRACED BAYS SHALL BE SLIP CRITICAL (FRICTION TYPE) CONNECTIONS. THIS INCLUDES BRACING MEMBER-TO-BEAM (OR COLUMN) CONNECTIONS, BEAM-TO-COLUMN CONNECTIONS, AND COLUMN-TO-COLUMN CONNECTIONS.
3. SEE PLAN FOR BEAM AND COLUMN SIZES.
4. T= ULTIMATE TENSION FORCE IN KIPS.
5. C= ULTIMATE COMPRESSION FORCE IN KIPS.
6. ALLOWABLE STRESS INCREASE FOR WIND OR SEISMIC LOADS ARE NOT PERMISSIBLE.
7. FOR HSS LATERAL BRACES, SLOT TUBE OR PIPE AS REQUIRED FOR GUSSET PLATES.
8. PROVIDE DECK/DIAPHRAGM SUPPORT AT ALL BRACES. SEE S/S750.



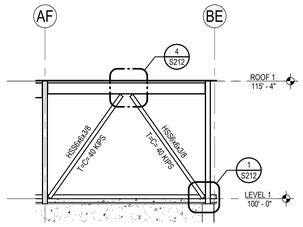
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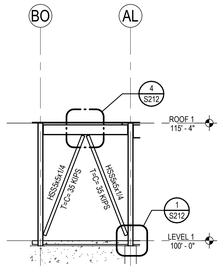
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1/8" = 1'-0"



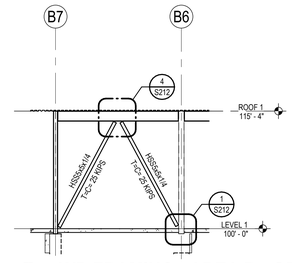
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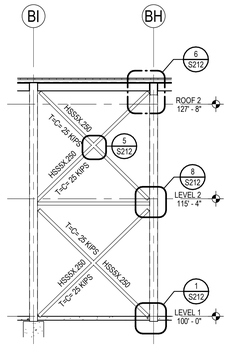
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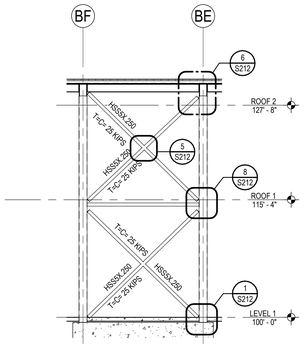
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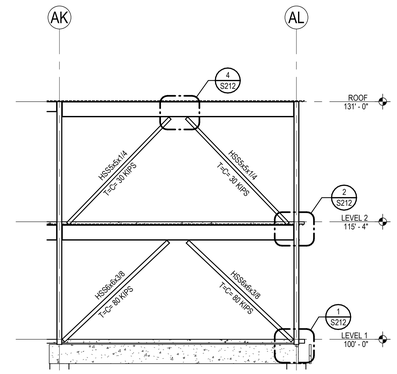
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1/8" = 1'-0"



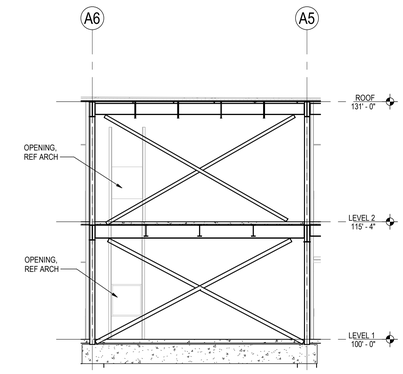
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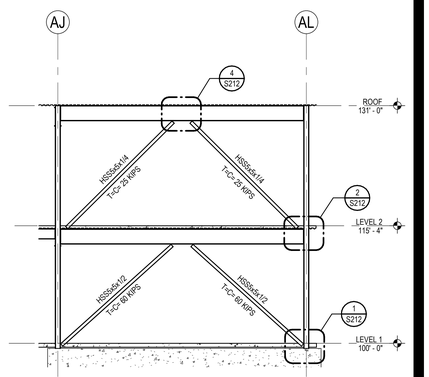
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1/8" = 1'-0"



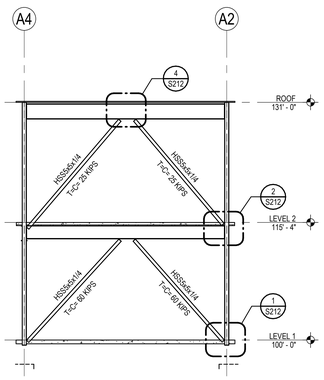
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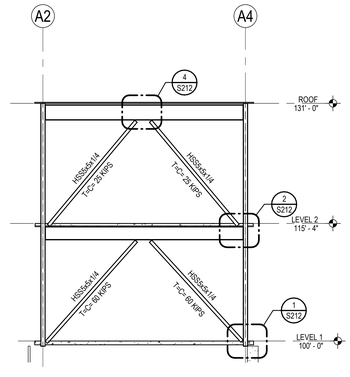
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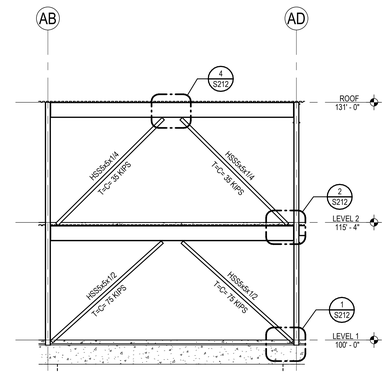
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1/8" = 1'-0"



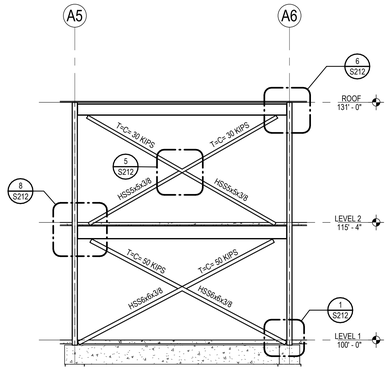
5 S211 WB FRAMING - AREA A - GRID AL
1/8" = 1'-0"



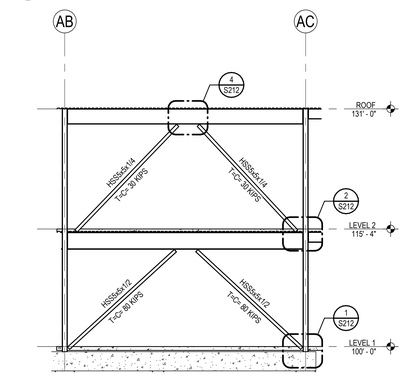
4 S211 WB FRAMING - AREA A - GRID AB
1/8" = 1'-0"



3 S211 WB FRAMING - AREA A - GRID A4
1/8" = 1'-0"



2 S211 WB FRAMING - AREA A - GRID
1/8" = 1'-0"



1 S211 WB FRAMING - AREA A - GRID A13
1/8" = 1'-0"

Stantec

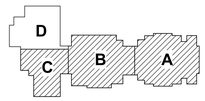
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KEY PLAN

PROJECT NORTH

1	ADDENDUM #4		2026.03.11
Revision		By	Appd	YYYY.MM.DD

ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
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Permit/Seal



Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

CROSBY SIXTH GRADE CAMPUS

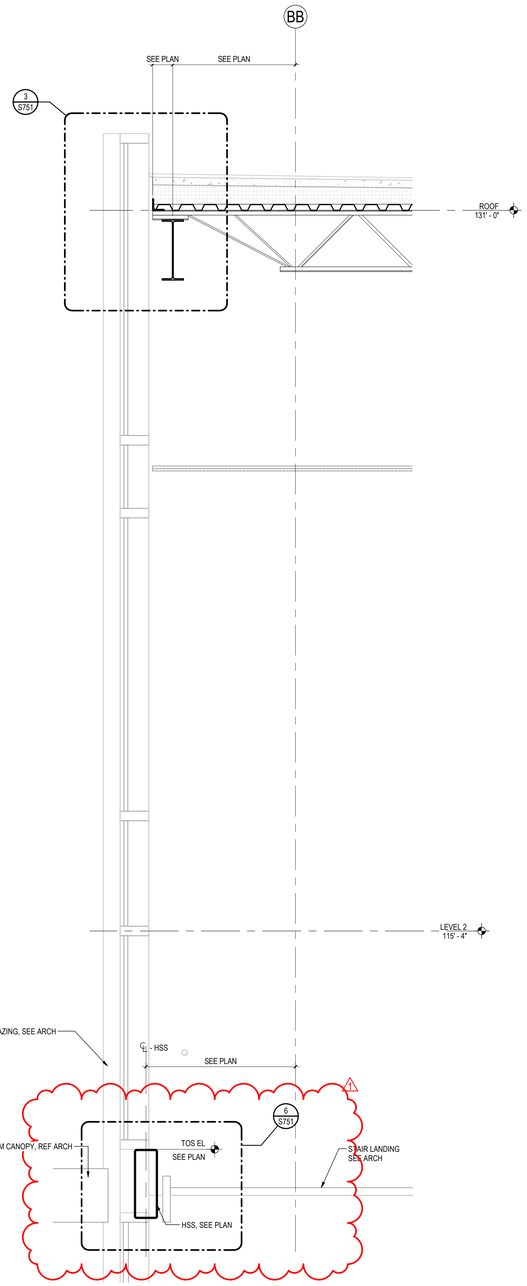
202 Red Summit Dr
Crosby, TX 77532

Title
BRACING ELEVATIONS

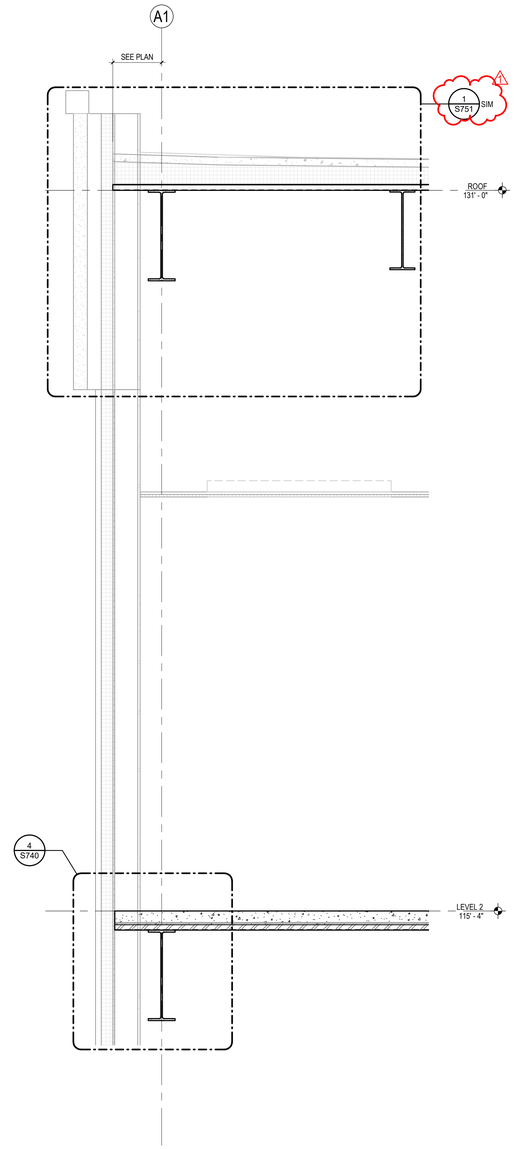
Project No.	Scale
214001329	As indicated
Revision	Drawing No.
1	**S211**

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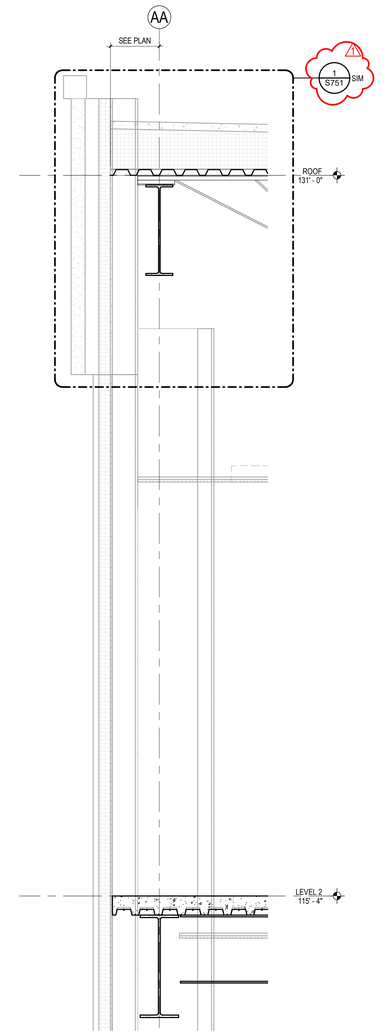
ORIGINAL SHEET - ARCH E1



3 S300 **NORTH SECTION AT STAIR LANDING/ROOF - AREA A**
3/4" = 1'-0"



2 S300 **EAST SECTION AT SECOND FLOOR/ROOF - AREA A**
3/4" = 1'-0"



1 S300 **NORTH SECTION AT SECOND FLOOR/ROOF - AREA A**
3/4" = 1'-0"

Stantec

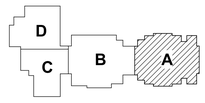
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PROJECT NORTH

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BRITNEY R. WEIDERT
112068
LICENSED
PROFESSIONAL
ENGINEER
2026.03.11

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Crosby ISD

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202 Red Summit Dr
Crosby, TX 77532

Title
STRUCTURAL WALL SECTIONS - AREA A

Project No.
214001329

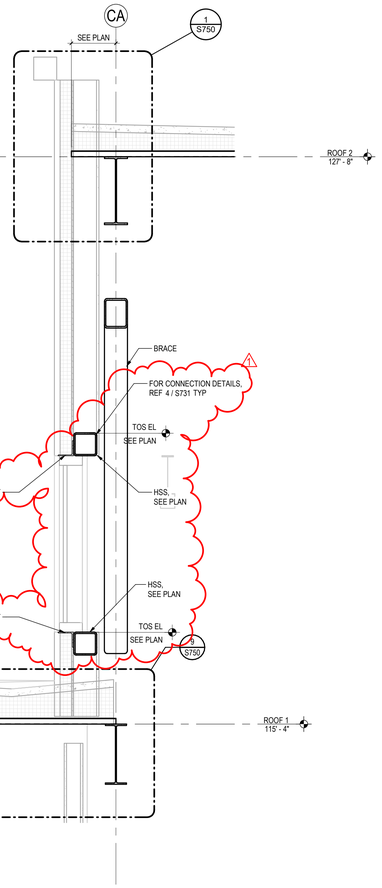
Scale
3/4" = 1'-0"

Revision
1

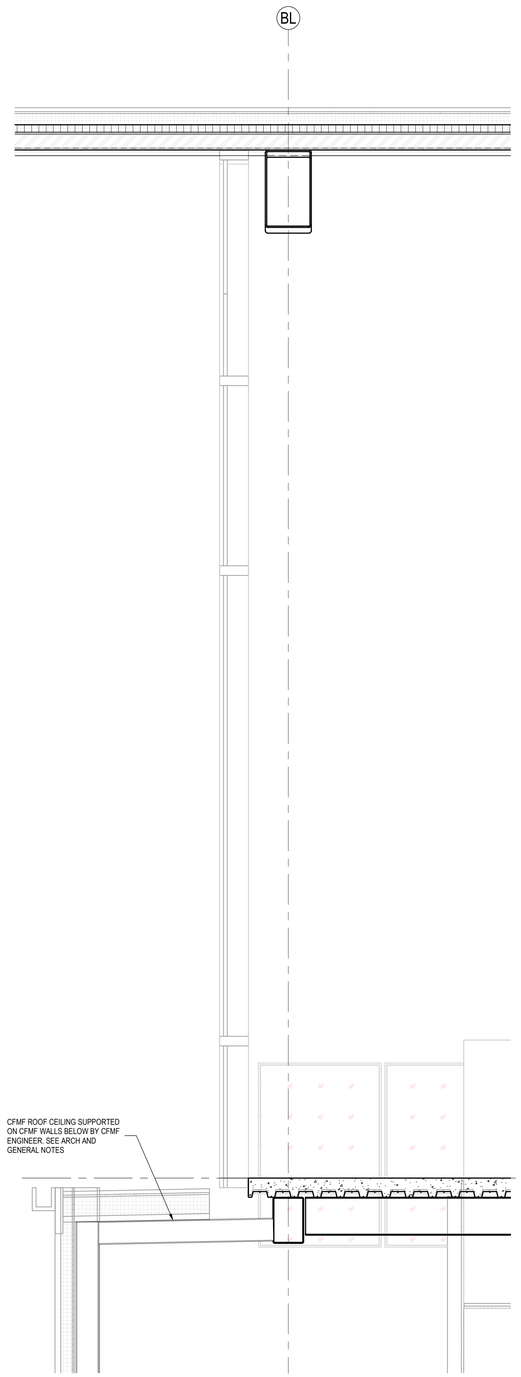
Drawing No.
S300

Pick location in Project Information
3/10/2026 2:26:17 PM

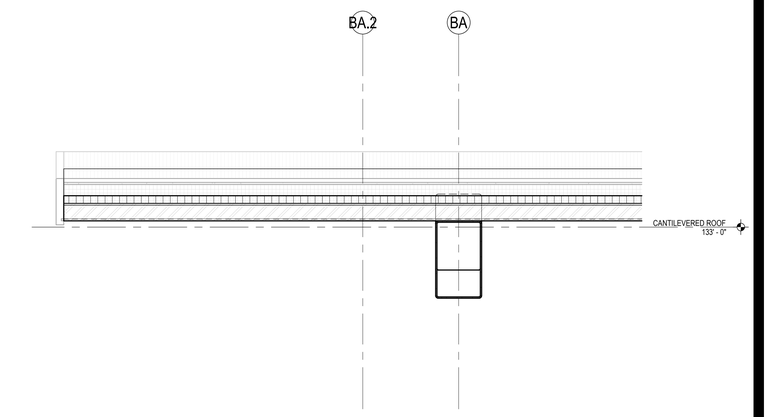
ORIGINAL SHEET - ARCH E1



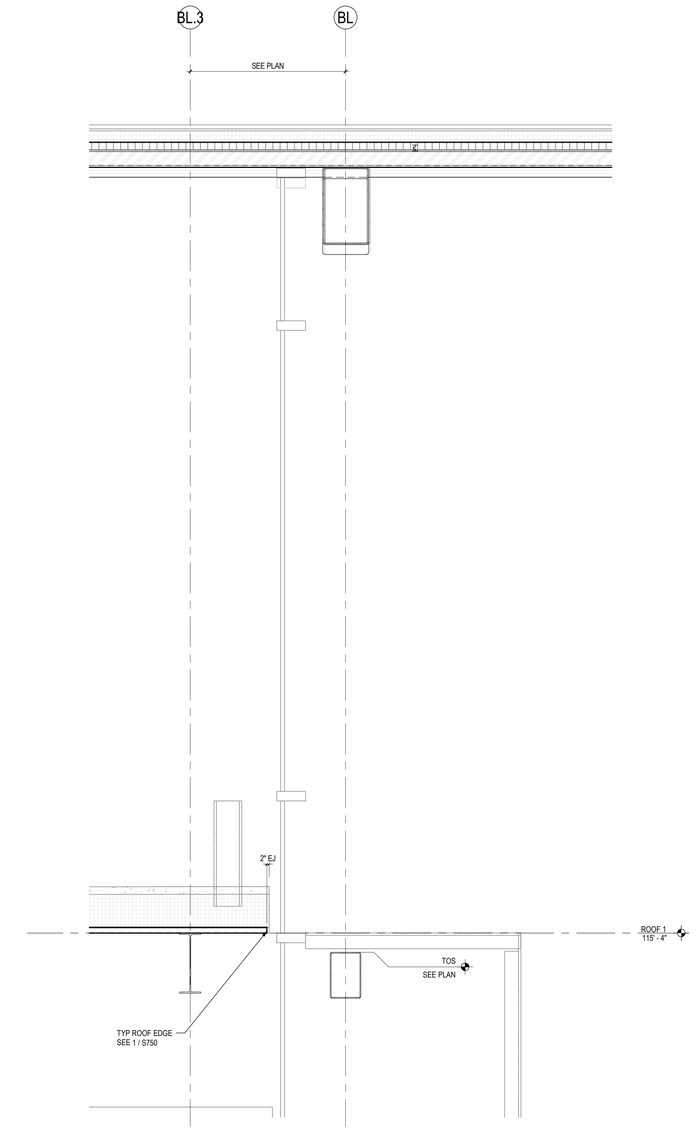
3 S302 **HI LOW ROOF AT AREA B/C**
3/4" = 1'-0"



2 S302 **MULTI MEDIA ROOF AT LOW VESTIBLE ROOF**
3/4" = 1'-0"



4 S302 **HIGH ROOF AT MEDIA - AREA B**
3/4" = 1'-0"



1 S302 **MULTI MEDIA ROOF AT COORIDOR POP OUT**
3/4" = 1'-0"

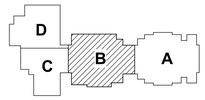
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Crosby, TX 77532

Title
STRUCTURAL WALL SECTIONS - AREA B

Project No.
214001329

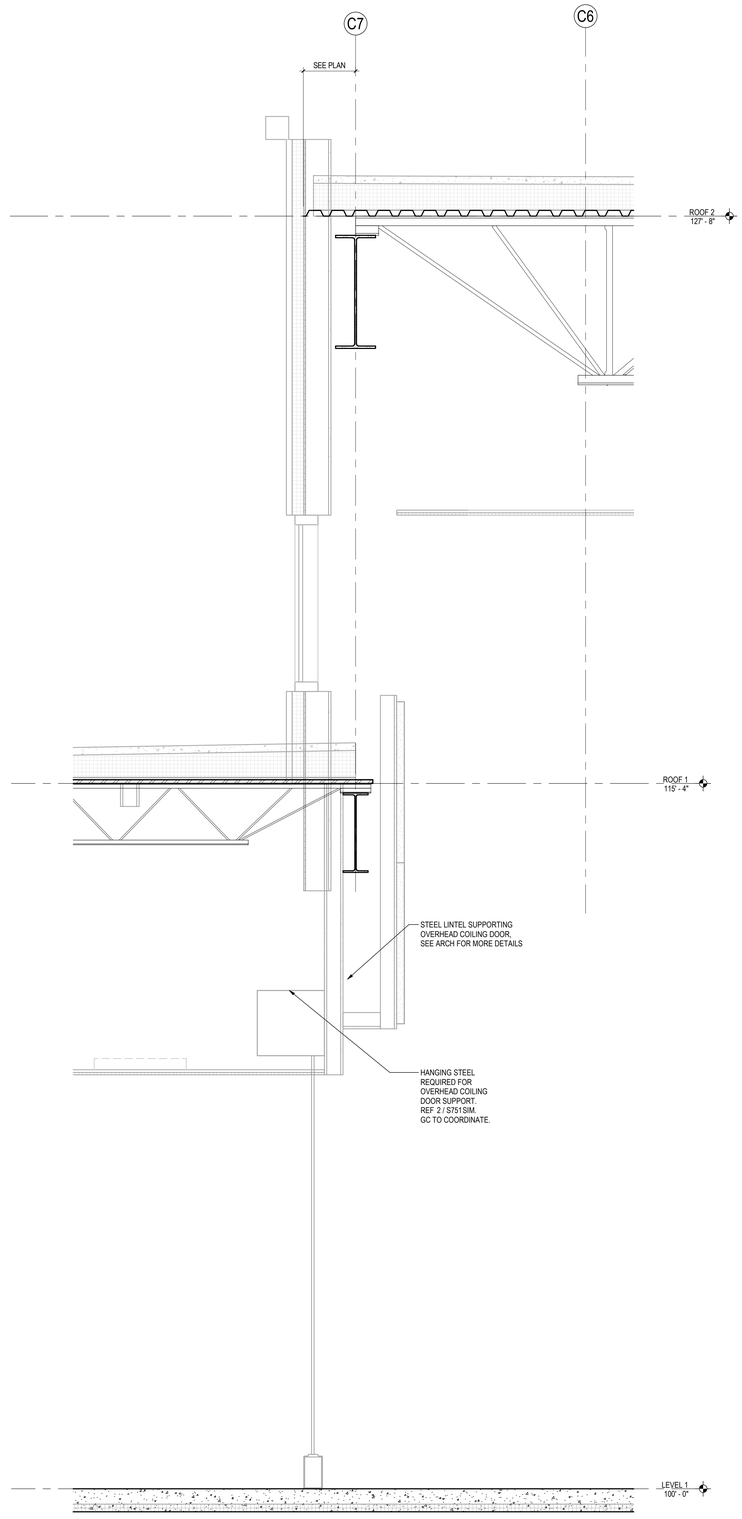
Scale
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Revision
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Drawing No.
S302

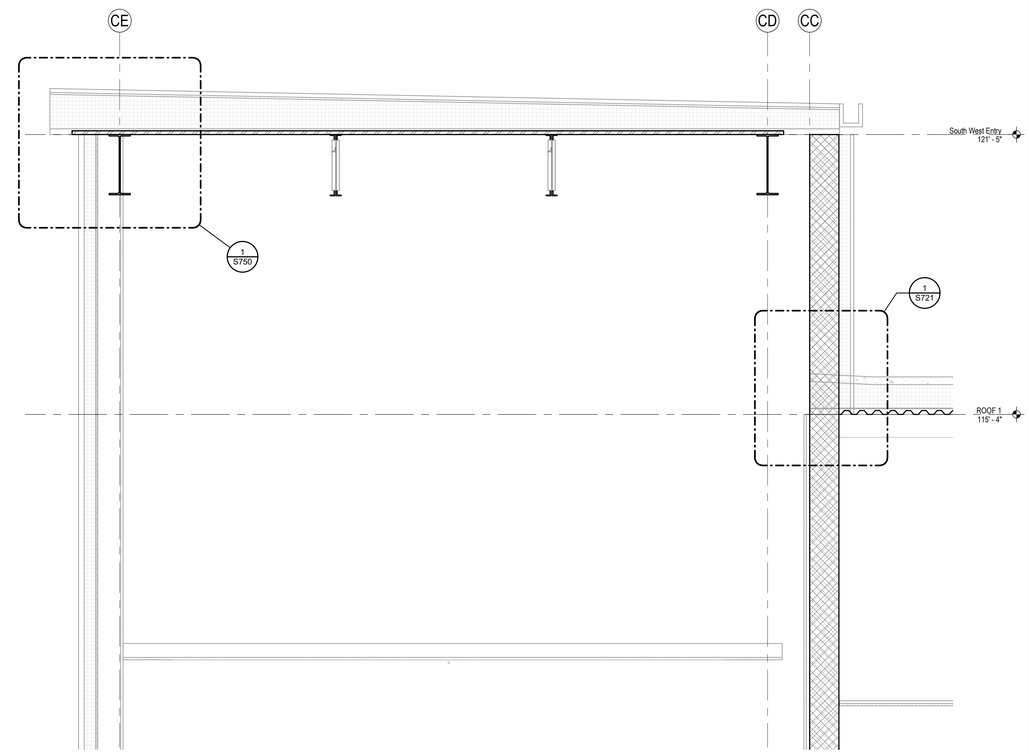
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ORIGINAL SHEET - ARCH E1



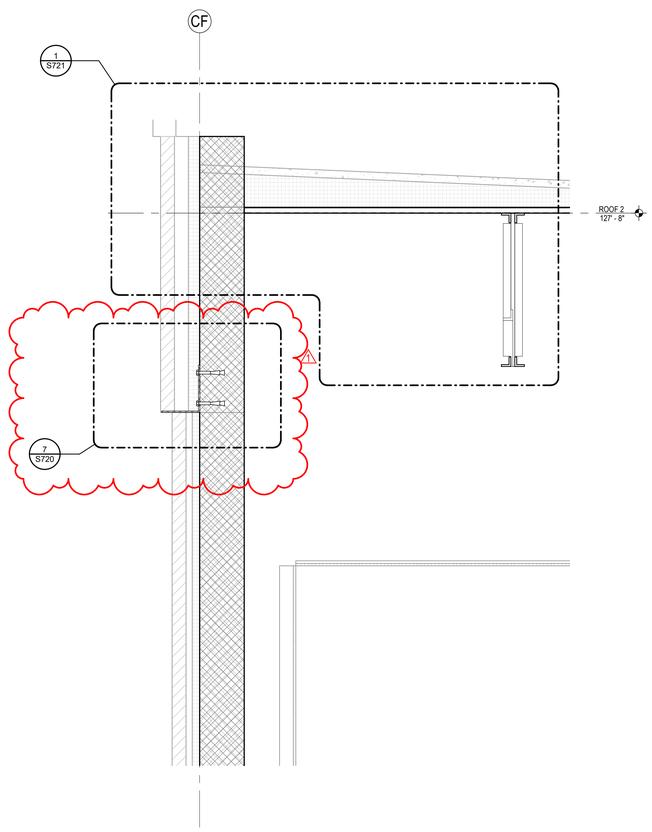
2 S304 HI/LO ROOF AT DINING/KITCHEN - AREA C

3/4" = 1'-0"



3 S304 POP-UP ROOF AT VESTIBULE - AREA C

3/4" = 1'-0"



1 S304 SOUTH ROOF AT BAND HALL - AREA C

3/4" = 1'-0"

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Notes

D
C B A

KEY PLAN

PROJECT NORTH

	Revision	By	Appd	YYYY.MM.DD
1	ADDENDUM #4			2026.03.11

	Issued	By	Appd	YYYY.MM.DD
	ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

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117068
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2026.03.11

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Title
STRUCTURAL WALL SECTIONS - AREA C

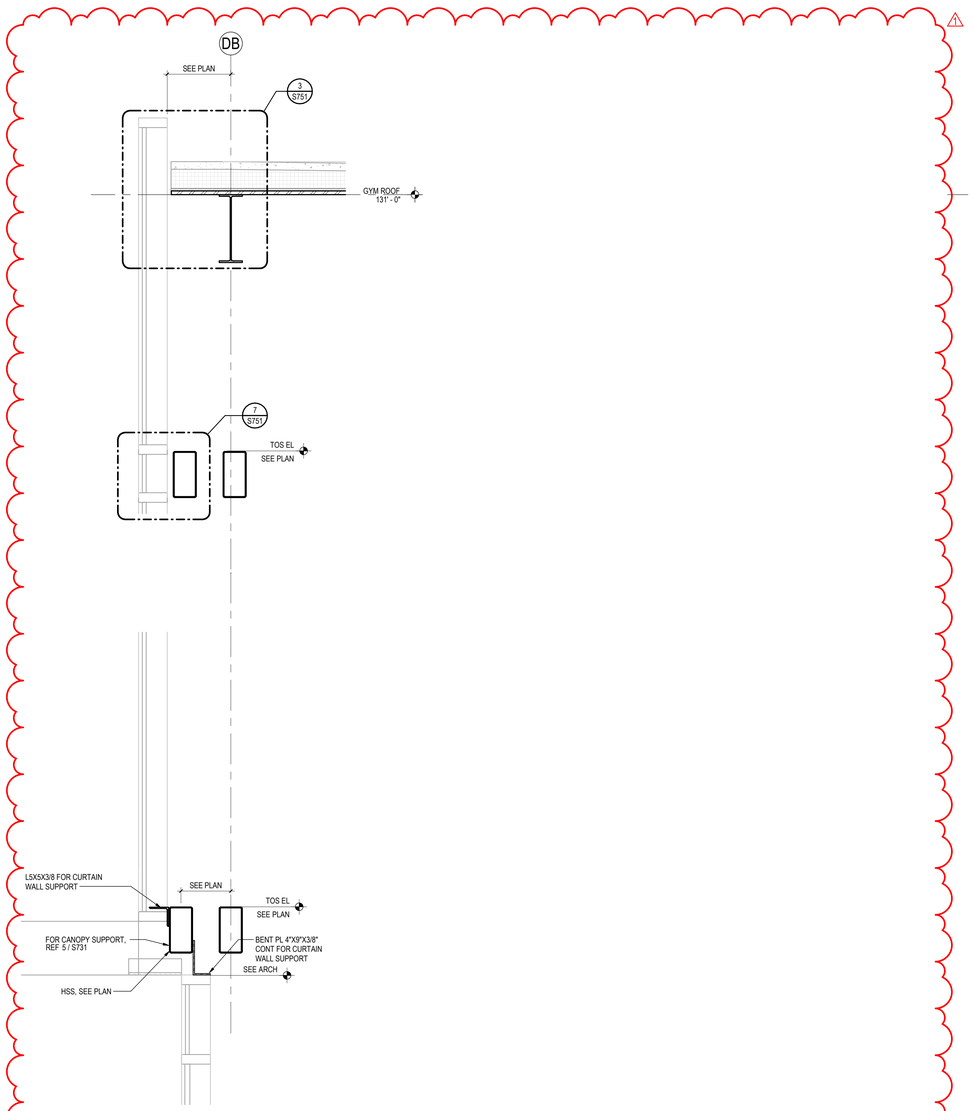
Project No.
214001329

Scale
3/4" = 1'-0"

Revision
1

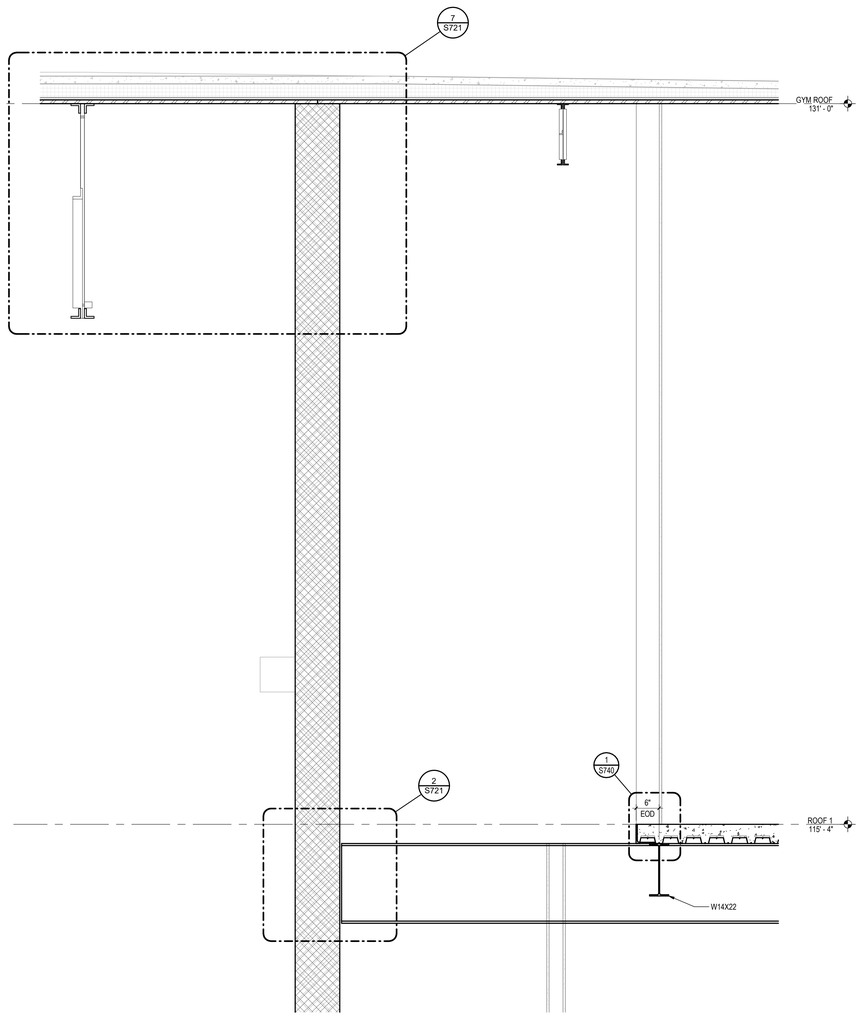
Drawing No.
S304

ORIGINAL SHEET - ARCH E1



3 S306 **WALL GLAZING AT GYM - AREA D**

3/4" = 1'-0"



1 S306 **MECHANICAL ROOM AT AREA D**

3/4" = 1'-0"

Stantec

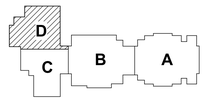
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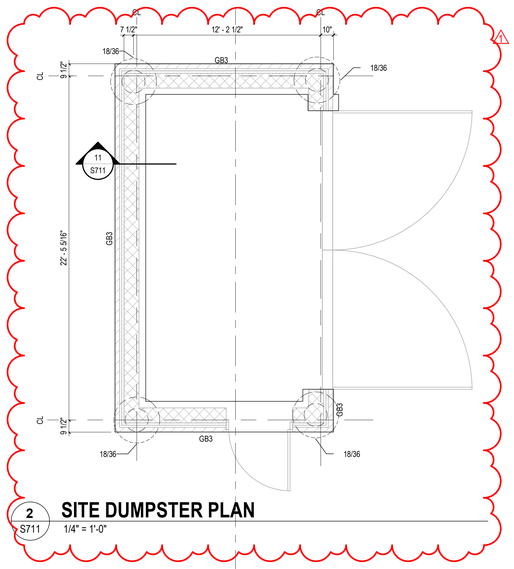
202 Red Summit Dr
Crosby, TX 77532

Title
STRUCTURAL WALL SECTIONS - AREA D

Project No.	Scale
214001329	3/4" = 1'-0"
Revision	Drawing No.
1	**S306**

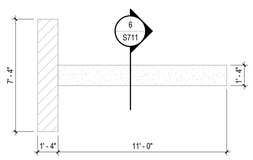
ORIGINAL SHEET - ARCH E1

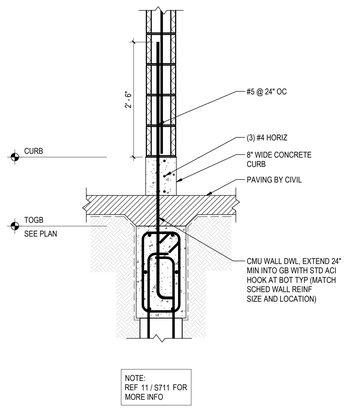
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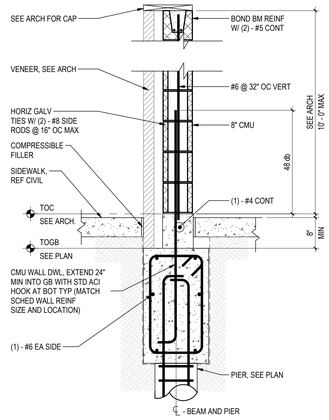


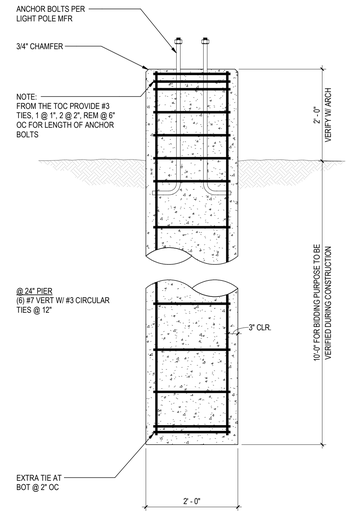
2 SITE DUMPSTER PLAN
S711 — 1/4" = 1'-0"

CA







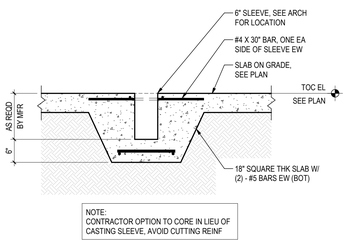


4 MARQUEE SIGN PLAN
S711 — 1/4" = 1'-0"

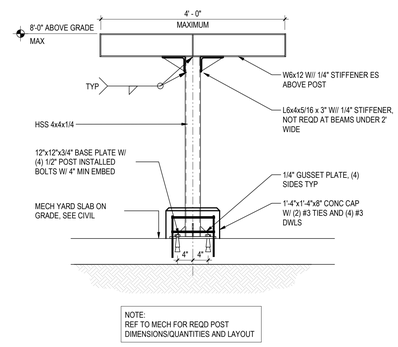
12 BACK OF DUMPSTER WALL W/ CURB
S711 — 3/4" = 1'-0"

11 TYP GB AT FREESTANDING WALL
S711 — 3/4" = 1'-0"

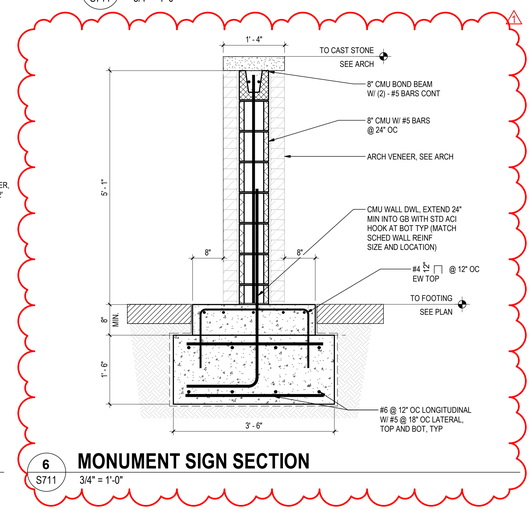
9 TYP LIGHTPOLE BASE
S711 — 3/4" = 1'-0"



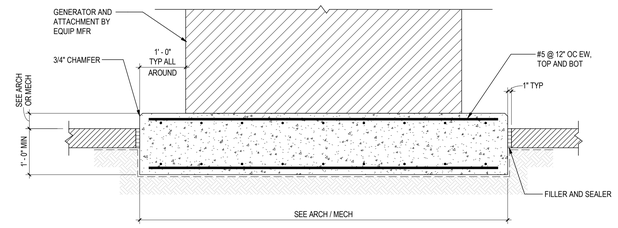
8 TYP SECTION AT VOLLEYBALL SLEEVE
S711 — 3/4" = 1'-0"



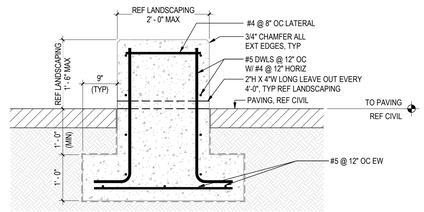
7 TYP MECH PIPE SUPPORT
S711 — 3/4" = 1'-0"



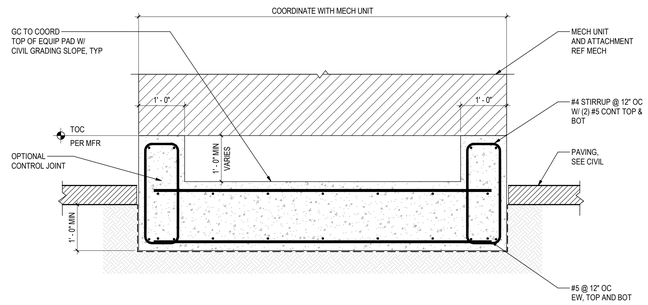
6 MONUMENT SIGN SECTION
S711 — 3/4" = 1'-0"



5 TYP GENERATOR PAD
S711 — 3/4" = 1'-0"



3 TYP LANDSCAPING/ ARCH BENCH
S711 — 3/4" = 1'-0"



1 TYP MECH ELEVATED CHILLER PAD
S711 — 3/4" = 1'-0"

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CROSBY SIXTH GRADE CAMPUS

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Crosby, TX 77532

Title
TYPICAL MISC. SITE FOUNDATION DETAILS

Project No.
214001329

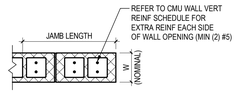
Scale
As indicated

Revision
1

Drawing No.
S711

<dNot location in Project Information>
3/17/2026 2:26:13 PM

ORIGINAL SHEET - ARCH E1



TYP CMU JAMB SECTION

LOAD BEARING AND SHEAR WALL MASONRY LINTEL TABLE

CLEAR OPENING	8" CMU	12" CMU	JAMB WIDTH	
UP TO 4'-0"	8" DEEP BOND BEAM W/ (2) - #4	8" DEEP BOND BEAM W/ (2) - #5	8" WIDE JAMB W/ (2) -#5	
UP TO 6'-0"	8" DEEP BOND BEAM W/ (2) - #4	8" DEEP BOND BEAM W/ (2) - #5	8" WIDE JAMB W/ (2) -#5	
UP TO 8'-0"	16" DEEP BOND BEAM W/ (2) - #4	16" DEEP BOND BEAM W/ (2) - #5	16" WIDE JAMB W/ (2) -#5 EA CELL	
UP TO 10'-0"	24" DEEP BOND BEAM W/ (2) - #6	24" DEEP BOND BEAM W/ (2) - #6	16" WIDE JAMB W/ (2) -#6 EA CELL	
UP TO 6'-0" CANTILEVER (NOTE 5)	———	24" DEEP BOND BEAM W/ (2) - #6 T&B EXTENDED AT LEAST 4'-0" AT THE SUPPORT	16" WIDE JAMB W/ (2) -#6 EA CELL	

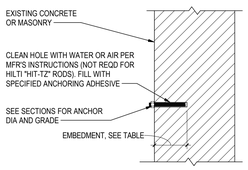
NOTES:
1. SEE ARCH DWGS FOR SIZE AND LOCATIONS OF OPENINGS
2. FOR UNSCHEDULED OPENING GREATER THAN 10'-0", CONSULT THE STRUCTURAL ENGINEER
3. PROVIDE SOLID BOTTOM MASONRY LINTEL FOR HEAD CONDITION OF ALL CMU OPENINGS. SOLID GROUTED KNOCK-OUT CMU CORES **SHALL NOT** BE ALLOWED AND WILL BE REQUIRED TO BE REPLACED AT THE CONTRACTOR'S EXPENSE IF USED
4. PROVIDE BLOCK LINTELS FOR ALL OPENINGS AT INTERIOR/EXTERIOR WALLS FOR WHICH A STEEL LINTEL IS NOT SCHEDULED
5. THIS DETAIL IS APPLICABLE ONLY AT BAND HALL AREA IN AREA C.

⚠

9 S720 TYP MASONRY LINTEL SCHEDULE
NTS

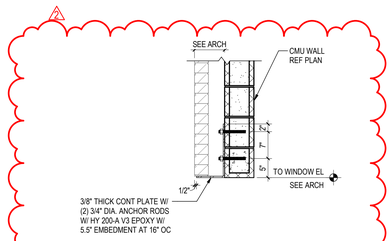
ANCHOR INSTALLATION INFORMATION

	POST-INSTALLED ANCHOR TYPE	ANCHOR DIAMETER 1/2"	5/8"	3/4"
EMBEDMENT (INCHES)	ADHESIVES	4 1/4"	5 1/2"	6 3/4"
	SCREEN TUBES	SEE NOTE 7		
	MECHANICAL	3 1/2"	4"	4 3/4"
DRILL BIT DIAMETER	ADHESIVES	9/16"	11/16"	13/16"
	SCREEN TUBES	11/16"	7/8"	1"
	MECHANICAL	1/2"	5/8"	3/4"

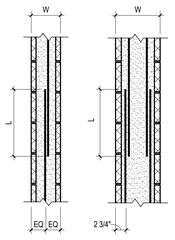


NOTES:
1. SEE GENERAL NOTES AND SPECS FOR ANCHOR REQUIREMENTS
2. LOCATE EXISTING REINF STEEL IN THE CONCRETE OR CMU USING NON-DESTRUCTIVE METHODS AND POSITION ANCHOR LOCATIONS TO AVOID CONFLICTS WITH EXISTING REINF. DO NOT DAMAGE EXISTING REINF DURING THE DRILLING PROCESS. ANCHOR LOCATIONS CAN BE ADJUSTED BY A MAXIMUM OF 1 1/2" FROM DETAILED LOCATIONS TO AVOID CONFLICTS WITH AS-BUILT CONDITIONS UON
3. BASED ON FIELD VERIFIED LOCATIONS OF REINFORCING STEEL AND EMBEDDED ITEMS, CONTRACTOR SHALL CREATE TEMPLATES FOR EACH ANCHOR GROUP FOR FABRICATION OF ANCHORED ITEM
4. INSTALL ANCHORS PER MFR RECOMMENDATIONS. LIMIT THE TORQUE OF TIGHTENING WRENCHES TO THE MAXIMUM ALLOWABLE PER THE MFR RECOMMENDATIONS
5. ALL ABANDONED HOLES SHALL BE FILLED WITH NON-SHRINK GROUT
6. HOLES IN CONNECTION PLATES SHALL BE NO MORE THAT 1/16" LARGER THAN THE ANCHOR DIAMETER. IF LARGER HOLES ARE REQUIRED FOR ERECTION PURPOSES, PROVIDE 1/4"X3"X3" PLATE WASHERS CONTINUOSLY WELDED TO THE CONNECTION PLATE.
7. 2" FOR HILTI HIT-HY 20 ~ PER MFR RECOMMENDATIONS
   3" FOR SIMPSON TITEN HD ~ PER MFR RECOMMENDATIONS

8 S720 TYP POST INSTALLED ANCHORS IN CMU
3/4" = 1'-0"



7 S720 BRICK SUPPORT AT CMU LINTEL
3/4" = 1'-0"



1 VERTICAL BAR **2 VERTICAL BAR**

S401-C3 LAP LENGTH "L" (INCHES) FOR fm = 2000 PSI

BAR SIZE	NOMINAL CMU WIDTH "W" 16" 1 BAR	16" 2 BAR	12" 1 BAR	12" 2 BAR	8" 1 BAR	8" 2 BAR	6" 1 BAR
#3	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
#4	1'-0"	1'-8"	1'-0"	1'-8"	1'-0"	1'-8"	1'-4"
#5	1'-1"	2'-9"	1'-1"	2'-9"	1'-6"	2'-9"	2'-0"
#6	1'-7"	5'-4"	1'-10"	5'-4"	2'-10"	5'-4"	3'-9"
#7	1'-11"	NOTE 2	2'-6"	NOTE 2	3'-10"	NOTE 2	5'-2"
#8	2'-10"	NOTE 2	3'-9"	NOTE 2	5'-9"	NOTE 2	———
#9	3'-7"	NOTE 2	4'-9"	NOTE 2	———	———	———

NOTES:
1. BARS SHALL BE SPACED W/ "DUR-O-WALL" VERTICAL BAR POSITIONER OR APPROVED EQUAL
2. PROVIDE ONE OF THE FOLLOWING MECHANICAL SPLICES OR APPROVED EQUAL:
   A. ERICO "LENTON" COUPLER SYSTEM
   B. BARLOCK "S-SERIES" COUPLER SYSTEM
   C. RICHMOND "USIMC-SAE" COUPLERS SYSTEM
3. MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICES AT CONTRACTOR'S OPTION.

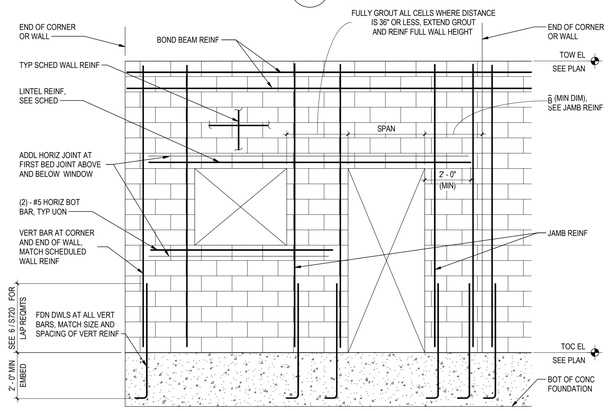
6 S720 TYP SPLICE DTL IN CMU
3/4" = 1'-0"

CMU WALL SCHEDULE

TYPE	WIDTH (IN)	VERTICAL BAR REINFORCING	NOTES
8WT1	8	#5 @ 32" OC	KITCHEN AND MECH AREA, TYP UON
12WT1	12	#5 @ 32" OC	BAND HALL
12WT2	12	#6 @ 24" OC	GYM
NOTES:			

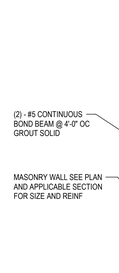
CMU LOAD BEARING AND SHEAR WALL SCHEDULE

5 S720 CMU WALL SCHEDULE
3/4" = 1'-0"

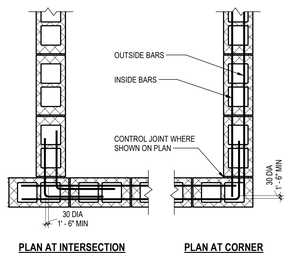


NOTES:
1. ALL REINF SHOWN IN ADDITION TO SCHEDULED WALL REINF
2. ALL REINF SHALL BE SOLID GROUTED USING 2500 PSI SPEC COURSE GROUT
3. REFER TO PLANS, GENERAL NOTES, AND WALL ELEVATIONS FOR TYP VERT AND HORIZ WALL REINF
4. SEE PLAN 2 / S720 FOR LOCATION OF CONTROL JOINTS
5. USE VERT BAR POSITIONERS AT 192 BAR DIAMETER OR 10 FT WHICH EVER IS LESS
6. ALL HORIZ REINFORCEMENT SHALL BE PLACED IN BOND BEAM BLOCKS EXCEPT JOINT REINF
7. HORIZ REINF SHALL BE DISCONTINUOUS THROUGH CONTROL JOINTS EXCEPT BOND BEAMS AT ROOF FLOORS AND AT MASONRY LINTELS
8. PROVIDE HORIZ JOINT REINF AT FIRST BED JOINT ABOVE AND BELOW OPENINGS AND EXTEND 1'-0" BEYOND THE OPENING

1 S720 TYP REINF/ENGINEERED/STRUCT MASONRY WALL ELEVATION
NTS



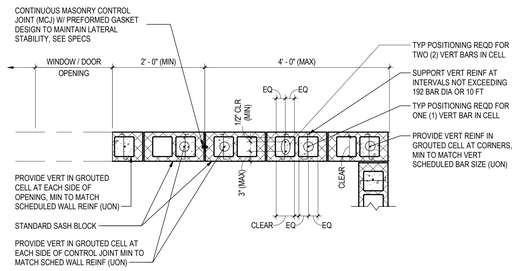
4 S720 TYP HORIZ BOND BEAM IN MASONRY WALL
3/4" = 1'-0"



PLAN AT INTERSECTION **PLAN AT CORNER**

NOTES:
1. OUTSIDE BARS EXTEND AROUND CORNER, INSIDE BARS EXTEND AS FAR AS POSSIBLE AND BEND INTO CORNER CELL
2. WHERE SINGLE LAYER OF REINF OCCURS, BEND REINF AS SHOWN OUTSIDE BARS

3 S720 TYP ENGINEERED MASONRY WALL CORNER BARS
3/4" = 1'-0"



NOTES:
1. SEE PLAN FOR CMU WALL TYPE AND LOCATION.
2. REF SCHEDULE ON 5 / S720 FOR MASONRY WALL REINFORCEMENT.
3. UNLESS NOTED OTHERWISE, BOND BEAM SHALL BE REINFORCED WITH (2) - #5 BARS CONT @ 8' - 0" OC, AT TOP OF PARAPET AND ROOF DECK ELEVATIONS.
4. UNLESS NOTED OTHERWISE. PROVIDE STANDARD HORIZONTAL JOINT REINFORCEMENT (REF GENERAL NOTES) BELOW GRADE.
5. FOR LOAD-BEARING MASONRY, CONTROL JOINT SPACING SHOULD BE 24' - 8" OC MAXIMUM UON. FOR NON-REINFORCED WALL, REFER TO ARCHITECTURAL FOR CONTROL JOINT SPACING (20' - 0" MAXIMUM).
6. CUT HORIZONTAL REINFORCEMENT AT CONTROL JOINTS, EXCEPT AT BOND BEAMS AND MASONRY LINTELS.

2 S720 TYP MASONRY WALL JOINTS
3/4" = 1'-0"

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Notes

2 ADDENDUM #4			2026.03.11
1 ADDENDUM #1			2026.02.13
Revision	By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued	By	Appd	YYYY.MM.DD

Permit/Seal

STATE OF TEXAS
BRITNEY R. WEIDERT
113990
LICENSED
PROFESSIONAL ENGINEER
2026.03.11

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

CROSBY SIXTH GRADE CAMPUS

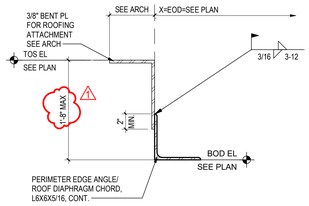
202 Red Summit Dr
Crosby, TX 77532

Title
TYPICAL ENGINEERED MASONRY DETAILS

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	S720

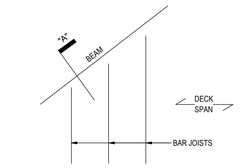
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ORIGINAL SHEET - ARCH E1

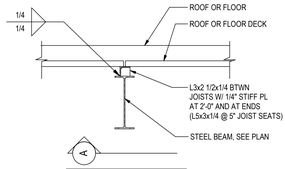


NOTE:
1. ROOFING AND ROOF DECK NOT SHOWN FOR CLARITY.
2. SPLICE CONT. PERIMETER ROOF EDGE ANGLE AT JOIST/BEAM.

13 TYP ROOF EDGE PERIMETER ANGLE
S750 — 1 1/2" = 1'-0"

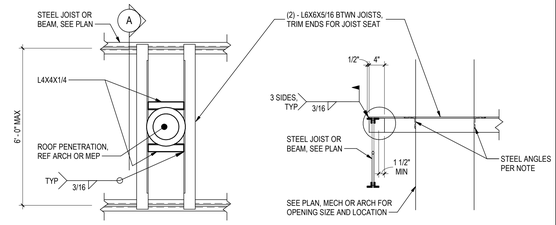


PLAN VIEW



NOTE:
INCREASE ANGLE SIZE (OR PROVIDE BENT PLATES) AS REQD TO MATCH JOIST SEATS

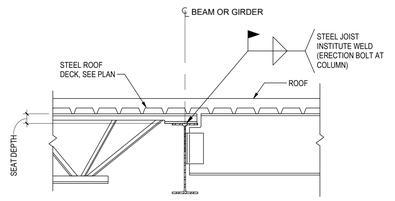
12 TYPICAL DETAIL DECK SUPPORT AT SKEWED BEAM
S750 — NTS



PLAN — SECTION 'A'

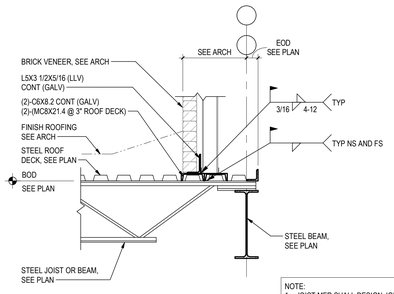
NOTES:
1. NO ANGLE FRAMING REQD FOR OPENINGS LESS THAN 12" AND WEIGHT LESS THAN 50 POUNDS
2. REFER TO ARCH DWGS FOR ROOF HATCH OPENINGS, LOCATIONS, AND SIZE
3. REFER TO MECH DWGS FOR MECH ROOF OPENINGS, LOCATIONS, AND SIZES

11 TYP ROOF OPENING
S750 — 3/4" = 1'-0"



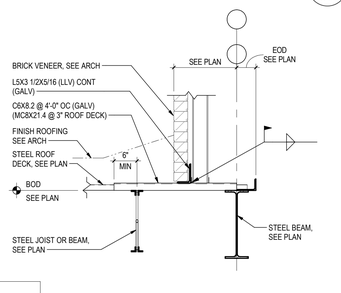
NOTE:
COORDINATE JOIST SEATS WITH JOIST SUPPLIER

10 TYP STL JST/STL BM AT INT STL BM/ROOF
S750 — NTS

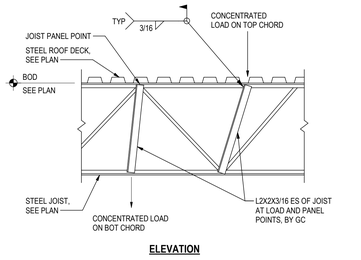


NOTE:
1. JOIST MFR SHALL DESIGN JOIST FOR ADDL BENDING STRESSES RESULTING FROM THE REACTION OF THE CHANNEL AT ANY LOCATION ALONG THE TOP CHORD. SEE PLAN FOR JOIST SIZE AND BRICK LOADING
2. DETAIL IS APPLICABLE ONLY AT LOCATIONS WITH MAX BRICK HEIGHT OF 5'-0"
3. FOR INFO NOT SHOWN, REF 1 / S750

9 TYP LOW ROOF BRICK SUPPORT
S750 — 3/4" = 1'-0"



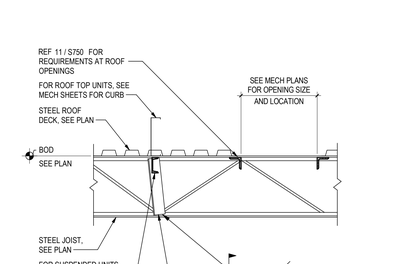
TYP CHANGE IN DECK DIRECTION, DECK SUPPORT & DIAPHRAGM CONNECTOR
S750 — NTS



ELEVATION

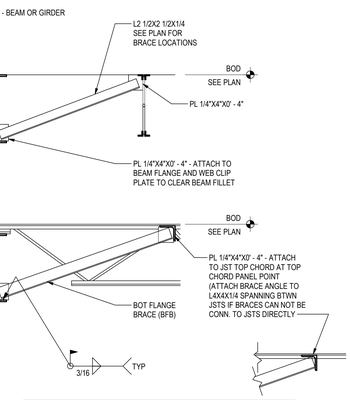
NOTES:
THIS DETAIL IS APPLICABLE TO ALL CONCENTRATED LOADS THAT ARE ATTACHED TO JOIST(S) WHETHER INDICATED ON THE STRUCT DWGS OR NOT. EXAMPLES OF THESE LOADS ARE:
1. HANGING LOAD, PARTITION THAT EXCEEDS 150#
2. HANGING PLUMBING, MECH STEEL PIPE 4" DIA OR LARGER
3. HANGING BASKETBALL GOALS

8 TYP JOIST REINF DTL
S750 — 3/4" = 1'-0"



ELEVATION

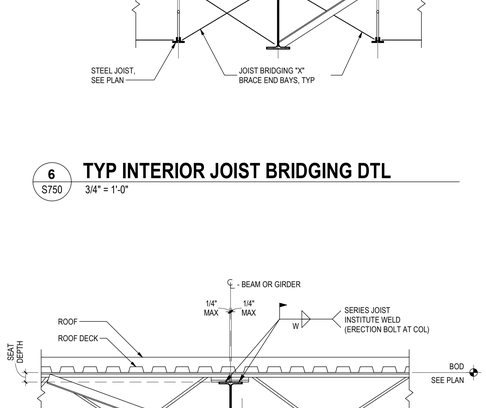
7 TYP MECH SUPPORT
S750 — 3/4" = 1'-0"



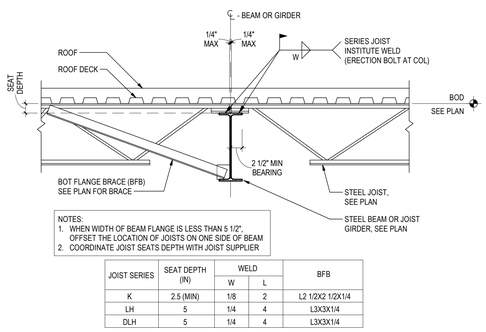
NOTES:
1. SEE PLAN/DTLS FOR LOCATIONS OF ANGLE BRACES
2. FIELD WELDING OF 1/4" CONN PLATES SHALL BE AT FABRICATOR'S OPTION
3. ALL BRACING SHALL BE IN PLACE AND WELDED BEFORE DECK INSTALLATION
4. BRACE SIZES SHOWN ARE TYP UON ON PLAN
5. SEE GENERAL NOTES FOR DECK CONSTRUCTION

JOIST SERIES	SEAT DEPTH (IN)	WELD		BFB
		W	L	
K	2.5 (MIN)	1/8	2	L2 1/2X2 1/2X1/4
LH	5	1/4	4	L3X3X1/4
DLH	5	1/4	4	L3X3X1/4

4 TYP BEAM BOT FLANGE BRACE AT JST
S750 — 3/4" = 1'-0"



6 TYP INTERIOR JOIST BRIDGING DTL
S750 — 3/4" = 1'-0"

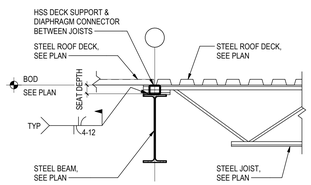


NOTES:
1. WHEN WIDTH OF BEAM FLANGE IS LESS THAN 5 1/2", OFFSET THE LOCATION OF JOISTS ON ONE SIDE OF BEAM
2. COORDINATE JOIST SEATS DEPTH WITH JOIST SUPPLIER

JOIST SERIES	SEAT DEPTH (IN)	WELD		BFB
		W	L	
K	2.5 (MIN)	1/8	2	L2 1/2X2 1/2X1/4
LH	5	1/4	4	L3X3X1/4
DLH	5	1/4	4	L3X3X1/4

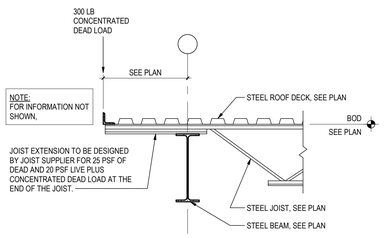
3 TYP DTL OPEN WEB STEEL JST AT INT STL BM
S750 — 3/4" = 1'-0"

JOIST SERIES	SEAT DEPTH (IN)	HSS DECK SUPPORT
K	2.5 (MIN)	HSS 3X2 1/2X1/4 (LSH)
LH	5	HSS 5X3X1/4 (LSH)
DLH	5	HSS 5X3X1/4 (LSH)

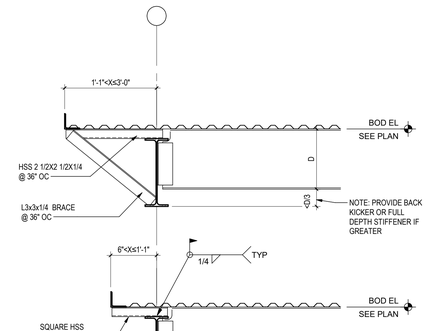


NOTE:
1. COORDINATE W/ JOIST SEAT W/ MANUF
2. PROVIDE HSS DIAPHRAGM CONNECTOR AT ANY LATERAL ELEMENTS WITH JOIST SUPPORT. BRACE FRAMES OR MOMENT FRAMES

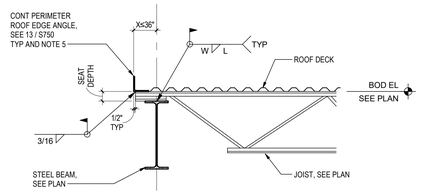
2 TYP ROOF JOIST EXTENSION
S750 — 3/4" = 1'-0"



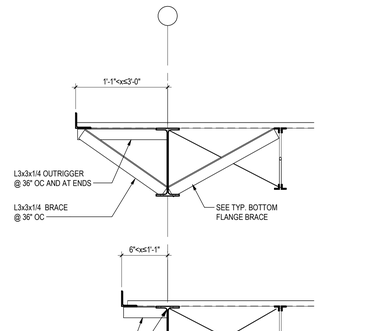
1 TYP ROOF EDGE
S750 — 3/4" = 1'-0"

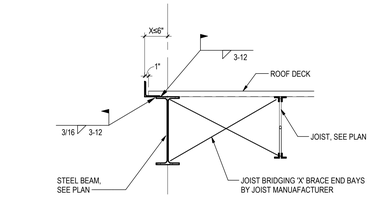


BEAM PERPENDICULAR



JOIST PERPENDICULAR





JOIST PARALLEL

JOIST SERIES	SEAT DEPTH (IN)	WELD DETAILS	
		W	L
K	2.5 (MIN)	1/8"	2
LH	5	1/4"	4
DLH	5	1/4"	4

NOTES:
1. EDGE OF DECK DIMENSION (EOD) = X - SEE PLAN
2. ROOFING NOT SHOWN FOR CLARITY. SEE ARCH.
3. FOR JOIST EXTENSION INFO. SEE A3/SS21
4. COORDINATE JOIST SEATS WITH JOIST MANUFACTURER.
5. SPLICE CONT. PERIMETER ROOF EDGE ANGLE AT JOIST/BEAM.

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Notes

Revision	By	Appd	
1 ADDENDUM #4			2026.03.11 YYYY.MM.DD

Issued	By	Appd	
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26 YYYY.MM.DD

Permit/Seal



Client/Project Logo

Client/Project
Crosby ISD

CROSBY SIXTH GRADE CAMPUS

202 Red Summit Dr
Crosby, TX 77532

Title
TYPICAL STEEL ROOF FRAMING DETAILS

Project No.
214001329

Scale
As indicated

Revision
1

Drawing No.
S750

*Plot location in Project Information
3/31/2026 2:24:18 PM
ORIGINAL SHEET - ARCH E1

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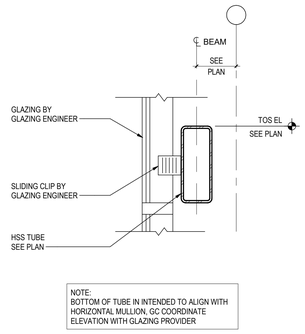
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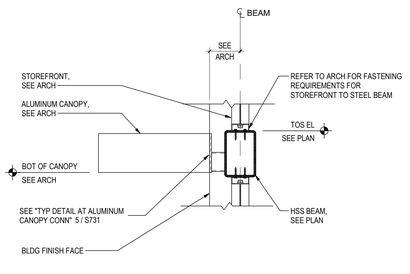
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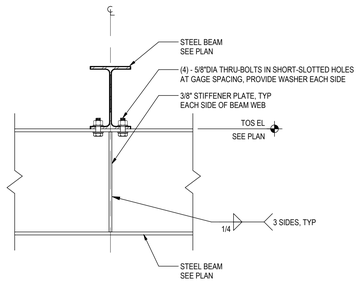
Notes



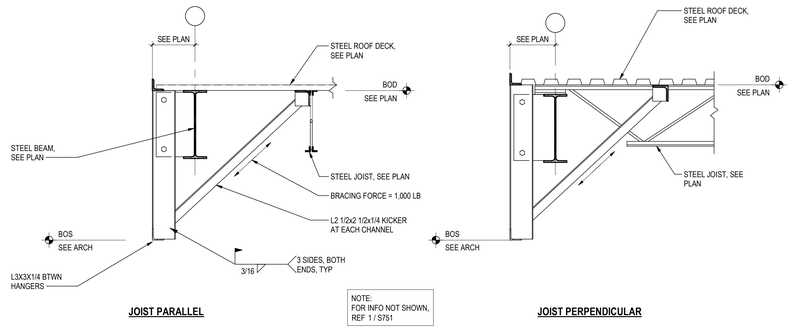
7 S751 TUBE AT GLAZING
NTS



6 S751 TYP DTL GIRT AT STOREFRONT AND CANOPY
NTS



5 S751 TYP WF BEAM BEARING ON WF BEAM
1 1/2" = 1'-0"



4 S751 TYP CURTAIN WALL SUPPORT
3/4" = 1'-0"

1	ADDENDUM #4		2026.03.11
Revision		By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal



Client/Project Logo

Client/Project
Crosby ISD

CROSBY SIXTH GRADE CAMPUS

202 Red Summit Dr
Crosby, TX 77532

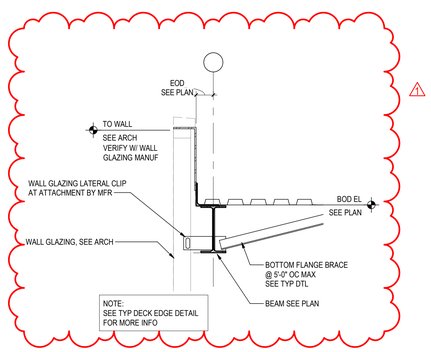
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TYPICAL STEEL ROOF FRAMING DETAILS

Project No.
21400329

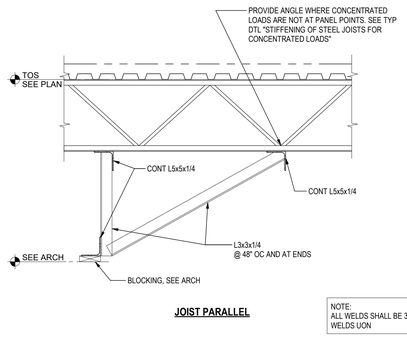
Scale
As indicated

Revision
1

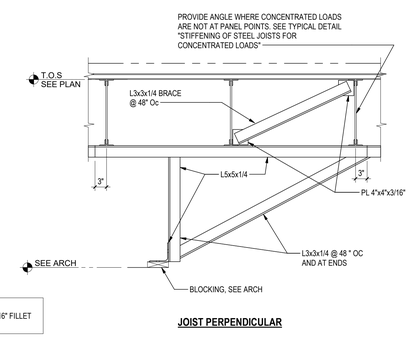
Drawing No.
S751

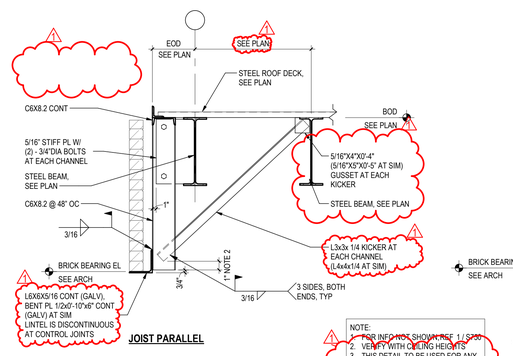


3 S751 TYP ROOF EDGE AT WALL GLAZING PARAPET
NTS



2 S751 TYP DETAILS INTERIOR WALL GLAZING BRACING
NTS





1 S751 TYP BRICK HANGER DTL
3/4" = 1'-0"

*Plot location in Project Information
3/17/2026 2:26:18 PM

ORIGINAL SHEET - ARCH E1

GLAZING KEY:

NAME	DESCRIPTION
GL1	TINTED INSUL SAFETY GLASS
GL2	OPAQUE SPANDREL GLASS
GL3	LAMINATED IMPACT RESISTANT TO MATCH GL1
GL4	CLEAR SAFETY GLASS
GL5a	LAMINATED GLASS - CLEAR
GL5b	MATCH GL5a WITH FINISHED PANEL ON BACKSIDE OF GLAZING
GL6	FIRE-RATED GLASS (45 MIN.)
GL7	LAMINATED GLASS - GRAY
GL8	LAMINATED GLASS - RED
GL9	LAMINATED GLASS - WHITE
GL10	LAMINATED SLIDING WINDOW GLASS

*RE: SPECIFICATIONS FOR GLAZING TYPES

GLAZING FRAME TYPES:

INTERIOR ALUMINUM (STOREFRONT)
BASIS OF DESIGN: KAWNEER TRIFAB 450 (1 3/4" X 4 1/2" MULLIONS)
3791457 PERMADIZE - MEDIUM BRONZE FINISH

EXTERIOR ALUMINUM (STOREFRONT)
BASIS OF DESIGN: KAWNEER TRIFAB 601T (2" X 6" MULLIONS)
3791457 PERMADIZE - MEDIUM BRONZE FINISH

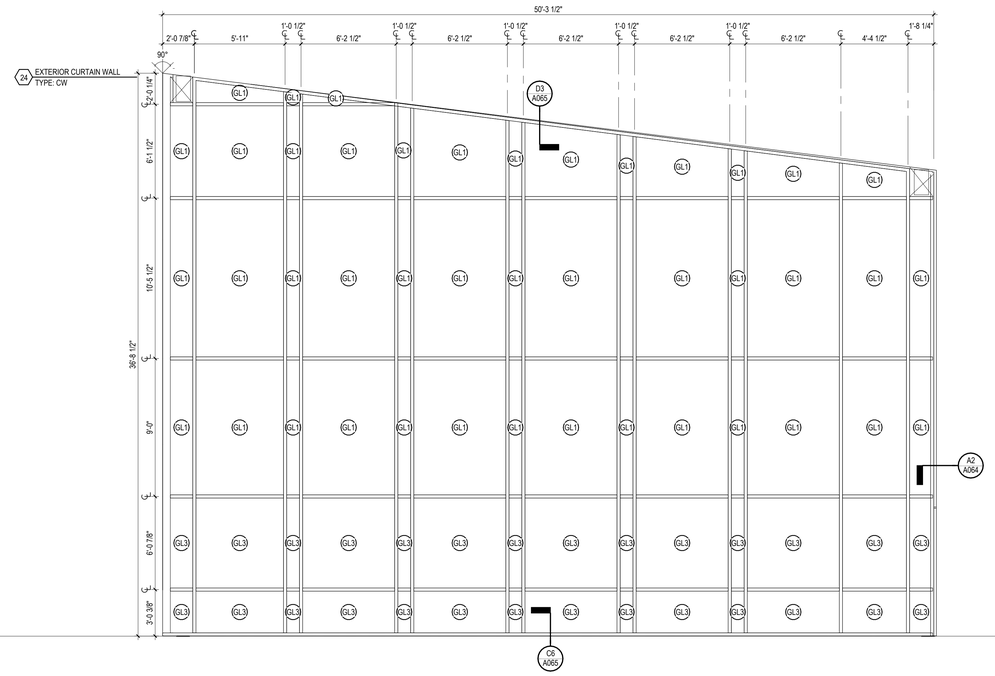
INTERIOR ALUMINUM (CURTAIN WALL)
BASIS OF DESIGN: KAWNEER TRIFAB 1600 (2 1/2" X 7" MULLIONS)
3791457 PERMADIZE - MEDIUM BRONZE FINISH

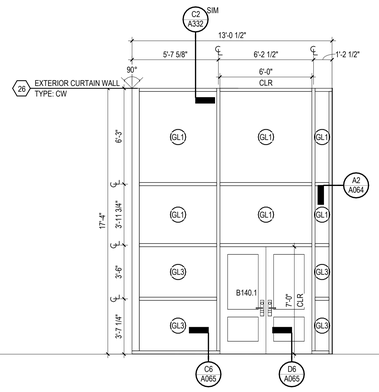
EXTERIOR ALUMINUM (CURTAIN WALL)
BASIS OF DESIGN: KAWNEER TRIFAB 1600 (2 1/2" X 7" MULLIONS)
3791457 PERMADIZE - MEDIUM BRONZE FINISH

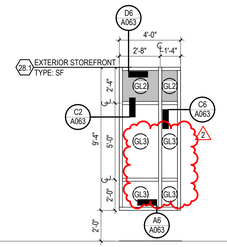
INTERIOR STEEL (HM)

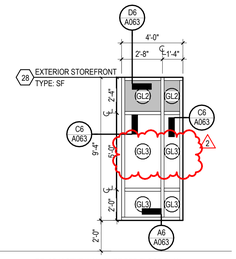
INTERIOR FIRE-RATED STEEL (HM)

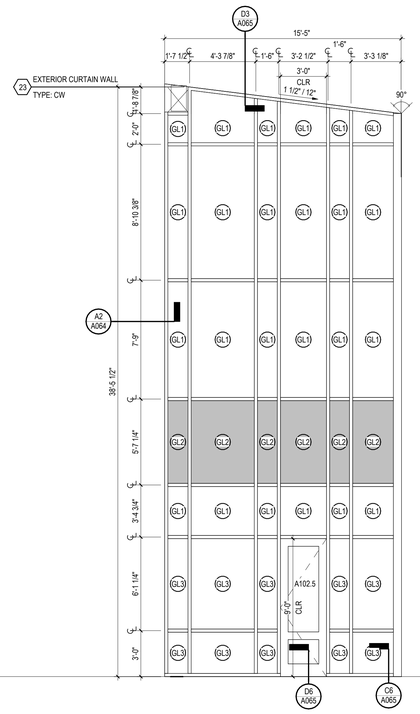
*AT HIGH ROOF STEEL STRUCTURE, VERIFY STEEL STRUCTURE IN FIELD, ALLOW 1" TOLERANCE FROM FACE OF BEAM TO FACE OF MULLION

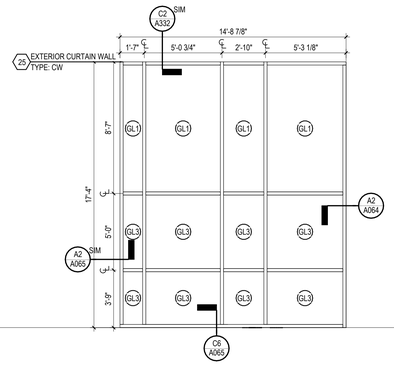


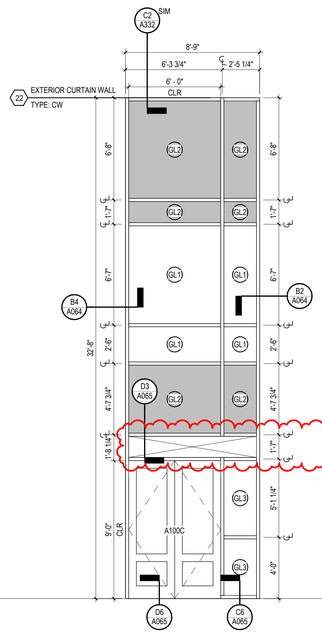


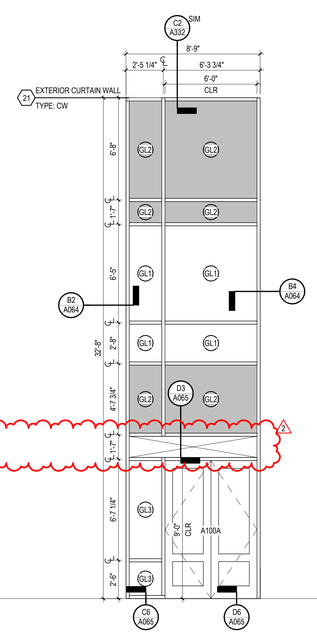


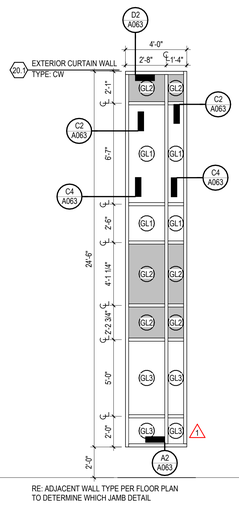


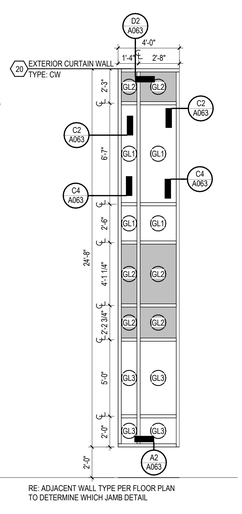












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Notes

2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13
Revision		By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL				2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT
ERIN J SHEDD
37996
STATE OF TEXAS
03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

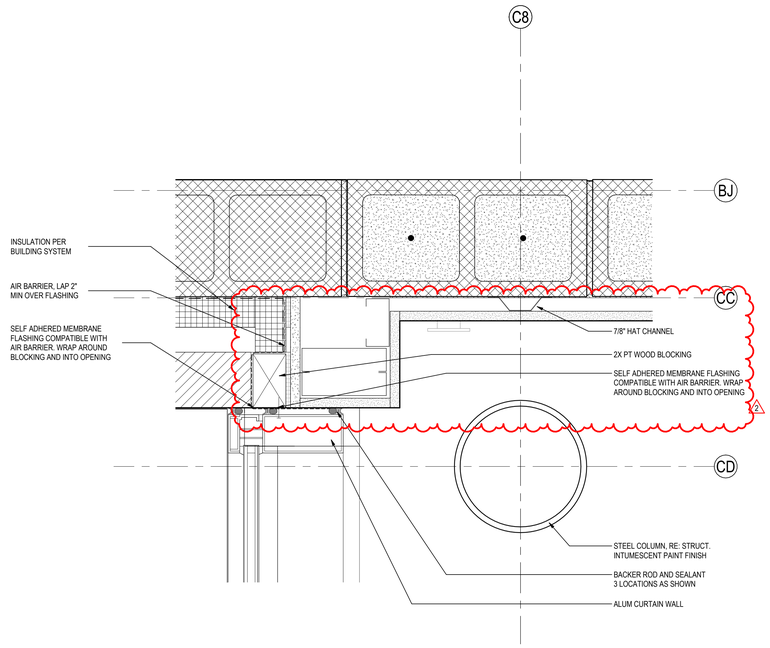
Title
EXTERIOR GLAZING TYPES

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	A053

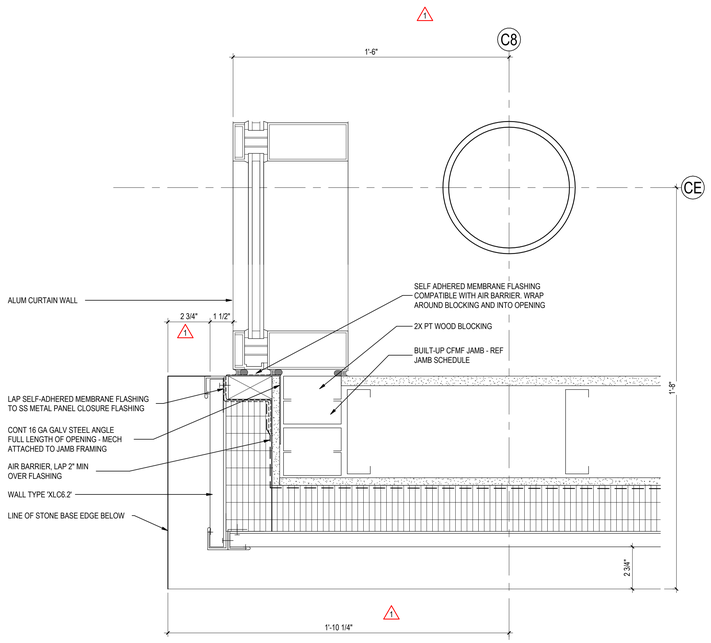
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ORIGINAL SHEET - ARCH E1

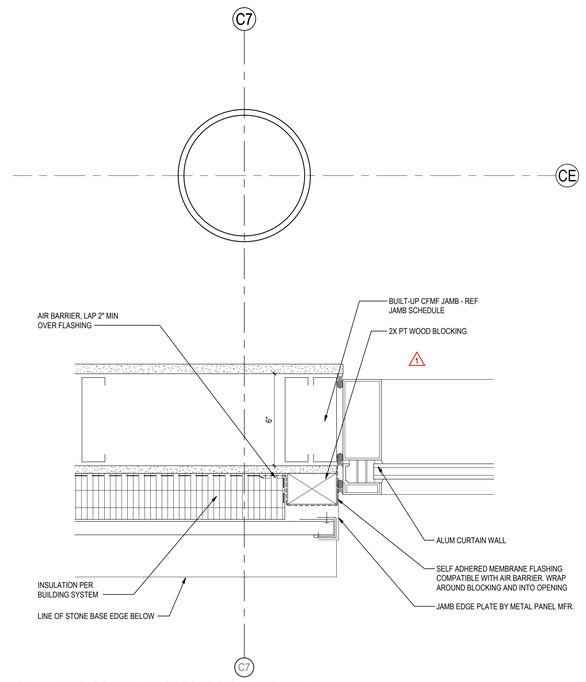




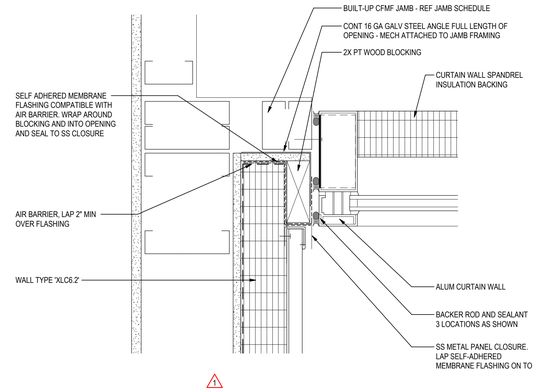
C2 A066 **CWJAMB @ BRICK - AREA C**
3" = 1'-0"



A5 A066 **CW JAMB @ CORNER - AREA C**
3" = 1'-0"



A3 A066 **CW JAMB @ MTL PNL - AREA C**
3" = 1'-0"



A2 A066 **CURTAIN WALL JAMB DETAIL**
3" = 1'-0"

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2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13
Revision		By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL				2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT
ERIN J SHEDD
33796
STATE OF TEXAS

03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
EXTERIOR H/J/S DETAILS

Project No.
214001329

Scale
3" = 1'-0"

Revision
2

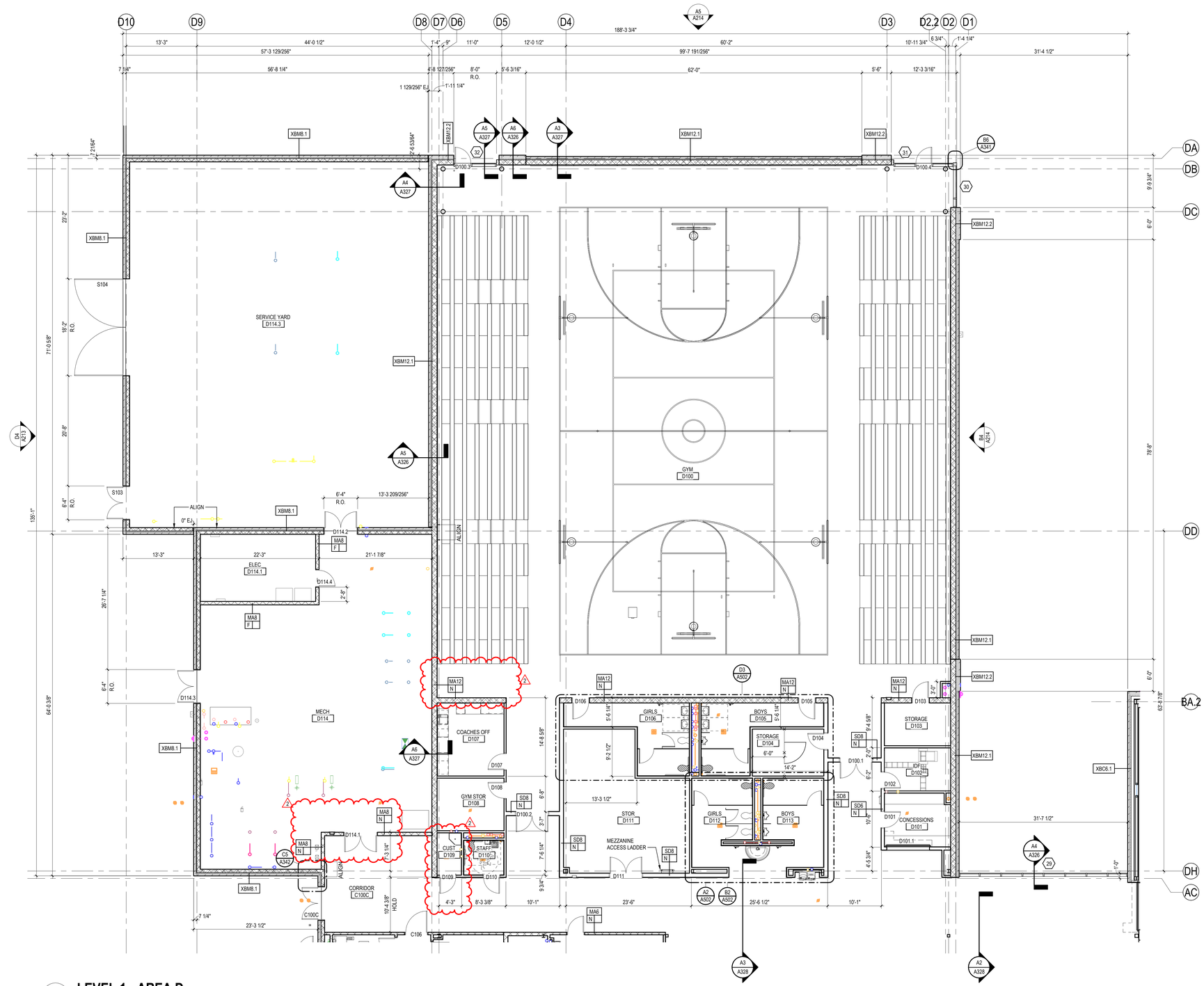
Drawing No.
A066

*Plot location in Project Information
3/10/2026 2:51:34 PM

ORIGINAL SHEET - ARCH E1

GENERAL NOTES - AREA PLANS:

1. PARTITION TYPE SD3N IS TYP AT INTERIOR WALLS, UON.
2. COLUMN WRAPS ARE TO BE TYPE CB3N TYP. UON.
3. PLUMBING CHASE WALLS ARE TO BE TYPE CB3N TYP. UON.
4. REFER TO SHEET A111 FOR ADDITIONAL GENERAL PLAN NOTES
5. WHERE ENLARGED PLANS ARE INDICATED, REFER TO ENLARGED PLAN FOR DIMENSIONS AND WALL TYPES.



