ADDENDUM NO. 2

DATE: 1/10/25

For: Elementary School # 38
522 Brookewater Boulevard
Rosenberg, TX 77471
for
LAMAR CISD
3911 Avenue I
Rosenberg, TX 77471

TO: DRAWINGS AND SPECIFICATIONS DATED: December 12, 2024

PREPARED BY: PFLUGER ARCHITECTS, L.P.

ADDENDUM DATE: January 10, 2025

PROJECT NO: 24-028

This addendum shall be considered part of the Bid Documents for the above named project as though it had been issued at the same time and shall be incorporated integrally therewith. Where provisions of the following supplementary data differ from those of the original Bid Documents, this Addendum shall govern and take precedence.

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- ADD. NO. 2 - Pfluger Narrative
- ADD. NO. 2 - Specifications and Drawings (listed below in narrative)
- ADD. NO. 2 - Drawings
- ADD. NO.2 - Bid Log

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Reference to Specification or Detail modifications in this Addendum are to attached documents. Including the following attached narratives

- Addendum 2 Architectural Narrative - 3 pages.
- Addendum 2 MEP Narrative - 4 pages.
- Addendum 2 Civil Narrative - 2 pages.
- Addendum 2 Structural Narrative - 2 pages.
- Addendum 2 Specs - 85 pages
- Addendum 2 Sheets - 87 pages
- RFI Log - 5 pages

GENERAL:

ITEM	SHEET	DESCRIPTION
G0-1		RFI Log

SPECIFICATIONS:

ITEM	SECTION	DESCRIPTION
S2-1	00 01 01	Table of Contents is REVISED to reflect sections being issued as part of this Addendum
S2-2	00 01 10.1	Architect Table of Contents is REVISED to reflect sections being issued as part of this Addendum
S2-3	07 42 13	Paragraph 1.08.B is REVISED
S2-4	07 42 13	Paragraph 2.01 is REVISED
S2-5	08 41 13	Paragraph 1.16.B is REVISED

S2-6	08 44 13	Paragraph 2.07.C is REVISED
S2-7	08 71 00	The following Hardware Sets are REVISED: Set 2.0, Set 12.0, Set 21.0, Set 23.0, Set 27.0
S2-8	08 71 00	The following Harware Set is DELETED: Set 24.0
S2-9	08 71 00	The following statement is DELETED from this section: *Hardware Sets based on plans dated 11/08/2023 – 95%CD - Plotted 12/15/2023.*
S2-10	10 14 64	This is a NEW section
S2-11	10 28 00	Paragraph 1.2.A.7 is REVISED
S2-12	10 28 00	Paragraph 2.2.A is REVISED
S2-13	10 28 00	Paragraph 2.2.G is REVISED
S2-14	22 05 11	This is a NEW section
S2-15	22 14 13	This is a NEW section
S2-16	26 05 11	This is a NEW section

DRAWINGS:

ITEM	SHEET	DESCRIPTION
D2-1	G0.04	Revised room C109 name from "CENTRAL PLANT" to " CHAIR STORAGE", TYP.
D2-2	G0.04	Room C108E Storage added in area C. Door added to room C108E
D2-3	G0.04	FEC added in Platform in Area C.
D2-4	G0.04	Fire Assembly Legend: Floor/Ceiling - UL Assembly No P902: 1HR Structural Frame Rated 1HR Added
D2-5	G0.05	Fire Assembly Legend: Floor/Ceiling - UL Assembly No P902: 1HR Structural Frame Rated 1HR Added
D2-6	G0.05	UL Assembly No P902 added to Floor/Ceiling Assembly in Mezzanine
D2-7	G0.05	Fire Assembly Legend: Floor/Ceiling - UL Assembly No P902: 1HR Structural Frame Rated 1HR Added
D2-8	G0.06	UL Assembly No P921 added to Roof Assembly in Area C
D2-9	G0.07	Revised room C109 name from "CENTRAL PLANT" to " CHAIR STORAGE", TYP.
D2-10	G0.07	Note added at Overhead Coiling Grilles in Corridors
D2-11	G0.08	Design No P921 Details Added
D2-12	A1.00	Removed stop sign from center of roadway
D2-13	A1.00	Sidewalk located west of property line, facing Wallingford Park Drive deleted
D2-14	A1.00	Added callout for sign type 'L'
D2-15	A1.00	Added post and panel sign '2' at south entrance
D2-16	A1.00	Added post and panel sign '2' at parent drive
D2-17	A1.00	Modified callout for signage to "POST AND PANEL SIGN TYPE '3'
D2-18	A1.00	North Arrow added to View
D2-19	A1.00	Added bike racks along student drop off
D2-20	A1.00	Added ramp on the northside of student dropoff
D2-21	A1.00	Added Do Not Enter Sign at end of student drop off
D2-22	A1.00	Added post and panel sign at SPED drop off
D2-23	A1.00	Added louvers to mechanical yard
D2-24	A1.00	Updated sizing on gate schedule for gate S009. Revisions made to "DESCRIPTION" of gate S007
D2-25	A1.02	Downspouts modified. Metal soffit span directions modified.
D2-26	A1.02	Detail 9 soffit span direction modified and soffit material modified to be AWC
D2-27	A1.02	Soffit span directions modified on details 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
D2-28	A1.03	Modified post and panel sign types
D2-29	A1.03	Detail 12 Modified
D2-30	A1.03	Added and revised notes regarding bollards on detail 1
D2-31	A1.03	Modified Gate S010 to be double swing gate
D2-32	A1.03	Updated tags on for gates on detail 1
D2-33	A1.05	DetailS 1, 2, 5, 7 & 8 Modified
D2-34	A2.01A	Tagged frame window frame by reception desk
D2-35	A2.01B	Added callout for wall section 5/A7.08 near door C121
D2-36	A2.01C	Revised room C109 name from "CENTRAL PLANT" to " CHAIR STORAGE", TYP.
D2-37	A2.01C	Room C108E Storage added in area C. Door added to room C108E
D2-38	A2.01C	FEC added in Platform in Area C.
D2-39	A2.01E	Standpipe note removed from corridor E102
D2-40	A5.00	Downspouts in area B and C modified.
D2-41	A5.00	Called out downspouts on multiple canopies
D2-42	A5.01A	Called out downspouts on multiple canopies
D2-43	A5.01B	Called out downspouts on multiple canopies
D2-44	A5.01C	Called out downspouts on multiple canopies
D2-45	A5.01E	Called out downspouts on multiple canopies

D2-46	A5.01F	Called out downspouts on multiple canopies
D2-47	A6.01	Changed detail callouts on elevation 2 and 9.
D2-48	A6.03	Added louvers to mechanical yard
D2-49	A6.03	Modified Gate S010 to be double swing gate
D2-50	A7.08	Added Section 5
D2-51	A7.20	Revised detail 9
D2-52	A7.21	Revised notes for fire treated wood on detail 5
D2-53	A8.00	Door C108E Added.
D2-54	A8.00	Type K Doors note modified to be "Open Grille Coiling Overhead Door".
D2-55	A8.00	Updated door B101C to hardware set 2
D2-56	A8.03	Added frame type 29
D2-57	A8.03	Added detail references for frame type H1
D2-58	A9.00B	Added room C108E
D2-59	A9.00B	Updated Ceiling types for B105, B128, E115, E127, F127, C113
D2-60	A9.00A	Added general note regarding Fine-Fissured Ceilings
D2-61	A9.10	Elevation 28 modified, cubbies are NIC and part of FF&E
D2-62	A9.10	Elevation 17 at Lounge, note modified to say "VENDING IN CONTRACT"
D2-63	A9.13	Adjusted display cases on elevation 1
D2-64	A9.01A	Removed and added new wall clocks. Tagged Metal Shelving in A133 and A134.
D2-65	A9.01B	Removed and added new wall clocks. Removed metal shelving that was overlapping in room B106.
D2-66	A9.01C	Removed and added new wall clocks.
D2-67	A9.01D	Removed and added new wall clocks.
D2-68	A9.01E	Removed and added new wall clocks.
D2-69	A9.01F	Removed and added new wall clocks.
D2-70	A9.12	Made interior coiling door visible on elevation 4
D2-71	A10.01C	Added note regarding paint above cloud ceiling.
D2-72	A10.01D	Updated ceiling type for D118
D2-73	A10.01D	Motorized lift track path modified in RR D117

END OF ADDENDUM 2

Dally + ASSOCIATES
STRUCTURAL | CIVIL

Civil Narrative

Lamar CISD Elementary School No. 38
Addendum 2
January 10, 2025

Below is a summary of the sheet revisions for Addendum 2.

ALL PLAN SHEETS

- Added 3’ wide section of concrete sidewalk northeast of proposed building for bike racks.
- Added concrete curb ramps at driveway intersections and sidewalk crossing points on future Brookewater Boulevard and Wallingford Park Drive.
- Removed proposed sidewalk southwest of site along Wallingford Park Drive.

C2.00 DEMOLITION PLAN

- Added callout to relocate existing power pole to accommodate proposed driveway and sidewalk.

C3.00 LAYOUT PLAN

- Added dimensions for proposed sidewalks north and south of building.
- Added dimensions for proposed sidewalks east and south along Brookewater Boulevard and Wallingford Park Drive

C3.01 SCHOOL ZONE SIGNAGE PLAN

- Revised scale bar.

C4.00 PAVING PLAN

- Added concrete sidewalk hatch northeast of proposed building for bike racks.
- Added keynote P2 for proposed concrete curb ramps w/ truncated domes.
- Added keynote P3 for proposed truncated domes.

C5.00 STORM SEWER UTILITY PLAN

- Revised proposed storm connections west and south of building.
- Added linework for proposed building downspouts and associated storm connections.
- Added keynote for 8” HDPE piping for building downspouts.
- Added keynote for 4” HDPE piping for canopy drainage.
- Added flow line information for storm sewer pipes.

C5.01 SANITARY AND WATER UTILITY PLAN

- Added flowline information for sanitary sewer piping.
- Revised location of grease trap and sample well west of building to match plumbing plans.

C6.00 GRADING PLAN

- Background updates.

C7.00 DRAINAGE PLAN

- Revised drainage area limits.

C8.00 FIRE ACCESS PLAN

- Added additional fire lane striping east and west of building.

C9.00 SWPPP

- Added two (2) stabilized construction entrances and two (2) concrete washout areas.

C11.02 STORM DETAILS 2

- Added Fort Bend County storm outfall details.

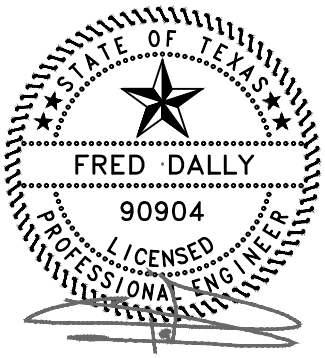
C15.00 MISCELLANEOUS DETAILS

- Removed proposed surfacing in track section detail.
- Removed accessible sign details from plans. Refer to architectural sheet A1.04.

If you have any questions, please contact us at (713) 337-8881.

Thank you,

Carlos Pacas
Dally + Associates, Inc.



1/10/2025

ADDENDUM NO. 2

For: Elementary School # 38
522 Brookewater Boulevard
Rosenberg, TX 77471
for
LAMAR CISD
3911 Avenue I
Rosenberg, TX 77471

TO: DRAWINGS AND SPECIFICATIONS DATED: December 12, 2024

PREPARED BY: PFLUGER ARCHITECTS, L.P.

ADDENDUM DATE: January 10, 2025

PROJECT NO: 24-028

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Matrix Structural Engineers
TBPE Firm Registration No. F-2640

01/10/2025

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ITEM	SHEET	#	DESCRIPTION
G1-1			
G1-2			

SPECIFICATIONS:

ITEM	SECTION	#	DESCRIPTION	
S1-1				
S1-2				
S1-3				
S1-4				
S1-5				
S1-6				
S1-7				

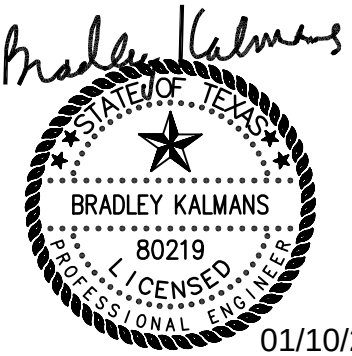
S1-8				
S1-9				
S1-10				

DRAWINGS:

ITEM	SHEET	#	DESCRIPTION
D1-1	S2.01		Section cuts are added on grade beams at various locations.
D1-2	S2.01		Slab type and the grade beam layout is revised between Grids AD & AQ along the Grid C6 to match with the architectural finishes.
D1-3	S2.01		Grade beam at Grid AG.1 / A6 is shifted to align with the slab edge.
D1-4	S2.01		Missing pier tags are added at two locations.
D1-5	S2.01		Dimension is added to the pier just plan West of Grid A7.
D1-6	S2.02		Slab type and the grade beam layout is revised between Grids BD & BE to match with the architectural finishes.
D1-7	S2.03		Missing pier tags are added at two locations.
D1-8	S2.03		New piers are added at the grade beam under the cooler/freezer.
D1-9	S2.03		Grade beams are extended and new pier is added at the central plant entrance to match 13/S3.04.
D1-10	S2.04		Recessed slab at the shower and the related notes on the plan is removed.
D1-11	S2.05		Missing pier tags is added at Grid E14.
D1-12	S2.10		Slab edge and the framing is revised along Grid AB.
D1-13	S2.10		Slab edge and the framing is revised around the stairs.
D1-14	S2.10		Beam size is revised at Grid C10.
D1-15	S2.10		Overhead lift track support detail is called out on the plan.
D1-16	S2.22		Missing beam tag is added along Grid A6, between Grids AA and BF.
D1-17	S2.22		The textbox for RTU framing is removed from the plan.
D1-18	S3.02		Detail 20/S3.02 is revised for clarification.

END OF ADDENDUM 2

ADDENDUM NO. 2



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G2-1			
G2-2			

SPECIFICATIONS:

ITEM	SECTION	#		DESCRIPTION
S2-1	22 14 13			ROOF DRAINAGE PIPING AND APPURTENANCES, Add this section in its entirety.
S2-2	27 51 24			**SECTION 27 51 24 LOCAL SOUND DISTRIBUTION SYSTEM**
				2.3 SOUND SYSTEMS COMPONENTS AND EQUIPMENT – VENDOR SPECIFIC

			A. Gymnasium/Stage
			2. Wireless Microphone System – Provide the following:
			Remove
			~~a. Approved Products – Shure~~
			~~b. Digital Wireless Receiver, Product No. QLXD4 (qty of 2)~~
			~~c. Handheld Transmitter with SM58, Product No. QLXD2/SM58 (qty of 2)~~
			~~d. Bodypack Transmitter, Product No. QLXD1 (qty of 2)~~
			~~h. Headset Microphone, Product No. SM35 (qty of 2)~~
			~~d. Shure UA844SWB antenna combiner/power supply. (Qty 1)~~
			~~e. Shure UA8-470-530 (for band G) 1/2 Wave Antennas. (Qty as shown on drawings)~~
			2. Wireless Microphone System – Provide the following
			Add
			a. Approved Products – Sennheiser
			b. Digital Wireless Receiver – EW-DX EM2 (qty of 2)
			c. Handheld Transmitter - EW-DX SKM (qty of 2)
			d. Bodypack Transmitter – EW-DX SK 3-PIN (qty of 2)
			h. Headset Microphone – HSP 4 (qty 2)
			d. Antenna combiner/power supply -
			e. Antenna – AD 1800 (qty 1)
			4. Equipment Rack
			2.2 SOUND SYSTEMS COMPONENTS AND EQUIPMENT – ALL VENUES
			F. Miscellaneous Equipment
			1. Provide the following equipment for the overall combined venue.
			~~a. (2) Shure SM58S-LC Microphones~~
			a. (2) Sennheiser Handheld Transmitter - EW-DX SKM
			2.3 SOUND SYSTEMS COMPONENTS AND EQUIPMENT – VENUE SPECIFIC
			1. Gymnasium/Stage
			3. Rack Mounted Equipment
			ADD
			b. Q-SYS Core 8 Flex
			g. 24-port Netgear switch M4250 Series
			Remove
			~~b. Digital Signal Processor (DSP), BSS Blu-50 (qty of 1)~~
			2.4 WIRING
			Network connection and ~~BLU Link~~ **REMOVE**
			ADD Q-LAN – Provide CAT6A cable
S2-3	27 61 05		**SECTION 27 61 05 AUDIO VIDEO SYSTEMS AND EQUIPMENT**
			2.1 ACCEPTABLE MANUFACTURERS
			B. Interactive Monitors/Classroom AV
			Remove
			~~1. Promethean ActivPanel 9 (A certified Promethean installer is required)~~
			Add
			1. Promethean ActivPanel 10 (A certified Promethean installer is required)
			C. Flat Panel Display Monitors (FSD*)
			Add
			2. Samsung Commercial Series QBT-B Series for 98” display
			D. Mounting Hardware
			Add
			6. All display mounts shall be articulating type mounts
S2-4	28 46 00		**SECTION 28 46 00 FIRE DETECTION & ALARM SYSTEM**
			2.7 MAGNETIC DOOR HOLDERS, AUTOMATIC FIRE DOORS / SHUTTERS, AND SECURITY
			GRILLES AND INTERIOR SPACE CONTROLLED ACCESS EGRESS DOORS WITH
			AUTOMATIC EMERGENCY EGRESS ELECTRIC LOCK EMERGENCY RELEASE
			Add
			E. Powered roll-down grilles shall be integrated into fire alarm system to be raised (open) alarm activation.

S2-5	22 05 11			UNDER SLAB PIPE VOID SYSTEM, Add this section in its entirety.
S2-6	26 05 11			UNDER SLAB PIPE VOID SYSTEM - ELECTRICAL, Add this section in its entirety.
S2-7	INDEX			UPDATED INDEX

DRAWINGS:

ITEM	SHEET	#	DESCRIPTION
D2-1	M1.01		Add a general note indicating the following applicable codes: INTERNATIONAL MECHANICAL CODE (IMC)-2015; INTERNATIONAL ENERGY CONSERVATION CODE (IECC)-2015.
D2-2	M6.01		Revise double duct variable air volume air handling unit schedule
D2-3	M6.01		Revise air handling unit schedule
D2-4	M6.01		Revise energy recovery unit schedule
D2-5	E1.01		Add general note for pipe void system.
D2-5	E1.01		Replace sheet in it's entirety.
D2-5	E2.01C		Platform C102, connect stage lighting to spare 20A/1P circuit in Panel LA with 2#8, 1#10G.,3/4"C.
D2-6	E2.01C		Gym C107, add type 'T8' to stage lighting system fixtures.
D2-7	E2.01C		Dining C108, provide (1) type C1 light fixture, type RB lighting controls, vacancy sensor, and light switch for storage closet. Connect to HA-4 with 2#12, 1#12G.,3/4"C.
D2-8	E2.01C		Gym C107 / Dining C108, provide partition sensor between spaces at partition and connect to light controls.
D2-9	E2.01C		Add light switch locations. Typical of
D2-10	E2.01C		Gym C107 / Dining C108, provide partition sensor between spaces at partition and connect to light controls.
D2-11	E2.01C		Replace sheet in it's entirety.
D2-12	E3.01A		Library A132, provide (2) duplex receptacles on west wall via keyed note 13 for flat panel display wall mounted speakers. Connect to spare 20A/1P circuit in Panel LE with 2#8, 1#10G., 3/4"C.
D2-13	E3.01A		Add keyed note 13, note shall read: "RECEPTACLE FOR WALL MOUNTED SPEAKERS. COORDINATE WITH DIVISION 27 FOR EXACT MOUNTING HEIGHT AND LOCATION."
D2-14	E3.01A		Add keyed note 14, note shall read: "PROVIDE GROUNDING BUS BAS, REFER TO GROUNDING SPECIFICATIONS AND TECHNOLOGY DRAWINGS FOR ADDITIONAL SCOPE OF WORK.
D2-15	E3.01A		MDF A120, add keyed note 14 to room.
D2-16	E3.01B		Add keyed note 11, note shall read: "PROVIDE GROUNDING BUS BAS, REFER TO GROUNDING SPECIFICATIONS AND TECHNOLOGY DRAWINGS FOR ADDITIONAL SCOPE OF WORK.
D2-17	E3.01B		IDF B127, add keyed note 11 to room.
D2-18	E3.01C		Kitchen C112, provide 480v 3ph 20A circuit from panel HA to feed KEF-1. Connect with 3#12,1 #12G., 3/4"C. connect via 30A/3P/NF/S1 motor starter located in Central Plant C120 on west wall.
D2-19	E3.01C		Kitchen C112, provide 480v 3ph 20A circuit from panel HA to feed KEF-2. Connect with 3#12,1 #12G., 3/4"C. connect via 30A/3P/NF/S1 motor starter located in Central Plant C120 on west wall.
D2-20	E3.01D		Add keyed note 7, note shall read: "PROVIDE GROUNDING BUS BAS, REFER TO GROUNDING SPECIFICATIONS AND TECHNOLOGY DRAWINGS FOR ADDITIONAL SCOPE OF WORK.
D2-21	E3.01D		IDF D103, add keyed note 7 to room.
D2-22	E3.01E		Add keyed note 11, note shall read: "PROVIDE GROUNDING BUS BAS, REFER TO GROUNDING SPECIFICATIONS AND TECHNOLOGY DRAWINGS FOR ADDITIONAL SCOPE OF WORK.
D2-23	E3.01E		IDF E130, add keyed note 11 to room.
D2-24	E3.01F		Add keyed note 10, note shall read: "PROVIDE GROUNDING BUS BAS, REFER TO GROUNDING SPECIFICATIONS AND TECHNOLOGY DRAWINGS FOR ADDITIONAL SCOPE OF WORK.
D2-25	E3.01F		Science F116, provide junction box and electrical connections for exhaust fan timer switch. Verify exact location with Architect. Stimer provided by division 23, installed by division 26.
D2-26	E3.01F		IDF F112, add keyed note 10 to room.
D2-27	E4.01		Add keyed note 2, note shall read: "CIRCUIT CONTROLLED VIA 24-HOUR TIMECLOCK, REFER TO PLUMBING.
D2-28	E4.01		Add keyed note 2 to each circulation pump (CP-1 and CP-2).
D2-29	E5.01		Revise enclosed circuit breaker for panel LK to 250A/3P/22KAIC.
D2-30	E5.01		Revise xfmr TLK secondary feeder to 4#250kmcil, 1#2G., 2-1/2"C.; xfmr ground shall change to #2.
D2-31	E5.01		Delete fire rating from feeders from generator to wireway EMA. Revise conduits to 3".
D2-32	E5.01		Revise note for MTS to the following: "DUAL PURPOSE MANUAL TRANSFER SWITCH "MTS" 277/480V, 3PH, 4W,
D2-33	E5.01		Add the following Available Fault Current Labeling: "PROVIDE A 2X3 INCH LABEL WITH BLUE 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 THE CALCULATION SHALL BE THE DATE INDICATED BY THE ENGINEER OF RECORD'S SEAL ON THE CONSTRUCTION DOCUMENT ELECTRICAL ONE-LINE DIAGRAM/RISER DRAWING. SERVICE EQUIPMENT AVAILABLE FAULT CURRENT: 33,405 AMPS; DATA OF CALCULATION: 01/09/2025
D2-34	E6.01		Panel HC, provide (2) 20A/3P circuit breakers for KEF-1 and KEF-2.
D2-35	E6.01		Panel HM, revise the follow to 40A/3P circuit breakers with #8 awg: AHU-1, AHU-2, AHU-8, AHU-9, & OAU-2.
D2-36	E6.01		Panel HM, revise the follow to 50A/3P circuit breakers with #8 awg: AHU-5, AHU-6, & AHU-7.
D2-37	E6.01		Panel HM, revise the follow to 20A/3P circuit breakers with #12 awg: OAU-1, OAU-3, ERU-1, & ERU-3.
D2-38	E6.01		Panel HM, revise the follow to 30A/3P circuit breakers with #10 awg: AHU-3, & AHU-4.

D2-39	E6.01		Panel HB, revise AIC rating to 22,000.
D2-40	E6.01		Panel HTB, revise AIC rating to 30,000.
D2-41	E6.02		Panel LA, provide 20A branch circuit 59 with #8 awg for Stage Lighting.
D2-42	E6.03		Panel LK, re-label circuits 42 and 44 as SPARE.
D2-43	E6.03		Panel LK, provide shunt trip circuit breakers for the follow: Circuits 8, 12; adjust circuits as necessary to add.
D2-44	E6.03		Panel LE, provide 20A branch circuit 75 with #8 awg for Speaker Recept.
D2-45	E8.01		Add a general note indicating the following applicable codes: NATIONAL ELECTRICAL CODE (NEC)-2023; INTERNATIONAL ENERGY CONSERVATION CODE (IECC)-2015.
D2-46	P1.01		Revise grease trap location and routing.
D2-47	P1.01		Revise sanitary outlet in Area B.
D2-48	P1.01		Add additional gas pipe routing from street to the gas meter.
D2-49	P2.01A		Revise sanitary piping to avoid structural piers and add pipe void system general note.
D2-50	P2.01B		Revise sanitary piping to avoid footings, piers and add pipe void system general note.
D2-52	P2.01C		Add pipe void system general note.
D2-53	P2.01D		Add pipe void system general note.
D2-54	P2.01E		Add pipe void system general note.
D2-55	P2.01F		Adjust sanitary piping and add pipe void system general note.
D2-56	P3.01A		Add TP-1 & TP-3 to serve floor drains/sinks.
D2-57	P3.01B		Revise wall hydrant location.
D2-58	P3.01D		Revise sanitary piping and add TP-1 to serve floor drains/sinks.
D2-59	P3.01E		Add TP-1 to serve floor drains/sinks.
D2-60	P3.01F		Add TP-1 to serve floor drains/sinks.
D2-61	P3.02		Add DN-1 from high roof to lower roof.
D2-62	P4.01		Add TP-1 to serve floor drains/sinks.
D2-63	P4.03		Add new sheet to set.
D2-64	P4.04		Revise gas piping and water piping.
D2-65	P4.06		Hide mechanical equipment.
D2-66	P5.00		Revise plumbing details.
D2-68	P5.02		Add roof drain insulation detail.
D2-69	P6.00		Revise circulation pump schedule.
D2-70	P6.01		Revise plumbing fixture schedule.
D2-72	T2.01		Remove classroom entrance conduits.
D2-73	T2.01A		Remove clock outside Elec. A125.
D2-74	T2.01B		Add CR and DC to Door B101C
D2-75	T2.01C		Add D2 at PE Office C106, Revise data height in Teachers dining to 44" aff, Revise proj. ht. to 12' aff.
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List of Specifications, As Prepared by:

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12-12-2024

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SECTION 07 42 13 PREFORMED METAL WALL PANELS

PART 1 - GENERAL

1.01 SCOPE

A. Provide and install complete, watertight, metal wall system as shown on drawings including panels, framing members, metal flashing, trim, accessories, and miscellaneous items as necessary for complete installation.

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM)
   1. ASTM A 653: Steel Sheet, Zinc-Coated by the Hot Dip Process
   2. ASTM A 792: Steel Sheet, Aluminum-Zinc Alloy Coated by the Hot Dip Process.
   3. ASTM B 209: Aluminum and Aluminum Alloy Sheet and Plate.

B. Sheet Metal and Air Condition Contractors National Association, Inc. (SMACNA): Architectural Sheet Metal Manual, 2003 Edition.

C. American Iron and Steel Institute (AISI): AISI Cold Formed Steel Design Manual

D. Aluminum Association: Aluminum Design Manual

E. Metal Construction Association (MCA): Preformed Metal Wall Guidelines

F. Code References: ASCE-7, Minimum Loads for Buildings and Other Structures; IBC International Building Code

1.03 SYSTEM DESCRIPTION

A. Performance Requirements: Provide factory formed, prefinished, lappable, exposed fastener, structural, ribbed metal wall system, that has been pretested and certified by manufacturer to comply with specified requirements under installed conditions.
   1. The metal siding system including required trim members shall meet the specified requirements for wind loads.

B. Structural Requirements: Engineer panels for structural properties in accordance with latest edition of American Iron and Steel Institute’s Cold Formed Steel Design Manual using “effective width" concept and Aluminum Association’s Aluminum Design Manual.

1.04 SUBMITTALS

A. Product Data: Submit manufacturer's specifications, standard profile sheet, product data brochure and finish warranty.

B. Shop Drawings: Shop drawings showing wall elevations with layout of panels, screws, underlayment and sections of each flashing/trim condition shall be submitted for approval prior to fabrication. Drawings shall contain material type, metal thickness and finish. Drawings shall distinguish between factory and field fabrication.

C. Samples:
   1. Submit sample 12" long x full width panel, showing proposed metal gauge, seam profile and specified finish.
   2. Submit manufacturers standard colors for Architect's selection.

D. Certification: Submit manufacturer's certification that materials and finishes meet specification requirements.

E. Test Reports: DMI Air and Water Infiltration Testing.
   1. ASTM-E283 Air Test
   2. ASTM-E331 Water Test

1.05 QUALITY ASSURANCE

A. Panel manufacturer shall have a minimum of ten (10) years of experience in manufacturing roofing and siding panels in a permanent stationary indoor facility.

B. Panel installer shall have a minimum of two (2) years experience in the installation of exposed fastener roofing and siding and show evidence of successful completion of at least three (3) projects of similar size, scope, and complexity.

1.06 DELIVERY, STORAGE, HANDLING

A. Panels and flashings shall be protected and properly packaged to protect against transportation damage in transit to the jobsite.

B. Upon delivery, exercise care in unloading, stacking, moving, storing, and erecting panels and flashings to prevent twisting, bending, scratching, or denting.

C. Store panels and flashings in a safe, dry environment under a waterproof covering to prevent water damage. Allow for adequate ventilation to prevent condensation. Panels and flashings with strippable film shall not be stored in direct sunlight.

D. Upon exposure to direct sunlight, immediately remove strippable film from panels and flashings. Protect panels and flashings from foot traffic and from all other trades.

1.07 PROJECT CONDITIONS

A. Field dimensions shall be taken prior to fabrication to verify jobsite conditions.

B. Maximum panel length is 40' (contact the factory for longer panels).

1.08 WARRANTIES

A. Substrate Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Structural failures including rupturing or perforating.
      b. Deterioration of metals and other materials beyond normal weathering.

   2. Warranty Period: 20 years and 6 months from date of Substantial Completion.

B. Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
   1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
      a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
      b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
      c. Cracking, chipping, peeling, or failure of paint to adhere to bare metal.

   2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Wall Panels

1) General:

a. Exterior wall panels shall be by Berridge Manufacturing Co.
b. Refer to exterior elevation drawing sheets for location and layout of panels.
c. Refer to drawing sheet A6.01 for Basis of Design products.
d. Substitutions: Refer to section 01 25 13:

2) MP1 consists of the following mix of panel types from Berridge.

a. Panel HS-8 Description:
1. 24 gauge steel
2. Smooth finish
3. Concealed fasteners
4. Pattern: 7/8" height and 5-5/8" rib with 2" reveal; 8" coverage
5. Meets the following Testing Standards
a. Uplift Resistance ASTM E-1592
b. Water Penetration ASTM E-331
c. Air Leakage ASTM E-283
d. ASTM E-1592

b. Panel HS-12 Description:
1. 24 gauge steel
2. Smooth finish
3. Concealed fasteners
4. Pattern: 7/8" height and 9-5/8" rib with 2" reveal; 12" coverage
5. Meets the following Testing Standards
a. Uplift Resistance ASTM E-1592
b. Water Penetration ASTM E-331
c. Air Leakage ASTM E-283
d. ASTM E-1592

c. Panel HR-4 Description:
1. 24 gauge steel
2. Smooth finish
3. Concealed fasteners
4. Pattern: 7/8" height and 4" rib with 2" reveal; 4" coverage
5. Meets the following Testing Standards
a. Uplift Resistance ASTM E-1592
b. Water Penetration ASTM E-331
c. Air Leakage ASTM E-283
d. ASTM E8

d. Panel HR-16 Description
1. 24 gauge steel
2. Smooth finish
3. Concealed fasteners
4. Pattern: 7/8" height and 4" rib with 2" reveal; 16" coverage
5. Meets the following Testing Standards
a. Uplift Resistance ASTM E-1592
b. Water Penetration ASTM E-331
c. Air Leakage ASTM E-283
d. ASTM E8

PART 3 - EXECUTION

3.01 PANEL APPLICATION

A. Structural system shall be plumb before wall panels are attached. Attach purlins to min. 22 ga. hat channel purlins.

B. Side laps shall be at least one full major rib with the underlying rib utilizing a supporting member bearing edge and the overlapping rib utilizing a continuous anti-capillary groove with sealant as recommended by manufacturer.

C. Panels shall be sealed at the base and at the eave according to manufacturer's recommendations.

D. Flashing material shall be as follows:
(1) Base angle shall be galvanized steel as recommended by manufacturer, factory painted to match wall panels.

(2) All exterior trim shall be of the same type material and finish as wall panels except as noted otherwise.

E. Provide additional sealant as required for air/water tightness equal to Sonneborn Sonolastic one-part sealant.
1) Fasteners:
a. Provide all fasteners to meet metal panel manufacturer's installation guidelines.

b. All base and eave structural connections shall be made in accordance with manufacturer's recommendations.

c. Intermediate girt connections shall be by manufacturer's approved method.

d. All exposed fasteners shall be same color as that selected on adjacent surfaces.

3.02 INSTALLATION

A. Contractor shall provide all flashing, accessories, and whatever is necessary to provide complete waterproof, non-leaking installation.

B. Accessories: Shall be standard by manufacturer and as otherwise noted and indicated on drawings. Flashing and accessories shall be fastened at max. 12" o.c. Resulting metal shall lie flat to surface with no raised gap.

C. Framing Member Installation:
1) Install all framing members level, square, and plumb to building lines.

2) Securely attach all framing members to building structural members by welding and bolting.

D. Panel Installation: Install all wall panels and soffit according to manufacturer's written instructions and shop drawings. Alignment shall be straight, square, and parallel with neat cuts. Uneven, ragged cut edges are prohibited.
1) All panels shall be factory cut-to-length according to the erection drawings as furnished by manufacturer.

2) Panels shall be continuous panel length; no end laps will be allowed unless the panel length exceeds 40'-0". Panel end laps shall be a minimum of 24" and sealed with bead of sealant. Symmetrical layout shall be used causing the end panels to have equal widths.

3) Panels, trim, fasteners, etc. shall be installed with proper tools in a workmanlike manner according to manufacturer's written directions.

4) Panel and soffit installation shall be square to building and all panels and trim aligned. All trim shall butt tightly and miter at corners.

~~E. Guarantees and Warranties~~

~~1) Manufacturer shall furnish its written manufacturer's warranty covering materials and workmanship of the metal building components for a period of five (5) years from date as evidenced on Final Application and Certificate for Payment.~~

~~2) Manufacturer shall furnish its written manufacturer's Color Coto Guarantee covering the color finish of the wall panels and trim pieces for a period of ten (10) years from date as evidenced on Final Certificate for Payment.~~

END OF SECTION 07 42 13

SECTION 08 41 13 ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section covers Kawneer Architectural Aluminum Storefront Systems, including perimeter trims, stools, accessories, shims and anchors, and perimeter sealing of storefront units.

1.3 DEFINITIONS

A. For fenestration industry standard terminology and definitions, refer to the Fenestration & Glazing Industry Alliance (FGIA) Glossary (AAMA AG-13).

1.4 PERFORMANCE REQUIREMENTS

A. General Performance:
   1. Product to comply with the specified performance requirements without failure due to defective manufacture, fabrication, installation, or other defects in construction, as determined by testing of aluminum storefront systems representing those indicated for this project.
   2. Aluminum storefront systems shall withstand movements of supporting structure including, but not limited to, story drift, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
   3. Failure includes any of these events:
      a. Thermal stresses transferring to building structure
      b. Glass breakage
      c. Loosening or weakening of fasteners, attachments, and other components
      d. Failure of operating units

B. Delegated Design:
   1. Design aluminum storefront systems, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

C. Wind Loads: Provide storefront system; include anchorage, capable of withstanding wind load design pressures as indicated in the drawings.

D. Air Leakage:
   1. The test specimen shall be tested in accordance with ASTM E 283.
   2. With interior seal, air leakage rate shall not exceed 0.06 cfm/ft^2 (0.3 l/s · m^2) at a static air pressure differential of 6.2 psf (300 Pa).

3. Without interior seal, air leakage rate shall not exceed 0.06 cfm/ft^2 (0.3 l/s · m^2) at a static air pressure differential of 1.6 psf (75 Pa).
4. CSA A440 Fixed Rating

E. Water Resistance:
1. The test specimen shall be tested in accordance with ASTM E 331.
2. There shall be no leakage at a minimum static air pressure differential of 15 psf (720 Pa) as defined in AAMA 501.
3. CSA A440 B5 Rating

F. Uniform Load:
1. A static air design load of 30 psf (1436 Pa) shall be applied in the positive and negative direction in accordance with ASTM E 330.
2. There shall be no deflection in excess of L/175 of the span of any framing member.
3. At a structural test load equal to 1.5 times the specified design load, no glass breakage or permanent set in the framing members in excess of 0.2% of their clear spans shall occur.
4. CSA A440 C2 Rating

G. Thermal Transmittance (U-factor):
1. Thermal transmittance test results are based upon 1" (25.4 mm) clear high-performance insulating glass [1/4" (e=0.035, #2), 1/2" warm edge spacer and argon fill gas, 1/4"].

H. Sound Transmission Class (STC) and Outdoor-Indoor Transmission Class (OITC):
1. Sound transmission loss test results in accordance with AAMA 1801 are based upon 1" (25.4 mm) clear double laminated insulating glass with PVB interlayer (1/8", 0.030", 1/8", 1/2" AS, 1/8", 0.030", 1/8").
2. Ratings shall not be less than listed here:
   a. Trifab® VersaGlaze® 601/601T/601UT Framing System, Center Plane laminated glass STC 37 and OITC 31

I. Impact Resistance Performance(Center Plane Only):
1. The test specimen shall be tested in accordance with ASTM E 1886, information in ASTM E 1996 and TAS 201/203.
2. Large-Missile Impact: For aluminum-framed systems located within 30 feet (9.1 m) of grade.

1.5 SUBMITTALS

A. Product Data:
1. For each type of aluminum-framed storefront system indicated, include:
   a. Construction details
   b. Material descriptions
   c. Dimensions of individual components and profiles
   d. Hardware
   e. Finishes

f. Installation instructions

B. Shop Drawings:
1. Plans
2. Elevations
3. Sections
4. Details
5. Hardware
6. Attachments to other work
7. Operational clearances
8. Installation details

C. Samples for Initial Selection:
1. Provide samples for units with factory-applied color finishes.
2. Provide samples of hardware and accessories involving color selection.

D. Samples for Verification:
1. Provide a verification sample for aluminum-framed storefront system and required components.

E. Product Test Reports:
1. Provide test reports for each type of aluminum-framed storefront used in the project.
2. Test reports must be based on evaluation of comprehensive tests performed by a qualified preconstruction testing agency.
3. Test reports must indicate compliance with performance requirements.

F. Fabrication Sample:
1. Provide a fabrication sample of each vertical-to-horizontal intersection of aluminum-framed systems, made from 12" (304.8 mm) lengths of full-size components and showing details of the following:
   a. Joinery, including concealed welds
   b. Anchorage
   c. Expansion provisions
   d. Glazing
   e. Flashing and drainage

G. Entrance Door Hardware Schedule:
1. Schedule shall be prepared by or under the supervision of supplier.
2. Schedule shall detail fabrication and assembly of entrance door hardware, including procedures and diagrams.
3. Coordinate final entrance door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of entrance door hardware.

1.6 QUALITY ASSURANCE

A. Installer Qualifications:
   1. Installer must have successfully installed the same or similar units required for the project and other projects of similar size and scope.

B. Manufacturer Qualifications:
   1. Manufacturer must be capable of providing aluminum-framed storefront systems that meet or exceed performance the stated performance requirements.
   2. Manufacturer must document this performance by the inclusion of test reports and calculations.

C. Source Limitations:
   1. Obtain aluminum-framed storefront system through one source from a single manufacturer.

D. Product Options:
   1. Drawings indicate size, profiles, and dimensional requirements of aluminum-framed storefront system and are based on the specific system indicated. Refer to Division 01 Product Requirements Section. Do not modify size and dimensional requirements.
   2. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

E. Mockups:
   1. Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
   2. Build mockups for the type(s) of storefront elevation(s) indicated, in location(s) shown on drawings.

F. Pre-installation Conference:
   1. Conduct conference at project site to comply with requirements in Division 01 Project Management and Coordination Section.

G. Structural-Sealant Glazing must comply with ASTM C 1401, “Guide for Structural Sealant Glazing” for design and installation of structural-sealant-glazed systems.

H. Structural-Sealant Joints: Design reviewed and approved by structural-sealant manufacturer.

1.7 PROJECT CONDITIONS

A. Field Measurements:
   1. Verify actual dimensions of aluminum-framed storefront openings by field measurements before fabrication.
   2. Indicate measurements on shop drawings.

1.8 WARRANTY

A. Submit manufacturer's standard warranty for owner's acceptance.

B. Warranty Period:
   1. Two years from Date of Substantial Completion of the project provided however that in no event shall the Limited Warranty begin later than six months from date of shipment by manufacturer.

PRODUCTS

1.9 MANUFACTURERS

A. Basis-of-Design Product:
   1. Kawneer Company, Inc.
   2. Trifab Versaglaze 601T Framing System - Impact Glazing
      a. 2" x 6" (50.8 mm x 152.4 mm) nominal dimension
      b. Thermal
      c. Center Plane
      d. Screw Spline Fabrication

B. Types of Kawneer Aluminum Storefront Systems include:
   1. Exterior Storefront: Trifab® Versaglaze 601T Framing System - Impact Glazing
      a. 2" x 6" (50.8 mm x 152.4 mm) nominal dimension
      b. Thermal
      c. Center Plane
      d. Screw Spline Fabrication
   2. Interior Storefront: Trifab® VersaGlaze® 451 Framing System
      a. 2" x 4-1/2" (50.8 mm x 114.3 mm) nominal dimension
      b. Non-thermal
      c. Front, center, back, multi-plane, structural silicone or weatherseal (type B) glazed
      d. Screw spline, shear block, stick, or punched opening
   3. Clerestory: Trifab® VersaGlaze® 451T Framing System
      a. 2" x 4-1/2" (50.8 mm x 114.3 mm) nominal dimension
      b. Thermal

C. Substitutions: Refer to section 01 25 13.

1.10 MATERIALS

A. Aluminum Extrusions:
   1. Alloy and temper recommended by aluminum storefront manufacturer for strength, corrosion resistance, and application of required finish
   2. Not less than 0.070" (1.8 mm) wall thickness at any location for the main frame

3. Complying with ASTM B221: 6063-T6 alloy and temper

B. Fasteners:
1. Aluminum, nonmagnetic stainless steel or other materials must be non-corrosive and compatible with aluminum members, trim hardware, anchors, and other components.

C. Anchors, Clips, and Accessories:
1. Anchors, clips, and accessories shall provide sufficient strength to withstand the design pressure indicated.

D. Reinforcing Members:
1. Reinforcing members must provide sufficient strength to withstand the design pressure indicated.

E. Sealant:
1. For sealants required within fabricated storefront system, provide permanently elastic, non-shrinking, and non-migrating type recommended by sealant manufacturer for joint size and movement.

F. Tolerances:
1. References to tolerances for wall thickness and other cross-sectional dimensions of storefront members are nominal and in compliance with AA Aluminum Standards and Data.

1.11 STOREFRONT FRAMING SYSTEM

A. Thermal Barrier:
1. Trifab Versaglaze 601T:
a. Kawneer IsoLock™ Thermal Break with a nominal 1/4" (6.4 mm) separation consisting of a two-part chemically curing, high-density polyurethane, which is mechanically and adhesively joined to aluminum storefront sections.

B. Brackets and Reinforcements:
1. Manufacturer's standard high-strength aluminum with non-staining, non-ferrous shims for aligning system components.

C. Fasteners and Accessories:
1. Manufacturer's standard corrosion-resistant, non-staining, non-bleeding fasteners and accessories must be compatible with adjacent materials.
2. Where exposed, fasteners and accessories shall be stainless steel.

D. Perimeter Anchors:
1. When steel anchors are used, provide insulation between steel material and aluminum material to prevent galvanic action.

E. Packing, Shipping, Handling, and Unloading:

1. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

F. Storage and Protection:
1. Store materials so that they are protected from exposure to harmful weather conditions.
2. Handle material and components to avoid damage.
3. Protect material against damage from elements, construction activities, and other hazards before, during, and after installation.

1.12 GLAZING SYSTEMS

A. Glazing to meet requirements in Division 08 Glazing Section.

B. Glazing Gaskets:
1. Manufacturer's standard compression types
2. Replaceable, extruded EPDM rubber

C. Spacers and Setting Blocks:
1. Manufacturer's standard elastomeric type

D. Bond-Breaker Tape:
1. Manufacturer's standard TFE-fluorocarbon or polyethylene material to which sealants will not develop adhesion.

E. Glazing Sealants for structural-sealant-glazed systems as recommended by manufacturer for joint type, and as follows:
1. Weatherseal sealant:
a. ASTM C 920 for Type S, Grade NS, Class 25, Uses NT, G, A, and O
b. Single-component neutral-curing formulation that is compatible with the structural sealant and other system components with which it comes in contact
c. Recommended by structural-sealant, weatherseal-sealant, and aluminum-framed-system manufacturers for this use
d. Color: Matching structural sealant

1.13 ENTRANCE DOOR SYSTEMS

A. Refer to Entrance Doors as specified in Division 08 41 13 Aluminum-Framed Entrances and Storefronts Section.

B. Refer to Entrance Door Hardware as specified in Division 08 71 00 Door Hardware.

1.14 ACCESSORY MATERIALS

A. Joint Sealants:
1. For installation at perimeter of aluminum-framed systems, as specified in Division 07 Joint Sealants Section.

B. Bituminous Paint:
   1. Cold-applied asphalt-mastic paint
   2. Complies with SSPC-Paint 12 requirements except containing no asbestos
   3. Formulated for 30-mil (0.762 mm) thickness per coat

1.15 FABRICATION

A. Fabricate framing member components that, when assembled, have the following characteristics:
   1. Profiles that are sharp, straight, and free of defects or deformations
   2. Accurately fitted joints that are flush, hairline, and weatherproof
   3. Means to drain water passing joints, condensation within framing members, and moisture migrating within the system to exterior
   4. Physical and thermal isolation of glazing from framing members
   5. Accommodations for thermal and mechanical movements of glazing and framing that maintain required glazing edge clearances
   6. Provisions for field replacement of glazing
   7. Fasteners, anchors, and connection devices that are concealed from view to the greatest extent possible

B. Mechanically Glazed Framing Members:
   1. Fabricate for flush glazing without projecting stops.

C. Structural-Sealant-Glazed Framing Members:
   1. Include accommodations for using temporary support device to retain glazing in place while structural sealant cures.

D. Storefront Framing:
   1. Fabricate components for assembly using manufacturer’s standard installation instructions.

E. After fabrication, clearly mark components to identify their locations in project according to shop drawings.

1.16 ALUMINUM FINISHES

A. Finish designations that are prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

B. Factory Finishing:
   1. Kawneer Permadize (50% PVDF), AAMA 2604, Fluoropolymer Coating
      a. Color: CHAMPAGNE - 379A1455

PART 2 EXECUTION

2.1 EXAMINATION

A. With installer present, examine openings, substrates, structural support, anchorage, and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of work:
   1. Verify rough opening dimensions.
   2. Verify levelness of sill plate.
   3. Verify operational clearances.
   4. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components for proper water management.
   5. Masonry Surfaces:
      a. Masonry surfaces must be visibly dry and free of excess mortar, sand, and other construction debris.
   6. Wood Frame Walls:
      a. Wood frame walls must be dry, clean, sound, well nailed, free of voids, and without offsets at joints.
      b. Ensure that nail heads are driven flush with surfaces in opening and within 3" (76.2 mm) of opening.
   7. Metal Surfaces:
      a. Metal surfaces must be dry and clean (free of grease, oil, dirt, rust, corrosion, and welding slag).
      b. Ensure that metal surfaces are without sharp edges or offsets at joints.

B. Proceed with installation only after correcting unsatisfactory conditions.

2.2 INSTALLATION

A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing aluminum-framed storefront system, accessories, and other components.

B. Install aluminum-framed storefront system so that components:
   1. Are level, plumb, square, and true to line
   2. Are without distortion and do not impede thermal movement
   3. Are anchored securely in place to structural support
   4. Are in proper relation to wall flashing and other adjacent construction

C. Set sill members in bed of sealant or with gaskets, as indicated, for weather-tight construction.

D. Install aluminum-framed storefront system and components to drain condensation, water penetrating joints, and moisture migrating within aluminum-framed storefront system to the exterior.

E. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

2.3 FIELD QUALITY CONTROL

A. Field Tests:
1. Architect shall select storefront units to be tested as soon as a representative portion of the project has been installed, glazed, perimeter caulked and cured.
2. Conduct tests for air infiltration and water penetration with manufacturer's representative present.
3. Tests that do not meet the specified performance requirements and units that have deficiencies shall be corrected as part of the contract amount.
4. Testing shall be performed per AAMA 503 by a qualified independent testing agency. Refer to Testing Section for payment of testing and testing requirements.
5. Air Infiltration Tests:
   a. Conduct tests in accordance with ASTM E 783.
   b. Allowable air infiltration shall not exceed 1.5 times the amount indicated in the performance requirements or 0.09 cfm/ft^2, whichever is greater.
6. Water Infiltration Tests:
   a. Conduct tests in accordance with ASTM E 1105.
   b. No uncontrolled water leakage is permitted when tested at a static test pressure of two-thirds the specified water penetration pressure but not less than 6.2 psf (300 Pa).

B. Manufacturer's Field Services:
1. Upon owner's written request, provide periodic site visit by manufacturer's field service representative.

2.4 ADJUSTING, CLEANING, AND PROTECTION

A. Adjusting: Not applicable.

B. Protection:
1. Protect installed product's finish surfaces from damage during construction.

C. Cleaning:
1. Clean glass immediately after installation.
   a. Comply with glass manufacturer's written recommendations for final cleaning and maintenance.
   b. Remove non-permanent labels and clean surfaces.
2. Clean aluminum surfaces.
3. Avoid damaging protective coatings and finishes.
4. Remove excess sealants, glazing materials, dirt, and other substances.
5. Repair or replace damaged installed products.

6. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during the construction period.
7. Remove construction debris from project site and legally dispose of debris.

END OF SECTION 08 41 13

SECTION 08 44 13 ALUMINUM CURTAIN WALL SYSTEM

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:

1. Aluminum-framed curtain wall system.

1.02 REFERENCES

A. American Architectural Manufacturers Association:

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

B. ASTM International:

1. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
2. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
3. ASTM 6209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate,
4. ASTM 8221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
5. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors By Uniform Static Air Pressure Difference.

C. SSPC: The Society for Protective Coatings: SSPC Paint 20 - Zinc-Rich Primers (Type I - Inorganic and Type 11 - Organic).

1.03 SYSTEM DESCRIPTION

A. Glazed aluminum curtain wall system includes: tubular aluminum sections; shop fabricated, factory finished, with glass and glazing specified in Section 08800 and installed by this Section; related flashings, anchorage and attachment devices.

1. System to be re-glazable from exterior.

B. System Assembly: Site assembled.

1.04 PERFORMANCE REQUIREMENTS

A. General Performance: Comply with performance requirements specified, as determined by testing of glazed aluminum curtain walls representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.

1. Glazed aluminum curtain walls shall withstand movements of supporting structure including, but not limited to, story drift, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads. Failure also includes the following.
   a. Thermal stresses transferring to building structure.
   b. Glass breakage.
   c. Loosening or weakening of fasteners, attachments, and other components.
   d. Failure of operating units.

B. Delegated Design: Design glazed aluminum curtain walls, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

C. Wind loads: Provide Curtain Wall system; include anchorage, capable of withstanding wind load design pressures as noted in the drawings.

D. Air Infiltration: The test specimen shall be tested in accordance with ASTM E 283. Air infiltration rate shall not exceed 0.06 cfm/ft^2 (0.3 l/s · m^2) at a static air pressure differential of 6.2 psf (300 Pa).

E. Water Resistance, (static): The test specimen shall be tested in accordance with ASTM E 331. There shall be no leakage at a static air pressure differential of 12 psf (575 Pa) as defined in AAMA 501.

F. Water Resistance, (dynamic): The test specimen shall be tested in accordance with AAMA 501.1. There shall be no leakage at an air pressure differential of 12 psf (575 Pa) as defined in AAMA 501.

G. Uniform Load: A static air design load of 40 psf (1915 Pa) shall be applied in the positive and negative direction in accordance with ASTM E 330. There shall be no deflection in excess of L/175 of the span of any framing member at design load. At structural test load equal to 1.5 times the specified design load, no glass breakage or permanent set in the framing members in excess of 0.2% of their clear spans shall occur.

H. Energy Efficiency:
   1. Thermal Transmittance (U-factor): When tested to AAMA Specification 1503, the thermal transmittance (U-factor) shall not be more than: 0.66 (clear) BTU/hr/ft^2/°F per AAMA 507

I. Condensation Resistance (CRF): When tested to AAMA Specification 1503, the condensation resistance factor shall not be less than 66frame and 60glass (clear).

   or

   Condensation Index (I): when tested to CSA-A440-00, the Condensation Index shall not be less than 68_{frame} and 54_{glass} (clear).

J. Sound Transmission Loss: When tested to ASTM E90 and ASTM E1425, the Sound Transmission Class (STC) and Outdoor/Indoor Transmission Class (OITC) shall not be less than:
   1. STC 37 or OITC 30 based upon 1" (25.4) laminated glass (1/4" laminated, 1/2" AS, 1/4" laminated).

K. Windborne-Debris-Impact Resistance Performance: Shall be tested in accordance with ASTM E1886, information in ASTM E1996, and TAS 201/203.
   1. Large – Missile Impact: For aluminum-framed systems located within 30 feet (9.1 m) of grade.

   2. Small – Missile Impact: For aluminum-framed systems located above 30 feet (9.1 m) of grade.

1.05 SUBMITTALS

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

B. Structural Analysis Data: Include structural analysis data and shop drawings related to system anchorage that are signed and sealed by the Professional Engineer registered in the state of Texas who is responsible for their preparation. Engineer shall also provide structural analysis data, signed and sealed, for system Performance Requirements that are not certified by manufacturer.

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

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

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

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

1.06 QUALITY ASSURANCE

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

1.07 QUALIFICATIONS

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

1.08 PRE-INSTALLATION MEETINGS

A. Section 01300 - Administrative Requirements: Pre-installation meeting.

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

1.09 DELIVERY, STORAGE, AND PROTECTION

A. Section 01600 - Product Requirements: Product storage and handling requirements.

B. Handle Products of this section in accordance with AAMA MCWM-1 - Curtain Wall Manual.

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

1.10 ENVIRONMENTAL REQUIREMENTS

A. Section 01600 - Product Requirements.

B. Do not install sealants nor glazing materials when ambient temperature is less than 40 degrees F during and 48 hours after installation.

1 .11 WARRANTY

A. Special Assembly Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of aluminum-framed systems that do not comply with requirements or that deteriorate as defined in this Section within specified warranty period,

1. Failures include, but are not limited to, the following:
   a. Structural failures including, but not limited to, excessive deflection.
   b. Noise or vibration caused by thermal movements.
   c. Deterioration of metals and other materials beyond normal weathering.
   d. Adhesive or cohesive sealant failures.
   e. Water leakage through fixed glazing and framing areas.
   f. Failure of operating components to function properly.

2. Warranty Period: Two years from date of Substantial Completion.

B. Special Finish Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components on which finishes fail within specified warranty period. Warranty does not include normal weathering.
   1. Warranty Period: 5 years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 ALUMINUM CURTAIN WALL SYSTEMS
A. Basis-of-Design Product.
   1. Kawneer Company Inc.
      a. 1600 Wall System™1 IR Curtain Wall – 2-1/2", outside glazed pressure plate format; with continuous fillers at head and jamb locations
      b. System depth: 10-1/2" depth for 1-5/16" insulating glazing.

B. Subject to compliance with the requirements of this section, provide a comparable product by the following.Manufacturers:
   1. EFCO Corporation www.efcocorp.com
   2. United States Aluminum. www.usalum.com
   3. Vistawall Architectural Products. www.vistawall.com/
   4. Columbia Commercial Building Products www.ccbpwin.com
   5. YKK-AP America, Inc.
   6. Substitutions: Refer to Section 01 25 13

2.02 CURTAIN WALL COMPONENTS
A. Materials
   1. Aluminum Extrusions: Alloy and temper recommended by glazed aluminum curtain wall manufacturer for strength, corrosion resistance, and application of required finish and not less than 0.070" (1.78) wall thickness at any location for the main frame and complying with ASTM B 221: 6063-T6 alloy and temper.
   2. Aluminum sheet alloy: Shall meet the requirements of ASTM B209.
   3. Fasteners: Aluminum, nonmagnetic stainless steel or other materials to be non-corrosive and compatible with aluminum window members, trim hardware, anchors, and other components.
   4. Anchors, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.
   5. Pressure Plate: Pressure plate shall be aluminum and fastened to the mullion with stainless steel screws.
   6. Reinforcing Members: Aluminum, nonmagnetic stainless steel, or nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.
   7. Sealant: For sealants required within fabricated curtain wall system, provide permanently elastic, non-shrinking, and non-migrating type recommended by sealant manufacturer for joint size and movement.
   8. Thermal Barrier: Thermal separator shall be extruded of a silicone compatible elastomer that provides a minimum 1/4" (6.3) separation.

9. Tolerances: Reference to tolerances for wall thickness and other cross-sectional dimensions of glazed curtain wall members are nominal and in compliance with AA Aluminum Standards and Data.

2.03 CURTAIN WALL FRAMING

2.04 GLAZING

A. Glazing: Comply with Division 08 Section “Glazing”. Following glazing options are available.
   1. 1600 Wall System 1 IR Curtain Wall.
      a. System depth: 7-13/16" depth for 1-5/16" insulating glazing.

B. Glazing Gaskets: Gaskets to meet the requirements of ASTM C864.

C. Spacers and Setting Blocks: Manufacturer's standard elastomeric type.

D. Bond-Breaker Tape: Manufacturer's standard TFE-fluorocarbon or polyethylene material to which sealants will not develop adhesion.

E. Glazing Sealants: As recommended by manufacturer for joint type.

2.05 ACCESSORY MATERIALS

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

2.06 FABRICATION

A. Form or extrude aluminum shapes before finishing.

B. Fabricate components that, when assembled, have the following characteristics.
   1. Profiles that are sharp, straight, and free of defects or deformations.
   2. Accurately fitted joints.
   3. Physical and thermal isolation of glazing from framing members.
   4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
   5. Provisions for field replacement of glazing from exterior.
   6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.
   7. Internal weeping system or other means to drain water passing joints, condensation occurring within framing members, and moisture migrating within glazed aluminum curtain wall to exterior.

C. Curtain Wall Framing: Fabricate components for assembly using shear block system following manufacturer's standard installation instructions.

D. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.07 ALUMINUM FINISHES

A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

B. Factory Finishing.

C. Kawneer Permadize (50% PVDF), AAMA 2604, Fluoropolymer Coating

1. Color: CHAMPAGNE - 379A1455

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. General: Install curtain wall systems plumb, level, and true to line, without warp or rack of frames with manufacturer's prescribed tolerances and installation instructions. Provide support and anchor in place.

1. Dissimilar Materials: Provide separation of aluminum materials from sources of corrosion or electrolytic action contact points.
2. Glazing: Glass shall be outside glazed and held in place with extruded aluminum pressure plates anchored to the mullion using stainless steel fasteners spaced no greater than 9" (228.6) on center.
3. Water Drainage: Each light of glass shall be compartmentalized using joint plugs and silicone sealant to divert water to the horizontal weep locations. Weep holes shall be located in the horizontal pressure plates and covers to divert water to the exterior of the building.

B. Related Products Installation Requirements.

1. Sealants (Perimeter): Refer to Joint Treatment (Sealants) Section.
2. Glass: Refer to Glass and Glazing Section.
3. Reference: ANSI Z97.1, CPSC 16 CFR 1201 and GANA Glazing Manual.

3.03 FIELD QUALITY CONTROL

A. Field Tests: Architect shall select curtain wall units to be tested as soon as a representative portion of the project has been installed, glazed, perimeter caulked and cured. Conduct tests for air infiltration and water penetration with manufacturer's representative present. Tests not meeting specified performance requirements and units having deficiencies shall be corrected as part of the contract amount.

B. Testing: Testing shall be performed per AAMA 503 by a qualified independent testing agency. Refer to Testing Section for payment of testing and testing requirements.

1. Air Infiltration Tests: Conduct tests in accordance with ASTM E 783. Allowable air infiltration shall not exceed 1.5 times the amount indicated in the performance requirements or 0.09 cfm/ft^2, whichever is greater.

2. Water Infiltration Tests: Conduct tests in accordance with ASTM E 1105. No uncontrolled water leakage is permitted when tested at a static test pressure of two-thirds the specified water penetration pressure but not less than 8 psf (383 Pa).

A. Manufacturer's Field Services: Upon Owner's written request, provide periodic site visit by manufacturer's field service representative.

3.04 ADJUSTING, CLEANING AND PROTECTION

A. Protection: Protect installed product's finish surfaces from damage during construction. Protect aluminum curtain wall system from damage from grinding and polishing compounds, plaster, lime, acid, cement, or other harmful contaminants.

B. Cleaning: Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance. Remove construction debris from project site and legally dispose of debris.

C. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

END OF SECTION 08 44 13

SECTION 08 71 00 DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes commercial door hardware for the following:

1. Swinging doors.
2. Other doors to the extent indicated.

B. Door hardware includes, but is not necessarily limited to, the following:

1. Mechanical door hardware.
2. Electromechanical door hardware.
3. Cylinders specified for doors in other sections.

C. Related Sections:

1. Division 08 Section “Hollow Metal Doors and Frames”.
2. Division 08 Section “Flush Wood Doors”.
3. Division 08 Section “Aluminum-Framed Entrances and Storefronts”.
4. Division 28 Section “Access Control Hardware Devices”.

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
2. ICC/IBC - International Building Code.
3. NFPA 70 - National Electrical Code.
4. NFPA 80 - Fire Doors and Windows.
5. NFPA 101 - Life Safety Code.
6. NFPA 105 - Installation of Smoke Door Assemblies.
7. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards:

1. ANSI/BHMA Certified Product Standards - A156 Series
2. UL10C – Positive Pressure Fire Tests of Door Assemblies

1.3 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."

2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.

3. Content: Include the following information:
   a. Type, style, function, size, label, hand, and finish of each door hardware item.
   b. Manufacturer of each item.
   c. Fastenings and other pertinent information.
   d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
   e. Explanation of abbreviations, symbols, and codes contained in schedule.
   f. Mounting locations for door hardware.
   g. Door and frame sizes and materials.
   h. Warranty information for each product.

4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Shop Drawings: Details of electrified access control hardware indicating the following:

1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
   a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
   b. Complete (risers, point-to-point) access control system block wiring diagrams.
   c. Wiring instructions for each electronic component scheduled herein.

2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.

D. Proof of Certification: Provide copy of manufacturer(s) official certification or accreditation document indicating proof of status as a qualified and authorized provider of the primary Integrated Wiegand Access Control Products.

E. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

F. Informational Submittals:
1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

G. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

1.4 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware 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.

C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

D. Integrated Wiegand, Wireless, and IP-Enabled Access Control Products Supplier Qualifications: Integrated access control products and accessories are required to be supplied and installed through current members of the ASSA ABLOY "Authorized Channel Partner" (ACP) and "Certified Integrator" (CI) programs. Suppliers are to be factory trained, certified prior to project bid, and a direct purchaser of the specified product. Installers are to be factory trained, certified prior to project bid, and are responsible for commissioning, servicing, and warranting the installed equipment specified for the project.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.

1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.

2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.

F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:

1. Function of building, purpose of each area and degree of security required.
2. Plans for existing and future key system expansion.
3. Requirements for key control storage and software.
4. Installation of permanent keys, cylinder cores and software.
5. Address and requirements for delivery of keys.

H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.

1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
3. Review sequence of operation narratives for each unique access controlled opening.
4. Review and finalize construction schedule and verify availability of materials.
5. Review the required inspecting, testing, commissioning, and demonstration procedures

I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.

C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:

1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of the hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Electrical component defects and failures within the systems operation.

C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

D. Special Warranty Periods:

1. Ten years for mortise locks and latches.
2. Five years for exit hardware.
3. Twenty five years for manual surface door closer bodies.

4. Five years for motorized electric latch retraction exit devices.
5. Two years for electromechanical door hardware.

1.8 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:

1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.

1. Quantity: Provide the following hinge quantity:
   a. Two Hinges: For doors with heights up to 60 inches.
   b. Three Hinges: For doors with heights 61 to 90 inches.
   c. Four Hinges: For doors with heights 91 to 120 inches.
   d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.

2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
   a. Widths up to 3’0”: 4-1/2” standard or heavy weight as specified.
   b. Sizes from 3’1” to 4’0”: 5” standard or heavy weight as specified.

3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
   a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
   b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

4. Hinge Options: Comply with the following:
   a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.

5. Manufacturers:

   a. Hager Companies (HA) - CB Series.
   b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - TA Series.

B. Pivots: ANSI/BHMA A156.4, Grade 1, certified. Space intermediate pivots equally not less than 25 inches on center apart or not more than 35 inches on center for doors over 121 inches high. Pivot hinges to have oil impregnated bronze bearing in the top pivot and a radial roller and thrust bearing in the bottom pivot with the bottom pivot designed to carry the full weight of the door. Pivots to be UL listed for windstorm where applicable.

1. Manufacturers:

   a. Dorma Products (DO).
   b. Rixson Door Controls (RF).

2.3 POWER TRANSFER DEVICES

A. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

1. Manufacturers:

   a. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE) – EL-CEPT Series.
   b. Securitron (SU) - EL-CEPT Series.

2.4 DOOR OPERATING TRIM

A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.

1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
2. Furnish dust proof strikes for bottom bolts.
3. Surface bolts to be minimum 8” in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.

5. Manufacturers:

    a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

B. Door Push Plates and Pulls: ANSI/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.

1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.

5. Manufacturers:

    a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

2.5 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.

1. Manufacturers:

    a. Sargent Manufacturing (SA).
    b. No Substitution.

C. Cylinders: Original manufacturer cylinders complying with the following:

1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
3. Bored-Lock Type: Cylinders with tailpieces to suit locks.

4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
5. **The hardware distributor provides cylinders for Access control devices, locks and exits.**
6. Keyway: Match Facility Standard.

D. Security Cylinders: ANSI/BHMA A156.5, Grade 1, patterned security cylinders and keys able to be used together under the same facility master or grandmaster key system. Cylinders are to be factory keyed.

1. Manufacturers:

   a. Sargent Manufacturing (SA) - Signature Series at exterior.
   b. No Substitution.
   c. 10- Signature supplied on the exterior side of opening only. Not at Mullions or 16- Cylinder dogging

E. Keying System: Each type of lock and cylinders to be factory keyed.

1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a **visual key control number as directed by Owner.**
3. New System: Key locks to a new key system as directed by the Owner.

F. Key Quantity: Provide the following minimum number of keys:

1. Change Keys per Cylinder Group: Seven (7).
2. Master Keys (per Master Key Level/Group): Ten (10).
3. Signature Key Blanks: 150ea
4. Standard Key Blanks: 100ea

G. Key Registration List (Bitting List):

1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.

H. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.

1. Manufacturers:

   a. Lund Equipment (LU). 1205A

2.6 MECHANICAL LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.

1. Manufacturers:

a. Sargent Manufacturing (SA) – 8200 Series.
b. No Substitution.

2.7 AUXILIARY LOCKS

A. Mortise Deadlocks, Small Case: ANSI/BHMA A156.36, Grade 1, small case mortise type deadlocks constructed of heavy gauge wrought corrosion resistant steel. Steel or stainless steel bolts with a 1" throw and hardened steel roller pins. Deadlocks to be products of the same source manufacturer and keyway as other specified locksets.

1. Manufacturers:

a. Sargent Manufacturing (SA) - 4870 Series.
b. No Substitution.

B. Narrow Case Deadlocks and Deadlatches: ANSI/BHMA 156.13 Series 1000 Grade 1 certified narrow case deadlocks and deadlatches for swinging or sliding door applications. All functions shall be manufactured in a single sized case formed from 12 gauge minimum, corrosion resistant steel (option for fully stainless steel case and components). Provide minimum 2 7/8" throw laminated stainless steel bolt. Bottom rail deadlocks to have 3/8” diameter bolts.

1. Manufacturers:

a. Adams Rite Manufacturing (AD) - MS1850S Series

2.8 INTEGRATED WIRED OUTPUT LOCKING DEVICES – MULTI-CLASS READER

A. Integrated Wired Output Multi-Class Mortise Locks: Wiegand or Open Supervised Device Protocol (OSDP) output ANSI A156.13, Grade 1, mortise lockset with integrated card reader with or without keypad option, request-to-exit signaling, door position status switch, and latchbolt monitoring in one complete unit. Hard wired, solenoid driven locking/unlocking control of the lever handle trim, 3/4" deadlocking anti-friction latch, and 1" case-hardened steel deadbolt. Lock is U.L listed and labeled for use on up to 3 hour fire rated openings. Available with or without keyed high security cylinder override.
1. Open architecture, hard wired platform supports centralized control of locking units with new or existing Wiegand or OSDP compatible access control systems. Latchbolt monitoring and door position switch act in conjunction to report door-in-frame (DPS) and door latched (door closed and latched) conditions.
2. Integrated reader supports the following credentials:
   a. 125kHz proximity credentials: HID, AWID, Indala, and EM4102.

b. 13.56 MHz proximity credentials: HID Secure Identity Object™ (SIO) on iCLASS Seos, HID iCLASS, HID iCLASS SE/SR, MIFARE Classic, DESFire EV1 and EV2.
c. 2.4 GHz credentials: Secure Identity Object™ (SIO) on Mobile IDs (Bluetooth Smart)
d. ISO14443A/B (PIV-compatible Transparent FASC-N read) available with pivCLASS variant
e. NFC-enabled mobile phones
f. PIN code only or PIN + credential with keypad option.

3. 12VDC external power supply required for reader and lock, with optional 24VDC lock solenoid. Fail safe or fail secure options.
4. Energy Efficient Design: Provide lock bodies which have a holding current draw of 500mA maximum, and can operate on either 12 or 24 volts. Locks are to be field configurable for fail safe or fail secure operation.
5. Support end-of-line resistors contained within the lock case.
6. Installation requires only one cable run from the lock to the access control panel without requirements for additional proprietary lock panel interface boards or modules.
7. Installation to include manufacturer's access control panel interface board or module where required for Wiegand or OSDP output protocol.
8. Manufacturers:
   a. Sargent Manufacturing (SA) – SN200/SN210 8200 Series.
   b. No Substitution.

2.9 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:

1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:

1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Strikes for Bored Locks and Latches: BHMA A156.2.
3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
4. Dustproof Strikes: BHMA A156.16.

2.10 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:

1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.

2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.

3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.

4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.

5. Energy Efficient Design: Provide lock bodies which have a holding current draw of 15mA maximum, and can operate on either 12 or 24 volts. Locks are to be field configurable for fail safe or fail secure operation.

6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
   a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
   b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.

7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.

8. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.

9. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.

10. Rail Sizing: Provide exit device rails factory sized for proper door width application.

11. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

12. **No self-tapping screws allowed. Drill and tap at all machine screw locations.**

B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.

1. Manufacturers:

    a. Sargent Manufacturing (SA) - 80 Series.
    b. No Substitution.

C. Tube Steel Removable Mullions: ANSI/BHMA A156.3 removable steel mullions with malleable-iron top and bottom retainers and a primed paint finish.

1. Provide keyed removable feature where specified in the Hardware Sets.

2. Provide stabilizers and mounting brackets as required.

3. Provide electrical quick connection wiring options as specified in the hardware sets.

4. Manufacturers:

    a. Sargent Manufacturing (SA) - 980S Series.

2.11 INTEGRATED WIRED OUTPUT EXIT DEVICES - MULTI-CLASS READER

A. Integrated Wired Output Multi-Class Exit Hardware: Wiegand output ANSI 156.3 Grade 1 rim, mortise, and vertical rod exit device hardware with integrated card reader with or without keypad option, latchbolt and touchbar monitoring, and request-to-exit signaling, in one complete unit. Hard wired, solenoid driven locking/unlocking control of the lever handle exit trim with 3/4" throw latch bolt. U.L listed and labeled for either panic or "fire exit hardware" for use on up to 3 hour fire rated openings. Available with or without keyed high security cylinder override.

1. Open architecture, hard wired platform supports centralized control of locking units with new or existing Wiegand or OSDP compatible access control systems. Inside push bar (request-to-exit) signaling and door position (open/closed status) monitoring (via separately connected DPS).
2. Integrated reader supports the following credentials:
    a. 125kHz proximity credentials: HID, AWID, Indala, and EM4102.
    b. 13.56 MHz proximity credentials: HID Secure Identity Object™ (SIO) on iCLASS Seos, HID iCLASS, HID iCLASS SE/SR, MIFARE Classic, DESFire EV1 and EV2.
    c. 2.4 GHz credentials: Secure Identity Object™ (SIO) on Mobile IDs (Bluetooth Smart)
    d. ISO14443A/B (PIV-compatible Transparent FASC-N read) available with pivCLASS variant
    e. NFC-enabled mobile phones
    f. PIN code only or PIN + credential with keypad option

3. 12VDC external power supply required for reader. 24VDC required for solenoid operated exit trim. Fail safe or fail secure options.
4. Installation requires only one cable run from the exit hardware to the access control panel without requirements for additional proprietary lock panel interface boards or modules.

5. Competitor Alternates Allowed Option: Installation to include manufacturer's access control panel interface board or module where required for Wiegand or OSDP output protocol.

6. Manufacturers:

   a. Sargent Manufacturing (SA) – SN200/SN210 80 Series.
   b. No Substitution.

2.12 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:

1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.

2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.

3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.

4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.

5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.

6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
7. **Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.**

8. **No self-tapping screws allowed. Drill and tap at all machine screw location.**

9. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.

1. Manufacturers:

    a. Sargent Manufacturing (SA) - 351 Series.
    b. No Substitution.

2.13 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.

2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1” LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.

3. Where plates are applied to fire rated doors with the top of the plate more than 16” above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer’s catalog and template book for specific requirements for size and applications.

4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:

    a. Stainless Steel: 300 grade, 050-inch thick.

5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.

6. Manufacturers:

    a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

2.14 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.

1. Manufacturers:

    a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

2.15 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.

1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.

1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:

1. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).

2.16 ELECTRONIC ACCESSORIES

A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide DPDT, surface mounted switches.

1. Manufacturers:

a. Sentrol (SE) – 2507AD-L.

Power Supplies – By Security

2.17 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.18 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Testing procedures for access control doors are essential to ensure that the system is functioning correctly and providing the necessary level of security.

1. Test the door lock: Verify that the door lock is functioning correctly. Test the lock by using a key or code to unlock the door and ensure that it locks properly when closed.

2. Test the door hardware: Check the door hardware, including the hinges, locks, and other components, to ensure that they are functioning correctly. Verify that the door opens and closes smoothly, and that the hardware is secure.
3. Test the access control equipment using Wiegand tester.
   a. Test card reader by enrolling card into Wiegand Tester. Verify that the lock is working correctly by ensuring that the door unlocks and locks properly when presenting card to reader.
   b. Test Door Position Switch (DPS) by opening door to ensure that the sensors detect open and close signal on Wiegand Tester.
   c. Test Request to Open (REX) using Wiegand Tester to ensure getting open and short signal.

4. Document the results: Keep a record of the testing results and any issues that were identified. This will help you to identify any recurring issues and ensure that the access control system is functioning correctly. Overall, testing procedures for access control doors are critical to ensuring that the system is functioning correctly and providing the necessary level of security. By following these procedures, you can identify any issues and address them before they become a problem.

C. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

D. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

F. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

A. Field Inspection (Punch-Out Report): Reference Division 01 Section "Closeout Procedures". Final inspect installed door hardware and state in report whether work complies with or deviates from specification requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

B. The supplier is responsible for handing and sizing all products and providing the correct option for the appropriate door type and material where more than one is presented in the hardware sets. Quantities listed are for each pair of doors, or for each single door.

C. Manufacturer's Abbreviations:
1. MK - McKinney
2. RF - Rixson
3. SA - SARGENT
4. RO - Rockwood
5. PE - Pemko
6. OT - Other
7. SU – Securitron
8. SE - Sentrol

~~Hardware Sets based on plans dated 11/08/2023 – 95%CD - Plotted 12/15/2023~~

Set: 1.0
Doors: A100, B101, B101A, C107B, C107C, C108B, C108C, C119, C121, E101, E101A, F100, F101, F101A
Description: *Ext - Alum - Pair - Rim SN200 MELR - KRM - Closer/stop

2	Intermediate Pivot	M190	626	RF
2	Pivot Set	195	626	RF
1	Electric Power Transfer	EL-CEPT	630	SU
1	Mounting Kit	98-2579		SA
1	Mullion	L980S	PC	SA
1	Rim Exit Device	10 TB 43 56-SN200-8804 BIS-OE 862		US32D SA
1	Rim Exit DT	16 TB 43 8810 862	US32D	SA
1	Cylinder	980C1	US26D	SA
2	Heavy Duty Floor Stop	409 / 462 as req	US2C	RO
1	Lip Threshold	2005AT		PE
1	Rain Guard	346C		PE
2	Kit	581-2	EN	SA
2	Closer w/ Stop Arm	TB 351 CPS	EN	SA
2	Sweep w/ Drip	3452AV		PE
1	ElectroLynx Harness	QC-C1500P		MK
2	ElectroLynx Harness	QC-CxxxP		MK
1	Perimeter Seal	By door mfgr		OT
1	Position Switch (Surface Mounted)	2507AD-L		SE
1	Power Supply	By Security		OT

Notes: Valid card read allows entry by trim. Remote release buttons if required are by security contractor. Upon loss of power doors will remain secure unless dogged by cylinder. Free egress at all times.

Set: 2.0
Doors: A103, A114, A126B, **B101C**, F116B
Description: *Ext - Alum - Sgl - Rim SN200, MELR - Closer/stop

1	Intermediate Pivot	M190	626	RF
1	Pivot Set	195	626	RF
1	Electric Power Transfer	EL-CEPT	630	SU
1	Rim Exit Device SA	10 TB 43 56-SN200-8804 BIS-OE 862		US32D
1	Heavy Duty Floor Stop	409 / 462 as req	US2C	RO
1	Lip Threshold	2005AT		PE
1	Rain Guard	346C		PE
1	Kit	581-2	EN	SA
1	Closer w/ Stop Arm	TB 351 CPS	EN	SA
1	Sweep w/ Drip	3452AV		PE
1	ElectroLynx Harness	QC-C1500P		MK
2	ElectroLynx Harness	QC-CxxxP		MK
1	Perimeter Seal	By door mfgr		OT
1	Position Switch (Surface Mounted)	2507AD-L		SE
1	Power Supply	By Security		OT

Notes: Valid card read allows entry by trim. Remote release buttons if required are by security contractor. Upon loss of power doors will remain secure unless dogged by cylinder. Free egress at all times.

Set: 3.0
Doors: C120
Description: *Ext HM- Mechanical Pair - SN Exit - MFB - Closer/Stop

6	Hinge (heavy weight)	T4A3386 NRP	US32D	MK
1	Dust Proof Strike	570	US26D	RO
2	Flush Bolt	555 - 12"/72" A.F.F.	US26D	RO
1	Electric Power Transfer	EL-CEPT	630	SU
1	SN Rim Exit HM SA	10 TB 43 56-SN200-8804 BIS-0E FSW 644		US32D
1	Lip Threshold	2005AT		PE
1	Perimeter Seal	2891APK		PE
1	Rain Guard	346C		PE
2	Closer w/ Stop Arm	TB 351 CPS	EN	SA
2	Sweep w/ Drip	3452AV		PE
2	Astragal	303AS		PE
1	ElectroLynx Harness	QC-C1500P		MK
2	ElectroLynx Harness	QC-CxxxP		MK
2	Position Switch (Surface Mounted)	2507AD-L		SE
1	Power Supply	By Security		OT

Notes: Doors are normally closed and secure. Presentation of valid credential will allow entry by pull. Upon loss of power, doors will remain secure. Free egress at all times.

Set: 3.1
Doors: C112D, C120A
Description: *Ext HM - Egress Sgl -SN Exit - Closer/ Stop

3	Hinge (heavy weight)	T4A3386 NRP	US32D	MK
1	Electric Power Transfer	EL-CEPT	630	SU
1	SN Rim Exit HM SA	10 TB 43 56-SN200-8804 BIS-0E FSW		US32D
1	Heavy Duty Floor Stop	409 / 462 as req	US2C	RO
1	Lip Threshold	2005AT		PE
1	Perimeter Seal	2891APK		PE
1	Rain Guard	346C		PE
1	Closer w/ Stop Arm	TB 351 CPS	EN	SA
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-CxxxP		MK
1	Position Switch (Surface Mounted)	2507AD-L		SE
1	Power Supply	By Security		OT

Set: 4.0
Doors: A120, D103
Description: *Int - Sgl - IN220 Lock- Closer/stop - Gasket

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Electric Power Transfer	EL-CEPT	630	SU
1	Access Control Mort Lock	SN200-82271 BIS-0E LNJ	US26D	SA
1	Door Stop	409 / 462 as req	US32D	RO
1	Door Closer	TB 351 O / PS as required	EN	SA
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-CxxxP		MK
1	Gasketing	By the frame manufacturer		OT
1	Position Switch (Surface Mounted)	2507AD-L		SE
1	Power Supply	By Security		OT

Notes: Valid credential allows entry by trim. Upon loss of power doors will remain secure. Free egress at all times.

Set: 5.0
Doors: A109, A109A, B127, E130, F112
Description: *Int - Sgl - IN220 Lock- Closer - Gasket

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Electric Power Transfer	EL-CEPT	630	SU
1	Access Control Mort Lock	SN200-82271 BIS-0E LNJ	US26D	SA
1	Door Stop	409 / 462 as req	US32D	RO
1	Door Closer	TB 351 O / PS as required	EN	SA
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-CxxxP		MK
1	Gasketing	By the frame manufacturer		OT
1	Position Switch (Surface Mounted)	2507AD-L		SE
1	Power Supply	By Security		OT

Notes: Valid credential allows entry by trim. Upon loss of power doors will remain secure. Free egress at all times.

Set: 6.0
Doors: A100A
Description: *Int - Alum - Pair - Rim SN200 MELR - KRM - Closer/stop

2	Intermediate Pivot	M190	626	RF
2	Pivot Set	195	626	RF
1	Electric Power Transfer	EL-CEPT	630	SU
1	Mounting Kit	98-2579		SA
1	Mullion	L980S	PC	SA
1	Rim Exit Device	10 TB 43 56-SN200-8804 BIS-OE 862		US32D SA
1	Rim Exit DT	16 TB 43 8810 862	US32D	SA
1	Cylinder	980C1	US26D	SA
2	Heavy Duty Floor Stop	409 / 462 as req	US2C	RO
2	Kit	581-2	EN	SA
2	Closer w/ Stop Arm	TB 351 CPS	EN	SA
1	ElectroLynx Harness	QC-C1500P		MK
2	ElectroLynx Harness	QC-CxxxP		MK
1	Perimeter Seal	By door mfgr		OT
2	Position Switch (Surface Mounted)	2507AD-L		SE
1	Power Supply	By Security		OT

Notes: Valid card read allows entry by trim. Remote release buttons if required are by security contractor. Upon loss of power doors will remain secure unless dogged by cylinder. Free egress at all times. Remote release located at reception desk is by security provider. Low voltage wiring.

Set: 7.0
Doors: A101, A104, A104A, A104B
Description: *Int - Alum - Sgl - SN200 Lock - Closer

1	Intermediate Pivot	M190	626	RF
1	Pivot Set	195	626	RF
1	Electric Power Transfer	EL-CEPT	630	SU
1	Access Control Mort Lock	10 SN200-82271 BIS-OE LNJ	US26D	SA
1	Heavy Duty Floor Stop	409 / 462 as req	US2C	RO
1	Kit	581-2	EN	SA
1	Closer w/ Stop Arm	TB 351 CPS	EN	SA
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-CxxxP		MK
1	Perimeter Seal	By door mfgr		OT
1	Position Switch (Surface Mounted)	2507AD-L		SE
1	Power Supply	By Security		OT

Notes: Valid card read allows entry by trim. Remote release buttons if required are by security contractor. Upon loss of power doors will remain secure unless dogged by cylinder. Free egress at all times. Remote release located at reception desk is by security provider. Low voltage wiring.

Set: 8.0
Doors: C103, C109
Description: Int - Pair - Storeroom MFB - Closer

6	Hinge, Full Mortise	TA2714	US26D	MK
1	Dust Proof Strike	570	US26D	RO
2	Flush Bolt	555 - 12"/72" A.F.F.	US26D	RO
1	Storeroom/Closet Lock	8204 LNJ GMK VK Keys	US26D	SA
2	Kick Plate	K1050 10" BEV CSK	US32D	RO
2	Heavy Duty Floor Stop	409 / 462 as req	US2C	RO
1	Perimeter Seal	S773BL		PE
1	Door Closer	TB 351 O / PS as required	EN	SA
1	Astragal	18041CNB		PE

Notes: Closer on active leaf.

Set: 9.0
Doors: A132, C107, C107A, C108, C108A
Description: Int - Alum - Pair - Rim/CL Lever - KRM - Closer/stop

2	Intermediate Pivot	M190	626	RF
2	Pivot Set	195	626	RF
1	Mounting Kit	98-2579		SA
1	Mullion	L980S	PC	SA
1	Rim Exit Device, DT Lever	TB 16 43 8810 ETJ GMK VK Keys	US32D	SA
1	Rim Exit Device, Classroom	TB 16 43 8813 ETJ GMK VK Keys	US32D	SA
1	Cylinder	980C1 GMK VK Keys - By 087100	US26D	SA
2	Heavy Duty Floor Stop	409 / 462 as req	US2C	RO
2	Kit	581-2	EN	SA
2	Closer w/ Stop Arm	TB 351 PS	EN	SA
1	Perimeter Seal	By door mfgr		OT

Notes: Wide stile required.

Set: 10.0
Doors: A132A
Description: Int - Pair - Rim/CL Lever - KRM - Closer/HO

6	Hinge (heavy weight)	T4A3786	US26D	MK
1	Mounting Kit	98-2579		SA
1	Mullion	L980S	PC	SA
1	Rim Exit Device, DT Lever	TB 16 43 8810 ETJ GMK VK Keys	US32D	SA
1	Rim Exit Device, Classroom	TB 16 43 8813 ETJ GMK VK Keys	US32D	SA
1	Cylinder	980C1 GMK VK Keys - By 087100	US26D	SA
2	Heavy Duty Floor Stop	409 / 462 as req	US2C	RO
2	Surface Closer	351 CPSH	EN	SA
1	Gasketing	By Frame Manufacturer		OT

Set: 11.0
Doors: A125, B125, B128, B129, C118, E113, E127, E128, F111, F127, F128
Description: Int - Sgl - Storeroom - Closer - Gasket

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Storeroom/Closet Lock	8204 LNJ GMK VK Keys	US26D	SA
1	Kick Plate	K1050 10" BEV CSK	US32D	RO
1	Door Stop	409 / 462 as req	US32D	RO
1	Perimeter Seal	S773BL		PE
1	Door Closer	TB 351 UO	EN	SA

Notes: At aluminum frames, gasketing is by frame manufacturer.

Set: 12.0
Doors: A111, A119, A133, A134, B105, B106, B124, D111, D119, E110, E111, C108E
Description: Int - Sgl - Storeroom

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Storeroom/Closet Lock	8204 LNJ GMK VK Keys	US26D	SA
1	Door Stop	409 / 462 as req	US32D	RO
1	Gasketing	By the frame manufacturer		OT

Set: 13.0
Doors: C105, E115
Description: Int - Sgl - Storeroom - Wide

3	Hinge (heavy weight)	T4A3786	US26D	MK
1	Storeroom/Closet Lock	8204 LNJ GMK VK Keys	US26D	SA
1	Door Stop	409 / 462 as req	US32D	RO
3	Silencer	608		RO

Notes: At aluminum frames, gasketing is by frame manufacturer.

Set: 14.0
Doors: B123, B126, B136, C101, E112, E129, E131, F129, F130, F132
Description: Int - Sgl -Storeroom - Closer

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Storeroom/Closet Lock	8204 LNJ GMK VK Keys	US26D	SA
1	Kick Plate	K1050 10" BEV CSK	US32D	RO
1	Heavy Duty Floor Stop	409 / 462 as req	US2C	RO
1	Door Closer	TB 351 UO	EN	SA
1	Gasketing	By the frame manufacturer		OT

Set: 15.0
Doors: B103
Description: Int - Sgl -Storeroom - Closer /stop

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Storeroom/Closet Lock	8204 LNJ GMK VK Keys	US26D	SA
1	Kick Plate	K1050 10" BEV CSK	US32D	RO
1	Heavy Duty Floor Stop	409 / 462 as req	US2C	RO
1	Closer w/ Stop Arm	TB 351 PS	EN	SA
1	Gasketing	By the frame manufacturer		OT

Set: 16.0
Doors: A118
Description: Int - Sgl - Storeroom - Closer - Gasket

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Storeroom/Closet Lock	8204 LNJ GMK VK Keys	US26D	SA
1	Kick Plate	K1050 10" BEV CSK	US32D	RO
1	Door Stop	409 / 462 as req	US32D	RO
1	Closer - pull side	TB 351 O	EN	SA
1	Gasketing	By the frame manufacturer		OT

Set: 16.1
Doors: D107
Description: Int - Sgl - Storeroom - Closer - Gasket - Wide

3	Hinge (heavy weight)	T4A3786	US26D	MK
1	Storeroom/Closet Lock	8204 LNJ GMK VK Keys	US26D	SA
1	Kick Plate	K1050 10" BEV CSK	US32D	RO
1	Door Stop	409 / 462 as req	US32D	RO
1	Closer - pull side	TB 351 O	EN	SA
1	Gasketing	By the frame manufacturer		OT

Set: 17.0
Doors: A114A, C115, F114
Description: Int - Sgl - Classroom - Closer

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Classroom Lock	8237 LNJ GMK VK Keys	US26D	SA
1	Kick Plate	K1050 10" BEV CSK	US32D	RO
1	Door Stop	409 / 462 as req	US32D	RO
1	Door Closer	TB 351 UO	EN	SA
1	Gasketing	By the frame manufacturer		OT

Set: 18.0
Doors: D112, D113, D116, D120, E114
Description: Int - Sgl - Office - Closer

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Office/Entry Lock	8205 LNJ GMK VK Keys	US26D	SA
1	Kick Plate	K1050 10" BEV CSK	US32D	RO
1	Door Stop	409 / 462 as req	US32D	RO
1	Door Closer	TB 351 UO	EN	SA
1	Gasketing	By the frame manufacturer		OT

Set: 19.0
Doors: C112A, C112B
Description: Int - Sgl - ASF Sec Classroom - Closer - Holder - Serving

1	Intermediate Pivot	M190	626	RF
1	Pivot Set	195	626	RF
1	Classroom Security Intruder Lock	8238 LNJ GMK VK Keys	US26D	SA
1	Kit	581-2	EN	SA
1	Closer w/ Stop/Hold	TB 351 PSH	EN	SA
1	Gasketing	By the frame manufacturer		OT

Set: 20.0
Doors: A121
Description: Int - Sgl - Classroom

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Classroom Lock	8237 LNJ GMK VK Keys	US26D	SA
1	Door Stop	409 / 462 as req	US32D	RO
1	Gasketing	By the frame manufacturer		OT

Set: 21.0
Doors: A112, A113, ~~**B111, B113**~~
Description: Int - Sgl - Passage

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Passage Set	8215 LNJ	US26D	SA
1	Door Stop	409 / 462 as req	US32D	RO
1	Gasketing	By the frame manufacturer		OT

Set: 22.0
Doors: B132, B133, B134, B135, C117, D105, D106, E121, E122, E123, E124, F121, F122, F123, F124
Description: Int - Sgl - PP - DL - Closer

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Public Toilet Deadlock	4878 GMK VK Keys	US26D	SA
1	Push Plate	70E	US32D	RO
1	Pull Plate	111x70C	US32D	RO
1	Kick Plate	K1050 10" BEV CSK	US32D	RO
1	Door Stop	409 / 462 as req	US32D	RO
1	Perimeter Seal	S773BL		PE
1	Door Closer	TB 351 O / PS as required	EN	SA

Notes: At aluminum frames, gasketing is by frame manufacturer.

Set: 23.0
Doors: ~~A135~~, A135A, B107, B108, B109, B110, **B111,** B112, **B113,** B114, B115, B116, B117, B118, B119, ~~B120~~, B121, ~~B122~~, C100, D104, D108, D109, D114, D114A, D115, D115A, D122, D122A, D123, D123A, E103, E104, E105, E106, E107, E108, E109, E116, E117, E118, E119, E120, F103, F104, F105, F106, F107, F108, F109, F110, F117, F118, F119, F120
Description: Int - Sgl - Sec Classroom

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Classroom Security Intruder Lock	8238 LNJ GMK VK Keys	US26D	SA
1	Door Stop	409 / 462 as req	US32D	RO
3	Silencer	608		RO

Notes: At aluminum frames, seals/silencers are by frame manufacturer.

~~**Set: 24.0**~~
~~Doors: D104~~
~~Description: Int - Alum Sgl - Sec Classroom~~

~~1~~	~~Intermediate Pivot~~	~~M190~~	~~626~~	~~RF~~
~~1~~	~~Pivot Set~~	~~195~~	~~626~~	~~RF~~
~~1~~	~~Classroom Security Intruder Lock~~	~~8238 LNJ GMK VK Keys~~	~~US26D~~	~~SA~~
~~1~~	~~Door Stop~~	~~409 / 462 as req~~	~~US32D~~	~~RO~~
~~1~~	~~Kit~~	~~581-2~~	~~EN~~	~~SA~~
~~1~~	~~Door Closer~~	~~TB 351 O / PS as required~~	~~EN~~	~~SA~~
~~1~~	~~Perimeter Seal~~	~~By door mfgr~~		~~OT~~

~~Notes: At aluminum frames, seals/silencers are by frame manufacturer.~~

Set: 25.0
Doors: A126, A128, A128A, A129, A129A, A130, A130A, A131, A131A, A135B, F116
Description: Int - Sgl - Sec Classroom Exit

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Rim Exit Device Sec CR Int SA	TB 16 43 49 8816 ETJ GMK VK Keys		US32D
1	Kick Plate	K1050 10" BEV CSK	US32D	RO
1	Closer w/ Stop Arm	TB 351 CPS	EN	SA
1	Gasketing	By the frame manufacturer		OT

Notes: At aluminum frames, seals/silencers are by frame manufacturer.

Set: 26.0
Doors: A105, A106, A107, A107A, A108, A115, A122, A123, A124, A136, B104, C106, C114, D102, F113, F115
Description: Int - Sgl - Office

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Office/Entry Lock	8205 LNJ GMK VK Keys	US26D	SA
1	Door Stop	409 / 462 as req	US32D	RO
3	Silencer	608		RO

Notes: At aluminum frame, gasketing / silencers are by frame manufacturer.

Set: 27.0
Doors: A102, A110, A116, A117, **B120, B122,** C116, D117, D121
Description: Int - Sgl - Privacy - 8225

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Dormitory/Exit Lock	V20 EMB 8225 VN1J VK Keys	US26D	SA
1	Kick Plate	K1050 10" BEV CSK	US32D	RO
1	Door Stop	409 / 462 as req	US32D	RO
1	Perimeter Seal	S773BL		PE
1	Door Closer	TB 351 UO	EN	SA

Notes: At aluminum frames, gasketing is by frame manufacturer.

Set: 28.0
Doors: B130, B131, D110, E125, E126, F125, F126
Description: Int - Sgl - Privacy - Staff - 8251

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Storeroom Deadbolt Lock	V20 EMB 8251 VN1J VK Keys	US26D	SA
1	Kick Plate	K1050 10" BEV CSK	US32D	RO
1	Door Stop	409 / 462 as req	US32D	RO
1	Door Closer	TB 351 UO	EN	SA
1	Gasketing	By the frame manufacturer		OT

Set: 29.0
Doors: B101B, C108F, C112C, E101B, F101B
Description: Cylinder Only

1	Cylinder Ring	1KB-1		SA
2	Cylinder	as required GMK VK Keys	US32D	SA
1	Balance hardware	by the door manufacturer		OT

Notes: Confirm cylinder type required with door manufacturer.

Set: 29.1
Doors: A137, A138, A139, C108D
Description: Folding Panel

1	All Hardware	By Door Manufacturer		OT

Set: 30.0
Doors: Misc
Description: MISC

50	Master Key	10-S6272MK		SA
100	Key Blank	6275		SA
150	Key Blank	10-6275		SA
1	Key Cabinet	1205-A 400 Double Tag Key Box		LU
1	Badge Holders	Mifflin USA Clear 2.25x3.5 250 pack		OT

END OF SECTION 087100

SECTION 10 14 64 ELECTRONIC MESSAGE SIGNAGE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Rear-illuminated school name with monochrome animated LED electronic message board mounted on sign manufacturer's steel support system. Final connections for power and data at all terminations.

1.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide signs capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated, determined according to ASCE 7, "Minimum Design Loads for Buildings and Other Structures":
   1. Wind Loads: As indicated on Drawings, or if not indicated, a minimum uniform pressure of 25 lb/sf acting in any direction.

B. Thermal Movements: Provide signs that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
   1. Temperature Change (Range): 20-deg F ambient; 180-deg F material surfaces.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes. Include manufacturer's written instructions for maintaining and cleaning sign surfaces.

B. Shop Drawings: Show fabrication and installation details for self-supporting signs.
   1. Include plans, elevations, and at least 3/4-inch (1:20) scale sections of typical members and other components. Show anchors, reinforcement, accessories, layout, and installation details.
   2. Show locations of electrical service connections and conduit routing.
   3. Wiring Diagrams: For internally illuminated signs and LED message boards.

C. Samples for Initial Selection: Manufacturer's color charts consisting of actual units or sections of units showing the full range of colors available for exposed portion of cabinet.

D. Samples for Verification: For each type of product indicated, of size below:
   1. Aluminum Panels: Factory finished in selected color(s), on nominal 4" by 4" sheet in the specified thickness.
   2. Lexan Panels: Factory finished in selected color(s), on nominal 4" by 4" sheet in the specified thickness.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative of sign manufacturer for installation and maintenance of units required for this Project.

B. Fabrication: Signs factory fabricated and delivered to the Project site as a package unit fully functional and ready for installation.

C. Product Design:

1. Drawings indicate size, profiles, and aesthetic design requirements of signs and are based on the types and features indicated.
2. Concealed framing and sign support are the sole responsibility of the sign fabricator and his structural engineer.

3. Do not modify intended design effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed due to manufacturing or delivery limitations, submit comprehensive explanatory data to Architect for review.

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.5 DELIVERY AND HANDLING

A. Deliver monument-type signs in protective covering and crating to protect sign components and surfaces against damage.

1.6 COORDINATION

A. Coordinate installation of anchorages for monument-type signs. Furnish setting drawings, templates, and locations for installing conduit, anchorages and other items that are to be embedded in concrete.

B. Coordinate delivery time so signs can be installed within 24 hours of receipt at Project site.

1.7 WARRANTY

A. Message Sign Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace panels and components that fail in materials or workmanship during specified warranty period. Failures include, but are not limited to, the following:
1. Coating degradation.
2. Chalking.
3. Fading.
4. Failure of LEDs or electronic message board components.

B. Warranty Period: 5 years from date of Substantial Completion of the Project.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Sign Box Manufacturers:
1. Spectrum Corporation, www.spectrumscoreboards.com
2. Stewart Signs, www.stewart signs.com

B. Basis-of-Design: Spectrum double-faced "Horizon" model 4.7-12832 Outdoor LED Electronic Marquee with upper school name panel and lower address panel.

2.2 MATERIALS

A. Aluminum Extrusions: ASTM B221/B221M, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of alloy 6063-T5.

B. Aluminum Panels: Minimum 0.063" thick 3003 Grade aluminum.

C. Structural Steel:
1. Hot-Rolled Structural-Steel Shapes: ASTM A36/A36M or ASTM A529/A529M.
2. Steel Tubing or Pipe: ASTM A500, Grade B.
3. Steel Members Fabricated from Plate or Bar Stock: ASTM A529/A529M or ASTM A572/A572M, 42,000-psi minimum yield strength.
4. Bolts for Steel Framing: ASTM A307 or ASTM A325/A325M as necessary for design loads and connection details.
5. Exposed Steel: Not applicable.

D. Double-Faced School Name Sign Panel:
   1. Upper Panel: Minimum 0.118” thick Sheffield Makralon Polycarbonate.
      a. Face Size: 22"H x 8'-0"W.
      b. Applied Graphics: 3M 3630 translucent films applied to #2 surface, with protective coating of Spraylat’s Lacryl paint for plastic.
      c. Copy: Internally illuminated embossed Lexan panel finished in colors Red, Silver, & White with stylized lettering to read similar to:
         [SCHOOL NAME]
         ELEMENTARY SCHOOL

   2. Lower Panel
      a. Face Size: 1’-6”H x 8'-0"W
      b. Type: Non-illuminated painted aluminum panel with black painted letters to read:
         [Address]

   3. Double-faced sign panel to include Smart Power surge arrestors.

E. Double-Faced LED Animated Message Boards:
   1. Middle Panel
      a. Face Size: 2'-3"H x 7'-7"W.
      b. Type: 140^{o} shaded L.E.D. electronic display capable of displaying 4 lines of 4.7” high characters or up to one line of 21.4” high characters and graphics.
   2. LED Matrix: 32 x 128
   3. LEDs per Pixel: 1
   4. Color: Red, with variable color and dimming levels
   5. Graphics Capability: Text, animation, pictures, video.
   6. Frame Rate: 60 frames/sec.
   7. Scan Rate: 300 Hz
   8. Communication: Wireless

F. Overall Size:
   1. Provide 2” reveal between lower panel and message board for an overall sign height of 5’-9” above concrete base.
   2. Overall sign width: 8’-0”.

2.3 ACCESSORIES

A. Fasteners: Use concealed fasteners fabricated from metals that are noncorrosive to sign material and mounting surface.

B. Anchors and Inserts: Use stainless steel or hot-dip galvanized anchors and inserts. Use torque-controlled expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete.

C. Temperature and Ambient Light Sensor: Mount sensor on concrete base of sign wall. Temperature probe shall provide ambient temperature read-out on screen when programmed. Light sensor shall automatically brighten and dim LED lighting for optimum brightness depending on ambient light condition.

2.4 OPERATION

A. Computer Controlled: Software program provided and installed by sign manufacturer on Owner-provided computer using Windows-based operating system.

B. Communication: Provide and install wiring from MDF room to wireless transmitter located on the exterior corner of the building nearest the sign location.

C. Emergency Power Operation: Power circuit to monument sign is from the emergency power panel. In the event of a power outage, transfer to emergency power will be delayed for several seconds. Upon temporary short-term power loss, sign shall be capable of self-rebooting and continuing to operate without manual reset.

2.5 FABRICATION, GENERAL

A. General: Provide factory-fabricated self-supporting sign assembly consisting of double-sided rear-illuminated school name panel, double-sided LED message boards, and lower non-illuminated address panel. Panels mounted on manufacturer's concealed steel and aluminum framing.
   1. Welded Connections: Comply with AWS standards for recommended practices in shop welding. Provide welds behind finished surfaces without distortion or discoloration of exposed side. Clean exposed welded surfaces of welding flux and dress exposed and contact surfaces.
   2. Mill joints to a tight, hairline fit. Form joints exposed to weather to exclude water penetration.
   3. Preassemble signs in the shop and disassemble signs only as necessary for shipping and installation requirements.
   4. Conceal fasteners where possible; otherwise, locate fasteners where they will be inconspicuous. All exposed fasteners shall be color finished to match panels.

2.6 STRUCTURE

A. Base: Provide signs with integral base consisting of channels, angles, plates, or other fittings. Drill holes in members for anchor-bolt connection.
   1. Provide 4" steel pipe(s) embedded in concrete footing with housekeeping pad poured monolithically.
   2. Steel members shall be hot-dip galvanized.

B. Internal Frames: Manufacturer's standard internal steel framing system, designed to withstand wind pressure indicated. Provide welded construction using mitered joints. Cut, drill, and tap units to receive hardware, bolts, and similar items.
   1. Hot-dip galvanize steel framing system after fabrication to comply with ASTM A123/A123M.
   2. Where aluminum members are utilized, use for secondary framing only.

2.7 ALUMINUM FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Factory Finish:
   1. AA-M12c12R1x non-specular, chemically cleaned and prepared for applied coating:
      a. Interior of Cabinet: Factory-sprayed with white Spraylat 5106 to ensure uniform lighting of cabinet.
      b. Exterior of Cabinet: Factory-coated with 4-stange Akzo Noble premium urethane coating.
      c. Color(s) as selected by Architect coating manufacturer's full range.

2.8 LEXAN FINISHES

A. Polyester enamel with minimum 30% polyvinylidene resin. Minimum 2-coats.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Set any embedded items required for installation of signs. Use templates furnished by suppliers of items to be attached.

B. Install signs level and plumb, with surfaces free from distortion or other defects in appearance.

C. Install control system and all related wiring. Install temperature/lighting sensor and related wiring. Make all final connections.

D. Install manufacture’s control software on Owner-provided computer.

3.2 CLEANING

A. At completion of installation, clean soiled surfaces of sign units according to manufacturer's written instructions.

3.3 TESTING AND TRAINING

A. Test installed equipment thoroughly for proper operation. Provide operational testing for both primary and secondary control system.

B. Train Owner’s designated personnel in the proper maintenance and operation of the sign and related equipment. Instruct Owner’s personnel in the proper use of the installed control software.

C. Set up initial programming as needed by the Owner and leave the sign in operating condition.

END OF SECTION

SECTION 10 28 00 TOILET AND BATH ACCESSORIES

PART 1 – GENERAL REQUIREMENTS

1.1 SCOPE

A. Provide and install toilet room accessories and mounting devices. Install accessories noted to be furnished by owner and installed by contractor. Location, if not shown on drawings, shall be at location as directed by architect at job site.

1.2 SUMMARY

A. Section includes the following toilet and bath accessory items:

1. Paper Towel Dispensers (OFCI)
2. Toilet Tissue Dispensers (OFCI)
3. Stainless Steel Framed Mirrors – Over Lavatory & Full Height
4. Grab Bars – Shower & Toilet Partitions
5. Baby Changing Station
6. Soap Dispensers (OFCI)
7. **Sanitary Napkin Disposal Units (OFCI)**
8. Folding Shower Seat
9. Weighted Shower Curtain and Rod
10. Mop / Broom Holder
11. Waste Receptacles
12. Robe Hooks

1.3 SUBMITTALS

A. PRODUCT DATA: Provide data / cut sheets for each item specified, including details of construction relative to materials, dimensions, gauges, profiles, mounting methods, specified colors and finishes.

B. SCHEDULE: Indicate types, quantities, sizes, locations (BY ROOM) for each accessory item to be provided.

C. DRAWINGS: Where cutouts are required in other work, provide templates, substrate preparation instructions, and directions for installation of anchorage devices.

1.4 QUALITY ASSURANCE

A. Provide products of same manufacturer for each type accessory unit or units and for units exposed to view in same area, unless otherwise acceptable to the Architect.

1.5 WARRANTY

A. Provide manufacturer's written 5 year warranty against silver spoilage of mirrors, with inclusion to replace any mirrors which develop visible defects within warranty period.

PART 2 – PRODUCTS

2.1 PRODUCTS – APPROVED MANUFACTURERS

A. Based on quality of Bobrick Washroom Equipment, Inc. items are specified to be purchased and installed by contractor.

B. The architect will consider products of comparable manufacturers as a substitution pending the contractor's submission of adequate documentation of the substitution in accordance with procedures indicated in Section 01 25 13 Product Substitution Procedures. Items of equal quality and same design features and standards from the following firms are acceptable:
   1. Bobrick Washroom Accessories, www.bobrick.com
   2. Gamco Accessories (Bobrick)
   3. A & J Washroom Accessories, www.ajwashroom.com
   4. American Specialties, Inc., www.americanspecialties.com
   5. General Accessory Manufacturing Co., www.gamcousa.com
   6. Sloan Valve Co.; www.sloanvalve.com
   7. Bradley Corporation; www.bradleycorp.com
   8. Pinnacle Dryer Corp. www.pinnacledryer.com
   9. World Dryer Corp. www.worlddryer.com
   10. KR Specialties, Inc. www.kr-specialties.com

B. Stainless Steel: AISI Type 302/304 with polished No.4 finish, 22 gauge min. thickness unless otherwise indicated.

C. Brass: Flat products ASTM B 19, rods, shapes, forgings ASTM B 16, Castings ASTM B-30.

D. Sheet Steel: Cold rolled commercial quality, ASTM A 366, 20 gauge min. unless noted otherwise. Preparation and pretreatment as required for applied finish.

E. Galvanized Steel Sheet: ASTM A 527, G60

F. Chromium Plating: Nickel and chromium electro-deposited on base metal, ASTM B 456, Type SC 2.

G. Baked Enamel Finish: Factory-applied, baked acrylic enamel coating. Color as selected in finish schedule from manufacturer's standard colors.

H. Mirror Glass: No.1 quality, ¼" select float glass selected for silvering, electrolytically copper-plated by the galvanic process, and guaranteed for 15 years against silver spoilage. All edges protected by plastic filler strips; back to be protected by nonabrasive, 3/16" thick polyethylene padding.

2.2 ACCESSORIES SCHEDULE (Refer to Drawings for Schedule and Mounting Heights):

A. TOILET TISSUE DISPENSERS: Owner-Furnished, Contractor-Installed

B. PAPER TOWEL DISPENSER: Owner-Furnished, Contractor-Installed

C. STAINLESS STEEL ANGLE FRAMED MIRRORS:

Bobrick B-290 2436, 24" x 36", Type 304 stainless steel angle framed mirrors. Mount (1) mirror at each lavatory (in addition to other locations noted on the drawings) with concealed, 20 ga., galvanized steel wall hangers. Bottom of reflective surface of all mirror to be mounted at 40" max. above finished floor. Provide area between mirrors as required for installation of soap dispensers.

Bobrick B-290 2472, 24" x 72", Type 304 stainless steel angle framed mirrors. Mount (1) mirror at each dressing room location noted on the drawings with concealed, 20 ga., galvanized steel wall hangers. Bottom of reflective surface of all mirror to be mounted at 18" max. above finished floor (mount at height indicated on the drawings).