A5 A111D LEVEL 1 - AREA D
1/8" = 1'-0"

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KEY PLAN

PROJECT NORTH

2	ADDENDUM #4			2026.03.11
1	ADDENDUM #3			2026.03.04
Revision		By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL				2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT
ERIN J SHEID
43796
STATE OF TEXAS
03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
LEVEL 1 FLOOR PLAN - AREA D

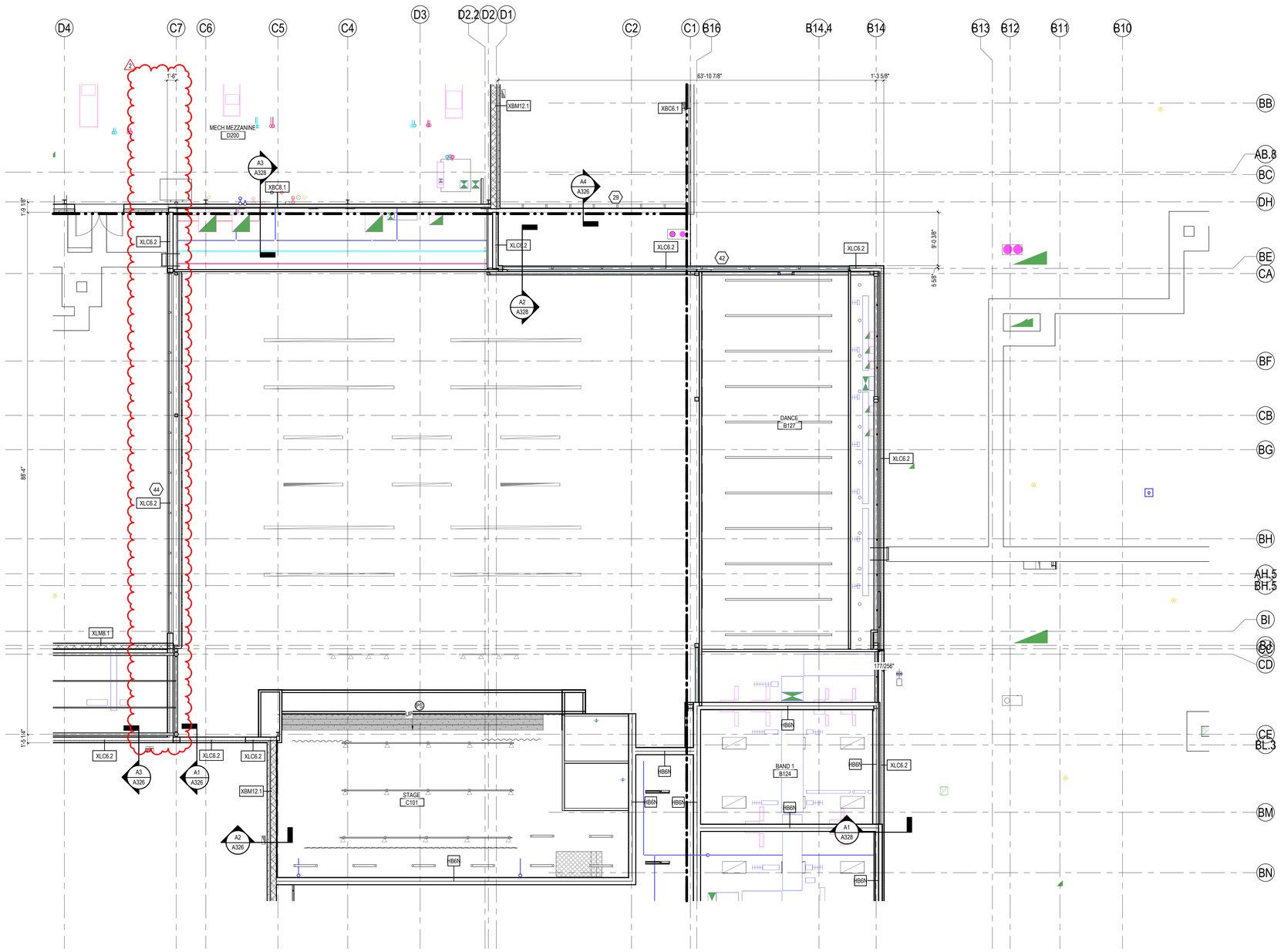
Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	A111D

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1/30/2026 2:30:13 PM

ORIGINAL SHEET - ARCH E1

GENERAL NOTES - AREA PLANS:

1. PARTITION TYPE SD3N IS TYP AT INTERIOR WALLS, UON.
2. COLUMN WRAPS ARE TO BE TYPE CB3N TYP. UON.
3. PLUMBING CHASE WALLS ARE TO BE TYPE CB3N TYP. UON.
4. REFER TO SHEET A111 FOR ADDITIONAL GENERAL PLAN NOTES
5. WHERE ENLARGED PLANS ARE INDICATED, REFER TO ENLARGED PLAN FOR DIMENSIONS AND WALL TYPES.



DINING DANCE CLERESTORY PLAN

A5 / A112C

1/8" = 1'-0"

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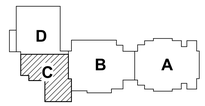
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2	ADDENDUM #4			2026.03.11
1	ADDENDUM #3			2026.03.04
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ERIN J SHEDD
33796
STATE OF TEXAS
03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

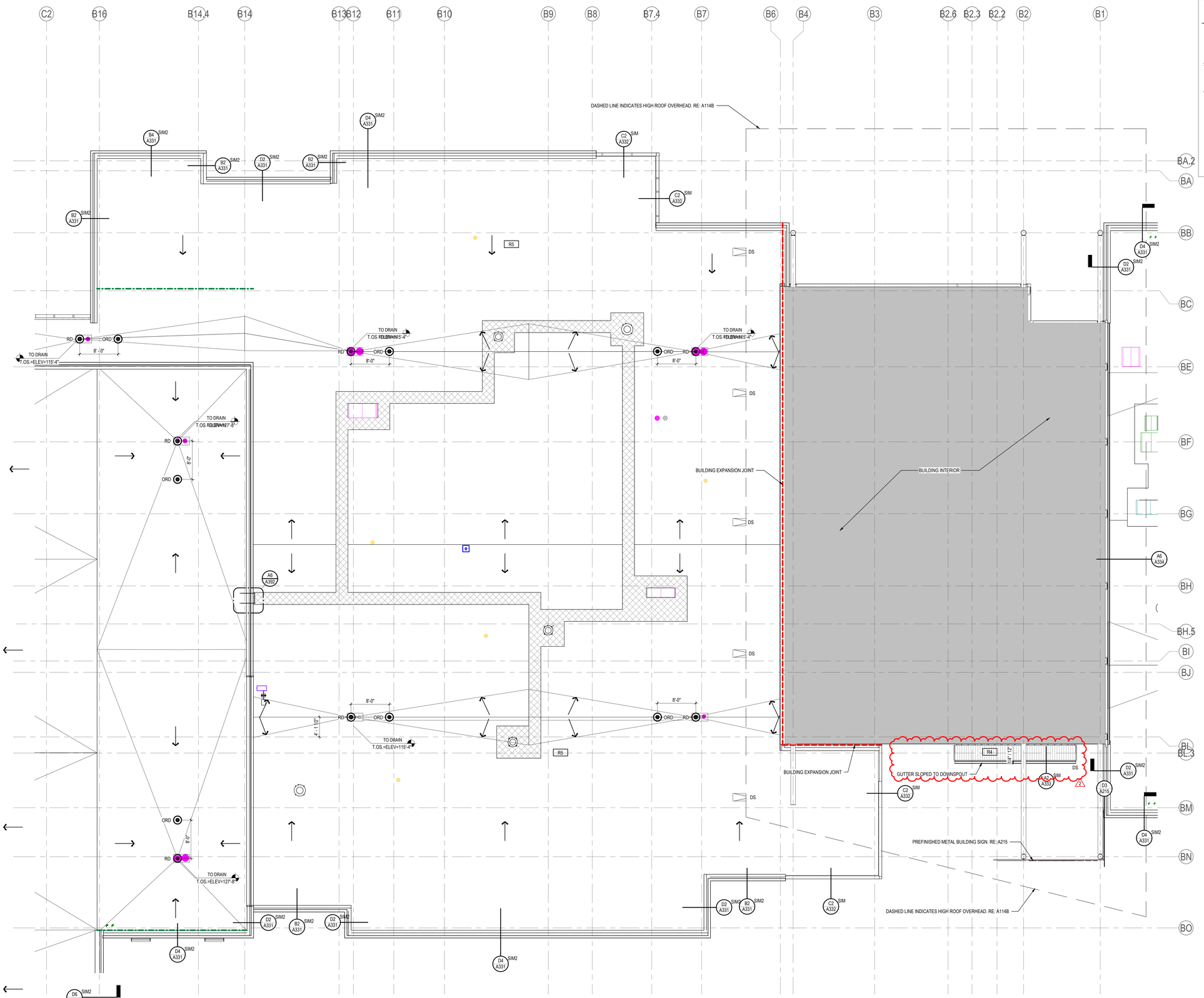
202 Red Summit Dr
Crosby, TX 77532

Title
LEVEL 2 CLERESTORY PLAN - DINING, DANCE, AND BAND

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	A112C

*Plot location in Project Information
3/10/2026 4:29:34 PM

ORIGINAL SHEET - ARCH E1



A6 A113B
ROOF PLAN - AREA B
1/8" = 1'-0"

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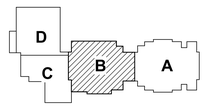
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KEY PLAN

PROJECT NORTH

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #3		2026.03.04
Revision		By	Appd YYYY.MM.DD
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Issued		By	Appd YYYY.MM.DD

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Title
ROOF PLAN - AREA B

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	A113B

<Pw location in Project Information>
3/10/2026 2:36:00 PM
ORIGINAL SHEET - ARCH E1



CEILING LEGEND:

- 2'-0"x2'-0" ACOUSTIC PANEL CEILING SYSTEM. REFER TO RCP FOR TYPE AND HEIGHT, TYP
- 2'-0"x2'-0" VINYL FACED GYPSUM BOARD PANEL CEILING. REFER TO RCP FOR TYPE AND HEIGHT, TYP
- GYPSUM BOARD - PAINTED
- EXPOSED STRUCTURE
- AB-1 SUSPENDED CEILING BAFFLES
- SUSPENDED CEILING CLOUDS
- XX | XX — ELEVATION TYPE & HEIGHT SYMBOL INDICATES HEIGHT OF ELEMENT ABOVE DATUM LEVEL
- RECESSED TROFFER 2' X 4' LIGHT FIXTURE REF ELEC. DOC
- RECESSED LINEAR LIGHT FIXTURE REF ELEC. DOC
- RECESSED LINEAR LIGHT FIXTURE REF ELEC. DOC
- CHAIN HUNG LINEAR LIGHT FIXTURE, 11' AFF REF ELEC. DOC
- PENDANT LINEAR LIGHT FIXTURE, 21' AFF REF ELEC. DOC
- HIGH BAY PENDANT LIGHT FIXTURE, SUSPENDED 5' REF ELEC. DOC
- PENDANT CYLINDER LIGHT FIXTURE REF ELEC. DOC
- SUSPENDED WAVE LIGHT FIXTURE, 11' AFF REF ELEC. DOC
- COVE LIGHT FIXTURE REF ELEC. DOC
- RECESSED CAN LIGHT FIXTURE REF ELEC. DOC
- DF-1, PYRAMID DIFFUSER PANEL

A6 A121A
LEVEL 1 CEILING PLAN - AREA A
1/8" = 1'-0"

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KEY PLAN — PROJECT NORTH

2	ADDENDUM #4			2026.03.11
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Revision		By	Appd	YYYY.MM.DD
	ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal
REGISTERED ARCHITECT — ERIN J SHEED — 23790 — STATE OF TEXAS
03/10/2026

Client/Project Logo
Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
LEVEL 1 CEILING PLAN - AREA A

Project No. 214001329
Scale 1/8" = 1'-0"
Revision 2
Drawing No. **A121A**

ORIGINAL SHEET - ARCH E1

CEILING LEGEND:

- 2'-0"x2'-0" ACOUSTIC PANEL CEILING SYSTEM. REFER TO RCP FOR TYPE AND HEIGHT, TYP
- 2'-0"x2'-0" VINYL FACED GYPSUM BOARD PANEL CEILING. REFER TO RCP FOR TYPE AND HEIGHT, TYP
- GYPSUM BOARD - PAINTED
- EXPOSED STRUCTURE
- AB-1 SUSPENDED CEILING BAFFLES
- SUSPENDED CEILING CLOUDS
- XX | XX — ELEVATION TYPE & HEIGHT SYMBOL INDICATES HEIGHT OF ELEMENT ABOVE DATUM LEVEL
- RECESSED TROFFER 2' X 4' LIGHT FIXTURE REF ELEC. DOC
- RECESSED LINEAR LIGHT FIXTURE REF ELEC. DOC
- RECESSED LINEAR LIGHT FIXTURE REF ELEC. DOC
- CHAIN HUNG LINEAR LIGHT FIXTURE, 11' AFF REF ELEC. DOC
- PENDANT LINEAR LIGHT FIXTURE, 21' AFF REF ELEC. DOC
- HIGH BAY PENDANT LIGHT FIXTURE, SUSPENDED 5' REF ELEC. DOC
- PENDANT CYLINDER LIGHT FIXTURE REF ELEC. DOC
- SUSPENDED WAVE LIGHT FIXTURE, 11' AFF REF ELEC. DOC
- COVE LIGHT FIXTURE REF ELEC. DOC
- RECESSED CAN LIGHT FIXTURE REF ELEC. DOC
- DF-1, PYRAMID DIFFUSER PANEL

A6 LEVEL 1 CEILING PLAN - AREA B
A121B 1/8" = 1'-0"

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KEY PLAN

PROJECT NORTH

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Revision		By	Appd YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT — ERIN J SHEDD — 33796 — STATE OF TEXAS

03/10/2026

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Client/Project
Crosby ISD

Crosby Sixth Grade Campus

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Crosby, TX 77532

Title
LEVEL 1 CEILING PLAN - AREA B

Project No.
214001329

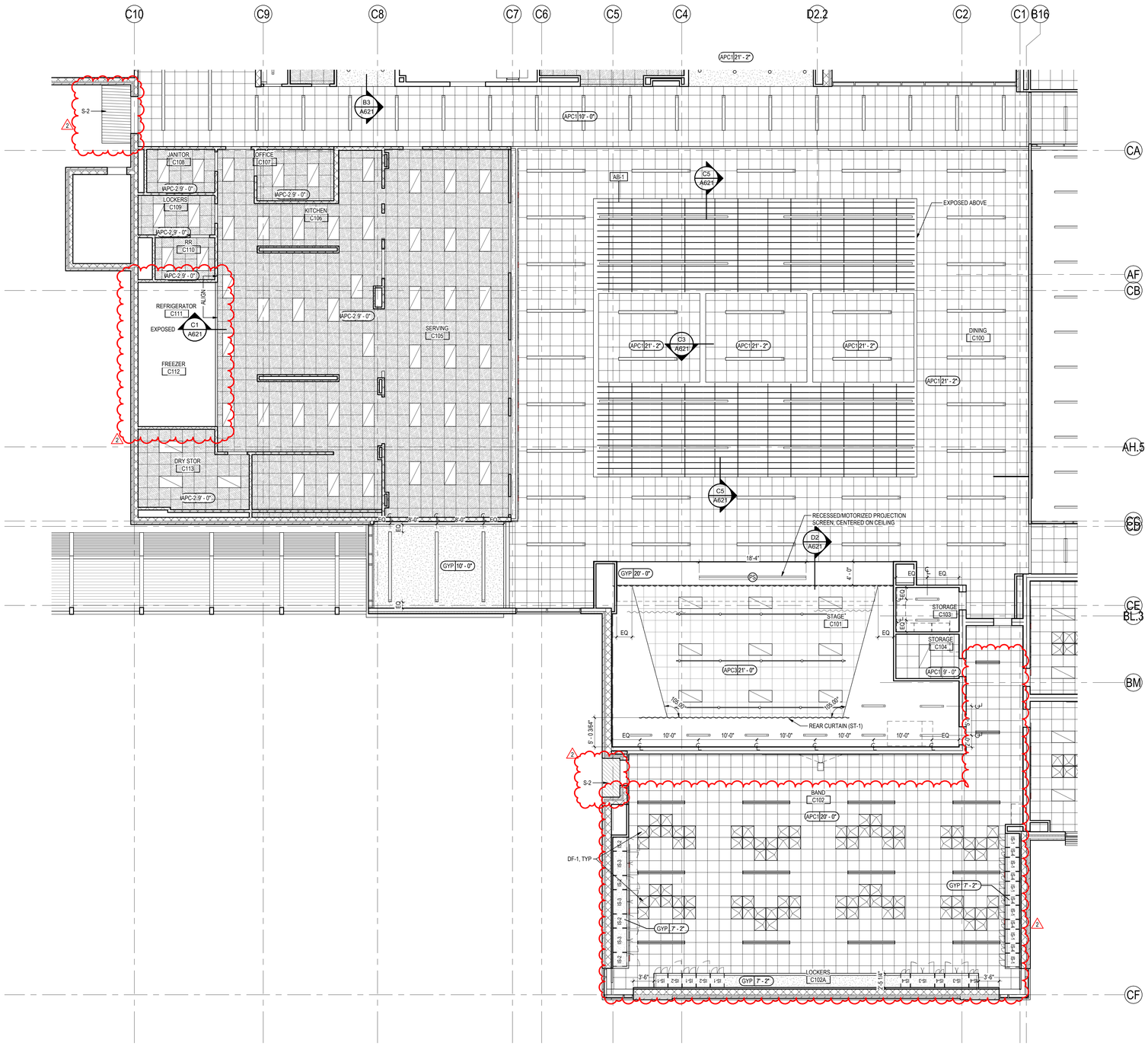
Scale
1/8" = 1'-0"

Revision
2

Drawing No.
A121B

*Pick location in Project Information
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ORIGINAL SHEET - ARCH E1



A5 / A121C LEVEL 1 CEILING PLAN - AREA C

1/8" = 1'-0"

CEILING LEGEND:

- 2'-0"x2'-0" ACOUSTIC PANEL CEILING SYSTEM. REFER TO RCP FOR TYPE AND HEIGHT, TYP
- 2'-0"x2'-0" VINYL FACED GYPSUM BOARD PANEL CEILING. REFER TO RCP FOR TYPE AND HEIGHT, TYP
- GYPSUM BOARD - PAINTED
- EXPOSED STRUCTURE
- AB-1 SUSPENDED CEILING BAFFLES
- SUSPENDED CEILING CLOUDS
- XX | XX — ELEVATION TYPE & HEIGHT SYMBOL INDICATES HEIGHT OF ELEMENT ABOVE DATUM LEVEL
- RECESSED TROFFER 2' X 4' LIGHT FIXTURE REF ELEC. DOC
- RECESSED LINEAR LIGHT FIXTURE REF ELEC. DOC
- RECESSED LINEAR LIGHT FIXTURE REF ELEC. DOC
- CHAIN HUNG LINEAR LIGHT FIXTURE, 11' AFF REF ELEC. DOC
- PENDANT LINEAR LIGHT FIXTURE, 21' AFF REF ELEC. DOC
- HIGH BAY PENDANT LIGHT FIXTURE, SUSPENDED 5' REF ELEC. DOC
- PENDANT CYLINDER LIGHT FIXTURE REF ELEC. DOC
- SUSPENDED WAVE LIGHT FIXTURE, 11' AFF REF ELEC. DOC
- COVE LIGHT FIXTURE REF ELEC. DOC
- RECESSED CAN LIGHT FIXTURE REF ELEC. DOC
- DF-1, PYRAMID DIFFUSER PANEL

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D C B A

KEY PLAN

PROJECT NORTH

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #3		2026.03.04
Revision		By	Appd YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT ERIN J SHEED 23796 STATE OF TEXAS
03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

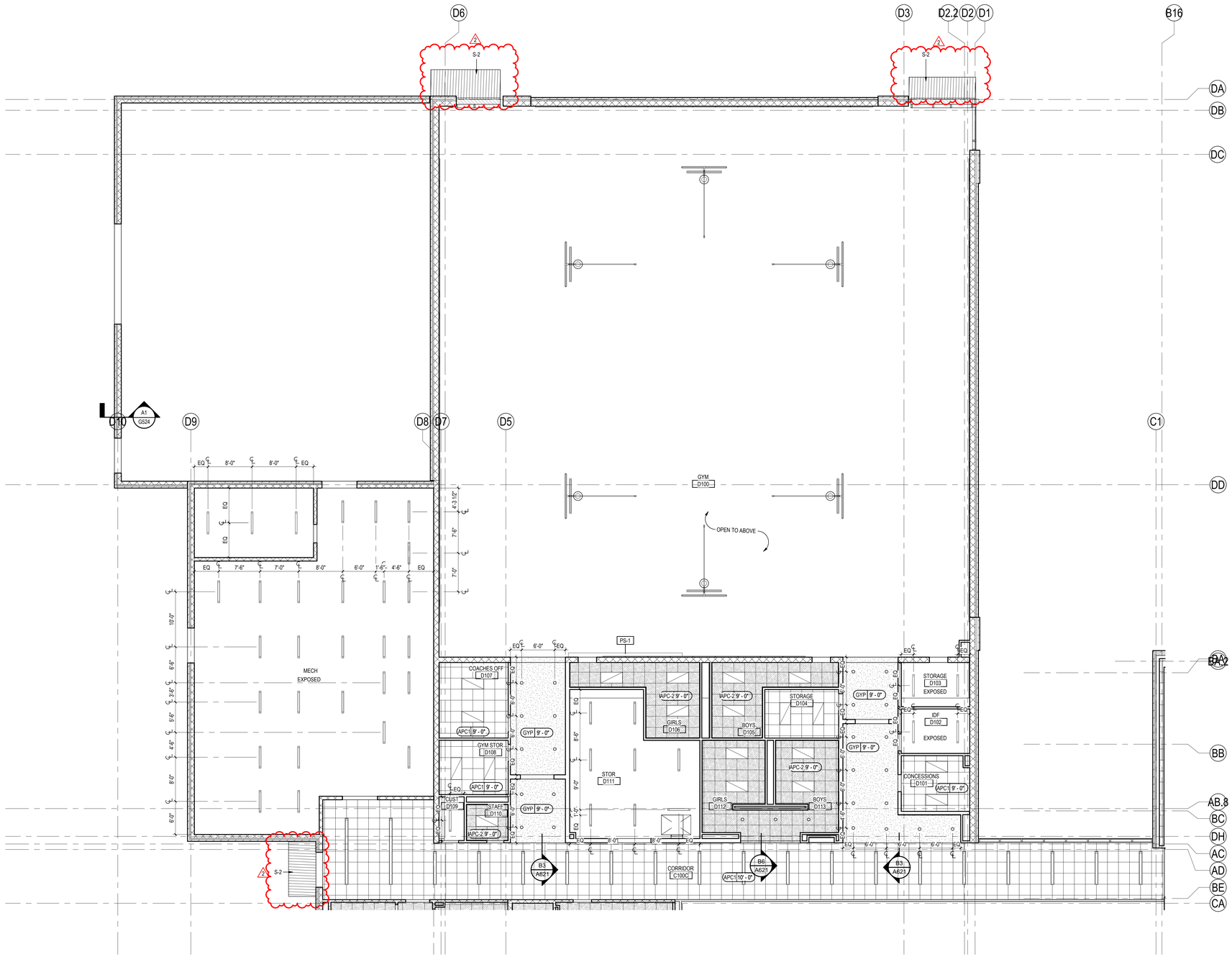
Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
LEVEL 1 CEILING PLAN - AREA C

Project No. 214001329	Scale 1/8" = 1'-0"
Revision 2	Drawing No. A121C

ORIGINAL SHEET - ARCH E1



CEILING LEGEND:

- 2'-0"x2'-0" ACOUSTIC PANEL CEILING SYSTEM. REFER TO RCP FOR TYPE AND HEIGHT, TYP
- 2'-0"x2'-0" VINYL FACED GYPSUM BOARD PANEL CEILING. REFER TO RCP FOR TYPE AND HEIGHT, TYP
- GYPSUM BOARD - PAINTED
- EXPOSED STRUCTURE
- AB-1 SUSPENDED CEILING BAFFLES
- SUSPENDED CEILING CLOUDS
- XX | XX — ELEVATION TYPE & HEIGHT SYMBOL INDICATES HEIGHT OF ELEMENT ABOVE DATUM LEVEL
- RECESSED TROFFER 2' X 4' LIGHT FIXTURE REF ELEC. DOC
- RECESSED LINEAR LIGHT FIXTURE REF ELEC. DOC
- RECESSED LINEAR LIGHT FIXTURE REF ELEC. DOC
- CHAIN HUNG LINEAR LIGHT FIXTURE, 11' AFF REF ELEC. DOC
- PENDANT LINEAR LIGHT FIXTURE, 21' AFF REF ELEC. DOC
- HIGH BAY PENDANT LIGHT FIXTURE, SUSPENDED 5' REF ELEC. DOC
- PENDANT CYLINDER LIGHT FIXTURE REF ELEC. DOC
- SUSPENDED WAVE LIGHT FIXTURE, 11' AFF REF ELEC. DOC
- COVE LIGHT FIXTURE REF ELEC. DOC
- RECESSED CAN LIGHT FIXTURE REF ELEC. DOC
- DF-1, PYRAMID DIFFUSER PANEL

A6
A121D

LEVEL 1 CEILING PLAN - AREA D

1/8" = 1'-0"

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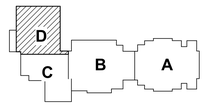
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PROJECT NORTH

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Revision		By	Appd	YYYY.MM.DD
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Issued		By	Appd	YYYY.MM.DD

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03/10/2026

Client/Project Logo

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Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
LEVEL 1 CEILING PLAN - AREA D

Project No.
214001329

Scale
1/8" = 1'-0"

Revision
2

Drawing No.
A121D

*Pick location in Project Information
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ORIGINAL SHEET - ARCH E1



CEILING LEGEND:

- 2'-0"x2'-0" ACOUSTIC PANEL CEILING SYSTEM. REFER TO RCP FOR TYPE AND HEIGHT, TYP
- 2'-0"x2'-0" VINYL FACED GYPSUM BOARD PANEL CEILING. REFER TO RCP FOR TYPE AND HEIGHT, TYP
- GYPSUM BOARD - PAINTED
- EXPOSED STRUCTURE
- SUSPENDED CEILING BAFFLES
- SUSPENDED CEILING CLOUDS
- XX | XX — ELEVATION TYPE & HEIGHT SYMBOL INDICATES HEIGHT OF ELEMENT ABOVE DATUM LEVEL
- SPECIALTY RECESSED 2' X 4' LIGHT FIXTURE REF MEP DOC
- STANDARD RECESSED 2' X 4' LIGHT FIXTURE REF MEP DOC
- STANDARD RECESSED 2' X 2' LIGHT FIXTURE REF MEP DOC
- RECESSED LINEAR LIGHT FIXTURE REF MEP DOC
- PENDANT LINEAR LIGHT FIXTURE REF MEP DOC
- PENDANT CYLINDER LIGHT FIXTURE REF MEP DOC
- SUSPENDED WAVE LIGHT FIXTURE REF MEP DOC
- COVE LIGHT FIXTURE REF MEP DOC
- RECESSED CAN LIGHT FIXTURE REF MEP DOC

A6 A122A
LEVEL 2 CEILING PLAN - AREA A
1/8" = 1'-0"

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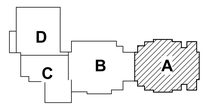
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KEY PLAN



PROJECT NORTH

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd	YYYY.MM.DD
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Issued		By	Appd	YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT · ERIN J SHEED · 33796 · STATE OF TEXAS
03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
LEVEL 2 CEILING PLAN - AREA A

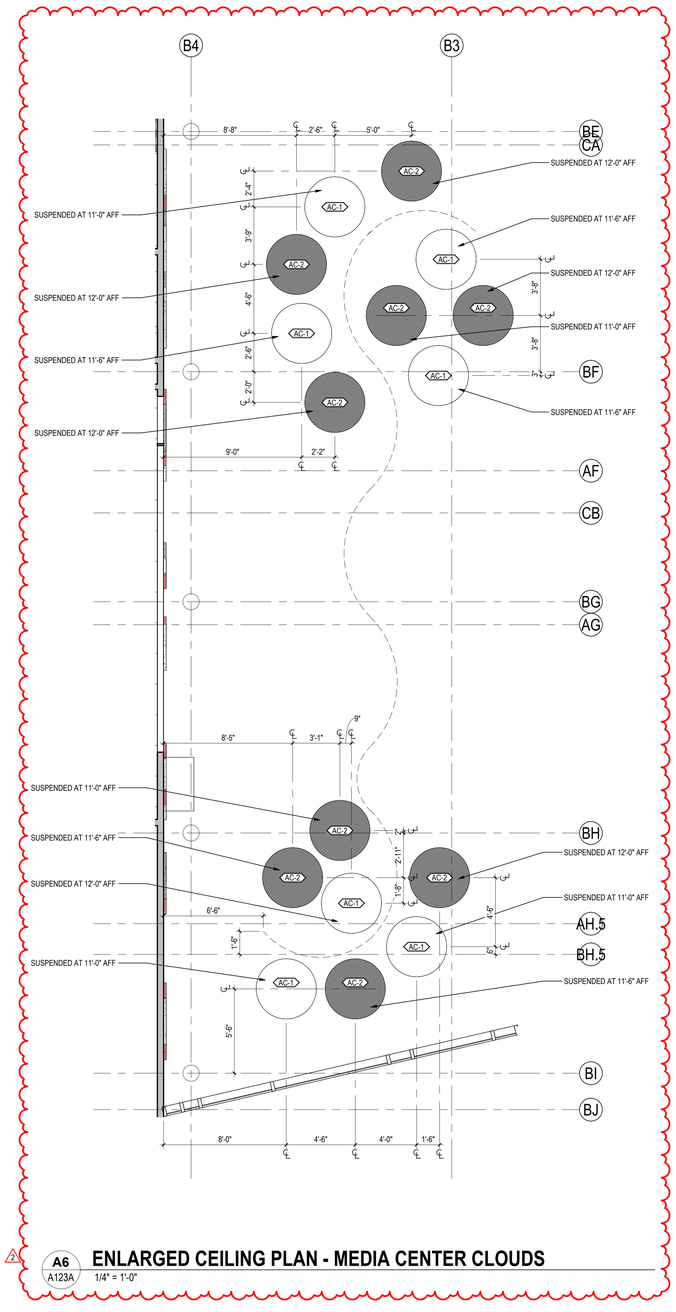
Project No.
214001329

Scale
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Revision
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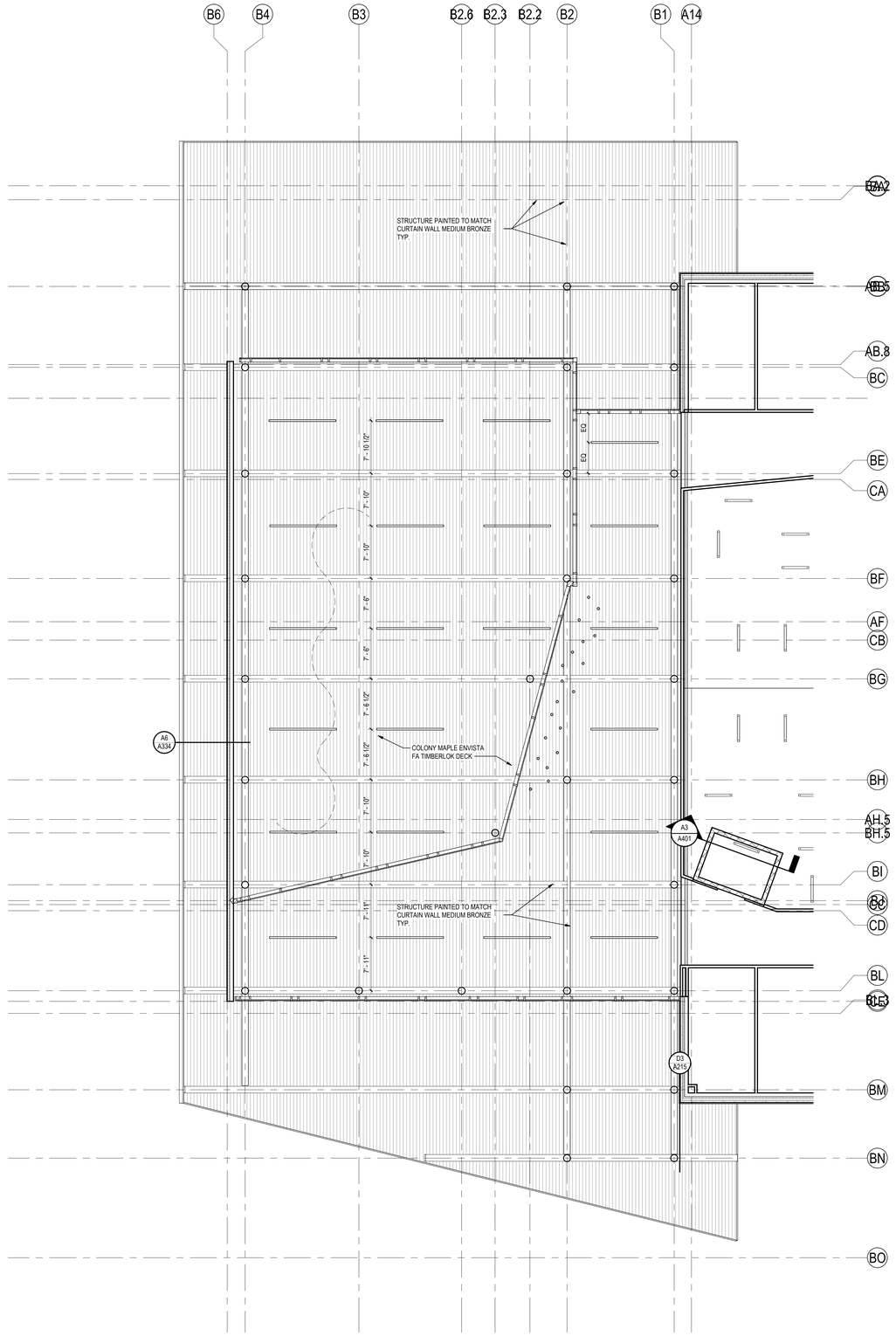
Drawing No.
A122A

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ORIGINAL SHEET - ARCH E1



A6 / A123A — **ENLARGED CEILING PLAN - MEDIA CENTER CLOUDS**

1/4" = 1'-0"



A3 / A123A — **MEDIA HIGH ROOF**

1/8" = 1'-0"

CEILING LEGEND:

- 2'-0"x2'-0" ACOUSTIC PANEL CEILING SYSTEM. REFER TO RCP FOR TYPE AND HEIGHT, TYP
- 2'-0"x2'-0" VINYL FACED GYPSUM BOARD PANEL CEILING. REFER TO RCP FOR TYPE AND HEIGHT, TYP
- GYPSUM BOARD - PAINTED
- EXPOSED STRUCTURE
- EXPOSED DECK
- SUSPENDED CEILING BAFFLES
- SUSPENDED CEILING CLOUDS
- XX | XX — ELEVATION TYPE & HEIGHT SYMBOL, INDICATES HEIGHT OF ELEMENT ABOVE DATUM LEVEL
- SPECIALTY RECESSED 2' X 4' LIGHT FIXTURE REF MEP DOC
- STANDARD RECESSED 2' X 4' LIGHT FIXTURE REF MEP DOC
- STANDARD RECESSED 2' X 2' LIGHT FIXTURE REF MEP DOC
- RECESSED LINEAR LIGHT FIXTURE REF MEP DOC
- PENDANT LINEAR LIGHT FIXTURE REF MEP DOC
- PENDANT CYLINDER LIGHT FIXTURE REF MEP DOC
- SUSPENDED WAVE LIGHT FIXTURE REF MEP DOC
- COVE LIGHT FIXTURE REF MEP DOC
- RECESSED CAN LIGHT FIXTURE REF MEP DOC

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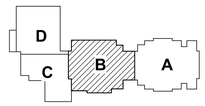
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Issued		By	Appd	YYYY.MM.DD

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03/10/2026

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Client/Project
Crosby ISD

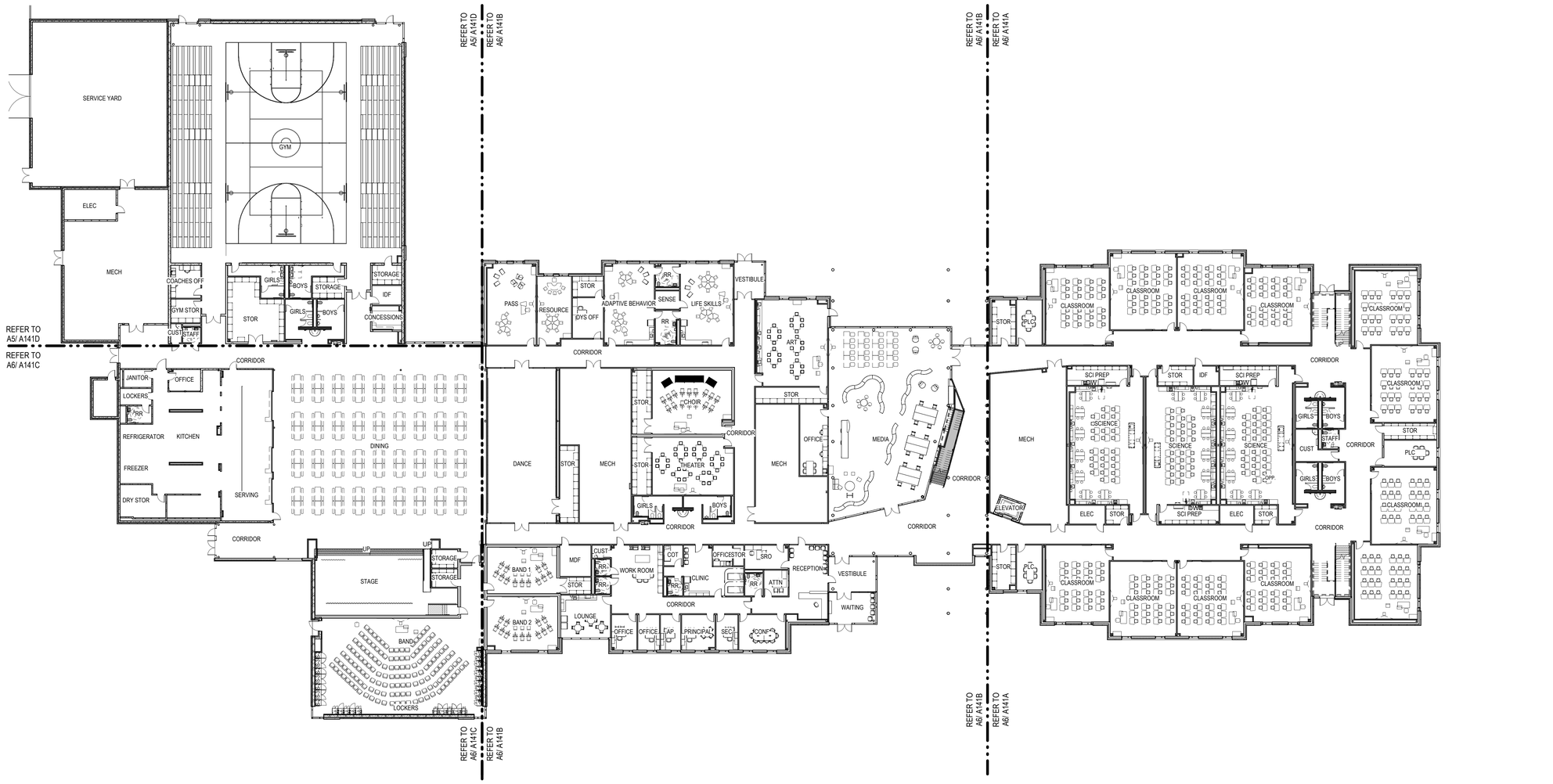
Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
LEVEL 2 CEILING PLAN - MEDIA CENTER HIGH CEILING

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	A123A

ORIGINAL SHEET - ARCH E1



A6 A141 **FURNITURE PLAN - LEVEL 1 - OVERALL**

1" = 20'-0"

SEE A141C PLAN SHEET FOR LOCATIONS

ALL CABINETS TO BE INDIVIDUAL COMPARTMENT, STRAIGHT GRILLE DOORS. LAMINATE, EDGE BANDING, HARDWARE/FASTENERS/EXTRUSION TO BE OYSTER FINISH

TYPE	MANUFACTURER	INFORMATION
IS-1	WENGER CORPORATION	ULTRASTOR #4
IS-2	WENGER CORPORATION	ULTRASTOR #10
IS-3	WENGER CORPORATION	ULTRASTOR #15
IS-4	WENGER CORPORATION	ULTRASTOR #23

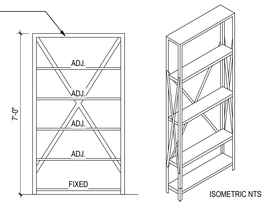
E4 A141 **INSTRUMENT STORAGE LEGEND**

3/8" = 1'-0"

BRACE METAL SHELVING TO WALL

SEE A8 PLAN SHEETS FOR LOCATIONS

TYPE	SIZE
MS-1	36"x84"x24"
MS-2	36"x84"x18"
MS-3	36"x84"x12"



ISOMETRIC NTS

A2 A141 **METAL SHELVING LEGEND**

3/8" = 1'-0"

Stantec

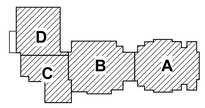
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PROJECT NORTH

2	ADDENDUM #4		2026.03.11
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Client/Project

Crosby ISD

Crosby Sixth Grade Campus

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Crosby, TX 77532

Title

LEVEL 1 EQUIPMENT AND FURNISHING PLAN - OVERALL

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	**A141**

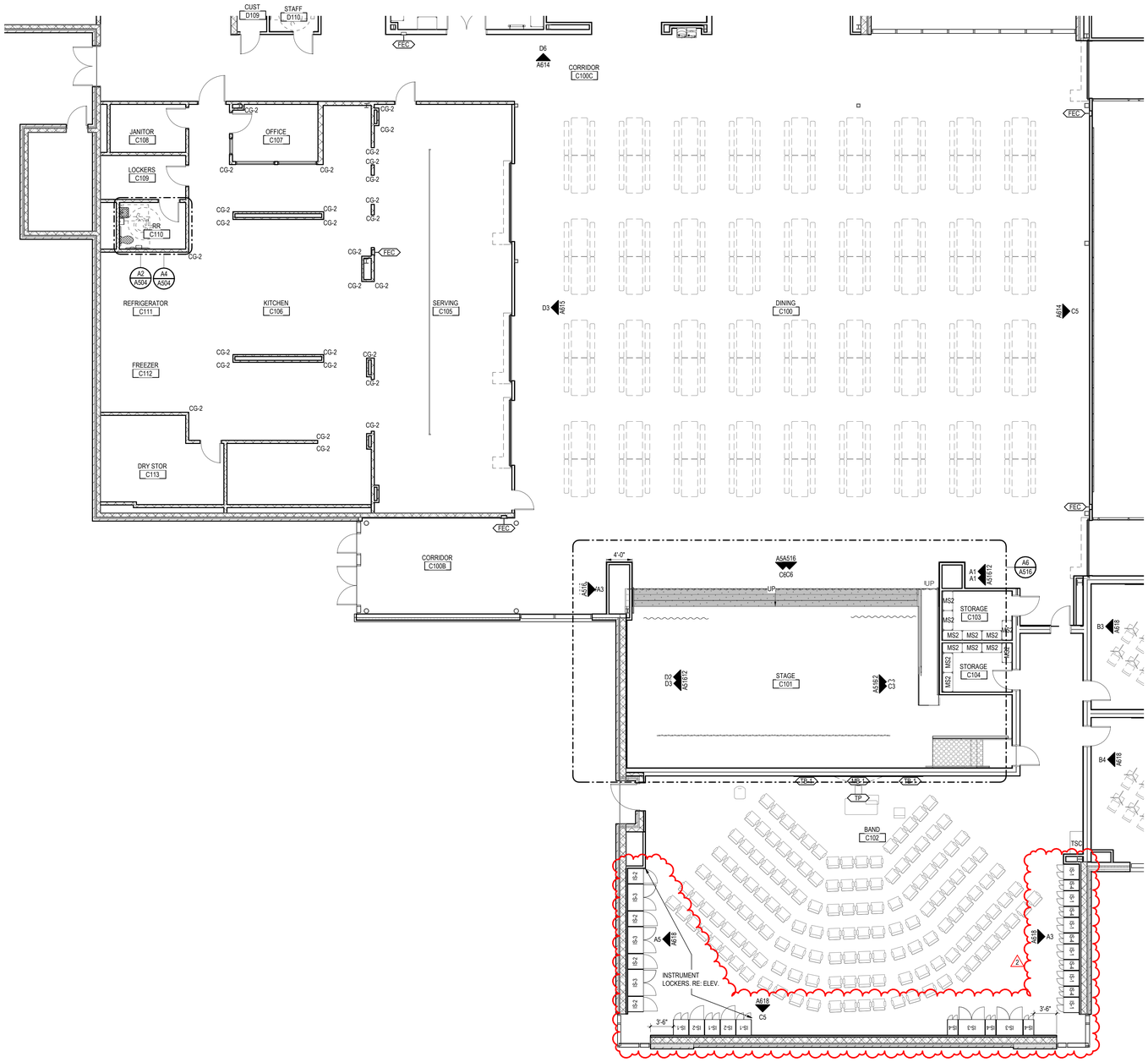
ORIGINAL SHEET - ARCH E1

OWNER FURNISHED OWNER INSTALLED	
Type Mark	Description
CPY	FLOOR COPIER
R	REFRIGERATOR

OWNER FURNISHED CONTRACTOR INSTALLED	
Type Mark	Description
MW	MICROWAVE
PTD	PAPER TOWEL DISPENSER
SD	WALL MOUNTED SOAP DISPENSER
TP	SHORT THROW PROJECTOR

ABBREVIATION LEGEND

CCT: CLINIC CURTAIN AND TRACK
CFCI: CONTRACTOR FURNISHED/CONTRACTOR INSTALLED
CG: CORNER GUARD
CPY: FLOOR COPIER (OF/OI)
DW: DISHWASHER
FC: FLAMMABLE STORAGE CABINET (OF/CI)
FE: WALL MOUNTED FIRE EXTINGUISHER
FEC: FIRE EXTINGUISHER IN CABINET
FECB: FIRE EXTINGUISHER AND FIRE BLANKET IN CABINET
FP: FILLER PANEL
GC: GOGGLE CABINET
HD: HAND DRYER
HLB: HORIZONTAL LOUVER BLINDS
KS: KNEE SPACE
MB: MARKER BOARD
MS: METAL SHELVING
NIC: NOT IN CONTRACT
OFCI: OWNER FURNISHED/CONTRACTOR INSTALLED
OP HD: OPPOSITE HAND
PEG: PEGBOARD DRYING RACK
PTD: PAPER TOWEL DISPENSER (OF/CI)
R: REFRIGERATOR (OF/OI)
RS: ROLLER SHADES
SIM: SIMILAR
SD: SOAP DISPENSER (OF/CI)
SS: SAFETY SHOWER
STB: SLIDING TACK BOARD
TB: TACK BOARD
TC: TEACHER'S CABINET
TP: THROW PROJECTOR
TSC: TALL STORAGE CABINET
TWC: TACKABLE WALL COVERING
WD: WASHER/DRYER



A6 A141C **FURNITURE PLAN - LEVEL 1 - AREA C**

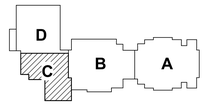
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KEY PLAN

PROJECT NORTH

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Revision		By	Appd	YYYY.MM.DD
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Issued		By	Appd	YYYY.MM.DD

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03/10/2026

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Crosby, TX 77532

Title
LEVEL 1 EQUIPMENT AND FURNISHING PLAN - AREA C

Project No.
214001329

Scale
As indicated

Revision
2

Drawing No.
A141C

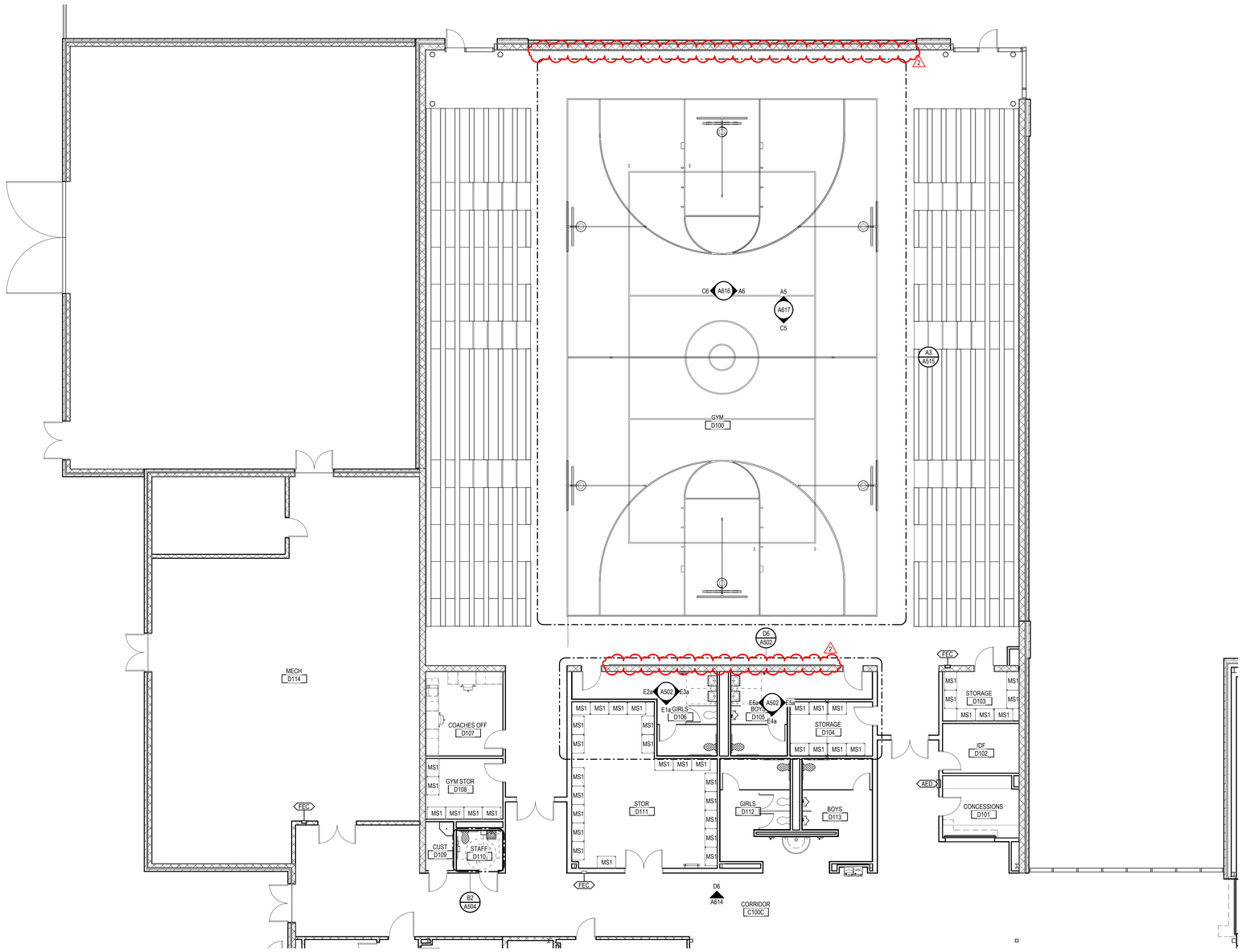
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ORIGINAL SHEET - ARCH E1

OWNER FURNISHED OWNER INSTALLED	
Type Mark	Description
CPY	FLOOR COPIER
R	REFRIGERATOR

OWNER FURNISHED CONTRACTOR INSTALLED	
Type Mark	Description
MW	MICROWAVE
PTD	PAPER TOWEL DISPENSER
SD	WALL MOUNTED SOAP DISPENSER
TP	SHORT THROW PROJECTOR

ABBREVIATION LEGEND

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FP: FILLER PANEL
GC: GOGGLE CABINET
HD: HAND DRYER
HLB: HORIZONTAL LOUVER BLINDS
KS: KNEE SPACE
MB: MARKER BOARD
MS: METAL SHELVING
NIC: NOT IN CONTRACT
OFCI: OWNER FURNISHED/CONTRACTOR INSTALLED
OP HD: OPPOSITE HAND
PEG: PEGBOARD DRYING RACK
PTD: PAPER TOWEL DISPENSER (OF/CI)
R: REFRIGERATOR (OF/OI)
RS: ROLLER SHADES
SIM: SIMILAR
SD: SOAP DISPENSER (OF/CI)
SS: SAFETY SHOWER
STB: SLIDING TACK BOARD
TB: TACK BOARD
TC: TEACHER'S CABINET
TP: THROW PROJECTOR
TSC: TALL STORAGE CABINET
TWC: TACKABLE WALL COVERING
WD: WASHER/DRYER



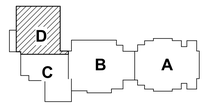
A5 / A141D **FURNITURE PLAN - LEVEL 1 - AREA D**
1/8" = 1'-0"

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KEY PLAN

PROJECT NORTH

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2 ADDENDUM #4			2026.03.11
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Issued			YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

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Client/Project
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Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
LEVEL 1 EQUIPMENT AND FURNISHING PLAN - AREA D

Project No.
214001329

Scale
As indicated

Revision
2

Drawing No.
A141D

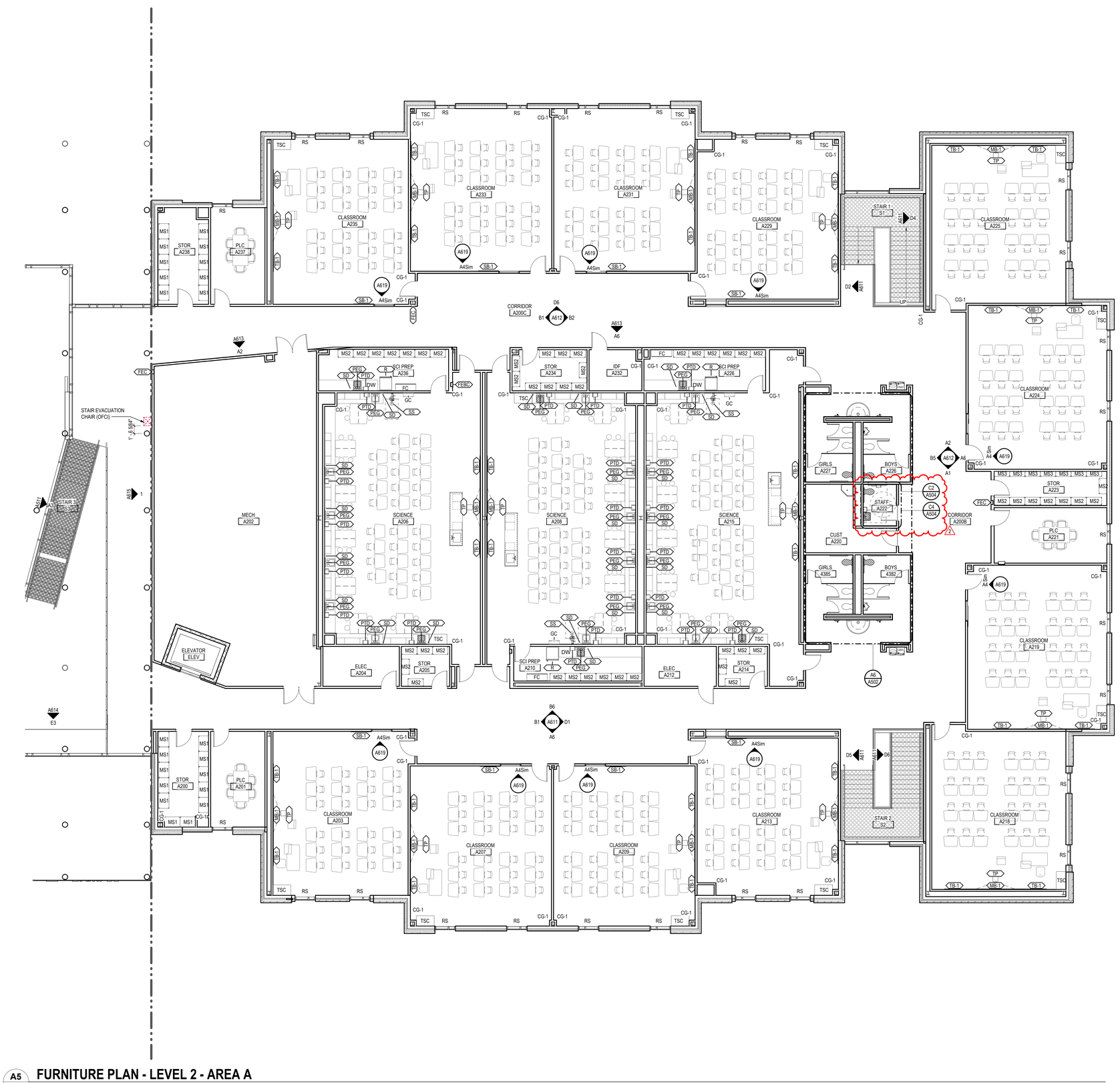
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ORIGINAL SHEET - ARCH E1

OWNER FURNISHED OWNER INSTALLED	
Type Mark	Description
CPY	FLOOR COPIER
R	REFRIGERATOR

OWNER FURNISHED CONTRACTOR INSTALLED	
Type Mark	Description
MW	MICROWAVE
PTD	PAPER TOWEL DISPENSER
SD	WALL MOUNTED SOAP DISPENSER
TP	SHORT THROW PROJECTOR

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DW: DISHWASHER
FC: FLAMMABLE STORAGE CABINET (OF/CI)
FE: WALL MOUNTED FIRE EXTINGUISHER
FEC: FIRE EXTINGUISHER IN CABINET
FECB: FIRE EXTINGUISHER AND FIRE BLANKET IN CABINET
FP: FILLER PANEL
GC: GOOGLE CABINET
HD: HAND DRYER
HLB: HORIZONTAL LOUVER BLINDS
KS: KNEE SPACE
MB: MARKER BOARD
MS: METAL SHELVING
NIC: NOT IN CONTRACT
OFCI: OWNER FURNISHED/CONTRACTOR INSTALLED
OP HD: OPPOSITE HAND
PEG: PEGBOARD DRYING RACK
PTD: PAPER TOWEL DISPENSER (OF/CI)
R: REFRIGERATOR (OF/OI)
RS: ROLLER SHADES
SIM: SIMILAR
SD: SOAP DISPENSER (OF/CI)
SS: SAFETY SHOWER
STB: SLIDING TACK BOARD
TB: TACK BOARD
TC: TEACHER'S CABINET
TP: THROW PROJECTOR
TSC: TALL STORAGE CABINET
TWC: TACKABLE WALL COVERING
W/D: WASHER/DRYER



A5 / A142A — **FURNITURE PLAN - LEVEL 2 - AREA A**
1/8" = 1'-0"

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Notes

KEY PLAN

PROJECT NORTH

Revision	By	Appd	
2 ADDENDUM #4			2026.03.11
1 ADDENDUM #3			2026.03.04

Issued	By	Appd	
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

Permit/Seal
REGISTERED ARCHITECT BRIN J SHEDD 23796 STATE OF TEXAS
03/10/2026

Client/Project Logo
Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
LEVEL 2 EQUIPMENT AND FURNISHING PLAN - AREA A

Project No.
214001329

Scale
As indicated

Revision
2

Drawing No.
A142A

*Plot location in Project Information
3/10/2026 2:45:00 PM
ORIGINAL SHEET - ARCH E1

MATERIAL SCHEDULE - EXTERIOR								
NAME	MARK	MANUFACTURER	COLOR	STYLE	REMARKS	E P D	H P D	REQ'D CLASS / TEST
ALUMINUM FRAMES	AL-1	KAWNEER	MEDIUM BRONZE	-	-			
BRICK	BK-1	UPCHURCH KIMBOROUGH	BURGUNDY	1/2 RUNNING BOND	MODULAR			
CONCRETE MASONRY UNIT	CMU-1	-	-	-	-			
GLAZING	GL-1	GUARDIAN	SNX 70+ CRYSTAL GRAY	-	VISION GLASS			
GLAZING	GL-2	GUARDIAN	SNX 70+ CRYSTAL GRAY		SPANDREL GLASS TO MATCH VISION			
MANUFACTURED STONE	MS-1	ARISCRAFT	SMOOTH OAK					
METAL PANEL	MP-1	BERRIDGE	VARIOUS, RE: A212	HS-8 & HR-4	VERTICAL STRIPED PANELS			NFPA 285
METAL PANEL	MP-2	BERRIDGE	DEEP RED	FW-12 (NO GROOVES)	ACCENT METAL			NFPA 285
METAL SOFFIT	S-1	HUNTER DOUGLAS	FONTHILL CHERRY, 8422	150F	WOOD LOOK			
METAL SOFFIT	S-2	BERRIDGE	MEDIUME BRONZE	FW-12				
METAL TRIM	MT-1	BERRIDGE	MEDIUM BRONZE		ROOF EDGE TRIM			
MORTAR	-	-	-	-	-			

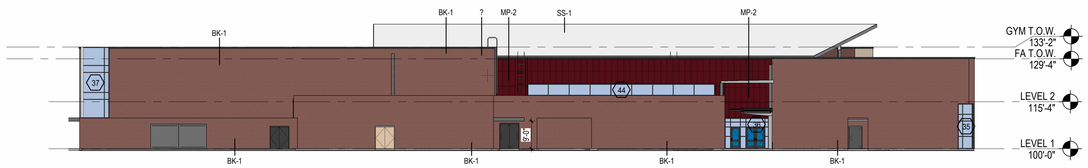
GENERAL NOTES - EXTERIOR ELEVATIONS:

1. PROVIDE MEJs (MASONRY EXPANSION JOINTS) AT LOCATIONS AS SHOWN. FOR LOCATIONS NOT SHOWN, PROVIDE JOINTS 3' - 4" FROM OUTSIDE CORNERS AND SPACED MAX. 20' - 0" O.C.
2. REFER TO SHEET A601 FOR ADDITIONAL EXTERIOR FINISHES AND FINISH NOTES.
3. REFER TO ROOF PLAN A151 FOR DOWNSPOUT, GUTTER EJ, SCUPPER, AND LADDER LOCATIONS.
4. CONTINUE MASONRY ACCENT SCHEME AT ALL EXT WALLS, INCLUDING AT ENTRIES, COLUMNS, AND WALLS NOT SHOWN ON ELEVATIONS.

GENERAL NOTES - EXTERIOR FINISH AND COLOR SCHEDULE:

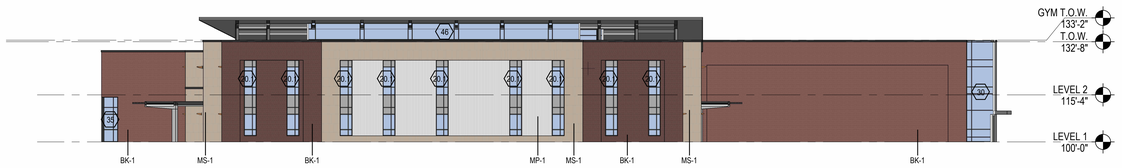
1. MANUFACTURERS NAMES AND IDENTIFICATION NUMBERS ARE LISTED AS A MEANS OF ESTABLISHING A STANDARD OF TYPE, FUNCTION, COLOR, AND QUALITY. REFER TO PROJECT MANUAL FOR ADDITIONAL MANUFACTURERS & PROCEDURES.
2. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT A SAMPLE OF ALL MATERIALS FOR APPROVAL BEFORE MATERIALS ARE APPLIED ON THE JOB.
3. TERMINATE ALL ACCENT PAINTS & VINYL WALL COVERING ON INSIDE CORNERS ONLY UNLESS OTHERWISE INDICATED.
4. PAINT ALL EXTERIOR EXPOSED PIPING. VERIFY COLOR W/ ARCHITECT.
5. ALL EXTERIOR STEEL LINTELS SHALL BE PAINTED TO MATCH ADJACENT BRICK.
6. ALL FLAGPOLES TO HAVE CLEAR ANODIZED FINISH, (UON).
7. ALL ALUM. WINDOWS & DOOR FRAMES SHALL BE CLEAR ANODIZED; EXTERIOR GLAZING TO BE ACCORDING TO MANUFACTURER PPG "AZURIA" INSULATION GLASS, TYP.
8. ALL EXTERIOR METAL SHALL BE FINISHED AS FOLLOWS:

CLEAR ANNOD.	- ALUMINUM STOREFRONT, ALUMINUM WINDOWS
PM	- COPING, AND FLASHING NOTED ON THE DRAWINGS.
PM	- ALL UNDESIGNATED PRE-FINISHED METAL
PM	- PRE-FINISHED LOUVERS
PM	- GUTTERS, DOWNSPOUTS, BRACKETS & D.S. BOOTS
CLEAR ANNOD.	- ALUMINUM HANDRAILS.
MATCH ADJ. WALL	- HOLLOW METAL DOORS, FRAMES AND STEEL HANDRAILS.
MATCH ADJ. WALL	- ALL EXPOSED COUNTER FLASHING, PIPE SUPPORTS AND OTHER MISC. FLASHING (U.O.N.).
PM	- ALL METAL BUILDING SIGNAGE.



D6 / A211 — **OVERALL ELEVATION EAST**
1" = 20'-0"

C6 / A211 — **OVERALL ELEVATION - SOUTH**
1" = 20'-0"



B6 / A211 — **OVERALL ELEVATION - WEST**
1" = 20'-0"



A6 / A211 — **OVERALL ELEVATION - NORTH1**
1" = 20'-0"

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Notes

Revision	By	Appd	YYYY.MM.DD
2 ADDENDUM #4			2026.03.11
1 ADDENDUM #3			2026.03.04

Issued	By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

Permit/Seal

REGISTERED ARCHITECT — BRIN J SHEDD — 33796 — STATE OF TEXAS

03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
EXTERIOR ELEVATIONS

Project No.
214001329

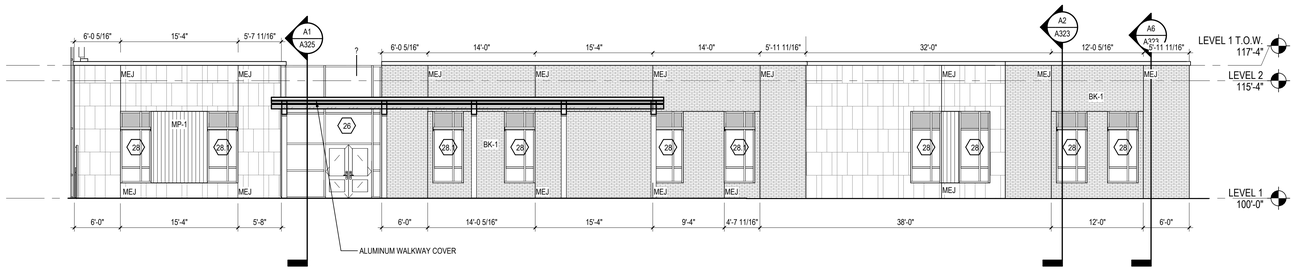
Scale
As indicated

Revision
2

Drawing No.
A211

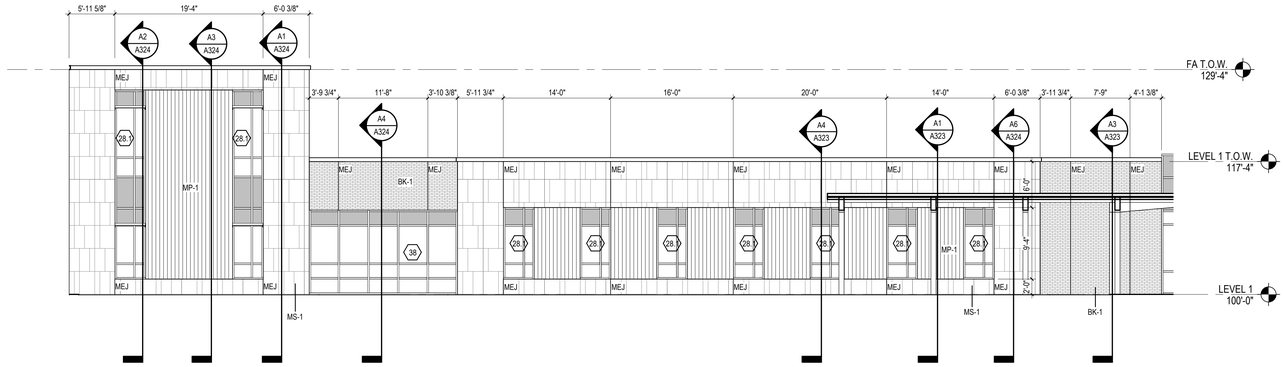
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ORIGINAL SHEET - ARCH E1



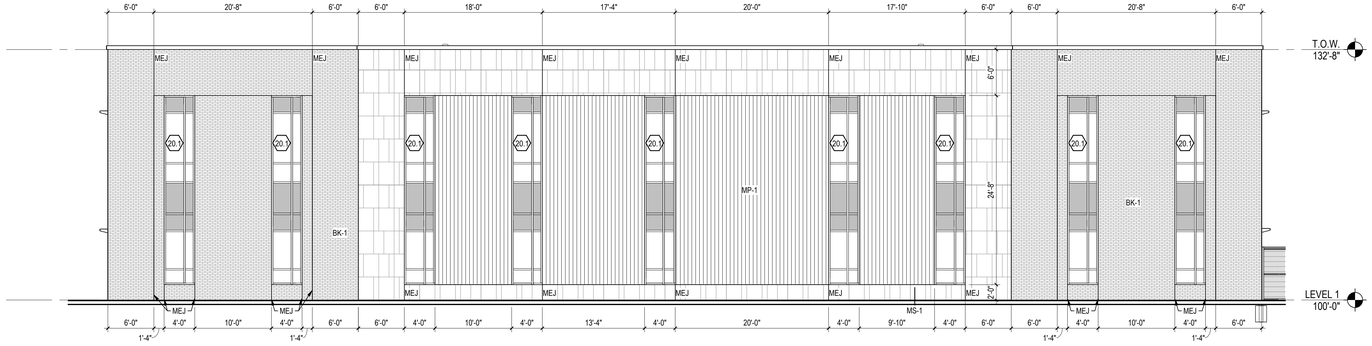
E6 A212 ENLARGED ELEVATION - AREA B - NORTH

1/8" = 1'-0"



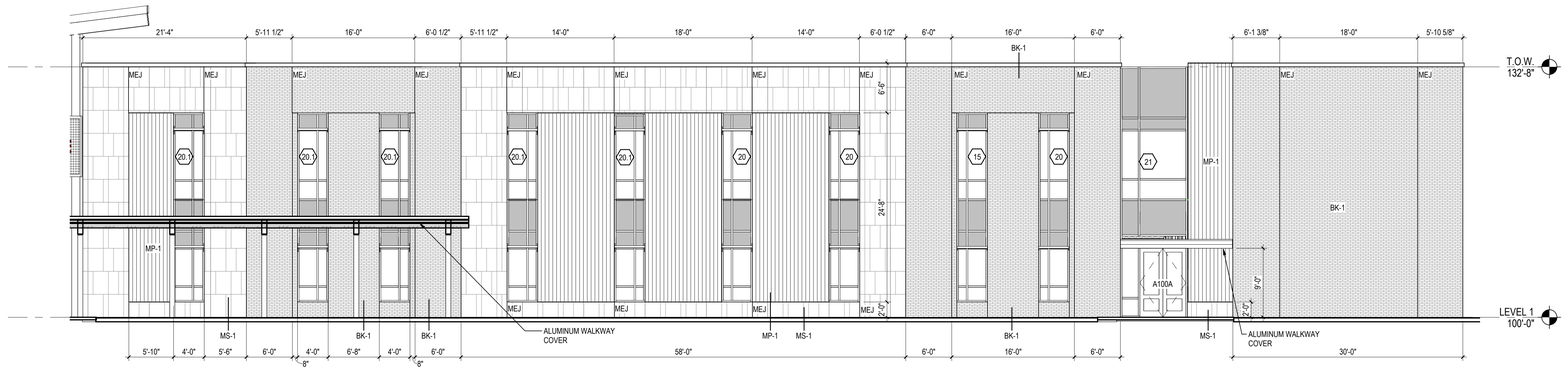
C5 A212 ENLARGED ELEVATION - AREA B - SOUTH

1/8" = 1'-0"



B6 A212 ENLARGED ELEVATION - AREA A - EAST

1/8" = 1'-0"



A6 A212 ENLARGED ELEVATION - AREA A - TYP.

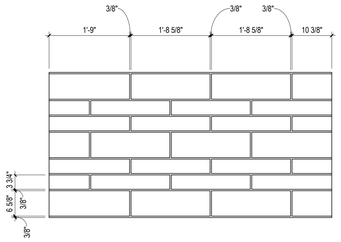
1/8" = 1'-0"

MATERIAL LEGEND

- BK-1 - MODULAR BRICK 1/2 RUNNING BOND
- MS-1 - MANUFACTURED STONE
- MP-1 - METAL PANEL SYSTEM
- MP-2 - METAL PANEL SYSTEM
- BOD: BERRIDGE FLAT PANEL FW-12 (W/O GROOVES), COLOR: DEEP RED

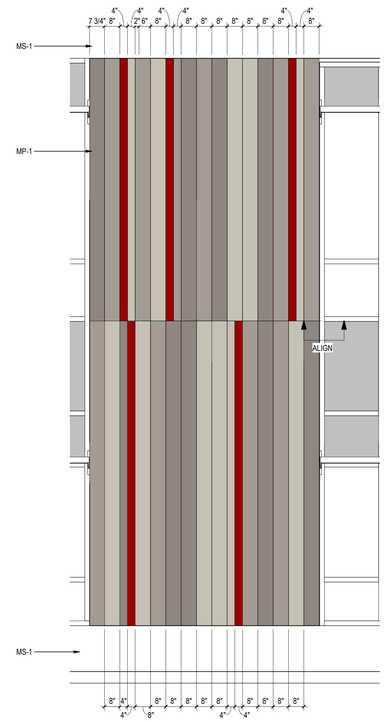
MP1 PATTERN LEGEND:

- BOD: BERRIDGE FLAT PANEL HS-8 AND HR-4, COLOR: PARCHMENT
- BOD: BERRIDGE FLAT PANEL HS-8 AND HR-4, COLOR: BUCKSKIN
- BOD: BERRIDGE FLAT PANEL HS-8 AND HR-4, COLOR: CHAMPAGNE
- BOD: BERRIDGE FLAT PANEL HR-4, COLOR: DEEP RED



C1 A212 MANUFACTURED STONE LAYOUT

3/4" = 1'-0"



A1 A212 ENLARGED METAL PANEL ELEVATION TYP

3/8" = 1'-0"

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Notes

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #3		2026.03.04
Revision		By	Appd YYYY.MM.DD
	ISSUE FOR PERMIT AND PROPOSAL		2026.01.26
Issued		By	Appd YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT ERIN J SHEDD 23796 STATE OF TEXAS
03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

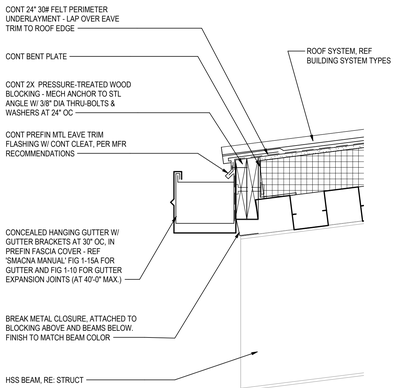
Crosby Sixth Grade Campus

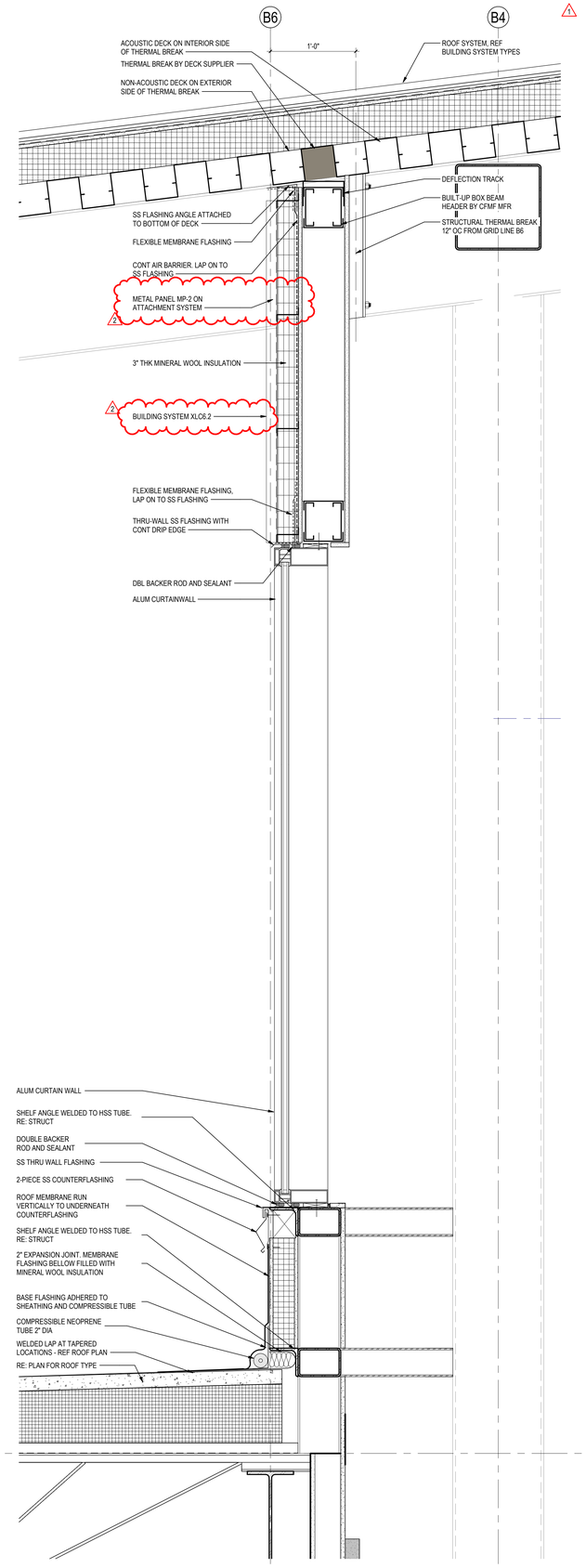
202 Red Summit Dr
Crosby, TX 77532

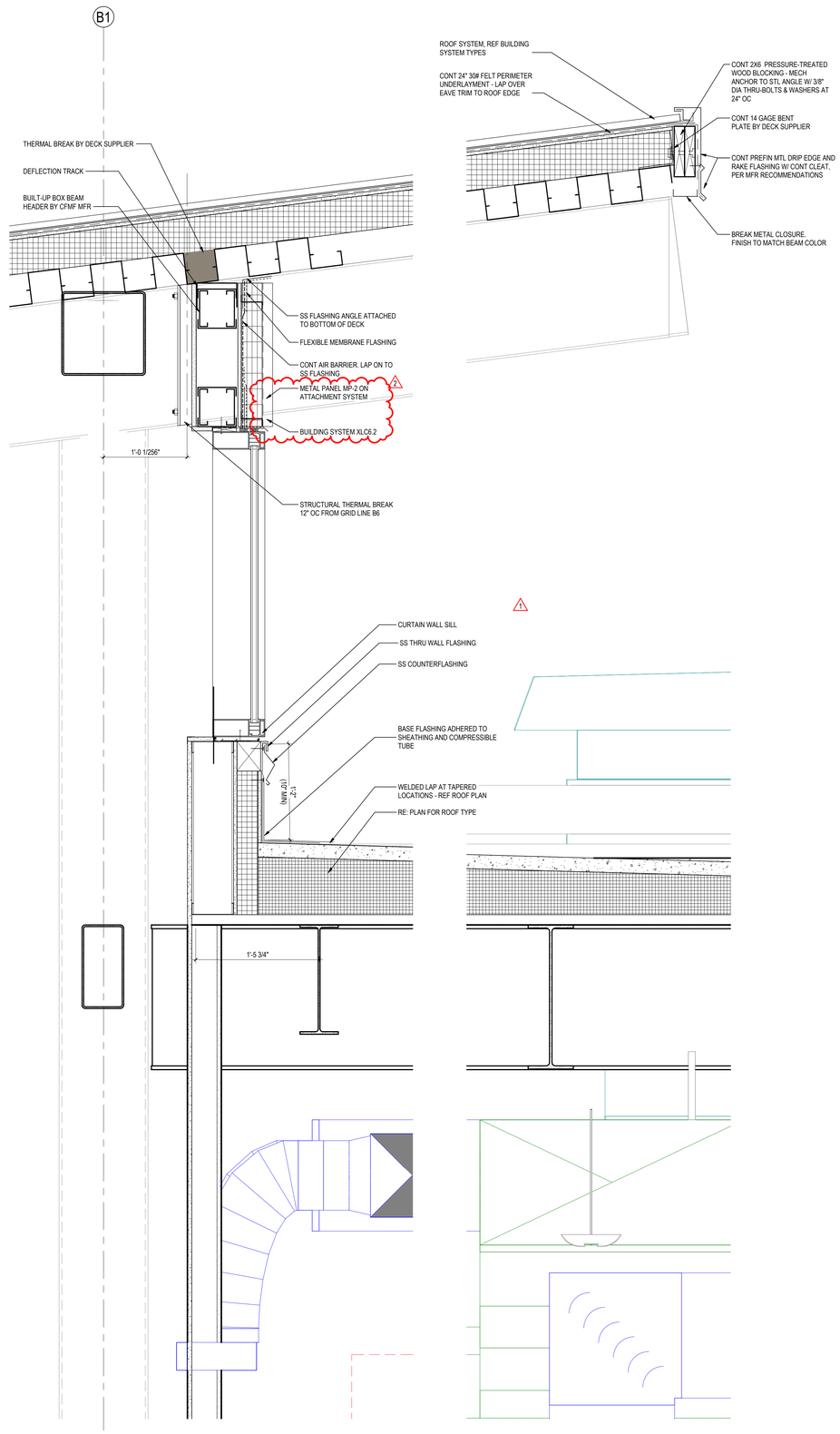
Title
ENLARGED ELEVATIONS

Project No. 214001329
Scale As indicated
Revision 2
Drawing No. **A212**

ORIGINAL SHEET - ARCH E1







A6 A334 **SECTION DETAIL - HIGH ROOF WEST**
1 1/2" = 1'-0"

A1 A334 **SECTION DETAIL - HIGH ROOF EAST**
1 1/2" = 1'-0"

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Notes

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd	YYYY.MM.DD
	ISSUE FOR PERMIT AND PROPOSAL		2026.01.26
Issued		By	Appd	YYYY.MM.DD

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REGISTERED ARCHITECT
ERIN J SHEDD
33796
STATE OF TEXAS
03/10/2026

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Crosby ISD

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Crosby, TX 77532

Title
EXTERIOR SECTION DETAILS

Project No.
214001329

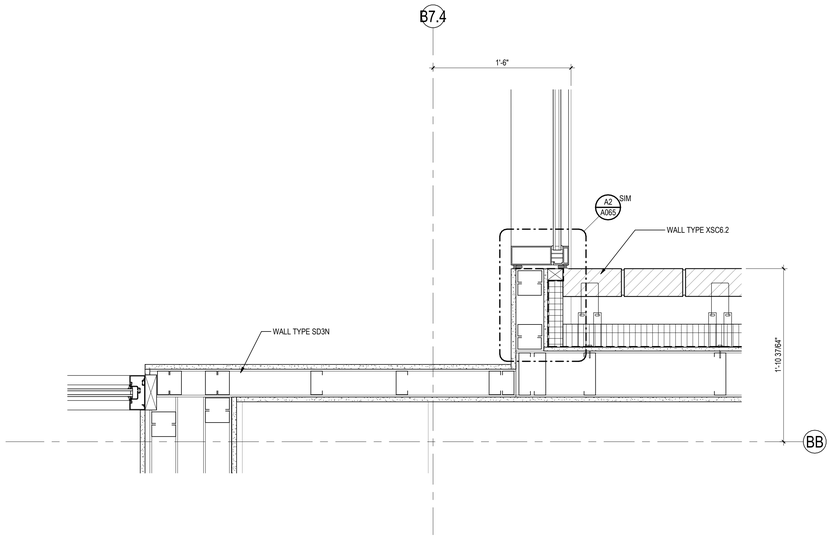
Scale
1 1/2" = 1'-0"

Revision
2

Drawing No.
A334

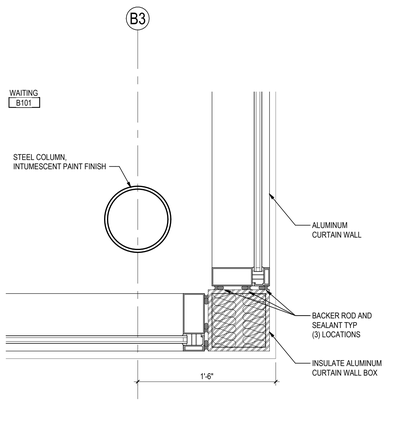
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ORIGINAL SHEET - ARCH E1



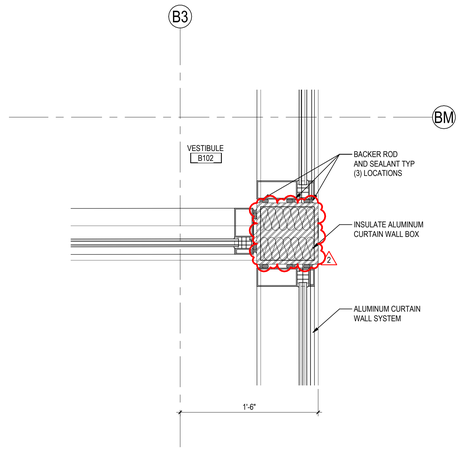
D2 PLAN DETAIL - MASONRY/ VESTIBULE/ GYP TRANSITION

A341 — 1 1/2" = 1'-0"



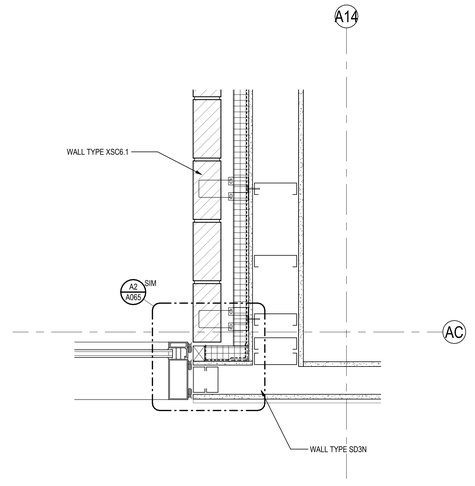
B6 PLAN DETAIL @ VESTIBULE CORNER

A341 — 1 1/2" = 1'-0"



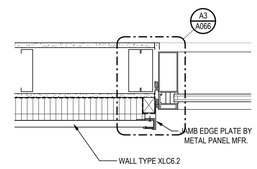
B5 PLAN DETAIL @ VESTIBULE

A341 — 1 1/2" = 1'-0"



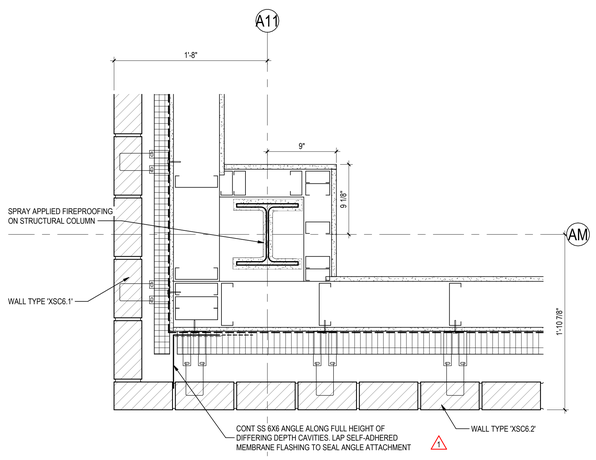
B3 PLAN DETAIL @ BRICK TO WINDOW JAMB

A341 — 1 1/2" = 1'-0"



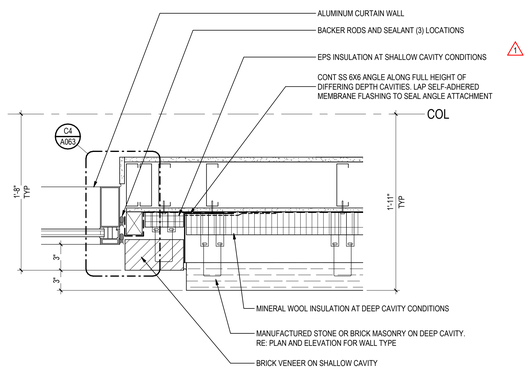
B2 PLAN DETAIL @ METAL PANEL TO WINDOW JAMB

A341 — 1 1/2" = 1'-0"



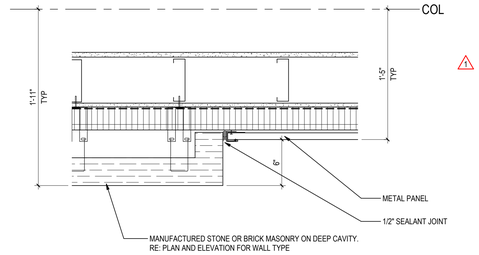
A6 PLAN DETAIL @ BRICK CORNER

A341 — 1 1/2" = 1'-0"



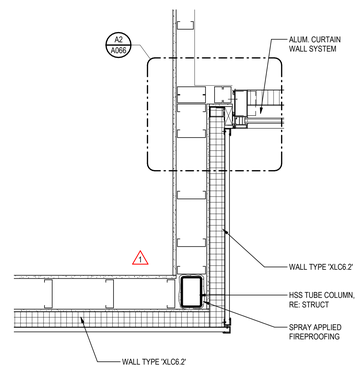
A5 PLAN DETAIL @ MASONRY - TYP

A341 — 1 1/2" = 1'-0"



A3 PLAN DETAIL @ BRICK TO METAL PANEL TYP

A341 — 1 1/2" = 1'-0"



A2 PLAN DETAIL @ METAL PANEL CORNER

A341 — 1" = 1'-0"

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Notes

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2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13

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	ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

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REGISTERED ARCHITECT
ERIN J SHEDD
43796
STATE OF TEXAS
03/10/2026

Client/Project Logo

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Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
EXTERIOR PLAN DETAILS

Project No.
214001329

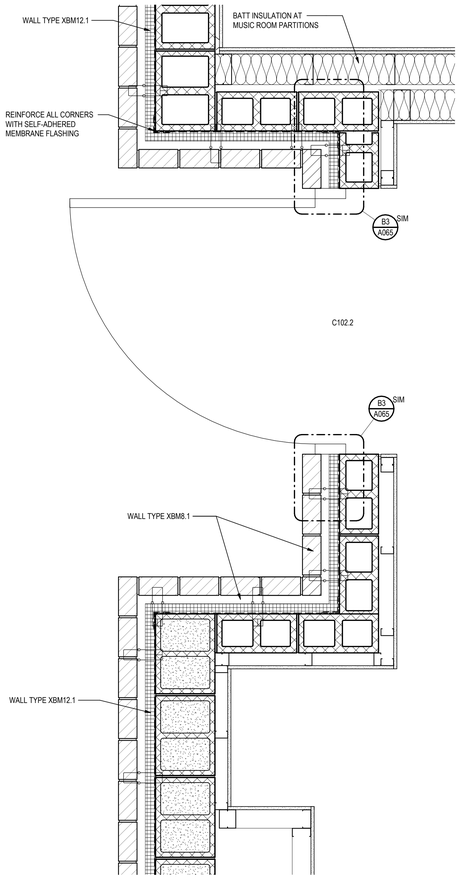
Scale
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Revision
2

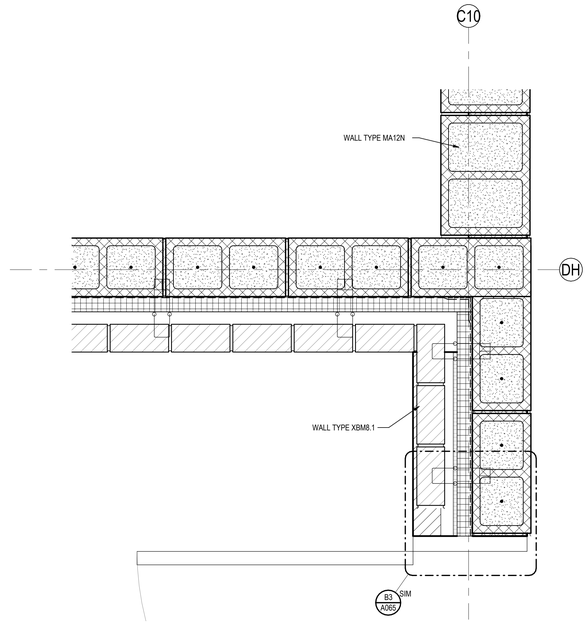
Drawing No.
A341

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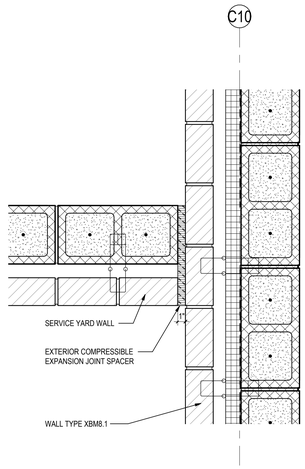
ORIGINAL SHEET - ARCH E1



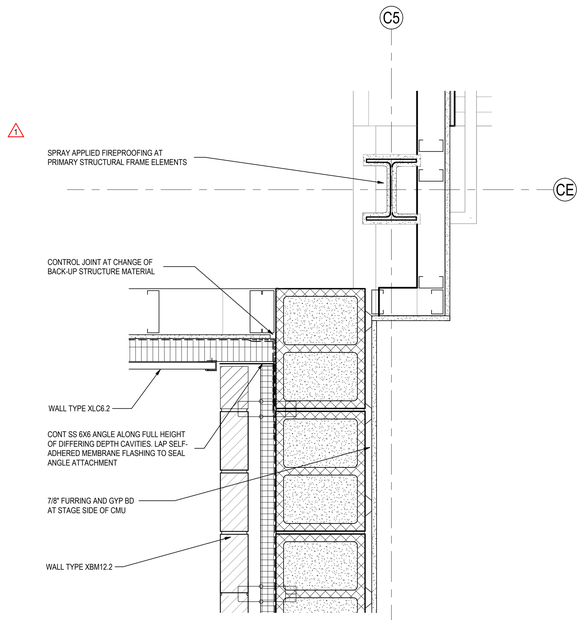
A6 A342 **ENLARGED PLAN - AREA C ENTRY**
1" = 1'-0"



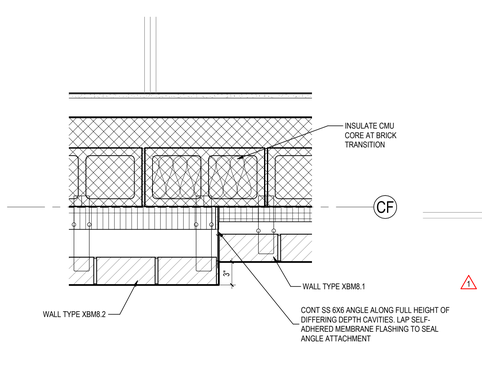
C5 A342 **PLAN DETAIL @ CMU/ MASONRY CORNER**
1 1/2" = 1'-0"



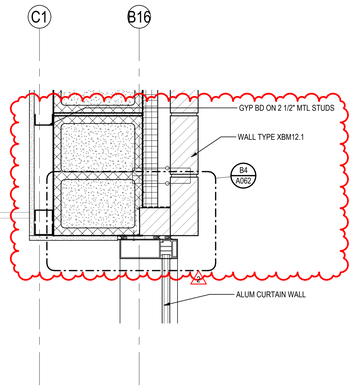
C3 A342 **PLAN DETAIL @ MASONRY FENCE**
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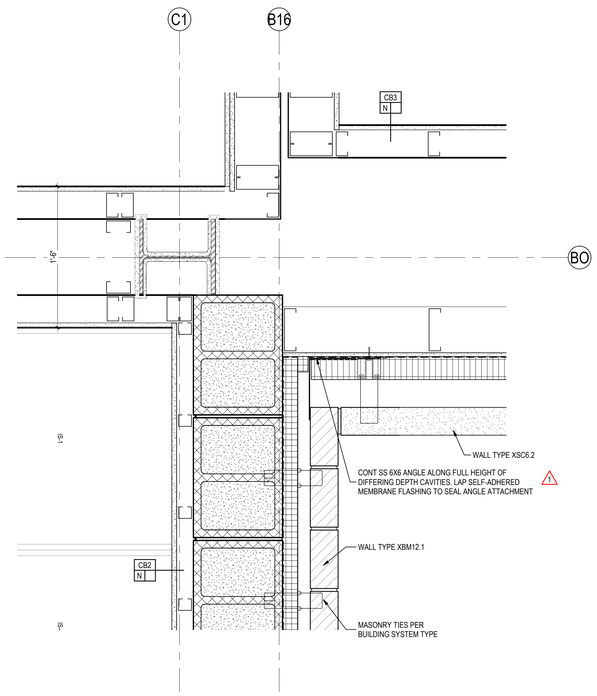
C2 A342 **PLAN DETAIL @ CMU/ CFMF MATERIAL CHANGE**
1 1/2" = 1'-0"



A4 A342 **PLAN DETAIL @ MASONRY STEP**
1 1/2" = 1'-0"



A3 A342 **PLAN DETAIL @ CMU MASONRY JAMB**
1 1/2" = 1'-0"



A2 A342 **PLAN DETAIL @ CMU/ CFMF CORNER**
1 1/2" = 1'-0"

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Notes

Revision	By	Appd	YYYY.MM.DD
2 ADDENDUM #4			2026.03.11
1 ADDENDUM #1			2026.02.13

Issued	By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

Permit/Seal

REGISTERED ARCHITECT ERIN J SHEDD 33796 STATE OF TEXAS
03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
EXTERIOR PLAN DETAILS

Project No.
214001329

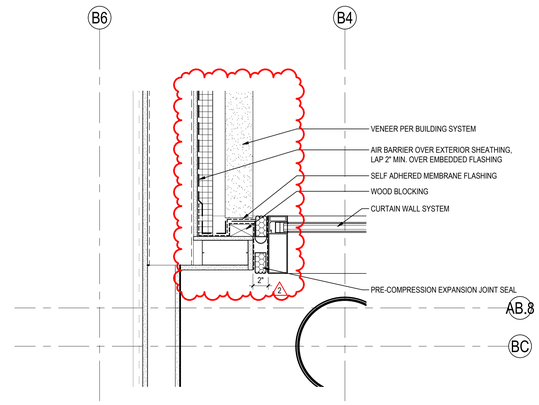
Scale
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Revision
2

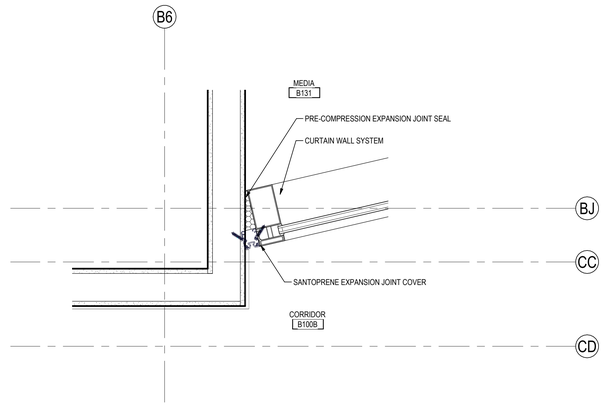
Drawing No.
A342

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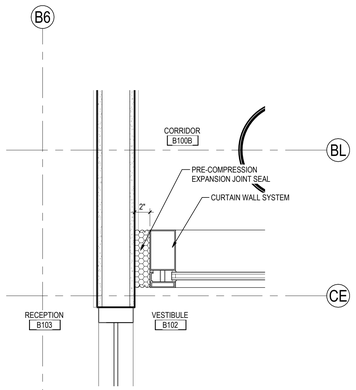
ORIGINAL SHEET - ARCH E1



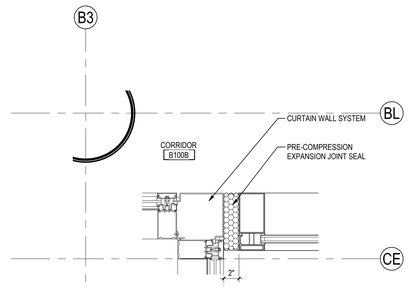
C4 / A343 **PLAN DETAIL - EXP JT @ CW NORTH**
1 1/2" = 1'-0"



B4 / A343 **PLAN DETAIL - EXP JT @ INT MEDIA CW**
1 1/2" = 1'-0"



A4 / A343 **PLAN DETAIL - EXP JT @ CW SOUTH**
1 1/2" = 1'-0"



A2 / A343 **PLAN DETAIL - EXP JT @ CW-SF INTERSECTION**
1 1/2" = 1'-0"

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2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT
ERIN J SHEED
23796
STATE OF TEXAS
03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
EXPANSION JOINT PLAN DETAILS

Project No.
214001329

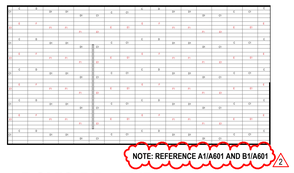
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Revision
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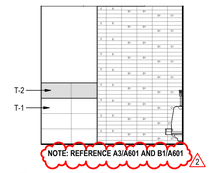
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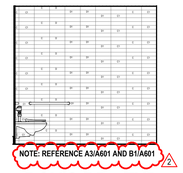
ORIGINAL SHEET - ARCH E1



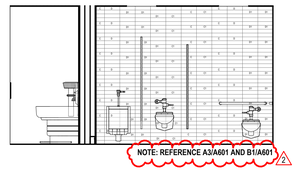
E6 A501 **BOY'S RR - TYP**
1/4" = 1'-0"



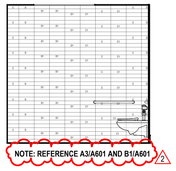
E5 A501 **BOY'S RR - TYP**
1/4" = 1'-0"



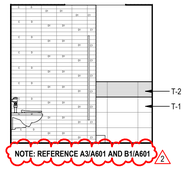
E4 A501 **BOY'S RR - TYP**
1/4" = 1'-0"



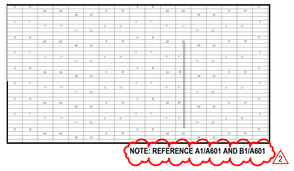
E4b A501 **BOY'S RR - TYP**
1/4" = 1'-0"



D6 A501 **GIRL'S RR - TYP**
1/4" = 1'-0"



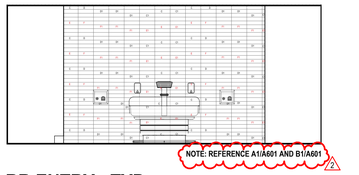
D5 A501 **GIRL'S RR - TYP**
1/4" = 1'-0"



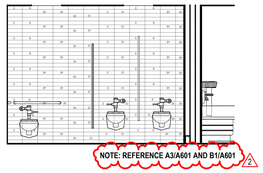
D4 A501 **GIRL'S RR - TYP**
1/4" = 1'-0"



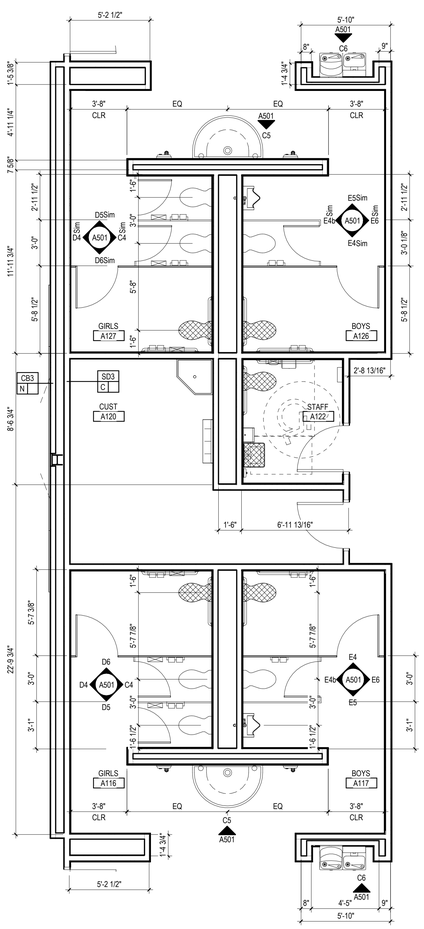
C6 A501 **WATER FOUNTAIN - TYP**
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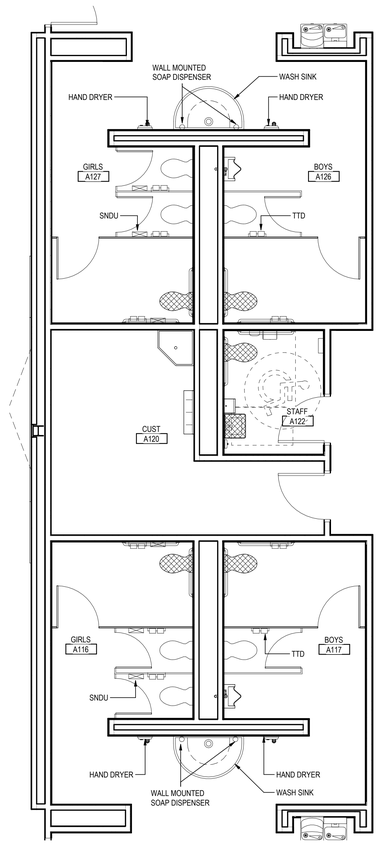
C5 A501 **RR ENTRY - TYP**
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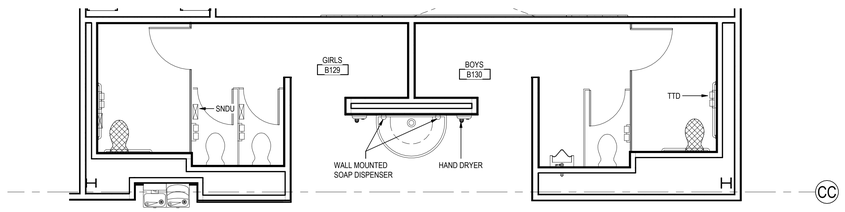
C4 A501 **GIRL'S RR - TYP**
1/4" = 1'-0"



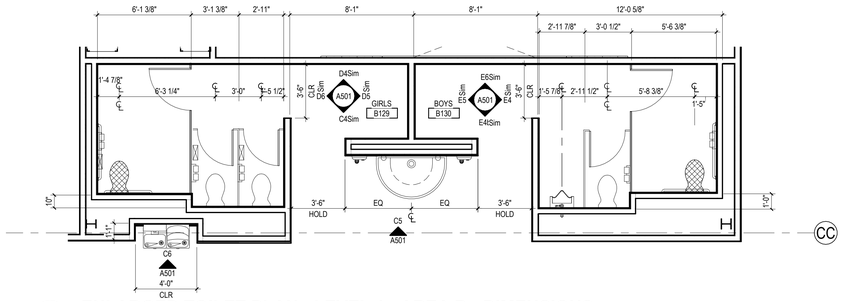
A6 A501 **ENLARGED TOILET PLAN - LEVEL 1 - AREA A - DIMENSIONS**
1/4" = 1'-0"



A4 A501 **ENLARGED TOILET PLAN - LEVEL 1 - AREA A - ACCESSORIES**
1/4" = 1'-0"



B3 A501 **ENLARGED TOILET PLAN - LEVEL 1 - AREA B - ACCESSORIES**
1/4" = 1'-0"



A3 A501 **ENLARGED TOILET PLAN - LEVEL 1 - AREA B - DIMENSIONS**
1/4" = 1'-0"

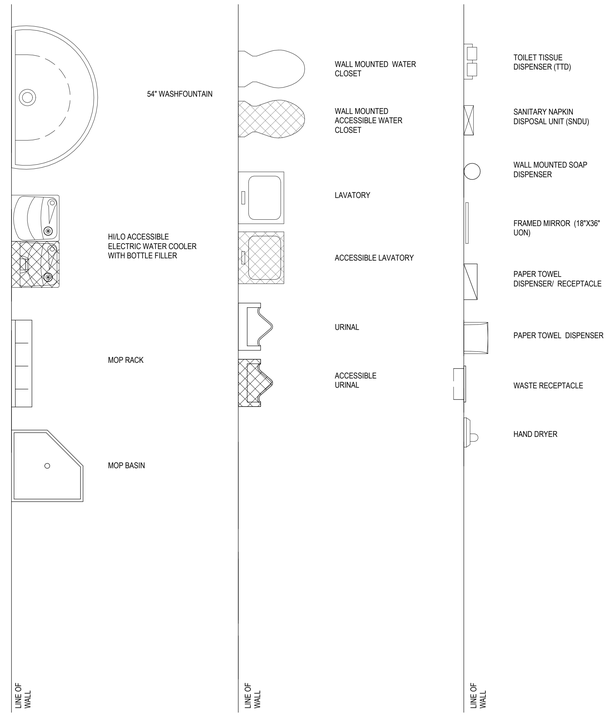
GENERAL NOTES - TOILET PLANS:

1. REFER TO A031 FOR PARTITION TYPES.
2. REFER TO A111 FOR ADDITIONAL GENERAL PLAN NOTES.
3. ALL TOILET ROOM WALLS TO GO TO DECK UNO.
4. PROVIDE ACOUSTICAL BATT INSULATION IN STUD CONSTRUCTION WALLS SURROUNDING TOILET ROOMS.
5. PROVIDE WALL MOUNTED DOOR STOPS IN RESTROOMS.
6. REFER TO A600's FOR INTERIOR FINISHES.
7. PROVIDE 90 DEGREE OUTSIDE CMU CORNERS BEHIND CERAMIC TILE WRAPPING AROUND OUTSIDE CORNERS.
8. TERMINATE CERAMIC TILE 2" SHORT OF CMU BULLNOSE CORNERS WHERE TILE FINISH STOPS AT OUTSIDE CORNERS.
9. EXTEND CERAMIC TILE UP TO AND AROUND MIRRORS ON WALLS WITH CERAMIC TILE WAINSCOT.

ACCESSORIES:

1. REFER TO SHEET A011 FOR TYPICAL TOILET ROOM 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
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.
5. MIRRORS MOUNTED WITHOUT SINKS OR CABINETS BELOW THEM SHALL BE FULL HEIGHT MIRRORS UON. LOCATE THE TOPS OF THESE MIRRORS (MEASURED FROM FLOOR TO TOP MOST EDGE) AT 74" AFF AND THE BOTTOMS OF MIRRORS AT 24" AFF (MEASURED FROM FLOOR TO BOTTOM OF REFLECTING SURFACE).
6. SHOWER CURTAIN RODS TO BE MOUNTED AT 80" AFF (MIN. - MEASURED TO BOTTOM OF ROD), UON.

TOILET & CUSTODIAL ROOM ACCESSORY LEGEND:



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Notes

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #3		2026.03.04
Revision		By	Appd YYYY.MM.DD
	ISSUE FOR PERMIT AND PROPOSAL		2026.01.26
Issued		By	Appd YYYY.MM.DD

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Client/Project Logo

Crosby Independent School District

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Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ENLARGED TOILET ROOMS & ELEVATIONS

Project No.
214001329

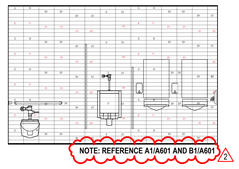
Scale
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Revision
2

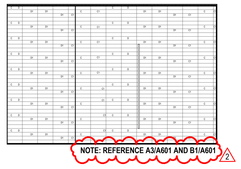
Drawing No.
A501

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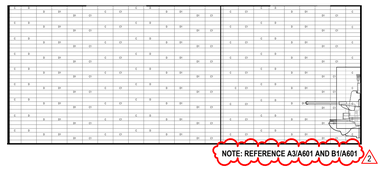
ORIGINAL SHEET - ARCH E1



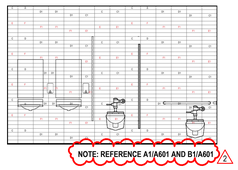
E6a A502 **BOY'S RR D105 - W**
1/4" = 1'-0"



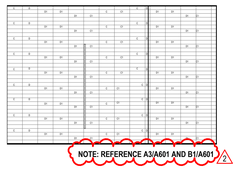
E5a A502 **BOY'S RR D105 - E**
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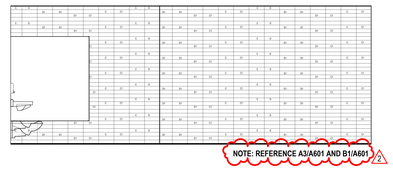
E4a A502 **BOY'S RR D105 - S**
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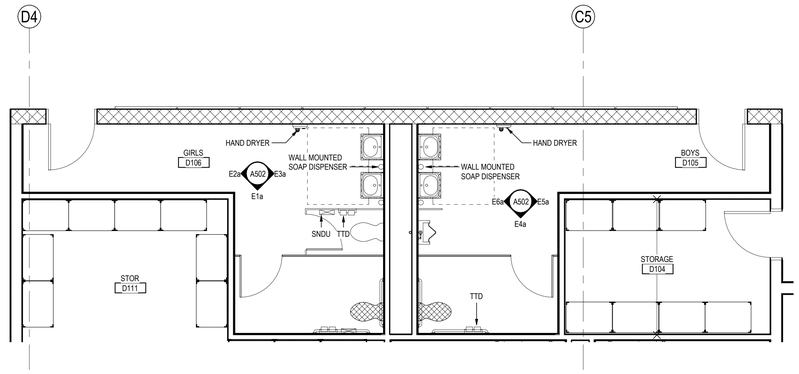
E3a A502 **GIRL'S RR D106 - E**
1/4" = 1'-0"



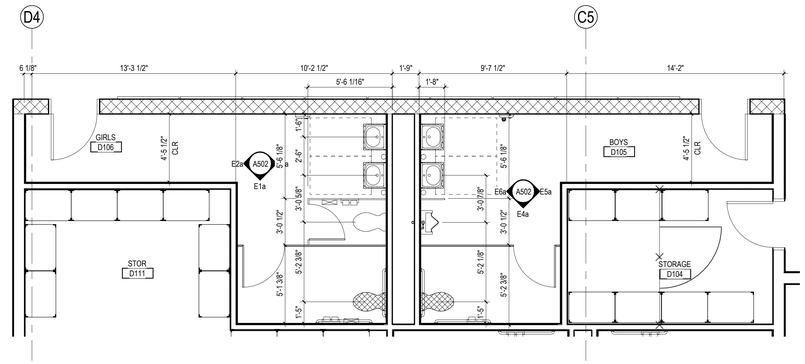
E2a A502 **GIRL'S RR D106 - W**
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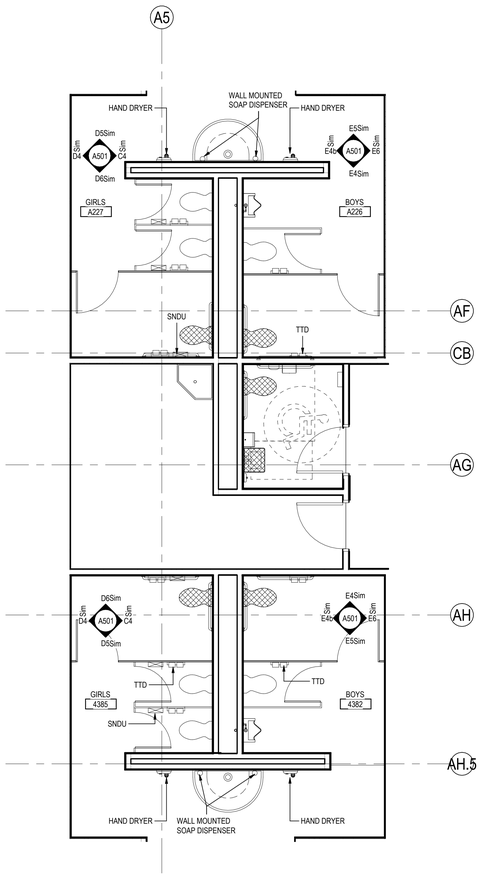
E1a A502 **GIRL'S RR D106 - S**
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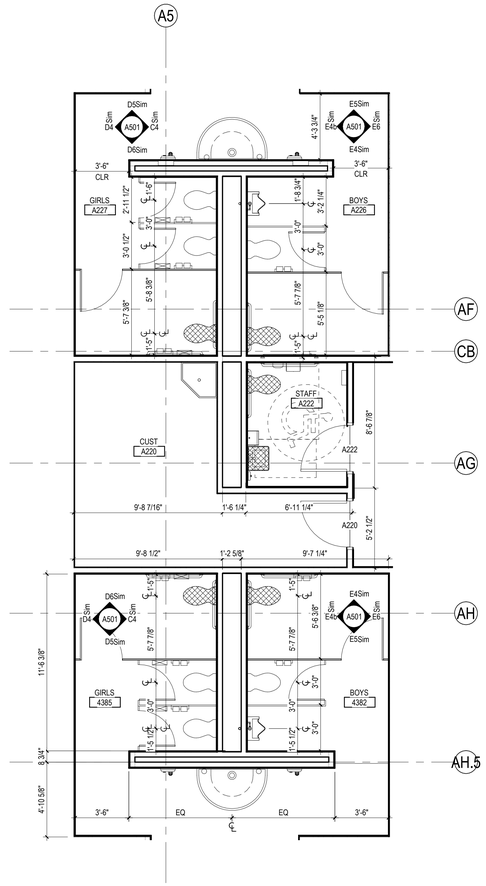
D6 A502 **ENLARGED TOILET PLAN - LEVEL 1 - AREA D GYM - ACCESSORIES**
1/4" = 1'-0"



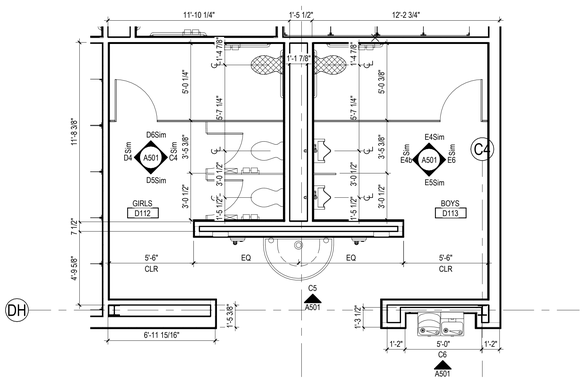
D3 A502 **ENLARGED TOILET PLAN - LEVEL 1 - AREA D GYM - DIMENSIONS**
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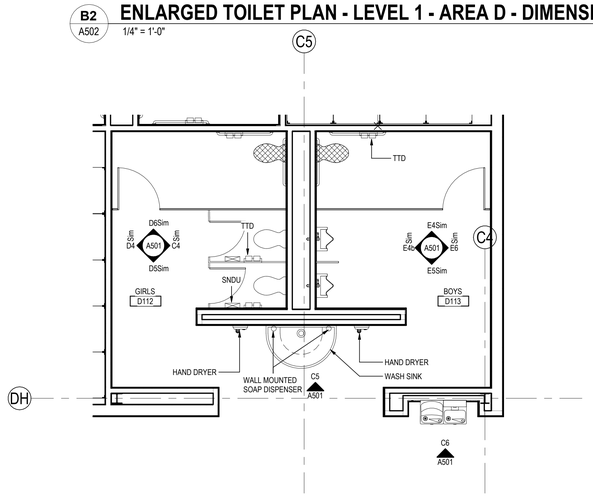
A6 A502 **ENLARGED TOILET PLAN - LEVEL 2 - AREA A - ACCESSORIES**
1/4" = 1'-0"



A4 A502 **ENLARGED TOILET PLAN - LEVEL 2 - AREA A - DIMENSIONS**
1/4" = 1'-0"



B2 A502 **ENLARGED TOILET PLAN - LEVEL 1 - AREA D - DIMENSIONS**
1/4" = 1'-0"



A2 A502 **ENLARGED TOILET PLAN - LEVEL 1 - AREA D - ACCESSORIES**
1/4" = 1'-0"

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Permit/Seal

REGISTERED ARCHITECT
ERIN J SHEDD
33796
STATE OF TEXAS
03/10/2026

Client/Project Logo

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Crosby Sixth Grade Campus

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Crosby, TX 77532

Title
ENLARGED TOILET ROOMS & ELEVATIONS

Project No.
214001329

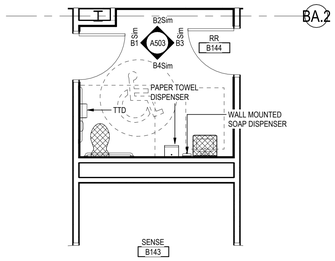
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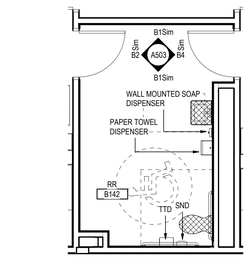
Revision
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Drawing No.
A502

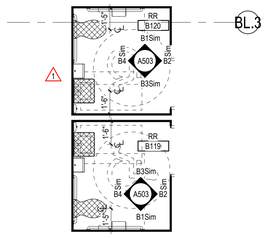
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ORIGINAL SHEET - ARCH E1

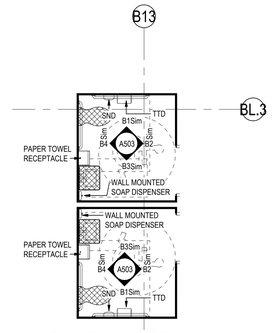




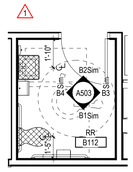
C6 A503 — **ENLARGED B142 & B144 TOILET PLAN - ACCESSORIES**
1/4" = 1'-0"



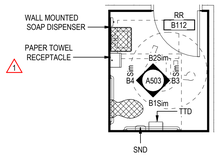
E4 A503 — **ENLARGED B119 & B120 TOILET PLAN - DIMENSIONS**
1/4" = 1'-0"



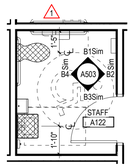
E2 A503 — **ENLARGED B119 & B120 TOILET PLAN - ACCESSORIES**
1/4" = 1'-0"



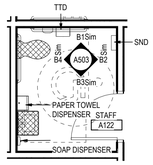
D4 A503 — **ENLARGED B112 TOILET PLAN - DIMENSIONS**
1/4" = 1'-0"



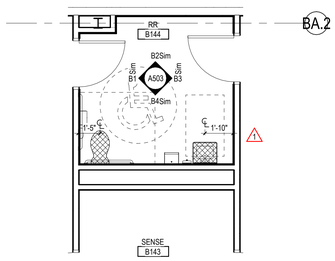
D2 A503 — **ENLARGED B112 TOILET PLAN - ACCESSORIES**
1/4" = 1'-0"

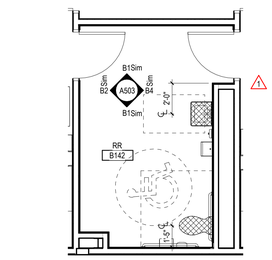


C4 A503 — **ENLARGED A122 TOILET PLAN - DIMENSIONS**
1/4" = 1'-0"

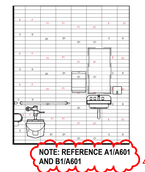


C2 A503 — **ENLARGED A122 TOILET PLAN - ACCESSORIES**
1/4" = 1'-0"

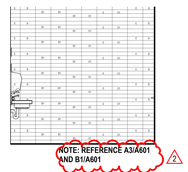




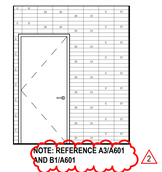
A6 A503 — **ENLARGED B142 & B144 TOILET PLAN - DIMENSIONS**
1/4" = 1'-0"



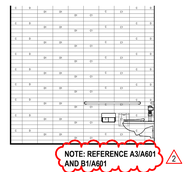
B4 A503 — **STAFF RR B106 - N**
1/4" = 1'-0"



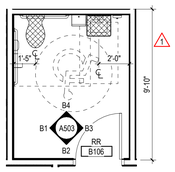
B3 A503 — **STAFF RR B106 - E**
1/4" = 1'-0"



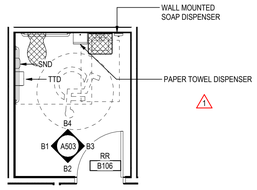
B2 A503 — **STAFF RR B106 - S**
1/4" = 1'-0"



B1 A503 — **STAFF RR B106 - W**
1/4" = 1'-0"



A4 A503 — **ENLARGED TOILET PLAN - B106 - DIMENSIONS**
1/4" = 1'-0"



A2 A503 — **ENLARGED TOILET - B106 - ACCESSORIES**
1/4" = 1'-0"

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Notes

2 ADDENDUM #4			2026.03.11
1 ADDENDUM #1			2026.02.13
Revision	By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued	By	Appd	YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT
ERIN J SHEDD
3796
STATE OF TEXAS
03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ENLARGED TOILET ROOMS & ELEVATIONS

Project No.
214001329

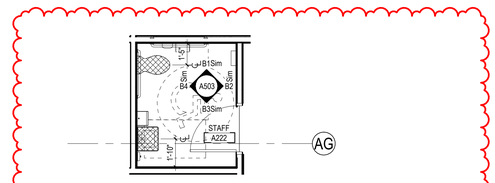
Scale
1/4" = 1'-0"

Revision
2

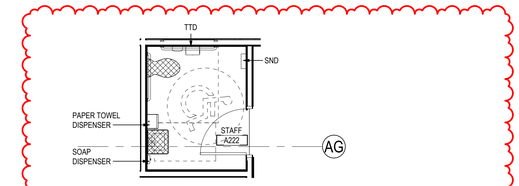
Drawing No.
A503

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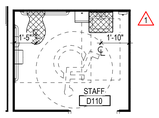
ORIGINAL SHEET - ARCH E1



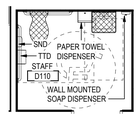
C4 A504 **ENLARGED A222 TOILET PLAN - DIMENSIONS**
1/4" = 1'-0"



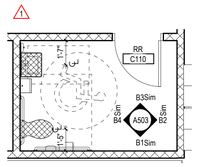
C2 A504 **ENLARGED A222 TOILET PLAN - ACCESSORIES**
1/4" = 1'-0"



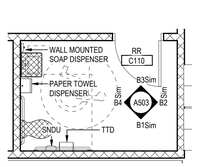
B4 A504 **ENLARGED D110 TOILET PLAN - DIMENSIONS**
1/4" = 1'-0"



B2 A504 **ENLARGED D110 TOILET PLAN - ACCESSORIES**
1/4" = 1'-0"



A4 A504 **ENLARGED C110 TOILET PLAN - DIMENSIONS**
1/4" = 1'-0"



A2 A504 **ENLARGED C110 TOILET PLAN - ACCESSORIES**
1/4" = 1'-0"

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Notes

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT BRIN J SHEID 33796 STATE OF TEXAS

03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ENLARGED TOILET ROOMS & ELEVATIONS

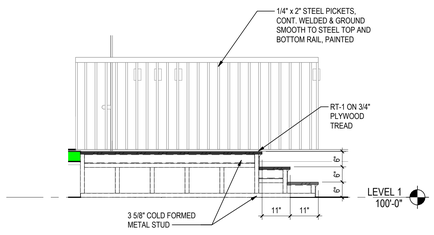
Project No.
214001329

Scale
1/4" = 1'-0"

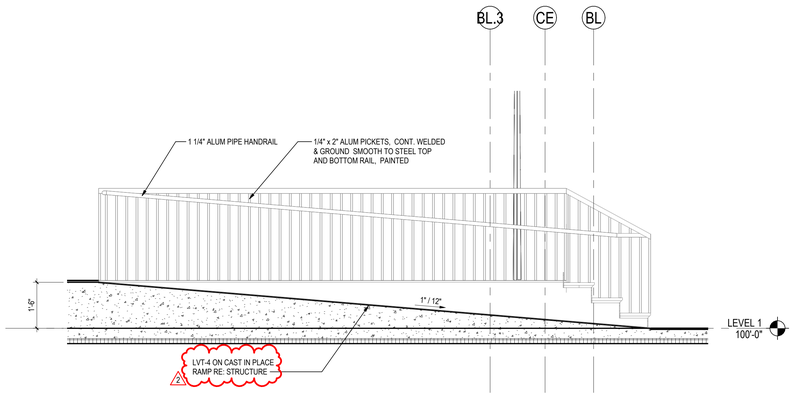
Revision
2

Drawing No.
A504

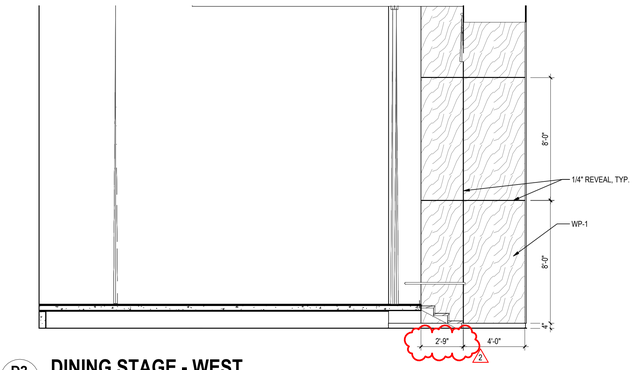
ORIGINAL SHEET - ARCH E1



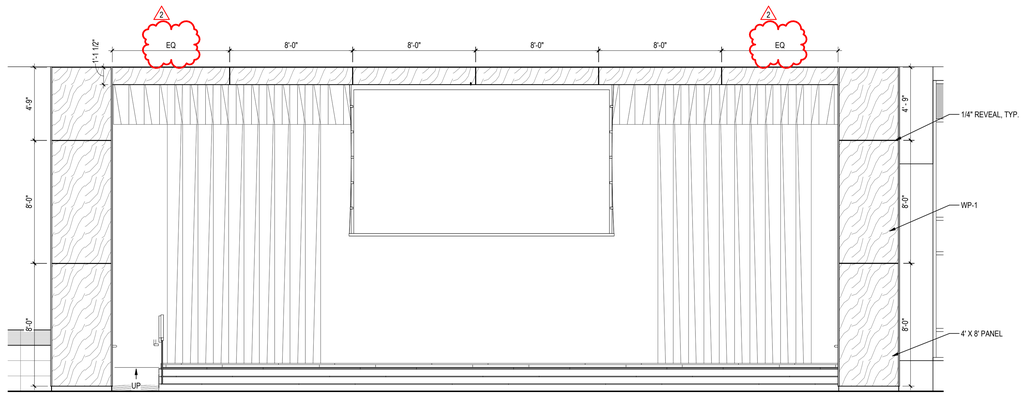
D6 A512 **ACCESS STAIR SECTION**
1/2" = 1'-0"



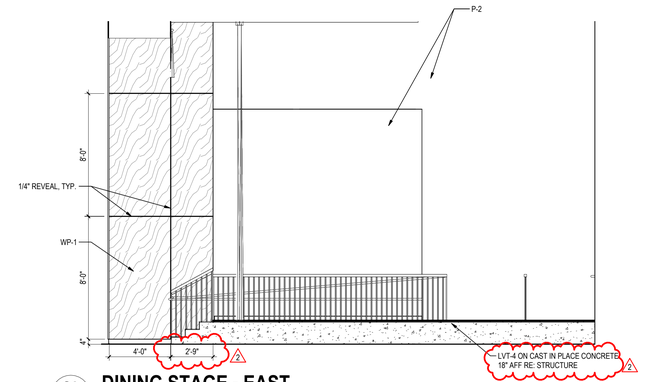
D4 A512 **STAGE RAMP SECTION**
1/2" = 1'-0"



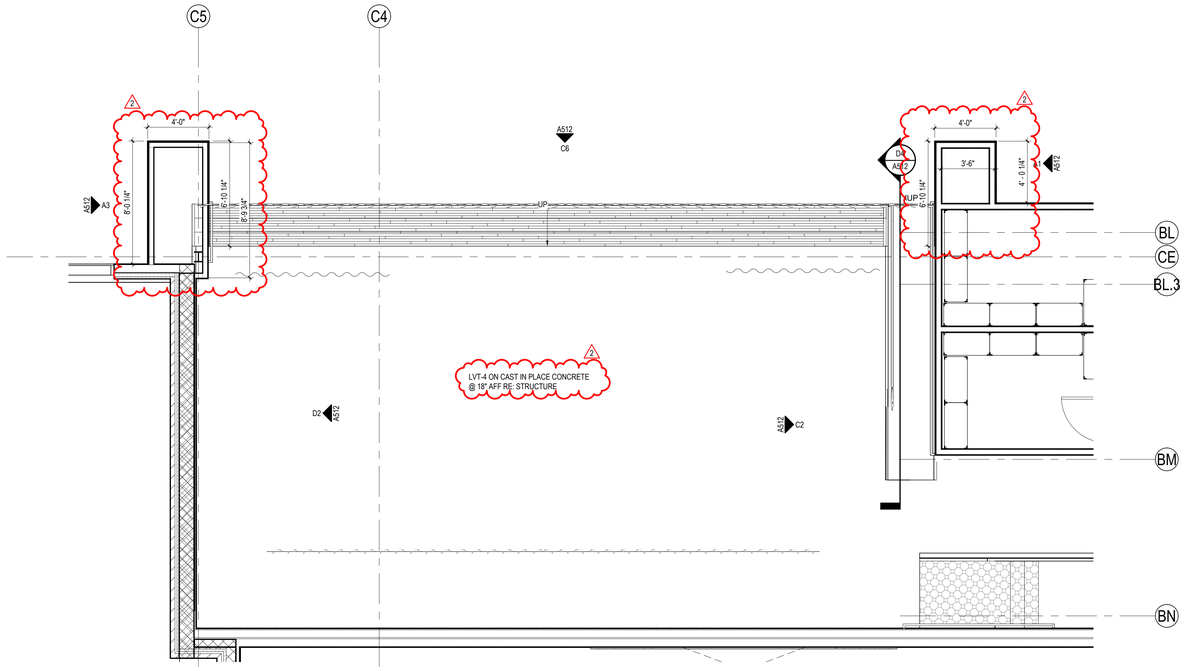
D2 A512 **DINING STAGE - WEST**
1/4" = 1'-0"



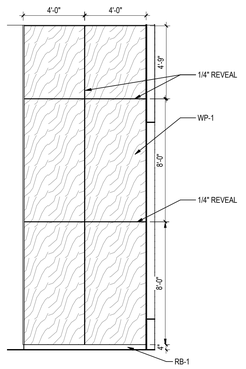
C6 A512 **DINING PROSCENIUM - SOUTH**
1/4" = 1'-0"



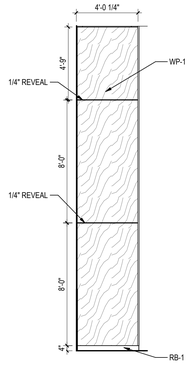
C2 A512 **DINING STAGE - EAST**
1/4" = 1'-0"



A6 A512 **ENLARGED PLAN - DINING PROSCENIUM**
1/4" = 1'-0"



A3 A512 **DINING PROSCENIUM - EAST**
1/4" = 1'-0"



A1 A512 **DINING PROSCENIUM - WEST**
1/4" = 1'-0"

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Notes

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #3		2026.03.04
Revision		By	Appd YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT · ERIN J SHEED · 23796 · STATE OF TEXAS
03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ENLARGED PLANS & ELEVATIONS - PROSCENIUM

Project No.
214001329

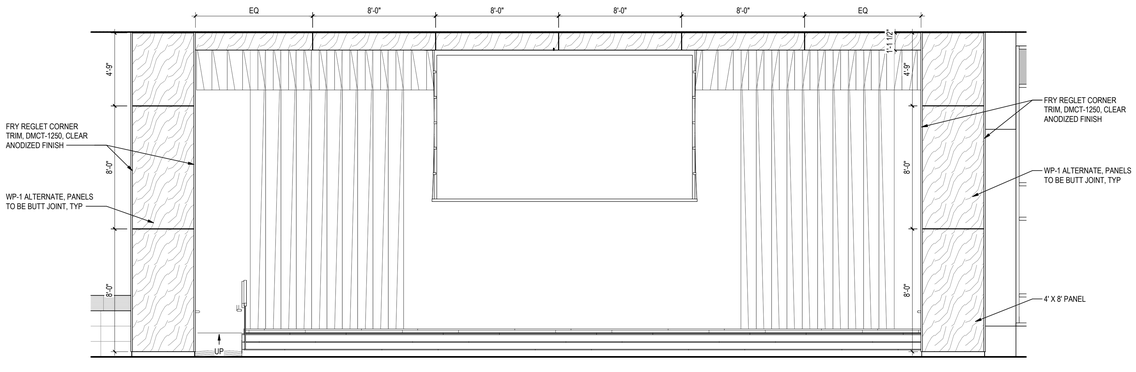
Scale
As indicated

Revision
2

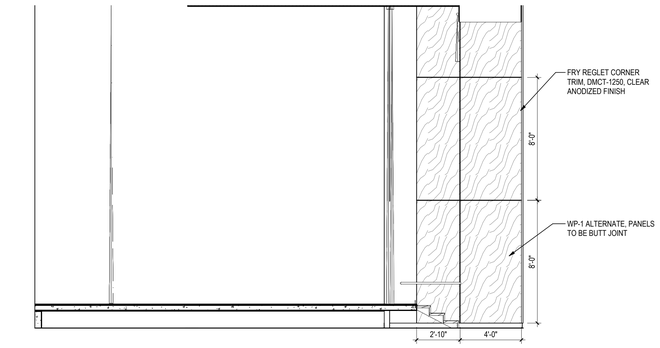
Drawing No.
A512

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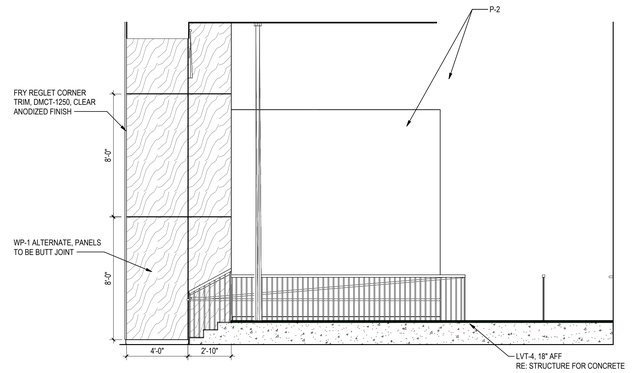
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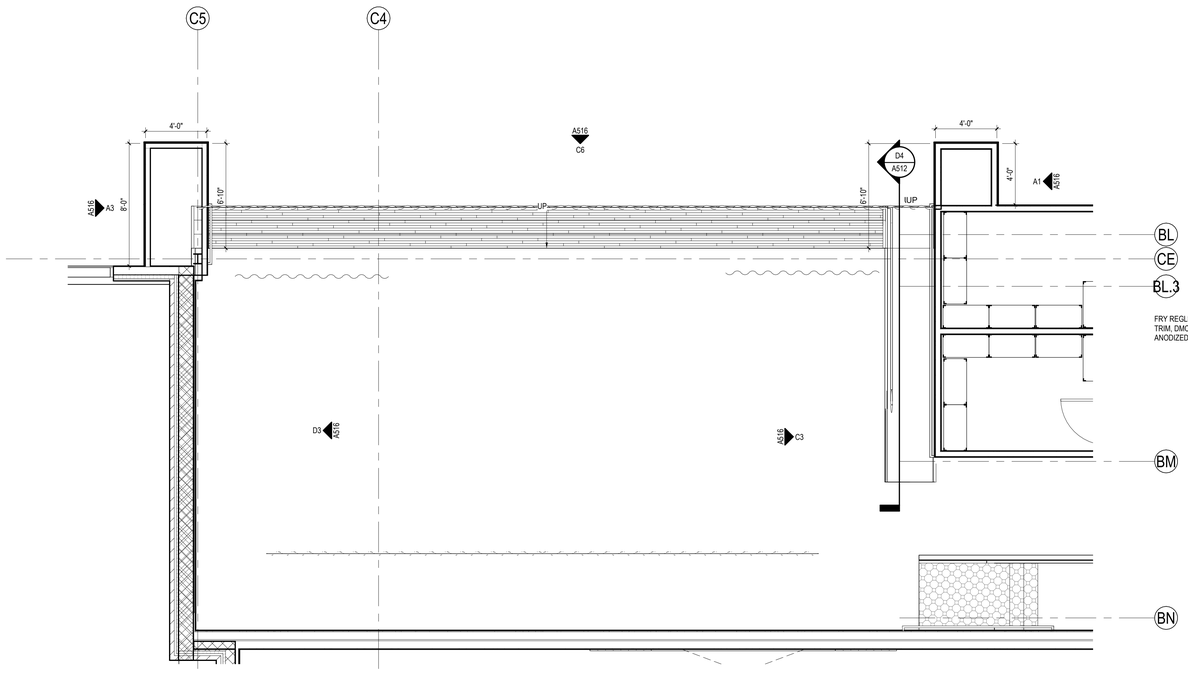
C6 / A516 **DINING PROSCENIUM - SOUTH - ALT**
1/4" = 1'-0"



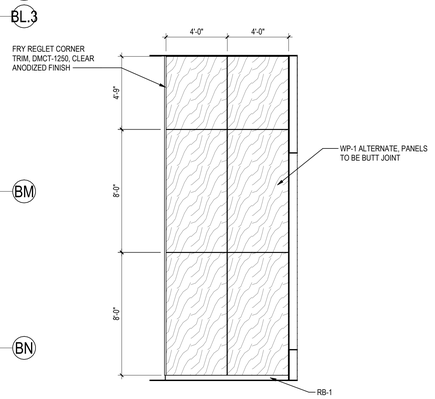
D3 / A516 **DINING STAGE - WEST - ALT**
1/4" = 1'-0"



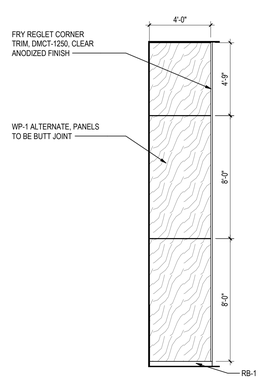
C3 / A516 **DINING STAGE - EAST - ALT**
1/4" = 1'-0"



A6 / A516 **ENLARGED PLAN - DINING PROSCENIUM - ALTERNATE**
1/4" = 1'-0"



A3 / A516 **DINING PROSCENIUM - EAST - ALT**
1/4" = 1'-0"



A1 / A516 **DINING PROSCENIUM - WEST - ALT**
1/4" = 1'-0"

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Notes

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #3		2026.03.04
Revision		By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT
ERIN J SHEED
23796
STATE OF TEXAS
03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ENLARGED PLANS & ELEVATIONS - PROSCENIUM ALTERNATE

Project No.
214001329

Scale
1/4" = 1'-0"

Revision
2

Drawing No.
A516

ORIGINAL SHEET - ARCH E1

Interior Material Schedule - AIA Materials Pledge

TYPE MARK	DESCRIPTION	MANUFACTURER	PRODUCT	COMMENTS	CERTIFICATIONS	AIA MATERIALS PLEDGE				
						Human Health	Social Health & Equity	Ecosystem Health	Climate Health	Circular Economy
AB-1	ACOUSTIC BAFFLES	AUTEX	FRONTIER, TALUS, 1/2" THICKNESS, 108" LENGTH, 12" O.C SPACING. PATTERNS A, C, C* TO BE SAVOYE COLOR, PATTERN B TO BE FLATIRON COLOR.	DINING	Declare LabelEnvironmental Product Declaration	●	●	●	●	●
AC-1	ACOUSTIC CLOUDS	AUTEX	HORIZON, CIRCLE, 48X48", SAVOYE	LIBRARY	Declare LabelEnvironmental Product Declaration	●	●	●	●	●
AC-2	ACOUSTIC CLOUDS	AUTEX	HORIZON, CIRCLE, 48X48", FLATIRON	LIBRARY	Declare LabelEnvironmental Product Declaration	●	●	●	●	●
AF-1	RESILIENT ATHLETIC FLOORING	TARKETT OMNISPORTS	MULTI-USE, COLOR: CLASSIC OAK, REF TO FINISH PLANS, 6.2MM THICK	GAME / COURT LAYOUT APPLIED TO SURFACE, DANCE ROOM	Environmental Product Declaration	●	●	●	●	●
APC-1	ACOUSTIC PANEL CEILING	ARMSTRONG	FINE FISSURED, WHITE	TYPICAL	Declare LabelEnvironmental Product DeclarationHealth Product Declaration	●	●	●	●	●
APC-2	ACOUSTIC PANEL CEILING	ARMSTRONG	ULTIMA HEALTH ZONE, WHITE	KITCHEN, ALL RESTROOMS	Declare LabelEnvironmental Product DeclarationHealth Product Declaration	●	●	●	●	●
APC-3	ACOUSTIC PANEL CEILING	ARMSTRONG	FINE FISSURED, BLACK	STAGE	Declare LabelEnvironmental Product DeclarationHealth Product Declaration	●	●	●	●	●
AWP-1	ACOUSTIC WALL PANEL	DECOUSTICS	2", FABRIC WRAPPED WITH GUILFORD OF MAINE, WHISPER, TRANQUILITY	DINING AND LIBRARY, REFERENCE ELEVATIONS FOR DIMENSIONS	Environmental Product Declaration	●	●	●	●	●
AWP-2	ACOUSTIC WALL PANEL	DECOUSTICS	2", FABRIC WRAPPED WITH GUILFORD OF MAINE, WHISPER, STILLNESS	DINING AND LIBRARY, REFERENCE ELEVATIONS FOR DIMENSIONS	Environmental Product Declaration	●	●	●	●	●
AWP-3	ACOUSTIC WALL PANEL	DECOUSTICS	2", FABRIC WRAPPED WITH GUILFORD OF MAINE, WHISPER, CHANT	DINING AND LIBRARY, REFERENCE ELEVATIONS FOR DIMENSIONS	Environmental Product Declaration	●	●	●	●	●
AWP-4	ACOUSTIC WALL PANEL	TECTUM	DIRECT-ATTACH WALL PANELS, 1 1/2", C-20 MOUNTING METHOD, POLAR COLOR	GYM, REFERENCE ELEVATIONS FOR DIMENSIONS	Declare LabelEnvironmental Product DeclarationForest Stewardship Council	●	●	●	●	●
AWP-5	ACOUSTIC WALL PANEL	TECTUM	DIRECT-ATTACH WALL PANELS, 1 1/2", C-20 MOUNTING METHOD, BASALT COLOR	GYM, REFERENCE ELEVATIONS FOR DIMENSIONS	Declare LabelEnvironmental Product DeclarationForest Stewardship Council	●	●	●	●	●
AWP-6	ACOUSTIC WALL PANEL	TECTUM	DIRECT-ATTACH WALL PANELS, 1 1/2", C-20 MOUNTING METHOD, ROSE COLOR	GYM, REFERENCE ELEVATIONS FOR DIMENSIONS	Declare LabelEnvironmental Product DeclarationForest Stewardship Council	●	●	●	●	●
AWP-7	ACOUSTIC WALL PANEL	CARNEGIE	PEAK, WRAPPED IN XOREL METEOR 6427 765	DANCE, REFERENCE ELEVATIONS FOR PANEL SHAPE AND SIZE	Health Product Declaration	●	●	○	○	○
AWP-8	ACOUSTIC WALL PANEL	CARNEGIE	PEAK, WRAPPED IN XOREL LINEN 6291-9	DANCE, REFERENCE ELEVATIONS FOR PANEL SHAPE AND SIZE	Health Product Declaration	●	●	○	○	○
AWP-9	ACOUSTIC WALL PANEL	CARNEGIE	PEAK, WRAPPED IN XOREL METEOR 6427 2041	DANCE, REFERENCE ELEVATIONS FOR PANEL SHAPE AND SIZE	Health Product Declaration	●	●	○	○	○
CC-1	CLINIC CURTAINS	CF STINSON	ECHO, EC011 FLAX			○	○	○	○	○
CFC-1	CLEAR FINISHED CONCRETE	SCOFIELD	SEALECT SEAL PLUS			○	○	○	○	○
CG-1	CORNER GUARD	POWERHOLD	STAINLESS STEEL, 90 DEGREE CORNERS	2"X2" ONE-PIECE LENGTH FROM TOP OF FLOOR BASE TO CEILING		○	○	○	○	○
CG-2	CORNER GUARD	POWERHOLD	STAINLESS STEEL, 90 DEGREE CORNERS	4"X4" ONE-PIECE LENGTH FROM TOP OF FLOOR BASE TO CEILING AT KITCHEN		○	○	○	○	○
CPT-1	CARPET	TARKETT	BALANCE 11339, FLASH POINT 30803, 24" X 24"	FIELD CARPET, VERTICAL ASHLAR INSTALLATION		○	○	○	○	○
CPT-2	CARPET	TARKETT	CONTINUUM 11328, AGATE 31307, POWERBOND	LIBRARY CARPET	Environmental Product Declaration	●	●	●	●	●
CPT-3	CARPET	TARKETT	CONTINUUM 11328, TRUE RED 31301, POWERBOND	LIBRARY CARPET	Environmental Product Declaration	●	●	●	●	●
CPT-4	CARPET	TARKETT	ASSERTIVE ACTION	WALK-OFF CARPET		○	○	○	○	○
DF-1	CEILING DIFFUSER PANEL	WENGER	LAY-IN PYRAMIDAL CEILING DIFFUSER PANEL, 2' X 2'			○	○	○	○	○
EC-1	EPOXY COUNTERTOP	DURCON	EPOXY RESIN COLOR GRAY	SCIENCE LAB AND SCIENCE PREP ROOM COUNTERTOPS		○	○	○	○	○
GF-1	GLASS FILM	SOLYX	WHITE DUSTED MATTE	@ DANCE GLAZING		○	○	○	○	○
GF-2	GLASS FILM	SOLYX	DARK RED SAND BLAST	@ DANCE GLAZING		○	○	○	○	○
GF-3	GLASS FILM	SOLYX	CHARCOAL MATTE	@ DANCE GLAZING		○	○	○	○	○
GR-1	GROUT	MAPEI	5093 WARM GRAY	TO BE USED WITH T-1, T-2, T-9		○	○	○	○	○
GR-2	GROUT	MAPEI	5077 FROST	TO BE USED WITH T-4, T-5, T-6, T-7, T-8		○	○	○	○	○
GR-3	GROUT	MAPEI	5027 SILVER	TO BE USED WITH T-10 AND T-11		○	○	○	○	○
GWP-1	GYM WALL PAD	PORTER		@ GYM		○	○	○	○	○
IP-1	INTUMESCENT PAINT	ISOLATEK	CAFCO SPRAY FILM - WB 3		Environmental Product Declaration	●	●	●	●	●
LVT-1	LUXURY VINYL TILE	TARKETT	CONTOUR, PCWE COLOR WEAVE, C163 PEWTER	REF FLOOR FINISH PLANS	Environmental Product Declaration	●	●	●	●	●
LVT-2	LUXURY VINYL TILE	TARKETT	CONTOUR, PCWE COLOR WEAVE, POPPY C158	REF FLOOR FINISH PLANS	Environmental Product Declaration	●	●	●	●	●
LVT-3	LUXURY VINYL TILE	TARKETT	CONTOUR, PCWE COLOR WEAVE, ANGORA C169	REF FLOOR FINISH PLANS	Environmental Product Declaration	●	●	●	●	●
LVT-4	LUXURY VINYL TILE	TARKETT	CONTOUR, PCWE COLOR WEAVE, ASHBURN C168	STAGE	Environmental Product Declaration	●	●	●	●	●
MB-1	MARKER BOARD	CLARIDGE	PORCELAIN	WHITE, SLIDING AND FIXED MARKERBOARD. REFER TO PLAN DETAIL AND SECTION ON A619		○	○	○	○	○
MBC-1	METAL BAFFLE CEILING	CERTAINTEED	BOX SERIES, PENSHAW CHERRY FINISH, NON-PERFORATED, CLOSED JOINTS			○	○	○	○	○
MR-1	MIRROR		UNFRAMED	MIRROR TO BE PROVIDED AND INSTALLED BY GLASS SUBCONTRACTOR		○	○	○	○	○
P-1	PAINT	SHERWIN WILLIAMS	PEARLY WHITE SW 7009	FIELD PAINT	Environmental Product Declaration	●	●	●	●	●
P-2	PAINT	SHERWIN WILLIAMS	PEPPERCORN SW 7674	STAGE	Environmental Product Declaration	●	●	●	●	●
P-3	PAINT	SHERWIN WILLIAMS	CUSTOM COLOR, RGB TO BE 155-0-0	RED ACCENT	Environmental Product Declaration	●	●	●	●	●
P-4	PAINT	SHERWIN WILLIAMS	PEARLY WHITE SW 7009	KITCHEN EPOXY FINISH	Environmental Product Declaration	●	●	●	●	●
P-5	PAINT	SHERWIN WILLIAMS	AMAZING GRAY SW 7044		Environmental Product Declaration	●	●	●	●	●
P-6	PAINT	SHERWIN WILLIAMS	STATUS BRONZE SW 7034	EXPOSED STRUCTURE	Environmental Product Declaration	●	●	●	●	●
PL-1	PLASTIC LAMINATE	WILSONART	TUSCAN WALNUT 7921-38	DOORS AND CASEWORK	Forest Stewardship Council	●	●	●	●	○
PL-2	PLASTIC LAMINATE	WILSONART	SATIN STAINLESS 4830	COUNTERTOPS	Forest Stewardship Council	●	●	●	●	○
PL-3	PLASTIC LAMINATE	WILSONART	PLATINUM D315-60	ELEVATOR CAB	Forest Stewardship Council	●	●	●	●	○
QT-1	QUARRY TILE	DALTILE	QUARRY TEXTURES, ASHEN GRAY OT03, SMOOTH SURFACE, 6" X 6"		Declare Label	●	●	●	●	●
QTB-1	QUARRY TILE BASE	DALTILE	QUARRY TEXTURES, ASHEN GRAY OT03, SMOOTH SURFACE, ROUND TOP COVE BASE		Declare Label	●	●	●	●	●
QZ-1	QUARTZ COUNTERTOP	WILSONART	QUARTZ, ARKTOS Q4037	RECEPTION DESK AND LIBRARY CIRCULATION DESK ACCENTS	Declare LabelHealth Product Declaration	●	●	●	●	●
RB-1	RUBBER BASE	JOHNSONITE	20 CHARCOAL, 4"	TYPICAL	Cradle to CradleEnvironmental Product Declaration	●	●	●	●	●
RB-2	RUBBER BASE	ROPPE	BLACK, 4"	AT STAGE	Environmental Product DeclarationHealth Product Declaration	●	●	●	●	●
RT-1	RUBBER TREAD	TARKETT	ANGLE FIT RUBBER STAIR TREADS WITH INTEGRATED RISER, HAMMERED TEXTURE, MOON ROCK, 55 INSERT		Cradle to CradleEnvironmental Product DeclaratonHealth Product Declaration	●	●	●	●	●
RT-2	RUBBER TREAD	TARKETT	ANGLE FIT RUBBER STAIR TREADS WITH INTEGRATED RISER, HAMMERED TEXTURE, FLAME, 55 INSERT	MAIN STAIRCASE	Cradle to CradleEnvironmental Product DeclaratonHealth Product Declaration	●	●	●	●	●
ST-1	STAGE CURTAIN	KM FABRICS	PRESTIGE, BLACK			○	○	○	○	○
T-1	TILE- CERAMIC- WAINSCOT	DALTILE	RIGID CLAY, ROCK, PLATEAU, 12X24"	WAINSCOT AT CORRIDORS	Declare Label	●	●	●	●	●
T-2	TILE- CERAMIC- WAINSCOT	DALTILE	RIGID CLAY, ROCK, RIDGE, 12X24"	WAINSCOT AT CORRIDORS	Declare Label	●	●	●	●	●
T-3	TILE- CERAMIC- WALL TILE	CROSSVILLE	SWATCHES, COTTON, GLOSS, 3" X 12"			○	○	○	○	○
T-4	TILE- CERAMIC- WALL TILE	CROSSVILLE	SNIPPET, COTTON LEFT, GLOSS, 3" X 12"			○	○	○	○	○
T-5	TILE- CERAMIC- WALL TILE	CROSSVILLE	SNIPPET, COTTON RIGHT, GLOSS, 3" X 12"			○	○	○	○	○
T-6	TILE- CERAMIC- WALL TILE	CROSSVILLE	SWATCHES, LIPSTICK, GLOSS, 3" X 12"			○	○	○	○	○
T-7	TILE- CERAMIC- WALL TILE	CROSSVILLE	SNIPPET, LIPSTICK LEFT, GLOSS, 3" X 12"			○	○	○	○	○
T-8	TILE- CERAMIC- WALL TILE	CROSSVILLE	SNIPPET, LIPSTICK RIGHT, GLOSS, 3" X 12"			○	○	○	○	○
T-9	TILE- PORCELAIN- DINING FLOOR	CONCEPT SURFACES	ADAMS, WHITE, 12X24"		Health Product Declaration	●	●	○	○	○
T-10	TILE- PORCELAIN- DINING FLOOR	CONCEPT SURFACES	ADAMS, GRAY, 12X24"		Health Product Declaration	●	●	○	○	○
T-11	TILE- PORCELAIN- RESTROOM FLOORS	DALTILE	KEYSTONES, DESERT GRAY, 2"X2"		Declare Label	●	●	●	●	●
TB-1	TACKBOARD	CLARIDGE	CLARIDGE CORK VINYL FACED	TYPICAL AT ALL CLASSROOMS, REFER TO PLAN DETAIL AND SECTION ON A619		○	○	○	○	○
TP-1	TOILET PARTITIONS	PSISC	PHENOLIC CORE, MEETS NFPA 286			○	○	○	○	○
TR-6	SPECIALTY TRIM	SCHLUTER	QUADEC OR INDEC ,COLOR: ALUMINIUM	TILE OUTSIDE CORNERS WITH END CAPS		○	○	○	○	○
TR-7	SPECIALTY TRIM	SCHLUTER	RONDEC, COLOR: ALUMINIUM	TOP OF WAINSCOT		○	○	○	○	○
TWP-1	TACKABLE WALL PANEL	DECOUSTICS	1" THICK, FABRIC WRAPPED WITH CARNEGIE XOREL STRIE 6423-818, 56" ROLL WIDTH, NO BACKING	DISPLAY CASE	Cradle to CradleDeclare LabelEnvironmental Product Declaration	●	●	●	●	●
VF-1	VINYL FABRIC UPHOLSTERY	PALLAS	DEJA VU - FLASH	LIBRARY CUBBIES, 54" WIDE, TO COVER 4" THICK HIGH DENSITY FOAM CUSHION	Health Product Declaration	●	●	○	○	○
WC-1	WALL COVERING	CARNEGIE XOREL	DASH, 6603W 42		Cradle to CradleDeclare LabelEnvironmental Product Declaration	●	●	●	●	●
WD-1	WOOD		3/4" WHITE OAK, STAIN TO MATCH WILSONART "TUSCAN WALNUT 7921	STAGE STAIR TREADS AND RISERS		○	○	○	○	○
WF-1	WOVEN FABRIC UPHOLSTERY	PALLAS	ISLA - BLUR	LIBRARY CUBBIES, 54" WIDE, TO COVER 4" THICK HIGH DENSITY FOAM CUSHION	Health Product Declaration	●	●	○	○	○
WP-1	WALL PANEL	PSI	SYSTEM 314, CLEAR ANODIZED REVEAL, HIGH PRESSURE LAMINATE SURFACE - LAMINATE TO BE PL-1	@ STAGE PROSCENIUM		○	○	○	○	○

ALTERNATE:

WP-1: SOELBERG - 3D WALL PANELS - PREMIUM MDF CORE, 3/4" THICKNESS - FIUME - HORIZONTAL PATTERN, CANDLELIGHT FINISH, Z CLIP INSTALLATION

GENERAL NOTES - INTERIOR FINISH AND COLOR SCHEDULE:

1. MANUFACTURERS NAMES AND IDENTIFICATION NUMBERS ARE LISTED AS A MEANS OF ESTABLISHING A STANDARD OF TYPE, FUNCTION, COLOR, AND QUALITY. REFER TO PROJECT MANUAL FOR ADDITIONAL MANUFACTURERS & PROCEDURES.
2. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT A SAMPLE OF ALL FINISH MATERIALS FOR APPROVAL BEFORE MATERIALS ARE APPLIED ON THE JOB.
3. VERIFY ALL GRAPHICS WITH THE ARCHITECT BEFORE PAINTING. GRAPHICS MAY NEED TO BE ADJUSTED AFTER ENLARGING TO REFLECT THE SAME COMPOSITION AS ON THE DRAWINGS.
4. IF REQUESTED THE ARCHITECT WILL PROVIDE 8 1/2" X 11" CLEAR ACETATE OR MYLAR OF DETAILED MURAL GRAPHICS FOR PROJECTION ON WALL.
5. TERMINATE ALL ACCENT PAINTS & VINYL WALL COVERING ON INSIDE CORNERS ONLY UNLESS OTHERWISE INDICATED.
6. PAINT ALL INTERIOR & EXTERIOR EXPOSED PIPING. VERIFY COLOR W/ ARCHITECT.
7. PAINT ANY VENTS, GRILLES, PIPING, FEC, ETC... SAME COLOR AS ADJACENT WALL.