D. GRAB BARS

Bobrick B-6806 x 36, 1 1/2-inch dia. x 36-inch length, stainless steel with snap flanges. Supply and install one grab bar on wall behind toilet for each accessible toilet indicated on plans (provide for minimum of one (1) per toilet room if not indicated otherwise). Design shall meet State of Texas Senate Bill No. 111 - Sixty-first Legislature, as amended by HB 1319 - Sixty-second Legislature. Provide anchors as required for permanently secure installation. Mount grab bars at 33" to 36" above finished floor to the centerline of the bar.

Bobrick B-6806 x 42, 1 1/2-inch dia. x 42-inch length, stainless steel with snap flanges. Supply and install one grab bar on side wall of toilet for each accessible toilet indicated on plans (provide for minimum of one (1) per toilet room if not indicated otherwise). Design shall meet State of Texas Senate Bill No. 111 - Sixty-first Legislature, as amended by HB 1319 - Sixty-second Legislature. Provide anchors as required for permanently secure installation. Mount grab bars at 33" to 36" above finished floor to the centerline of the bar.

Bobrick B-6861 Series, 1 1/2-inch dia. x 15-7/8-inch x 30-7/8-inch length, two-wall, stainless steel with snap flanges. Supply and install one grab bar at each accessible shower indicated on plan (minimum one (1) per shower room if not indicated otherwise).

F. SOAP DISPENSERS: Owner-Furnished, Contractor-Installed

G. SANITARY NAPKIN DISPOSAL: Owner-Furnished, Contractor-Installed

H. FOLDING SHOWER SEAT: Bradley Model #956 (9561) or GAMCO Model #SS-4-ADA, reversible, solid phenolic, folding shower seat. Provide 1 seat for each accessible shower indicated on the drawings (provide for minimum of one (1) per shower area if not indicated otherwise). Mount seat at height indicated by TAS.

J. WEIGHTED SHOWER CURTAIN AND ROD:

1. Provide shower curtain and rod at all individual showers.
2. Shower rod equal to **Bobrick Model #B-6047** or **Bradley Model #9531**, extra heavy duty shower curtain rod with stainless steel flanges. Provide 1 at each shower stall location.
3. Weighted Shower Curtain to be equal to Model CUR-130 (36" opening) or CUR-132 (60" opening) as manufactured by KR Specialties, Inc or approved equal. Provide 1 at each shower stall location.

    a. Curtain shall be equipped with heavy tape weights in bottom seam engineered and tailored specifically for use in commercial barrier-free, curb-less, or low threshold shower stalls. The curtain must meet or exceed the following requirements. The width shall be a minimum of six inches greater then the pre-determined shower opening. The curtain length shall be a standard 72" height unless custom specified and must touch the floor of the shower to effectively control water spillage. Material shall be a soft polyester fabric, standard color white, machine washable, splash resistant, bacterial resistant, stain resistant, and flame resistant. Material shall meet all state and federal code compliance regulations. Each curtain shall include twelve clear plastic hooks.

K. **MOP & BROOM HOLDER:** **Bobrick Model #B-223 x 36" or GAMCO Model MS-2 or Bradley Model #9954**, 22 ga., Type 304, stainless steel with 4 spring loaded rubber cams. Provide and install one (1) at each custodian sink location. Mount holder on wall above sinks so that mops will drip into sinks.

L. **BABY CHANGING STATION:** Horizontal design, equal to **Koala Kare/Bobrick Model KB200-00 or Bradley Model # 961**. Provide and install one (1) at each family/single user restroom in public spaces.

M. **WASTE RECEPTACLES:** **Bobrick Model # B-279**; provide at each OFCI paper towel dispenser that is not located over a base cabinet. Waste receptacles shall be installed so bottom edge is no higher than 27" AFF.

N. **ROBE HOOK WITH BUMPER:** **Bobrick B-212**, aluminum, matte finish, with rubber bumper, projects no more than 4-inches. Mount as indicated on drawings. Provide and install one (1) at each individual shower stall, each toilet stall, and each single-user restroom; refer to locations shown on drawings. Allow for one (1) hook per each shower head to be installed in gang-showers (F113.4) – location to be determined by Architect.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify openings are sized and located in accordance with shop drawings.

B. Verify reinforcement and anchoring devices are correct type and are located in accordance with shop drawings.

C. Examine conditions under which construction activities are to be performed, then submit written notification if such conditions are unacceptable.

3.02 INSTALLATION

A. Install accessories in the locations indicated with anchor devices of the types specified. Fasten securely, true, plumb and level.

B. Install recessed accessories into wall openings with wood screws through cabinet side into wood blocking or studs, or sheet metal screws into metal backing or studs.

C. Install surface mounted accessories to hollow back up using toggle bolts and to metal or wood backing using proper type screws.

D. Do not use any anchors, screws, attachment bolts or anchoring sleeves containing lead.

E. Provide fasteners, anchors, and the like as necessary to install toilet accessories.

F. Make required electrical connections.

G. Locate toilet accessories at heights specified by TAS - ADAAG, State, or local requirements.

H. Install all accessories in accordance with manufacturer's written instructions, using attachment appropriate to substrate and as recommended by accessory manufacturer. Install all accessories securely anchored, plumb, level and at heights indicated.

I. Secure mirrors to walls in concealed, tamperproof manner with appropriate hangers, toggle bolts or screws. Set units plumb, level and square at locations indicated, in accordance with manufacturer's instructions.

J. Install grab bars to resist tensile and movement forces generated by a load of 250 lbs. applied in any direction, or as otherwise required by authorities having jurisdiction, whichever is more stringent.

K. At all areas where accessories are attached to masonry walls, use metal toggle bolts; plastic expansion shields are not allowed.

L. At drywall partitions, attach to solid fire-treated 2x blocking between metal studs (butterfly bolts). . All items shall be attached with adequate sized non-removable screws/anchors.

3.03 CLEANING

A. Remove manufacturer's protective coverings and clean surfaces in accordance with manufacturer's recommendations.

3.04 PROTECTION

A. Protect products from damage caused by subsequent construction activities.

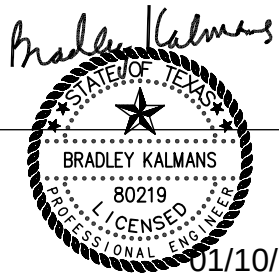
B. Field repair of damaged product finishes is prohibited; replace products having damaged finishes caused by subsequent construction activities.

END OF SECTION 10 28 00

SECTION 22 05 11 **UNDER SLAB PIPE VOID SYSTEMS**

PART 1 - GENERAL

1.1 OVERVIEW:



01/10/2025

A. This specification covers Sacrificial Pipe Void Forms, hereinafter referred to as “Pipe Voids”. Saddle Pipe Voids and Standard Pipe Voids shall always be used in conjunction with SV – Rigid/Rib Retainers as a SYSTEM to maintain void spaces below all building utility systems under building foundations during and after construction.

B. Pipe Voids serve as sacrificial falsework, which isolate critical building systems, such as domestic water, fire water, sanitary sewer utility pipes, electrical, communication conduits, and other building system piping from the potentially damaging effects of expansive soils. The Pipe Voids furnished for this project shall be in accordance with these specifications and in reasonably close conformity with the lines, grades, design and dimensions shown on the plans or as established by the Engineer.

C. The Pipe Voids shall be resistant to water and UV rays and shall be chiefly comprised of carbon steel expanded metal, which is structurally efficient and biodegradable. The carbon steel shall contain a minimum of 40% RECYCLED material. In situations where two or more specifications apply to this work, the most stringent requirements shall govern.

1.2 PIPE VOID STRUCTURE:

A. Pipe Voids shall provide a dimensionally stable void space, maintaining uniform separation between the base soil and the critical building systems. The Pipe Voids shall have sufficient structural strength to maintain the intended void space while experiencing the anticipated construction loads.

B. The Pipe Void (system) shall be designed to perform as sacrificial falsework and shall remain in place after construction and shall not be reused.

C. Serving as a structural fuse, Pipe Voids shall intercept the potential accumulation of vertical and lateral soil forces on critical building utility systems which can result from soil movement. The Pipe Voids shall intercept, absorb or redirect the forces of soil movements by: crumpling, crushing, collapsing, deforming, material section degradation, soil extrusion, open corrugation load span designs or combination of any or all load relief design functions.

1.3 SUBMITTALS

A. The manufacturer’s literature shall be submitted prior to installation.

B. Submittal Drawings shall indicate layout, components and material sizing. Include information on all components and accessories.

C. Submittals shall include a full copy of these specifications with a line-by-line compliance as required for all mandatory shop drawings. Refer to Specification 22 05 12 Plumbing Shop and Coordination Drawings.

1.4 PRODUCT HANDLING AND STORAGE

A. Upon receipt at the job site, all materials shall be checked to ensure that no damage occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism and theft.

1.5 Related Specifications

A. 22 11 16 Domestic Water Piping and Appurtenances
B. 22 13 16 Soil Waste & Sanitary Drain Piping, Vent Piping and Appurtenances
C. 22 14 13 Roof Drainage Piping & Appurtenances
D. 22 20 00 Plumbing Pipe and Fittings General

PART 2 - PRODUCTS

2.1 PIPE VOID MATERIAL:

A. Pipe Voids shall be constructed from Carbon Steel Expanded Metal, Types I & II, conforming to ASTM F1267 and shall be assembled when required with 16ga. galvanized steel C-Rings.

B. The carbon steel shall conform to ASTM A1011 and contain a minimum of 40% RECYCLED material.

C. All expanded metal components used for the manufacture of any Pipe Void shall fully conform to EMMA (Expanded Metal Manufacturers Association) minimum material standards.

D. All assembly and/or fabrications of the Pipe Voids shall occur entirely within the United States.

E. The Pipe Void material shall not promote the formation or emergence of mold spore, organic or other biological colonization.

F. The Pipe Voids must be able to be delivered and stored unprotected in the open jobsite environment for a minimum of 90 days without loss of design strength.

2.2 PIPE VOID MATERIAL, MINIMUM PHYSICAL PROPERTIES REQUIREMENTS:

A. Pipe Void shall be naturally waterproof in terms of its intended use in this section.

B. Pipe Void shall have negligible buoyancy.

C. Pipe Void shall maintain structural integrity in 100% relative humidity.

D. Pipe Void material shall not emit offensive off-gassing odors during decomposition.

E. The structural integrity of the Pipe Void shall be unaffected by high/low ambient temperatures and elevated surface temperatures from direct sunlight extremes, above or sub-freezing, frozen soil and ice buildup.

F. Pipe Void must have an industry history of providing consistent performance integrity during and after all types of weather event applications, while in readiness storage or installed, without the threat of partial or full section premature collapse during backfill or concrete casting operations.

G. Pipe Void strength shall not be affected by becoming damp, wet, or when completely submerged in standing water.

H. Pipe Void must be fire-resistant and incombustible.

I. All Suspension Hardware to be Stainless Steel Grade, including nuts, washers & hanger rods.

J. All Suspended Piping using the Pipe Void Systems, must be permanently fixed to and permanently suspended but supported at constant elevations by structural components above.

K. All Pipe Void System protection component materials excluding hanger hardware, backfill, piping or conduits shall be furnished per project specifications by SV-PV system manufacturer.

2.3 PIPE VOID MATERIAL, MINIMUM PERFORMANCE REQUIREMENTS:

A. The Pipe Void (system) shall be designed to provide sufficient dynamic live and dead load support capacities of but not limited to all loads common to this type of construction.

B. Installation of utility piping and/or conduit – dead/live loads, Placement of backfill materials.

C. Manpower and foot traffic loads after application of substrates, do not Walk on Void components without Substrates in place.

D. Sub-standard Pipe Void cover sheet substrates, can affect desired performance; use only the types of substrates as those approved for use and recommended by the Pipe Void (system) manufacturer.

E. Substrate materials shall originate from FSC (Forest Stewardship Council, United States) mills and be in new or like new condition, performing to APA (The Engineered Wood Association) current standards.

2.4 RIGID RETAINER STRUCTURE:

A. Rigid Retainers shall maintain a dimensionally stable void space beneath structural concrete and other critical building systems and components by physically restraining backfill material from entering the void space. The Rigid Retainers shall have sufficient structural strength to maintain the intended void space, without excessive deflection, while experiencing the anticipated lateral earth pressures.

B. The Rigid Retainers shall be designed to perform as a permanent soil retaining structure which shall remain in place after construction and shall not be reused.

C. For “Best Practice Standards,” the Rigid Retainers recommended installation is to overlap concrete castings by at least six (6) inches and extend a minimum of at least six (6) inches into the subgrade.

D. Rigid Retainers should be secured to the concrete at the top with at least three (3) anchors of sufficient size and securing strength, one at each end of the overlapping joint seal design and one centered.

E. A “Minimum Design Standard,” for the Rigid Retainers shall be designed to overlap concrete castings by at least three (3) inches and extend a minimum of at least three (3) inches into the subgrade.

2.5 RIGID RETAINER MATERIAL:

A. The Rigid Retainers shall be constructed from extruded or injection molded High Density Polyethylene (HDPE).

B. The HDPE material shall be either HDPE-8 (Crate Grade) or HDPE-8 (Pail Grade) and shall contain a minimum of 95% RECYCLED material. (5% for colorant and plastic foaming additives)

C. The HDPE shall conform to the following: ASTM D 1238 or ASTM D 1238E, ASTM D 4883

D. ASTM D 638, ASTM D 790, ASTM D 256, ASTM D 2240 and ASTM D 648.

E. Rigid Retainers shall be manufactured entirely within the United States.

2.6 RIGID RETAINER MATERIAL, MINIMUM PHYSICAL PROPERTIES REQUIREMENTS:

A. Rigid Retainer shall be naturally waterproof in terms of its intended use in this section.

B. Rigid Retainer shall have negligible buoyancy.

C. Rigid Retainer shall maintain structural integrity in 100% relative humidity.

D. Rigid Retainer material shall be non-biodegradable.

2.7 RIGID RETAINER MATERIAL, MINIMUM PERFORMANCE REQUIREMENTS:

A. Rigid Retainers material shall provide sufficient dynamic live and dead load support capacities of but not limited to all loads common to this type of construction.
   1. Installation of backfill material – construction live loads
   2. Manpower and foot traffic loads
   3. Rigid Retainers material shall possess sufficient structural strength to resist anticipated lateral earth pressures.
   4. Rigid Retainers must be able to be delivered and stored unprotected in the open jobsite environment for a minimum of 90 days without loss of design strength.
   5. The structural integrity and installation of the Rigid Retainer shall be functionally unaffected by high/low ambient temperatures and elevated surface temperatures from direct sunlight extremes, above or sub- freezing, frozen soil and ice buildup.
   6. Rigid Retainer material strength shall not be affected by becoming damp, wet, or when completely submerged in standing water.
   7. These Rigid Retainer general specifications, with recommended application height and position adjustments, also apply to other Rigid Retainer assemblies such as, **SV** – Pipe Void Systems.

2.8 INSTALLATION, QUALITY CONTROL:

A. During Installations, follow fully all Pipe Void System manufacturers’ installation instructions.

B. Installations are subject to inspection by the Pipe Void System Manufacturer, their designated authorized personnel or representatives, for installation compliance and overall quality control.

2.9 APPROVED PIPE VOID MANUFACTURERS MEETING ALL REQUIRED SECTION SPECIFICATIONS:

A. SuperVoid Systems, LLC -
1. 1172 County Rd. 24 - Prattville, Alabama 36067 –
2. 334-730-3614 - 334-221-5761
3. Lprimm@SuperVoid.com; primmd@SuperVoid.com
4. www.SuperVoid.com

B. Plumbing Void Pipe Isolation System
1. Void Form Products, Inc.
   a) 6151 Cowley Road - Fort Worth, TX 76119 - 888-803-VOID (8643) - 817-429-0888 (Local)
   b) http://voidform.com

END OF SECTION UNDER SLAB PIPE VOID SYSTEMS

SECTION 22 14 13 ROOF DRAINAGE PIPING AND APPURTENANCES

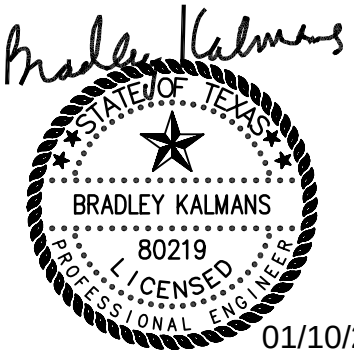
PART 1 - GENERAL

1.1 WORK INCLUDED

A. Furnish and install roof drains, drain pipes and accessories.

1.2 RELATED WORK

A. Division 22 Plumbing
1. Pipe and Pipe Fittings - General; for general piping requirements.
2. Drains and Cleanouts.
3. Plumbing Piping Insulation.
4. Earthwork



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1.3 REFERENCES

A. CISPI – Cast Iron Soil Pipe Institute

B. ASTM – American Society for Testing and Materials

PART 2 - PRODUCTS

2.0 ACCEPTABLE MANUFACTURERS

A. Cast Iron Soil Pipe and Fittings
1. AB&I
2. Charlotte Pipe and Foundry Co.
3. Tyler Pipe / Soil Division

2.1 STORM PIPE AND FITTINGS

A. Above Ground Pipe. Provide service weight cast iron Hub and Spigot soil pipe and fittings with compression type neoprene gaskets that conform to ASTM C-564. Pipe and fittings shall meet the requirements of ASTM A 74. All cast iron soil pipe and fittings shall be marked with the collective trademark of the Cast Iron Soil Pipe Institute.

B. Below Slab on Grade: Provide Schedule 40 PVC plastic pipe and DWV fittings with solvent welded joints. Pipe and fittings shall conform to ASTM D 1784-82.

C. Provide Husky shielded couplings, Series 4200 with one-piece neoprene gasket for cast iron pipe transitions to Schedule 40 DWV pipe penetrations through slabs. Sizes 2” through 8” use Series 4200.

PART 3 - EXECUTION

3.1 INSTALLATION

A. All above and below slab storm piping installation methods shall be in accordance with the Cast Iron Soil Pipe Institute Standards.

B. Above ground installation in the horizontal position shall be supported at every hub (hub & spigot or hubless type). Hangers to be placed within 18” of hub or coupling. For large diameter fittings, 5 inches and larger shall be braced to prevent horizontal movement. Every branch opening or

change of direction, braces, blocks, rodding or other suitable method shall be used to prevent movement. Riser clamps to be used for each floor, not to exceed 15'-0".

C. All above and below slab PVC storm piping installation methods shall be in accordance with IAPMO Installation Standard 18-9 for Schedule 40 PVC-DWV, per manufacturer's recommendations and applicable standards, and in accordance with ASTM D2321.

3.2 GRADE

A. Give horizontal lines minimum grade of 1/8 inch per foot.

3.3 TESTING

A. Below Slab on Grade and All Floors in Multi-Story Buildings:
1. Test pipe below slab on grade before backfilling and connecting to city sewers.
2. Maintain not less than 10 foot of hydrostatic head for1 hour without a leak.
3. Before acceptance of the work the contractor must ensure the piping is in working order before and after the slab is poured. To ensure this the contractor must test completed systems in the presence of the Architect, Engineer and authorities having jurisdiction after installation is complete.
4. Maintain the test on the system till after the slab is poured. Provide an accessible connection that may be reviewed by Architect, Engineer and authorities having jurisdiction prior to and after the slab is poured.
5. Test drainage piping systems in accordance with governing codes and the requirements specified. Provide equipment and materials and make test connections required to execute tests.
6. Test drainage and waste piping hydraulically by filling system to its highest point or, whichever is greater, at a static head of 10 feet. Leaks at any joint shall be sufficient cause for rejection.
7. Air tests may be substituted for hydraulic tests by forcing air into the closed system at a uniform pressure sufficient to balance a column of 10 inch hg in height.
8. Under any of the previously described tests, the water height shall remain constant, after stabilization, for not less than 15 minutes without any further addition of water.

B. System Test. After the various sections of soil, waste and vent piping are installed, but before fixtures are connected, test the system by:
1. Plugging outlets.
2. Filling vertical sections of multiple story buildings of not less than three floors at a time with water. Provide wyes as required to facilitate plugging.
3. Test for 6 hours without any drop in the water level.

3.4 RODDING SEWERS

A. All storm sewer lines, both in the building and out, shall be rodded out and flushed out after completion of construction and prior to finish floor being installed. All work must be completed prior to substantial completion. All floor drains and cleanout locations must be included in this work.

B. All storm lines below building 3" and larger shall be internally video-taped at time of substantial completion. An Owner's Representative shall be present during video-taping. Three copies of the video-tape shall be delivered to the Owner for future records.

C. This work shall be done in the presence of the Owner's Representative, as part of the Contract, to ensure all lines are clear, and any obstruction that may be discovered shall be removed

immediately. Rodding shall be accomplished by utilizing a rotary cutter, which shall be full size of pipe being cleaned for pipe sizes up to 6 inches. Pipe sizes 8 inches and larger shall be hydro-flushed.

END OF SECTION 22 14 13

SECTION 26 05 11 UNDER SLAB PIPE VOID SYSTEMS FOR ELECTRICAL CONDUITS

PART 1 - GENERAL

1.1 OVERVIEW

A. This specification covers Sacrificial Pipe Void Forms, hereinafter referred to as “Pipe Voids”. Saddle Pipe Voids and Standard Pipe Voids shall always be used in conjunction with SV – Rigid/Rib Retainers as a SYSTEM to maintain void spaces below all building utility systems under building foundations during and after construction.

B. Pipe Voids serve as sacrificial falsework, which isolate critical building systems, such as domestic water, fire water, sanitary sewer utility pipes, electrical, communication conduits, and other building system piping from the potentially damaging effects of expansive soils. The Pipe Voids furnished for this project shall be in accordance with these specifications and in reasonably close conformity with the lines, grades, design and dimensions shown on the plans or as established by the Engineer.

C. The Pipe Voids shall be resistant to water and UV rays and shall be chiefly comprised of carbon steel expanded metal, which is structurally efficient and biodegradable. In situations where two or more specifications apply to this work, the most stringent requirements shall govern.

1.2 PIPE VOID STRUCTURE

A. Pipe Voids shall provide a dimensionally stable void space, maintaining uniform separation between the base soil and the critical building systems. The Pipe Voids shall have sufficient structural strength to maintain the intended void space while experiencing the anticipated construction loads.

B. The Pipe Void (system) shall be designed to perform as sacrificial falsework and shall remain in place after construction and shall not be reused.

C. Serving as a structural fuse, Pipe Voids shall intercept the potential accumulation of vertical and lateral soil forces on critical building utility systems which can result from soil movement. The Pipe Voids shall intercept, absorb or redirect the forces of soil movements by crumpling, crushing, collapsing, deforming, material section degradation, soil extrusion, open corrugation load span designs or combination of any or all load relief design functions.

1.3 SUBMITTALS

A. The manufacturer’s literature shall be submitted prior to installation.

B. Submittal Drawings shall indicate layout, components, and material sizing. Include information on all components and accessories.

C. Submittals shall include a full copy of these specifications with a line-by-line compliance as required for all mandatory shop drawings. Refer to Specification 26 05 12 Electrical Shop and Coordination Drawings.

1.4 PRODUCT HANDLING AND STORAGE

A. Upon receipt at the job site, all materials shall be checked to ensure that no damage occurred during shipping or handling. Materials shall be stored in such a manner to ensure

proper ventilation and drainage, and to protect against damage, weather, vandalism, and theft.

1.5 RELATED SPECIFICATIONS

A. Refer to Section 26 05 33 Conduit Systems specifications for additional requirements for conduit installations which may govern the installation of the pipe void systems. It is the general intent that all conduits be installed above the building slab unless specifically indicated as below slab on the drawings.

B. Conduits 2-inches or less in diameter for floor outlet boxes may be installed in the building slab as permitted by the structural engineer to avoid the need for a conduit pipe void system for floor box installation.

PART 2 - PRODUCTS

2.1 APPROVED PIPE VOID MANUFACTURERS MEETING ALL REQUIRED SECTION SPECIFICATIONS

A. SuperVoid Systems, LLC -www.SuperVoid.com
1172 County Rd. 24 - Prattville, Alabama 36067 –
334-730-3614 - 334-221-5761
Lprimm@SuperVoid.com; primmd@SuperVoid.com

B. Void Pipe Isolation System
Void Form Products, Inc. http://voidform.com
6151 Cowley Road - Fort Worth, TX 76119 - 888-803-VOID (8643) - 817-429-0888 (Local)

2.2 PIPE VOID MATERIAL

A. Pipe Voids shall be constructed from Carbon Steel Expanded Metal, Types I & II, conforming to ASTM F1267 and shall be assembled when required with 16ga. galvanized steel C-Rings.

B. The carbon steel shall conform to ASTM A1011.

C. All expanded metal components used for the manufacture of any Pipe Void shall fully conform to EMMA (Expanded Metal Manufacturers Association) minimum material standards.

D. All assembly and/or fabrications of the Pipe Voids shall occur entirely within the United States.

E. The Pipe Void material shall not promote the formation or emergence of mold spore, organic or other biological colonization.

F. The Pipe Voids must be able to be delivered and stored unprotected in the open jobsite environment for a minimum of 90 days without loss of design strength.

2.3 PIPE VOID MATERIAL, MINIMUM PHYSICAL PROPERTIES REQUIREMENTS

A. Pipe Void shall be naturally waterproof in terms of its intended use in this section.

B. Pipe Void shall have negligible buoyancy.

C. Pipe Void shall maintain structural integrity in 100% relative humidity.

D. Pipe Void material shall not emit offensive off-gassing odors during decomposition.

E. The structural integrity of the Pipe Void shall be unaffected by high/low ambient temperatures and elevated surface temperatures from direct sunlight extremes, above or sub-freezing, frozen soil and ice buildup.

F. Pipe Void must have an industry history of providing consistent performance integrity during and after all types of weather event applications, while in readiness storage or installed, without the threat of partial or full section premature collapse during backfill or concrete casting operations.

G. Pipe Void strength shall not be affected by becoming damp, wet, or when completely submerged in standing water.

H. Pipe Void must be fire-resistant and incombustible.

I. All Suspension Hardware to be Stainless Steel Grade, including nuts, washers & hanger rods.

J. All Suspended Piping using the Pipe Void Systems, must be permanently fixed to and permanently suspended but supported at constant elevations by structural components above.

K. All Pipe Void System protection component materials excluding hanger hardware, backfill, piping or conduits shall be furnished per project specifications by SV-PV system manufacturer.

2.4 PIPE VOID MATERIAL, MINIMUM PERFORMANCE REQUIREMENTS

A. The Pipe Void (system) shall be designed to provide sufficient dynamic live and dead load support capacities of but not limited to all loads common to this type of construction.

B. The Pipe Void (system) shall allow the installation of utility piping and/or conduit with dead/live loads and placement of backfill materials.

C. The Pipe Void (system) shall allow manpower and foot traffic loads after application of substrates, do not walk on void components without Substrates in place.

D. Substrates shall be of those approved for use and recommended by the Pipe Void (system) manufacturer.

E. Substrate materials shall originate from FSC (Forest Stewardship Council, United States) mills and be in new or like new condition, performing to APA (The Engineered Wood Association) current standards.

2.5 RIGID RETAINER STRUCTURE

A. Rigid Retainers shall maintain a dimensionally stable void space beneath structural concrete and other critical building systems and components by physically restraining backfill material from entering the void space. The Rigid Retainers shall have sufficient

structural strength to maintain the intended void space, without excessive deflection, while experiencing the anticipated lateral earth pressures.

B. The Rigid Retainers shall be designed to perform as a permanent soil retaining structure which shall remain in place after construction and shall not be reused.

C. For “Best Practice Standards,” the Rigid Retainers recommended installation is to overlap concrete castings by at least six (6) inches and extend a minimum of at least six (6) inches into the subgrade.

D. Rigid Retainers should be secured to the concrete at the top with at least three (3) anchors of sufficient size and securing strength, one at each end of the overlapping joint seal design and one centered.

E. A “Minimum Design Standard,” for the Rigid Retainers shall be designed to overlap concrete castings by at least three (3) inches and extend a minimum of at least three (3) inches into the subgrade.

2.6 RIGID RETAINER MATERIAL

A. The Rigid Retainers shall be constructed from extruded or injection molded High Density Polyethylene (HDPE).

B. The HDPE material shall be either HDPE-8 (Crate Grade) or HDPE-8 (Pail Grade).

C. The HDPE shall conform to the following: ASTM D 1238 or ASTM D 1238E, ASTM D 4883, ASTM D 638, ASTM D 790, ASTM D 256, ASTM D 2240, and ASTM D 648.

D. Rigid Retainers shall be manufactured entirely within the United States.

2.7 RIGID RETAINER MATERIAL, MINIMUM PHYSICAL PROPERTIES REQUIREMENTS

A. Rigid Retainer shall be naturally waterproof in terms of its intended use in this section.

B. Rigid Retainer shall have negligible buoyancy.

C. Rigid Retainer shall maintain structural integrity in 100% relative humidity.

D. Rigid Retainer material shall be non-biodegradable.

2.8 RIGID RETAINER MATERIAL, MINIMUM PERFORMANCE REQUIREMENTS

A. Rigid Retainers material shall provide sufficient dynamic live and dead load support capacities of but not limited to all loads common to this type of construction.
   1. Installation of backfill material – construction live loads
   2. Manpower and foot traffic loads
   3. Rigid Retainers material shall possess sufficient structural strength to resist anticipated lateral earth pressures.
   4. Rigid Retainers must be able to be delivered and stored unprotected in the open jobsite environment for a minimum of 90 days without loss of design strength.
   5. The structural integrity and installation of the Rigid Retainer shall be functionally unaffected by high/low ambient temperatures and elevated surface temperatures from direct sunlight extremes, above or sub- freezing, frozen soil and ice buildup.
   6. Rigid Retainer material strength shall not be affected by becoming damp, wet,

or when completely submerged in standing water.

7. These Rigid Retainer general specifications, with recommended application height and position adjustments, also apply to other Rigid Retainer assemblies such as, SV – Pipe Void Systems.

PART 3 - EXECUTION

3.1 INSTALLATION, QUALITY CONTROL

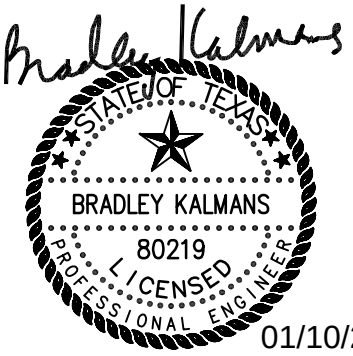
A. Install under slab electrical conduits in pipe voids with supports and fittings. Coordinate installation with structural slab drawings and specifications.

B. Install conduits, supports and fittings in accordance with pipe void system manufacture designs, recommendations, installation instructions, local codes, and applicable sections of the NECA “Standard of Installation”.

C. Installations shall be inspected by the Pipe Void System Manufacturer, their designated authorized personnel, or representatives, for installation compliance and overall quality control.

D. Provide and submit written documentation from the manufacture or their representative that the installation is consistent with the manufacturer's design and their installation instructions prior to installing any conductors in any below slab conduits installed in pipe void systems.

END OF SECTION UNDER SLAB PIPE VOID SYSTEMS FOR ELECTRICAL CONDUITS



01/10/2025

STUDENT CAPACITY:

GRADES SERVED:	PRE-KINDER - 5TH GRADE
DESIGN CAPACITY: 800 STUDENTS	
32 REGULAR CLASSROOMS x 22* =	704
6 REGULAR CLASSROOMS x 24** =	144
TOTAL CAPACITY =	848

* TEXAS EDUCATION AGENCY (TEA) MANDATES/REQUIRES A MAXIMUM OF 22 STUDENTS PER CLASSROOM FOR GRADES KINDERGARTEN THROUGH FOURTH GRADE.

** TEXAS EDUCATION AGENCY (TEA) MANDATES/REQUIRES A MAXIMUM OF 24 STUDENTS PER CLASSROOM FOR FIFTH GRADE.

LEVEL 01 - CODE REVIEW 1
SCALE: 1" = 20'-0"

PROJECT GENERAL INFORMATION:

PROJECT	LAMAR CISD ELEMENTARY SCHOOL #38
LOCATION	ROSENBERG, TEXAS
BUILDING HEIGHT	ONE STORY W/ MECHANICAL PLATFORM
FLOOR AREA SUMMARY	LEVEL 1: 107,757 SF MECHANICAL PLATFORMS: 8,353 SF TOTAL = **116,110 SF**

CODE REVIEW: IBC 2015

OCCUPANCY (SEC. 508)	MIXED
PRIMARY OCCUPANCY (SEC. 305)	EDUCATIONAL GROUP "E"
SECONDARY OCCUPANCY (SEC. 303, 304)	ASSEMBLY GROUP "A-2" (CAFETERIA) W/ ASSOCIATED KITCHEN ASSEMBLY GROUP "A-3" (GYMNASIUM) BUSINESS GROUP "B" (ADMIN. AREAS) NOTE: PER EXCEPTION 508.2.1, THE ABOVE SECONDARY OCCUPANCIES ARE DESIGNATED AS ACCESSORY OCCUPANCIES.
AUTOMATIC SPRINKLER SYSTEM	YES
TYPE OF CONSTRUCTION (CHAPTER 6)	TYPE II A
BUILDING AREA AND HEIGHT LIMITATIONS (SEC. 503-506) FOR GROUP "E" OCCUPANCY	106,000 AREA / 75 FT HEIGHT / 3 STORIES (TAB. 506.2 ALLOWABL AREA): 26,500 NS / 106,000 S1 / 79,500 MS (HEIGHT INCREASE PER TAB. 504.3): 75 FT HEIGHT / 3 STORIES
ALLOWABLE AREA CALCULATIONS (SEC. 506.2):	
Aa = At + (S1 x If)	MIXED-OCCUPANCY, ONE STORY
TOTAL MAXIMUM ALLOWABLE AREA EQUATION (SEC. 506.2/506.3):	
Aa = At + (S1 x If)	Aa = 106,000 + (26,500 x .75) Aa = 106,000 + 19,875
TOTAL MAXIMUM ALLOWABLE AREA:	**Aa = 125,875 SF** / FLOOR

FIRE-RESISTANCE REQUIREMENTS

FOR GENERAL BUILDING ELEMENTS:	(TAB. 601 AND 602)	DOOR RATING (TAB. 716.5)
STRUCTURAL FRAME	1 HR	
BEARING WALLS:		
EXTERIOR	1 HR	
INTERIOR	1 HR	
NONBEARING WALLS:		
EXTERIOR LESS THAN 5'	1 HR	45 MIN
5' OR LESS THAN 10'	1 HR	45 MIN
10' OR LESS THAN 30'	1 HR	45 MIN
GREATER THAN 30'	0 HR	
INTERIOR	0 HR	
FLOOR CONSTRUCTION (INCL. SUPPORT BEAMS/JOISTS)	1 HR	
ROOF CONSTRUCTION (INCL. SUPPORT BEAMS/JOISTS)	1 HR	
FOR SPECIFIC BUILDING ELEMENTS:		
SHAFT ENCLOSURES (SEC. 713.4)	1 HR	45 MIN
STAIRWAYS (SEC. 1019.3 EXP.1)	0 HR	
AISLES (TAB. 1018.1)	0 HR	

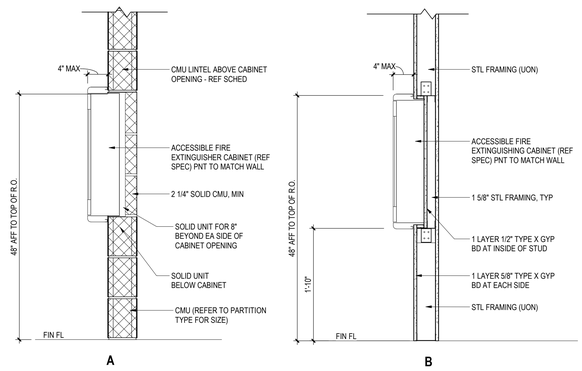
OCCUPANCY SEPARATIONS: NOT REQUIRED - NONSEPARATED USE (SEC 508.3.1)

INCIDENTAL USE SEPARATIONS (TABLE 509):

BOILER AND FURNACE ROOMS	1 HR. OR PROVIDE AUTOMATIC SPRINKLER SYSTEM **- 2 HOUR & AUTOMATIC SPRINKLER SYSTEM PROVIDED**
LABORATORIES OR VOCATIONAL SHOPS	1 HR. OR PROVIDE AUTOMATIC SPRINKLER SYSTEM **- AUTOMATIC SPRINKLER SYSTEM PROVIDED**
LAUNDRY ROOMS OVER 100 SF	1 HR. OR PROVIDE AUTOMATIC SPRINKLER SYSTEM **-AUTOMATIC SPRINKLER SYSTEM PROVIDED**

MISCELLANEOUS DETAILED REQUIREMENTS

CEILING HEIGHT FOR MEANS OF EGRESS (SEC. 1003.2)	MIN. 7'-6"
CEILING HEIGHT FOR OCCUPIABLE SPACES AND CORRIDORS (SEC. 1208.2)	MIN. 7'-6"
KITCHEN HOOD - TYPE I (SEC 507.10/506.3.11 OF IMC)	SHAFT ENCL. PER IBC (2 HR.)
STAGE MISCELLANEOUS REQUIREMENTS	SEC 410
SAFETY GLAZING MISCELLANEOUS REQUIREMENT	SEC 2406
ELEVATOR MISCELLANEOUS REQUIREMENTS	CHAPTER 30



FIRE EXTINGUISHER CABINET DETAILS 5
SCALE: 1" = 1'-0"

WALL TO DECK RATING LEGEND

- 1-HR WALL TO DECK (45 MIN DRS) UL No U465 AT STUD CONSTR NCMA-TEK 7-1A -FIRE RESISTANCE (2001) AT CMU CONSTR
- 2-HR AREA SEPARATION WALL TO DECK (1.5 HR DRS) UL No U411 AT STUD CONSTR NCMA-TEK 7-1A -FIRE RESISTANCE (2001) AT CMU CONSTR UL No U905 AT CMU CONSTR
- INDICATES EXTERIOR WALL
- INDICATES INTERIOR WALL TO DECK
- INDICATES INTERIOR NON WALL TO DECK WALL TO TERMINATE 8" ABOVE ADJACENT CEILING

NOTES:

1. ALL WALLS ARE NON-RATED WALLS TO BOTTOM OF DECK (UON).
2. ALL NON-LOADBEARING CMU WALLS SPAN VERTICALLY (UON).
3. ALL COLUMN ENCLOSURES SHALL BE THE SAME HEIGHT AS THE ADJACENT WALL (UON).
4. BRACE ALL WALLS TO STRUC ABOVE AS NOTED IN WALL BRACING NOTES AND WALL TERMINATION DETAILS ON SHEET A004 THRU A006.
5. REFER TO PARTITION TYPES, SHEET A009 & WALL CONSTRUCTION AND RATED ASSEMBLY UL NOS., SHEET A000, TYP.
6. MARKING OF FIRE RATED & SMOKE STOP PARTITIONS: PERMANENTLY MARK ALL SMOKE BARRIERS, FIRE PARTITIONS, SHAFT ENCLOSURES, FIRE BARRIERS ABOVE CEILINGS AS FOLLOWS: "FIRE AND SMOKE BARRIER-PROTECT ALL OPENINGS" LETTERS SHALL BE MINIMUM 2 1/2" IN HEIGHT AND PAINTED RED. PROVIDE ONE TIME PER STRUCTURAL BAY.

FIRE ASSEMBLY LEGEND

- INTUMESCENT PAINT ON ALL EXPOSED STRUCTURAL COLUMN AND MEMBERS - UL ASSEMBLY No X650, X661, X662: 1-HR AT ROOF/FLOOR/CEILING
- ROOF/CEILING - UL ASSEMBLY No P921: 1-HR
- FLOOR/CEILING - UL ASSEMBLY No P902: 1-HR STRUCTURAL FRAME RATED 1HR
- STRUCTURE EXCEEDS 20 FT - FIREPROOFING NOT REQUIRED
- (FEC) - LOCATE PER "NFPA 10" (75' MAX) - FIELD LOCATE/COORDINATE EXACT LOCATIONS W/ ARCHITECT IN FIELD. - CONTRACTOR TO VERIFY EXACT AMOUNT AND LOCATION COMPLIANCE AND PROVIDE ADDITIONAL "FEC'S" PER FIRE MARSHALL REQUIREMENTS. PROVIDE CLASS 'K' FIRE EXTINGUISHER IN KITCHEN, TYP.
- WALL MOUNTED FIRE EXTINGUISHER. (FE) CONTRACTOR PROVIDED AND INSTALLED.

NOTES:

1. PROTECT ALL CONDUIT, PIPES, DUCTS, AND MISC PENETRATIONS THROUGH RATED WALLS, FLOOR OR ROOF WITH FIRE SAFING INSULATION AND FIRE STOP SEALANT. REFER TO UL GUIDELINES FOR APPROPRIATE ASSEMBLIES.
2. PROVIDE DAMPERS AND LIGHT FIXTURE PROTECTION AS REQUIRED BY UL ASSEMBLIES.
3. PROVIDE SPRAY-ON FIRE PROTECTION FOR STRUCTURAL MEMBERS CROSSING FROM AN AREA DESIGNATED TO BE A FIRE RATED FLOOR/CEILING AND OR FIRE RATED ROOF/CEILING ASSEMBLY INTO AREAS WITH ANY OTHER FIRE ASSEMBLY OR NO FIRE ASSEMBLY FOR THEIR FULL LENGTH, TYP.
4. UL ASSEMBLIES INDICATED ESTABLISH A PERFORMANCE BASIS. OTHER ASSEMBLIES MAY BE CONSIDERED AT THE DISCRETION OF THE ARCHITECT IF EQUIVALENT PERFORMANCE IS PROVIDED. SUBSTITUTION PROPOSALS SHALL INCLUDE CHANGES REQUIRED TO ALL COMPONENTS OF THE ASSEMBLY.
5. ALL CONCEALED STEEL COLUMNS AND COLUMNS IN MEP SPACES - SPRAY ON FIREPROOFING, UL ASSEMBLY X790, U.O.N
6. ALL EXPOSED STEEL COLUMNS AND HSS BEAMS NOT IN MEP SPACES, INTUMESCENT COATING, UL ASSEMBLY X650, X651, X662

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ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT — JOSHUA Raleigh Pfluger — 23278 — STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

No.	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

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LEVEL 01 - CODE REVIEW

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WALL TO DECK RATING LEGEND

(green triangles)	1-HR WALL TO DECK (45 MIN DRS) UL No U465 AT STUD CONSTR NCMA-TEK 7-1A -FIRE RESISTANCE (2001) AT CMU CONSTR
(red diamonds)	2-HR AREA SEPARATION WALL TO DECK (1.5 HR DRS) UL No U411 AT STUD CONSTR NCMA-TEK 7-1A -FIRE RESISTANCE (2001) AT CMU CONSTR UL No U905 AT CMU CONSTR
(heavy line)	INDICATES EXTERIOR WALL
(grey line)	INDICATES INTERIOR WALL TO DECK
(double line)	INDICATES INTERIOR NON WALL TO DECK WALL TO TERMINATE 8" ABOVE ADJACENT CEILING

NOTES:

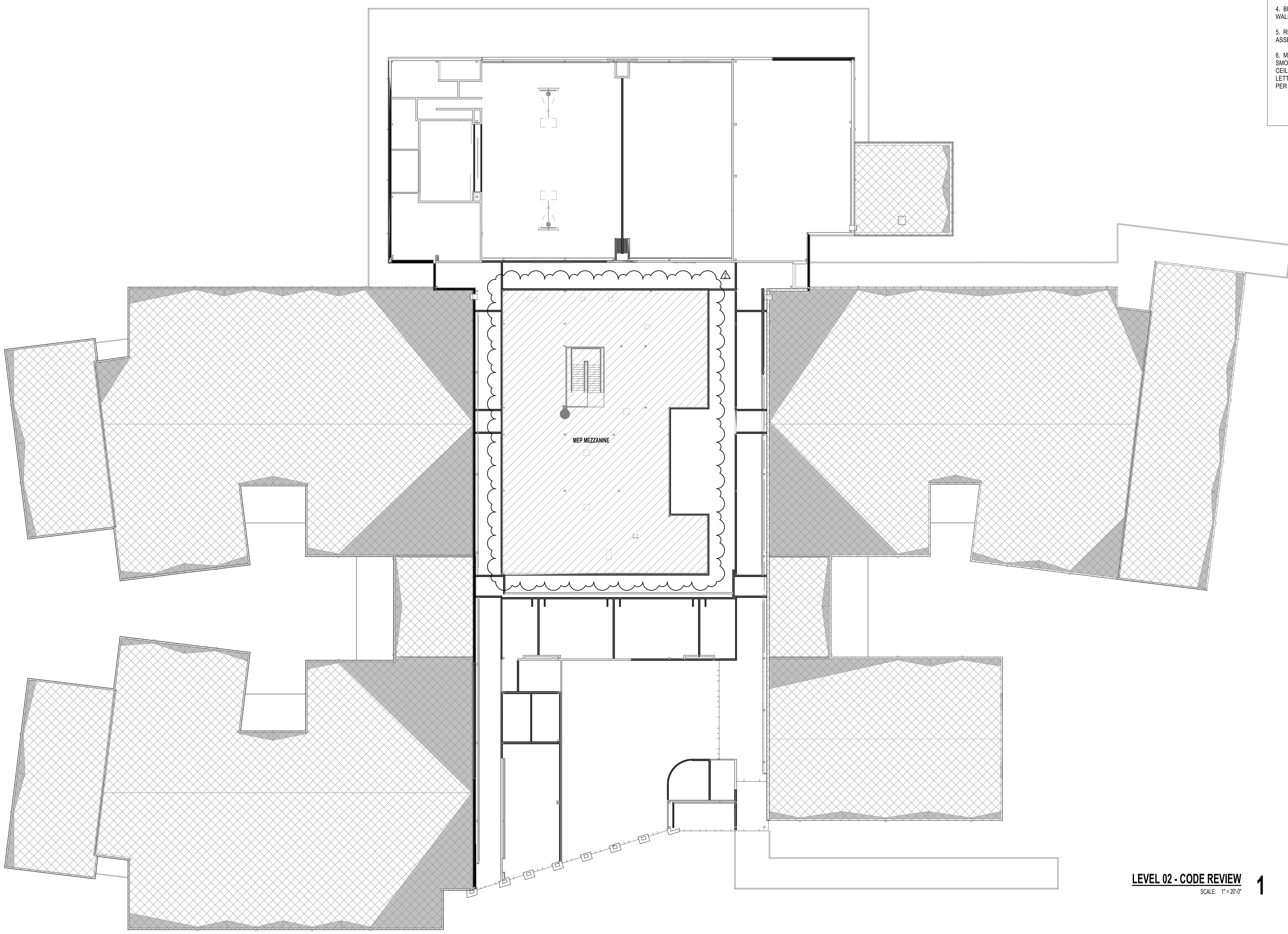
1. ALL WALLS ARE NON-RATED WALLS TO BOTTOM OF DECK (UON).
2. ALL NON-LOADBEARING CMU WALLS SPAN VERTICALLY (UON).
3. ALL COLUMN ENCLOSURES SHALL BE THE SAME HEIGHT AS THE ADJACENT WALL (UON).
4. BRACE ALL WALLS TO STRUC ABOVE AS NOTED IN WALL BRACING NOTES AND WALL TERMINATION DETAILS ON SHEET A004 THRU A006.
5. REFER TO PARTITION TYPES, SHEET A009 & WALL CONSTRUCTION AND RATED ASSEMBLY UL NOS., SHEET A000, TYP.
6. MARKING OF FIRE RATED & SMOKE STOP PARTITIONS: PERMANENTLY MARK ALL SMOKE BARRIERS, FIRE PARTITIONS, SHAFT ENCLOSURES, FIRE BARRIERS ABOVE CEILINGS AS FOLLOWS: "FIRE AND SMOKE BARRIER-PROTECT ALL OPENINGS". LETTERS SHALL BE MINIMUM 2 1/2" IN HEIGHT AND PAINTED RED. PROVIDE ONE TIME PER STRUCTURAL BAY.

FIRE ASSEMBLY LEGEND

(red dot)	INTUMESCENT PAINT ON ALL EXPOSED STRUCTURAL COLUMN AND MEMBERS - UL ASSEMBLY No X650, X661, X662: 1-HR AT ROOF/FLOOR/CEILING
(cross-hatch)	ROOF/CEILING - UL ASSEMBLY No P921: 1-HR
(diagonal hatch) 2	FLOOR/CEILING - UL ASSEMBLY No P902: 1-HR STRUCTURAL FRAME RATED 1HR
	STRUCTURE EXCEEDS 20 FT - FIREPROOFING NOT REQUIRED
(crosshair symbol)	(FEC) - LOCATE PER "NFPA 10" (75' MAX) - FIELD LOCATE/COORDINATE EXACT LOCATIONS W/ ARCHITECT IN FIELD. - CONTRACTOR TO VERIFY EXACT AMOUNT AND LOCATION COMPLIANCE AND PROVIDE ADDITIONAL "FEC'S" PER FIRE MARSHALL REQUIREMENTS. PROVIDE CLASS 'K' FIRE EXTINGUISHER IN KITCHEN, TYP.
(black dot)	WALL MOUNTED FIRE EXTINGUISHER. (FE) CONTRACTOR PROVIDED AND INSTALLED.

NOTES:

1. PROTECT ALL CONDUIT, PIPES, DUCTS, AND MISC PENETRATIONS THROUGH RATED WALLS, FLOOR OR ROOF WITH FIRE SAFING INSULATION AND FIRE STOP SEALANT. REFER TO UL GUIDELINES FOR APPROPRIATE ASSEMBLIES.
2. PROVIDE DAMPERS AND LIGHT FIXTURE PROTECTION AS REQUIRED BY UL ASSEMBLIES.
3. PROVIDE SPRAY-ON FIRE PROTECTION FOR STRUCTURAL MEMBERS CROSSING FROM AN AREA DESIGNATED TO BE A FIRE RATED FLOOR/CEILING AND OR FIRE RATED ROOF/CEILING ASSEMBLY INTO AREAS WITH ANY OTHER FIRE ASSEMBLY OR NO FIRE ASSEMBLY FOR THEIR FULL LENGTH, TYP.
4. UL ASSEMBLIES INDICATED ESTABLISH A PERFORMANCE BASIS. OTHER ASSEMBLIES MAY BE CONSIDERED AT THE DISCRETION OF THE ARCHITECT IF EQUIVALENT PERFORMANCE IS PROVIDED. SUBSTITUTION PROPOSALS SHALL INCLUDE CHANGES REQUIRED TO ALL COMPONENTS OF THE ASSEMBLY.
5. ALL CONCEALED STEEL COLUMNS AND COLUMNS IN MEP SPACES - SPRAY ON FIREPROOFING, UL ASSEMBLY X790, U.O.N
6. ALL EXPOSED STEEL COLUMNS AND HSS BEAMS NOT IN MEP SPACES, INTUMESCENT COATING, UL ASSEMBLY X650, X661, X662



LEVEL 02 - CODE REVIEW 1
SCALE: 1" = 20'-0"

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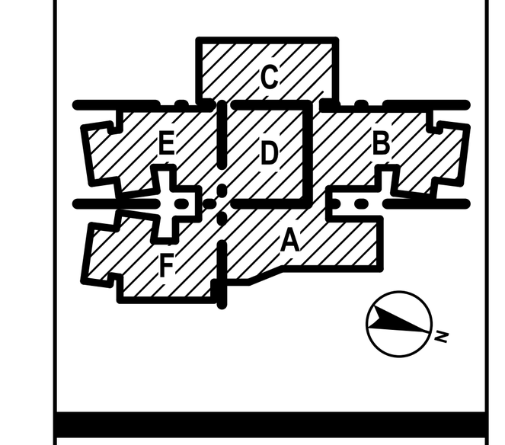

ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

DATE: 1/10/2025

PROJECT NO.	24-028
DATE:	1/10/2025
DRAWN BY: DRW	CHECKED BY: CHK

REVISIONS:

No.	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

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LEVEL 02 - CODE REVIEW

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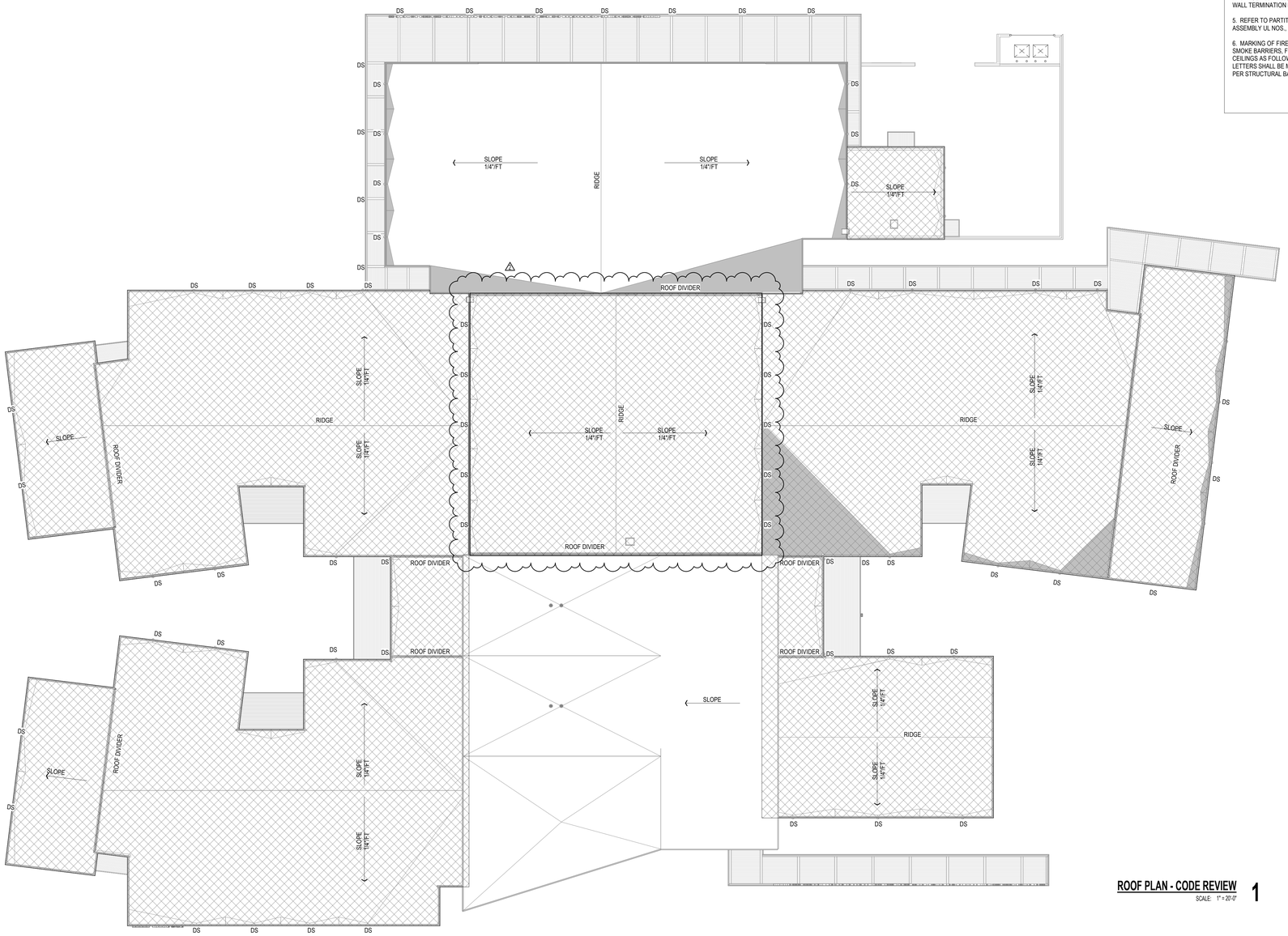

ROOF PLAN - CODE REVIEW 1
SCALE: 1" = 20'-0"

WALL TO DECK RATING LEGEND

- 1-HR WALL TO DECK (45 MIN DRS)
  UL No U465 AT STUD CONSTR
  NCMA-TEK 7-1A -FIRE RESISTANCE (2001) AT CMU CONSTR
- 2-HR AREA SEPARATION WALL TO DECK (1.5 HR DRS)
  UL No U411 AT STUD CONSTR
  NCMA-TEK 7-1A -FIRE RESISTANCE (2001) AT CMU CONSTR
  UL No U905 AT CMU CONSTR
- INDICATES EXTERIOR WALL
- INDICATES INTERIOR WALL TO DECK
- INDICATES INTERIOR NON WALL TO DECK WALL TO TERMINATE 8" ABOVE ADJACENT CEILING

NOTES:

1. ALL WALLS ARE NON-RATED WALLS TO BOTTOM OF DECK (UON).
2. ALL NON-LOADBEARING CMU WALLS SPAN VERTICALLY (UON).
3. ALL COLUMN ENCLOSURES SHALL BE THE SAME HEIGHT AS THE ADJACENT WALL (UON).
4. BRACE ALL WALLS TO STRUC ABOVE AS NOTED IN WALL BRACING NOTES AND WALL TERMINATION DETAILS ON SHEET A004 THRU A006.
5. REFER TO PARTITION TYPES, SHEET A009 & WALL CONSTRUCTION AND RATED ASSEMBLY UL NOS., SHEET A000, TYP.
6. MARKING OF FIRE RATED & SMOKE STOP PARTITIONS: PERMANENTLY MARK ALL SMOKE BARRIERS, FIRE PARTITIONS, SHAFT ENCLOSURES, FIRE BARRIERS ABOVE CEILINGS AS FOLLOWS: "FIRE AND SMOKE BARRIER-PROTECT ALL OPENINGS". LETTERS SHALL BE MINIMUM 2 1/2" IN HEIGHT AND PAINTED RED. PROVIDE ONE TIME PER STRUCTURAL BAY.

FIRE ASSEMBLY LEGEND

- INTUMESCENT PAINT ON ALL EXPOSED STRUCTURAL COLUMN AND MEMBERS - UL ASSEMBLY No X650, X661, X662: 1-HR AT ROOF/FLOOR/CEILING
- ROOF/CEILING - UL ASSEMBLY No P921: 1-HR
- FLOOR/CEILING - UL ASSEMBLY No P902: 1-HR
  STRUCTURAL FRAME RATED 1HR
- STRUCTURE EXCEEDS 20 FT - FIREPROOFING NOT REQUIRED
- (FEC) - LOCATE PER "NFPA 10" (75' MAX) - FIELD LOCATE/COORDINATE EXACT LOCATIONS W/ ARCHITECT IN FIELD. - CONTRACTOR TO VERIFY EXACT AMOUNT AND LOCATION COMPLIANCE AND PROVIDE ADDITIONAL "FEC'S" PER FIRE MARSHALL REQUIREMENTS. PROVIDE CLASS 'K' FIRE EXTINGUISHER IN KITCHEN, TYP.
- WALL MOUNTED FIRE EXTINGUISHER. (FE) CONTRACTOR PROVIDED AND INSTALLED.

NOTES:

1. PROTECT ALL CONDUIT, PIPES, DUCTS, AND MISC PENETRATIONS THROUGH RATED WALLS, FLOOR OR ROOF WITH FIRE SAFING INSULATION AND FIRE STOP SEALANT. REFER TO UL GUIDELINES FOR APPROPRIATE ASSEMBLIES.
2. PROVIDE DAMPERS AND LIGHT FIXTURE PROTECTION AS REQUIRED BY UL ASSEMBLIES.
3. PROVIDE SPRAY-ON FIRE PROTECTION FOR STRUCTURAL MEMBERS CROSSING FROM AN AREA DESIGNATED TO BE A FIRE RATED FLOOR/CEILING AND OR FIRE RATED ROOF/CEILING ASSEMBLY INTO AREAS WITH ANY OTHER FIRE ASSEMBLY OR NO FIRE ASSEMBLY FOR THEIR FULL LENGTH, TYP.
4. UL ASSEMBLIES INDICATED ESTABLISH A PERFORMANCE BASIS. OTHER ASSEMBLIES MAY BE CONSIDERED AT THE DISCRETION OF THE ARCHITECT IF EQUIVALENT PERFORMANCE IS PROVIDED. SUBSTITUTION PROPOSALS SHALL INCLUDE CHANGES REQUIRED TO ALL COMPONENTS OF THE ASSEMBLY.
5. ALL CONCEALED STEEL COLUMNS AND COLUMNS IN MEP SPACES - SPRAY ON FIREPROOFING, UL ASSEMBLY X790, U.O.N
6. ALL EXPOSED STEEL COLUMNS AND HSS BEAMS NOT IN MEP SPACES, INTUMESCENT COATING, UL ASSEMBLY X650, X661, X662

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ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT Marisa Raleigh Pfluger 23278 STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: Author CHECKED BY: CHK
REVISIONS:

No.	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

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ROOF PLAN - CODE REVIEW

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PLUMBING FIXTURE COUNT

INTERNATIONAL PLUMBING CODE 2015 (TABLE 403.1)

TYPE OF OCCUPANCY: EDUCATION			
MAXIMUM CAPACITY: 800 STUDENTS			
FIXTURE COUNTS, STUDENT MALE (400)			
		REQ'D	PROV'D
TOILETS	1/2 OF 1/50	4	9
URINALS	1/2 OF 1/50	4	6
LAVATORIES	1/50	8	18
FIXTURE COUNTS, STUDENT FEMALE (400)			
		REQ'D	PROV'D
TOILETS	1/50	8	18
LAVATORIES	1/50	8	18
EWC	1/100	8	12
UNISEX FIXTURES (NOT REQ'D)			
TOILETS			2
LAVATORIES			2

TYPE OF OCCUPANCY: ASSEMBLY (DINING)			
MAXIMUM CAPACITY: 247 STUDENTS			
FIXTURE COUNTS, STUDENT MALE (124)			
		REQ'D	PROV'D
TOILETS	1/2 OF 1/75	1	1
URINALS	1/2 OF 1/75	1	2
LAVATORIES	1/200	1	3
FIXTURE COUNTS, STUDENT FEMALE (124)			
		REQ'D	PROV'D
TOILETS*	1/75	2	3
LAVATORIES	1/200	1	3
EWC	1/500	1	2
UNISEX FIXTURES (NOT REQ'D)			
TOILETS			0
LAVATORIES			0

TYPE OF OCCUPANCY: ASSEMBLY (GYMNASIUM)			
MAXIMUM CAPACITY: 140 OCCUPANTS			
FIXTURE COUNTS, MALE (70)			
		REQ'D	PROV'D
TOILETS	1/2 OF 1/125	1	1
URINALS	1/2 OF 1/125	0	2
LAVATORIES	1/200	1	3
FIXTURE COUNTS, FEMALE (70)			
		REQ'D	PROV'D
TOILETS	1/65	1	3
LAVATORIES	1/150	1	3
EWC	1/500	1	2
UNISEX FIXTURES (NOT REQ'D)			
TOILETS			0
LAVATORIES			0

TYPE OF OCCUPANCY: BUSINESS			
MAXIMUM CAPACITY: 90 STAFF			
FIXTURE COUNTS, STAFF MALE (45)			
		REQ'D	PROV'D
TOILETS	SEE BELOW	2	11
URINALS		0	0
LAVATORIES	SEE BELOW	1	11
FIXTURE COUNTS, STAFF FEMALE (45)			
		REQ'D	PROV'D
TOILETS	SEE BELOW	2	11
LAVATORIES	SEE BELOW	1	11
EWC	1/100	1	1
UNISEX FIXTURES (NOT REQ'D)			
TOILETS			0
LAVATORIES			0

NOTES: BUSINESS
TOILETS - 1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50
LAVATORIES - 1 PER 40 FOR THE FIRST 80 AND 1 PER 80 FOR THE REMIANDER EXCEEDING 80

GYM AREA EGRESS (A-3)

GYMNASIUM (15 S.F./PERSON) = 90 OCC.
BUSINESS (100 SF/PERSON) = 2 OCC.
STORAGE (300 SF/PERSON) = 4 OCC.
PLATFORM (15 SF/PERSON) = 44 OCC.
TOTAL OCCUPANT LOAD: 140 OCC.

NUMBER OF EXITS REQUIRED: 2 (1-500 OCC) TAB. 1006.3.1
EXITS PROVIDED: 4
EXIT WIDTH REQUIRED: (140 X 0.2) = 44"
EXIT WIDTH PROVIDED: 144"

DINING AREA EGRESS (A-2)

DINING (15 SF/PERSON) = 246 OCC.
STORAGE (300 SF/PERSON)= 1 OCC.
TOTAL OCCUPANT LOAD: 247 OCC.

NUMBER OF EXITS REQUIRED: 2 (50 - 500 OCC.) TAB. 1006.3.1
EXITS PROVIDED: 4
EGRESS WIDTH REQUIRED: (247 X 0.2) = 49.4"
EGRESS WIDTH PROVIDED: 144"

LIBRARY AREA EGRESS (A-3)

LIBRARY: STACKS 1000 SF (100 SF GROSS /PERSON) = 7 OCC.
LIBRARY: READING (50 SF NET/PERSON) = 80 OCC.
BUSINESS (100 SF/PERSON) = 10 OCC.
STORAGE (300 SF/PERSON)= 2 OCC.
TOTAL OCCUPANT LOAD: 99 OCC.

NUMBER OF EXITS REQUIRED: 2 (1-500 OCC) TAB. 1006.3.1
EXITS PROVIDED: 2
EXIT WIDTH REQUIRED: (99 X 0.2) = 19.8"
EXIT WIDTH PROVIDED: 144"

BUSINESS AREA EGRESS (B)

BUSINESS AREA (100 SF GROSS /PERSON) = 43 OCC.
STORAGE (300 SF/PERSON)= 5 OCC.
TOTAL OCCUPANT LOAD: 48 OCC.

NUMBER OF EXITS REQUIRED: 2 (1-500 OCC) TAB. 1006.3.1
EXITS PROVIDED: 2
EXIT WIDTH REQUIRED: (38 X 0.2) = 7.6"
EXIT WIDTH PROVIDED: 72"

LEVEL 01 - EGRESS PLAN 1

SCALE: 1" = 20'-0"

EGRESS REQUIREMENTS: IBC 2015

OCCUPANT LOADS: **(TAB. 1004.5)**

FUNCTION OF SPACE:	SQ. FT PER OCCUPANT:
ACCESSORY STORAGE AREAS, MECH. EQUIPMENT ROOMS	300 GROSS
ASSEMBLY WITHOUT FIXED SEATS:	
CONCENTRATED (CHAIRS ONLY)	7 NET
STANDING SPACE	5 NET
UNCONCENTRATED (TABLES AND CHAIRS)	15 NET
BUSINESS AREAS	100 GROSS
CLASSROOMS	20 NET
SHOPS AND VOCATIONAL ROOMS INCLUDING ART ROOMS, SCIENCE ROOMS, WOOD SHOP AND METAL SHOP	50 NET
EXERCISE ROOMS	50 GROSS
KITCHENS (COMMERCIAL)	200 GROSS
LOCKER ROOMS	50 GROSS
STAGES AND PLATFORMS	15 NET
LIBRARY:	
STACK AREA	100 GROSS
READING ROOM	50 NET

OCCUPANT LOAD BASED ON EGRESS REQUIREMENTS: 3036

REQUIRED EGRESS WIDTH:

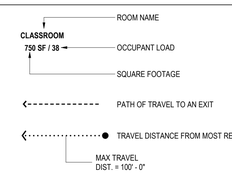
MINIMUM CORRIDOR WIDTH (TAB. 1020.2)	44" MIN OR .15" PER OCCUPANT
GROUP E OCCUPANCY SERVING 100 OR MORE OCCUPANTS (TAB. 1020.2)	72" MIN OR .15" PER OCCUPANT
MINIMUM STAIR WIDTH (TAB. 1011.2)	44" MIN OR .20" PER OCCUPANT (48" MIN FOR ACC MEANS OF EGRESS)
NUMBER OF EXITS REQUIRED (TAB. 1006.3.2)	
1-49 OCCUPANTS	1
51-500 OCCUPANTS	2
501-1000 OCCUPANTS	3
1001 OR MORE OCCUPANTS	4
MAXIMUM TRAVEL DISTANCE TO AN EXIT (TAB. 1017.2)	250'
MAXIMUM LENGTH OF DEAD END CORRIDORS (1020.4)	50' OR UNLIMITED LENGTH WHEN MIN. WIDTH < 2.5 TIMES THE WIDTH OF THE DEAD END CORRIDOR
MAXIMUM TRAVEL DISTANCE TO AN EXIT FOR OUTDOOR SEATING (TABLE 1029.7 E2)	TRAVEL DISTANCE IS NOT LIMITED FOR TYPE I AND II CONSTRUCTION
EXITS THROUGH ADJOINING ROOMS (1016.2)	PERMITTED AT ACCESSORY, NON-HI-HAZARD ROOMS W/ A DISCERNABLE PATH OF TRAVEL PROVIDED, NOT PERMITTED THROUGH KITCHENS, STORAGE, OR SIMILAR
COMMON PATH OF TRAVEL (1006.2.1)	75'-0" TO CHOICE OF 2 EXIT PATHS

DOOR AND STAIR EGRESS LEGEND:

INTERIOR, EXTERIOR DOOR EGRESS (IBC SECTION 1005.1)

1. 3'-0" DOOR (32" CLR) AT .15"/OCCUPANT = 213 OCCUPANTS
2. 4'-0" DOOR (44" CLR) AT .15"/OCCUPANT = 294 OCCUPANTS
3. PAIR 3'-0" DOOR (64" CLR) AT .15"/OCCUPANT = 426 OCCUPANTS
4. 2 PAIR 3'-0" DOOR (64" CLR) AT .15"/OCCUPANT = 852 OCCUPANTS
5. PAIR 4'-0" DOOR (88" CLR) AT .15"/OCCUPANT = 586 OCCUPANTS

OCCUPANCY / EGRESS LEGEND:



AREA CLASSIFICATION (SEC 302 / TABLE 1004.1.2)

- **A-2** : DINING
- **A-3** : LIBRARY
- **A-3** : GYMNASIUM
- **B** : BUSINESS
- **S-1** : STORAGE / MECHANICAL
- **E** : EDUCATIONAL

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

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LAMAR CISD
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REGISTERED ARCHITECT
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23276
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: Author CHECKED BY: Checker
REVISIONS:

No.	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

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EGRESS PLAN

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DESIGN NO. P921

UL Product iQ®

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

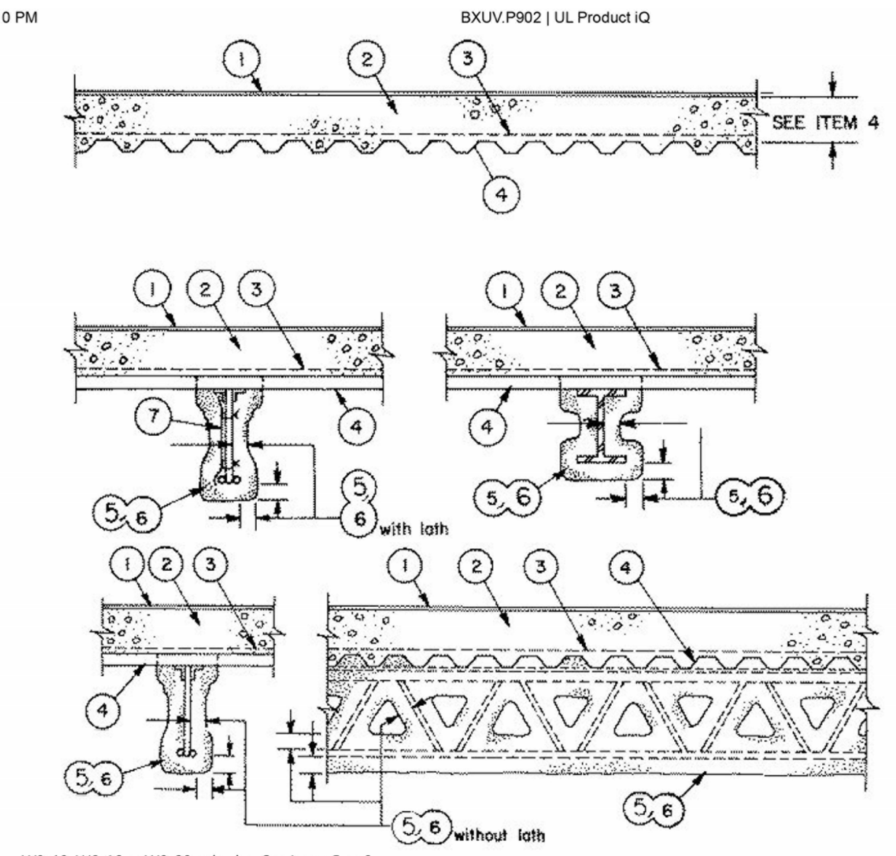
See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. P902
November 21, 2024

Restrained Assembly Rating — 1, 1-1/2 and 2 Hr. (See Items 4, and 5 through 6C)
Unrestrained Assembly Rating — 0 Hr. (See Item 4)
Unrestrained Beam Rating — 1, 1-1/2 and 2 Hr. (See Items 5 through 6C)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



Beam — W8x10, W6x16 or W8x28, min size. See Items 5 or 6.

Joist — 10K1, 12J4 or 14K4 min size. See Items 5 or 6. As alternate to steel beam **Joist girders** (Not shown)-20 in. min depth and 13 lb/lin ft min weight. As an alternate support, LH Series steel joists spanning no greater than 60 ft may be used. For spans greater than 60 ft, LH Series joists my be used provided that the deflection under their published total load shall not be greater than 1/312 of the joist span. When steel joists are used, bridging designed in accordance with SJI specifications is required at top and bottom chords.

1. **Roof Covering*** — Consisting of hot mopped or cold application materials compatible with insulation(s) described herein which provide Class A, B or C coverings. See Roofing Materials and Systems Directory-Roof Covering Materials (TEVT).

1A. **In lieu of Item 1,** — roof covering consisting of single-ply **Roofing Membrane*** that is either ballasted, adhered or mechanically attached as permitted under the respective manufacturer's Classification. See Fire Resistance Directory-Roofing Membranes (CHCI).

2. **Cellular Concrete** — 2.95 cu ft of stabilized preformed foam to 94 lb of Portland cement premixed with 6 gal of water. Cellular concrete to have a dry density of 31.5 (+ or -) 3.0 pcf and a 28-day compressive strength of 190 to 350 psi, as determined in accordance with ASTM C495-66.

2A. **Insulating Concrete** — Various types of insulating concrete prepared and applied in the thickness indicated:
A. **Cellular Concrete — Floor or Roof Topping Mixture*** — Foam concentrate mixed with water and Portland cement per manufacturer's specifications. Cast dry density and 28-day min compressive strength of 190 psi as determined in accordance with ASTM C495-66.
CELCORE INC — Type Celcore with cast dry density of 31 (+ or - 3.0) pcf or Type Celcore MF with cast dry density of 29 (+ or - 3.0) pcf.

CONCRECEL INTERNATIONAL INC — Cast dry density 38 (+ or -) 3.0 pcf.

ELASTIZELL CORP OF AMERICA — Type II. Mix #1 of cast dry density 39 (+ or -) 3.0 pcf, Mix #2 of cast dry density 40 (+ or -) 3.0 pcf, Mix #3 of cast dry density 47 (+ or -) 3.0 pcf.

AERIX INDUSTRIES — Cast dry density 37 (+ or -) 3.0 pcf.

SIPLAST INC — Mix #1. Cast dry density 32 + or -3.0 pcf.

B. **Perlite Concrete** — 6 cu ft of Perlite Aggregate* to 94 lb of Portland cement and 1-1/2 pints of air entraining agent.
See **Perlite Aggregate** (CFFX) category in Fire Resistance Directory for names of manufacturers.

C. **Cellular Concrete — Roof Topping Mixture*** — Foam Concentrate mixed with water, Portland Cement and UL Classified Vermiculite Aggregate per manufacturer's application instructions. Cast dry density of 33 (+ or -) 3.0 pcf and 28-day compressive strength of min 250 psi as determined in accordance with ASTM C495-86.
AERIX INDUSTRIES — Mix #3.

SIPLAST INC — Mix #3.

D. **Foamed Plastic*** — (Not Shown) — Optional — Nom 24 by 48 by max 8 in. thick polystyrene foamed plastic insulation boards having a density of 1.0 (+ or -) 0.1 pcf. Encapsulated within cellular concrete topping. Each insulation board shall contain six nom 3 in. diam holes oriented in two rows of three holes each with the holes spaced 12 in. OC, transversely and 16 in. OC longitudinally. When foamed plastic is used, a min 1/8 in. thick slurry coat of cellular concrete, as measured to the top of the steel form unit corrugations, shall be employed. The cellular concrete topping thickness above foamed plastic shall be 2 in. min. The combined thickness of slurry coat plus concrete topping shall not be less than 2-3/8 in.
See Foamed Plastic* (BRYX) category in Building Materials Directory or Foamed Plastic* (CCVW) category in Fire Resistance Directory for list of manufacturers. Any polystyrene foamed plastic insulation boards meeting the above specifications and bearing the UL Classification Marking.

E. **Foamed Plastic*** — (Optional) — For use with cellular concrete. Max thickness 8 in. and containing both round and slotted holes.
SIPLAST INC

VERMICULITE PRODUCTS INC

F. **Foamed Plastic*** — Nom 24 by 48 in., 48 by 48 in., 24 by 96 in. or 48 by 96 in. by max 8 in. thick polystyrene foamed plastic insulation boards with holes symmetrically placed having a max density of 2.0 pcf. For use only with cellular concrete roof topping mixture.

G. **Foamed Plastic*** — (Optional — For Use With Cellular Concrete) — Nominal 24 by 48 by max 14 in. thick expanded polystyrene foamed plastic insulation boards having a maximum density of 2.5 +/- 0.1 pcf encapsulated within cellular concrete topping. Each insulation board shall contain eight min 2 in. diameter holes oriented in two rows of four holes each with the holes spaced 12 in. OC transversely and 12 in. OC longitudinally or six min 3 in. diameter holes oriented in two rows of three holes each with the holes spaced 12 in. OC transversely and 16 in. OC longitudinally. When foamed plastic is used, a min 1/8 in. thick slurry coat of cellular concrete, as measured to the top of the steel form unit corrugations, shall be employed. The cellular concrete topping thickness above foamed plastic shall be 2 in. min. The combined thickness of slurry coat plus concrete topping shall not be less than 2-3/8 in.
See **Foamed Plastic*** (BRYX) category in Building Materials Directory or **Foamed Plastic*** (CCVW) category in Fire Resistance Directory for list of manufacturers.

3. **Welded Wire Fabric** — 4x8 — 12/14 SWG. As an alternate, wire mesh made from No. 19 SWG galv steel wire twisted to form 2 in. hexagons, with straight No. 16 SWG galv steel wire woven into mesh 3 in. OC. Installed without attachment with longitudinal wires parallel to deck corrugations. Ends lapped 6 in.

4. **Steel Floor and Form Units*** — Noncomposite design, corrugated or fluted units.
Corrugated units, min 28 MSG galv steel. Welded to supports 14 in. OC with welding washers. When 9/16, 15/16 or 1 in. units are used, their loadings shall be limited to produce a 75 percent max bending stresses in the steel, and the Restrained Assembly Rating shall not exceed 1- 1/2 H. Supports spaced not over 8 ft 0 in. OC. For corrugated steel form units less than or equal to 1-5/16 in. deep, the concrete (Item 2) thickness shall be 4-1/16 in. as measured from the surface of the concrete to the valley of the units. For corrugated steel form units greater than 1-5/16 in. deep, the concrete thickness shall be 2-3/4 in. as measured from the surface of the concrete to the top plane of the units.
Fluted units min 22 MSG galv steel 1-1/2 or 3 in. deep, 24 to 36 in. wide. Welded to supports at each side and not to exceed 12 in. OC between sides. Adjacent units button-punched or welded together 36 in. OC along side joints. Supports spaced not over 8 ft 0 in. OC. For 1-1/2 and 3 in. deep fluted steel form units, the concrete (Item 2) thickness shall be 2-3/4 in. as measured from the surface of the concrete to the top plane of the units. Joint cover shall be 2 in. wide cloth adhesive tape applied following the contour of the steel form units. For 1-5/16 in. deep corrugated units with clear spans not more than 7 ft 6 in. the **Unrestrained Assembly Rating** is equal to the **Restrained Assembly Rating.**

CANAM GROUP INC — 36 in. wide Type P-3606 and P-3615 noncomposite; 24 in. wide Type P-2436, and P-2404 noncomposite; 36 in. wide Type, P-3606 and P-3615 composite; 24 in. wide Type P-2432 composite; 30 in. wide P-3012 form deck; 36 in. wide Types 1.5B, 1.5BI, 1.5BL and 1.5BLI. 24 in. wide Types 3N, 3NI. Composite units may be used provided allowable loading is calculated on the basis of noncomposite design.

CANAM STEEL CORP — Types B, N, NS32 and NS32-XS, UFS, UFX, UFX-36.

CENTRIA, A DIVISION OF NCI GROUP, INC — Types 3, 21, 2"QL-99, 3" QL-99.

CSM PRODUCTS & SOLUTIONS, LLC — Types 1-1/2" deep B-Deck and 3" deep N-Deck

DECK WEST INC — 36 in. wide Type B-DW, BA-DW, 2-DW or 3-DW.

EPIC METALS CORP — Type Metricform.

INTSEL STEEL EAST LLC — 36 in. wide Type 1.5" B-DECK/ROOF, 24 in. wide Type N-DECK/ROOF.

MARLYN STEEL DECKS INC — Types B, EF, F, HF, N, NV, SF.

NEW MILLENNIUM BUILDING SYSTEMS L L C — Types 0.6 FD, 1.0FD, 1.5FD, 1.5FDR, 1.5FDI, 2.0FD, 3.0FD, B, BI, F, N, NW32, NW32I, EHD, HD, S, SD, SDR. Units may be phos/painted or galvanized.

ROOF DECK INC — Types A, B-1, B-2, EHD Multi-Rib or F.

VULCRAFT, DIV OF NUCOR CORP — Types 0.6C, 0.6CPR, 1.0C, 1.3C, 1.5C, 2C, 3C, 1.5B, 1.5BI, 1.5PLB, 3N, 3NI, 3.0PLN, 3NL-32, 3NI-32, 3PLN-32; Types BW, B High Strength, BW High Strength.

Alternate Construction — Composite units of the same type listed above may be used provided allowable loading is calculated on the basis of noncomposite design.

5. **Spray-Applied Fire Resistive Materials*** — Applied by spraying with water, in one or more coats to the final thicknesses shown in the following table to **beams or joists** which are free of dirt, oil or scale. Use of adhesive is optional. Tamping is optional.

Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Min Thkns on W6x16 Beam In.
1	1	3/4
1-1/2 or 2	1-1/2	1-1/16
2	2	1-3/8

Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Min Thkns on 10K1 Joist In.*
1	1	15/16
1-1/2 or 2	1-1/2	1-1/2
2	2	2-5/16

*Protection material directly applied to joist following joist contours. As an alternate, metal lath (Item 7) or glass fiber mesh (Item 7A) secured to one side of joist to catch overspray when spraying following joist contours. Metal lath to be fully covered with protection material but with no min thickness requirements.

ISOLATEK INTERNATIONAL — Types D-C/F, HP, II, or II HS, Type EBS or Type X adhesive/sealer optional. For Type D-C/F, Type II, or Type II HS min avg density of 13 pcf with min ind value of 11 pcf. For Type HP, min avg and min ind densities of 22 and 19 pcf, respectively. For method of density determination, refer to Design Information Section.

6. **Spray-Applied Fire Resistive Materials*** — Applied by mixing with water and spraying in one or more coats to the beam or joist surfaces which are free of oil, dirt or loose scale to the thicknesses shown in the table below. Min average density of 15 pcf with min individual value of 14 pcf, respectively,

for Types 300, 300AC, 300ES, 300HS, 300N, 3000, 3000ES and SB. For Types 400AC and 400ES min average and min individual density of 22 and 19 pcf, respectively. For method of density determination, see Design Information Section, Sprayed Material.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Min Thkns W6x16 Beam In.	Min Thkns 10K1 Joist In.*
1	1	7/16	15/16 (1-1/16)
1-1/2 or 2	1-1/2	3/4	1-1/2
2	2	1-1/16	1-13/16

*Spray-Applied Fire Resistive Materials directly applied to joist contours. As an alternate, metal lath or nonmetallic fabric mesh secured to one side of joist to catch overspray when spraying following joist contours. Metal lath to be fully covered with Spray-Applied Fire Resistive Materials but with no min thickness requirements.

BERLIN CO LTD — Types 300, 300ES, 300N or SB.

GREENTECH ASIA PACIFIC SDN BDH — Types 300, 300ES, or 300HS.

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Types 300, 300AC, or 400AC.

ISOLATEK INTERNATIONAL — Types 300, 300AC, 300ES, 300HS, 300N, SB, 400AC, 400ES, 3000 or 3000ES.

NEWKEM PRODUCTS CORP — Types 300, 300ES, 300N, or SB

6A. **Spray-Applied Fire Resistive Materials*** — As an alternate to Item 6 — Applied by mixing with water and spraying in one or more coats to the beam or joist surfaces which are free of oil, dirt or loose scale to the thicknesses shown in the table below. Min average density of 17.5 pcf with min individual value of 17 pcf for Type 280. Min average density of 17.5 pcf, with min individual value of 16 pcf for Type 300TW. Min average and min individual density of 25 and 22 pcf, respectively, for Type 400. For method of density determination, see Design Information Section, Sprayed Material.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Min Thkns W6x16 Beam In.	Min Thkns 10K1 Joist In.*
1	1	7/16	15/16 (1-1/16)
1-1/2 or 2	1-1/2	3/4	1-1/2
2	2	1-1/16	1-13/16

*Spray-Applied Fire Resistive Materials directly applied to joist contours. As an alternate, metal lath or nonmetallic fabric mesh secured to one side of joist to catch overspray when spraying following joist contours. Metal lath to be fully covered with Spray-Applied Fire Resistive Materials but with no min thickness requirements. When Type 280 is used for the 1 Hr. Rating, the thickness must be increased from 15/16 in. to 1-1/16 in.

GREENTECH ASIA PACIFIC SDN BDH — Type 400.

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Type 400.

ISOLATEK INTERNATIONAL — Types 280, 300TW, or 400.

NEWKEM PRODUCTS CORP — Type 400.

6B **Spray-Applied Fire Resistive Materials*** — As an alternate to Item 6 and 6A - Spray applied in one or more coats to final thicknesses shown in the following table. Steel surfaces must be clean and free of dirt, loose scale and oil. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 19/18 pcf respectively for Types 7GP and 7HD. For method of density determination refer to Design information Section.

Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Min Thkns on Beam In W6x16	Min Thkns on Beam In W8x10	Min Thkns on 12J4 or 14K4 Joist In With Lath *	Min Thkns on 12J4 or 14K4 Joist In No. Lath
1	1	1	1-3/8	—	—
1-1/2	1-1/2	1-1/4	1-3/4	1-7/8	—
2	1-1/2	1-3/8	1-7/8	—	2-1/4
2	2	1-5/8	2-1/4	1-7/8	2-7/16

GCP APPLIED TECHNOLOGIES INC — Types MK-6/HY, MK-6s, RG, Monokote Acoustic 1.

GCP KOREA INC — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s, Monokote Acoustic 1.

PYROK INC — Type LD.

Carboline Global Inc. — Types 4, 5, 5EF, 5GP, 5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD.

*Thickness applied to both sides of joist and lath. All surfaces of lath on both sides to be protected with the min required thickness of protection material.

7. **Metal Lath** — (Optional) — Metal lath may be used to facilitate the spray application of protection material on steel bar joists and trusses. The diamond mesh, 3/8 in. expanded steel lath, 1.7 to 3.4 lb/sq yd is secured to one side of each steel joist with No. 18 SWG galv steel wire at joist web and bottom chord members, spaced 15 in. O.C. max. When used, the metal lath is to be fully covered with protection material with no min thickness requirements, unless specified.

7A. **Non-Metallic Fabric Mesh** — (Optional, Not Shown) — As an alternate to metal lath, glass fiber fabric mesh, weighing approximately 2.5 oz/sq yd, polypropylene fabric mesh, weighing approximately 1.25 oz/sq yd or equivalent, may be used to facilitate the spray application. The mesh is secured to one side of each joist web member. The method of attaching the mesh must be sufficient to hold the mesh and the spray-applied protection material in place during application until it has cured. An acceptable method to attach the mesh is by embedding the mesh in minimum 1/4 in. long beads of hot melted glue. The beads of glue shall be spaced a maximum of 12 in. O.C. along the top chord of the bar joist. Another method to secure the mesh is by 1-1/4 in. long by 1/2 in. wide hairpin clips formed from No. 18 SWG or heavier steel wire.

8. **Bridging** — (Not Shown) — Welded to top and bottom chord of each joist. Number, size and spacing of bridging angles per steel Joist Institute specifications. Protection material thickness applied to the bridging bars shall be the same as required on joist, but is not required to exceed 1-3/4 in.

9. **Foamed Plastic*** — (Not Shown) — Optional — Rigid foamed plastic insulation. 2 by 4 ft boards, min thickness 2 in., max thickness 4 in. May be bonded to the membrane or installed without adhesion after final asphalt glaze coat has cooled. When applying more than one layer, successive layers shall be installed over preceding layer without attachment. Covered with crushed stone or concrete pavers at a rate of 10 psf min.
OWENS CORNING SCIENCE AND TECHNOLOGY, LLC — Min. thickness 2 in., Max. thickness 4 in.

DUPONT DE NEMOURS, INC. — Type Styrofoam

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2024-11-21

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DESIGN NO. X790

FIRE-RESISTANCE DESIGN

Assembly Usage Disclaimer

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. X790
August 06, 2019

Ratings — 1, 1-1/2, 2, 3 and 4 Hr.

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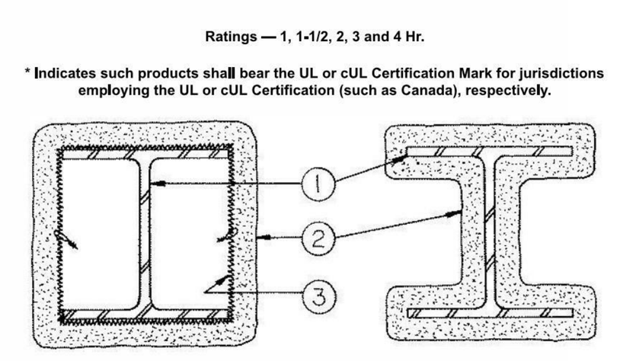

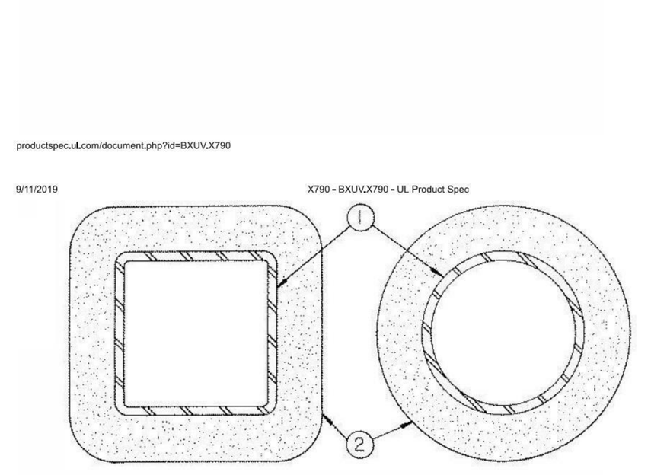

1. **Steel Column, Steel Pipe or Steel Tube** — Wide flange steel column (W) or steel circular pipe (SP) or steel square or rectangular tube (ST), min sizes as shown in the tables below.

2. **Spray-Applied Fire Resistive Materials*** — Applied by mixing with water and spraying in one or more coats to the thicknesses shown below, to steel surfaces which are clean and free of dirt, loose scale, and oil. Min average and min individual density of 15 and 14 pcf, for Types 300, 300AC, 300ES, 300HS, 300N, 3000, 3000ES and SB. For Types 400AC and 400ES min average and min individual density of 22 and 19 pcf, respectively. Min avg density of 44 pcf with min ind value of 40 pcf for Types M-II and TG. Min avg density of 47 pcf, with min individual value of 43 pcf for Type M-II/P. For method of density determination, see Design Information Section, Sprayed Material.
The min thickness of Spray-Applied Fire Resistive Materials required for various fire resistance ratings of contour sprayed or boxed wide flange columns are shown in the table below:

Column Size	W/D	Min Thkns In. 1 Hr	1-1/2 Hr	2 Hr	3 Hr	4 Hr
W6x9	0.33	15/16	1-1/4	1-9/16	2-1/8	2-11/16
W6x12	0.43	13/16	1-1/8	1-7/16	2	2-9/16
W6x16	0.57	11/16	1	1-5/16	1-7/8	2-3/8
W8x28	0.68	5/8	15/16	1-1/4	1-13/16	2-5/16
W10x49	0.83	9/16	13/16	1-1/8	1-5/8	2-1/8
W12x106	1.46	3/8	9/16	13/16	1-1/4	1-11/16
W14x233	2.52	1/4	3/8	1/2	7/8	1-3/16
W14x730	6.68	1/4	1/4	1/4	3/8	1/2

As an alternate to the above table, the required thickness of Spray-Applied Fire Resistive Materials to be applied to all surfaces of the steel columns for all rating periods may be determined from the following equations:

$$h = \frac{R}{75\,(W/D) + 32}$$

(for column W/D range of 0.33 to 2.51)

$$h = \frac{R}{75\,(W/D) + 15}$$

(for column W/D range of 2.51 to 6.68)

Where:

h = Spray-Applied Fire Resistive Materials thickness in the range of 1/4 to 4-1/2 in. (rounded up to the nearest 1/16 in.)

R = Fire resistance rating period in minutes (60-240 mins.)

D = Heated perimeter of the steel column in inches.

W = Weight of the steel column in lbs per foot.

The thicknesses contained in the table below are applicable when the Spray-Applied Fire Resistive Materials applied to the column's flange tips are reduced to one-half that shown in the table below (for contour application):

Column Size In.	Min Thkns In. 1 Hr	1-1/2 Hr	2 Hr	3 Hr	4 Hr
W6x9	1	1-3/8	1-3/4	2-7/16	3-1/8
W6x12	7/8	1-1/4	1-5/8	2-5/16	3-1/16
W6x16	3/4	1-1/8	1-7/16	2-1/16	2-11/16
W8x28	11/16	1	1-5/16	1-15/16	2-1/2
W10x49	5/8	15/16	1-3/16	1-3/4	2-3/8
W12x106	3/8	5/8	7/8	1-3/8	1-13/16
W14x233	5/16	3/8	9/16	15/16	1-5/16
W14x730	5/16	5/16	5/16	7/16	5/8

The min thickness of Spray-Applied Fire Resistive Materials required for various fire resistance ratings of contour sprayed steel pipes or tubes are shown on the table below:

Min Column Size In.	A/P	1 Hr	1-1/2 Hr	Min Thkns In. 2 Hr	3 Hr	4 Hr
SP 4x0.237	0.22	11/16	1	1-3/8	2-1/16	2-3/4
ST 4x4x0.1875	0.18	3/4	1-1/16	1-7/16	2-1/16	2-11/16
ST 4x4x0.3125	0.29	1/2	13/16	1-1/8	1-3/4	2-5/16
ST 4x4x0.375	0.34	7/16	3/4	1	1-9/16	2-1/8
ST 4x4x0.5	0.44	3/8	9/16	7/8	1-3/8	1-7/8
ST20x20x0.75 in	0.72	5/16	1/2	11/16	1-1/16	1-7/16
ST20x20x1 in.	0.95	1/4	3/8	1/2	13/16	1-1/8
ST20x20x1.5 in.	1.39	1/4	1/4	3/8	5/8	13/16
ST20x20x1.75 in.	1.60	1/4	1/4	3/8	1/2	3/4
ST32x32x1.25 in.	1.20	1/4	5/16	7/16	11/16	15/16
ST 36x24x0.5	0.49	5/16	7/16	11/16	1-1/8	1-9/16

As an alternate to the table above, the required thickness of Spray-Applied Fire Resistive Materials to be applied to all surfaces of the steel pipes or tubes for all rating periods may be determined from the following equation:

$$h = \frac{R}{188\,(A/P) + 45}$$

Where:

h = Spray-Applied Fire Resistive Materials thickness in the range of 5/16 to 4-1/4 in. (rounded up to the nearest 1/16 in.)

R = Fire resistance rating in minutes (60-240 mins.)

A = Cross-sectional area of pipe or tube.

P = Heated perimeter of steel pipe or tube.

A/P = 0.18 to 0.49.

The A/P ratio of a circular pipe is determined by:

$$t\,(d - t)$$

$$A/P = \frac{}{d}$$

Where:

d = the outer diameter of the pipe (in.)

t = the wall thickness of the pipe (in.)

The A/P ratio of a rectangular tube is determined by:

$$A/P = \frac{t\,(a + b - 2t)}{a + b}$$

Where:

a = the outer width of the tube (in.)

b = the outer length of the tube (in.)

t = the wall thickness of the tube (in.)

BERLIN CO LTD — Types 300, 300ES, 300N, SB, M-II, TG and M-II/P.

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Types 300, 300AC, 400AC, M-II, TG and M-II/P.

ISOLATEK INTERNATIONAL — Type 300, 300AC, 300ES, 300HS, 300N, 400AC, 400ES, SB, 3000, 3000ES, M-II, TG and M-II/P.

NEWKEM PRODUCTS CORP — Types 300, 300ES, 300N, SB, M-II, TG and M-II/P

2A. **(As an alternate to Item 2) Spray-Applied Fire Resistive Materials*** — Applied by mixing with water and spraying in one or more coats to the thicknesses shown below, to steel surfaces which are clean and free of dirt, loose scale, and oil. Min average and min individual density of 17.5 and 16 pcf, respectively, for Type 300TW. Min average and min individual density of 22 and 19 pcf, respectively, for Type 400. For method of density determination, see Design Information Section, Sprayed Material.
The min thickness of Spray-Applied Fire Resistive Materials required for various fire resistance ratings is shown in Item 2.

BERLIN CO LTD — Type 400.

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Type 400.

ISOLATEK INTERNATIONAL — Type 300TW or Type 400.

NEWKEM PRODUCTS CORP — Type 400.

2B. **(As an alternate to Item 2 and 2A) — Spray-Applied Fire Resistive Materials*** — Prepared by mixing with water according to instructions on each bag of mixture and spray- or trowel-applied to steel surfaces which are free of dirt, oil or scale. Min average density of 17.5 pcf with min individual value of 17.0 pcf. For method of density determination, see Design Information Section, Sprayed Material. The min thickness of Spray-Applied Fire Resistive Materials required for various fire resistance ratings is shown in Item 2.

ISOLATEK INTERNATIONAL — Type 280.

3. **Metal Lath** — (Optional for contour application) — 3.4 lb/sq yd galv or painted expanded steel lath. Lath shall be lapped 1 in. and tied together with No. 18 SWG galv steel wire spaced vertically 6 in. OC.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2019-08-06

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- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
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DESIGN NO. P921

ONLINE CERTIFICATIONS DIRECTORY

Design No. P921
BXUV.P921
Fire Resistance Ratings - ANSI/UL 263

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Fire Resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - ANSI/UL 263

Design No. P921

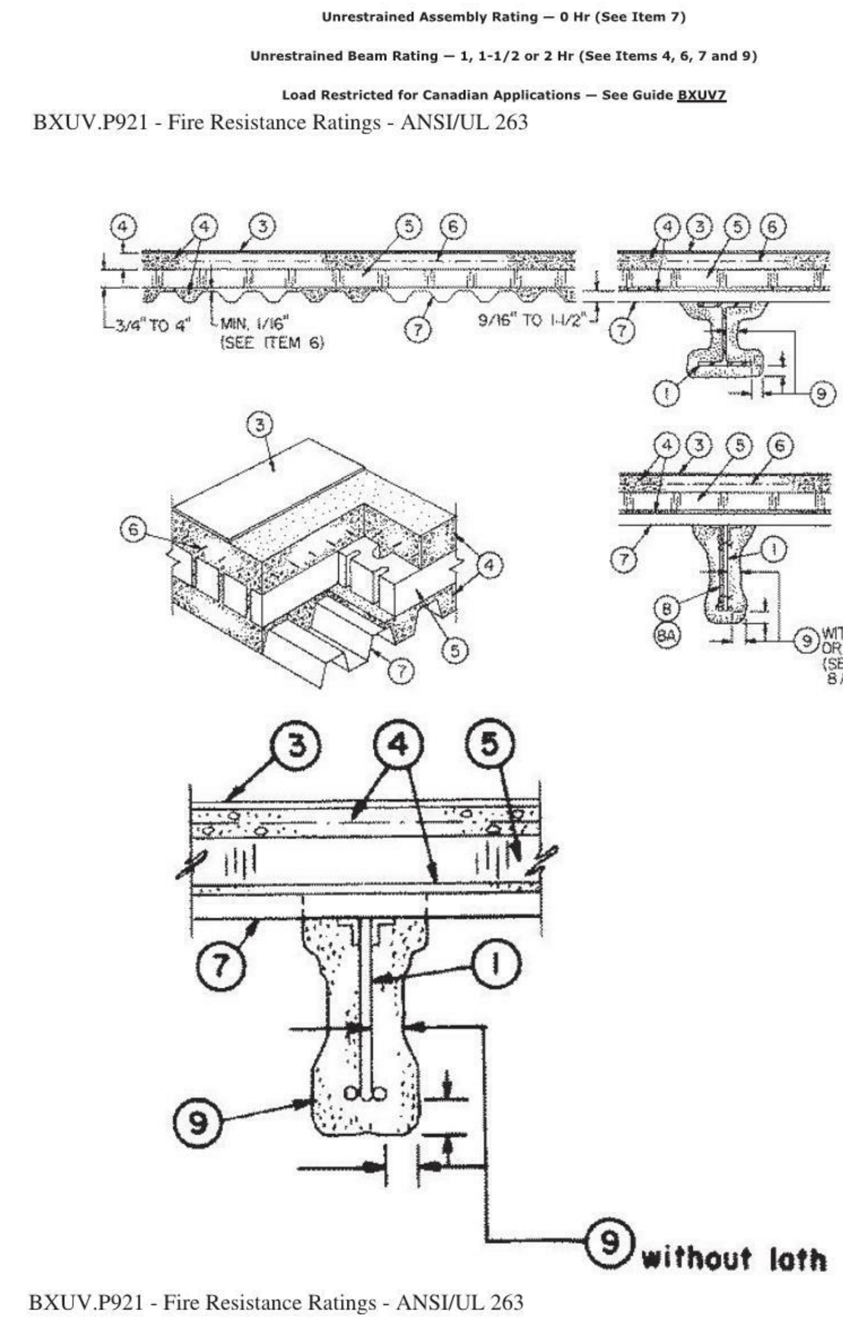
September 27, 2011

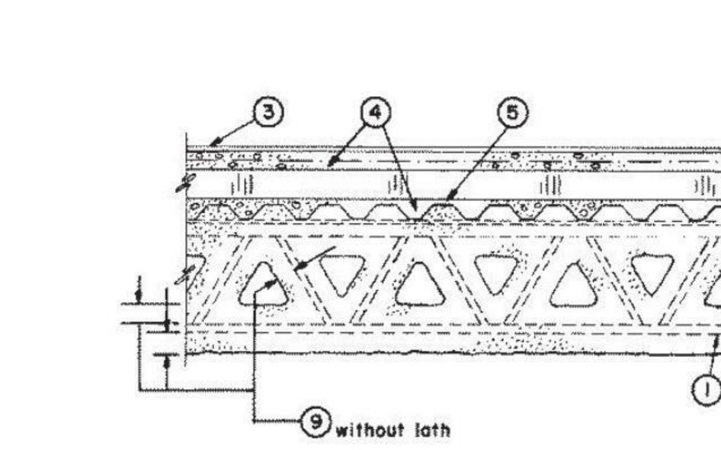
Restrained Assembly Rating — 1, 1-1/2 or 2 Hr (See Items 4, 6, 7 and 9)

Unrestrained Assembly Rating — 0 Hr (See Item 7)

Unrestrained Beam Rating — 1, 1-1/2 or 2 Hr (See Items 4, 6, 7 and 9)

Load Restricted for Canadian Applications — See Guide BXUV7





1. **Supports** — W6X16 or W8X10 beam. As alternate to steel beams, Joist girders — (Not shown) — 20 in. min depth and 13 lb/lin ft min weight.

1A. **Steel Joists** — 12K5 or heavier steel joist may be used as secondary support.

2. **Bridging Angles** — (Not shown) — 1-1/4 by 1-1/4 by 1/8 in. thick angles for use with steel joists. Angles welded to top and bottom chords of the joists.

3. **Roof Covering*** — Consisting of hot mopped or cold application materials compatible with insulation(s) described herein which provide Class A, B or C coverings. See Roofing Materials and Systems Directory-Roof Covering Materials (TEVT).

3A. **In lieu of Item 3, roof covering consisting of single-ply Roofing Membrane*** — that is either ballasted, adhered or mechanically attached as permitted under the respective manufacturer's Classification. See Fire Resistance Directory — Roofing Membranes (CHCI).

4. **Vermiculite Concrete** — 6 cu ft of **Vermiculite Aggregate*** to 94 lb of Portland cement and 0.11 lb of air entraining agent mixed with approx 25 gal of water. Min compressive strength shall be 125 psi when tested in accordance with ASTM C495. Min thickness above foamed plastic is 2 in. Min thickness between top of steel deck and bottom of foamed plastic shall be 1/16 in. when wire mesh (Item 6) is used and 1/8 in. when the wire mesh is not used. When foamed plastic (Item No. 5 or 5A) is not used the topping thickness of Vermiculite Concrete over the crests of steel deck shall be a min of 2-3/16 in. for the 1 and 1-1/2 h ratings and 2-3/8 in. for the 2 h rating. The max vermiculite concrete thickness shall be determined by job site conditions.

MANDOVAL LTD

MANDOVAL VERMICULITE PRODUCTS INC

PALMETTO VERMICULITE CO

SIPLAST INC

THE STRONG CO INC

VERMICULITE PRODUCTS INC

4A. **As an alternate to Item 4, Cellular Concrete— Roof Topping Mixture*** — Foam concentrate mixed with water and Portland cement per manufacturer's specifications. Cast dry density and 28-day compressive strength of min 190 psi as determined in accordance with ASTM C495-66. Min thickness between the top of steel deck and the bottom of foamed plastic shall be 1/8 in. When foamed plastic is not used, the min thickness of Roof Topping Mixture* above the top of the steel deck shall be 2-3/4 in.

CELCORE INC — Type Celcore with cast dry density of 31 (+ or - 3.0) pcf or Type Celcore MF with cast dry density of 29 (+ or - 3.0) pcf.

CONCRECEL INTERNATIONAL INC — Cast dry density 38 (+ or -) 3.0 pcf.

ELASTIZELL CORP OF AMERICA — Type II. Mix #1 of cast dry density 39 (+ or -) 3.0 pcf, Mix #2 of cast dry density 40 (+ or -) 3.0 pcf, Mix #3 of cast dry density 47 (+ or -) 3.0 pcf.

LITE-CRETE INC — Cast dry density of 29 (+ or -) 3.0 pcf.

CELLULAR CONCRETE L L C — Cast dry density 37 (+ or -) 3.0 pcf.

SIPLAST INC — Mix #2. Cast dry density of 36 (+ or -) 3.0 pcf.

4B. **As an alternate to Item 4** — Perlite Concrete — Mix consists of 6 cu ft of **Perlite Aggregate*** to 94 lb of Portland cement and 1-1/2 pints of air-entraining agent. Thickness of perlite concrete topping to be 2 in. min from the top plane of the foamed plastic. Min thickness between the top of steel deck and the bottom of the foamed plastic shall be 1/8 in.

See Perlite Aggregate (CFFX) category in Fire Resistance Directory for names of Classified companies.

4C. **As an alternate to Item 4** — Cellular Concrete — Roof Topping Mixture* — Foam Concentrate mixed with water, Portland Cement and UL Classified Vermiculite Aggregate per manufacturer's application instructions. Cast dry density of 33 (+ or -) 3.0 pcf and 28-day compressive strength of min 250 psi as determined in accordance with ASTM C495-86. A 1/8 in. min slurry coat shall be employed below the foamed plastic (Item 5). The cellular concrete topping thickness, above the foamed plastic, shall be 2 in. min. When foamed plastic is not used, the min thickness of Roof-Topping Mixture, above the top of the steel deck, shall be 2-3/4 in.

CELLULAR CONCRETE L L C — Mix #3.

SIPLAST INC — Mix #3.

5. **Foamed Plastic*** — (Optional) — Foamed plastic insulation boards with holes and/or slots. Nom size 24 by 48 in. Thickness shall be 3/4 in. to 8 in.

SIPLAST INC

VERMICULITE PRODUCTS INC

5A. **Foamed Plastic*** — Nom 24 by 48 in., 48 by 48 in. or 30 by 60 in. by max 8 in. thick polystyrene foamed plastic insulation boards with holes symetrically placed having a max density of 2.0 pcf. For use only with cellular concrete roof topping mixture.

STARRFOAM MFG INC

5B. **Foamed Plastic*** — (Optional) — Nom 24 x 48 by max 8 in. thick polystyrene foamed plastic insulation boards having a density of 2.5 pcf max. Each insulation board shall contain six nom 3 in. diam holes oriented in two rows of three holes each, with the holes spaced 12 in. OC transversely and 16 in. OC longitudinally.

See Foamed Plastic* (BRYX) category in the Building Materials Directory or **Foamed Plastic* (CCVW)** category in Fire Resistance Directory for list of Classified Companies.

6. **Wire Mesh** — No. 19 SWG galv steel wire twisted to form 2 in. hexagons. In addition, straight No. 16 SWG galv steel wire woven into mesh and spaced 3 in. apart for stiffness. Mesh installed without attachment perpendicular to supports and overlapped 6 in. at the sides. As an alternate, 4 by 8 in., No. 12/14 SWG or 2 by 2 in., No. 14/14 SWG welded wire fabric may be used. The wire mesh may be omitted for the **1 and 1-1/2 h ratings.** Thickness of vermiculite concrete between the top of the roof deck and the bottom of the foamed plastic insulation shall be 1/8 in. min when wire mesh is not used.

6A. **Fiber Reinforcement*** — (Optional, not for use to achieve 2 hr ratings) - For use only with Roof-Topping Mixtures* manufactured by Cellular Concrete LLC. In lieu of Wire Mesh (Item 6), Fiber Reinforcement may be added to roof topping mixtures (Items 4A or 4C). See Fiber Reinforcement (CBXQ) Category for rate that fibers are added to roof topping mixture.

FORTA CORP — Types Econo-Mono, Mighty-Mono, Stucco-Bond, Econo-Net, Cast-Master , Super-Net, Ultra-Net.