XX1 - COLORS WILL BE MARKED AS SHOWN. NOTE ALL COLORS MAY NOT BE MARKED ON PLANS. MATERIALS NOT NOTED WILL BE COVERED UNDER GENERAL NOTES OR WILL BE PICKED ON THE JOB BY THE ARCHITECT.

8. ALL CARPET SHALL BE MARK "CPT-1", U.O.N.
9. UNDESIGNATED PAINTED GYPSUM BOARD WALLS TO BE MARK "P-1".
10. UNDESIGNATED PAINTED CMU WALLS TO BE MARK "P-1".
11. ALL INTERIOR HOLLOW METAL DOOR FRAMES, WINDOW FRAMES, AND VISION PANEL FRAMES IN INTERIOR DOORS SHALL BE 379A 1457 PERMADIZE - MEDIUM BRONZE FINISH (U.O.N.). REFERENCE SHEET A041.
12. ALL INTERIOR WOOD DOORS & UNASSIGNED WOOD TRIM PIECES SHALL BE MARK "PL-1".
13. METAL HANDRAILS (INTERIOR) SHALL BE BRUSHED ALUMINUM.
14. ALL BOY'S AND GIRL'S TOILET PARTITIONS SHALL BE AS SPECIFIED.
15. ALL BASE CABINETS, WALL CABINETS, AND MISC. CASE WORK SHALL BE MARK "PL-1", U.O.N.
16. ALL COUNTERTOPS SHALL BE MARK "PL-2", (U.O.N.).
17. RAMPS SCHEDULED TO RECEIVE LUXURY VINYL TILE FLOORING SHALL RECEIVE MARK "LVT-4".
18. ALL METAL LOCKERS SHALL BE FINISHED TO MATCH MARK "P-5".
19. ALL PLASTIC LAMINATE WALL PANELS TO BE AS NOTED ON SHEETS A512.
20. ALL EXPOSED STRUCTURAL STEEL INCLUDING ROOF DECK, JOISTS, GIRDERS, BEAMS AND ANY MISC. STEEL SHALL BE PAINTED MARK "P-1". DUCTS, DIFFUSERS AND AIR HANDLING UNITS SHALL BE GALVANIZED METAL.
21. REFER TO DRAWINGS ON A515 FOR GAME LINES, COLORS, SIZE AND LOCATION.
22. LOW PROFILE TRANSITION STRIPS TO BE PLACED AT ANY FLOORING MATERIAL CHANGE.
23. METAL LOW PROFILE TRANSITION STRIPS TO BE PLACED AT ANY FLOORING MATERIAL CHANGE ADJACENT TO CT.
24. REFER TO FINISH SCHEDULE FOR TILE AND CORRESPONDING GROUT.
25. SEAL ALL EXPOSED JOINTS BETWEEN DISSIMILAR MATERIALS INCLUDING, BUT NOT LIMITED TO: BETWEEN WALLS AND CASEWORK; MILLWORK, WINDOW SILLS, BACKSPLASHES, PLUMBING FIXTURES, FIRE EXTINGUISHER CABINETS, WINDOW SILLS TO WINDOW FRAMES; RESILIENT FLOORING TO STAIR STRINGERS AND RISERS; BACKSPLASHES TO COUNTER TOPS; ETC. VERIFY SEALANT TYPE AND COLOR FOR EACH APPLICATION WITH ARCHITECT PRIOR TO INSTALLATION.
26. WET AREAS SHALL RECEIVE EPOXY PAINT AND GROUT, TYP. WALLS AND FLOORS.

GENERAL NOTES - FURNISHING AND EQUIPMENT:

1. MODEL NUMBERS/MFR'S ARE LISTED ON CASEWORK ELEVATIONS SO THAT A MINIMUM DESIGN BASIS MAY BE ESTABLISHED. THE DIMENSIONS SHOWN (WXHXD) MAY DIFFER FROM THE SELECTED MFR'S STANDARD DIMENSIONS FOR THE LISTED MODEL NUMBERS.
2. PROVIDE SIDE, TOP, AND BOTTOM FILLER PIECES AS REQ'D TO COMPLETE CASEWORK INDICATED ON PLANS.
3. ALL FLOOR MOUNTED FIXTURES ARE TO HAVE THE SAME FINISH FACE MATERIAL AS THE ROOM IN WHICH THEY ARE LOCATED.
4. BLIND CABINETS, AT CORNERS, ARE TO BE LEFT OR RIGHT HAND AS REQ'D PER PLAN.
5. ALL CABINETS TO HAVE PLASTIC LAMINATE THROUGHOUT, INCLUDING ALL EXPOSED SUFACES INSIDE AND OUT.
6. PROVIDE PLASTIC LAMINATE FINISHED END PANELS AT EXPOSED CABINET ENDS INCLUDING KNEESPACES (TYP).
7. FIELD VERIFY DIMENSIONS PRIOR TO FABRICATION AND INSTALLATION OF ANY FIXTURES.
8. BOOKCASES AND SHELVES TO HAVE FRONT FACING SURFACE OF BACK PANEL TO WATCH FINISH OF REMAINDER OF BOOKCASE.
9. COUNTERTOPS TO HAVE PLASTIC LAMINATE SURFACE W/ 4" HIGH BACKSPLASH TYP, UON.
10. PROVIDE KEYED LOCKS AT CABINET DOORS AND DRAWERS, WHERE INDICATED.
11. KNEESPACE UNITS NOT RECEIVING SINKS SHALL RECEIVE GROMMETS CENTERED ON THE UNIT, 3" FROM THE BACK EDGE OF THE KNEESPACE UNIT (UON).
12. KNEESPACE UNITS IN THE ADMINISTRATION AREA TO HAVE MFR'S STANDARD COMPUTER KEYBOARD DRAWER (UON).
13. PROVIDE MFR'S STANDARD PENCIL DRAWER INSERT AT KNEESPACE UNITS W/ STANDARD DRAWERS (NOT KEYBOARD DRAWERS (UON).
14. PROVIDE CORNER GUARDS FROM TOP OF BASE TO TOP OF DOOR FRAME: PROVIDE FIRE RATED CORNER GUARD AT RATED WALLS (MODEL NUMBERS ARE NON RATED) MFR'S BY IN-PRO CORP. (DESIGN BASIS).
    . SURFACE STYLE:
    STAINLESS STEEL:
    ALL OUTSIDE CORNERS OF GYPSUM BOARD CONST AND IN FOOD SERVICE AREAS - 2X2X16 GA (TYPE 304) (SURFACE)
    VINYL - TYPE 150BN 2X2 (SURFACE)
15. PROVIDE ACID RESISTANT PLASTIC LAMINATE STUDENT STATION COUNTER SURFACES AT SCIENCE ROOMS.
16. PROVIDE 1" THICK EPOXY RESIN COUNTER SURFACES AT DEMONSTRATION DESK IN SCIENCE ROOMS.
17. SHELVES SHALL BE ADJUSTABLE (UON). SHELVES OVER 36" IN LENGTH SHALL BE 1" THICK.
18. PROVIDE 7/8" WORK TOPS WITH PLASTIC LAMINATE FINISH AT CASEWORK SHELVING UNITS UNDER 48".
19. PROVIDE 4' -0" TALL TACKBOARDS, AND MARKERBOARDS (UON). BOARDS SHALL BE IN THE SAME FRAME WHEN ADJACENT.
20. MKBDS, AND TKBDS TO HAVE CONT TACKSTRIPS AND PEN TROUGHS (UON). TACKSTRIPS TO HAVE MAP HOOKS (UON).
21. PROJECTION SCREENS: SPRING-ROLLER OPERATED, WALL MOUNTED, 72"X72" W/ 70"X70" VIEWING AREA (UON).
22. PROVIDE BUILT-IN RECESSED COMBINATION LOCKS AT LOCKERS (UON).
23. PROVIDE HORIZONTAL LOUVER BLINDS AT ALL INTERIOR WINDOWS (UON).
24. PROVIDE HORIZONTAL LOUVER BLINDS AT ALL EXTERIOR WINDOWS, EXCEPT WINDOWS SHARING A FRAME WITH A DOOR (UON).
25. TYPICAL AT LIBRARY CIRCULATION DESK: PROVIDE MFR'S STANDARD CONT CLOSED FLOOR BASE/TOE SPACE PIECE AND CONT CURVED AND STRAIGHT SURROUND BACK PANEL, AS INDICATED ON PLANS (UON).

GENERAL NOTES - FURNISHING AND EQUIP. ACCESSORIES

THE FOLLOWING FIXTURE ACCESSORIES ARE TO BE TYPICALLY PROVIDED IN SCIENCE AREAS, U.O.N. - REF. TO FIXT. SCHED., MECH., ELEC., & PLUMB. DOCS. FOR MORE INFORMATION TO PROVIDE COMPLETE OR ADDITIONAL ASSEMBLIES, (TYP.).

a. SINKS: - PROVIDE VACUUM BREAKERS, LEAD PLUGS & SEDIMENT TRAPS AT ALL SINKS, (TYP.)
   - ALL SINKS TO BE STAINLESS STEEL (SHELDON #78760), TYP. (U.O.N.)
   - FOR SINKS LOCATED AT EPOXY RESIN COUNTERTOPS, USE CAB. MFR'S. SUGGESTED SINK (EPOXY RESIN)

b. FAUCETS: - PROVIDE FAUCET (SHELDON #80100), HOT/COLD WATER MIXING GOOSENECK AT EA. SINK, (U.O.N.)
   - AT EPOXY RESIN COUNTERTOPS, USE CAB. MFR'S. SUGGESTED FAUCETS.

c. GAS COCKS: USE CAB. MFR'S. SUGGESTED GAS COCKS (U.O.N.)

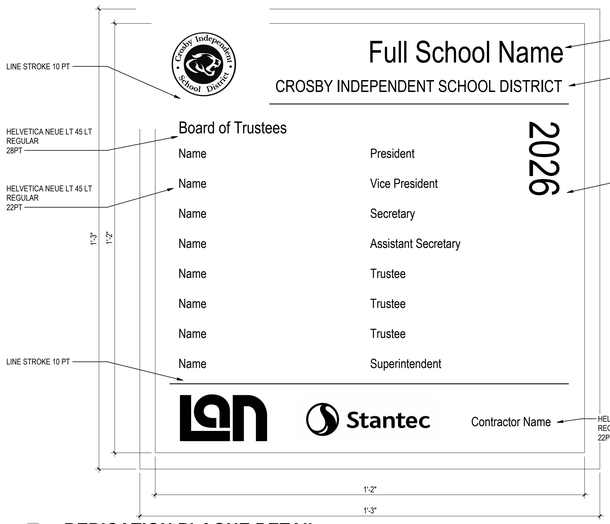
d. ROD ASSEMBLIES: USE CAB. MFR'S. SUGGESTED ROD ASSEMBLY (U.O.N.)

e. ELECTRIC OUTLETS: REF. ELEC. DOCS. FOR ADDITIONAL INFO. USE CAB. MFR'S. SUGGESTED ELECTRICAL OUTLETS (U.O.N.)

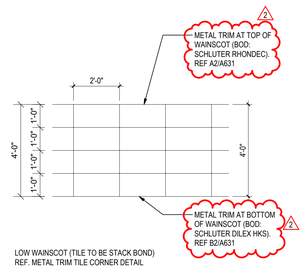
f. EYE/FACE WASH: PROVIDE EYE/FACE WASH AS FOLLOWS:
   - AT ROOMS A106, A108, A115, A206, A208 & A215 -- PROVIDE EYE/FACE WASH (BRADLEY #ESW19314BFPB) AT COUNTER ADJACENT TO S.S. SINK.

g. MASTER EMERGENCY UTILITY CUT-OFF (GAS, ELEC., & WATER): PROVIDE MASTER KEY, CUT-OUT FOR UTILITIES, AND PLAQUE ON SINK CABINET DOOR WITH 1"TALL RED LETTERS ON A WHITE BACKGROUND WHICH READS "EMERGENCY UTILITIES CUT-OFF INSIDE SINK CABINET". REFER TO ELECTRICAL & PLUMBING DOCUMENTS FOR ADDITIONAL INFORMATION & LOCATIONS, (TYP).

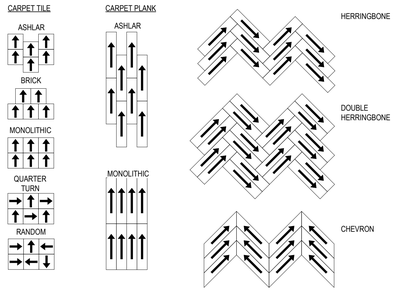
h. VENTILATION LOUVERS: -PROVIDE 8"LONG VENTILATION LOUVER (CR-9942) IN TOE SPACE OF ALL CASEWORK IN SCIENCE AREAS, U.O.N.



A6 / A601 DEDICATION PLAQUE DETAIL — 1 : 1



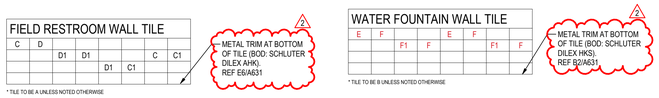
A4 / A601 A601_ENLARGED WALL TILE ELEVATION — 3/8" = 1'-0"



B3 / A601 A601_INSTALLATION PATTERN LEGEND — 12" = 1'-0"

RESTROOM TILE ELEVATION KEY		
ELEVATION TAG	MATERIAL TAG	DESCRIPTION
A	T-3	WHITE FIELD TILE
B	T-6	RED FIELD TILE
C	T-4	WHITE TILE, LEFT
C1	T-4	WHITE TILE, LEFT, ROTATED 180 DEGREES
D	T-5	WHITE TILE, RIGHT
D1	T-5	WHITE TILE, RIGHT, ROTATED 180 DEGREES
E	T-7	RED TILE, LEFT
E1	T-7	RED TILE, LEFT ROTATED 180 DEGREES
F	T-8	RED TILE, RIGHT
F1	T-8	RED TILE, RIGHT, ROTATED 180 DEGREES

B1 / A106 RESTROOM TILE ELEVATION KEY — 1/8" = 1'-0"



A3 / A106 FIELD RESTROOM WALL TILE — 1/8" = 1'-0"

A2 / A106 WATER FOUNTAIN WALL TILE — 1/8" = 1'-0"

A1 / A106 ACCENT RESTROOM WALL TILE — 1/8" = 1'-0"

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Consultant

Notes

Revision	By	Appd	YYYY.MM.DD
2 ADDENDUM #4			2026.03.11
1 ADDENDUM #1			2026.02.13
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26

Issued

Permit/Seal

REGISTERED ARCHITECT — SHIN J SHEDD — 33796 — STATE OF TEXAS
03/10/2026

Client/Project Logo

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
FINISH SCHEDULES

Project No.
214001329

Scale
As indicated

Revision
2

Drawing No.
A601

*Plot location in Project Information
3/10/2026 2:45:13 PM
ORIGINAL SHEET - ARCH E1

ROOM FINISH SCHEDULE - LEVEL 1 - AREA A

NUMBER	NAME	FLOOR FINISH	BASE FINISH	NORTH WALL FINISH	EAST WALL FINISH	SOUTH WALL FINISH	WEST WALL FINISH	CEILING FINISH	COMMENTS
A100	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
A100A	CORRIDOR	SEE FINISH PLAN	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1	
A100B	CORRIDOR	SEE FINISH PLAN	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1	
A100C	CORRIDOR	SEE FINISH PLAN	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1	
A101	PLC	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A102	MECH	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
A103	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A104	ELEC	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
A105	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
A106	SCIENCE	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A107	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A108	SCIENCE	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A109	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A110	SCI PREP	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A112	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
A113	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A114	ELEC	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
A115	SCIENCE	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A116	GIRLS	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
A117	BOYS	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
A118	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A119	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A120	CUST	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
A121	PLC	LVT-3	RB-1	P-1	P-1	P-1	PT	APC-1	
A122	STAFF	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
A123	STOR	CFC-1	RB-1	SEE INT. ELEVATIONS	P-1	P-1	P-1	APC-1	
A124	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A125	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A126	BOYS	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
A127	GIRLS	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
A128	SCI PREP	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A129	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A131	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A132	IDF	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
A133	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A134	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
A135	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A136	SCI PREP	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A137	PLC	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A138	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	

ROOM FINISH SCHEDULE - LEVEL 1 - AREA B

NUMBER	NAME	FLOOR FINISH	BASE FINISH	NORTH WALL FINISH	EAST WALL FINISH	SOUTH WALL FINISH	WEST WALL FINISH	CEILING FINISH	COMMENTS
B100A	CORRIDOR	LVT-1	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1, OPEN TO ABOVE	
B100B	CORRIDOR	LVT-1	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1, OPEN TO ABOVE	
B100C	CORRIDOR	LVT-1	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1	
B100D	CORRIDOR	LVT-1	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1	
B100E	CORRIDOR	LVT-1	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1	
B101	WAITING	CPT-4	RB-1				P-1	MBC-1	
B102	VESTIBULE	LVT-1	RB-1				P-1	MBC-1	
B103	RECEPTION	CPT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B104	SRO	CPT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B105	ATTN	CPT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B106	RR	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
B107	CONF	LVT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B108	CLINIC	LVT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B109	OFFICE	LVT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B110	STOR	LVT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B111	COT	LVT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B112	RR	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
B113	SEC	CPT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B114	PRINCIPAL	CPT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B115	AP	CPT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B116	OFFICE	CPT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B117	OFFICE	CPT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B118	LOUNGE	LVT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B119	RR	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
B120	RR	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
B121	CUST	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	2
B122	WORK ROOM	CPT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B123	MDF	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
B124	BAND 1	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
B125	STOR	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
B126	BAND 2	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
B127	DANCE	AF-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
B128	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B129	GIRLS	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
B130	BOYS	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
B131	MEDIA	CPT-2,CPT-3	RB-1	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	OPEN TO ABOVE	
B132	OFFICE	CPT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B133	MECH	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
B134	THEATER	LVT-4	RB-2	P-3	P-3	P-3	P-3	APC-3	
B135	STOR	LVT-4	RB-1	P-1	P-1	P-1	P-1	APC-1	
B136	CHOIR	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
B137	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B138	ART	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
B139	STOR	LVT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B140	VESTIBULE	CPT-4	RB-1	P-1	P-1	P-1	P-1	GYP	2
B141	LIFE SKILLS	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
B142	RR	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
B143	SENSE	LVT-3	RB-1	P-1	P-1	P-1	P-1	GYP	2
B144	RR	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
B145	ADAPTIVE BEHAVIOR	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
B146	DYS OFF	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
B146A	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
B147	MECH	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
B148	RESOURCE	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
B149	PASS	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	

ROOM FINISH SCHEDULE - LEVEL 1 - AREA C

NUMBER	NAME	FLOOR FINISH	BASE FINISH	NORTH WALL FINISH	EAST WALL FINISH	SOUTH WALL FINISH	WEST WALL FINISH	CEILING FINISH	COMMENTS
C100	DINING	T-9,T-10	SEE INT. ELEVATIONS		SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1, AB-1	
C100B	CORRIDOR	T-9, T-10	SEE INT. ELEVATIONS			SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1, GYP	
C100C	CORRIDOR	T-9, T-10	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS			SEE INT. ELEVATIONS	APC-1, GYP	
C101	STAGE	WDF-1, LVT-4	RB-2		SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-3	
C102	BAND	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
C102A	LOCKERS								
C103	STORAGE	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
C104	STORAGE	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
C105	SERVING	QT-1	QTB-1	P-4	P-4	P-4	P-4	APC-2	
C106	KITCHEN	QT-1	QTB-1	P-4	P-4	P-4	P-4	APC-2	
C107	OFFICE	QT-1	QTB-1	P-1	P-1	P-1	P-1	APC-2	
C108	JANITOR	QT-1	QTB-1	P-4	P-4	P-4	P-4	APC-2	
C109	LOCKERS	QT-1	QTB-1	P-4	P-4	P-4	P-4	APC-2	
C110	RR	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
C111	REFRIGERATOR	QT-1	QTB-1	P-4	P-4	P-4	P-4	EXPOSED	2
C112	FREEZER	QT-1	QTB-1			P-4	P-4	EXPOSED	
C113	DRY STOR	QT-1	QTB-1	P-4	P-4	P-4	P-4	APC-2	

ROOM FINISH SCHEDULE - LEVEL 1 - AREA D

NUMBER	NAME	FLOOR FINISH	BASE FINISH	NORTH WALL FINISH	EAST WALL FINISH	SOUTH WALL FINISH	WEST WALL FINISH	CEILING FINISH	COMMENTS
D100	GYM	AF-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
D101	CONCESSIONS	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
D102	IDF	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
D103	STORAGE	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
D104	STORAGE	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
D105	BOYS	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
D106	GIRLS	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
D107	COACHES OFF	LVT-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
D108	GYM STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
D109	CUST	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
D110	STAFF	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
D111	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
D112	GIRLS	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
D113	BOYS	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
D114	MECH	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
D114.1	ELEC	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
D114.3	SERVICE YARD								
D115	BLEACHER BOT CAGE								

ROOM FINISH SCHEDULE - LEVEL 2 - AREA A

NUMBER	NAME	FLOOR FINISH	BASE FINISH	NORTH WALL FINISH	EAST WALL FINISH	SOUTH WALL FINISH	WEST WALL FINISH	CEILING FINISH	COMMENTS
A200	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
A200A	CORRIDOR	SEE FINISH PLAN	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1	
A200B	CORRIDOR	SEE FINISH PLAN	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1	
A200C	CORRIDOR	SEE FINISH PLAN	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-1	
A201	PLC	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A202	MECH	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
A203	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A204	ELEC	CFC-1	RB-1	P-1	P-1	PT	P-1	EXPOSED	
A205	STOR	CFC-1	RB-1	P-1	P-1	PT	P-1	APC-1	
A206	SCIENCE	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A207	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A208	SCIENCE	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A209	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A210	SCI PREP	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A212	ELEC	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
A213	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A214	STOR	CFC-1	RB-1	P-1	P-1	P-1	PT	APC-1	
A215	SCIENCE	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A218	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A219	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A220	CUST	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
A221	PLC	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A222	STAFF	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
A223	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
A224	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A225	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A226	SCI PREP	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A226	BOYS	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
A227	GIRLS	T-11	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	SEE INT. ELEVATIONS	APC-2	
A229	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A231	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A232	IDF	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	
A233	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A234	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	
A235	CLASSROOM	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A236	SCI PREP	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A237	PLC	LVT-3	RB-1	P-1	P-1	P-1	P-1	APC-1	
A238	STOR	CFC-1	RB-1	P-1	P-1	P-1	P-1	APC-1	

ROOM FINISH SCHEDULE - LEVEL 2 - AREA D

NUMBER	NAME	FLOOR FINISH	BASE FINISH	NORTH WALL FINISH	EAST WALL FINISH	SOUTH WALL FINISH	WEST WALL FINISH	CEILING FINISH	COMMENTS
D200	MECH MEZZANINE	CFC-1	RB-1	P-1	P-1	P-1	P-1	EXPOSED	

GENERAL NOTES - ROOM FINISHES:

1. (#) IN REMARKS COLUMN OF ROOM FINISH SCHEDULE REFERENCES THE SPECIFIC ROOM FINISH SCHEDULE REMARKS.
2. COORDINATE INTERIOR FINISHES WITH PARTITION TYPES.
3. FLOOR MATERIAL CHANGES BETWEEN ROOMS TO OCCUR UNDER DOOR (UON)
4. PAINT EXPOSED JOISTS, DECK, & ALL MISC. ITEMS, TYP. REFER TO GENERAL FINISH SCHEDULE NOTES ON A601
5. ALL APC SHALL BE PER THE FOLLOWING GUIDELINES:
   APC-1 24"x24" STANDARD SIZE AS SPECIFIED
   APC-2 24"x48" STANDARD SIZE "VINYL FACED" AS SPECIFIED
6. REFER TO LIGHTING PLANS & REFLECTED CEILING PLAN SHEETS FOR ACP TYPE/HEIGHT, CEILING GRID LAYOUT & BULKHEAD LOCATIONS (U.O.N.). REFER MEP DOCS.
7. PROVIDE CJ's AT GYP. BD. CEILINGS AT 50'-0"OC MAX. (U.O) PROVIDE CJ's AT WALLS/BLKHDS AT 30'-0"OC MAX. (U.O.N.)
8. ALL SUSPENDED GYP. BD. TO BE PAINTED. REFER REFLECTED CEILING PLANS AND GENERAL FINISH SCHEDULE NOTES ON A601.
9. SEE FLOOR PATTERN PLANS FOR EXTENTS AND TYPE OF FLOORING FINISHES
10. ALL CMU TO BE PAINTED. REFER GENERAL FINISH SCHEDULE NOTES ON A601

ROOM FINISH SCHEDULE REMARKS:

1. PROVIDE 4'x8' VERTICAL FRP PANELS FROM CORNER TO CORNER AT STUD WALLS BEHIND MOP SINKS, TYP
2. PROVIDE ADA COMPLIANT MARBLE THRESHOLD 2" WIDE W/ CHAMFERED EDGES AT ENTRY DOOR OR FLOORING TRANSITION AT RESTROOMS AND TOILETS.
3. BLOCK FILL AND PAINT ALL WALLS TO DECK AND BEHIND ACOUSTICAL WALL PANELS, TYP.
4. CONTINUOUS PTD 1/2" PLYWOOD OVER SCHEDULED PARTITION TYPE, FROM CEILING DOWN 8' ALL AROUND ROOM.

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Notes

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #3		2026.03.04
Revision		By	Appd	YYYY.MM.DD
ISSUE FOR PERMIT AND PROPOSAL			2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal

REGISTERED ARCHITECT · BRIN J SHEDD · 23796 · STATE OF TEXAS

03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ROOM FINISH SCHEDULE

Project No.
214001329

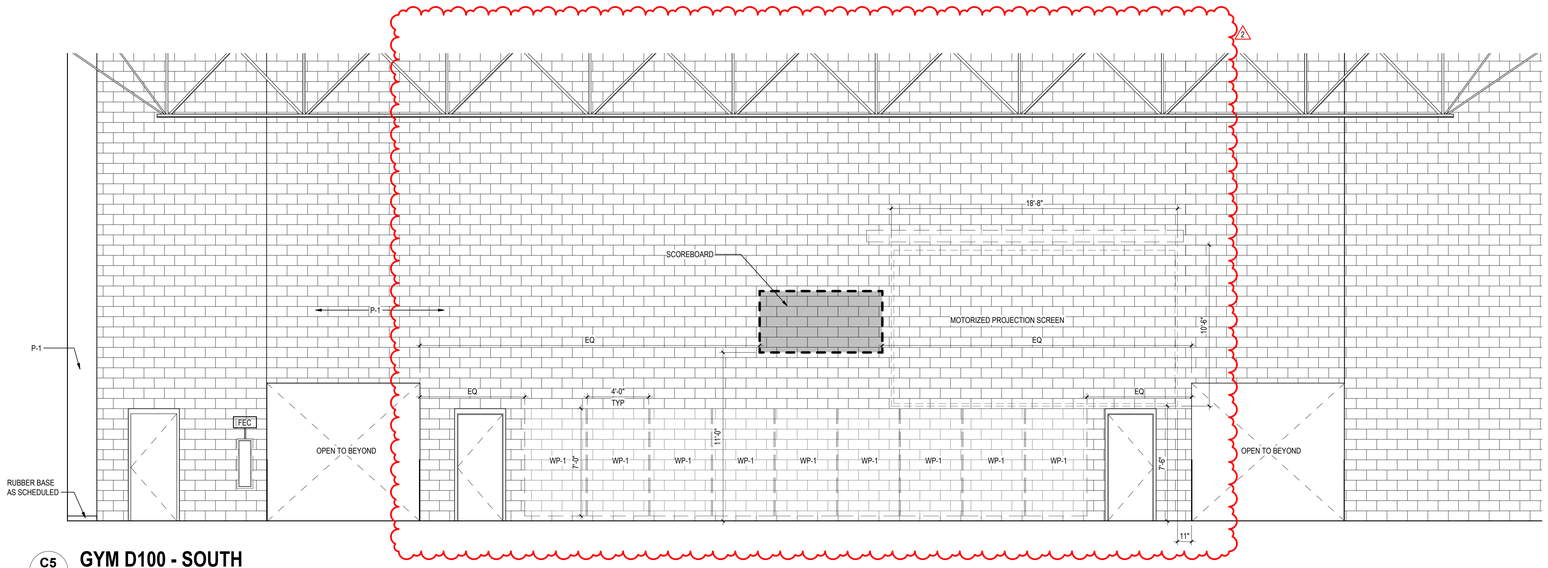
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1" = 1'-0"

Revision
2

Drawing No.
A602

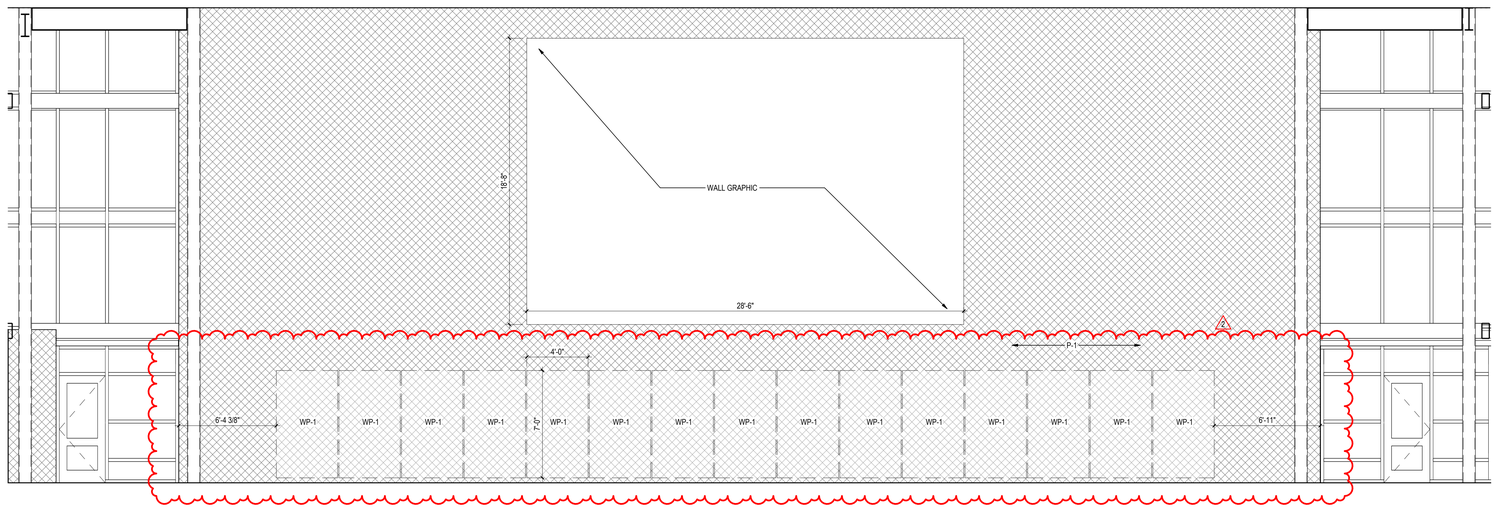
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ORIGINAL SHEET - ARCH E1



C5 / A617 **GYM D100 - SOUTH**

1/4" = 1'-0"



A5 / A617 **GYM D100 - NORTH**

1/4" = 1'-0"

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Permit/Seal

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STATE OF TEXAS
03/10/2026

Client/Project Logo

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Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
INTERIOR ELEVATIONS

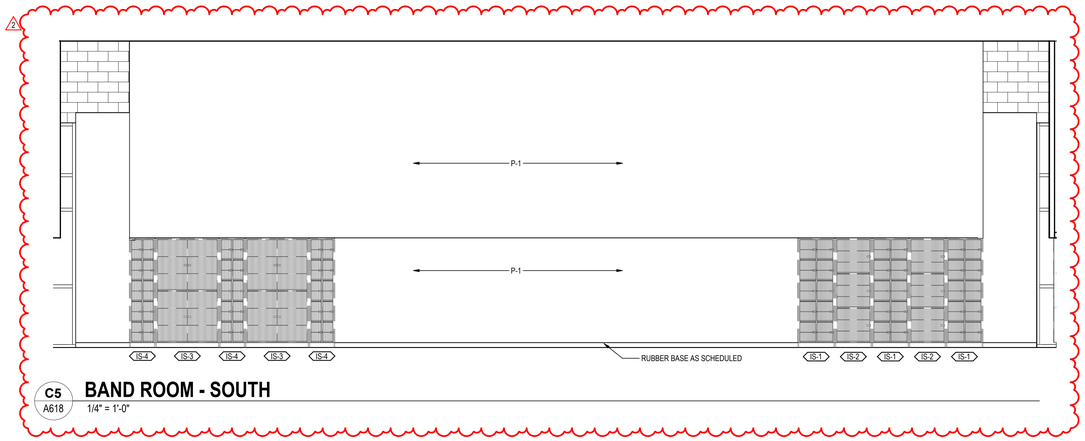
Project No.
214001329

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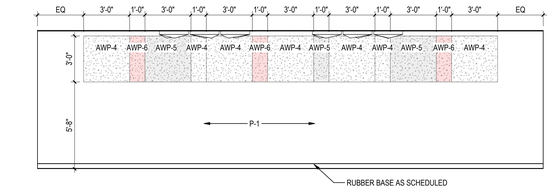
Revision
2

Drawing No.
A617

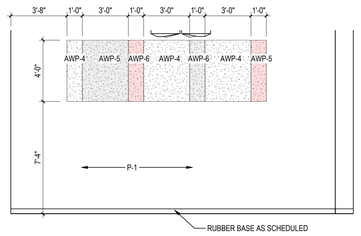
ORIGINAL SHEET - ARCH E1



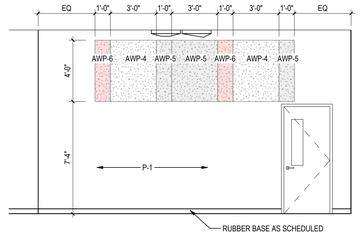
C5 A618 **BAND ROOM - SOUTH**
1/4" = 1'-0"



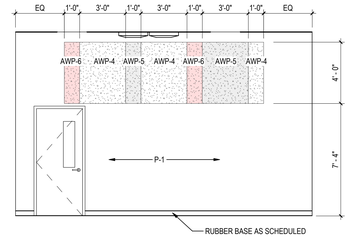
C2 A618 **CHOIR - NORTH**
1/4" = 1'-0"



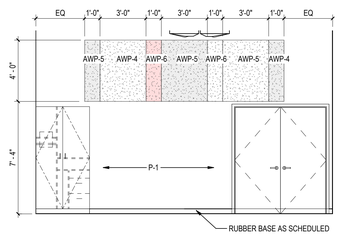
B5 A618 **BAND 2 B126 - EAST**
1/4" = 1'-0"



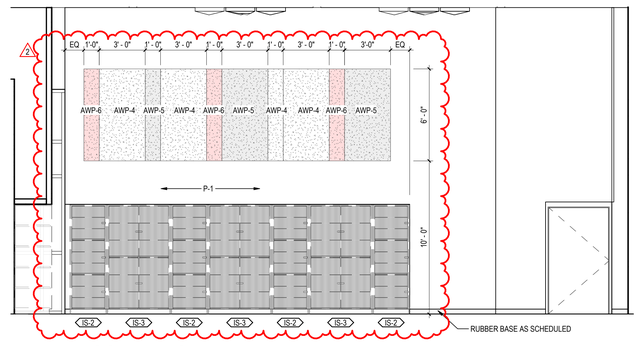
B4 A618 **BAND 2 B126 - WEST**
1/4" = 1'-0"



B3 A618 **BAND 1 B124 - WEST**
1/4" = 1'-0"



B1 A618 **BAND 1 B124 - EAST**
1/4" = 1'-0"



A5 A618 **BAND ROOM - WEST**
1/4" = 1'-0"



A3 A618 **BAND ROOM - EAST**
1/4" = 1'-0"

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03/10/2026

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Client/Project
Crosby ISD

Crosby Sixth Grade Campus

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Crosby, TX 77532

Title
INTERIOR ELEVATIONS

Project No.
214001329

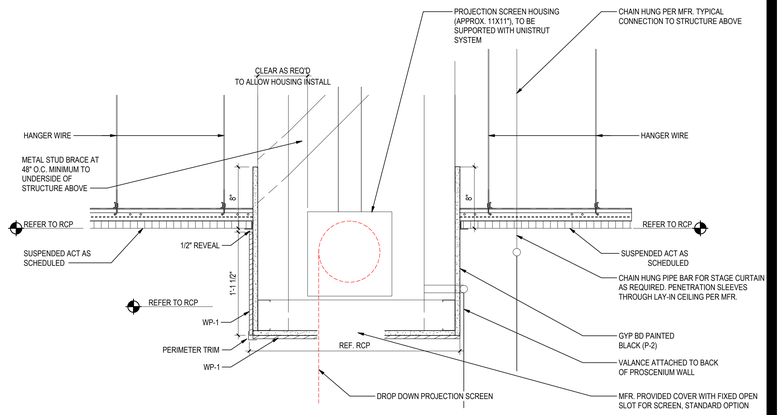
Scale
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Revision
2

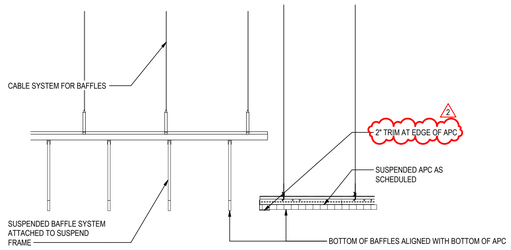
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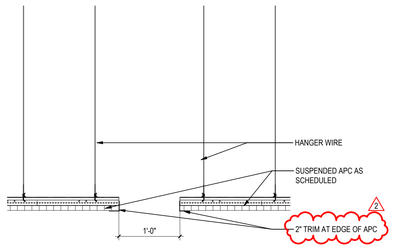
ORIGINAL SHEET - ARCH E1



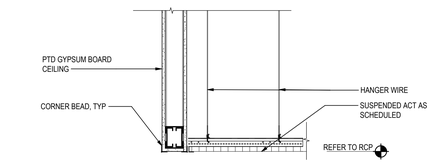
D2 GYPSUM BOARD SOFFIT WITH ACT
A621 — 1 1/2" = 1'-0"



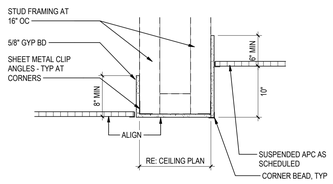
C5 CEILING DETAIL AT BAFFLES
A621 — 1" = 1'-0"



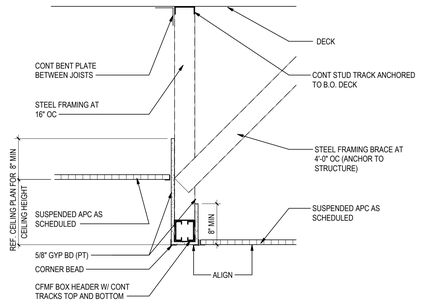
C3 CEILING DETAIL - FLOATING ACP
A621 — 1" = 1'-0"



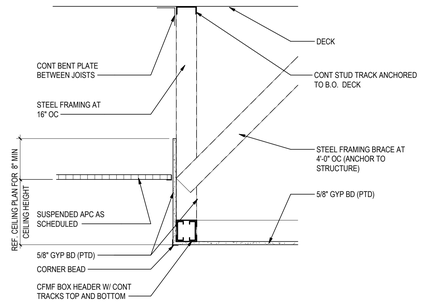
C1 CEILING DETAIL
A621 — 1" = 1'-0"



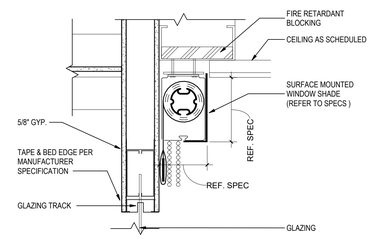
B6 CEILING DETAIL AT ACP
A621 — 1" = 1'-0"



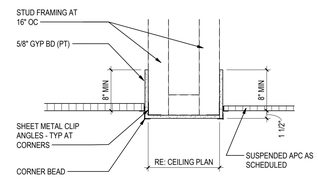
B5 CEILING DETAIL - APC TO APC
A621 — 1" = 1'-0"



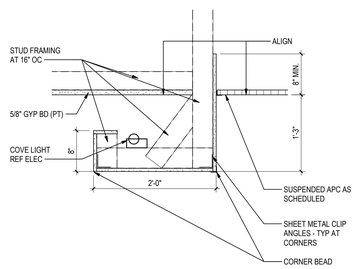
B3 CEILING DETAIL - GYP TO ACP
A621 — 1" = 1'-0"



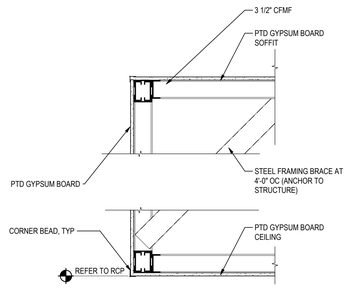
B1 SURFACE MOUNTED ROLLER SHADE
A621 — 1 1/2" = 1'-0"



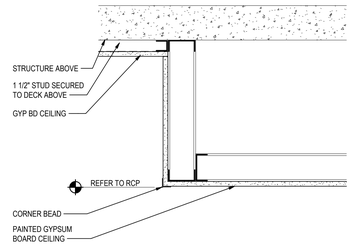
A6 CEILING DETAIL - ACP
A621 — 1" = 1'-0"



A5 COVE LIGHT DETAIL
A621 — 1" = 1'-0"



A3 CEILING DETAIL - GYP CEILING
A621 — 1" = 1'-0"



A1 GYPSUM BOARD SOFFIT DETAIL
A621 — 1 1/2" = 1'-0"

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03/10/2026

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Client/Project
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Crosby, TX 77532

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CEILING DETAILS

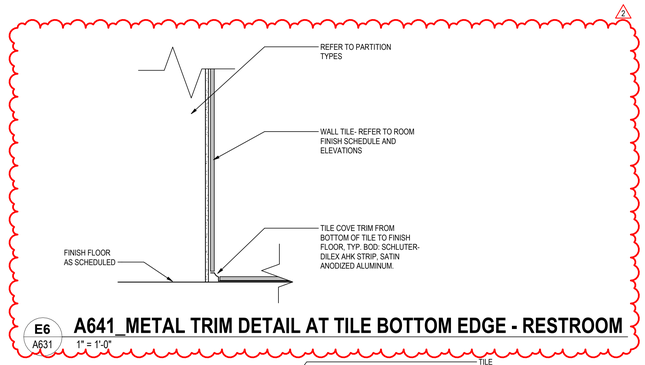
Project No.
214001329

Scale
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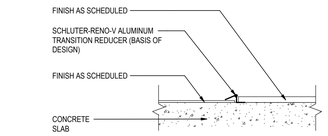
Revision
2

Drawing No.
A621

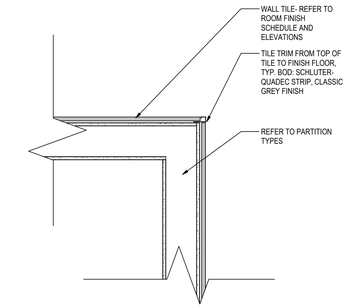
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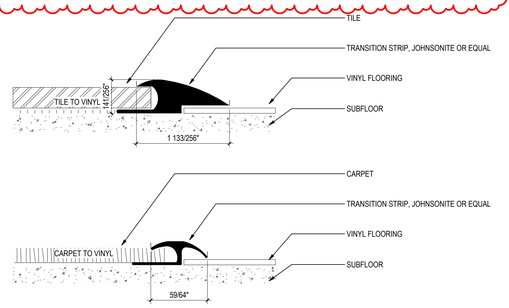
E6 A631 — **A641_METAL TRIM DETAIL AT TILE BOTTOM EDGE - RESTROOM**
1" = 1'-0"

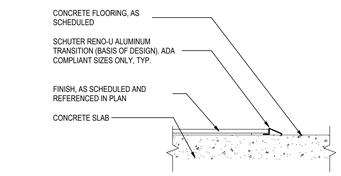


E4 A631 — **A641_FLOOR TRANSITION REDUCER, TYP.**
3" = 1'-0"

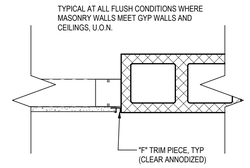


E2 A631 — **A641_TILE CORNER DETAIL- AJS**
1" = 1'-0"

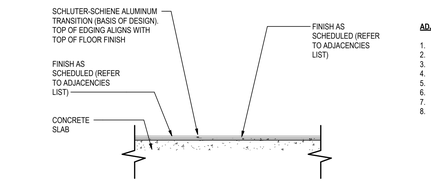




D4 A631 — **A641_FLOOR TRANSITION TO SUBFLOOR, TYP.**
3" = 1'-0"



D2 A631 — **A641_CMU TO GYP TRANSITION- AJS**
1 1/2" = 1'-0"

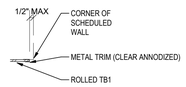


ADJACENCIES LIST

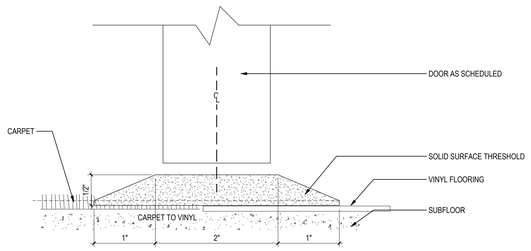
1. CPT TO VCT
2. MT TO RT-2
3. MT TO WD
4. MT TO SC
5. AWF-1 TO PC/SC
6. AWF-2 TO VCT
7. AWF-2 TO CPT
8. PORC TO PC (AT LEARNING STAIR ONLY)

C4 A631 — **A641_FLOOR TRANSITION "L" DETAIL, TYP.- AJS**
1 1/2" = 1'-0"

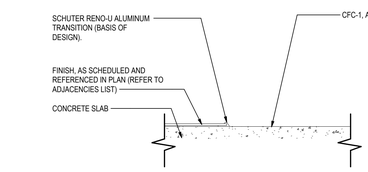
TYPICAL AT ALL LOCATIONS WHERE ROLLED TACKBOARD MEETS AN OUTSIDE CORNER (OR DOES NOT TERMINATE INTO AN INSIDE CORNER), U.O.N.



C2 A631 — **A641_TYP TACKBD DETAIL- AJS**
1 1/2" = 1'-0"



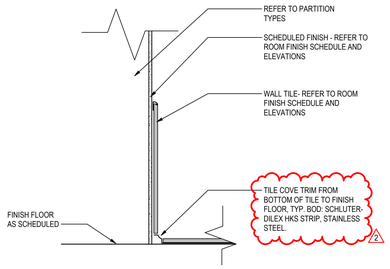
B6 A631 — **A641_TRANSITION DETAILS_jef**
12" = 1'-0"



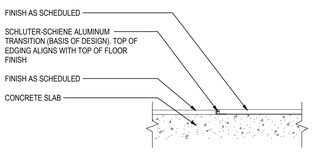
ADJACENCIES LIST

1. VCT TO PC/SC
2. CPT TO PC/SC
3. QT TO PC/SC
4. RT-1 TO PC/SC
5. PORC TO PC
6. AWF-2 TO PC

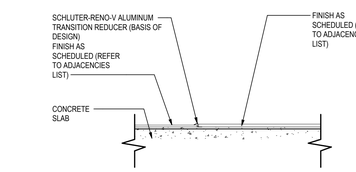
B4 A631 — **A641_FLOOR TRANSITION REDUCER TO SUBFLOOR, TYP.- AJS**
1 1/2" = 1'-0"



B2 A631 — **A641_METAL TRIM DETAIL AT TILE BOTTOM EDGE**
1" = 1'-0"



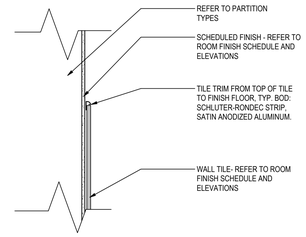
A6 A631 — **A641_FLOOR TRANSITION "L" DETAIL, TYP.**
3" = 1'-0"



ADJACENCIES LIST

1. QT TO CPT

A4 A631 — **A641_FLOOR TRANSITION REDUCER, TYP.- AJS**
1 1/2" = 1'-0"



A2 A631 — **A641_METAL TRIM DETAIL AT TILE TOP EDGE**
1" = 1'-0"

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03/10/2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
INTERIOR DETAILS, PLAN & SECTIONS

Project No.
214001329

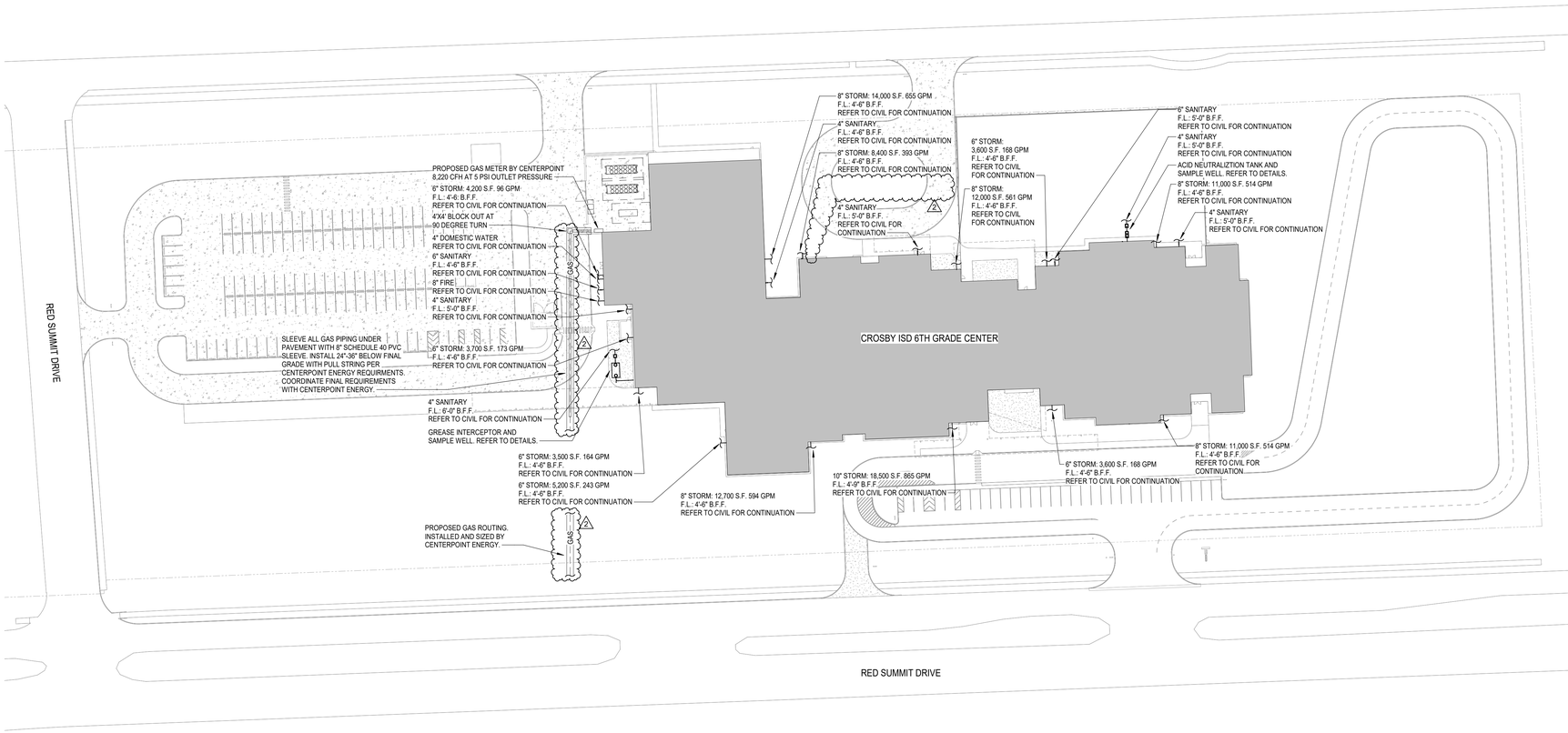
Scale
As indicated

Revision
2

Drawing No.
A631

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ORIGINAL SHEET - ARCH E1



1 **PLUMBING SITE PLAN**
Scale: 1" = 50'-0"

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Consultant

Salas O'Brien

salasobrien.com 281-664-1900
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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064

Registration: F-4111
Project No: 2550-01131-00

Notes

D C B A

KEY PLAN

PROJECT NORTH

2	ADDENDUM #4	By	Appd	2026.03.11 YYYY.MM.DD

Revision

	Issue for Permit and Proposal	By	Appd	2026.01.26 YYYY.MM.DD

Issued

Permit/Seal

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
03-11-2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
PLUMBING SITE PLAN

Project No.
214001329

Scale
1" = 50'-0"

Revision
2

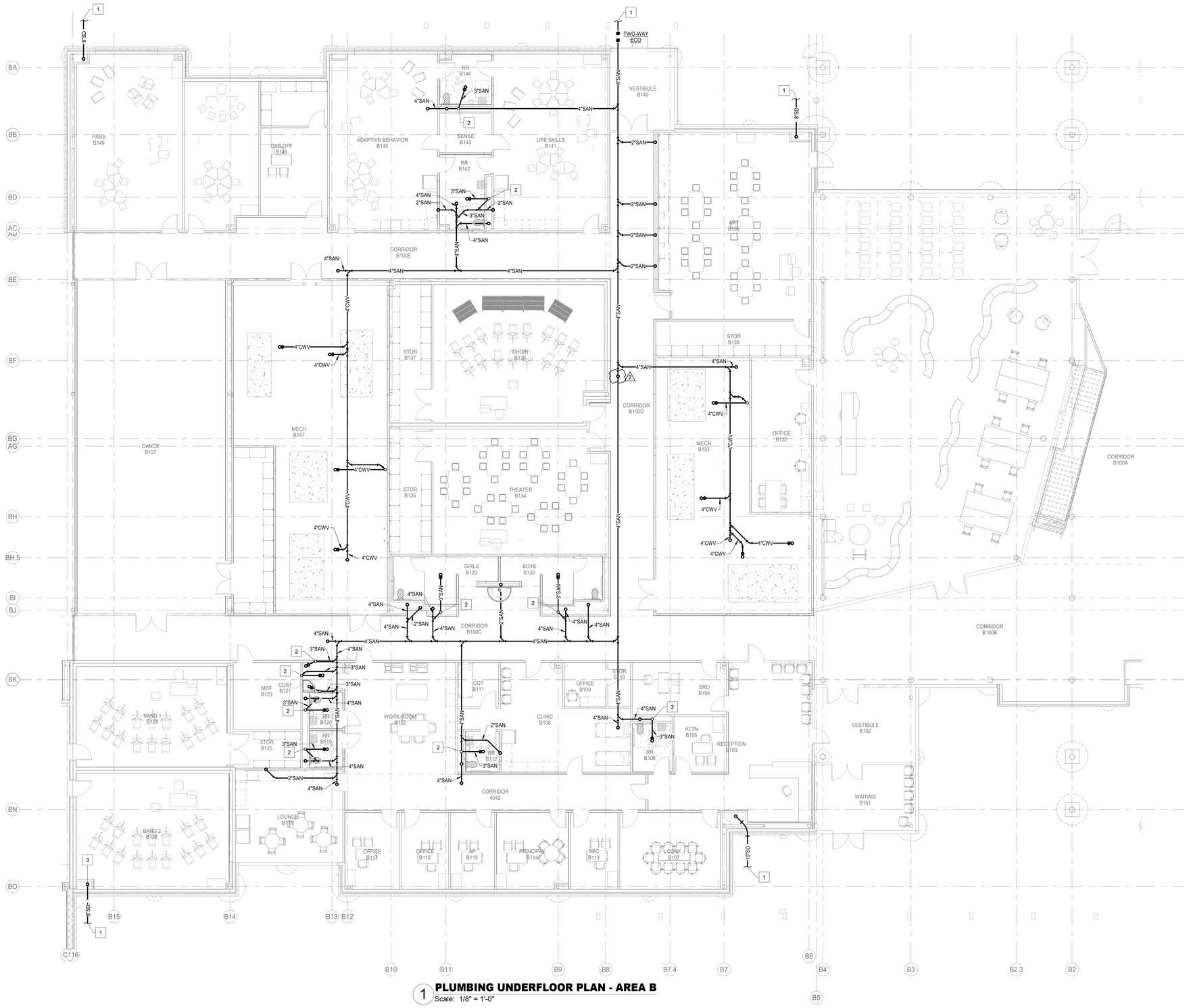
Drawing No.
P100

3/17/2026 8:47:29 AM

ORIGINAL SHEET - ARCH E1

PLUMBING KEYED NOTES

1 REFER TO SHEET P100 FOR CONTINUATION.
2 2" VENT UP.
3 8" STORM FROM ABOVE.



1 PLUMBING UNDERFLOOR PLAN - AREA B

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

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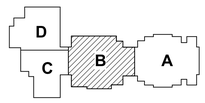
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KEY PLAN

PROJECT NORTH

2 ADDENDUM #4			2026.03.11
Revision	By	Appd	YYYY.MM.DD
Issue for Permit and Proposal			2026.01.26
Issued	By	Appd	YYYY.MM.DD

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Title
PLUMBING UNDERFLOOR PLAN - AREA B

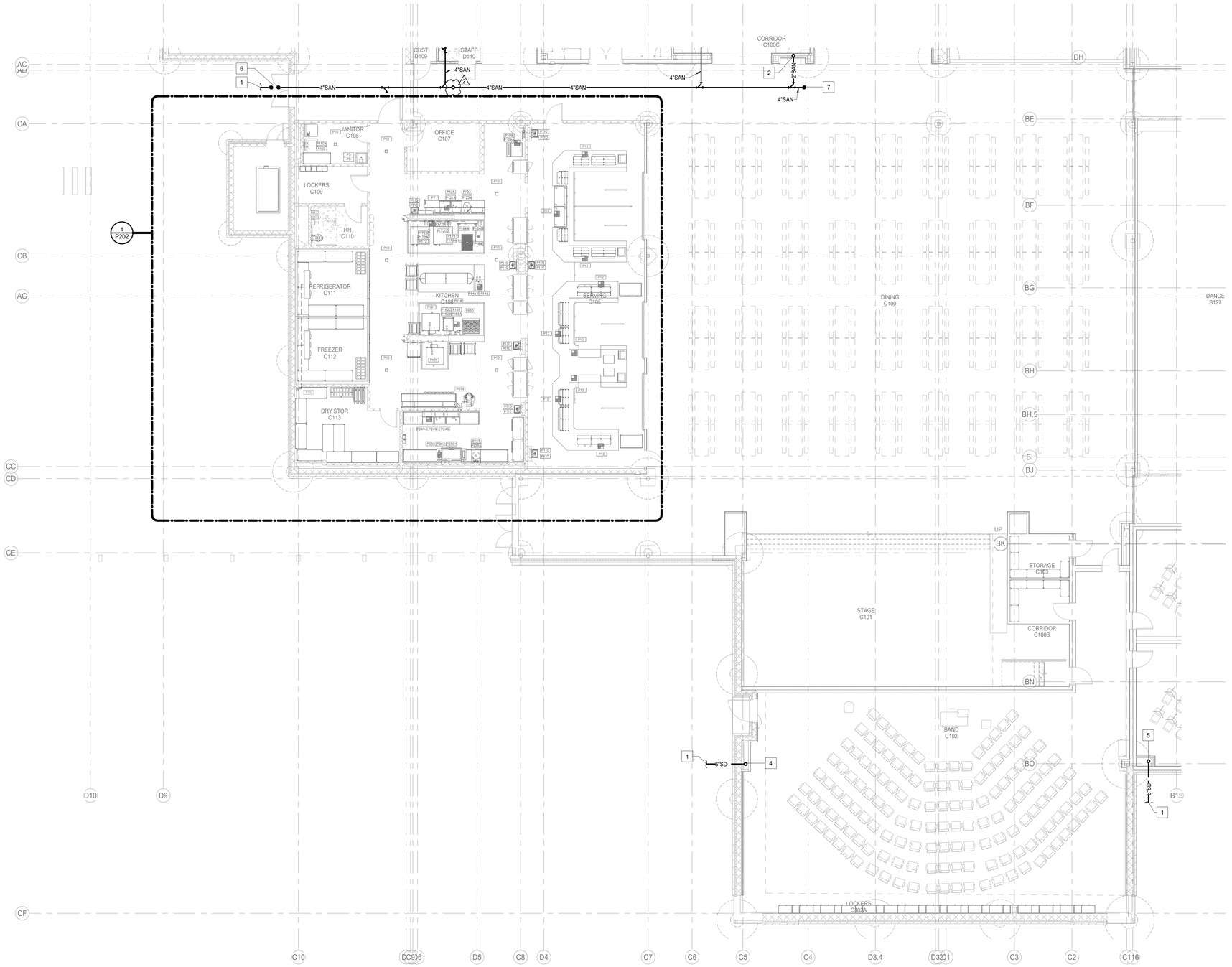
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Revision 2	Drawing No. P201B

3/10/2026 8:47:44 AM

ORIGINAL SHEET - ARCH E1

PLUMBING KEYED NOTES

1 REFER TO SHEET P100 FOR CONTINUATION.
2 2" WASTE FROM ABOVE.
4 6" STORM FROM ABOVE.
5 8" STORM FROM ABOVE.
6 4" WASTE FROM TWO-WAY CLEANOUT ABOVE.
7 4" WASTE FROM CLEANOUT ABOVE.



1 PLUMBING UNDERFLOOR PLAN - AREA C

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

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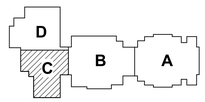
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KEY PLAN

PROJECT NORTH

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Title
PLUMBING UNDERFLOOR PLAN - AREA C

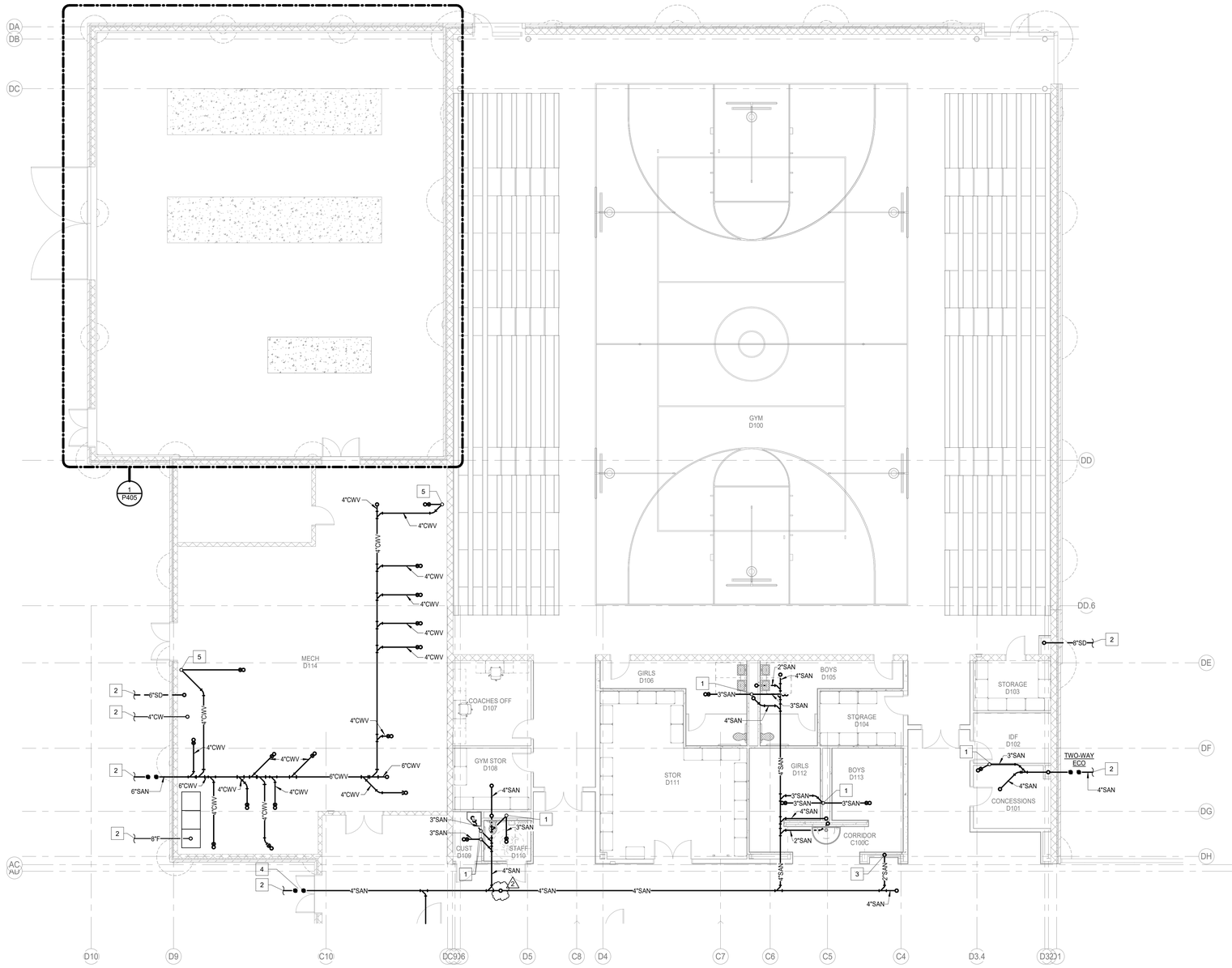
Project No.	Scale
214001329	1/8" = 1'-0"
Revision	Drawing No.
2	P201C

3/11/2026 8:47:47 AM

ORIGINAL SHEET - ARCH E1

PLUMBING KEYED NOTES

1 2" VENT UP.
2 REFER TO SHEET P100 FOR CONTINUATION.
3 2" WASTE FROM ABOVE.
4 4" WASTE FROM TWO-WAY CLEANOUT ABOVE.
5 4" VENT UP.



1 **PLUMBING UNDERFLOOR PLAN - AREA D**
Scale: 1/8" = 1'-0"

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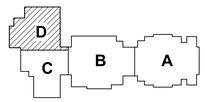
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Project No: 2550-01131-00

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KEY PLAN

PROJECT NORTH

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Title
PLUMBING UNDERFLOOR PLAN - AREA D

Project No.	Scale
214001329	1/8" = 1'-0"
Revision	Drawing No.
2	**P201D**

3/17/2026 8:47:52 AM

ORIGINAL SHEET - ARCH E1

FIRE SPRINKLER SYSTEM NOTES

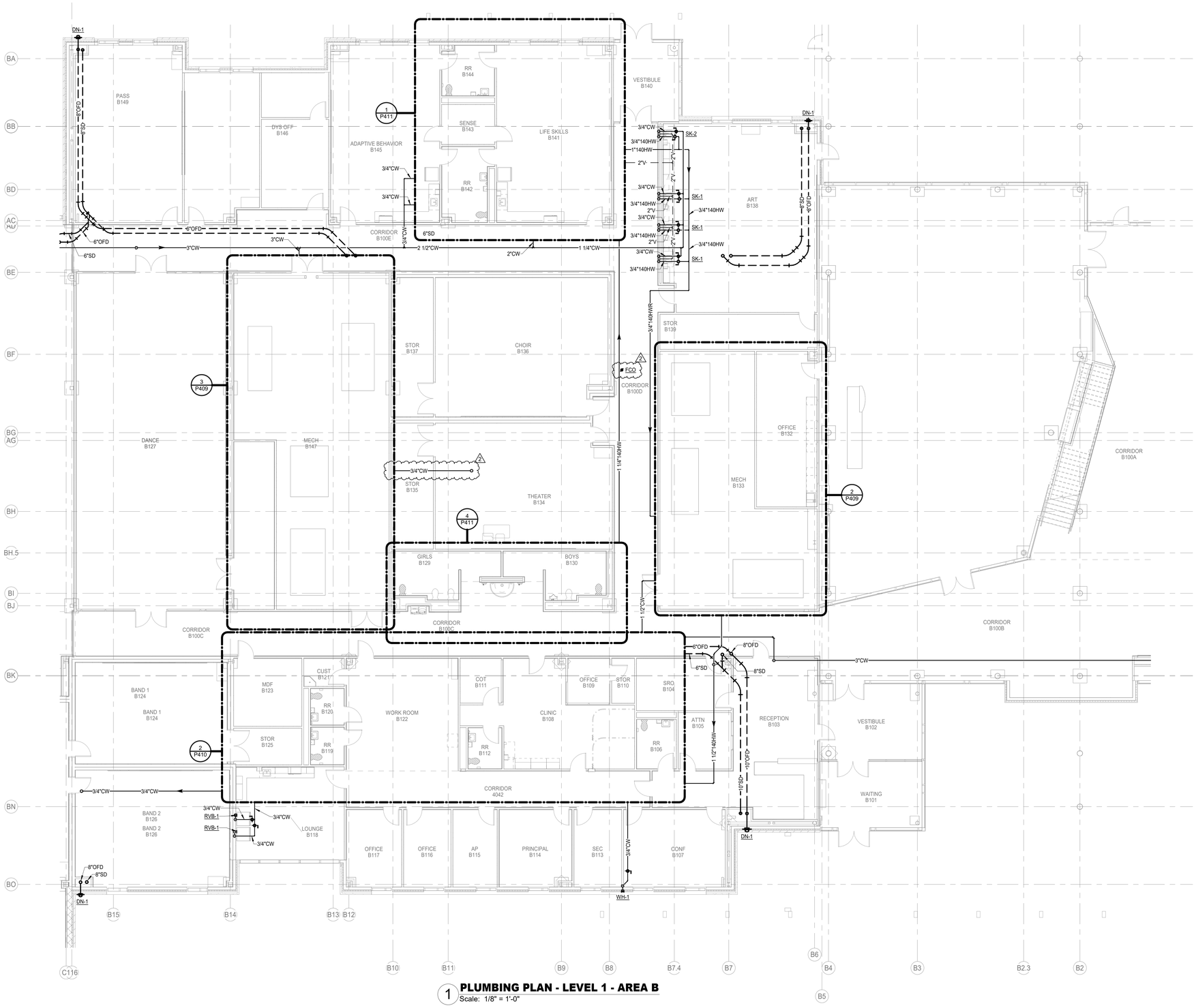
A. DESIGN AND FURNISH LABOR AND MATERIALS FOR THE COMPLETE INSTALLATION OF A HYDRAULICALLY CALCULATED AUTOMATIC WET PIPE FIRE SPRINKLER SYSTEM WITH THE ATTENDANT ACCESSORIES FOR ENTIRE AREA.

B. STUDY THE GENERAL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS. IN ORDER TO BECOME FAMILIAR WITH THE BUILDING AND DETAILS AS THEY APPLY TO THE WORK OF THIS SECTION. COOPERATE WITH OTHERS SO THAT THERE WILL BE NO CONFLICT OF SPACE REQUIRED. DUCTWORK AND ELECTRICAL WORK SHALL TAKE PRECEDENCE OVER OTHER WORK, EXCEPT WHERE IT IS ABSOLUTELY NECESSARY TO MAINTAIN COVERAGE PROTECTION.

C. THE INSTALLATION OF THE ENTIRE SPRINKLER SYSTEMS SHALL COMPLY WITH ALL RULES AND REGULATIONS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, THE STANDARD BUILDING CODE, REQUIREMENTS OF NFPA PAMPHLET 13, AND OTHER LOCAL AUTHORITIES EXERCISING JURISDICTION.

D. IT SHALL BE THE FIRE PROTECTION INSTALLERS RESPONSIBILITY, PRIOR TO BID, TO VERIFY PRESSURE AT THE PROJECT SITE BY PERFORMING A FLOW TEST. DETERMINE IF THE AVAILABLE STATIC AND RESIDUAL PRESSURE WILL ADEQUATELY PROVIDE THE FIRE EXTINGUISHING SYSTEM WITH THE NECESSARY PRESSURE OR IF A FIRE PUMP, BREAK TANK AND NECESSARY APPURTENANCES ARE REQUIRED.

E. REFER TO SPECIFICATIONS FOR PIPE MATERIALS.



1 **PLUMBING PLAN - LEVEL 1 - AREA B**
Scale: 1/8" = 1'-0"

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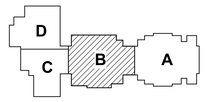
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KEY PLAN

PROJECT NORTH

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Revision		By	Appd	YYYY.MM.DD
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Title
PLUMBING PLAN - LEVEL 1 - AREA B

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	P301B

3/17/2026 8:47:56 AM

ORIGINAL SHEET - ARCH E1

FIRE SPRINKLER SYSTEM NOTES

A. DESIGN AND FURNISH LABOR AND MATERIALS FOR THE COMPLETE INSTALLATION OF A HYDRAULICALLY CALCULATED AUTOMATIC WET PIPE FIRE SPRINKLER SYSTEM WITH THE ATTENDANT ACCESSORIES FOR ENTIRE AREA.