7. **Steel Roof Deck** — (Unclassified) — Noncomposite design, vented or nonvented units, 9/16 in., 15/16 in., 1-5/16 in., 1-1/2 or 2 in. deep galv units, nom 24 to 36 in. wide. When vented or nonvented 9/16 in. deep galv units are used, the **Restrained Assembly and Beam Ratings shall not exceed 1-1/2 h.** Welded to supports with 3/8 in. puddle welds through weld washers spaced 15 in. OC. Adjacent units overlapped one corrugation. Max support spacings 8 ft OC unless otherwise noted for specific Classified units and their recommended loadings. Steel thickness to be No. 24 MSG min when

supports are spaced not more than 8 ft OC, No. 26 MSG min when supports are spaced not more than 6 ft OC, and No. 28 MSG, 9/16 in. deep steel deck may be used when supports are spaced 4 ft. OC. Roof deck units to be loaded not more than 75 percent of their max allowable bending stress. For clear spans not more than 7 ft., 8-3/8 in. the **Unrestrained Assembly Rating is equal to the Restrained Assembly Rating.** Or, **Classified Steel Floor and Form Units*** conforming to the same installation, steel thickness, loading requirements and **Restrained Assembly Rating** as described for unclassified units.

ASC STEEL DECK, DIV OF ASC PROFILES

INC — Types CP32, (1-3/8), B, DGB, Ventform and 2W. Two or three 10 ft 0 in. continuous spans may be used for Type B, DGB or 2W units, and 12 ft 0 in. simple or continuous spans may be used for Type N units, provided that the total loading on these spans is based on the allowable steel stress and the deflection limitation criteria using the steel (noncomposite) section properties of these units.

CANAM STEEL CORP — Type P-3606, P-3615, or P-3012.

CENTRIA — Type QL-3 or Sec. 3 with or without up-punched integral hanger tabs, and 3 in. QL-99. The 3 in. deep Type QL-99 units made from 22 ga or heavier steel may be used for max 10 ft, 0 in. spans, provided that the total loading on these spans is based on the allowable steel stresses and the deflection limitation criteria using the steel (noncomposite) section properties of these units.

CANAM STEEL CORP — Types B, UFX, UFXV, UFX-36, UFXV-36. Types NI and NS deck may be used on simple or continuous 12 ft 0 in. spans with the total loading on these spans limited by the allowable bending stress and/or the deflection criteria of this deck.

CONSOLIDATED SYSTEMS INC — Consoliform and Comvent Types EHD, HD, S, SD. -Media-Dek Type 1 (vented and nonvented) and Media-Dek Type 2, Type R. Type N 3 in. deep made from 22MSG or heavier steel.

DECK WEST INC — 36 in. wide Type B-DW, BA-DW or 3-DW. The Type 3-DW units made from 22 ga or heavier steel may be used for a maximum 10 ft., 0 in. spans, provided that the total loading on these spans is based on the allowable steel stresses and the deflection limitation criteria using the steel (noncomposite) section properties of these units.

EPIC METALS CORP — Type Metricform, ER2R, ER3.5, ECA, ECA3.5.

MARLYN STEEL DECKS INC — Types B, BV, EF, EVF, F, HF, HVF, N, NV, SF, SVF.

NEW MILLENNIUM BUILDING SYSTEMS L L C — Types B, N, 0.6FD, 1.0FD, 1.5FD, 0.6FDV, 1.0FDV, 1.5BV. Units may be phos/painted or galvanized.

ROOF DECK INC — Vented or Nonvented Types EHD Multi-Rib, HD Multi-Rib, S Multi-Rib.

MORIN CORP — 24, 30 or 36 in. wide, Types LXR-B; 30 in. wide, Types LXR-B-N-30 and LXR-B-N-30-I; 35 in. wide, Types LXR-B-35 and LXR-B-35-I.

VALLEY JOIST — Types F, B, BI, VS, B vented.

VERCO DECKING INC - A NUCOR CO — Types PLB, B, 2"B, 2" B Ventlok, Vercor, Vercor-Ventlok, PLW2, W2, System 80, PLN and N. Two or three 10 ft 0 in. continuous spans may be used for the following units under the following conditions: (A) For Types PLB, B, PLW2 and W-2 units the total loading on these spans shall be based on the allowable steel stress or the deflection limitation criteria using the steel (noncomposite) section properties of these units. (B) For System 80 the min gauge of units is 18 MSG and use is limited to three continuous spans. (C) For 2"B and 2" B Ventlok the total loading on these spans shall be limited to 80 percent of the allowable steel bending stress, or the deflection limitation criteria.

Types PLN and N deck may be used on simple or continuous 12 ft 0 in. spans with the total loading on these spans limited by the allowable bending stress and/or the deflection limitation criteria.

VULCRAFT, DIV OF NUCOR CORP — Types 0.6C, 0.6CPR, 0.6CPRV, 0.6CSV, 1.0C, 1.0CSV, 1.3C, 1.3CSV, 1.5C, 2C, 3C, 1.5B, 1.5BI, 1.5F, 3N, 3NI. Type 1.5B units made from 21MSG or heavier steel may be used on simple or continuous 10 ft 0 in. spans with the total load on these spans limited by the allowable bending stress and/or the deflection criteria of this deck. Type 3N made from 22MSG or heavier steel may be used on simple or continuous 12 ft 0 in. spans with the total load on these spans limited by the allowable bending stress and/or the deflection criteria of this deck.

WHEELING-PITTSBURGH STEEL CORP, DIV

OF WHEELING CORRUGATING CO — Types BW, F, High Strength B, High Strength BW, TF-50, TF-75, TF-125, TF-H3, TV-50, TV-75, TV-125, TV-H3, Permaform Type H. Nonvented Type BW, Dovetail 2.0, Dovetail 3.5.

8. **Metal Lath** — (Not Shown) — (Required on both sides of joists with Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC, otherwise optional !) — Metal lath is used to facilitate the spray application of Spray-Applied Fire Resistive Materials on steel bar joists and trusses. The diamond mesh, 3/8 in. expanded steel lath, 1.7 to 3.4 lb per sq yd, is secured to one side of each steel joist with No. 18 SWG galv steel wire at joist web and bottom chord members, spaced 15 in. OC max. When used, the metal lath is to be fully covered with Spray-Applied Fire Resistive Materials with no min thickness requirements.

8A. **Non-Metallic Fabric Mesh** — (Optional) — As an alternate to metal lath, glass fiber fabric mesh, weighing approximately 2.5 oz per sq yd, polypropylene fabric mesh, weighing approximately 1.25 oz per sq yd or equivalent, is used to facilitate the spray application. The mesh is secured to one side of each joist web member. The method of attaching the mesh must be sufficient to hold the mesh and the spray-applied Spray-Applied Fire Resistive Materials material in place during application until it has cured. An acceptable method to attach the mesh is by embedding the mesh in minimum 1/4 in. long beads of hot melted glue. The beads of glue shall be spaced a maximum of 12 in. OC along the top chord of the bar joist. Another method to secure the mesh is by 1-1/4 in. long by 1/2 in. wide hairpin clips formed from No. 18 SWG or heavier steel wire.

9. **Spray-Applied Fire Resistive Materials*** — Applied by mixing with water and spraying in more than one coat to the final thickness shown below to joist or beam surfaces which are clean, free of dirt, loose scale and oil. A 1-3/4 in. thickness of Spray-Applied Fire Resistive Materials shall be applied to the bridging bars. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 19/18 pcf respectively for Type 7GP and 7HD. For method of density determination refer to Design Information Section.

Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Thkns In. Min Thkns on Beam W6x16	W8x10	Min Thkns on Joist (No. Lath)	Min Thkns on Joist (with Lath)
1	1	1	1-3/8	1-1/2+	1-1/2+
1-1/2	1-1/2	1-1/4	1-3/4	2-1/4	1-3/4
2	1-1/2	1-3/8	1-7/8	2-1/4	1-3/4
2	2	1-5/8	2-1/4	2-7/16	1-7/8

ARABIAN VERMICULITE INDUSTRIES — Types MK-5, MK-6/CBF, MK-6/ED, MK-/HY, MK-6s, Sonophone 1.

W R GRACE & CO - CONN — Types MK-4, MK-5, MK-6/HY, MK-6S, RG, Monokote Acoustic 1.

GRACE KOREA INC — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6S, Monokote Acoustic 1.

PYROK INC — Type LD

SOUTHWEST FIREPROOFING PRODUCTS CO — Types 4, 5, 5EF, 5GP, 5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD

+For 1 Hr ratings, the min joist size shall be 14J7.

9A. **Spray-Applied Fire Resistive Materials*** — (Not Shown) — In lieu of Item 9 the following Spray-Applied Fire Resistive Materials may be applied by mixing with water and spraying in multiple coats to final thicknesses shown below. Min avg and min ind density 19/18 pcf respectively for Types 7GP, 105. Min avg and min ind density of 22/19 pcf respectively for Types Z-106, Z-106/G, Z-106/HY. For method of density determination, refer to Design Information Section, Sprayed Material.

Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Min Thkns on Beam in W6x16	W8x10
1	1	1-1/16	1-1/2
1-1/2	1-1/2	1-3/8	1-15/16
2	1-1/2	1-1/2	2-1/16
2	2	1-13/16	2-9/16

ARABIAN VERMICULITE INDUSTRIES — Types Sonophone 5 , Z-106, Z-106/G, Z-106/HY.

W R GRACE & CO - CONN — Types 105, Monokote Acoustic 5, KM-601, Z-106, Z-106/G, Z-106/HY.

GRACE KOREA INC — Types Monokote Acoustic 5, Z-106, Z-106/G, Z-106/HY.

SOUTHWEST FIREPROOFING PRODUCTS CO — Type 7GP.

9B. **Spray-Applied Fire Resistive Materials*** — (Not Shown) — In lieu of Item 9 or 9A the following Spray-Applied Fire Resistive Materials may be applied by mixing with water and spraying in multiple coats to final thicknesses shown below. Min avg and min ind density 40/36 pcf respectively. Min avg and min ind density of 40/36 pcf respectively for Types Z-146, Z-146PC and Z-146T cementitious mixture. Min avg and min ind density of 50/45 pcf respectively for Types Z-156, Z-156T and Z-156PC. For method of density determination, refer to Design Information Section, Sprayed Material.

Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Min Thkns on Beam in W6x16	W8x10
1	1	1-1/16	1-1/2
1-1/2	1-1/2	1-3/8	1-15/16
2	1-1/2	1-1/2	2-1/16
2	2	1-13/16	2-9/16

ARABIAN VERMICULITE INDUSTRIES — Type Z-146

GRACE KOREA INC — Type Z-146

W R GRACE & CO - CONN — Types Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC

*Bearing the UL Classification Mark

Last Updated on 2011-09-27

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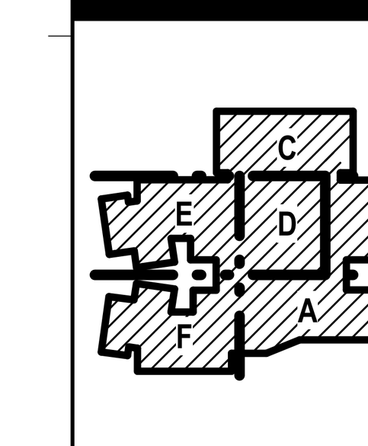


ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Joseph A. Raleigh Sullivan
23278
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: Author CHECKED BY: Checker
REVISIONS:

No.	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

G0.08
UL LISTINGS

1/10/2025 11:58:11 AM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt

SITE GRAPHICS AND SIGNAGE PLAN GENERAL NOTES

1. DIMENSIONS FOR GRAPHICS AND SIGNAGE ARE FROM BACK OF CURB, TYP.
2. GRAPHICS AND SIGNAGE ARE TO BE FABRICATED IN ACCORDANCE WITH FORT BEND COUNTY AND STATE OF TEXAS STANDARDS, TYP.
3. FIRELANE STRIPING TO BE IN ACCORDANCE WITH FORT BEND COUNTY REQUIREMENTS, TYP. FIRE LANE SIGNS TO BE PROVIDED ALONG ENTIRE FIRE LANE EVERY 75'. CONFIRM REQUIREMENTS WITH FIRE MARSHALL PROPR TO INSTALLATION.
4. VERIFY SIGNAGE LOCATIONS, MESSAGES, GRAPHICS, AND FACE DIRECTION(S) WITH ARCHITECT PRIOR TO FABRICATION.
5. PARKING SPACE STRIPING: 4" WIDE WHITE TRAFFIC PAINT, TYP.
6. ISLAND AND MISC STRIPING: 4" WIDE WHITE TRAFFIC PAINT, TYP.

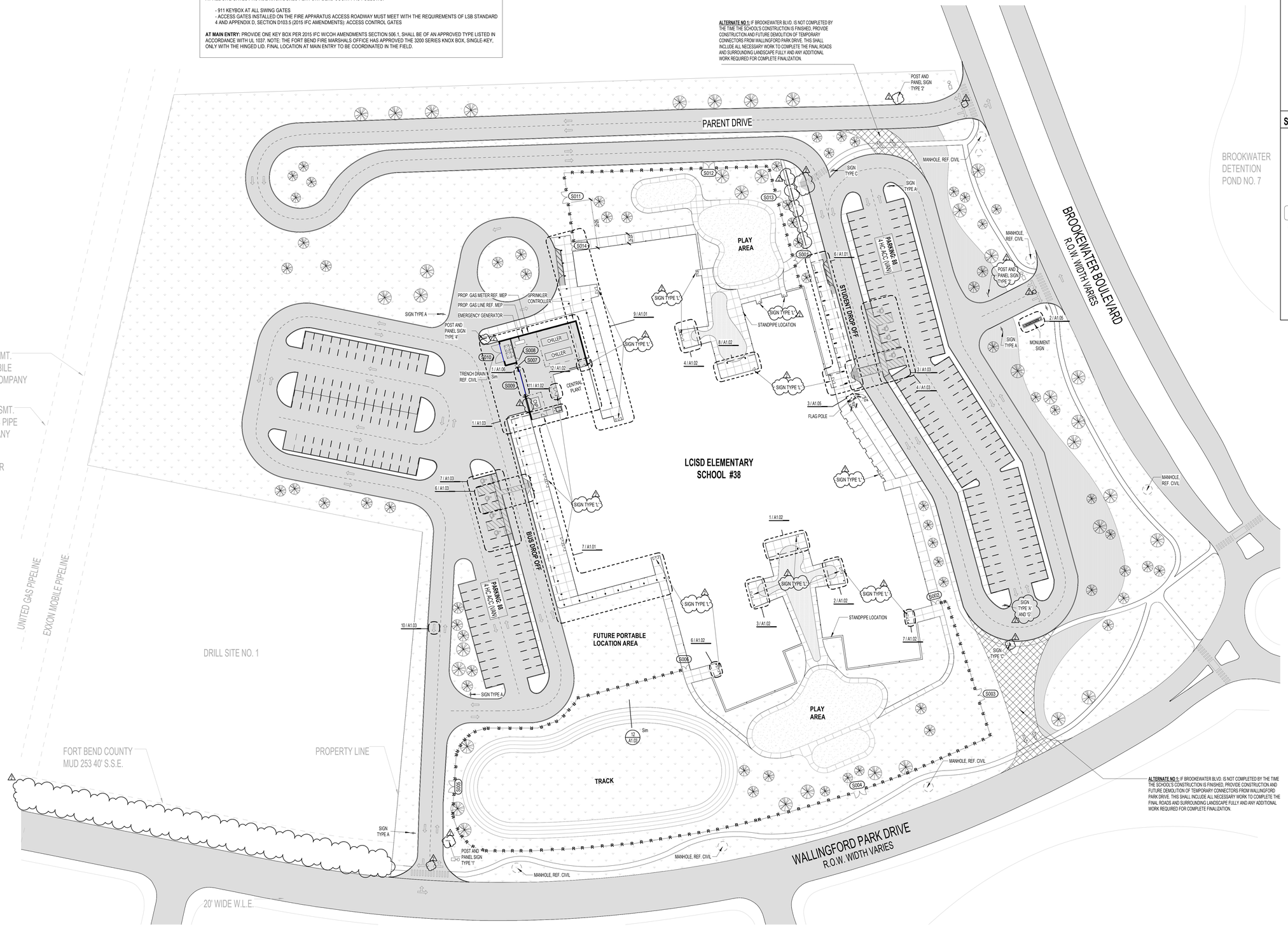
DOOR SCHEDULE - SITE GATES

DOOR			REFER TO DETAIL	
DOOR #	HEIGHT x WIDTH	MATERIAL		DESCRIPTION
S001	6'-0" H x 8'-0" W	STEEL	6/A1.06	PROVIDE PANIC HARDWARE, CARD READER AND FIRE ACCESS BOX
S002	6'-0" H x 8'-0" W	STEEL	6/A1.06	PROVIDE PANIC HARDWARE, CARD READER AND FIRE ACCESS BOX
S003	6'-0" H x 12'-0" W	STEEL	3/A1.06	PROVIDE FIRE ACCESS BOX
S004	6'-0" H x 12'-0" W	STEEL	3/A1.06	PROVIDE FIRE ACCESS BOX
S005	6'-0" H x 12'-0" W	STEEL	3/A1.06	PROVIDE FIRE ACCESS BOX
S006	6'-0" H x 8'-0" W	STEEL	6/A1.06	PROVIDE PANIC HARDWARE, CARD READER AND FIRE ACCESS BOX
S007	6'-0" H x 3'-0" W	STEEL	5/A1.06	PROVIDE PANIC HARDWARE, CARD READER AND FIRE ACCESS BOX
S008	6'-0" H x 12'-0" W	STEEL	5/A1.06	MANUAL SWING GATE
S009	6'-0" H x 24'-0" W	STEEL	1/A1.06	MANUAL SWING GATE
S010	6'-0" H x 6'-0" W	STEEL	7/A1.06	MANUAL SWING GATE
S011	6'-0" H x 12'-0" W	STEEL	3/A1.06	PROVIDE FIRE ACCESS BOX
S012	6'-0" H x 12'-0" W	STEEL	3/A1.06	PROVIDE FIRE ACCESS BOX
S013	6'-0" H x 12'-0" W	STEEL	3/A1.06	PROVIDE FIRE ACCESS BOX
S014	6'-0" H x 8'-0" W	STEEL	6/A1.06	PROVIDE PANIC HARDWARE, CARD READER AND FIRE ACCESS BOX

AT ALL SITE GATES PROVIDE KNOX BOXES PER FORT BEND COUNTY AS FOLLOWS:

- 911 KEYBOX AT ALL SWING GATES
- ACCESS GATES INSTALLED ON THE FIRE APPARATUS ACCESS ROADWAY MUST MEET WITH THE REQUIREMENTS OF LSB STANDARD 4 AND APPENDIX D, SECTION D103.5 (2015 IFC AMENDMENTS): ACCESS CONTROL GATES

AT MAIN ENTRY: PROVIDE ONE KEY BOX PER 2015 IFC W/CON AMENDMENTS SECTION 506.1, SHALL BE OF AN APPROVED TYPE LISTED IN ACCORDANCE WITH UL 1037. NOTE: THE FORT BEND FIRE MARSHALS OFFICE HAS APPROVED THE 3200 SERIES KNOX BOX, SINGLE-KEY, ONLY WITH THE HINGED LID. FINAL LOCATION AT MAIN ENTRY TO BE COORDINATED IN THE FIELD.



SITE PLAN GENERAL NOTES

1. REFER TO SHEET A 0.00 FOR ADDITIONAL GENERAL NOTES.
2. RE: SHEET G0.02 & G0.03 FOR TAS REQUIREMENTS
3. RE: G0.04 & G0.05 FOR CODE PLAN
4. PROVIDE KNOX PADLOCKS AT ALL VEHICULAR GATES. PROVIDE BOLLARDS AT LATCH SIDES OF VEHICULAR GATES WHEN THEY ARE OPEN AND HASP TO LOCK OPEN GATE TO BOLLARD.
5. ALL FENCING SHALL BE VINYL COATED CHAIN LINK, 48" HIGH UNO.
6. PROVIDE 48" HIGH, 4" DIA. CONCRETE FILLED STEEL BOLLARDS SPACED 6' O.C. AROUND SIDES AND BACK OF DUMPSTER YARDS. AROUND ELECTRICAL TRANSFORMER AS REQUIRED BY ELECTRICAL PROVIDER, AND AT BOTH SIDES OF EXTERIOR ROLL-UP/GARAGE DOORS.
7. ALL DISTURBED AREAS SHALL BE FINISH GRADED, REVEGETATED, AND IRRIGATED.
8. FLAGPOLES SHALL HAVE MIN. 6' DIAMETER PAVING AROUND THEM AND A PATH TO A BUILDING ENTRANCE. PATH AND PAVING SHALL BE TAS REQUIREMENTS FOR WIDTH AND GRADING.
9. ALL RETAINING WALLS SHALL HAVE BACKSIDE WATERPROOFING AND DRAINAGE
10. ALL EXIT GATES SHALL BE PROVIDED WITH PANIC HARDWARE AND WIRED FOR CARD READERS AND ELECTRIFIED HARDWARE.
11. PROVIDE 24" CONCRETE MOW STRIP AROUND PERIMETER OF ALL BUILDINGS WHERE NO OTHER PAVING IS CALLED FOR. PROVIDE 12" MOW STRIP CENTERED ON ALL FENCING.
12. REFER TO A1.04 FOR SIGNAGE TYPES.
13. SIGN TYPE 'L' TO BE POSTED OUTSIDE ALL EXTERIOR DOORS.

SITE PLAN LEGEND

- VINYL COATED CHAIN LINK FENCE, 48" HIGH
- BLACK WROUGHT IRON FENCE, 72" HIGH
- BLACK WROUGHT IRON FENCE, 48" HIGH
- BUILDING SECTION TAG
- WALL SECTION TAG
- ENLARGED CALL OUT
- ACCESSIBLE ROUTE
- TRAFFIC SIGNAGE REFER TO A1.04
- SITE DOOR / GATE TAG
- INLET - REFER TO CIVIL
- STREET LIGHTS - REFER TO ELEC.
- WOOD CHIPS (N.I.C.)
- TURF
- GIANT BERMUDA
- PAVING
- POST AND PANEL SIGNAGE REFER TO A1.03
- FLAG POLE REFER TO A1.05
- ELEC. EASMENT - REFER TO CIVIL
- PROPERTY LINE

SITE PLAN SCALE: 1" = 40'-0"

1

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT Raleigh Pfluger 23279 STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

	Date	Description
2	01/10/2025	ADDENDUM #2

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A1.00
ARCHITECTURAL SITE PLAN

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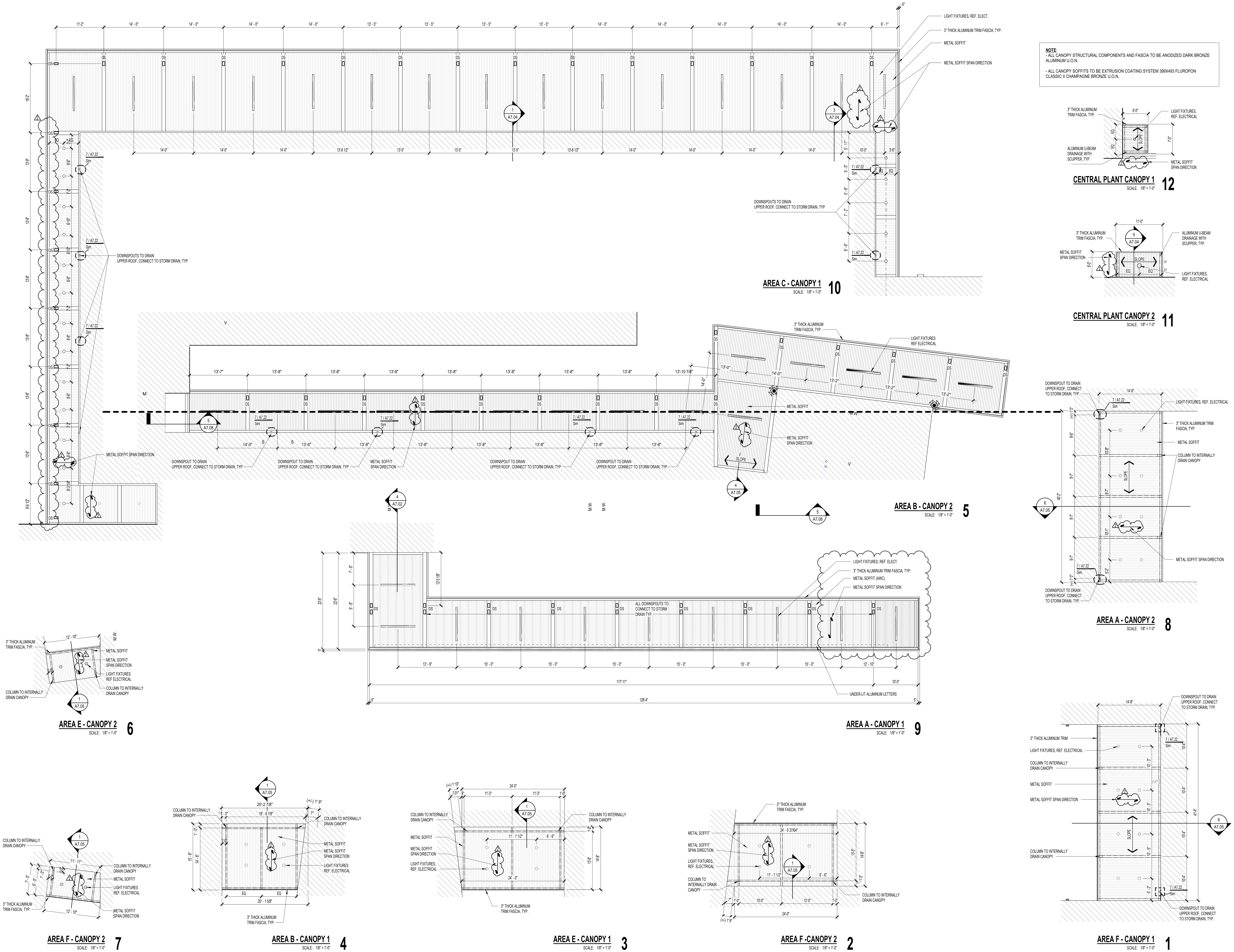
1/10/2025 11:58:35 AM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt



NOTE:
- ALL CANOPY STRUCTURAL COMPONENTS AND FASCIA TO BE ANODIZED DARK BRONZE ALUMINUM U.O.N.

- ALL CANOPY SOFFITS TO BE EXTRUSION COATING SYSTEM 399X493 FLUROPON CLASSIC II CHAMPAGNE BRONZE U.O.N.

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LAMAR CISD

3911 AVENUE I
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REGISTERED ARCHITECT
Joseph A. Raleigh Sullivan
23278
STATE OF TEXAS

DATE: 1/10/2025

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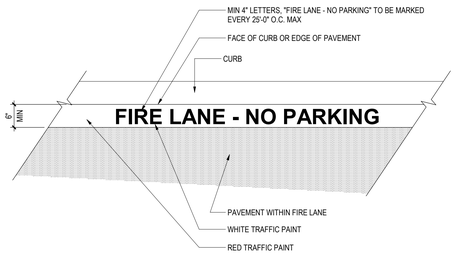
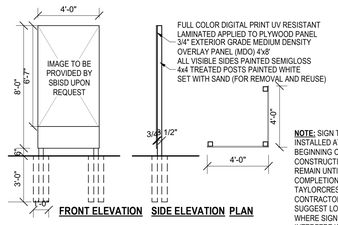
A1.02
ENLARGED ARCHITECTURAL SITE PLANS



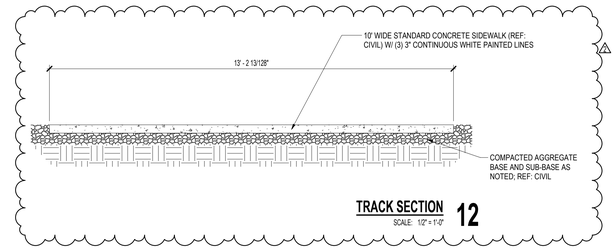
FIRE LANE MARKING 14

SCALE: 3/4" = 1'-0"



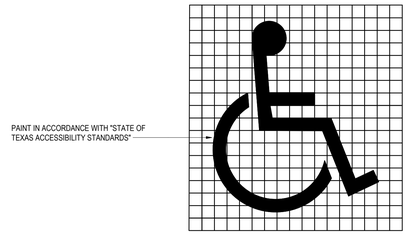
BOND WORK SIGN 13

SCALE: 1/4" = 1'-0"



TRACK SECTION 12

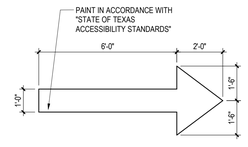
SCALE: 1/2" = 1'-0"



NOTE: GRID FOR LAYOUT PURPOSES ONLY.

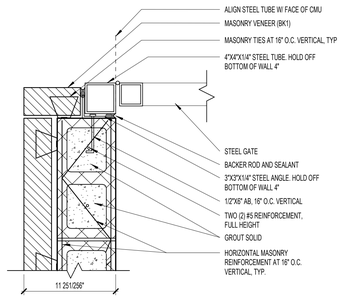
ACCESSIBLE SYMBOL DETAIL 11

SCALE: 1/4" = 1'-0"



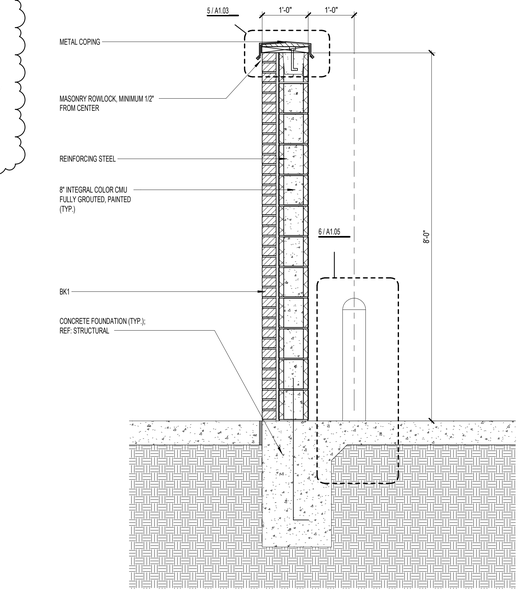
DRIVEWAY SIGNAGE 10

SCALE: 3/8" = 1'-0"



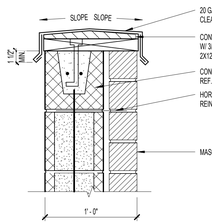
DUMPSTER ENCLOSURE GATE JAMB 9

SCALE: 1 1/2" = 1'-0"



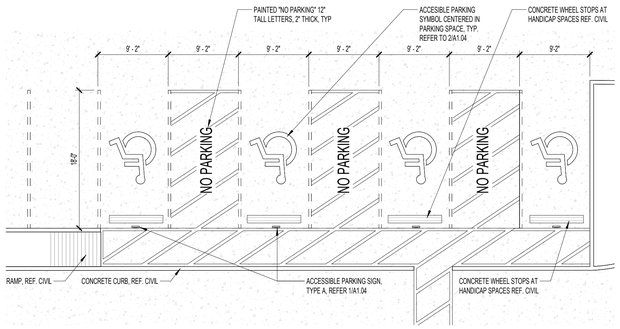
DUMPSTER ENCLOSURE / SITE WALL SECTION 8

SCALE: 3/4" = 1'-0"



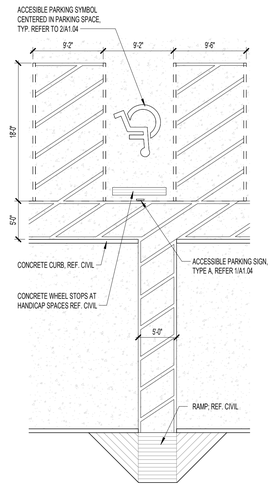
DUMPSTER ENCLOSURE SECTION DETAIL 5

SCALE: 1 1/2" = 1'-0"



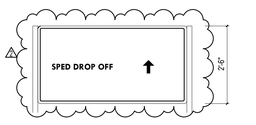
REAR ACCESSIBLE PARKING 7

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

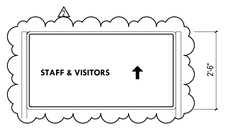


REAR ENTRY ACCESSIBLE PATH 6

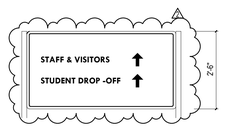
SCALE: 1/8" = 1'-0"



TYPE 4



TYPE 3



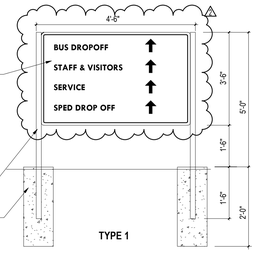
TYPE 2

NOTES:
1. TEXT SIZE TO BE 2 1/4" HIGH (MIN)
2. TEXT STYLE TO BE TW CENT MT BOLD.
3. FINAL SELECTION OF TEXT SIZE STYLE AND OVERALL LAYOUT WILL BE MADE ON SUBMITTAL.
4. VERTICAL DIMENSION OF PANEL TO BE ADJUSTED PER SIGN DESIGNATION
5. SINGLE LINE TEXT SIGNS TO MATCH DOUBLE LINE TEXT SIGN SIZE (MIN)
6. SPACE BETWEEN RELATED LINES OF TEXT TO MATCH TEXT HEIGHT
7. SPACE BETWEEN UNRELATED MULTI LINE TEXT TO RANGE BETWEEN 1.5 TO 2 TIME TEXT HEIGHT TO ACCOMMODATE DIRECTIONAL ARROW HEIGHT AND GRAPHICAL LAYOUT.

ALUMINUM TUBE AND SIGNBOARD. LETTER & BACKGROUND COLOR TO BE DETERMINED BY ARC IN A SEPERATE SUBMITTAL. REF SITE PLAN FOR LOCATIONS AND TYPES.

ALUMINUM TUBE, 3" X 3" X 0.125" SQUARE SECTION 5'-6" LENGTH SET IN CONC. FOOTING, COLOR TO BE DETERMINED BY ARC IN A SEPERATE SUBMITTAL.

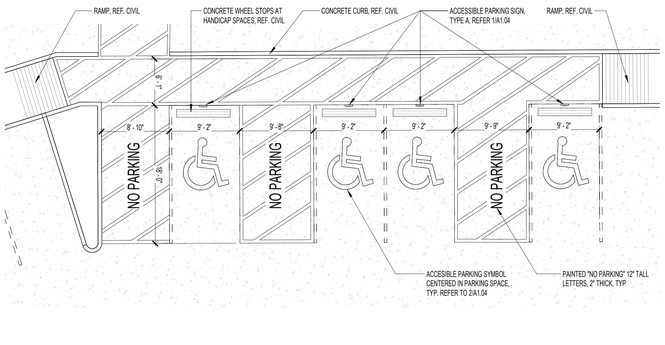
CONCRETE PIER, 8" DIAMETER 2'-0" DEEP WITH 3000 PSI CONCRETE



TYPE 1

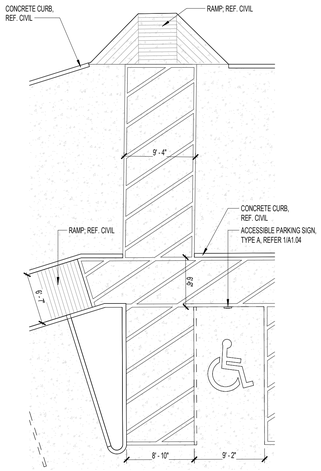
POST AND PANEL SIGN TYPES 2

SCALE: 1/4" = 1'-0"



FRONT ACCESSIBLE PARKING 4

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



FRONT ENTRY ACCESSIBLE PATH 3

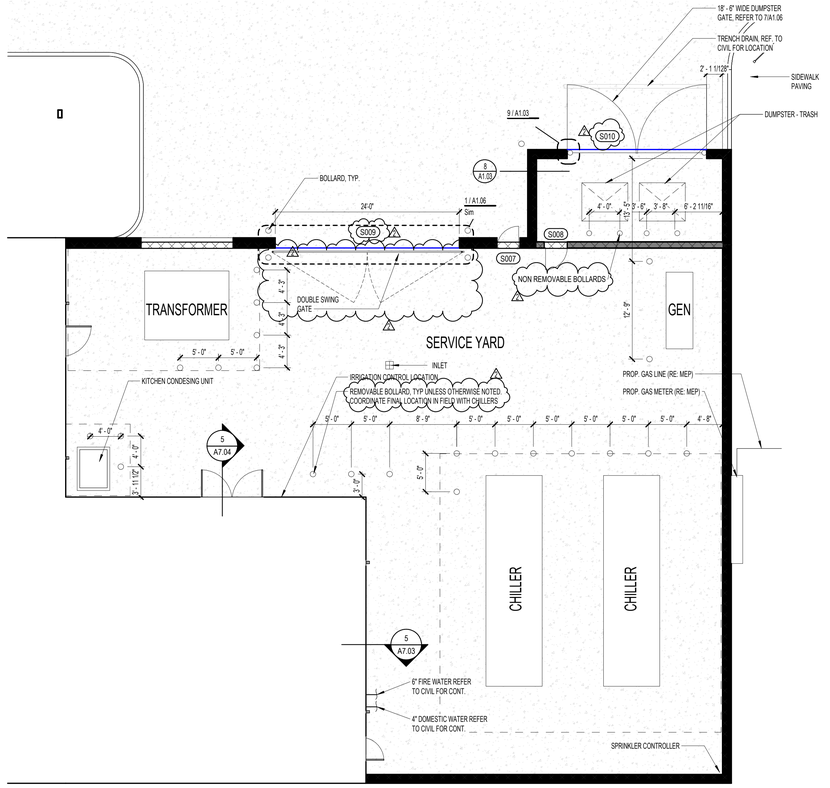
SCALE: 1/8" = 1'-0"

SITE PLAN GENERAL NOTES

1. REFER TO SHEET A 0.00 FOR ADDITIONAL GENERAL NOTES.
2. RE: SHEET G0.02 & G0.03 FOR TAS REQUIREMENTS
3. RE: G0.04 & G0.05 FOR CODE PLAN
4. PROVIDE KNOX PADLOCKS AT ALL VEHICULAR GATES. PROVIDE BOLLARDS AT LATCH SIDES OF VEHICULAR GATES WHEN THEY ARE OPEN AND HASP TO LOCK OPEN GATE TO BOLLARD.
5. ALL FENCING SHALL BE VINYL COATED CHAIN LINK, 48" HIGH UNO.
6. PROVIDE 48" HIGH, 4" DIA. CONCRETE FILLED STEEL BOLLARDS SPACED 6' O.C. AROUND SIDES AND BACK OF DUMPSTER YARDS. AROUND ELECTRICAL TRANSFORMER AS REQUIRED BY ELECTRICAL PROVIDER, AND AT BOTH SIDES OF EXTERIOR ROLL-UP/GARAGE DOORS.
7. ALL DISTURBED AREAS SHALL BE FINISH GRADED, REVEGETATED, AND IRRIGATED.
8. FLAGPOLES SHALL HAVE MIN. 6' DIAMETER PAVING AROUND THEM AND A PATH TO A BUILDING ENTRANCE. PATH AND PAVING SHALL BE TAS REQUIREMENTS FOR WIDTH AND GRADING.
9. ALL RETAINING WALLS SHALL HAVE BACKSIDE WATERPROOFING AND DRAINAGE
10. ALL EXIT GATES SHALL BE PROVIDED WITH PANIC HARDWARE AND WIRED FOR CARD READERS AND ELECTRIFIED HARDWARE.
11. PROVIDE 24" CONCRETE MOW STRIP AROUND PERIMETER OF ALL BUILDINGS WHERE NO OTHER PAVING IS CALLED FOR. PROVIDE 12" MOW STRIP CENTERED ON ALL FENCING.
12. REFER TO A1.04 FOR SIGNAGE TYPES.
13. SIGN TYPE 'L' TO BE POSTED OUTSIDE ALL EXTERIOR DOORS.

SITE PLAN LEGEND

- X-X VINYL COATED CHAIN LINK FENCE, 48" HIGH
- R-R BLACK WROUGHT IRON FENCE, 72" HIGH
- F-F BLACK WROUGHT IRON FENCE, 48" HIGH
- 1 / A101 SIM. — BUILDING SECTION TAG
- SIM. / A101 — WALL SECTION TAG
- 21 / A101 SIM. — ENLARGED CALL OUT
- ACCESSIBLE ROUTE
- TRAFFIC SIGNAGE REFER TO A1.04
- XXXX — SITE DOOR / GATE TAG
- INLET - REFER TO CIVIL
- STREET LIGHTS - REFER TO ELEC.
- WOOD CHIPS (N.I.C.)
- TURF
- GIANT BERMUDA
- PAVING
- POST AND PANEL SIGNAGE REFER TO A1.03
- FLAG POLE REFER TO A1.05
- ELEC. EASMENT - REFER TO CIVIL
- PROPERTY LINE



SERVICE YARD 1

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

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ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT — Joshua A. Raleigh — 23278 — STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

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2	01/10/2025	ADDENDUM #2

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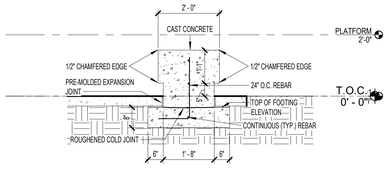
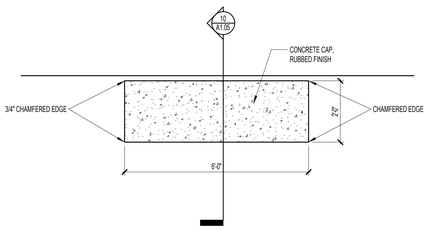
A1.03
ENLARGED ARCHITECTURAL SITE PLANS

1/10/2025 11:58:41 AM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookwater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt



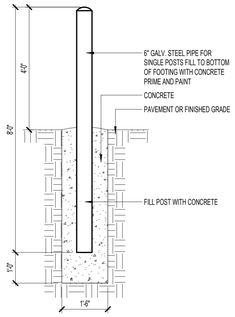
SECTION - CONCRETE BENCH 10

SCALE: 1/2" = 1'-0"



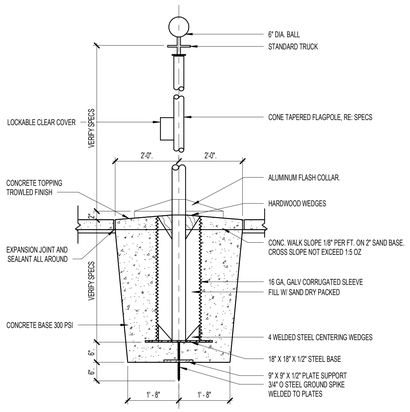
ENLARGED PLAN - CONCRETE BENCH 9

SCALE: 1/2" = 1'-0"



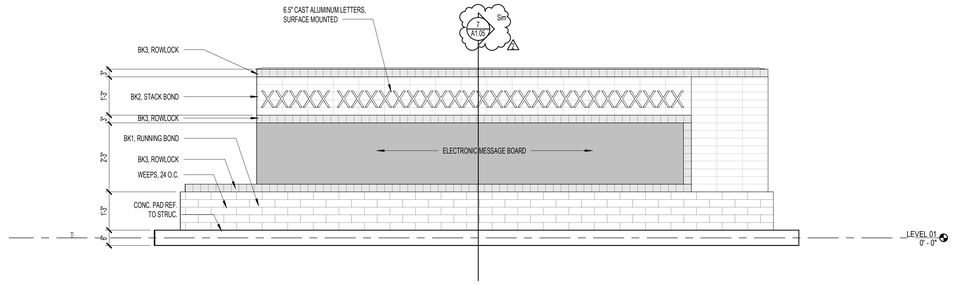
SITE DETAIL - BOLLARD DETAIL 6

SCALE: 1/2" = 1'-0"



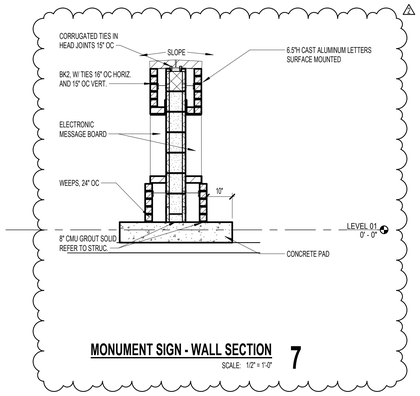
SITE DETAIL - FLAGPOLE DETAIL 3

SCALE: 1/2" = 1'-0"



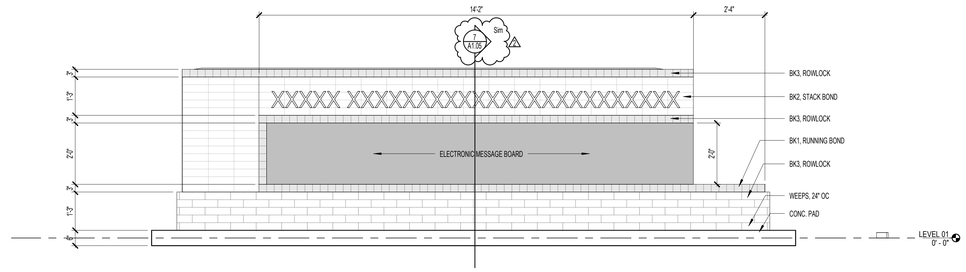
MONUMENT SIGN - SOUTH ELEVATION 8

SCALE: 1/2" = 1'-0"



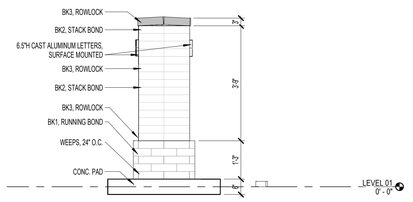
MONUMENT SIGN - WALL SECTION 7

SCALE: 1/2" = 1'-0"



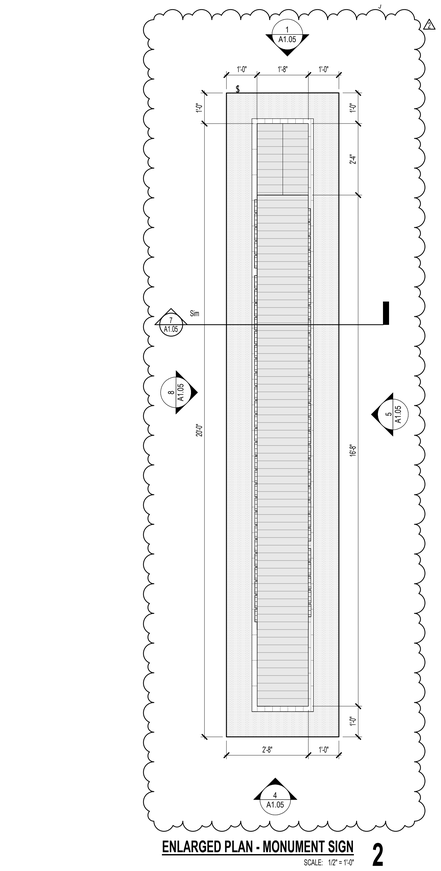
MONUMENT SIGN - NORTH ELEVATION 5

SCALE: 1/2" = 1'-0"



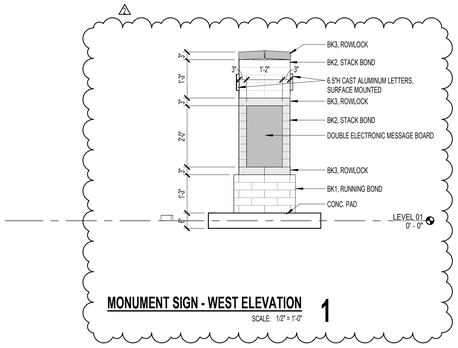
MONUMENT SIGN EAST ELEVATION 4

SCALE: 1/2" = 1'-0"



ENLARGED PLAN - MONUMENT SIGN 2

SCALE: 1/2" = 1'-0"



MONUMENT SIGN - WEST ELEVATION 1

SCALE: 1/2" = 1'-0"

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Brenda Raleigh Pfluger
23278
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

Δ	Date	Description
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A1.05
SITE DETAILS

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FLOOR PLAN GENERAL NOTES

1. REFER TO SHEET A 0.00 FOR ADDITIONAL GENERAL NOTES.
2. RE: SHEET A0.01 FOR PARTITION TYPE SCHEDULE
3. RE: G0.04 & G0.05 SHEETS FOR GRAPHIC EXTENT OF FIRE RATED PARTITIONS.
4. RE: SPECIFICATIONS FOR LOCATION OF SOUND ATTENUATION BLANKETS.
5. DIMENSIONS SHOWN ON THE FLOOR PLANS ARE TO THE FACE OF STUD/FACE OF CMU/FACE OF TILT WALL OF INTERIOR WALLS, UNLESS OTHERWISE INDICATED.
6. ALL SINKS AND LAVATORIES SHALL BE MOUNTED SO THAT THE CENTERLINE OF THE FIXTURE IS 1'-3" MIN. TO THE FACE OF ADJACENT FIXED EQUIPMENT, PARTITIONS, CASEWORK, WALLS, ETC. AND 1'-3" MIN. TO THE CENTER OF AN ADJACENT FIXTURE.
7. REFER TO SHEETS A3 SHEETS FOR TOILET ROOM DESIGNATIONS, TYPICAL MOUNTING HEIGHTS OF PLUMBING FIXTURES AND TOILET ACCESSORIES.
8. PROVIDE MINIMUM 1'-0" CLEAR FLOOR SPACE AT THE PUSH SIDE OF EVERY DOOR WITH A CLOSER & LATCH. PROVIDE MINIMUM 1'-6" CLEAR AT THE PULL SIDE OF EVERY DOOR, UNLESS SPECIFICALLY DIMENSIONED, NOTED, OR SHOWN OTHERWISE.

FLOOR PLAN LEGEND

- NEW CONSTRUCTION
- EXISTING/ NOT IN SCOPE
- EXPANSION JOINT
- COLUMN GRID
- EXTERIOR ELEVATION TAG
- INTERIOR ELEVATION TAG
- BUILDING SECTION TAG
- WALL SECTION TAG
- ENLARGED CALL OUT
- DOOR TAG
- PARTITION TAG
- HOLLOW METAL WINDOW TAG
- ALUMINUM STOREFRONT TAG
- 5' DIAMETER ADA TURN AROUND

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Marcia Raleigh Pfluger
33276
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

No.	Date	Description
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2	01/10/2025	ADDENDUM #2

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A2.01A
LEVEL 1 FLOOR PLAN
AREA A

LEVEL 01 - ON SHEETS - AREA A 1
SCALE: 1/8" = 1'-0"

AREA F
AREA A

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FLOOR PLAN LEGEND

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- EXPANSION JOINT
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- INTERIOR ELEVATION TAG
- BUILDING SECTION TAG
- WALL SECTION TAG
- ENLARGED CALL OUT
- DOOR TAG
- PARTITION TAG
- HOLLOW METAL WINDOW TAG
- ALUMINUM STOREFRONT TAG
- 5' DIAMETER ADA TURN AROUND

AREA C
AREA D
AREA A
AREA B

LEVEL 01 - AREA B
SCALE: 1/8" = 1'-0"

1

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522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Joshua Raleigh Pfluger
33276
STATE OF TEXAS
DATE: 1/10/2025

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A2.01B
LEVEL 1 FLOOR PLAN
AREA B

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FLOOR PLAN GENERAL NOTES

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3. RE: G0.04 & G0.05 SHEETS FOR GRAPHIC EXTENT OF FIRE RATED PARTITIONS.
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REGISTERED ARCHITECT Nora Raleigh Pfluger 23278 STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
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100% CONSTRUCTION DOCUMENTS

A2.01C
LEVEL 1 FLOOR PLAN
AREA C

LEVEL 01 - AREA C 1
SCALE: 1/8" = 1'-0"

AREA C
AREA B
AREA E
AREA D
AREA D
AREA B

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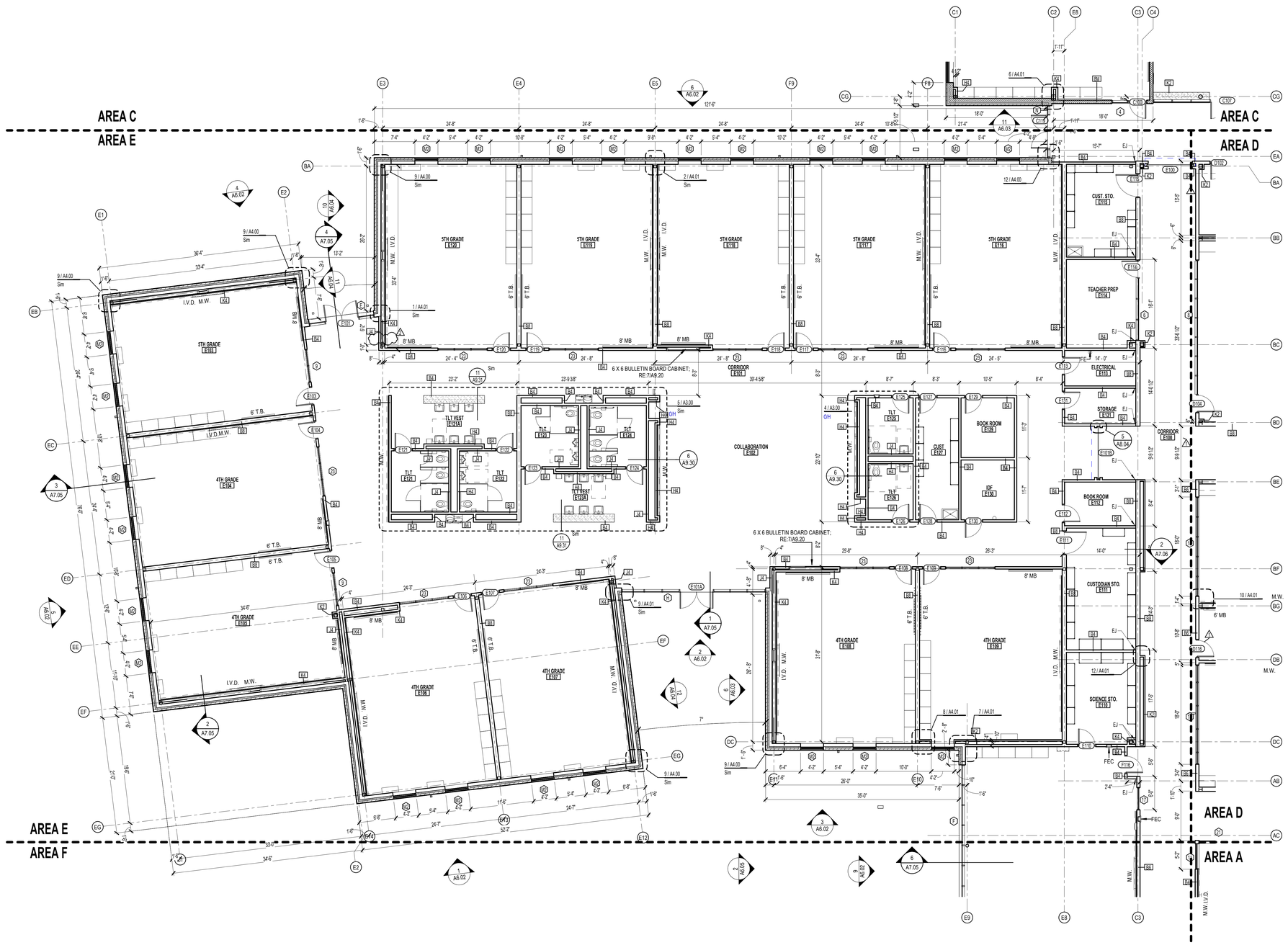

FLOOR PLAN GENERAL NOTES

1. REFER TO SHEET A 0.00 FOR ADDITIONAL GENERAL NOTES.
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3. RE: G0.04 & G0.05 SHEETS FOR GRAPHIC EXTENT OF FIRE RATED PARTITIONS.
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FLOOR PLAN LEGEND

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- EXPANSION JOINT
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- DOOR TAG
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- 5' DIAMETER ADA TURN AROUND

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REGISTERED ARCHITECT
Rosita Raleigh Pfluger
23278
STATE OF TEXAS

DATE: 1/10/2025

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A2.01E

LEVEL 1 FLOOR PLAN AREA E

LEVEL 01 - AREA E 1

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

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GENERAL NOTES - ROOF:

1. FOR TYPICAL ROOF PENETRATIONS AND PIPE SUPPORTS DETAILS REFER TO SHEET A5.10
2. FOR ADDITIONAL ROOF PENETRATION DETAILS: REFER TO MEP DOCS.
3. REFER MEP DOCUMENTS FOR ROOFTOP EQUIPMENT NOT SHOWN. MECHANICAL, ELECTRICAL AND PLUMBING ROOF EQUIPMENT DEPICTED ON THIS SHEET IS FOR GENERAL ARCHITECTURAL INFORMATION ONLY. REFER TO THE MEP DOCUMENTS FOR ADDITIONAL REQUIREMENTS AND COORDINATION. REFER STRUCTURAL DOCUMENTS FOR EQUIPMENT SUPPORTS. REFER MEP AND STRUCT DOCS FOR CURB DETAILS.
4. REF. A5.10 FOR ROOF LADDER DETAILS
5. EXPOSED METAL FLASHING/TRIM PIECES ARE TO BE PREFIN GALV STL. UON. PAINT EXPOSED METAL FLASHING/TRIM PIECES THAT ARE NOT PREFIN, AS WELL AS ALL EXPOSED MISC STL PIECES. REFER FINISH SCHEDULE AND NOTES, SHEET A9.00a
6. GUTTERS SHALL BE PAINTED PREFINISHED GALV STL (GUTTER SIZES PER ROOF LEGEND), UON. PROVIDE PNT 1/4"x1 1/2" GALV STL BENT PLATE BRACKETS AND 1" GALV STL SPACERS AT 36"OC MAX. - STAGGER W/ EACH OTHER AT 18"OC. PROVIDE PREFIN GUTTER E/s. PROVIDE SST SCREENS AT ALL GUTTERS. LOCATE GUTTER E/s PER ROOF PLAN. (30' MAX SPAN). PAINT COLOR TO BE DETERMINED BY ARCHITECT PRIOR INSTALLATION.
7. ALL SCUPPERS TO BE PAINTED AND TO BE 6"X8" SIZE UON. PAINT COLOR TO BE DETERMINED BY ARCHITECT PRIOR INSTALLATION.
8. DOWNSPOUTS SHALL BE PAINTED PREFINISHED GALV STL. DOWNSPOUTS ARE 6"x8". UON. LOCATE AS INDICATED PER ROOF PLAN. PROVIDE PNT 2" GALV STL HANGERS AT 48"OC. PROVIDE PNT VANDALPROOF SST STRAINERS AT EA DS. PAINT COLOR TO BE DETERMINED BY ARCHITECT PRIOR INSTALLATION.
9. PROVIDE PNT 4'-0" TALL CAST IRON DS BOOTS AT DOWNSPOUTS THAT OCCUR AT GRADE LEVEL. SIZE BOOT TO FIT DS.
10. TAPERED INSULATION SHALL BE 1/4"/FT MIN SLOPE TO DRAIN. ROOF PLAN SHOWS TAPERED INSUL AT NTS AND IS GRAPHIC ONLY, TO SHOW SLOPE AND APPROX LOCATION. (VERIFY INSULATION REQD TO MAINTAIN SLOPE. PRIOR TO INSTALLATION).
11. PROVIDE TAPERED INSULATION CRICKETS (1/4"/FT MIN SLOPE) AT HIGH SIDE OF ALL MECH UNITS, SKYLIGHTS, ROOF HATCHES, AND MISC ROOF PENETRATIONS, TO SHED WATER AROUND, AND TO INSURE POSITIVE ROOF DRAINAGE.
12. WOOD BLOCKING AT ROOF EDGES, BIDGES, ETC. SHALL BE FABRICATED FROM CONT MIN 2x6s PTWD BLOCKING. PROVIDE LARGER DX PTWDS REQD PER DETAIL DIMENSIONS. REFER ROOFING MANUF RECOMMENDATIONS.
13. WHERE WOOD BLOCKING EXCEEDS 6" THICKNESS AT TAPERED INSULATION, PROVIDE STEM WALL CONSTRUCTED OF 6" GALV CRMF AT 16"OC W/ CONT TRACK TOP AND BOTTOM AND W/ 3/4" PT EXT GR PLYWOOD AT EA SIDE. TOP TO SLOPE W/ TAPERED INSULATION.
14. PROVIDE STEP FLASHING AND COVER PLATE AT SLOPED ROOF H/LO CONDITIONS.
15. VERIFY ELEVATION OF ROOF DRAIN RELATIVE TO OVERFLOW SCUPPER PRIOR TO INSTALLATION OF SCUPPERS.
16. LOCATE SCUPPERS AS INDICATED ON ROOF PLAN AND ELEVATIONS.
17. PROVIDE ROOF AREA DIVIDER WHERE REQUIRED. REFER DET 8/A5.12
18. STRUCTURAL SLOPES SHOWN ON PLAN ARE FOR GENERAL CONCEPT ONLY. REFER STRUCTURAL DRAWINGS FOR EXACT TOS/BOD ELEVATIONS.
19. REFER PLUMBING DOCUMENTS FOR ROOF DRAIN LEADERS, CONNECTIONS TO STORM DRAIN, AND NOZZLES.
20. FOR TYPICAL ROOF PENETRATION DETAILS: PROVIDE MTL ROOF MFRS STD ROOF CURBS AND PENETRATION DETAILS. FOR LOCATIONS, HEIGHTS, AND ANY OTHER ADDITIONAL INFO REFER TO MEP DOCS. COORDINATE FINAL SIZE.

a. PROVIDE CURBS AND ALL SUPPORTS NOT INDICATED ON THE STRUCTURAL DOCUMENTS FOR NEW ROOF TOP MECH EQUIPMENT, INCLUDING BUT NOT LIMITED TO RTUS, CONDENSERS, AND FANS. REFER STRUCTURAL AND MEP DOCUMENTS.

b. PROVIDE SUPPORTS AND FLASHING AS REQUIRED AT NEW GAS PIPING ON THE ROOF.

21. PROVIDE STD EAVE CLOSURES, AND MISC TRIM REQUIRED FOR COMPLETE ASSEMBLY.
22. PROVIDE SPLASH BLOCK AT ALL DOWNSPOUTS THAT TRANSFER WATER FROM ONE ROOF TO ANOTHER. PROVIDE ADDITIONAL "WALKWAY PAD" OR ROOF MEMBRANE PROTECTION UNDER SPLASH (3'-0" MIN BEYOND SPILLWAY) SECURE SPLASH BLOCK TO ROOF WITH COMPATIBLE SEALANT TO MAINTAIN ROOF WARRANTEE.
23. CONTRACTOR MAY DELETE WOOD BLOCKING SHOWN IN ROOFING DETAILS AS ALLOWED BY ROOFING MANUFACTURER RECOMMENDATIONS AND FACTORY MUTUAL WIND UPLIFT REQUIREMENTS.
24. REFER TO BAS.10 FOR LAYOUT OF BITUMEN ROOF SYSTEM (ANCHOR SHEET, BASE SHEET, AND CAP SHEET)

ROOF LEGEND:

- 1:12 — ROOF SLOPE DIRECTION (1/4"/FT MIN)
- RD ORD — INTERNAL ROOF DRAIN AND OVERFLOW ROOF DRAIN
- LINE OF ROOF EXPANSION JOINT
- 16" CLR WIDE ROOF ACCESS LADDER - REFER TO ROOF PLANS AND
- 2'-6"x3'-0" ROOF HATCH ON INTEGRAL CURB - REFER TO ROOF PLANS AND
- 36" WIDE ROOF WALK PADS TO EACH ROOF ACCESS POINT AND SERVICE SIDE OF EACH MECH UNIT
- ROOF SYSTEM (R1)
- CRICKETS
- ALUMINUM WALKWAY COVER

8"X8" DOWNSPOUT IN THIS LOCATION

ROOF LADDER

ROOF HATCH

ALUMINUM WALKWAY COVER

BUILDING EXPANSION JOINT

BUILDING EXPANSION JOINT UNDER ROOF OVERHANG

ROOF DIVIDER

RIDGE

SLOPE

SLOPE 1/4"/FT

DS

RD

ORD

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Ryan A. Raleigh Pfluger
23278
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

Δ	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

A5.00
ROOF PLAN - COMPOSITE

ROOF PLAN - COMPOSITE 1
SCALE: 1/16" = 1'-0"

1/10/2025 11:59:23 AM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt

ROOF LEGEND:

- 1:12 — ROOF SLOPE DIRECTION (1/4"/FT MIN)
- RD ORD — INTERNAL ROOF DRAIN AND OVERFLOW ROOF DRAIN
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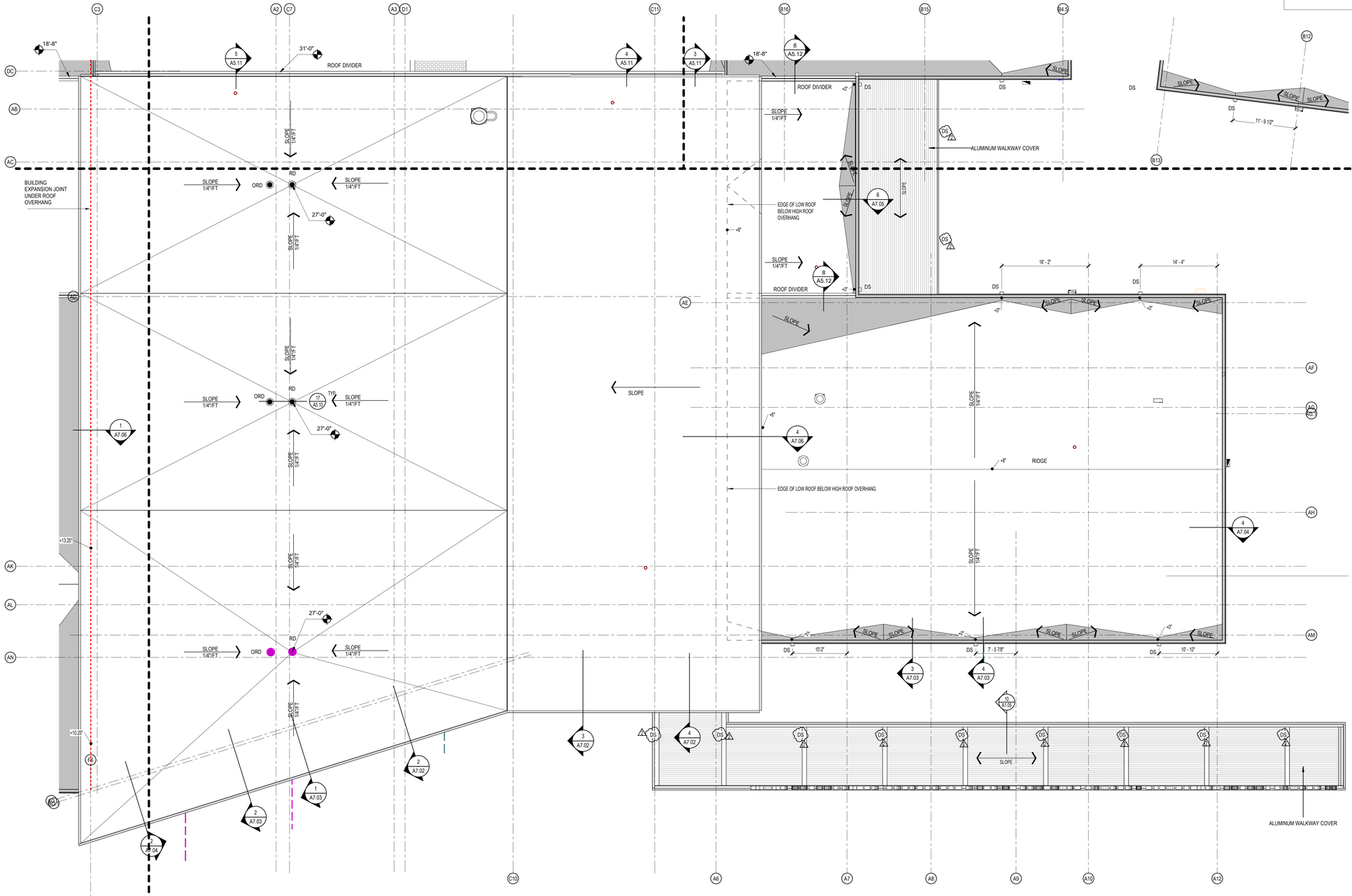
- 36" WIDE ROOF WALK PADS TO EACH ROOF ACCESS POINT AND SERVICE SIDE OF EACH MECH UNIT
- ROOF SYSTEM (R1)
- CRICKETS
- ALUMINUM WALKWAY COVER



ROOF PLAN - AREA A 1

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

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT — Roberta Raleigh Swann — 23278 — STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
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2	01/10/2025	ADDENDUM #2

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A5.01A
ROOF PLAN - AREA A

1/10/2025 11:59:29 AM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt

ROOF LEGEND:

- 1:12 — ROOF SLOPE DIRECTION (1/4"/FT MIN)
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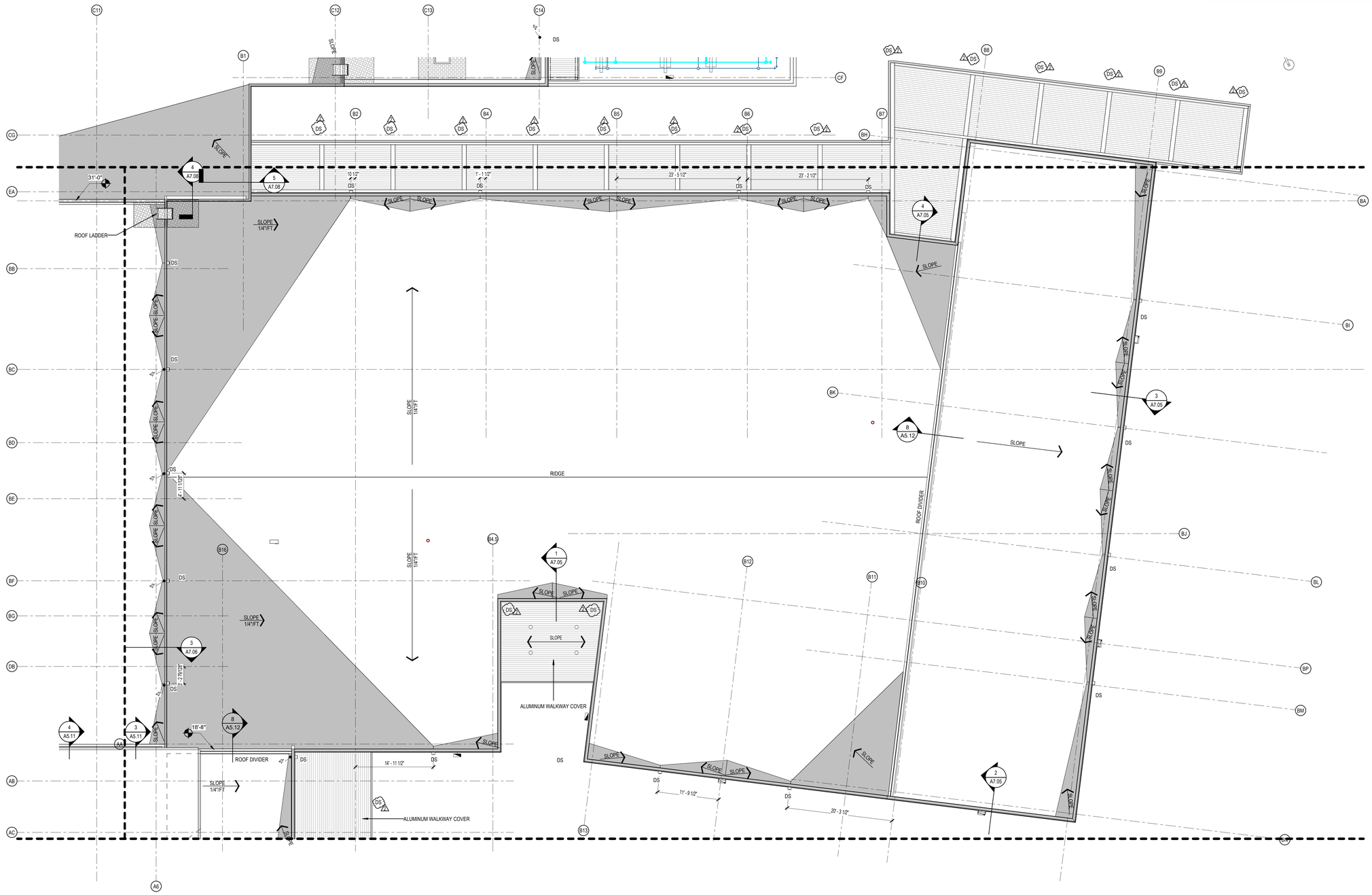
- 16" CLR WIDE ROOF ACCESS LADDER - REFER TO ROOF PLANS AND
- 2'-6"x3'-0" ROOF HATCH ON INTEGRAL CURB - REFER TO ROOF PLANS AND
- 36" WIDE ROOF WALK PADS TO EACH ROOF ACCESS POINT AND SERVICE SIDE OF EACH MECH UNIT
- ROOF SYSTEM (R1)
- CRICKETS
- ALUMINUM WALKWAY COVER



ROOF PLAN - AREA B

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

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C D E F A B

ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT — Raleigh Pfluger — 23279 — STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO.	24-028
DATE:	1/10/2025
DRAWN BY: DRW	CHECKED BY: CHK

REVISIONS:

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2	01/10/2025	ADDENDUM #2

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A5.01B
ROOF PLAN - AREA B

1/10/2025 11:59:36 AM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt

ROOF LEGEND:

- 1:12 — ROOF SLOPE DIRECTION (1/4"/FT MIN)
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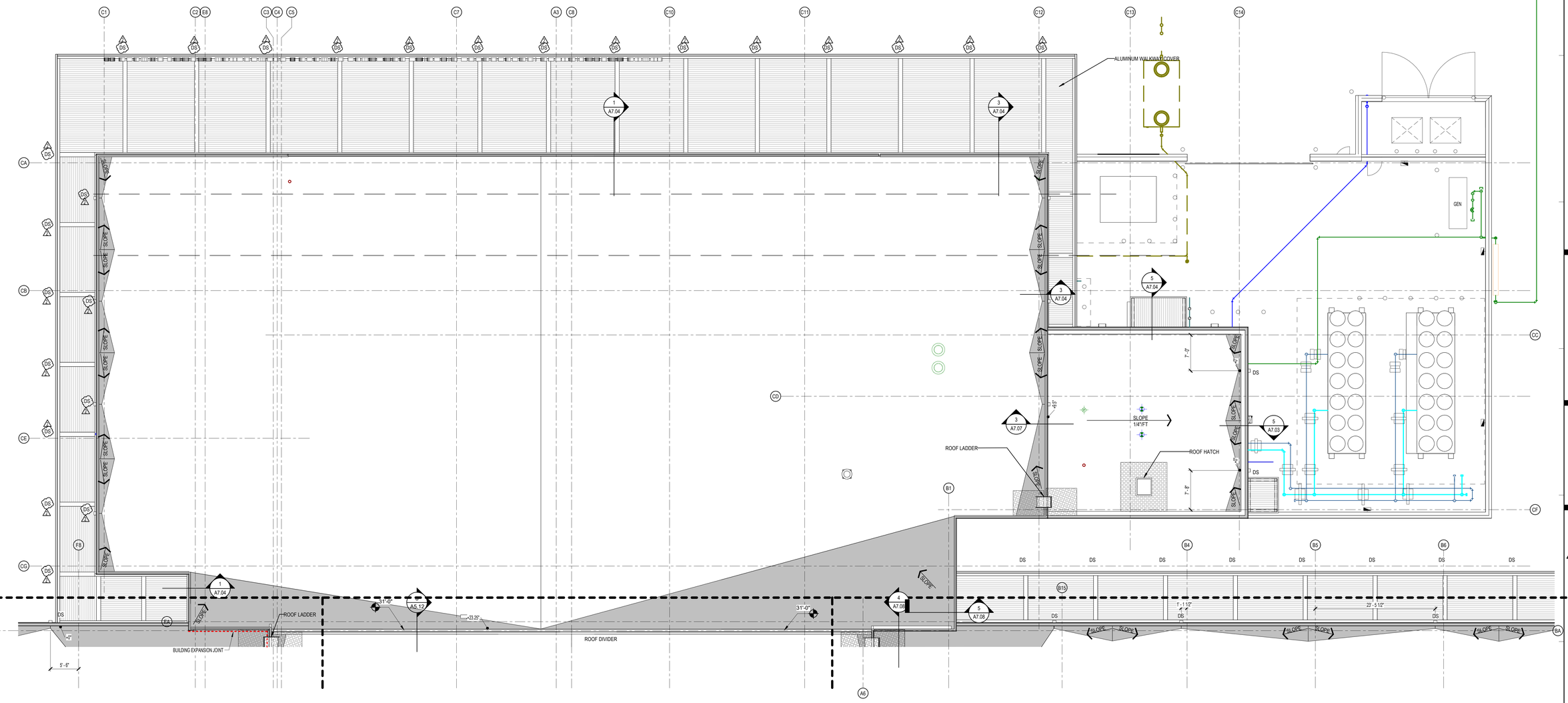
- LINE OF ROOF EXPANSION JOINT
- 16" CLR WIDE ROOF ACCESS LADDER - REFER TO ROOF PLANS AND
- 2'-6"x3'-0" ROOF HATCH ON INTEGRAL CURB - REFER TO ROOF PLANS AND
- 36" WIDE ROOF WALK PADS TO EACH ROOF ACCESS POINT AND SERVICE SIDE OF EACH MECH UNIT
- ROOF SYSTEM (R1)
- CRICKETS
- ALUMINUM WALKWAY COVER



ROOF PLAN - AREA C 1
SCALE: 1/8" = 1'-0"

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT — Ryan Wilson Pfluger — 23278 — STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

Δ	Date	Description
2	01/10/2025	ADDENDUM #2

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A5.01C
ROOF PLAN - AREA C

Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt
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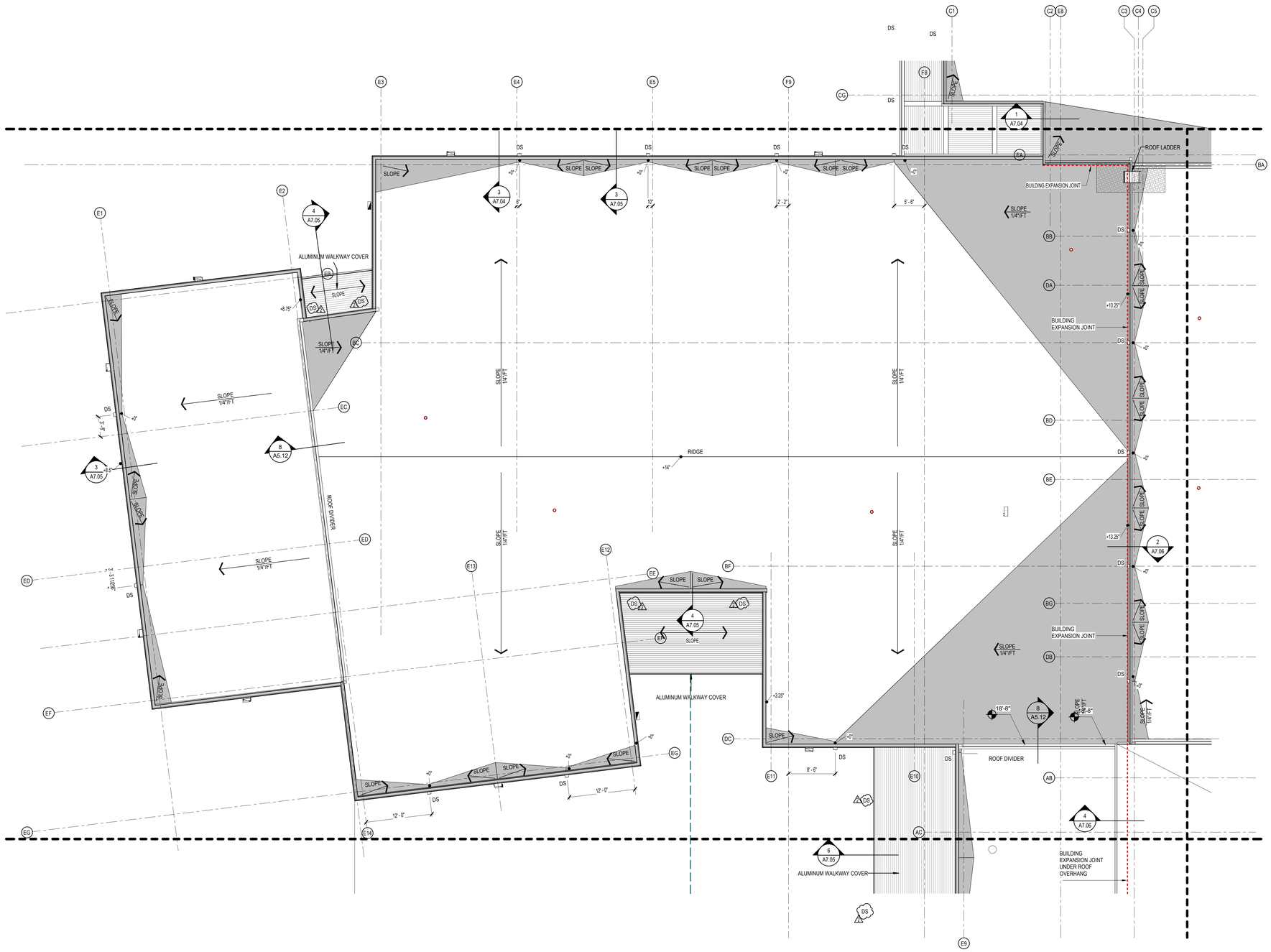
- 1:12 — ROOF SLOPE DIRECTION (1/4"/FT MIN)
- RD ORD — INTERNAL ROOF DRAIN AND OVERFLOW ROOF DRAIN
- LINE OF ROOF EXPANSION JOINT
- 16" CLR WIDE ROOF ACCESS LADDER - REFER TO ROOF PLANS AND
- 2'-5"x3'-0" ROOF HATCH ON INTEGRAL CURB - REFER TO ROOF PLANS AND
- 36" WIDE ROOF WALK PADS TO EACH ROOF ACCESS POINT AND SERVICE SIDE OF EACH MECH UNIT
- ROOF SYSTEM (R1)
- CRICKETS
- ALUMINUM WALKWAY COVER



ROOF PLAN - AREA E 1
SCALE: 1/8" = 1'-0"

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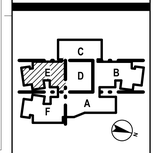

ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Rebecca Raleigh Pfluger
23279
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

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2	01/10/2025	ADDENDUM #2

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A5.01E
ROOF PLAN - AREA E

1/10/2025 11:59:48 AM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt

ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD

3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
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A5.01F
ROOF PLAN - AREA F

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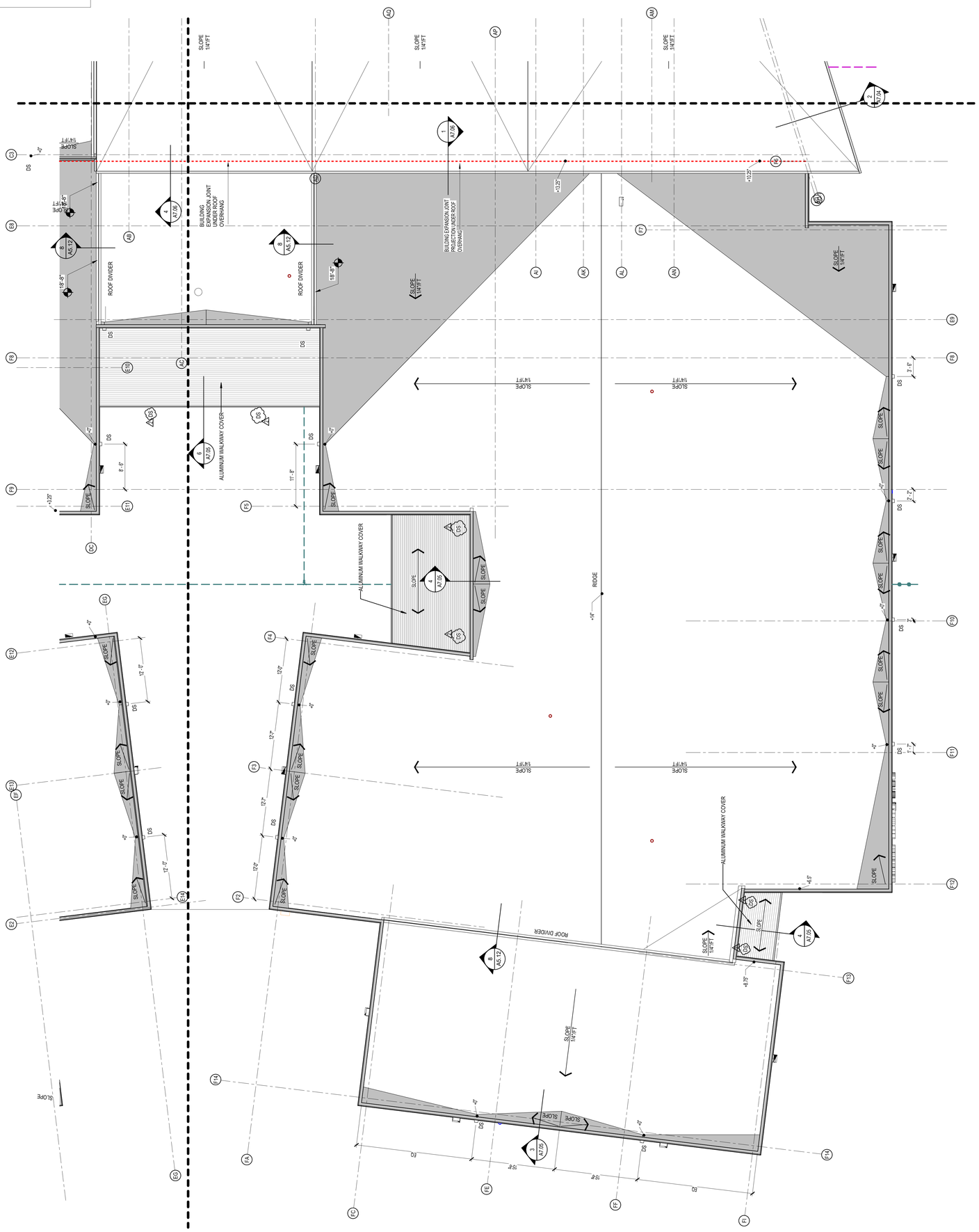
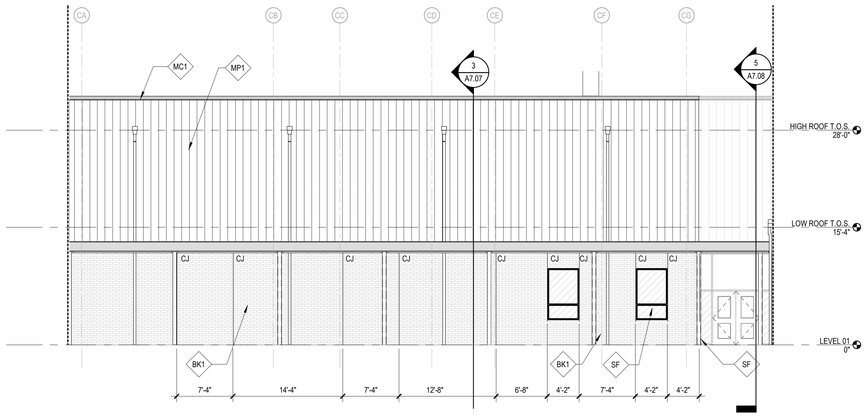
ROOF LEGEND:

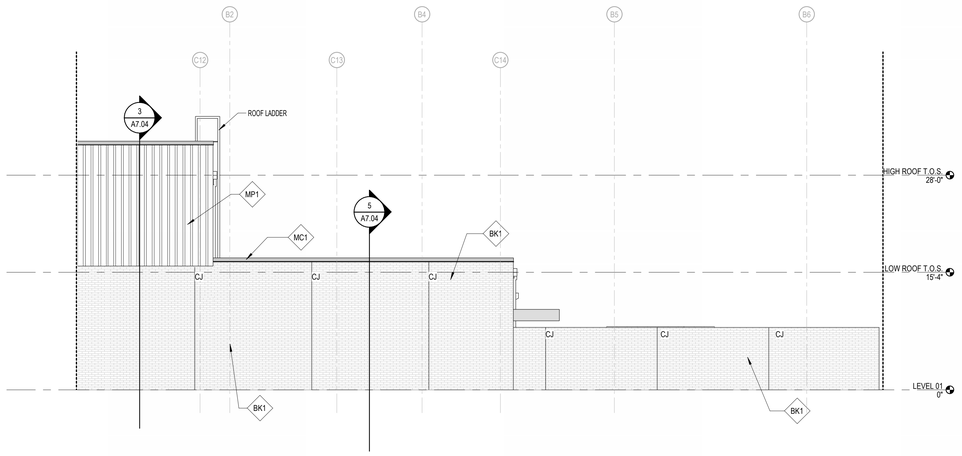
- ROOF SLOPE DIRECTION (1/4"/FT MIN)
- INTERNAL ROOF DRAIN AND OVERFLOW ROOF DRAIN
- LINE OF ROOF EXPANSION JOINT
- 15" CLR WIDE ROOF ACCESS LADDER - REFER TO ROOF PLANS AND
- 2'-6"X3'-0" ROOF HATCH ON INTEGRAL CURB - REFER TO ROOF PLANS AND
- 36" WIDE ROOF WALK PADS TO EACH ROOF ACCESS DOOR AND SERVICE SIDE OF EACH MECH UNIT
- ROOF SYSTEM
- CRICKETS
- ALUMINUM WALKWAY COVER



ROOF PLAN - AREA F 1
SCALE: 1/8" = 1'-0"



SOUTH ELEVATION - AREA C - ENLARGED 11
SCALE: 1/8" = 1'-0"



EAST ELEVATION - AREA C - ENLARGED 10
SCALE: 1/8" = 1'-0"

EXTERIOR MATERIAL LEGEND

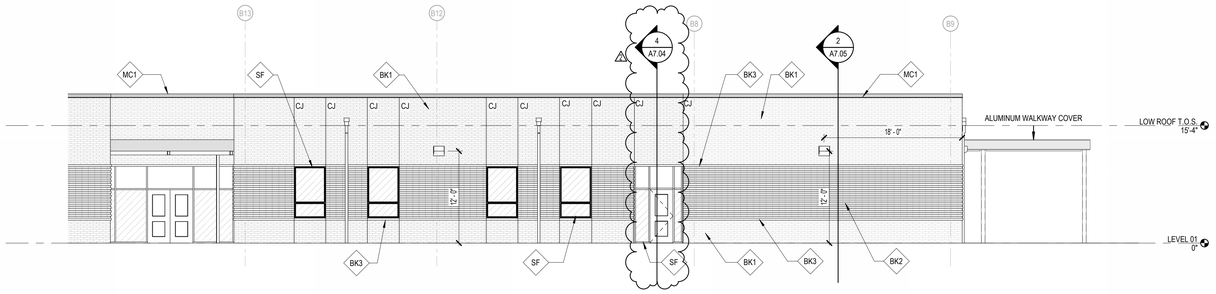
BK1	BRICK - KING SIZE (RUNNING BOND)
BK2	BRICK - KING SIZE (STACK BOND)
BK3	BRICK - KING SIZE (RUNNING BOND)
MP1	METAL PANEL - INTERMIXED PANELS BOD: HS-8, HS-12, HR-4, HR-16 (BERRIDGE) LEAD-COTE METALLIC FINISH
STN1	STONE VENEER
SF	4.5" x 2" STOREFRONT WALL SYSTEM 6" x 2" STOREFRONT WALL SYSTEM
CW	7 1/2" x 2 1/2" CURTAIN WALL SYSTEM

REFER TO EXTERIOR MATERIAL SCHEDULE (A9.00) FOR COMPLETE LIST AND MATERIALS AND FINISHES

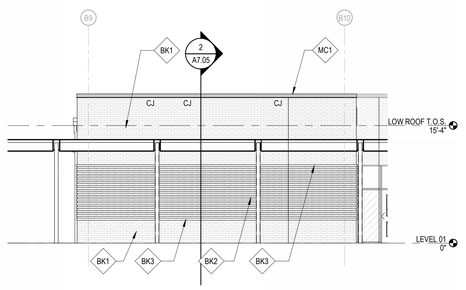
PREFINISHED METAL COPING AT BRICK, METAL PANEL AND CURTAIN WALL

EXTERIOR ELEVATION GENERAL NOTES:

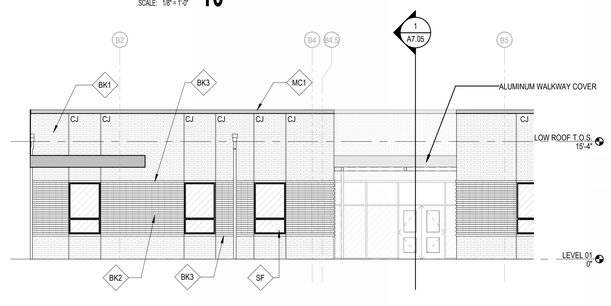
1. PROVIDE MEJs (MASONRY EXPANSION JOINTS) AT LOCATIONS AS SHOWN. FOR LOCATIONS NOT SHOWN, PROVIDE JOINTS 3' - 4" FROM OUTSIDE CORNERS AND SPACED MAX. 20' - 0" O.C.
2. REFER TO SHEET A9.00 FOR ADDITIONAL EXTERIOR MATERIAL FINISHES AND FINISH NOTES.
3. REFER TO ROOF PLANS FOR LADDER LOCATIONS.
4. CONTINUE MASONRY ACCENT SCHEME AT ALL EXTERIOR WALLS, INCLUDING AT ENTRIES, COLUMNS, AND WALLS NOT SHOWN ON ELEVATIONS.



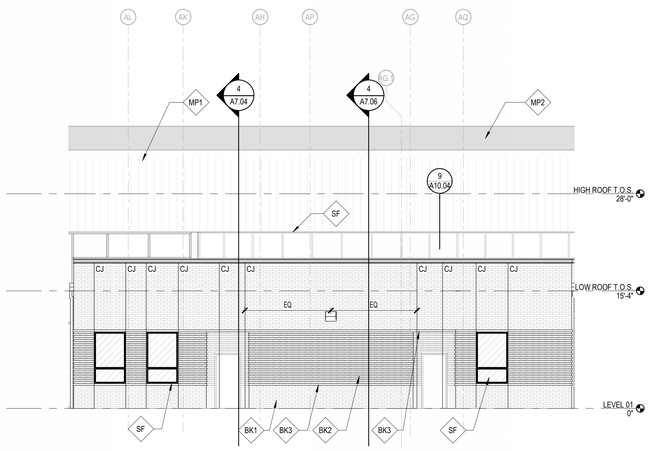
EAST ELEVATION 03 - AREA B - ENLARGED 9
SCALE: 1/8" = 1'-0"



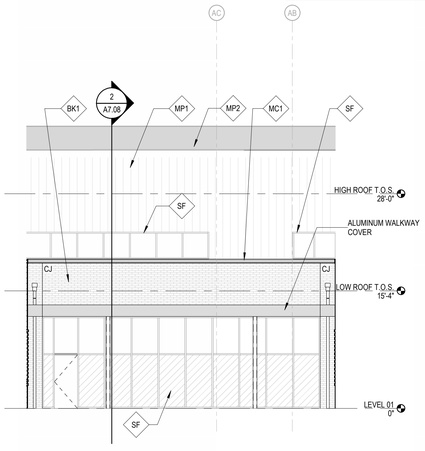
WEST ELEVATION 02 - AREA B - ENLARGED 8
SCALE: 1/8" = 1'-0"



EAST ELEVATION - AREA B - ENLARGED 7
SCALE: 1/8" = 1'-0"



NORTH ELEVATION - AREA A - ENLARGED 6
SCALE: 1/8" = 1'-0"



NORTH ELEVATION - AREA B - ENLARGED 5
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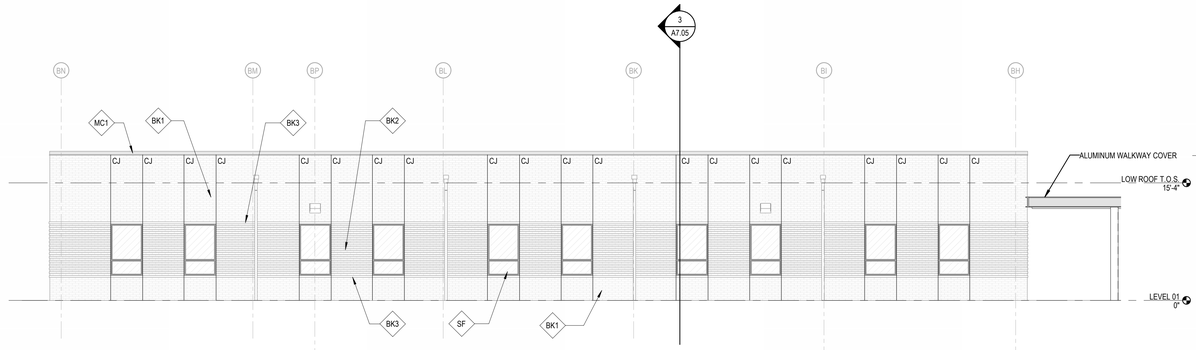
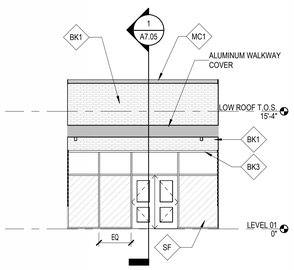
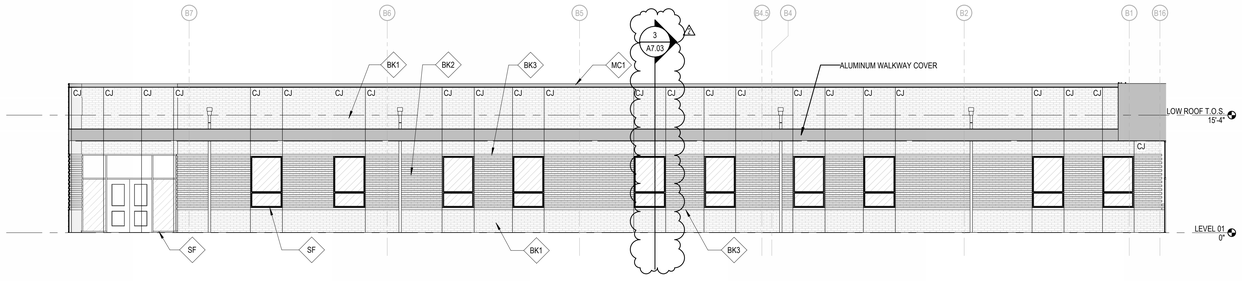


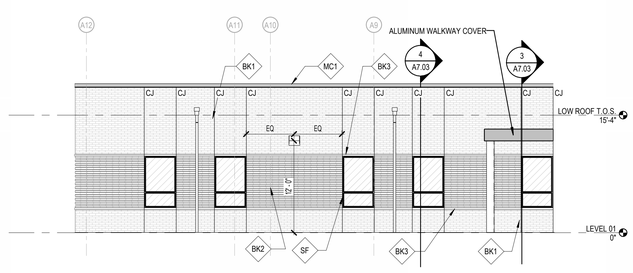
NORTH ELEVATION 02 - AREA B - ENLARGED 4
SCALE: 1/8" = 1'-0"



EAST ELEVATION 02 - AREA B - ENLARGED 3
SCALE: 1/8" = 1'-0"



WEST ELEVATION - AREA B - ENLARGED 2
SCALE: 1/8" = 1'-0"



WEST ELEVATION - AREA A - ENLARGED 1
SCALE: 1/8" = 1'-0"

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Houston, Texas 77046
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ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Joshua Raleigh Pfluger
23278
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

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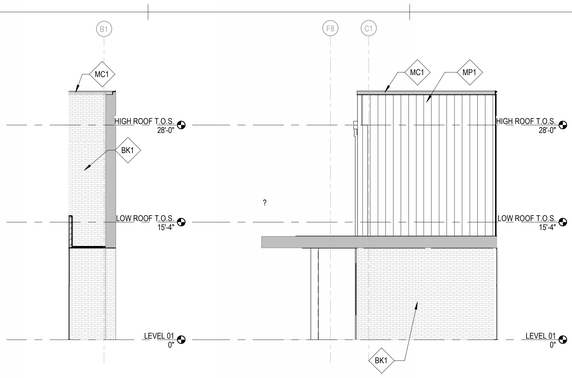
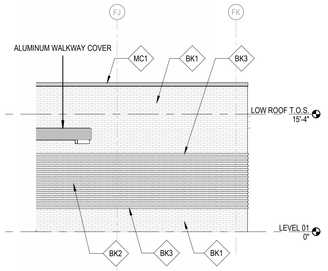
A6.01
EXTERIOR ELEVATIONS

1/10/2025 12:00:39 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt

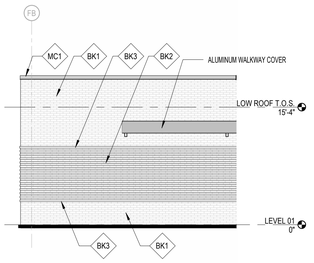


EAST ELEVATION 03 -AREA C-ENLARGED 12
SCALE: 1/8" = 1'-0"

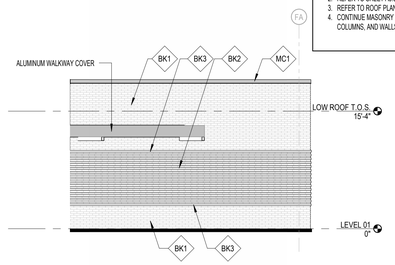
EAST ELEVATION O2-AREA C - ENLARGED 11
SCALE: 1/8" = 1'-0"



SOUTH ELEVATION - AREA F - ENLARGED 10
SCALE: 1/8" = 1'-0"



SOUTH ELEVATION - AREA F - ENLARGED 8
SCALE: 1/8" = 1'-0"



NORTH ELEVATION-AREA F-ENLARGED 7
SCALE: 1/8" = 1'-0"

EXTERIOR ELEVATION GENERAL NOTES:

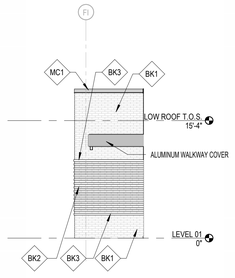
1. PROVIDE ME.Js (MASONRY EXPANSION JOINTS) AT LOCATIONS AS SHOWN. FOR LOCATIONS NOT SHOWN, PROVIDE JOINTS 3' - 4" FROM OUTSIDE CORNERS AND SPACED MAX. 20' - 0" O.C.
2. REFER TO SHEET A9.00 FOR ADDITIONAL EXTERIOR MATERIAL FINISHES AND FINISH NOTES.
3. REFER TO ROOF PLANS FOR LADDER LOCATIONS.
4. CONTINUE MASONRY ACCENT SCHEME AT ALL EXTERIOR WALLS, INCLUDING AT ENTRIES, COUMNS, AND WALLS NOT SHOWN ON ELEVATIONS.

EXTERIOR MATERIAL LEGEND

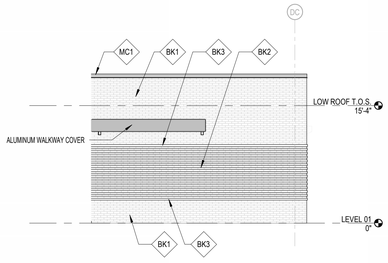
	BK1	BRICK - KING SIZE (RUNNING BOND)
	BK2	BRICK - KING SIZE (STACK BOND)
	BK3	BRICK - KING SIZE (RUNNING BOND)
	MP1	METAL PANEL - INTERMIXED PANELS BOD: HS-8, HS-12, HR-4, HR-16 (BERRIDGE) LEAD-COTE METALLIC FINISH
	STN1	STONE VENEER
	SF	4.5" x 2" STOREFRONT WALL SYSTEM 6" x 2" STOREFRONT WALL SYSTEM
	CW	7 1/2" x 2 1/2" CURTAIN WALL SYSTEM

REFER TO EXTERIOR MATERIAL SCHEDULE (A9.00) FOR COMPLETE LIST AND MATERIALS AND FINISHES

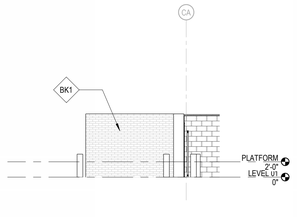
PREFINISHED METAL COPING AT BRICK, METAL PANEL AND CURTAIN WALL



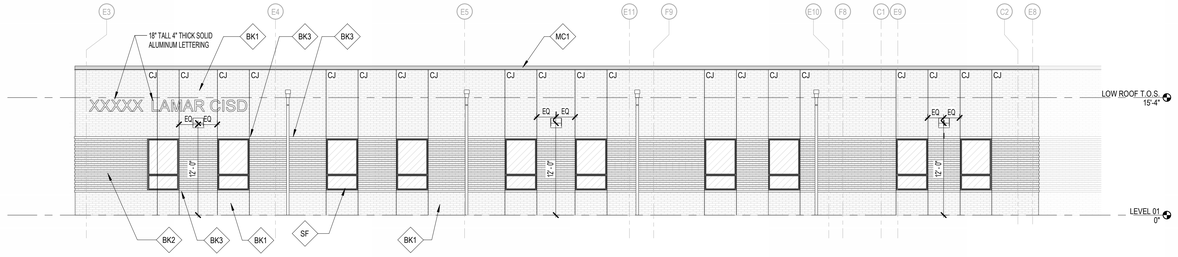
NORTH ELEVATION-AREA F-ENLARGED 9
SCALE: 1/8" = 1'-0"



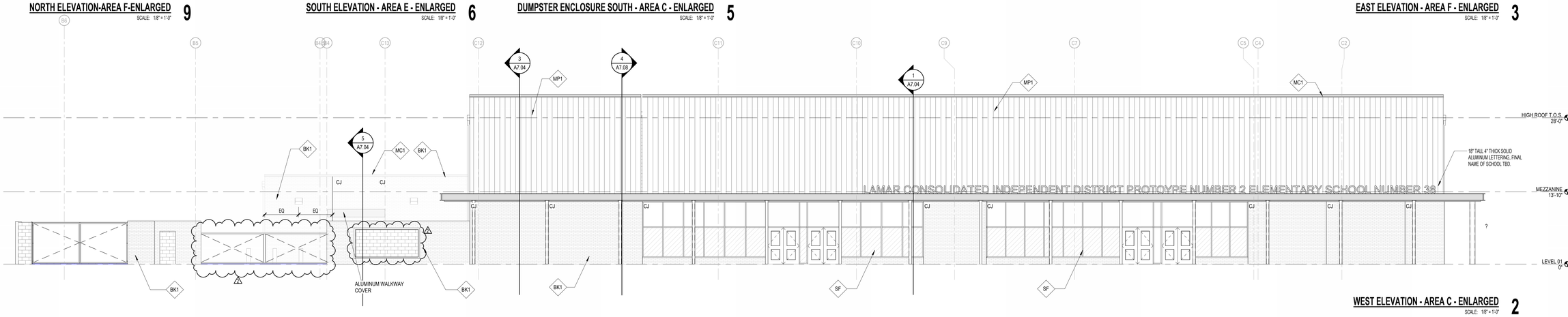
SOUTH ELEVATION - AREA E - ENLARGED 6
SCALE: 1/8" = 1'-0"



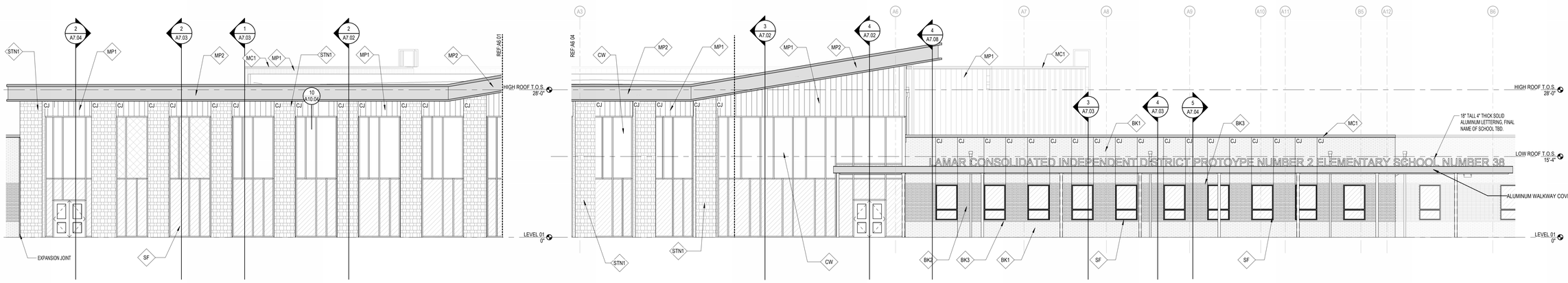
DUMPSTER ENCLOSURE SOUTH - AREA C - ENLARGED 5
SCALE: 1/8" = 1'-0"



EAST ELEVATION - AREA F - ENLARGED 3
SCALE: 1/8" = 1'-0"



WEST ELEVATION - AREA C - ENLARGED 2
SCALE: 1/8" = 1'-0"



EAST ELEVATION - AREA A - ENLARGED PLAN 1
SCALE: 1/8" = 1'-0"

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ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Rueben Rainey Pfluger
23278
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

	Date	Description
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A6.03
EXTERIOR ELEVATIONS

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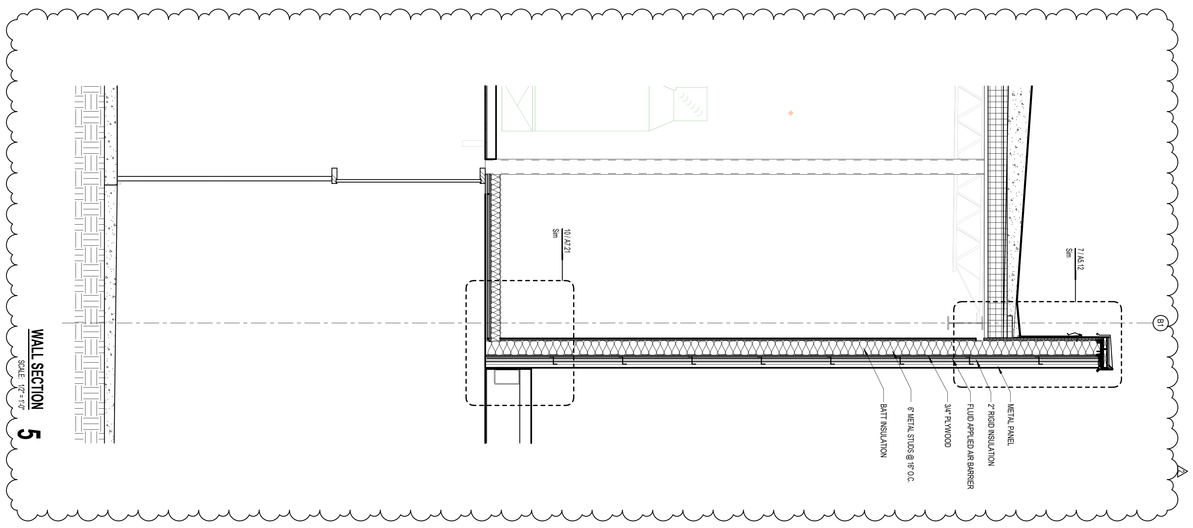
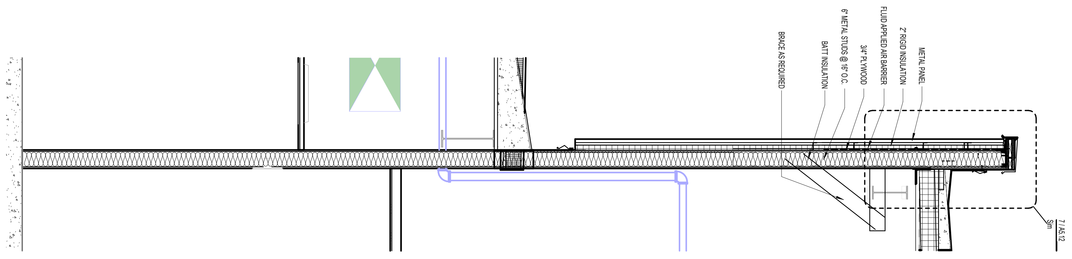
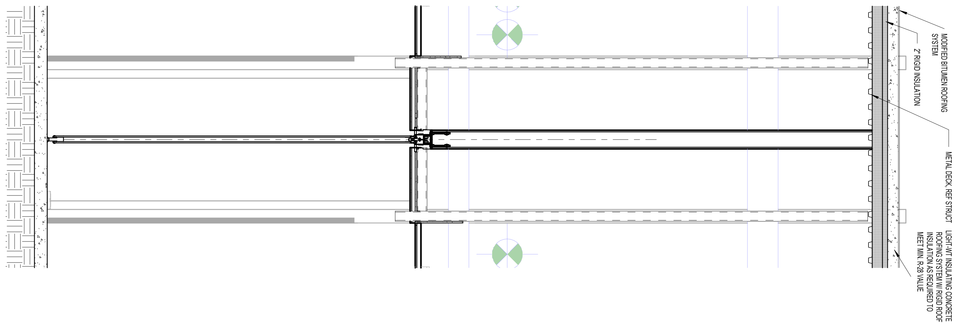


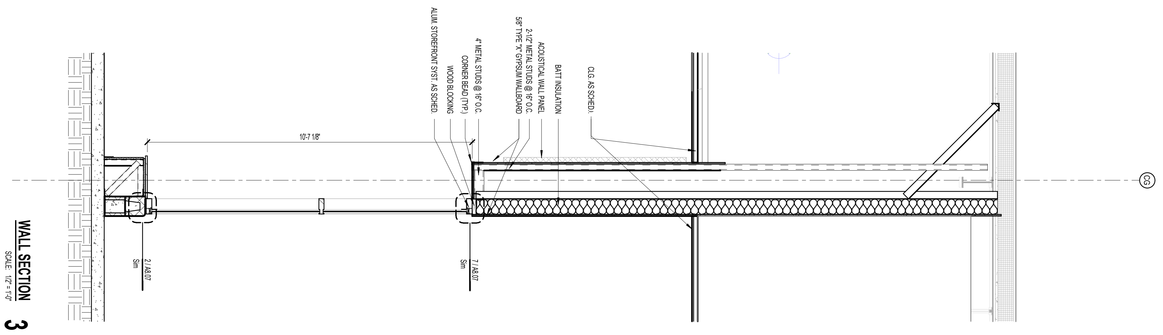
WALL SECTION 5
SCALE: 1/2" = 1'-0"



WALL SECTION 4
SCALE: 1/2" = 1'-0"



WALL SECTION 2
SCALE: 1/2" = 1'-0"



WALL SECTION 3
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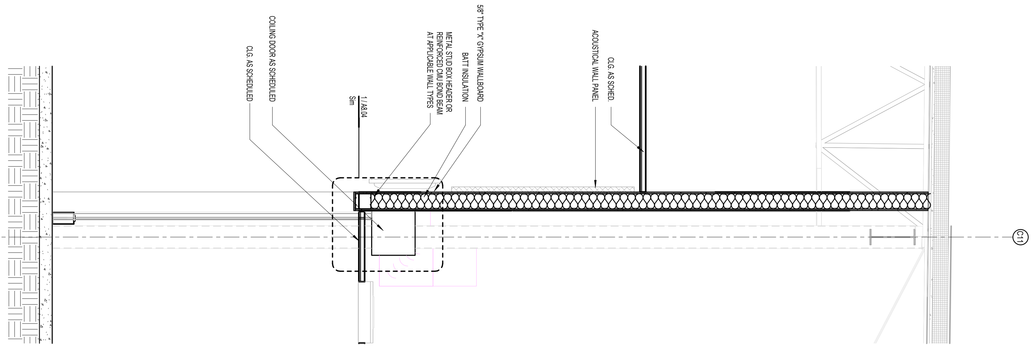

WALL SECTION 1
SCALE: 1/2" = 1'-0"

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A7.08
WALL SECTIONS

PROJECT NO. 24-028
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LAMAR CISD

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ROSENBERG, TX 77471

ELEMENTARY SCHOOL #38 IN BROOKEWATER

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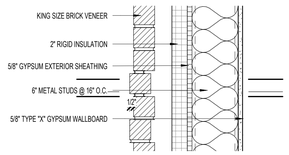
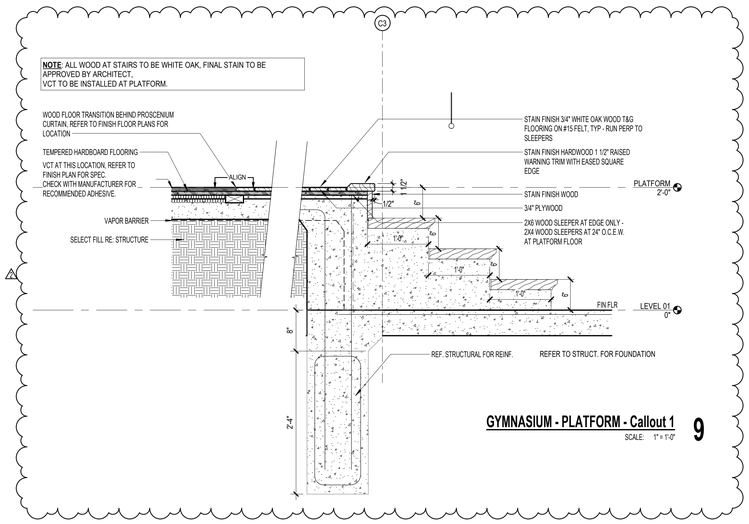
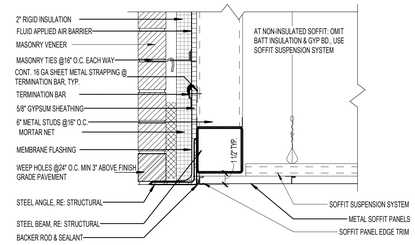


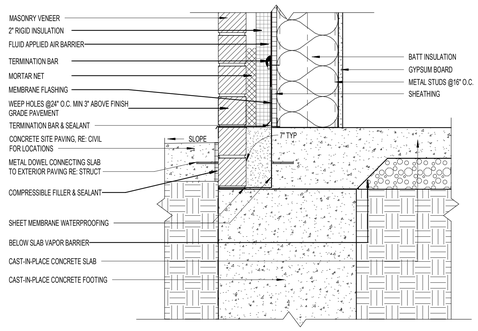
SECTION DETAIL 10
SCALE: 1 1/2" = 1'-0"



GYMNASIUM - PLATFORM - Callout 1 9
SCALE: 1" = 1'-0"



SECTION DETAIL - WALL RECESS 8
SCALE: 1 1/2" = 1'-0"



FOUNDATION DETAIL 7
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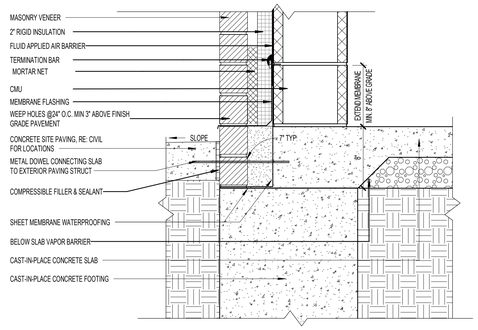
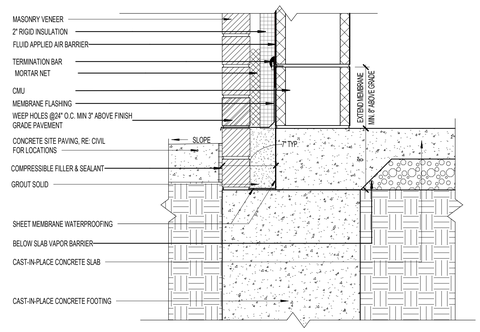


FOUNDATION DETAIL 6
SCALE: 1 1/2" = 1'-0"



FOUNDATION DETAIL 5
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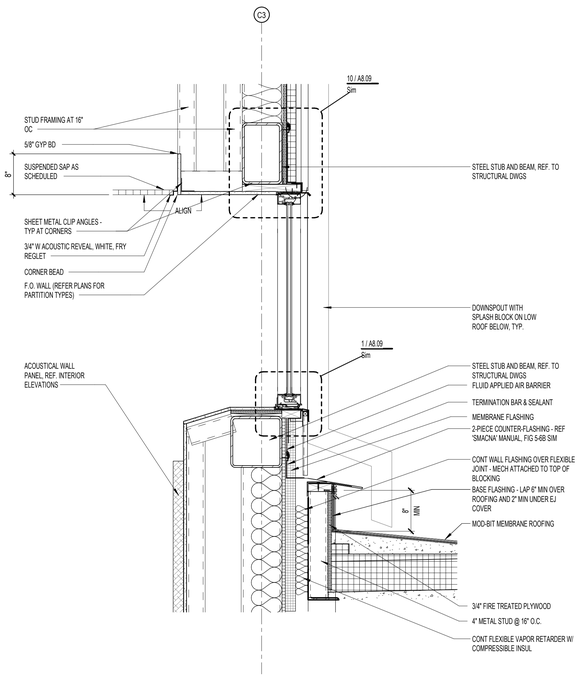
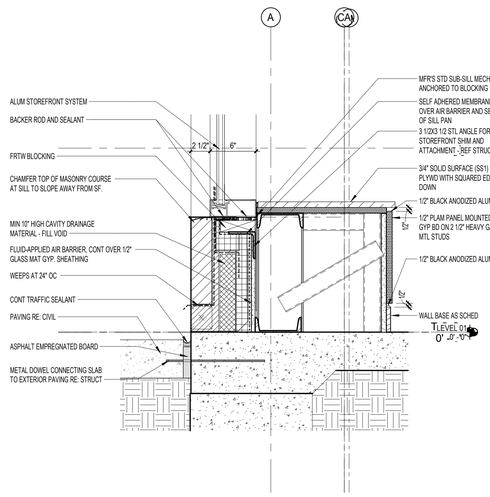
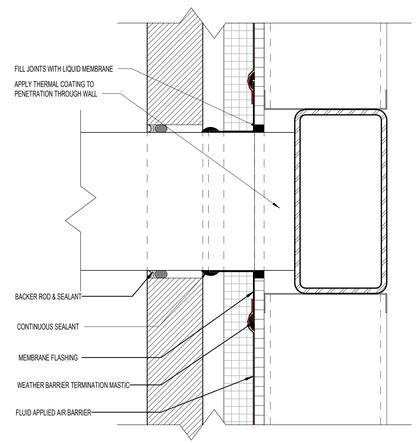


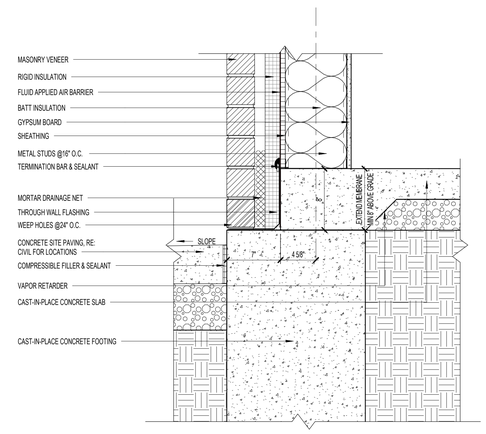
SECTION DETAIL - EXPANSION JOINT 4
SCALE: 1" = 1'-0"



SECTION DETAIL - LOW WALL WITH BENCH 3
SCALE: 1 1/2" = 1'-0"



SD - TYPICAL WALL/AIR BARRIER PENETRATION DETAIL 2
SCALE: 3" = 1'-0"



FOUNDATION DETAIL 1
SCALE: 1 1/2" = 1'-0"

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

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Joshua Raleigh Pluger
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A7.20
SECTION DETAILS

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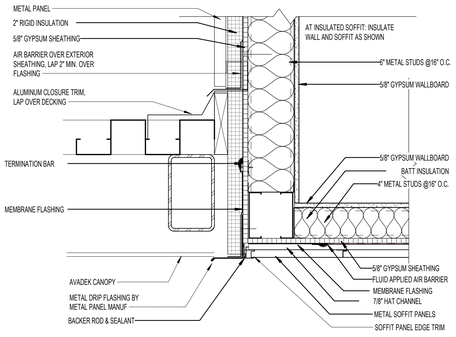

SECTION DETAIL - SOFFIT 10
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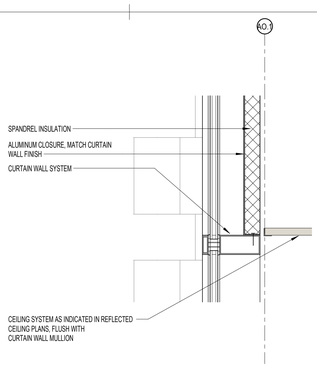
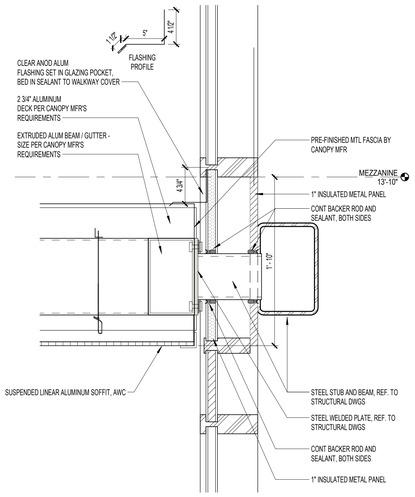
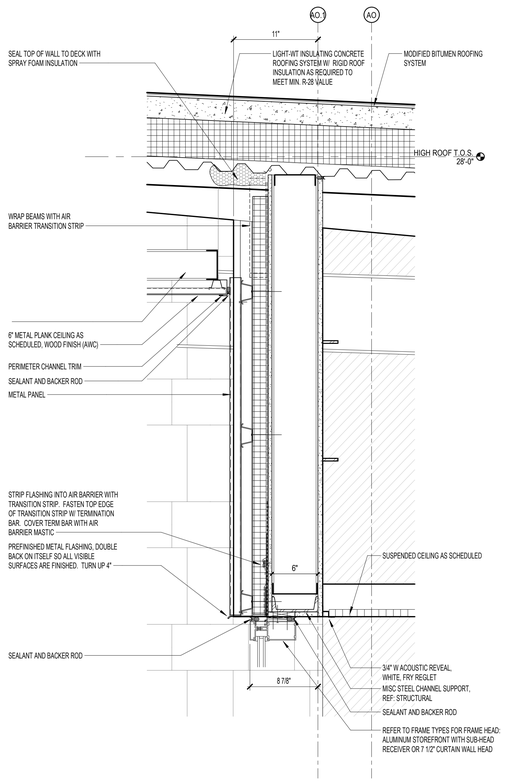


SHADOW BOX DETAIL AT COMPUTER LAB 9
SCALE: 1 1/2" = 1'-0"



ENTRY CANOPY BEAM CONNECTION 8
SCALE: 1 1/2" = 1'-0"



SECTION DETAIL 7
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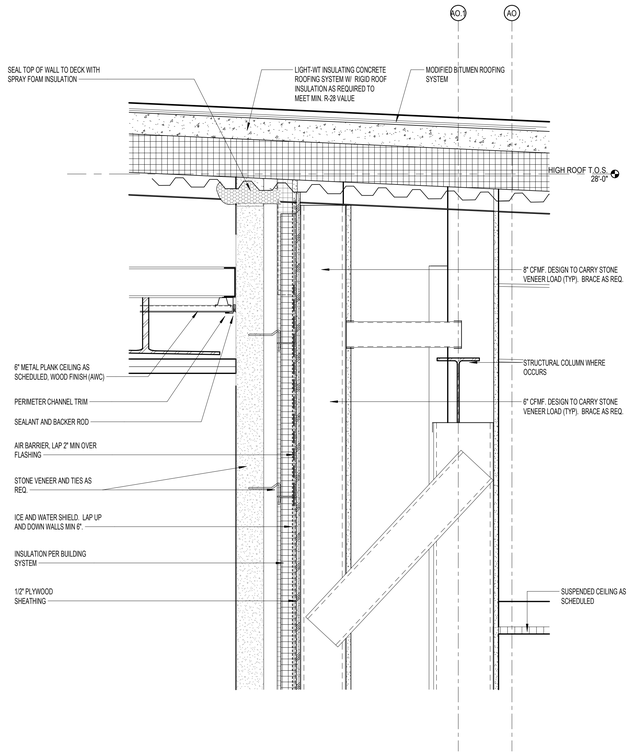

SECTION DETAIL 6
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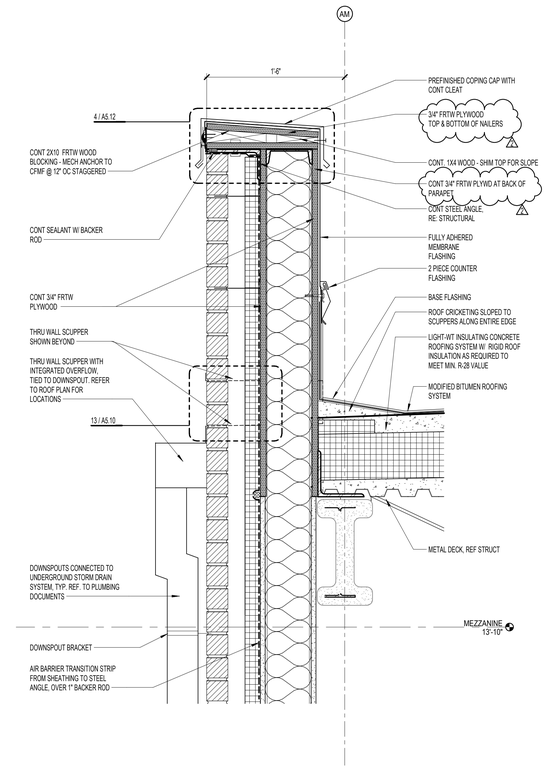
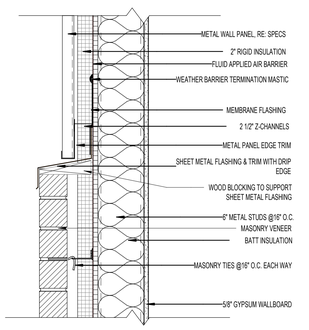
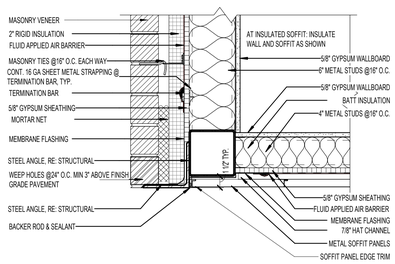


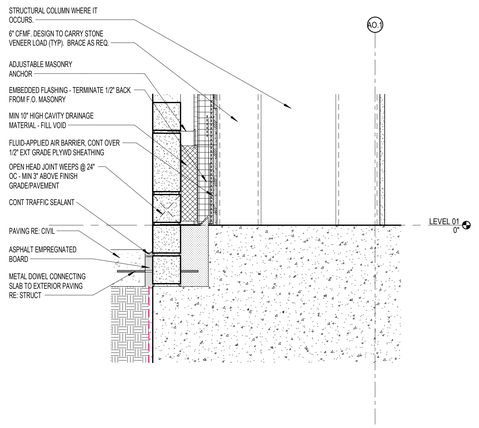
SECTION DETAIL - ROOF PARAPET AT BRICK 5
SCALE: 1 1/2" = 1'-0"



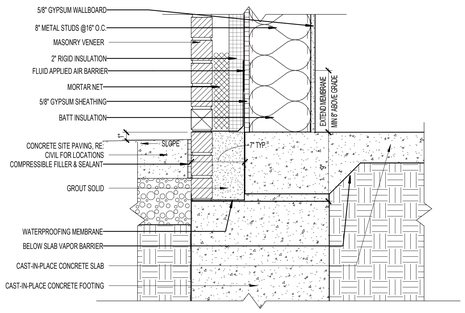
SECTION DETAIL - WALL TRANSITION 4
SCALE: 1 1/2" = 1'-0"



SECTION DETAIL - WALL RECESS 3
SCALE: 1 1/2" = 1'-0"



SECTION DETAIL - LIBRARY STONE WALL AT BASE 2
SCALE: 1 1/2" = 1'-0"



FOUNDATION DETAIL 1
SCALE: 1 1/2" = 1'-0"

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ELEMENTARY SCHOOL #38 IN BROOKEWATER
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JOSHUA Raleigh HAYES
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DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: Author CHECKED BY: Checker
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A7.21
SECTION DETAILS

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DOOR SCHEDULE

Level	NUMBER	PANEL PAIR	WIDTH	PANEL WIDTH	PANEL HEIGHT	PANEL TYPE	PANEL MATERIAL	FRAME TYPE	FRAME MATERIAL	FIRE RATING	*Glazing Finish	HARDWARE	DETAILS HEAD	DETAILS JAMB	DETAILS THRESHOLD	REMARKS	DOOR SIGNAGE
AREA A																	
LEVEL 01	A100	Pair	3'-0"	6'-0"	7'-0"	C	AL	A	AL		GL2	1.0			9/A8.09	2	D
LEVEL 01	A100A	Pair	3'-0"	6'-0"	7'-0"	C	AL	Q	AL		GL2	6.0			9/A8.09	2	D
LEVEL 01	A101		3'-0"	3'-0"	7'-0"	C	AL	AL1	AL		GL2	7.0	7/A8.07	4/A8.07		2	B
LEVEL 01	A102		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			27.0	7/A8.07	4/A8.07			A
LEVEL 01	A103		3'-0"	3'-0"	7'-0"	C	AL	AL2	AL		GL2	2.0	11/A8.09	6/A8.09		2	D
LEVEL 01	A104		3'-0"	3'-0"	7'-0"	C	AL	P	AL		GL2	7.0	7/A8.07	4/A8.07		2	C
LEVEL 01	A104A		3'-0"	3'-0"	7'-0"	C	AL	AL1	AL		GL2	7.0	7/A8.07	4/A8.07		2	C
LEVEL 01	A104B		3'-0"	3'-0"	7'-0"	C	AL	AL1	AL		GL2	7.0	7/A8.07	4/A8.07		2	C
LEVEL 01	A105		3'-0"	3'-0"	7'-0"	A	SCW	4	AL			26.0	7/A8.07	4/A8.07			B
LEVEL 01	A106		3'-0"	3'-0"	7'-0"	A	SCW	4	AL			26.0	7/A8.07	4/A8.07			B
LEVEL 01	A107		3'-0"	3'-0"	7'-0"	A	SCW	4	AL			26.0	7/A8.07	4/A8.07			B
LEVEL 01	A107A		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			26.0	7/A8.07	4/A8.07			B
LEVEL 01	A108		3'-0"	3'-0"	7'-0"	A	SCW	4	AL			26.0	7/A8.07	4/A8.07			B
LEVEL 01	A109		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	5.0	7/A8.07	4/A8.07		2	C
LEVEL 01	A109A		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	5.0	7/A8.07	4/A8.07		2	C
LEVEL 01	A110		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			27.0	7/A8.07	4/A8.07			A
LEVEL 01	A111		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			12.0	7/A8.07	4/A8.07			C
LEVEL 01	A112		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			21.0	7/A8.07	4/A8.07			C
LEVEL 01	A113		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			21.0	7/A8.07	4/A8.07			C
LEVEL 01	A114		3'-0"	3'-0"	7'-0"	C	AL	AL2	AL		GL2	2.0	11/A8.09	6/A8.09		2	D
LEVEL 01	A114A		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	17.0	7/A8.07	4/A8.07		2	C
LEVEL 01	A115		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			26.0	7/A8.07	4/A8.07			B
LEVEL 01	A116		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			27.0	7/A8.07	4/A8.07			A
LEVEL 01	A117		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			27.0	7/A8.07	4/A8.07			A
LEVEL 01	A118		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL	90 MIN		16.0	7/A8.07	4/A8.07			C
LEVEL 01	A119		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			12.0	7/A8.07	4/A8.07			C
LEVEL 01	A120		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			4.0	7/A8.07	4/A8.07		2	C
LEVEL 01	A121		3'-0"	3'-0"	7'-0"	A	SCW	4	AL			20.0	7/A8.07	4/A8.07			C
LEVEL 01	A122		3'-0"	3'-0"	7'-0"	A	SCW	4	AL			26.0	7/A8.07	4/A8.07			C
LEVEL 01	A123		3'-0"	3'-0"	7'-0"	A	SCW	4	AL			26.0	7/A8.07	4/A8.07			B
LEVEL 01	A124		3'-0"	3'-0"	7'-0"	A	SCW	4	AL			26.0	7/A8.07	4/A8.07			B
LEVEL 01	A125		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			11.0	7/A8.07	4/A8.07			C
LEVEL 01	A126		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	25.0	7/A8.07	4/A8.07			B
LEVEL 01	A126B		3'-0"	3'-0"	7'-0"	C	AL	J	AL		GL2	2.0			9/A8.09	2	D
LEVEL 01	A128		3'-0"	3'-0"	7'-0"	C	SCW	28	AL		GL3	25.0		4/A8.07			C
LEVEL 01	A128A		3'-0"	3'-0"	7'-0"	C	SCW	21	AL		GL3	25.0		4/A8.07			C
LEVEL 01	A129		3'-0"	3'-0"	7'-0"	C	SCW	28	AL		GL3	25.0		4/A8.07			C
LEVEL 01	A129A		3'-0"	3'-0"	7'-0"	C	SCW	27	AL		GL3	25.0		4/A8.07			C
LEVEL 01	A130		3'-0"	3'-0"	7'-0"	C	SCW	28	AL		GL3	25.0		4/A8.07			C
LEVEL 01	A130A		3'-0"	3'-0"	7'-0"	C	SCW	27	AL		GL3	25.0		4/A8.07			C
LEVEL 01	A131		3'-0"	3'-0"	7'-0"	C	SCW	28	AL		GL3	25.0		4/A8.07			C
LEVEL 01	A131A		3'-0"	3'-0"	7'-0"	C	SCW	21	AL		GL3	25.0		4/A8.07			C
LEVEL 01	A132	Pair	3'-0"	6'-0"	7'-0"	C	AL	R	AL		GL3	9.0					C
LEVEL 01	A132A	Pair	3'-0"	6'-0"	7'-0"	C	SCW	15	AL		GL3	10.0					C
LEVEL 01	A133		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	12.0	7/A8.07	4/A8.07			C
LEVEL 01	A134		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	12.0	7/A8.07	4/A8.07			C
LEVEL 01	A135A		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			C
LEVEL 01	A135B		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	25.0	7/A8.07	4/A8.07			D
LEVEL 01	A136		3'-0"	3'-0"	7'-0"	C	SCW	25	AL		GL3	26.0					B
LEVEL 01	A137	FOLDING WALL PARTITION		21'-0"	12'-6"							29.1	4/A8.04	2/A8.04		5, 11	
LEVEL 01	A138	FOLDING WALL PARTITION		21'-0"	12'-6"							29.1	4/A8.04	2/A8.04		5, 11	
LEVEL 01	A139	FOLDING WALL PARTITION		21'-0"	12'-6"							29.1	4/A8.04	2/A8.04		5, 11	
AREA B																	
LEVEL 01	B100			9'-0"	12'-0"	K	MTL		MTL			29.0	4/A8.04	7/A8.04		5	
LEVEL 01	B101	Pair	3'-0"	6'-0"	7'-0"	C	AL	H	AL		GL2	1.0			9/A8.09	2	D
LEVEL 01	B101A	Pair	3'-0"	6'-0"	7'-0"	C	AL	E	AL		GL2	1.0			9/A8.09	2	D
LEVEL 01	B101B			9'-0"	10'-0"	K	MTL		MTL			29.0	4/A8.04	7/A8.04		5	
LEVEL 01	B101C		3'-0"	3'-0"	7'-0"	C	AL	E1	AL		GL2	2.0			9/A8.09	2	D
LEVEL 01	B103		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			15.0	7/A8.07	4/A8.07			C
LEVEL 01	B104		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			26.0	7/A8.07	4/A8.07			B
LEVEL 01	B105		4'-0"	4'-0"	7'-0"	B	SCW	AL1	AL			12.0	7/A8.07	4/A8.07			C
LEVEL 01	B106		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			12.0	7/A8.07	4/A8.07			C
LEVEL 01	B107		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	B108		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	B109		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	B110		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	B111		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			
LEVEL 01	B112		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	B113		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	B114		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	B115		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			
LEVEL 01	B116		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	B117		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	B118		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	B119		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	B120		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			27.0	7/A8.07	4/A8.07			A
LEVEL 01	B121		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	B122		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			27.0	7/A8.07	4/A8.07			A
LEVEL 01	B123		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			14.0	7/A8.07	4/A8.07			C
LEVEL 01	B124		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			12.0	7/A8.07	4/A8.07			C
LEVEL 01	B125		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			11.0	7/A8.07	4/A8.07			C
LEVEL 01	B126		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			14.0	7/A8.07	4/A8.07			C
LEVEL 01	B127		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			5.0	7/A8.07	4/A8.07		2	C
LEVEL 01	B128		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			11.0	7/A8.07	4/A8.07			C
LEVEL 01	B129		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			11.0	7/A8.07	4/A8.07			C
LEVEL 01	B130		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			28.0	7/A8.07	4/A8.07			A
LEVEL 01	B131		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			28.0	7/A8.07	4/A8.07			A
LEVEL 01	B132		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	B133		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	B134		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	B135		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	B136		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			14.0	7/A8.07	4/A8.07			C

DOOR SCHEDULE

Level	NUMBER	PANEL PAIR	WIDTH	PANEL WIDTH	PANEL HEIGHT	PANEL TYPE	PANEL MATERIAL	FRAME TYPE	FRAME MATERIAL	FIRE RATING	*Glazing Finish	HARDWARE	DETAILS HEAD	DETAILS JAMB	DETAILS THRESHOLD	REMARKS	DOOR SIGNAGE
AREA C																	
LEVEL 01	C100		3'-0"	3'-0"	7'-0"	B	SCW	4	AL		GL3	23.0	8/A8.07	5/A8.07			B
LEVEL 01	C101		3'-0"	3'-0"	7'-0"	B	SCW	AL2	AL			14.0	8/A8.07	5/A8.07			C
PLATFORM	C103	Pair	3'-0"	3'-0"	7'-0"	A	SCW	AL2	AL			8.0	8/A8.07	5/A8.07			C
LEVEL 01	C105		4'-0"	4'-0"	7'-0"	B	SCW	AL2	AL			13.0	8/A8.07	5/A8.07			C
LEVEL 01	C106		3'-0"	3'-0"	7'-0"	B	SCW	AL2	AL			26.0	8/A8.07	5/A8.07			B
LEVEL 01	C107	Pair	3'-0"	6'-0"	7'-0"	C	AL	2	AL		GL3	9.0		5/A8.07			C
LEVEL 01	C107A	Pair	3'-0"	6'-0"	7'-0"	C	AL	2	AL		GL3	9.0		5/A8.07			C
LEVEL 01	C107B	Pair	3'-0"	6'-0"	7'-0"	C	AL	G	AL		GL2	1.0	13/A8.09	7/A4.09	9/A8.09	2	D
LEVEL 01	C107C	Pair	3'-0"	6'-0"	7'-0"	C	AL	G	AL		GL2	1.0	13/A8.09	7/A4.09	9/A8.09	2	D
LEVEL 01	C108	Pair	3'-0"	6'-0"	7'-0"	C	AL	1	AL		GL3	9.0	8/A8.07	5/A8.07			C
LEVEL 01	C108A	Pair	3'-0"	6'-0"	7'-0"	C	AL	1	AL		GL3	9.0	8/A8.07	5/A8.07			C
LEVEL 01	C108B	Pair	3'-0"	6'-0"	7'-0"	C	AL	K	AL		GL2	1.0	13/A8.09	7/A4.09	9/A8.09	2	D
LEVEL 01	C108C	Pair	3'-0"	6'-0"	7'-0"	C	AL	K	AL		GL2	1.0	13/A8.09	7/A4.09	9/A8.09	2	D
LEVEL 01	C108D	FOLDING WALL PARTITION - FIELD VERIFY		19'-2"								29.1	1/A7.07	2/A4.02		5, 11	
LEVEL 01	C108E		3'-0"	3'-0"	7'-0"	A	SCW	HM2	HM			12.0	8/A8.07	5/A8.07			
PLATFORM	C108F			3'-0"	4'-0"							29.0	1/A8.04	5/A8.04			
LEVEL 01	C109	Pair	3'-0"	3'-0"	7'-0"	B	SCW	AL2	AL			8.0	8/A8.07	5/A8.07			C
LEVEL 01	C112A		3'-0"	3'-0"	7'-0"	C	SCW	22	AL		GL3	19.0		5/A8.07			C
LEVEL 01	C112B		3'-0"	3'-0"	7'-0"	C	SCW	22	AL		GL3	19.0		5/A8.07			C
LEVEL 01	C112C			18'-0"	10'-0"		AL	AL				29.0	1/A8.04	2/A8.04			
LEVEL 01	C112D		4'-0"	4'-0"	7'-0"	A	HM	HM2	HM			3.1	13/A8.08	11/A8.08		2, 8	D
LEVEL 01	C114		3'-0"	3'-0"	7'-0"	A	SCW	HM2	HM			26.0	3/A8.06	2/A8.06			B
LEVEL 01	C115		3'-0"	3'-0"	7'-0"	A	SCW	AL2	AL			17.0	8/A8.07	5/A8.07			C
LEVEL 01	C116		3'-0"	3'-0"	7'-0"	A	SCW	HM2	HM			27.0	3/A8.06	2/A8.06			A
LEVEL 01	C117		3'-0"	3'-0"	7'-0"	A	SCW	HM2	HM			22.0	3/A8.06	2/A8.06			C
LEVEL 01	C118		3'-0"	3'-0"	7'-0"	A	SCW	HM2	HM			11.0	3/A8.06	2/A8.06			C
LEVEL 01	C119	Pair	3'-0"	6'-0"	7'-0"	C	AL	N	AL		GL2	1.0			9/A8.09	2	D
LEVEL 01	C120	Pair	4'-0"	4'-0"	7'-0"	A	HM	HM2	HM			3.0	13/A8.08	11/A8.08			C
LEVEL 01	C120A		3'-0"	3'-0"	7'-0"	A	HM	HM2	HM			3.1	13/A8.08	11/A8.08			D
LEVEL 01	C121	Pair	3'-0"	6'-0"	7'-0"	C	AL	N	AL		GL2	1.0			9/A8.09	2	D
AREA D																	
LEVEL 01	D102		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			26.0	7/A8.07	4/A8.07			C
LEVEL 01	D103		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			4.0	7/A8.07	4/A8.07		2	C
LEVEL 01	D104		3'-0"	3'-0"	7'-0"		SCW	8	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	D105		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	D106		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	D107	Pair	4'-0"	4'-0"	7'-0"	A	SCW	AL1	AL			16.1	7/A8.07	4/A8.07			C
LEVEL 01	D108		3'-0"	3'-0"	7'-0"	C	SCW	19	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	D109		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	D110		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			28.0	7/A8.07	4/A8.07			A
LEVEL 01	D111		4'-0"	4'-0"	7'-0"	B	SCW	AL1	AL			12.0	7/A8.07	4/A8.07			C
LEVEL 01	D112		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	18.0	7/A8.07	4/A8.07			B
LEVEL 01	D113		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	18.0	7/A8.07	4/A8.07			B
LEVEL 01	D114		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	D114A		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			C
LEVEL 01	D115		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	D115A		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			C
LEVEL 01	D116		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	18.0	7/A8.07	4/A8.07			B
LEVEL 01	D117		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			27.0	7/A8.07	4/A8.07			C
LEVEL 01	D119		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			12.0	7/A8.07	4/A8.07			C
LEVEL 01	D120		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	18.0	7/A8.07	4/A8.07			B
LEVEL 01	D121		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			27.0	7/A8.07	4/A8.07			C
LEVEL 01	D122		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	D122A		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			C
LEVEL 01	D123		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	D123A		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			C
AREA E																	
LEVEL 01	E100			8'-0"	12'-0"	K	MTL		MTL			29.0	4/A8.04	7/A8.04		5	
LEVEL 01	E101	Pair	3'-0"	6'-0"	7'-0"	C	AL	E	AL		GL2	1.0			9/A8.09	2	D
LEVEL 01	E101A	Pair	3'-0"	6'-0"	7'-0"	C	AL	H	AL		GL2	1.0			9/A8.09	2	D
LEVEL 01	E101B			9'-0"	10'-0"	K	MTL		MTL			29.0	4/A8.04	7/A8.04		5	
LEVEL 01	E103		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	E104		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	E105		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	E106		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	E107		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	E108		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	E109		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	E110		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			12.0	7/A8.07	4/A8.07			C
LEVEL 01	E111		4'-0"	4'-0"	7'-0"	B	SCW	AL1	AL			12.0	7/A8.07	4/A8.07			C
LEVEL 01	E112		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			14.0	7/A8.07	4/A8.07			C
LEVEL 01	E113		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			11.0	7/A8.07	4/A8.07			C
LEVEL 01	E114		3'-0"	3'-0"	7'-0"	A	SCW	6	AL			18.0	7/A8.07	4/A8.07			C
LEVEL 01	E115		4'-0"	4'-0"	7'-0"	B	SCW	AL1	AL			13.0	7/A8.07	4/A8.07			C
LEVEL 01	E116		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	E117		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	E118		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	E119		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	E120		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	E121		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	E122		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	E123		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	E124		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	E125		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			28.0	7/A8.07	4/A8.07			C
LEVEL 01	E126		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			28.0	7/A8.07	4/A8.07			A
LEVEL 01	E127		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			11.0	7/A8.07	4/A8.07			C
LEVEL 01	E128		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			11.0	7/A8.07	4/A8.07			C
LEVEL 01	E129		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			14.0	7/A8.07	4/A8.07			C
LEVEL 01	E130		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			5.0	7/A8.07	4/A8.07		2	C
LEVEL 01	E131		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			14.0	7/A8.07	4/A8.07			C
AREA F																	
LEVEL 01	F100	Pair	3'-0"	6'-0"	7'-0"	C	AL	D	AL		GL2	1.0			9/A8.09	2	A
LEVEL 01	F101	Pair	3'-0"	6'-0"	7'-0"	C	AL	H	AL		GL2	1.0			9/A8.09	2	D
LEVEL 01	F101A	Pair	3'-0"	6'-0"	7'-0"	C	AL	E	AL		GL2	1.0			9/A8.09		D
LEVEL 01	F101B			11'-0"	10'-0"	K	MTL		MTL			29.0	4/A8.04	7/A8.04		5	
LEVEL 01	F103		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	F104		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	F105		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	F106		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	F107		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	F108		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	F109		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	F110		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	F111		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			11.0	7/A8.07	4/A8.07			C
LEVEL 01	F112		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			5.0	7/A8.07	4/A8.07		2	C
LEVEL 01	F113		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	26.0	7/A8.07	4/A8.07			B
LEVEL 01	F114		3'-0"	3'-0"	7'-0"	C	SCW	15	AL		GL3	17.0		4/A8.07			B
LEVEL 01	F115		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	26.0	7/A8.07	4/A8.07			B
LEVEL 01	F116		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	25.0	7/A8.07	4/A8.07			B
LEVEL 01	F116B		3'-0"	3'-0"	7'-0"	C	AL	F	AL		GL2	2.0			9/A8.09	2	D

DOOR SCHEDULE

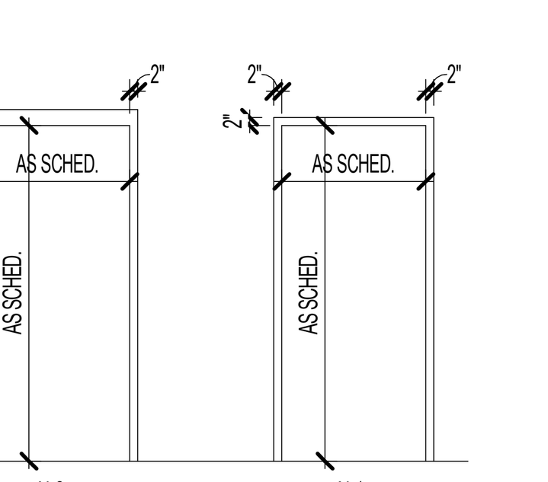
Level	NUMBER	PANEL PAIR	WIDTH	PANEL WIDTH	PANEL HEIGHT	PANEL TYPE	PANEL MATERIAL	FRAME TYPE	FRAME MATERIAL	FIRE RATING	*Glazing Finish	HARDWARE	DETAILS HEAD	DETAILS JAMB	DETAILS THRESHOLD	REMARKS	DOOR SIGNAGE
LEVEL 01	F117		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	F118		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	F119		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	F120		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL		GL3	23.0	7/A8.07	4/A8.07			B
LEVEL 01	F121		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	F122		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	F123		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	F124		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			22.0	7/A8.07	4/A8.07			A
LEVEL 01	F125		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			28.0	7/A8.07	4/A8.07			A
LEVEL 01	F126		3'-0"	3'-0"	7'-0"	A	SCW	AL1	AL			28.0	7/A8.07	4/A8.07			A
LEVEL 01	F127		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			11.0	7/A8.07	4/A8.07			C
LEVEL 01	F128		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			11.0	7/A8.07	4/A8.07			C
LEVEL 01	F129		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			14.0	7/A8.07	4/A8.07			C
LEVEL 01	F130		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			14.0	7/A8.07	4/A8.07			C
LEVEL 01	F132		3'-0"	3'-0"	7'-0"	B	SCW	AL1	AL			14.0	7/A8.07	4/A8.07			C

GENERAL NOTES - DOORS AND WINDOWS:

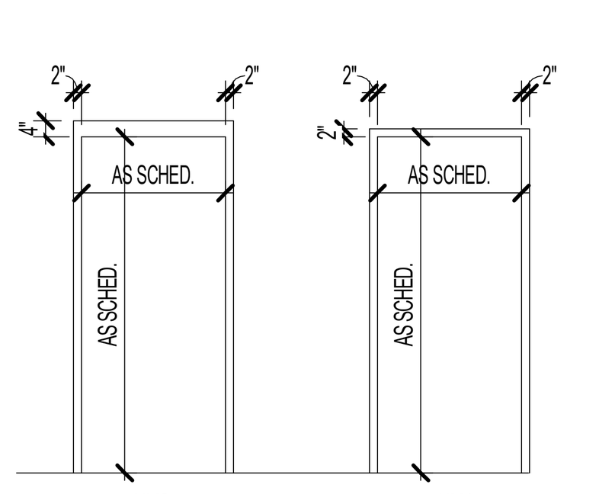
1. REFER TO SHEET A8.00 FOR DOOR SCHEDULE AND FOR DOOR SIGNAGE TYPES.
2. REFER TO A0.02 SHEET FOR LINTEL SCHEDULES AND DOOR AND WINDOW JAMB STUD FRAMING DETAILS 1 & 3 A8.00.
3. ALL DOORS TO BE 1 3/4" THICK (UON)
4. ALL STL FRAMES TO HAVE A 2" FACE DIMENSION UON, W/ 5/8" STOP. 3/4" STOP REQUIRED FOR FIRE RATED FRAMES.
5. STEEL FRAME DEPTHS INDICATED IN THE DETAILS ARE NOMINAL. PROVIDE STANDARD WIDTH FRAME WITH THROAT OPENING APPROPRIATE TO PARTITION TYPE.
6. COORDINATE WITH MECH DOCUMENTS FOR DOOR UNDERCUTS AND DOOR LOUVERS, IF ANY.
7. ALL LIGHTS IN DOORS TO HAVE SAFETY GLAZING (UON).
8. EXTERIOR DOORS TO HAVE TINTED GLAZING (UON) AND INTERIOR DOORS TO HAVE CLEAR GLAZING.
9. FIELD VERIFY DIMENSIONS PRIOR TO FABRICATING FRAMES.
10. PROVIDE WD BLKG IN GYP BD WALLS BEHIND DOORS SCHEDULED TO HAVE WALL MOUNTED DOOR STOPS. (REFER HARDWARE SCHEDULE SUBMITTAL).
11. REFER DTLS A0.02, & 3A8.00 FOR TYP WINDOW AND DOOR CONTROL JOINTS IN MASONRY WALLS. REFER DTLS A0.02, & 1A8.00 FOR TYP WINDOW AND DOOR CONTROL JOINTS IN STEEL STUD FRAMED WALLS.
12. FLOOR MATERIAL CHANGES BETWEEN ROOMS TO OCCUR UNDER DOOR.
13. DOOR HARDWARE (CLOSERS, LEVERS, PANIC HARDWARE, ETC.) SHALL NOT CONFLICT WITH THE GLASS OR TRIM FOR THE LITE.
14. REFER TO THE SPECIFICATIONS FOR HARDWARE DESCRIPTIONS
15. REF. A8.00 AND SPECIFICATIONS FOR GLAZING TYPES
16. ALL DOORS IN SMOKE RESISTANT PARTITIONS TO HAVE POSITIVE LATCHING AND BE SMOKE TIGHT (ST)
17. ALL DOORS TO HAVE BOXED HEADERS UNLESS STEEL CHANNELS ARE INDICATED IN THE COMMENT COLUMN OF THE DOOR SCHEDULE OR UNLESS OTHERWISE INDICATED BY HEAD DETAIL
18. ALL CLOSERS TO BE LOCATED ON THE ROOM SIDE OF THE DOOR WHERE INSTALLED AT CORRIDORS. IN NON CORRIDORS, CLOSERS TO BE INSTALLED AT THE ROOM SIDE FOR THE ROOM BEING SERVED BY THE OPENER
19. ALL FIRE RATINGS NOTED IN MINUTES
20. ALL EXTERIOR DOORS WITH LITES OR GLAZING TO HAVE GL2 CHILDGARD GLAZING TYPE.
21. PROVIDE 9" X 9" ALUMINUM SIGNS AT ALL EXTERIOR DOORS STARTING WITH THE FRONT DOOR WHICH SHALL BEAR THE NUMBER "1" AND PROCEED CLOCKWISE AROUND THE BUILDING TO ENSURE ALL EXTERIOR DOORS ARE NUMBERED. REF. 2/A8.00 FOR EXTERIOR DOOR SIGNAGE DETAIL

DOOR SCHEDULE REMARKS:

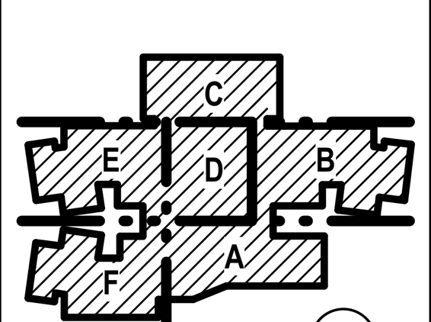
1. NOT USED
2. REFER TO ELECTRICAL DOCUMENTS FOR POWER FOR CARD KEY ACCESS. AT DOUBLE DOORS PROVIDE ELECTRIC STRIKE AT REMOVABLE MULLION.
3. PROVIDE DRIP AT HEAD OF DOOR
4. NOT USED
5. MOTOR OPERATED, TYPICAL. REFER TO MEP DOC.
6. NOT USED
7. NOT USED
8. PROVIDE PEEP HOLE AND DOOR BELL.
9. NOT USED
10. NOT USED
11. FOLDING PANEL PARTITION BY MANUFACTURER
12. NOT USED



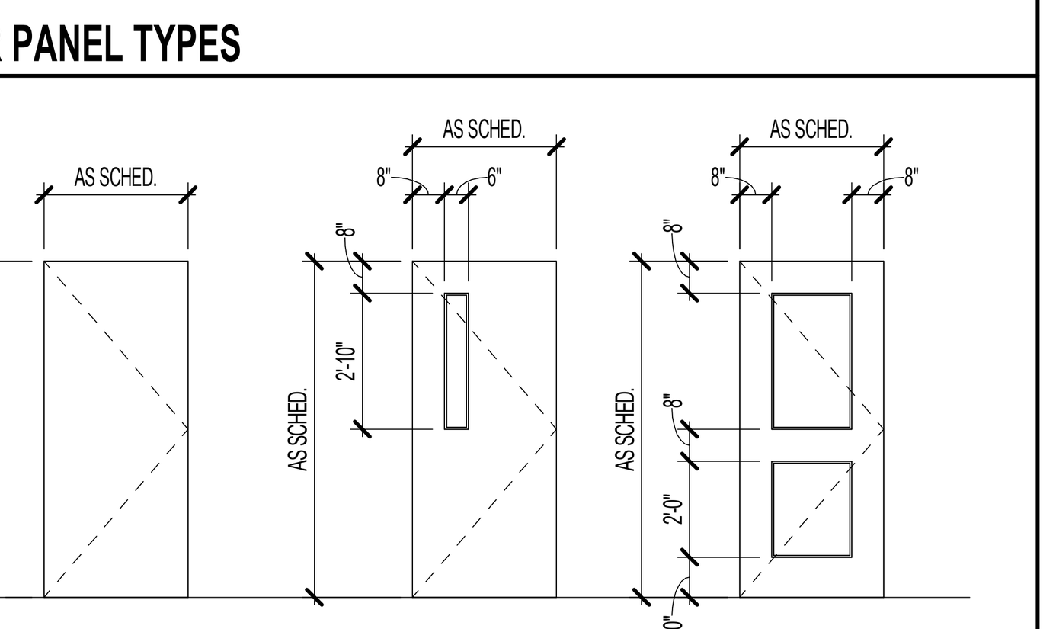
ALUMINUM FRAME TYPES 5
SCALE: 1/4" = 1'-0"

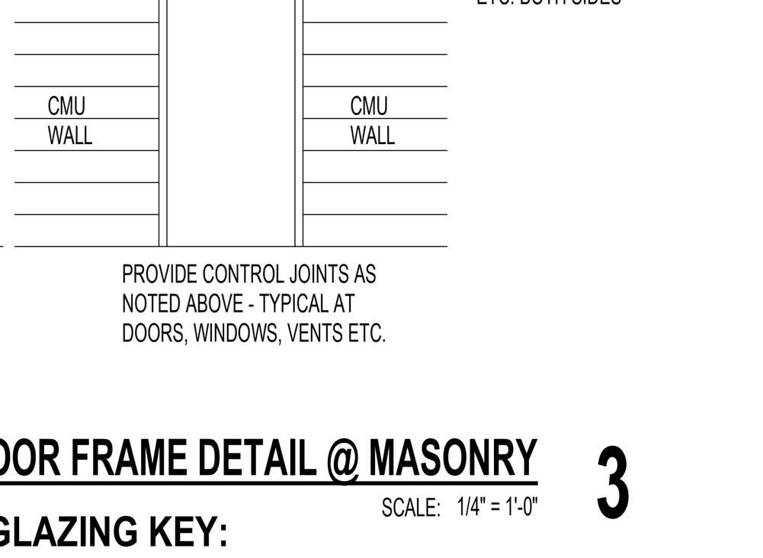


HOLLOW METAL FRAME TYPES 4
SCALE: 1/4" = 1'-0"

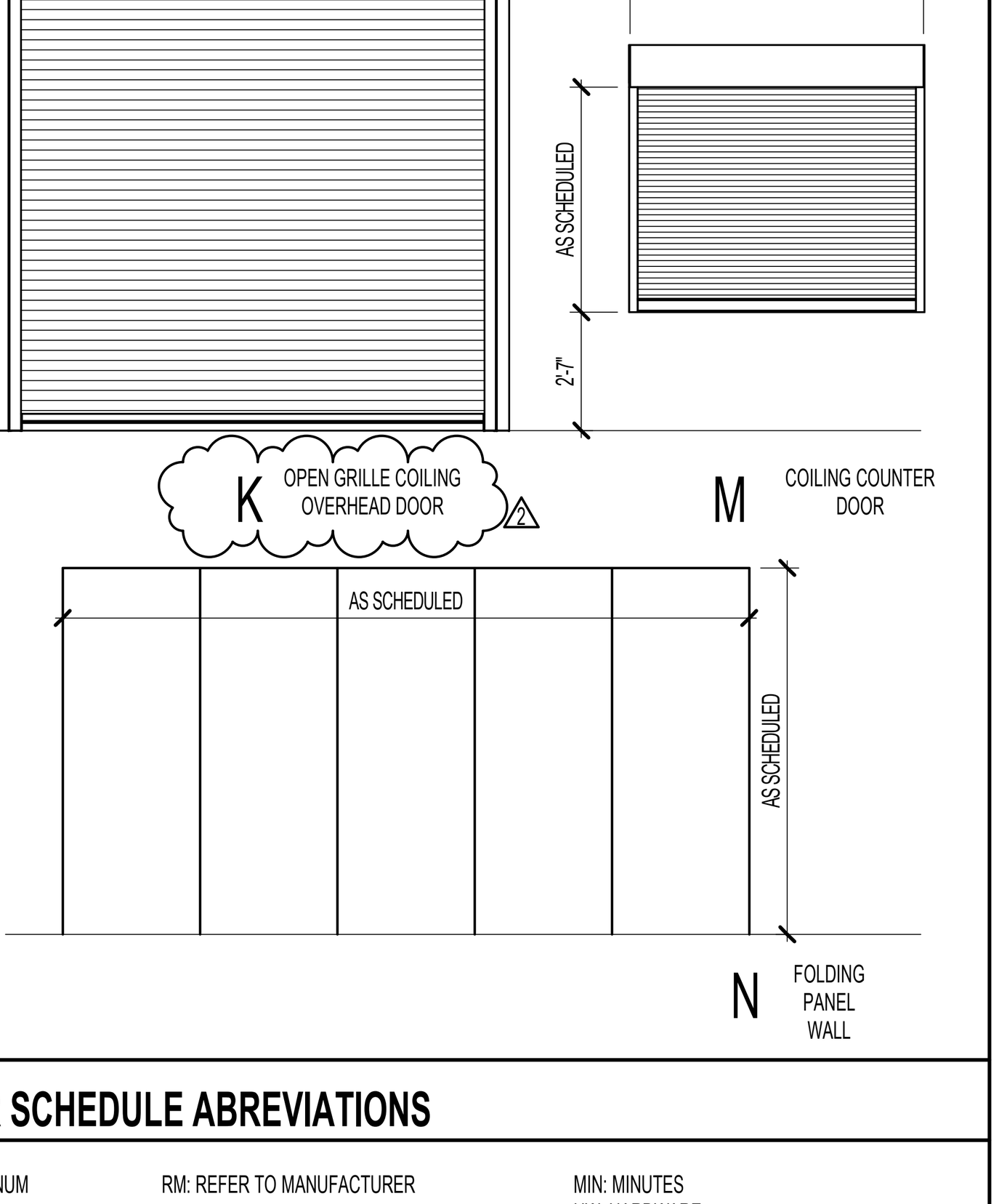


DOOR PANEL TYPES





DOOR FRAME DETAIL @ MASONRY 3
SCALE: 1/4" = 1'-0"



GLAZING KEY:

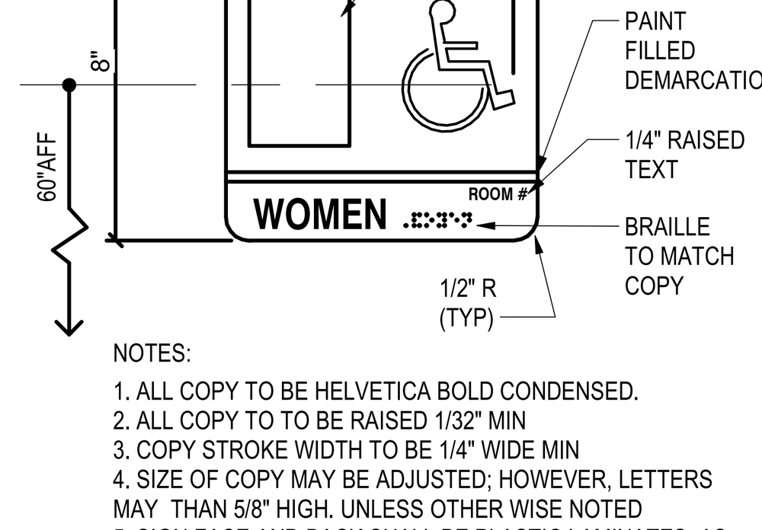
GLAZING TYPES GL1 - GL2: SHGC: 0.2 U-FACTOR: 0.37

NAME/SYMBOL	DESCRIPTION
GL1	INSULATED TINTED SAFETY (TEMPERED) LOW 'E' GLASS, CLEAR + CLEAR (EXTERIOR)
GL2	CHILDGARD GLAZING (TEMPERED) LOW 'E' GLASS, CLEAR + CLEAR (EXTERIOR)
GL2A	CHILDGARD GLAZING (TEMPERED) LOW 'E' GLASS, CLEAR + CLEAR (EXTERIOR) FROSTED FRIT ON FACE 3
GL3	CLEAR SAFETY (TEMPERED) GLASS, 1/2" THICK, 3/8" CLEAR SEALANT JOINTS BETWEEN PANELS, TYP. U.O.N. (INTERIOR)
GL4	CHILDGARD GLAZING (TEMPERED) GLASS, 1/2" THICK, 3/8" CLEAR SEALANT JOINTS BETWEEN PANELS, TYP. U.O.N. (INTERIOR)
GL5	SHADOWBOX - INSULATED TINTED SAFETY (TEMPERED) LOW 'E' GLASS, CLEAR + CLEAR (EXTERIOR)
GL6	1" INSULATED METAL PANEL

NOTE: REFER TO SPECIFICATIONS FOR GLAZING TYPES AND IMPACT RESISTANT GLAZING FILM
REFER TO FRAME TYPE DRAWINGS FOR IMPACT RESISTANT GLAZING FILM LOCATIONS

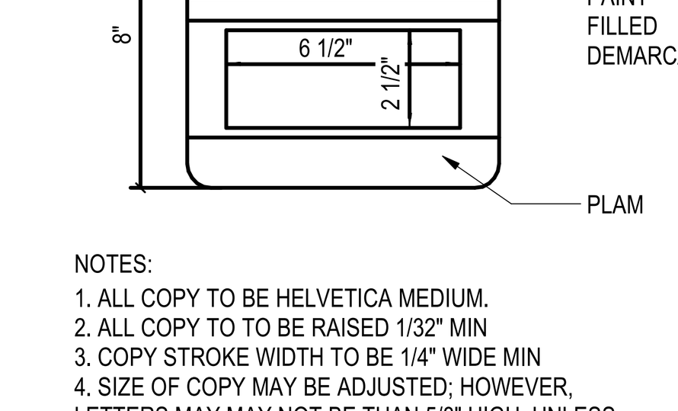
DOOR SCHEDULE ABREVIATIONS

AL: ALUMINUM	RM: REFER TO MANUFACTURER	MIN: MINUTES HW: HARDWARE
HM: HOLLOW METAL	ST: SMOKE TIGHT	
MTL: METAL	SCW: SOLID CORE WOOD	
CL: CHAIN LINK	FBC: POLYMER CORE	



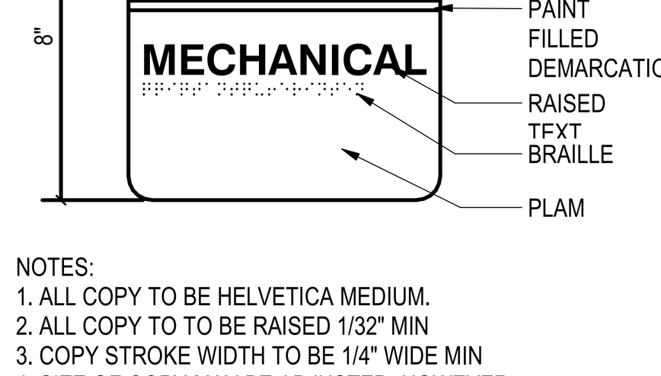
NOTES:
1. ALL COPY TO BE HELVETICA BOLD CONDENSED.
2. ALL COPY TO TO BE RAISED 1/32" MIN
3. COPY STROKE WIDTH TO BE 1/4" WIDE MIN
4. SIZE OF COPY MAY BE ADJUSTED; HOWEVER, LETTERS MAY THAN 5/8" HIGH. UNLESS OTHER WISE NOTED
5. SIGN FACE AND BACK SHALL BE PLASTIC LAMINATES, AS SELECTED BY ARCHITECT. SIDES OF SIGN SHALL BE PAINTED TO MATCH SIGN FACE. COPY TO BE PAINTED WHITE.

SIGN TYPE 'A'



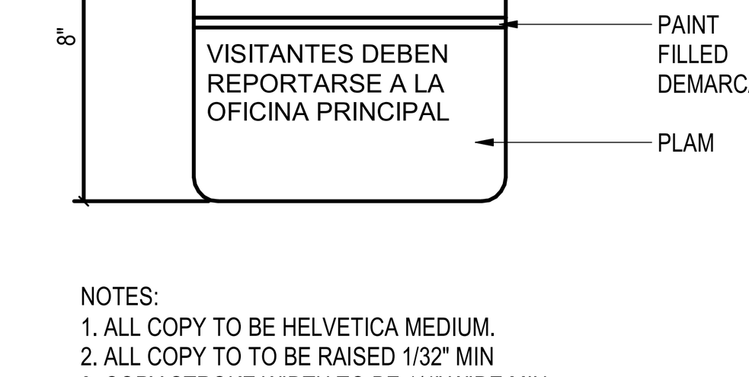
NOTES:
1. ALL COPY TO BE HELVETICA MEDIUM.
2. ALL COPY TO TO BE RAISED 1/32" MIN
3. COPY STROKE WIDTH TO BE 1/4" WIDE MIN
4. SIZE OF COPY MAY BE ADJUSTED; HOWEVER, LETTERS MAY NOT BE THAN 5/8" HIGH. UNLESS OTHER WISE NOTED
5. SIGN FACE AND BACK SHALL BE PLASTIC LAMINATES, AS SELECTED BY ARCHITECT. SIDES OF SIGN SHALL BE PAINTED TO MATCH SIGN FACE. COPY TO BE PAINTED WHITE.

SIGN TYPE 'B'



NOTES:
1. ALL COPY TO BE HELVETICA MEDIUM.
2. ALL COPY TO TO BE RAISED 1/32" MIN
3. COPY STROKE WIDTH TO BE 1/4" WIDE MIN
4. SIZE OF COPY MAY BE ADJUSTED; HOWEVER, LETTERS MAY MAY NOT BE THAN 5/8" HIGH. UNLESS OTHER WISE NOTED
5. SIGN FACE AND BACK SHALL BE PLASTIC LAMINATES, AS SELECTED BY ARCHITECT. SIDES OF SIGN SHALL BE PAINTED TO MATCH SIGN FACE. COPY TO BE PAINTED WHITE.
6.EXTERIOR SIGNS PAINTED WITH CLEAR COAT

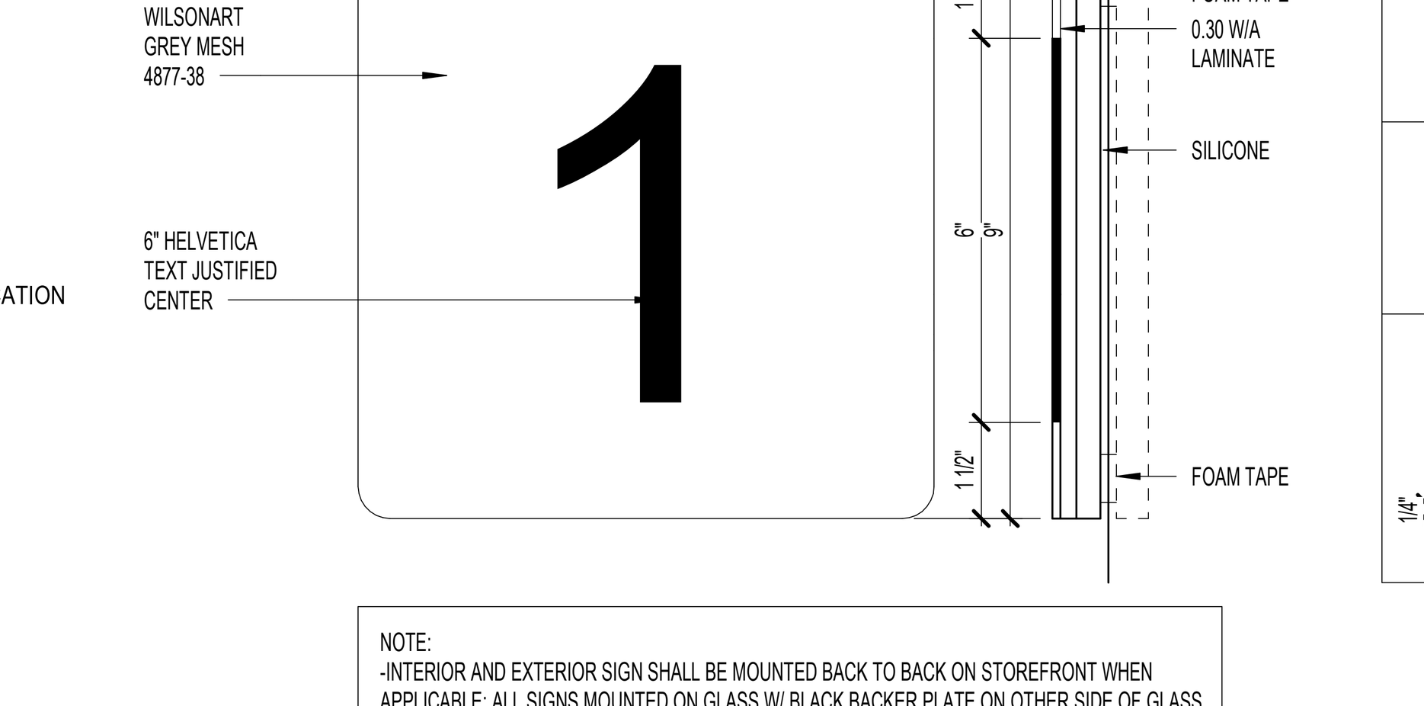
SIGN TYPE 'C'



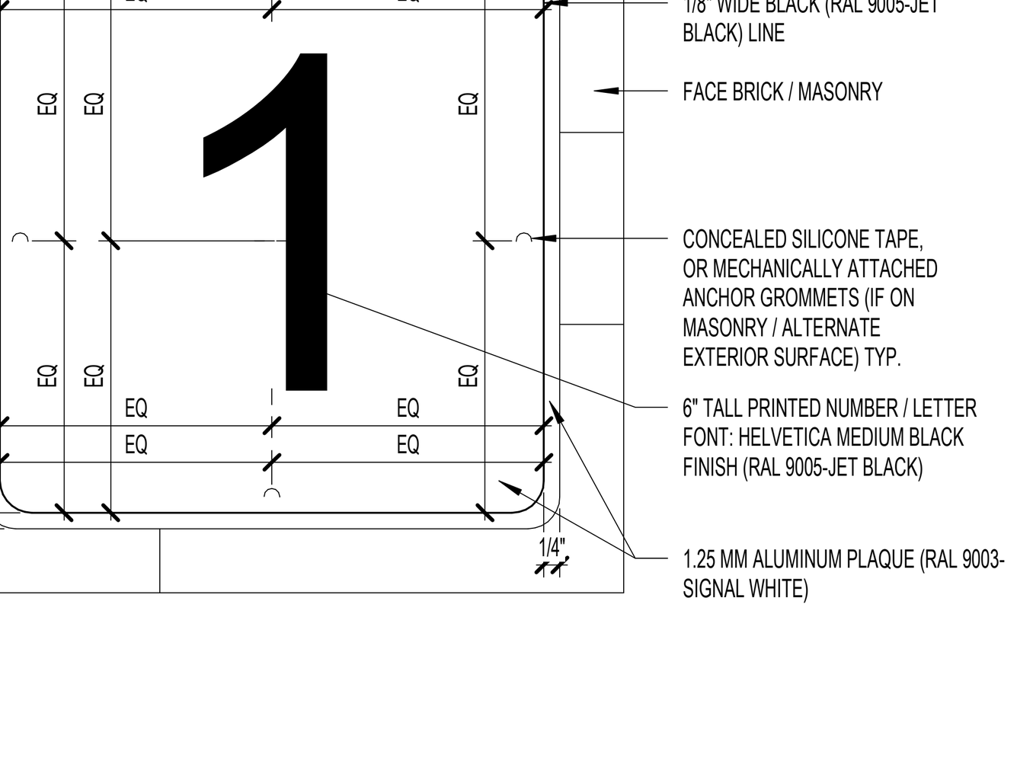
NOTES:
1. ALL COPY TO BE HELVETICA MEDIUM.
2. ALL COPY TO TO BE RAISED 1/32" MIN
3. COPY STROKE WIDTH TO BE 1/4" WIDE MIN
4. SIZE OF COPY MAY BE ADJUSTED; HOWEVER, LETTERS MAY MAY NOT BE THAN 5/8" HIGH. UNLESS OTHER WISE NOTED
5. SIGN FACE AND BACK SHALL BE PLASTIC LAMINATES, AS SELECTED BY ARCHITECT. SIDES OF SIGN SHALL BE PAINTED TO MATCH SIGN FACE. COPY TO BE PAINTED WHITE.

SIGN TYPE 'D'

INTERIOR

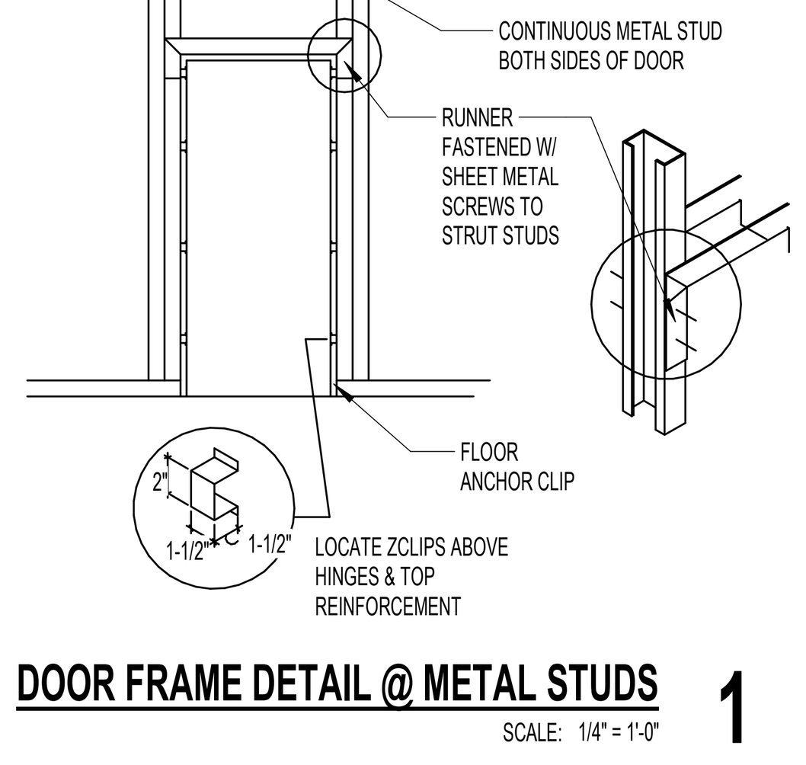


EXTERIOR



NOTE:
-INTERIOR AND EXTERIOR SIGN SHALL BE MOUNTED BACK TO BACK ON STOREFRONT WHEN APPLICABLE; ALL SIGNS MOUNTED ON GLASS W/ BLACK BACKER PLATE ON OTHER SIDE OF GLASS.
-COORDINATE AND CONFIRM LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
-ALL SIGNS TO BE MOUNTED 7'-6" AFF, CENTERED ON DOOR OPENING.

EXTERIOR DOOR SIGNAGE DETAIL 2
SCALE: 1 : 3



DOOR FRAME DETAIL @ METAL STUDS 1
SCALE: 1/4" = 1'-0"

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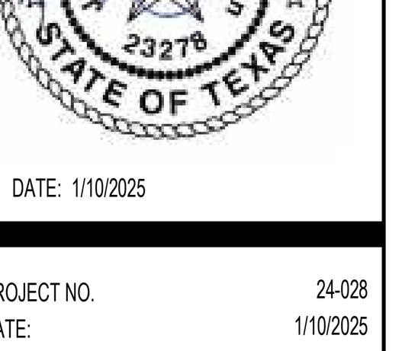
ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471



DATE: 1/10/2025

PROJECT NO.	24-028
DATE:	1/10/2025
DRAWN BY: DRW	CHECKED BY: CHK

REVISIONS:

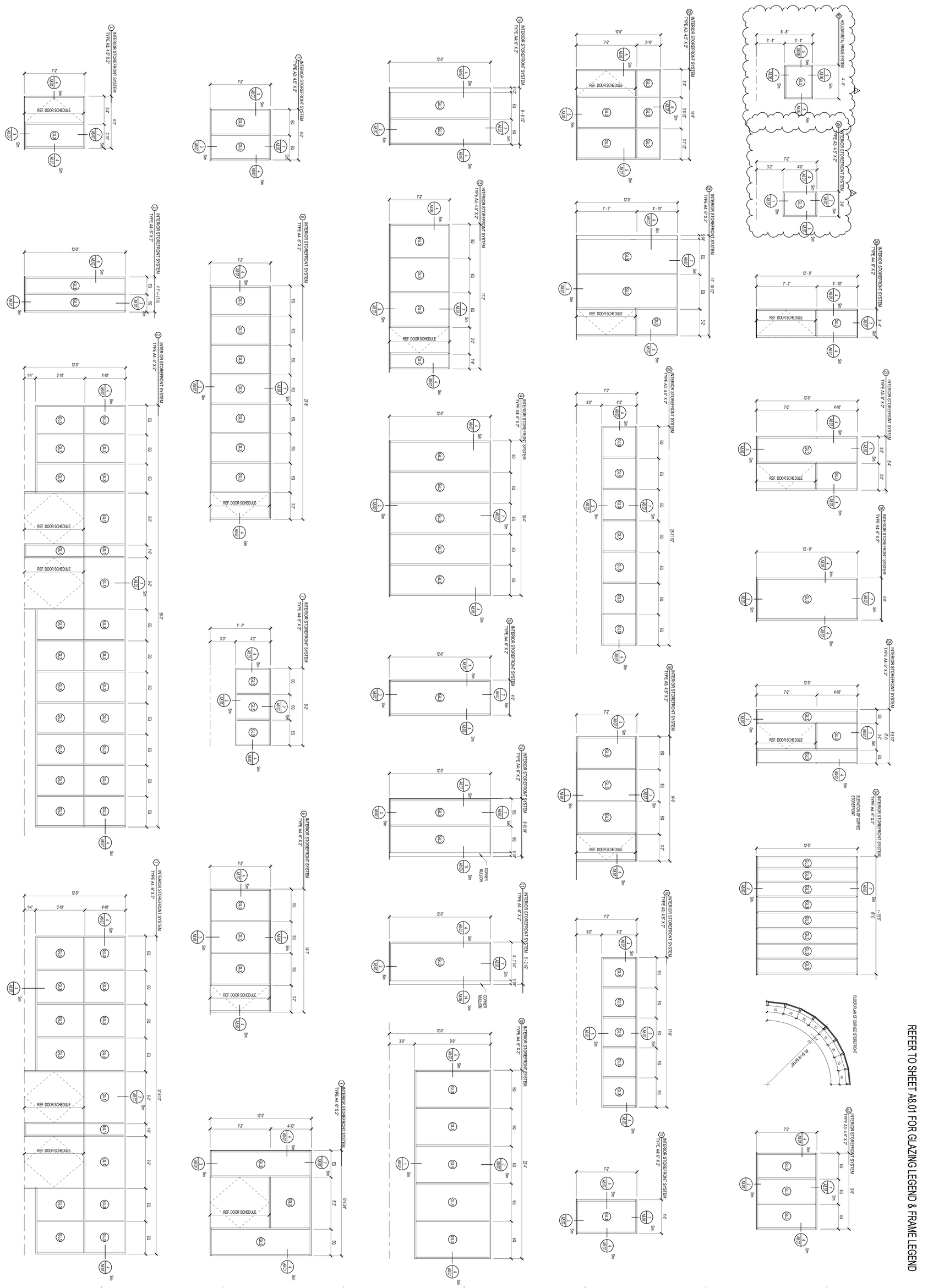
No.	Date	Description
1	12/20/2024	ADDENDUM #1
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

A8.00
DOOR SCHEDULE, INFO AND FRAME TYPES

Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt
1/10/2025 1:13:48 PM

REFER TO SHEET A8.01 FOR GLAZING LEGEND & FRAME LEGEND



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PROJECT NO. 24.028
DATE 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK

	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

A8.03
DOOR & WINDOW FRAME TYPES

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 MATCH 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 SNAP ON PVC CORNER GUARDS FROM TOP OF BASE TO TOP OF DOOR FRAME ALL OUTSIDE CORNERS (NON CMU WALLS) IN HIGH TRAFFIC AREAS, INCLUDING PARTITIONS WITH VWC.
15. PROVIDE STAINLESS STEEL CORNER GUARDS, 4" AT KITCHEN AREA AND SURROUNDING SPACES.
16. SHELVES SHALL BE ADJUSTABLE, UON. SHELVES OVER 36" IN LENGTH SHALL BE 1" THICK.
17. PROVIDE 7/8" WORK TOPS WITH PLASTIC LAMINATE FINISH AT CASEWORK SHELVING UNITS UNDER 48".
18. PROVIDE 4' -0" TALL TACKBOARDS (TB), AND MARKERBOARDS (MB), UON. BOARDS SHALL BE IN THE SAME FRAME WHEN ADJACENT.
19. MB, AND TB TO HAVE CONT TACKSTRIPS AND PEN TROUGHS (UON). TACKSTRIPS TO HAVE MAP HOOKS, UON.
20. PROJECTION SCREENS: SPRING-ROLLER OPERATED, WALL MOUNTED, 72"X72" W/ 70"X70" VIEWING AREA, UON.
21. PROVIDE ROLLER SHADES (RS) AT INTERIOR WINDOWS U.O.N., REFER TO A9.01A - A9.02D SERIES FOR LOCATIONS.
22. PROVIDE HORIZONTAL LOUVER BLINDS (HLB) AT EXTERIOR WINDOWS U.O.N, REFER TO A9.01A - A9.02D SERIES FOR LOCATIONS

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 VINYL WALL 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, ETC. SAME COLOR AS ADJACENT WALL.
8. UNDESIGNATED PAINTED GYPSUM BOARD WALLS TO BE MARK "P-1".
9. UNDESIGNATED PAINTED CMU WALLS TO BE MARK "P-1".
10. ALL INTERIOR HOLLOW METAL DOOR AND WINDOW FRAMES SHALL BE PAINTED TO MATCH MARK "P-1" (U.O.N.). ALL VISION PANEL FRAMES IN INTERIOR DOORS TO MATCH MARK P-2.
11. ALL INTERIOR HOLLOW METAL DOORS SHALL BE PAINTED TO MATCH MARK "P-1".
12. ALL INTERIOR WOOD DOORS & UNASSIGNED WOOD TRIM PIECES SHALL BE MARK "P-1".
13. ALL METAL HANDRAIL (INTERIOR) SHALL BE PAINTED STEEL RAILING, UON. ALL METAL HANDRAIL (EXTERIOR) SHALL BE GALVANIZED STEEL RAILING, SHOP PRIMED, FIELD PAINTED, UON.
14. ALL BOYS AND GIRL'S TOILET PARTITIONS SHALL BE AS SPECIFIED.
15. ALL BASE CABINETS, WALL CABINETS, AND MISC. CASE WORK IN CLASSROOM/ ACADEMIC AREA SHALL BE MARK "PL-1" UON. ALL BASE CABINETS, WALL CABINETS, AND MISC. CASE WORK IN ADMIN SUITE SHALL BE MARK "PL-1" UON.
16. ALL COUNTERTOPS IN CLASSROOM SHALL BE MARKED "PL-3". UON. ALL COUNTERTOPS IN ADMIN SUITE SHALL BE MARKED "PL-3". UON.
17. PROVIDE MATCHING COLOR FOR ALL EDGE BANDING AT ALL COUNTERS..
18. RECEPTION COUNTERTOPS SHALL BE MARKED "SS-1".
19. ALL PLASTIC LAMINATE WALL PANELS TO BE AS NOTED ON SHEETS A9.10 - A9.16.
20. ALL RESTROOM TILE, KITCHEN, OR ANY OTHER WET AREA SHALL RECEIVE EPOXY GROUT, PREFER MATERIAL & FINISH SCHEDULE FOR SPECIFIC GROUT COLOR.
21. 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.
22. PATTERNS AND COLORS FOR AREAS SCHEDULED TO RECEIVE LVT SHALL BE AS REPRESENTED ON SHEETS A9.01A THRU A9.01D.
23. LOW PROFILE TRANSITION STRIPS TO BE PLACED AT ANY FLOORING MATERIAL CHANGE.
24. METAL LOW PROFILE TRANSITION STRIPS TO BE PLACED AT ANY FLOORING MATERIAL CHANGE ADJACENT TO CT.
25. REFER TO FINISH SCHEDULE FOR CT GROUT TYPE IN ALL BATHROOM AND KITCHEN AREAS.
26. ALL WALLS TO RECEIVE DRY ERASE WALLCOVERING TO BE LEVEL 5 FINISH. INSTALL ALUMINUM J TRIM AT PERIMETER. DRY ERASE WALLCOVERING SHOULD BE WRITABLE AND PROJECTABLE
27. ALL FINE FISSURED CEILING TO BE 0.70 NRC

MATERIAL SCHEDULE

LIGH	MARK	MATERIAL	MANUFACTURER	STYLE	COLOR	SPECS	REMARKS
01 FLOOR FINISH							
01 FLOOR FINISH	CPT-1	POWERBOND CARPET	TARKETT	TEXTURE MAP	COLOR:42802 PICTOGRAM	POWERBOND	ADMINISTRATION, LIBRARY, COLLABORATION AND CLASSROOMS
01 FLOOR FINISH	CPT-2	POWERBOND CARPET	TARKETT	SQUAREDUP II	COLOR: CUSTOM 11537991-10	POWERBOND	ACCENT
01 FLOOR FINISH	EPF-1	EPOXY RESINOUS FLOORING	STONHARD	STONSHIELD	COLOR: GLACIER	MEDIUM TEXTURE	KITCHEN AND RESTROOM FLOORING
01 FLOOR FINISH	LVT-1	LUXURY VINYL TILE	TARKETT	EVENT ABSTRACT	COLOR: 11194 CHANTILLY	12" X 24"	WHERE APPLICABLE
01 FLOOR FINISH	SC-1	SEALED CONCRETE					MEZZANINE, STAIRS
01 FLOOR FINISH	T-1	TERRAZZO	TM SUPPLY, THICK SET	CEMENT TERRAZZO	COLOR: REFER TO CONTROL SAMPLE	THICK SET	MAIN CORRIDORS
01 FLOOR FINISH	T-2	TERRAZZO	TM SUPPLY, THICK SET	CEMENT TERRAZZO	COLOR: REFER TO CONTROL SAMPLE	THICK SET	ACCENT AT CORRIDORS
01 FLOOR FINISH	VCT-1	VINYL COMPOSITION TILE	ARMSTRONG	STANDARD EXCELON IMPERIAL TEXTURE	COLOR: SOFT WARM GRAY	12" X 12"	FIELD VCT, NEUTRAL
01 FLOOR FINISH	VCT-2	VINYL COMPOSITION TILE	ARMSTRONG	STANDARD EXCELON IMPERIAL TEXTURE	COLOR: COLORADO STONE	12" X 12"	ACCENT VCT, ACCENT BLUE
01 FLOOR FINISH	VCT-3	VINYL COMPOSITION TILE	ARMSTRONG	STANDARD EXCELON IMPERIAL TEXTURE	COLOR: CLASSIC BLACK	12" X 12"	BLACK VCT
01 FLOOR FINISH	VCT-4	VINYL COMPOSITION TILE	ARMSTRONG	STANDARD EXCELON IMPERIAL TEXTURE	COLOR: MID GRAYED BLUE	12" X 12"	ACCENT SQUARES AT GYM
01 FLOOR FINISH	WD-1	STAINED WOOD		SPECIES: MAPLE	TO BE STAINED		STAGE STEPS
01 FLOOR FINISH	WF-1	WALK -OFF	TARKETT	ASSERTIVE ACTION	COLOR: STEELWORK		MAIN EXITS/ENTRANCE, DRINKING FOUNTAINS
02 BASE							
02 BASE	EPB	EPOXY BASE	STONHARD	STONSHIELD	COLOR: GLACIER	MEDIUM TEXTURE	
02 BASE	RB-1	RUBBER BASE	TARKETT/JOHNSONITE	4" HEIGHT, TRADITIONAL	COLOR:48 GREY		FIELD RUBBER BASE
02 BASE	RB-2	RUBBER BASE	TARKETT/JOHNSONITE	4" HEIGHT, TRADITIONAL	COLOR:40 BLACK		AT STAGE
03 WALL FINISH							
03 WALL FINISH	P-1	PAINT	SHERWIN WILLIAMS		SW7648 BIG CHILL		FIELD PAINT
03 WALL FINISH	P-2	PAINT	SHERWIN WILLIAMS		SW7652 MINERAL DEPOSIT		ACCENT
03 WALL FINISH	P-3	PAINT	SHERWIN WILLIAMS		SW7019 GAUNTLET GRAY		DOOR FRAMES
03 WALL FINISH	P-4	PAINT	SHERWIN WILLIAMS		SW6487 CLOUDBURST		BLUE
03 WALL FINISH	P-5	PAINT	SHERWIN WILLIAMS		SW6258 TRICORN BLACK		ACCENT, AT STAGE & RAMP
03 WALL FINISH	VWC-1	TYPE 2 VINYL WALL COVERING	MOMENTUM	WALLCOVERING UPPERCASE	COLOR: EDITION		ACCENT AT LIBRARY, RECEPTION ACCENT
03 WALL FINISH	VWC-2	VINYL WALLCOVERING	MOMENTUM	WALLCOVERING UPPERCASE	COLOR: SYNTAX		RECEPTION FIELD
03 WALL FINISH	VWC-3	VINYL WALLCOVERING	KOROSEAL	DESERT SAND	COLOR: GRAY ANGORA		FIELD AT CLASSROOMS AND MAIN CORRIDORS
03 WALL FINISH	VWC-4	VINYL WALLCOVERING	KOROSEAL	DESERT SAND	COLOR: CUSTOM COLOR, KIP#49581	CUSTOM MATCHES P-4	TEACHING WALLS AT CLASSROOM
03 WALL FINISH	WS-1	WRITABLE SURFACE	KOROSEAL	WALL TALKER/MAG-RITE	COLOR: WHITE		WHERE APPLICABLE, TEACHING WALLS
03 WALL FINISH	WT-1	WALL TILE	DALTILE	FABRIC ART MODERN LINEAR	COLOR: ML63 MEDIUM GRAY	12" X 24"	CORRIDOR WAINSCOT, AT 4' AFF
03 WALL FINISH	WT-2	WALL TILE	DALTILE	COLOR WHEEL LINEAR	COLOR: DESERT GRAY	8" X 24"	RESTROOM WALLS FIELD, SERVING LINE FIELD
03 WALL FINISH	WT-3	WALL TILE	CROSSVILLE	GLASS BLOX	COLOR:VIVID TEAL	2" X 4" MOSAIC	RESTROOM ACCENT (BLUE) GLASS TILE
03 WALL FINISH	WT-4	WALL TILE	CROSSVILLE	GLASS BLOX	COLOR:AQUA GLEAM	2" X 4" MOSAIC	SERVING COUNTER ACCENT
04 CEILING							
04 CEILING	AWC	ACOUSTICAL WOOD CEILING	CERTAINTEED	BOX SERIES	FINISH:8475 LIGHT PECAN		LIBRARY AND COLLABORATION
04 CEILING	EXP	EXPOSED CEILING			COLOR: SW6258 TRICORN BLACK		PAINTED
04 CEILING	GYP	GYPBOARD CEILING					PAINTED
04 CEILING	SAP-1	SUSPENDED ACOUSTIC CEILING	ARMSTRONG	FINE FISSURED	WHITE	24" X 24"	CLASSROOMS. REFER TO RCP
04 CEILING	SAP-2	SUSPENDED ACOUSTIC VINYL TILE	CERTAINTEED	VINYL FACED GYPSUM BOARD	WHITE	24" X 24"	RESTROOMS, KITCHEN AND SERVING LINE
04 CEILING	SAP-3	SUSPENDED ACOUSTICAL TILE/BLACK					STAGE /PLATFORM
05 MISC FINISHES							
05 MISC FINISHES		OPERABLE PARTITION SYSTEM	BOD: MODERNFOLD	ACOUSTI-SEAL PREMIER/ELECTRIC PARTITION 9334E	FINISH: PREMIUM VINYL		CUSTOM FINISH PER ARCHITECT
05 MISC FINISHES	AWP-1	FABRIC WRAPPED PANEL	MOMENTUM	FELTRO	COLOR: CLOUD		MAIN CORRIDOR,LIBRARY, DINING AND GYM
05 MISC FINISHES	AWP-2	FABRIC WRAPPED PANEL	MOMENTUM	FELTRO	COLOR: SLATE		MAIN CORRIDOR, LIBRARY, DINING AND GYM
05 MISC FINISHES	AWP-3	FABRIC WRAPPED PANEL	MOMENTUM	FELTRO	COLOR: SPA		MAIN CORRIDOR,LIBRARY, DINING AND GYM
05 MISC FINISHES	CG-1	CORNER GUARDS	WALLANDCORNERGUARD.COM	THE INVISIBLE CORNERGUARD	COLOR: CLEAR		
05 MISC FINISHES	CG-2	CORNER GUARDS	KOROSEAL	KOROGARD SERIES GS40	FINISH: STAINLESS STEEL, MATTE FINISH		AT KITCHEN ONLY
05 MISC FINISHES	PL-1	PLASTIC LAMINATE	WILSONART	STANDARD LAMINATE	COLOR: 7986-38 PASADENA OAK	FINE VELVET FINISH	CASE WORK, DOORS
05 MISC FINISHES	PL-2	PLASTIC LAMINATE	WILSONART		COLOR:Y0835-60, RENDEZVOUS	MATTE FINISH	ACCENT PLAM
05 MISC FINISHES	PL-3	PLASTIC LAMINATE	WILSONART	STANDARD LAMINATE	COLOR: 4942-38, CRISP LINEN	FINE VELVET FINISH	COUNTERTOPS
05 MISC FINISHES	SS-1	SOLID SURFACE	WILSONART	SOLID SURFACE	COLOR: CALMING WAVES		COUNTERTOPS WHERE APPLICABLE
05 MISC FINISHES	STG	STAGE CURTAIN	KM FABRICS	MEMORABLE	COLOR: TBD		STAGE
05 MISC FINISHES	TP	TOILET PARTITIONS	ASI	SOLID PLASTICS, HDPE	COLOR: CHARCOAL	PEBBLE GRAINED TEXTURE	RESTROOMS
07 EXTERIOR							
07 EXTERIOR	ALUM	STOREFRONT AND CURTAIN WALL	KAWNEER		CHAMPAGNE		3794/1455 PERMADIZE
07 EXTERIOR	BK-1	BRICK	UPCHURCH KIMBROUGH (CLOUD CERAMICS		ASH GRAY	KING SIZE, VELOUR	FILLED
07 EXTERIOR	BK-2	BRICK	UPCHURCH KIMBROUGH (CLOUD CERAMICS		CORONADO	KING SIZE, VELOUR	STACKED BOND
07 EXTERIOR	BK-3	BRICK	UPCHURCH KIMBROUGH (CLOUD CERAMICS		GREY BLEND	KING SIZE, VELOUR	STRIPES
07 EXTERIOR	GL-1	GLAZING	INSULATTED TINTED SAFETY (TEMPERED)				
07 EXTERIOR	GL-2	GLAZING	INS. CHILOGARD GLAZING (TEMPERED)				
07 EXTERIOR	GL-2A	GLAZING	INS. CHILOGARD GLAZING (TEMPERED) FROSTED				
07 EXTERIOR	GL-3	GLAZING	CLEAR SAFETY (TEMPERED)				
07 EXTERIOR	GL-4	GLAZING	CHILOGARD GLAZING				
07 EXTERIOR	GL-5	GLAZING	SHADOWBOX - INS. TENTED SAFETY (TEMP)				
07 EXTERIOR	GL-6	GLAZING					
07 EXTERIOR	MP-1	METAL PANEL - INTERMIXED PANLES	BERRIDGE	HS-8, HS-12, HR-4, HR-16	CHAMPAGNE		KYNAR 500
07 EXTERIOR	MP-2	INSULATED METAL	KINGSPAN	QUADCORE OPTIMO SMOOTH	DARK BRONZE - PREMIUM COLOR		SHERWIN-WILLIAMS® FLUROPON® CLASSIC - 70% PVDF METALLIC COLORS
07 EXTERIOR	MPC	METAL PANEL SOFFIT	CERTAINTEED	BOX SERIES - EXTERIOR	FINISH:8475 LIGHT PECAN	LAMINATE FILM, WOOD FINISH	AT SOFFIT
07 EXTERIOR	STN-1	NATURAL STONE	UPCHURCH KIMBOROUGH	FINNEY VALLEY CHOPPED STONE BLEND COURSED	ASHLAR PATTERN	3-5" THICK X 4" SAWN HEIGHTS X RANDOM LENGTHS	AT LIBRARY

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD

3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Ryan A. Kalisek
23279
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

Δ	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

A9.00A
INTERIOR-EXTERIOR FINISH LEGEND

1/10/2025 12:01:49 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028 _ARCH_ES38 BROOKEWATER_R24.rvt

ROOM FINISH SCHEDULE - FIRST FLOOR - AREA A

ROOM #	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILIING	REMARKS
A100	VESTIBULE	WF-1	RB-1	GLAZING	WT-1/GRAPHIC ABOVE	GLAZING	VWC-1	SAP-1	VWC-1 FLOOR TO CEILING ON WEST WALL
A100A	RR VESTIBULE	WF-1	-	WT-1, P-1	-	WT-1, P-1	WT-1, P-1	SAP-1	
A101	PARENTS VOLUNTEER	CPT-2	RB-1	VWC-3/DIGITAL GRAPHIC	VWC-3, P-1	GLAZING	VWC-3, P-1	AWC, GYP	VWC-3 UP TO 8', AWP ON EAST & WEST WALLS, MOTORIZED ROLLER SHADES AT EXTERIOR WALL
A102	RR	EPF-1	EPB	WT-3	WT-2	WT-2	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
A103	CORRIDOR	T-1, T-2, CPT-1, WF-1	-	-	WT-1, WVC-3, P-1	GLAZING	REFER TO ELEVATION	SAP-1, GYP	AWP ON WALLS REFER TO INTERIOR ELEVATIONS FOR TILE $ VWC-3 LOCATIONS
A104	RECEPTION	CPT-1	RB-1	VWC-2	VWC-2	P-1	VWC-2	SAP-1, GYP	NO WALLCOVERING AT EXTERIOR WALL, REFER TO INTERIOR ELEVATIONS FOR CASEWORK
A105	SECRETARY	CPT-1	RB-1	VWC-3	VWC-3	P-1	VWC-3	SAP--1	NO WALLCOVERING AT EXTERIOR WALL, REFER TO INTERIOR ELEVATIONS FOR CASEWORK
A106	A. PRINCIPAL	CPT-1	RB-1	VWC-3	VWC-3	P-1	VWC-3	SAP-1	NO WALLCOVERING AT EXTERIOR WALL, REFER TO INTERIOR ELEVATIONS FOR CASEWORK
A107	CONFERENCE	CPT-1	RB-1	VWC-3	VWC-3	P-1	VWC-3	SAP-1	NO WALLCOVERING AT EXTERIOR WALL, REFER TO INTERIOR ELEVATIONS FOR CASEWORK
A108	PRINCIPAL	CPT-1	RB-1	VWC-3	P-1	P-1	VWC-3	SAP-1	NO WALLCOVERING AT EXTERIOR WALL, REFER TO INTERIOR ELEVATIONS FOR CASEWORK
A109	CLINIC	LVT-1	RB-1	VWC-3	VWC-4	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
A110	RR	EPF-1	EPB	WT-2	WT-3/WT-2	WT-2	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
A111	STO.	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	MS-3 SHELVES IN THIS LOCATION
A112	EXAM/ISO	LVT-1	RB-1	VWC-3	VWC-4	VWC-3	VWC-3	SAP-1	
A113	COT	LVT-1	RB-1	VWC-3	VWC-4	VWC-3	VWC-3	SAP-1	
A114	CORRIDOR	CPT-1, WF-1	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1, GYP	REFER TO ELEVATIONS FOR CASEWORK
A115	SECURITY	CPT-1	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK. WEAPON RACK IN THIS ROOM
A116	RR	EPF-1	EPB	WT-2	WT-3	WT-2	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
A117	RR	EPF-1	EPB	WT-2	WT-2	WT-2	WT-3	SAP-2	WALL TILE FLOOR TO CEILING
A118	VAULT / FILES	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	VAULT, MS-2 & 3 IN THIS ROOM
A119	STORAGE	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
A120	MDF	SC-1	RB-1	P-1	P-1	P-1	P-1	EXP	
A121	LOUNGE	LVT-1	RB-1	P-1	P-1	VWC-3	VWC-3	SAP-1	NO WALLCOVERING AT EXTERIOR WALL, REFER TO INTERIOR ELEVATIONS FOR CASEWORK
A122	WORKROOM	LVT-1	RB-1	P-1	VWC-3	VWC-3	VWC-3	SAP-1	NO WALLCOVERING AT EXTERIOR WALL, REFER TO INTERIOR ELEVATIONS FOR CASEWORK
A123	COUNSELOR	CPT-1	RB-1	P-1	VWC-3	VWC-3	VWC-3	SAP-1	NO WALLCOVERING AT EXTERIOR WALL, REFER TO INTERIOR ELEVATIONS FOR CASEWORK
A124	COUNSELOR	CPT-1	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
A125	ELEC	VCT-1	RB-1	P1	P1	P1	P1	EXP	
A126	ART	LVT-1	RB-1	VWC-4	P-1	VWC-3	VWC-3	SAP-1	REFER TO ELEVATION FOR TEACHING WALL & CASEWORK, NO WALL COVERING AT EXTERIOR WALL
A127	CORRIDOR	T-2	-	WT-1, VWC-3, P-1	-	WT-1, VWC-3, P-1	-	SAP-1	REFER TO ELEVATIONS
A128	FLEX	CPT-2	RB-1	VWC-3	VWC-3	VWC-3	VWC-4	SAP-1, GYP	REFER TO TEACHING WALL ELEVATION
A129	KIVA	CPT-2	RB-1	VWC-4	VWC-3	VWC-3	VWC-3	SAP-1, GYP	REFER TO ELEVATION FOR TEACHING WALL
A130	LARGE GROUP	CPT-2	RB-1	VWC-4	VWC-3	VWC-3	VWC-3	SAP-1, GYP	REFER TO ELEVATION FOR TEACHING WALL
A131	FLEX	CPT-2	RB-1	WC-3	VWC-4	VWC-3	VWC-3	SAP-1, GYP	REFER TO ELEVATION FOR TEACHING WALL
A132	LIBRARY	CPT-1	RB-1	REFER TO ELEVATION	REFER TO ELEVATION	P-1	REFER TO ELEVATION	SAP-1, GYP	MOTORIZED ROLLER SHADES AT EXTERIOR WALL
A133	COMP STO.	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
A134	AV STO.	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
A135	COMPUTER LAB	CPT-1	RB-1	VWC-4	VWC-3	P-1	VWC-3	SAP-1	REFER TO ELEVATION FOR TEACHING WALL, MOTORIZED ROLLER SHADES AT EXTERIOR WALL
A136	OFFICE	CPT-1/LVT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	SAP-1	

ROOM FINISH SCHEDULE - FIRST FLOOR - AREA B

ROOM #	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING FINISH	REMARKS
B100	CORRIDOR	T-1, T-2	-	-	SEE INT. ELEVATION	-	SEE INT. ELEVATION	SAP-1, GYP	WALL TILE UP TO TOP OF DOOR, REFER TO ELEVATIONS
B101	CORRIDOR	EPF-1	EPB	WT-2, P-4	WT-2	REFER TO ELEVATION	WT-2, P-4	GYP	WALL TILE UP TO TOP OF DOOR, REFER TO ELEVATIONS
B101	CORRIDOR	CPT-1, CPT-2, WF-1	RB-1	WT-1, VWC-3	WT-1, VWC-3	WT-1, VWC-3	WT-1, VWC-3	SAP-1, GYP, AWC	WALL TILE UP TO TOP OF DOOR, REFER TO ELEVATIONS
B102	COLLABORATION	CPT-2	RB-1	-	SEE INT. ELEVATION	-	SEE INT. ELEVATION	AWC	REFER TO ELEVATION FOR TEACHING WALL
B102A	COLLABORATION	CPT-2, WF-1	RB-1	SEE INT. ELEVATION	-	-	SEE INT. ELEVATION	AWC	MARKER WALL AT THIS LOCATION
B102A	COLLABORATION	CPT-2, WF-1	RB-1	SEE INT. ELEVATION	-	-	SEE INT. ELEVATION	AWC	
B103	BOOK ROOM	SC-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
B104	DIAG.	CPT-1	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
B105	CUSTDODIAN STO.	SC-1	RB-1	P-1	P-1	P-1	P-1	SAP-2	
B106	ART STO.	LVT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
B107	1ST GRADE	CPT-1	RB-1	VWC-3	VWC-3	P-1	VWC-4	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B108	1ST GRADE	CPT-1	RB-1	VWC-3	VWC-3	P-1	VWC-4	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B109	1ST GRADE	CPT-1	RB-1	VWC-3	VWC-4	P-1	P-1	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B110	1ST GRADE	CPT-1	RB-1	VWC-3	VWC-3	P-1	VWC-4	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B111	1ST GRADE	CPT-1	RB-1	VWC-3	P-1	VWC-4	VWC-3	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B112	1ST GRADE	CPT-1	RB-1	VWC-3	P-1	VWC-4	VWC-3	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B113	KINDERGARTEN	CPT-1, LVT-1	RB1	VWC-3	P-1	VWC-4	VWC-3	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B114	KINDERGARTEN	CPT-1, LVT-1	RB-1	VWC-4	P-1	VWC-3	VWC-3	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B115	KINDERGARTEN	CPT-1, LVT-1	RB-1	P-4	P-1	VWC-3	VWC-3	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B116	KINDERGARTEN	CPT-1, LVT-1	RB-1	P-1	VWC-3	VWC-3	VWC-4	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B117	KINDERGARTEN	CPT-1, LVT-1	RB-1	P-1	VWC-4	VWC-3	VWC-3	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B118	KINDERGARTEN	CPT-1, LVT-1	RB-1	VWC-3	VWC-3	P-1	VWC-4	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B119	PRE-K	CPT-1,LVT-1	RB-1	P-1	VWC-3	VWC-3	VWC-4	SAP-1	NO WALLCOVERING AT EXTERIOR WALLS. REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B120	RR	EPF-1	EPB	WT-2	WT-2	WT-2	WT-3	SAP-2	WALL TILE FLOOR TO CEILING
B121	PRE-K	CPT-1, LVT-1	RB-1	P-1	VWC-4	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
B122	RR	EPF-1	EPB	WT-2	WT-3	WT-2	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
B123	LIT LIB	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
B124	MATH STOR	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
B125	ELECTRICAL	SC-1	RB-1	P-1	P-1	P-1	P-1	EXP	
B126	BOOK ROOM	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
B127	IDF	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
B128	CUST	SC-1	RB-1	P-1	P-1	P-1	P-1	SAP-2	
B130	TLT	EPF-1	EPB	WT-2	WT-2	WT-3	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
B131	TLT	EPF-1	EPB	WT-3	WT-2	WT-2	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
B132	TLT	EPF-1	EPB	WT-2	WT-2	WT-2	WT-3	SAP-2	WALL TILE FLOOR TO CEILING
B132A	TLT VEST								
B133	TLT	EPF-1	EPB	WT-2	WT-3	WT-2	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
B134	TLT	EPF-1	EPB	WT-2	WT-2	WT-2	WT-3	SAP-2	WALL TILE FLOOR TO CEILING
B134A	TLT VEST	EPF-1	EPB	REFER TO ELEVATION	WT-2, P-4	WT-2,P-4	WT-2, P-4	GYP	WALL TILE UP TO TOP OF DOOR, REFER TO ELEVATIONS
B135	TLT	EPF-1	EPB	WT-2	WT-3	WT-2	WT-2	SAP-2	WALL TILE UP TO TOP OF DOOR
B136	STORAGE	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	

ROOM FINISH SCHEDULE - FIRST FLOOR - AREA C

ROOM #	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING FINISH	REMARKS
C100	MUSIC	CPT-2	RB-1	VWC-4, P-1	P-1	P-1, CASEWORK	P-1	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
C101	MUSIC STORAGE	CPT-2	RB-1	P-1	P-1	P-1	P-1	SAP-1	
C102	PLATFORM	VCT-3	-	BLACK PAINT	BLACK PAINT	BLACK PAINT	BLACK PAINT	SAP-3	
C103	PLATFORM STO.	VCT-3	RB-1	P-1	P-1	P-1	P-1	SAP-1	
C104	RAMP	VCT-3	RB-1	BLACK PAINT	BLACK PAINT	BLACK PAINT	BLACK PAINT	SAP-3	
C105	GYM STORAGE	VCT-2	RB-1	P-1	P-1	P-1	P-1	SAP-1	
C106	PE OFFICE	CPT-1	RB-1	P-1	P-1	P-1	P-1, CASEWORK	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
C107	GYM	VCT-1, VCT-2, VCT-4	RB-1	P-1	OPERABLE PARTITION	P-1	P-4 REFER TO ELEVATION	SAP-1, SAP-3, GYP	NORTH & SOUTH WALL TO HAVE ACOUSTICAL WALL PANELS
C108	DINING	VCT-1, VCT-2	RB-1	P-1	P-1	P-1	OPERABLE PARTITION	SAP-1, SAP-3, GYP	NORTH & SOUTH WALL TO HAVE ACOUSTICAL WALL PANELS
C108E	STORAGE	EPF-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
C109	CHAIR STORAGE	VCT-2	RB1	P-1	P-1	P-1	P-1	SAP-1	
C110	DRY STORAGE	EPF-1	EPB	P-1	P-1	P-1	P-1	SAP-2	
C111	WAREWASH	EPF-1	EPB	P-1	P-1	P-1	P-1	SAP-2	
C112	KITCHEN	EPF-1	EPB	WT-2, P-2	P-2	WT-2, P-2	P-2	SAP-2	WT-4 AT SERVING LINE
C113	WALK INS	EPF-1	EPB	-	-	-	-	-	
C114	OFFICE	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	SAFE IN THIS ROOM
C115	TEACHERS DINING	LVT-1	RB-1	P-1	P-1, CASEWORK	P-1	P-1, CASEWORK	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
C116	RR	EPF-1	EPB	WT-2	WT-2	WT-2	WT-3	SAP-2	WALL TILE FLOOR TO CEILING
C117	LOCKERS	EPF-1	EPB	P-1	P-1	P-1	P-1	SAP-2	
C118	CUST	SC-1	EPB	P-1	P-1	P-1	P-1	SAP-2	
C120	CENTRAL PLANT	SC-1	REFER TO REMARKS	P-1	P-1	P-1	P-1	-	FIRST COARSE OF CMU BLOCKS WILL BE FILLED

ROOM FINISH SCHEDULE - FIRST FLOOR - AREA D

ROOM #	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING FINISH	REMARKS
D100	CORRIDOR	T-2, WF-1	-	P-1	P-1	WT-1, VWC-3, P-1	P-1	SAP-1, GYP	SEE INT. ELEVATION
D100A	TLT VESTIBULE	EPF-1	EPB	WT-3	WT-2, P-4	WT-2, P-4	WT-2, P-4	GYP	SEE INT. ELEVATION, TILE TO ALIGN WITH TOP OF DOOR, SEE ELEVATIONS
D101	CORRIDOR	T-2	-	WT-1, VWC-3, P-1	-	WT-1, VWC-3, P-1-	-	SAP-1	SEE INT. ELEVATION
D102	CUSTODIAN OFFICE	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
D103	IDF	SC-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
D104	RESOURCE	LVT-1	RB-1	VWC-3, CASEWORK	VWC-4	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
D105	RR	EPF-1	EPB	WT-2	WT-2	WT-2	WT-3	SAP-2	WALL TILE FLOOR TO CEILING
D106	RR	EPF-1	EFB	WT-2	WT-3	WT-2	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
D107	STAIR	SC-1	RB-1	P-1	P-1	P-1	P-1	EXP	
D108	SPEECH	CPT-2	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
D109	SPED	LVT-1	RB-1	VWC-4	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
D110	RR	EPF-1	EPB	WT-2	WT-2	WT-3	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
D111	MAINTENANCE STORAGE	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
D112	SPED OFFICE	CPT-2	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
D113	SPED OFFICE	CPT-2	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
D114	SPED	LVT-1	RB-1	VWC-3	VWC-3	VWC-4	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
D115	SPED	LVT-1	RB-1	VWC-3	VWC-3	VWC-4	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
D116	ESL COACH	CPT-2	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
D117	RR	EPF-1	EPB	WT-2	WT-2	WT-2	WT-3	SAP-2	WALL TILE FLOOR TO CEILING
D118	SPED VEST	VCT-1	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1	
D119	STO.	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
D120	ESL COACH	CPT-2	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
D121	RR	EPF-1	EPB	WT-2	WT-2	WT-3	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
D122	SPED	LVT-1	RB-1	VWC-4	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
D123	SPED	LVT-1	RB-1	VWC-4	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL

ROOM FINISH SCHEDULE - FIRST FLOOR - AREA E

ROOM #	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING FINISH	REMARKS
E100	CORRIDOR	T-1, T-2	-	P-1	WT-1, VWC-3, P-1	-	WT-1, VWC-3, P-1	SAP-1, GYP	SEE INT. ELEVATION
E100	CORRIDOR								
E101	CORRIDOR	CPT-1, CPT-2. WF-1	RB-1	WT-1, VWC-3, P-1	WT-1, VWC-3, P-1	WT-1, VWC-3, P-1	WT-1, VWC-3, P-1	SAP-1, AWC, GYP	SEE INT. ELEVATION
E102	COLLABORATION	CPT-2	RB-1	-	VWC-4	-	VWC-4	AWC	SEE INT. ELEVATIONS
E103	5TH GRADE	CPT-1	RB-1	P-4	VWC-3	VWC-3	P-1	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
E104	4TH GRADE	CPT-1	RB-1	VWC-3	VWC-3	VWC-4	P-1	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
E105	4TH GRADE	CPT-1	RB-1	VWC-3	VWC-3	P-4	P-1	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
E106	4TH GRADE	CPT-1	RB-1	P-4	VWC-3	P-1	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
E107	4TH GRADE	CPT-1	RB-1	VWC-3	VWC-4	P-1	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
E108	4TH GRADE	CPT-1	RB-1	VWC-3	VWC-3	VWC-3	VWC-4	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
E109	4TH GRADE	CPT-1	RB-1	VWC-3	VWC-4	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
E110	SCIENCE STO.	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
E111	CUSTODIAN STO.	SC-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
E112	BOOK ROOM	SC-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
E113	ELECTRICAL	SC-1	RB-1	P-1	P-1	P-1	P-1	EXP	
E114	TEACHER PREP	VCT-1	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1	
E115	CUST. STO.	SC-1	RB-1	P-1	P-1	P-1	P-1	SAP-2	
E116	5TH GRADE	CPT-1	RB-1	P-1	VWC-4	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
E117	5TH GRADE	CPT-1	RB-1	P-1	VWC-4	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
E118	5TH GRADE	CPT-1	RB-1	P-1	VWC-3	VWC-3	VWC-4	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
E119	5TH GRADE	CPT-1	RB-1	P-1	VWC-4	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
E120	5TH GRADE	CPT-1	RB-1	P-1	VWC-3	VWC-3	VWC-4	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
E121	TLT	EPF-1	EPB	WT-2	WT-2	WT-2	WT-3	SAP-2	WALL TILE FLOOR TO CEILING
E121A	TLT VEST	EPF-1	EPB	WT-3	WT-2,P-4	WT-2,P-4	WT-2, P-4	GYP	WALL TILE UP TO TOP OF DOOR, REFER TO ELEVATIONS
E122	TLT	EPF-1	EPB	WT-2	WT-3	WT-2	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
E123	TLT	EPF-1	EPB	WT-2	WT-2	WT-2	WT-3	SAP-2	WALL TILE FLOOR TO CEILING
E123A	TLT VEST	EPF-1	EPB	WT-2, P-4	WT-2, P-4	WT-3	WT-2, P-4	GYP	WALL TILE UP TO TOP OF DOOR, REFER TO ELEVATIONS
E124	TLT	EPF-1	EPB	WT-2	WT-3	WT-2	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
E125	TLT	EPF-1	EPB	WT-2	WT-2	WT-3	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
E126	TLT	EPF-1	EPB	WT-3	WT-2	WT-2	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
E127	CUST	SC-1	RB-1	P-1	P-1	P-1	P-1	SAP-2	
E129	BOOK ROOM	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
E130	IDF	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
E131	STORAGE	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	

ROOM FINISH SCHEDULE - FIRST FLOOR - AREA F

ROOM #	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING FINISH	REMARKS
F100	CORRIDOR	T-1, T-2	-	-	WT-1, VWC-3, P-1	-	WT-1, VWC-3, P-1	SAP-1	SEE INT. ELEVATION
F101	CORRIDOR	CPT-1, CPT-2, WF-1	RB-1	WT-1, VWC-3, P-1	WT-1, VWC-3, P-1	WT-1, VWC-3, P-1	WT-1, VWC-3, P-1	SAP-1, AWC, GYP	SEE INT. ELEVATION
F103	3RD GRADE	CPT-1	RB-1	VWC-4	VWC-3	VWC-3	P-1	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
F104	3RD GRADE	CPT-1	RB-1	VWC-4	VWC-3	VWC-3	P-1	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
F105	2ND GRADE	CPT-1	RB-1	VWC-3	VWC-3	VWC-4	P-1	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
F106	2ND GRADE	CPT-1	RB-1	VWC-3	VWC-3	P-1	VWC-4	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
F107	2ND GRADE	CPT-1	RB-1	VWC-3	VWC-4	P-1	VWC-4	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
F108	2ND GRADE	CPT-1	RB-1	VWC-3	VWC-4	P-1	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
F109	2ND GRADE	CPT-1	RB-1	VWC-3	VWC-3	P-1	VWC-4	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
F110	2ND GRADE	CPT-1	RB-1	VWC-3	VWC-4	P-1	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
F111	ELEC	SC-1	RB-1	P-1	P-1	P-1	P-1	EXP	
F112	IDF	SC-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
F113	INSTRUCTIONAL COACH	CPT-1	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
F114	COLLABORATION	CPT-2	RB-1	VWC-3	VWC-3	VWC-3	VWC-4	SAP-1	
F115	INSTRUCTIONAL COACH	CPT-1	RB-1	VWC-3	VWC-3	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
F116	SCIENCE	LVT-1	RB-1	VWC-3	VWC-4	VWC-3	P-1	SAP-1	REFER TO ELEVATIONS FOR CASEWORK
F117	3RD GRADE	CPT-1	RB-1	VWC-3	VWC-4	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
F118	3RD GRADE	CPT-1	RB-1	P-1	VWC-3	VWC-3	VWC-4	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
F119	3RD GRADE	CPT-1	RB-1	P-1	VWC-4	VWC-3	VWC-3	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
F120	3RD GRADE	CPT-1	RB-1	P-1	VWC-3	VWC-3	VWC-4	SAP-1	REFER TO ELEVATIONS FOR CASEWORK AND TEACHING WALL
F121	TLT	EPF-1	EPB	WT-2	WT-2	WT-2	WT-3	SAP-2	WALL TILE FLOOR TO CEILING
F121A	TLT VEST	EPF-1	EPB	WT-2, P-4	WT-2, P-4	WT-3	WT-2, P-4	GYP	WALL TILE UP TO TOP OF DOOR, REFER TO ELEVATIONS
F122	TLT	EPF-1	EPB	WT-2	WT-3	WT-2	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
F123	TLT	EPF-1	EPB	WT-2	WT-2	WT-2	WT-3	SAP-2	WALL TILE FLOOR TO CEILING
F123A	TLT VEST	EPF-1	EPB	WT-3	WT-2, P-4	WT-2, P-4	WT-2, P-4	GYP	WALL TILE UP TO TOP OF DOOR, REFER TO ELEVATIONS
F124	TLT	EPF-1	EPB	WT-2	WT-3	WT-2	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
F125	TLT	EPF-1	EPB	WT-2	WT-2	WT-3	WT-2	SAP-2	WALL TILE FLOOR TO CEILING
F126	TLT	EPF-1	EPB	WT-3	WT-2	WT-2	WT-2	SAP-2	REFER TO ELEVATION FOR TEACHING WALL
F127	CUST.	SC-1	RB-1	P-1	P-1	P-1	P-1	SAP-2	EPOXY PAINT
F129	BOOK RM	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
F130	BOOK RM	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	
F131	COLLABORATION	CPT-2	RB-1	-	VWC-1	-	VWC-1	AWC	REFER TO INTERIOR ELEVATIONS
F132	STORAGE	VCT-1	RB-1	P-1	P-1	P-1	P-1	SAP-1	

ROOM FINISH SCHEDULE - STAIRS

ROOM #	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING	REMARKS
D107	STAIR	SC-1	RB-1	P-1	P-1	P-1	P-1	EXP	

ROOM FINISH SCHEDULE - SECOND FLOOR - AREA D

ROOM #	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING	REMARKS
D201	MEP MEZZANINE	SC-1	CONCRETE CURB	P-1	P-1	P-1	P-1	EXP	

FINISH SCHEDULE NOTES

1. REFER TO INTERIOR ELEVATIONS FOR LOCATION, SIZES & TYPES OF INTERIOR FINISHES.
2. PROVIDE FLOOR OR WALL PATTERNS. REFER TO INTERIOR PLANS (A9 SERIES) FOR DESIGN DETAILS.
3. PROVIDE ACOUSTIC PANELS. REFER TO INTERIOR ELEVATIONS FOR SIZES & TYPES.
4. REFER TO REFLECTED CEILING PLAN (A10 SERIES DWGS) FOR PAINTED GYP. BD. AND/OR SPECIALTY PORTIONS OF CEILING.
5. PROVIDE 6' OF CERAMIC TILE (WT-2) WAINSCOT ON 2 WALLS ADJACENT TO MOP SINK AT JANITOR CLOSETS.
6. PROVIDE CERAMIC TILE WAINSCOT TO 4'- 0"A.F.F. WITH TACKABLE VINYL WALL COVERING ABOVE.
7. PROVIDE ACCENT WALL. REFER TO INTERIOR PLANS AND ROOM FINISH SCHEDULES FOR ACCENT PAINT LOCATIONS AT CORRIDORS.
8. AT MDF & IDF ROOMS, PROVIDE 8'-0"H, 3/4" PLYWOOD ON ALL WALL SURFACES. PAINT SIDES AND EDGES BLACK.