B. STUDY THE GENERAL, STRUCTURAL, ELECTRICAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS, IN ORDER TO BECOME FAMILIAR WITH THE BUILDING AND DETAILS AS THEY APPLY TO THE WORK OF THIS SECTION. COOPERATE WITH OTHERS SO THAT THERE WILL BE NO CONFLICT OF SPACE REQUIRED. DUCTWORK AND ELECTRICAL WORK SHALL TAKE PRECEDENCE OVER OTHER WORK, EXCEPT WHERE IT IS ABSOLUTELY NECESSARY TO MAINTAIN COVERAGE PROTECTION.

C. THE INSTALLATION OF THE ENTIRE SPRINKLER SYSTEMS SHALL COMPLY WITH ALL RULES AND REGULATIONS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, THE STANDARD BUILDING CODE, REQUIREMENTS OF NFPA PAMPHLET 13, AND OTHER LOCAL AUTHORITIES EXERCISING JURISDICTION.

D. IT SHALL BE THE FIRE PROTECTION INSTALLERS RESPONSIBILITY, PRIOR TO BID, TO VERIFY PRESSURE AT THE PROJECT SITE BY PERFORMING A FLOW TEST. DETERMINE IF THE AVAILABLE STATIC AND RESIDUAL PRESSURE WILL ADEQUATELY PROVIDE THE FIRE EXTINGUISHING SYSTEM WITH THE NECESSARY PRESSURE OR IF A FIRE PUMP, BREAK TANK AND NECESSARY APPURTENANCES ARE REQUIRED.

E. REFER TO SPECIFICATIONS FOR PIPE MATERIALS.

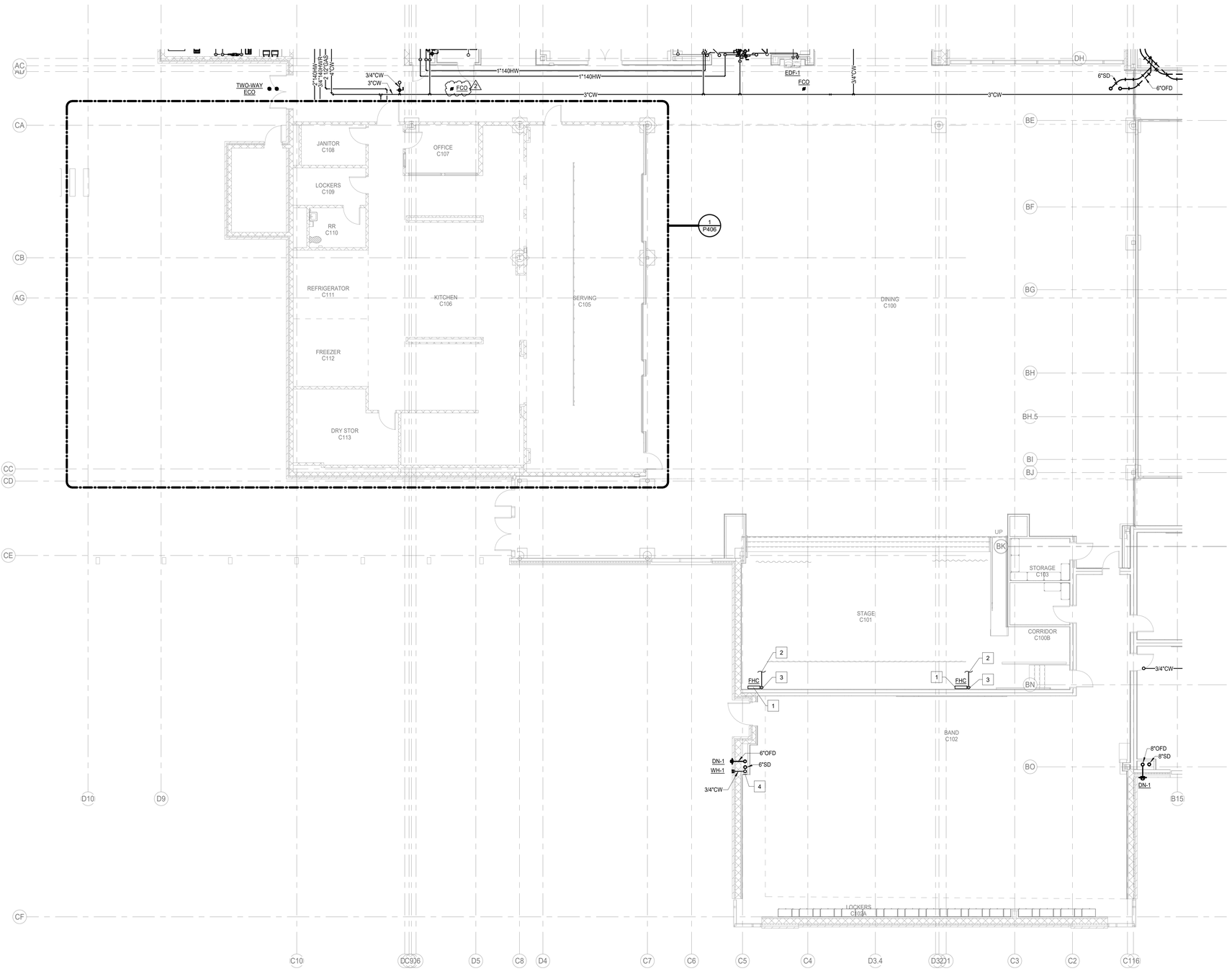
PLUMBING KEYED NOTES

1 PROVIDE AND INSTALL A POTTER ROEMER #1052-AL-A FIRE HOSE CABINET. HOUSES 1-1/2" FIRE HOSE RACK ASSEMBLY WITH 75 FEET OF HOSE. WHITE POWDER COAT FINISH. THIS WORK SHALL BE DONE BY FIRE SPRINKLER CONTRACTOR. PROVIDE WITH INLET ON LEFT SIDE OF CABINET.

2 FIRE SPRINKLER CONTRACTOR TO CONNECT FIRE LINE THAT SERVES FIRE HOSE CABINET TO NEAREST 2" OR LARGER FIRE SPRINKLER MAIN WITHIN THE BUILDING.

3 2" FIRE DOWN TO HOSE CABINET.

4 PROVIDE 8"X8" ACCESS PANEL TO SHUTOFF VALVE 48" A.F.F.



1 **PLUMBING PLAN - LEVEL 1 - AREA C**
Scale: 1/8" = 1'-0"

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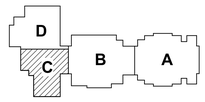
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Houston, TX 77064

Registration: F-4111
Project No: 2550-01131-00

Notes



KEY PLAN

PROJECT NORTH

2 ADDENDUM #4			2026.03.11
Revision	By	Appd	YYYY.MM.DD
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Issued	By	Appd	YYYY.MM.DD

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PLUMBING PLAN - LEVEL 1 - AREA C

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	P301C

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ORIGINAL SHEET - ARCH E1

FIRE SPRINKLER SYSTEM NOTES

A. DESIGN AND FURNISH LABOR AND MATERIALS FOR THE COMPLETE INSTALLATION OF A HYDRAULICALLY CALCULATED AUTOMATIC WET PIPE FIRE SPRINKLER SYSTEM WITH THE ATTENDANT ACCESSORIES FOR ENTIRE AREA.

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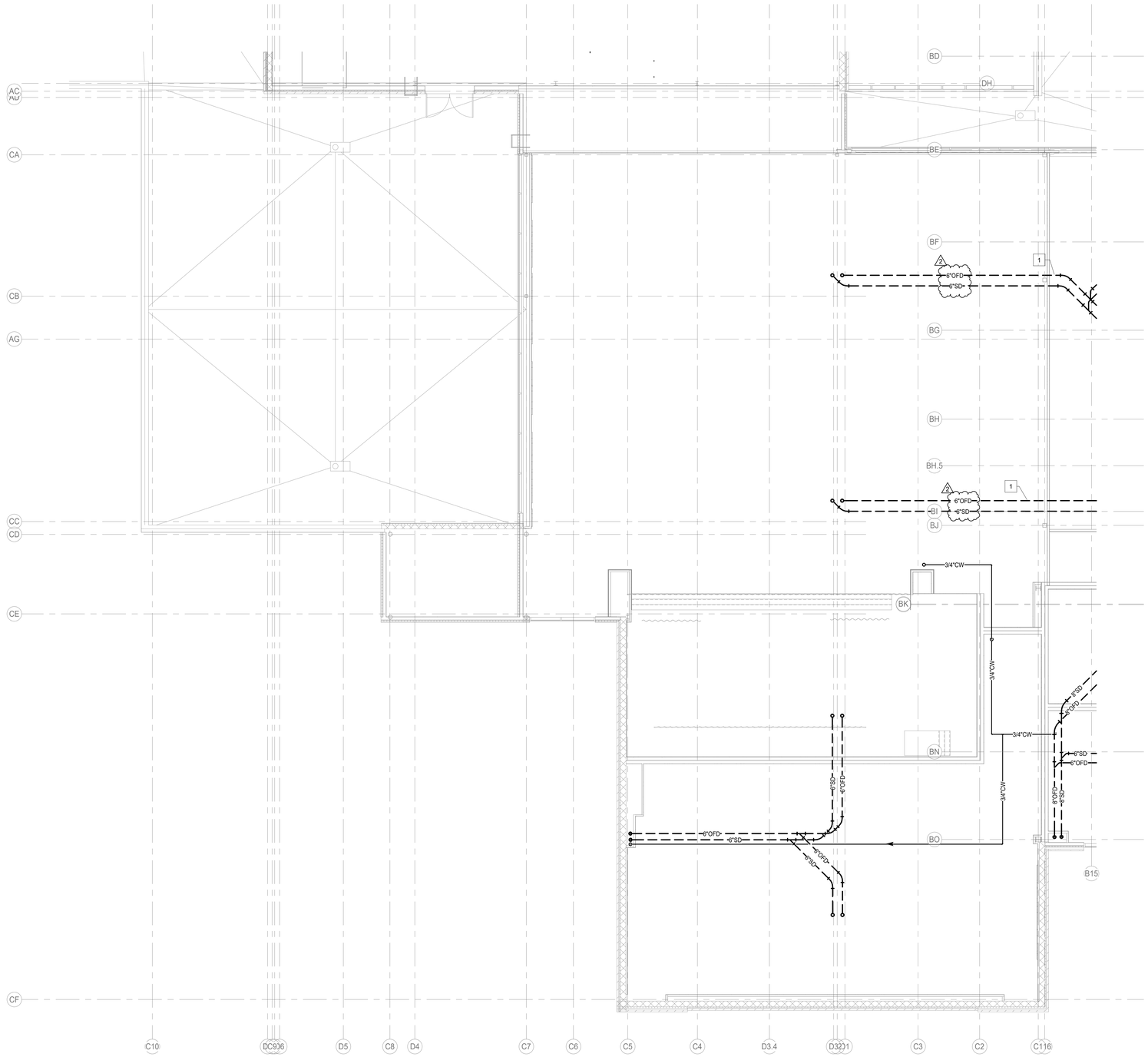
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D. IT SHALL BE THE FIRE PROTECTION INSTALLERS RESPONSIBILITY, PRIOR TO BID, TO VERIFY PRESSURE AT THE PROJECT SITE BY PERFORMING A FLOW TEST. DETERMINE IF THE AVAILABLE STATIC AND RESIDUAL PRESSURE WILL ADEQUATELY PROVIDE THE FIRE EXTINGUISHING SYSTEM WITH THE NECESSARY PRESSURE OR IF A FIRE PUMP, BREAK TANK AND NECESSARY APPURTENANCES ARE REQUIRED.

E. REFER TO SPECIFICATIONS FOR PIPE MATERIALS.

PLUMBING KEYED NOTES

1 ROUTE STORM AND OVERFLOW PIPING AS CLOSE TO ROOF DECK AS POSSIBLE.



1 **PLUMBING PLAN - LEVEL 2 - AREA C**
Scale: 1/8" = 1'-0"

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Project No: 2550-01131-00

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KEY PLAN

PROJECT NORTH

2	ADDENDUM #4			2026.03.11
Revision		By	Appd	YYYY.MM.DD
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Issued		By	Appd	YYYY.MM.DD

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Title
PLUMBING PLAN - LEVEL 2 - AREA C

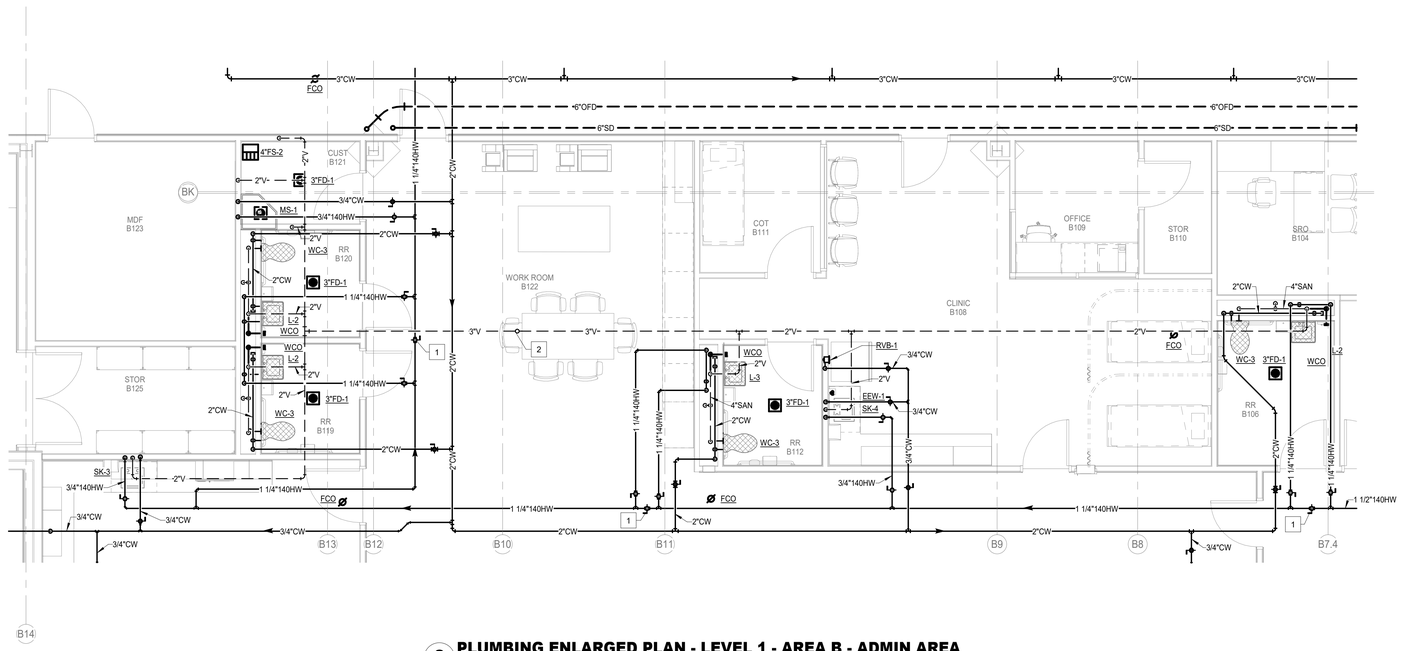
Project No. 214001329
Scale As indicated
Revision 2
Drawing No. **P311C**

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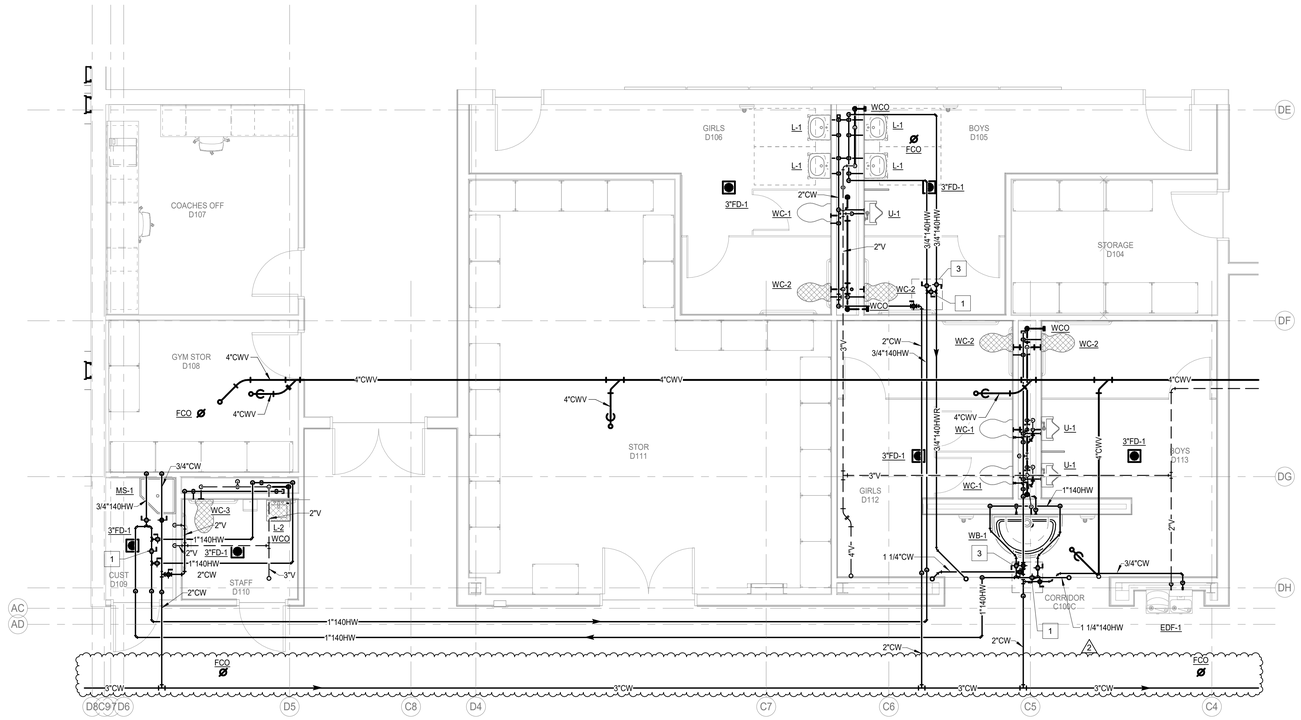
ORIGINAL SHEET - ARCH E1

PLUMBING KEYED NOTES

1 BYPASS VALVE NORMALLY CLOSED.
2 3" VENT UP TO 4" VTR.
3 PROVIDE A 24"X24" ACCESS PANEL.



2 PLUMBING ENLARGED PLAN - LEVEL 1 - AREA B - ADMIN AREA
Scale: 1/4" = 1'-0"



1 PLUMBING ENLARGED PLAN - LEVEL 1 - AREA D - GYM RESTROOMS
Scale: 1/4" = 1'-0"

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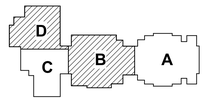
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Project No: 2550-01131-00

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BRADLEY KALMANS
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STATE OF TEXAS

03-11-2026

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Client/Project
Crosby ISD

Crosby Sixth Grade Campus

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Title
PLUMBING ENLARGED PLANS

Project No.	Scale
214001329	1/4" = 1'-0"
Revision	Drawing No.
2	P410

31/10/2026 8:48:10 AM

ORIGINAL SHEET - ARCH E1

PLUMBING FIXTURE SCHEDULE

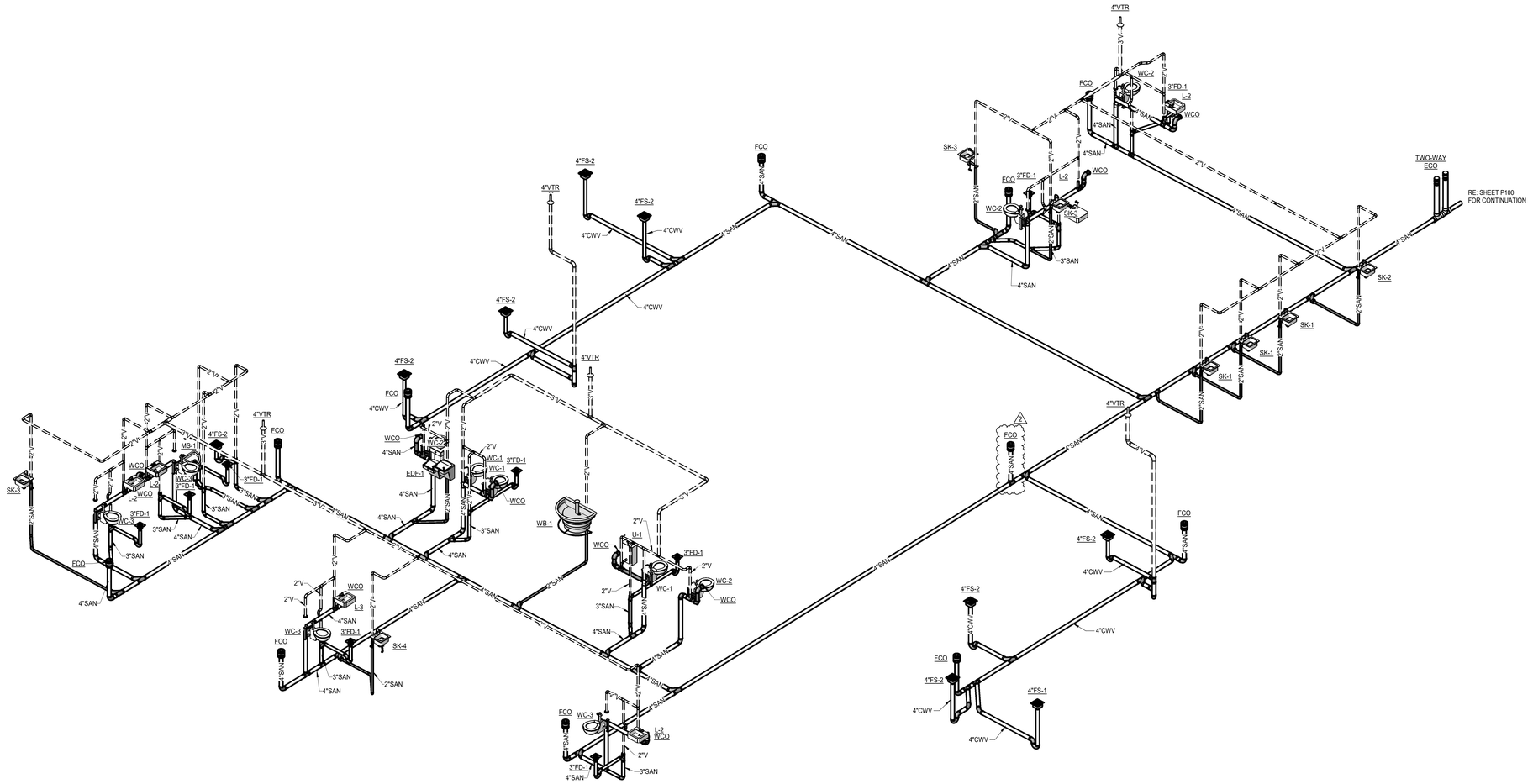
Type Mark	Plumbing Fixture Description
BACKFLOW PREVENTION	
BFP-1	DESCRIPTION: (2" AND SMALLER) BACKFLOW PREVENTER, REDUCED PRESSURE ZONE TYPE WITH TWO INLINE INDEPENDENT CHECK ALVES WITH AN INTERMEDIATE RELIEF VALVE. COMPLETE WITH TWO FULL PORTED BALL VALVE SHUT-OFFS AND BALL TYPE TEST COCKS. BRONZE STRAINER ON INLET. REFER TO FLOOR PLANS FOR SIZES. MOUNT AT 48" A.F.F. UNLESS NOTED OTHERWISE ON DRAWINGS. PROVIDED AIR GAP WITH DRAIN PIPE TO NEAREST FLOOR DRAIN. WATTS 909-QT-S.
BFP-2	DESCRIPTION: KITCHEN EQUIPMENT: WATTS 007 DOUBLE CHECK VALVE BACKFLOW PREVENTER, COMPLETE WITH TWO FULL PORTED BALL VALVE SHUT-OFFS AND BALL TYPE TEST COCKS, BRONZE STRAINER ON INLET.
DRAINAGE FIXTURE (FD, FS, HD, TD)	
3"FD-1	SERVICE: TOILET ROOMS AND GENERAL USE DESCRIPTION: FLOOR DRAIN, CAST IRON BODY, ADJUSTABLE 6" DIAMETER STAINLESS STEEL STRAINER WITH VANDAL PROOF SCREWS, INTEGRAL CLAMPING DEVICE, BOTTOM OUTLET. WADE 1100-MR6-85. TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR DRAIN BY SIZE, MODEL, AND MANUFACTURER. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS / FLOOR CONSTRUCTION.
3"FD-2	SERVICE: KITCHEN AREA DRAINS DESCRIPTION: FLOOR DRAIN, CAST IRON BODY, 8" DIAMETER STAINLESS STEEL STRAINER, 6" DEEP SUMP, A.R.C. INTERIOR, A.R.C. SEDIMENT BUCKET, CLAMPING COLLAR, ALUMINUM DOME STAINER. WADE #9010-26-27-85-110. TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR DRAIN BY SIZE, MODEL, AND MANUFACTURER. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS / FLOOR CONSTRUCTION.
3"FD-3	SERVICE: KITCHEN REFRIGERATION EQUIPMENT CONDENSATE DESCRIPTION: FLOOR DRAIN, CAST IRON BODY WITH A.R.E., ADJUSTABLE 6" DIAMETER STAINLESS STEEL STRAINER WITH VANDAL PROOF SCREWS, INTEGRAL CLAMPING DEVICE, BOTTOM OUTLET, 6" DIAMETER STAINLESS STEEL FUNNEL ATTACHMENT. WADE 1100-MR6-EF6-SS. TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR DRAIN BY SIZE, MODEL, AND MANUFACTURER. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL / KITCHEN CONSULTANT DRAWINGS.
4"FD-1	SERVICE: EMERGENCY SHOWER DRAIN DESCRIPTION: FLOOR DRAIN, CAST IRON BODY, A.R.C. INTERIOR, 8" SUMP DEPTH, STAINLESS STEEL FULL GRATE, ANCHOR FLANGE WITH CLAMPING COLLAR, ALUMINUM DOME STRAINER. WADE #9040-VP-26-48-85. TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR DRAIN BY SIZE, MODEL, AND MANUFACTURER. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS / FLOOR CONSTRUCTION.
4"FD-2	SERVICE: KITCHEN TRENCH OUTLET DESCRIPTION: FLOOR DRAIN, CAST IRON BODY, ADJUSTABLE 5" DIAMETER STAINLESS STEEL DOME STAINER WITH INTEGRAL CLAMPING DEVICE, AND BOTTOM OUTLET. WADE #1100-K-85. TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR DRAIN BY SIZE, MODEL, AND MANUFACTURER. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS / FLOOR CONSTRUCTION.
4"FS-1	SERVICE: ICE MACHINE DRAIN / BACKFLOW PREVENTER DISCHARGE DESCRIPTION: CAST IRON 8" SQUARE FLOOR SINK WITH 6" DEEP SUMP, A.R.E. INTERIOR, ALUMINUM DOME BOTTOM STRAINER, 1/2 STAINLESS STEEL TOP, CLAMPING DEVICE. WADE 9110-15-26-27-85. TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR DRAIN BY SIZE, MODEL, AND MANUFACTURER. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH ARCHITECTURAL DRAWINGS/EQUIPMENT PLACEMENT.
4"FS-2	SERVICE: MECHANICAL ROOM DESCRIPTION: A.R.E. COATED CAST IRON BODY 12" SQUARE FLOOR SINK WITH 8" DEEP SUMP, BOTTOM OUTLET, LOOSE SET CAST IRON SECONDARY STRAINER, CLAMPING DEVICE, STAINLESS STEEL FRAME AND HALF TOP GRATE. WADE 9140-15-26-27-85. TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR SINK BY SIZE, MODEL, AND MANUFACTURER. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH EQUIPMENT PLACEMENT.
4"FS-3	SERVICE: KITCHEN DESCRIPTION: A.R.E. COATED CAST IRON BODY 12" SQUARE FLOOR SINK WITH 8" DEEP SUMP, BOTTOM OUTLET, A.R.E. INTERIOR, ALUMINUM DOME BOTTOM STRAINER, TOP ANCHOR FLANGE WITH CLAMPING DEVICE, STAINLESS STEEL FRAME AND HALF TOP GRATE. WADE 9140-15-26-27-85. TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR SINK BY SIZE, MODEL, AND MANUFACTURER. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH EQUIPMENT PLACEMENT.
ECO	DESRIPTION: EXTERIOR CLEANOUT TO GRADE, CAST IRON BODY WITH ADJUSTABLE TOP ASSEMBLY WITH GASKET SEAL, AND ROUND SCORIATED VANDAL RESISTANT DUCTILE IRON TRACTOR TYPE COVER. IF LOCATED IN ASHPHALT OR DIRT PROVIDE 18"X18"X12" CONCRETE PAD. WADE 6000-Z.
FCO	DESCRIPTION: FLOOR CLEANOUT, CAST IRON BODY AND ADJUSTABLE TOP ASSEMBLY WITH GASKET SEAL, AND ROUND SCORIATED STAINLESS STEEL COVER. WADE 6000-85. FOR CARPETED FLOORS PROVIDE WADE 6000-CM.
FCO-A	DESCRIPTION: ACID WASTE FLOOR CLEANOUT, PVDF CONSTRUCTION AT SECOND FLOOR LOCATIONS AND POLYPROPYLENE MATERIAL AT FIRST FLOOR LOCATIONS. PROVIDE WITH FERRULE, COUNTERSINK PLUG, AND ADJUSTABLE TOP WITH ROUND STAINLESS STEEL COVER WITH "AWCO" CAST IN COVER. PROVIDE CARPET MARKER WHERE REQUIRED. ORION FCO-RD.
TWO-WAY ECO	DESCRIPTION: EXTERIOR CLEANOUT TO GRADE, CAST IRON BODY WITH ADJUSTABLE TOP ASSEMBLY WITH GASKET SEAL, AND ROUND SCORIATED VANDAL RESISTANT DUCTILE IRON TRACTOR TYPE COVER. IF LOCATED IN ASHPALT OR DIRT PROVIDE 18" X 18" X 12" CONCRETE PAD. WADE #6000-Z.
TWO-WAY ECO-A	DESCRIPTION: EXTERIOR ACID WASTE CLEANOUT TO GRADE, POLYPROPLYLENE CONSTRUCTION. PROVIDE WITH FERRULE, COUNTERSUNK PLUG, AND ADJUSTABLE TOP WITH ROUND SCORIATED VANDALRESISTANT DUCTILE IRON TRACTOR TYPE COVER. IF LOCATED IN ASPHALT OR DIRT PROVIDE 18" X 18" X 12" CONCRETE PAD. ORION FCO-RD.
UT-1	SERVICE: SCIENCE ROOMS DESCRIPTION: 12" WIDE UTILITY TRENCH, HDBP HEAVY DUTY BLACK POWDER PAINTED STEEL FRAME, 12" DEPTH, NO SLOPE. DURA TRENCH #DTUTPF12. PROVIDE F.R. FIBERGLASS SOLID COVER #14424FR1.5. COLOR SELECTION "TBD". COLOR CHOSEN BY ARCHITECT.
WCO	DESCRIPTION: WALL CLEANOUT. CAST IRON CLEANOUT FERRULE WITH DUCTILE IRON COMBINED COVER/PLUG AND ROUND STAINLESS COVER PLATE WITH CENTER SECURING SCREW. WADE #8550-75 WITH 8480-R6. PROVIDE WADE #8560 CAST IRON CLEANOUT TEE IN LIEU OF FERRULE AS REQUIRED FOR WALL CONSTRUCTION.
DRINKING FOUNTAIN (EDF)	
EDF-1	DESCRIPTION: WALL HUNG, BARRIER FREE, BI-LEVEL ELECTRIC DRINKING FOUNTAIN WITH ELECTRONIC BOTTLE FILLER, NON-FILTERED, REFRIDGERATED, 8 GPH OF 50 DEGREE WATER AT 90 DEGREE AMBIENT AND 80 DEGREE INLET WATER, VANDAL RESISTANT BUBBLER, MECHANICAL FRONT BUBBLER BUTTON, ELKAY #VRCTLBWSK. PROVIDE CANE TOUCH SKIRT 98324C TO COMPLY WITH ADA GUIDELINES. PROVIDE BOTTLE FILLER ON LOW SIDE BY MANUFACTURER. 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 STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISER. 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 #400. ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.
FIXTURES	
EEW-1	DESCRIPTION: EMERGENCY EYEWASH ASSEMBLY. DECK MOUNTED EYE/FACE WASH SOFT-FLO DUAL SPRAY HEADS. HANDLE STAYS OPEN ONCE VALVE IS SQUEEZED. HOSE IS YELLOW REINFORCED THERMOPLASTIC. BRADLEY #S19-460EFW. NAVIGATOR EFX8 EMERGENCY THERMOSTATIC MIXING VALVE. MODEL @219-2000. ROUGH-IN: 1/2: COLD AND HOT WATER.
RVB-1	DESCRIPTION: RECESSED VALVE BOX, 7" X 7", 18 GAUGE STEEL WITH WHITE POWDER COAT FINISH, 1/2" THREADED CONNECTION DOMESTIC VALVE. PROVIDE FILTER WHEN MAKING FINAL CONNECTION. GUY GRAY MIB1AB WITH AQUA-PURE AP717 FILTER. ROUGH-IN: 1/2" COLD WATER
WMB-1	DESCRIPTION: WASHING MACHINE DRAIN BOX, 20 GAUGE STEEL BOX WITH WHITE POWDER COAT FINISH, MALE IRON PIPE WATER SUPPLY CONNECTIONS AND DRAIN FITTING. PROVIDE HAMMER ARRESTOR AT BOTH HOT AND COLD WATER HOSE THREADS. GUY GRAY T-200 (36" - 42" AFF). ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER

PLUMBING FIXTURE SCHEDULE

Type Mark	Plumbing Fixture Description
HYDRANTS (HB, RH, WH)	
HB-1	DESCRIPTION: HOSE BIBB. EXPOSED TYPE, MILD CLIMATE, WALL-MOUNTED FAUCET WITH 3/4" F.P.T. INLET, 3/4" MALE HOSE THREAD OUTLET AND SELF-DRAINING ANTI-SIPHON VACUUM BREAKER, CERAMIC DISC CARTRIDGE. CHROME PLATED BRASS FINISH WITH REMOVABLE TEE HANDLE. CHICAGO 952-XKCP. ROUGH-IN: 3/4" COLD WATER. INSTALL WITH OUTLET AT 18" A.F.F. OR AS DIRECTED BY ARCHITECT/OWNER.
RH-1	DESCRIPTION: ROOF HYDRANT, DRAIN CANISTER BELOW ROOF LINE, 3/4" FIP INLET AND 3/4" OULTET HOSE THREAD. 1" SCHEDULE 40 GALVANIZED RISER AND SELF ADJUSTING SOLID BRASS OPERATING ROD. MAPA PRODUCTS #MPH-24-FP. ROUGH-IN: 3/4" COLD WATER.
WH-1	DESCRIPTION: WALL HYDRANT IN S.S. BOX. 3/4" NON FREEZE, HALF TURN CERAMIC DISC CARTRIDGE, STAINLESS STEEL FINISH WITH ANTI SIPHON VACUUM BREAKER AND LOOSE TEE KEY. INSTALL WITH BOTTOM OF HYDRANT 18" A.F.F. WADE 8701-MT-175. ROUGH-IN: 3/4" COLD WATER
LAB SAFETY	
ECP-1	SERVICE: ELECTRIC CONTACTOR PANEL (SCIENCE ROOMS) DESCRIPTION: PANEL CONTAINING FOUR POLE CONTACTORS FOR EACH ELECTRICAL SERVICE, PRE PUNCHED HOLES. E & I CO. #ECP-16. ROUGH-IN: REFER TO FLOOR PLANS FOR LOCATIONS, INSTALL ECP IN CEILING. INSTALLED BY ELECTRICAL CONTRACTOR. COORDINATE FINAL INSTALLATION WITH ARCHITECT/OWNER AND ELECTRICAL CONTRACTOR.
ESEW-1	DESCRIPTION: (T.A.S. COMPLIANT) EMERGENCY SHOWER/FACE AND EYEWASH. FLOOR MOUNTED, EYEWASH PADDLE, HINGED DUST COVERS, BARRIER FREE, YELLOW ABS PLASTIC, 20 GPM FLOW CONTROL SHOWER HEAD. BRADLEY #S193148BFPB. MIXING VALVE: TEPID WATER, NAVIGATOR S19-2150 (EFX20) WITH WALL, MOUNTING BRACKET. FLOW SWITCH: RECESSED AUTOMATIC, AUDIBLE AND VISUAL SYSTEM, DOUBLE POLE, DOUBLE THROW FLOW SWITCH, BRIGHT LED LIGHT. BRADLEY S19-322D. ROUGH-IN: 1-1/4" COLD WATER AND HOT WATER. COORDINATE FINAL LOCATION/HEIGHT WITH ARCHITECTURAL DRAWINGS.
LCP-1	DESCRIPTION: UTILITY CONTROLLER NEMA 1 PANEL WITH DOOR PANEL MOUNTED PASSWORD ASSIGNED IDEC HMI TO ACTIVATE REMOTE SOLENOIDS AND RELAYS TO CONTROL THE DOMESTIC WATER AND ELECTRICAL CONVENIENCE OUTLETS. UTILITY CONTROLLER SHALL COMPLY WITH UL 508A STANDARDS. CONTROLLER SHALL LOGIC DEVICE TO PROVIDE LOW VOLTAGE SIGNALS FOR OUTPUT CIRCUITS. TWO POSITION KEY SELECTOR SWITCH SYSTEM POWER SUPPLY 120VAC WITH CIRCUIT PROTECTION, POWER ON SELECTOR, SWITCH LOCATED IN AN INTERNAL JUNCTION BOX WITH REMOVABLE COVER SYSTEM CONTROLLER 24VDC, DISCRETE INPUTS, RELAY OUTPUTS, AND TERMINAL BLOCKS WITH GROUND TB. UNIT SHALL CONTROL UTILITY OUTLETS AT STUDENT WORKSTATIONS OTHER LOCATIONS AS INDICATED ON DRAWINGS. THE CONTROLLER SHALL BE CONTROLLER BE EQUIPPED WITH AN ENABLING PASS CODE. LACS BY E&I CO. #LCP-ST-3-CW-HW-E-RT. ROUGH-IN: ENCLOSURE TO BE FLUSH MOUNT INSIDE WALL. PROVIDE IN CONJUNCTION WITH ECP-1, REO-1, AND SVB1 OR SVB-2. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHTECT/OWNER AND ELECTRICAL CONTRACTOR.
REO	SERVICE: INDIVIDUAL SCIENCE LAB UTILITY EMERGENCY OFF BUTTON. DESCRIPTION: WHITE POWDER COATED BOX, APPROXIMATELY 4.88" X 3.22" X 4" DEEP, FURNISHED 120/24V TRANSFORMER, TWO POSITION SWITCH FOR ACTIVATION OF SERVICE, LOCKABLE AND EQUIPPED WITH AN EMERGENCY PANIC BUTTON. SERVICE ON LIGHT, KEYED RESET SWITCH. LACS BY E&I CO. #REO-PC-CC-KS-SO. ROUGH-IN: REFER TO FLOOR PLANS FOR LOCATIONS, FURNISHED BY PLUMBING CONTRACTOR, BOX AND WIRING INSTALLED BY ELECTRICAL CONTRACTOR. COORDINATE FINAL INSTALLATION WITH ARCHITECT/OWNER AND ELECTRICAL CONTRACTOR.
SVB-1	DESCRIPTION: SCIENCE LAB 1ST FLOOR - SOLENOID VALVE BOX FOR (1) CW AND HW. WHITE POWDER COATED STEEL FULLY RECESSED ENCLOSURE, APPROXIMATELY 20" X 24" X 6" DEEP. FLUSH MOUNTED WITH PIANO HINGE DOOR AND KEYED LOCK. FACTORY ASSEMBLED FOR ONE CLASSROOM. FOR EACH UTILITY, FURNISH (1) LINE-SIZED LEVER HANDLE BALL VALVE UPSTREAM OF (1) 120 VOLT LINE-SIZED ZERO DIFFERENTIAL SOLENOID VALVE OF BRASS CONSTRUCTION. SOLENOID VALVES SHALL BE GENERAL SERVICE, NORMALLY CLOSED AND SHALL CLOSE UPON LOSS OF POWER. PROVIDE (3) KEYS WITH EACH ENCLOSURE. LAB SAFETY SYSTEMS BY E&I INC. MODEL #VP-2-HW-CW-1-1.25-T-KL-S-FM. ROUGH-IN: REFER TO PLANS FOR PIPE SIZES. SOLENOID ENCLOSURE TO BE FLUSH MOUNTED INSIDE WALL. NO PIPING SHALL BE EXPOSED. PROVIDE IN CONJUCTION WITH EOB-1. SPECIFIED BELOW. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECT/OWNER AND ELECTRICAL CONTRACTOR.
SVB-2	DESCRIPTION: SCIENCE LAB 2ND FLOOR - SOLENOID VALVE BOX FOR (1) CW AND HW. WHITE POWDER COATED STEEL FULLY RECESSED ENCLOSURE, APPROXIMATELY 20" X 24" X 6" DEEP. FLUSH MOUNTED WITH PIANO HINGE DOOR AND KEYED LOCK. FACTORY ASSEMBLED FOR ONE CLASSROOM. FOR EACH UTILITY, FURNISH (1) LINE-SIZED LEVER HANDLE BALL VALVE UPSTREAM OF (1) 120 VOLT LINE-SIZED ZERO DIFFERENTIAL SOLENOID VALVE OF BRASS CONSTRUCTION. SOLENOID VALVES SHALL BE GENERAL SERVICE, NORMALLY CLOSED AND SHALL CLOSE UPON LOSS OF POWER. PROVIDE (3) KEYS WITH EACH ENCLOSURE. LAB SAFETY SYSTEMS BY E&I INC. MODEL #VP-2-HW-CW-1-1.25-T-KL-S-FM. ROUGH-IN: REFER TO PLANS FOR PIPE SIZES. SOLENOID ENCLOSURE TO BE FLUSH MOUNTED INSIDE WALL. NO PIPING SHALL BE EXPOSED. PROVIDE IN CONJUCTION WITH EOB-1, SPECIFIED BELOW. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECT/OWNER AND ELECTRICAL CONTRACTOR.
MOP SINK (MS)	
MS-1	DESCRIPTION: MOP SINK BASIN, 24" X 24" X 12" HIGH CORNER TYPE, PRECAST TERRAZZO WITH 6" DROPPED FORNT, STAINLESS STEEL THRESHOLD CAP, AND DOUBLE STAINLESS STEEL WALL GUARDS. STERN-WILLIMAS "CORLOW" SBC-1700. FAUCET: CHROME PLATED BRASS WALL MOUNTED FITTING WITH CHECK IN STOPS, ADJUSTABLE SUPPLY ARMS, VACUUM BREAKER SPOUT WITH PAIL HOOK AND WALL BRACE, 2-1/2" INDEXED LEVER HANDLES ON 8" CENTERS. QUARTER TURN CERAMIC DISC CARTRIDGES, 3/4" MALE HOSE THREAD OUTLET. CHICAGO #445-897SRXKCCP. ROUGH-IN: 3" WASTE, 2" VENT, 1/2" HOT AND COLD WATER.
ROOF DRAINAGE FIXTURE (DN, RD, OFD)	
DN-1	DESCRIPTION: OVERFLOW DOWNSPOUT NOZZLE. STAINLESS STEEL WITH TREADED STEEL WITH THREADED OR NO HUB OUTLET AND FLANGE TO SECURE NOZZLE TO WALL. COORDINATE EXACT ELEVATION WITH ARCHITECTURAL DRAWINGS. WADE #3941-85-VP. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.
RD-1	DESCRIPTION: ROOF DRAIN, CAST IRON BODY WITH FLANGE, FLASHING RING WITH GRAVEL STOP, ALUMINUM DOME, UNDERDECK CLAMP AND ADJUSTABLE EXTENSION AS REQUIRED FOR ROOF CONSTRUCTION. WADE 3000-D-46-52-53 FOR 6" AND SMALLER, WADE 3001-D-46-52-53 FOR 8" AND LARGER. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.
RD-2	DESCRIPTION: OVERFLOW ROOF DRAIN. CAST IRON BODY WITH FLANGE, FLASHING RING WITH GRAVEL STOP, ALUMINUM DOME, 2" HIGH WATER DAM, BEARING PAN, UNDERDECK CLAMP AND ADJUSTABLE EXTENSION AS REQUIRED FOR ROOF CONSTRUCTION. WADE 3000-D-46-52-53 FOR 6" AND SMALLER, WADE 3001-D-46-52-53 FOR 8" AND LARGER. ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

PLUMBING FIXTURE SCHEDULE

Type Mark	Plumbing Fixture Description
SINK/LAVATORIES (L, SK)	
HS-1	DESCRIPTION: KITCHEN HAND SINK (TA.S. COMPLIANT): LAVATORY, WALL HUNG, WHITE VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, TWO FAUCET HOLE ON 4" CENTERS. AMERICAN STANDARD LUCERNE #0355.012. FAUCET: CHROME PLATED BRASS, DECK MOUNTED, LAVATORY FITTING WITH VANDAL RESISTANT 4" WRISTBALDE HANDLES ON 4" CENTERS, 4" SPOUT AND VANDAL RESISTANT 0.5 GPM SOFTFLO AERATOR. CERAMIC DISC QUARTER TURN OPERATING CARTRIDGES. CHICAGO #802-V31TE66-XKABCP. MIXING VALVE: POINT OF USE CERTIFIED, BRASS BODY, ADJUSTABLE TEMPERATURE CONTROL, WAX FILLED THERMOSTAT AND MOUNTING BRACKET. (105 F) BRADLEY #S59-4007BY. STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TAILPIEC. MCGUIRE #155A. P-TRAP: 1-1/4" 17 GUAGE 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 SCEWS. WADE #520-08. ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD AND HOT WATER ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.
L-1	DESCRIPTION: METERED STUDENT LAVATORY (TA.S. COMPLIANT): LAVATORY, WALL HUNG, WHITE VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, 4" CENTERSET FAUCET HOLES. AMERCIAN STANDARD LUCERNE #0355.012. FAUCET: CHROME PLATE BRASS DECK MOUNTED LAVATORY FAUCET WITH COVER PLATE, 4-1/8" SPOUT, AND PUSH BUTTON HANDLE INDEXED "PUSH". SELF CLOSING METERING CARTIDGE, VANDAL RESISTANT 0.5 GPM NON-AERATING LAMINAR FLOW OUTLET. CHICAGO MODEL #857-765PSHABCP. MIXING VALVE: POINT OF USE CERTIFIED, BRASS BODY, ADJUSTABLE TEMPERATURE CONTROL, WAX FILLED THERMOSTAT AND MOUNTING BRACKET. (105 F) BRADLEY #S59-4007BY. STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TAILPIEC. MCGUIRE #155A. P-TRAP: 1-1/4" 17 GUAGE 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 SCEWS. WADE #520-08. ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD AND HOT WATER ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.
L-2	DESCRIPTION: ADULT LAVATORY (TA.S. COMPLIANT): LAVATORY, WALL HUNG, WHITE VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, THREE FAUCET HOLE ON 4" CENTER. AMERICAN STANDARD LUCERNE #0355.012. FAUCET: SINGLE HOLE ELECTRONIC FAUCET, INTEGRAL SPOUT, CHROME PLATED, 0.5 GPM, 12 VOLT AC TRANSFORMER HARD WIRED. PROVIDE COVER PLATE 240.627.21.1. CHICAGO #116.101.AB.1T. MIXING VALVE: POINT OF USE CERTIFIED, BRASS BODY, ADJUSTABLE TEMPERATURE CONTROL, WAX FILLED THERMOSTAT AND MOUNTING BRACKET. (105 F) BRADLEY #S59-4007BY. STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TAILPIEC. MCGUIRE #155A. P-TRAP: 1-1/4" 17 GUAGE 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 SCEWS. WADE #520-08. ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD AND HOT WATER ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.
L-3	DESCRIPTION: ADULT LAVATORY (TA.S. COMPLIANT): LAVATORY, WALL HUNG, WHITE VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, TWO FAUCET HOLE ON 4" CENTERS. AMERICAN STANDARD LUCERNE #0355.012. FAUCET: CHROME PLATED BRASS, DECK MOUNTED, LAVATORY FITTING WITH VANDAL RESISTANT 4" WRISTBALDE HANDLES ON 4" CENTERS, 4" SPOUT AND VANDAL RESISTANT 0.5 GPM SOFTFLO AERATOR. CERAMIC DISC QUARTER TURN OPERATING CARTRIDGES. CHICAGO #802-V31TE66-XKABCP. MIXING VALVE: POINT OF USE CERTIFIED, BRASS BODY, ADJUSTABLE TEMPERATURE CONTROL, WAX FILLED THERMOSTAT AND MOUNTING BRACKET. (105 F) BRADLEY #S59-4007BY. STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TAILPIEC. MCGUIRE #155A. P-TRAP: 1-1/4" 17 GUAGE 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 SCEWS. WADE #520-08. ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD AND HOT WATER ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.
SK-1	DESCRIPTION: ART ROOM: SINK, COUNTER MOUNTED, SELF-RIMMING, 18 GAUGE TYPE 302 STAINLESS STEEL, 22" X 19.5" X 7-5/8" DEEP, SINGLE COMPARTMENT WITH FAUCET DECK. THREE FAUCET HOLES ON 4" CENTERS. ELKAY LR2219. FAUCET: CHROME PLATED BRASS DECK MOUNTED FITTING WITH 8" RIGID/SWING SPOUT AND VANDAL PROOF 4" WRISTBLADE HANDLES ON 8" CENTERS. QUARTER TURN CERAMIC DISC OPERATING CARTIDGES, VANDAL RESISTANT 1.5 GPM SOFTFLO AERATOR. CHICAGO #786-GN8AE35-317XKABCP. MIXING VALVE: POINT OF USE CERTIFIED, BRASS BODY, ADJUSTABLE TEMPERATURE CONTROL, WAX FILLED THERMOSTAT AND MOUNTING BRACKET. (105 F) BRADLEY #S59-4007BY. STRAINER: CHROME PLATED WROUGHT BRASS 4-1/2" WIDE GRID SINK STRAINER, 1-1/4" 17 GAUGE CHROME PLATED BRASS TAILPIECE. MCGUIRE #152MN. INTERCEPTOR: A.R.C. CAST ALUMINUM TOP ACCESS SOLIDS INTERCEPTOR, GASKETED COVER, REMOVEABLE SEDIMENT BUCKET. WADE 5720. SUPPLIES: 1/2" I.P.S. X 3/8" O.D. WITH ESCUTCHEONS AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165. ROUGH-INS: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED HEIGHT.
SK-2	DESCRIPTION: ART ROOM (T.A.S. COMPLIANT): SINK, COUNTER MOUNTED, SELF-RIMMING, 18 GAUGE TYPE 302 STAINLESS STEEL, 22" X 19.5" X 5.5" D



1 AREA B WASTE AND VENT

Scale:

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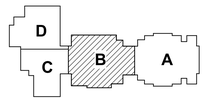
Consultant

Salas O'Brien

salasobrien.com 281-664-1900
Houston
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Houston, TX 77064

Registration: F-4111
Project No: 2550-01131-00

Notes



KEY PLAN

PROJECT NORTH

2	ADDENDUM #4			2026.03.11
Revision		By	Appd	YYYY.MM.DD
	Issue for Permit and Proposal			2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal



03-11-2026

Client/Project Logo

Crosby Independent School District

Client/Project

Crosby ISD

Crosby Sixth Grade Campus

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Crosby, TX 77532

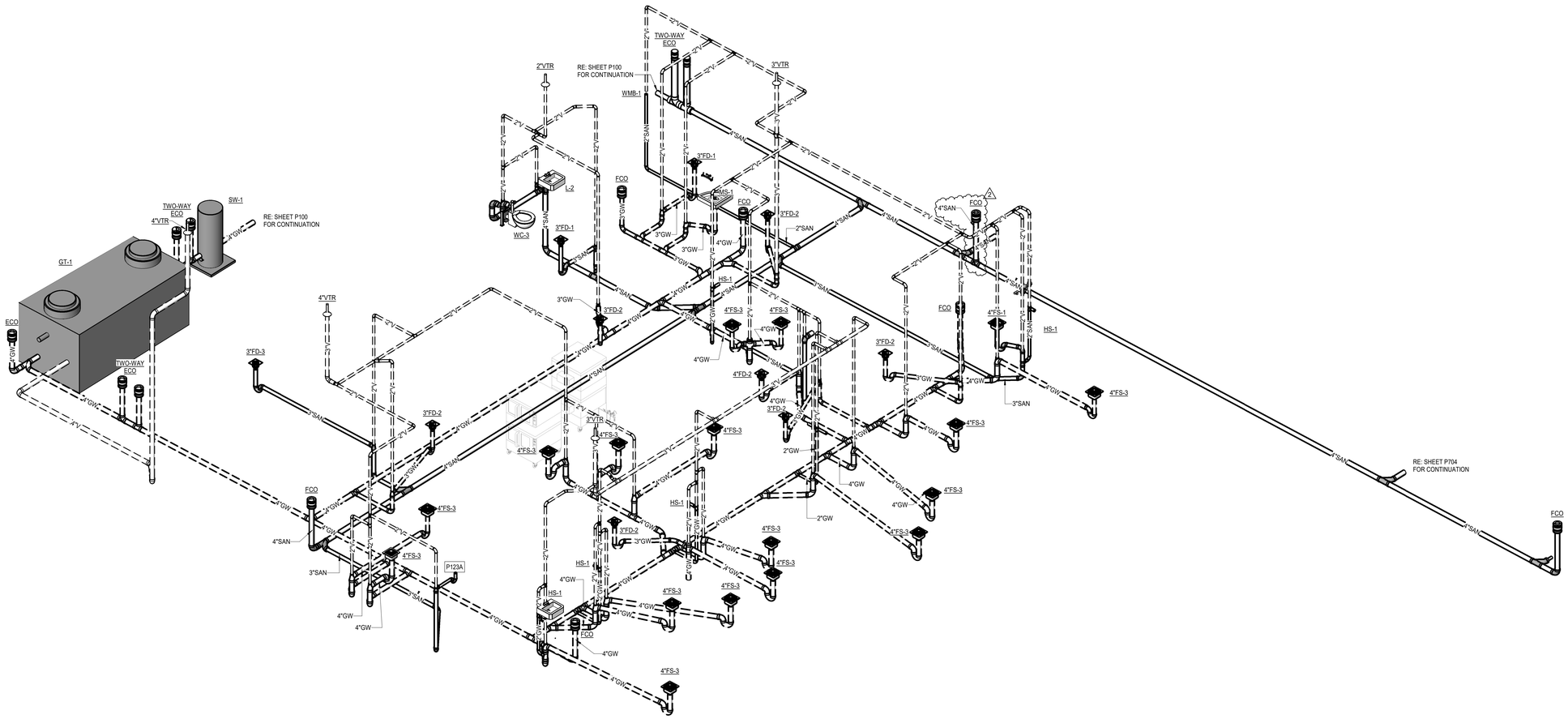
Title

PLUMBING RISER DIAGRAM AREA B - WASTE AND VENT

Project No.	Scale
214001329	
Revision	Drawing No.
2	**P702**

3/10/2026 8:48:18 AM

ORIGINAL SHEET - ARCH E1



1 **AREA C WASTE AND VENT**
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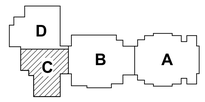
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Project No: 2550-01131-00

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KEY PLAN

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Revision	By	Appd	
2 ADDENDUM #4			2026.03.11
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Issue for Permit and Proposal			2026.01.26

Permit/Seal



03-11-2026

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Crosby ISD

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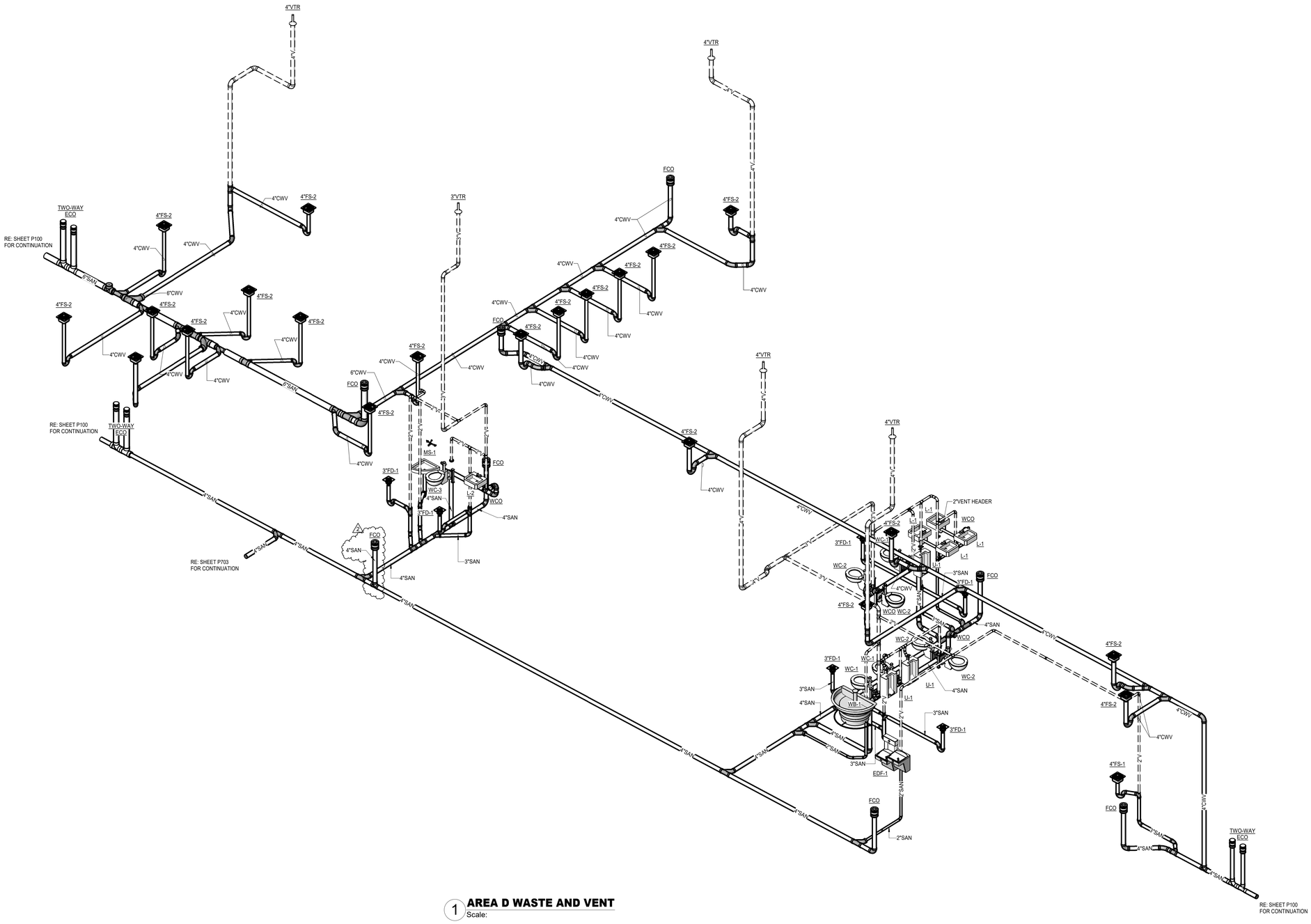
202 Red Summit Dr
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Title
PLUMBING RISER DIAGRAM AREA C - WASTE AND VENT

Project No. 214001329
Scale
Revision 2
Drawing No. **P703**

3/11/2026 8:48:24 AM

ORIGINAL SHEET - ARCH E1



1 **AREA D WASTE AND VENT**
Scale:

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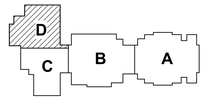
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KEY PLAN

PROJECT NORTH

2	ADDENDUM #4			2026.03.11
Revision		By	Appd	YYYY.MM.DD

Issue for Permit and Proposal			2026.01.26
Issued	By	Appd	YYYY.MM.DD

Permit/Seal



03-11-2026

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Client/Project
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Crosby Sixth Grade Campus

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Title
PLUMBING RISER DIAGRAM AREA D - WASTE AND VENT

Project No.	Scale
214001329	
Revision	Drawing No.
2	**P704**

3/19/2026 8:48:30 AM

ORIGINAL SHEET - ARCH E1

SITE GENERAL NOTES

1. CONTRACTOR TO COORDINATE FINAL LOCATION OF ALL CONDUITS WITH ALL OTHER TRADES.
2. REFER TO CIVIL DRAWINGS FOR FINAL ROUTING AND DEPTH OF ALL UNDERGROUND UTILITIES.
3. REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER REQUIREMENTS TO BE PROVIDED BY DIVISION 26.
4. PROVIDE PULL WIRES IN ALL EMPTY CONDUITS.
5. DO NOT ROUTE CONDUITS THROUGH DETENTION PONDS. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED ABOVE FLOOD ZONE PERCENTAGE DESIGNATION, FINAL ELEVATION ABOVE FLOOD ZONE PERCENTAGE DESIGNATION LEVEL SHALL BE PER LOCAL AHJ.

ELECTRICAL KEYED NOTES

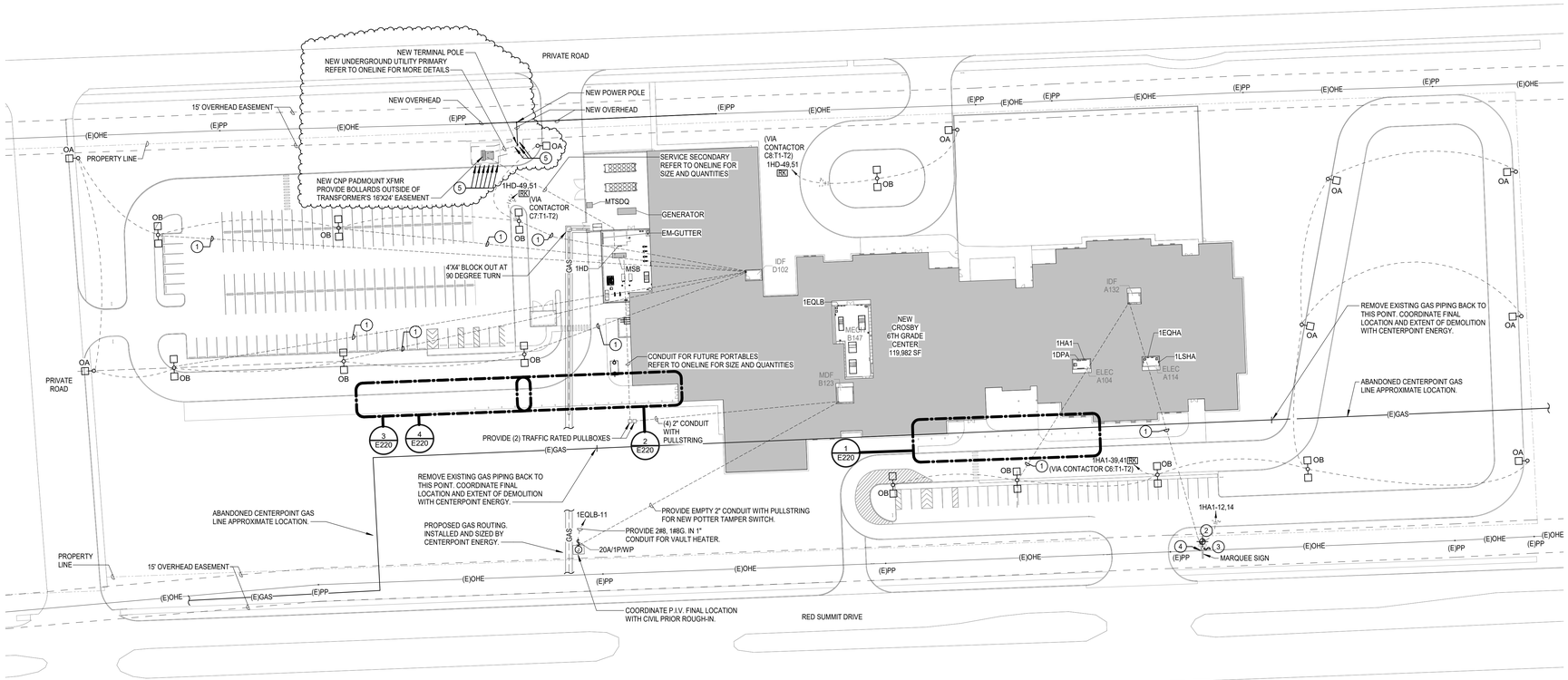
1	PROVIDE 1" CONDUIT WITH PULLSTRING. VERIFY FINAL CONDUIT PATHS QUANTITIES AND SIZES WITH DIVISION 27 PRIOR TO INSTALL
2	PROVIDE 480-240V, 1PH, 3W, 5kVA, POWER-ZONE PACKAGE WITH PRIMARY MAIN CIRCUIT BREAKER, STEP-DOWN TRANSFORMER, SECONDARY CIRCUIT BREAKER, 'NQ' DISTRIBUTION PANELBOARD IN SINGLE ENCLOSURE, NEMA 3R-SS. PROVIDE SQUARE D #MPZBSS40PSS OR APPROVED EQUAL, MOUNTED ON RACK INSTALLED IN MARQUEE SIGN CONCRETE PAD, CONCEALED ON OPPOSITE END OF MAIN ROAD. COORDINATE MARQUEE SIGN'S EXACT POWER REQUIREMENTS PRIOR TO ORDERING POWER-ZONE PACKAGE TO DETERMINE BREAKER REQUIREMENTS.
3	ROUTE POWER AS NEEDED FROM THE PROVIDED MINIPOWERZONE. COORDINATE WITH MARQUEE SIGN MANUFACTURER TO PROVIDE SIZE AND QUANTITIES OF LOCAL DISCONNECTS, CONDUCTORS AND CONDUITS TO NEW MARQUEE SIGN.
4	COORDINATE WITH SIGN MANUFACTURER TO STUB UP CONDUIT IN SIGN NEAR WHERE DATA CONNECTIONS TO CONTORL THE MARQUEE SIGN ARE NEEDED.
2 5	PROVIDE REMOVABLE PROTECTIVE BARRIER PER CENTERPOINT STANDARDS.

LIGHTING CONTROLS SCHEDULE

Type	Sensor Operation	# of Lighting Zones	Description	AREA
RK	PHOTOCELL	1	CONTACTOR CONTROLLED V/A 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.	EXTERIOR

SITE POLE LIGHTING FIXTURE SCHEDULE

Type Mark	CATALOG NUMBER MANUFACTURER	CATALOG NUMBER MODEL	MOUNTING	LAMP TYPE	CCT	CRI	VOLTAGE	LOAD	REMARKS
OA	COOPER LIGHTING MCGRAW EDISON KW INDUSTRIES	GALN-SB4C-840-R-T2-DP RTSP-35-9.00-11-KZ RAL 7036-DM10-Extra Hand Holes (2XHH) at 8.5 ft., SAME Side as Handhole and at 11.5 ft., OPPOSITE Side - BC	POLE MOUNT 1	201W LED 28,447 LUMENS	4000 K	80	480	200 W	TYPE 2 AREA LUMINARE. 35' ROUND TAPERED STEEL HOT DIPPED GALVANIZED POLE WITH DARK PLATINUM FINISH MOUNTED ON 2'6" CONCRETE BASE.
OB	COOPER LIGHTING MCGRAW EDISON KW INDUSTRIES	GALN-SB4C-840-8-5WQ-DP RTSP-35-9.00-11-KZ RAL 7036-DM2180-Extra Hand Holes (2XHH) at 8.5 ft., SAME Side as Handhole and at 11.5 ft., OPPOSITE Side - BC	POLE MOUNT 2 @ 180	201W LED 29,040 LUMENS PER HEAD	4000 K	80	480	402 W	TWO TYPE 5 SQUARE WIDE AREA LUMINAIRES. 35' ROUND TAPERED STEEL HOT DIPPED GALVANIZED POLE WITH DARK PLATINUM FINISH MOUNTED ON 2'6" CONCRETE BASE.



1 **ELECTRICAL SITE PLAN**
Scale: 1" = 50'-0"

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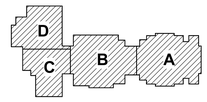
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Registration: F-4111
Project No: 2550-01131-00

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KEY PLAN

PROJECT NORTH

2	ADDENDUM #4			2026.03.11
Revision		By	Appd	YYYY.MM.DD
	Issue for Permit and Proposal			2026.01.26
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03-11-2026

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Title
ELECTRICAL SITE PLAN

Project No.	Scale
214001329	1" = 50'-0"
Revision	Drawing No.
2	**E100**

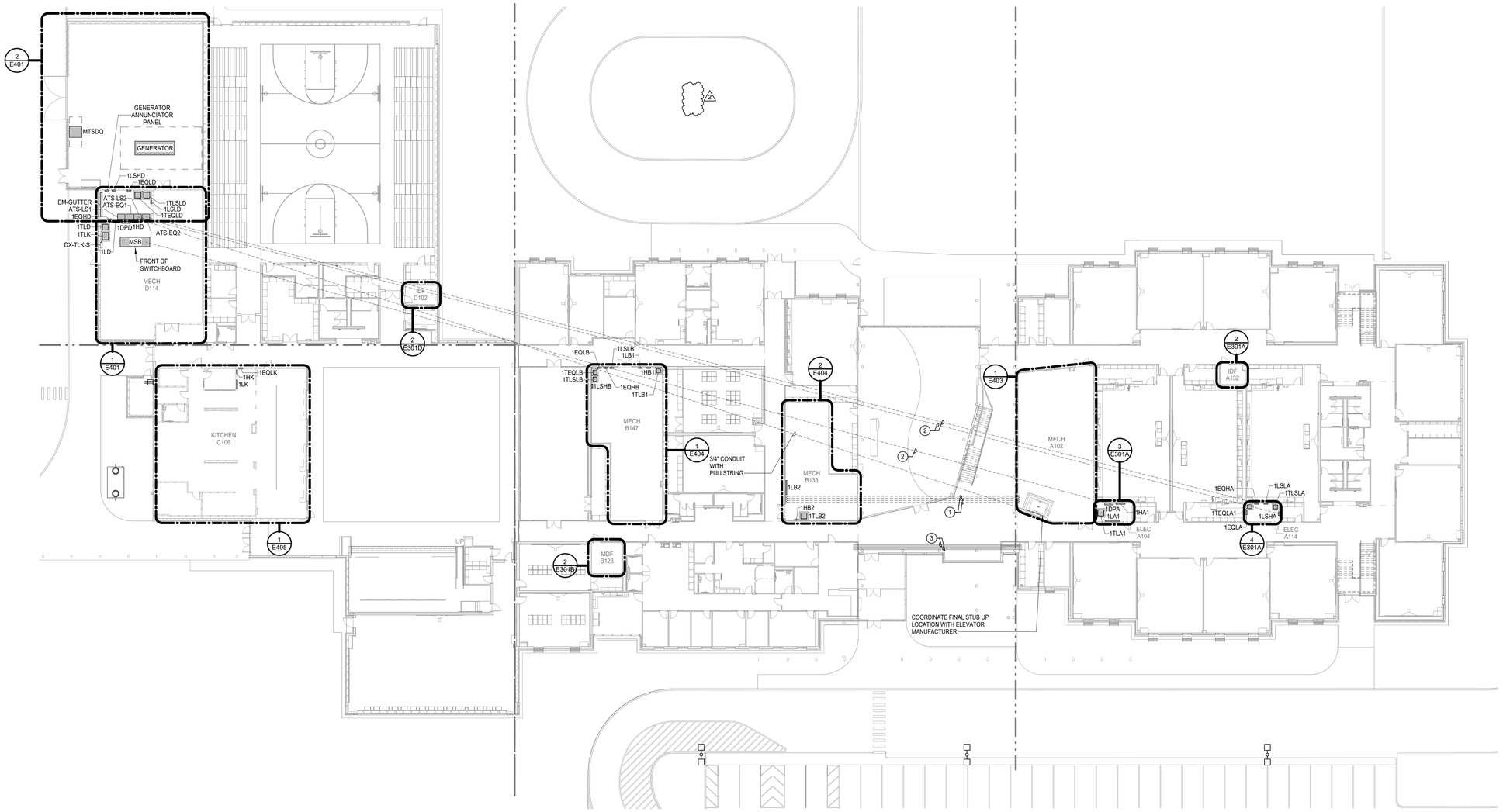
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ORIGINAL SHEET - ARCH E1

ELECTRICAL KEYED NOTES

1	PROVIDE (4) SPARE EMPTY 4" CONDUITS WITH PULLSTRING. COORDINATE FINAL ROUTING WITH STRUCTURAL.
2	ROUTE FEEDER UNDERGROUND. REFER TO ONELINE FOR SIZE AND QUANTITIES.
3	PROVIDE (5)4"C. ROUTE ABOVE MECHANICAL AND PLUMBING IN CHASE FOR TECHNOLOGY TO CROSS ATRIUM. OTHER TECHNOLOGY CONDUITS WILL BE REQUIRED THROUGHOUT THE BUILDING THAT ARE NOT SHOWN.

SUBMIT DETAILED ROUTING COORDINATION DRAWINGS PRIOR TO CONSTRUCTION FOR REVIEW.



1 **ELECTRICAL COMPOSITE PLAN - LEVEL 1**
Scale: 1" = 20'-0"

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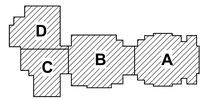
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KEY PLAN

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Title
ELECTRICAL COMPOSITE PLAN - LEVEL 1

Project No. 214001329	Scale 1" = 20'-0"
Revision 2	Drawing No. **E101**

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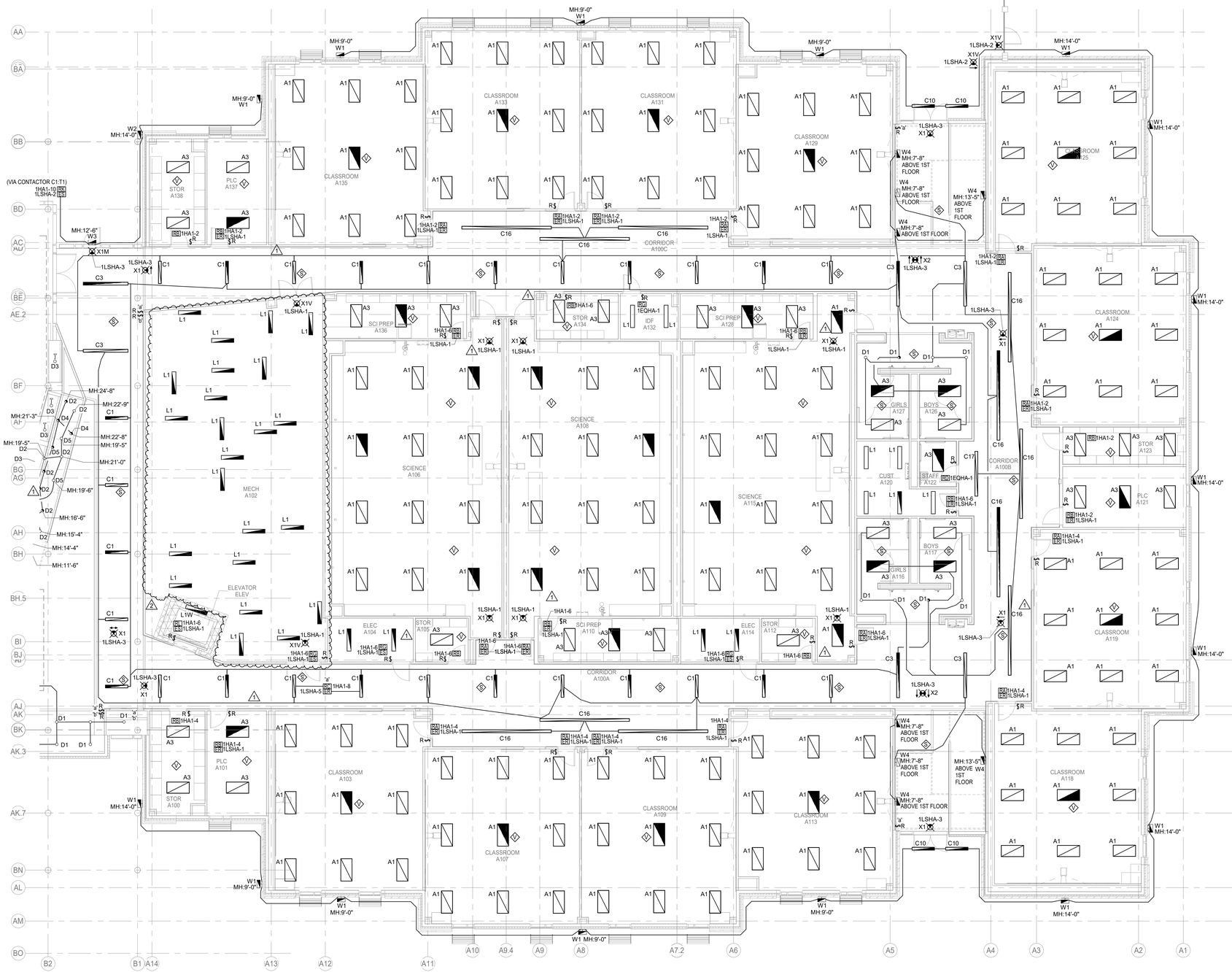
ORIGINAL SHEET - ARCH E1

LIGHTING CONTROLS SCHEDULE

Type	Sensor Operation	# of Lighting Zones	Description	AREA
RA	VACANCY - MANUAL ON / AUTO OFF	1	LOCAL ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING, 0-10V DIMMING. IF ON/OFF/DIMMING FUNCTIONALITY CANNOT BE COMBINED INTO ONE SWITCH, THEN PROVIDE SEPARATE ON/OFF AND DIMMING SWITCHES. FOR ALL CLASSROOMS LOCATE ROOM CONTROLLER OUTSIDE ROOM ABOVE DOOR. PROVIDE DAYLIGHT ZONES WHEN INDICATED ON FLOOR PLANS.	CLASSROOMS/OFFICES
RB	VACANCY - MANUAL ON / AUTO OFF	1	LOCAL ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING.	STORAGE, ADMIN CORRIDOR, AND CUSTODIAL CLOSETS
RC	OCCUPANCY - AUTO ON / AUTO OFF	1	LOCAL KEYED SWITCHES. ROOM CONTROLLER LOCATED ABOVE CEILING. PROVIDE DAYLIGHT ZONES AS INDICATED. PROVIDE DAYLIGHT ZONES WHEN INDICATED ON FLOOR PLANS. CONTRACTOR TO MAKE ALL TIE-IN CONNECTIONS TO FIRE ALARM SYSTEM AND TO COORDINATE WITH FIRE ALARM CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.	CORRIDORS
RD	OCCUPANCY - AUTO ON / AUTO OFF	1	ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING.	SINGLE SEAT RESTROOMS
RG	NONE	1	MECHANICALLY WOUND TIMER SWITCH.	MECH / ELEC / IDF
RK	PHOTOCELL	1	CONTACTOR CONTROLLED VIA 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.	EXTERIOR
RL	NONE	1	ON/OFF SWITCHES.	ELEVATOR SHAFT
ER	-	-	UL924 LOAD CONTROL RELAY, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM. FOR INTERIOR FIXTURES, LOCATE ADJACENT TO ROOM CONTROLLER.	-
ES	-	-	UL1008 GENERATOR TRANSFER DEVICE. PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM. FOR INTERIOR FIXTURES, LOCATE ADJACENT TO ROOM CONTROLLER. FOR EXTERIOR FIXTURES PROVIDE GTDS INSIDE ADJACENT TO EMERGENCY PANEL IN ELECTRICAL ROOMS.	-

LIGHTING GENERAL NOTES

1. LIGHTING CONTROLS SHALL COMPLY WITH IECC-2015. REFER TO LIGHTING CONTROLS SCHEDULE FOR ALL LIGHTING CONTROLS, SENSORS, AND SWITCHING SCHEMES THROUGHOUT FACILITY.
2. OCCUPANCY BASED AUTOMATIC SHUT-OFF CONTROLS ARE NOT PROVIDED IN AREAS WHERE IT WOULD ENDANGER OCCUPANT SAFETY OR SECURITY, SUCH AS ELECTRICAL, MECHANICAL AND FOOD PROCESSING ROOMS. THESE AREAS ARE EXEMPT PER IECC-2015 FROM AUTOMATIC CONTROLS.
3. LOCATE PLENUM RATED DIGITAL LIGHTING CONTROLLER AND/OR EMERGENCY LOAD CONTROL RELAY/TRANSFER SWITCH ABOVE ACCESSIBLE CEILING 12-FEET AFF OR BELOW DIRECTLY ABOVE SWITCH CONTROLLING THE SPACE. IN NON-ACCESSIBLE AND/OR HIGH CEILING AREAS, LOCATE PLENUM RATED DIGITAL LIGHTING CONTROLLER IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING. IN AREAS WITH NO CEILING AND/OR EXTERIOR APPLICATIONS LOCATE ADJACENT TO PANEL SERVING THE LOAD. PROVIDE LABEL WITH WORDING IDENTIFYING ASSOCIATED SPACE PER SPECIFICATIONS.
4. SPACES WITH MULTIPLE OCCUPANCY BASED AUTOMATIC SHUT-OFF SENSORS OR WHERE LINE OF SIGHT MAY BE OBSCURED, SUCH AS CORRIDORS, AMONG OTHERS; SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.
5. OCCUPANCY/VACANCY SENSOR AND/OR DAYLIGHTING SENSOR LOCATIONS INDICATE SPACE OR AREA CONTROLLED, CONTRACTOR TO PROVIDE ACTUAL QUANTITIES, TYPES, AND MOUNTING LOCATIONS AS RECOMMENDED BY MANUFACTURER.
6. COORDINATE LOCATION OF LIGHT FIXTURES IN ALL MEPT ROOMS WITH MECHANICAL, PLUMBING AND TECHNOLOGY EQUIPMENT, PIPING, AND ALL OTHER TRADES. SUSPEND OR WALL MOUNT FIXTURES WHERE PRACTICAL.
7. CONTRACTOR SHALL PROVIDE CONSTANT UNSWITCHED POWER CIRCUIT FOR EMERGENCY LOAD CONTROL RELAYS. EMERGENCY TRANSFER SWITCHES. EMERGENCY FIXTURES AND EXIT SIGNS.
8. CONCEAL CONDUIT SYSTEMS IN FINISHED AREAS. CONDUIT MAY BE EXPOSED IN MECHANICAL AND ELECTRICAL ROOMS AND WHERE OTHERWISE SHOWN OR INDICATED ONLY. RUN THE CONDUIT PARALLEL AND PERPENDICULAR TO THE STRUCTURAL FEATURES OF THE BUILDING IN THE MOST DIRECT, NEAT AND WORKMANLIKE MANNER.