GENERAL NOTES

A. REFER TO REFLECTED CEILING PLAN (A10 SERIES DWGS) FOR CEILING HEIGHTS & ADDITIONAL INFORMATION.
B. ALL FINISHES SUBJECT TO ARCHITECT'S APPROVAL.
C. REFERENCE FOOD SERVICE DRAWINGS (K SERIES) FOR KITCHEN AND SERVING LINE EQUIPMENT & FINISH INFORMATION.

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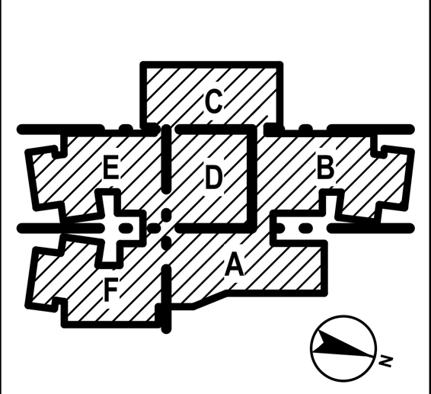
Houston, Texas 77046
pflugerarchitects.com



ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Joseph A. Raleigh Sullivan
23278
STATE OF TEXAS

DATE: 1/10/2025

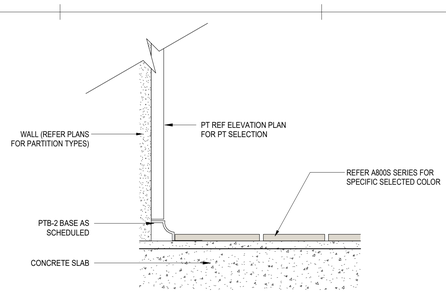
PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

No.	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

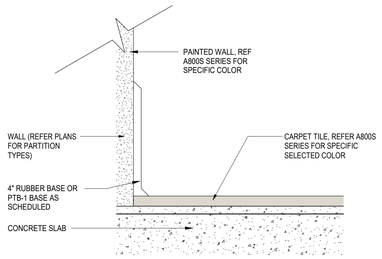
A9.00B
ROOM FINISH SCHEDULES

1/10/2025 12:01:50 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt



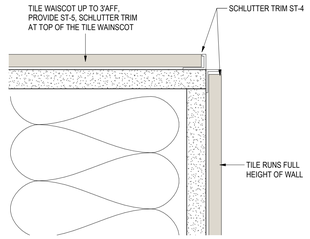
RUBBER BASE/ PTB-2 BASE 7

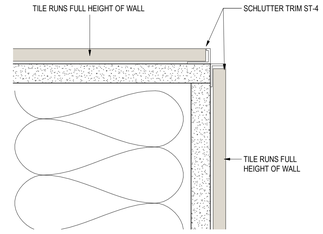
SCALE: 6" = 1'-0"



RUBBER BASE/PT BASE 6

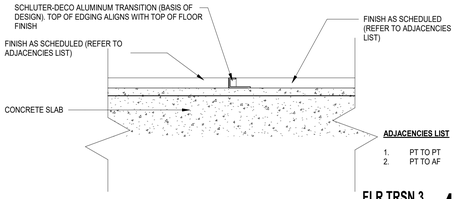
SCALE: 6" = 1'-0"





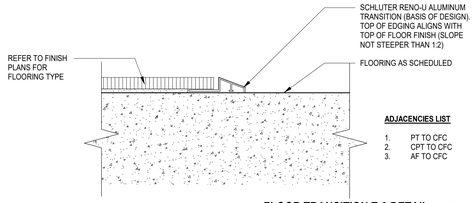
FLOOR CORNER DETAIL PT-PT 5

SCALE: 6" = 1'-0"



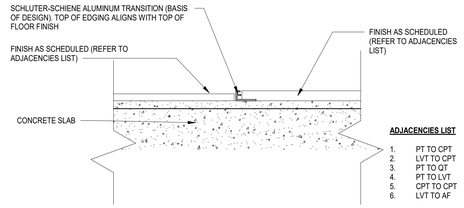
FLR TRSN 3 4

SCALE: 6" = 1'-0"



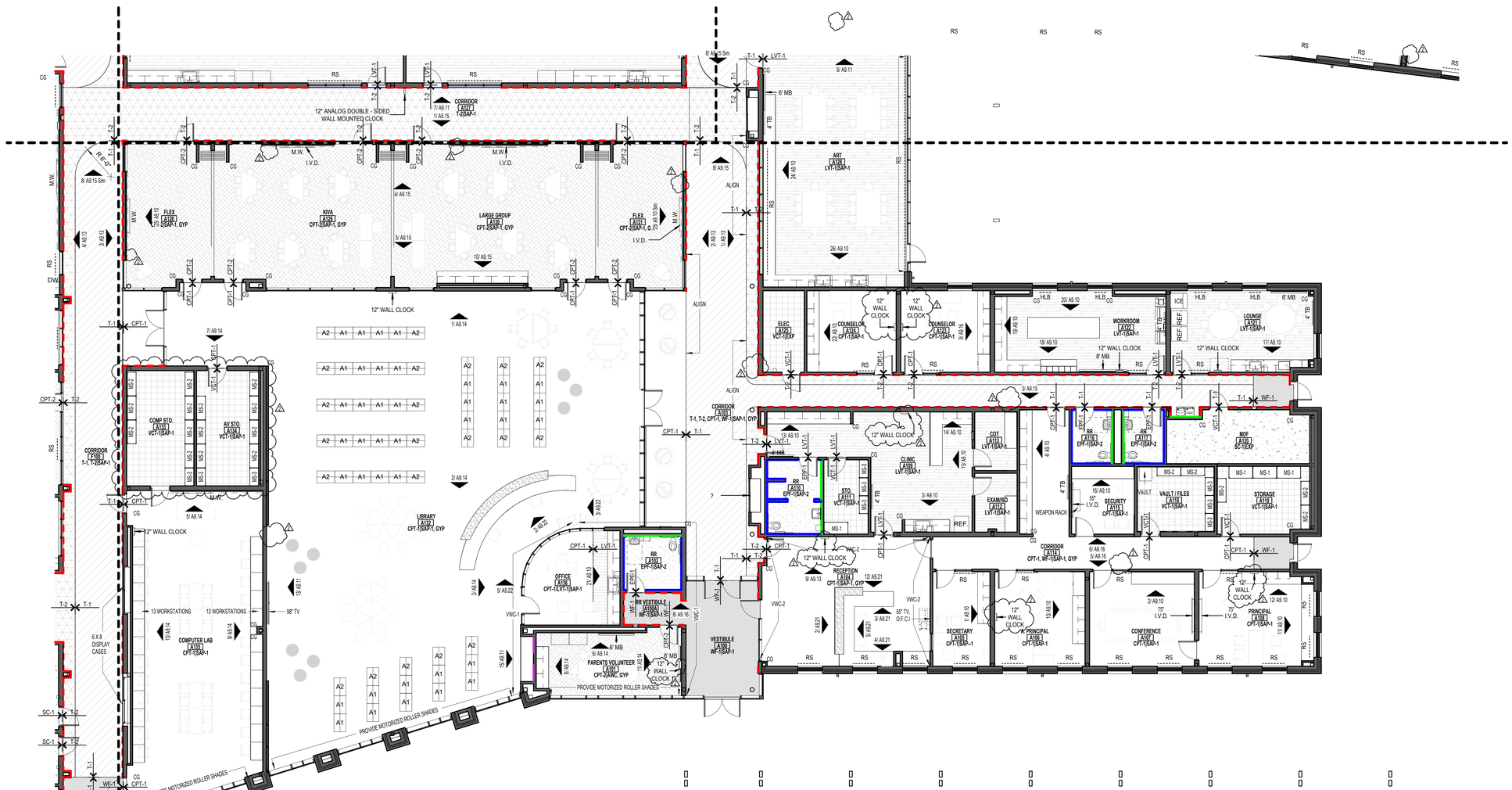
FLOOR TRANSITION T-2 DETAIL 3

SCALE: 6" = 1'-0"



FLOOR TRANSITION T-1 DETAIL 2

SCALE: 6" = 1'-0"



LEVEL 01 - FINISH PLAN - AREA A 1

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

LIBRARY CASEWORK

Type Mark	Manufacturer	Model	Series	Quantity	Width	Height	Depth	Shelves	Casters	Top	Material
A1	TESCO	ADDER_CONT TOP-4584127213	PATRIOT	39	36"	42"	24"	6	Yes	CONTINOUS WITH FLUSH_WOOD	WOOD
A2	TESCO	STARTER_CONT TOP-4583127213	PATRIOT	21	36"	42"	24"	6	Yes	CONTINOUS WITH FLUSH_WOOD	WOOD

MATERIAL FINISH LEGEND

- CPT-1 (FIELD CARPET)
- CPT-2 (ACCENT CARPET)
- T-1 (TERRAZZO)
- T-2 (TERRAZZO)
- LVT-1 (LUXURY TILE VINYL)
- VCT-1
- VCT-2
- VCT-3
- VCT-4 ACCENT SQUARES AT GYM
- WF-1 (WALK OFF CARPET)
- EPF-1 (EPOXY RESIN)
- WD-1 (WOOD)
- SC-1 (SEALED CONCRETE)

PROVIDE CONTROL JOINTS (C.J.) AS SHOWN & AT COLOR CHANGES. WHERE CONTROL JOINTS ARE NOT SHOWN, REFER TO STRUCTURAL DWGS

SYMBOLS

MW	MARKER WALL - DRY ERASE WALL-COVERING
CJ	CONTROL JOINT*
EJ	EXPANSION JOINT
CG	CORNER GUARD
HLB	HORIZONTAL LOUVER BLINDS
RS	ROLLER SHADES
CPT / VCT	FLOOR FINISH TRANSITION
	INSTALL DIRECTION
WT-1	TILE WAINSCOT UP TO 4 FT
WT-4	SERVING LINE, ACCENT TILE AT LIBRARY
WT-2	FIELD RESTROOM TILE - FULL HEIGHT
WT-3	ACCENT RESTROOM TILE - FULL HEIGHT

PAINT
P-1 MAIN WALL PAINT
P-2 WHITE (SELECT CEILING AREAS)
P-3 ACCENT

ROOM 100 PCON

FLOOR FINISH

* PROVIDE CONTROL JOINTS AS SHOWN. WHERE CONTROL JOINTS ARE NOT SHOWN, REFER TO STRUCTURAL DWGS. REFER TO STRUCTURAL DWGS FOR DIMENSIONS. AT COLOR TRANSITIONS, PROVIDE SCORE LINE U.N.O.

** REFER TO ROOM FINISH SCHEDULE FOR FULL LIST OF FINISH WITHIN ROOM

WALL FINISH TYPES

- PLP-1 TYPE 1, HORIZONTAL PATTERN
- PLP-2 TYPE 2, VERTICAL PATTERN
- PLP-3 TYPE 3, HORIZONTAL PATTERN

REFER TO 3A 9.35 FOR MORE INFORMATION

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office: 713.222.1141 | fax: 713.222.1174
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Houston, Texas 77046
pflugerarchitects.com

C E D B F A

ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Regina Raleigh Pfluger
23278
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

A9.01A
LEVEL 1 FINISH / CASEWORK PLAN AREA A

1/10/2025 12:02:06 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt

MATERIAL FINISH LEGEND

- CPT-1 (FIELD CARPET)
- CPT-2 (ACCENT CARPET)
- T-1 (TERRAZZO)
- T-2 (TERRAZZO)
- LVT-1 (LUXURY TILE VINYL)
- VCT-1
- VCT-2
- VCT-3
- VCT-4 ACCENT SQUARES AT GYM
- WF-1 (WALK OFF CARPET)
- EPF-1 (EPOXY RESIN)
- WD-1 (WOOD)
- SC-1 (SEALED CONCRETE)

PROVIDE CONTROL JOINTS (C.J.) AS SHOWN & AT COLOR CHANGES. WHERE CONTROL JOINTS ARE NOT SHOWN, REFER TO STRUCTURAL DWGS

SYMBOLS

MW	MARKER WALL - DRY ERASE WALL-COVERING
CJ	CONTROL JOINT*
EJ	EXPANSION JOINT
CG	CORNER GUARD
HLB	HORIZONTAL LOUVER BLINDS
RS	ROLLER SHADES
CPT / VCT	FLOOR FINISH TRANSITION
	INSTALL DIRECTION
WT-1	TILE WAINSCOT UP TO 4 FT
WT-4	SERVING LINE, ACCENT TILE AT LIBRARY
WT-2	FIELD RESTROOM TILE - FULL HEIGHT
WT-3	ACCENT RESTROOM TILE - FULL HEIGHT

PAINT
P-1 MAIN WALL PAINT
P-2 WHITE (SELECT CEILING AREAS)
P-3 ACCENT

ROOM 100 PCON — FLOOR FINISH

* PROVIDE CONTROL JOINTS AS SHOWN. WHERE CONTROL JOINTS ARE NOT SHOWN, REFER TO STRUCTURAL DWGS. REFER TO STRUCTURAL DWGS FOR DIMENSIONS. AT COLOR TRANSITIONS, PROVIDE SCORE LINE U.N.O.

** REFER TO ROOM FINISH SCHEDULE FOR FULL LIST OF FINISH WITHIN ROOM

WALL FINISH TYPES

- PLP-1 TYPE 1, HORIZONTAL PATTERN
- PLP-2 TYPE 2, VERTICAL PATTERN
- PLP-3 TYPE 3, HORIZONTAL PATTERN

REFER TO 3A 9.35 FOR MORE INFORMATION

LEVEL 01 - FINISH PLAN - AREA B 1
SCALE: 1/8" = 1'-0"

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Houston, Texas 77046
pflugerarchitects.com

ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT — Joshua Raleigh Pfluger — 23279 — STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

A9.01B
LEVEL 1 FINISH / CASEWORK PLAN AREA B

1/10/2025 12:02:29 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt

MATERIAL FINISH LEGEND

- CPT-1 (FIELD CARPET)
- CPT-2 (ACCENT CARPET)
- T-1 (TERRAZZO)
- T-2 (TERRAZZO)
- LVT-1 (LUXURY TILE VINYL)
- VCT-1
- VCT-2
- VCT-3
- VCT-4 ACCENT SQUARES AT GYM
- WF-1 (WALK OFF CARPET)
- EPF-1 (EPOXY RESIN)
- WD-1 (WOOD)
- SC-1 (SEALED CONCRETE)

PROVIDE CONTROL JOINTS (C.J.) AS SHOWN & AT COLOR CHANGES. WHERE CONTROL JOINTS ARE NOT SHOWN, REFER TO STRUCTURAL DWGS

SYMBOLS

- **MW** MARKER WALL - DRY ERASE WALL-COVERING
- **CJ** CONTROL JOINT*
- **EJ** EXPANSION JOINT
- **CG** CORNER GUARD
- **HLB** HORIZONTAL LOUVER BLINDS
- **RS** ROLLER SHADES
- CPT / VCT — FLOOR FINISH TRANSITION
- INSTALL DIRECTION
- WT-1 TILE WAINSCOT UP TO 4 FT
- WT-4 SERVING LINE, ACCENT TILE AT LIBRARY
- WT-2 FIELD RESTROOM TILE - FULL HEIGHT
- WT-3 ACCENT RESTROOM TILE - FULL HEIGHT

PAINT
P-1 MAIN WALL PAINT
P-2 WHITE (SELECT CEILING AREAS)
P-3 ACCENT

ROOM
100
PCON
FLOOR FINISH

* PROVIDE CONTROL JOINTS AS SHOWN. WHERE CONTROL JOINTS ARE NOT SHOWN, REFER TO STRUCTURAL DWGS. REFER TO STRUCTURAL DWGS FOR DIMENSIONS. AT COLOR TRANSITIONS, PROVIDE SCORE LINE U.N.O.

** REFER TO ROOM FINISH SCHEDULE FOR FULL LIST OF FINISH WITHIN ROOM

WALL FINISH TYPES

- PLP-1 TYPE 1, HORIZONTAL PATTERN
- PLP-2 TYPE 2, VERTICAL PATTERN
- PLP-3 TYPE 3, HORIZONTAL PATTERN

REFER TO 3A 9.35 FOR MORE INFORMATION

LEVEL 01 - FINISH PLAN - AREA C 1
SCALE: 1/8" = 1'-0"

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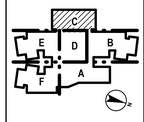
Houston, Texas 77046
pflugerarchitects.com



ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Sonia Raleigh
23278
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

No.	Date	Description
1	12/20/2024	ADDENDUM #1
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

A9.01C
LEVEL 1 FINISH / CASEWORK PLAN AREA C

Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt
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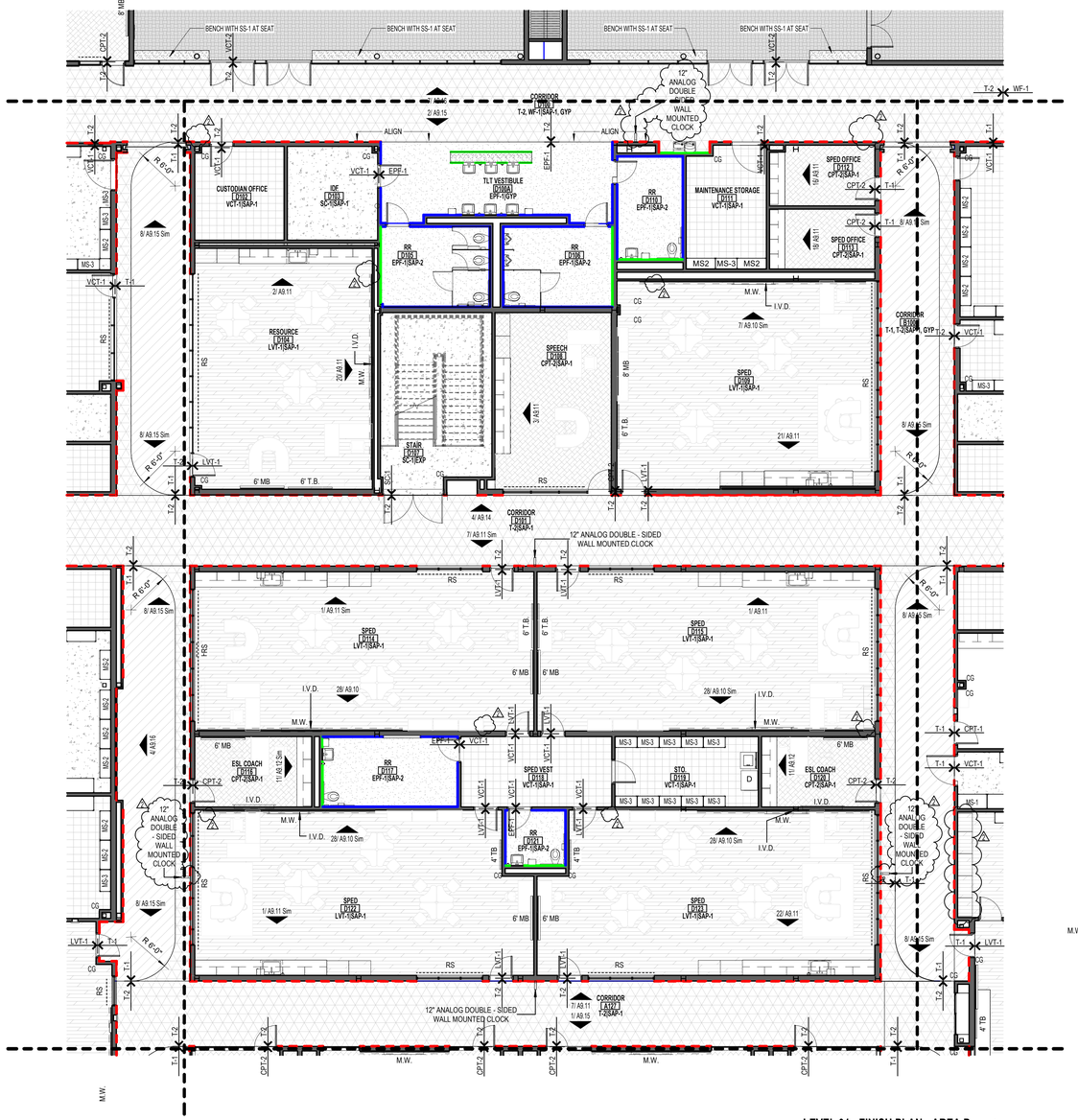

LEVEL 01 - FINISH PLAN - AREA D 1

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

MATERIAL FINISH LEGEND

- CPT-1 (FIELD CARPET)
- CPT-2 (ACCENT CARPET)
- T-1 (TERRAZZO)
- T-2 (TERRAZZO)
- LVT-1 (LUXURY TILE VINYL)
- VCT-1
- VCT-2
- VCT-3
- VCT-4 ACCENT SQUARES AT GYM
- WF-1 (WALK OFF CARPET)
- EPF-1 (EPOXY RESIN)
- WD-1 (WOOD)
- SC-1 (SEALED CONCRETE)

PROVIDE CONTROL JOINTS (C.J.) AS SHOWN & AT COLOR CHANGES. WHERE CONTROL JOINTS ARE NOT SHOWN, REFER TO STRUCTURAL DWGS.

SYMBOLS

MW	MARKER WALL - DRY ERASE WALL-COVERING
CJ	CONTROL JOINT*
EJ	EXPANSION JOINT
CG	CORNER GUARD
HLB	HORIZONTAL LOUVER BLINDS
RS	ROLLER SHADES
CPT / VCT	FLOOR FINISH TRANSITION
	INSTALL DIRECTION
WT-1	TILE WAINSCOT UP TO 4 FT
WT-4	SERVING LINE, ACCENT TILE AT LIBRARY
WT-2	FIELD RESTROOM TILE - FULL HEIGHT
WT-3	ACCENT RESTROOM TILE - FULL HEIGHT

PAINT
P-1 MAIN WALL PAINT
P-2 WHITE (SELECT CEILING AREAS)
P-3 ACCENT

ROOM 100 PCON — FLOOR FINISH

* PROVIDE CONTROL JOINTS AS SHOWN. WHERE CONTROL JOINTS ARE NOT SHOWN, REFER TO STRUCTURAL DWGS. REFER TO STRUCTURAL DWGS FOR DIMENSIONS. AT COLOR TRANSITIONS, PROVIDE SCORE LINE U.N.O.

** REFER TO ROOM FINISH SCHEDULE FOR FULL LIST OF FINISH WITHIN ROOM

WALL FINISH TYPES

- PLP-1 TYPE 1, HORIZONTAL PATTERN
- PLP-2 TYPE 2, VERTICAL PATTERN
- PLP-3 TYPE 3, HORIZONTAL PATTERN

REFER TO 3A 9.35 FOR MORE INFORMATION

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2 Greenway Plaza #460
Houston, Texas 77046
pflugerarchitects.com

C D E F A B

ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT — Rebecca Raleigh Pfluger — 23278 — STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

A9.01D
LEVEL 1 FINISH / CASEWORK PLAN AREA D

1/10/2025 12:02:46 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt

LEVEL 01 - FINISH PLAN - AREA E

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

MATERIAL FINISH LEGEND

- CPT-1 (FIELD CARPET)
- CPT-2 (ACCENT CARPET)
- T-1 (TERRAZZO)
- T-2 (TERRAZZO)
- LVT-1 (LUXURY TILE VINYL)
- VCT-1
- VCT-2
- VCT-3
- VCT-4 ACCENT SQUARES AT GYM
- WF-1 (WALK OFF CARPET)
- EPF-1 (EPOXY RESIN)
- WD-1 (WOOD)
- SC-1 (SEALED CONCRETE)

PROVIDE CONTROL JOINTS (C.J.) AS SHOWN & AT COLOR CHANGES. WHERE CONTROL JOINTS ARE NOT SHOWN, REFER TO STRUCTURAL DWGS

SYMBOLS

- MW MARKER WALL - DRY ERASE WALL-COVERING
- CJ CONTROL JOINT*
- EJ EXPANSION JOINT
- CG CORNER GUARD
- HLB HORIZONTAL LOUVER BLINDS
- RS ROLLER SHADES
- CPT / VCT FLOOR FINISH TRANSITION
- INSTALL DIRECTION
- WT-1 TILE WAINSCOT UP TO 4 FT
- WT-4 SERVING LINE, ACCENT TILE AT LIBRARY
- WT-2 FIELD RESTROOM TILE - FULL HEIGHT
- WT-3 ACCENT RESTROOM TILE - FULL HEIGHT

PAINT
P-1 MAIN WALL PAINT
P-2 WHITE (SELECT CEILING AREAS)
P-3 ACCENT

ROOM NO. 100
PCON
FLOOR FINISH

* PROVIDE CONTROL JOINTS AS SHOWN. WHERE CONTROL JOINTS ARE NOT SHOWN, REFER TO STRUCTURAL DWGS. REFER TO STRUCTURAL DWGS FOR DIMENSIONS. AT COLOR TRANSITIONS, PROVIDE SCORE LINE U.N.O.

** REFER TO ROOM FINISH SCHEDULE FOR FULL LIST OF FINISH WITHIN ROOM

WALL FINISH TYPES

- PLP-1 TYPE 1, HORIZONTAL PATTERN
- PLP-2 TYPE 2, VERTICAL PATTERN
- PLP-3 TYPE 3, HORIZONTAL PATTERN

REFER TO 3A 9.35 FOR MORE INFORMATION

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Houston, Texas 77046
pflugerarchitects.com

ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Joshua Raleigh Pfluger
23279
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

Δ	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

A9.01E
LEVEL 1 FINISH / CASEWORK PLAN AREA E

1/10/2025 12:03:03 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt

MATERIAL FINISH LEGEND

- CPT-1 (FIELD CARPET)
- CPT-2 (ACCENT CARPET)
- T-1 (TERRAZZO)
- T-2 (TERRAZZO)
- LVT-1 (LUXURY TILE VINYL)
- VCT-1
- VCT-2
- VCT-3
- VCT-4 ACCENT SQUARES AT GYM
- WF-1 (WALK OFF CARPET)
- EPF-1 (EPOXY RESIN)
- WD-1 (WOOD)
- SC-1 (SEALED CONCRETE)

PROVIDE CONTROL JOINTS (C.J.) AS SHOWN & AT COLOR CHANGES. WHERE CONTROL JOINTS ARE NOT SHOWN, REFER TO STRUCTURAL DWGS

SYMBOLS

MW	MARKER WALL - DRY ERASE WALL-COVERING
CJ	CONTROL JOINT*
EJ	EXPANSION JOINT
CG	CORNER GUARD
HLB	HORIZONTAL LOUVER BLINDS
RS	ROLLER SHADES

CPT / VCT — FLOOR FINISH TRANSITION

INSTALL DIRECTION

- WT-1 TILE WAINSCOT UP TO 4 FT
- WT-4 SERVING LINE, ACCENT TILE AT LIBRARY
- WT-2 FIELD RESTROOM TILE - FULL HEIGHT
- WT-3 ACCENT RESTROOM TILE - FULL HEIGHT

PAINT
P-1 MAIN WALL PAINT
P-2 WHITE (SELECT CEILING AREAS)
P-3 ACCENT

ROOM 100 PCON — FLOOR FINISH

* PROVIDE CONTROL JOINTS AS SHOWN. WHERE CONTROL JOINTS ARE NOT SHOWN, REFER TO STRUCTURAL DWGS. REFER TO STRUCTURAL DWGS FOR DIMENSIONS. AT COLOR TRANSITIONS, PROVIDE SCORE LINE U.N.O.

** REFER TO ROOM FINISH SCHEDULE FOR FULL LIST OF FINISH WITHIN ROOM

WALL FINISH TYPES

- PLP-1 TYPE 1, HORIZONTAL PATTERN
- PLP-2 TYPE 2, VERTICAL PATTERN
- PLP-3 TYPE 3, HORIZONTAL PATTERN

REFER TO 3A 9.35 FOR MORE INFORMATION

LEVEL 01 - FINISH PLAN - AREA F 1
SCALE: 1/8" = 1'-0"

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2 Greenway Plaza #460
Houston, Texas 77046
pflugerarchitects.com

ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT — Rocha Raleigh Pfluger — 23278 — STATE OF TEXAS
DATE: 1/10/2025

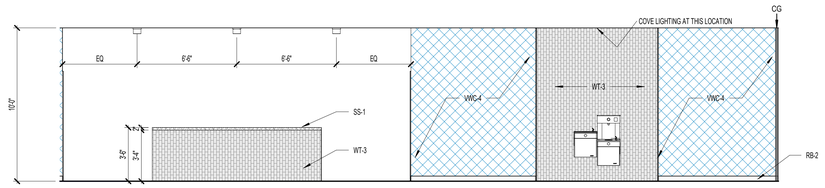
PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

	Date	Description
2	01/10/2025	ADDENDUM #2

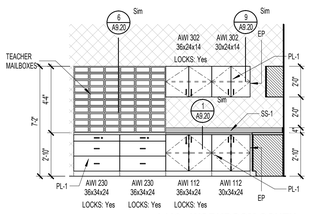
100% CONSTRUCTION DOCUMENTS

A9.01F
LEVEL 1 FINISH / CASEWORK PLAN AREA F

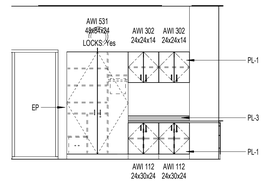
Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt
1/10/2025 12:03:21 PM



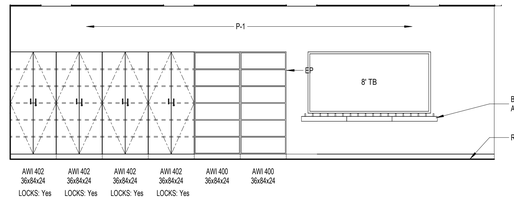
TYPICAL DRINKING FOUNTAIN WALL 29
SCALE: 1/4" = 1'-0"



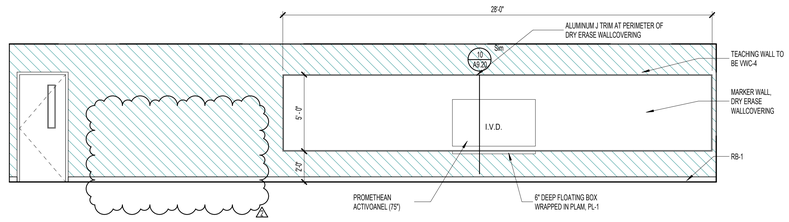
A122 - WORKROOM SOUTH 18
SCALE: 1/4" = 1'-0"



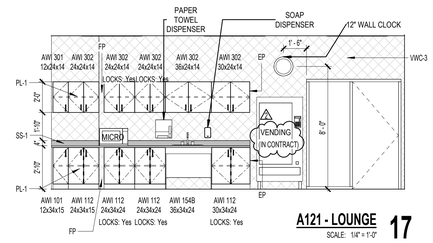
PRINCIPAL OFFICE 2 12
SCALE: 1/4" = 1'-0"



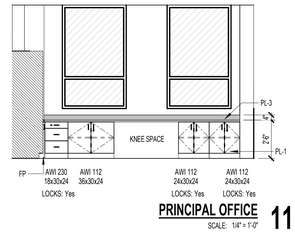
TYPICAL CASEWORK AT 1ST - 5TH GRADE 6
SCALE: 1/4" = 1'-0"



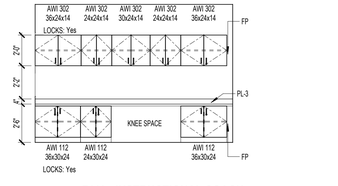
TYPICAL SPED MARKERWALL 28
SCALE: 1/4" = 1'-0"



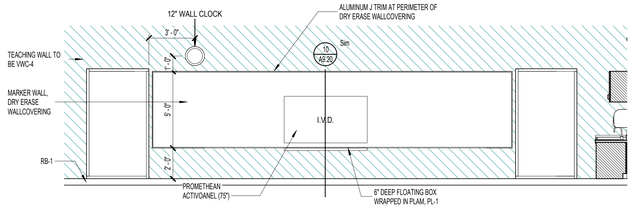
A121 - LOUNGE 17
SCALE: 1/4" = 1'-0"



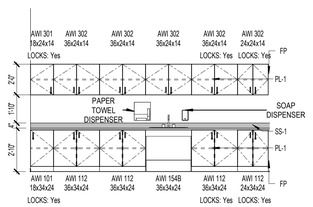
PRINCIPAL OFFICE 11
SCALE: 1/4" = 1'-0"



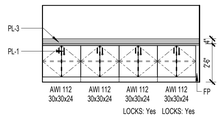
F113 - INSTRUCTIONAL COACH 5
SCALE: 1/4" = 1'-0"



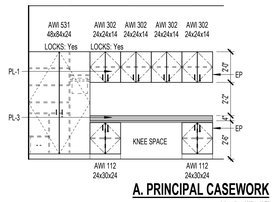
F116 - SCIENCE TEACHING WALL 27
SCALE: 1/4" = 1'-0"



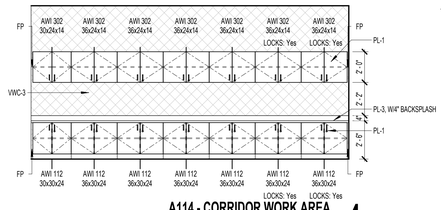
A136 - LIBRARY OFFICE 21
SCALE: 1/4" = 1'-0"



SECURITY OFFICE 16
SCALE: 1/4" = 1'-0"



A. PRINCIPAL CASEWORK 10
SCALE: 1/4" = 1'-0"



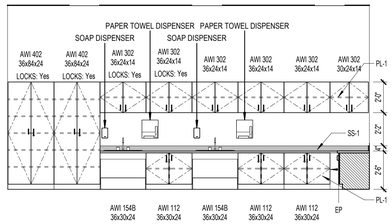
A114 - CORRIDOR WORK AREA 4
SCALE: 1/4" = 1'-0"

DRY-ERASE WALLCOVERING NOTES:

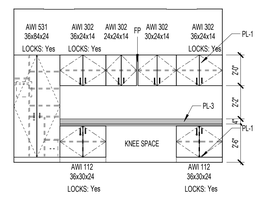
1. ALL WALLS TO RECEIVE DRY ERASE WALLCOVERING TO BE LEVEL 5 FINISH.

2. INSTALL ALUMINUM J TRIM AT PERIMETER.

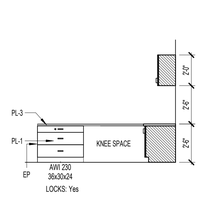
3. DRY ERASE WALLCOVERING SHOULD BE WRITABLE AND PROJECTION.



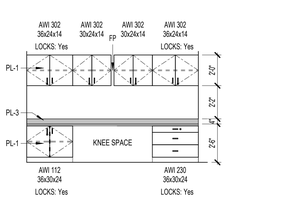
A126 - ART BUILT-INS 2 26
SCALE: 1/4" = 1'-0"



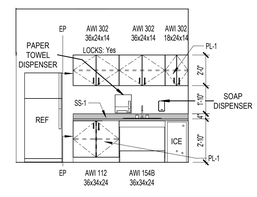
A124 - COUNSELOR 22
SCALE: 1/4" = 1'-0"



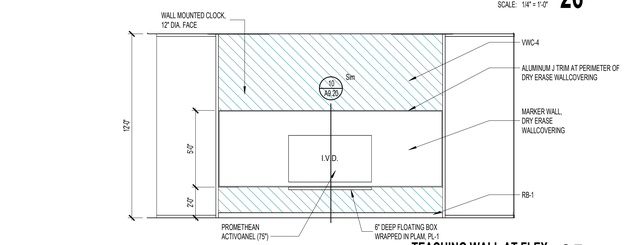
CLINIC DESK 2 15
SCALE: 1/4" = 1'-0"



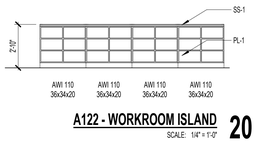
F115 - INSTRUCTIONAL COACH 9
SCALE: 1/4" = 1'-0"



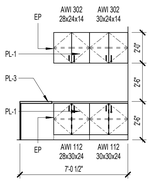
CLINIC BUILT-IN 3
SCALE: 1/4" = 1'-0"



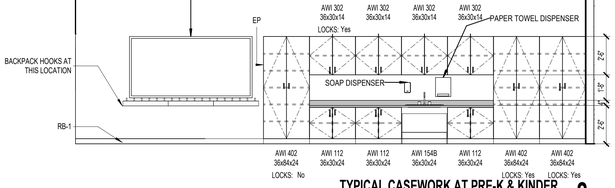
TEACHING WALL AT FLEX 25
SCALE: 1/4" = 1'-0"



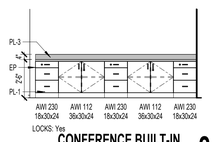
A122 - WORKROOM ISLAND 20
SCALE: 1/4" = 1'-0"



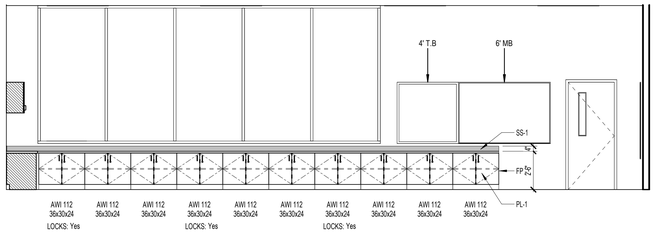
CLINIC DESK 1 14
SCALE: 1/4" = 1'-0"



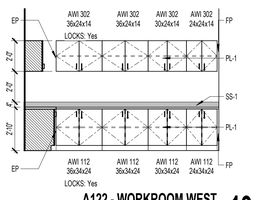
TYPICAL CASEWORK AT PRE-K & KINDER 8
SCALE: 1/4" = 1'-0"



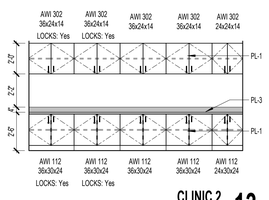
CONFERENCE BUILT-IN 2
SCALE: 1/4" = 1'-0"



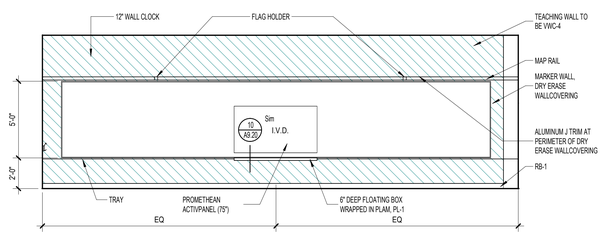
A126 - ART BUILT-INS 24
SCALE: 1/4" = 1'-0"



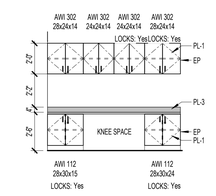
A122 - WORKROOM WEST 19
SCALE: 1/4" = 1'-0"



CLINIC 2 13
SCALE: 1/4" = 1'-0"



TYPICAL TEACHING WALL AT CLASSROOMS 7
SCALE: 1/4" = 1'-0"



A105 - SECRETARY 1
SCALE: 1/4" = 1'-0"

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Joshua Raleigh Pfluger
23279
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

Δ	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS

A9.10
INTERIOR ELEVATIONS

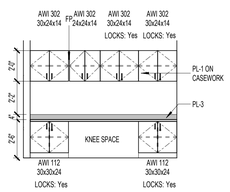
1/10/2025 12:03:31 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt

DRY-ERASE WALLCOVERING NOTES:

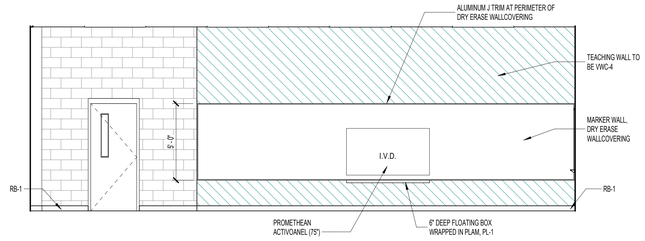
1. ALL WALLS TO RECEIVE DRY ERASE WALLCOVERING TO BE LEVEL 5 FINISH.

2. INSTALL ALUMINUM J TRIM AT PERIMETER.

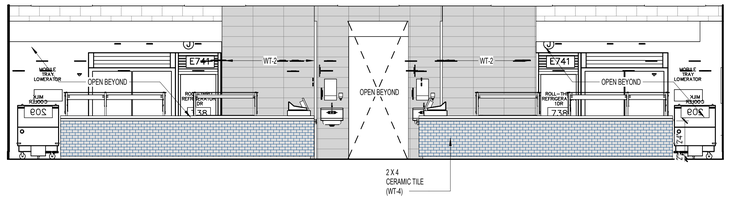
3. DRY ERASE WALLCOVERING SHOULD BE WRITABLE AND PROJECTION.



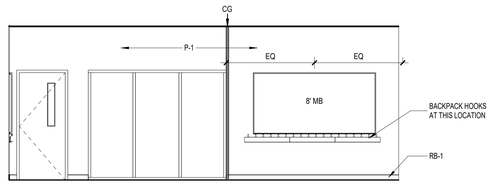
D120 ESL COACH 11
SCALE: 1/4" = 1'-0"



C100 - MUSIC NORTH 10
SCALE: 1/4" = 1'-0"



TILE AT SERVING LINE 9
SCALE: 1/4" = 1'-0"

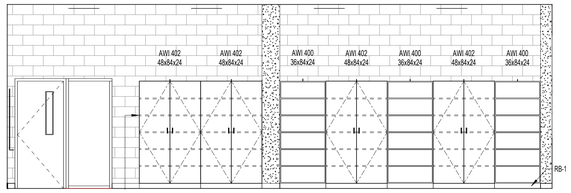


BACKPACK HOOKS AT DOOR WALL 8
SCALE: 1/4" = 1'-0"

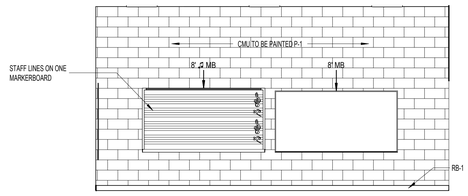
PLAM SYSTEM'S TRIM NOTE FOR STAGE (PLWS)

1. ALL VERTICAL DIVIDER MOLDING SHALL BE #302A .018", UON
2. ALL HORIZONTAL DIVIDER MOLDING SHALL BE #631
3. ALL TOP AND BOTTOM EDGE TRIM SHALL BE #604A 3/8", UON
4. ALL CORNER REVEAL SHALL BE #803, UON
5. ALL SIDE TRIM SHALL BE #804, UON

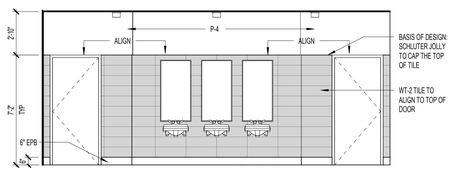
BASIS OF DESIGN: PSI SYSTEM



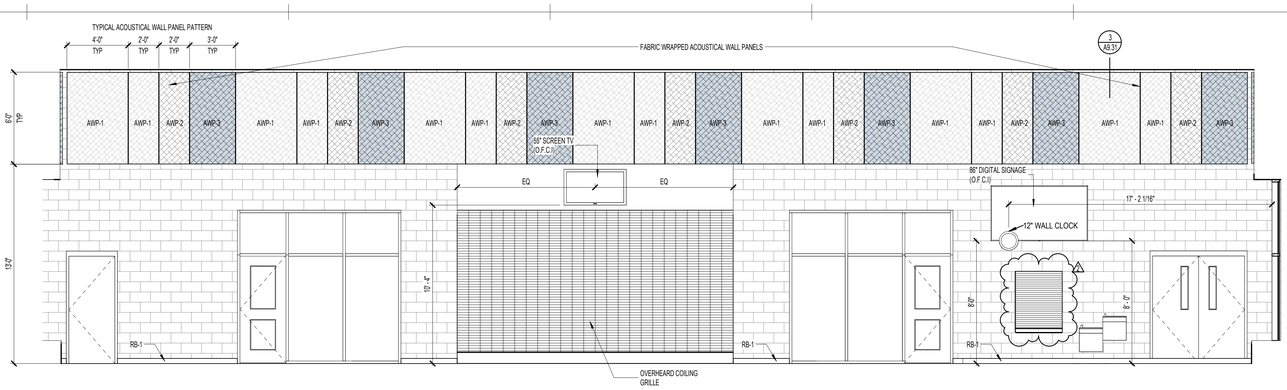
C100 - MUSIC CASEWORK 7
SCALE: 1/4" = 1'-0"



C100 - MUSIC EAST 6
SCALE: 1/4" = 1'-0"



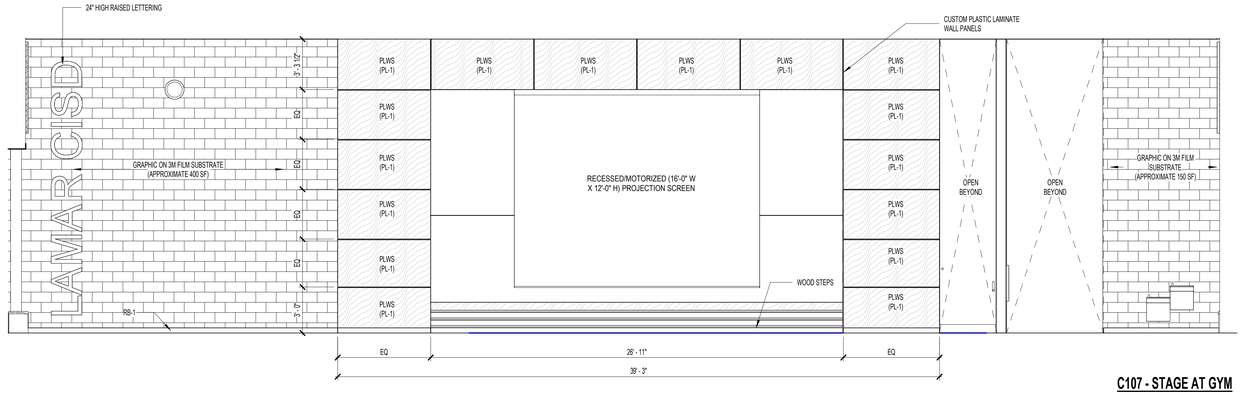
TYPICAL SINK WALL AT TLT VESTIBULE 5
SCALE: 1/4" = 1'-0"



ACOUSTICAL WALL PANEL NOTES:

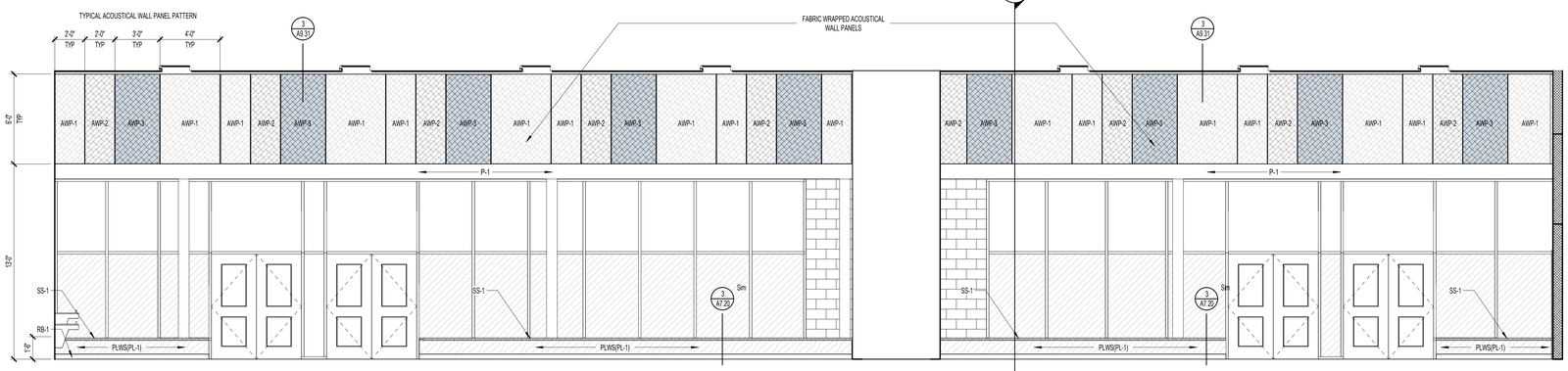
1. BASIS OF DESIGN: MOMENTUM, FELTRO
   AWP-1: FELTRO, CLOUD
   AWP-2: FELTRO, SLATE
   AWP-3: FELTRO, SPA

C107/C108 - EAST 4
SCALE: 1/4" = 1'-0"



C107 - STAGE AT GYM 3
SCALE: 1/4" = 1'-0"

C107/C108 - SOUTH 2
SCALE: 1/4" = 1'-0"



C107/C108 - NORTH 1
SCALE: 1/4" = 1'-0"

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT
Joshua Raleigh Pfluger
33278
STATE OF TEXAS

DATE: 1/10/2025

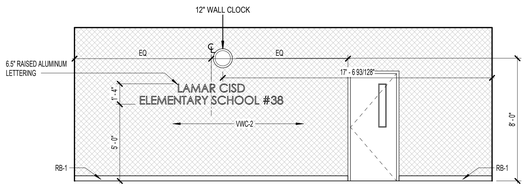
PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

Δ	Date	Description
2	01/10/2025	ADDENDUM #2

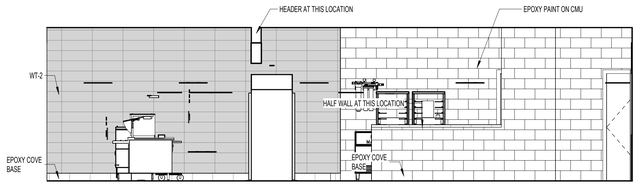
100% CONSTRUCTION DOCUMENTS

A9.12
INTERIOR ELEVATIONS

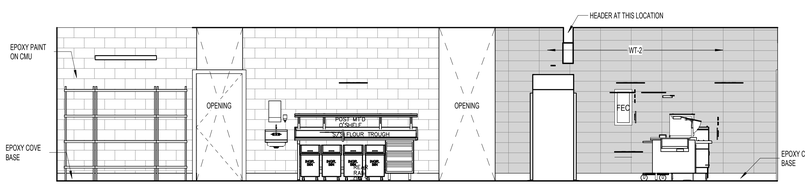
1/10/2025 12:03:38 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt



RECEPTION - NORTH 9
SCALE: 1/4" = 1'-0"



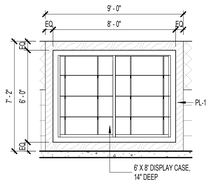
KITCHEN - NORTH WALL 6
SCALE: 1/4" = 1'-0"



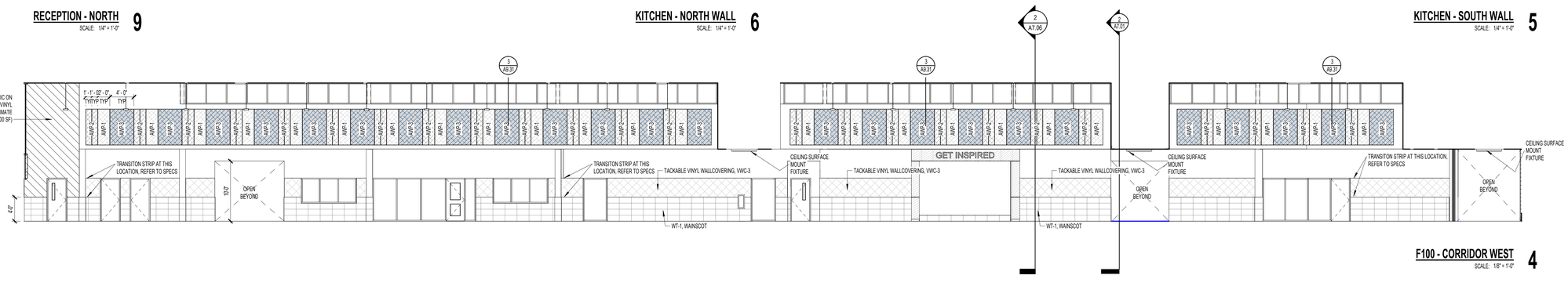
KITCHEN - SOUTH WALL 5
SCALE: 1/4" = 1'-0"

ACOUSTICAL WALL PANEL NOTES:

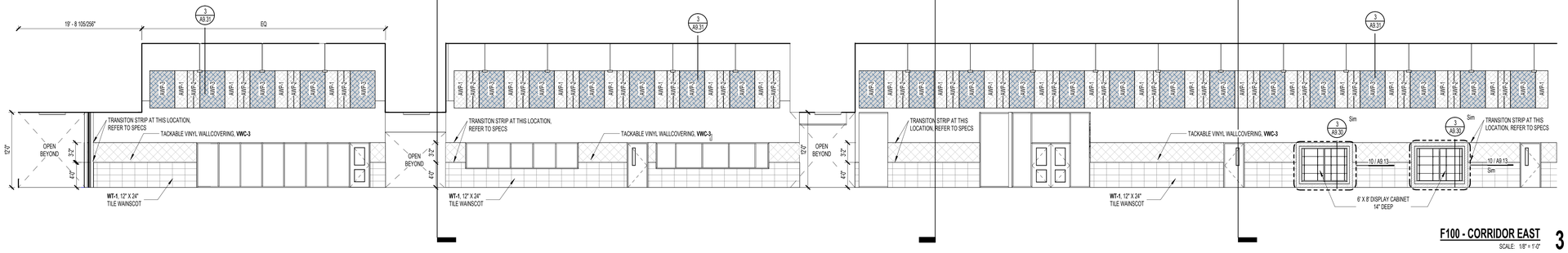
1. BASIS OF DESIGN: MOMENTUM, FELTRO
   AWP-1: FELTRO, CLOUD
   AWP-2: FELTRO, SLATE
   AWP-3: FELTRO, SPA



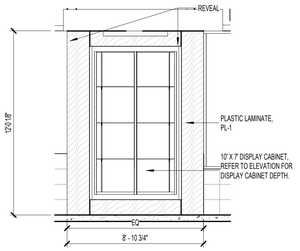
DETAIL - DISPLAY CASES 2 10
SCALE: 1/4" = 1'-0"



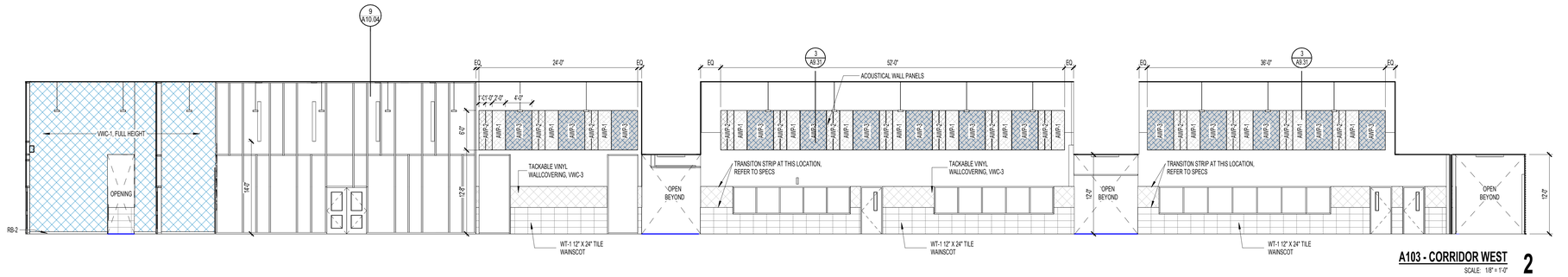
F100 - CORRIDOR WEST 4
SCALE: 1/8" = 1'-0"



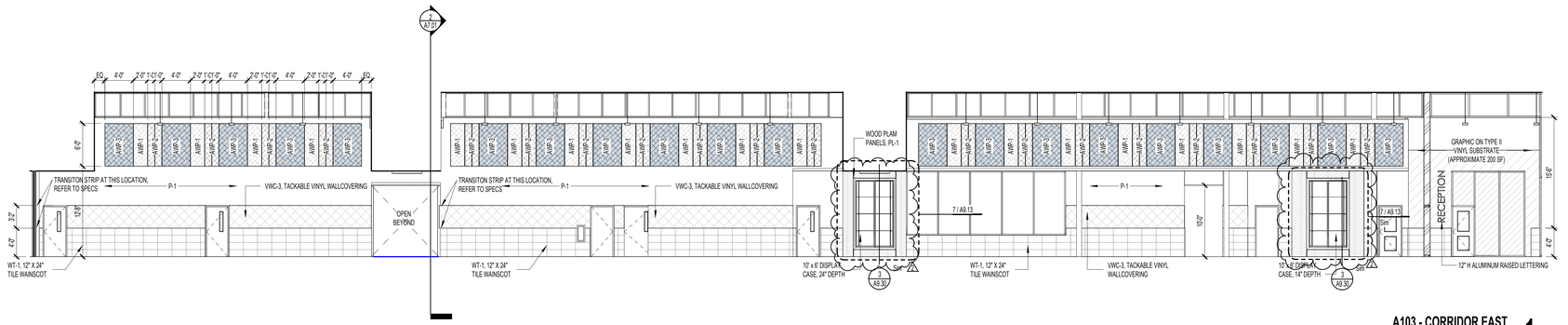
F100 - CORRIDOR EAST 3
SCALE: 1/8" = 1'-0"



DISPLAY CASE 7
SCALE: 1/4" = 1'-0"



A103 - CORRIDOR WEST 2
SCALE: 1/8" = 1'-0"



A103 - CORRIDOR EAST 1
SCALE: 1/8" = 1'-0"

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REGISTERED ARCHITECT
Regina Raleigh Pfluger
23276
STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
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DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

No.	Date	Description
2	01/10/2025	ADDENDUM #2

100% CONSTRUCTION DOCUMENTS
A9.13
INTERIOR ELEVATIONS

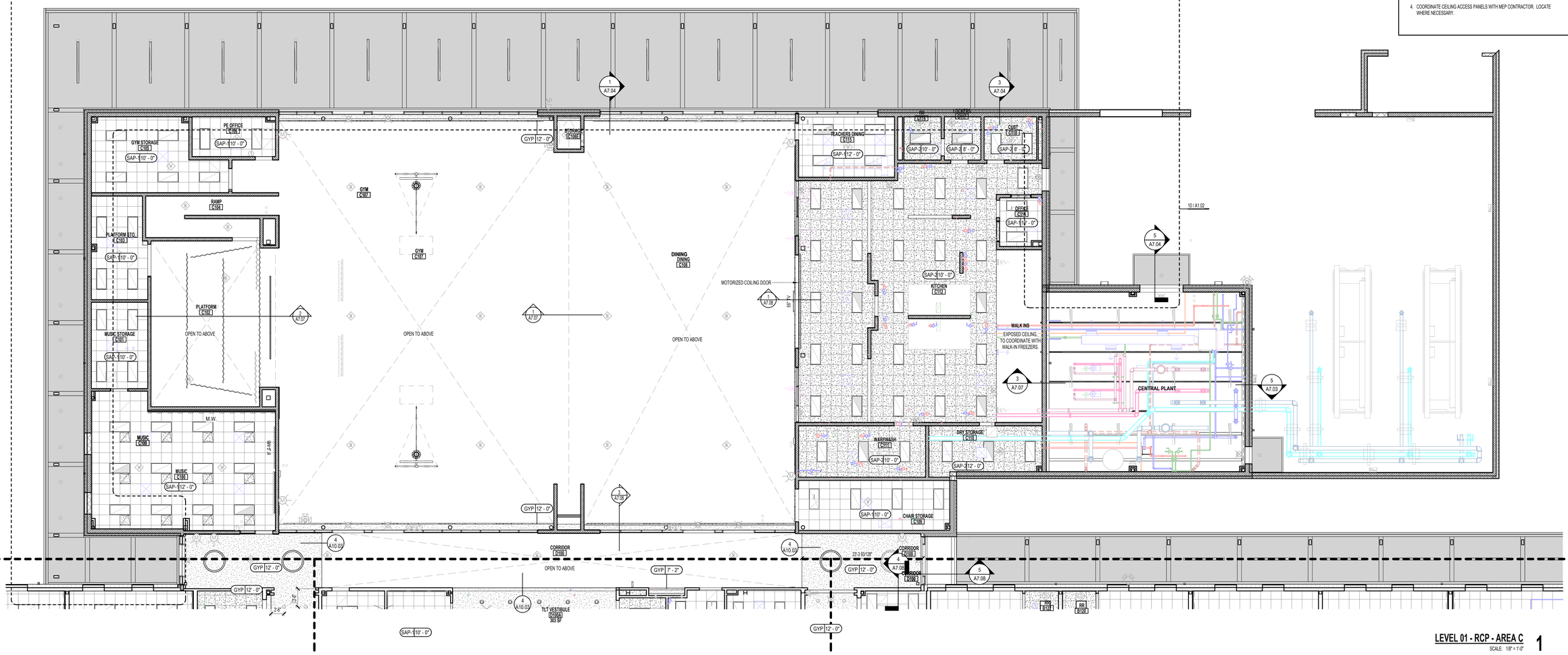
1/10/2025 12:03:44 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt

REFLECTED CEILING PLAN LEGEND

- 2' X 4' LED FIXTURE (RECESSED)
- LINEAR LED FIXTURE (RECESSED)
- LINEAR LED FIXTURE (SUSPENDED)
- LINEAR LED FIXTURE (SURFACE MOUNTED)
- RECESSED CAN FIXTURE
- PENDANT LIGHT FIXTURE
- SURFACE MOUNTED CAN LIGHT FIXTURE
- WALL SCONCE
- SUPPLY AIR GRILLE
- RETURN AIR GRILLE
- APC1 10' - 0" — CEILING TYPE & HEIGHT
- CEILING INSTALL DIRECTION
- 109'-8" — ELEVATION HEIGHT SYMBOL
- SUSPENDED GYPSUM BOARD (GYP)
- SUSPENDED CEILING SYSTEM WITH LAY-IN ACOUSTICAL PANELS (SAP-1)
- SUSPENDED CEILING SYSTEM WITH LAY-IN VINYL FACED PANELS (SAP-2)
- SUSPENDED CEILING SYSTEM WITH BLACK LAY-IN ACOUSTICAL PANELS (SAP-3)
- INTERIOR / EXTERIOR METAL CEILING
- INTERIOR / EXTERIOR METAL CEILING, WOOD FINISH (AWC)
- EXPOSED STRUCTURE, PAINTED
- METAL SOFFIT, EXTERIOR

GENERAL NOTES:

1. REFER TO INTERIOR AND EXTERIOR ELEVATIONS FOR LIGHT FIXTURE MOUNTING HEIGHTS.
2. MEP & ARCHITECT TO REVIEW AND APPROVE SPRINKLER KEYOUT AND HEAD LOCATIONS PRIOR TO CONSTRUCTION. SUBMIT PLAN USING ARCHITECTS RCPS.
3. AT AREAS WHERE CEILING IS EXPOSED - EXPOSED CONDUIT TO BE LOCATED NEATLY. ARCHITECT TO APPROVE LAYOUTS.
4. COORDINATE CEILING ACCESS PANELS WITH MEP CONTRACTOR. LOCATE WHERE NECESSARY.



LEVEL 01 - RCP - AREA C 1

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

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

REGISTERED ARCHITECT — Joshua Raleigh Pfluger — 23278 — STATE OF TEXAS

DATE: 1/10/2025

PROJECT NO. 24-028
DATE: 1/10/2025
DRAWN BY: DRW CHECKED BY: CHK
REVISIONS:

No.	Date	Description

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A10.01C
LEVEL 1 CEILING PLAN
AREA C

Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24-028_ARCH_ES38 BROOKEWATER_R24.rvt
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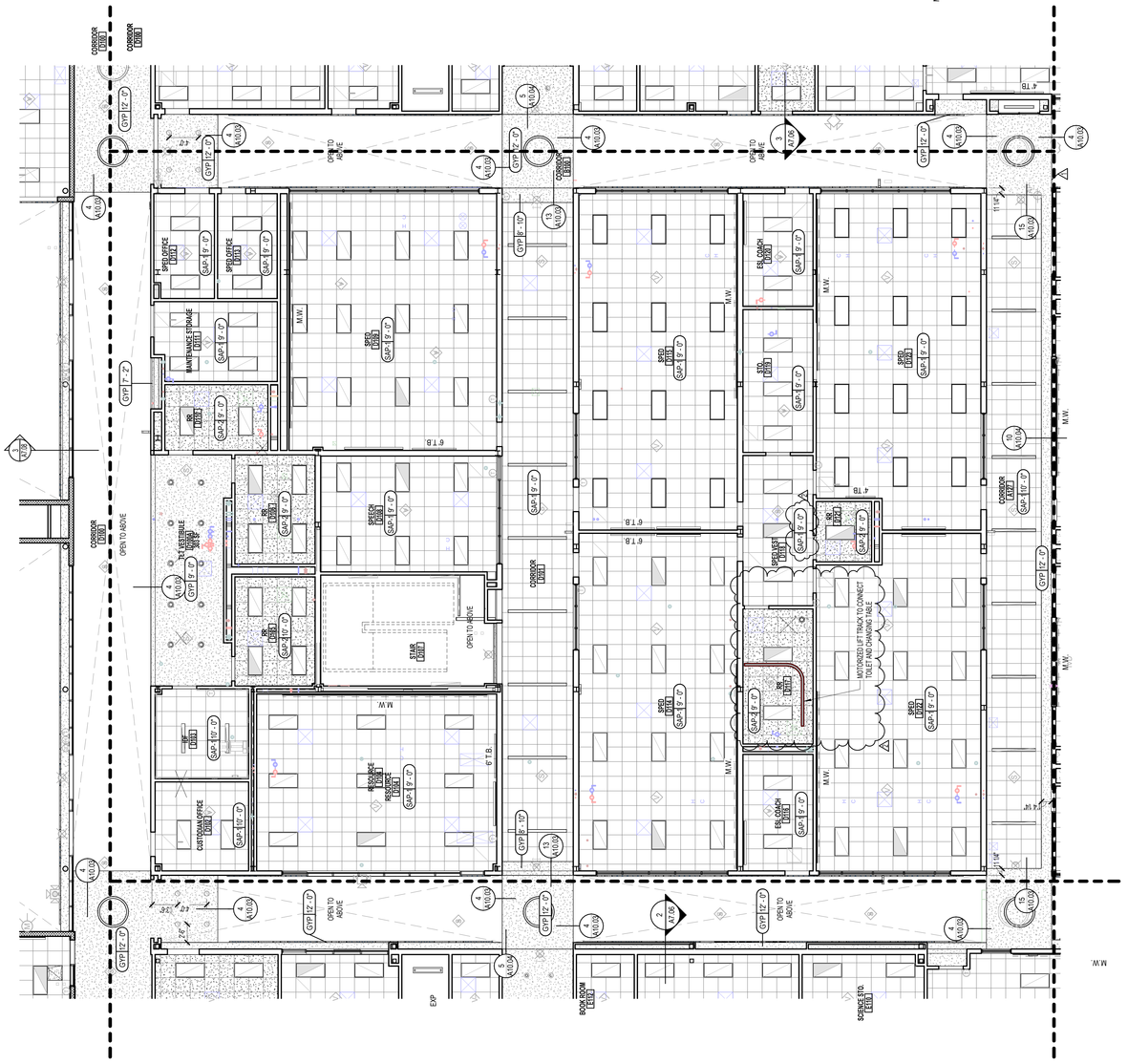
REFLECTED CEILING PLAN LEGEND

- 2' x 4' LED FIXTURE (RECESSED)
- LINEAR LED FIXTURE (RECESSED)
- LINEAR LED FIXTURE (SUSPENDED)
- LINEAR LED FIXTURE (SURFACE MOUNTED)
- RECESSED CAN FIXTURE
- PENDANT LIGHT FIXTURE
- SURFACE MOUNTED CAN LIGHT FIXTURE
- WALL SCONCE
- SUPPLY AIR GRILLE
- RETURN AIR GRILLE
- APC/10'-0" — CEILING TYPE & HEIGHT
- CEILING INSTALL DIRECTION
- 109'-8" — ELEVATION HEIGHT SYMBOL
- SUSPENDED GYPSUM BOARD (GYP)
- SUSPENDED CEILING SYSTEM WITH LAY-IN ACOUSTICAL PANELS (SAP-1)
- SUSPENDED CEILING SYSTEM WITH LAY-IN VINYL FACED PANELS (SAP-2)
- SUSPENDED CEILING SYSTEM WITH BLACK LAY-IN ACOUSTICAL PANELS (SAP-3)
- INTERIOR / EXTERIOR METAL CEILING
- INTERIOR / EXTERIOR METAL CEILING, WOOD FINISH (WMC)
- EXPOSED STRUCTURE, PAINTED
- METAL SOFFIT, EXTERIOR

GENERAL NOTES:

1. REFER TO INTERIOR AND EXTERIOR ELEVATIONS FOR LIGHT FIXTURE MOUNTING HEIGHTS.
2. MEP & ARCHITECT TO REVIEW AND APPROVE SPRINKLER KEYOUT AND HEAD LOCATIONS PRIOR TO CONSTRUCTION. SUBMIT PLAN USING ARCHITECT'S RCPS.
3. AT AREAS WHERE CEILING IS EXPOSED, EXPOSED CONDUIT TO BE LOCATED NEATLY. ARCHITECT TO APPROVE LAYOUTS.
4. COORDINATE CEILING ACCESS PANELS WITH MEP CONTRACTOR. LOCATE WHERE NECESSARY.



LEVEL 01 - RCP - AREA D 1
SCALE: 1/8" = 1'-0"

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

522 BROOKEWATER BLVD ROSENBERG, TX 77471

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DATE: 1/10/2025

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	Date	Description
1	12/20/2024	ADDENDUM #1
2	01/10/2025	ADDENDUM #2

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

A10.01D
LEVEL 1 CEILING PLAN
AREA D

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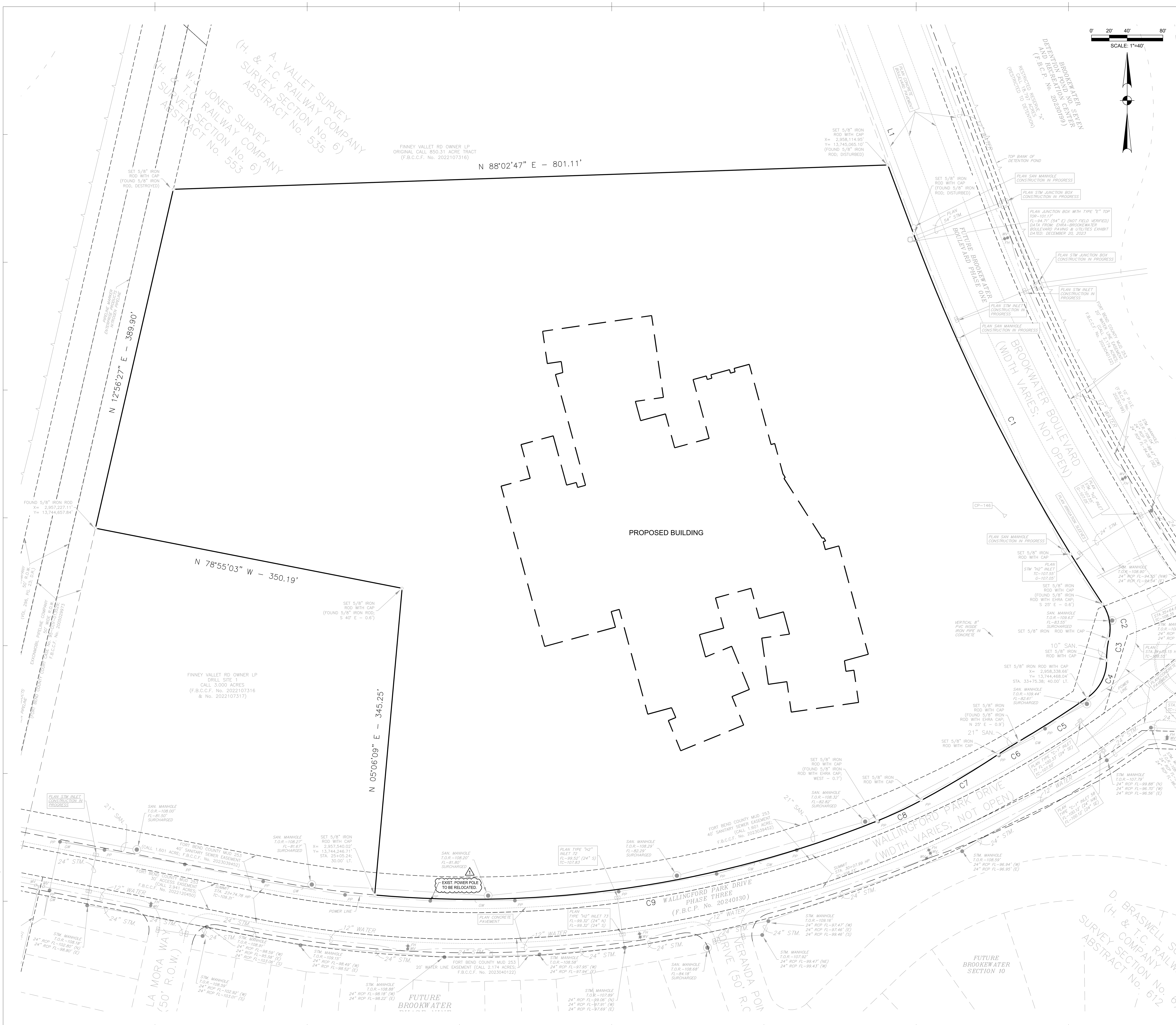

LEGEND

[ ]	PROPOSED BUILDING LIMITS
— — —	PROPOSED SAW-CUT LINE

DEMOLITION NOTES TO CONTRACTOR:

1. THE CONTRACTOR AND OWNER SHALL COORDINATE WITH UTILITY SERVICE PROVIDERS FOR TERMINATION OF POWER AND GAS SERVICES TO THE SITE OR NEW SERVICES. THIS WORK SHALL BE PERFORMED BY THE UTILITY SERVICE PROVIDER AND SHALL BE SCHEDULED AS ONE OF THE FIRST ITEMS OF BUSINESS.
2. ALL SITE FEATURES NOT IDENTIFIED TO BE DEMOLISHED ARE TO REMAIN AND SHALL BE PROTECTED-IN-PLACE.
3. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
4. CONTRACTOR TO FOLLOW ALL RECOMMENDED SAFETY AND DISPOSAL PROCEDURES INCLUDING BUT NOT LIMITED TO EPA, TCEQ & OSHA.
5. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEBRIS OFFSITE.
6. BACKFILL ALL VOIDS FROM REMOVED ITEMS WITH STRUCTURAL FILL MATERIAL PLACED AND COMPACTED PER GEOTECHNICAL REPORT.
7. WHEN EXISTING SIDEWALK IS CLOSED FOR CONSTRUCTION, CONTRACTOR SHALL BARRICADE THAT AREA AND PROVIDE SAFE ALTERNATE PATH FOR PEDESTRIANS WITH PROPER SIGNAGE.
8. ALL TRAFFIC SIGNAGE WITHIN THE ROW SHALL BE PROTECTED IN PLACE AT ALL TIMES. ANY DAMAGE TO THESE DEVICES SHALL BE REPAIRED IMMEDIATELY.
9. CONTRACTOR SHALL REPAIR ANY ITEMS DAMAGED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING POSITIVE DRAINAGE ON SITE DURING ALL CONSTRUCTION ACTIVITIES.
11. THE CONTRACTOR SHALL ENTER AND EXIT THE SITE THROUGH EXISTING DRIVEWAY.
12. CONTRACTOR SHALL NOTE ALL UTILITY PLUG LOCATIONS ON FIELD RECORD DRAWINGS.

SAWCUT NOTES:

1. SAWCUT 2" MINIMUM DEPTH, EXPOSE AND CLEAN EXISTING REINFORCING STEEL.
2. IF NO REINFORCING STEEL EXISTS, #5 HORIZONTAL DOWELS, 24" LONG, GRADE 60, SHALL BE DRILLED AND EMBEDDED 12" INTO THE CENTER OF EXISTING CONCRETE WITH EPOXY.
3. ALL REINFORCING STEEL SHALL BE PLACED 3" CLEAR (2" ABSOLUTE MINIMUM) FROM EDGE OF CONCRETE.

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C D E B F A

ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD, ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

STATE OF TEXAS
FRED DALLY
90904
LICENSED PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO.	24-028
DATE:	01/10/2025
DRAWN BY: MR	CHECKED BY: CP
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1	01/10/2025	ADDENDUM 2

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C2.00

DEMOLITION PLAN

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LEGEND

PROPOSED BUILDING OUTLINE

GENERAL CONSTRUCTION NOTES:

1. ALL UNDERGROUND UTILITIES SHOWN ARE NOT GUARANTEED TO COMPLETE OR DEFINITE, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE.
2. CONTRACTOR TO VERIFY ALL UNDERGROUND UTILITIES IN THE FI PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IF DISCREPANC OCCUR.
3. THE LOCATION OF ALL UTILITIES PRESENTED ON THESE DRAWING SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
4. CAUTION!!! THERE ARE OVERHEAD POWER LINES IN THE WORK AR CONTRACTOR SHALL FOLLOW CITY, STATE AND FEDERAL GUIDELI WHEN WORKING AROUND EXISTING POWER LINES.
5. CONTRACTOR TO OBTAIN ALL PERMITS AND APPROVALS REQUIRE PRIOR TO STARTING CONSTRUCTION.
6. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL COORDINAT STAGING AND TRAFFIC CONTROL PLANS WITH OWNER.
7. ALL DISTURBED AREAS NOT TO BE PAVED OR LANDSCAPED SHALL SODDED UPON COMPLETION.
8. WATER AND SEWER MAINS SHALL BE CONSTRUCTED AND TESTED ACCORDANCE WITH TCEQ RULES AND REGULATIONS.
9. CONTRACTOR PERFORMING THE WORK SHALL BE RESPONSIBLE F SECURING ALL UTILITY PERMITS, PRIOR TO INSTALLATION OF ANY UTILITIES INCLUDING WATER, SEWER, ELECTRIC, CABLE TELEVISI GAS.
10. DOMESTIC WATER LINES LESS THAN 4" IN DIAMETER SHALL BE SC PVC AND HAVE A MINIMUM COVER OF 2 FEET. DOMESTIC WATER L DIAMETER AND LARGER SHALL BE AWWA C-900 DR 14 PVC AND HA MINIMUM COVER OF 4 FEET.
11. FIRE WATER SERVICE SHALL BE C-900 SELF-EXTINGUISHING PVC F THAT BEARS UNDERWRITERS' LABORATORIES MARK OF APPROVA IS ACCEPTABLE WITHOUT PENALTY TO TEXAS STATE FIRE INSURA COMMITTEE AND HAVE A MINIMUM COVER OF 4 FEET.
12. SANITARY SEWER PIPE SHALL BE SDR-26 PVC.

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522 BROOKEWATER BLVD, ROSENBERG, TX 77471

LAMAR CISD

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ROSENBERG, TX 77471

STATE OF TEXAS
FRED DALLY
90904
LICENSED PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
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1	01/10/2025	ADDENDUM 2

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C3.00

LAYOUT PLAN

LEGEND

PROPOSED BUILDING OUTLINE

GENERAL CONSTRUCTION NOTES:

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10. DOMESTIC WATER LINES LESS THAN 4" IN DIAMETER SHALL BE SCH 40 PVC AND HAVE A MINIMUM COVER OF 2 FEET. DOMESTIC WATER LINES 4" DIAMETER AND LARGER SHALL BE AWWA C-900 DR 14 PVC AND HAVE A MINIMUM COVER OF 4 FEET.
11. FIRE WATER SERVICE SHALL BE C-900 SELF-EXTINGUISHING PVC PIPE THAT BEARS UNDERWRITERS' LABORATORIES MARK OF APPROVAL AND IS ACCEPTABLE WITHOUT PENALTY TO TEXAS STATE FIRE INSURANCE COMMITTEE AND HAVE A MINIMUM COVER OF 4 FEET.
12. SANITARY SEWER PIPE SHALL BE SDR-26 PVC.

TRAFFIC SIGNAGE KEY NOTES:

(G1) PROPOSED S5-1 AND S7-1T WITH LED BEACONS (SCHOOL SPEED LIMIT 20 - CELL PHONE USE PROHIBITED UP TO $200 FINE).

(G2) PROPOSED S5-2 AND R2-1 (END SCHOOL ZONE - SPEED LIMIT 35).

(G3) PROPOSED S1-1 AND W16-7P (SCHOOL CROSSING AND DIAGONAL ARROW SIGN LEFT).

(G4) PROPOSED S1-1 AND W16-9P (SCHOOL CROSSING - AHEAD).

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD, ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

STATE OF TEXAS
FRED DALLY
90904
LICENSED
PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
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1	01/10/2025	ADDENDUM 2

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C3.01
SCHOOL ZONE SIGNAGE PLAN

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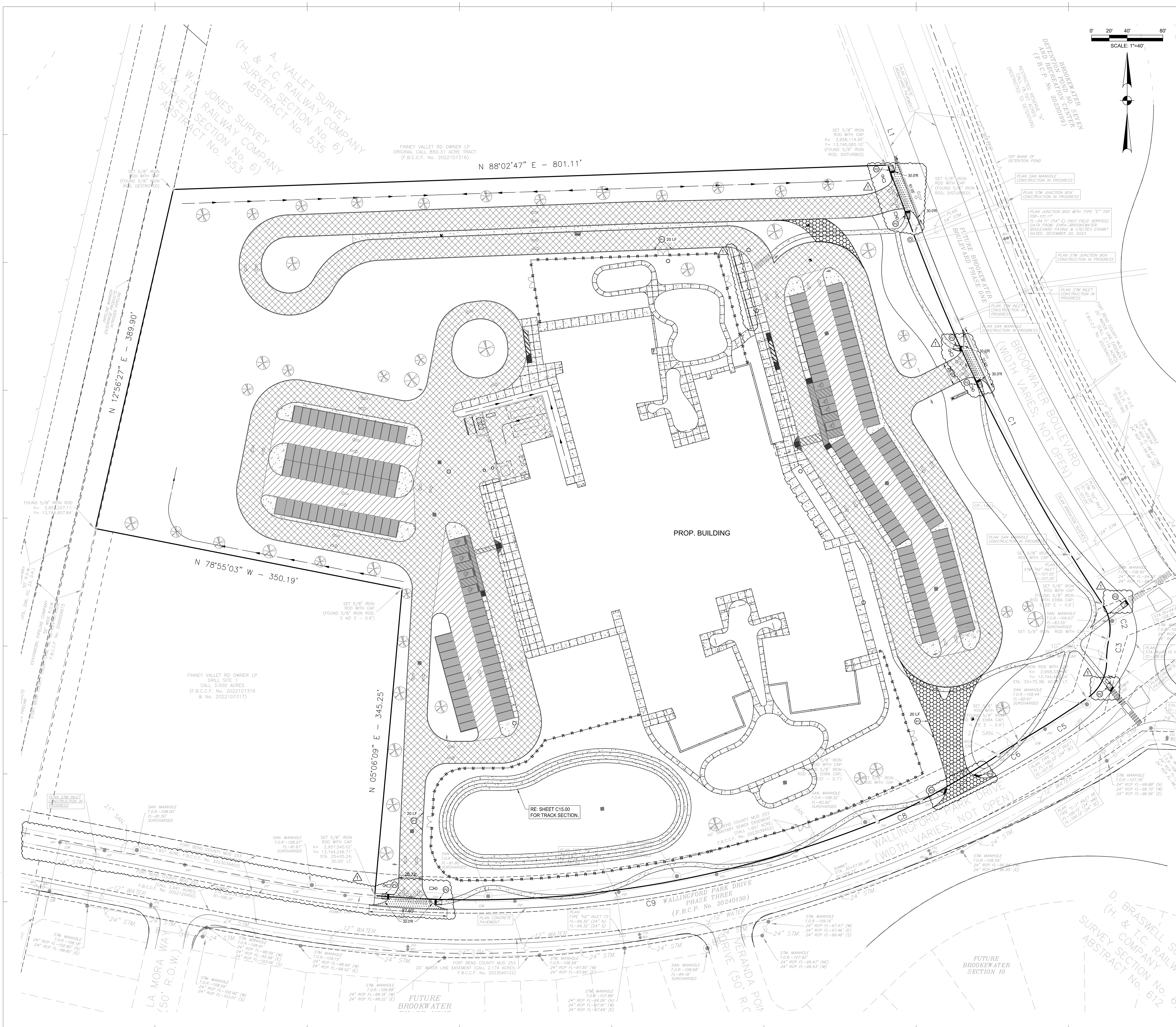

LEGEND

- PROPOSED BUILDING LIMITS
- 4.5" CONCRETE SIDEWALK
- 5" CONCRETE PAVING
- 6" CONCRETE PAVING
- 7" CONCRETE PAVING
- 8" CONCRETE PAVING
- ASPHALT PAVING (TEMPORARY DRIVES FOR BID ALTERNATE NO. 1)
- PROPOSED SAWCUT

GENERAL CONSTRUCTION NOTES:

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3. THE LOCATION OF ALL UTILITIES PRESENTED ON THESE DRAWINGS IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
4. CAUTION!!! THERE ARE OVERHEAD POWER LINES IN THE WORK AREA. CONTRACTOR SHALL FOLLOW CITY, STATE AND FEDERAL GUIDELINES WHEN WORKING AROUND EXISTING POWER LINES.
5. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
6. ALL DIMENSIONS ARE PERPENDICULAR OR PARALLEL TO THEIR RESPECTIVE PROPERTY LINES UNLESS OTHERWISE NOTED.
7. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING DIMENSIONS.
8. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE STAGING AND TRAFFIC CONTROL PLANS WITH OWNER.
9. ALL DISTURBED AREAS NOT TO BE PAVED OR LANDSCAPED SHALL BE SODDED UPON COMPLETION.

SAWCUT NOTES:

1. SAWCUT THE FULL DEPTH OF CONCRETE, EXPOSE AND CLEAN EXISTING REINFORCING STEEL.
2. IF NO REINFORCING STEEL EXISTS, #5 HORIZONTAL DOWELS, 24" LONG, GRADE 60, SHALL BE DRILLED AND EMBEDDED 12" INTO THE CENTER OF EXISTING CONCRETE WITH EPOXY.
3. ALL REINFORCING STEEL SHALL BE PLACED 3" CLEAR (2" ABSOLUTE MINIMUM) FROM EDGE OF CONCRETE.

BID ALTERNATE NO. 1: IF BROOKEWATER BOULEVARD IS NOT COMPLETED BY THE TIME THAT THE SCHOOL CONSTRUCTION IS FINISHED, PLEASE PROVIDE FOR THE CONSTRUCTION AND FUTURE DEMOLITION OF TEMPORARY CONNECTORS FROM WALLINGFORD PARK DRIVE. THIS SHALL INCLUDE ALL NECESSARY WORK TO COMPLETE THE FINAL ROADS AND SURROUNDING LANDSCAPE FULLY AND ANY ADDITIONAL WORK REQUIRED FOR COMPLETE FINALIZATION.

PAVING KEY NOTES:

- P1 PROP. 4" X 12" MOUNTABLE CONCRETE CURB.
- P2 PROP. 6' CONCRETE CURB RAMP W/ 2' WIDE TRUNCATED DOMES. (1)
- P3 PROP. 2' WIDE TRUNCATED DOMES.

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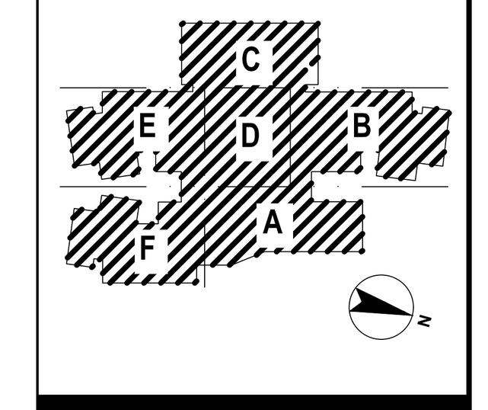

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STATE OF TEXAS
FRED DALLY
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LICENSED
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PAVING PLAN

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9. CONTRACTOR PERFORMING THE WORK SHALL BE RESPONSIBLE FOR SECURING ALL UTILITY PERMITS, PRIOR TO INSTALLATION OF ANY UTILITIES INCLUDING WATER, SEWER, ELECTRIC, CABLE TELEVISION AND GAS.
10. DOMESTIC WATER LINES LESS THAN 4" IN DIAMETER SHALL BE SCH 40 PVC AND HAVE A MINIMUM COVER OF 2 FEET. DOMESTIC WATER LINES 4" DIAMETER AND LARGER SHALL BE AWWA C-900 DR 14 PVC AND HAVE A MINIMUM COVER OF 4 FEET.
11. FIRE WATER SERVICE SHALL BE C-900 SELF-EXTINGUISHING PVC PIPE THAT BEARS UNDERWRITERS' LABORATORIES MARK OF APPROVAL AND IS ACCEPTABLE WITHOUT PENALTY TO TEXAS STATE FIRE INSURANCE COMMITTEE AND HAVE A MINIMUM COVER OF 4 FEET.
12. SANITARY SEWER PIPE SHALL BE SDR-26 PVC.

BID ALTERNATE NO. 2- IF BROOKEWATER BOULEVARD IS NOT COMPLETED BY THE TIME THAT THE SCHOOL CONSTRUCTION IS FINISHED, PLEASE PROVIDE FOR THE CONSTRUCTION AND FUTURE DEMOLITION OF A TEMPORARY RAINSTORM OUTFALL THAT WILL CONNECT TO THE DETENTION AREA ACROSS BROOKEWATER BOULEVARD. THIS SHOULD INCLUDE ALL NECESSARY FINAL CONNECTIONS TO THE PERMANENT OUTFALLS AND ANY ADDITIONAL WORK REQUIRED FOR COMPLETE FINALIZATION.

DRAINAGE KEY NOTES:

(D4) PROPOSED STORM SEWER CLEANOUT. CLEANOUTS IN PAVED AREAS SHALL HAVE TRAFFIC RATED LIDS.

(D5) PROPOSED 4" ROOF DRAIN COLLECTOR AT 1.0 % MINIMUM SLOPE. REFER TO ARCH AND MEP PLANS FOR EXACT ROOF DRAIN LOCATIONS.

(D6) PROPOSED 8" ROOF DRAIN COLLECTOR AT 0.7 % MINIMUM SLOPE. REFER TO ARCH AND MEP PLANS FOR EXACT ROOF DRAIN LOCATIONS.

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FRED DALLY 90904 LICENSED PROFESSIONAL ENGINEER
01/10/2025

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C5.00
STORM SEWER UTILITY PLAN

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LEGEND	
[building outline symbol]	PROPOSED BUILDING OUTLINE

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9. CONTRACTOR PERFORMING THE WORK SHALL BE RESPONSIBLE FOR SECURING ALL UTILITY PERMITS, PRIOR TO INSTALLATION OF ANY UTILITIES INCLUDING WATER, SEWER, ELECTRIC, CABLE TELEVISION AND GAS.
10. DOMESTIC WATER LINES LESS THAN 4" IN DIAMETER SHALL BE SCH 40 PVC AND HAVE A MINIMUM COVER OF 2 FEET. DOMESTIC WATER LINES 4" DIAMETER AND LARGER SHALL BE AWWA C-900 DR 14 PVC AND HAVE A MINIMUM COVER OF 4 FEET.
11. FIRE WATER SERVICE SHALL BE C-900 SELF-EXTINGUISHING PVC PIPE THAT BEARS UNDERWRITERS' LABORATORIES MARK OF APPROVAL AND IS ACCEPTABLE WITHOUT PENALTY TO TEXAS STATE FIRE INSURANCE COMMITTEE AND HAVE A MINIMUM COVER OF 4 FEET.
12. SANITARY SEWER PIPE SHALL BE SDR-26 PVC.

NOTE: PROVIDE TRACER WIRE FOR ALL SITE UTILITIES, INCLUDING GAS LINE, SANITARY SEWER, STORM SEWER, FIRE AND DOMESTIC WATER LINES.

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD, ROSENBERG, TX 77471

LAMAR CISD

3911 AVENUE I
ROSENBERG, TX 77471

STATE OF TEXAS
FRED DALLY
90904
LICENSED PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
DATE: 01/10/2025
DRAWN BY: MR CHECKED BY: CP
REVISIONS:

No.	Date	Description
1	01/10/2025	ADDENDUM 2

100% CONSTRUCTION DOCUMENTS

C5.01

SANITARY AND WATER UTILITY PLAN

0' 20' 40' 80'

SCALE: 1"=40'

LEGEND	
------	PROPOSED SAWCUT
EL	ELEVATION
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FL	FLOW LINE
HP	HIGH POINT
MEG	MATCH EXISTING GRADE
MEP	MATCH EXISTING PAVEMENT
MEC	MATCH EXISTING CURB
TC	TOP OF CURB
TG	TOP OF GRATE
TP	TOP OF PAVEMENT
+65.9	Existing Grade
TP XX.XX	PROPOSED GRADE
——►	GRADE TO DRAIN

GENERAL CONSTRUCTION NOTES:

1. ALL UNDERGROUND UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR DEFINITE, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE.
2. CONTRACTOR TO VERIFY ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IF DISCREPANCIES OCCUR.
3. THE LOCATION OF ALL UTILITIES PRESENTED ON THESE DRAWINGS IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
4. CAUTION!!! THERE ARE OVERHEAD POWER LINES IN THE WORK AREA. CONTRACTOR SHALL FOLLOW CITY, STATE AND FEDERAL GUIDELINES WHEN WORKING AROUND EXISTING POWER LINES.
5. CONTRACTOR TO OBTAIN ALL PERMITS AND APPROVALS REQUIRED PRIOR TO STARTING CONSTRUCTION.
6. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE STAGING AND TRAFFIC CONTROL PLANS WITH OWNER.
7. ALL DISTURBED AREAS NOT TO BE PAVED OR LANDSCAPED SHALL BE SODDED UPON COMPLETION.
8. WATER AND SEWER MAINS SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH TCEQ RULES AND REGULATIONS.
9. CONTRACTOR PERFORMING THE WORK SHALL BE RESPONSIBLE FOR SECURING ALL UTILITY PERMITS, PRIOR TO INSTALLATION OF ANY UTILITIES INCLUDING WATER, SEWER, ELECTRIC, CABLE TELEVISION AND GAS.
10. DOMESTIC WATER LINES LESS THAN 4" IN DIAMETER SHALL BE SCH 40 PVC AND HAVE A MINIMUM COVER OF 2 FEET. DOMESTIC WATER LINES 4" DIAMETER AND LARGER SHALL BE AWWA C-900 DR 14 PVC AND HAVE A MINIMUM COVER OF 4 FEET.
11. FIRE WATER SERVICE SHALL BE C-900 SELF-EXTINGUISHING PVC PIPE THAT BEARS UNDERWRITERS' LABORATORIES MARK OF APPROVAL AND IS ACCEPTABLE WITHOUT PENALTY TO TEXAS STATE FIRE INSURANCE COMMITTEE AND HAVE A MINIMUM COVER OF 4 FEET.
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GRADING PLAN

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0' 20' 40' 80'
SCALE: 1"=40'

LEGEND

SYMBOL	DESCRIPTION
XX / Y.YY	DRAINAGE AREA DESIGNATION / DRAINAGE AREA (ACRES)
OS / Y.YY	OFFSITE DRAINAGE AREA DESIGNATION / OFFSITE DRAINAGE AREA (ACRES)
X.XX / Y.YY	3-YEAR FLOW (C.F.S.) / 100-YEAR FLOW (C.F.S.)
	DRAINAGE AREA BOUNDARY
	DRAINAGE SUB-AREA BOUNDARY
XX	MANHOLE OR INLET NUMBER
	DRAINAGE PATTERN
	PROPOSED SWALE LINE

GENERAL CONSTRUCTION NOTES:

1. ALL UNDERGROUND UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR DEFINITE, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE.
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4. CAUTION!!! THERE ARE OVERHEAD POWER LINES IN THE WORK AREA. CONTRACTOR SHALL FOLLOW CITY, STATE AND FEDERAL GUIDELINES WHEN WORKING AROUND EXISTING POWER LINES.
5. CONTRACTOR TO OBTAIN ALL PERMITS AND APPROVALS REQUIRED PRIOR TO STARTING CONSTRUCTION.
6. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE STAGING AND TRAFFIC CONTROL PLANS WITH OWNER.
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DRAINAGE PLAN

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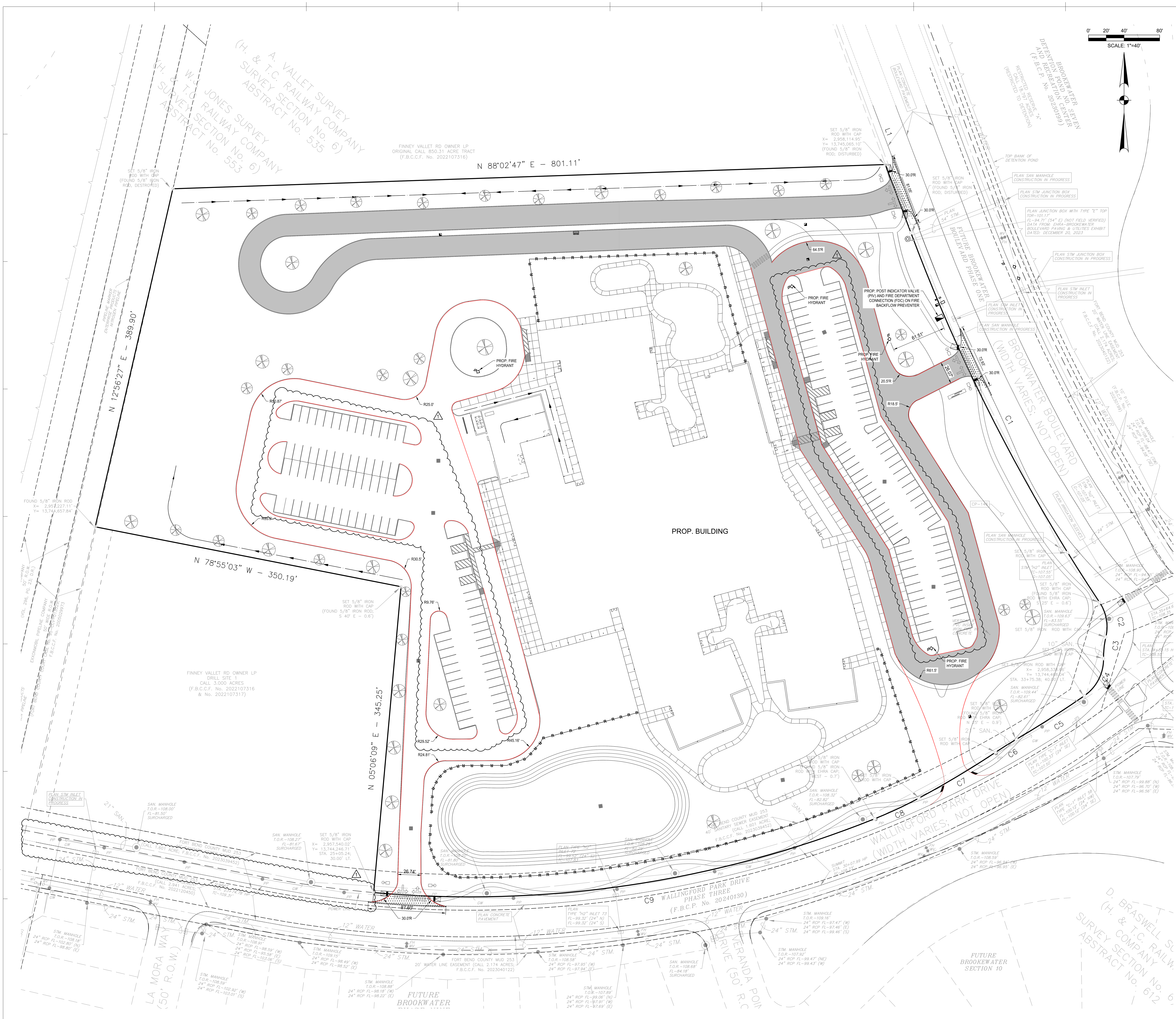

LEGEND

- PROPOSED BUILDING LIMITS
- HOSE LAY
- PROPERTY LINE
- PROPOSED FIRE LANE
- FIRE TRUCK LOCATION

WHITE REFLECTIVE LETTERING
FIRE LANE - TOW AWAY ZONE
RED BACKGROUND
4" 6" 3/4"

A. PROVIDE FIRE LANE STRIPPING PER LOCAL JURISDICTION.

B. FIRE DEPARTMENT ACCESS LANE SITE CONCRETE PAVING TO BE CAPABLE OF WITHSTANDING 75,000 LBS UNDER ALL WEATHER CONDITIONS.

GENERAL CONSTRUCTION NOTES :

1. ALL UNDERGROUND UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR DEFINITE, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE.
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5. CONTRACTOR TO OBTAIN ALL PERMITS AND APPROVALS REQUIRED PRIOR TO STARTING CONSTRUCTION.
6. SIDEWALKS SHALL HAVE A RUN SLOPE NO GREATER THAN 5% AND A CROSS SLOPE NO GREATER THAN 2%, UNLESS OTHERWISE NOTED.
7. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
8. ALL DIMENSIONS ARE PERPENDICULAR OR PARALLEL TO THEIR RESPECTIVE PROPERTY LINES UNLESS OTHERWISE NOTED.
9. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING DIMENSIONS.
10. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE STAGING AND TRAFFIC CONTROL PLANS WITH OWNER.
11. ALL DISTURBED AREAS NOT TO BE PAVED OR LANDSCAPED SHALL BE SODDED UPON COMPLETION.

FIRE ACCESS NOTES:

1. POSTING OF FIRE LANES IS REQUIRED. FIRELANE SHALL BE INDICATED WITH PAINTED 6" RED STRIPES ON BOTH SIDES OF THE LANE WITH "FIRE LANE - NO PARKING - TOW AWAY ZONE" WRITTEN WITH 4" LETTERS IN WHITE PAINT SPACED EVERY 50 FEET. SEE DETAIL ON THIS SHEET.
2. FIRE LANE SIGNS SHOULD BE PLACED EVERY 75 FEET ALONG ANY FIRE LANE WHERE PAVEMENT OR CURB STRIPING IS NOT PRATICAL. SEE DETAIL ON THIS SHEET.

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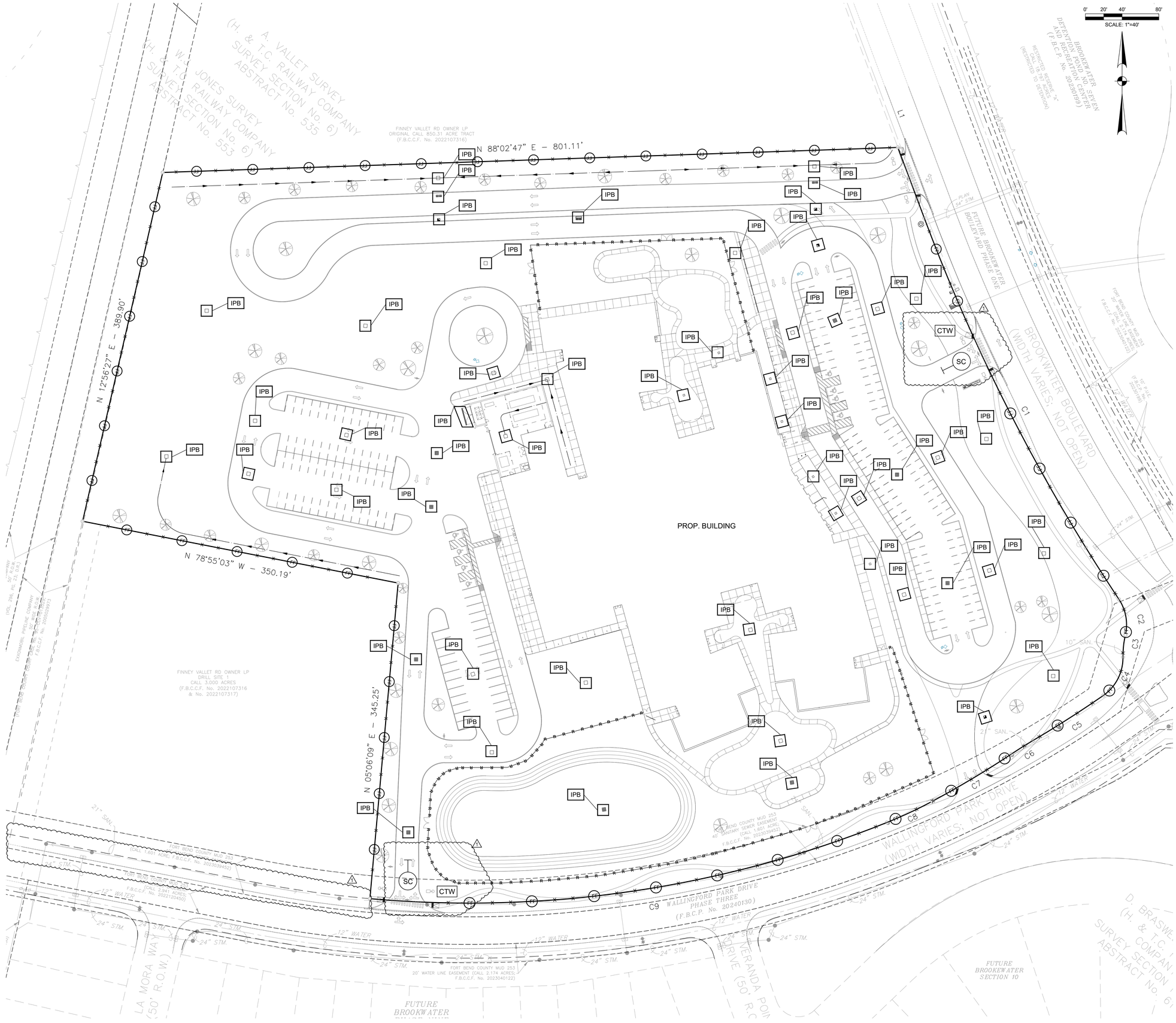
FIRE ACCESS PLAN



0' 20' 40' 80'

LEGEND

- PROPOSED BUILDING LIMITS
- IPB — INLET PROTECTION BARRIER
- FF — FILTER FABRIC FENCE
- FD TYPE 1 — FILTER DAM
- PROPOSED SILT SOCK
- SC — STABILIZED CONSTRUCTION ACCESS
- CTW — CONCRETE TRUCK WASHOUT

GENERAL CONSTRUCTION NOTES

1. ALL UNDERGROUND UTILITIES SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR DEFINITE, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE.
2. CONTRACTOR TO VERIFY ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IF DISCREPANCIES OCCUR.
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4. CONTRACTOR TO OBTAIN ALL PERMITS AND APPROVALS REQUIRED PRIOR TO STARTING CONSTRUCTION.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE STAGING AND TRAFFIC CONTROL PLANS WITH OWNER.
6. ALL DISTURBED AREAS SHALL BE SODDED UPON COMPLETION IF NOT TO BE PAVED OR LANDSCAPED.
7. CONTRACTOR SHALL UTILIZE TEMPORARY EROSION CONTROL MAT OR EQUAL DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ENSURING WATER QUALITY CONTROLS MEET TCEQ STANDARDS.

SWPPP CONSTRUCTION NOTES :

1. ALL AREAS WHERE EXISTING VEGETATION AND GRASS COVER HAVE BEEN BARED BY CONSTRUCTION SHALL BE ADEQUATELY BLOCK SODDED OR HYDROMULCHED AND WATERED UNTIL GROWTH IS ESTABLISHED. IN DEVELOPED AREAS WHERE GRASS IS PRESENT, BLOCK SOD WILL BE REQUIRED. BARED AREAS SHALL BE SEEDED OR SODDED WITHIN 14 CALENDAR DAYS OF LAST DISTURBANCE.
2. APPROVED EROSION CONTROL MEASURES MUST BE INSTALLED DURING THE ENTIRE TIME THAT EARTH HAS BEEN BARED BY CONSTRUCTION AND SHALL STAY IN PLACE UNTIL ACCEPTABLE VEGETATIVE GROWTH IS ESTABLISHED AFTER CONSTRUCTION IS COMPLETE AND THEN REMOVED BY CONTRACTOR.
3. ALL EROSION CONTROL MEASURES SHALL BE CLEANED AFTER EVERY RAIN.
4. CONTRACTOR SHALL ENTER AND EXIT SITE FROM EXISTING DRIVEWAY.

NOTE: REFER TO LANDSCAPE PLANS FOR TREE PROTECTION.

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C9.00
SWPPP

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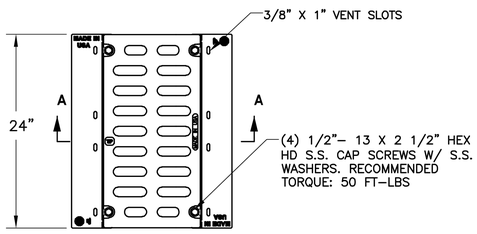
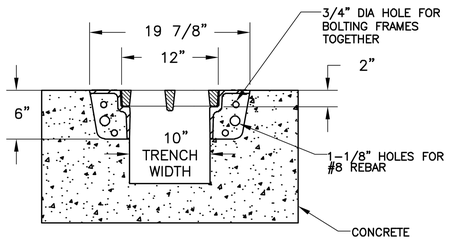
6900Z5 6903M2 Assembly





CAUTION:
DO NOT DISASSEMBLE BOLTED GRATES.
CHECK FRAME WIDTH INSIDE BEFORE SETTING SECTIONS IN CONCRETE.

ej

Product Number
00690346B02

Design Features
-Materials
Trench Rail
Ductile Iron (80-55-06)
Trench Grate
Ductile Iron (70-50-05)

-Load Rating
Airport Extra Heavy Duty
(Proof Load Tested
to 200,000lbs.)
-Open Area
80 sq. Inches
-Coating
Undipped
-√ Designates Machined Surface

Certification
-
- ASTM A536
-
-Country of Origin: USA

Major Components
(2) 00690029
00690346

Drawing Revision
1/23/2019 Designer: DEF
10/1/2021 Revised By: MAH

Disclaimer
Weights (lbs./kg) dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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ejco.com

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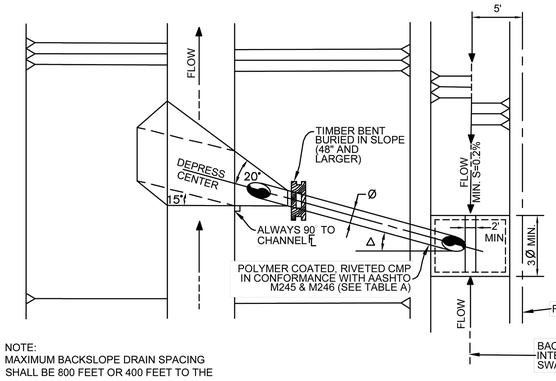


TABLE A					
SIZE 2 2/3" X 1/2" CORRUGATION	PIPE GAUGE	BAND COUPLER GAUGE	SIZE 3"X1" & 5"X1" CORRUGATION	PIPE GAUGE	BAND COUPLER GAUGE
24"	16	16			
30"	16	16			
36"	16	16			
42"	14	16			
48"	14	16	48"	16	18
54"	12	14	54"	16	18
60"	12	14	60"	16	18
66"	10	12	66"	16	18
72"	10	12	72"	16	18
78"	8	10	78"	14	16
84"	8	10	84"	14	16

TABLE B		
PIPE DIA.	SLOPE	VELOCITY
24"	0.6%	3.25 F.P.S.
36"	0.3%	3.00 F.P.S.
42"	0.2%	2.75 F.P.S.
48"	0.2%	3.00 F.P.S.
54"	0.2%	3.25 F.P.S.

NOTE:
MAXIMUM BACKSLOPE DRAIN SPACING SHALL BE 800 FEET OR 400 FEET TO THE SWALE HIGH POINT.

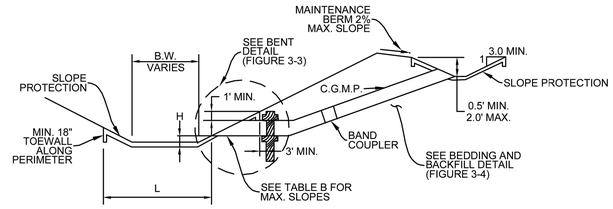
Δ: PROP. 24" TO 42" Δ= 15°
PROP. 48" AND LARGER Δ= 30°

H: FOR PIPE SIZES 24" TO 42"
H=3' MAX. AND 1' MIN.

FOR PIPE SIZES 48" AND LARGER
H=1' MAX. AND MIN.

L: $\frac{\text{B.W.}}{\text{PIPE DIA.}} \leq 7'\text{-}6"$ ⇒ L WILL EXTEND ONE PIPE DIA. ABOVE FLOWLINE ON OPPOSITE BANK (MIN.)

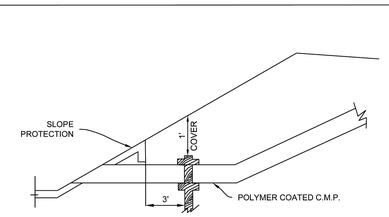
$\frac{\text{B.W.}}{\text{PIPE DIA.}} > 7'\text{-}6"$ ⇒ L=6 DIA. OR MIN. 1'-6" INTO B.W. WHICHEVER IS GREATER



NOTE:
CONCRETE SLOPE PAVING SHALL HAVE A MINIMUM THICKNESS OF 4". MINIMUM REINFORCING STEEL SHALL BE #3 REBAR AT 18" 0.C. OR 6X6XW4.0XW4.0 WELDED WIRE FABRIC

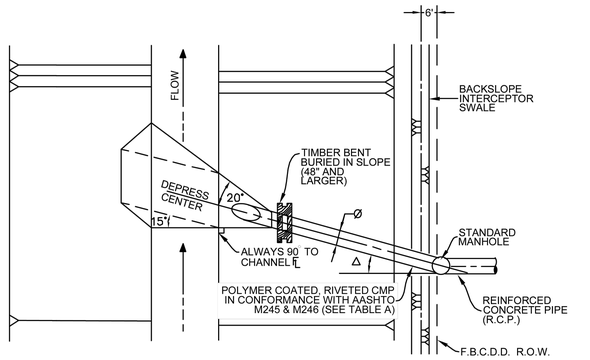
REVISIONS 1. 7-13-1988
2. 5-20-1997
3. 12-01-2010

TYPICAL BACKSLOPE DRAIN DETAIL FOR FORT BEND COUNTY, TEXAS	
APRIL 2022	FIGURE 3-2



BENT FOR CORRUGATED METAL PIPE OUTFALL
48-INCH AND LARGER

TYPICAL BENT DETAIL FOR C.G.M.P. OUTFALL FOR FORT BEND COUNTY, TEXAS	
APRIL 2022	FIGURE 3-5



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30"	16	16			
36"	16	16			
42"	14	16			
48"	14	16	48"	16	18
54"	12	14	54"	16	18
60"	12	14	60"	16	18
66"	10	12	66"	16	18
72"	10	12	72"	16	18
78"	8	10	78"	14	16
84"	8	10	84"	14	16

H: FOR PIPE SIZES 24" TO 42"
H=3' MAX. AND 1' MIN.

FOR PIPE SIZES 48" AND LARGER
H=1' MAX. AND MIN.

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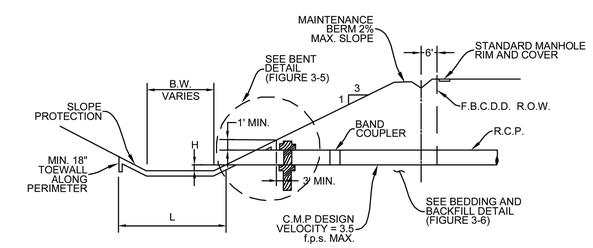
Δ: PROP. 24" TO 42" Δ= 15°
PROP. 48" AND LARGER Δ= 30°



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REVISIONS: 1. 7-13-1988
2. 5-20-1997
3. 12-01-2010

TYPICAL STORM SEWER OUTFALL DETAIL FOR FORT BEND COUNTY, TEXAS	
APRIL 2022	FIGURE 3-4

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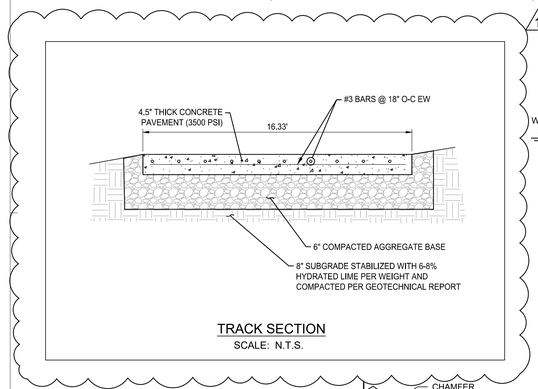
STORM DETAILS 2

8/28/2024 2:10:54 PM P:\2024 - Daily + Associates - Civil\C24-032-00 LCISD ES38 Brookewater\EMAILS\Received\2024-08-05 Revit File from Arch\24-028_ARCH_ES38 BROOKEWATER_R24 - DA.rvt

8/28/2024 2:10:54 PM P:\2024 - Daily + Associates - Civil\C24-032-00 LCISD ES38 Brookewater\EMAILS\Received\2024-08-05 Revit File from Arch\24-028_ARCH_ES38 BROOKEWATER_R24 - DA.rvt



TRACK SECTION
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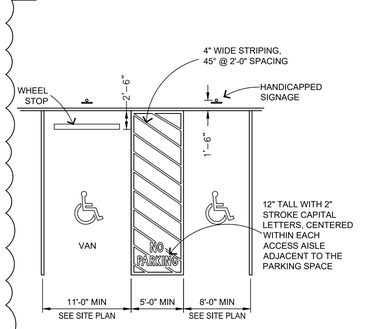
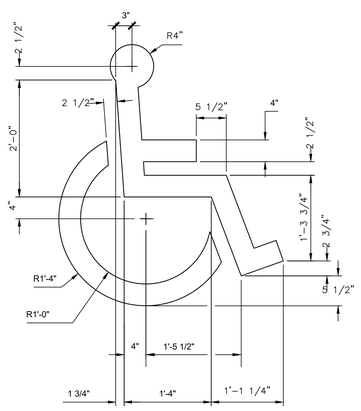
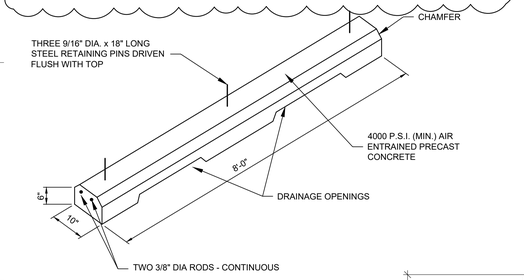




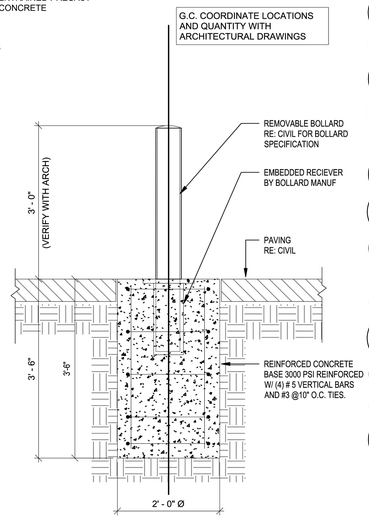
NOTES:
1. PAVEMENT PAINT, TRAFFIC COATING, ITEM 66, TYPE II.
2. BLUE COLOR TO MATCH TRAFFIC SIGNAGE BLUE

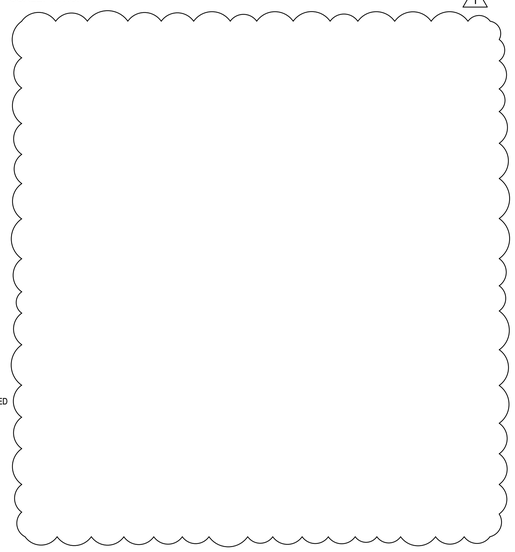
NOTES:
4" WIDE STRIPING MIN. PAVEMENT PAINT WHITE, ITEM 666, TYPE II

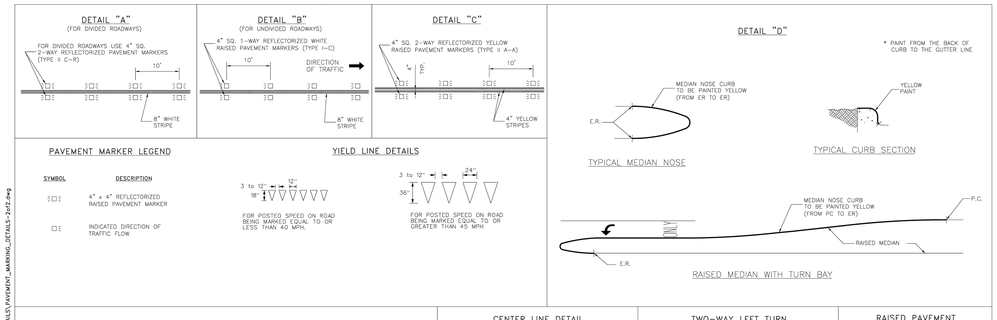
HANDICAP PARKING AND STRIPE DETAILS
SCALE: N.T.S.

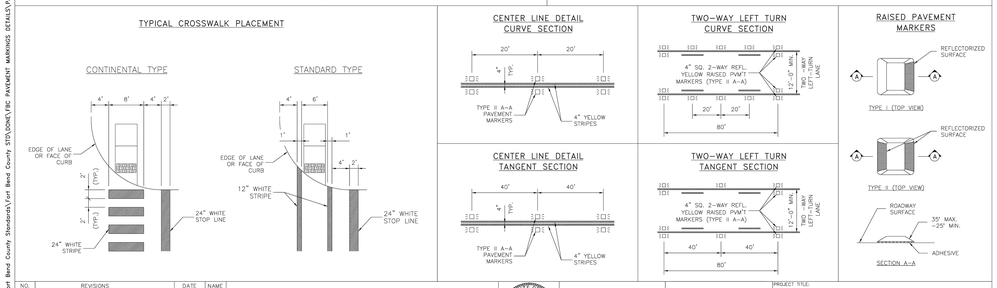


CONCRETE WHEEL STOP
SCALE: N.T.S.









NO.	REVISIONS	DATE	NAME
1	ORIGINAL STANDARD ISSUED	2-1-22	RJS

FORT BEND COUNTY ENGINEERING DEPARTMENT

PROJECT TITLE:
DRAWN BY: INT
CK'D BY: INT
SCALE: NONE
DATE: 2-1-22
SHEET DESCRIPTION: PAVEMENT MARKING DETAILS
APPROVED BY:
FBCED STANDARD: 47
SHEET NO.: SHEET 2 OF 2
/

A:\12KA\16X\Fort Bend County Standards\Fort Bend County STD\DWG\FBC PAVEMENT MARKING DETAILS\FBC_PAVEMENT_MARKING_DETAILS-2x12.dwg

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2 Greenway Plaza #460
Houston, Texas 77046
pflugerarchitects.com

ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD, ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

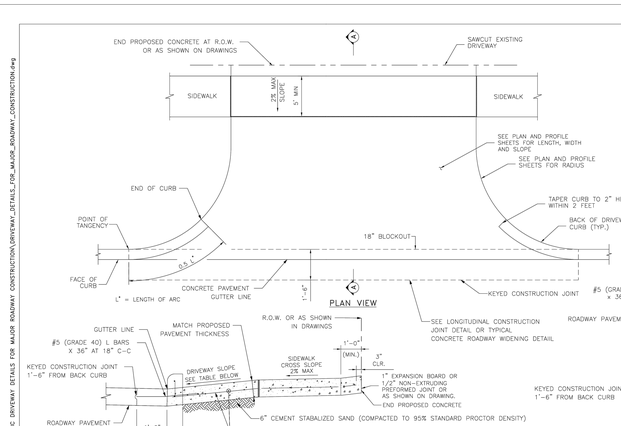
STATE OF TEXAS
FRED DALLY
90904
LICENSED PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO.	24-028
DATE:	01/10/2025
DRAWN BY: MR	CHECKED BY: CP

REVISIONS:

No.	Date	Description
1	01/10/2025	ADDENDUM 2

100% CONSTRUCTION DOCUMENTS
C15.00
MISCELLANEOUS DETAILS



NOTES:
1. SAWCUT EXISTING DRIVEWAY AT R.O.W. LINE OR AS SHOWN ON DRAWING AND REMOVE EXISTING DRIVEWAY TO SAWCUT LINE.
2. IF THERE IS EXISTING CURB ON DRIVEWAY, CONNECT PROPOSED CURB TO EXISTING CURB, OTHERWISE TAPER CURB HEIGHT AS SHOWN.
3. SEE PAVEMENT DETAIL SHEET FOR CONCRETE CURB REINFORCEMENT.
4. THIS DRIVEWAY INSTALLATION IS GOVERNED BY HARRIS COUNTY ITEM 360.
5. DRIVEWAY WIDTHS ARE MEASURED AT THE ROW LINE

MINIMUM RADII REQUIREMENTS - DRIVEWAYS

	LOCAL	COLLECTOR	MAJOR
RESIDENTIAL	5'	5'	
COMMERCIAL	10'	10'	25'

DRIVEWAY WIDTHS

	MINIMUM	MAXIMUM
RESIDENTIAL	10'	25'
COMMERCIAL	20'	40'

REINFORCEMENT	6"	#4 @ 24" O.C.E.W.	N/A	#4 @ 24" O.C.E.W.
	7"	#4 @ 24" O.C.E.W.	#4 @ 24" O.C.E.W.	#4 @ 24" O.C.E.W.
	8"	#4 @ 18" O.C.E.W.	#4 @ 18" O.C.E.W.	#4 @ 18" O.C.E.W.
	9"-10"	#5 @ 18" O.C.E.W.	#5 @ 18" O.C.E.W.	#5 @ 18" O.C.E.W.
EXPANSION DOWEL JOINT	6"	3/4" DIA. SMOOTH BAR	3/4" DIA. SMOOTH BAR	3/4" DIA. SMOOTH BAR
	7"	1" DIA. SMOOTH BAR	1" DIA. SMOOTH BAR	1" DIA. SMOOTH BAR
	8"	1" DIA. SMOOTH BAR	1" DIA. SMOOTH BAR	1" DIA. SMOOTH BAR
	9"-10"	1¼" DIA. SMOOTH BAR	1¼" DIA. SMOOTH BAR	1¼" DIA. SMOOTH BAR
CONSTRUCTION JOINT DOWEL	ALL	#5 REBAR	#5 REBAR	#5 REBAR
SUBGRADE	ALL	6" CEMENT-STABALIZED SAND	2" BANK SAND	2" BANK SAND
DRIVEWAY SLOPE	ALL	2% TO 4%	2% TO 6%	2% TO 10%*

*10% ALLOWABLE ON PRIVATELY CONSTRUCTED PROJECTS
6% MAX ON PUBLIC PROJECTS

NO.	REVISIONS	DATE	NAME
1	ORIGINAL STANDARD ISSUED	3-1-22	RJS

FORT BEND COUNTY ENGINEERING DEPARTMENT

PROJECT TITLE:
DRAWN BY: INT
CK'D BY: INT
SCALE: 1"=1'-6"
DATE: 3-1-22
SHEET DESCRIPTION: DRIVEWAY DETAILS FOR MAJOR ROADWAY CONSTRUCTION
APPROVED BY:
FBCED STANDARD: 10
SHEET NO.: /

A:\12KA\16X\Fort Bend County Standards\Fort Bend County STD\DWG\FBC DRIVEWAY DETAILS FOR MAJOR ROADWAY CONSTRUCTION\DRIVEWAY_DETAILS_FOR_MAJOR_ROADWAY_CONSTRUCTION.dwg

GENERAL NOTES

CURB RAMPS

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
4. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5' x 5' passing areas at intervals not to exceed 200' are required.
5. Turning Spaces shall be 5' x 5' minimum. Cross slope shall be maximum 2%.
6. Clear space at the bottom of curb ramps shall be a minimum of 4' x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
12. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
16. Provide a smooth transition where the curb ramps connect to the street.
17. Curbs shown on sheets with details within the limits of pavement are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
18. Existing features that comply with applicable standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved detectable warning paver unit with truncated domes for placement in areas adjacent to unstained concrete, unless specified elsewhere in the plans.
20. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
21. Detectable warning surfaces must be firm, stable and slip resistant.
22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and wheel the full width of the curb ramp or landing where the pedestrian access route enters the street.
23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
24. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

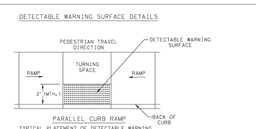
DETECTABLE WARNING PAVERS (IF USED)

25. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.

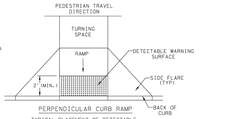
SIDEWALKS

27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, mailboxes, fire hydrants and other items so as not to obstruct the pedestrian access route or clear ground space.
29. Street grades and cross slopes shall be as shown elsewhere in the plans.
30. Changes in level greater than 1/4 inch are not permitted.
31. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than five percent (5%) must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with PROWAG R409.
32. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
33. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item "Sidewalks".
34. Sidewalk details are shown elsewhere in the plans.

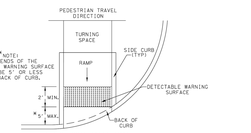
DETECTABLE WARNING SURFACE DETAILS



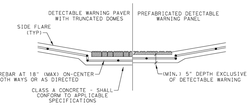
PARALLEL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.



PERPENDICULAR CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



DIRECTIONAL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



SECTION VIEW DETAIL
CURB RAMP AT DETECTIBLE WARNINGS

NO.	REVISIONS	DATE	NAME
1	ORIGINAL STANDARD ISSUED	2-1-22	RJS

FORT BEND COUNTY ENGINEERING DEPARTMENT

PROJECT TITLE:
DRAWN BY: INT
CK'D BY: INT
SCALE: 1"=1'
DATE: 2-1-22
SHEET DESCRIPTION: PED-18 RAMP DETAILS
APPROVED BY:
FBCED STANDARD: 15
SHEET NO.: SHEET 2 OF 4
/

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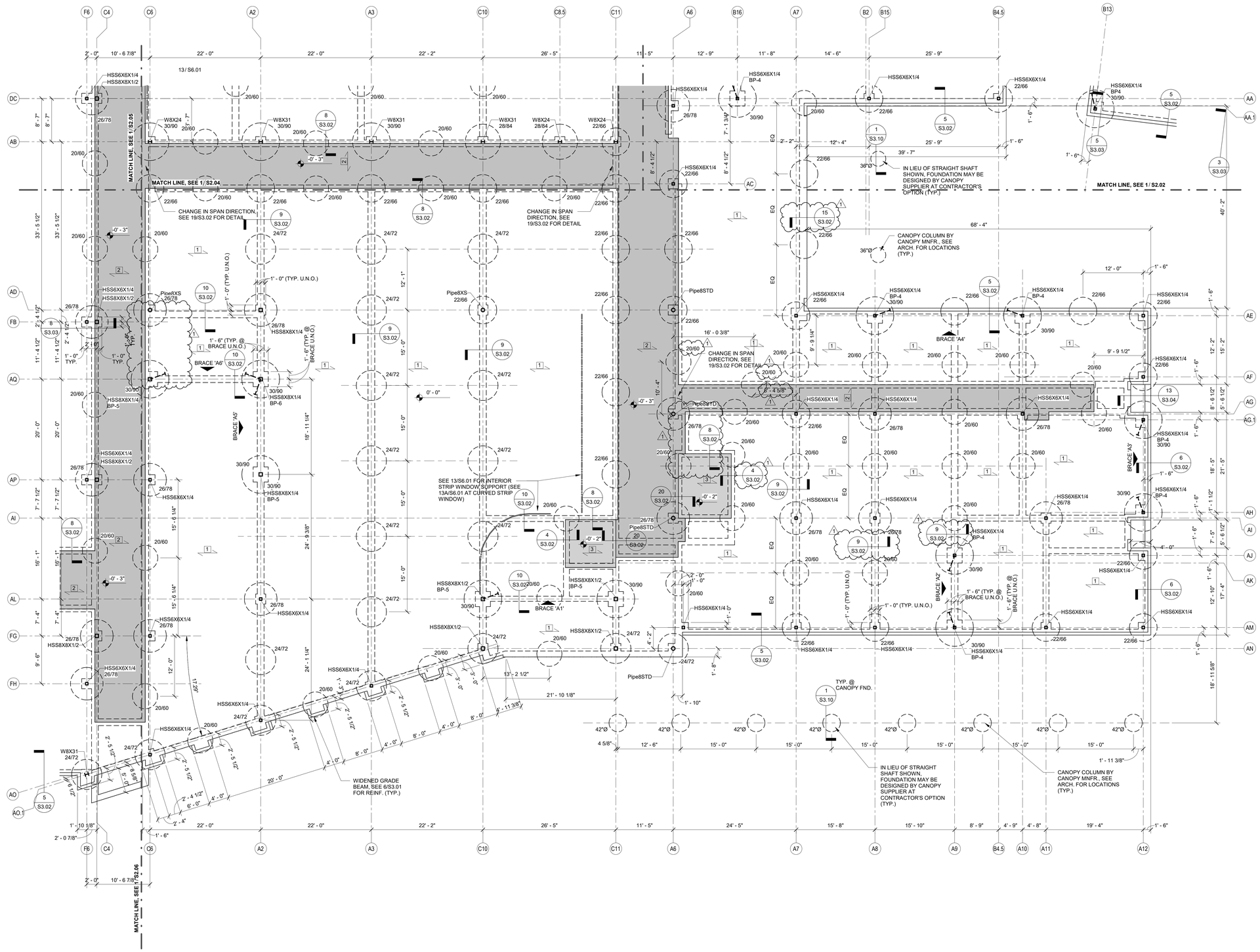

1 FOUNDATION PLAN - AREA A
SCALE: 1/8" = 1'-0"

FOUNDATION PLAN NOTES:

1. ALL PIERS ARE CENTERED UNDER COLUMN CENTERLINES, U.N.O.
2. PIERS UNDER GRADE BEAMS (WITHOUT COLUMNS) SHALL BE CENTERED UNDER GRADE BEAMS, U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL FLOOR SLOPES, DEPRESSIONS, ETC.
4. COORDINATE ALL BRICK LEDGES AND DEPTH WITH ARCHITECTURAL DRAWINGS.
5. LOCATIONS NOTED THUS: 0' - 0" INDICATES TOP OF SLAB ELEVATION.
6. REF. ELEVATION = 0' - 0" CORRESPONDING TO CIVIL FINISH FLOOR ELEVATION. VERIFY WITH CIVIL.
7. SEE SHEET S3.04 FOR BASE PLATES.
8. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
9. T.D. INDICATES TURN DOWN, SEE DETAIL 18/S3.02.
10. SEE 9/S7.01 FOR EXTERIOR CMU WALL REINF. SCHEDULE.
11. SEE 13/S7.02 FOR INTERIOR CMU WALL REINFORCING SCHEDULE AND BRACING REQUIREMENTS. SEE DETAILS ON SHEET S7.02 FOR TOP BRACING OF INTERIOR CMU WALLS.
12. M.C.J. INDICATES THE MASONRY CONTROL JOINTS FOR EXTERIOR CMU WALL PER 1/S7.01. SEE PLAN FOR CONTROL JOINT LOCATIONS. CONTROL JOINTS CAN BE ADJUSTED +/-2" TO ALIGN WITH CMU COURSING. VERTICAL CONTROL JOINTS IN NON-LOAD BEARING WALLS SHALL BE LOCATED PER DETAIL 13/S7.02.
13. [1] INDICATES 8" HOLLOW CORE PLANK 8"GC107XT WITH 2" STRUCTURAL CONCRETE TOPPING (MIN. CONCRETE COMPRESSIVE STRENGTH, Fc = 3,000 PSI). SEE GENERAL NOTES FOR MORE INFORMATION.
14. [2] INDICATES 7" CONCRETE SLAB ON 10" VOID BOXES - REINF. W/ #5 @ 10" O.C. TOP & BOT. (TYP.) - PLACE REINF. IN SHORT DIRECTION SHOWN AS ——→ ON PLAN. PROVIDE #3 @ 10" O.C. IN LONG DIRECTION. SEE 2/S3.04 FOR REINF. PLACEMENT
15. [3] INDICATES 8" CONCRETE SLAB ON 10" VOID BOXES - REINF. W/ #5 @ 10" O.C. TOP & BOT. (TYP.) - PLACE REINF. IN SHORT DIRECTION SHOWN AS ——→ ON PLAN. PROVIDE #3 @ 10" O.C. IN LONG DIRECTION. SEE 2/S3.04 FOR REINF. PLACEMENT.

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Houston, Texas 77046
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ELEMENTARY SCHOOL #38 IN BROOKEWATER

522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

Matrix Structural Engineers
TBPE Firm Registration No. F-2640

STATE OF TEXAS
KHALIL TABAJA
127126
LICENSED
PROFESSIONAL ENGINEER
01/10/2025

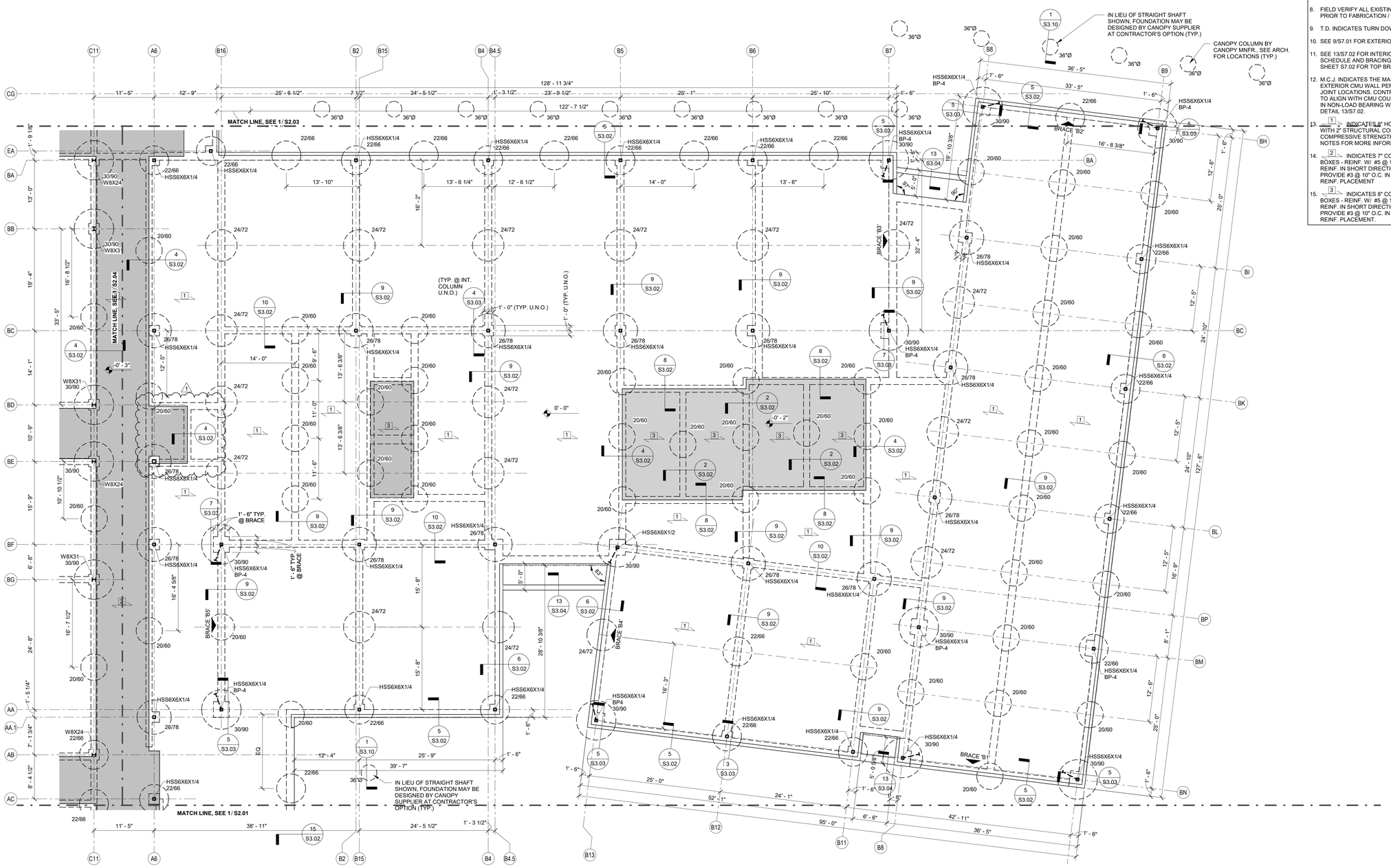
PROJECT NO. 24-028
DATE: 12/12/2024
DRAWN BY: KN CHECKED BY: KT
REVISIONS:

No.	Date	Description
1	01/10/2025	Addendum #2

100% CONSTRUCTION DOCUMENTS

S2.01
FOUNDATION PLAN - AREA A

1/9/2025 4:42:00 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24064_STRUCT_LAMAR CISD_ES38_R24.rvt



1 FOUNDATION PLAN - AREA B

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

FOUNDATION PLAN NOTES:

1. ALL PIERS ARE CENTERED UNDER COLUMN CENTERLINES, U.N.O.
2. PIERS UNDER GRADE BEAMS (WITHOUT COLUMNS) SHALL BE CENTERED UNDER GRADE BEAMS, U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL FLOOR SLOPES, DEPRESSIONS, ETC.
4. COORDINATE ALL BRICK LEDGES AND DEPTH WITH ARCHITECTURAL DRAWINGS.
5. LOCATIONS NOTED THUS: 0' - 0" INDICATES TOP OF SLAB ELEVATION.
6. REF. ELEVATION = 0' - 0" CORRESPONDING TO CIVIL FINISH FLOOR ELEVATION. VERIFY WITH CIVIL.
7. SEE SHEET S3.04 FOR BASE PLATES.
8. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
9. T.D. INDICATES TURN DOWN, SEE DETAIL 18/S3.02.
10. SEE 9/S7.01 FOR EXTERIOR CMU WALL REINF. SCHEDULE.
11. SEE 13/S7.02 FOR INTERIOR CMU WALL REINFORCING SCHEDULE AND BRACING REQUIREMENTS. SEE DETAILS ON SHEET S7.02 FOR TOP BRACING OF INTERIOR CMU WALLS.
12. M.C.J. INDICATES THE MASONRY CONTROL JOINTS FOR EXTERIOR CMU WALL PER 1/S7.01. SEE PLAN FOR CONTROL JOINT LOCATIONS. CONTROL JOINTS CAN BE ADJUSTED +/-2" TO ALIGN WITH CMU COURSING. VERTICAL CONTROL JOINTS IN NON-LOAD BEARING WALLS SHALL BE LOCATED PER DETAIL 13/S7.02.
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14. 2 INDICATES 7" CONCRETE SLAB ON 10" VOID BOXES - REINF. W/ #5 @ 10" O.C. TOP & BOT. (TYP.) - PLACE REINF. IN SHORT DIRECTION SHOWN AS ——→ ON PLAN. PROVIDE #3 @ 10" O.C. IN LONG DIRECTION. SEE 2/S3.04 FOR REINF. PLACEMENT
15. 3 INDICATES 8" CONCRETE SLAB ON 10" VOID BOXES - REINF. W/ #5 @ 10" O.C. TOP & BOT. (TYP.) - PLACE REINF. IN SHORT DIRECTION SHOWN AS ——→ ON PLAN. PROVIDE #3 @ 10" O.C. IN LONG DIRECTION. SEE 2/S3.04 FOR REINF. PLACEMENT.

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Matrix Structural Engineers
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STATE OF TEXAS
KHALIL TABAJA
117126
LICENSED
PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
DATE: 12/12/2024
DRAWN BY: KN CHECKED BY: KT
REVISIONS:

No.	Date	Description
1	01/10/2025	Addendum #2

100% CONSTRUCTION DOCUMENTS

S2.02
FOUNDATION PLAN - AREA B

Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookwater/24064_STRUCT_LAMAR CISD_ES38_R24.rvt
1/9/2025 4:42:00 PM

FOUNDATION PLAN NOTES:

1. ALL PIERS ARE CENTERED UNDER COLUMN CENTERLINES, U.N.O.
2. PIERS UNDER GRADE BEAMS (WITHOUT COLUMNS) SHALL BE CENTERED UNDER GRADE BEAMS, U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL FLOOR SLOPES, DEPRESSIONS, ETC.
4. COORDINATE ALL BRICK LEDGES AND DEPTH WITH ARCHITECTURAL DRAWINGS.
5. LOCATIONS NOTED THUS: 0' - 0" INDICATES TOP OF SLAB ELEVATION.
6. REF. ELEVATION = 0' - 0" CORRESPONDING TO CIVIL FINISH FLOOR ELEVATION. VERIFY WITH CIVIL.
7. SEE SHEET S3.04 FOR BASE PLATES.
8. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
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10. SEE 9/S7.01 FOR EXTERIOR CMU WALL REINF. SCHEDULE.
11. SEE 13/S7.02 FOR INTERIOR CMU WALL REINFORCING SCHEDULE AND BRACING REQUIREMENTS. SEE DETAILS ON SHEET S7.02 FOR TOP BRACING OF INTERIOR CMU WALLS.
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14. 2 INDICATES 7" CONCRETE SLAB ON 10" VOID BOXES - REINF. W/ #5 @ 10" O.C. TOP & BOT. (TYP.) - PLACE REINF. IN SHORT DIRECTION SHOWN AS ——→ ON PLAN. PROVIDE #3 @ 10" O.C. IN LONG DIRECTION. SEE 2/S3.04 FOR REINF. PLACEMENT
15. 3 INDICATES 8" CONCRETE SLAB ON 10" VOID BOXES - REINF. W/ #5 @ 10" O.C. TOP & BOT. (TYP.) - PLACE REINF. IN SHORT DIRECTION SHOWN AS ——→ ON PLAN. PROVIDE #3 @ 10" O.C. IN LONG DIRECTION. SEE 2/S3.04 FOR REINF. PLACEMENT.

CANOPY COLUMN BY CANOPY MNFR., SEE ARCH. FOR LOCATIONS (TYP.)

TYP. @ CANOPY FND.

IN LIEU OF STRAIGHT SHAFT SHOWN, FOUNDATION MAY BE DESIGNED BY CANOPY SUPPLIER AT CONTRACTOR'S OPTION (TYP.)

HOLLOW CORE PLANK MNFR. TO DESIGN HOLLOW CORE PLANKS FOR L/600 AT CMU WALLS WHERE THERE IS NO GRADE BEAM UNDER THE WALL (TYP.)

VERIFY W/ MEP

OUTLINE OF CHILLER

CONCRETE RUNNER AT CHILLER SUPPORT. COORD. W/ MEP

1 FOUNDATION PLAN - AREA C
SCALE: 1/8" = 1'-0"

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ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

Matrix Structural Engineers
TBPE Firm Registration No. F-2640
STATE OF TEXAS
KHALIL TABAJA
117E
LICENSED
CIVIL ENGINEER
01/10/2025

PROJECT NO. 24-028
DATE: 12/12/2024
DRAWN BY: KN CHECKED BY: KT
REVISIONS:

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S2.03
FOUNDATION PLAN - AREA C

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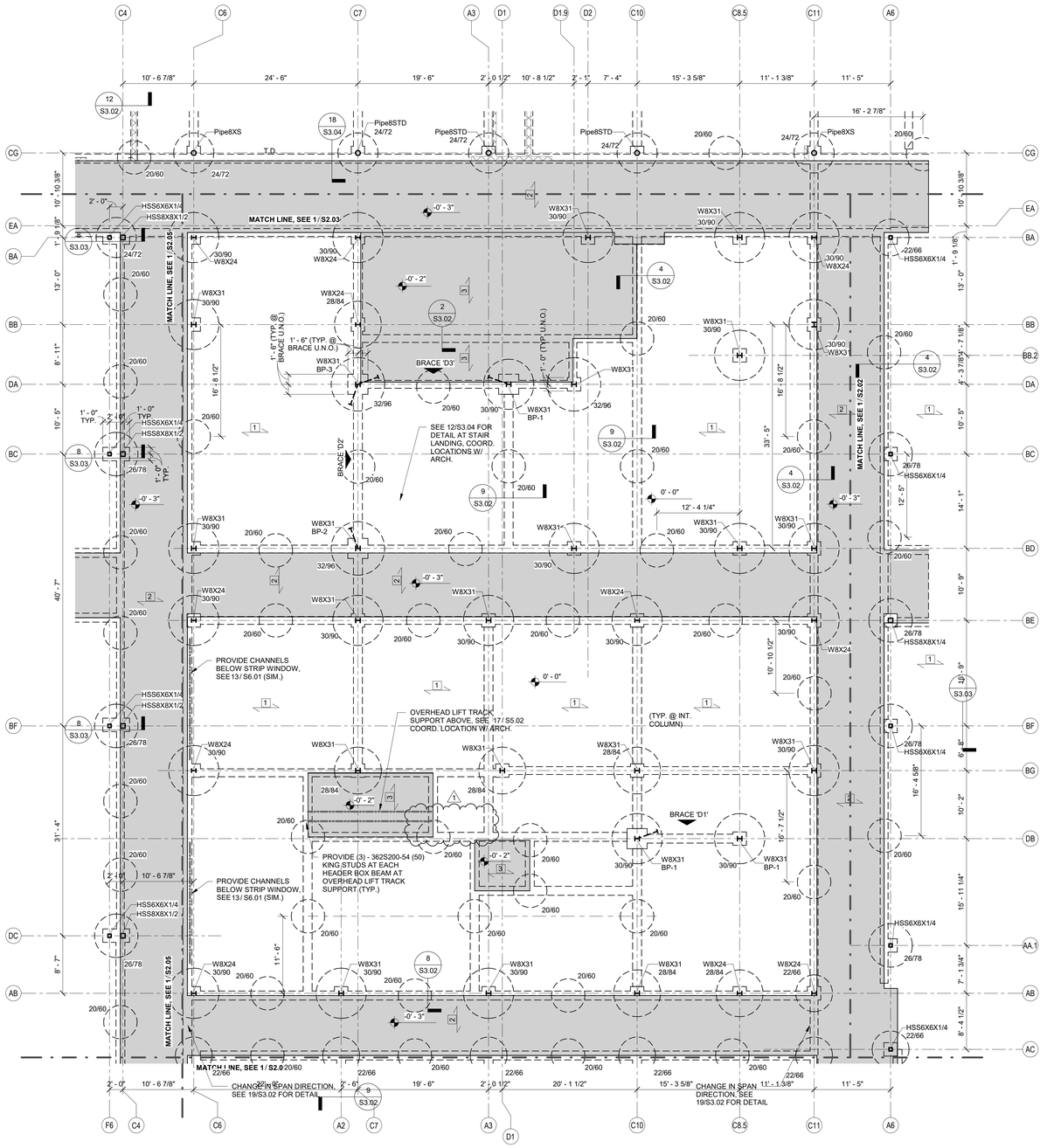

1 FOUNDATION PLAN - AREA D
SCALE: 1/8" = 1'-0"

FOUNDATION PLAN NOTES:

1. ALL PIERS ARE CENTERED UNDER COLUMN CENTERLINES, U.N.O.
2. PIERS UNDER GRADE BEAMS (WITHOUT COLUMNS) SHALL BE CENTERED UNDER GRADE BEAMS, U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL FLOOR SLOPES, DEPRESSIONS, ETC.
4. COORDINATE ALL BRICK LEDGES AND DEPTH WITH ARCHITECTURAL DRAWINGS.
5. LOCATIONS NOTED THUS: 0' - 0" INDICATES TOP OF SLAB ELEVATION.
6. REF. ELEVATION = 0' - 0" CORRESPONDING TO CIVIL FINISH FLOOR ELEVATION. VERIFY WITH CIVIL.
7. SEE SHEET S3.04 FOR BASE PLATES.
8. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
9. T.D. INDICATES TURN DOWN, SEE DETAIL 18/S3.02.
10. SEE 9/S7.01 FOR EXTERIOR CMU WALL REINF. SCHEDULE.
11. SEE 13/S7.02 FOR INTERIOR CMU WALL REINFORCING SCHEDULE AND BRACING REQUIREMENTS. SEE DETAILS ON SHEET S7.02 FOR TOP BRACING OF INTERIOR CMU WALLS.
12. M.C.J. INDICATES THE MASONRY CONTROL JOINTS FOR EXTERIOR CMU WALL PER 1/S7.01. SEE PLAN FOR CONTROL JOINT LOCATIONS. CONTROL JOINTS CAN BE ADJUSTED +/-2" TO ALIGN WITH CMU COURSING. VERTICAL CONTROL JOINTS IN NON-LOAD BEARING WALLS SHALL BE LOCATED PER DETAIL 13/S7.02.
13. 1 INDICATES 8" HOLLOW CORE PLANK 8"GC107XT WITH 2" STRUCTURAL CONCRETE TOPPING (MIN. CONCRETE COMPRESSIVE STRENGTH, F'c = 3,000 PSI). SEE GENERAL NOTES FOR MORE INFORMATION.
14. 2 INDICATES 7" CONCRETE SLAB ON 10" VOID BOXES - REINF. W/ #5 @ 10" O.C. TOP & BOT. (TYP.) - PLACE REINF. IN SHORT DIRECTION SHOWN AS ——→ ON PLAN. PROVIDE #3 @ 10" O.C. IN LONG DIRECTION. SEE 2/S3.04 FOR REINF. PLACEMENT
15. 3 INDICATES 8" CONCRETE SLAB ON 10" VOID BOXES - REINF. W/ #5 @ 10" O.C. TOP & BOT. (TYP.) - PLACE REINF. IN SHORT DIRECTION SHOWN AS ——→ ON PLAN. PROVIDE #3 @ 10" O.C. IN LONG DIRECTION. SEE 2/S3.04 FOR REINF. PLACEMENT.

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S2.04
FOUNDATION PLAN - AREA D

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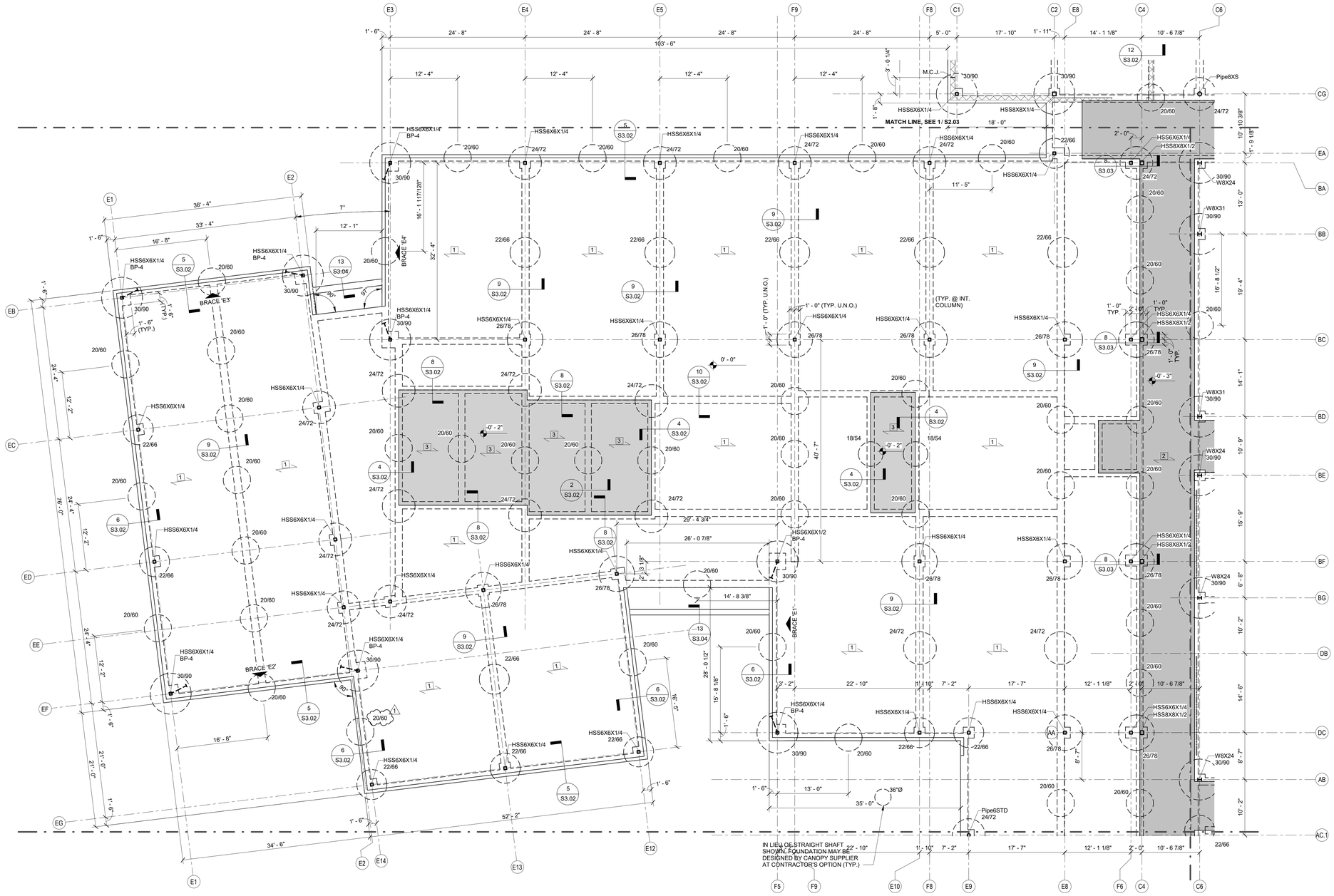

1 FOUNDATION PLAN - AREA E
SCALE: 1/8" = 1'-0"

FOUNDATION PLAN NOTES:

1. ALL PIERS ARE CENTERED UNDER COLUMN CENTERLINES, U.N.O.
2. PIERS UNDER GRADE BEAMS (WITHOUT COLUMNS) SHALL BE CENTERED UNDER GRADE BEAMS, U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL FLOOR SLOPES, DEPRESSIONS, ETC.
4. COORDINATE ALL BRICK LEDGES AND DEPTH WITH ARCHITECTURAL DRAWINGS.
5. LOCATIONS NOTED THUS: 0' - 0" INDICATES TOP OF SLAB ELEVATION.
6. REF. ELEVATION = 0' - 0" CORRESPONDING TO CIVIL FINISH FLOOR ELEVATION. VERIFY WITH CIVIL.
7. SEE SHEET S3.04 FOR BASE PLATES.
8. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
9. T.D. INDICATES TURN DOWN, SEE DETAIL 18/S3.02.
10. SEE 9/S7.01 FOR EXTERIOR CMU WALL REINF. SCHEDULE.
11. SEE 13/S7.02 FOR INTERIOR CMU WALL REINFORCING SCHEDULE AND BRACING REQUIREMENTS. SEE DETAILS ON SHEET S7.02 FOR TOP BRACING OF INTERIOR CMU WALLS.
12. M.C.J. INDICATES THE MASONRY CONTROL JOINTS FOR EXTERIOR CMU WALL PER 1/S7.01. SEE PLAN FOR CONTROL JOINT LOCATIONS. CONTROL JOINTS CAN BE ADJUSTED +/-2" TO ALIGN WITH CMU COURSING. VERTICAL CONTROL JOINTS IN NON-LOAD BEARING WALLS SHALL BE LOCATED PER DETAIL 13/S7.02.
13. 1 INDICATES 8" HOLLOW CORE PLANK 8"GC107XT WITH 2" STRUCTURAL CONCRETE TOPPING (MIN. CONCRETE COMPRESSIVE STRENGTH, F'c = 3,000 PSI). SEE GENERAL NOTES FOR MORE INFORMATION.
14. 2 INDICATES 7" CONCRETE SLAB ON 10" VOID BOXES - REINF. W/ #5 @ 10" O.C. TOP & BOT. (TYP.) - PLACE REINF. IN SHORT DIRECTION SHOWN AS ——→ ON PLAN. PROVIDE #3 @ 10" O.C. IN LONG DIRECTION. SEE 2/S3.04 FOR REINF. PLACEMENT
15. 3 INDICATES 8" CONCRETE SLAB ON 10" VOID BOXES - REINF. W/ #5 @ 10" O.C. TOP & BOT. (TYP.) - PLACE REINF. IN SHORT DIRECTION SHOWN AS ——→ ON PLAN. PROVIDE #3 @ 10" O.C. IN LONG DIRECTION. SEE 2/S3.04 FOR REINF. PLACEMENT.

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S2.05
FOUNDATION PLAN - AREA E

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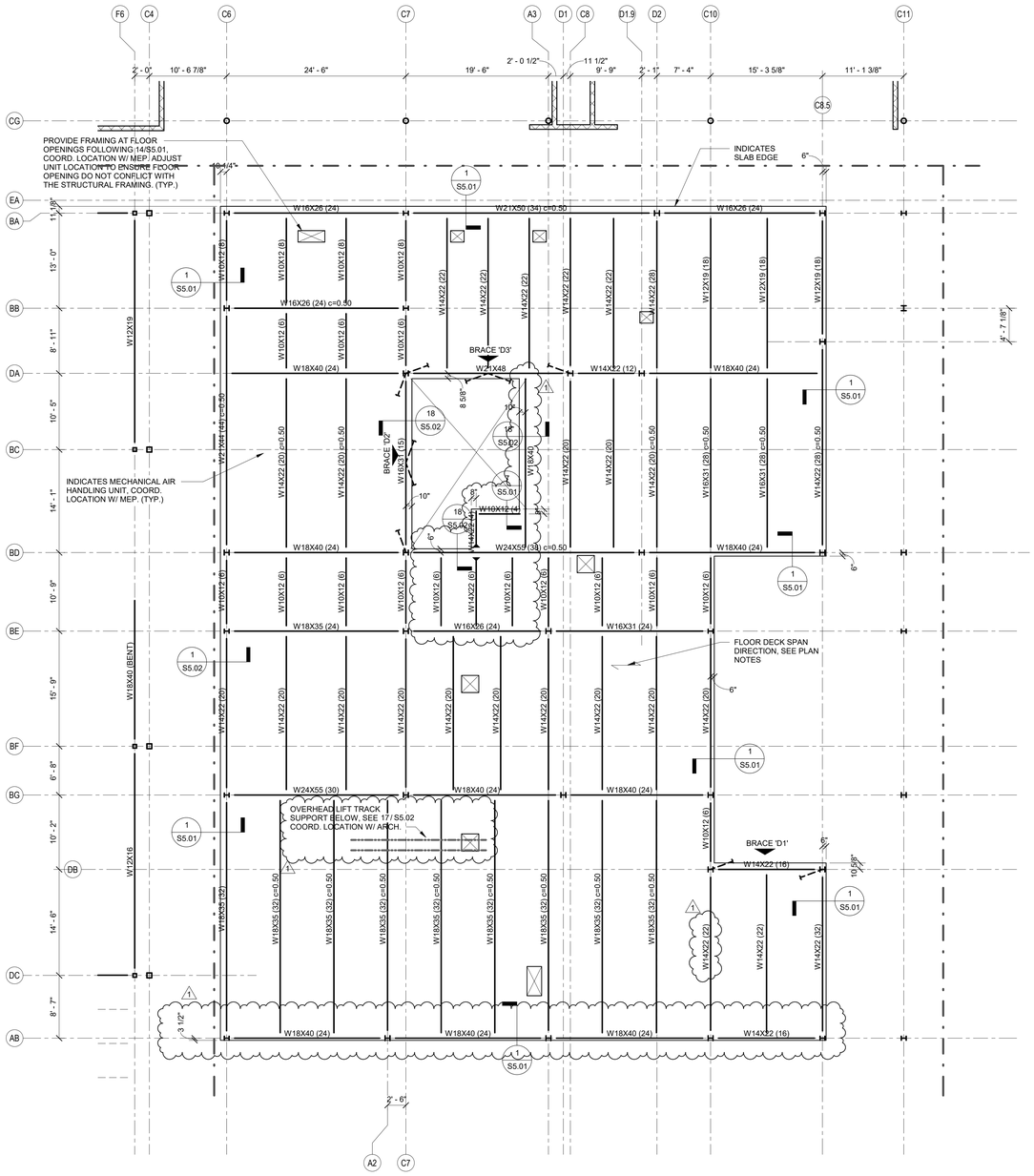

1 MEZZANINE FRAMING PLAN - AREA D
SCALE: 1/8" = 1'-0"

FLOOR PLAN NOTES:

1. TOP OF CONCRETE ELEVATION = 13' - 10".
2. LOCATIONS SHOWN THUS: (12) C=3/4" INDICATES NUMBER OF SHEAR CONNECTORS AS 12 AND UPWARD CAMBER AT MID SPAN OF BEAM AS 3/4".
3. SPACE BEAMS EQUALLY U.N.O.
4. PROVIDE END PLATES AT ALL TUBE BEAMS.
5. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
6. SEE SHEET S8.01, S8.02 & S8.03 FOR BRACE ELEVATIONS.
7. ▶— = MOMENT CONNECTION
   LSH = LONG SIDE HORIZONTAL
   LSV = LONG SIDE VERTICAL
8. FLOOR SHALL BE 3" NORMAL WEIGHT CONCRETE OVER THE FLUTES OF 2" x 18 GA TYPE VLI STEEL DECK AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT TO TOTAL THICKNESS = 5". REINFORCE CONCRETE WITH #3 AT 18" O.C. EACH WAY. PLACE REBAR PERPENDICULAR TO BEAMS (PARALLEL TO DECK) IN THE OUTSIDE LAYER. WELD DECK USING 5/8"Ø NET EFFECTIVE PUDDLE WELDS:
   a. PERPENDICULAR BEARING : 36/4 PATTERN.
   b. PARALLEL BEARING AND EDGE : AT 12" O.C.
   c. SIDE SEAMS : SEAM WELDS AT 12" O.C.
9. SEE 17/S5.01 FOR ADDITIONAL SLAB REINFORCING AT ALL BEAMS & GIRDERS.
10. SEE 13/S5.01 & 15/S5.01 FOR ADDITIONAL SLAB REINFORCING AT OPENINGS AND EDGES.
11. SEE 11/S5.01 FOR ADDITIONAL STEEL ANGLES AND REINFORCING AT STEEL COLUMNS.
12. AT SLOPED FLOOR LOCATIONS ON ELEVATED FLOORS WHERE OVERALL SLAB THICKNESS IS LESS THAN 5 1/2", SPRAY FIREPROOFING SHALL BE APPLIED TO THE UNDERSIDE OF THE DECK IN SLOPED AREA TO MEET REQUIRED FIRE RATING. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE RATING.

BEAM SIZE @ 2ND LEVEL	FACTORED END REACTION (kips)
W10X12	20
W12X19	30
W14X22	40
W16X26, W16X31	50
W18X35, W18X40	70
W21X44, W21X50	80
W24X55	90

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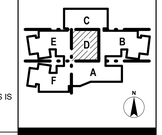

ELEMENTARY SCHOOL #38 IN BROOKEWATER

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Matrix Structural Engineers
TBPE Firm Registration No. F-2640

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S2.10
MEZZANINE FRAMING PLAN

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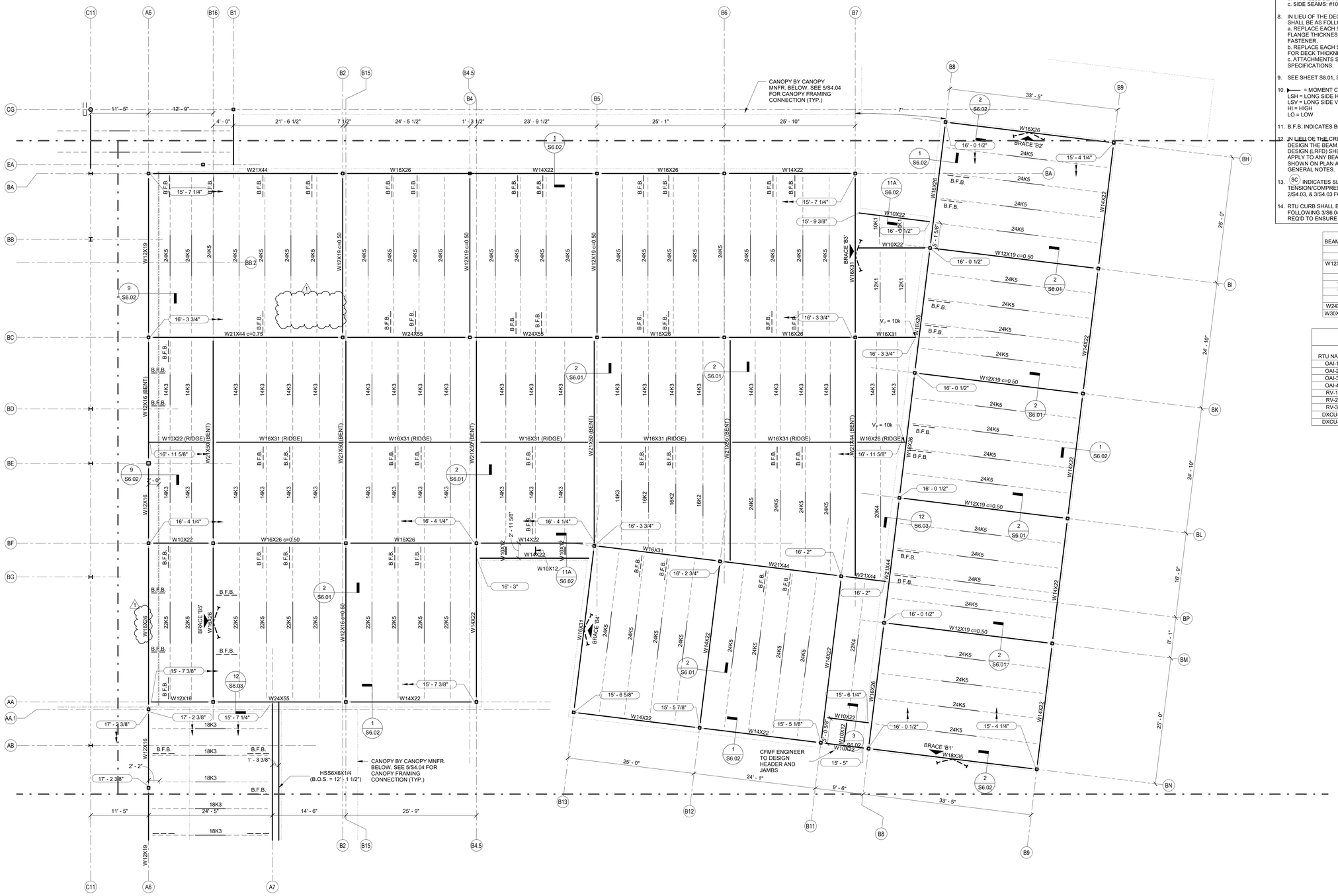

1 ROOF FRAMING PLAN - AREA B
SCALE: 1/8" = 1'-0"

ROOF FRAMING PLAN NOTES:

1. LOCATIONS SHOWN THUS: ( ) INDICATES TOP OF STEEL (T.O.S.) ELEVATION (TOP OF STEEL = TOP OF JOIST OR BOTTOM OF DECK).
2. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
3. JOISTS SHALL BE DESIGNED FOR ADDITIONAL LOADS RESULTING FROM RTU'S AND OTHER MECHANICAL EQUIPMENT ON THE ROOF OR SUSPENDED FROM THE ROOF STRUCTURE. SEE ARCHITECTURAL AND MEP DRAWINGS FOR LOCATIONS.
4. SPACE JOISTS EQUALLY, U.N.O.
5. PROVIDE 3/16" CLOSURE PLATES AT ALL TUBE BEAMS.
6. REFER TO ARCHITECTURAL DRAWINGS / MEP FOR LOCATIONS OF ROOF DRAINS, OVERFLOW DRAINS AND TAPERED INSULATION.
7. ROOF SHALL BE 1.5BV, 22GA DECK AS MANUFACTURED BY VULCRAFT OR EQUIVALENT. SEE ARCHITECTURAL DRAWINGS FOR INSULATION, ROOFING, ETC. WELD DECK USING 5/8"Ø NET EFFECTIVE PUDDLE WELDS:
   a. PERPENDICULAR BEARING: 36/7 PATTERN.
   b. PARALLEL BEARINGS AND EDGE: AT 6"O.C.
   c. SIDE SEAMS: #10 TEK SCREWS AT 6"O.C.
8. IN LIEU OF THE DECK ATTACHMENT SHOWN ABOVE, ALTERNATE DECK ATTACHMENT SHALL BE AS FOLLOWS:
   a. REPLACE EACH 5/8"Ø WELD WITH ONE HILTI X-HSN 24 FASTENER FOR BASE STEEL FLANGE THICKNESS (tf) ≤ 3/8" AT THICKER BASE STEEL USE ONE HILTI X-ENP-19-L15 TYPE FASTENER.
   b. REPLACE EACH SIDE SEAM #10 SCREW WITH ONE HILTI S-SLC 01 M HWH FASTENER FOR DECK THICKNESS LESS THAN OR EQUAL TO 20 GAGE.
   c. ATTACHMENTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
9. SEE SHEET S8.01, S8.02 & S8.03 FOR BRACE ELEVATIONS.
10. ▶—— = MOMENT CONNECTION
    LSH = LONG SIDE HORIZONTAL
    LSV = LONG SIDE VERTICAL
    HI = HIGH
    LO = LOW
11. B.F.B. INDICATES BOTTOM FLANGE BRACE, SEE S6.01 FOR DETAILS.
12. IN LIEU OF THE CRITERIA PROVIDED WITHIN THE GENERAL NOTES, THE FABRICATOR MAY DESIGN THE BEAM CONNECTIONS AT THIS FLOOR LEVEL FOR THE ULTIMATE STRENGTH DESIGN (LRFD) SHEAR REACTIONS SHOWN IN THE CHART BELOW. THIS CHART DOES NOT APPLY TO ANY BEAMS AT MOMENT CONNECTIONS OR BRACE FRAMES. WHERE BEAMS SHOWN ON PLAN AREA NOT INDICATED IN CHART. APPLY CRITERIA INDICATED IN THE GENERAL NOTES.
13. (SC) INDICATES SLIP CRITICAL CONNECTION. ——30k—▶ DESIGN CONNECTION FOR AXIAL TENSION/COMPRESSION ULTIMATE FORCE (LRFD) AS SHOWN IN THE PLAN. SEE 1/S4.03, 2/S4.03, & 3/S4.03 FOR CONNECTION DETAILS.
14. RTU CURB SHALL BE SUPPORTED AS SHOWN IN 5 OR 7/S6.04. FASTEN CURB BLOCKING FOLLOWING 3/S6.04. ROOF OPENINGS SHALL BE FRAMED PER 1/S6.04. ADJUST UNITS AS REQ'D TO ENSURE ROOF OPENINGS DO NOT CONFLICT WITH FRAMING (TYP.)

BEAM SIZE @ ROOF LEVEL	FACTORED END REACTION (kips)
W8X10	10
W10X12	20
W12X14, W12X16, W12X19, W10X22	30
W14X22	40
W16X26, W16X31	60
W16X35, W16X40	80
W21X44	90
W24X55, W24X62, W24X68	100
W30X90, W30X99, W30X108	120

RTU LOAD SCHEDULE

RTU NAME	RTU WEIGHT (LBS)	WIND REACTION (LBS) (ASD)* (-)	(+)
OAI-1	300	-950	550
OAI-2	300	-950	550
OAI-3	325	-950	550
OAI-4	150	-950	550
RV-1	200	-700	500
RV-2	200	-700	500
RV-3	200	-700	500
DXCU-1	1200	-850	650
DXCU-2	750	-850	650

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ROOF FRAMING PLAN - AREA B

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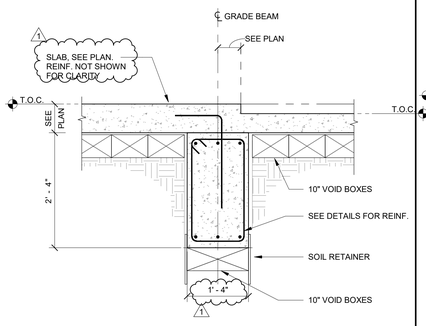
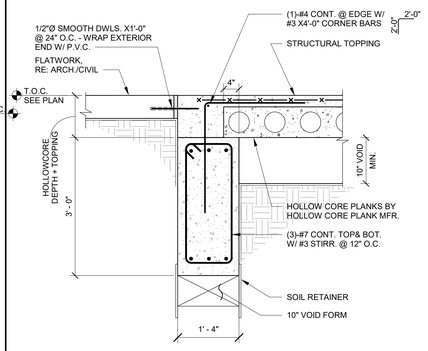


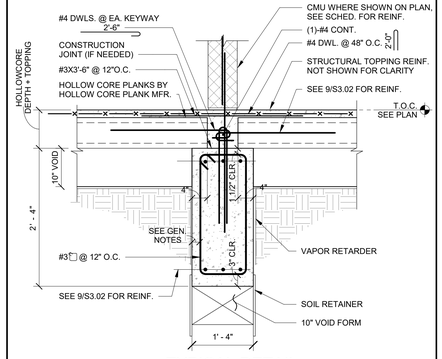
TYPICAL DETAIL
INTERIOR GRADE BEAM AT DEPRESSION (STRUCTURAL SLAB)

20 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
GRADE BEAM AT DOORS / FLATWORK

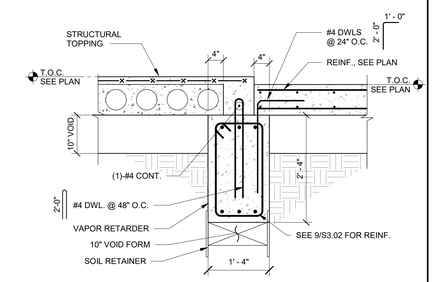
16 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
INTERIOR GRADE BEAM

12 SCALE: 3/4" = 1'-0"

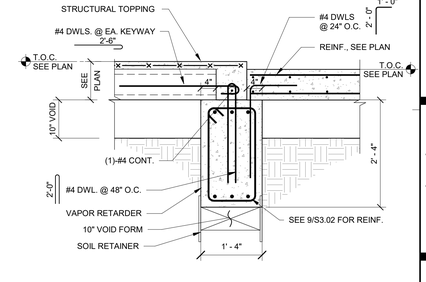
NOTE
ALL REINF. AT TOPPING SLAB SHALL BE PROVIDED AT MID-DEPTH.



TYPICAL DETAIL INTERIOR GRADE BEAM AT HOLLW CORE TO STRUCTURAL SLAB TRANSITION

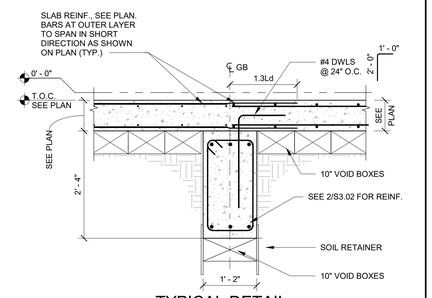
8 SCALE: 3/4" = 1'-0"

NOTE
ALL REINF. AT TOPPING SLAB SHALL BE PROVIDED AT MID-DEPTH.



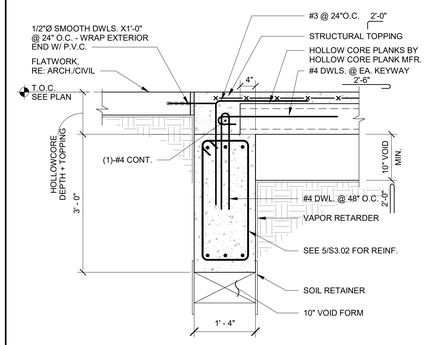
TYPICAL DETAIL
INTERIOR GRADE BEAM AT HOLLW CORE TO STRUCTURAL SLAB TRANSITION

4 SCALE: 3/4" = 1'-0"



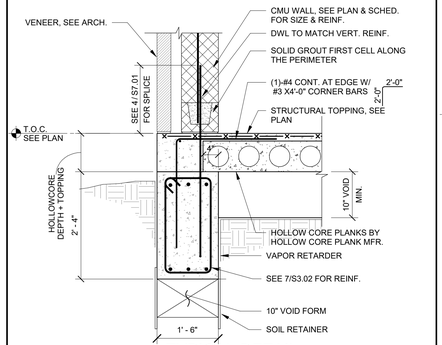
TYPICAL DETAIL
INTERIOR GRADE BEAM AT SPAN DIRECTION CHANGE (STRUCTURAL SLAB)

19 SCALE: 3/4" = 1'-0"



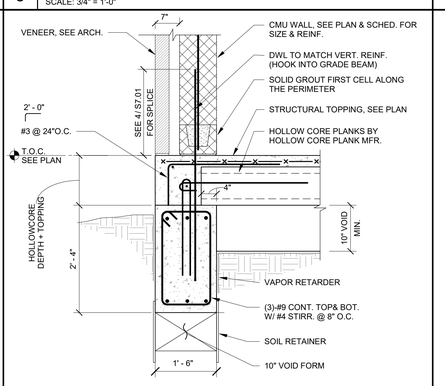
TYPICAL DETAIL
GRADE BEAM AT DOORS / FLATWORK

15 SCALE: 3/4" = 1'-0"



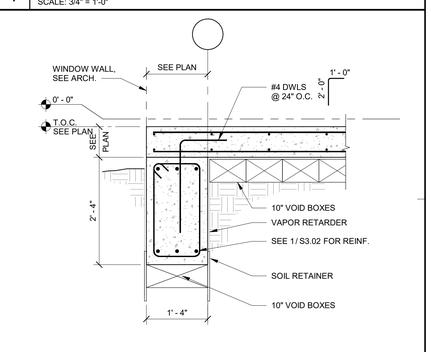
TYPICAL DETAIL
EXTERIOR GRADE BEAM AT CMU WALL

11 SCALE: 3/4" = 1'-0"



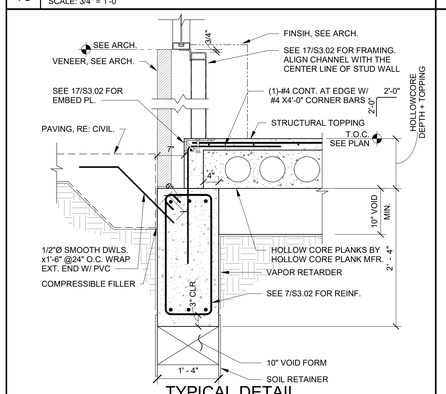
TYPICAL DETAIL
EXTERIOR GRADE BEAM AT CMU WALL

7 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL EXTERIOR
GRADE BEAM AT WINDOW WALL (STRUCTURAL SLAB)

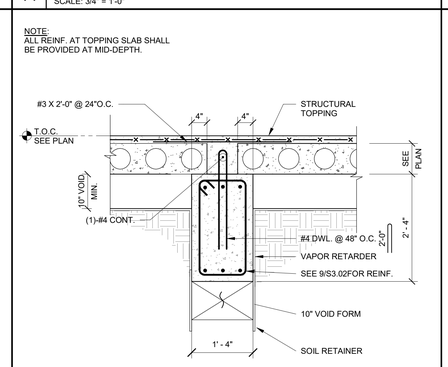
3 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
EXTERIOR GRADE BEAM

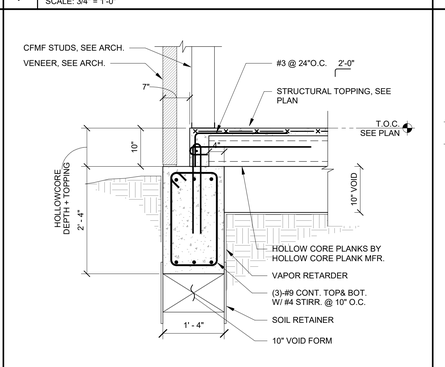
18 SCALE: 3/4" = 1'-0"

NOTE:
ALL REINF. AT TOPPING SLAB SHALL BE PROVIDED AT MID-DEPTH.



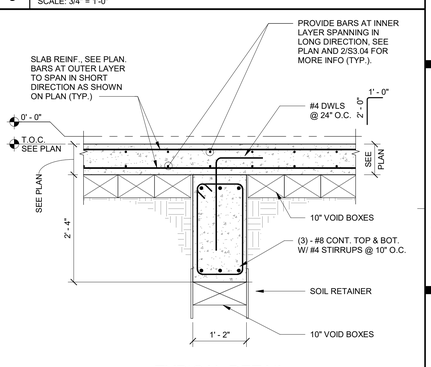
TYPICAL DETAIL INTERIOR GRADE BEAM (HOLLOW CORE)

10 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
EXTERIOR GRADE BEAM (HOLLOW CORE)

6 SCALE: 3/4" = 1'-0"

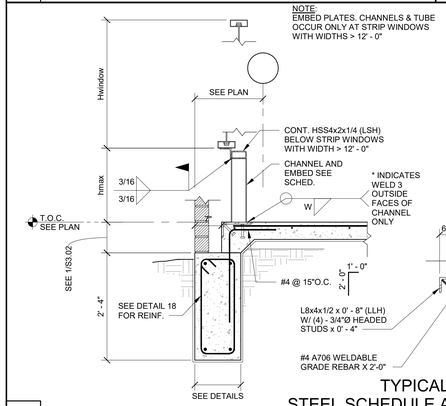


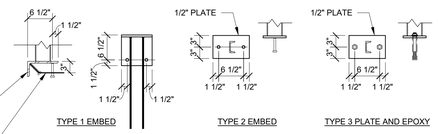
TYPICAL DETAIL
INTERIOR GRADE BEAM (STRUCTURAL SLAB)

2 SCALE: 3/4" = 1'-0"

NOTE:
EMBED PLATES, CHANNELS & TUBE OCCUR ONLY AT STRIP WINDOWS WITH WIDTHS > 12' - 0"

hmax	Hwindow max	CHANNEL	WELD "W"	EMBED	SPACING
1'-6"	4'-6"	C3x3.5	3/16"*	TYPE 3	3'-0" O.C.
2'-0"	5'-0"	C3x3.5	3/16"*	TYPE 3	2'-0" O.C.
2'-0"	5'-0"	C3x3.5	3/16"*	TYPE 2	3'-0" O.C.
2'-6"	5'-0"	C3x3.5	3/16"*	TYPE 2	2'-6" O.C.
2'-6"	7'-0"	C3x3.5	3/16"*	TYPE 2	2'-0" O.C.
3'-0"	10'-0"	C4x4.5	3/16"	TYPE 1	4'-0" O.C.
3'-0"	15'-0"	C4x5.4	3/16"	TYPE 1	3'-0" O.C.
3'-0"	18'-0"	C4x5.4	3/16"	TYPE 1	2'-6" O.C.
4'-0"	13'-0"	C4x5.4	3/16"	TYPE 1	2'-6" O.C.
4'-0"	17'-0"	C5x6.7	1/4"*	TYPE 1	2'-0" O.C.

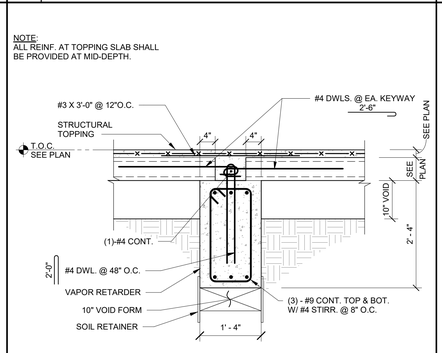




TYPICAL DETAIL
STEEL SCHEDULE AT STRIP WINDOWS

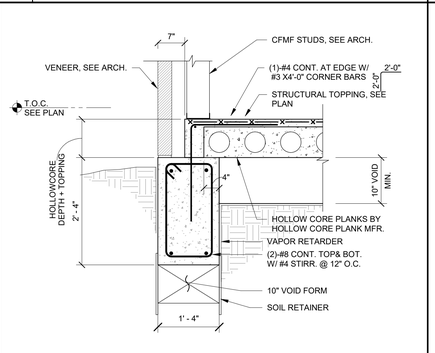
17 SCALE: 3/4" = 1'-0"

NOTE:
ALL REINF. AT TOPPING SLAB SHALL BE PROVIDED AT MID-DEPTH.



TYPICAL DETAIL INTERIOR GRADE BEAM (HOLLOW CORE)

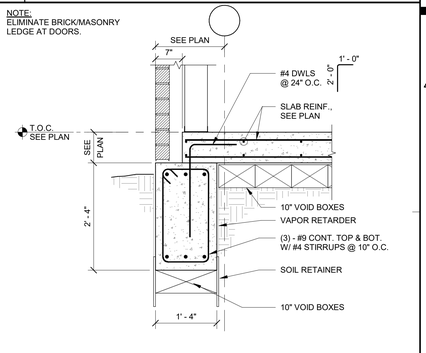
9 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
EXTERIOR GRADE BEAM (HOLLOW CORE)

5 SCALE: 3/4" = 1'-0"

NOTE:
ELIMINATE BRICK/MASONRY LEDGE AT DOORS.



TYPICAL DETAIL
EXTERIOR GRADE BEAM (STRUCTURAL SLAB)

1 SCALE: 3/4" = 1'-0"

pfluger
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ELEMENTARY SCHOOL #38 IN BROOKEWATER
522 BROOKEWATER BLVD ROSENBERG, TX 77471

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

Matrix Structural Engineers
TBPE Firm Registration No. F-2640

STATE OF TEXAS
KHALIL TABAJA
137126
LICENSED
PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
DATE: 12/12/2024
DRAWN BY: KN CHECKED BY: KT
REVISIONS:

No.	Date	Description
1	01/10/2025	Addendum #2

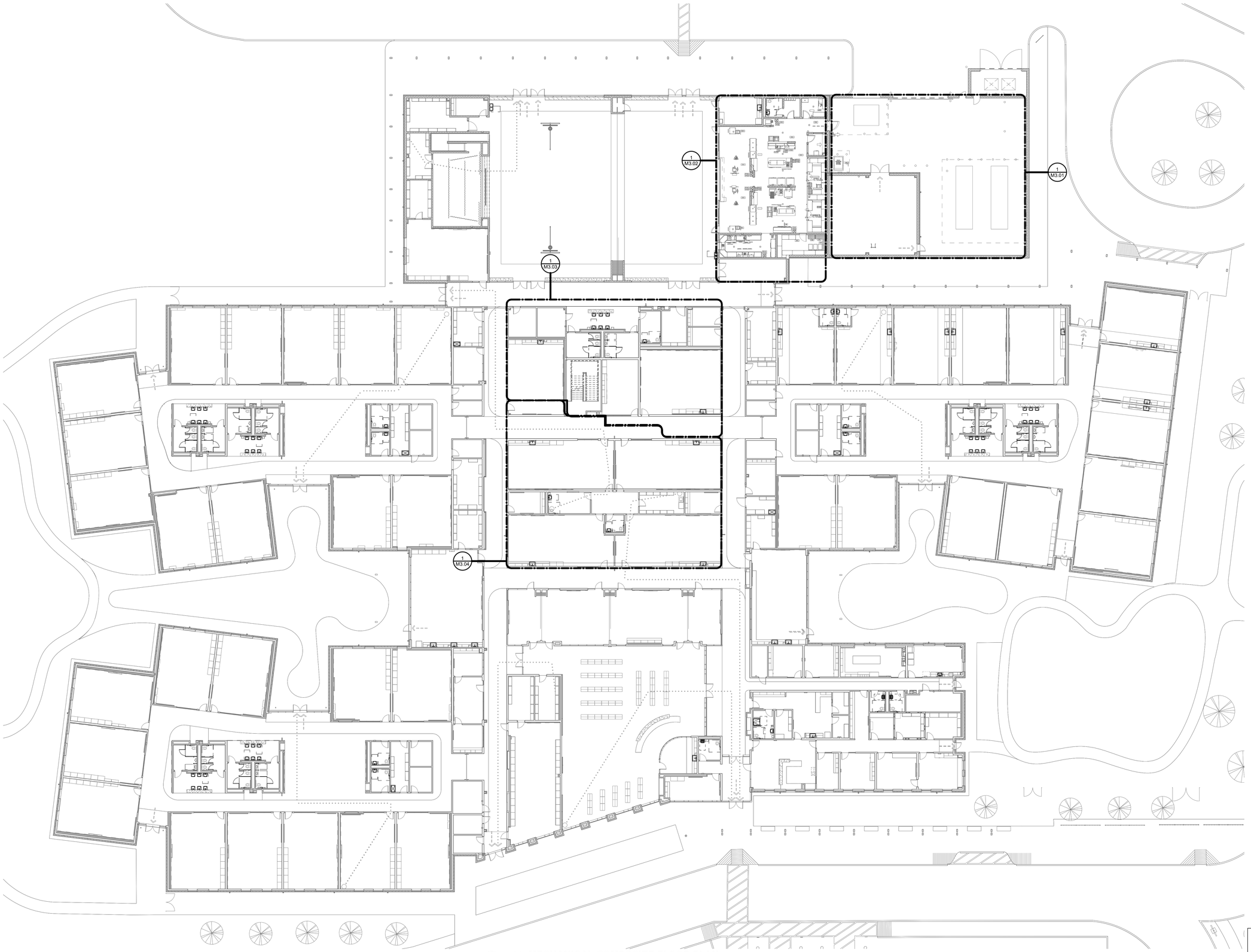
100% CONSTRUCTION DOCUMENTS

S3.02
FOUNDATION DETAILS

1/9/2025 4:42:21 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/24064_STRUCT_LAMAR CISD_ES38_R24.rvt

MECHANICAL GENERAL NOTES:

1. APPLICABLE CODES: INTERNATIONAL MECHANICAL CODE (IMC)-2015; INTERNATIONAL, ENERGY CONSERVATION CODE (IECC)-2015.



1 **MECHANICAL COMPOSITE FLOOR PLAN**
Scale: 1/16" = 1'-0"

pfluger

ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS
80219
LICENSED
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: AA CHECKED BY: SH
REVISIONS:

	Date	Description
2	01/10/2025	Addendum 2

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

100% CONSTRUCTION DOCUMENTS

M1.01
MECHANICAL COMPOSITE FLOOR PLAN

1/9/2025 4:20:05 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

DUAL DUCT TERMINAL BOX

MARK	COOLING CFM MAX.	COOLING CFM MIN.	COOLING INLET DIAMETER SIZE (IN.)	HEATING MAXIMUM CFM	HEATING INLET DIAMETER SIZE (IN.)	REMARKS
DDB-1-1	1,220	360	12	980	10	-
DDB-1-2	1,120	340	12	900	10	-
DDB-1-3	1,100	405	12	880	9	-
DDB-1-4	940	400	10	755	9	-
DDB-1-5	1,490	415	12	1195	12	-
DDB-1-6	1,100	340	12	880	9	-
DDB-1-7	1,050	340	10	840	9	-
DDB-1-8	1,290	425	12	1035	10	-
DDB-2-1	1,450	440	12	1160	12	-
DDB-2-2	1,000	340	10	800	9	-
DDB-2-3	1,370	450	12	1100	12	-
DDB-2-4	1,060	355	10	850	9	-
DDB-2-5	1,290	450	12	1035	10	-
DDB-2-6	1,390	425	12	1115	12	-
DDB-2-7	1,390	400	12	1115	12	-
DDB-2-8	1,210	385	12	970	10	-
DDB-2-9	795	295	10	640	8	-
DDB-2-10	1,095	400	12	880	9	-
DDB-2-11	1,000	305	10	800	9	-
DDB-3-1	1,000	200	10	800	9	-
DDB-3-2	500	100	8	400	7	-
DDB-3-3	1,440	285	12	1155	12	-
DDB-3-4	1,340	265	12	1075	10	-
DDB-3-5	1,110	220	12	890	10	-
DDB-3-6	905	180	10	725	9	-
DDB-3-7	1,160	230	12	930	10	-
DDB-5-1	1,180	385	12	945	10	-
DDB-5-2	1,310	430	12	1050	10	-
DDB-5-3	1,310	430	12	1050	10	-
DDB-5-4	1,060	350	10	850	9	-
DDB-5-5	1,410	460	12	1130	12	-
DDB-5-6	1,495	490	12	1200	12	-
DDB-5-7	1,425	465	12	1140	12	-
DDB-5-8	1,180	385	12	945	10	-
DDB-5-9	1,240	405	12	995	10	-
DDB-5-10	1,220	400	12	980	10	-
DDB-5-11	1,285	420	12	1030	10	-
DDB-6-1	1,280	465	12	1025	10	-
DDB-6-2	1,395	470	12	1120	12	-
DDB-6-3	1,395	470	12	1120	12	-
DDB-6-4	1,500	505	12	1200	12	-
DDB-6-5	1,500	505	12	1200	12	-
DDB-6-6	1,255	425	12	1005	10	-
DDB-6-7	1,375	465	12	1100	12	-
DDB-6-8	1,160	390	12	930	10	-
DDB-6-9	1,435	485	12	1150	12	-
DDB-6-10	1,100	370	12	880	9	-
DDB-6-11	1,180	400	12	945	10	-
DDB-7-1	1,340	390	12	1075	10	-
DDB-7-2	1,340	390	12	1075	10	-
DDB-7-3	1,400	410	12	1120	12	-
DDB-7-4	1,460	425	12	1170	12	-
DDB-7-5	990	290	10	795	9	-
DDB-7-6	905	265	10	725	9	-
DDB-7-7	1,395	410	12	1120	12	-
DDB-7-8	1,395	410	12	1120	12	-
DDB-7-9	1,435	420	12	1150	12	-
DDB-7-10	1,110	325	12	890	10	-
DDB-7-11	1,425	415	12	1140	12	-
DDB-8-1	1,495	395	12	1200	12	-
DDB-8-2	1,160	310	12	930	10	-
DDB-8-3	1,375	365	12	1100	12	-
DDB-8-4	1,160	310	12	930	10	-
DDB-8-5	1,335	355	12	1070	10	-
DDB-8-6	1,415	375	12	1135	12	-
DDB-8-7	1,500	400	12	1200	12	-
DDB-8-8	1,420	375	12	1140	12	-
DDB-8-9	920	245	10	740	9	-

GENERAL NOTES:
1. MAXIMUM STATIC PRESSURE DROP OF AIR THROUGH THE TERMINAL BOX SHALL BE 0.2" W.G.
2. MAXIMUM VELOCITY THROUGH DUCT INLET SHALL BE 2,000 FPM.
3. SUSPEND UNIT WITH FOUR THREADED HANGER RODS ATTACHED TO TWO UNISTRUT RUNNERS SECURED TO STRUCTURE. REFER TO MANUFACTURER FOR MORE DETAILS.
4. UNITS TO BE MOUNTED BETWEEN BEAMS AND 18" MAXIMUM ABOVE CEILING. AVOID MOUNTING OVER LIGHTS WHEREVER POSSIBLE.

REMARKS:
1. N/A

VARIABLE VOLUME TERMINAL BOX

MARK	MAXIMUM CFM	MINIMUM CFM	INLET DIAMETER SIZE (IN.)	HOT WATER COIL GPM	HOT WATER COIL CONNECTING PIPE SIZE	REMARKS
OAVAV-1-1	2,260	1,600	16			-
OAVAV-1-2	2,260	1,600	16			-
OAVAV-1-3	990	605	10			-
OAVAV-1-4	1,030	710	10			-
OAVAV-2-1	2,480	1,480	16			-
OAVAV-2-2	2,480	1,480	16			-
OAVAV-2-3	2,075	1,140	14			-
OAVAV-2-4	2,075	1,140	14			-
OAVAV-2-5	3,130	2,390	16			-
OAVAV-3-1	2,780	2,390	16			-
OAVAV-3-2	2,150	1,560	16			-
OAVAV-3-3	2,150	1,560	16			-
OAVAV-4-1	820	545	10			-
OAVAV-4-2	1,740	960	14			-
OAVAV-4-3	1,575	920	14			-
VAV-2-1	150	150	4			-
VAV-3-1	150	150	4			-
VAV-5-1	150	150	4			-
VAV-6-1	150	150	4			-

GENERAL NOTES:
1. MAXIMUM STATIC PRESSURE DROP OF AIR THROUGH THE TERMINAL BOX SHALL BE 0.2" ESP.
2. MAXIMUM VELOCITY THROUGH DUCT INLET SHALL BE 2,000 FPM.
3. MAXIMUM STATIC PRESSURE DROP THROUGH HEATER COIL SHALL BE 0.25" ESP.
4. MAXIMUM STATIC PRESSURE DROP OF WATER THROUGH HEATER COIL SHALL BE 10' W.G.
5. BTUH REQUIRED FOR HOT WATER HEATING IS HEATING GPM MULTIPLIED BY 10,000.
6. SUSPEND UNIT WITH FOUR THREADED HANGER RODS ATTACHED TO TWO UNISTRUT RUNNERS SECURED TO STRUCTURE. REFER TO MANUFACTURER FOR MORE DETAILS.
7. UNITS TO BE MOUNTED BETWEEN BEAMS AND 18" MAXIMUM ABOVE CEILING. AVOID MOUNTING OVER LIGHTS WHEREVER POSSIBLE.
8. REFER TO PIPING AT HOT WATER COIL DETAILS. PROVIDE WITH 2-WAY CONTROL VALVE UNLESS OTHERWISE SCHEDULED.

REMARKS:
1. N/A

CHILLED WATER FAN/COIL UNIT

MARK	FAN SUPPLY AIR CFM	FAN OUTSIDE AIR CFM	FAN EXT. STATIC PRESSURE (IN. W.C.)	FAN HORSE POWER	FAN CURRENT CHARAC.	COOLING AIR TEMP. ENTERING DRY BULB	COOLING AIR TEMP. ENTERING WET BULB	COOLING AIR TEMP. LEAVING DRY BULB	COOLING AIR TEMP. LEAVING WET BULB	COOLING WATER ENTERING TEMP. (°F)	COOLING WATER GPM	COOLING WATER MAX. PRESSURE DROP (FT.)	HEATING ENTERING AIR TEMPERATURE (°F)	HEATING MINIMUM CAPACITY (BTUH)	HEATING WATER ENTERING TEMP. (°F)	HEATING WATER GPM	HEATING WATER MAX. PRESSURE DROP (FT.)	PIPE SIZE TO COIL (IN.) CHILLED WATER	PIPE SIZE TO COIL (IN.) HOT WATER	REMARKS
CWFCU-1	2,000	-	0.5	1	277/1/60	75.0	62.5	54.3	53.8	45.0	11.0	10	NO HEAT					1	-	1,2,3

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MINIMUM RECOMMENDED CLEARANCE AROUND FAN COIL UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY FAN COIL UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON FAN COIL UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH HORIZONTAL CABINET
2. PROVIDE DRAIN PAN WITH AUTOMATIC SHUT OFF FLOAT SWITCH TO DEACTIVATE UNIT IN THE EVENT PRIMARY LINE BECOMES OBSTRUCTED.
3. SUSPEND UNIT WITH FOUR THREADED HANGER RODS ATTACHED TO TWO UNISTRUT RUNNERS SECURED TO STRUCTURE. PROVIDE SPRING ISOLATION. REFER TO MANUFACTURER FOR MORE DETAILS.

FAN

MARK	LOCATION	CFM	EXT. STATIC PRESSURE (IN. W.C.)	MAX. FAN RPM	HORSE POWER	CURRENT CHARAC. V	P	F	LOCALLY SWITCHED BY	INTERLOCKED WITH	FAN TYPE	DRIVE TYPE	MANUFACTURER	MODEL NUMBER	REMARKS
EF-1	SCIENCE F116	1,540	0.60	1,300	0.5	120	1	60	TIMER	-	ROOF MOUNTED	DIRECT	COOK	ACED	1,2,3,4
EF-2	CORRIDOR A103	225	0.40	1,370	0.4	120	1	60	-	AHU-1	ROOF MOUNTED	DIRECT	COOK	ACED	1,23,4
EF-3	STO A111	225	0.40	1,370	0.4	120	1	60	-	AHU-1	ROOF MOUNTED	DIRECT	COOK	ACED	1,23,4
KEF-1	KITCHEN	2,485	1.50	1,570	1.5	480	3	60	-	HOOD SWITCH	ROOF MOUNTED	BELT	COOK	ACRUB	1,2,5
KEF-2	KITCHEN	2,485	1.50	1,570	1.5	480	3	60	-	HOOD SWITCH	ROOF MOUNTED	BELT	COOK	ACRUB	1,2,5
KEF-3	WAREWASH C111	1,200	0.75	1,262	0.5	120	1	60	-	SWITCH	ROOF MOUNTED	BELT	COOK	ACRUB	1,2
SF-1	MEZZANINE	1,030	0.50	4,000	0.5	120	1	60	-	AHU-3	ROOF MOUNTED	BELT	COOK	QMXS	

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MINIMUM RECOMMENDED CLEARANCE AROUND UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH DISCONNECT.
2. PROVIDE WITH ROOF CURB AND BIRD SCREEN.
3. PROVIDE WITH MOTORIZED DAMPER.
4. PROVIDE WITH EC MOTOR AND SPEED CONTROLLER.
5. PROVIDE WITH CLEANOUT PORT, VENTED CURB EXTENSION TO MEET NFPA 96, DRAIN CONNECTION, GREASE TRAP AND HINGE KIT.
6. PROVIDE 60 MINUTE TIMER WITHOUT HOLD.

GRILLE

MARK	SERVICE	TYPE	DAMPER	CONSTRUCTION MATERIAL	FINISH COLOR	MANUFACTURER	MODEL NUMBER	DESCRIPTION
A	SUPPLY AIR	DIFFUSER	-	STEEL	-	TITUS	OMNI	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" OR 12"X12" FACE.
B	RETURN AIR	GRILLE	-	STEEL	-	TITUS	PAR	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" OR 12"X12" FACE.
C	SUPPLY AIR	DIFFUSER	-	STEEL	-	TITUS	OMNI	SURFACE MOUNT CEILING FRAME STYLE WITH 24"X24" OR 12"X12" FACE.
D	EXHAUST AIR	GRILLE	-	STEEL	-	TITUS	PAR	SURFACE MOUNT CEILING FRAME STYLE WITH 24"X24" OR 12"X12" FACE. PERFERATED FACE.
E	SUPPLY AIR	DIFFUSER	-	STEEL	-	TITUS	FL	SURFACE MOUNT PLENUM SLOT DIFFUSER WITH 3/4" SLOT, WITH INSULATED PLENUM.
F	RETURN AIR	GRILLE	-	STEEL	-	TITUS	FL	SURFACE MOUNT PLENUM SLOT DIFFUSER WITH 3/4" SLOT, WITH INSULATED PLENUM.
G	SUPPLY AIR	DIFFUSER	-	STEEL	-	TITUS	FL	SURFACE MOUNT PLENUM SLOT DIFFUSER WITH 3/4" SLOT, WITH INSULATED PLENUM.
H	RETURN AIR	GRILLE	-	STEEL	-	TITUS	FL	SURFACE MOUNT CEILING FRAME STYLE WITH 24"X24" FACE, WITH INSULATED PLENUM.
J	SUPPLY AIR	DIFFUSER	-	STEEL	-	TITUS	300RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTE
K	RETURN AIR	GRILLE	-	STEEL	-	TITUS	350RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED

GENERAL NOTES:
1. DAMPERS NOTED AS U.L. SHALLBE A 'U.L.' CLASSIFIED CEILING RADIATION DAMPER WITH THERMAL BLANKET.
2. COORDINATE FINAL AIR DEVICE LOCATION AND FINISH COLOR WITH ARCHITECT.

REMARKS:
1. N/A

DUCTLESS MINI-SPLIT - INDOOR UNIT

MARK	FAN SUPPLY AIR CFM	FAN OUTSIDE AIR CFM	FAN EXT.STATIC PRESSURE (IN. W.C.)	FAN HORSE POWER	CURRENT CHARAC. V	P	F	AIR TEMP. ENTERING DRY BULB	AIR TEMP. ENTERING WET BULB	COOLING MIN. TOTAL CAPACITY (BTUH)	COOLING MIN. SENS. CAPACITY (BTUH)	COOLING MINIMUM EER/ SEER	REMARKS
DMS-1	705	0	0.10	75.0	208	1	60	75.0	62.5	34,200	27,860	-/14	(1,2,3,4,5,6)
DMS-2	370	0	0.10	40.0	208	1	60	75.0	62.5	17,100	13,680	-/15.2	(1,2,3,4,5,6)
DMS-3	370	0	0.10	40.0	208	1	60	75.0	62.5	17,100	13,680	-/15.2	(1,2,3,4,5,6)
DMS-4	370	0	0.10	40.0	208	1	60	75.0	62.5	17,100	13,680	-/15.2	(1,2,3,4,5,6)
DMS-5	370	0	0.10	40.0	208	1	60	75.0	62.5	17,100	13,680	-/15.2	(1,2,3,4,5,6)

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. CONTROLLED BY PROGRAMMABLE WIRED THERMOSTAT.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.
5. PROVIDE INTEGRAL MINI SPLIT CONDENSATE PUMP KIT ASP-MA-UNI MINI AQUA BY ASPEN PUMPS OR EQUAL. CONDENSATE PUMP SHALL BE INSTALLED INSIDE HIGH WALL UNIT. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS.
6. PROVIDE CONDENSATE OVERFLOW SWITCH TO DEACTIVATE UNIT IN THE EVENT OF AN OVERFLOW CONDITION.

PUMP

MARK	SERVICE	TYPE	GPM	HEAD (FT.)	MOTOR HORSE POWER	MAX. RPM	CURRENT CHARAC. V	P	F	MANUFACTURER	MODEL NUMBER	REMARKS
CHWP-1	CHILLER WATER	VERTICAL INLINE	430	100.00	20	1780	480	3	60	ARMSTRONG	4300	1,2,4
CHWP-2	CHILLER WATER	VERTICAL INLINE	430	100.00	20	1780	480	3	60	ARMSTRONG	4300	1,2,4
HWP-1	HEATING HOT WATER	VERTICAL INLINE	146	90.00	10	1770	480	3	60	ARMSTRONG	4300	1,2,4
HWP-2	HEATING HOT WATER	VERTICAL INLINE	146	90.00	10	1770	480	3	60	ARMSTRONG	4300	1,2,4
HWP-3	HEATING HOT WATER	INLINE CIRCULATOR	96	20.00	1	1750	480	3	60	ARMSTRONG	4300	3,4
HWP-4	HEATING HOT WATER	INLINE CIRCULATOR	96	20.00	1	1750	480	3	60	ARMSTRONG	4300	3,4

GENERAL NOTES:
1. PUMP IS TO HAVE A NON-OVERLOADING MOTOR.
2. MINIMUM RECOMMENDED CLEARANCE AROUND A PUMP IS 24 INCHES. MAINTAIN MINIMUM CLEARANCES AS REQUIRED FOR SERVICE, MAINTENANCE, AND INSPECTION.

REMARKS:
1. PROVIDE SUCTION DIFFUSER WITH GAUGE TAPS AT PUMP INLET.
2. PROVIDE WITH VARIABLE FREQUENCY DRIVE.
3. PUMP SHALL BE PROVIDED BY BOILER MANUFACTURER.
4. PROVIDE PUMP WITH GAUGE TAPS

PACKAGED AIR COOLED CHILLER

MARK	ACTUAL CAPACITY (TONS)	LEAVING WATER TEMP.(°F)	GPM	PRESSURE DROP (FT.)	AMBIENT AIR TEMP. (°F)	CURRENT CHARAC. V	P	F	REMARKS
ACC-1	215	42	430	20.0	95 °F	480	3	60	1,2,3,4
ACC-2	215	42	430	20.0	95 °F	480	3	60	1,2,3,4

GENERAL NOTES:
1. MAXIMUM FOULING FACTOR FOR THE EVAPORATOR IS 0.0001
2. MAINTAIN MINIMUM CLEARANCES REQUIRED BY CHILLER MANUFACTURER FOR PROPER AIRFLOW TO FANS AND UNIT. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON EQUIPMENT FOR SERVICE, MAINTENANCE AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCES AS REQUIRED BY NEC.
3. CHILLER SHALL MEET OR EXCEED BOTH MINIMUM AHRI STANDARDIZED FULL-LOAD AND PART LOAD EFFICIENCIES INDICATED IN IECC 2015.