1 **ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA A**
Scale: 1/8" = 1'-0"

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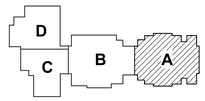
Consultant

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Registration: F-4111
Project No: 2550-01131-00

Notes

KEY PLAN



PROJECT NORTH

2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13
Revision		By	Appd	YYYY.MM.DD

Issue for Permit and Proposal			2026.01.26
Issued	By	Appd	YYYY.MM.DD

Permit/Seal



Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA A

Project No. 214001329	Scale 1/8" = 1'-0"
Revision 2	Drawing No. **E201A**

3/17/2026 9:43:55 AM

ORIGINAL SHEET - ARCH E1

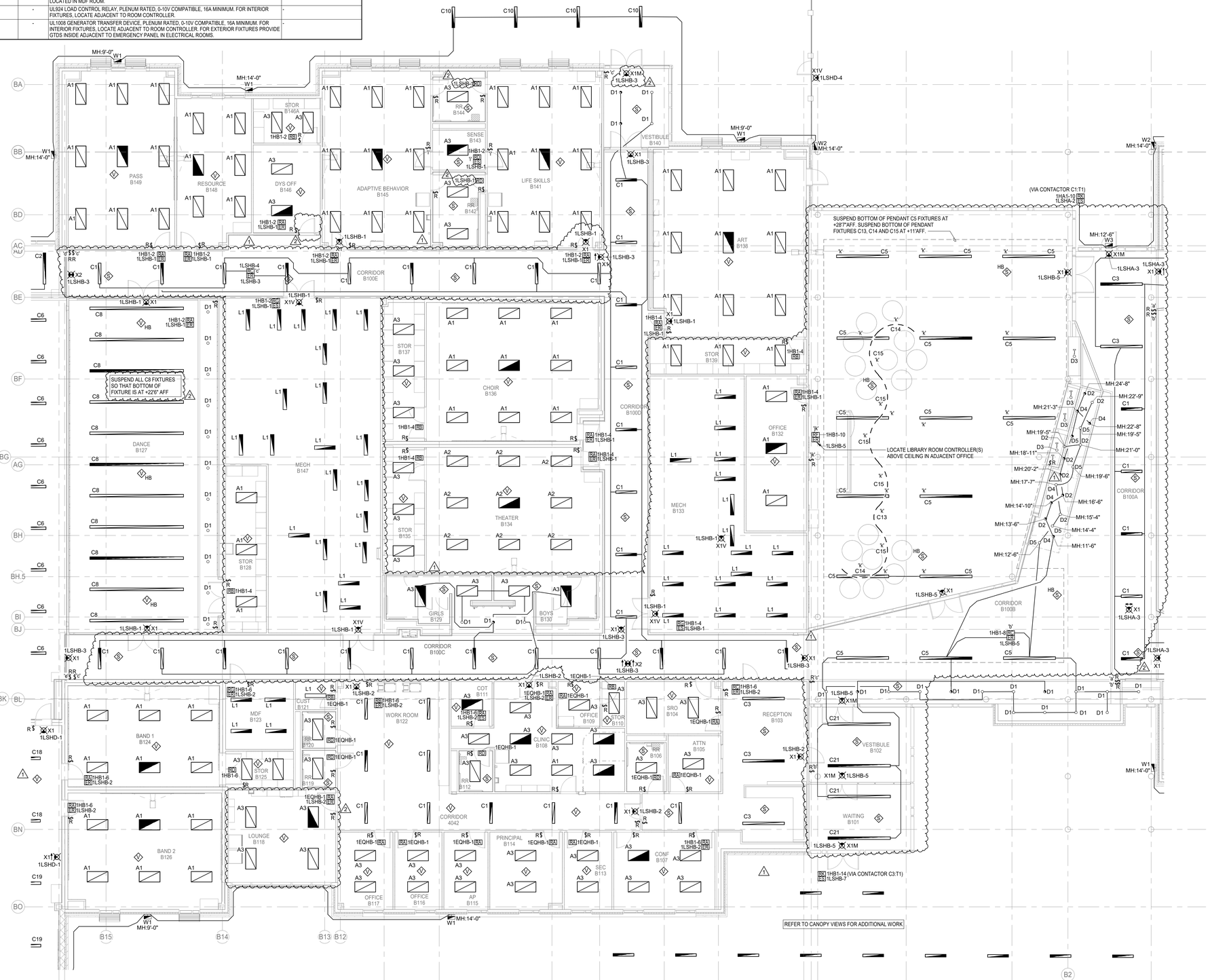
LIGHTING CONTROLS SCHEDULE

Type	Sensor Operation	# of Lighting Zones	Description	AREA
RA	VACANCY - MANUAL ON / AUTO OFF	1	LOCAL ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING, 0-10V DIMMING. IF ON/OFF/DIMMING FUNCTIONALITY CANNOT BE COMBINED INTO ONE SWITCH, THEN PROVIDE SEPARATE ON/OFF AND DIMMING SWITCHES. FOR ALL CLASSROOMS LOCATE ROOM CONTROLLER OUTSIDE ROOM ABOVE DOOR. PROVIDE DAYLIGHT ZONES WHEN INDICATED ON FLOOR PLANS.	CLASSROOMS/OFFICES
RB	VACANCY - MANUAL ON / AUTO OFF	1	LOCAL ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING.	STORAGE, ADMIN CORRIDOR, AND CUSTODIAL CLOSETS
RC	OCCUPANCY - AUTO ON / AUTO OFF	1	LOCAL KEYED SWITCHES. ROOM CONTROLLER LOCATED ABOVE CEILING. PROVIDE DAYLIGHT ZONES AS INDICATED. PROVIDE DAYLIGHT ZONES WHEN INDICATED ON FLOOR PLANS. CONTRACTOR TO MAKE ALL TIE-IN CONNECTIONS TO FIRE ALARM SYSTEM AND TO COORDINATE WITH FIRE ALARM CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.	CORRIDORS
RD	OCCUPANCY - AUTO ON / AUTO OFF	1	ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING.	SINGLE SEAT RESTROOMS
RF	OCCUPANCY - AUTO ON / AUTO OFF	1	LOCAL SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING. 0-10V DIMMING. IF ON/OFF/DIMMING FUNCTIONALITY CANNOT BE COMBINED INTO ONE SWITCH, THEN PROVIDE SEPARATE ON/OFF AND DIMMING SWITCHES. CONTRACTOR TO MAKE ALL TIE-IN CONNECTIONS TO FIRE ALARM SYSTEM AND TO COORDINATE WITH FIRE ALARM CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.	LIBRARY
RG	NONE	1	MECHANICALLY WOUND TIMER SWITCH.	MECH / ELEC / IDF
RK	PHOTOCELL	1	CONTACTOR CONTROLLED VIA 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.	EXTERIOR
ER	-	-	UL924 LOAD CONTROL RELAY, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM. FOR INTERIOR FIXTURES, LOCATE ADJACENT TO ROOM CONTROLLER.	-
ES	-	-	UL1008 GENERATOR TRANSFER DEVICE, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM. FOR INTERIOR FIXTURES, LOCATE ADJACENT TO ROOM CONTROLLER. FOR EXTERIOR FIXTURES PROVIDE GTDS INSIDE ADJACENT TO EMERGENCY PANEL IN ELECTRICAL ROOMS.	-

DO NOT PENETRATE THIN METAL CANOPIES WITH CONDUIT. STUB CONDUIT UP FROM UNDERGROUND ADJACENT TO A STRUCTURAL SUPPORT AND ROUTE CONDUIT ON UNDERSIDE OF CANOPY FROM FIXTURE TO FIXTURE.

LIGHTING GENERAL NOTES

1. LIGHTING CONTROLS SHALL COMPLY WITH IECC-2015. REFER TO LIGHTING CONTROLS SCHEDULE FOR ALL LIGHTING CONTROLS, SENSORS, AND SWITCHING SCHEMES THROUGHOUT FACILITY.
2. OCCUPANCY BASED AUTOMATIC SHUT-OFF CONTROLS ARE NOT PROVIDED IN AREAS WHERE IT WOULD ENDANGER OCCUPANT SAFETY OR SECURITY, SUCH AS ELECTRICAL, MECHANICAL AND FOOD PROCESSING ROOMS. THESE AREAS ARE EXEMPT PER IECC-2015 FROM AUTOMATIC CONTROLS.
3. LOCATE PLENUM RATED DIGITAL LIGHTING CONTROLLER AND/OR EMERGENCY LOAD CONTROL RELAY/TRANSFER SWITCH ABOVE ACCESSIBLE CEILING 12-FEET AFF OR BELOW DIRECTLY ABOVE SWITCH CONTROLLING THE SPACE; IN NON-ACCESSIBLE AND/OR HIGH CEILING AREAS, LOCATE PLENUM RATED DIGITAL LIGHTING CONTROLLER IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING; IN AREAS WITH NO CEILING AND/OR EXTERIOR APPLICATIONS LOCATE ADJACENT TO PANEL SERVING THE LOAD. PROVIDE LABEL WITH WORDING IDENTIFYING ASSOCIATED SPACE PER SPECIFICATIONS.
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1 **ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA B**
Scale: 1/8" = 1'-0"

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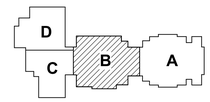
Consultant

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Houston, TX 77064

Registration: F-4111
Project No: 2550-01131-00

Notes

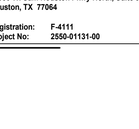
KEY PLAN



PROJECT NORTH

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd YYYY.MM.DD
Issue for Permit and Proposal			2026.01.26
Issued		By	Appd YYYY.MM.DD

Permit/Seal



Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA B

Project No.	Scale
214001329	1/8" = 1'-0"
Revision	Drawing No.
2	E201B

3/13/2026 9:53:42 AM

ORIGINAL SHEET - ARCH E1

ELECTRICAL KEYED NOTES

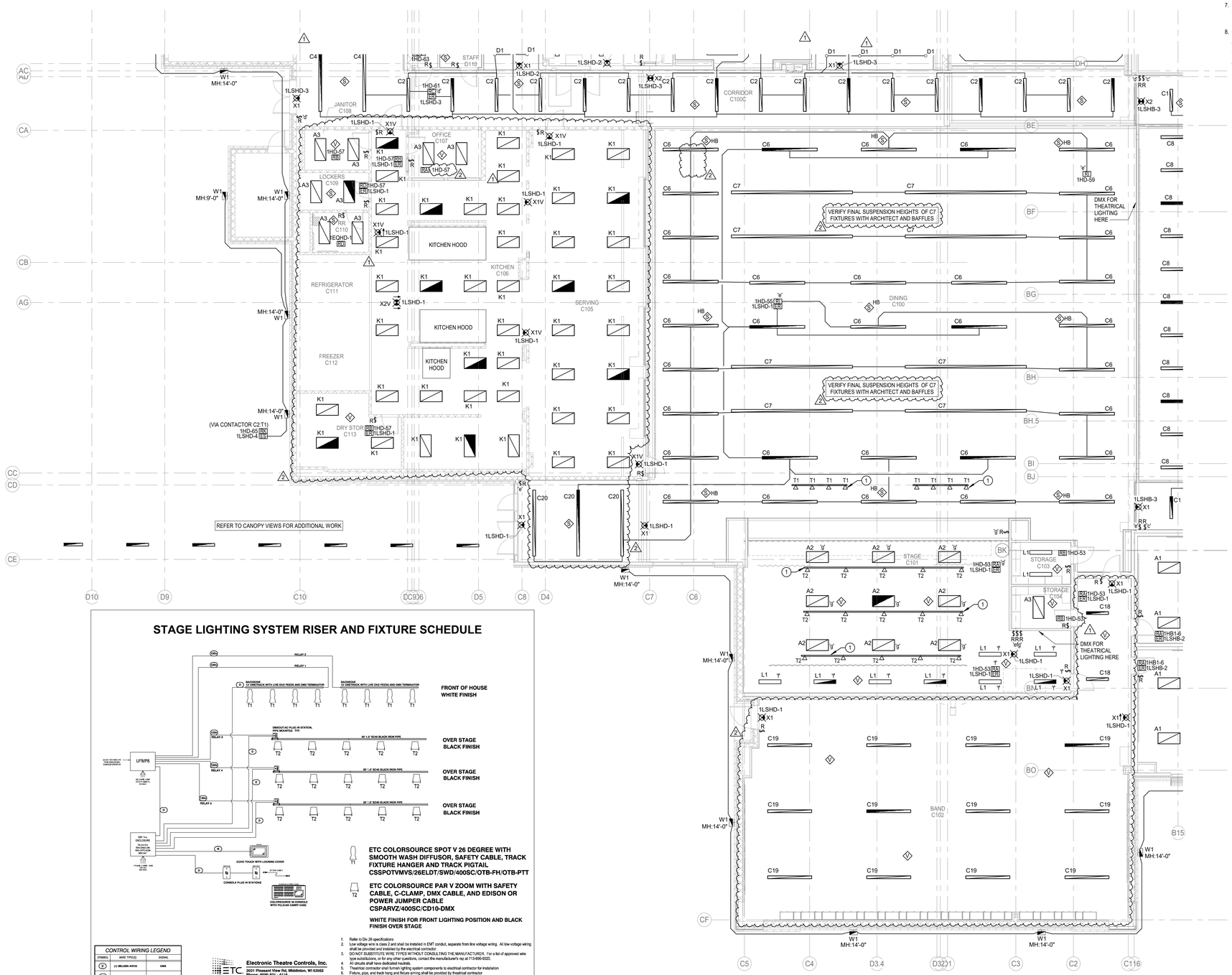
1	REFER TO THEATRICAL LIGHTING RISER AND SPECIFICATION SECTION FOR THE REQUIREMENTS OF ALL "T1 & T2" FIXTURES AND ASSOCIATED CONTROLS. COORDINATE THE FINAL LOCATION OF ALL CONTROLS WITH DISTRICT REPRESENTITVE/ ARCHITECTURAL TEAM PRIOR TO INSTALL.

LIGHTING CONTROLS SCHEDULE

Type	Sensor Operation	# of Lighting Zones	Description	AREA
RA	VACANCY - MANUAL ON / AUTO OFF	1	LOCAL ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING, 0-10V DIMMING. IF ON/OFF/DIMMING FUNCTIONALITY CANNOT BE COMBINED INTO ONE SWITCH, THEN PROVIDE SEPARATE ON/OFF AND DIMMING SWITCHES. FOR ALL CLASSROOMS LOCATE ROOM CONTROLLER OUTSIDE ROOM ABOVE DOOR. PROVIDE DAYLIGHT ZONES WHEN INDICATED ON FLOOR PLANS.	CLASSROOMS/OFFICES
RB	VACANCY - MANUAL ON / AUTO OFF	1	LOCAL ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING.	STORAGE, ADMIN CORRIDOR, AND CUSTODIAL CLOSETS
RC	OCCUPANCY - AUTO ON / AUTO OFF	1	LOCAL KEYED SWITCHES. ROOM CONTROLLER LOCATED ABOVE CEILING. PROVIDE DAYLIGHT ZONES AS INDICATED. PROVIDE DAYLIGHT ZONES WHEN INDICATED ON FLOOR PLANS. CONTRACTOR TO MAKE ALL TIE-IN CONNECTIONS TO FIRE ALARM SYSTEM AND TO COORDINATE WITH FIRE ALARM CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.	CORRIDORS
RD	OCCUPANCY - AUTO ON / AUTO OFF	1	ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING.	SINGLE SEAT RESTROOMS
RH	NONE	1	ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING.	KITCHEN
RI	OCCUPANCY - AUTO ON / AUTO OFF	1	LOCAL KEYED SWITCHES. PROVIDE NON-KEYED ON/OFF/DIMMING SWITCH BEHIND STAGE INDICATED ON PLANS. ROOM CONTROLLER LOCATED ABOVE CEILING, 0-10V DIMMING. IF ON/OFF/DIMMING FUNCTIONALITY CANNOT BE COMBINED INTO ONE SWITCH, THEN PROVIDE SEPARATE ON/OFF AND DIMMING SWITCHES. CONTRACTOR TO MAKE ALL TIE-IN CONNECTIONS TO FIRE ALARM SYSTEM AND TO COORDINATE WITH FIRE ALARM CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.	CAFETERIA
RK	PHOTOCELL	1	CONTACTOR CONTROLLED VIA 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.	EXTERIOR
ER	-	-	UL924 LOAD CONTROL RELAY, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM. FOR INTERIOR FIXTURES, LOCATE ADJACENT TO ROOM CONTROLLER.	-
ES	-	-	UL1008 GENERATOR TRANSFER DEVICE, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM. FOR INTERIOR FIXTURES, LOCATE ADJACENT TO ROOM CONTROLLER. FOR EXTERIOR FIXTURES PROVIDE GTDS INSIDE ADJACENT TO EMERGENCY PANEL IN ELECTRICAL ROOMS.	-

LIGHTING GENERAL NOTES

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STAGE LIGHTING SYSTEM RISER AND FIXTURE SCHEDULE

FRONT OF HOUSE WHITE FINISH

OVER STAGE BLACK FINISH

OVER STAGE BLACK FINISH

OVER STAGE BLACK FINISH

T1 — ETC COLORSOURCE SPOT V 26 DEGREE WITH SMOOTH WASH DIFFUSOR, SAFETY CABLE, TRACK FIXTURE HANGER AND TRACK PIGTAIL CSSPOTVMVS/26ELDT/SWD/400SC/OTB-FH/OTB-PTT

T2 — ETC COLORSOURCE PAR V ZOOM WITH SAFETY CABLE, C-CLAMP, DMX CABLE, AND EDISON OR POWER JUMPER CABLE CSPARVZ/400SC/CD10-DMX

WHITE FINISH FOR FRONT LIGHTING POSITION AND BLACK FINISH OVER STAGE

CONTROL WIRING LEGEND		
SYMBOL	WIRE TYPE(S)	SIGNAL
D	(1) #4/c18A AWG/6	DMX
W	(1) Cat5e	NRP

CAT5E IN CONDUIT IS AN ACCEPTABLE SUBSTITUTE FOR DMX

Electronic Theatre Controls, Inc.
3031 Pleasant View Rd, Middleton, WI 53562
Phone: (608) 831 - 4116
Web: www.etcconnect.com

1. Refer to Div 26 specifications
2. Low voltage wire is class 2 and shall be installed in EMT conduit, separate from line voltage wiring. All low voltage wiring shall be provided and installed by the electrical contractor.
3. DO NOT SUBSTITUTE WIRE TYPES WITHOUT CONSULTING THE MANUFACTURER. For a list of approved wire type substitutions, or for any other questions, contact the manufacturer's rep at 713-690-9320.
4. All circuits shall have dedicated neutrals.
5. Theatrical contractor shall furnish lighting system components to electrical contractor for installation
6. Fixture, pipe, and track hang and fixture aiming shall be provided by theatrical contractor
7. Low voltage terminations, system startup, programming, and training to be provided by an ETC Authorized Service Center. Contact 713-690-9320 for system startup a minimum of 3 weeks prior to desired date to schedule.
8. LED Fixtures shall have a 5 year complete warranty, and a 10 year warranty on the light array.

1 **ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA C**
Scale: 1/8" = 1'-0"

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Registration: F-4111
Project No: 2550-01131-00

Notes

D C B A

KEY PLAN — PROJECT NORTH

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd YYYY.MM.DD
Issue for Permit and Proposal			2026.01.26
Issued		By	Appd YYYY.MM.DD

Permit/Seal

BRADLEY KALMANS — STATE OF TEXAS — 80219 — LICENSED — PROFESSIONAL ENGINEER
03-11-2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA C

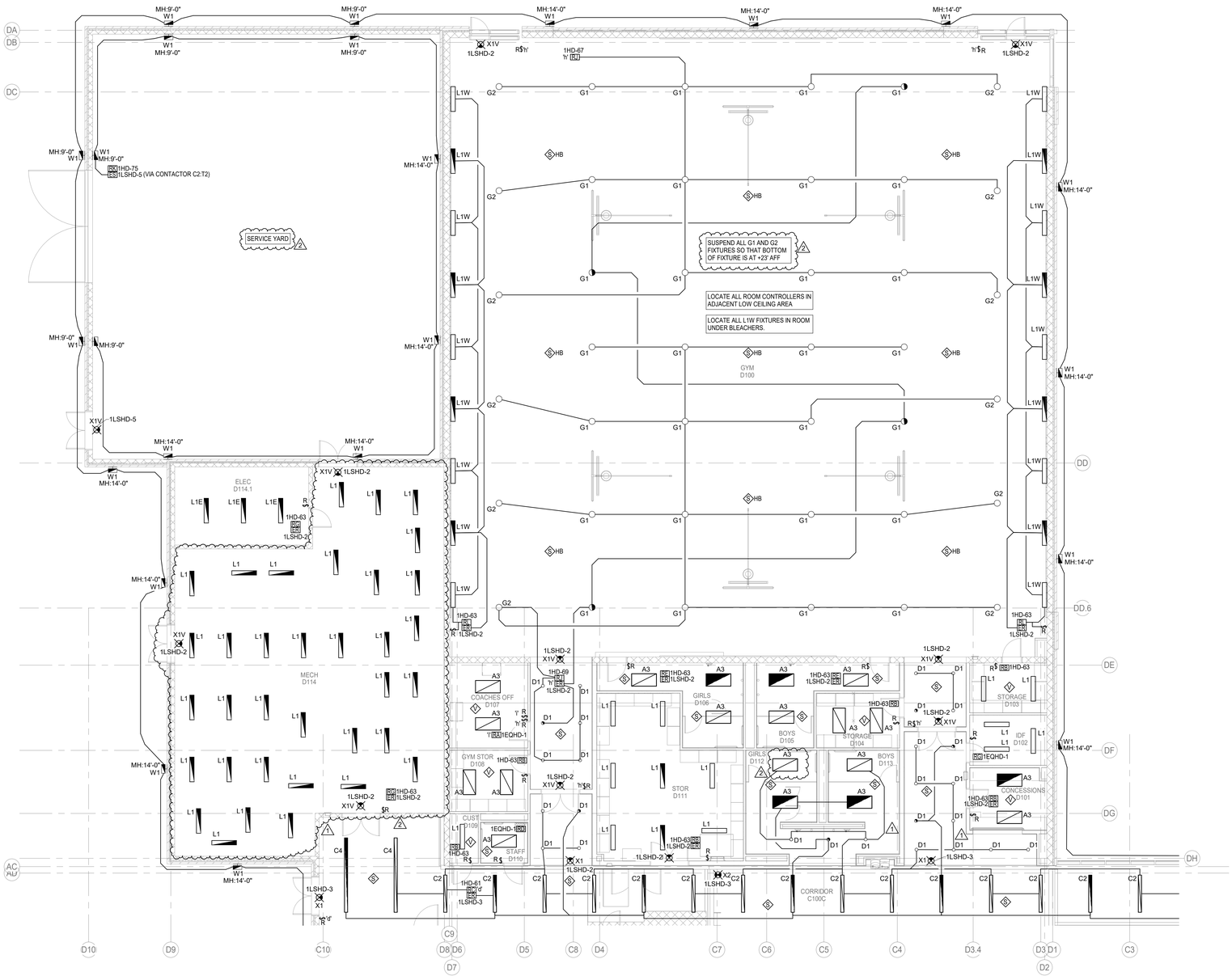
Project No.	Scale
214001329	1/8" = 1'-0"
Revision	Drawing No.
2	E201C

3/10/2026 9:55:44 AM

ORIGINAL SHEET - ARCH E1

LIGHTING CONTROLS SCHEDULE

Type	Sensor Operation	# of Lighting Zones	Description	AREA
RA	VACANCY - MANUAL ON / AUTO OFF	1	LOCAL ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING, 0-10V DIMMING. IF ON/OFF/DIMMING FUNCTIONALITY CANNOT BE COMBINED INTO ONE SWITCH, THEN PROVIDE SEPARATE ON/OFF AND DIMMING SWITCHES. FOR ALL CLASSROOMS LOCATE ROOM CONTROLLER OUTSIDE ROOM ABOVE DOOR. PROVIDE DAYLIGHT ZONES WHEN INDICATED ON FLOOR PLANS.	CLASSROOMS/OFFICES
RB	VACANCY - MANUAL ON / AUTO OFF	1	LOCAL ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING.	STORAGE, ADMIN CORRIDOR, AND CUSTODIAL CLOSETS
RC	OCCUPANCY - AUTO ON / AUTO OFF	1	LOCAL KEYED SWITCHES. ROOM CONTROLLER LOCATED ABOVE CEILING. PROVIDE DAYLIGHT ZONES AS INDICATED. PROVIDE DAYLIGHT ZONES WHEN INDICATED ON FLOOR PLANS. CONTRACTOR TO MAKE ALL TIE-IN CONNECTIONS TO FIRE ALARM SYSTEM AND TO COORDINATE WITH FIRE ALARM CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.	CORRIDORS
RD	OCCUPANCY - AUTO ON / AUTO OFF	1	ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING.	SINGLE SEAT RESTROOMS
RE	OCCUPANCY - AUTO ON / AUTO OFF	1	LOCAL KEYED SWITCH. ROOM CONTROLLER, NO DIMMING.	MULTI-SEAT RESTROOMS
RG	NONE	1	MECHANICALLY WOUND TIMER SWITCH.	MECH / ELEC / IDF
RJ	OCCUPANCY - AUTO ON / AUTO OFF	1	LOCAL KEYED SWITCHES. PROVIDE NON-KEYED ON/OFF/DIMMING SWITCH IN NEARBY OFFICE INDICATED ON PLANS. ROOM CONTROLLER LOCATED ABOVE CEILING, 0-10V DIMMING. IF ON/OFF/DIMMING FUNCTIONALITY CANNOT BE COMBINED INTO ONE SWITCH, THEN PROVIDE SEPARATE ON/OFF AND DIMMING SWITCHES. CONTRACTOR TO MAKE ALL TIE-IN CONNECTIONS TO FIRE ALARM SYSTEM AND TO COORDINATE WITH FIRE ALARM CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.	GYM
RK	PHOTOCELL	1	CONTACTOR CONTROLLED VIA 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.	EXTERIOR
RL	NONE	1	ON/OFF SWITCHES.	ELEVATOR SHAFT
ER	-	-	UL924 LOAD CONTROL RELAY, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM. FOR INTERIOR FIXTURES, LOCATE ADJACENT TO ROOM CONTROLLER.	-
ES	-	-	UL1008 GENERATOR TRANSFER DEVICE, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM. FOR INTERIOR FIXTURES, LOCATE ADJACENT TO ROOM CONTROLLER. FOR EXTERIOR FIXTURES PROVIDE GTDS INSIDE ADJACENT TO EMERGENCY PANEL IN ELECTRICAL ROOMS.	-



1 **ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA D**
Scale: 1/8" = 1'-0"

LIGHTING GENERAL NOTES

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3. LOCATE PLENUM RATED DIGITAL LIGHTING CONTROLLER AND/OR EMERGENCY LOAD CONTROL RELAY/TRANSFER SWITCH ABOVE ACCESSIBLE CEILING 12-FEET AFF OR BELOW DIRECTLY ABOVE SWITCH CONTROLLING THE SPACE. IN NON-ACCESSIBLE AND/OR HIGH CEILING AREAS, LOCATE PLENUM RATED DIGITAL LIGHTING CONTROLLER IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING; IN AREAS WITH NO CEILING AND/OR EXTERIOR APPLICATIONS LOCATE ADJACENT TO PANEL SERVING THE LOAD. PROVIDE LABEL WITH WORDING IDENTIFYING ASSOCIATED SPACE PER SPECIFICATIONS.
4. SPACES WITH MULTIPLE OCCUPANCY BASED AUTOMATIC SHUT-OFF SENSORS OR WHERE LINE OF SIGHT MAY BE OBSCURED, SUCH AS CORRIDORS, AMONG OTHERS: SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.
5. OCCUPANCY/VACANCY SENSOR AND/OR DAYLIGHTING SENSOR LOCATIONS INDICATE SPACE OR AREA CONTROLLED. CONTRACTOR TO PROVIDE ACTUAL QUANTITIES, TYPES, AND MOUNTING LOCATIONS AS RECOMMENDED BY MANUFACTURER.
6. COORDINATE LOCATION OF LIGHT FIXTURES IN ALL MEPT ROOMS WITH MECHANICAL, PLUMBING AND TECHNOLOGY EQUIPMENT, PIPING, AND ALL OTHER TRADES. SUSPEND OR WALL MOUNT FIXTURES WHERE PRACTICAL.
7. CONTRACTOR SHALL PROVIDE CONSTANT UNSWITCHED POWER CIRCUIT FOR EMERGENCY LOAD CONTROL RELAYS, EMERGENCY TRANSFER SWITCHES, EMERGENCY FIXTURES AND EXIT SIGNS.
8. CONCEAL CONDUIT SYSTEMS IN FINISHED AREAS. CONDUIT MAY BE EXPOSED IN MECHANICAL AND ELECTRICAL ROOMS AND WHERE OTHERWISE SHOWN OR INDICATED ONLY. RUN THE CONDUIT PARALLEL AND PERPENDICULAR TO THE STRUCTURAL FEATURES OF THE BUILDING IN THE MOST DIRECT, NEAT AND WORKMANLIKE MANNER.

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Registration: F-4111
Project No: 2550-01131-00

Notes

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KEY PLAN

PROJECT NORTH

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd YYYY.MM.DD
Issue for Permit and Proposal			2026.01.26
Issued		By	Appd YYYY.MM.DD

Permit/Seal

STATE OF TEXAS
BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
03-11-2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ELECTRICAL LIGHTING PLAN - LEVEL 1 - AREA D

Project No.	Scale
21400329	1/8" = 1'-0"
Revision	Drawing No.
2	E201D

3/13/2026 9:53:48 AM

ORIGINAL SHEET - ARCH E1

LIGHTING CONTROLS SCHEDULE

Type	Sensor Operation	# of Lighting Zones	Description	AREA
RA	VACANCY - MANUAL ON / AUTO OFF	1	LOCAL ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING, 0-10V DIMMING. IF ON/OFF/DIMMING FUNCTIONALITY CANNOT BE COMBINED INTO ONE SWITCH, THEN PROVIDE SEPARATE ON/OFF AND DIMMING SWITCHES. FOR ALL CLASSROOMS LOCATE ROOM CONTROLLER OUTSIDE ROOM ABOVE DOOR. PROVIDE DAYLIGHT ZONES WHEN INDICATED ON FLOOR PLANS.	CLASSROOMS/OFFICES
RB	VACANCY - MANUAL ON / AUTO OFF	1	LOCAL ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING.	STORAGE, ADMIN CORRIDOR, AND CUSTODIAL CLOSETS
RC	OCCUPANCY - AUTO ON / AUTO OFF	1	LOCAL KEYED SWITCHES. ROOM CONTROLLER LOCATED ABOVE CEILING. PROVIDE DAYLIGHT ZONES AS INDICATED. PROVIDE DAYLIGHT ZONES WHEN INDICATED ON FLOOR PLANS. CONTRACTOR TO MAKE ALL TIE-IN CONNECTIONS TO FIRE ALARM SYSTEM AND TO COORDINATE WITH FIRE ALARM CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.	CORRIDORS
RD	OCCUPANCY - AUTO ON / AUTO OFF	1	ON/OFF SWITCH. ROOM CONTROLLER LOCATED ABOVE CEILING.	SINGLE SEAT RESTROOMS
RG	NONE	1	MECHANICALLY WOUND TIMER SWITCH.	MECH / ELEC / IDF
ER	-	-	UL924 LOAD CONTROL RELAY, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM. FOR INTERIOR FIXTURES, LOCATE ADJACENT TO ROOM CONTROLLER.	-
ES	-	-	UL1008 GENERATOR TRANSFER DEVICE, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM. FOR INTERIOR FIXTURES, LOCATE ADJACENT TO ROOM CONTROLLER. FOR EXTERIOR FIXTURES PROVIDE GTDS INSIDE ADJACENT TO EMERGENCY PANEL IN ELECTRICAL ROOMS.	-

LIGHTING GENERAL NOTES

1. LIGHTING CONTROLS SHALL COMPLY WITH IECC-2015. REFER TO LIGHTING CONTROLS SCHEDULE FOR ALL LIGHTING CONTROLS, SENSORS, AND SWITCHING SCHEMES THROUGHOUT FACILITY.
2. OCCUPANCY BASED AUTOMATIC SHUT-OFF CONTROLS ARE NOT PROVIDED IN AREAS WHERE IT WOULD ENDANGER OCCUPANT SAFETY OR SECURITY, SUCH AS ELECTRICAL, MECHANICAL AND FOOD PROCESSING ROOMS. THESE AREAS ARE EXEMPT PER IECC-2015 FROM AUTOMATIC CONTROLS.
3. LOCATE PLENUM RATED DIGITAL LIGHTING CONTROLLER AND/OR EMERGENCY LOAD CONTROL RELAY/TRANSFER SWITCH ABOVE ACCESSIBLE CEILING 12-FEET AFF OR BELOW DIRECTLY ABOVE SWITCH CONTROLLING THE SPACE. IN NON-ACCESSIBLE AND/OR HIGH CEILING AREAS, LOCATE PLENUM RATED DIGITAL LIGHTING CONTROLLER IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING; IN AREAS WITH NO CEILING AND/OR EXTERIOR APPLICATIONS LOCATE ADJACENT TO PANEL SERVING THE LOAD. PROVIDE LABEL WITH WORDING IDENTIFYING ASSOCIATED SPACE PER SPECIFICATIONS.
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1 **ELECTRICAL LIGHTING PLAN - LEVEL 2 - AREA A**
Scale: 1/8" = 1'-0"

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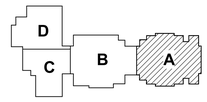
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Registration: F-4111
Project No: 2550-01131-00

Notes



KEY PLAN

PROJECT NORTH

	Revision	By	Appd	
2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13

	Issued	By	Appd	
	Issue for Permit and Proposal			2026.01.26

Permit/Seal

BRADLEY KALMANS 80219 LICENSED PROFESSIONAL ENGINEER
03-11-2026

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Client/Project
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Crosby Sixth Grade Campus

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Title
ELECTRICAL LIGHTING PLAN - LEVEL 2 - AREA A

Project No. 214001329
Scale 1/8" = 1'-0"
Revision 2
Drawing No. **E211A**

3/10/2026 9:58:51 AM

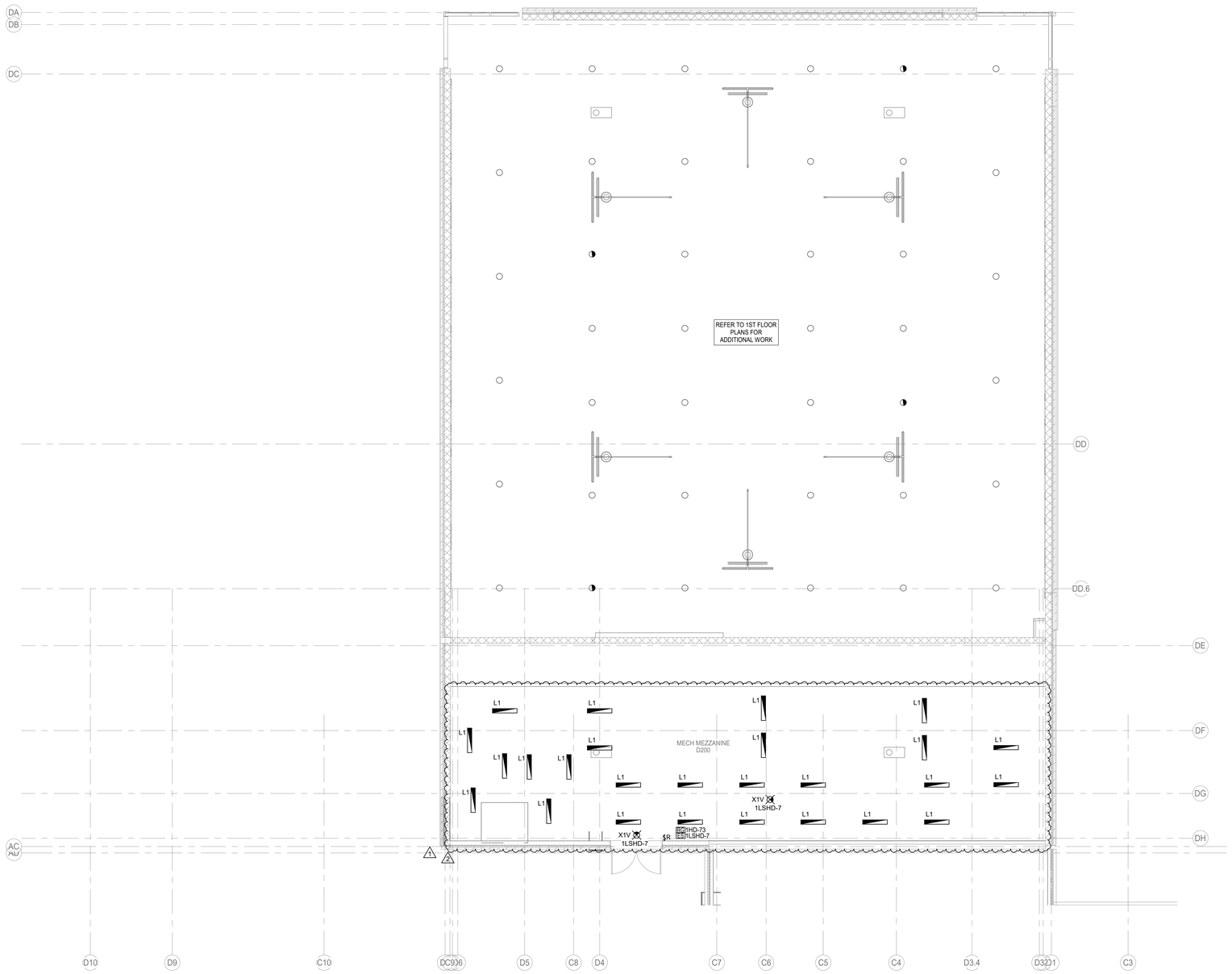
ORIGINAL SHEET - ARCH E1

LIGHTING GENERAL NOTES

1. LIGHTING CONTROLS SHALL COMPLY WITH IECC-2015. REFER TO LIGHTING CONTROLS SCHEDULE FOR ALL LIGHTING CONTROLS, SENSORS, AND SWITCHING SCHEMES THROUGHOUT FACILITY.
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LIGHTING CONTROLS SCHEDULE

Type	Sensor Operation	# of Lighting Zones	Description	AREA
RG	NONE	1	MECHANICALLY WOUND TIMER SWITCH.	MECH / ELEC / IDF
ES	-	-	UL1008 GENERATOR TRANSFER DEVICE, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM. FOR INTERIOR FIXTURES, LOCATE ADJACENT TO ROOM CONTROLLER. FOR EXTERIOR FIXTURES PROVIDE GTDS INSIDE ADJACENT TO EMERGENCY PANEL IN ELECTRICAL ROOMS.	-



1 **ELECTRICAL LIGHTING PLAN - LEVEL 2 - AREA D**
Scale: 1/8" = 1'-0"

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Registration: F-4111
Project No: 2550-01131-00

Notes

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KEY PLAN

PROJECT NORTH

		By	Appd	
2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13
Revision		By	Appd	YYYY.MM.DD
Issue for Permit and Proposal				2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal

STATE OF TEXAS
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PROFESSIONAL ENGINEER
03-11-2026

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Crosby ISD

Crosby Sixth Grade Campus

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Crosby, TX 77532

Title
ELECTRICAL LIGHTING PLAN - LEVEL 2 - AREA D

Project No. 214001329
Scale 1/8" = 1'-0"
Revision 2
Drawing No. **E211D**

3/10/2026 9:55:53 AM

ORIGINAL SHEET - ARCH E1

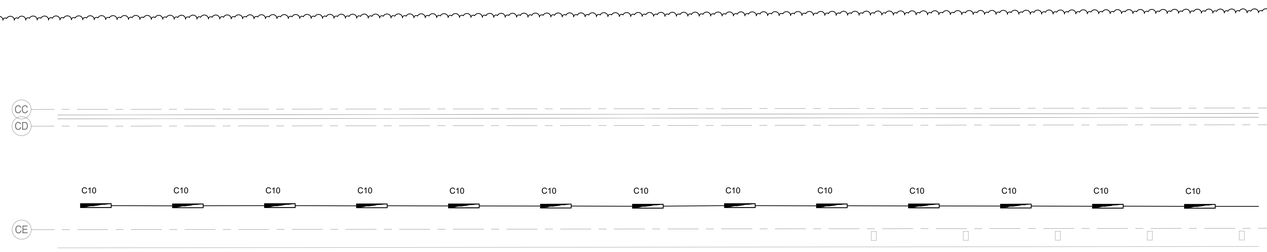
LIGHTING CONTROLS SCHEDULE

Type	Sensor Operation	# of Lighting Zones	Description	AREA
RK	PHOTOCELL	1	CONTACTOR CONTROLLED VIA 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.	EXTERIOR
ES	-	-	UL1008 GENERATOR TRANSFER DEVICE, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM. FOR INTERIOR FIXTURES, LOCATE ADJACENT TO ROOM CONTROLLER. FOR EXTERIOR FIXTURES PROVIDE GTDS INSIDE ADJACENT TO EMERGENCY PANEL IN ELECTRICAL ROOMS.	-

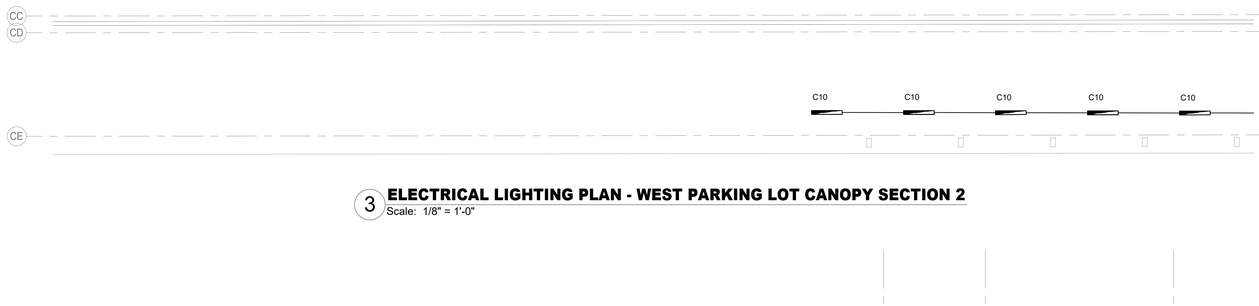
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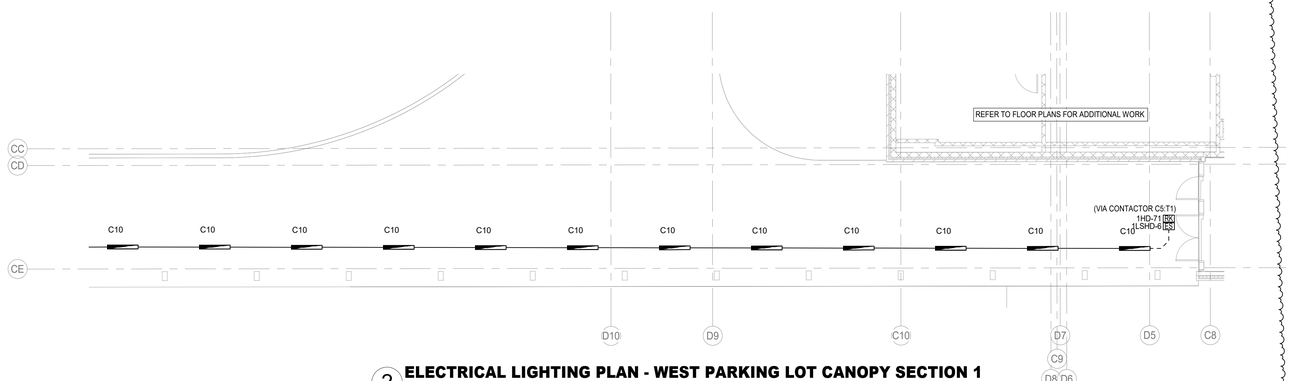
DO NOT PENETRATE THIN METAL CANOPIES WITH CONDUIT. STUB CONDUIT UP FROM UNDERGROUND ADJACENT TO A STRUCTURAL SUPPORT AND ROUTE CONDUIT ON UNDERSIDE OF CANOPY FROM FIXTURE TO FIXTURE.



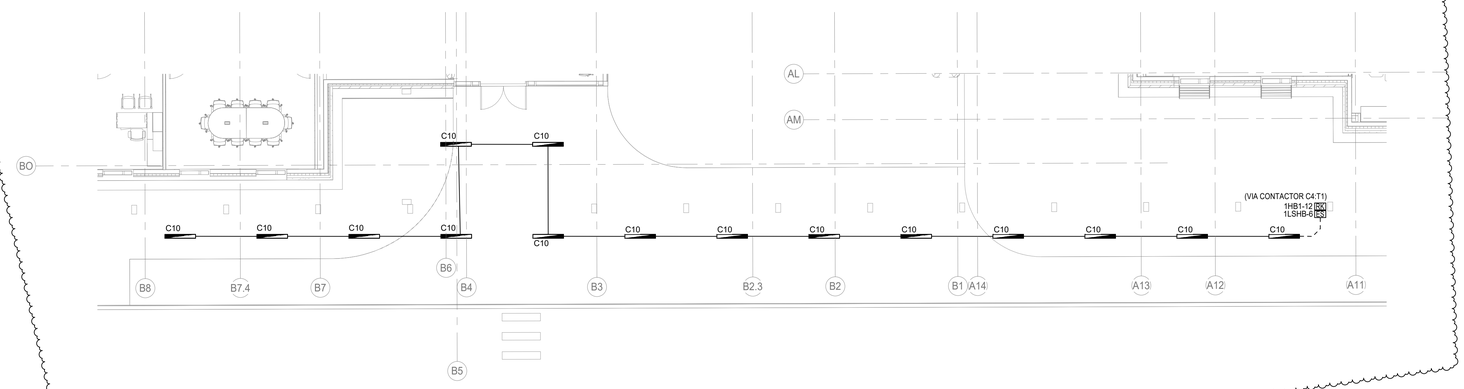
4 **ELECTRICAL LIGHTING PLAN - WEST PARKING LOT CANOPY SECTION 2 ALTERNATE**
Scale: 1/8" = 1'-0"



3 **ELECTRICAL LIGHTING PLAN - WEST PARKING LOT CANOPY SECTION 2**
Scale: 1/8" = 1'-0"



2 **ELECTRICAL LIGHTING PLAN - WEST PARKING LOT CANOPY SECTION 1**
Scale: 1/8" = 1'-0"



1 **ELECTRICAL LIGHTING PLAN - SOUTH PARKING LOT CANOPY**
Scale: 1/8" = 1'-0"

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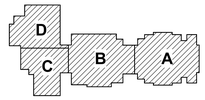
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		By	Appd	YYYY.MM.DD
2	ADDENDUM #4			2026.03.11
Revision				
Issue for Permit and Proposal				2026.01.26
Issued				

Permit/Seal



03-11-2026

Client/Project Logo

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Crosby Sixth Grade Campus

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Title
ELECTRICAL LIGHTING PLAN - LEVEL 1 - CANOPIES

Project No. 214001329
Scale 1/8" = 1'-0"
Revision 2
Drawing No. **E220**

3/17/2026 9:25:56 AM

ORIGINAL SHEET - ARCH E1

ELECTRICAL KEYED NOTES

1	PROVIDE DUPLEX RECEPTACLE IN ABOVE CEILING ENCLOSURE (ENCLOSURE PROVIDED BY DIVISION 27). REFER TO TECHNOLOGY DRAWINGS/DETAILS FOR MORE INFORMATION. CONTRACTOR TO COORDINATE WITH AV/TELECOMMUNICATION CONTRACTOR EXACT LOCATION AND OTHER REQUIREMENTS PRIOR TO COMMENCEMENT OF WORK.
2	PROVIDE 10-GANG CONCEALED SERVICE FLOOR BOX.
3	(1)#12, 1#12G IN 3/4" CONDUIT AND (4)EMPTY 1-1/4" CONDUIT WITH PULLSTRING.
4	DIVISION 26 TO MAKE FINAL CONNECTION TO AUTOMATIC LAVATORY FAUCET VIA LOW VOLTAGE TRANSFORMER.
5	PROVIDE LINE VOLTAGE TIMER(20A/1P/120V/60 MINUTES NO HOLD) FOR EXHAUST FAN. MAKE ALL FINAL CONNECTIONS.
6	PROVIDE GROUNDING BUS BAR. REFER TO GROUNDING SPECIFICATIONS AND TECHNOLOGY DRAWINGS FOR ADDITIONAL SCOPE OF WORK.
7	MOUNT RECEPTACLE ON UNISTRUT ABOVE RACK. REFER TO RACK RECEPTACLE DETAIL FOR MORE INFORMATION.
8	POWER TO DMS-1 IS PROVIDED FROM ROOFTOP MOUNTED DMSCU-1. COORDINATE WITH MANUFACTURER'S WIRING REQUIREMENTS FOR POWER AND CONTROL WIRING.

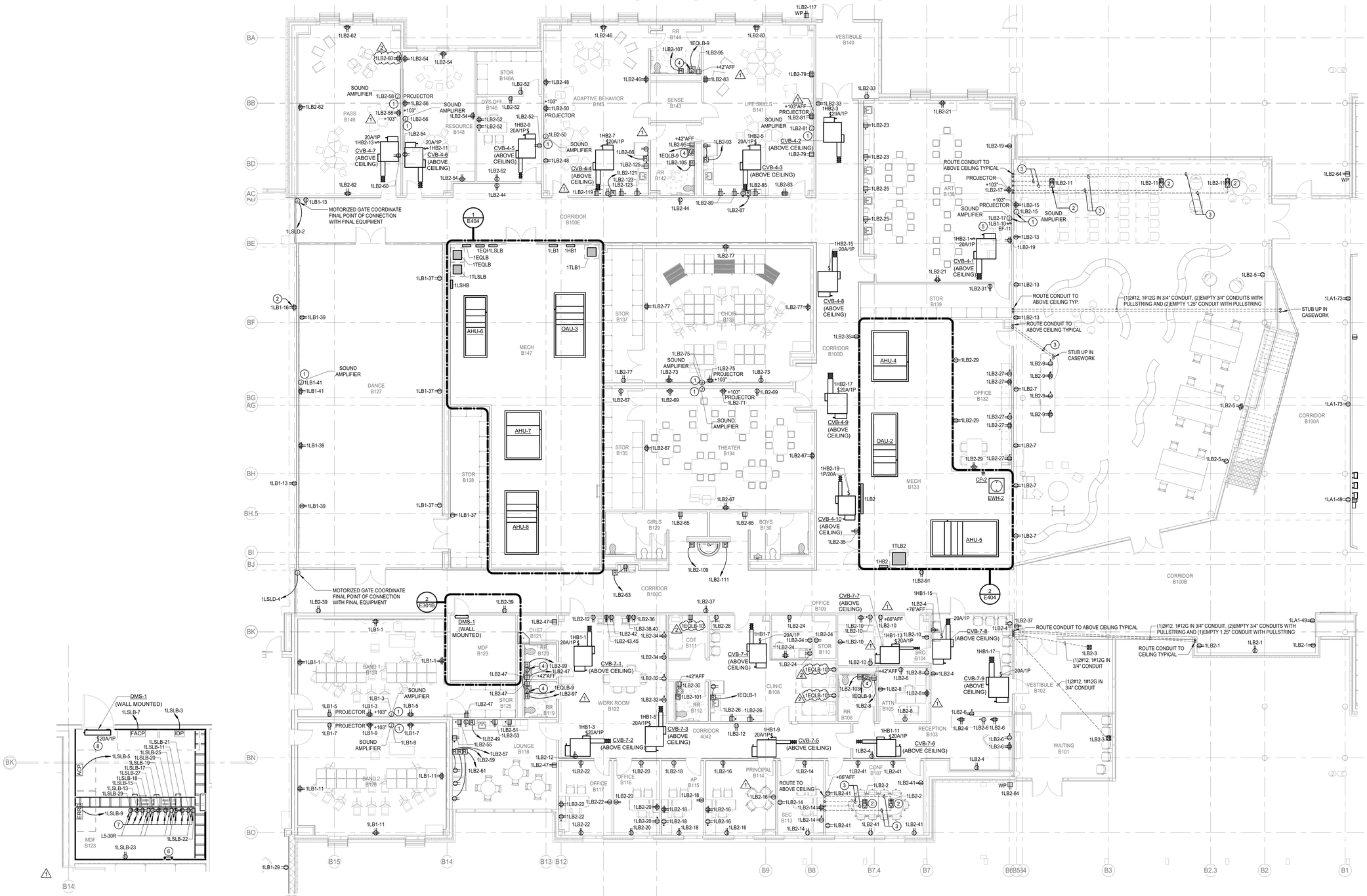
ALL 15 AND 20 AMPERES, 125 AND 250 VOLTS NON LOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN NEC 406-12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

COORDINATE FINAL LOCATION OF ALL RECEPTACLES IN IDF/SMDFS WITH TECHNOLOGY AND DISTRICT REPRESENTATIVE. REFER TO DETAIL FOR MOUNTING RECEPTACLES FOR RACKS.

REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.

POWER GENERAL NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR HAND DRYER MOUNTING HEIGHT AND FINAL LOCATION.
2. COORDINATE EXACT LOCATION AND ELEVATION OF RECEPTACLES AND SWITCHES WITH ARCHITECTURAL DRAWINGS PRIOR TO ELECTRICAL ROUGH-IN.
3. REFER TO MECHANICAL, PLUMBING AND TECHNOLOGY DRAWINGS FOR EXACT LOCATION OF EQUIPMENT AND SCHEDULES. PROVIDE ALL ELECTRICAL DISCONNECTS/ CONTROLLERS, BRANCH CIRCUITS, CIRCUIT BREAKERS AND MAKE FINAL CONNECTIONS REQUIRED TO POWER AND CONTROL EQUIPMENT.
4. REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.
5. CONCEAL CONDUIT SYSTEMS IN FINISHED AREAS. CONDUIT MAY BE EXPOSED IN MECHANICAL AND ELECTRICAL ROOMS AND WHERE OTHERWISE SHOWN OR INDICATED ONLY. RUN THE CONDUIT PARALLEL AND PERPENDICULAR TO THE STRUCTURAL FEATURES OF THE BUILDING IN THE MOST DIRECT, NEAT AND WORKMANLIKE MANNER.



2 **ELECTRICAL POWER ENLARGED PLAN - MDF B123**
Scale: 1/4" = 1'-0"

1 **ELECTRICAL POWER PLAN - LEVEL 1 - AREA B**
Scale: 1/8" = 1'-0"

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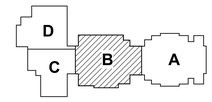
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Project No: 2550-01131-00

Notes



KEY PLAN

PROJECT NORTH

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd	YYYY.MM.DD

Issue for Permit and Proposal			2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal

BRADLEY KALMANS — 89219 — LICENSED PROFESSIONAL ENGINEER — STATE OF TEXAS

03-11-2026

Client/Project Logo

Crosby Independent School District

Client/Project

Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title

ELECTRICAL POWER PLAN - LEVEL 1 - AREA B

Project No. 214001329	Scale As indicated
Revision 2	Drawing No. **E301B**

31/01/2026 11:33:29 AM

ORIGINAL SHEET - ARCH E1

ELECTRICAL KEYED NOTES

1	PROVIDE DUPLEX RECEPTACLE IN ABOVE CEILING ENCLOSURE (ENCLOSURE PROVIDED BY DIVISION 27). REFER TO TECHNOLOGY DRAWINGS/DETAILS FOR MORE INFORMATION. CONTRACTOR TO COORDINATE WITH AV/TELECOMMUNICATION CONTRACTOR EXACT LOCATION AND OTHER REQUIREMENTS PRIOR TO COMMENCEMENT OF WORK.
2	(1)#12, 1#12G IN 3/4" CONDUIT (1)EMPTY .75" CONDUIT WITH PULLSTRING AND (2)EMPTY 1-1/4" CONDUIT WITH PULLSTRING.
3	EPO BUTTON FOR SCIENCE LAB UTILITY CONTROLLER BY DIVISION 22. ROUGH-IN BY DIVISION 26. STUDENT RECEPTACLES SHALL BE CONTROLLED VIA CONTACTOR IN UTILITY CONTROLLER. COORDINATE FINAL LOCATION WITH DIVISION 22 AND ALL OTHER TRADES.
4	UTILITY CONTROL PANEL PROVIDED BY DIVISION 22. DIVISION 26 TO MAKE ALL FINAL ELECTRICAL CONNECTIONS.
5	(1)#12, 1#12G IN 3/4" CONDUIT AND (4)EMPTY 1-1/4" CONDUIT WITH PULLSTRING.
6	PROVIDE 10-GANG POKE-THROUGH FLOOR BOX.
7	PROVIDE GROUNDING BUS BAR. REFER TO GROUNDING SPECIFICATIONS AND TECHNOLOGY DRAWINGS FOR ADDITIONAL SCOPE OF WORK.
8	MOUNT RECEPTACLE ON UNISTRUT ABOVE RACK. REFER TO RACK RECEPTACLE DETAIL FOR MORE INFORMATION.
9	DIVISION 26 TO MAKE FINAL CONNECTION TO GOGGLE CABINET. COORDINATE FINAL MOUNTING HEIGHT WITH ARCHITECTURE PRIOR TO ROUGH-IN.

ELECTRICAL KEYED NOTES

10	UTILITY CONTROL PANEL, ELECTRONIC CONTACTOR SCHEDULE, SOLINOID VALVE CABINET AND EMERGENCY POWER OFF BUTTON SHALL BE CONNECTED TO CONTROL STUDENT RECEPTACLES AND OTHER UTILITES IN EACH ASSOCIATED LAB. COORDINATE FINAL SYSTEM COMPONENT LOCATION AND ALL REQUIRED LOW VOLTAGE/LINE VOLTAGE CONNECTIONS BETWEEN THE SYSTEM WITH EQUIPMENT INSTALLATION INSTRUCTIONS, DIVISION 22 AND ALL OTHER TRADES.
11	ROUTE CIRCUIT HOMERUN VIA CONTACTOR IN ECP-1 LOCATED IN CONNECTED SCIENCE PREP ROOM.
12	DIVISION 26 TO MAKE FINAL CONNECTION TO AUTOMATIC LAVATORY FAUCET VIA 12V TRANSFORMER.
13	EXHAUST FAN LINE VOLTAGE THERMOSTAT(120V) FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26. MAKE ALL FINAL CONNECTIONS.
14	PROVIDE LINE VOLTAGE TIMER(20A/1P/120V/60 MINUTES NO HOLD) FOR EXHAUST FAN. MAKE ALL FINAL CONNECTIONS.
15	ELECTRICAL CONTACTOR CABINET FURNISHED BY DIVISION 22. DIVISION 26 TO MAKE ALL FINAL CONNECTIONS.
16	POWER TO DMS-3 IS PROVIDED FROM ROOFTOP MOUNTED DMSCU-3. COORDINATE WITH MANUFACTURER'S WIRING REQUIREMENTS FOR POWER AND CONTROL WIRING
17	DIVISION 26 TO MAKE FINAL CONNECTION TO EMERGENCY SHOWER AND ASSOCIATED ACCESSORIES INCLUDING BUT NOT LIMITED TO AN EMERGENCY LIGHT VIA LOW VOLTAGE TRANSFORMER. COORDINATE WITH DIVISION 23 FOR FINAL LOCATION AND ADDITIONAL REQUIREMENTS.
18	<varies>

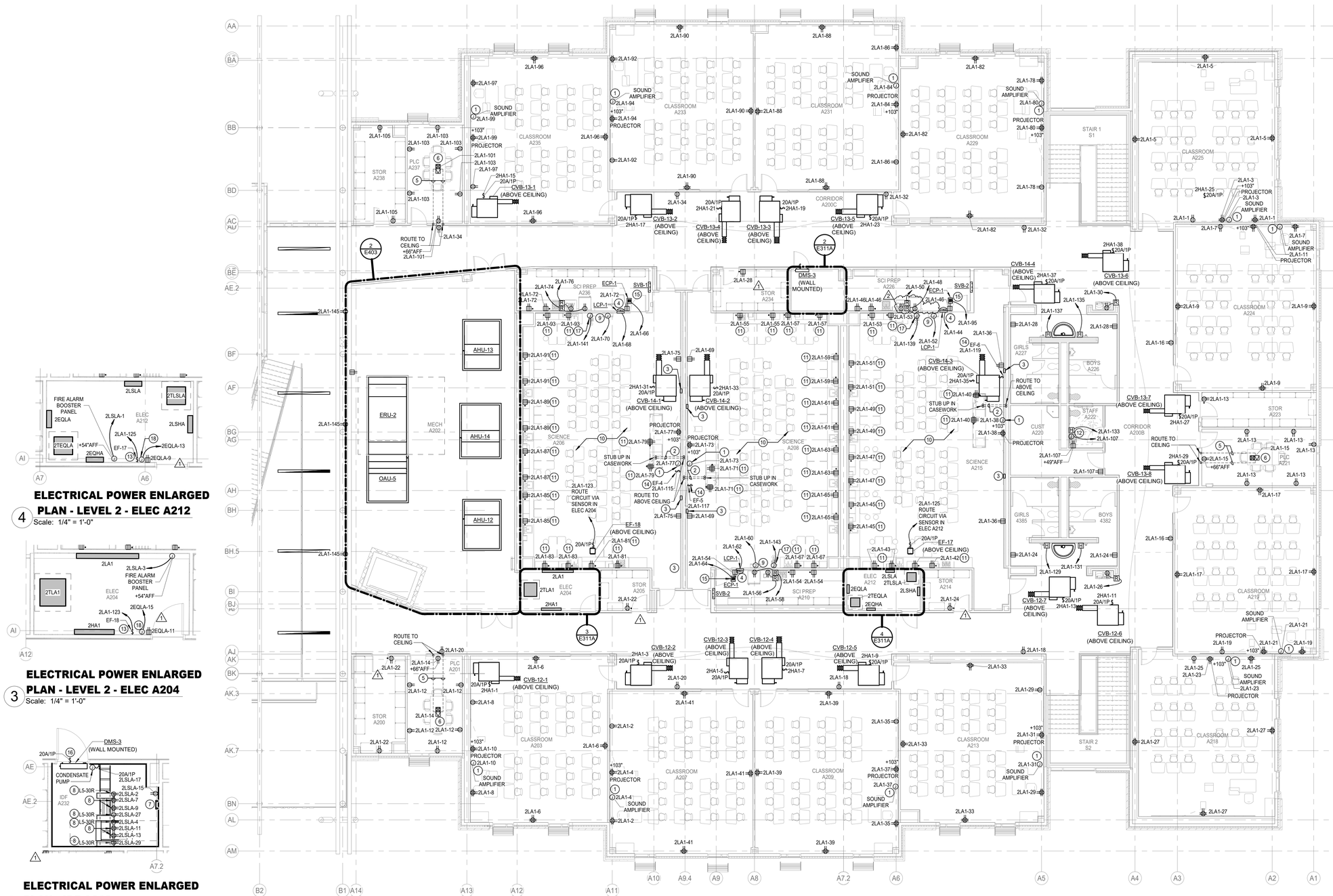
ALL 15 AND 20 AMPERES, 125 AND 250 VOLTS NON LOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN NEC 406-12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

COORDINATE FINAL LOCATION OF ALL RECEPTACLES IN IDF/SMDFS WITH TECHNOLOGY AND DISTRICT REPRESENTATIVE. REFER TO DETAIL FOR MOUNTING RECEPTACLES FOR RACKS.

REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.

POWER GENERAL NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR HAND DRYER MOUNTING HEIGHT AND FINAL LOCATION.
2. COORDINATE EXACT LOCATION AND ELEVATION OF RECEPTACLES AND SWITCHES WITH ARCHITECTURAL DRAWINGS PRIOR TO ELECTRICAL ROUGH-IN.
3. REFER TO MECHANICAL, PLUMBING AND TECHNOLOGY DRAWINGS FOR EXACT LOCATION OF EQUIPMENT AND SCHEDULES. PROVIDE ALL ELECTRICAL DISCONNECTS/ CONTROLLERS, BRANCH CIRCUITS, CIRCUIT BREAKERS AND MAKE FINAL CONNECTIONS REQUIRED TO POWER AND CONTROL EQUIPMENT.
4. REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.
5. CONCEAL CONDUIT SYSTEMS IN FINISHED AREAS. CONDUIT MAY BE EXPOSED IN MECHANICAL AND ELECTRICAL ROOMS AND WHERE OTHERWISE SHOWN OR INDICATED ONLY. RUN THE CONDUIT PARALLEL AND PERPENDICULAR TO THE STRUCTURAL FEATURES OF THE BUILDING IN THE MOST DIRECT, NEAT AND WORKMANLIKE MANNER.


CLASSROOM A235
CLASSROOM A233
CLASSROOM A231
CLASSROOM A229
CLASSROOM A225
CLASSROOM A224
CLASSROOM A218
CLASSROOM A219
CLASSROOM A213
CLASSROOM A209
CLASSROOM A207
CLASSROOM A203
STOR A238
PLC A237
STOR A234
SCI PREP A236
SCI PREP A210
STOR A205
STOR A200
PLC A201
STOR A214
STOR A223
SCIENCE A208
SCIENCE A215
CORRIDOR A200C
CORRIDOR A200B
STAIR 1 S1
STAIR 2 S2
GIRLS A227
BOYS A226
STAFF A222
CUST A220
GIRLS 4385
BOYS 4382
PLC A221
AHU-13
AHU-14
AHU-12
ERU-2
OAU-5
MECH A202
SOUND AMPLIFIER
PROJECTOR
DMS-3 (WALL MOUNTED)
CVB-13-1 (ABOVE CEILING)
CVB-13-2 (ABOVE CEILING)
CVB-13-3 (ABOVE CEILING)
CVB-13-4 (ABOVE CEILING)
CVB-13-5 (ABOVE CEILING)
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CVB-13-7 (ABOVE CEILING)
CVB-13-8 (ABOVE CEILING)
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CVB-12-5 (ABOVE CEILING)
CVB-12-6 (ABOVE CEILING)
CVB-12-7 (ABOVE CEILING)
EF-17 (ABOVE CEILING)
EF-18 (ABOVE CEILING)
ROUTE TO CEILING
ROUTE TO ABOVE CEILING
ROUTE TO ABOVE CEILING
STUB UP IN CASEWORK
ROUTE CIRCUIT VIA SENSOR IN ELEC A204
ROUTE CIRCUIT VIA SENSOR IN ELEC A212
ECP-1
LCP-1
SVB-1
SVB-2
SVB-3
ELEC A204
ELEC A212
2TLA1
2LSLA
2TLSLA
2LSHA
2EQLA
2TEQLA
2EQHA
FIRE ALARM BOOSTER PANEL
IDF A232
CONDENSATE PUMP
EF-6
2LA1-119
EF-5
2LA1-117
EF-4
2LA1-115
2LA1-123
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ELECTRICAL KEYED NOTES

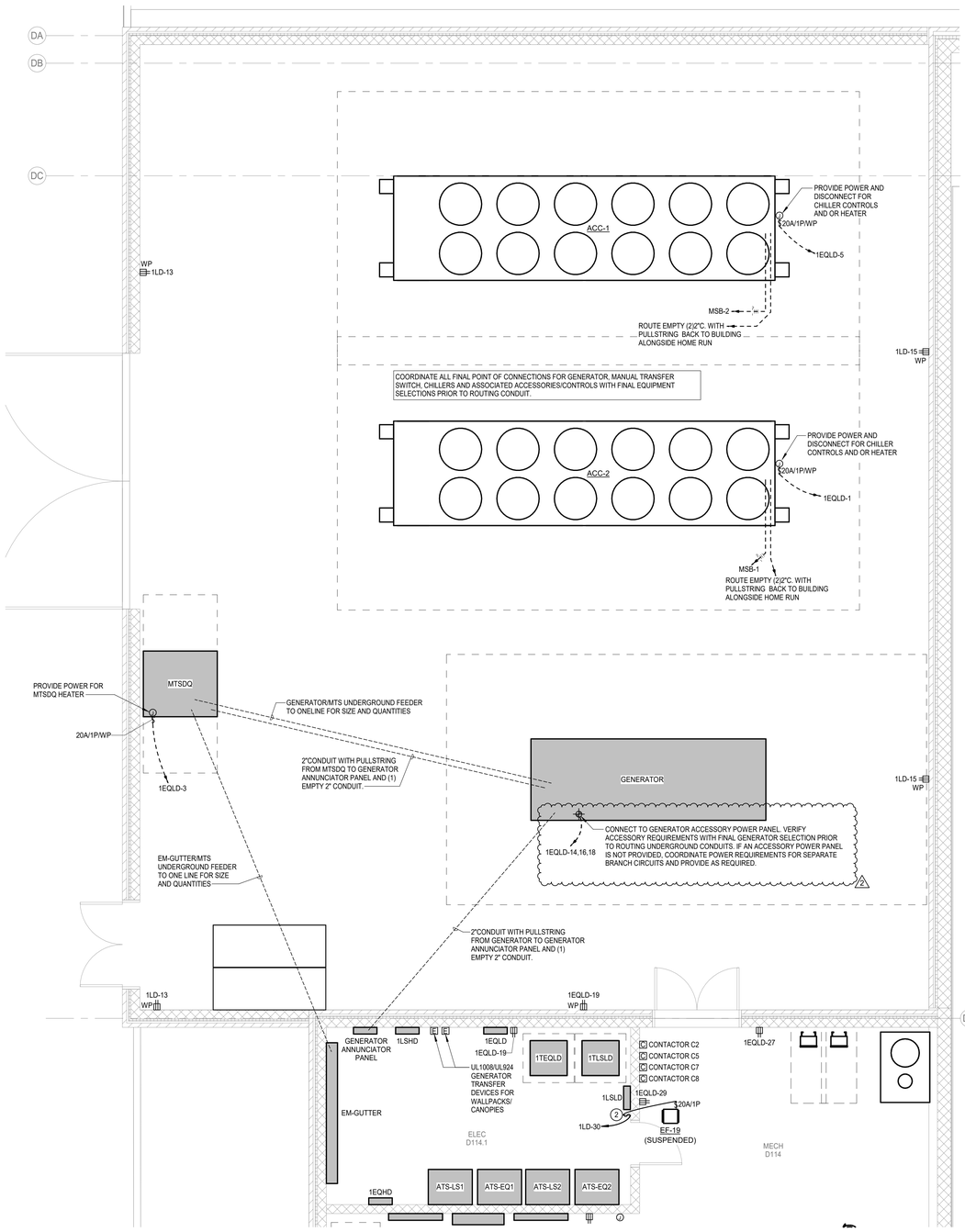
1	PROVIDE CONNECTION TO BMCS PANEL(S). DIVISION 26 TO MAKE FINAL CONNECTION. COORDINATE FINAL LOCATION AND POWER REQUIREMENTS WITH DIVISION 23 PRIOR TO ROUGH-IN AND INSTALLATION.
2	EXHAUST FAN LINE VOLTAGE THERMOSTAT(120V) FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26. MAKE ALL FINAL CONNECTIONS.

ALL 15 AND 20 AMPERES, 125 AND 250 VOLTS NON LOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN NEC 406-12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.

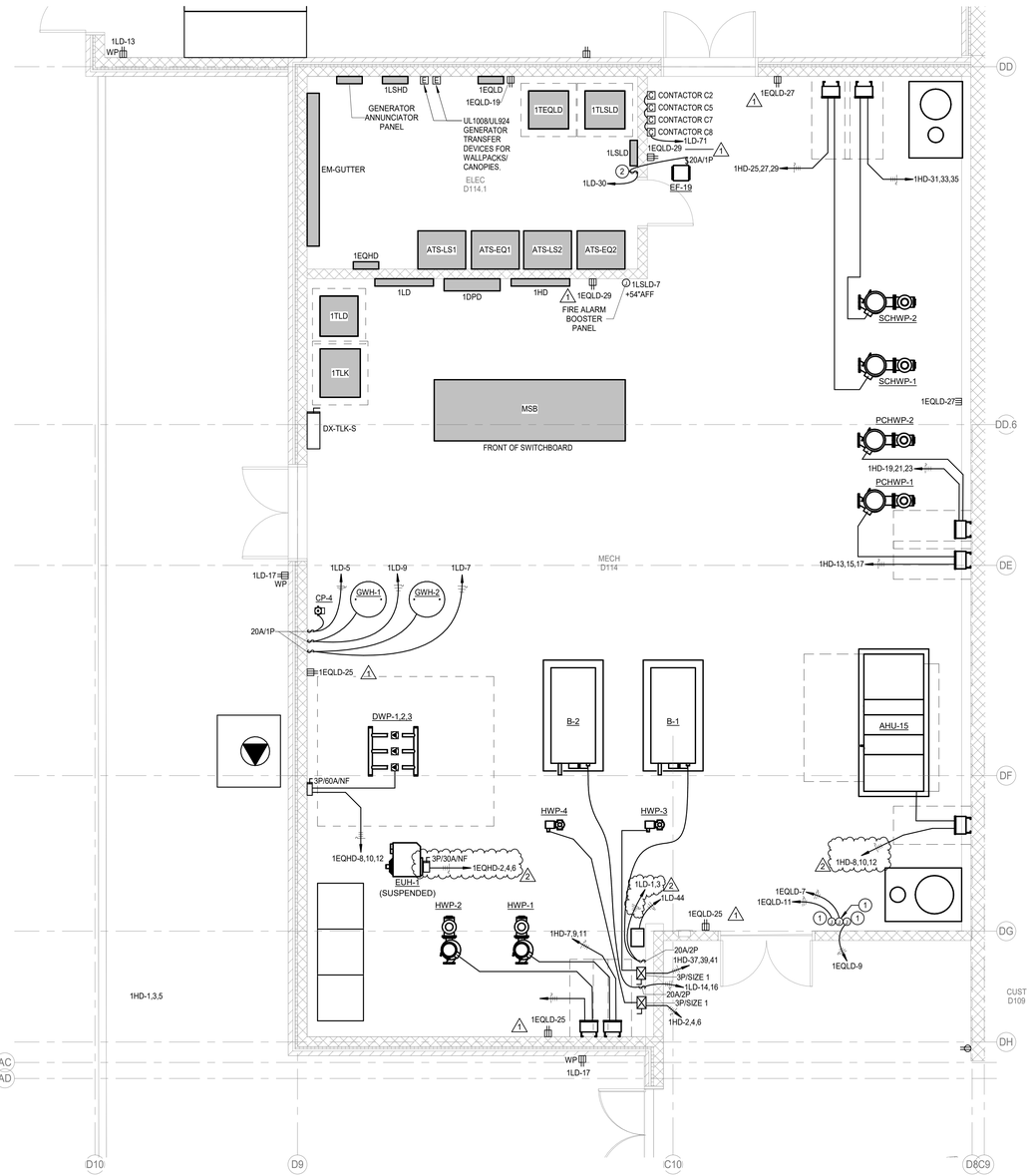
POWER GENERAL NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR HAND DRYER MOUNTING HEIGHT AND FINAL LOCATION.
2. COORDINATE EXACT LOCATION AND ELEVATION OF RECEPTACLES AND SWITCHES WITH ARCHITECTURAL DRAWINGS PRIOR TO ELECTRICAL ROUGH-IN.
3. REFER TO MECHANICAL, PLUMBING AND TECHNOLOGY DRAWINGS FOR EXACT LOCATION OF EQUIPMENT AND SCHEDULES. PROVIDE ALL ELECTRICAL DISCONNECTS/ CONTROLLERS, BRANCH CIRCUITS, CIRCUIT BREAKERS AND MAKE FINAL CONNECTIONS REQUIRED TO POWER AND CONTROL EQUIPMENT.
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5. CONCEAL CONDUIT SYSTEMS IN FINISHED AREAS. CONDUIT MAY BE EXPOSED IN MECHANICAL AND ELECTRICAL ROOMS AND WHERE OTHERWISE SHOWN OR INDICATED ONLY. RUN THE CONDUIT PARALLEL AND PERPENDICULAR TO THE STRUCTURAL FEATURES OF THE BUILDING IN THE MOST DIRECT, NEAT AND WORKMANLIKE MANNER.