REMARKS:
1. PROVIDE WITH LOW AMBIENT HEAD PRESSURE CONTROL.
2. PROVIDE WITH INTEGRAL MAIN ELECTRICAL DISCONNECT SWITCH.
3. PROVIDE WITH INSULATION ON ALL SUCTION LINES.
4. PROVIDE WITH A MINIMUM FULL LOAD EFFICIENCY OF 9.775 EER AND A MINIMUM IPLV OF 16.36.

UNIT HEATER - ELECTRIC

MARK	MINIMUM CAPACITY (BTUH)	KW	NUMBER OF STAGES	CURRENT CHARAC. V	P	F	CFM	MANUFACTURER	MODEL	REMARKS
EUH-1	25,597	8	2	480	3	60	600	REZNOR	EGEB	1,2

REMARKS:
1. PROVIDE WITH PENDANT MOUNTED THERMOSTAT.
2. PROVIDE WITH DISCONNECT SWITCH.

DOUBLE DUCT VARIABLE AIR VOLUME AIR HANDLING UNIT

MARK	FAN SUPPLY AIR CFM	FAN OUTSIDE AIR CFM	FAN EXT. STATIC PRESSURE (IN. W.C.)	FAN HORSE POWER	FAN QTY.	CURRENT CHARAC.	COOLING ENTERING DRY BULB	COOLING ENTERING WET BULB	COOLING LEAVING DRY BULB	COOLING LEAVING WET BULB	COOLING WATER ENTERING TEMP. (°F)	COOLING WATER GPM	COOLING WATER MAX. PRESSURE DROP (FT.)	HEATING AIR CFM	HEATING ENTERING AIR TEMPERATURE (°F)	HEATING MINIMUM CAPACITY (BTUH)	HEATING WATER ENTERING TEMP. (°F)	HEATING WATER GPM	HEATING WATER MAX. PRESSURE DROP (FT.)	PIPE SIZE CHILLED WATER	PIPE SIZE HOT WATER	REMARKS
AHU-1	9,310	2,780	2.75	15.0	1	480/3/60	75.0	62.5	53.7	52.9	45.0	43.2	15.0	7,465	65.8	237,566	130	23.8	10	2-1/2	2	1,2,3,4,5,6
AHU-2	13,200	4,300	2.75	15.0	1	480/3/60	75.0	62.5	53.4	52.6	45.0	63.2	15.0	10,465	65.5	340,468	130	34.0	10	2-1/2	2	1,2,3,4,5,6
AHU-3	7,605	1,030	2.75	10.0	1	480/3/60	75.0	62.5	54.0	53.2	45.0	34.8	15.0	5,975	69.1	168,104	130	16.8	10	2	1-1/2	1,2,3,4,5,6,7,8,9
AHU-5	14,615	4,520	2.75	20.0	1	480/3/60	75.0	62.5	53.8	53.0	45.0	68.0	15.0	11,315	65.2	365,737	130	36.6	10	3	2-1/2	1,2,3,4,5,6
AHU-6	14,825	4,960	2.75	20.0	1	480/3/60	75.0	62.5	53.7	52.9	45.0	68.9	15.0	11,755	64.8	384,833	130	38.5	10	3	2-1/2	1,2,3,4,5,6
AHU-7	14,195	4,150	2.75	20.0	1	480/3/60	75.0	62.5	53.7	52.9	45.0	66.0	15.0	11,380	65.8	360,535	130	36.1	10	3	2-1/2	1,2,3,4,5,6
AHU-8	11,780	3,130	2.75	15.0	1	480/3/60	75.0	62.5	54.0	53.2	45.0	53.9	15.0	9,445	66.4	293,433	130	29.3	10	2-1/2	2	1,2,3,4,5,6

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. HORIZONTAL DRAW THROUGH UNIT.
2. VELOCITY NOT TO EXCEED 500 FPM ON COOLING COIL.
3. PROVIDE ANGLE FILTER SECTION.
4. PROVIDE WITH VARIABLE FREQUENCY DRIVE.
5. PROVIDE TWO-WAY VALVE AT AIR HANDLING UNIT HOT WATER COIL.
6. PROVIDE TWO-WAY VALVE AT AIR HANDLING UNIT CHILLED WATER COIL.
7. PROVIDE AUXILIARY DX COIL DOWNSTREAM OF CHILLED WATER COIL FOR AFTER HOURS USE DIRECT EXPANSION COIL SHALL BE R-32 OR R454B.
8. DX COIL COOLING TOTAL CAPACITY SHALL BE 259,000 BTU/HR AND SENSIBLE CAPACITY SHALL BE 197,122 BTU/HR. ENTERING AND LEAVING AIR CONDITIONS SHALL BE AS SCHEDULED.
9. INTERLOCK UNIT WITH ELECTRIC DUCT HEATER EDH-2.

AIR HANDLING UNIT

MARK	FAN SUPPLY AIR CFM	FAN OUTSIDE AIR CFM	FAN EXT. STATIC PRESSURE (IN. W.C.)	FAN HORSE POWER	FAN QTY.	CURRENT CHARAC.	COOLING ENTERING DRY BULB	COOLING ENTERING WET BULB	COOLING LEAVING DRY BULB	COOLING LEAVING WET BULB	COOLING WATER ENTERING TEMP. (°F)	COOLING WATER GPM	COOLING WATER MAX. PRESSURE DROP (FT.)	HEATING ENTERING AIR TEMPERATURE (°F)	HEATING MINIMUM CAPACITY (BTUH)	HEATING WATER ENTERING TEMP. (°F)	HEATING WATER GPM	HEATING WATER MAX. PRESSURE DROP (FT.)	PIPE SIZE CHILLED WATER	PIPE SIZE HOT WATER	REMARKS
AHU-4	9,115	990	2.5	10.0	1	480/3/60	75.0	62.5	54.0	53.2	45.0	41.7	15.0	70.2	245,725	130	24.6	10.0	2-1/2	2	1,2,4,6,7,8,10,11
AHU-9	9,360	1,575	2.5	15.0	1	480/3/60	75.0	62.5	53.4	52.6	45.0	44.9	15.0	69.1	262,630	130	26.3	10.0	2-1/2	2	1,2,4,6,7,8,10,11
AHU-10	4,920	1,740	2.5	5.0	1	480/3/60	75.0	62.5	52.3	51.5	45.0	25.8	15.0	66.0	154,873	130	15.5	10.0	2	1-1/2	1,2,4,6,7,8,10,11
AHU-11	4,085	820	2.5	5.0	1	480/3/60	75.0	62.5	53.5	52.7	45.0	19.1	15.0	68.5	115,818	130	11.6	10.0	1-1/2	1-1/4	1,2,4,6,7,8,10,11,12,13,17
OAU-1	6,540	6,540	2.0	7.5	1	480/3/60	98.0	80.0	53.0	52.0	45.0	107.9	15.0	27.0	305,124	130	30.5	10.0	3	2	1,3,4,5,8,9,11,14
OAU-2	12,240	12,240	2.0	15.0	1	480/3/60	98.0	80.0	53.0	52.0	45.0	202.0	15.0	27.0	571,057	130	57.1	10.0	4	2-1/2	1,3,4,5,8,9,11,15
OAU-3	7,080	7,080	2.0	7.5	1	480/3/60	98.0	80.0	53.0	52.0	45.0	120.0	15.0	27.0	330,317	130	33.0	10.0	4	2	1,3,4,5,8,9,11,16
OAU-4	4,135	4,135	2.0	5.0	1	480/3/60	98.0	80.0	53.0	52.0	45.0	68.2	15.0	27.0	192,918	130	19.3	10.0	3	1-1/2	1,3,4,5,8,9,11

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. HORIZONTAL DRAW THROUGH UNIT.
2. VELOCITY NOT TO EXCEED 500 FPM ON COOLING COIL.
3. VELOCITY NOT TO EXCEED 450 FPM ON COOLING COIL.
4. PROVIDE ANGLE FILTER SECTION.
5. HOT WATER COIL IN PRE-HEAT POSITION.
6. HOT WATER COIL IN REHEAT POSITION.
7. PROVIDE WITH HUMIDITY CONTROL.
8. PROVIDE WITH VARIABLE FREQUENCY DRIVE.
9. PROVIDE THREE-WAY VALVE AT AIR HANDLING UNIT HOT WATER COIL.
10. PROVIDE TWO-WAY VALVE AT AIR HANDLING UNIT HOT WATER COIL.
11. PROVIDE TWO-WAY VALVE AT AIR HANDLING UNIT CHILLED WATER COIL.
12. PROVIDE AUXILIARY DX COIL DOWNSTREAM OF CHILLED WATER COIL FOR AFTER HOURS USE DIRECT EXPANSION COIL SHALL BE R-32 OR R3454B .
13. INTERLOCK UNIT WITH ELECTRIC DUCT HEATER EDH-1.
14. INTEGRATE UNIT WITH ENERGY RECOVERY CORE SECTION ERU-OAU-1 REFER TO ENERGY RECOVERY UNIT SCHEDULE.
15. INTEGRATE UNIT WITH ENERGY RECOVERY CORE SECTION ERU-OAU-2 REFER TO ENERGY RECOVERY UNIT SCHEDULE.
16. INTEGRATE UNIT WITH ENERGY RECOVERY CORE SECTION ERU-OAU-3 REFER TO ENERGY RECOVERY UNIT SCHEDULE.
17. DX COIL COOLING TOTAL CAPACITY SHALL BE 160,065 BTU/HR AND SENSIBLE CAPACITY SHALL BE 113,303 BTU/HR. ENTERING AND LEAVING AIR CONDITIONS SHALL BE AS SCHEDULED.

DUCTLESS MINI-SPLIT - OUTDOOR UNIT

MARK	MIN. TOTAL CAPACITY (BTUH)	OUTDOOR AIR TEMP (°F)	MINIMUM EER/ SEER	CURRENT CHARAC. V	PH	F	RELATED UNIT MARK	REMARKS
DMSCU-1	34,200	95	-/14	208	1	60	DMS-1	(1,2,3)
DMSCU-2	17,100	95	-/15.2	208	1	60	DMS-2	(1,2,3)
DMSCU-3	17,100	95	-/15.2	208	1	60	DMS-3	(1,2,3)
DMSCU-4	17,100	95	-/15.2	208	1	60	DMS-4	(1,2,3)
DMSCU-5	17,100	95	-/15.2	208	1	60	DMS-5	(1,2,3)

GENERAL NOTES:
1. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH LOW AMBIENT CONTROL DOWN TO 20°F.
2. PROVIDE WITH DISCONNECT SWITCH.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.

ENERGY RECOVERY UNIT

MARK	CFM OUTSIDE AIR	CFM EXHAUST AIR	EXTERNAL SP (W.G.) OUTSIDE AIR	EXTERNAL SP (W.G.) EXHAUST AIR	SUMMER TOTAL ENTHALPY EFFIC. (%)	SUMMER AIR REMPERATURE (°F) OA LEAVING DRY BULB	SUMMER AIR REMPERATURE (°F) OA LEAVING WET BULB	WINTER TOTAL ENTHALPY EFFIC. (%)	WINTER AIR REMPERATURE (°F) OA LEAVING DRY BULB	WINTER AIR REMPERATURE (°F) OA LEAVING WET BULB	EXHAUT FAN HP	CURRENT CHARC.	REMARKS
ERU-OAU-1	6,540	3,270	2.0	2.0	77.8	87.1	74.0	71.1	43.2	39.8	7.5	480/3/60	1,2,3
ERU-OAU-2	12,240	6,120	2.0	2.0	75.0	87.1	74.2	70.4	43.1	39.7	10	480/3/60	1,2,4
ERU-OAU-3	7,080	3,540	2.0	2.0	76.3	87.1	74.1	70.8	43.1	39.8	7.5	480/3/60	1,2,5

GENERAL NOTES:
1. TOTAL ENTHALPY EFFICIENCY = (ENTHALPY SUPPLY AIR - ENTHALPY OUTSIDE AIR) / (ENTHALPY EXHAUST AIR - ENTHALPY OUTSIDE AIR)
2. AMBIENT CONDITIONS:
SUMMER: 98°F DB / 80°F WB
WINTER: 27°F DB / 25°F WB
3. RETURN AIR CONDITIONS:
SUMMER: 75°F DB / 62.5°F WB
WINTER: 72°F DB / 60°F WB

REMARKS
1. PROVIDE WITH BYPASS ON OUTSIDE AIR SECTION WITH DAMPERS AS SPECIFIED.
2. ENERGY RECOVERY UNIT SHALL MEET OR EXCEED 50% ENTHALPY EFFICIENCY AS SPECIFIED IN CHAPTER C403.2.7, 2015 IECC.
3. UNIT TO BE INTEGRATED WITH OAU-1 REFER TO AIR HANDLING UNIT SCHEDULE FOR MORE INFORMATION.
4. UNIT TO BE INTEGRATED WITH OAU-2 REFER TO AIR HANDLING UNIT SCHEDULE FOR MORE INFORMATION.
5. UNIT TO BE INTEGRATED WITH OAU-3 REFER TO AIR HANDLING UNIT SCHEDULE FOR MORE INFORMATION.

BOILER - FORCED AIR

MARK	TYPE	MINIMUM GAS INPUT (MBTUH)	MINIMUM HEAT OUTPUT (MBTUH)	PRESSURE DROP (FT.H20)	GPM	FLUE SIZE	ELECTRICAL BLOWER HORSEPOWER	CURRENT CHARC. V	P	F	MANUFACTURER	MODEL NUMBER	REMARKS
B-1	CONDENSING	1500.0	1440.0	10.0	96.0	10	890	208	1	60	HYDROTHERM	KN-16	1,2
B-2	CONDENSING	1500.0	1440.0	10.0	96.0	10	890	208	1	60	HYDROTHERM	KN-16	1,2

GENERAL NOTES:
1. PROVIDE 8 OUNCE GAS PRESSURE TO BOILER.
2. MAINTAIN MINIMUM CLEARANCE AROUND A BOILER OF 24 INCHES PER TEXAS BOILER LAW. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS FOR SERVICE, MAINTENANCE AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCES AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH CIRCULATING PUMP, SIZED BY BOILER MANUFACTURER TO ENSURE CONSTANT FLOW THROUGH BOILER. PUMP TO BE SHIPPED LOOSE. POWER BY ELECTRICAL CONTRACTOR BUT CONTROLLED BY BOILER. CONTRACTOR TO WIRE FROM BOILER PUMP CONTROL CIRCUIT TO PUMP STARTER RELAY.
2. PROVIDE SEALED COMBUSTION BOILER.

AIR COOLED CONDENSING UNIT

MARK	MIN. TOTAL CAPACITY (BTUH)	OUTDOOR AIR TEMP (°F)	MINIMUM EER/ SEER	CURRENT CHARAC.	RELATED UNIT MARK	REMARKS
DXCU-1	259,000	95.0	9.8/-	480/3/60	AHU-3	1,2,3
DXCU-2	160,065	95.0	9.8/-	480/3/60	AHU-11	1,2,3

GENERAL NOTES:
1. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH LOW AMBIENT CONTROL DOWN TO 20° F.
2. PROVIDE WITH DISCONNECT SWITCH.
3. UNITS ARE PART OF A VARIABLE AIR VOLUME SYSTEM AND SHALL BE PROVIDED WITH A MINIMUM OF ONE CIRCUIT WITH A FULLY MODULATING DIGITAL SCROLL OR VARIABLE SPEED SCROLL TYPE COMPRESSOR AS SPECIFIED. UNITS SHALL BE CAPABLE OF MODULATION FROM 10-100% OF ITS CAPACITY AND ALLOW FOR AHU AIRFLOW TURN DOWN TO 30% OF FULL FLOW.

RELIEF VENT & O.A. INTAKE2

MARK	CFM	MAX. S.P. (IN.WC.)	MIN. THROAT AREA	COOK MODEL NUMBER	SERVES	REMARKS
OAI-1	9,860	0.04	18.00	GI	OAU-1	1,2,3
OAI-2	9,720	0.04	18.00	GI	OAU-2	1,2,3
OAI-3	11,390	0.04	21.00	GI	OAU-3	1,2,3
OAI-4	4,250	0.04	12.00	GI	OAU-4	1,2,3
RV-1	4,930	0.03	12.00	GR	OAU-4	1,2,3
RV-2	4,930	0.03	12.00	GR	OAU-4	1,2,3
RV-3	4,930	0.03	12.00	GR	OAU-4	1,2,3

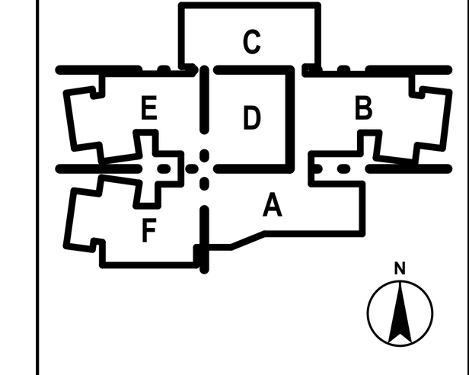
REMARKS:
1. PROVIDE WITH ROOF CURB.
2. PROVIDE WITH BIRD SCREEN.
3. PROVIDE WITH MOTORIZED DAMPER.

ELECTRIC DUCT HEATER

MARK	CFM	ENTERING AIR TEMP (°F)	MINIMUM CAPACITY (BTUH)	KW	NUMBER OF STAGES	CURRENT CHARAC.	REMARKS
EDH-1	4,035	62.3	120,710	35	SCR	480/3/60	1,2,3
EDH-2	5,975	65.3	159,390	47	SCR	480/3/60	1,2,4
EDH-3	1,030	27.0	31,300	10	SCR	480/3/60	1,2,5

REMARKS:
1. FLANGE FOR MOUNTING IN DUCTWORK
2. PROVIDE WITH SCR CONTROLS
3. INTERLOCK WITH AHU-11
4. INTERLOCK WITH AHU-3
5. INTERLOCK WITH SF-1

pfluger



ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD

3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS
80219
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: AA CHECKED BY: SH
REVISIONS:

No.	Date	Description
1	12/20/2024	Addendum 1
2	01/10/2025	Addendum 2

100% CONSTRUCTION DOCUMENTS

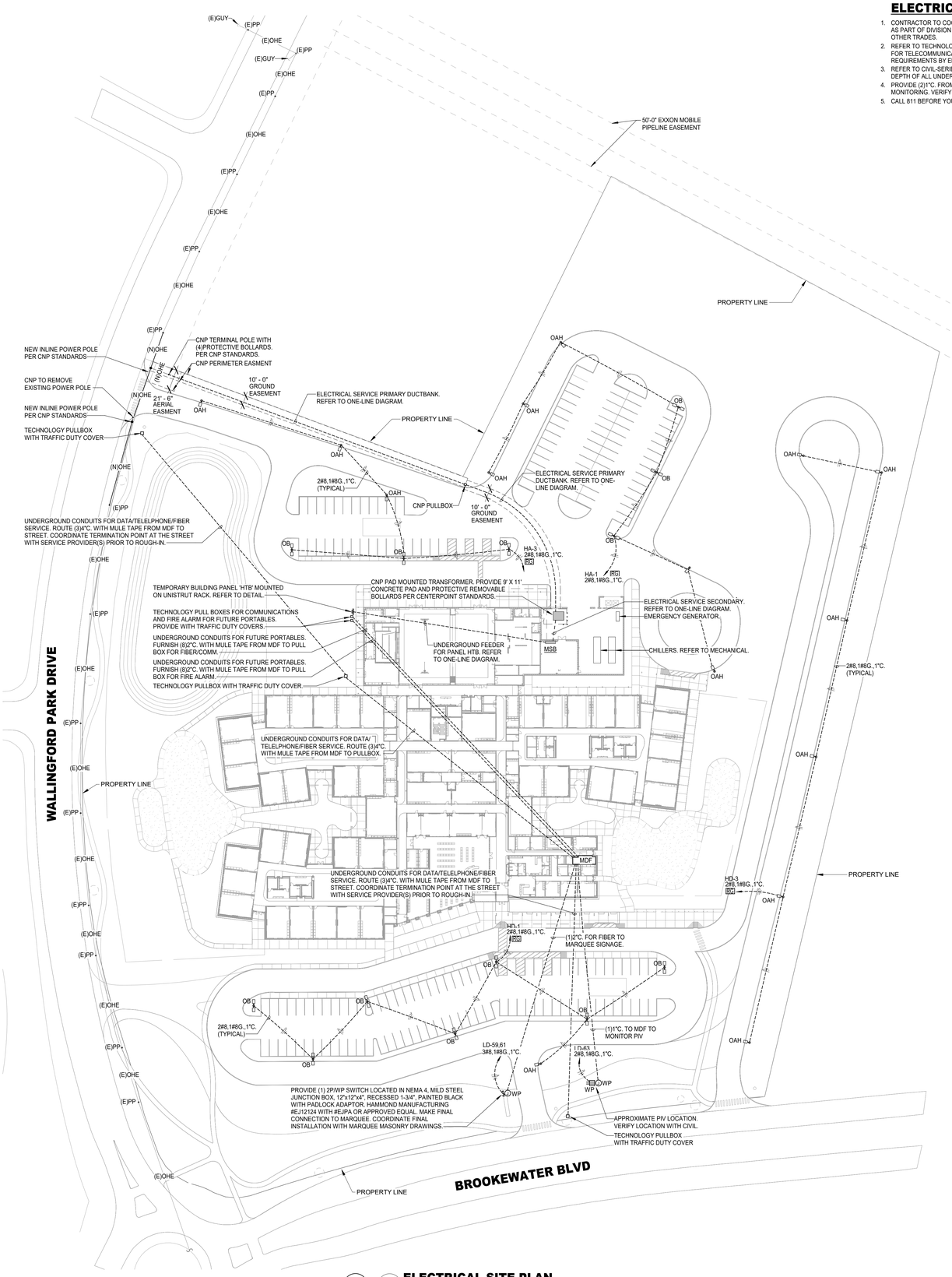
M6.01
MECHANICAL SCHEDULES

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

1/9/2025 4:39:40 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

ELECTRICAL GENERAL NOTES:

1. CONTRACTOR TO COORDINATE FINAL LOCATION OF ALL CONDUITS AS PART OF DIVISION 26 WITH PLUMBING, TECHNOLOGY, AND ALL OTHER TRADES.
2. REFER TO TECHNOLOGY-SERIES DRAWINGS, DIVISION 27 AND 28 FOR TELECOMMUNICATIONS PATHWAYS AND OTHER REQUIREMENTS BY ELECTRICAL CONTRACTOR.
3. REFER TO CIVIL-SERIES DRAWINGS FOR FINAL ROUTING AND DEPTH OF ALL UNDERGROUND UTILITIES.
4. PROVIDE (2)1"C. FROM MDF ROOM TO FIRE SPRINKLER VAULT FOR MONITORING. VERIFY EXACT LOCATION WITH CIVIL.
5. CALL 811 BEFORE YOU DIG.



PIPE VOID SYSTEM REQUIRED FOR BELOW SLAB PIPING AND CONDUITS:

A. INSTALL UNDER SLAB PIPING AND ELECTRICAL CONDUITS IN PIPE VOIDS WITH SUPPORTS AND FITTINGS. COORDINATE INSTALLATION WITH STRUCTURAL SLAB DRAWINGS AND SPECIFICATIONS.
B. INSTALL PIPING, CONDUITS, SUPPORTS AND FITTINGS IN ACCORDANCE WITH PIPE VOID SYSTEM MANUFACTURE DESIGNS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, LOCAL CODES, AND APPLICABLE TRADE STANDARDS OF INSTALLATIONS.
C. INSTALLATIONS SHALL BE INSPECTED BY THE PIPE VOID SYSTEM MANUFACTURER, THEIR DESIGNATED AUTHORIZED PERSONNEL, OR REPRESENTATIVES, FOR INSTALLATION COMPLIANCE AND OVERALL QUALITY CONTROL.
D. PROVIDE AND SUBMIT WRITTEN DOCUMENTATION FROM THE MANUFACTURE OR THEIR REPRESENTATIVE THAT THE INSTALLATION IS CONSISTENT WITH THE MANUFACTURER'S DESIGN AND THEIR INSTALLATION INSTRUCTIONS PRIOR TO FILLING PIPING WITH FLUIDS OR INSTALLING CONDUCTORS IN BELOW SLAB PIPES OR CONDUITS LOCATED IN PIPE VOID SYSTEMS.
E. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

SITE LIGHTING FIXTURE SCHEDULE

Type	Manufacturer	Model	Mounting	Driver / Light Engine Type/Lumens	CRI	Voltage	Input Wattage	Remarks
OAH	GARDCO	ECF-S-64L-1A-NW-G2-AR-3--UNV-CM50-RPA-BK-HIS	POLE MOUNT: 1 @ 90	LED / 26,280 LUMENS 4000K	70+	277 V	206 W	TYPE III AREA LUMINAIRE, & BLACK FINISH, AUTO PROFILE DIMMING TO 50%. MOUNT ON 25' POLE WITH BRONZE POWDER COAT OVER GALVANIZING. PROVIDE WITH HOUSE SHEILD. POLE: KWI RTSP25-7.0-11-KZ21-DM10-BC
OB	GARDCO	ECF-S-48L-900-NW-G2-AR-3-UNV-CM50-RPA-BK	POLE MOUNT: 2 @ 180	LED / 17,625 LUMENS 4000K	70+	277 V	270 W	TYPE III AREA LUMINAIRE, & BLACK FINISH, AUTO PROFILE DIMMING TO 50%. MOUNT ON 25' POLE WITH BRONZE POWDER COAT OVER GALVANIZING. POLE: KWI RTSP25-7.0-11-KZ21-DM2180-BC

* PRIOR TO SHOP DRAWING SUBMITTAL, ALL EXTERIOR LIGHTING FIXTURES SHALL BE SUBMITTED AND APPROVED BY FORT BEND COUNTY. PROVIDE "NO OBJECTIONS" LETTER UPON SHOP DRAWING SUBMITTAL.
** SITE LIGHTING DESIGN SHALL COMPLY WITH FORT BEND COUNTY LIGHTING ORDINANCE LIGHTING ZONE LZ2.

N 1 **ELECTRICAL SITE PLAN**
Scale: 1" = 50'-0"

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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C E D B F A N

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

ELEMENTARY SCHOOL #38 IN BROOKEWATER

BRADLEY KALMANS
80219
LICENSED
STATE OF TEXAS
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: DES CHECKED BY: JZ
REVISIONS:

Δ	Date	Description
2	01/10/2025	Addendum 2

100% CONSTRUCTION DOCUMENTS

E1.01
ELECTRICAL SITE PLAN

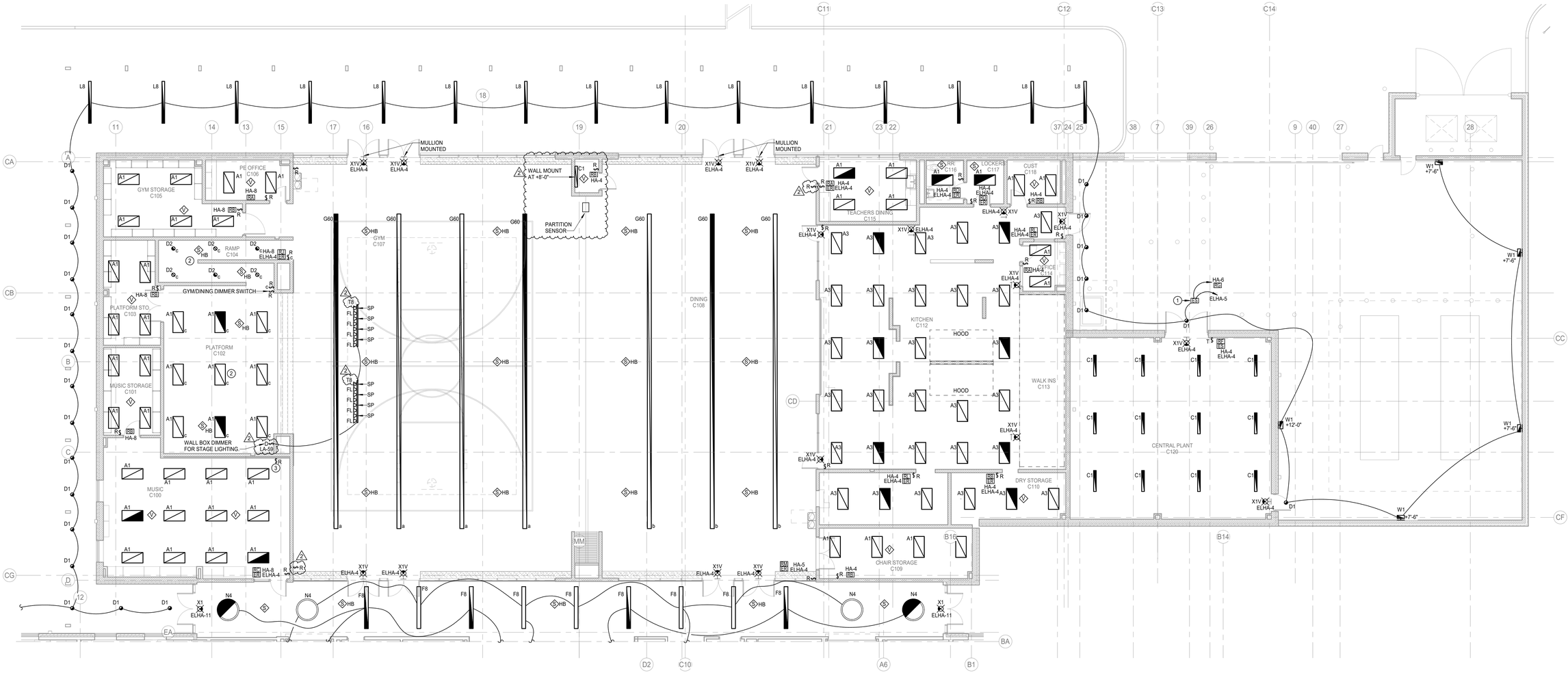
1/10/2025 9:30:57 AM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

ELECTRICAL GENERAL NOTES:

1. LIGHTING CONTROLS SHALL COMPLY WITH IECC 2015. REFER TO CONTROLS SCHEDULE FOR ALL LIGHTING CONTROLS, SENSORS, AND SWITCHING SCHEMES THROUGHOUT FACILITY.
2. CONTRACTOR SHALL MAINTAIN CONSTANT UNSWITCHED POWER FOR EMERGENCY LOAD CONTROL RELAYS AND / OR EXIT SIGNS.
3. LOCATE DIGITAL LIGHTING CONTROLLER AND / OR EMERGENCY LOAD CONTROL RELAY ABOVE ACCESSIBLE CEILING 12-FEET AFF OR BELOW ADJACENT TO SWITCH CONTROLLING THE SPACE. IN NON-ACCESSIBLE AND / OR HIGH CEILING AREAS, LOCATE DIGITAL LIGHTING CONTROLLER IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING. IN AREAS WITH NO CEILING AND / OR IN EXTERIOR APPLICATIONS LOCATE ADJACENT TO PANEL SERVING THE LOAD. PROVIDE PLASTIC TAPE MACHINE TYPED NAME PLATE TO BOTTOM OF CEILING T-GRID BELOW RELAY LOCATION. WHITE LETTERS ON BLACK BACKGROUND WITH 1/4" HIGH LETTERS ON 1/2" TALL LABEL FOR DIGITAL MODULE, INDICATE AS: DLM.
4. OCCUPANCY / VACANCY SENSOR AND DAYLIGHTING SENSOR LOCATIONS INDICATE SPACE OR AREA CONTROLLED, CONTRACTOR TO PROVIDE ACTUAL QUANTITIES, TYPES, AND MOUNTING LOCATIONS AS RECOMMENDED BY MANUFACTURER.
5. SPACES WITH MULTIPLE OCCUPANCY / VACANCY SENSORS OR WHERE LINE OF SIGHT MAY BE OBSCURED, SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.
6. COORDINATE LOCATION OF LIGHT FIXTURES IN ALL MEPT ROOMS WITH MECHANICAL EQUIPMENT, PIPING, AND ALL OTHER TRADES. SUSPEND OR WALL MOUNT FIXTURES WHERE PRACTICAL.
7. PROVIDE A FULLY NETWORKED LIGHTING CONTROL SYSTEM. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
8. ALL LIGHT FIXTURES LOCATED IN CEILINGS 14'-0" OR HIGHER SHALL BE PROVIDED WITH A REMOTE DRIVER. LOCATE DRIVER ABOVE ACCESSIBLE CEILING 12-FEET AFF OR BELOW ADJACENT TO SWITCH CONTROLLING THE SPACE. IN NON-ACCESSIBLE AND / OR HIGH CEILING AREAS, LOCATE DRIVER IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING.

ELECTRICAL KEYED NOTES:

1. EMERGENCY TRANSFER SWITCHING DEVICE. LOCATE IN NEAREST MECHANICAL/ELECTRICAL ROOM ADJACENT TO PANELBOARDS.
2. PROVIDE ALL LIGHT FIXTURES LOCATED FOR RAMP AND STAGE WITH A REMOTE DRIVER. COORDINATE FINAL LOCATION OF STAGE LIGHT FIXTURES WITH STAGE LIGHTING SYSTEM.
3. LIGHT SWITCH FOR TEACHERS STATION. REFERENCE TECHNOLOGY DETAILS (T SERIES) DRAWINGS FOR EXACT MOUNTING HEIGHTS AND MAKE FINAL CONNECTION.



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1 **ELECTRICAL LIGHTING 01 FLOOR PLAN - AREA C**
Scale: 1/8" = 1'-0"

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS — 80215 — LICENSED — STATE OF TEXAS — PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: DES CHECKED BY: JZ
REVISIONS:

No.	Date	Description
2	01/10/2025	Addendum 2

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E2.01C
ELECTRICAL LIGHTING
01 FLOOR PLAN - AREA C

ELEMENTARY SCHOOL #38 IN BROOKEWATER

Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt
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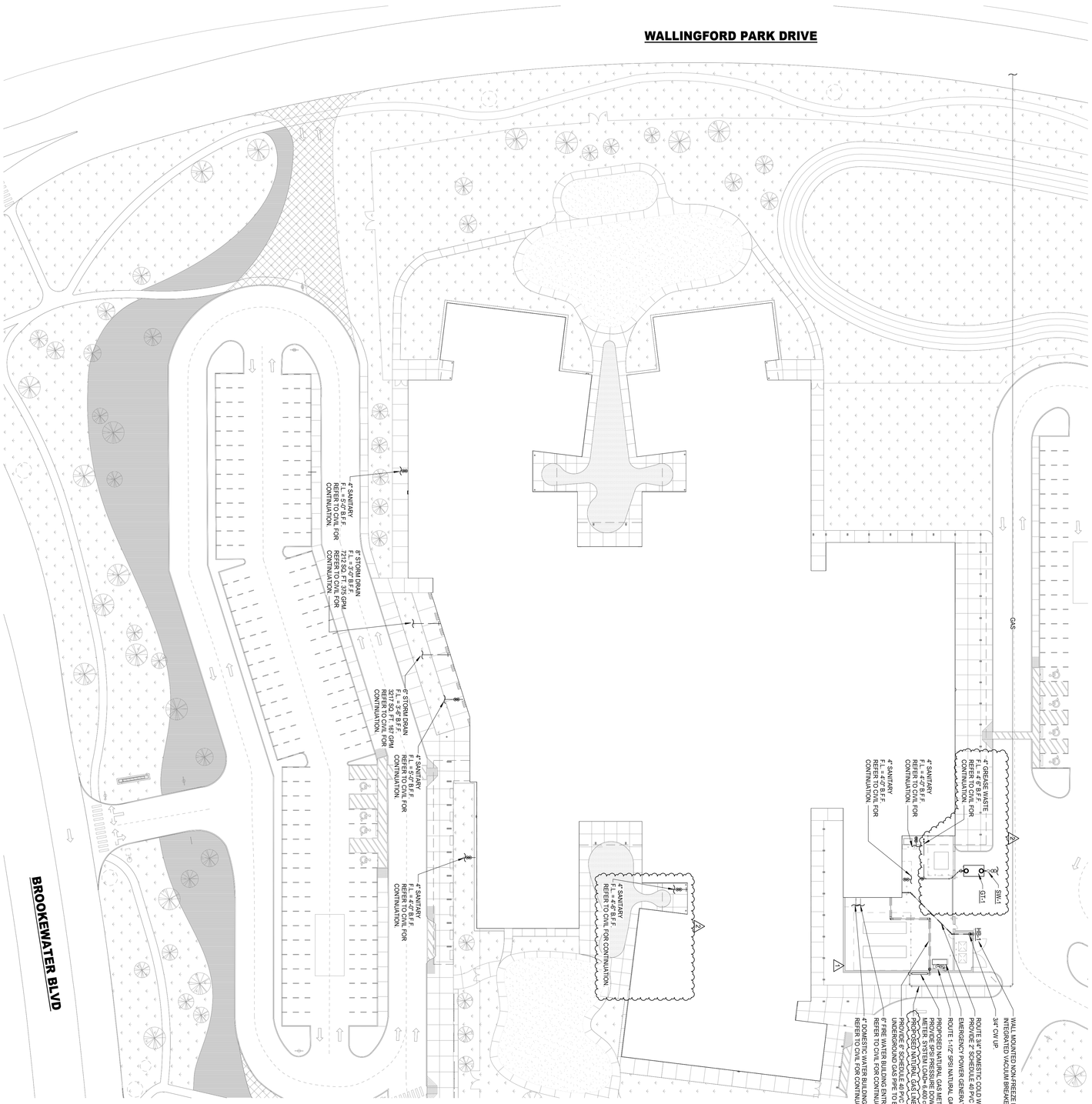

1 PLUMBING SITE PLAN
Scale: 1" = 30'-0"

pfluger

ELEMENTARY SCHOOL #38 IN BROOKEWATER

-

LAMAR CISD

3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY WILLIAMS 27000 01/10/2025

PROJECT NO.	24-028
DATE	2024/12/12
DRAWN BY	PG
CHECKED BY	EH

	Date	Description
1	12/20/2024	Addendum 1
2	01/10/2025	Addendum 2

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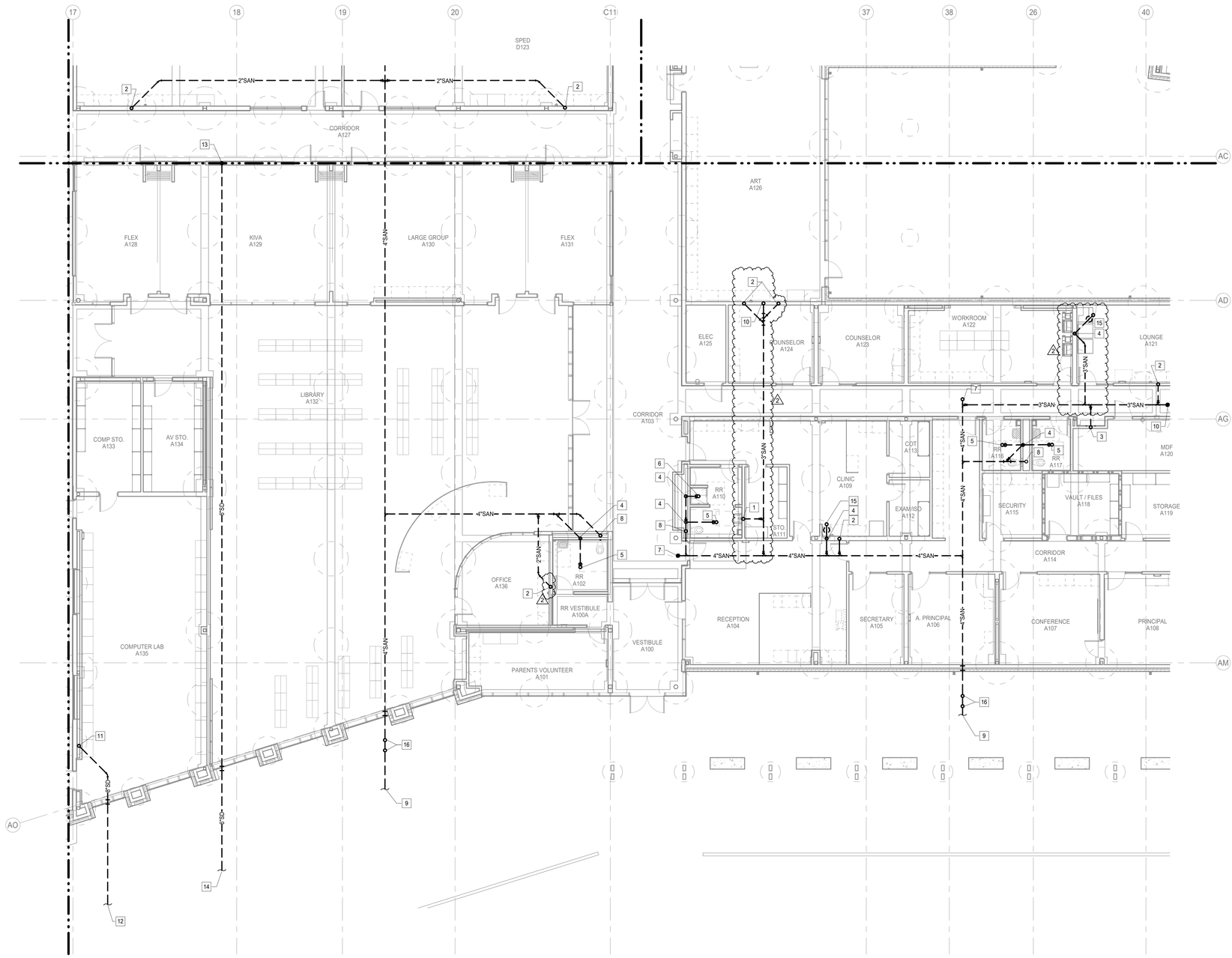
P1.01
PLUMBING SITE PLAN

Salas O'Brien
Houston
Texas Tower II, 5847 San Felipe St, Suite 900
Houston, TX 77057
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00



1 PLUMBING UNDERFLOOR PLAN - AREA A

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

PLUMBING KEYED NOTES

1. 2" SANITARY FROM LAVATORY ABOVE.
2. 2" SANITARY FROM SINK ABOVE.
3. 2" SANITARY FROM ELECTRONIC DRINKING FOUNTAIN ABOVE.
4. 2" VENT UP.
5. 3" SANITARY FROM FLOOR DRAIN ABOVE.
6. 2" SANITARY FROM SHOWER ABOVE.
7. 4" SANITARY FROM CLEANOUT ABOVE.
8. 4" SANITARY FROM WATER CLOSET ABOVE.
9. REFER TO SHEET P1.01 FOR CONTINUATION.
10. 3" SANITARY FROM CLEANOUT ABOVE.
11. 8" STORM FROM ABOVE.
12. 8" STORM, REFER TO PLUMBING SITE PLAN P1.01 FOR CONTINUATION.
13. 6" STORM FROM ABOVE.
14. 6" STORM, REFER TO PLUMBING SITE PLAN P1.01 FOR CONTINUATION.
15. 3" SANITARY FROM FLOOR SINK ABOVE.
16. 4" SANITARY FROM TWO-WAY CLEANOUT ABOVE.

PIPE VOID SYSTEM REQUIRED FOR BELOW SLAB PIPING AND CONDUITS:

A. INSTALL UNDER SLAB PIPING AND ELECTRICAL CONDUITS IN PIPE VOIDS WITH SUPPORTS AND FITTINGS. COORDINATE INSTALLATION WITH STRUCTURAL SLAB DRAWINGS AND SPECIFICATIONS.
B. INSTALL PIPING, CONDUITS, SUPPORTS AND FITTINGS IN ACCORDANCE WITH PIPE VOID SYSTEM MANUFACTURE DESIGNS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, LOCAL CODES, AND APPLICABLE TRADE STANDARDS OF INSTALLATIONS.
C. INSTALLATIONS SHALL BE INSPECTED BY THE PIPE VOID SYSTEM MANUFACTURER, THEIR DESIGNATED AUTHORIZED PERSONNEL, OR REPRESENTATIVES, FOR INSTALLATION COMPLIANCE AND OVERALL QUALITY CONTROL.
D. PROVIDE AND SUBMIT WRITTEN DOCUMENTATION FROM THE MANUFACTURE OR THEIR REPRESENTATIVE THAT THE INSTALLATION IS CONSISTENT WITH THE MANUFACTURER'S DESIGN AND THEIR INSTALLATION INSTRUCTIONS PRIOR TO FILLING PIPING WITH FLUIDS OR INSTALLING CONDUCTORS IN BELOW SLAB PIPES OR CONDUITS LOCATED IN PIPE VOID SYSTEMS.
E. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

Salas O'Brien
Houston
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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS
STATE OF TEXAS
80219
LICENSED
PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: PG CHECKED BY: EH
REVISIONS:

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2	01/10/2025	Addendum 2

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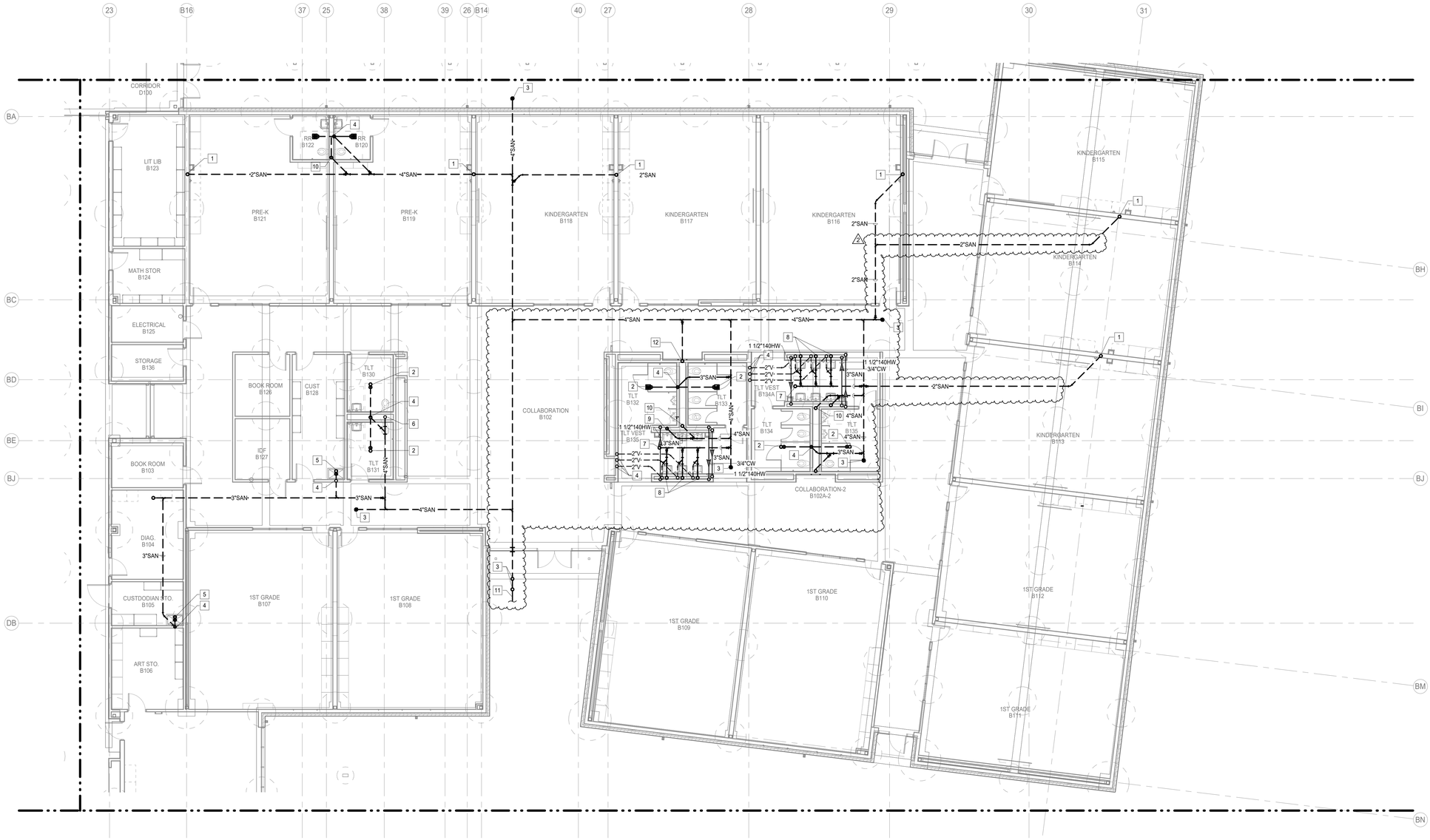
P2.01A
PLUMBING
UNDERFLOOR PLAN - AREA A

1/9/2025 6:11:01 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

PLUMBING KEYED NOTES

1 2" SANITARY FROM SINK ABOVE.
2 3" SANITARY FROM FLOOR DRAIN ABOVE.
3 4" SANITARY FROM CLEANOUT ABOVE.
4 2" VENT UP.
5 3" SANITARY FROM MOP SINK ABOVE.
6 4" SANITARY FROM WATER CLOSET ABOVE.
7 3" SANITARY FROM CLEANOUT ABOVE.
8 2" SANITARY FROM LAVATORY ABOVE.
9 3" SANITARY FROM ABOVE.
10 4" SANITARY FROM ABOVE.
11 REFER TO SHEET P1.01 FOR CONTINUATION.
12 2" SANITARY FROM ELECTRONIC DRINKING FOUNTAIN ABOVE.



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1 **PLUMBING UNDERFLOOR PLAN - AREA B**
Scale: 1/8" = 1'-0"

PIPE VOID SYSTEM REQUIRED FOR BELOW SLAB PIPING AND CONDUITS:

A. INSTALL UNDER SLAB PIPING AND ELECTRICAL CONDUITS IN PIPE VOIDS WITH SUPPORTS AND FITTINGS. COORDINATE INSTALLATION WITH STRUCTURAL SLAB DRAWINGS AND SPECIFICATIONS.
B. INSTALL PIPING, CONDUITS, SUPPORTS AND FITTINGS IN ACCORDANCE WITH PIPE VOID SYSTEM MANUFACTURE DESIGNS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, LOCAL CODES, AND APPLICABLE TRADE STANDARDS OF INSTALLATIONS.
C. INSTALLATIONS SHALL BE INSPECTED BY THE PIPE VOID SYSTEM MANUFACTURER, THEIR DESIGNATED AUTHORIZED PERSONNEL, OR REPRESENTATIVES, FOR INSTALLATION COMPLIANCE AND OVERALL QUALITY CONTROL.
D. PROVIDE AND SUBMIT WRITTEN DOCUMENTATION FROM THE MANUFACTURE OR THEIR REPRESENTATIVE THAT THE INSTALLATION IS CONSISTENT WITH THE MANUFACTURER'S DESIGN AND THEIR INSTALLATION INSTRUCTIONS PRIOR TO FILLING PIPING WITH FLUIDS OR INSTALLING CONDUCTORS IN BELOW SLAB PIPES OR CONDUITS LOCATED IN PIPE VOID SYSTEMS.
E. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

STATE OF TEXAS
BRADLEY KALMANS
80219
LICENSED
01/10/2025

PROJECT NO.	24-028
DATE:	2024/12/12
DRAWN BY: PG	CHECKED BY: EH

REVISIONS:

No.	Date	Description
2	01/10/2025	Addendum 2

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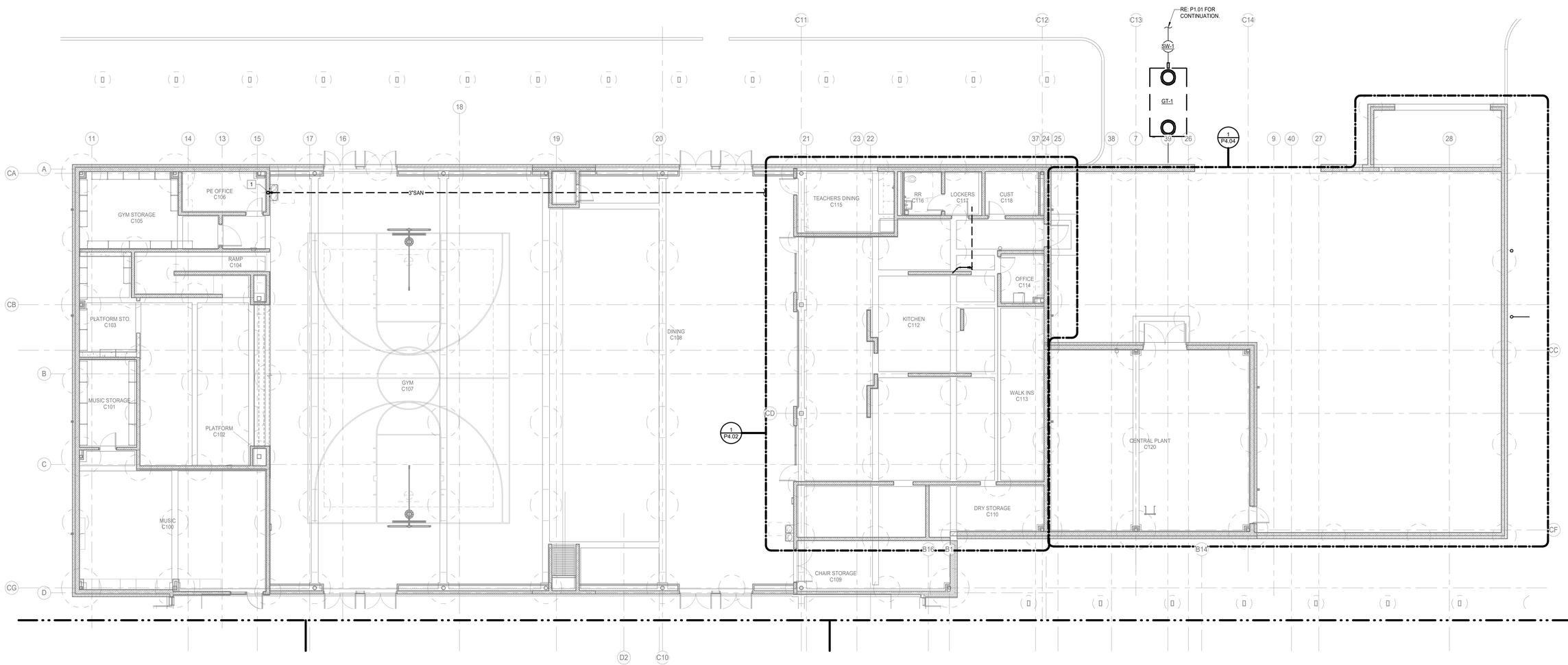
P2.01B
PLUMBING
UNDERFLOOR PLAN - AREA B

1/9/2025 6:20:08 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

PLUMBING KEYED NOTES

1 2" SANITARY FROM ELECTRONIC DRINKING FOUNTAIN ABOVE.



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1 PLUMBING UNDERFLOOR PLAN - AREA C

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

PIPE VOID SYSTEM REQUIRED FOR BELOW SLAB PIPING AND CONDUITS:

A. INSTALL UNDER SLAB PIPING AND ELECTRICAL CONDUITS IN PIPE VOIDS WITH SUPPORTS AND FITTINGS. COORDINATE INSTALLATION WITH STRUCTURAL SLAB DRAWINGS AND SPECIFICATIONS.
B. INSTALL PIPING, CONDUITS, SUPPORTS AND FITTINGS IN ACCORDANCE WITH PIPE VOID SYSTEM MANUFACTURE DESIGNS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, LOCAL CODES, AND APPLICABLE TRADE STANDARDS OF INSTALLATIONS.
C. INSTALLATIONS SHALL BE INSPECTED BY THE PIPE VOID SYSTEM MANUFACTURER, THEIR DESIGNATED AUTHORIZED PERSONNEL, OR REPRESENTATIVES, FOR INSTALLATION COMPLIANCE AND OVERALL QUALITY CONTROL.
D. PROVIDE AND SUBMIT WRITTEN DOCUMENTATION FROM THE MANUFACTURE OR THEIR REPRESENTATIVE THAT THE INSTALLATION IS CONSISTENT WITH THE MANUFACTURER'S DESIGN AND THEIR INSTALLATION INSTRUCTIONS PRIOR TO FILLING PIPING WITH FLUIDS OR INSTALLING CONDUCTORS IN BELOW SLAB PIPES OR CONDUITS LOCATED IN PIPE VOID SYSTEMS.
E. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111

Salas O'Brien Project Number: 2024-02562-00

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: PG CHECKED BY: EH

REVISIONS:

No.	Date	Description
2	01/10/2025	Addendum 2

100% CONSTRUCTION DOCUMENTS

P2.01C
PLUMBING
UNDERFLOOR PLAN - AREA C

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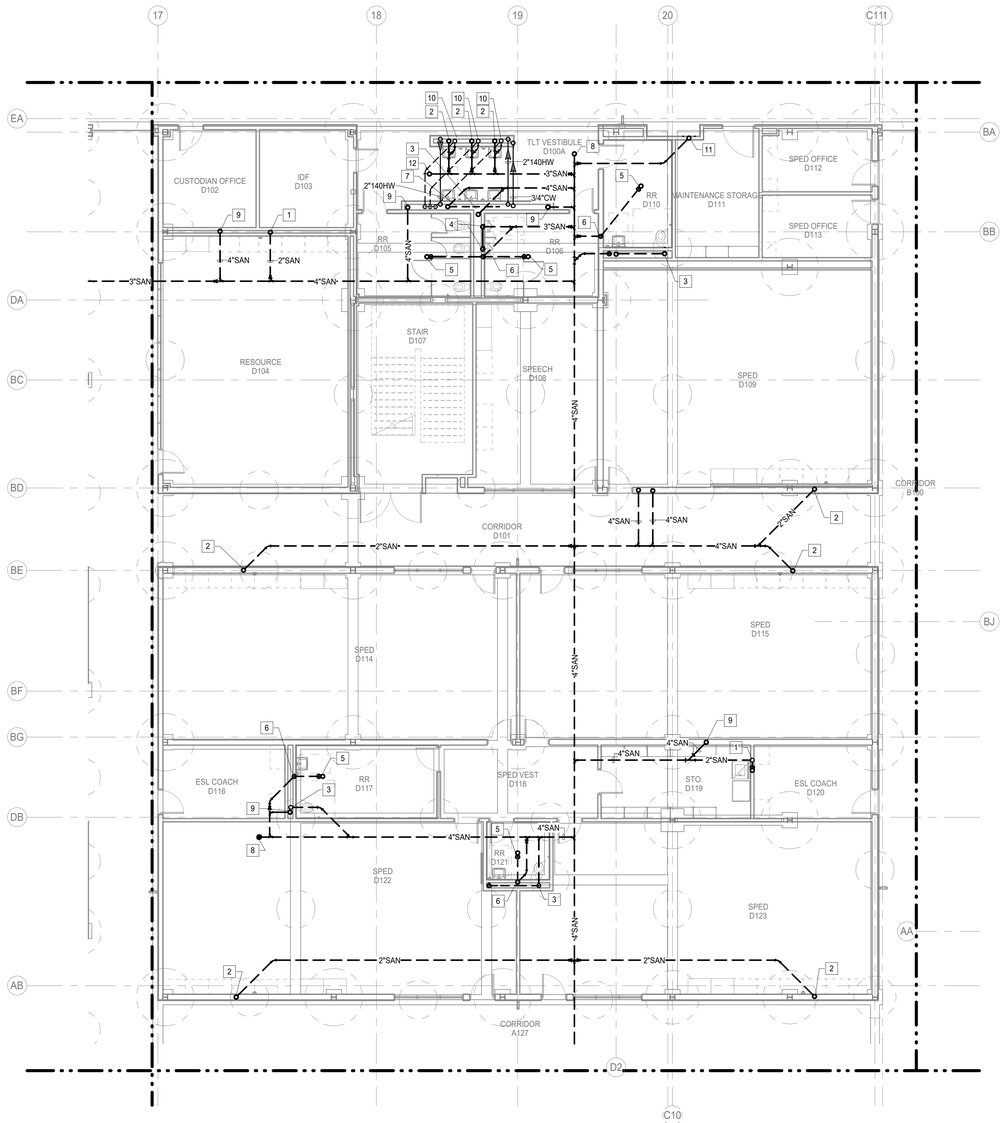

1 **PLUMBING UNDERFLOOR PLAN - AREA D**
Scale: 1/8" = 1'-0"

PLUMBING KEYED NOTES

1 2" SANITARY FROM ABOVE.
2 2" SANITARY FROM SINK ABOVE.
3 4" SANITARY FROM WATER CLOSET ABOVE.
4 2" SANITARY FROM URINAL ABOVE.
5 3" SANITARY FROM FLOOR DRAIN ABOVE.
6 2" VENT UP.
7 2" SANITARY FROM LAVATORY ABOVE.
8 4" SANITARY FROM CLEANOUT ABOVE.
9 4" SANITARY FROM ABOVE.
10 2" ISLAND VENT FROM ABOVE.
11 2" SANITARY FROM ELECTRONIC DRINKING FOUNTAIN ABOVE.
12 3" SANITARY FROM CLEANOUT ABOVE.

PIPE VOID SYSTEM REQUIRED FOR BELOW SLAB PIPING AND CONDUITS:

A. INSTALL UNDER SLAB PIPING AND ELECTRICAL CONDUITS IN PIPE VOIDS WITH SUPPORTS AND FITTINGS. COORDINATE INSTALLATION WITH STRUCTURAL SLAB DRAWINGS AND SPECIFICATIONS.
B. INSTALL PIPING, CONDUITS, SUPPORTS AND FITTINGS IN ACCORDANCE WITH PIPE VOID SYSTEM MANUFACTURE DESIGNS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, LOCAL CODES, AND APPLICABLE TRADE STANDARDS OF INSTALLATIONS.
C. INSTALLATIONS SHALL BE INSPECTED BY THE PIPE VOID SYSTEM MANUFACTURER, THEIR DESIGNATED AUTHORIZED PERSONNEL, OR REPRESENTATIVES, FOR INSTALLATION COMPLIANCE AND OVERALL QUALITY CONTROL.
D. PROVIDE AND SUBMIT WRITTEN DOCUMENTATION FROM THE MANUFACTURE OR THEIR REPRESENTATIVE THAT THE INSTALLATION IS CONSISTENT WITH THE MANUFACTURER'S DESIGN AND THEIR INSTALLATION INSTRUCTIONS PRIOR TO FILLING PIPING WITH FLUIDS OR INSTALLING CONDUCTORS IN BELOW SLAB PIPES OR CONDUITS LOCATED IN PIPE VOID SYSTEMS.
E. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: PG CHECKED BY: EH
REVISIONS:

No.	Date	Description
2	01/10/2025	Addendum 2

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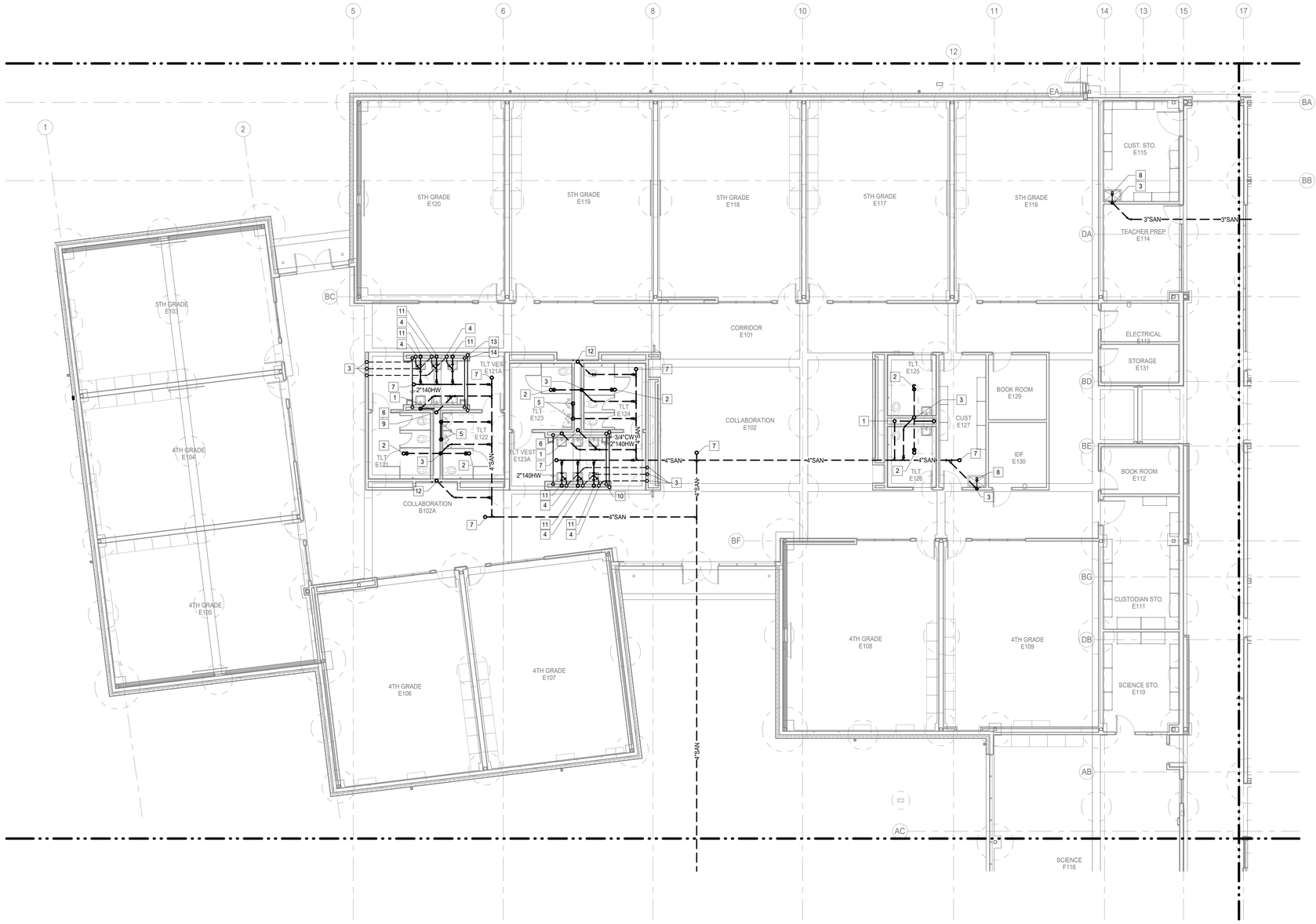
P2.01D
PLUMBING UNDERFLOOR PLAN - AREA D

1/9/2025 6:52:59 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

PLUMBING KEYED NOTES

1 4" SANITARY FROM WATER CLOSET ABOVE.
2 3" SANITARY FROM FLOOR DRAIN ABOVE.
3 2" VENT UP.
4 2" ISLAND VENT FROM ABOVE.
5 2" SANITARY FROM URINAL ABOVE.
6 2" SANITARY FROM ABOVE.
7 4" SANITARY FROM CLEANOUT ABOVE.
8 3" SANITARY FROM MOP SINK ABOVE.
9 4" SANITARY FROM ABOVE.
10 3/4" CW AND HW UP.
11 2" SANITARY FROM LAVATORY ABOVE.
12 2" SANITARY FROM ELECTRONIC DRINKING FOUNTAIN ABOVE.
13 3/4" CW UP.
14 2" HW UP.



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1 **PLUMBING UNDERFLOOR PLAN - AREA E**
Scale: 1/8" = 1'-0"

PIPE VOID SYSTEM REQUIRED FOR BELOW SLAB PIPING AND CONDUITS:

A. INSTALL UNDER SLAB PIPING AND ELECTRICAL CONDUITS IN PIPE VOIDS WITH SUPPORTS AND FITTINGS. COORDINATE INSTALLATION WITH STRUCTURAL SLAB DRAWINGS AND SPECIFICATIONS.
B. INSTALL PIPING, CONDUITS, SUPPORTS AND FITTINGS IN ACCORDANCE WITH PIPE VOID SYSTEM MANUFACTURE DESIGNS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, LOCAL CODES, AND APPLICABLE TRADE STANDARDS OF INSTALLATIONS.
C. INSTALLATIONS SHALL BE INSPECTED BY THE PIPE VOID SYSTEM MANUFACTURER, THEIR DESIGNATED AUTHORIZED PERSONNEL, OR REPRESENTATIVES, FOR INSTALLATION COMPLIANCE AND OVERALL QUALITY CONTROL.
D. PROVIDE AND SUBMIT WRITTEN DOCUMENTATION FROM THE MANUFACTURE OR THEIR REPRESENTATIVE THAT THE INSTALLATION IS CONSISTENT WITH THE MANUFACTURER'S DESIGN AND THEIR INSTALLATION INSTRUCTIONS PRIOR TO FILLING PIPING WITH FLUIDS OR INSTALLING CONDUCTORS IN BELOW SLAB PIPES OR CONDUITS LOCATED IN PIPE VOID SYSTEMS.
E. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS
STATE OF TEXAS
80219
LICENSED
PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: PG CHECKED BY: EH
REVISIONS:

No.	Date	Description
2	01/10/2025	Addendum 2

100% CONSTRUCTION DOCUMENTS

P2.01E
PLUMBING UNDERFLOOR PLAN - AREA E

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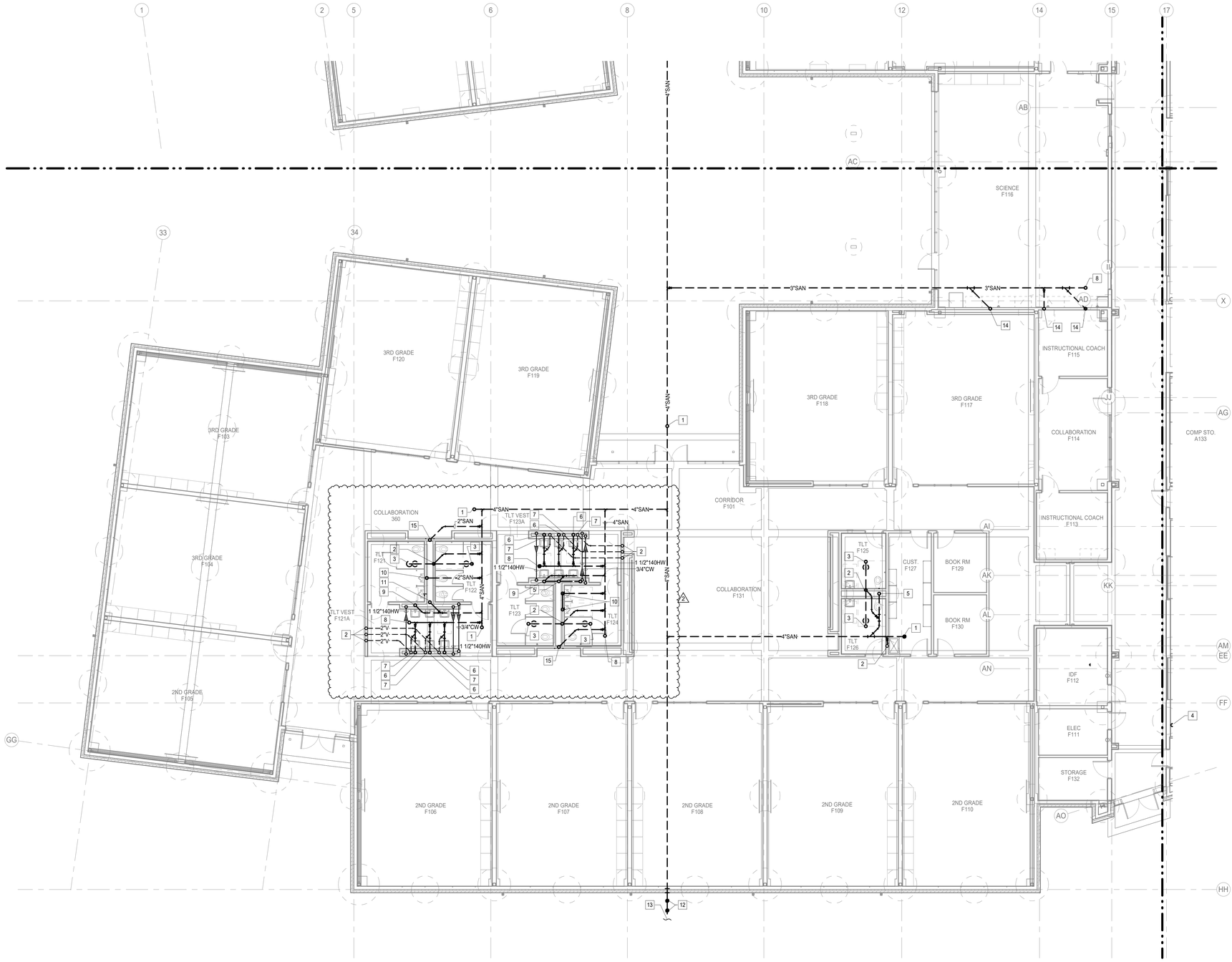
1/9/2025 6:56:57 PM

PLUMBING KEYED NOTES

1 4" SANITARY FROM CLEANOUT ABOVE.
2 2" VENT UP.
3 3" SANITARY FROM FLOOR DRAIN ABOVE.
4 8" STORM FROM ABOVE.
5 4" SANITARY FROM WATER CLOSET ABOVE.
6 2" SANITARY FROM LAVATORY ABOVE.
7 2" ISLAND VENT FROM ABOVE.
8 3" SANITARY FROM CLEANOUT ABOVE.
9 2" SANITARY FROM ABOVE.
10 2" SANITARY FROM URINAL ABOVE.
11 4" SANITARY FROM ABOVE.
12 4" SANITARY FROM TWO-WAY CLEANOUT ABOVE.
13 REFER TO SHEET P1.01 FOR CONTINUATION.
14 2" SANITARY FROM SINK ABOVE.
15 2" SANITARY FROM ELECTRONIC DRINKING FOUNTAIN ABOVE.



1 **PLUMBING UNDERFLOOR PLAN - AREA F**
Scale: 1/8" = 1'-0"

PIPE VOID SYSTEM REQUIRED FOR BELOW SLAB PIPING AND CONDUITS:

A. INSTALL UNDER SLAB PIPING AND ELECTRICAL CONDUITS IN PIPE VOIDS WITH SUPPORTS AND FITTINGS. COORDINATE INSTALLATION WITH STRUCTURAL SLAB DRAWINGS AND SPECIFICATIONS.
B. INSTALL PIPING, CONDUITS, SUPPORTS AND FITTINGS IN ACCORDANCE WITH PIPE VOID SYSTEM MANUFACTURE DESIGNS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, LOCAL CODES, AND APPLICABLE TRADE STANDARDS OF INSTALLATIONS.
C. INSTALLATIONS SHALL BE INSPECTED BY THE PIPE VOID SYSTEM MANUFACTURER, THEIR DESIGNATED AUTHORIZED PERSONNEL, OR REPRESENTATIVES, FOR INSTALLATION COMPLIANCE AND OVERALL QUALITY CONTROL.
D. PROVIDE AND SUBMIT WRITTEN DOCUMENTATION FROM THE MANUFACTURE OR THEIR REPRESENTATIVE THAT THE INSTALLATION IS CONSISTENT WITH THE MANUFACTURER'S DESIGN AND THEIR INSTALLATION INSTRUCTIONS PRIOR TO FILLING PIPING WITH FLUIDS OR INSTALLING CONDUCTORS IN BELOW SLAB PIPES OR CONDUITS LOCATED IN PIPE VOID SYSTEMS.
E. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
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REVISIONS:

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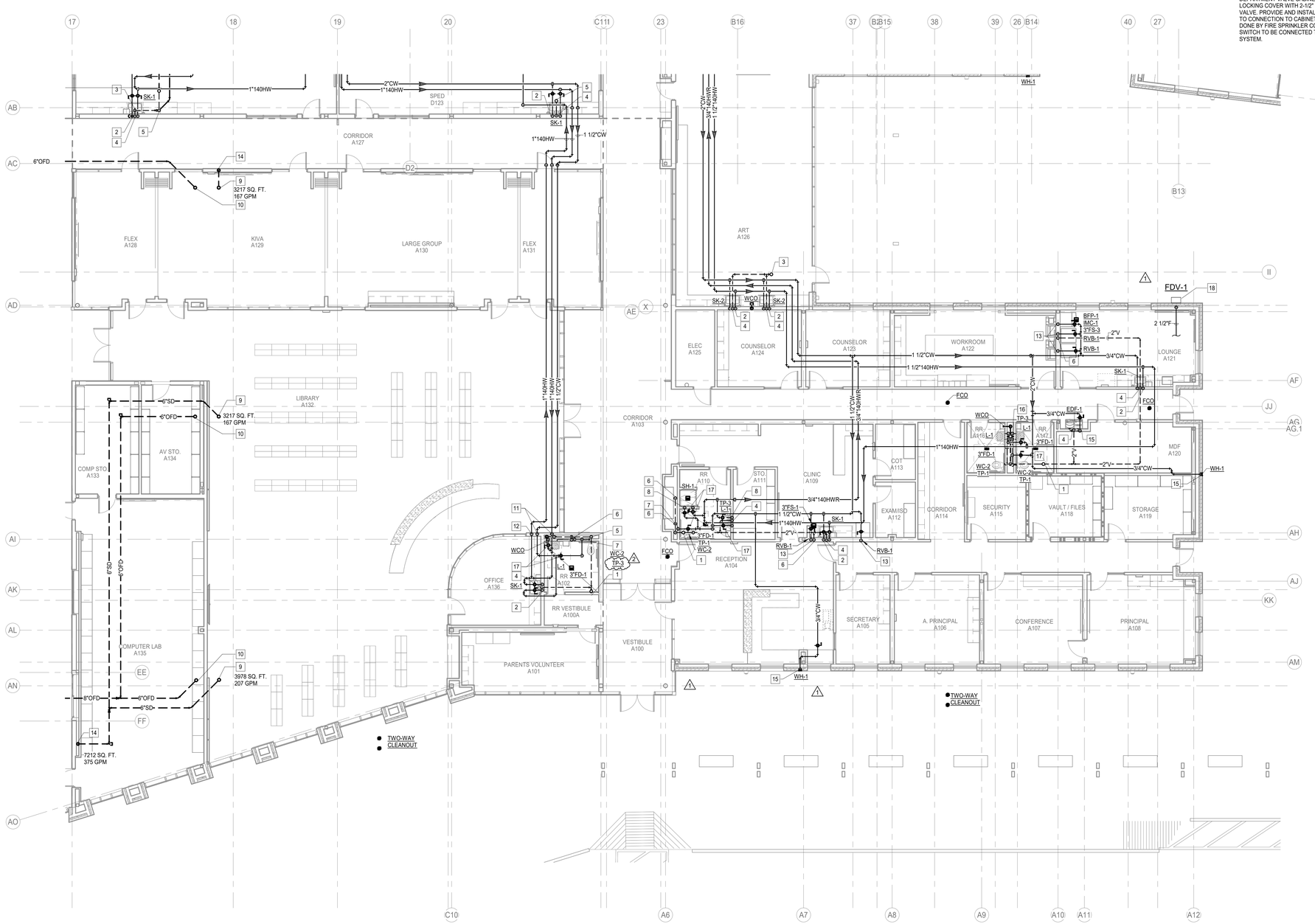
100% CONSTRUCTION DOCUMENTS
P2.01F
PLUMBING UNDERFLOOR PLAN - AREA F

1/9/2025 6:58:41 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

PLUMBING KEYED NOTES

1 2" VENT UP TO 4" VTR.
2 3/4" CW AND HW DOWN TO SERVE PLUMBING FIXTURE/S.
3 2" VENT UP TO 2" VTR.
4 2" SANITARY DOWN, 2" VENT UP.
5 2" VENT UP.
6 2" VENT FROM BELOW.
7 1-1/2" CW DOWN.
8 3/4" CW AND HW DOWN.
9 6" STORM FROM ROOF DRAIN ABOVE.
10 6" STORM OVERFLOW FROM OVERFLOW DRAIN ABOVE.
11 1-1/2" CW AND 1" HW DOWN TO ABOVE LOWER CEILING.
12 1" HW UP TO HIGH CEILING.
13 3/4" CW DOWN.
14 6" STORM DOWN.
15 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.
16 PROVIDE WYE TAILPIECE FOR CONDENSATE.
17 PROVIDE A 24"X 24" ACCESS PANEL.
18 PROVIDE AND INSTALL SURFACE MOUNTED FIRE DEPARTMENT VALVE CABINET WITH SOLID METAL LOCKING COVER WITH 2-1/2" FIRE DEPARTMENT VALVE. PROVIDE AND INSTALL TAMPER SWITCH PRIOR TO CONNECTION TO CABINET. THIS WORK SHALL BE DONE BY FIRE SPRINKLER CONTRACTOR. TAMPER SWITCH TO BE CONNECTED TO BUILDING FIRE ALARM SYSTEM.



1 PLUMBING FLOOR PLAN - AREA A

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

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

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LICENSED
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P3.01A
PLUMBING 01 FLOOR PLAN - AREA A

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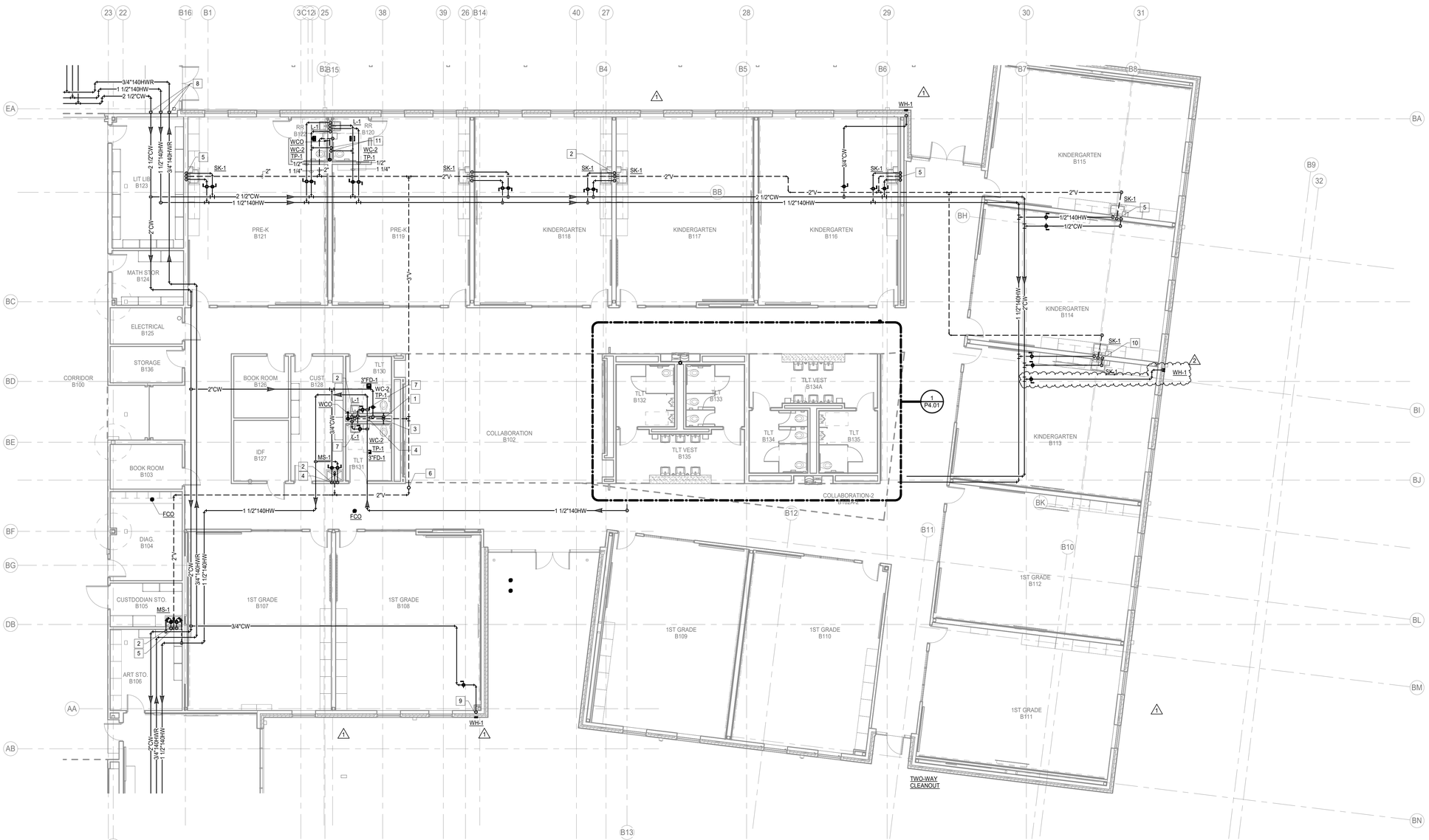
1/9/2025 8:20:49 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

PLUMBING KEYED NOTES

1 4" SANITARY DOWN.
2 3/4" CW AND HW DOWN.
3 3" VENT UP TO 4" VTR.
4 2" VENT FROM BELOW.
5 2" SANITARY DOWN, 2" VENT UP.
6 3" VENT UP TO 3" VTR.
7 PROVIDE A 24"X 24" ACCESS PANEL.
8 OFFSET WATER DOWN TO LOWER CEILING.
9 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.
10 3/4" CW AND HW DOWN, 2" SANITARY DOWN. 2" VENT UP.
11 1-1/4" CW DOWN.



N 1 **PLUMBING FLOOR PLAN - AREA B**
Scale: 1/8" = 1'-0"

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
3911 AVENUE I
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BRADLEY KALMANS
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1	12/20/2024	Addendum 1
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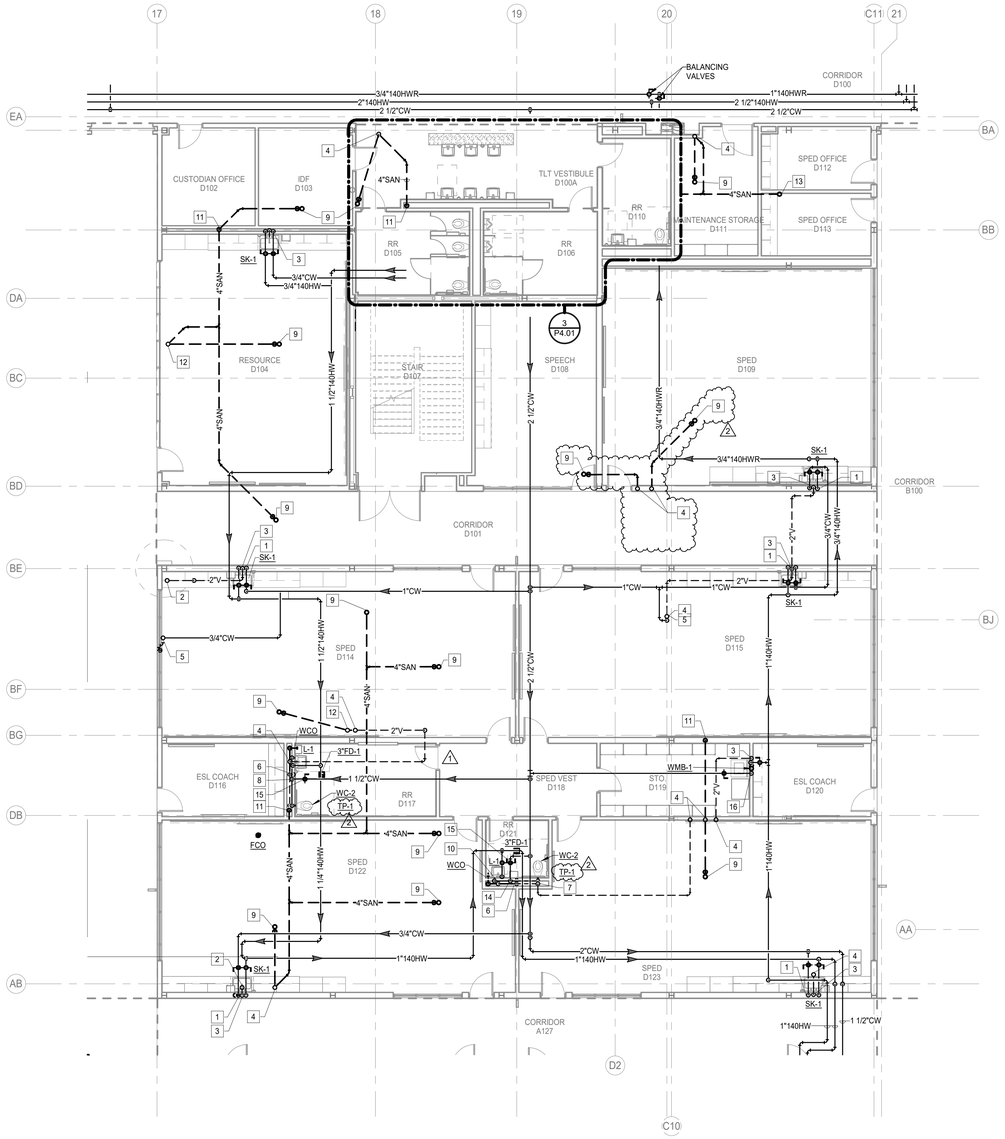
P3.01B
PLUMBING FLOOR PLAN - AREA B

1/9/2025 7:13:04 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

PLUMBING KEYED NOTES

1 3/4" CW AND HW DOWN TO SERVE PLUMBING FIXTURE/S.
2 2" VENT UP TO 2" VTR.
3 2" SANITARY DOWN, 2" VENT UP.
4 2" VENT UP.
5 3/4" CW UP.
6 2" VENT FROM BELOW.
7 4" SANITARY DOWN, 2" VENT UP.
8 1-1/2" CW DOWN.
9 4" SANITARY FROM FLOOR SINK ABOVE.
10 3/4" HW DOWN TO SERVE PLUMBING FIXTURE/S.
11 4" SANITARY DOWN.
12 3" VENT UP.
13 4" SANITARY FROM CLEANOUT ABOVE.
14 1-1/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.
15 PROVIDE A 24"X 24" ACCESS PANEL.
16 3/4" CW AND HW DOWN.



N

1 PLUMBING FLOOR PLAN - AREA D
Scale: 1/8" = 1'-0"

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C D E B F A

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1	12/20/2024	Addendum 1
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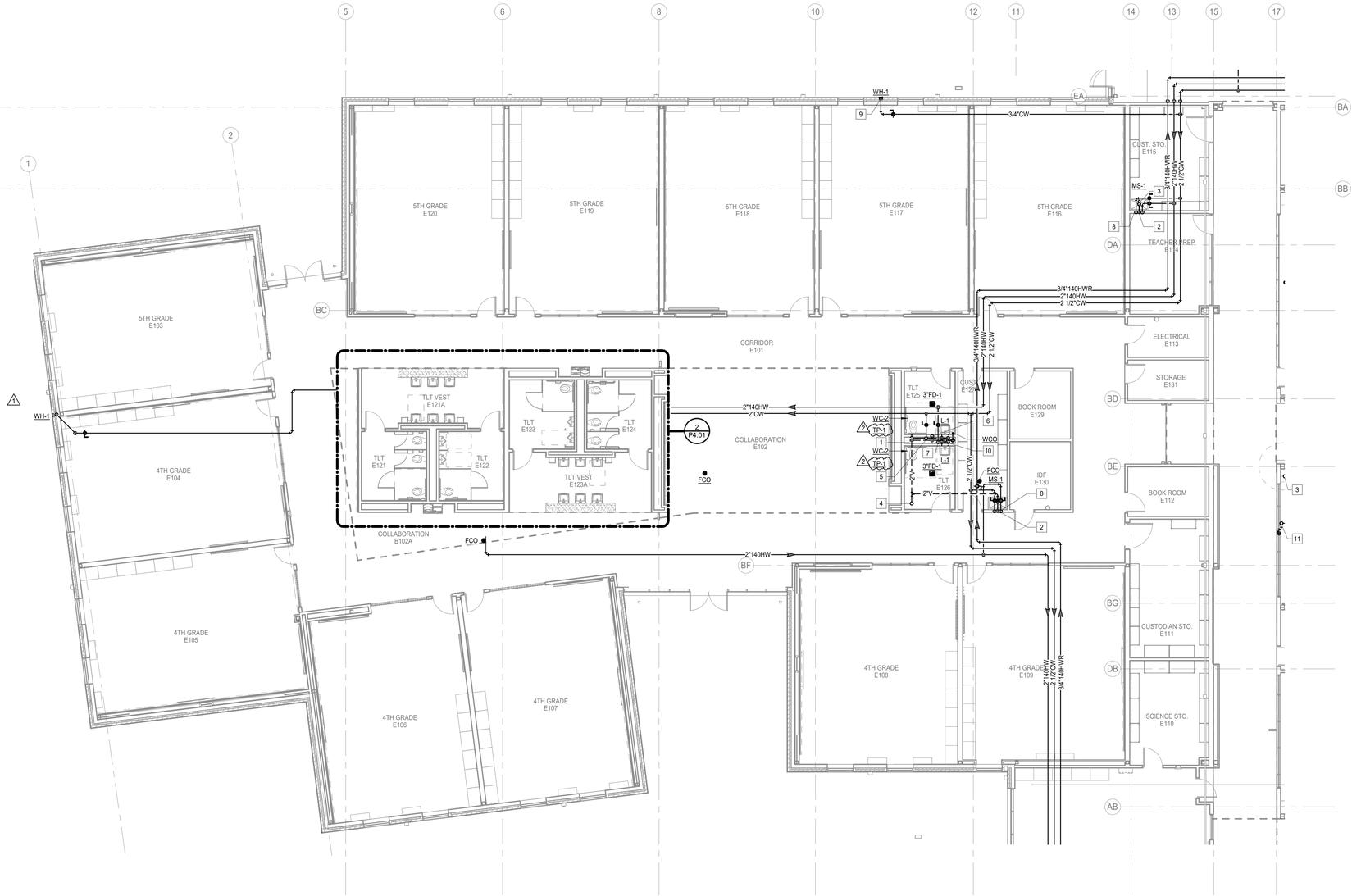
ELEMENTARY SCHOOL #38 IN BROOKEWATER

P3.01D
PLUMBING FLOOR PLAN - AREA D

1/9/2025 7:16:46 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

PLUMBING KEYED NOTES

1 4" SANITARY DOWN.
2 3" SANITARY DOWN, 2" VENT UP.
3 2" VENT UP TO 2" VTR.
4 3" VENT UP TO 3" VTR.
5 2" CW DOWN TO SERVE PLUMBING FIXTURE/S.
6 2" VENT FROM BELOW.
7 3/4" HW DOWN TO SERVE PLUMBING FIXTURE/S.
8 3/4" CW AND HW DOWN.
9 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.
10 PROVIDE WYE TAILPIECE FOR CONDENSATE.
11 3/4" CW UP.



1 PLUMBING FLOOR PLAN - AREA E

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

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LAMAR CISD
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ELEMENTARY SCHOOL #38 IN BROOKEWATER

BRADLEY KALMANS
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STATE OF TEXAS
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PROJECT NO. 24-028
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1	12/20/2024	Addendum 1
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P3.01E
PLUMBING FLOOR PLAN - AREA E

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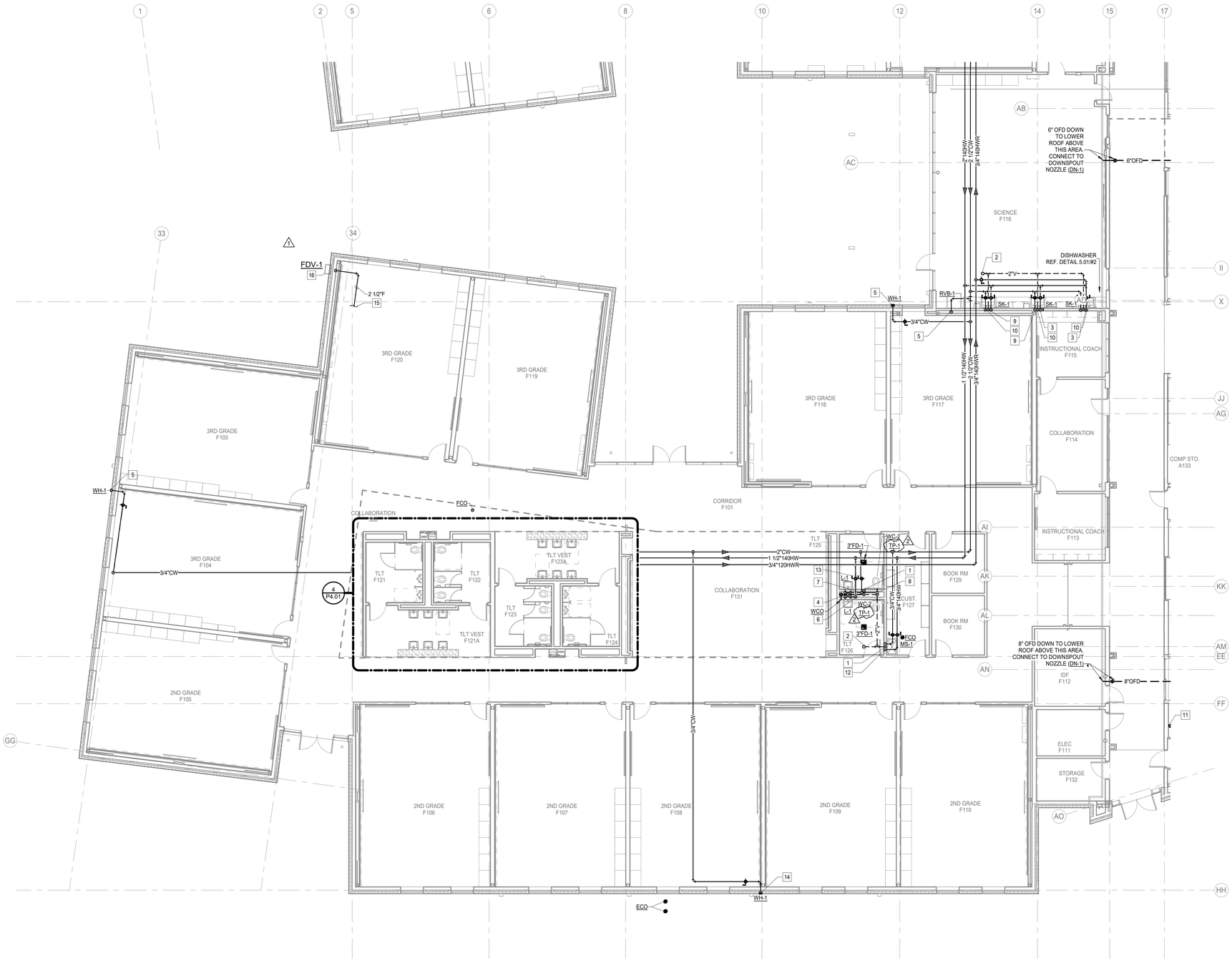
PLUMBING KEYED NOTES

1 2" VENT FROM BELOW.
2 3" VENT UP TO 3" VTR.
3 STUB OUT EXTRA HOT WITH SHUT OFF FOR DISHWASHER CONNECTION AND CONNECT DRAIN WITH WYE BRANCH FITTING ABOVE TRAP UNDER SINK.
4 PROVIDE WYE TAILPIECE FOR CONDENSATE.
5 3/4" CW DOWN.
6 3/4" HW DOWN.
7 1-1/2" CW DOWN.
8 4" SANITARY DOWN.
9 3/4" CW AND HW DOWN.
10 2" SANITARY DOWN, 2" VENT UP.
11 6" STORM DOWN.
12 3/4" CW AND HW DOWN TO SERVE PLUMBING FIXTURE/S.
13 PROVIDE A 24"X 24" ACCESS PANEL.
14 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.
15 COORDINATE ROUTING OF NEW 2-1/2" FIRE LINE TO SERVE FIRE DEPARTMENT VALVE (FDV-1) WITH FIRE SPRINKLER CONTRACTOR.
16 PROVIDE AND INSTALL SURFACE MOUNTED FIRE DEPARTMENT VALVE CABINET WITH SOLID METAL LOCKING COVER WITH 2-1/2" FIRE DEPARTMENT VALVE. PROVIDE AND INSTALL TAMPER SWITCH PRIOR TO CONNECTION TO CABINET. THIS WORK SHALL BE DONE BY FIRE SPRINKLER CONTRACTOR. TAMPER SWITCH TO BE CONNECTED TO BUILDING FIRE ALARM SYSTEM.



N

1 PLUMBING FLOOR PLAN - AREA F

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

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

STATE OF TEXAS
BRADLEY KALMANS
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1	12/20/2024	Addendum 1
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P3.01F
PLUMBING FLOOR PLAN - AREA F

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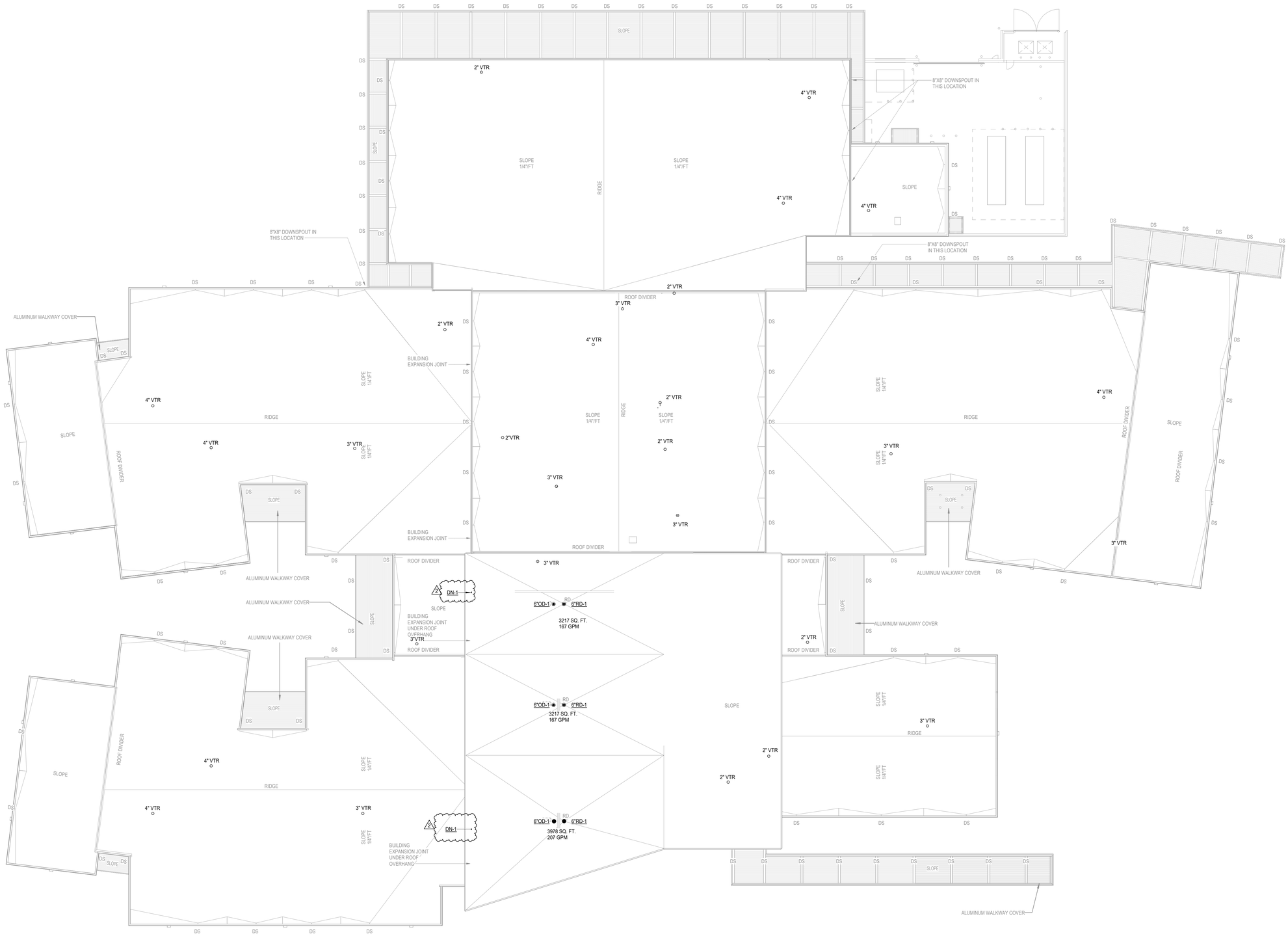
PLUMBING KEYED NOTES



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1 PLUMBING ROOF PLAN
Scale: 1/16" = 1'-0"

1/9/2025 7:30:10 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

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STATE OF TEXAS
01/10/2025

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2	01/10/2025	Addendum 2

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P3.02
PLUMBING ROOF PLAN

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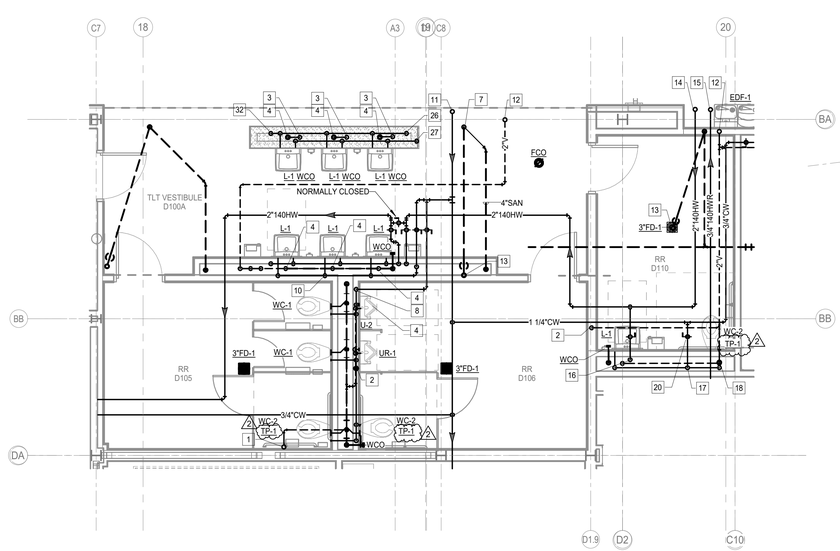
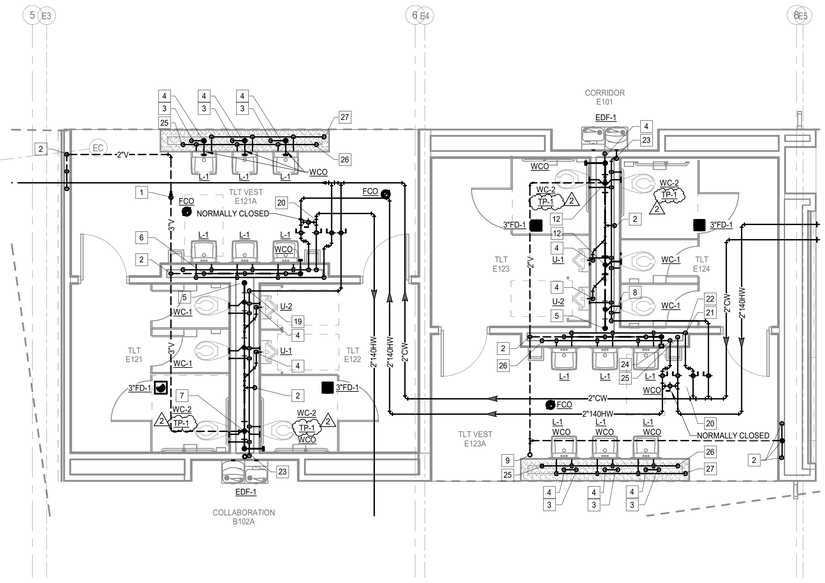
PLUMBING KEYED NOTES

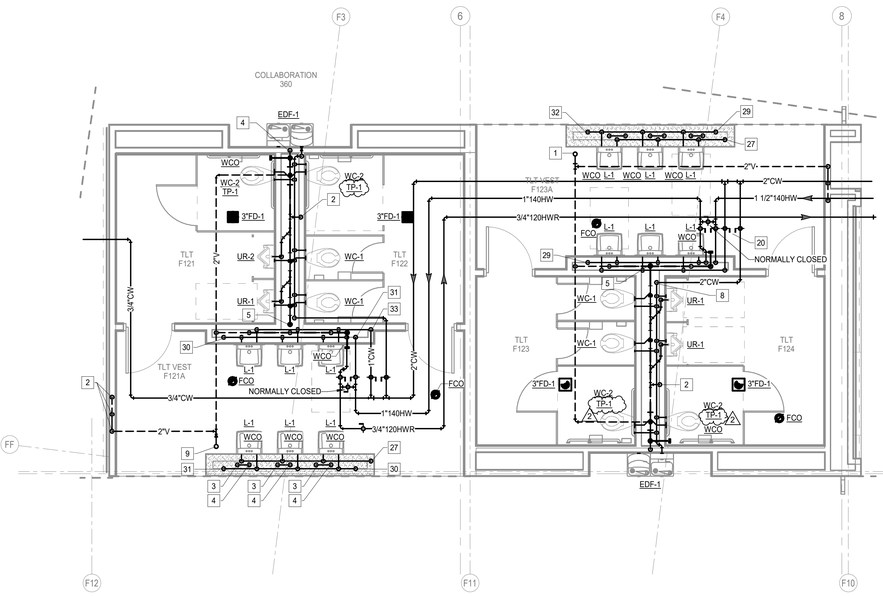
1 3" VENT UP TO 4" VTR.
2 2" VENT FROM BELOW.
3 2" ISLAND VENT DOWN TO BELOW.
4 2" SANITARY DOWN, 2" VENT UP.
5 4" SANITARY DOWN THROUGH SLAB.
6 2" SANITARY DOWN.
7 3" VENT UP.
8 2" CW DOWN TO SERVE PLUMBING FIXTURE/S.
9 4" VENT UP TO 4" VTR.
10 4" SANITARY DOWN.
11 3" CW UP.
12 2" VENT UP.
13 4" SANITARY FROM FLOOR SINK ABOVE.
14 2" HW DOWN.
15 3/4" HWR DOWN.
16 3/4" HW DOWN.
17 1-1/2" CW DOWN.
18 4" SANITARY FROM ABOVE.
19 2" CW DOWN.
20 PROVIDE A 24"X 24" ACCESS PANEL.
21 1" CW DOWN TO SERVE PLUMBING FIXTURE/S.
22 3/4" CW DOWN TO BELOW SLAB.
23 3/4" CW DOWN TO SERVE DRINKING FOUNTAIN.
24 2" HW DOWN TO SERVE PLUMBING FIXTURE/S.
25 2" HW DOWN TO BELOW SLAB.
26 2" HW FROM BELOW SLAB.
27 3/4" CW FROM BELOW SLAB.
28 NOT USED.
29 1-1/2" HW FROM BELOW.
30 1" HW FROM BELOW.
31 1" HW DOWN TO BELOW SLAB.
32 1-1/2" HW DOWN TO BELOW SLAB.
33 1" CW DOWN.