2 ELECTRICAL POWER ENLARGED PLAN - SERVICE YARD

Scale: 1/4" = 1'-0"



1 ELECTRICAL POWER ENLARGED PLAN - CENTRAL PLANT

Scale: 1/4" = 1'-0"

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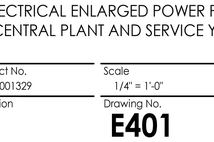
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Project No: 2550-01131-00

Notes



KEY PLAN

PROJECT NORTH

2	ADDENDUM #4			2024.03.11
1	ADDENDUM #1			2024.02.13
Revision		By	Appd	YYYY.MM.DD
Issue for Permit and Proposal				2024.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal



Client/Project Logo

Crosby Independent School District

Client/Project

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Crosby Sixth Grade Campus

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Title

ELECTRICAL ENLARGED POWER PLAN - CENTRAL PLANT AND SERVICE YARD

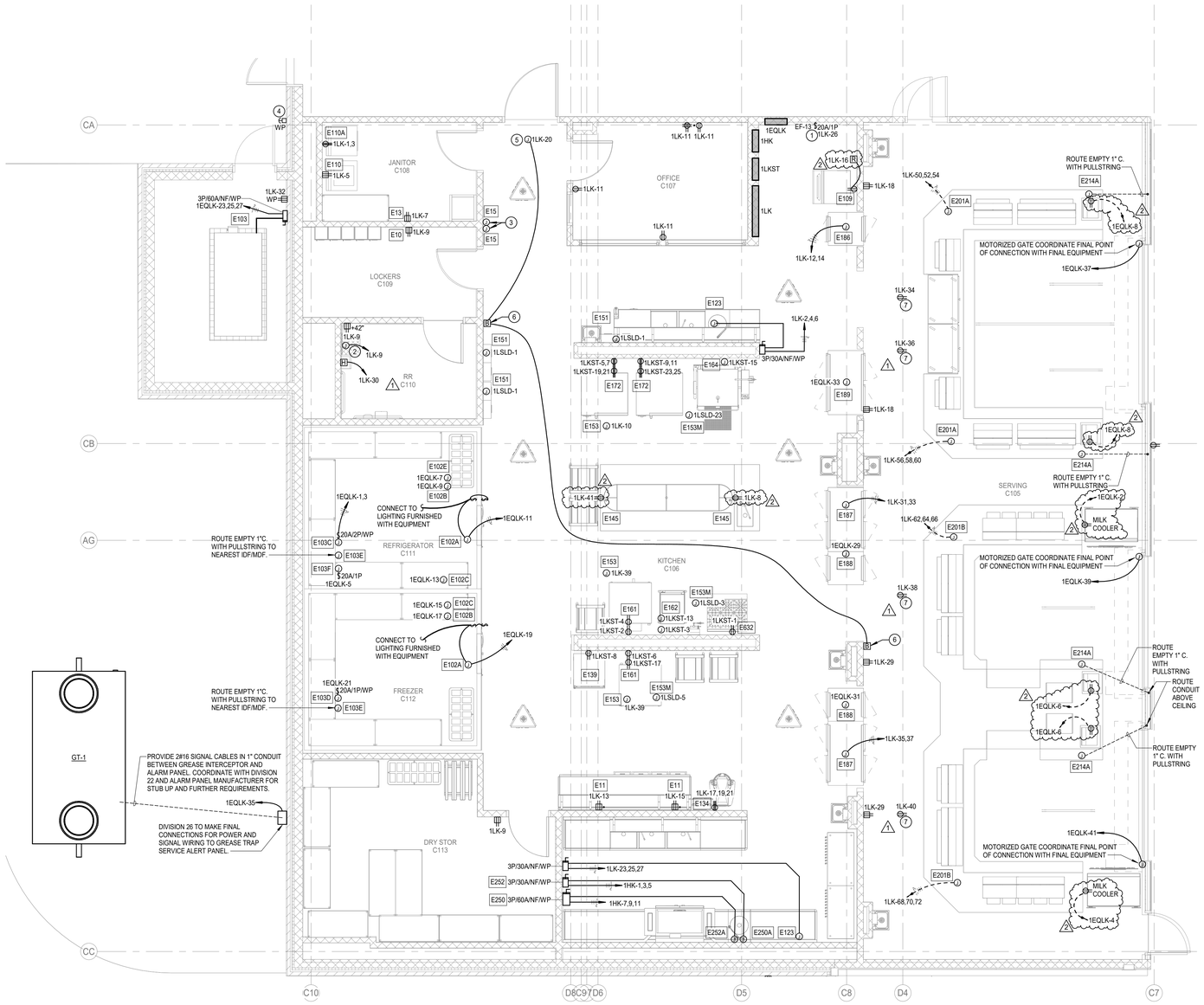
Project No. 214001329	Scale 1/4" = 1'-0"
Revision 2	Drawing No. E401

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ORIGINAL SHEET - ARCH E1

FOOD SERVICE ELECTRICAL SCHEDULE								
COORDINATE ALL REQUIREMENTS WITH FINAL SELECTIONS PRIOR TO ROUGH-IN								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC
E153	JB	10.0A	120	1	HOOD LIGHTS	CLG	DFA	BTC
E153M	JB	10.0A	120	1	HEAT SENSOR	CLG	DFA	BTC
E161	(2)DR	6.0A EA.	120	1	CONVECTION OVEN	WALL	24"/48"	SHUNT TRIP BREAKER
E162	(2) JB	4.0A EA.	120	1	CONVECTION STEAMER	WALL	24" / 60"	BTC: SHUNT TRIP BREAKER
E164	DR	1.4A	120	1	TILT BRAISING PAN	WALL	24"	SHUNT TRIP BREAKER
E172	(2)SR	0.9kW EA.	208	1	COMBI OVEN	WALL	24"/48"	SHUNT TRIP BREAKER
E186	JB	7.8A	120/208	1	HEATED CABINET	WALL	96"	BTC; MOUNT ON KITCHEN SIDE-OMIT PLUG, UNIT TO BE HARDWIRED
E187	JB	15.5A	120/208	1	HEATED CABINET	WALL	96"	BTC; MOUNT ON KITCHEN SIDE
E188	JB	7.2A	120	1	REFRIGERATOR	WALL	96"	BTC; MOUNT ON KITCHEN SIDE-OMIT PLUG, UNIT TO BE HARDWIRED
E189	JB	8.6A	120	1	REFRIGERATOR	WALL	96"	BTC; MOUNT ON KITCHEN SIDE-OMIT PLUG, UNIT TO BE HARDWIRED
E201A	CS	60A	120/208	3	LOAD CENTER	FLOOR	6"	BTC
E201B	CS	60A	120/208	3	LOAD CENTER	FLOOR	6"	BTC
E214A	CS	---	---	---	POS	FLOOR	6"	BTC; CONDUIT W/DATA LINE TO RUN TO MANAGER'S OFFICE OR IDF ROOM-VERIFY
E250	JB/DS	24.5A	480	3	DISHMACHINE MOTORS & TANK HEAT	WALL	54"	BTC; INTERCONNECT TO E250A
E250A	JB	---	---	---	DISHMACHINE	WALL	68"	BTC; INTERCONNECT FROM E250
E252	JB/DS	27.2A	480	3	DISHMACHINE CONTROLS & BOOSTER HEATER	WALL	54"	BTC; INTERCONNECT TO E252A
E252A	JB	---	---	---	BOOSTER HEATER	WALL	24"	BTC; INTERCONNECT FROM E252
E632	DR	4.0A	120	1	6 BURNER RANGE	WALL	24"	SHUNT TRIP BREAKER

FOOD SERVICE ELECTRICAL SCHEDULE								
COORDINATE ALL REQUIREMENTS WITH FINAL SELECTIONS PRIOR TO ROUGH-IN								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E10	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	24"	---
E11	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	47"	MOUNT HORIZONTAL
E13	WPR	16.0A	120	1	CONVENIENCE OUTLET	WALL	48"	---
E15	JB	---	---	--	REMOTE FIRE PULL	WALL	54"	BTC; RECESSED JB - EXTEND TO FIRE SYSTEM FOR HOOD
E102A	JB	16.0A	120	1	DOOR HEATER/LIGHTS	CLG	DFA	BTC
E102B	JB	5.0A	120	1	TEMP. ALARM	CLG	DFA	BTC
E102C	JB	5.0A	120	1	PRESSURE RELIEF PORT	CLG	DFA	BTC
E102E	JB	10.0A	120	1	PANIC ALARM BUTTON	CLG	DFA	BTC; INTERCONNECT TO STROBE LIGHT/HORN ABOVE FREEZER DOOR AND IN CAFETORIUM
E103	JB	33.3A	208	3	REFRIGERATION SYSTEM	VERIFY	VERIFY	BTC: WEATHERPROOF DISCONNECT SWITCH
E103C	JB	11.9A	208	1	FREEZER COIL	CLG	DFA	BTC
E103D	JB	2.0A	120	1	COOLER COIL	CLG	DFA	BTC
E103E	JB	---	---	---	DATA CONNECTION	CLG	DFA	BTC; RUN TO NEAREST IDF / MDF ROOM
E103F	JB	16.0A	120	1	DRAIN LINE HEATER	CLG	DFA	BTC; DEDICATED CIRCUIT
E109	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E110	DR	16.0A	120	1	CLOTHES WASHER	WALL	48"	---
E110A	SR	30.0A	208	1	CLOTHES DRYER	WALL	48"	VERIFY NEMA PLUG RECEPTACLE
E123	JB	3.0HP	208	3	DISPOSER	WALL	24"	BTC - CONNECT THRU C.P. TO DISPOSER
E134	SR	5.6A	208	3	40 QT MIXER	WALL	54"	---
E139	SR	15.0A	120	1	INSUL. MOBILE PROOFER	WALL	47"	---
E145	DCR	16.0A	120	1	TABLE RECEPTACLE	CLG	84"	TWISTLOCK PLUG & RECEPTACLE



1 **ELECTRICAL POWER ENLARGED PLAN - KITCHEN**
Scale: 1/4" = 1'-0"

POWER GENERAL NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR HAND DRYER MOUNTING HEIGHT AND FINAL LOCATION.
2. COORDINATE EXACT LOCATION AND ELEVATION OF RECEPTACLES AND SWITCHES WITH ARCHITECTURAL DRAWINGS PRIOR TO ELECTRICAL ROUGH-IN.
3. REFER TO MECHANICAL, PLUMBING AND TECHNOLOGY DRAWINGS FOR EXACT LOCATION OF EQUIPMENT AND SCHEDULES. PROVIDE ALL ELECTRICAL DISCONNECTS/ CONTROLLERS, BRANCH CIRCUITS, CIRCUIT BREAKERS AND MAKE FINAL CONNECTIONS REQUIRED TO POWER AND CONTROL EQUIPMENT.
4. REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.
5. CONCEAL CONDUIT SYSTEMS IN FINISHED AREAS. CONDUIT MAY BE EXPOSED IN MECHANICAL AND ELECTRICAL ROOMS AND WHERE OTHERWISE SHOWN OR INDICATED ONLY. RUN THE CONDUIT PARALLEL AND PERPENDICULAR TO THE STRUCTURAL FEATURES OF THE BUILDING IN THE MOST DIRECT, NEAT AND WORKMANLIKE MANNER.

ALL 15 AND 20 AMPERES, 125 AND 250 VOLTS NON LOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN NEC 406-12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.

FOOD ESTABLISHMENT GENERAL NOTES:
1. FOOD SERVICE EQUIPMENT INSTALLATION SHALL BE IN COMPLIANCE WITH APPLICABLE BUILDING AND HEALTH CODES.
2. ALL ELECTRICAL EQUIPMENTS AND DEVICES WITHIN FOOD PREPARATION AND WAREWASH AREAS SHALL BE WEATHERPROOF OR PROVIDED WITH STAINLESS STEEL COVERS/TOPS INCLUDING ELECTRICAL PANELBOARDS.
3. LIGHTING LEVELS SHALL BE A MINIMUM 10 FOOT CANDLES 30-INCHES ABOVE FLOOR, IN WALK-IN REFRIGERATION UNITS AND DRY FOOD STORAGE.
4. LIGHTING LEVELS SHALL BE A MINIMUM 20 FOOT CANDLES AT:
   A. A SURFACE WHERE FOOD IS PROVIDED FOR CONSUMER SELF-SERVICE OR WHERE FRESH PRODUCE OR PACKAGED FOODS ARE SOLD OR OFFERED FOR CONSUMPTION.
   B. INSIDE EQUIPMENT SUCH AS REACH-IN AND UNDER-COUNTER REFRIGERATOR.
   C. 30-INCHES ABOVE FLOOR IN AREAS USED FOR HANDWASHING, WAREWASHING, EQUIPMENT AND UTENSIL STORAGE AND IN TOILET ROOMS.
5. LIGHTING LEVELS SHALL BE A MINIMUM 50 FOOT CANDLES AT ALL SURFACES OF FOOD PREPARATION AND COOKING.
6. CONTRACTOR TO SEAL ALL PENETRATIONS THRU WALK-IN COOLER / FREEZER.

PROVIDE LISTED CLASS A GFCI PROTECTION FOR PERSONNEL FOR
A. ALL SINGLE-PHASE BRANCH RECEPTACLES RATED 150 V TO GROUND OR LESS, 50A OR LESS.
B. ALL THREE-PHASE BRANCH RECEPTACLES RATED 150 V TO GROUND OR LESS, 100 A OR LESS LOCATED IN KITCHEN AND ALL AREAS WITH PERMANENT PROVISIONS FOR FOOD PREPARATION, COOKING, AND FOOD SERVING.

ALL EQUIPMENT LOCATED UNDER HOOD IN KITCHEN AND PREPARATION AREAS SHALL BE SHUT DOWN DURING FIRE PROVIDE SHUNT-TRIP BREAKERS OR CONTACTORS TO PROVIDE SHUNT-TRIP CAPABILITY AND GFCI PROTECTION FOR ALL SINGLE/THREE PHASE EQUIPMENT UNDER HOOD IN KITCHEN AND FOOD PREPARATION AREAS, INCLUDING HOOD SUPPLY FANS. PROVIDE FINAL CONNECTION BETWEEN FIRE SUPPRESSION SYSTEM AND COILS. REFER TO HOOD DRAWINGS/DETAILS SHEETS FOR FINAL REQUIREMENTS.

ELECTRICAL KEYED NOTES

1	EXHAUST FAN LINE VOLTAGE THERMOSTAT(120V) FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26. MAKE ALL FINAL CONNECTIONS.
2	DIVISION 26 TO MAKE FINAL CONNECTION TO AUTOMATIC LAVATORY FAUCET VIA LOW VOLTAGE TRANSFORMER.
3	ROUTE EMPTY 1"C. WITH PULLSTRING TO FIRE SYSTEM FOR HOOD.
4	PROVIDE EDWARDS #852 WEATHERPROOF PUSHBUTTON. PROVIDE ALL WIRING AND CONNECTIONS FOR PUSH BUTTON TO ACTIVATE KITCHEN BUZZER.
5	LOCATED ABOVE CEILING WITH EDWARDS #593 MOUNTING PLATE.
6	PROVIDE EDWARDS #340-G5 BUZZER MOUNTED 12" BELOW FINISHED CEILING.
7	LOCATE DUPLEX IN CEILING.

2 VERIFY THE NEMA CONFIGURATION OF ALL PLUGS WITH FINAL SELECTED EQUIPMENT PRIOR TO ROUGH-IN.

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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Registration: F-4111
Project No: 2550-01131-00

Notes

D C B A

KEY PLAN

PROJECT NORTH

2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13
Revision		By	Appd	YYYY.MM.DD
Issue for Permit and Proposal				2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal



Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ELECTRICAL ENLARGED POWER PLAN - KITCHEN

Project No.	Scale
214001329	1/4" = 1'-0"
Revision	Drawing No.
2	E405

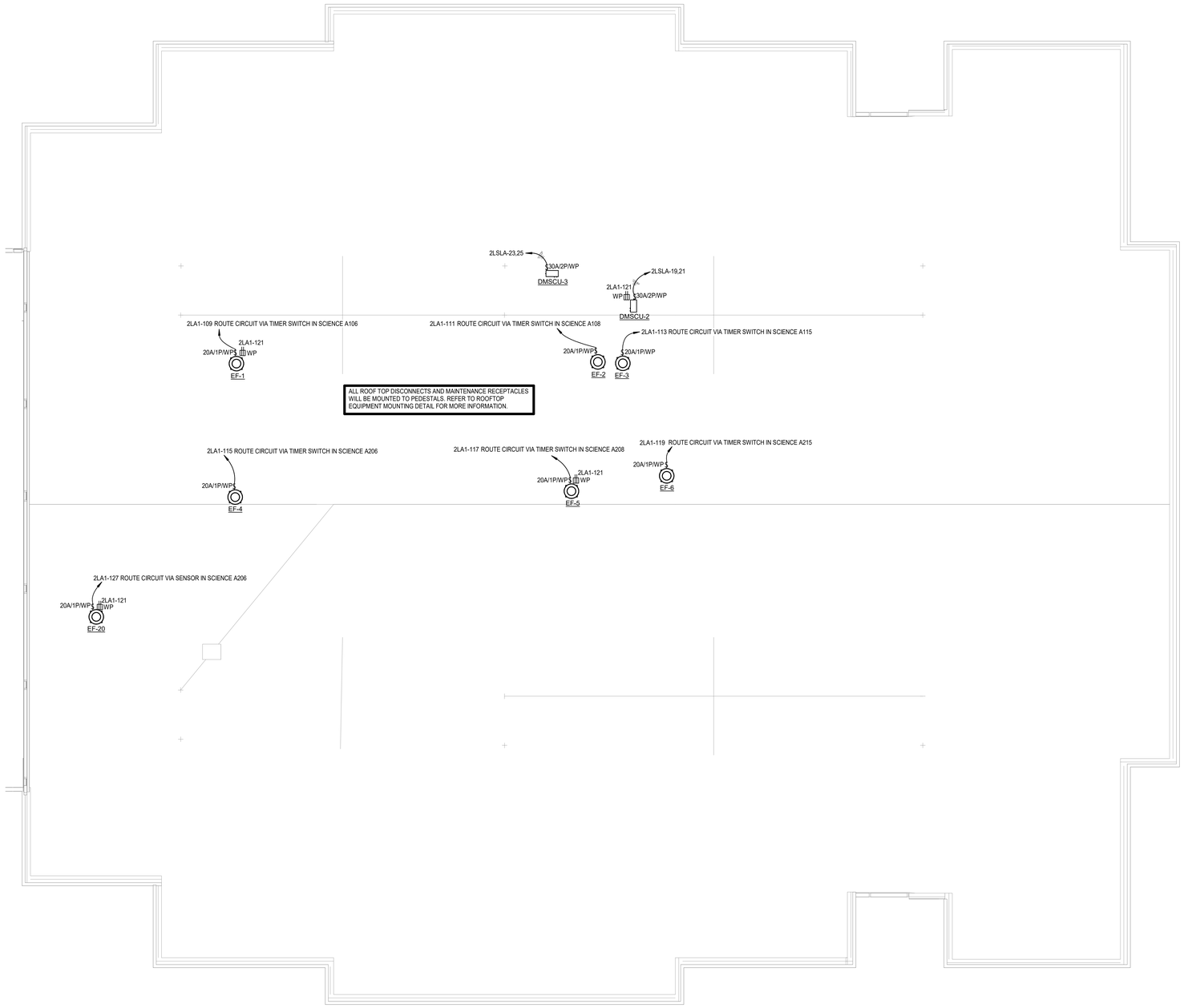
3/17/2026 9:44:05 AM
ORIGINAL SHEET - ARCH E1

ALL 15 AND 20 AMPERES, 125 AND 250 VOLTS NON LOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN NEC 406-12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

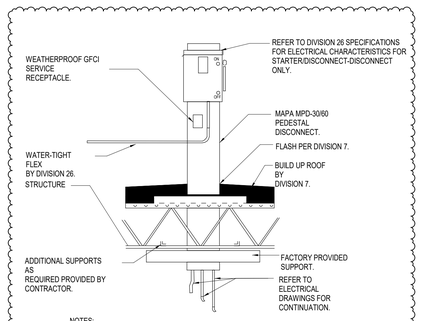
REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.

POWER GENERAL NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR HAND DRYER MOUNTING HEIGHT AND FINAL LOCATION.
2. COORDINATE EXACT LOCATION AND ELEVATION OF RECEPTACLES AND SWITCHES WITH ARCHITECTURAL DRAWINGS PRIOR TO ELECTRICAL ROUGH-IN.
3. REFER TO MECHANICAL, PLUMBING AND TECHNOLOGY DRAWINGS FOR EXACT LOCATION OF EQUIPMENT AND SCHEDULES. PROVIDE ALL ELECTRICAL DISCONNECTS/ CONTROLLERS, BRANCH CIRCUITS, CIRCUIT BREAKERS AND MAKE FINAL CONNECTIONS REQUIRED TO POWER AND CONTROL EQUIPMENT.
4. REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.
5. CONCEAL CONDUIT SYSTEMS IN FINISHED AREAS. CONDUIT MAY BE EXPOSED IN MECHANICAL AND ELECTRICAL ROOMS AND WHERE OTHERWISE SHOWN OR INDICATED ONLY. RUN THE CONDUIT PARALLEL AND PERPENDICULAR TO THE STRUCTURAL FEATURES OF THE BUILDING IN THE MOST DIRECT, NEAT AND WORKMANLIKE MANNER.



1 **ELECTRICAL ROOF PLAN - AREA A**
Scale: 1/8" = 1'-0"



NOTES:
1. WATER TIGHT FLEX CONDUIT SHALL NOT RESTRICT FAN FROM ROTATING ON HINGE SUB-BASE FOR SERVICE TO DAMPERS AND DUCT CONNECTION. REFER TO DIVISION 26.

2 **ROOFTOP EQUIPMENT**
Scale: NOT TO SCALE

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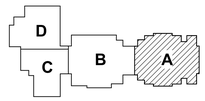
Consultant

Salas O'Brien

salasobrien.com 281-664-1900
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064

Registration: F-4111
Project No: 2550-01131-00

Notes



KEY PLAN

PROJECT NORTH

		By	Appd	
2	ADDENDUM #4			2026.03.11
Revision				YYYY.MM.DD
Issue for Permit and Proposal				2026.01.26
Issued				YYYY.MM.DD

Permit/Seal



03-11-2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ELECTRICAL ROOF PLAN - AREA A

Project No. 214001329
Scale As indicated
Revision 2
Drawing No. **E501A**

3/17/2026 9:54:01 AM

ORIGINAL SHEET - ARCH E1

ALL 15 AND 20 AMPERES, 125 AND 250 VOLTS NON LOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN NEC 406-12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

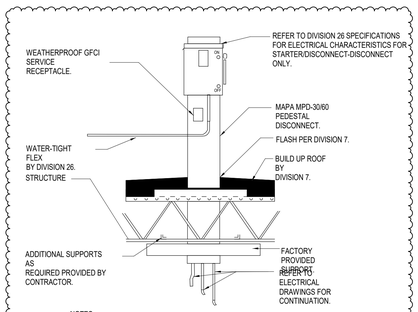
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1 **ELECTRICAL ROOF PLAN - AREA B**
Scale: 1/8" = 1'-0"



NOTES:
1. WATER TIGHT FLEX CONDUIT SHALL NOT RESTRICT FAN FROM ROTATING ON HINGE SUB-BASE FOR SERVICE TO DAMPERS AND DUCT CONNECTION. REFER TO DIVISION 26.

2 **ROOFTOP EQUIPMENT**
Scale: N.T.S.

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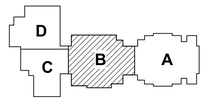
Consultant

Salas O'Brien

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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064

Registration: F-4111
Project No: 2550-01131-00

Notes

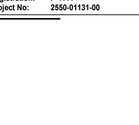


KEY PLAN

PROJECT NORTH

2 ADDENDUM #4			2026.03.11
Revision	By	Appd	YYYY.MM.DD
Issue for Permit and Proposal			2026.01.26
Issued	By	Appd	YYYY.MM.DD

Permit/Seal



03-11-2026

Client/Project Logo

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

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Crosby, TX 77532

Title
ELECTRICAL ROOF PLAN - AREA B

Project No. 214001329	Scale As indicated
Revision 2	Drawing No. E501B

3/10/2026 9:54:03 AM

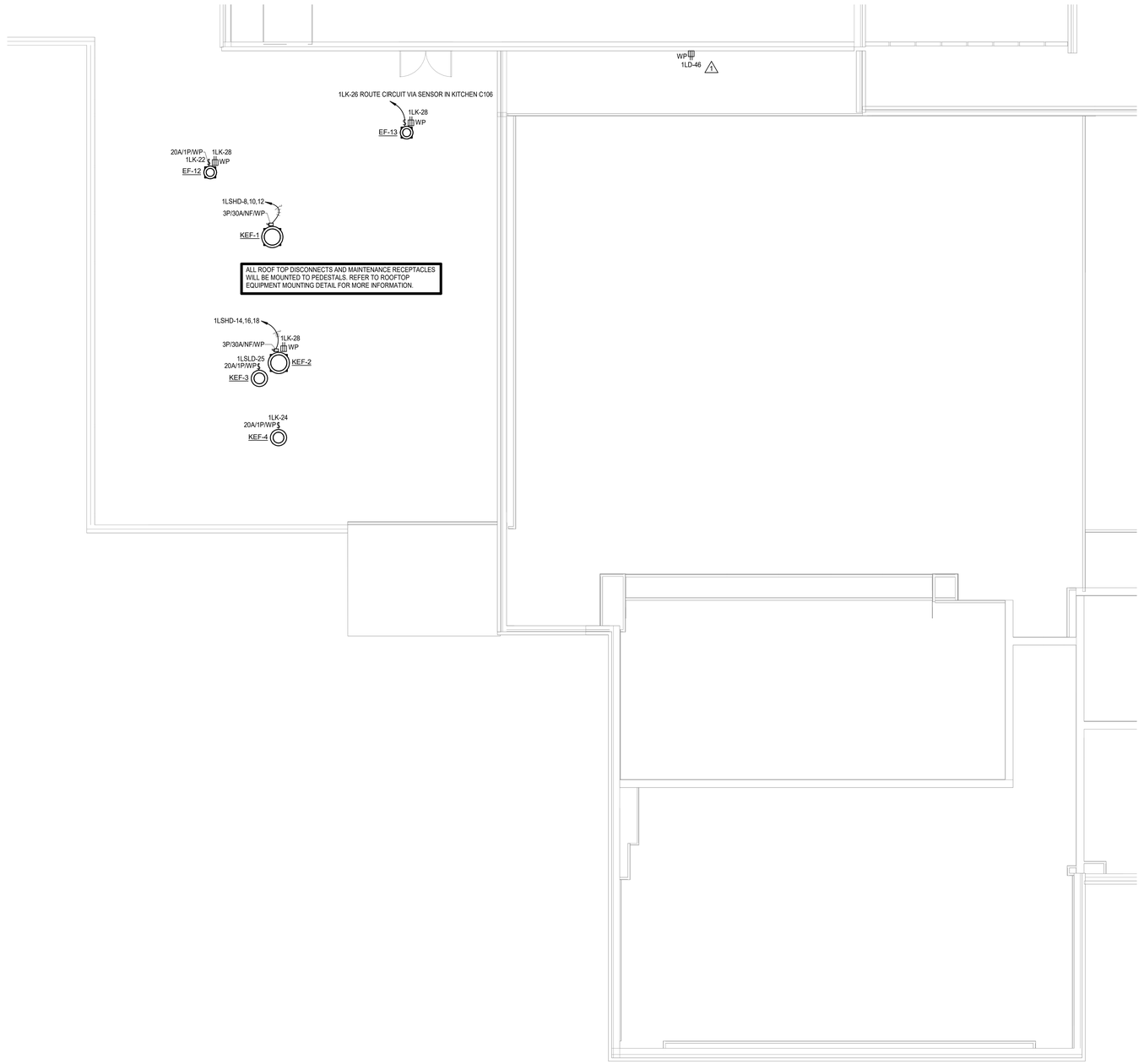
ORIGINAL SHEET - ARCH E1

ALL 15 AND 20 AMPERES, 125 AND 250 VOLTS NON LOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN NEC 406-12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

REFER TO TECHNOLOGY DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER ADDITIONAL REQUIREMENTS TO BE PROVIDED AS SPECIFIED IN DIVISION 26.

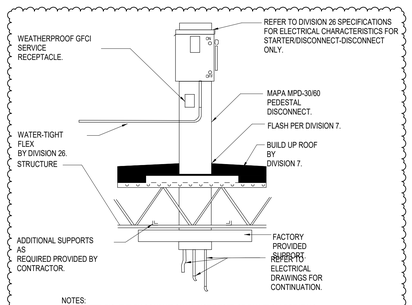
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1 ELECTRICAL ROOF PLAN - AREA C

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



NOTES:
1. WATER TIGHT FLEX CONDUIT SHALL NOT RESTRICT FAN FROM ROTATING ON HINGE SUB-BASE FOR SERVICE TO DAMPERS AND DUCT CONNECTION. REFER TO DIVISION 26.

2 ROOFTOP EQUIPMENT

Scale: N.T.S.

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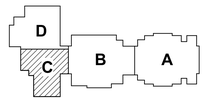
Consultant

Salas O'Brien

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Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064

Registration: F-4111
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Notes



KEY PLAN

PROJECT NORTH

2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13
Revision		By	Appd	YYYY.MM.DD

Issue for Permit and Proposal			2026.01.26
Issued	By	Appd	YYYY.MM.DD

Permit/Seal

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
03-11-2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ELECTRICAL ROOF PLAN - AREA C

Project No.
214001329

Scale
As indicated

Revision
2

Drawing No.
E501C

3/17/2026 9:54:04 AM

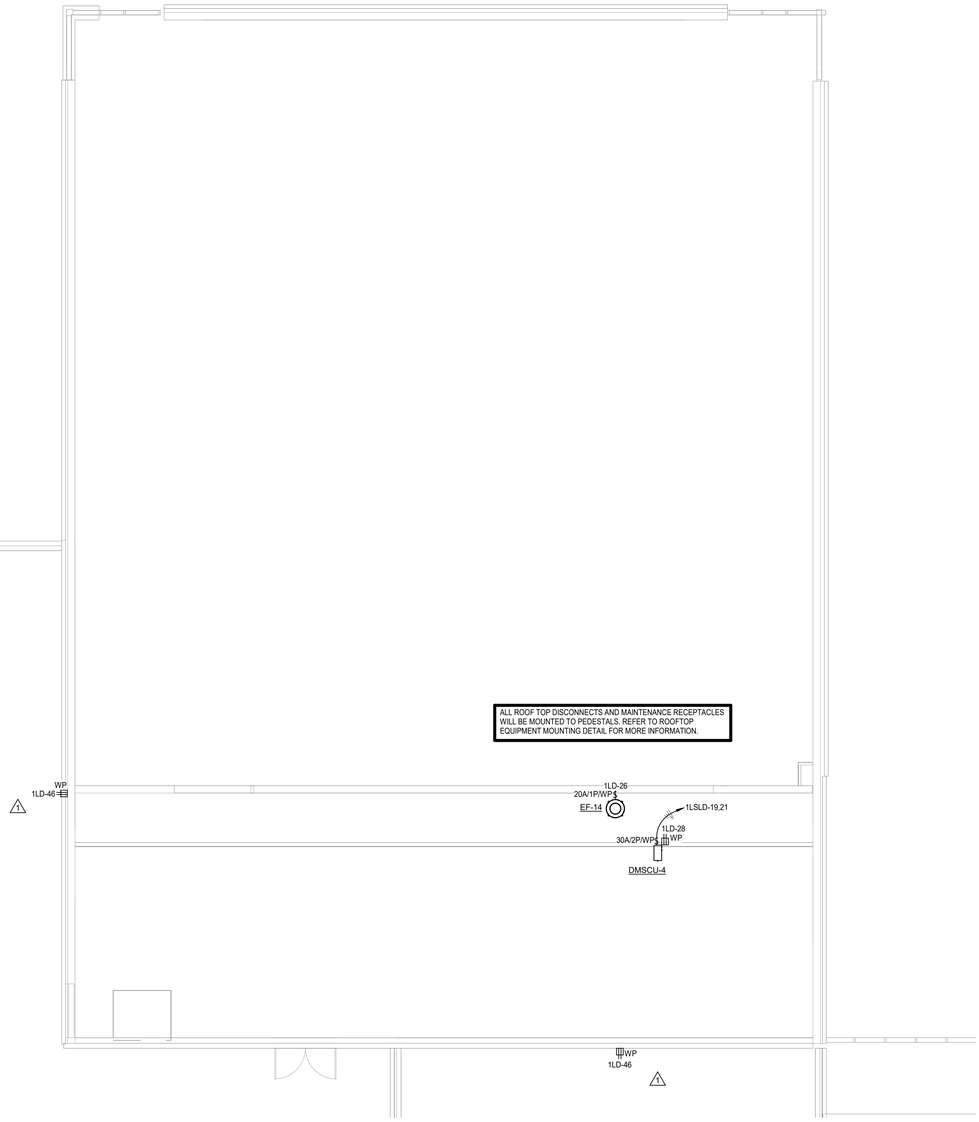
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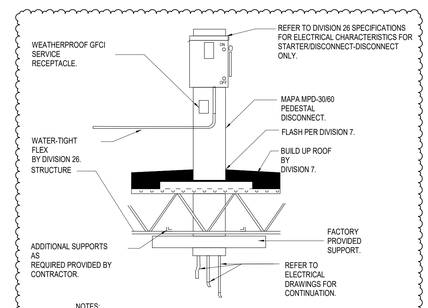
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1 **ELECTRICAL ROOF PLAN - AREA D**
Scale: 1/8" = 1'-0"



NOTES:
1. WATER TIGHT FLEX CONDUIT SHALL NOT RESTRICT FAN FROM ROTATING ON HINGE SUB-BASE FOR SERVICE TO DAMPERS AND DUCT CONNECTION. REFER TO DIVISION 26.

2 **ROOFTOP EQUIPMENT**
Scale: N.T.S.

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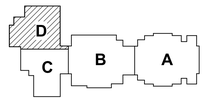
Consultant

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KEY PLAN

PROJECT NORTH

2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13
Revision		By	Appd	YYYY.MM.DD

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Permit/Seal

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
03-11-2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

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Crosby, TX 77532

Title
ELECTRICAL ROOF PLAN - AREA D

Project No.	Scale
214001329	As indicated
Revision	Drawing No.
2	**E501D**

3/17/2026 9:54:05 AM

ORIGINAL SHEET - ARCH E1

TRANSFORMER SCHEDULE

PRIMARY (480V 3PH 3W + GND)			SECONDARY (208V 3PH 4W + GND)		
KVA	WIRE & CONDUIT	CIRCUIT BREAKER	WIRE & CONDUIT	CIRCUIT BREAKER	GROUNDING ELECTRODE CONDUCTOR
30KVA	3#8, 3/4"C, 1#8G	3P-50A	4#2, 1-1/4"C, 1#8G	3P-100A	#8
45KVA	3#4, 1-1/4"C, 1#8G	3P-70A	4#1/0, 2"C, 1#6G	3P-150A	#6
75KVA	3#2, 1-1/4"C, 1#6G	3P-125A	4#250KCMIL, 3"C, 1#2G	3P-250A	#2
112.5KVA	3#2/0, 1-1/2"C, 1#6G	3P-175A	(2) SETS: 4#3/0, 2"C, 1#1/0G	3P-400A	#1/0

'MSB' ELECTRICAL LOAD ANALYSIS

277/480 VOLT, 3 PHASE, 4 WIRE SERVICE

LIGHTING (CONNECTED) X 1.25	(35.17 kVA)
LIGHTING CALCULATED 171,154 SF*1.5W/SF (2023 NEC 220-42)	256.8 kVA
RECEPTACLES (CONNECTED)	(181.4 kVA)
1ST 10kVA AT 100% (2023 NEC 220-47)	10 kVA
REMAINDER AT 50% (2023 NEC 220-47)	85.7 kVA
MISCELLANEOUS	119.9 kVA
HVAC	1229.6 kVA
LARGEST MOTOR 234.3kVA@25% (2023 NEC 430-24)	58.6 kVA
KITCHEN EQUIPMENT @65% (2023 NEC 220-56)	151.5 kVA
PRELIMINARY TOTAL	1866.8
PRELIMINARY 1866800VA/171,154SF	11.2 VA/SF
(2023 NEC 220-86) DEMAND FACTOR CALCULATION	
0-3 VA/SF @100%	3 VA/SF
3-20 VA/SF @ 75%	6.15 VA/SF
TOTAL VA/SF	9.15 VA/SF
ESTIMATED DEMAND LOAD	1566.1 kVA

1566100 VA / (480V√3) = 1883.7 A LOAD
2500A SERVICE REQUESTED

MSB AVAILABLE FAULT CURRENT

PROVIDE LABEL WITH LETTERING ON CONTRASTING BACKGROUND PERMANENTLY AFFIXED TO THE SERVICE DISCONNECT / EQUIPMENT PRIOR TO ENERGIZING THE SERVICE EQUIPMENT. THE LABEL SHALL INCLUDE THE DATE OF INSTALLATION AND THE DATE OF CALCULATION. THE DATE OF CALCULATION SHALL BE THE DATE INDICATED BY THE ENGINEER OF RECORD'S SEAL ON THE CONSTRUCTION DOCUMENT ELECTRICAL ONE-LINE DIAGRAM / RISER DRAWING. REFER TO SPECIFICATIONS.

SERVICE EQUIPMENT AVAILABLE FAULT CURRENT: 23,960 A
DATE OF INSTALLATION: MM/DD/YYYY
DATE OF CALCULATION: 12/17/2025

FEEDER SCHEDULE

AMPERAGE	# SETS	CONDUCTOR (QTY.)/SIZE	GROUND (QTY.)SIZE	CONDUIT
60A	1	(4) #6	#10	1"C
100A	1	(4) #3	#8	1-1/4"C
150A	1	(4) #1/0	#6	2"C
200A	1	(4) #3/0	#6	2"C
200A-U	1	(4) #3/0	#6	2"C AND (1)EMPTY 2"C SPARE
250A	1	(4) #250KCMIL	#4	3"C
250A-F	1	(4) #250KCMIL	#4	3.5"C
250A-U	1	(4) #250KCMIL	#4	3"C AND (1)EMPTY 3"C SPARE
400A	2	(4) #3/0	#2	2"C
500A-U	2	(4) #250KCMIL	#2	3"C AND (1)EMPTY 3"C SPARE
600A-D	2	(3) #350KCMIL	#1/0	3"C
800A-U	3	(4) #300KCMIL	#1/0	3"C AND (1)EMPTY 3"C SPARE
1000A-U	3	(4) #400KCMIL	#2/0	3"C AND (1)EMPTY 3"C SPARE
2500A-S	7	(4) #500KCMIL		4"C
SPDM	1	(4) #6	#6	1"C
SPDVH	1	(4) #2	#2	1-1/4"C

1. ALL CONDUCTORS SHALL BE COPPER
2. CONDUIT SIZE AND QUANTITIES ARE BASED ON 3-PHASE 4-WIRE SYSTEMS. CONDUIT SIZE IS PERMITTED TO BE REDUCED BY THE CONTRACTOR AS ALLOWED BY THE CURRENT VERSION OF THE NEC FOR THE REDUCED NUMBER OF CONDUCTORS THAT ARE TYPICAL FOR EQUIPMENT THAT IS SINGLE PHASE OR EQUIPMENT THAT DOES NOT REQUIRE A NEUTRAL CONDUCTOR.
3. CONDUCTOR SIZES BASED ON NEC-2023 TABLE 310.16 - COPPER 75°
4. GROUND SIZES BASED ON NEC-2023 TABLE 250.122 AND TABLE 250.66 - COPPER.
5. CONDUIT FILL BASED ON NEC-2023 ANNEX C - THHN/THHW CONDUCTOR INSULATION.

-F DENOTES 2-HOUR FIRE RATED FEEDER.
-S DENOTES SERVICE CONDUCTORS
-D DENOTES NO NEUTRAL CONDUCTORS.

GENERATOR ELECTRICAL LOAD ANALYSIS

277/480 VOLT, 3 PHASE, 4 WIRE SERVICE

LIGHTING (CONNECTED) X 1.25	35.5 kVA
RECEPTACLES (CONNECTED)	11.2 kVA
MISCELLANEOUS	49.7 kVA
ELEVATOR	54 kVA
HVAC	17 kVA
LARGEST MOTOR 33.3kVA@25% (2023 NEC 430-24)	8.3 kVA
KITCHEN EQUIPMENT @65% (2023 NEC 220-56)	19.7 kVA
TOTAL	194.8 kVA

312.5 kVA GENERATOR SPECIFIED
GENERATOR SIZING IS ALSO INFLUENCED BY THE INRUSH CURRENT OF LARGE MOTORS ON THE GENERATOR DISTRIBUTION SYSTEM.

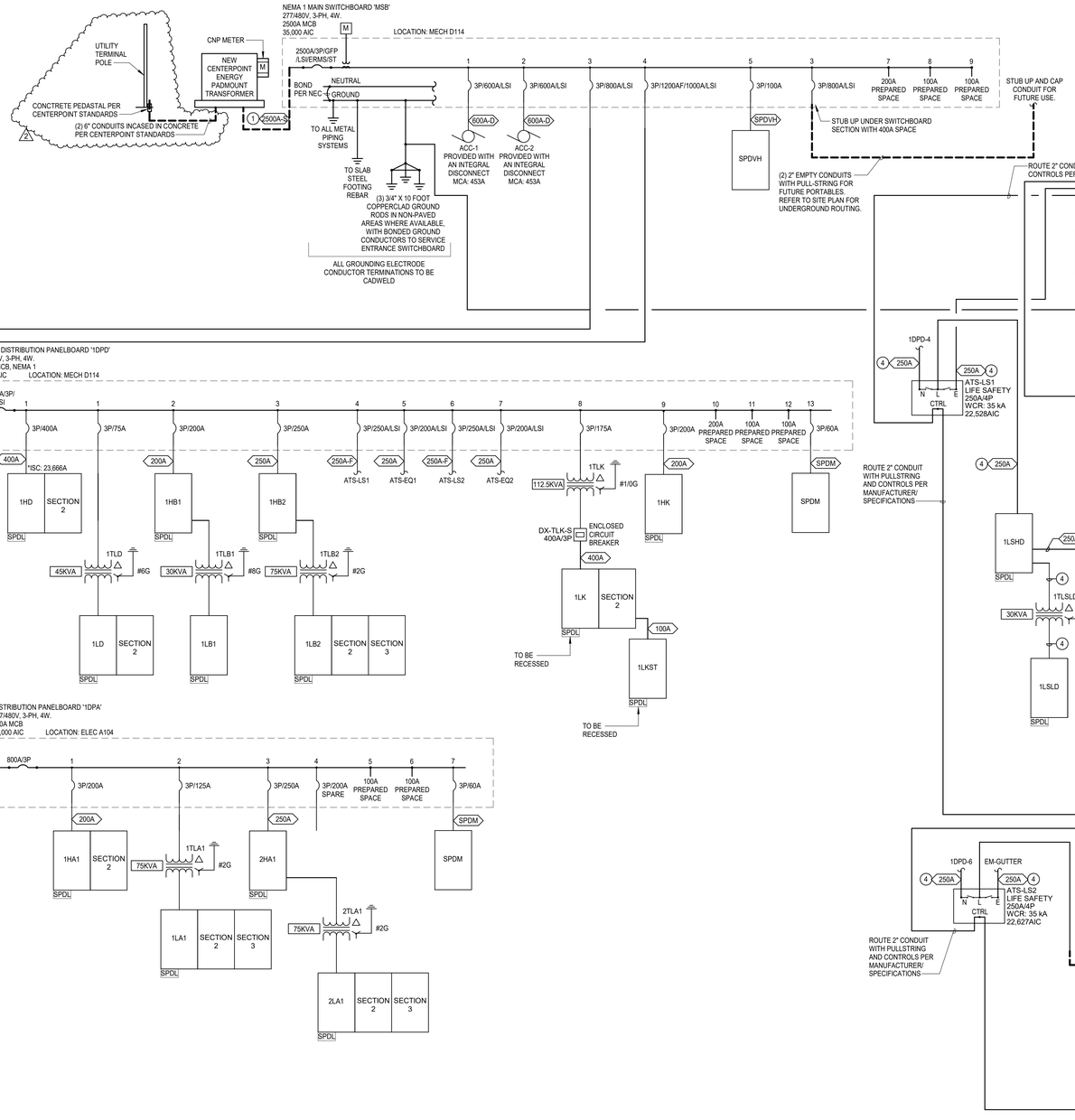
ELECTRICAL KEYED NOTES

1	ROUTE (2) EMPTY 4"CONDUITS WITH PULLSTRING ALONGSIDE FEEDER.
2	ROUTE FEEDER UNDER SLAB. REFER TO 1ST FLOOR COMPOSITE PLAN FOR PROPOSED ROUTING.
3	PROVIDE 2 HOUR FIRE RATED CONDUIT AND CONDUCTOR PAIR. REFER TO FIRE RATED CONDUCTOR MANUFACTURER RECCOMENDATIONS FOR CONDUIT/CONDUCTOR PAIRS AND PROJECT SPECIFICATIONS FOR FURTHER REQUIREMENTS.
4	DO NOT ROUTE CONDUIT ABOVE DROP CEILING OR IN ANY INTERIOR AREA NOT PROTECTED BY THE FIRE SPRINKLER SYSTEM.
6	ROUTE UNDER SLAB. REFER TO SERVICE YARD ENLARGED PLAN FOR PROPOSED ROUTING.

INITIAL UTILITY ELECTRICAL SERVICE COORDINATION HAS BEEN COMPLETED BY SALAS O'BRIEN. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL THE REQUIRED LABOR & MATERIALS THAT ARE NOT INCLUDED IN THE ELECTRICAL UTILITY COMPANY'S SCOPE OF WORK. FINAL UTILITY ELECTRICAL COORDINATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND ANY UNCOORDINATED WORK SHALL BE PROVIDED AT NO EXPENSE TO OWNER.

MAXIMUM ALLOWABLE VOLTAGE DROP

1. TOTAL VOLTAGE DROP FROM THE POINT OF SERVICE TO THE LAST OUTLET OR UTILIZATION EQUIPMENT OF THE SAME VOLTAGE SHALL NOT EXCEED FIVE-PERCENT OF RATED VOLTAGE.
2. TOTAL VOLTAGE DROP FROM THE POINT OF SERVICE TO TRANSFORMERS WITH ADJUSTABLE TAPS, BUCK-BOOST TRANSFORMERS, UNINTERRUPTIBLE POWER SUPPLIES (UPS), OR VOLTAGE REGULATORS SHALL NOT EXCEED FIVE-PERCENT OF RATED VOLTAGE.
3. TOTAL VOLTAGE DROP FROM A SEPARATELY DERIVED SYSTEM, TRANSFORMER WITH ADJUSTABLE TAPS, BUCK-BOOST TRANSFORMER, UNINTERRUPTIBLE POWER SUPPLY (UPS), OR VOLTAGE REGULATOR TO THE LAST OUTLET OR UTILIZATION EQUIPMENT OF THE SAME VOLTAGE SHALL NOT EXCEED FIVE-PERCENT OF RATED VOLTAGE.
4. TOTAL VOLTAGE DROP FROM THE POINT OF SERVICE TO DISTRIBUTION EQUIPMENT OF THE SAME VOLTAGE SHALL NOT EXCEED TWO-PERCENT OF RATED VOLTAGE.
5. BRANCH CIRCUIT VOLTAGE DROP FROM DISTRIBUTION EQUIPMENT TO THE LAST OUTLET OR UTILIZATION EQUIPMENT SHALL NOT EXCEED THREE-PERCENT OF RATED VOLTAGE.
6. PROVIDE THE SAME SIZE BRANCH CIRCUIT CONDUCTORS TO LAST OUTLET ON CIRCUIT UNLESS SPECIFICALLY NOTED OR INDICATED OTHERWISE ON THE DRAWINGS. FOR 20 AMP BRANCH CIRCUITS OPERATING AT 150-VOLTS OR LESS, PROVIDE #10 AWG WIRE WHEN THE FIRST OUTLET IS OVER 75-FEET FROM THE PANELBOARD. FOR BRANCH CIRCUITS OPERATING ABOVE 150-VOLTS TO 600-VOLTS, PROVIDE #10 AWG WIRE WHEN THE FIRST OUTLET IS OVER 150-FEET FROM THE PANELBOARD.



1 **ELECTRICAL ONELINE DIAGRAM**
Scale: N.T.S.

Stantec

Stantec Architecture Inc.
910 Louisiana Street Suite 2600
Houston, TX 77002-4916
Tel: (713) 548-5700 • www.stantec.com

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Registration: F-4111
Project No: 2550-01131-00

Notes

Revision	By	Appd	YYYY.MM.DD
2 ADDENDUM #4			2026.03.11
Issued	By	Appd	YYYY.MM.DD
Issue for Permit and Proposal			2026.01.26

Permit/Seal



Client/Project Logo

Crosby Independent School District

Client/Project

Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title

ELECTRICAL ONE-LINE DIAGRAM

Project No.	Scale
214001329	12" = 1'-0"
Revision	Drawing No.
2	E601

3/17/2026 9:44:07 AM

ORIGINAL SHEET - ARCH E1

Branch Panel: 1EQLD

Location: ELEC D114.1 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10,000
Supply From: 1TEQLD | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 150A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	AC-1 CHILLER HEATER AND CONTROLS	#12	20 1	1.5 / 0.0			1	20 --	SPARE	2	--
	3	MTSDQ HEATER	#12	20 1		1.5 / 0.0		1	20 --	SPARE	4	--
	5	ACC-2 CHILLER HEATER AND CONTROLS	#12	20 1			1.5 / 0.0	1	20 --	SPARE	6	--
	7	BMCS PANEL	#12	20 1	0.5 / 0.0			1	-- --	SPACE	8	--
	9	BMCS PANEL	#12	20 1		0.5 / 0.0		1	-- --	SPACE	10	--
	11	BMCS PANEL	#12	20 1			0.5 / 0.0	1	-- --	SPACE	12	--
	13	BMCS PANEL	#12	20 1	0.5 / 1.0						14	
	15	BMCS PANEL	#12	20 1		0.5 / 1.0		3	60 #6	GENERATOR ACCESSORY POWER PANEL	16	1
	17	ELECTRIC SINKS	#12	20 1			0.5 / 1.0				18	
	19	Receptacles ELEC D114.1	#12	20 1	0.4 / 11.6						20	
	21	Receptacles MECH MEZZANINE D200	#12	20 1		0.4 / 11.5		3	100 1L	1EQLK	22	
	23	Receptacles MECH MEZZANINE D200	#12	20 1			0.4 / 12.4				24	
	25	Receptacles MECH D114	#12	20 1	0.5 / 0.2						26	
	27	Receptacles MECH D114	#12	20 1		0.4 / 0.2		3	30 #10	SPDL	28	
	29	Receptacles Room D114.1, D114	#12	20 1			0.4 / 0.2				30	
				Total Load:	16.1 kVA	15.9 kVA	16.8 kVA					
				Total Amps:	135 A	132 A	140 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Heating	7.9 kVA	100.00%	7.9 kVA		
Kitchen Equipment	19.7 kVA	65.00%	12.8 kVA	**Total Conn. Load:**	48.8 kVA
Miscellaneous	16.3 kVA	100.00%	16.3 kVA	**Total Est. Demand:**	41.9 kVA
Receptacles	4.9 kVA	100.00%	4.9 kVA	**Total Conn. Current:**	135 A
				Total Est. Demand Current:	116 A

Notes:
1 - VERIFY ACCESSORY REQUIREMENTS WITH FINAL GENERATOR SELECTION PRIOR TO ROUTING UNDERGROUND CONDUITS. IF AN ACCESSORY POWER PANEL IS NOT PROVIDED, COORDINATE POWER REQUIREMENTS FOR SEPARATE BRANCH CIRCUITS AND PROVIDE AS REQUIRED. IF A LARGER PANEL IS PROVIDED UPSIZE THE BREAKER AND FEEDER AS REQUIRED.

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE
1L - REFER TO ONELINE

Branch Panel: 1EQHD

Location: ELEC D114.1 | **Volts:** 277/480 Wye | **A.I.C. Rating:** 35,000
Supply From: ATS-EQ1 | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 200A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Lighting	#12	20 1	0.4 / 1.9						2	
--	3	SPARE	--	20 1		0.0 / 1.9		3	20 #12	EUH-1 (5 kW)	4	
--	5	SPARE	--	20 1			0.0 / 1.9				6	
--	7	SPARE	--	20 1	0.0 / 6.3						8	
--	9	SPARE	--	20 1		0.0 / 6.3		3	40 #8	DWP-1,2,3 (3*5 HP)	10	
--	11	SPARE	--	20 1			0.0 / 6.3				12	
--	13	SPARE	--	20 1	0.0 / 3.0						14	
--	15	SPACE	--	-- 1		0.0 / 2.7		3	100 1L	1EQHB	16	
--	17	SPACE	--	-- 1			0.0 / 1.6				18	
--	19	SPACE	--	-- 1	0.0 / 16.1						20	
--	21	SPACE	--	-- 1		0.0 / 15.9		3	70 1L	1TEQLD	22	
--	23	SPACE	--	-- 1			0.0 / 16.8				24	
--	25	SPACE	--	-- 1	0.0 / 0.2						26	
--	27	SPACE	--	-- 1		0.0 / 0.2		3	30 #10	SPDL	28	
--	29	SPACE	--	-- 1			0.0 / 0.2				30	
				Total Load:	27.9 kVA	27.0 kVA	26.8 kVA					
				Total Amps:	101 A	98 A	97 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	5.7 kVA	100.00%	5.7 kVA		
Heating	7.9 kVA	100.00%	7.9 kVA	**Total Conn. Load:**	81.7 kVA
Kitchen Equipment	19.7 kVA	65.00%	12.8 kVA	**Total Est. Demand:**	75.0 kVA
Lighting	0.8 kVA	125.00%	1.0 kVA	**Total Conn. Current:**	98 A
Miscellaneous	40.3 kVA	100.00%	40.3 kVA	**Total Est. Demand Current:**	90 A
Receptacles	7.2 kVA	100.00%	7.2 kVA		

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE
1L - REFER TO THE ONELINE FOR WIRE SIZE

Branch Panel: 1EQLB

Location: MECH B147 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10,000
Supply From: 1TEQLB | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 100A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	REFRIGERATOR	#12	20 1	0.2 / 0.5			1	20 #12	Receptacles MECH B147	2	
	3	Receptacles MECH B147	#12	20 1		0.4 / 0.5		1	20 #12	BMCS PANEL	4	
	5	Receptacles MECH B133	#12	20 1			0.4 / 0.4	1	20 #12	Receptacles MECH B133	6	
	7	BMCS PANEL	#12	20 1	0.5 / 0.5			1	20 #12	BMCS PANEL	8	
	9	ELECTRONIC FAUCETS	#12	20 1		0.5 / 0.5		1	20 #12	Receptacles Room B111, B108	10	
	11	PIV VAULT HEATER	#10	20 1			0.5 / 0.0	1	-- --	SPACE	12	
	13	BMCS PANEL	#12	20 1	0.5 / 0.0			1	-- --	SPACE	14	--
	15	BMCS PANEL	#12	20 1		0.5 / 0.0		1	-- --	SPACE	16	--
--	17	SPARE	--	20 1			0.0 / 0.0	1	-- --	SPACE	18	--
--	19	SPARE	--	20 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 / 0.2						26	
--	27	SPACE	--	-- 1		0.0 / 0.2		3	30 #10	SPDL	28	
--	29	SPACE	--	-- 1			0.0 / 0.2				30	
				Total Load:	2.4 kVA	2.6 kVA	1.4 kVA					
				Total Amps:	21 A	23 A	12 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Miscellaneous	4.0 kVA	100.00%	4.0 kVA		
Receptacles	2.3 kVA	100.00%	2.3 kVA	**Total Conn. Load:**	6.3 kVA
				Total Est. Demand:	6.3 kVA
				Total Conn. Current:	18 A
				Total Est. Demand Current:	18 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE

Branch Panel: 1EQHB

Location: MECH B147 | **Volts:** 277/480 Wye | **A.I.C. Rating:** 18,000
Supply From: 1EQHD | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 100A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Lighting SEC B113	#12	20 1	0.4 / 0.0			1	20 --	SPARE	2	--
--	3	SPACE	--	-- 1		0.0 / 0.0		1	20 --	SPARE	4	--
--	5	SPACE	--	-- 1			0.0 / 0.0	1	20 --	SPARE	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 / 2.4						20	
--	21	SPACE	--	-- 1		0.0 / 2.6		3	50 1L	1TEQLB	22	
--	23	SPACE	--	-- 1			0.0 / 1.4				24	
--	25	SPACE	--	-- 1	0.0 / 0.2						26	
--	27	SPACE	--	-- 1		0.0 / 0.2		3	30 #10	SPDL	28	
--	29	SPACE	--	-- 1			0.0 / 0.2				30	
				Total Load:	3.0 kVA	2.7 kVA	1.6 kVA					
				Total Amps:	11 A	11 A	6 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	0.4 kVA	125.00%	0.5 kVA		
Miscellaneous	4.5 kVA	100.00%	4.5 kVA	**Total Conn. Load:**	7.3 kVA
Receptacles	2.3 kVA	100.00%	2.3 kVA	**Total Est. Demand:**	7.4 kVA
				Total Conn. Current:	9 A
				Total Est. Demand Current:	9 A

Notes:

Abbreviations:
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LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE
1L - REFER TO THE ONELINE FOR WIRE SIZE

Branch Panel: 1EQLA

Location: ELEC A114 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10,000
Supply From: 1TEQLA1 | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 100A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	BMCS PANEL	#12	20 1	0.5 / 0.5			1	20 #12	BMCS PANEL	2	
	3	Receptacles MECH A102	#12	20 1		0.5 / 0.4		1	20 #12	Receptacles MECH A102	4	
	5	FAUCET STAFF A122	#12	20 1			0.1 / 0.2				6	
	7	Receptacles ELEVATOR ELEV	#12	20 1	0.2 / 0.2			2	20 #12	ELEVATOR SUMP PUMP (1 HP)	8	LF
	9	ELEVATOR CAB LIGHTING	#12	20 1		0.0 / 0.0		1	20 #12	ELEVATOR CAB FAN	10	
	11	ELEVATOR MONITORING	#12	20 1			0.2 / 1.0	1	20 #12	ELEVATOR MANAGEMENT SYSTEM	12	
	13	Receptacles ELEC A114	#12	20 1	0.2 / 0.0			1	-- --	SPACE	14	--
	15	Receptacles ELEC A104	#12	20 1		0.2 / 0.0		1	-- --	SPACE	16	--
	17	BMCS PANEL	#12	20 1			0.5 / 0.0	1	-- --	SPACE	18	--
	19	BMCS PANEL	#12	20 1	0.5 / 0.0			1	-- --	SPACE	20	--
--	21	SPARE	--	20 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 / 0.2						26	
--	27	SPARE	--	20 1		0.0 / 0.2		3	30 #10	SPDL	28	
--	29	SPACE	--	-- 1			0.0 / 0.2				30	
				Total Load:	2.2 kVA	1.2 kVA	2.1 kVA					
				Total Amps:	20 A	10 A	19 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	0.4 kVA	100.00%	0.4 kVA		
Miscellaneous	3.6 kVA	100.00%	3.6 kVA	**Total Conn. Load:**	5.6 kVA
Receptacles	1.6 kVA	100.00%	1.6 kVA	**Total Est. Demand:**	5.6 kVA
				Total Conn. Current:	16 A
				Total Est. Demand Current:	16 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE

Branch Panel: 1EQHA

Location: SCIENCE A115 | **Volts:** 277/480 Wye | **A.I.C. Rating:** 18,000
Supply From: ATS-EQ2 | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 200A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Lighting	#12	20 1	0.0 / 18.0						2	
	3	Lighting	#12	20 1		0.1 / 18.0		3	150 1/0	ELEVATOR	4	
--	5	SPARE	--	20 1			0.0 / 18.0				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	SPACE	--	-- 1	0.0 / 2.2						14	
--	15	SPACE	--	-- 1		0.0 / 1.2		3	50 1L	1TEQLA1	16	
--	17	SPACE	--	-- 1			0.0 / 2.1				18	
--	19	SPACE	--	-- 1	0.0 / 1.8						20	
--	21	SPACE	--	-- 1		0.0 / 1.4		3	100 1L	2EQHA	22	
--	23	SPACE	--	-- 1			0.0 / 0.8				24	
--	25	SPACE	--	-- 1	0.0 / 0.2						26	
--	27	SPACE	--	-- 1		0.0 / 0.2		3	30 #10	SPDL	28	
--	29	SPACE	--	-- 1			0.0 / 0.2				30	
				Total Load:	22.2 kVA	20.9 kVA	21.1 kVA					
				Total Amps:	80 A	75 A	76 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	0.4 kVA	100.00%	0.4 kVA		
Lighting	0.4 kVA	125.00%	0.5 kVA	**Total Conn. Load:**	64.3 kVA
Miscellaneous	60.6 kVA	100.00%	60.6 kVA	**Total Est. Demand:**	64.4 kVA
Receptacles	2.9 kVA	100.00%	2.9 kVA	**Total Conn. Current:**	77 A
				Total Est. Demand Current:	77 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE
1L - REFER TO THE ONELINE FOR WIRE SIZE

Stantec

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Registration: F-4111
Project No: 2550-01131-00

Notes

2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13
Revision		By	Appd	YYYY.MM.DD

Issue for Permit and Proposal			2026.01.26
Issued	By	Appd	YYYY.MM.DD

Permit/Seal

STATE OF TEXAS
BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
03-11-2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ELECTRICAL PANEL SCHEDULES

Project No.
214001329

Scale

Revision
2

Drawing No.
E701

3/13/2026 P:54:08 AM

ORIGINAL SHEET - ARCH E1

Branch Panel: 1LSLB

Location: MECH B147 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10,000
Supply From: 1TLSLB | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 100A LSI MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
LO	1	FIRE ALARM BOOSTER PANEL	#12	20 1	0.5 / 0.5			1 20	#12	FIRE ALARM BOOSTER PANEL	2	LO
	3	IDP MDF B123	#12	20 1		0.1 / 1.7		2 30	#10	DMSCU-1	4	
	5	ACP MDF B123	#12	20 1			0.1 / 1.7				6	
LO	7	FACP MDF B123	#12	20 1	0.1 / 0.0			1 20	--	SPARE	8	--
	9	ERRC MDF B123	#12	20 1		0.1 / 0.0		1 20	--	SPARE	10	--
	11	IT RACK MDF B123	#12	20 1			0.4 / 0.0	1 20	--	SPARE	12	--
	13	IT RACK MDF B123	#12	20 1	0.4 / 0.0			1 20	--	SPARE	14	--
	15	IT RAC KReceptacles MDF B123	#12	20 1		0.4 / 0.0		1 20	--	SPARE	16	--
	17	IT RACK Receptacles MDF B123	#12	20 1			0.4 / 0.2	1 30	#10	IT RACK MDF B123	18	
	19	IT RACKReceptacles MDF B123	#12	20 1	0.4 / 0.2			1 30	#10	IT RACK MDF B123	20	
	21	IT RACKReceptacles MDF B123	#12	20 1		0.4 / 0.2		1 30	#10	IT RACK MDF B123	22	
	23	Receptacles MDF B123	#12	20 1			0.2 / 0.0	1 --	--	SPACE	24	--
	25	IT RACK Receptacles MDF B123	#10	30 1	0.2 / 0.2						26	
	27	IT RACK Receptacles MDF B123	#10	30 1		0.2 / 0.2		3 30	#10	SPDL	28	
	29	IT RACK Receptacles MDF B123	#10	30 1			0.2 / 0.2				30	
			Total Load:		2.4 kVA	3.2 kVA	3.2 kVA					
			Total Amps:		20 A	28 A	28 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	3.4 kVA	100.00%	3.4 kVA		
Miscellaneous	2.0 kVA	100.00%	2.0 kVA	**Total Conn. Load:**	8.8 kVA
Receptacles	3.4 kVA	100.00%	3.4 kVA	**Total Est. Demand:**	8.8 kVA
				Total Conn. Current:	24 A
				Total Est. Demand Current:	24 A

Notes:

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE
LSI - PROVIDE WITH ADJUSTABLE TRIP SETTINGS

Branch Panel: 1LSLA

Location: ELEC A114 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10,000
Supply From: 1TLSLA | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 100A LSI MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
LO	1	FIRE ALARM BOOSTER PANEL	#12	20 1	0.5 / 0.0			1 --	--	SPACE	2	--
LO	3	FIRE ALARM BOOSTER PANEL	#12	20 1		0.5 / 0.0		1 --	--	SPACE	4	--
	5	IT RACK IDF A132	#12	20 1			0.4 / 0.0	1 --	--	SPACE	6	--
	7	IT RACK IDF A132	#12	20 1	0.4 / 0.0			1 --	--	SPACE	8	--
	9	IT RACK IDF A132	#12	20 1		0.4 / 0.0		1 --	--	SPACE	10	--
	11	IT RACK IDF A132	#12	20 1			0.4 / 0.0	1 --	--	SPACE	12	--
	13	Receptacles IDF A132	#12	20 1	0.2 / 0.0			1 --	--	SPACE	14	--
	15	INTRUSION DETECTION PANEL IDF A132	#12	20 1		0.1 / 0.0		1 --	--	SPACE	16	--
	17	ACCESS CONTROL PANEL IDF A132	#12	20 1			0.1 / 0.0	1 --	--	SPACE	18	--
LO	19	FIRE ALARM BOOSTER PANEL	#12	20 1	0.5 / 0.0			1 --	--	SPACE	20	--
	21	CONDENSATE PUMP IDF A132	#12	20 1		0.5 / 0.0		1 --	--	SPACE	22	--
	23	IT RACK IDF A132	#10	30 1			0.2 / 0.0	1 --	--	SPACE	24	--
	25	IT RACK IDF A132	#10	30 1	0.2 / 0.2						26	
⚠1	27	IT RACK IDF A132	#10	30 1		0.2 / 0.2		3 30	#10	SPDL	28	
	29	IT RACK IDF A132	#10	30 1			0.2 / 0.2				30	
			Total Load:		1.9 kVA	1.8 kVA	1.4 kVA					
			Total Amps:		16 A	16 A	11 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Miscellaneous	2.7 kVA	100.00%	2.7 kVA		
Receptacles	2.3 kVA	100.00%	2.3 kVA	**Total Conn. Load:**	5.1 kVA
				Total Est. Demand:	5.1 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
M - PROVIDE METERING DEVICE
LSI - PROVIDE WITH ADJUSTABLE TRIP SETTINGS

Branch Panel: 1LSHD

Location: ELEC D114.1 | **Volts:** 277/480 Wye | **A.I.C. Rating:** 22,000
Supply From: ATS-LS1 | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 200A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Lighting	#12	20 1	1.3 / 3.0			1 20	#12	Lighting	2	
	3	Lighting	#12	20 1		0.6 / 1.4		1 20	#12	Lighting	4	
	5	Lighting Exterior	#12	20 1			0.4 / 1.2	1 20	#12	Lighting West Canopy	6	
	7	Lighting 2nd floor D200	#12	20 1	1.2 / 0.5						8	
--	9	SPARE	--	20 1		0.0 / 0.5		3 20	#12	KEF-1	10	
--	11	SPARE	--	20 1			0.0 / 0.5				12	
--	13	SPACE	--	-- 1	0.0 / 0.4						14	
--	15	SPACE	--	-- 1		0.0 / 0.4		3 20	#12	KEF-2	16	
--	17	SPACE	--	-- 1			0.0 / 0.4				18	
--	19	SPACE	--	-- 1	0.0 / 5.5						20	
--	21	SPACE	--	-- 1		0.0 / 5.7		3 50	1L	1TLSLD	22	LSI
--	23	SPACE	--	-- 1			0.0 / 3.4				24	
--	25	SPACE	--	-- 1	0.0 / 0.2						26	
--	27	SPACE	--	-- 1		0.0 / 0.2		3 30	#10	SPDL	28	
--	29	SPACE	--	-- 1			0.0 / 0.2				30	
			Total Load:		18.8 kVA	13.3 kVA	11.0 kVA					
			Total Amps:		69 A	49 A	40 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	9.8 kVA	100.00%	9.8 kVA		
Lighting	16.0 kVA	125.00%	20.0 kVA	**Total Conn. Load:**	43.1 kVA
Miscellaneous	11.5 kVA	100.00%	11.5 kVA	**Total Est. Demand:**	47.1 kVA
Receptacles	5.8 kVA	100.00%	5.8 kVA	**Total Conn. Current:**	52 A
				Total Est. Demand Current:	57 A

Notes:
PROVIDE PANEL WITH FEEDTHROUGH LUGS FOR FEEDER TO PANEL 1LSHB.

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
LSI - PROVIDE WITH ADJUSTABLE TRIP SETTINGS
L1 - REFER TO ONELINE

Branch Panel: 1LSHB

Location: MECH B147 | **Volts:** 277/480 Wye | **A.I.C. Rating:** 18,000
Supply From: 1LSHD | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 200A MCB LSI

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Lighting	#12	20 1	2.9 / 0.9			1 20	#12	Lighting	2	
	3	Lighting	#12	20 1		0.6 / 0.6		1 20	#12	Lighting	4	
	5	Lighting	#12	20 1			0.7 / 0.8	1 20	#12	Lighting South Canopy	6	
	7	Lighting Exterior	#12	20 1	0.4 / 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	SPARE	--	20 1	0.0 / 0.0			1 --	--	SPACE	14	--
--	15	SPARE	--	20 1		0.0 / 0.0		1 --	--	SPACE	16	--
--	17	SPARE	--	20 1			0.0 / 0.0	1 --	--	SPACE	18	--
--	19	SPACE	--	-- 1	0.0 / 2.4						20	
--	21	SPACE	--	-- 1		0.0 / 3.2		3 50	1L	1TLSLB	22	LSI
--	23	SPACE	--	-- 1			0.0 / 3.2				24	
--	25	SPACE	--	-- 1	0.0 / 0.2						26	
--	27	SPACE	--	-- 1		0.0 / 0.2		3 30	#10	SPDL	28	
--	29	SPACE	--	-- 1			0.0 / 0.2				30	
			Total Load:		6.7 kVA	4.5 kVA	4.9 kVA					
			Total Amps:		24 A	16 A	18 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	3.4 kVA	100.00%	3.4 kVA		
Lighting	6.8 kVA	125.00%	8.5 kVA	**Total Conn. Load:**	16.1 kVA
Miscellaneous	2.5 kVA	100.00%	2.5 kVA	**Total Est. Demand:**	17.8 kVA
Receptacles	3.4 kVA	100.00%	3.4 kVA	**Total Conn. Current:**	19 A
				Total Est. Demand Current:	21 A

Notes:

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
LSI - PROVIDE WITH ADJUSTABLE TRIP SETTINGS
1L - REFER TO ONELINE

Branch Panel: 1LSHA

Location: ELEC A114 | **Volts:** 277/480 Wye | **A.I.C. Rating:** 18,000
Supply From: ATS-LS2 | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 250A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	⚠1 Circuit Description	CKT	Note
	1	Lighting Room A135, A138, A137	#12	20 1	2.5 / 1.1			1 20	#12	Lighting Exterior	2	
	3	Lighting	#12	20 1		0.5 / 0.0		1 20	--	SPARE	4	--
	5	Lighting	#12	20 1			1.1 / 0.0	1 20	--	SPARE	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	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 / 1.9						20	
--	21	SPACE	--	-- 1		0.0 / 1.8		3 50	1L	1TLSLA	22	LSI
--	23	SPACE	--	-- 1			0.0 / 1.4				24	
--	25	SPACE	--	-- 1	0.0 / 0.2						26	
--	27	SPACE	--	-- 1		0.0 / 0.2		3 30	#10	SPDL	28	
--	29	SPACE	--	-- 1			0.0 / 0.2				30	
			Total Load:		13.0 kVA	7.0 kVA	6.0 kVA					
			Total Amps:		48 A	26 A	22 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	6.8 kVA	100.00%	6.8 kVA		
Lighting	8.8 kVA	125.00%	11.0 kVA	**Total Conn. Load:**	26.0 kVA
Miscellaneous	5.7 kVA	100.00%	5.7 kVA	**Total Est. Demand:**	28.2 kVA
Receptacles	4.7 kVA	100.00%	4.7 kVA	**Total Conn. Current:**	31 A
				Total Est. Demand Current:	34 A

Notes:
PROVIDE PANEL WITH FEEDTHROUGH LUGS FOR FEEDER TO PANEL 2LSHA.

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
LSI - PROVIDE WITH ADJUSTABLE TRIP SETTINGS
1L - REFER TO ONELINE

Branch Panel: 1EQLK

Location: KITCHEN | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10,000
Supply From: 1EQLD | **Phases:** 3 | **Enclosure:** N1/N4XSS COVER
Mounting: Surface | **Wires:** 4 | **Mains:** 100A

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	FREEZER COIL	#12	20 2	0.6 / 0.9			1 20	#12	MILK COOLER	2	G
	3					0.6 / 0.9		1 20	#12	MILK COOLER	4	G
2	5	DRAIN LINE HEATER	#12	20 1			1.9 / 0.4	1 20	#12	P.O.S. SERVING C105	6	
	7	FREEZER PANIC ALARM BUTTON	#12	20 1	1.2 / 0.4			1 20	#12	P.O.S. SERVING C105	8	2
	9	FREEZER TEMPERATURE ALARM	#12	20 1		0.6 / 0.0		1 20	--	SPARE	10	--
	11	FREEZER DOOR HEATER AND LIGHTS	#12	20 1			1.9 / 0.0	1 20	--	SPARE	12	--
	13	FREEZER PRESSURE RELIEF PORT	#12	20 1	0.6 / 0.0			1 20	--	SPARE	14	--
	15	COOLER PRESSURE RELIEF PORT	#12	20 1		0.6 / 0.0		1 20	--	SPARE	16	--
	17	COOLER TEMPERATURE ALARM	#12	20 1			0.6 / 0.0	1 20	--	SPARE	18	--
	19	COOLER DOOR HEATER AND LIGHTS	#12	20 1	0.5 / 0.0			1 --	--	SPACE	20	--
	21	COOLER COIL	#12	20 1		1.2 / 0.0		1 --	--	SPACE	22	--
	23						4.8 / 0.0	1 --	--	SPACE	24	--
1	25	REFRIGERATION RACK	#6	50 3	4.8 / 0.0			1 --	--	SPACE	26	--
	27					4.8 / 0.0		1 --	--	SPACE	28	--
LF	29	REFRIGERATOR	#12	20 1			0.9 / 0.0	1 --	--	SPACE	30	--
LF	31	REFRIGERATOR	#12	20 1	0.9 / 0.0			1 --	--	SPACE	32	--
LF	33	REFRIGERATOR	#12	20 1		1.1 / 0.0		1 --	--	SPACE	34	--
3	35	GREASE INTERCEPTOR ALARM	#12	20 1			0.2 / 0.0	1 --	--	SPACE	36	--
LF	37	MOTORIZED GATE	#10	20 1	1.7 / 0.0						38	
LF	39	MOTORIZED GATE	#10	20 1		1.7 / 0.0		3 30	#10	SPDL	40	2
LF	41	MOTORIZED GATE	#10	20 1			1.7 / 0.0				42	
			Total Load:		11.6 kVA	11.5 kVA	12.4 kVA					
			Total Amps:		96 A	96 A	103 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Heating	7.9 kVA	100.00%	7.9 kVA		
Kitchen Equipment	19.7 kVA	65.00%	12.8 kVA	**Total Conn. Load:**	35.5 kVA
Miscellaneous	5.3 kVA	100.00%	5.3 kVA	**Total Est. Demand:**	28.6 kVA
Receptacles	2.5 kVA	100.00%	2.5 kVA	**Total Conn. Current:**	98 A
				Total Est. Demand Current:	79 A

Notes:
1 -COORDINATE BREAKER/WIRE SIZE WITH FINAL EQUIPMENT SELECTION
2- RECESSED BELOW OR ON SIDE OF PANEL
3- PROVIDE 30mA EQUIPMENT GFCI

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE

Stantec

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Registration: F-4111
Project No: 2550-01131-00

Notes

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13

Revision | By | Appd | YYYY.MM.DD

Issue for Permit and Proposal			2026.01.24

Issued | By | Appd | YYYY.MM.DD

Permit/Seal

Client/Project Logo

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ELECTRICAL PANEL SCHEDULES

Project No.
214001329

Scale

Revision
2

Drawing No.
E702

3/10/2026 9:54:09 AM

ORIGINAL SHEET - ARCH E1

Branch Panel: 1HK

Location: KITCHEN
Supply From: 1DPD
Mounting: Surface

Volts: 277/480 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 18,000
Enclosure: N1/N4XSS COVER
Mains: 200A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CKT	Note
	1					6.8 / 0.0			1	20	--	SPARE	2	--
	3	DISH MACHINE	#10	30	3		6.8 / 0.0		1	20	--	SPARE	4	--
	5							6.8 / 0.0	1	20	--	SPARE	6	--
	7					7.6 / 0.0			1	20	--	SPARE	8	--
	9	BOOSTER HEATER	#8	40	3		7.6 / 0.0		1	20	--	SPARE	10	--
	11							7.6 / 0.0	1	20	--	SPARE	12	--
--	13	SPACE	--	--	1	0.0 / 0.0			1	20	--	SPARE	14	--
--	15	SPACE	--	--	1		0.0 / 0.0		1	20	--	SPARE	16	--
--	17	SPACE	--	--	1			0.0 / 0.0	1	20	--	SPARE	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 / 0.2							26	
--	27	SPACE	--	--	1		0.0 / 0.2		3	30	#10	SPDL	28	1
--	29	SPACE	--	--	1			0.0 / 0.2					30	
			Total Load:			14.5 kVA	14.5 kVA	14.5 kVA						
			Total Amps:			52 A	52 A	52 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Kitchen Equipment	43.1 kVA	100.00%	43.1 kVA		
Miscellaneous	0.5 kVA	100.00%	0.5 kVA	**Total Conn. Load:**	43.6 kVA
				Total Est. Demand:	43.6 kVA
				Total Conn. Current:	52 A
1. RECESSED BELOW OR ON SIDE OF PANEL				**Total Est. Demand Current:**	52 A

Notes:

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE

Branch Panel: 1HD

Location: MECH D114
Supply From: 1DPD
Mounting: Surface

Volts: 277/480 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 25,000
Enclosure: Type 1
Mains: 400A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CKT	Note
	1					5.8 / 0.6							2	
	3	HWP-2 (15 HP)	#8	40	3		5.8 / 0.6		3	20	#12	HWP-4 (1 HP)	4	
	5							5.8 / 0.6					6	
	7					5.8 / 1.4							8	
	9	HWP-1 (15 HP)	#8	40	3		5.8 / 1.4		3	20	#12	AHU-15 (3 HP)	10	
	11							5.8 / 1.4					12	
	13					5.8 / 3.9							14	
	15	PCHWP-1 (15 HP)	#8	40	3		5.8 / 3.9		3	30	#10	AHU-9 (10 HP)	16	
	17							5.8 / 3.9					18	
	19					5.8 / 5.8							20	
	21	PCHWP-2 (15 HP)	#8	40	3		5.8 / 5.8		3	40	#8	AHU-10 (15 HP)	22	
	23							5.8 / 5.8					24	
	25					9.4 / 5.8							26	
	27	SCHWP-1 (25 HP)	#4	70	3		9.4 / 5.8		3	40	#8	AHU-11 (15 HP)	28	
	29							9.4 / 5.8					30	
	31					9.4 / 3.9							32	
	33	SCHWP-2 (25 HP)	#4	70	3		9.4 / 3.9		3	30	#10	OAU-4 (10 HP)	34	
	35							9.4 / 3.9					36	
	37					0.6 / 0.0							38	
	39	HWP-3 (1 HP)	#12	20	3		0.6 / 0.0		3	30	#10	SPDL	40	
	41							0.6 / 0.0					42	
	43					0.0 / 0.0			1	20	--	SPARE	44	--
--	45	SPARE	--	20	3		0.0 / 0.0		1	20	--	SPARE	46	--
	47							0.0 / 0.0	1	20	--	SPARE	48	--
	49	SITE LIGHTING -NORTH/WEST-	#10	20	2	1.8 / 0.0			1	20	--	SPARE	50	--
	51						1.8 / 0.0		1	20	--	SPARE	52	--
	53	Lighting Band	#12	20	1			1.2 / 0.0	1	20	--	SPARE	54	--
	55	Lighting Dining	#12	20	1	2.0 / 0.0			1	20	--	SPARE	56	--
	57	Lighting Kitchen	#12	20	1		1.8 / 0.0		1	20	--	SPARE	58	--
	59	Lighting Dining	#12	20	1			1.6 / 2.0					60	
	61	Lighting Corridor	#12	20	1	0.9 / 2.0			3	20	#12	EWH-3 (6 KW)	62	
	63	Lighting	#12	20	1		2.2 / 2.0						64	
	65	Lighting Exterior	#12	20	1			1.6 / 0.0	1	--	--	SPACE	66	--
	67	Lighting Gym	#12	20	1	1.6 / 0.0			1	--	--	SPACE	68	--
	69	Lighting Gym	#12	20	1		2.1 / 0.0		1	--	--	SPACE	70	--
	71	Lighting West Canopy	#12	20	1			2.4 / 0.0	1	--	--	SPACE	72	--
	73	Lighting MECH MEZZANINE D200	#12	20	1	0.0 / 0.0			1	--	--	SPACE	74	--
	75	Lighting exterior Service Yard	#12	20	1		0.4 / 0.0		1	--	--	SPACE	76	--
--	77	SPARE	--	20	1			0.0 / 0.0	1	--	--	SPACE	78	--
--	79	SPARE	--	20	1	0.0 / 0.0			1	--	--	SPACE	80	--
--	81	SPARE	--	20	1		0.0 / 0.0		1	--	--	SPACE	82	--
--	83	SPARE	--	20	1			0.0 / 0.0	1	--	--	SPACE	84	--
			Total Load:			72.5 kVA	74.5 kVA	72.9 kVA						
			Total Amps:			262 A	269 A	264 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	192.5 kVA	100.00%	192.5 kVA		
Lighting	21.5 kVA	125.00%	26.8 kVA	**Total Conn. Load:**	219.9 kVA
Miscellaneous	6.0 kVA	100.00%	6.0 kVA	**Total Est. Demand:**	225.3 kVA
				Total Conn. Current:	265 A
				Total Est. Demand Current:	271 A

Notes:

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE

Branch Panel: 1HB2

Location: MECH B133
Supply From: 1DPD
Mounting: Surface

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
	1	CVB-4-1	#12	20	1	1.7 / 0.0			1	20	--	SPARE	2	--
	3	CVB-4-2	#12	20	1		1.2 / 0.0		1	20	--	SPARE	4	--
	5	CVB-4-3	#12	20	1			1.2 / 0.0	1	20	--	SPARE	6	--
	7	CVB-4-4	#12	20	1	1.2 / 3.9							8	
	9	CVB-4-5	#12	20	1		1.2 / 3.9		3	30	#10	AHU-4 (10 HP)	10	
	11	CVB-4-6	#12	20	1			1.2 / 3.9					12	
	13	CVB-4-7	#12	20	1	1.2 / 2.2							14	
	15	CVB-4-8	#12	20	1		1.7 / 2.2		3	20	#12	OAU-2 (5 HP)	16	
	17	CVB-4-9	#12	20	1			1.7 / 2.2					18	
	19	CVB-4-10	#12	20	1	1.2 / 3.9							20	
--	21	SPARE	--	20	1		0.0 / 3.9		3	30	#10	AHU-5 (10 HP)	22	
--	23	SPARE	--	20	1			0.0 / 3.9					24	
	25					0.0 / 5.0							26	
--	27	SPARE	--	30	3		0.0 / 5.0		3	30	#10	EWH-2 (15 kW)	28	
	29							0.0 / 5.0					30	
	31					0.0 / 21.7							32	
--	33	SPARE	--	30	3		0.0 / 23.5		3	125	1L	1TLB2	34	
	35							0.0 / 22.9					36	
	37					0.0 / 0.0							38	
--	39	SPARE	--	20	3		0.0 / 0.0		3	30	#10	SPDL	40	
	41							0.0 / 0.0					42	
			Total Load:			41.9 kVA	42.5 kVA	41.9 kVA						
			Total Amps:			151 A	153 A	151 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	58.3 kVA	100.00%	58.3 kVA		
Miscellaneous	16.5 kVA	100.00%	16.5 kVA	**Total Conn. Load:**	126.3 kVA
Power	0.2 kVA	100.00%	0.2 kVA	**Total Est. Demand:**	105.7 kVA
Receptacles	51.3 kVA	59.75%	30.7 kVA	**Total Conn. Current:**	152 A
				Total Est. Demand Current:	127 A

Notes:

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE
1L - REFER TO ONELINE

Branch Panel: 1HB1

Location: MECH B147
Supply From: 1DPD
Mounting: Surface

Volts: 277/480 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 18,000
Enclosure: Type 1
Mains: 200A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CKT	Note
	1	CVB-7-1	#12	20	1	1.2 / 3.2			1	20	#12	Lighting	2	
	3	CVB-7-2	#12	20	1		1.2 / 1.7		1	20	#12	Lighting Room B138, B139, B136, B134, B132,...	4	
	5	CVB-7-3	#12	20	1			1.2 / 1.3	1	20	#12	Lighting	6	
	7	CVB-7-4	#12	20	1	1.2 / 0.6			1	20	#12	Lighting	8	
	9	CVB-7-5	#12	20	1		1.2 / 1.4		1	20	#12	Lighting	10	
	11	CVB-7-6	#12	20	1			1.2 / 1.6	1	20	#12	Lighting South Canopy	12	
	13	CVB-7-7	#12	20	1	1.2 / 0.4			1	20	#12	Lighting	14	
	15	CVB-7-8	#12	20	1		1.2 / 0.0		1	20	--	SPARE	16	--
	17	CVB-7-9	#12	20	1			1.7 / 0.0	1	20	--	SPARE	18	--
--	19	SPARE	--	20	1	0.0 / 1.4							20	
--	21	SPARE	--	20	1		0.0 / 1.4		3	20	#12	AHU-6 (3 HP)	22	
--	23	SPARE	--	20	1			0.0 / 1.4					24	
--	25	SPARE	--	20	1	0.0 / 3.9							26	
	27						0.0 / 3.9		3	30	#10	AHU-7 (10 HP)	28	
--	29	SPARE	--	30	3			0.0 / 3.9					30	
	31					0.0 / 3.2							32	
	33						0.0 / 3.2		3	20	#12	AHU-8 (7.5 HP)	34	
--	35	SPARE	--	30	3			0.0 / 3.2					36	
	37					0.0 / 2.2							38	
	39						0.0 / 2.2		3	20	#12	AHU-3 (5 HP)	40	
--	41	SPARE	--	20	3			0.0 / 2.2					42	
	43					0.0 / 8.9							44	
--	45	SPACE	--	--	1		0.0 / 8.3		3	50	1L	1TLB1	46	
--	47	SPACE	--	--	1			0.0 / 7.8					48	
--	49	SPACE	--	--	1	0.0 / 0.0							50	
--	51	SPACE	--	--	1		0.0 / 0.0		3	30	#10	SPDL	52	
--	53	SPACE	--	--	1			0.0 / 0.0					54	
			Total Load:			27.4 kVA	25.7 kVA	25.4 kVA						
			Total Amps:			99 A	93 A	92 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	45.7 kVA	100.00%	45.7 kVA		
Lighting	17.3 kVA	125.00%	21.7 kVA	**Total Conn. Load:**	78.5 kVA
Miscellaneous	3.0 kVA	100.00%	3.0 kVA	**Total Est. Demand:**	81.6 kVA
Receptacles	12.4 kVA	90.19%	11.2 kVA	**Total Conn. Current:**	94 A
				Total Est. Demand Current:	98 A

Notes:

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G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE
1L - REFER TO ONELINE

Branch Panel: 1HA1

Location: ELEC A104
Supply From: 1DPA
Mounting: Surface

Volts: 277/480 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 18,000
Enclosure: Type 1
Mains: 200A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CKT	Note
	1	CVB-1-1	#12	20	1	1.2 / 2.6			1	20	#12	Lighting	2	
	3	CVB-1-2	#12	20	1		1.7 / 2.4		1	20	#12	Lighting	4	
	5	CVB-1-3	#12	20	1			1.2 / 2.1	1	20	#12	Lighting	6	
	7	CVB-1-4	#12	20	1	1.7 / 2.0			1	20	#12	Lighting Corridor	8	
	9	CVB-1-5	#12	20	1		1.7 / 1.5		1	20	#12	Lighting Exterior	10	
	11	CVB-1-6	#12	20	1			1.2 / 0.3	2	20	#10	MARQUEE 5kVA MINI POWER-ZONE	12	
	13	CVB-1-7	#12	20	1	1.7 / 0.3							14	
	15	CVB-1-8	#12	20	1		1.2 / 0.0		1	20	--	SPARE	16	--
	17	CVB-2-1	#12	20	1			1.2 / 0.0	1	20	--	SPARE	18	--
	19	CVB-2-2	#12	20	1	1.7 / 0.0			1	20	--	SPARE	20	--
	21	CVB-2-3	#12	20	1		1.2 / 0.0		1	20	--	SPARE	22	--
	23	CVB-2-4	#12	20	1			1.7 / 0.0	1	20	--	SPARE	24	--
	25	CVB-2-5	#12	20	1	1.7 / 0.0			1	20	--	SPARE	26	--
	27	CVB-2-6	#12	20	1		1.7 / 0.0		1	20	--	SPARE	28	--
	29	CVB-2-7	#12	20	1			1.7 / 0.0	1	20	--	SPARE	30	--
	31	CVB-2-8	#12	20	1	1.2 / 0.0			1	20	--	SPARE	32	--
	33	CVB-16-5	#12	20	1		1.7 / 0.0		1	20	--	SPARE	34	--
	35	CVB-16-6	#12	20	1			1.7 / 0.0	1	20	--	SPARE	36	--
	37	CVB-16-7	#12	20	1	1.7 / 0.0							38	
	39	SITE LIGHTING - EAST-	#10	20	2		1.3 / 0.0		3	30	#10	SPDL	40	
	41							1.3 / 0.0					42	
--	43	SPACE	--	--	1	0.0 / 0.0			1	20	--	SPARE	44	--
--	45	SPACE	--	--	1		0.0 / 0.0		1	20	--	SPARE	46	--
--	47	SPACE	--	--	1			0.0 / 0.0	1	20	--	SPARE	48	--
--	49	SPACE	--	--	1	0.0 / 3.9							50	
--	51	SPACE	--	--	1		0.0 / 3.9		3	30	#10	AHU-1 (10 HP)	52	
--	53	SPACE	--	--	1			0.0 / 3.9					54	
--	55	SPACE	--	--	1	0.0 / 3.9							56	
--	57	SPACE	--	--	1		0.0 / 3.9		3	30	#10	AHU-2 (10 HP)	58	
--	59	SPACE	--	--	1			0.0 / 3.9					60	
--	61	SPACE	--	--	1	0.0 / 3.9							62	
--	63	SPACE	--	--	1		0.0 / 3.9		3	30	#10	AHU-3 (10 HP)	64	
--	65	SPACE	--	--	1			0.0 / 3.9					66	
--	67	SPACE	--	--	1	0.0 / 3.2							68	
--	69	SPACE	--	--	1		0.0 / 3.2		3	20	#12	OAU-1 (7.5 HP)	70	
--	71	SPACE	--	--	1			0.0 / 3.2					72	
--	73	SPACE	--	--	1	0.0 / 0.0							74	
--	75	SPACE	--	--	1		0.0 / 0.0		3	20	#12	ERU-1 (5 HP)	76	
--	77	SPACE	--	--	1			0.0 / 0.0					78	
--	79	SPACE	--	--	1	0.0 / 10.0							80	
--	81	SPACE	--	--	1		0.0 / 10.0		3	50	#6	EWH-1 (30 kW)	82	
--	83	SPACE	--	--	1			0.0 / 10.0					84	
			Total Load:			40.3 kVA	39.0 kVA	38.9 kVA						
			Total Amps:			147 A	142 A	133 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	102.6 kVA	100.00%	102.6 kVA		
Lighting	13.1 kVA	125.00%	16.4 kVA	**Total Conn. Load:**	116.3 kVA
Miscellaneous	0.5 kVA	100.00%	0.5 kVA	**Total Est. Demand:**	119.5 kVA
				Total Conn. Current:	140 A
				Total Est. Demand Current:	144 A

Notes:

Abbrevations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE

Stantec

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910 Louisiana Street Suite 2600
Houston, TX 77002-4916
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Consultant

Salas O'Brien

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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064

Registration: F-4111
Project No: 2550-01131-00

Notes

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd	YYYY.MM.DD
Issue for Permit and Proposal			2026.01.26
Issued		By	Appd	YYYY.MM.DD

Permit/Seal

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
03-11-2026

Client/Project Logo

Crosby Independent School District

Client/Project

Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title

ELECTRICAL PANEL SCHEDULES

Project No.
214001329

Scale

Revision
2

Drawing No.
E704

3/17/2026 9:56:11 AM

ORIGINAL SHEET - ARCH E1

Branch Panel: 2LA1

Location: ELEC A204
Supply From: 2TLA1
Mounting: Surface

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Enclosure: NEMA 1
Mains: 250A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CKT	Note
	1	Receptacles CLASSROOM A225	#12	20	1	0.5 / 0.5			1	20	#12	Receptacles CLASSROOM A207	2	
	3	PROJECTOR AND LOCAL SOUND A225	#12	20	1		1.0 / 1.0		1	20	#12	PROJECTOR AND LOCAL SOUND A207	4	
	5	Receptacles CLASSROOM A225	#12	20	1			1.1 / 1.1	1	20	#12	Receptacles CLASSROOM A203	6	
	7	Receptacles CLASSROOM A224	#12	20	1	0.5 / 0.5			1	20	#12	Receptacles CLASSROOM A203	8	
	9	Receptacles CLASSROOM A224	#12	20	1		1.1 / 1.0		1	20	#12	PROJECTOR AND LOCAL SOUND A203	10	
	11	PROJECTOR AND LOCAL SOUND A224	#12	20	1			1.0 / 0.9	1	20	#12	Receptacles PLC A201	12	
	13	Receptacles PLC A221	#12	20	1	1.1 / 0.5			1	20	#12	Receptacles PLC A201	14	
	15	Receptacles PLC A221	#12	20	1		0.5 / 0.4		1	20	#12	Receptacles CORRIDOR A200B	16	
	17	Receptacles CLASSROOM A219	#12	20	1			1.1 / 0.4	1	20	#12	Receptacles CORRIDOR A200A	18	
	19	Receptacles CLASSROOM A219	#12	20	1	0.5 / 0.4			1	20	#12	Receptacles CORRIDOR A200A	20	
	21	PROJECTOR AND LOCAL SOUND A219	#12	20	1		1.0 / 0.5		1	20	#12	Receptacles Room A200, A205, A204	22	
	23	PROJECTOR AND LOCAL SOUND A218	#12	20	1			1.0 / 0.5	1	20	#12	Receptacles Room A212, A214	24	
	25	Receptacles CLASSROOM A218	#12	20	1	0.5 / 1.0			1	20	#12	DRINKING FOUNTAIN	26	
	27	Receptacles CLASSROOM A218	#12	20	1		1.1 / 0.5		1	20	#12	Receptacles Room A226, A227, A234	28	
	29	Receptacles CLASSROOM A213	#12	20	1			0.5 / 1.0	1	20	#12	DRINKING FOUNTAIN	30	
	31	PROJECTOR AND LOCAL SOUND A213	#12	20	1	1.0 / 0.4			1	20	#12	Receptacles Room A200C	32	
	33	Receptacles CLASSROOM A213	#12	20	1		1.1 / 0.4		1	20	#12	Receptacles CORRIDOR A200C	34	
	35	Receptacles CLASSROOM A209	#12	20	1			0.5 / 0.4	1	20	#12	Receptacles SCIENCE A215	36	
	37	PROJECTOR AND LOCAL SOUND A209	#12	20	1	1.0 / 1.0			1	20	#12	PROJECTOR AND LOCAL SOUND A215	38	
	39	Receptacles CLASSROOM A209	#12	20	1		1.1 / 0.7		1	20	#12	LAB STATION Receptacles SCIENCE A215	40	1
	41	Receptacles CLASSROOM A207	#12	20	1			1.1 / 0.4	1	20	#12	LAB STATION Receptacles SCIENCE A215	42	1
1	43	LAB STATION Receptacles SCIENCE A215	#12	20	1	0.4 / 0.1			1	20	#12	LAB STATION UTILITY CONTROL PANEL	44	
1	45	LAB STATION Receptacles SCIENCE A215	#12	20	1		0.4 / 0.5		1	20	#12	Receptacles SCI PREP A226	46	
1	47	LAB STATION Receptacles SCIENCE A215	#12	20	1			0.4 / 1.0	1	20	#12	REFRIGERATOR	48	
1	49	LAB STATION Receptacles SCIENCE A215	#12	20	1	0.4 / 1.0			1	20	#12	DISH WASHER	50	
1	51	LAB STATION Receptacles SCIENCE A215	#12	20	1		0.4 / 1.0		1	20	#12	GOGGLES CABINET	52	
1	53	LAB STATION Receptacles SCIENCE A215	#12	20	1			0.4 / 0.5	1	20	#12	Receptacles SCI PREP A210	54	
1	55	LAB STATION Receptacles SCIENCE A208	#12	20	1	0.4 / 1.0			1	20	#12	DISH WASHER	56	
1	57	LAB STATION Receptacles SCIENCE A208	#12	20	1		0.4 / 1.0		1	20	#12	REFRIGERATOR	58	
1	59	LAB STATION Receptacles SCIENCE A208	#12	20	1			0.4 / 1.0	1	20	#12	GOGGLES CABINET	60	
1	61	LAB STATION Receptacles SCIENCE A208	#12	20	1	0.4 / 0.1			1	20	#12	LAB STATION UTILITY CONTROL PANEL	62	
1	63	LAB STATION Receptacles SCIENCE A208	#12	20	1		0.4 / 0.1		1	20	#12	LAB STATION ELECTRICAL CONTACTOR PANEL	64	
1	65	LAB STATION Receptacles SCIENCE A208	#12	20	1			0.4 / 0.1	1	20	#12	LAB STATION ELECTRICAL CONTACTOR PANEL	66	
1	67	LAB STATION Receptacles SCIENCE A208	#12	20	1	0.4 / 0.1			1	20	#12	LAB STATION UTILITY CONTROL PANEL	68	
	69	Receptacles SCIENCE A208	#12	20	1		0.4 / 1.0		1	20	#12	GOGGLES CABINET	70	
1	71	LAB STATION Receptacles SCIENCE A208	#12	20	1			0.7 / 0.5	1	20	#12	Receptacles SCI PREP A236	72	
	73	PROJECTOR AND LOCAL SOUND A208	#12	20	1	1.0 / 1.0			1	20	#12	REFRIGERATOR	74	
	75	Receptacles SCIENCE A206	#12	20	1		0.4 / 1.0		1	20	#12	DISH WASHER	76	
	77	PROJECTOR AND LOCAL SOUND A206	#12	20	1			1.0 / 0.5	1	20	#12	Receptacles CLASSROOM A229	78	
1	79	LAB STATION Receptacles SCIENCE A206	#12	20	1	0.7 / 1.0			1	20	#12	PROJECTOR AND LOCAL SOUND A229	80	
1	81	LAB STATION Receptacles SCIENCE A206	#12	20	1		0.4 / 1.1		1	20	#12	Receptacles CLASSROOM A229	82	
1	83	LAB STATION Receptacles SCIENCE A206	#12	20	1			0.4 / 1.0	1	20	#12	PROJECTOR AND LOCAL SOUND A231	84	
1	85	LAB STATION Receptacles SCIENCE A206	#12	20	1	0.4 / 0.5			1	20	#12	Receptacles CLASSROOM A231	86	
1	87	LAB STATION Receptacles SCIENCE A206	#12	20	1		0.4 / 1.1		1	20	#12	Receptacles CLASSROOM A231	88	
1	89	LAB STATION Receptacles SCIENCE A206	#12	20	1			0.4 / 1.1	1	20	#12	Receptacles CLASSROOM A233	90	
1	91	LAB STATION Receptacles SCIENCE A206	#12	20	1	0.4 / 0.5			1	20	#12	Receptacles CLASSROOM A233	92	
1	93	LAB STATION Receptacles SCIENCE A206	#12	20	1		0.4 / 1.0		1	20	#12	PROJECTOR AND LOCAL SOUND A233	94	
	95	LAB STATION ELECTRICAL CONTACTOR PANEL	#12	20	1			0.1 / 1.1	1	20	#12	Receptacles CLASSROOM A235	96	
	97	Receptacles CLASSROOM A235	#12	20	1	0.5 / 0.0			1	20	--	SPARE	98	--
	99	PROJECTOR AND LOCAL SOUND A235	#12	20	1		1.0 / 0.0		1	20	--	SPARE	100	--
	101	Receptacles PLC A237	#12	20	1			0.5 / 0.0	1	20	--	SPARE	102	--
	103	Receptacles PLC A237	#12	20	1	0.9 / 0.0			1	20	--	SPARE	104	--
	105	Receptacles STOR A238	#12	20	1		0.4 / 0.0		1	20	--	SPARE	106	--
	107	Receptacles Room A222, A220	#12	20	1			0.5 / 0.0	1	20	--	SPARE	108	--
	109	EF-1	#12	20	1	0.5 / 0.0			1	20	--	SPARE	110	--
	111	EF-2	#12	20	1		0.5 / 0.0		1	20	--	SPARE	112	--
	113	EF-3	#12	20	1			0.5 / 0.0	1	20	--	SPARE	114	--
	115	EF-4	#12	20	1	0.5 / 0.0			1	20	--	SPARE	116	--
	117	EF-5	#12	20	1		0.5 / 0.0		1	20	--	SPARE	118	--
	119	EF-6	#12	20	1			0.5 / 0.0	1	20	--	SPARE	120	--
	121	ROOF RECEPTACLES	#12	20	1	0.7 / 0.0			1	20	--	SPARE	122	--
	123	EF-18	#12	20	1		0.5 / 0.0		1	20	--	SPARE	124	--
	125	EF-17	#12	20	1			0.5 / 0.0	1	20	--	SPARE	126	--
	127	EF-20	#12	20	1	0.7 / 0.0			1	20	--	SPARE	128	--
	129	HAND DRYER	#10	30	1		1.5 / 0.0		1	20	--	SPARE	130	--
	131	HAND DRYER	#10	30	1			1.5 / 0.0	1	20	--	SPARE	132	--
	133	HAND DRYER	#10	30	1	1.5 / 0.0			1	20	--	SPARE	134	--
	135	HAND DRYER	#10	30	1		1.5 / 0.0		1	20	--	SPARE	136	--
	137	HAND DRYER	#10	30	1			1.5 / 0.0	1	20	--	SPARE	138	--
	139	SHOWER ACCESSORIES SCIENCE A215	#12	20	1	0.5 / 0.0			1	20	--	SPARE	140	--
	141	SHOWER ACCESSORIES SCIENCE A206	#12	20	1		0.5 / 0.0		1	20	--	SPARE	142	--
	143	SHOWER ACCESSORIES SCIENCE A208	#12	20	1			0.5 / 0.0	1	20	--	SPARE	144	--
	145	Receptacles CORRIDOR A200A	#12	20	1	0.5 / 0.2							146	
--	147	SPARE	--	20	1		0.0 / 0.2		3	30	#10	SPDL	148	
--	149	SPARE	--	20	1			0.0 / 0.2					150	
		Total Load:				25.6 kVA	28.9 kVA	27.9 kVA						
		Total Amps:				213 A	244 A	235 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	4.8 kVA	100.00%	4.8 kVA		
Miscellaneous	29.1 kVA	100.00%	29.1 kVA	**Total Conn. Load:**	82.4 kVA
Receptacles	48.5 kVA	60.30%	29.3 kVA	**Total Est. Demand:**	63.1 kVA
				Total Conn. Current:	229 A
				Total Est. Demand Current:	175 A

Notes:
PROVIDE 3 PANEL SECTIONS 1-42 POLE SECTION WITH MCB AND 2 MLO 54 POLE SECTIONS CONNECTED THROUGH FEEDTHROUGH LUGS AND RATED FOR THE FULL AMPACITY OF THE MAIN BREAKER. ALL PANEL SECTIONS SHALL HAVE THE SAME BOX HEIGHT.
1 - ROUTE CIRCUIT VIA ELECTRONIC CONTACTOR PANEL IN CEILING ABOVE...

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE

Branch Panel: 2HA1

Location: ELEC A204
Supply From: 1DPA
Mounting: Surface

Volts: 277/480 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 18,000
Enclosure: NEMA 1
Mains: 250A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CKT	Note
	1	CVB-14-1	#12	20	1	1.2 / 0.0							2	
	3	CVB-14-2	#12	20	1		1.7 / 0.0		3	20	#12	ERU-2 (7.5 HP)	4	
	5	CVB-14-3	#12	20	1			1.2 / 0.0					6	
	7	CVB-14-4	#12	20	1	1.7 / 3.9							8	
	9	CVB-14-5	#12	20	1		1.7 / 3.9		3	30	#10	OAU-5 (10 HP)	10	
	11	CVB-14-6	#12	20	1			1.7 / 3.9					12	
	13	CVB-14-7	#12	20	1	1.7 / 3.9							14	
	15	CVB-15-1	#12	20	1		1.2 / 3.9		3	30	#10	AHU-12 (10 HP)	16	
	17	CVB-15-2	#12	20	1			1.7 / 3.9					18	
	19	CVB-15-3	#12	20	1	1.2 / 3.9							20	
	21	CVB-15-4	#12	20	1		1.7 / 3.9		3	30	#10	AHU-13 (10 HP)	22	
	23	CVB-15-5	#12	20	1			1.7 / 3.9					24	
	25	CVB-15-6	#12	20	1	0.0 / 5.8							26	
	27	CVB-15-7	#12	20	1		1.7 / 5.8		3	40	#8	AHU-14 (15 HP)	28	
	29	CVB-15-8	#12	20	1			1.2 / 5.8					30	
	31	CVB-16-1	#12	20	1	1.7 / 25.6							32	
	33	CVB-16-2	#12	20	1		1.7 / 28.9		3	125	1L	2TLA1	34	
	35	CVB-16-3	#12	20	1			1.7 / 27.9					36	
	37	CVB-16-4	#12	20	1	1.2 / 1.2			1	20	#12	CVB-13-6	38	
	39	Lighting	#12	20	1		2.5 / 0.0						40	
	41	Lighting	#12	20	1			2.4 / 0.0	3	30	--	SPARE	42	--
	43	Lighting	#12	20	1	2.6 / 0.0							44	
	45	Lighting Corridors	#12	20	1		2.2 / 0.0		1	20	--	SPARE	46	--
--	47	SPARE	--	20	1			0.0 / 0.0	1	20	--	SPARE	48	--
--	49	SPARE	--	20	1	0.0 / 0.2							50	
--	51	SPARE	--	20	1		0.0 / 0.2		3	30	#10	SPDL	52	
--	53	SPARE	--	20	1			0.0 / 0.2					54	
		Total Load:				55.5 kVA	60.7 kVA	56.9 kVA						
		Total Amps:				201 A	220 A	206 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	85.2 kVA	100.00%	85.2 kVA		
Lighting	9.7 kVA	125.00%	12.2 kVA	**Total Conn. Load:**	173.1 kVA
Miscellaneous	29.6 kVA	100.00%	29.6 kVA	**Total Est. Demand:**	156.3 kVA
Receptacles	48.5 kVA	60.30%	29.3 kVA	**Total Conn. Current:**	208 A
				Total Est. Demand Current:	188 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE

Branch Panel: 1LKST

Location: KITCHEN
Supply From: 1LK
Mounting: Surface

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Enclosure: N1/N4XSS COVER
Mains: 100A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CKT	Note
G	1	6 BURNER RANGE	#12	20	1	0.2 / 0.7			1	20	#12	CONVECTION OVEN	2	G
LF	3	CONVECTION STEAMER	#12	20	1		1.0 / 0.7		1	20	#12	CONVECTION OVEN	4	G
G	5	COMBI OVEN	#12	20	2			0.5 / 0.7	1	20	#12	CONVECTION OVEN	6	G
	7					0.5 / 0.7			1	20	#12	MOBILE PROOFER	8	G
G	9	COMBI OVEN	#12	20	2		0.5 / 0.0		1	20	--	SPARE	10	
	11							0.5 / 0.0	1	20	--	SPARE	12	--
LF	13	CONVECTION STEAMER	#12	20	1	1.0 / 0.0			1	20	--	SPARE	14	--
LF	15	TILT BRAISING PAN	#12	20	1		0.2 / 0.0		1	20	--	SPARE	16	--
G	17	CONVECTION OVEN	#12	20	1			0.7 / 0.0	1	20	--	SPARE	18	--
G	19	COMBI OVEN	#12	20	2	0.5 / 0.0			1	20	--	SPARE	20	--
	21						0.5 / 0.0		1	--	--	SPACE	22	--
G	23	COMBI OVEN	#12	20	2			0.5 / 0.0	1	--	--	SPACE	24	--
	25					0.5 / 0.0							26	
--	27	SPACE	--	--	1		0.0 / 0.0		3	30	#10	SPDL	28	
--	29	SPACE	--	--	1			0.0 / 0.0					30	
		Total Load:				3.9 kVA	2.8 kVA	2.8 kVA						
		Total Amps:				33 A	23 A	23 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Kitchen Equipment	9.3 kVA	65.00%	6.0 kVA		
Miscellaneous	0.0 kVA	0.00%	0.0 kVA	**Total Conn. Load:**	9.5 kVA
Receptacles	0.2 kVA	100.00%	0.2 kVA	**Total Est. Demand:**	6.2 kVA
				Total Conn. Current:	26 A
				Total Est. Demand Current:	17 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE

Branch Panel: 1LK

Location: KITCHEN
Supply From: 1TLK
Mounting: Surface

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Enclosure: N1/N4XSS COVER
Mains: 400A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CKT	Note
	1					3.1 / 1.3							2	
G	3	DRYER	#8	40	2		3.1 / 1.3		3	20	#12	DISPOSER (3 HP)	4	
	5	WASHING MACHINE	#12	20	1			1.9 / 1.3					6	
	7	Receptacles JANITOR C108	#12	20	1	0.2 / 1.9			1	20	#12	KITCHEN TWISTLOCK	8	G
	9	Receptacles LOCKERS C109	#12	20	1		0.6 / 1.2		1	20	#12	Lighting KITCHEN HOOD	10	
	11	Receptacles OFFICE-1 C107-1	#12	20	1			0.9 / 0.9	2	20	#12	HEATED CABINET	12	LF
	13	Receptacles KITCHEN C106	#12	20	1	0.2 / 0.9							14	
	15	Receptacles KITCHEN C106	#12	20	1		0.2 / 1.4		1	20	#12	ICE MACHINE	16	
	17							0.7 / 0.4	1	20	#12	Receptacles SERVING C105	18	
G	19	40 QT MIXER	#12	20	3	0.7 / 0.5			1	20	#12	DOOR BELL	20	LF
	21						0.7 / 0.5		1	20	#12	EF-12	22	
	23							1.3 / 0.4	1	20	#12	KEF-4	24	
	25	DISPOSER (3 HP)	#12	20	3	1.3 / 1.9			1	20	#12	EF-13	26	
	27						1.3 / 0.5		1	20	#12	ROOF RECEPTACLES	28	
	29	Receptacles Room C106, C105	#12	20	1			0.4 / 1.5	1	20	#10	HAND DRYER	30	
LF	31	HEATED CABINET	#12	20	2	1.7 / 0.2			1	20	#12	Receptacles	32	
	33						1.7 / 0.2		1	20	#12	MENU BOARD	34	G
LF	35	HEATED CABINET	#12	20	2			1.7 / 0.2	1	20	#12	MENU BOARD	36	G
	37					1.7 / 0.2			1	20	#12	MENU BOARD	38	G
G	39	Lighting KITCHEN HOOD	#12	20	1		1.7 / 0.2		1	20	#12	MENU BOARD	40	G
G	41	KITCHEN TWISTLOCK	#12	20	1			1.9 / 0.0	1	20	--	SPARE	42	--
--	43	SPARE	--	20	1	0.0 / 0.0			1	--	--	SPACE	44	--
--	45	SPARE	--	20	1		0.0 / 0.0		1	--	--	SPACE	46	--
--	47	SPARE	--	20	1			0.0 / 0.0	1	--	--	SPACE	48	--
--	49	SPARE	--	20	1	0.0 / 3.2							50	
--	51	SPARE	--	20	1		0.0 / 3.2		3	60	#4	LOAD CENTER	52	
--	53	SPARE	--	20	1			0.0 / 3.2					54	
--	55	SPARE	--	20	1	0.0 / 3.2							56	
--	57	SPARE	--	20	1		0.0 / 3.2		3	60	#4	LOAD CENTER	58	
--	59	SPARE	--	20	1			0.0 / 3.2					60	
--	61	SPARE	--	20	1	0.0 / 4.3							62	
--	63	SPARE	--	20	1		0.0 / 4.3		3	60	#4	LOAD CENTER	64	
--	65	SPARE	--	20	1			0.0 / 4.3					66	
--	67	SPARE	--	20	1	0.0 / 4.3							68	
--	69	SPARE	--	20	1		0.0 / 4.3		3	60	#4	LOAD CENTER	70	
--	71	SPARE	--	20	1			0.0 / 4.3					72	
	73					0.0 / 3.9							74	
--	75	SPARE	--	40	3		0.0 / 2.8		3	100	#2	1LKST	76	ST
	77							0.0 / 2.8					78	
	79					0.0 / 0.0							80	
--	81	SPARE	--	50	3		0.0 / 0.0		3	30	#10	SPDL	82	
	83							0.0 / 0.0					84	
		Total Load:				34.6 kVA	32.4 kVA	31.1 kVA						
		Total Amps:				290 A	272 A	259 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	1.4 kVA	100.00%	1.4 kVA		
Kitchen Equipment	77.6 kVA	65.00%	50.4 kVA	**Total Conn. Load:**	98.2 kVA
Lighting	2.9 kVA	125.00%	3.6 kVA	**Total Est. Demand:**	71.7 kVA
Miscellaneous	10.6 kVA	100.00%	10.6 kVA	**Total Conn. Current:**	273 A
Receptacles	5.7 kVA	100.00%	5.7 kVA	**Total Est. Demand Current:**	199 A

Notes:
1- PROVIDE 30mA EQUIPMENT GFCI

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
M - PROVIDE METERING DEVICE
SH|T - PROVIDE SHUNT TRIP BREAKER

Stantec

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Consultant

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Registration: F-4111
Project No: 2550-01131-00

Notes

2	ADDENDUM #4		2026.03.11
1	ADDENDUM #1		2026.02.13
Revision		By	Appd YYYY.MM.DD

Issue for Permit and Proposal		2026.01.26
Issued	By	Appd YYYY.MM.DD

Permit/Seal



Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ELECTRICAL PANEL SCHEDULES

Project No.
214001329

Scale

Revision
2

Drawing No.
E706

3/10/2026 9:56:13 AM

ORIGINAL SHEET - ARCH E1

LIGHTING FIXTURE SCHEDULE - LIGHTING ALTERNATE A

Type Mark	CATALOG NUMBER MANUFACTURER	MODEL	MOUNTING	LAMP TYPE	CCT	CRI	VOLTAGE	LOAD	REMARKS
A1	COOPER LIGHTING METALUX	24GR-LD5-64-F1-UNV-L840-CD-U	RECESSED	48.1W LED 6,462 LUMENS	4000 K	80	277	48 W	2'X4' LED TROFFER MATCHING CROSBY HIGH SCHOOL FOR SHARED ATTIC STOCK.
A2	COOPER LIGHTING METALUX	24GR-LD5-FAB-64-F1-UNV-L840-CD-U	RECESSED	48.1W LED 6,462 LUMENS	4000 K	80	277	48 W	2'X4' LED TROFFER MATCHING CROSBY HIGH SCHOOL FOR SHARED ATTIC STOCK.
A3	COOPER LIGHTING METALUX	24GR-LD5-48-F1-UNV-L840-CD-U	RECESSED	33W LED 4,948 LUMENS	4000 K	80	277	33 W	2'X4' LED TROFFER MATCHING STYLE OF CROSBY HIGH SCHOOL.
C1	ARON	DUOT1-FF-4FA-1000-B3-40K8-UNV-DM-W	RECESSED	32.4W LED 4,000 LUMENS	4000K	80	277	32 W	4' RECESSED LINEAR FIXTURE. DLC LISTED. WIDE DIFFUSER.WHITE FINISH.
C2	ARON	DUOT1-FF-6FA-750-B3-40K8-UNV-DM-W	RECESSED	56.1W LED 4,500 LUMENS	4000K	80	277	56 W	6' RECESSED LINEAR FIXTURE. DLC LISTED. WIDE DIFFUSER.
C3	ARON	DUOT1-FF-8FA-1000-B3-40K8-UNV-DM-W	RECESSED	68W LED 8,000 LUMENS	4000K	80	277	68 W	8' RECESSED LINEAR FIXTURE. DLC LISTED. WIDE DIFFUSER.
C4	ARON	DUOT1-FF-C12-750-B3-40K8-UNV-DM-W	RECESSED	103.8W LED 9,000 LUMENS	4000K	80	277	104 W	12' RECESSED LINEAR CORRIDOR FIXTURE. DLC LISTED. WIDE DIFFUSER.
C5	NULITE	RP44-D-FRF-15-L-40-UNV-D-1-1-SV-SR-B-48-120"	SUSPENDED	123W LED 15,080 LUMENS	4000K	80	277	123 W	10' SUSPENDED DIRECT LINEAR FIXTURE. FLUSH LENS. BAA COMPLIANT.
C6	ALW LIGHTING	LPX-4-R-T5-FN-S10-10-40-80-LG-V01-ALUMINUM-UNV	RECESSED	90W LED 13,090 LUMENS	4000K	80	277	90 W	10' RECESSED DIRECT LINEAR FIXTURE. ALUMINUM FINISH.
C7	ALW LIGHTING	LPX-2-D-SP-F-N-S22-07-40-80-LG-V01-N-N-N-N-N-AS-B16-1C-UNV	SUSPENDED	137.94W LED 21,670 LUMENS	4000K	80	277	138 W	22' SUSPENDED DINING DIRECT LINEAR FIXTURE. ALUMINUM FINISH.
C8	ALW LIGHTING	LPX-4-D-SP-F-N-S18-05-40-80-SL-V01-N-N-N-N-N-N-N-N-N-NN-N-N-AS-B16-1C-UNV-N-N-N-DC	SUSPENDED	197.46W LED 22,014 LUMENS	4000K	80	277	197 W	18' SUSPENDED DANCE DIRECT LINEAR FIXTURE. ALUMINUM FINISH.
C10	NEORAY	DTR3-DS-4F0-100D-940-FLL-1-D-U-DD-XX-JB-XX	SURFACE MOUNT	51W LED 6,197 LUMENS	4000 K	80	277	51 W	SURFACE MOUNT CANOPY FIXTURE. WET LOCATION LISTED. COORDINATE FINISH WITH ARCHITECT.
C13	ALW LIGHTING	LP1/MR1SD-CQ36-SS-4000K-0/10V/1%-EXT/F-AS-UNV-N	SUSPENDED	20.7W LED 860 LUMENS	4000 K	80	277	27 W	SUSPENDED MOUNT DIRECT 36" RADIUS LINEAR SECTION. ALL SECTIONS ARE TO BE CONNECTED TO FORM A LARGE COMPLEX CURVE. REFER TO RCP OR FLOORPLANS FOR THE QUANTIES AND PATTERNS OF SECTIONS.
C14	ALW LIGHTING	LP1/MR1SD-CQ60-SS-4000K-0/10V/1%-EXT/F-AS-UNV-N	SUSPENDED	34.5W LED 1,433 LUMENS	4000 K	80	277	35 W	SUSPENDED MOUNT DIRECT 60" RADIUS LINEAR SECTION. ALL SECTIONS ARE TO BE CONNECTED TO FORM A LARGE COMPLEX CURVE. REFER TO RCP OR FLOORPLANS FOR THE QUANTIES AND PATTERNS OF SECTIONS.
C15	ALW LIGHTING	LP1/MR1SD-CQ72-SS-4000K-0/10V/1%-EXT/F-AS-UNV-N	SUSPENDED	41.4W LED 1,720 LUMENS	4000 K	80	277	41 W	SUSPENDED MOUNT DIRECT 72" RADIUS LINEAR SECTION. ALL SECTIONS ARE TO BE CONNECTED TO FORM A LARGE COMPLEX CURVE. REFER TO RCP OR FLOORPLANS FOR THE QUANTIES AND PATTERNS OF SECTIONS.
C16	ALW LIGHTING	LPX-2-B-SP-F-F-S16-05-40-80-SL-V01-05-40-80-SL-V01-AS-B16-1C-UNV-N-N-N-DC	SUSPENDED	117.76W LED 8046 LUMENS DOWN 8176 LUMENS UP	4000 K	80	277	118 W	16' SUSPENDED DIRECT/INDIRECT LINEAR FIXTURE. DLC LISTED. WIDE DIFFUSER.
C17	ALW LIGHTING	LPX-2-B-SP-F-F-S8-05-40-80-SL-V01-05-40-80-SL-V01-AS-B16-1C-UNV-N-N-N-DC	SUSPENDED	58.88W LED, 4024 LUMENS DOWN 4088 LUMENS UP	4000K	80	277	59 W	8' SUSPENDED DIRECT/INDIRECT LINEAR FIXTURE. DLC LISTED. WIDE DIFFUSER.
C18	ALW LIGHTING	LPX-4-R-T5-FN-S4-10-40-80-LG-V01-ALUMINUM-UNV	RECESSED	27W LED 4,000 LUMENS	4000K	80	277	27 W	4' RECESSED LINEAR FIXTURE. DLC LISTED. WIDE DIFFUSER. ALUMINUM FINISH.
C19	ARON	LPX-4-R-T5-FN-S8-10-40-80-LG-V01-ALUMINUM-UNV	RECESSED	54W LED 8,000 LUMENS	4000K	80	277	54 W	8' RECESSED LINEAR FIXTURE. DLC LISTED. WIDE DIFFUSER. ALUMINUM FINISH.
C20	ARON	LPX-4-R-T5-FN-S12-05-40-80-LG-V01-ALUMINUM-UNV	RECESSED	51.6W LED 6,000 LUMENS	4000K	80	277	52 W	12' RECESSED LINEAR CORRIDOR FIXTURE. DLC LISTED. WIDE DIFFUSER.
C21	NULITE	RF4-D-FRF-10-L40-UNV-D-1-1-FINISH-12'	RECESSED	94.8W LED 11,952 LUMENS	4000K	80	277	95 W	12' RECESSED LINEAR CORRIDOR FIXTURE. DLC LISTED. WIDE DIFFUSER.
D1	COOPER LIGHTING HALO	HCDJB-L10-940-D-HCD8T-R-MW	RECESSED	10W LED 1,008 LUMENS	4000K	80	277	10 W	8-INCH MEDIUM BEAM WIDTH DOWNLIGHT. MATT WHITE FINISH.
D2	BROWNLEE	2750-12-NT-U10-NT-24D-BLC-40K-CE2	SUSPENDED	10W LED 930 LUMENS	4000K	80	277	10 W	12-INCH NARROW BEAM PENDANT CYLINDOR. NICKEL TONE FINISH.
D3	COOPER LIGHTING HALO	ML3LSFE10RMW	RECESSED	14.2W LED 800 LUMENS	4000K	80	277	14 W	3" DOWNLIGHT. ADJUST THE SETTINGS TO MATCH LUMENS AND COLOR SPECIFIED PRIOR TO INSTALL.
D4	BROWNLEE	2750-24-NT-U10-NT-24D-BLC-40K-CE2	SUSPENDED	10W LED 930 LUMENS	4000K	80	277	10 W	12-INCH NARROW BEAM PENDANT CYLINDOR. NICKEL TONE FINISH.
D5	BROWNLEE	2750-06-NT-U10-NT-24D-BLC-40K-CE2	SUSPENDED	10W LED 930 LUMENS	4000K	80	277	10 W	12-INCH NARROW BEAM PENDANT CYLINDOR. NICKEL TONE FINISH.
G1	COOPER LIGHTING METALUX	SSLED-L5SL-15-W-UNV-L840-CD-1	SUSPENDED	110.74 W LED 15612 LUMENS	4000 K	80	277	111 W	IMPACT RESISTANT GYM HIGH BAY FIXTURE OVER COURT.
G2	COOPER LIGHTING METALUX	SSLED-L5SL-12-W-UNV-L840-CD-1	SUSPENDED	85.3 W LED 12594 LUMENS	4000 K	80	277	85 W	IMPACT RESISTANT GYM HIGH BAY FIXTURE OVER BLEACHERS.
K1	COOPER LIGHTING METALUX	24CGTX-55-L840	RECESSED	44.1W LED 5,590 LUMENS	4000 K	80	277	44 W	2'X4' LED FLAT PANEL WITH NSF RATINGS AND HIGHER LUMEN PACKAGE FOR KITCHEN
L1	COOPER LIGHTING METALUX	4SNLED-LD5-50SL-SLC-UNV-L840-CD-1-U	CHAIN HUNG	46W LED 5,271 LUMENS	4000 K	80	277	46 W	4' CHAIN HUNG LINEAR FOR OPEN CEILING MEPT ROOMS.
L1E	COOPER LIGHTING METALUX	4SNLED-LD5-50SL-SLC-UNV-L840-CD-1-U-EL14W	CHAIN HUNG	46W LED 5,271 LUMENS	4000 K	80	277	46 W	4' CHAIN HUNG LINEAR FOR OPEN CEILING MEPT ROOMS.
L1W	COOPER LIGHTING METALUX	4SNLED-LD5-50SL-SLC-UNV-L840-CD-1-U	WALL MOUNT	46W LED 5,271 LUMENS	4000 K	80	277	46 W	4' WALL MOUNT LINEAR FOR OPEN CEILING MEPT ROOMS.
W1	COOPER LIGHTING LUMARK	XTORA5A-DIM-DARK-PLATINUM	WALL	50W LED 4,282 LUMENS	4000 K	80	277	50 W	WALLPACK FIXTURE, MATCH ADJACENT HIGH SCHOOL.
W2	COOPER LIGHTING MCGRAW EDISON	GWC-SA1-C740-U-T4FT-DP	WALL	38.7W LED 4,996 LUMENS	4000 K	80	277	39 W	FORWARD THROW EXTERIOR WALLPACK.
W3	NULITE	RXT-W-D-ASYM-09L40-UNV-D-1-1-XX-MR-2	MULLION	16.74W LED 1,808 LUMENS	4000 K	80	277	17 W	2FT DIRECT ONLY LINEAR MULLION MOUNTED.
W4	LIGHTWAY	ADAW-12-LED-F1P-4-M13-WSA-DIM	WALL	15W LED 1,361 LUMENS	4000 K	80	277	15 W	HALF CYLINDOR WALL SCONCE, IMPACT RESISTANT ACYRILLIC DIFFUSER.
X1	SURE-LITES	APX6R	UNIVERSAL	LED	4000 K	80	277	5 W	UNIVERSAL LED EXIT SIGN WITH WHITE HOUSING, RED LETTERING.
X1M	SURE-LITES	EUX61RWH	MULLION	LED	4000 K	80	277	5 W	MULLION MOUNT LED EXIT SIGN, RED LETTERING.
X1V	SURE-LITES	LPXW-6-1-R-WH	UNIVERSAL	LED	4000 K	80	277	5 W	WET LOCATION LISTED VANDAL RESISTANT UNIVERSAL LED EXIT SIGN WITH WHITE HOUSING, RED LETTERING.
X2	SURE-LITES	APX6R	UNIVERSAL	LED	4000 K	80	277	5 W	UNIVERSAL LED EXIT SIGN WITH WHITE HOUSING, RED LETTERING.
X2V	SURE-LITES	LPXW-6-2-R-WH	UNIVERSAL	LED	4000 K	80	277	5 W	WET LOCATION LISTED VANDAL RESISTANT UNIVERSAL LED EXIT SIGN WITH WHITE HOUSING, RED LETTERING.

PROVIDE AT LEAST 1 SPARE FIXTURE OF EACH TYPE TO THE DISTRICT AND 1 ADDITIONAL SPARE FOR EVERY 50 FIXTURES OF A GIVEN TYPE USED IN THE BUILDING. COORDINATE WITH THE DISTRICT'S REPRESENTATIVE TO DELIVER/STORE SPARES EITHER ONSITE OR AT ANOTHER BUILDING IN THE DISTRICT AT THEIR DISCRETION.

LIGHTING FIXTURE SCHEDULE - LIGHTING ALTERNATE B

Type Mark	CATALOG NUMBER MANUFACTURER	MODEL	MOUNTING	LAMP TYPE	CCT	CRI	VOLTAGE	LOAD	REMARKS
A1	COOPER LIGHTING METALUX	24CGTX-65HE-L840	RECESSED	49.9W LED 6,610 LUMENS	4000 K	80	277	50 W	2x4 FLAT PANEL, OPAQUE ACRYLIC LENS, 0-10V DIMMING, DLC LISTED.
A2	COOPER LIGHTING METALUX	24CGTX-65HE-L840-BLKF	RECESSED	49.9W LED 6,610 LUMENS	4000 K	80	277	50 W	2x4 FLAT PANEL, OPAQUE ACRYLIC LENS, 0-10V DIMMING, DLC LISTED, BLACK FRAME.
A3	COOPER LIGHTING METALUX	24CGT4540C	RECESSED	38W LED 4,432 LUMENS	4000 K	80	277	38 W	2x4 FLAT PANEL, OPAQUE ACRYLIC LENS, 0-10V DIMMING, DLC LISTED.

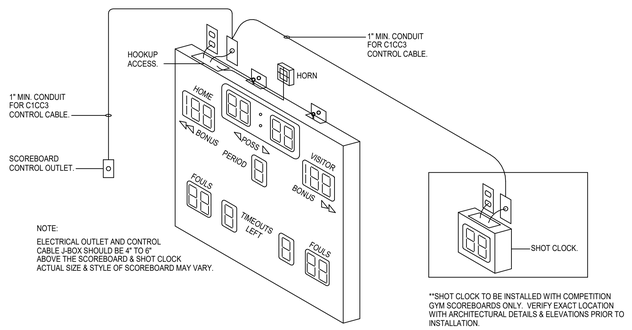
PROVIDE AT LEAST 1 SPARE FIXTURE OF EACH TYPE TO THE DISTRICT AND 1 ADDITIONAL SPARE FOR EVERY 50 FIXTURES OF A GIVEN TYPE USED IN THE BUILDING. COORDINATE WITH THE DISTRICT'S REPRESENTATIVE TO DELIVER/STORE SPARES EITHER ONSITE OR AT ANOTHER BUILDING IN THE DISTRICT AT THEIR DISCRETION.

FOR ANY FIXTURES NOT DESCRIBED IN THE LIGHTING ALTERNATE B SCHEDULE PROVIDE THE FIXTURE SPECIFIED IN THE LIGHTING ALTERNATE A SCHEDULE.

ALL FIXTURE WITH FIELD ADJUSTABLE SETTINGS MUST HAVE THEIR SETTINGS VERIFIED AND ADJUSTED AS NEEDED TO MATCH THE FIXTURE SCHEDULE PRIOR TO INSTALL.

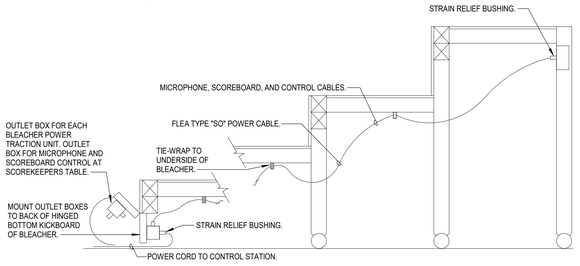
ALL FIXTURE FINISHES WILL BE CONFIRMED WITH THE ARCHITECT PRIOR ORDERING.

ALL MULLION MOUNTED FIXTURES WILL BE MOCKED UP AND PRESENTED FOR APPROVAL BY THE ARCHITECTURAL TEAMS AND THE DISTRICT'S REPRESENTATIVE PRIOR TO ROUGH-IN.

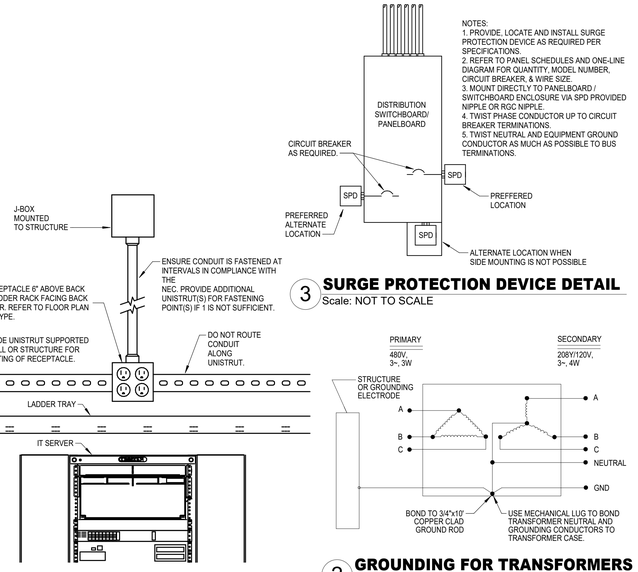


**SHOT CLOCK TO BE INSTALLED WITH COMPETITION GYM SCOREBOARDS ONLY. VERIFY EXACT LOCATION WITH ARCHITECTURAL DETAILS & ELEVATIONS PRIOR TO INSTALLATION.

5 GYMNASIUM SCOREBOARD DIAGRAM
Scale: N.T.S.



4 GYMNASIUM BLEACHER RECEPTACLE
Scale: NOT TO SCALE

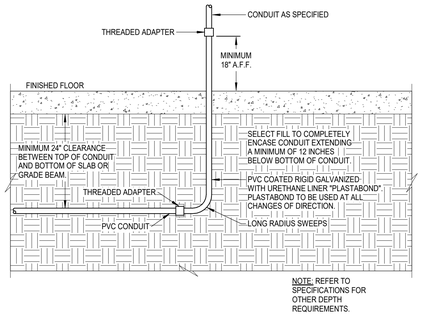


NOTES:
1. PROVIDE, LOCATE AND INSTALL SURGE PROTECTION DEVICE AS REQUIRED PER SPECIFICATIONS.
2. REFER TO PANEL SCHEDULES AND ONE-LINE DIAGRAM FOR QUANTITY, MODEL NUMBER, CIRCUIT BREAKER, & WIRE SIZE.
3. MOUNT DIRECTLY TO PANELBOARD / SWITCHBOARD ENCLOSURE VIA SPD PROVIDED NIPPLE OR RGC NIPPLE.
4. TWIST PHASE CONDUCTOR UP TO CIRCUIT BREAKER TERMINATIONS.
5. TWIST NEUTRAL AND EQUIPMENT GROUND CONDUCTOR AS MUCH AS POSSIBLE TO BUS TERMINATIONS.

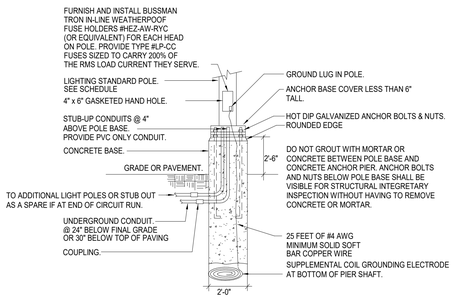
3 SURGE PROTECTION DEVICE DETAIL
Scale: NOT TO SCALE

2 GROUNDING FOR TRANSFORMERS
Scale: NOT TO SCALE

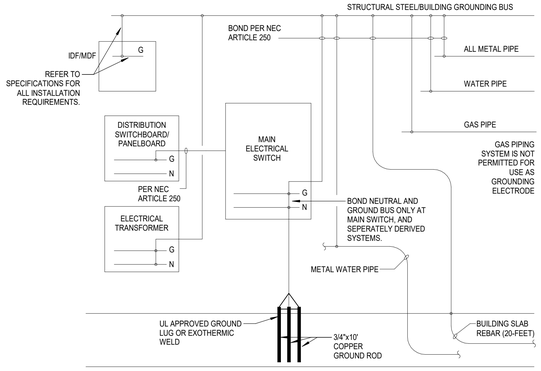
7 IDF-MDF RACK RECEPTACLES
Scale: NOT TO SCALE



8 CONDUIT BELOW BUILDING SLAB
Scale: NOT TO SCALE



6 ELECTRICAL REQUIREMENTS AT POLE BASE
Scale: NOT TO SCALE



1 SYSTEM GROUNDING DETAIL
Scale: NOT TO SCALE

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
	SINGLE HEAD SITE POLE
	DOUBLE HEAD SITE POLE
LINE VOLTAGE SWITCHES - ALL NON-LIGHTING TOGGLE SWITCHES ARE TO BE MOTOR RATED UNLESS NOTED OTHERWISE	
$	LINE VOLTAGE MOTOR RATED TOGGLE SWITCH. REFER TO TAG FOR ADDITIONAL REQUIREMENTS
LIGHTING CONTROLS	
$R	LIGHTING CONTROL SWITCH(S) - REFER TO ROOM CONTROL'S TAG AND THE CONTROL SCHEDULE FOR SWITCH REQUIREMENTS.
R'X'	ROOM CONTROLS TAG. REFER TO LIGHTING CONTROLS SCHEDULE ROW R'X' FOR THE DESCRIPTION OF CONTROLS FOR THE ROOM THIS TAG IS LOCATED IN OR TAGGED FOR. NON-EMERGENCY LIGHTING POWER WILL BE FROM THE CIRCUIT ADJACENT TO THE TAG.
E'X'	EMERGENCY CONTROLS TAG. REFER TO LIGHTING CONTROLS SCHEDULE ROW E'X' FOR THE DESCRIPTION OF THE EMERGENCY CONTROLS FOR THE ROOM THIS TAG IS LOCATED IN OR TAGGED FOR. EMERGENCY LIGHTING POWER WILL BE FROM THE CIRCUIT ADJACENT TO THE TAG.
<P>	CEILING MOUNTED PHOTO SENSOR
<V>	CEILING MOUNTED VACANCY SENSOR, MANUAL ON / AUTO OFF
<S>	CEILING MOUNTED OCCUPANCY SENSOR, AUTO ON / AUTO OFF
RECEPTACLES AND OUTLETS	
	DUPLEX RECEPTACLE
	125/250 VOLT, 1 PHASE, 3-WIRE, VERIFY FINAL SIZE WITH EQUIPMENT PRIOR TO INSTALLATION.
	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 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.
MISCELLANEOUS EQUIPMENT	
T	TRANSFORMER FOR DOOR BELL/BUZZER
H	HAND DRYER - DIVISION 26 TO MAKE FINAL CONNECTION. VERIFY BREAKER WITH EQUIPMENT MANUFACTURER. PROVIDE WITH A LOCK-OFF BREAKER
MOTOR CONTROLLERS AND EQUIPMENT	
	MOTOR, MAKE FINAL MOTOR CONNECTION
	DISCONNECT SWITCH/ENCLOSED BREAKER - REFER TO TAG FOR ADDITIONAL REQUIREMENTS
	COMBINATION MOTOR STARTER/DISCONNECT 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	
P	POLES
A	AMPACITY
AF	AMPACITY FUSE
C	CONTACTOR
NF	NON-FUSE
WP	INDICATES WEATHERPROOF
WG	INDICATES WIREGUARD
H	INDICATES HORIZONTAL
HB	INDICATES HIGH BAY
MH	INDICATES MOUNTING HEIGHT OF FIXTURE. VERIFY FINAL HEIGHT WITH ARCHITECT AND FIXTURE PRIOR TO INSTALLATION. IF THE FIXTURE IS PENDANT MOUNTED, THEN THE MOUNTING HEIGHT IS MEASURED FROM THE FINISHED FLOOR ON THE LEVEL OF THE FLOORPLAN TO THE FIXTURE BOTTOM.
TL	INDICATES TWIST LOCK
NL	LIGHT FIXTURE ON NIGHT LIGHT CIRCUIT
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH
LSI	ADJUSTABLE LONG, SHORT, INSTANTANEOUS SETTINGS
GFP	GROUND FAULT PROTECTION DEVICE
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.

LIGHTING CONTACTOR SCHEDULE

CONTACTOR NO.	CIRCUIT NO.	CONTROL SOURCE	CONTACTOR LOCATION	LOAD(S) SERVED	COIL VOLTAGE	COIL CIRCUIT
C1	T1:1HA1-10	BMCS	ELEC A104	SOUTH WALLPACKS AND CANOPIES	120V	1LA1-121
C2	T1:1HD-65 T2:1HD-75	BMCS	MECH D114	NORTHWEST WALLPACKS AND CANOPIES	120V	1LD-71
C3	T1:1HB1-14	BMCS	MECH B133	SOUTHWEST WALLPACKS	120V	1LB2-113
C4	T1:1HB1-12	BMCS	MECH B133	SOUTH PARKING CANOPY	120V	1LB2-113
C5	T1:1HD-71	BMCS	MECH D114	WEST PARKING CANOPY	120V	1LD-71
C6	T1:1HA1-39 T2:1HA1-41	BMCS	ELEC A104	SOUTHEAST POLE LIGHTS	120V	1LA1-121
C7	T1:1HD-49 T2:1HD-51	BMCS	MECH D114	WEST POLE LIGHTS	120V	1LD-71
C8	T1:1HD-49 T2:1HD-51	BMCS	MECH D114	NORTH POLE LIGHTS	120V	1LD-71

Stantec

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Project No: 2550-01131-00

Notes

Revision	By	Appd	
2 ADDENDUM #4			2026.03.11
1 ADDENDUM #1			2026.02.13
Issue for Permit and Proposal			2026.01.26
Issued	By	Appd	YYYY.MM.DD

Permit/Seal



Client/Project Logo

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
ELECTRICAL DETAILS, SCHEDULES AND SYMBOL LEGEND

Project No.
214001329

Scale
NOT TO SCALE

Revision
2

Drawing No.
E801

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ORIGINAL SHEET - ARCH E1

TECHNOLOGY LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
*# ▼	WALL MOUNTED NETWORK OUTLET D#: NUMBER OF DATA DROPS IN OUTLET AP: WIRELESS ACCESS POINT	+18" AFF, UNLESS OTHERWISE NOTED	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
V# ▽	COMMUNICATIONS OUTLET	FIELD COORDINATE	FIELD COORDINATE	
W ▼	WALL MOUNTED NETWORK OUTLET	+44" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
B ▽	WALL MOUNTED BOX FOR FUTURE USE.	+18" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
D# ▼	FLOOR MOUNTED NETWORK OUTLET	N/A	COORDINATE WITH ELECTRICAL CONTRACTOR	FINISHED HARDWARE PROVIDED BY DIV 27
*#	CEILING MOUNTED NETWORK OUTLET AP: WIRELESS ACCESS POINT D#: NETWORK OUTLET	ABOVE CEILING	CEILING BRACKET WITH BISCUIT BLOCK	

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. CONDUIT STUB UP AND SLEEVES SHALL HAVE A SOLID UNCUT PLASTIC PROTECTIVE BUSHING.
5. NO CONDUITS SHALL EXCEED FOR 40% MAXIMUM FILL RATIO. CONTRACTOR TO PROVIDE ADDITIONAL CONDUITS REQUIRED.

ACCESS CONTROL LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
ACP	ACCESS CONTROL SYSTEM, CONTROL PANEL.	+60" AFF TO CENTER	AS REQUIRED	COORDINATE POWER. NOTE #4.
CR	ACCESS CONTROL PROXIMITY CARD READER.	+42" A.F.F.	1-G, 3/4" C	
CR	DOOR MOUNTED ACCESS CONTROL PROXIMITY CARD READER THAT IS INTEGRATED INTO THE DOOR HARDWARE.	+42" AFF	N/A	
DS	2-WAY AUDIO/VIDEO INTERCOM DOOR STATION.	+42" AFF	*W: 1-G, 3/4" C *M: 3/4"C	COORDINATE POWER. NOTE #4.
DS	DOOR MOUNTED, 2-WAY AUDIO/VIDEO INTERCOM DOOR STATION.	+42" AFF, FIELD COORDINATE		COORDINATE POWER. NOTE #4.
MS	2-WAY AUDIO/VIDEO INTERCOM MASTER STATION.	DESK MOUNTED UNO		COORDINATE POWER. NOTE #4.
DR	DOOR RELEASE BUTTON	COORDINATE WITH GC	1-G, 3/4" C	
REX	PIR MOTION REQUEST TO EXIT DEVICE			
DP	DOOR PROP ALARM	CEILING MOUNTED UNO	N/A	N/A
DC	DPDT MAGNETIC DOOR CONTACT/DOOR POSITION SENSOR.	FLUSH MOUNTED IN DOOR FRAME	N/A	PROVIDED BY ACS CONTRACTOR.
RFID	VEHICLE RFID TAG READER.		FIELD COORDINATE RACEWAYS AND BACK BOXES	PROVIDE NECESSARY EQUIPMENT FOR A FULLY FUNCTIONAL VEHICLE ENTRY POINT

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK

INTERCOM LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
ICS	INTERCOM COMMUNICATIONS SYSTEM HEAD END UNIT.	FLOOR MOUNTED	COORDINATE WITH EC	COORDINATE POWER WITH EC
S	CEILING MOUNTED INTERCOM SPEAKER, LAY-IN CEILING.	CEILING	CONTRACTOR PROVIDED	
S2	CEILING MOUNTED INTERCOM SPEAKER, HARD CEILING.	CEILING	CONTRACTOR PROVIDED	
S3	WALL MOUNTED INTERIOR INTERCOM SPEAKER	REFERENCE FLOOR PLANS	CONTRACTOR PROVIDED	
S4	WALL MOUNTED EXTERIOR INTERCOM SPEAKER	+10' AFF UNO	CONTRACTOR PROVIDED	
VC	WALL MOUNTED VOLUME CONTROL	+48" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
CB	INTERCOM CALL BUTTON	+48" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
C	SINGLE FACE CLOCK	+8'-0" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
C2	DOUBLE FACE CLOCK	+8'-0" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
RPS	REMOTE PROGRAM SOURCE	DESK TOP	COORDINATE WITH EC	NOTE #5
ACS	ADMINISTRATIVE CALL STATION.	DESK TOP	N/A	NOTE #5
LD	LOCKDOWN BUTTON	+48" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. THE SYSTEM INTEGRATOR SHALL COORDINATE ALL BOX AND CONDUIT SIZE REQUIREMENTS PRIOR TO ROUGH-IN BY THE PROJECTS ELECTRICAL CONTRACTOR.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK

VIDEO SURVEILLANCE LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
	WALL/CORNER MOUNT 4-SENSOR CAMERA	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5
	CEILING MOUNTED 4-SENSOR CAMERA	CEILING		NOTE #5
	2-SENSOR CAMERA W: INDICATES WALLMOUNTED CAMERA	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5
	1-SENSOR CAMERA W: INDICATES WALLMOUNTED CAMERA	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. THE SYSTEM INTEGRATOR SHALL COORDINATE ALL BOX AND CONDUIT SIZE REQUIREMENTS PRIOR TO ROUGH-IN BY THE PROJECTS ELECTRICAL CONTRACTOR.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK

AUDIO/VIDEO LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
WMP ▽	WALL MOUNTED PROJECTOR AV OUTPUT OUTLET	+103" AFF UNO	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	NOTE #6
CMP	CEILING MOUNTED PROJECTOR AV OUTPUT OUTLET	CEILING MOUNTED	N/A	NOTE #6
AV-1 ▽	WALL MOUNTED AUDIO/VIDEO INPUT OUTLET	+18" AFF UNO	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	
FSD-1 ▽	WALL MOUNTED FLAT SCREEN DISPLAY AUDIO/VIDEO OUTPUT OUTLET	REFERENCE FLOOR PLAN	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #6
FSD-2 ▽	WALL MOUNTED FLAT SCREEN DISPLAY AUDIO/VIDEO OUTPUT OUTLET ASSOCIATED WITH AV-1 INPUT OUTLET	REFERENCE FLOOR PLAN	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	NOTE #6
IVD ▽	INTERACTIVE VIDEO DISPLAY AUDIO/VIDEO OUTPUT OUTLET	REFERENCE FLOOR PLAN	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	NOTE #6
CP ▽	AV CONTROL PANEL	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. THE SYSTEM INTEGRATOR SHALL COORDINATE ALL BOX AND CONDUIT SIZE REQUIREMENTS PRIOR TO ROUGH-IN BY THE PROJECTS ELECTRICAL CONTRACTOR.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK
6. PROVIDE AND INSTALL TWO (2) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK

LOCAL SOUND SYSTEM LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
LS	LOCAL SOUND SYSTEM SPEAKER	CEILING MOUNT UNO	CONTRACTOR PROVIDED BACK BOX OR 4"X4"X2 1/8" J BOX WITH COVER, 1"C	
LSC	LOCAL SOUND SYSTEM CONTROL PLATE	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
MI	MICROPHONE INPUT	+18" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
MA	COMBINATION OUTLET CONSISTING OF ONE (1) MICROPHONE INPUT AND ONE (1) AUXILIARY INPUT	+18" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
LA	LOCAL AMPLIFIER	ABOVE CEILING	PLENUM RATED ENCLOSURE	NOTE #6
H	HANGING MICROPHONE	CEILING MOUNT		
ABM	AUXILIARY INPUT AND BLUETOOTH MIXER	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
RACK	VENUE SPECIFIC LOCAL SOUND SYSTEM HEAD END RACK	WALL MOUNT UNO	N/A	
WA	WIRELESS ANTENNA	WALL MOUNT UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
ALA	ASSISTED LISTENING ANTENNA	WALL MOUNT UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
SUB	SUBWOOFER	CEILING MOUNT UNO		

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. THE SYSTEM INTEGRATOR SHALL COORDINATE ALL BOX AND CONDUIT SIZE REQUIREMENTS PRIOR TO ROUGH-IN BY THE PROJECTS ELECTRICAL CONTRACTOR.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK
6. COORDINATE POWER WITH DIV 26

INTRUSION LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
IDP	INTRUSION DETECTION SYSTEM CONTROL PANEL	+60" AFF	TWO(2) - 1"C TO CONTRACTOR PROVIDED BACK BOX	COORDINATE POWER WITH EC. NOTE #5
KP	INTRUSION DETECTION SYSTEM KEYPAD.	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
M	CEILING MOUNTED MOTION DETECTOR	CEILING		
M	WALL MOUNTED MOTION DETECTOR LR: LONG RANGE	REFERENCE FLOOR PLAN	N/A	
GB	CEILING MOUNTED GLASS BREAK DETECTOR	CEILING	N/A	
DC	DPDT MAGNETIC DOOR CONTACT/DOOR POSITION SENSOR.	FLUSH MOUNTED IN DOOR FRAME	N/A	DEVICE PROVIDED BY ACS CONTRACTOR.
SDC	SURFACE MOUNT MAGNETIC DOOR CONTACT.	SURFACE MOUNTED ON DOOR FRAME	N/A	
ODC	OVERHEAD DOOR MOUNT MAGNETIC DOOR CONTACT.	SURFACE MOUNTED ON DOOR FRAME	N/A	
DB	DURESS PANIC BUTTON	UNDER DESK UNO	N/A	

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. REFERENCE DIVISION 28 SPECIFICATION FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK

FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
FACP	FIRE ALARM CONTROL
FAA	FIRE ALARM ANNUNCIATOR PANEL

NOTES:
1. FIRE ALARM SYSTEM IS PERFORMANCE BASED PER SPECIFICATIONS. CONTRACTOR TO REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. A LICENSED FIRE ALARM PLANNING SUPERINTENDENT CERTIFIED TO A MINIMUM LEVEL 3, IN THE SUBFIELD OF FIRE ALARM SYSTEMS THROUGH THE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET), SHALL PROVIDE PLANS AND CALCULATIONS FOR A MANUAL AND AUTOMATIC FIRE DETECTION AND ALARM SYSTEM TO COMPLY WITH THE BUILDING SPACE LAYOUT, BUILDING OCCUPANCY, CURRENT NFPA 72, LOCAL AND STATE CODE REQUIREMENTS, AND THE FIRE ALARM AND DETECTION SYSTEM SPECIFICATIONS.

SUBSCRIPTS AND ABBREVIATIONS

TEXT	DESCRIPTION
'WP'	DEVICE SHALL BE WEATHER PROOF AND RATED FOR EXTERIOR CONDITIONS
•	FIELD COORDINATE ELEVATION
AFF	ABOVE FINISHED FLOOR
'UC'	DEVICE IS TO BE MOUNTED ON THE UNDERSIDE OF THE ELEVATED CANOPY

NOTES TO CONTRACTOR

1. EVERY SYMBOL SHOWN ON LEGEND MAY NOT APPEAR ON DRAWINGS.
2. SYSTEM INSTALLERS SHALL COORDINATE LOCATIONS AND CONNECTIONS WITH THE PROJECT'S ELECTRICAL CONTRACTOR.
3. CONTRACTOR TO PROVIDE PROPERLY GROUNDED LIGHTING PROTECTION ON ALL CABLING ENTERING AND EXITING THE BUILDING.

RESPONSIBILITY MATRIX

SCOPE ITEM	RESPONSIBILITY			NOTES
COMMUNICATIONS - DIVISION 27	OFOI	CFCI	OFCI	
CATEGORY 6/6A STRUCTURED CABLING SYSTEM		✓		
VIDEO DISTRIBUTION SYSTEM - SPECIAL SPACE		✓		
AUDIO DISTRIBUTION SYSTEM - SPECIAL SPACE		✓		
VIDEO DISTRIBUTION SYSTEM - INSTRUCTIONAL SPACE		✓		
AUDIO DISTRIBUTION SYSTEM - INSTRUCTIONAL SPACE		✓		
SPECIAL VENUE PROJECTORS		✓		
CLASSROOM PROJECTORS			✓	
PROJECTOR MOUNTS		✓		
FLAT PANEL DISPLAYS			✓	
FLAT PANEL DISPLAY MOUNTS		✓		
DIGITAL SIGNAGE			✓	
POWERED PROJECTION SCREENS			✓	SEE NOTE 6.
BUILDING INTERCOM/PA, BELL, AND CLOCK SYSTEM		✓		
NETWORK EQUIPMENT				
→ MDF/IDF NETWORK EQUIPMENT	✓			
→ VOIP TELEPHONES			✓	
→ WIRELESS ACCESS POINTS			✓	
→ UNINTERRUPTIBLE POWER SUPPLIES (UPS)			✓	
RACEWAY: CONDUIT, BACK BOXES, SLEEVES, ETC.		✓		SEE NOTE 4.
ELECTRICAL POWER		✓		SEE NOTE 4.
LIFE SAFETY AND SECURITY - DIVISION 28	OFOI	CFCI	OFCI	
ACCESS CONTROL SYSTEM(ACS)		✓		
INTRUSION DETECTION SYSTEM		✓		
DOOR ACCESS VIDEO INTERCOM SYSTEM		✓		
VIDEO SURVEILLANCE SYSTEM (VSS)				
→ VSS SERVERS			✓	
→ VSS CAMERAS			✓	
→ VSS PROGRAMMING		✓		
→ VSS CABLING		✓		SEE NOTE 7.
FIRE ALARM SMOKE DETECTION WITH VOICE EVACUATION		✓		
EMERGENCY RESPONDER RADIO COVERAGE SYSTEM (ERRCS)		✓		
RACEWAY: CONDUIT, BACK BOXES, SLEEVES, ETC.		✓		SEE NOTE 4.
ELECTRICAL POWER		✓		SEE NOTE 4.

OFOI - OWNER FURNISHED AND OWNER INSTALLED
CFCI - CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED
OFCI - OWNER FURNISHED AND CONTRACTOR INSTALLED

RESPONSIBILITY MATRIX NOTES:
1. NONE IN PROJECT.
2. OWNER CONFIGURED, CONTRACTOR INSTALLED AND PATCHED.
3. OWNER CONFIGURED, CONTRACTOR INSTALLED AND PATCHED. CONTRACTOR TO PROVIDE AND INSTALL WALL MOUNT BRACKETS AND HIGH IMPACT ENCLOSURES.
4. BY DIVISION 26.
5. REFERENCE DIVISION 8 FOR DOOR HARDWARE.
6. BY DIVISION 11.
7. BY DIVISION 27.
8. UNLESS SPECIFIED OTHERWISE.

Stantec

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Consultant

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Houston, TX 77064

Registration: F-4111
Project No: 2550-01131-00

Notes

2 ADDENDUM #4			2026.03.11
Revision	By	Appd	YYYY.MM.DD
Issue for Permit and Proposal			2026.01.26
Issued	By	Appd	YYYY.MM.DD

Permit/Seal

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
03-11-2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

202 Red Summit Dr
Crosby, TX 77532

Title
TECHNOLOGY NOTES AND LEGENDS

Project No.
214001329

Scale
12" = 1'-0"

Revision
2

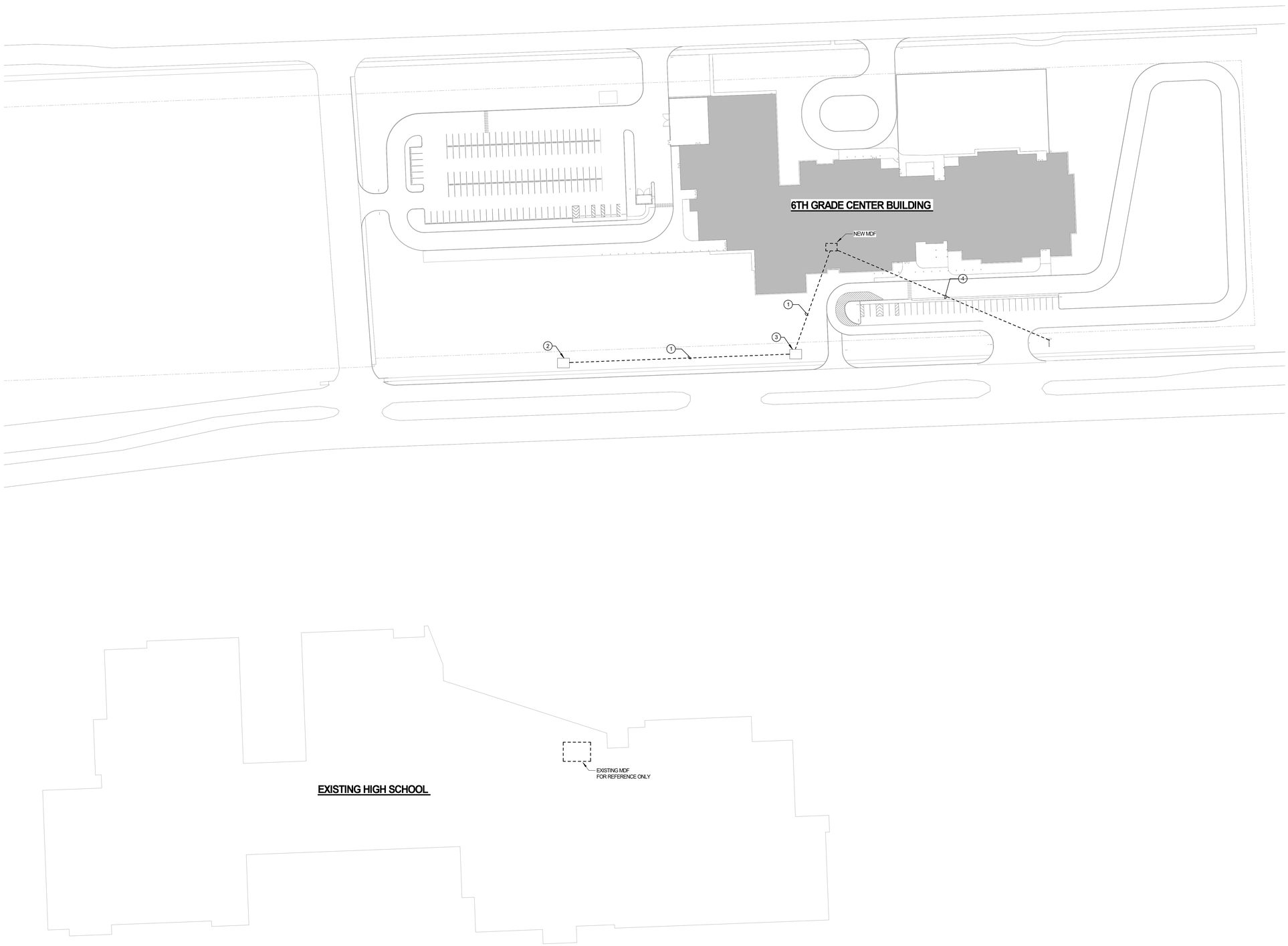
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ORIGINAL SHEET - ARCH E1

TECHNOLOGY KEYED NOTES

1. PROVIDE AND INSTALL (2) 4" CONDUITS FOR FIBER OPTIC CABLING TO NEW BUILDING AS SHOWN. COORDINATE EXACT ROUTING WITH ARCHITECT AND DIVISION 26.
2. LOCATION OF EXISTING COMMUNICATIONS PULL BOX WHERE FIBER TO NEW BUILDING SHALL ORIGINATE
3. PROVIDE AND INSTALL (1) 36" X 48" PULL BOX FOR FIBER OPTIC CABLING AS SHOWN. COORDINATE EXACT INSTALLATION LOCATION WITH ARCHITECT AND DIVISION 26.
4. PROVIDE (1) 1" CONDUIT AND CATEGORY CABLE FOR NEW MARQUEE SIGN.



N

1 **TECHNOLOGY OVERALL SITE PLAN**
Scale: 1" = 60'-0"

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Notes

2 ADDENDUM #4			2026.03.11
Revision	By	Appd	YYYY.MM.DD
Issue for Permit and Proposal			2026.01.26
Issued	By	Appd	YYYY.MM.DD

Permit/Seal

STATE OF TEXAS
BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
03-11-2026

Client/Project Logo

Crosby Independent School District

Client/Project
Crosby ISD

Crosby Sixth Grade Campus

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Crosby, TX 77532

Title
TECHNOLOGY OVERALL SITE PLAN

Project No.
214001329

Scale
1" = 60'-0"

Revision
2

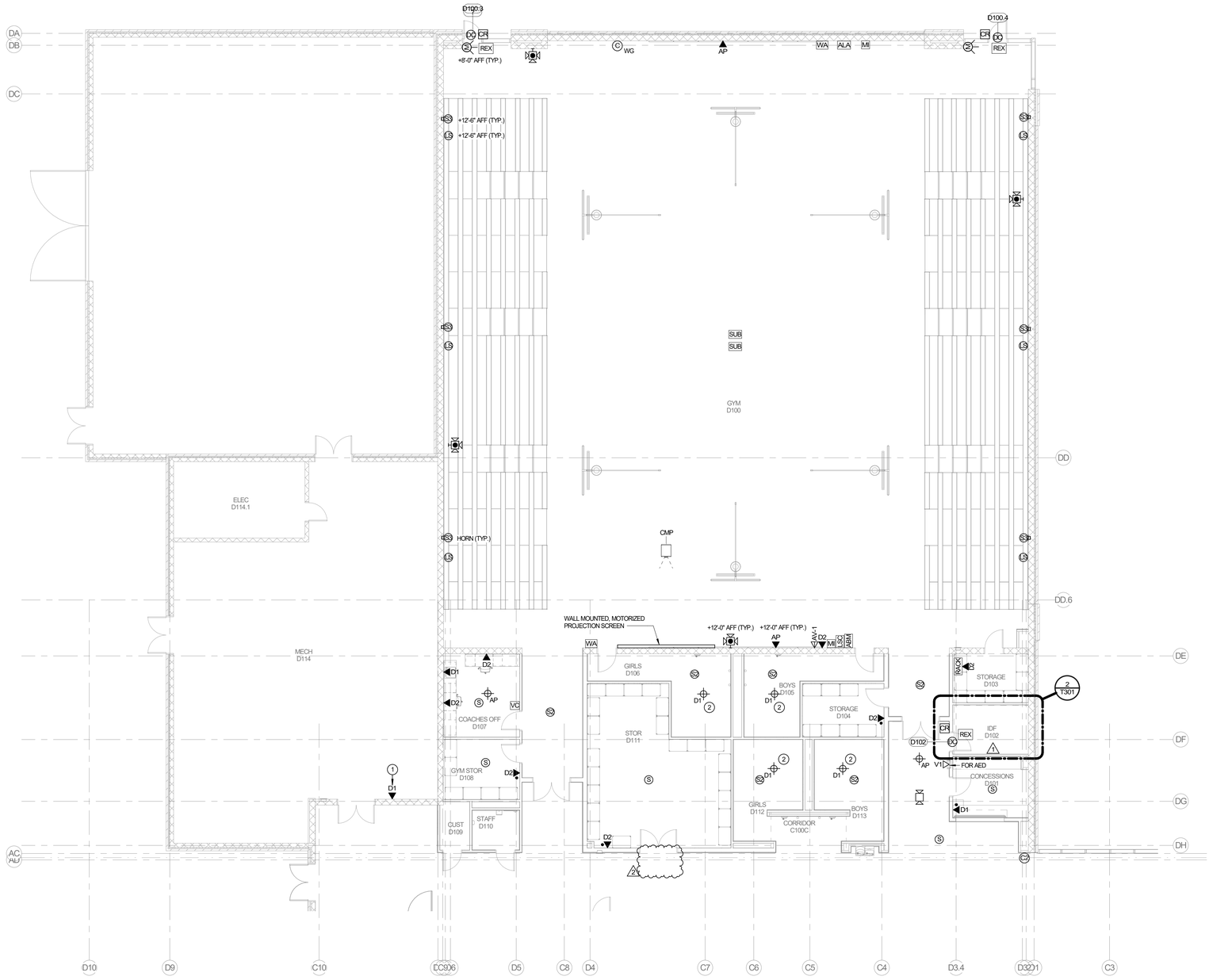
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ORIGINAL SHEET - ARCH E1

TECHNOLOGY KEYED NOTES

1. PROVIDE ONE (1) CATEGORY 6A DATA CIRCUIT FOR THE BUILDING MANAGEMENT CONTROL SYSTEM. COORDINATE WITH THE CONTRACTOR FOR EXACT LOCATION AND TERMINATION TYPE.
2. DATA DROP SHALL BE DEDICATED FOR VAPE DETECTOR. COORDINATE EXACT LOCATION WITH OWNER.



1 **TECHNOLOGY PLAN - LEVEL 1 - AREA D**
Scale: 1/8" = 1'-0"

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ORIGINAL SHEET - ARCH E1

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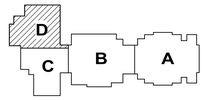
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Project No: 2550-01131-00

Notes



KEY PLAN

PROJECT NORTH

2	ADDENDUM #4			2026.03.11
1	ADDENDUM #1			2026.02.13
Revision		By	Appd	YYYY.MM.DD

Issue for Permit and Proposal			2026.01.26
Issued	By	Appd	YYYY.MM.DD

Permit/Seal



Client/Project Logo

Client/Project
Crosby ISD

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Title
TECHNOLOGY PLAN - LEVEL 1 - AREA D

Project No.
214001329

Scale
1/8" = 1'-0"

Revision
2

Drawing No.
T201D