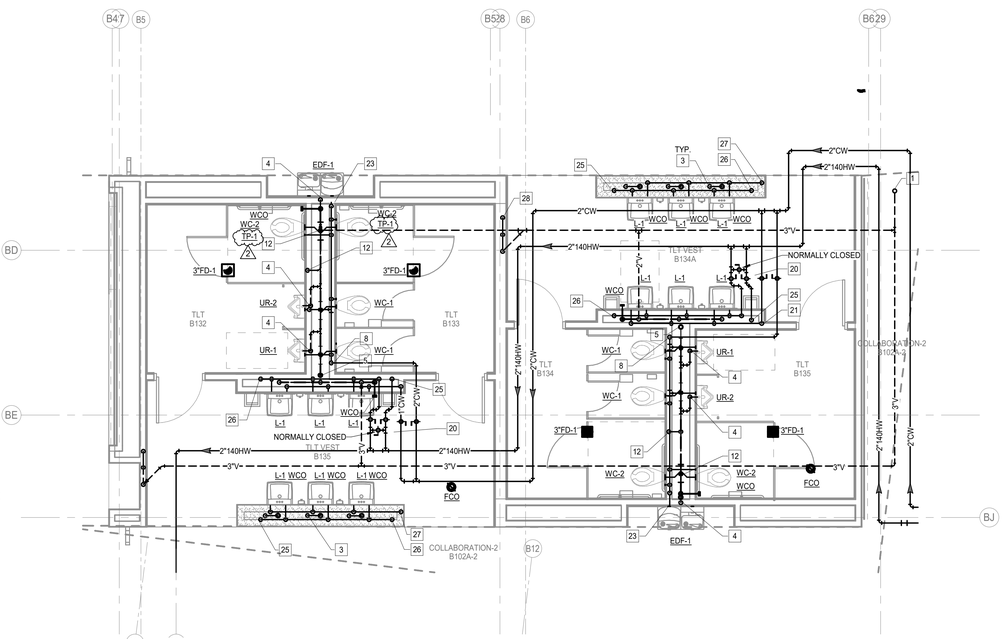
3 **PLUMBING FLOOR PLAN - AREA D - RESTROOMS**
Scale: 1/4" = 1'-0"



2 **PLUMBING FLOOR PLAN - AREA E - RESTROOMS**
Scale: 1/4" = 1'-0"



4 **PLUMBING FLOOR PLAN - AREA F RESTROOMS**
Scale: 1/4" = 1'-0"



1 **PLUMBING FLOOR PLAN - AREA B - RESTROOMS**
Scale: 1/4" = 1'-0"

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Salas O'Brien Project Number: 2024-02562-00

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STATE OF TEXAS
01/10/2025

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P4.01
PLUMBING ENLARGED FLOOR PLANS

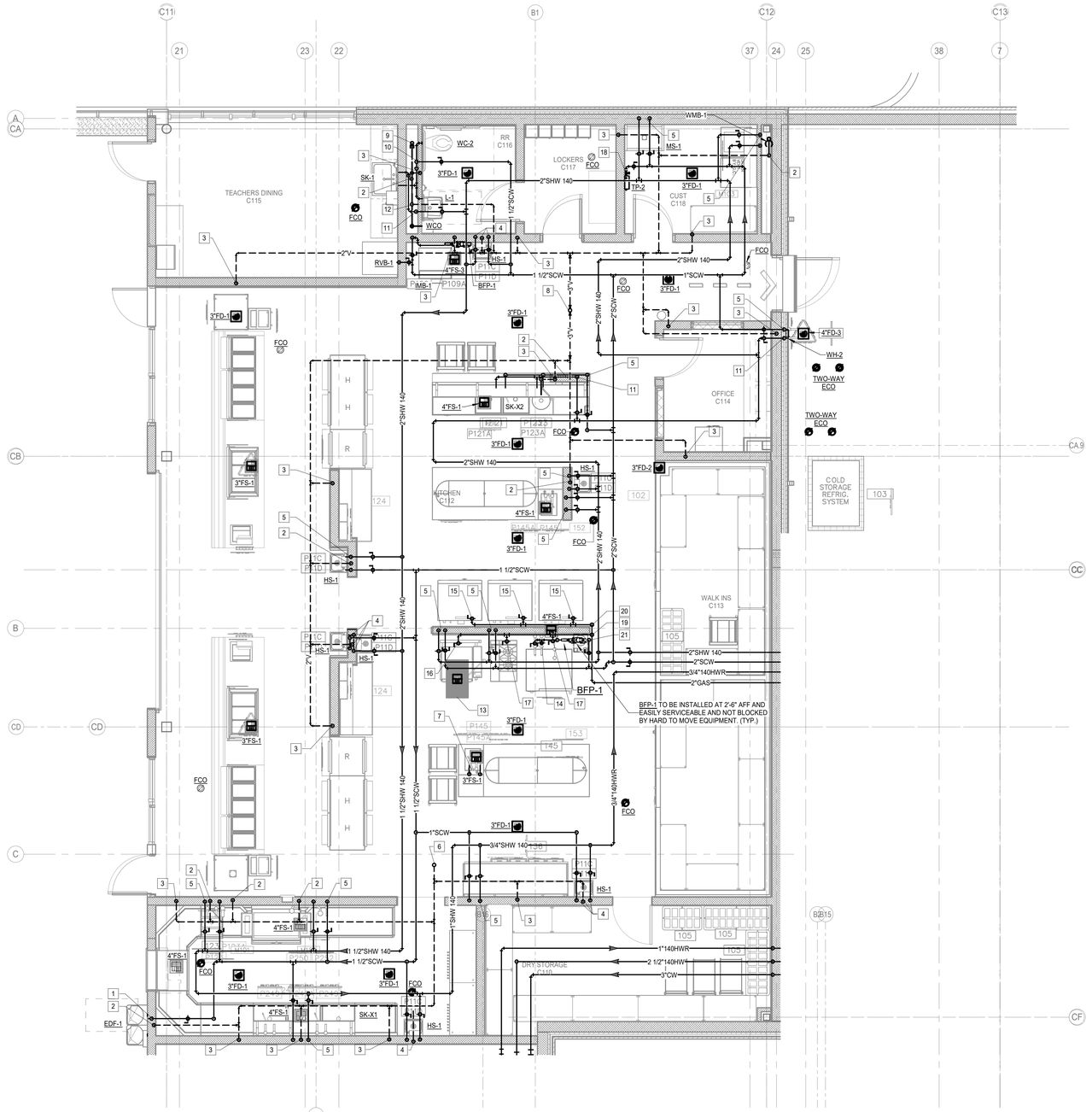
ELEMENTARY SCHOOL #38 IN BROOKEWATER

1/9/2025 7:52:44 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

FOOD SERVICE PLUMBING SCHEDULE						
REFER TO SHEET QF1 FOR PLUMBING COORDINATION NOTES						
FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
						<varies>
P5	3/4"	H & C WATER	JANITOR SINK	WALL	48"	JANITOR SINK BY PLUMBER
P6	4"	FLOOR DRAIN	JANITOR SINK	FLOOR	VERIFY	JANITOR SINK BY PLUMBER
P7	3/4"	H & C WATER	HOSE BIBB	WALL	18"	BTC
P7A	3/4"	H & C WATER	FREEZE PROOF HOSE BIBB	WALL	48"	BTC; PROVIDED BY DIV. 22
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	LOCATE PER ENGINEER'S DRAWING
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P12	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE
P14	1/2"	COLD WATER	FILL FAUCET	FLOOR	6"	BTC; CAP FOR FUTURE
P15	4"	FLOOR DRAIN	FUNNEL FLOOR DRAIN	FLOOR	0"	---
P25A	3"	FLOOR DRAIN	CAN WASH	FLOOR	-1"	LOCATE PER ENGINEER'S DRAWING
P109	3/4"	COLD WATER	WATER/ ICE	WALL	60"	BTC
P109A	12" SQ.	FLOOR SINK	ICE MACHINE	FLOOR	0"	3/4 GRATE
P110	3/4"	H & C WATER	CLOTHES WASHER	WALL	48"	BTC; VALVE BOX
P110A	2"	INDIRECT DRAIN	CLOTHES WASHER	WALL	48"	VALVE BOX
P121	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P121A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	3/4 GRATE
P123	3/4"	H & C WATER	FAUCET / DISPOSER	WALL	13"	BTC
P123A	2"	DIRECT DRAIN	DISPOSER	WALL	10"	BTC
P145	3/4"	H & C WATER	FAUCET	FLOOR	10"	BTC
P145A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	3/4 GRATE
P161	(2)3/4"	NATURAL GAS	CONVECTION OVEN	WALL	18"/36"	BTC: 60 MBTU/HR EACH
P163	4"	HUB DRAIN	TRENCH LINER	FLOOR	-9"	BTC; CRITICAL LOCATION
P163A	3/4"	NATURAL GAS	TILT BRAISING PAN	WALL	18"	BTC: 104 MBTU/HR.
P163B	3/4"	H & C WATER	TILT BRAISING PAN	WALL	36"	BTC
P165	1"	NATURAL GAS	RANGE	WALL	18"	BTC: 90 MBTU/HR
P165A	3/4"	H & C WATER	RANGE	WALL	18"	BTC
P172	(2)3/4"	COLD WATER	COMBI OVEN	WALL	24"/48"	BTC: INTERCONNECT THRU FILTERS
P172A	(2)3/4"	COLD WATER	COMBI OVEN	WALL	24"/48"	BTC
P172B	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE
P172C	(2)3/4"	NATURAL GAS	COMBI OVEN	WALL	18"/36"	BTC: 105 MBTU/HR EACH
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC
P249A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	THREE QUARTER GRATE
P250	12" SQ.	FLOOR SINK	BOOSTER / DISHMACHINE	FLOOR	0"	BTC
P252	3/4"	HOT WATER	BOOSTER HEATER	WALL	18"	EXT. THRU W FILTER TO BOOSTER / DISH MACHINE - 140DEG.MIN.

PLUMBING KEYED NOTES

1 3/4" CW DOWN TO SERVE DRINKING FOUNTAIN.
2 2" SANITARY DOWN, 2" VENT UP.
3 2" VENT FROM BELOW.
4 3/4" CW AND HW DOWN. 2" GREASE WASTE DOWN, 2" VENT UP.
5 3/4" CW AND HW DOWN.
6 2" VENT UP TO 4" VTR.
7 3/4" CW AND HW FROM BELOW.
8 3" VENT UP TO 4" VTR.
9 4" SANITARY DOWN.
10 1-1/2" CW DOWN.
11 3/4" HW DOWN.
12 2" VENT UP.
13 TRENCH LINEAR DRAIN PROVIDED BY FOOD SERVICE.
14 3/4" FILTERED WATER FROM RO FILTER.
15 PRESSURE REGULATOR FROM 5 PSI TO 8 OZ. 120 CFH.
16 PRESSURE REGULATOR FROM 5 PSI TO 8 OZ. 104 CFH.
17 PRESSURE REGULATOR FROM 5 PSI TO 8 OZ. 90 CFH.
18 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.
19 2" GAS DOWN
20 PROVIDE SHUTOFF VALVE AND ANSUL VALVE AT 60" A.F.F.
21 3/4" CW DOWN.



1 **PLUMBING ENLARGED FLOOR PLAN - KITCHEN**
Scale: 1/4" = 1'-0"

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
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2	01/09/2025	Addendum 2

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P4.03 2

PLUMBING ENLARGED FLOOR PLAN - KITCHEN

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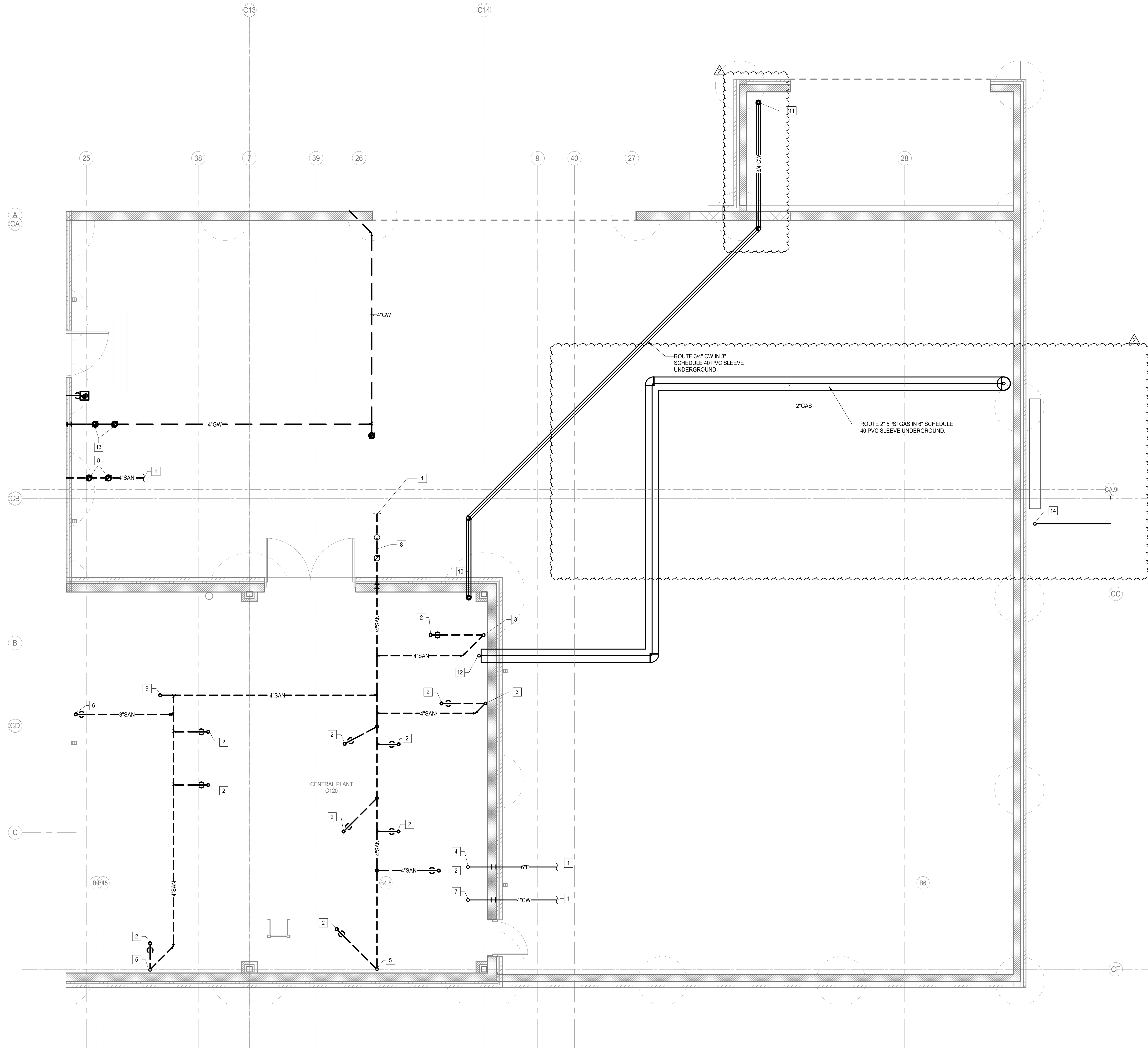
Salas O'Brien Project Number: 2024-02562-00

1/9/2025 8:42:36 AM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt



PLUMBING UNDERFLOOR PLAN - CENTRAL PLANT

1 Scale: 1/4" = 1'-0"

PLUMBING KEYED NOTES

1. REFER TO SHEET P1.01 FOR CONTINUATION.
2. 4" SANITARY FROM FLOOR SINK ABOVE.
3. 2" VENT UP.
4. 6" FIRE LINE UP.
5. 4" VENT UP.
6. 3" SANITARY FROM FLOOR SINK ABOVE.
7. 4" CW UP.
8. 4" SANITARY FROM TWO-WAY CLEANOUT ABOVE.
9. 4" SANITARY FROM CLEANOUT ABOVE.
10. 3/4" CW FROM ABOVE.
11. 3/4" CW UP.
12. 2" GAS UP
13. 4" GREASE WASTE FROM TWO-WAY CLEANOUT ABOVE.
14. NATURAL GAS LINE BY CENTERPOINT ENERGY UP TO GAS METER.

pfluger

ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD

3911 AVENUE I
ROSENBERG, TX 77471

Bradley Kalmans
STATE OF TEXAS
BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: PG CHECKED BY: EH
REVISIONS:

No.	Date	Description
2	01/10/2025	Addendum 2

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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P4.04
PLUMBING ENLARGED UNDERFLOOR PLAN - CENTRAL PLANT

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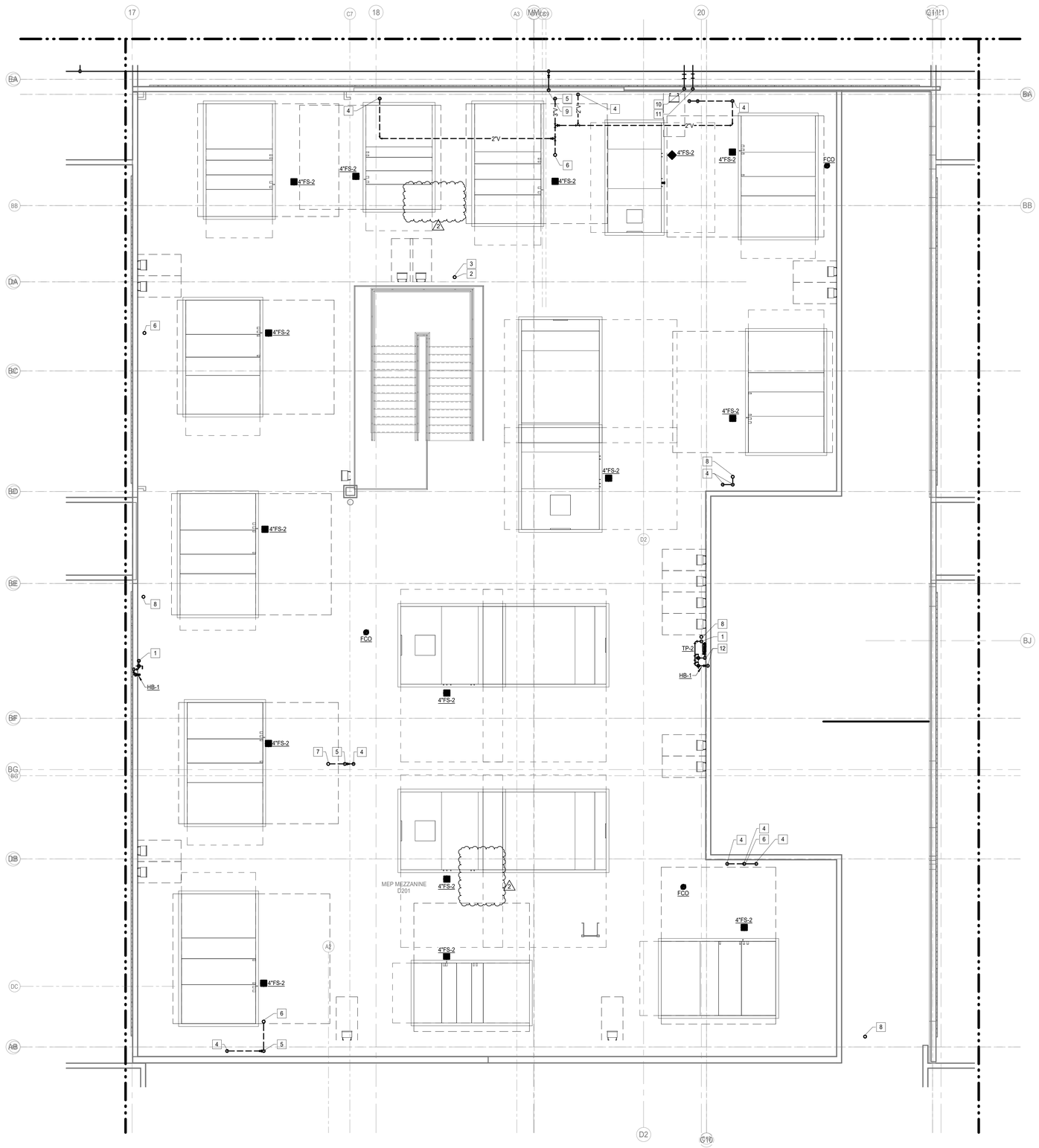
PLUMBING KEYED NOTES

1 3/4" CW FROM BELOW.
2 4" VENT FROM BELOW.
3 4" VENT UP TO 4" VTR.
4 2" VENT FROM BELOW.
5 3" VENT FROM BELOW.
6 3" VENT UP TO 3" VTR.
7 3" VENT UP.
8 2" VENT UP TO 3" VTR.
9 2-1/2" CW DOWN.
10 2" HW DOWN.
11 3/4" HWR FROM BELOW.
12 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.



1 **PLUMBING ENLARGED FLOOR PLAN - MEZZANINE**
Scale: 3/16" = 1'-0"

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pfluger

ELEMENTARY SCHOOL #38 IN BROOKEWATER

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LICENSED
STATE OF TEXAS
ENGINEERING
01/10/2024

PROJECT NO. 24-028
DATE: 2024/12/12
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2	01/09/2025	Addendum 2

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P4.06
PLUMBING ENLARGED FLOOR PLAN - MEZZANINE D201

1/9/2025 8:26:44 AM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

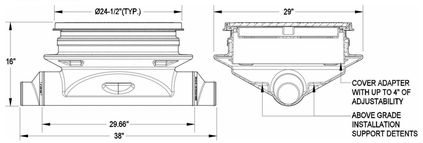
SPECIFICATIONS:

SCHIER WASTEWATER SAMPLING PORT MODEL SV24

WASTEWATER SAMPLING PORT SHALL BE LIFETIME GUARANTEED AND MADE IN USA OF SEAMLESS, ROTATIONALLY-MOLDED POLYETHYLENE. SAMPLING PORT SHALL BE FURNISHED FOR ABOVE OR BELOW GRADE INSTALLATION.

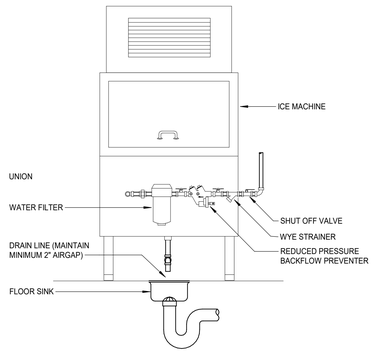
1. 4" PLAIN END INLET/OUTLET (FIELD MODIFIABLE TO 6" PLAIN END).
2. UNIT WEIGHT - WITH CAST IRON COVERS: 110 LBS.; WITH COMPOSITE COVERS: 58 LBS.
3. MAXIMUM OPERATING TEMPERATURE: 150°F CONTINUOUS.
4. LEVEL CONNECTIONS.
5. SAFETY STAR, ACCESS RESTRICTOR BUILT INTO EACH COVER ADAPTER, PREVENTS ACCIDENTAL ENTRY TO TANKS (450 LBS. RATING).
6. COVER: CAST IRON COVERS, PICKABLE 24" GAS/WATER TIGHT, H-20 RATED, PROOF-LOAD TESTED TO 40,000 LBS.

NOTE:
WHEN NECESSARY PROVIDE AND INSTALL FIELD CUT RISERS PER MANUFACTURES INSTRUCTIONS TO BRING ACCESS TO GRADE.



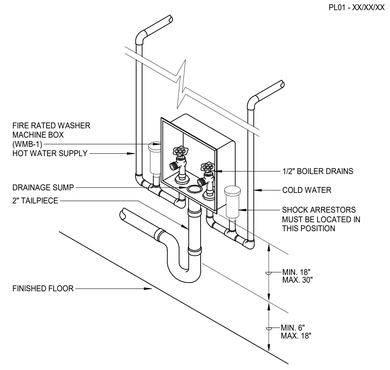
15 SAMPLE WELL (SW-1)
SCALE: NONE

PSAN25- XX/XX/XX



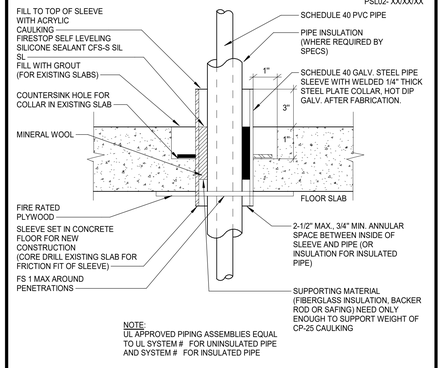
12 ICE MACHINE CONNECTION
SCALE: NONE

PL01 - XX/XX/XX



9 WASHING MACHINE DRAIN BOX (WMB)
SCALE: NONE

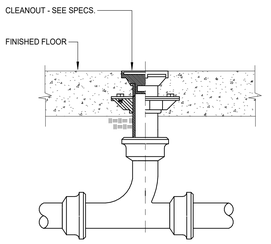
PSL02- XX/XX/XX



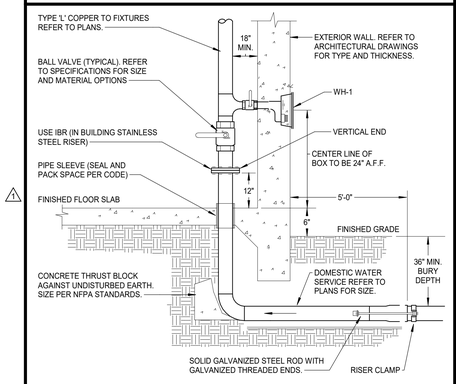
NOTE:
UL APPROVED PIPING ASSEMBLIES EQUAL TO UL SYSTEM # FOR UNINSULATED PIPE AND SYSTEM # FOR INSULATED PIPE

6 INTERIOR FLOOR PENETRATION
SCALE: NONE

PSAN01- XX/XX/XX

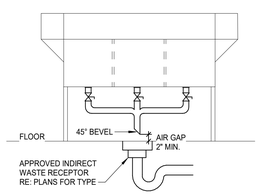


3 FLOOR CLEANOUT
SCALE: NONE



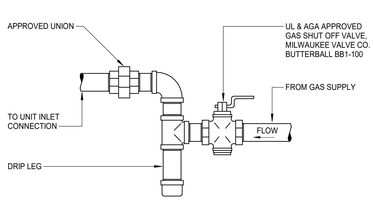
14 DOMESTIC WATER ENTRY - STAINLESS STEEL
SCALE: NONE

PSAN16- XX/XX/XX



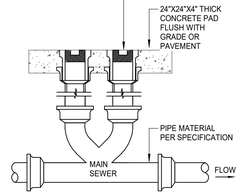
11 THREE COMPARTMENT SINK
SCALE: NONE

PNG03 - XX/XX/XX



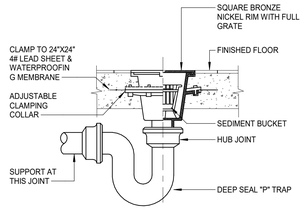
8 GAS CONNECTION
SCALE: NONE

PSAN05- XX/XX/XX



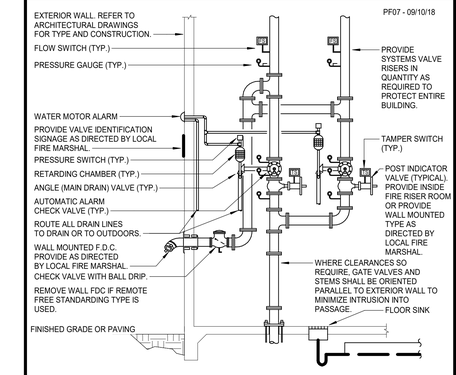
5 TWO-WAY EXTERIOR CLEANOUT
SCALE: NONE

PSAN08- XX/XX/XX

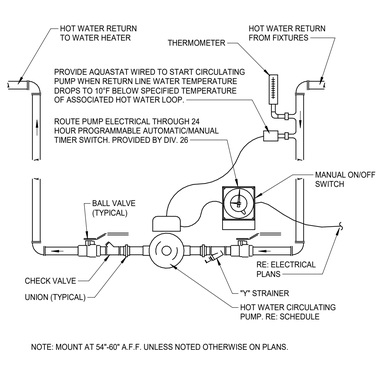


2 FLOOR SINK
SCALE: NONE

PF07 - 09/10/18



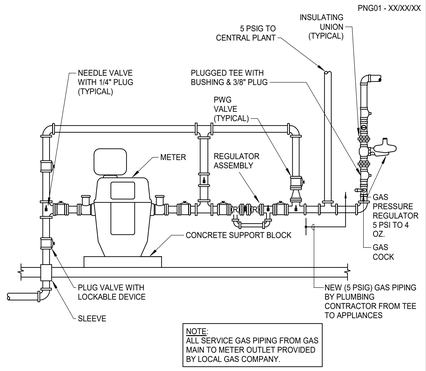
13 FIRE ENTRY PIPING
SCALE: NONE



NOTE: MOUNT AT 54"-60" A.F.F. UNLESS NOTED OTHERWISE ON PLANS.

10 HOT WATER CIRCULATING PUMP
SCALE: NONE

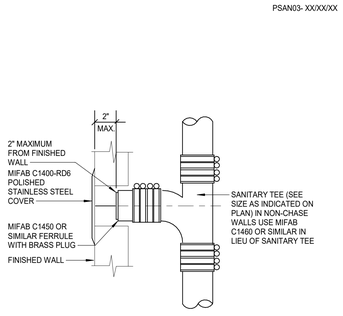
PNG01 - XX/XX/XX



NOTE:
ALL SERVICE GAS PIPING FROM GAS MAIN TO METER OUTLET PROVIDED BY LOCAL GAS COMPANY.

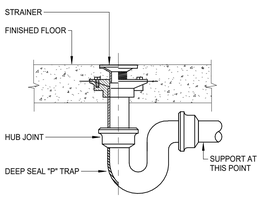
7 GAS METER PIPING
SCALE: NONE

PSAN03- XX/XX/XX



4 WALL CLEANOUT
SCALE: NONE

PSAN07- XX/XX/XX



1 FLOOR DRAIN
SCALE: NONE

pfluger

ELEMENTARY SCHOOL #38 IN BROOKEWATER

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BRADLEY KALMANS
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PROJECT NO. 24-028
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No	Date	Description
1	12/20/2024	Addendum 1

100% CONSTRUCTION DOCUMENTS

P5.00
PLUMBING DETAILS

Salas O'Brien

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10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Registration: F-4111

Salas O'Brien Project Number: 2024-02562-00

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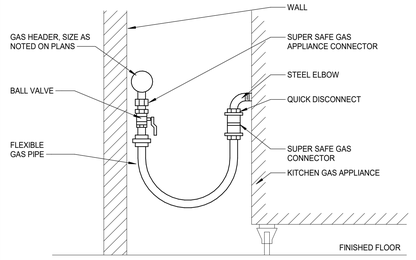
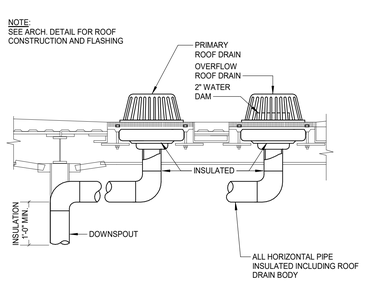


3 KITCHEN EQUIPMENT GAS PIPING
SCALE: NONE

PST02 - 10/29/20



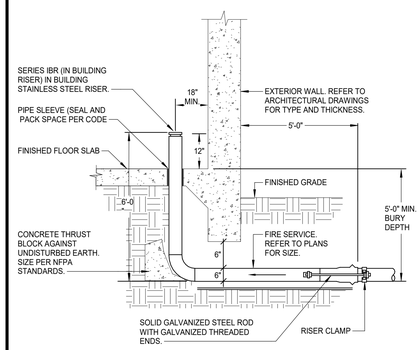
5 STORM DRAIN INSULATION
SCALE: NONE

PP01 - XX/XX/XX

MINIMUM DIMENSIONS OF GALVANIZED SHEETMETAL PROTECTION SHIELDS AT PIPE HANGERS		
NOMINAL SIZE PIPE	SHIELD LENGTH (IN.)	GAUGE THICKNESS
1/2" & 3/4"	12	18
1" - 2-1/2"	12	18
3" - 4"	16	18
6"	18	16

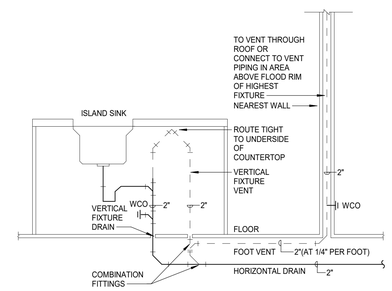
2 PIPE SHIELDS FOR INSULATED PIPING
SCALE: NONE

PF02 - 09/10/18



4 FIRE SPRINKLER ENTRY
SCALE: NONE

PSAN13- XX/XX/XX



1 TYPICAL ISLAND SINK PIPING
SCALE: NONE

pfluger

ELEMENTARY SCHOOL #38 IN BROOKEWATER

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PROJECT NO. 24-028
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No.	Date	Description
1	12/20/2024	Addendum 1
2	01/09/2025	Addendum 2

100% CONSTRUCTION DOCUMENTS

P5.02
PLUMBING DETAILS

Salas O'Brien
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10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Project Number: 2024-02562-00

1/9/2025 7:28:19 AM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

PLUMBING MATERIAL LIST

ABOVE GRADE, INSIDE BUILDING

SANITARY WASTE AND VENT PIPING SHALL BE

NO-HUB CAST IRON SYSTEM CONFORMING TO CISPI. STANDARD NO. 301-75. NEOPRENE GASKETS SHALL CONFORM TO ASTM STANDARD C564-75, OR,

STORM PIPING SHALL BE

SERVICE WEIGHT CAST IRON HUB AND SPIGOT PIPE AND FITTINGS WITH ELASTOMERIC GASKETS JOINTS.

DOMESTIC WATER PIPING SHALL BE

DRAWN (HARD) COPPER WATER TUBE, TYPE "L", ASTM B88, WITH WROUGHT COPPER FITTINGS, ANSI B16.22 AND 95-5 SOLDER JOINTS.

BELOW GRADE, INSIDE BUILDING

SANITARY WASTE AND VENT PIPING SHALL BE

SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS CONFORMING TO ASTM-2665 WITH SOLVENT WELDED JOINTS. DO NOT USE IN AIR SUPPLY OR RETURN PLENUMS, AND OR WHERE FIRE RATED WALLS, PARTITIONS, OR FLOORS ARE PENETRATED.

STORM PIPING SHALL BE

SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS CONFORMING TO ASTM-2665 WITH SOLVENT WELDED JOINTS.

DOMESTIC WATER PIPING SHALL BE

ANNEALED (SOFT) COPPER WATER TUBE, TYPE "K", ASTM B88, WITH NO JOINTS OR FITTINGS BELOW SLAB.

GAS PIPING SHALL BE

PIPE 2" AND SMALLER. PROVIDE SCHEDULE 40 ASTM A 53 BLACK STEEL WITH FACTORY FABRICATED SOCKET WELD FITTINGS.

PIPE LARGER THAN 2", USE SCHEDULE 40 ASTM A 53 BLACK STEEL PIPE WITH LONG RADIUS WELD FITTINGS.

WATER SOFTENER SCHEDULE

ITEM	WS-1	
EXCHANGE CAPACITY EACH TANK GRAINS REQUIRED	240,000	
NUMBER OF TANKS	(2) RESIN, (1) BRINE	
CUBIC FEET RESIN EACH TANK	3	
SERVICE RATE (GPM)	50	
BACKWASH RATE (GPM)	5.0	
PIPE CONNECTION SIZE	2"	
BRINE TANK CAPACITY SALT (LBS)	400	
MAX. SALT PER REGENERATION (LBS)	120	
MAX. SPACE AVAILABLE EXCLUDES SERVICE ACCESS (L x W x H)	78"x42"x73"	
TANK DIMENSIONS (DIA. x HEIGHT)	SOFTENER	BRINE
	14"x64"	18"x40"
MAKE/MODEL	WATERTECH SERVICES MODEL #WTS-F90.2	
REMARKS: ELECTRICAL REQUIREMENTS - 120 VAC FOR CONTROLLER (5 AMPS)		

GAS EQUIPMENT SCHEDULE

EQUIPMENT NUMBER	DESCRIPTION	BTU PER HOUR LOAD	TOTAL BTU PER HOUR	TOTAL CFH
GWH-1	GAS WATER HEATER	199,000 BTUH	199,000 BTUH	199 CFH
GWH-2	GAS WATER HEATER	199,000 BTUH	199,000 BTUH	199 CFH
GWH-3	GAS WATER HEATER	199,000 BTUH	199,000 BTUH	199 CFH
GWH-4	GAS WATER HEATER	199,000 BTUH	199,000 BTUH	199 CFH
EMER. GEN.	EMERGENCY GENERATOR	1,200,000 BTUH	1,200,000 BTUH	1200 CFH
COMBI OVEN	COMBI OVEN	120,000 BTUH	120,000 BTUH	120 CFH
COMBI OVEN	COMBI OVEN	120,000 BTUH	120,000 BTUH	120 CFH
COMBI OVEN	COMBI OVEN	120,000 BTUH	120,000 BTUH	120 CFH
TILT PAN	TILT BRAISING PAN	104,000 BTUH	104,000 BTUH	104 CFH
RANGE	RANGE	90,000 BTUH	90,000 BTUH	90 CFH
COMBI OVEN	COMBI OVEN	210,000 BTUH	210,000 BTUH	210 CFH
B-1	BOILER	1,800,000 BTUH	1,800,000 BTUH	1800 CFH
B-2	BOILER	1,800,000 BTUH	1,800,000 BTUH	1800 CFH
TOTAL:		6,360,000 BTUH	6,360,000 BTUH	6,360 CFH

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 PIPING LEGEND

SYMBOLS	DESCRIPTION
SAN	SANITARY OR WASTE PIPING ABOVE GRADE (SAN)
SAN	SANITARY OR WASTE PIPING BELOW GRADE (SAN)
GW	GREASE WASTE PIPING (GW)
GW	GREASE WASTE PIPING BELOW GRADE (GW)
SD	STORM DRAIN PIPING (SD)
SD	STORM DRAIN PIPING BELOW GRADE (GW)
SSD	SUB-SOIL DRAIN OR FOOTING DRAIN (SSD)
AW	ACID WASTE PIPING (AW)
AW	ACID WASTE PIPING BELOW GRADE (AW)
PD	PUMPED DISCHARGE (PD)
CD	CONDENSTATE DRAIN PIPING (CD)
D	CONDENSTATE - INDIRECT DRAIN PIPING (D)
	VENT PIPING (V)
CW	COLD WATER PIPING (CW)
HW	HOT WATER PIPING (HW)
HWR	HOT WATER RETURN PIPING (HWR)
SCW	SOFT COLD WATER PIPING (SCW)
CDW	CHILLED DRINKING WATER PIPING (CDW)
TP	TRAP PRIMER LINE (TP)
F	FIRE PROTECTION PIPING (F)
AS	AUTOMATIC SPRINKLER PIPING (AS)
GAS	NATURAL GAS PIPING (G)
GV	GAS VENT PIPING (GV)
AIR	COMPRESSED AIR PIPING (A)
	FLOW DIRECTIONAL ARROW
	SHUT-OFF VALVE
	BALANCING VALVE (BV)
	SOLENOID VALVE (SV)
	BALL VALVE (BV)
	BUTTERFLY VALVE
	LUBRICATED PACKED PLUG STOP STOP COCK (PC)
	HORIZONTAL SWING CHECK
	UNION
	HORIZONTAL SWING CHECK
	REDUCER OR INCREASER
	ECCENTRIC REDUCER
	REDUCED PRESSURE BACKFLOW PREVENTER (RPBFP)
	PIPING DOWN
	RISE OR DROP PIPING
	PIPING UP -OR- PIPING UP & DOWN
	CAP ON END OF PIPE
CO	CLEANOUT (WALL OR CEILING) (CO)
	FLOOR CLEANOUT (FCO)
ECO	EXTERIOR CLEANOUT WITH 18"x18"x4" CONCRETE PAD (ECO)
	TWO-WAY CLEANOUT (PROVIDE 18"x24"x4" CONCRETE PAD OUTSIDE)
	FIRE DEPARTMENT VALVE AT RISER
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
	PRESSURE REDUCING VALVE (PRV)
	BRANCH CONNECTION OUT OF TOP
	BRANCH CONNECTION OUT OF BOTTOM
	BRANCH CONNECTION OUT OF SIDE
	WYE & 1/8TH BEND BRANCH CONNECTION
	WYE BRANCH CONNECTION
	HOSE BIBB
	PRESSURE GAUGE WITH COCK
	THERMOMETER
	GAS PRESSURE REGULATOR
	TEST COCK
	GAS METER
	WALL HYDRANT
	VALVE IN RISE
	ASME TEMPERATURE & PRESSURE RELIEF VALVE
	VACUUM RELIEF VALVE
	ANGLE VALVE
	OS&Y VALVE
	ROOF DRAIN
1	REFER TO KEYED NOTE
FS	FLOW SWITCH
	FLOOR SINK (FS)
	FLOOR DRAIN (FD)
	FLOOR DRAIN WITH P-TRAP (FD)
	FLOOR DRAIN WITH P-TRAP AT 45° ANGLE (FD)
	HUB DRAIN (HD)
	ACCESS PANEL FOR TRAP PRIMER OR SHOCK ABSORBER
AP	ACCESS PANEL LOCATION SYMBOL
A	SHOCK ABSORBER
	AIR CHAMBER
(E)	EXISTING
(N)	NEW
VTR	VENT THRU ROOF
B.F.F.	BELOW FINISHED FLOOR
A.F.F.	ABOVE FINISHED FLOOR
	NEW CONNECTION
IE=100.00'	INVERT ELEVATION
1	DELTA CHANGE SYMBOL
P 1	4" VTR RISER FLAG

GAS WATER HEATER SCHEDULE

ITEM NO.	BTU/HR. INPUT	GALS. PER HR. RECOVERY RATE 100 F RISE	STORAGE CAPACITY GALLONS	ELECTRICAL REQUIRED	STORED WATER TEMP.	MANUFACTURER / COMMENTS
GWH-1	199,000	294	100	120V/1PH.	140 F	A.O. SMITH BTH-199A
GWH-2	199,000	294	100	120V/1PH.	140F	A.O. SMITH BTH-199A
GWH-3	199,000	294	100	120V/1PH.	140F	A.O. SMITH BTH-199A
GWH-4	199,000	294	100	120V/1PH.	140 F	A.O. SMITH BTH-199A

NOTES:
1. THE WATER HEATERS SHALL BE EQUIPPED WITH ASME RATED TANKS, ASME RATED TEMPERATURE PRESSURE AND RELIEF VALVES, IGNITION CONTROL DEVICES WITH INTEGRAL DIAGNOSTICS, LED FAULT DISPLAY AND DIGITAL DISPLAY OF TEMPERATURE SETTINGS.
2. THE WATER HEATERS SHALL BE LOW NOX AND THE SYSTEMS SHALL BE PIPED WITH AN EXPANSION TANK. RE: SCHEDULE THIS SHEET (ET-1,2).
3. THE WATER HEATERS SHALL BE SUITABLE FOR SEALED COMBUSTION DIRECT-VENT USING 3" OR 4" POLYPROPYLENE PIPE (UL 1738), RATED FOR FLUE GAS VENTING, FOR INTAKE AND EXHAUST AS MANUFACTURED BY DURA VENT. PROVIDE A CONCENTRIC VENT KIT FROM SAME MANUFACTURER AS GAS WATER HEATER SUPPLIED. INSTALL PER MANUFACTURERS INSTRUCTIONS.

DOMESTIC HW EXPANSION TANK SCHED.

ITEM NO.	DESCRIPTION	MAX. WORK PRESSURE	TANK VOL. GALLONS	MAX. ACCEPT. GALLONS	DIAMETER INCHES	MANUFACTURER AND MODEL
ET-1	HOT WATER EXPANSION TANK	150 PSI	34	11.2	18"	AMTROL THERM-X-TROL #ST-70V-C
ET-2	HOT WATER EXPANSION TANK	150 PSI	34	11.2	18"	AMTROL THERM-X-TROL #ST-70V-C

NOTES:
1. ALL EXPANSION TANKS SHALL BE ASME RATED.
2. ET-1 SHALL BE PIPE IN CONJUNCTION WITH GWH-1 AND GWH-2.
3. ET-2 SHALL BE PIPE IN CONJUNCTION WITH GWH-3 AND GWH-4.

CIRCULATING PUMP SCHEDULE

ITEM NO.	DESCRIPTION	TYPE	GPM	HEAD FEET	H.P. MIN.	VOLT/ PHASE	MAX RPM	MANUFACTURER AND MODEL
CP-1	CIRCULATION PUMP 140 F HOT WATER	IN-LINE STAINLESS STEEL	12	25	1/12	120/1	2400	GRUNDFOS ALPHA2 26-99
CP-2	CIRCULATION PUMP 140 F HOT WATER	IN-LINE STAINLESS STEEL	5	10	1/12	120/1	2400	GRUNDFOS ALPHA HWR 15-29

SHOCK ARRESTOR SCHEDULE

P.D.I. SYMBOLS:	FIXTURE UNITS:	THREADED CONNECTION	CERTIFICATION
A	1 - 11	1/2"	ASSE 1010
B	12 - 32	3/4"	ASSE 1010
C	33 - 60	1"	ASSE 1010
D	61 - 113	1"	ASSE 1010
E	114 - 154	1"	ASSE 1010
F	155 - 330	1"	ASSE 1010

pfluger

ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS
STATE OF TEXAS
80219
LICENSED
PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: PG CHECKED BY: EH
REVISIONS:

No.	Date	Description
2	01/10/2025	Addendum 2

100% CONSTRUCTION DOCUMENTS

P6.00
PLUMBING SCHEDULES

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

1/9/2025 8:03:04 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

PLUMBING FIXTURE SCHEDULE

TYPE: WC-1 (STANDARD HEIGHT)
DESCRIPTION: WATER CLOSET, WALL HUNG, WHITE VITREOUS CHINA WITH ANTIMICROBIAL SURFACE, 1.28 GALLON PER FLUSH SIPHON JET ACTION, ELONGATED CLOSET BOWL WITH 1- 1/2" TOP SPUD AND BOLT COVERS. AMERICAN STANDARD AFWALL #3351.101 ELONGATED OPEN FRONT SEAT WITH SELF SUSTAINING CONCEALED CHECK HINGES. REFER TO ARCHITECTURAL DRAWINGS FOR SEAT COLOR. BEMIS #1955SSCT.
SEAT:
FLUSH VALVE: 1.28 GALLON FLUSH CYCLE. EXPOSED, DIAPHRAGM TYPE, CHROME PLATED CLOSET FLUSHOMETER. VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD. SLOAN ROYAL II #111-1.28.
CARRIER: WADE 311 (HORIZONTAL) AND 330 (VERTICAL) AND FLUSH VALVE SUPPORT (-AM1).
ROUGH-IN: 4" WASTE, 2" VENT, 1" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT REQUIREMENTS.

TYPE: WC-2 (T.A.S. / ADA COMPLIANT)
DESCRIPTION: WATER CLOSET, WALL HUNG, WHITE VITREOUS CHINA WITH ANTIMICROBIAL SURFACE, 1.28 GALLON PER FLUSH SIPHON JET ACTION, ELONGATED CLOSET BOWL WITH 1- 1/2" TOP SPUD AND BOLT COVERS. AMERICAN STANDARD AFWALL #3351.101 ELONGATED OPEN FRONT SEAT WITH SELF SUSTAINING CONCEALED CHECK HINGES. REFER TO ARCHITECTURAL DRAWINGS FOR SEAT COLOR. BEMIS #1955SSCT.
SEAT:
FLUSH VALVE: 1.28 GALLON FLUSH CYCLE. EXPOSED, DIAPHRAGM TYPE, CHROME PLATED CLOSET FLUSHOMETER. VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD. PROVIDE WITH TRAP PRIMER ON FLUSH TUBE AT LOCATION NOTED ON DRAWING. SLOAN ROYAL II #111-1.28.
CARRIER: WADE 311 (HORIZONTAL) AND 330 (VERTICAL) AND FLUSH VALVE SUPPORT (-AM1).
ROUGH-IN: 4" WASTE, 2" VENT, 1" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT REQUIREMENTS.

TYPE: WC-3 (CHILDREN HEIGHT)
DESCRIPTION: WATER CLOSET, FLOOR MOUNTED, WHITE VITREOUS CHINA, 1.28 GALLON PER FLUSH SIPHON JET ACTION, ELONGATED CLOSET BOWL WITH 1- 1/2" TOP SPUD AND BOLT COVERS. AMERICAN STANDARD BABY DEVORO #2282.001.
SEAT: ELONGATED OPEN FRONT SEAT WITH SELF SUSTAINING CONCEALED CHECK HINGES. REFER TO ARCHITECTURAL DRAWINGS FOR SEAT COLOR. BEMIS #1955SSCT.
FLUSH VALVE: 1.28 GALLON FLUSH CYCLE. EXPOSED, DIAPHRAGM TYPE, CHROME PLATED CLOSET FLUSHOMETER. VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD. PROVIDE WITH TRAP PRIMER ON FLUSH TUBE AT LOCATION NOTED ON DRAWING. SLOAN ROYAL II #111-1.28.
CARRIER: WADE 310 AND 330 SERIES -AM1.
ROUGH-IN: 4" WASTE, 2" VENT, 1" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: U-1 (T.A.S. COMPLIANT)
DESCRIPTION: URINAL, WALL HUNG, WHITE VITREOUS CHINA, 0.5 GALLON PER FLUSH, WASHOUT FLUSH ACTION, INTEGRAL TRAP. REMOVABLE DOMED STRAINER. AMERICAN STANDARD "WASHBROOK" 6590.001
FLUSH VALVE: 0.5 GALLON FLUSH CYCLE. EXPOSED, DIAPHRAGM TYPE, CHROME PLATED URINAL FLUSHOMETER. VACUUM BREAKER, SPUD COUPLING FOR 3/4" TOP SPUD. SLOAN ROYAL II #186-0.5.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 4" SQUARE BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, UPPER AND LOWER BEARING PLATES WITH THREADED STUDS. WADE 401-AM1-M36.
ROUGH-IN: 2" WASTE, 2" VENT, 3/4" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: L-1 (T.A.S. COMPLIANT) - METERED - TEMPERED WATER FOR STUDENTS
DESCRIPTION: LAVATORY, WALL HUNG, WHITE VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, 4" CENTERSET FAUCET HOLES. AMERICAN STANDARD LUCERNE #0355.012.
FAUCET: CHROME PLATED BRASS DECK MOUNTED LAVATORY FAUCET WITH COVER PLATE, 4-1/8" SPOUT, AND PUSH BUTTON HANDLE INDEXED "PUSH". SELF CLOSING METERING CARTRIDGE, VANDAL RESISTANT 0.5 GPM VANDAL-AERATING LAMINAR FLOW OUTLET. CHICAGO MODEL #857-E66VP-665PSHABCP.
MIXING VALVE: ASSE 1070 POINT OF USE THERMOSTATIC MIXING VALVE WITH WAX FILLED THERMOSTAT, BYPASS, CHECK VALVES ON INLETS AND MOUNTING BRAKET. BRADLEY #S59-4007BY AND S45-2976 BRAKET.
STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TAILPIECE. MCGUIRE #152MN.
P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE #8872C.
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 #LFH2165LK.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE. THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS. WADE 520-08.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD WATER ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: SK-1 (T.A.S. COMPLIANT) - LOUNGE, WORKROOM, CLINIC
DESCRIPTION: SINK, COUNTER MOUNTED, SELF-RIMMING, 18 GAUGE TYPE 304 STAINLESS STEEL, 29" X 18" X 5-1/2" DEEP, DOUBLE COMPARTMENT WITH FAUCET DECK. THREE FAUCET HOLES ON 4" CENTERS. ELKAY LRAD-2918.
FAUCET: CHROME PLATED BRASS DECK MOUNTED FITTING WITH 8" SWING SPOUT AND 4" WRIST BLADE HANDLES ON 8" CENTERS. QUARTER TURN CERAMIC DISC OPERATING CARTRIDGES, VANDAL RESISTANT 1.5 GPM AERATOR. CHICAGO MODEL 1100-317XK-E3VPJKCP.
MIXING VALVE: ASSE 1070 POINT OF USE THERMOSTATIC MIXING VALVE WITH WAX FILLED THERMOSTAT, BYPASS, CHECK VALVES ON INLETS AND MOUNTING BRAKET. BRADLEY #S59-4007BY AND S45-2976 BRAKET.
STRAINER: (2)CHROME PLATED WROUGHT BRASS 4-1/2" WIDE GRID SINK STRAINER, 1-1/4" 17 GAUGE CHROME PLATED BRASS TAILPIECE. MCGUIRE #152MN.
P-TRAP: 1-1/2" END OUTLET 16" CENTERS 17 GAUGE CONTINUOUS WASTE WITH CAST BRASS TEE. MCGUIRE 111C WITH 1-1/2" 17 GAUGE CHROME PLATED CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE 8912.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165LK.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: SK-2 (T.A.S. COMPLIANT) - ART ROOM
DESCRIPTION: INK, COUNTER MOUNTED, SELF-RIMMING, 18 GAUGE TYPE 304 STAINLESS STEEL, 19" X 18" X 4" DEEP, SINGLE COMPARTMENT WITH FAUCET DECK. THREE FAUCET HOLES ON 4" CENTERS. ELKAY LRAD-1918.
FAUCET: CHROME PLATED BRASS DECK MOUNTED FITTING WITH 11-3/4" HIGH SWING SPOUT AND 4" WRIST BLADE HANDLES ON 8" CENTERS. QUARTER TURN CERAMIC DISC OPERATING CARTRIDGES, VANDAL RESISTANT 1.5 GPM AERATOR. CHICAGO MODEL 1100-HA8-317XK- E12VPJKCP.
MIXING VALVE: ASSE 1070 POINT OF USE THERMOSTATIC MIXING VALVE WITH WAX FILLED THERMOSTAT, BYPASS, CHECK VALVES ON INLETS AND MOUNTING BRAKET. BRADLEY #S59-4007BY AND S45-2976 BRAKET.
STRAINER: CHROME PLATED WROUGHT BRASS 4-1/2" WIDE GRID SINK STRAINER, 1-1/4" 17 GAUGE CHROME PLATED BRASS TAILPIECE. MCGUIRE #152.
INTERCEPTOR: INTERCEPTOR. WADE 5720.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165LK.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: SK-X1 - KITCHEN THREE COMPARTMENT SINK
DESCRIPTION: PROVIDED BY OTHERS. REFER TO FOOD SERVICE CONSULTANT DRAWINGS.
FAUCET: PROVIDED BY OTHERS. REFER TO FOOD SERVICE CONSULTANT DRAWINGS.
STRAINER: PROVIDED BY OTHERS. REFER TO FOOD SERVICE CONSULTANT DRAWINGS.
DISPOSER PROVIDED BY OTHERS. REFER TO FOOD SERVICE CONSULTANT DRAWINGS.
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 #LFH2165LK.
ROUGH-IN: 1/2" HOT AND COLD WATER, REFER TO FOOD SERVICE DRAWINGS FOR HEIGHT REQUIRMENTS. REFER TO PLUMBING PLANS FOR LOCATION AND TYPE OF INDIRECT DRAINAGE RECEPTOR, SPECIFIED SEPARETLY.

TYPE: SK-X2 - KITCHEN TWO COMPARTMENT SINK
DESCRIPTION: PROVIDED BY OTHERS. REFER TO FOOD SERVICE CONSULTANT DRAWINGS.
FAUCET: PROVIDED BY OTHERS. REFER TO FOOD SERVICE CONSULTANT DRAWINGS.
STRAINER: PROVIDED BY OTHERS. REFER TO FOOD SERVICE CONSULTANT DRAWINGS.
DISPOSER PROVIDED BY OTHERS. REFER TO FOOD SERVICE CONSULTANT DRAWINGS.
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 #LFH2165LK.
ROUGH-IN: 1/2" HOT AND COLD WATER, REFER TO FOOD SERVICE DRAWINGS FOR HEIGHT REQUIRMENTS. REFER TO PLUMBING PLANS FOR LOCATION AND TYPE OF INDIRECT DRAINAGE RECEPTOR, SPECIFIED SEPARETLY.

TYPE: IMC-1
DESCRIPTION: ICE MACHINE CONNECTION, WATER SUPPLY VALVED AT WALL. PROVIDE DOUBLE CHECK VALVE TYPE BACKFLOW PREVENTER AND WATER FILTER. GUY GRAY BIM875ABLEAD FREE). WATTS 1/2" 007-S BACKFLOW PREVENTER AND AQUA-PURE #ICE 140-S FILTER. ROUTE BACKFLOW PREVENTER DISCHARGE TO FLOOR SINK SERVING ICE MACHINE.
ROUGH-IN: 3/4" COLD WATER. COORDINATE ROUGH-IN LOCATION/HEIGHT, FINAL CONNECTION WITH EQUIPMENT BEING INSTALLED AND WITH ARCHITECTURAL/CASEWORK DRAWINGS.

TYPE: MS-1
DESCRIPTION: MOP SINK BASIN, 36" X 24" X 12" HIGH RECTANGULAR TYPE, PRECAST TERRAZZO WITH 6" DROPPED FRONT, STAINLESS STEEL THRESHOLD CAP ON ALL SIDES, AND DOUBLE STAINLESS STEEL WALL GUARDS. STERN-WILLIAMS "HILOW" #HL-2110-BP
FAUCET: (2) 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 #445-897-CP-XK.
PROVIDE 2 FAUCETS, ONE SHALL SERVE THE MOP SINK AND ONE SHALL BE MOUNTED NEXT TO THE MOP SINK TO SERVE THE CHEMICAL DISPENSERS COORDINATE LOCATION OF SECOND FAUCET WITH OWNER AND ARCHITECTURAL DRAWINGS.
ROUGH-IN: 3" WASTE, 2" VENT, 1/2" HOT AND COLD WATER

TYPE: FDV-1
DESCRIPTION: SURFACE MOUNTED FIRE DEPARTMENT VALVE CABINET WITH SOLID METAL LOCKING COVER WITH 2-1/2" FIRE DEPARTMENT VALVE. POTTER ROEMER #1815-SS-FS.

TYPE: 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 3000-46-52-53 FOR 6" AND SMALLER, WADE 3001-46-52-53 FOR 8" AND LARGER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

TYPE: OD-1
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.

TYPE: EDF-1 (T.A.S. COMPLIANT) W/ BOTTLE FILLER
DESCRIPTION: WALL HUNG, BARRIER FREE, ELECTRIC DRINK FOUNTAIN, ALL STAINLESS STEEL, VANDAL RESISTANT BUBBLER AND PUSH BUTTON OPERATON. PROVIDED BOTTLE FILLING STATION ON LOW SIDE OF DRINKING FOUNTAIN WITH PUSH BUTTON OPERATION. SHALL DELIVER 8 GPH OF 50 DEGREE AT 90 DEGREE AMBIENT 80 DEGREE INLET WATER. PROVIDE CANE TOUCH APRON IN ALL STAINLESS STEEL ALL UNITS MOUNTED WITH A CLEAR KNEE SPACE GREATER THAN 27" HIGH. ELKAY #3HTHBHVRBBL-NF AND CANE APRON #98324C.
P-TRAP: 1-1/4" CHROME PLATED CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON. MCGUIRE 8872.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165LK.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE SLAB WITH (4) 1/2" BOLTS. ADJUSTABLE SLEEVE FOR CONNECTION TO HANGER PLATE PROVIDED BY FIXTURE MANUFACTURER, WADE 400.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: HB-1 - COLD WATER
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. CHROME PLATED BRASS FINISH WITH REMOVABLE TEE HANDLE. CHICAGO 952-CP.
ROUGH-IN: 3/4" COLD WATER. INSTALL WITH OUTLET AT 18" A.F.F. OR AS DIRECTED BY ARCHITECT/OWNER.

TYPE: 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 BIM-875 WITH AQUA-PURE APF717 FILTER.
ROUGH-IN: 1/2" COLD WATER

TYPE: 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

TYPE: FD-1
SERVICE: TOILET ROOMS AND KITCHEN
DESCRIPTION: FLOOR DRAIN, CAST IRON BODY, ADJUSTABLE 6" DIAMETER STAINLESS STEEL STRAINER WITH VANDAL PROOF SCREWS, INTEGRAL CLAMPING DEVICE, BOTTOM OUTLET. WADE 1100-MR6.
TRAP SEAL: SERVED BY TRAP PRIMER DEVICE.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS / FLOOR CONSTRUCTION.

TYPE: FD-2
SERVICE: KITCHEN
DESCRIPTION: FLOOR DRAIN, CAST IRON BODY, ADJUSTABLE 7" DIAMETER STAINLESS STEEL STRAINER WITH EXTENDED RIM, 6" FUNNEL ASSEMBLY AND VANDAL PROOF SCREWS, INTEGRAL CLAMPIN DEVICE, BOTTOM OUTLET. WADE 1100-ER7-EF6.
TRAP SEAL: SERVED BY ELECTRONIC TRAP PRIMER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH EQUIPMENT PLACEMENT.

TYPE: FD-3
SERVICE: TRASH CAN WASH.
DESCRIPTION: FLOOR DRAIN, CAST IRON BODY, ADJUSTABLE 5" DIAMETER STAINLESS STEEL STRAINER WITH VANDAL PROOF SCREWS, INTEGRAL CLAMPING DEVICE, BOTTOM OUTLET, WITH SEDIMENT BUCKET. WADE 1100-ER7-27/3.
TRAP SEAL: SERVED BY TRAP PRIMER DEVICE.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS / FLOOR CONSTRUCTION.

TYPE: FS-1
SERVICE: KITCHEN INDIRECT WASTE
DESCRIPTION: CAST IRON 12" SQUARE FLOOR SINK WITH 8" DEEP SUMP, A.R.E. INTERIOR, ALUMINUM DOME BOTTOM STRAINER, STAINLESS STEEL TOP, AND CLAMPING DEVICE. WADE 9140-15-27-26-SS.
TRAP SEAL: SERVED BY TRAP PRIMER DEVICE.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH ARCHITECTURAL / KITCHEN CONSULTANT DRAWINGS.

TYPE: 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, AND HALF TOP GRATE. WADE 9140-8-15-26-64.
TRAP SEAL: SERVED BY ELECTRONIC TRAP PRIMER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH EQUIPMENT PLACEMENT.

TYPE: FS-3
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 9110-15026-27-SS.
TRAP SEAL: SERVED BY TRAP PRIMER DEVICE.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH ARCHITECTURAL DRAWINGS / EQUIPMENT PLACEMENT.

TYPE: DN-1
DESCRIPTION: OVERFLOW DOWNSPOUT NOZZLE. CAST BRONZE WITH THREADED OR NO HUB OUTLET AND FLANGE TO SECURE NOZZLE TO WALL. INSTALL AT 12" ABOVE FINISHED SLAB OR AS DIRECTED BY ARCHITECT. WADE 3941-VP.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

TYPE: SH-1 - INDIVIDUAL SHOWER STATION
DESCRIPTION: SHOWER, JOB BUILT BASE INSTALLED PER ARCHITECTURAL DRAWINGS.
CONTROLS: PRESSURE BALANCING HOT AND COLD WATER SHOWER CONTROL VALVE WITH LEVER HANDLE AND INTEGRAL CHECKSTOPS. STAINLESS STEEL, ALUMINUM OR CHROME PLATED BRASS ESCUTCHEON. 1.5 GPM HAND HELD SHOWER WITH 6" FLEXIBLE STAINLESS STEEL, CLAD HOSE, VACUUM BREAKER, MOUNTING BREAKCET AND 24" SLIDE BAR. VANDAL RESISTANT 1.5 GPM SHOWER HEAD. ACORN 532-GX-FX-SB-LVR.
DRAIN: FLOOR DRAIN, CAST IRON BODY, ADJUSTABLE 5" DIAMETER STAINLESS STEEL STRAINER WITH VANDAL PROOF SCREWS, INTEGRAL CLAMPING DEVICE, BOTTOM OUTLET. WADE 1100-MR5.
TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR DRAIN BY SIZE, MODEL, AND MANUFACTURER.
ROUGH-IN: 3" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: BFP-1 (2" AND SMALLER)
DESCRIPTION: BACKFLOW PREVENTER, REDUCED PRESSURE ZONE TYPE WITH TWO INLINE INDEPENDENT CHECK VALVES 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. PROVIDE AIR GAP WITH DRAIN PIPE TO NEAREST FLOOR DRAIN. WATTS 909-QT-S.

TYPE: BFP-2 (2 1/2" AND LARGER)
DESCRIPTION: BACKFLOW PREVENTER, REDUCED PRESSURE ZONE TYPE WITH TWO INLINE INDEPENDENT CHECK VALVES WITH AN INTERMEDIATE RELIEF VALVE. COMPLETE WITH TWO FULL PORTED BALL VALVE SHUT-OFFS AND BALL TYPE TEST COCKS. BRONZE STRAINER ON INLET. PROVIDE AIR GAP WITH DRAIN PIPE TO NEAREST
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. MOUNT AT 48" A.F.F. UNLESS NOTED OTHERWISE ON DRAWINGS.

TYPE: 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 ASPHALT OR DIRT PROVIDE 18"X18"X12" CONCRETE PAD. WADE 6000-Z.

TYPE: FCO
DESCRIPTION: FLOOR CLEANOUT, CAST IRON BODY AND ADJUSTABLE TOP ASSEMBLY WITH GASKET SEAL, AND ROUND SCORIATED STAINLESS STEEL COVER. WADE 6000-153. FOR CARPETED FLOORS PROVIDE WADE 6000-CM.

TYPE: 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 WITH 8480-R6. PROVIDE WADE 8560 CAST IRON CLEANOUT TEE IN LIEU OF FERRULE AS REQUIRED FOR WALL CONSTRUCTION.

TYPE: HS-1 (T.A.S. COMPLIANT) - KITCHEN HAND WASH
DESCRIPTION: LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCETS HOLES ON 4" CENTERS. AMERICAN STANDARD LUCERNE #0355.012.
FAUCET: CHROME PLATED BRASS DECK MOUNTED FITTING WITH 5-1/4" RIGID/SWING SPOUT
HANDLES ON: 4" CENTERS, QUARTER TURN CERAMIC DISC OPERATING CARTRIGES. CHICAGO MODEL #895-317GNZCXK4ABCP
MIXING VALVE: ASSE 1070 POINT OF USE THERMOSTATIC MIXING VALVE WITH WAX FILLED THERMOSTAT, BYPASS, CHECK VALVES ON INLETS AND MOUNTING BRAKET, BRADLEY #S59-4007BY AND #S45-2976 BRAKET.
STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TAILPIECE. MCGUIRE #152MN.
P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE #8872C.
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 #LFH2165LK
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 4" SQUARE BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVISE, AND LEVELING SCREWS. WADE #520-M36.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: 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 8601-MT-175. 3/4" COLD WATER

TYPE: WH-2 - CAN WASH - HOT AND COLD WATER
DESCRIPTION: WALL HYDRANT, CONCEALED BOX TYPE, 3/4" NON-FREEZE, DUAL CHECK BACKFLOW PREVENTOR, CHROME PLATED BRASS FINISH WITH ANTI-SIPHON VACUUM BREAKER AND LOOSE TEE KEY. INSTALL WITH BOTTOM OF BOX 24" A.F.F. WADE 8606HC-89.
ROUGH-IN: 3/4" HOT AND COLD WATER

TYPE: TP-1
SERVICE: SERVES ONE FLOOR DRAIN TRAP.
DESCRIPTION: FLUSH VALVE TRAP PRIMER, 1-1/2" O.D. X 12" 17 GAUGE PRIMING TUBE WITH VACUUM BREAKER. PRECISION PLUMBING PRODUCTS FVP-1VB.

TYPE: TP-2
SERVICE: SERVES 1 TO 30 FLOOR DRAIN/FLOOR SINK TRAPS, REFER TO PLANS.
DESCRIPTION: ELECTRONIC TRAP PRIMER WITH DISTRIBUTION MANIFOLD AND CABINET. SURFACE MOUNT WHERE SHOWN. PROVIDE SOLID COVER OVER CABINET. PRECISION PLUMBING PRODUCTS PRIME TIME MODEL PT SERIES.
ROUGH-IN: 3/4" COLD WATER

TYPE: TP-3
SERVICE: SERVES ONE FLOOR DRAIN TRAP
DESCRIPTION: TAIL PIECE TRAP PRIMER.
PRECISION PLUMBING PRODUCTS #LTP-1500.

TYPE: DN-1
DESCRIPTION: OVERFLOW DOWNSPOUT NOZZLE. CAST BRONZE WITH THREADED OR NO HUB OUTLET AND FLANGE TO SECURE NOZZLE TO WALL. INSTALL AT 12" ABOVE FINISHED SLAB OR AS DIRECTED BY ARCHITECT. WADE 3941-VP.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

GENERAL NOTES

ALL LAVATORIES AND SINKS SHALL BE SUPPLIED WITH HOT AND COLD WATER (UNLESS NOTED TO BE COLD WATER ONLY) TO FAUCETS AS INDICATED ON PLANS AND FIXTURE SCHEDULE. PROVIDE CHROME PLATED BRASS SUPPLY STOPS WITH LOOSE KEYS AND WALL ESCUTCHEONS. PROVIDE CHROME PLATED FLEXIBLE RISERS OF SIZE REQUIRED TO PROPERLY CONNECT FIXTURES. PROVIDE 17 GAUGE CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON (UNLESS NOTED TO BE AN ACID WASTE FIXTURE). REFER TO FIXTURE SCHEDULE FOR MINIMUM SIZES OF PLUMBING FIXTURE ROUGH-INS.

INSULATION KITS AT ALL LAVATORIES AND SINKS REQUIRED TO BE T.A.S. ACCESSIBLE (MCGUIRE OR TRUEBRO). ALL SUCH FIXTURES AND FINAL INSTALLATIONS SHALL COMPLY WITH THE STATE ACCESSIBILITY STANDARDS REQUIREMENTS.

INSERT TRAP GUARDS AFTER FINAL RODDING OF DRAINS. INSTALL TRAP GUARD WITH CLEAR SILICONE CAULK FOR GAS-TIGHT SEAL. FOR DRAIN RODDING AFTER INSTALLATION. INSERT SEWER TAPE THROUGH LIGHTLY GREASED 1-1/2" PVC PIPE TO PROTECT TRAP GUARD.

PROVIDE AND INSTALL ACID RESISTANT P-TRAPS ON ALL SCIENCE, BIOLOGY, CHEMISTRY, AND PHYSICS CLASSROOM SINKS.

DISREGARD FIXTURES LISTED THAT ARE NOT ON THIS JOB.

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

ELEMENTARY SCHOOL #38 IN BROOKEWATER

BRADLEY KALMANS
80219
LICENSED PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: PG CHECKED BY: EH
REVISIONS:

	Date	Description
2	01/10/2025	Addendum 2

100% CONSTRUCTION DOCUMENTS

P6.01
PLUMBING SCHEDULES

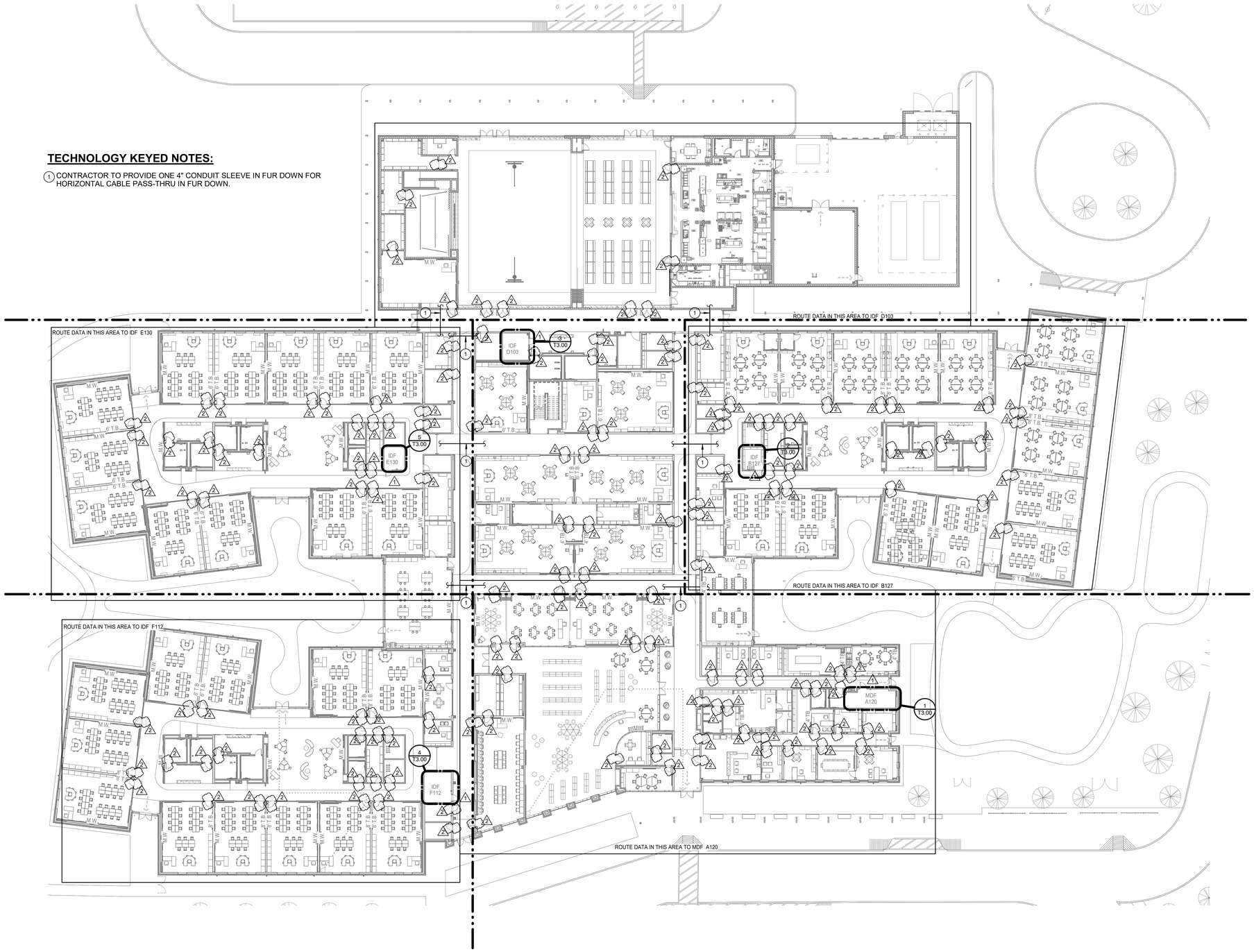
1/9/2025 8:17:48 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

TECHNOLOGY GENERAL NOTES:

PROVIDE CONDUIT WALL SLEEVES FOR HORIZONTAL CABLE ACCESS INTO SPACES, PROVIDE AS NECESSARY. LOCATE 6"-8" ABOVE ACCESSIBLE CEILING. SLEEVES SHALL EXTEND 6" FROM WALL ON BOTH SIDES. PROVIDE NON-SPLIT NYLON BUSHINGS ON ENDS OF EACH SLEEVE. FIRE STOP AS NECESSARY. ADJUST LOCATION AS TO NOT INTERFERE WITH OTHER CONDUITS, LIGHTING, PLUMBING AND MECHANICAL EQUIPMENT, ARCHITECTURAL FEATURES AND BUILDING STRUCTURE.

TECHNOLOGY KEYED NOTES:

1 CONTRACTOR TO PROVIDE ONE 4" CONDUIT SLEEVE IN FUR DOWN FOR HORIZONTAL CABLE PASS-THRU IN FUR DOWN.



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1 **TECHNOLOGY 01 COMPOSITE PLAN**
Scale: 1" = 20'-0"

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS — 80215 — LICENSED — STATE OF TEXAS
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: MA CHECKED BY: DCS
REVISIONS:

No.	Date	Description
1	12/20/2024	Addendum 1
2	01/10/2025	Addendum 2

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T2.01
TECHNOLOGY 01 COMPOSITE FLOOR PLAN

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Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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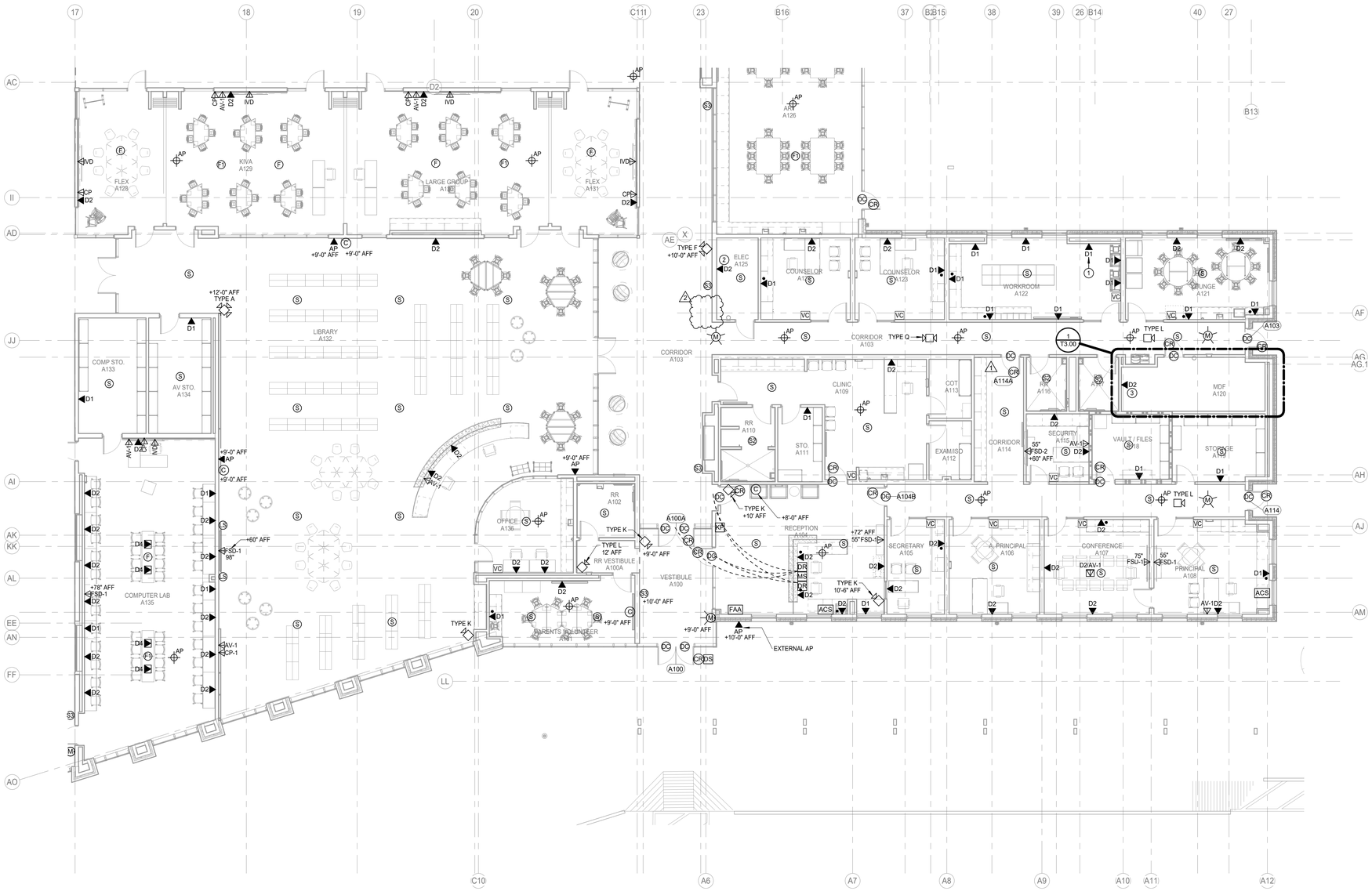
TECHNOLOGY GENERAL NOTES:

1. CONTRACTOR TO ROUTE DATA ON THIS SHEET TO MDF A120.

TECHNOLOGY KEYED NOTES:

1. DATA DROP SHALL BE USED FOR TIMECLOCK. MOUNT AT +48" AFF.
2. COORDINATE BAS DATA OUTLET LOCATION WITH ELECTRICAL CONTRACTOR.
3. COORDINATE ACCESS CONTROL PANEL DATA OUTLET WITH SECURITY CONTRACTOR.



1 **TECHNOLOGY 01 FLOOR PLAN - AREA A**
Scale: 1/8" = 1'-0"

pfluger

ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS — 80219 — LICENSED — 01/10/2025

PROJECT NO.	24-028
DATE:	2024/12/12
DRAWN BY: MA	CHECKED BY: DCS

REVISIONS:

No.	Date	Description
1	12/20/2024	Addendum 1
2	01/10/2025	Addendum 2

100% CONSTRUCTION DOCUMENTS

T2.01A
TECHNOLOGY 01
FLOOR PLAN - AREA A

Salas O'Brien

Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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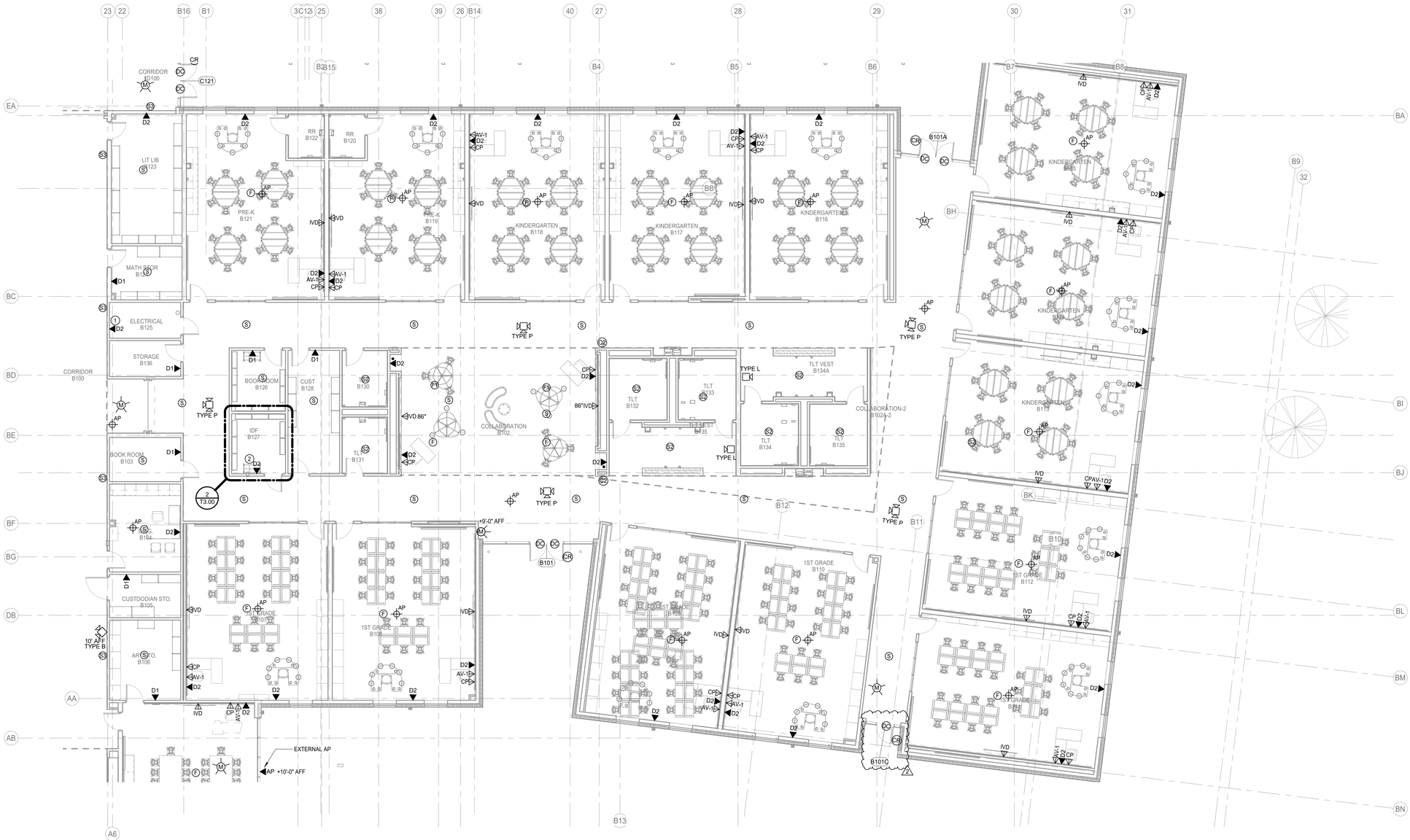
TECHNOLOGY GENERAL NOTES:

1. CONTRACTOR TO ROUTE DATA ON THIS SHEET TO IDF B127.

TECHNOLOGY KEYED NOTES:

1. COORDINATE BAS DATA OUTLET LOCATION WITH ELECTRICAL CONTRACTOR.
2. COORDINATE ACCESS CONTROL PANEL DATA OUTLET WITH SECURITY CONTRACTOR.



1 **TECHNOLOGY 01 FLOOR PLAN - AREA B**
Scale: 1/8" = 1'-0"

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ELEMENTARY SCHOOL #38 IN BROOKEWATER

LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS — STATE OF TEXAS — 80219 — LICENSED PROFESSIONAL ENGINEER
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: MA CHECKED BY: DCS
REVISIONS:

No.	Date	Description
2	01/10/2025	Addendum 2

100% CONSTRUCTION DOCUMENTS

T2.01B
TECHNOLOGY 01
FLOOR PLAN - AREA B

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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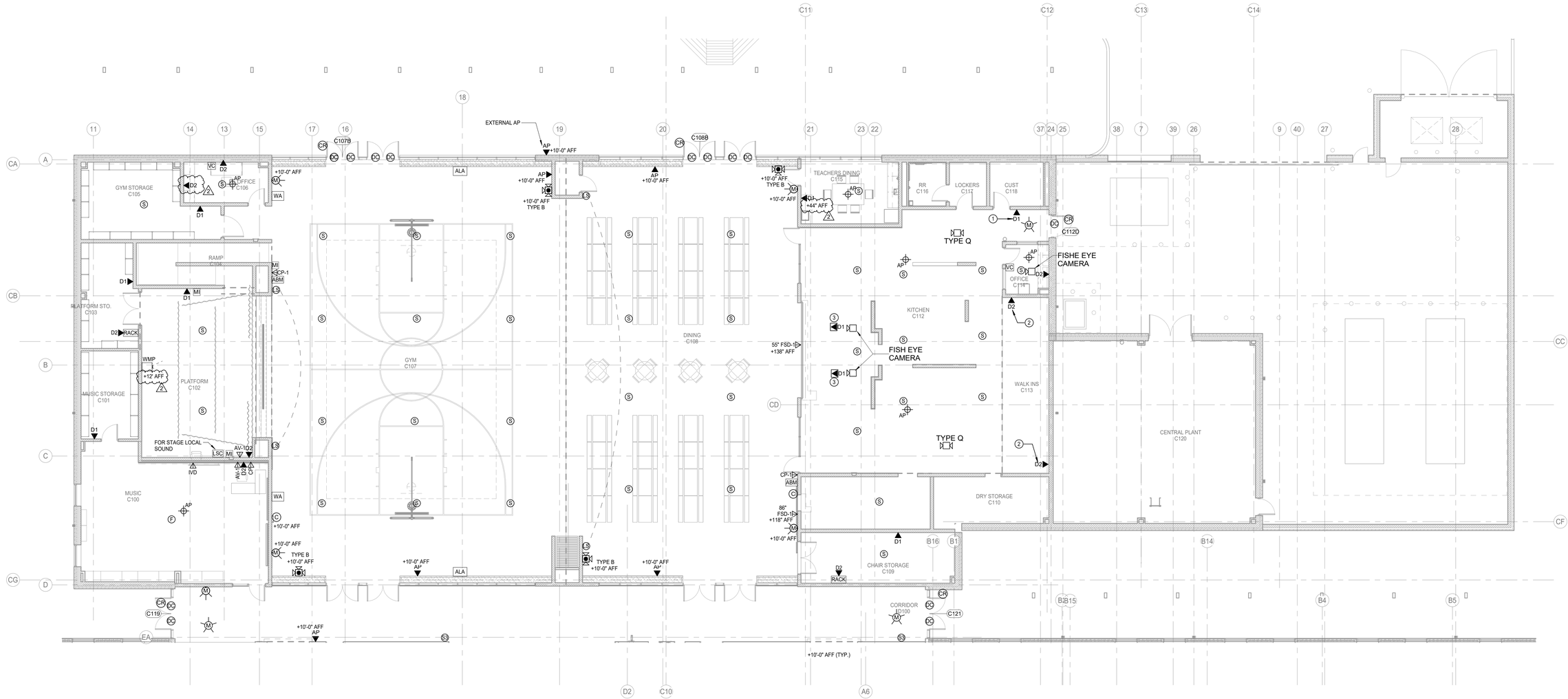
TECHNOLOGY GENERAL NOTES:

1. CONTRACTOR TO ROUTE DATA ON THIS SHEET TO IDF ROOM D103.

TECHNOLOGY KEYED NOTES:

1. DATA DROP SHALL BE USED FOR TIMECLOCK. MOUNT AT +48" A.F.F.
2. THE INDICATED DATA DROPS ARE TO CONNECT THE FREEZER AND COOLER TEMPERATURE MONITORS TO THE SECURITY SYSTEM. COORDINATE FINAL LOCATION PRIOR TO ROUGH-IN.
3. DATA DROP SHALL BE USED FOR POINT OF SALES SYSTEM. COORDINATE FINAL LOCATION WITH FOOD SERVICE PRIOR TO INSTALLATION.



1 **TECHNOLOGY 01 FLOOR PLAN - AREA C**
Scale: 1/8" = 1'-0"

Salas O'Brien
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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2024-02562-00

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LAMAR CISD
3911 AVENUE I
ROSENBERG, TX 77471

BRADLEY KALMANS
80219
LICENSED
01/10/2025

PROJECT NO. 24-028
DATE: 2024/12/12
DRAWN BY: MA CHECKED BY: DCS
REVISIONS:

	Date	Description
2	01/10/2025	Addendum 2

100% CONSTRUCTION DOCUMENTS

T2.01C
TECHNOLOGY 01
FLOOR PLAN - AREA C

ELEMENTARY SCHOOL #38 IN BROOKEWATER

1/9/2025 4:21:14 PM Autodesk Docs://24-028 Lamar CISD - Elementary School #38 Brookewater/ES38 BROOKEWATER_MEPT_R2024.rvt

REQUEST FOR INFORMATION (RFI) LOG

Project Number: 24-028
Project Name: New Elementary School #38
Owner: Lamar Consolidated ISD
Date: 1/10/2025

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RFI NO.	Date RECEIVED	CONTRACTOR / SUBCONTRACTOR	SHEET / SPEC. NO.	QUESTION	DISCIPLINE	RESPONSE	Date OUT for Review	Date Received	Date RETURNED
01	12/20/2024	Gamma Construction	05 12 00	The date to turn in the qualifications package is Sunday January 12. Is that going to be changed to the Friday or Monday after January 12?	Architectural	Please refer to Addendum #1			12/20/2024
02	12/20/2024	Gamma Construction	01 23 00	Section 012300 Alternates only list an alternate to change the date of substantial completion to 6/8 and the bid form list two different alternates. Please clarify.	Architectural	Please refer to Addendum #1			12/20/2024
03	12/20/2024	Gamma Construction	01 21 00	Section 012100 Allowances list for the owner's contingency ($400,000) allowance is different than the bid form ($350,000). Please clarify.	Architectural	Please refer to Addendum #1			12/20/2024
04	12/20/2024	Gamma Construction		Please provide the geo-tech report.	Architectural	The Geotechnical Report was included in the 100% Contract Documents specifications issued for the proposal.			12/20/2024
05	12/20/2024	Gamma Construction		Please provide a copy of the owner's contract AIA A101 and A201.	Architectural	Lamar CISD generally does not provide this information. Please refer to the standard 2017 version of A201. AIA 101 will be issued once the contract is awarded.			1/10/2025
06	12/23/2024	Satterfield & Pontikes Construction, Inc.		Does Lamar CISD want a wet signature on only the Price Delivery Information – CSP Form (bid form) or on all of the forms turned in on bid day?	Architectural	Please ensure that all forms submitted on bid day include a wet signature.			1/10/2025
07	12/24/2024	Satterfield & Pontikes Construction, Inc.	C4.00	Refer to Sheet C4.00. Please clarify if the clouded sidewalk below is to be part of the project as its past the property line.	Civil	Plans have been revised to exclude the clouded sidewalk from the project. Please refer to Addendum #2.			1/10/2025
08	12/24/2024	Satterfield & Pontikes Construction, Inc.		Can we have access to the BIM Model?	Architectural	The BIM model will be provided to the general contractor who is awarded the project after they have signed the BIM model release form.			1/10/2025
09	12/24/2024	Satterfield & Pontikes Construction, Inc.	A1.00	Refer to sheet A1.00.Please clarify if there is a pole mounted sign in the median at the plan SW Driveway. There looks to be one there but there is no callout. Below is a screenshot with the sign in question clouded.	Architectural	Please refer to Addendum #2 for clarifications regarding site signage.			1/10/2025
10	12/30/2024	Sterling Structures, Inc.		Qualification (A305) and references are due on 1/12/2025 which is a Sunday. Please advise if we can submit it on Monday January 13th.	Architectural	Please refer to Addendum #1 for additional information.			1/10/2025
11	12/30/2024	Sterling Structures, Inc.		Miscellaneous specifications include a barrier free lift, but I could not find a layout for the Barrier free lift. Please advise.	Architectural	For clarification on the lift path, please refer to Addendum #2. The lift is shown on sheet A10.01D.			1/10/2025
12	12/30/2024	Sterling Structures, Inc.		Please confirm if the building permit is in the City of Rosenberg Jurisdiction or Fort Bend County.	Architectural	Fort Bend County.			1/10/2025
13	12/30/2024	Satterfield & Pontikes Construction, Inc.		Please provide more clarification with regards to Allowance #2 - Network Equipment & Phone Allowance. Does this also include the entire IP PA System?	MEP/T	No, IP PA is part of the front row			1/10/2025
14	12/30/2024	Satterfield & Pontikes Construction, Inc.		Refer to Sheet C9.00. Please clarify if a Stabilized Construction Entrance and Concrete Truck Washout will be required as these items are currently not shown and they are usually required.	Civil	Stabilized construction entrance and concrete truck washout areas have been added along the future Brookewater Blvd and Wallingford Park Drive. Refer to Addendum #2.			1/10/2025
15	12/30/2024	Satterfield & Pontikes Construction, Inc.		The display case detailed on page A9.30 states to reference the specifications for the Basis of Design. There is not a specification in the Project Manual. Please provide the specifications or clarify the Basis of Design.	Architectural	The display cases will be custom-built on-site, eliminating the need for a Basis of Design. This note has been revised in Addendum #2.			1/10/2025
16	12/30/2024	Satterfield & Pontikes Construction, Inc.		Please clarify if there is to be surfacing on the track. The detail on Sheet C15.00 shows a 0.5" Thick Walkway Surfacing but then has us reference A1.03. Detail 12 on A1.03 only shows Concrete Sidewalk with with continuous painted lines. If there is to be track surfacing please provide more information and a specification	Civil	The track will be constructed of concrete according to Lamar CISD standards. Please refer to the updated Civil Detail in Addendum #2.			1/10/2025

REQUEST FOR INFORMATION (RFI) LOG

Project Number: 24-028
Project Name: New Elementary School #38
Owner: Lamar Consolidated ISD
Date: 1/10/2025

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RFI NO.	Date RECEIVED	CONTRACTOR / SUBCONTRACTOR	SHEET / SPEC. NO.	QUESTION	DISCIPLINE	RESPONSE	Date OUT for Review	Date Received	Date RETURNED
17	12/30/2024	Satterfield & Pontikes Construction, Inc.		Refer to sheet A1.05. Please clarify who is to provide and install the Electronic Message Board at the monument sign. Please provide a specification if it will be the responibility of the contractor.	Architectural	The electronic message board is part of the contractor's scope. Specifications will be issued in Addendum #2.			1/10/2025
18	1/3/2025	Sterling Structures, Inc.		There are alternates listed for the road and utilities, but no details are provided. Will you issue revised civil drawings for the alternate scope? There are multiple trades that will be affected by the alternate and will help if drawings are issued for the alternates.	Civil	Asphalt pavement section is provided in sheet C14.01 PAVING DETAILS 1			1/10/2025
19	1/3/2025	Sterling Structures, Inc.		Can we turn in the alternates and unit prices @ 03:00 p.m.?	Architectural	No, alternates and the base bid should be submitted simultaneously, according to the bid instructions.			1/10/2025
20	1/7/2025	Satterfield & Pontikes Construction, Inc.		Refer to sheet A1.05. Please clarify if the Electronic message board is to either be single or double sided. The elevations (5 & 8/A1.05) look to show it as double sided while 1 & 7/A1.05 show it to be single sided.	Architectural	The electronic message board is double-sided. Please refer to Addendum #2 for more information.			1/10/2025
21	1/7/2025	Satterfield & Pontikes Construction, Inc.		Refer to sheet A2.01A. The Wall Section Callout Tag at Art A126 appears to be incorrect. Please clarify.	Architectural	Clarification needed to answer question			1/10/2025
22	1/7/2025	Satterfield & Pontikes Construction, Inc.	09 64 55	Ref. 9/A7.20. Please issue Specification for the Wood Flooring at the Stage.	Architectural	The specification was issued at 100% according to CDS Spec Section 09 64 55.			1/10/2025
23	1/7/2025	Satterfield & Pontikes Construction, Inc.		With regards to the reserved parking signs, please clarify which detail we are to go by. 1/A1.04 or what is shown on C15.00?	Architectural	Please refer to Detail 1/A1.04 in the architectural drawings and see Addendum #2 for additional information.			1/10/2025
24	1/7/2025	Drymalla	10 28 00	Are TA-3 Toilet Tissue Dispenses OFCI, or CFCI? 1.2 Summary has them as OFCI, but 2.2 Accessories Schedule has them as CFCI	Architectural	10 28 00 Modified, Please refer to Addendum #2 for further information.			1/10/2025
25	1/7/2025	Drymalla		Accessories Schedule, M. Waste Receptacles. Are these required on this project? Specs call for them at every OFCI Towel Dispenser that is not located over a base cabinet, however none are shown on plans, and they are not listed on the plan toilet acc schedule? Furthermore if they are required do we need to quote them at the Kitchen sinks where the towel dispenser is mounting above the sink?	Architectural	Waste Receptacles are N.I.C.			1/10/2025
26	1/7/2025	Sterling Structures, Inc.		There are specifications for bike racks but none shown on the plans. Please advise.	Architectural	Please see Addendum #2 for the specific location.			1/10/2025
27	1/7/2025	Sterling Structures, Inc.		Detail 5 on sheet A7.21 calls out for fire treated plywood and exterior plywood. Please advise which is to be used. See attached.	Architectural	Please refer to Addendum #2 for further information.			1/10/2025
28	1/7/2025	Gamma Construction		There is a Metal Storage Shelving spec and drawings show boxes that could be metal shelving in several rooms. These boxes are not marked and could be shelving or millwork. Can Pfluger clarify?	Architectural	Please refer to Addendum #2 for further information.			1/10/2025
29	1/7/2025	Gamma Construction		The shutter in the warewash is duplicated in 114000 in item 254. We would exclude this	Food Service	Correct.			1/10/2025
30	1/7/2025	Gamma Construction		The door elevations on A800 have the type K units as solid doors, but the specs call for open air grilles. Typically LCISD uses grilles in the hallway and solid doors at the kitchen. Want to confirm what they want here?	Architectural	Please see Addendum #2 for the updated information regarding door type K.			1/10/2025

REQUEST FOR INFORMATION (RFI) LOG

Project Number: 24-028
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Owner: Lamar Consolidated ISD
Date: 1/10/2025

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31	1/7/2025	Cadence McShane	08 71 00	Aluminum Door Hardware (Exit DT - Panic): RFI : Please confirm if the 8800 series is the desired Exit DT – Panic hardware and that it meets the impact design criteria indicated in the Project Manual. -Section 08.71.00 – 2.10 – B calls for SA 80 Series. -Hardware Set 1.0 (per 08.71.00) calls for the 8810 SA model. According to our Subcontractors, the 8800 series has not yet been tested by Kawneer. The SA 8400 series have been tested by Kawneer.	Architectural	LCISD is not a windstorm area, what has been specified is suitable.LCISD is not located in a windstorm-prone area, so the specified requirements are adequate.			1/10/2025
32	1/7/2025	Cadence McShane		Curtain Wall versus Storefront – Finish: RFI: Please confirm that the curtainwall finish shall be clear anodized and that the aluminum storefront finish shall be light bronze. Please also confirm that the light bronze finish of the aluminum storefront shall be painted. -Section 08.44.13 – 2.07 – C calls for the curtain wall to be clear anodized. -Section 08.41.13 – 1.16 – B calls for the storefront to be clear anodized – light brown. Please note that Kawneer no longer offers light brown in an anodized finish, it will need to be painted light brown.	Architectural	All curtain walls and storefronts should be color "Champagne" according to the Material Legend on sheet A9.00A.			1/10/2025
33	1/7/2025	Cadence McShane	07 42 13	Metal Panel Warranty: RFI: Please clarify the required warranty for the metal panel system. -Section 07.42.13 – 1.08 WARRANITES: -Section 07.42.13 – 3.02 – E Guarantees and Warranties:	Architectural	Please see Addendum #2 for reference.			1/10/2025
34	1/7/2025	Cadence McShane		Metal Panel (MP-1) Material: RFI: Please clarify the material and thickness for the MP-1 panels. -Section 07.42.13 Part 2 does not specify material or thickness. Berridge offers 24g/22g steel or 0.032 aluminum options for the HS series.	Architectural	Please refer to Addendum #2. The metal panel will be 24-gauge steel.			1/10/2025
35	1/7/2025	Drymalla		I see that A1.02, for most of the canopies, the soffits are designed to span left to right instead of up and down. Typically, the soffit mounting beams are positioned perpendicular to the gutter beams, with the soffits attached to those beams running up and down. If the soffits are installed in the opposite direction, it would create a hash pattern for the mounting beams, leading to higher material costs. Can we confirm if the span directions are correct?	Architectural	Please refer to Addendum #2 for the updated soffit spans.			1/10/2025
36	1/8/2025	Satterfield & Pontikes Construction, Inc.		Please clarify the soffit finish for the canopy at Area A. 9/A1.02 calls for metal soffit (MPC) while the callout on Detail 8/A7.21 calls for suspended Aluminum Soffit (AWC).	Architectural	Please refer to Addendum #2 for the updated note on detail 9/A1.02.			1/10/2025
37	1/8/2025	Satterfield & Pontikes Construction, Inc.		Please clarify the metal soffit finish at the egress entrances. See below for one area in question. Will this be MPC?	Architectural	Please refer to the note in the upper right corner of sheet A1.02: "ALL CANOPY SOFFITS TO BE EXTRUSION COATING SYSTEM 399X493 FLUROPON CLASSIC II CHAMPAGNE BRONZE U.O.N."			1/10/2025
38	1/8/2025	Gamma Construction		Please reference plumbing page P301.C. I do not see the page referenced for the Kitchen floor plan DNP4.03 detail 1. Its not included with the proposal set or Addendum 1. We need this page for bid.	MEP/T	Refer to Addendum #2 for location			1/10/2025

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40	1/8/2025	Drymalla		C4.00 Paving plan – Do you know if any permits/reviews will be required by the developer or FBC for the sidewalks that go out of our property line? Its only a little at the cross walks along Brooke water Blvd.	Civil	The developer has confirmed that easements will not be required for sidewalks going outside of the site property line.			1/10/2025
41	1/8/2025	Drymalla		C5.01 and P1.01 show the grease trap and sample well in two different locations. Can you clarify which is correct?	Civil	Refer to Addendum 2. Grease trap and sample well locations have been updated to match the plumbing plans.			1/10/2025
42	1/8/2025	Drymalla		C9.00 SWPPP shows Filter Fabric Fence while 01 50 00 does not show filter fabric is required, can you clarify this for me?	Civil	Include filter fabric fence for SWPPP.			1/10/2025
43	1/8/2025	Drymalla		L1.02 shows the Irrigation controller location but this does not match the location provided on A1.00. electrical drawing E4.01 does not show the controller at all.	MEP/T	Refer to sheet E4.01 of bid documents for receptacle to power irrigation controller and conduit to nearest grass area. Electrical is show in same general area as landscape. Contractor to coordinate final location in field.			1/10/2025
44	1/8/2025	Drymalla	A1.00	A1.00 site plan only provides (1) post n panel sign, should we account for the second entrance as well?	Architectural	Please refer to Addendum #2 for clarifications regarding site signage.			1/10/25
45	1/8/2025	Drymalla	A1.00	A1.00 shows to provide a standpipe in Area A and Area F while the floor plans do not reference these. A2.01E shows a Standpipe in the corridor E101 outside of room E120.	Architectural	Please see Addendum #2 for clarification regarding the standpipe location notes.			1/10/25
46	1/8/2025	Drymalla	A1.03	A1.03 provides a detail of the walking track (#12) that shows concrete track but C15.00 shows to provide track surfacing, could you clarify what will be required? (36 has track surfacing)	Architectural	The track will be constructed of concrete according to Lamar CISD standards. Please refer to the updated Civil Detail in Addendum #2.			1/10/2025
47	1/8/2025	Drymalla	A1.03	A1.03 does not show that the CPE transformer will receive a vent/louver in the CMU wall. We had to add one for 36 per CPE, can we assume 38 will require this as well?	Architectural	The louver has been added. Please refer to Addendum #2 for more details.			1/10/2025
48	1/8/2025	Drymalla	A1.03	A1.03 shows the bollards but only (1) is technically called out to be removeable at the chillers, can you clarify if all bollards around the chiller will be removeable? CPE will require their bollards around the transformer to be removeable, we will assume this is the case.	Architectural	The notes have been updated. Please refer to Addendum #2 for further details.			1/10/25
49	1/8/2025	Drymalla	A1.03	A1.03 shows gate S010 to be 'sliding' but detail 1/A1.06 shows double swing, could you confirm this should be double swing?	Architectural	The gate S010 will be a double swing design. Please consult Addendum #2 for additional details.			1/10/25
50	1/8/2025	Drymalla	A2.01A	A2.01A – Reception A104 has a window behind the desk to see into Secretary A105 but it is not called out.	Architectural	Please see Addendum #2 for additional information.			1/10/25
51	1/8/2025	Drymalla	A2.01A	A2.01A – Can you confirm the display case outside of Art A126 will be 10' x 7' like the one outside of the Clinic RR? Or will it be 10' x 6' per elevation 1/A9.13?	Architectural	Please see Addendum #2 for additional information.			1/10/25
52	1/8/2025	Drymalla	A2.01C	A2.01C provides counter coiling door C108F but the elevation (4A9.12) shows CMU here. We will assume this door remains.	Architectural	Please see Addendum #2 for additional information.			1/10/25
53	1/8/2025	Drymalla	A2.01D	A2.01D – Sped rooms (D114, D115, D122) show what looks like casework and when you go to the elevation (28/A9.10) it says "Student Cubies" – Are these F.F.&E. items? Or should we include these as casework? Also, room D123 has the same layout as the others but does not show these cubies, will they be required here as well?	Architectural	The cubbies are categorized as FF&E (Furniture, Fixtures, and Equipment) and NIC (Not in Contract). Please refer to Addendum #2 for more details.			1/10/25
54	1/8/2025	Drymalla		A3.00 – Detail 7 – Can you confirm this is the only RR that will receive a baby changing station?	Architectural	Correct.			1/10/25
55	1/8/2025	Drymalla		A5.00 shows a Building expansion joint but the details shown do not provide enough information	Architectural	Refer To Detail 4/A7.20			1/10/25
56	1/8/2025	Drymalla		A5.00 – General Note 8 states to provide prefinished galvanized steel downspouts but 07 62 00 states Aluminum	Architectural	Please see Addendum #2 for additional information. Downspouts should be galvanized steel.			1/10/25

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57	1/8/2025	Drymalla	A6.01	A6.01 – Detail 2 shows 1/A7.05 but this shows a window going down the floor, please confirm we should show detail 3/A7.03 here, which states to have a p-lam window sill. Can I assume all M2 windows will receive a p-lam sill?	Architectural	Please see Addendum #2 for additional information.			1/10/25
58	1/8/2025	Drymalla	A6.01	A6.01 – Detail 9 shows 4/A7.05 but this references a canopy, please confirm we should match detail 4/A7.04 which provides a metal soffit over this door.	Architectural	Please see Addendum #2 for additional information.			1/10/25
59	1/8/2025	Drymalla	A7.20	A7.20 detail 9 for the stage steps does not match detail 15 on S3.04, could you confirm we are to match structural?	Architectural	Please see Addendum #2 for additional information.			1/10/25
60	1/8/2025	Drymalla	A9.00B	A9.00B Can I assume we should provide black paint above the cloud ceilings in the gym & café? (as we are doing at 36)	Architectural	Please provide black paint for all elements above the ceiling clouds in this area. Refer to Addendum #2 for additional information.			1/10/25
61	1/8/2025	Drymalla	A9.10	A9.10 detail 17 shows a vending machine in the teachers lounge, can I assume this is F.F.&E./OFOI?	Architectural	The vending machine is in contract. Please refer to Addendum #2 for more information.			1/10/25
62	1/8/2025	Drymalla	A10.01B	A10.01B – I see a spot at exit door C121 where the canopy does not exactly extend to the door, can I assume we will have metal panel soffit here? How tall is the canopy here? We added this on 36	Architectural	Please see Addendum #2 for additional information.			1/10/25
63	1/8/2025	Drymalla		T2.00 shows CR's at gates, will S007 gate entering into the Central Plant require CR & panic HW?	MEP/T	Provide Panic Hardware, Card Reader and Fire Access Box. Refer to Addendum #2.			1/10/25
64	1/8/2025	Drymalla		T2.01B – Just want to confirm we are not providing time clocks in any of the pods. I do not see any.	MEP/T	Correct.			1/10/25
65	1/8/2025	Drymalla		T2.01B Exit Door B101C does not show that we need to provide CR & DC, please confirm we do need these here. A8.00 does show to provide CR for this door, FYI.	MEP/T	Door B101C needs a card reader. Please refer to Addendum #2.			1/10/25
66	1/8/2025	Gamma Construction		A1.05 detail 07 has 9" h alum letters where the electronic messaging board goes for south and north walls. Is this a mistake?	Architectural	Please see Addendum #2 for additional information.			1/10/25
67	1/8/2025	Gamma Construction		A1.05 Are north detail 5 and south detail 8 wall lettering and messaging boards all on one side?	Architectural	Please see Addendum #2 for additional information.			1/10/25
68	1/8/2025	Gamma Construction		A1.05 detail 4 east the letters are on both sides, is there also a 2 sided messaging board you don't see?	Architectural	Please see Addendum #2 for additional information.			1/10/25
69	1/8/2025	Gamma Construction		A1.05 detail 1 west-is the messaging board really one sided?	Architectural	Please see Addendum #2 for additional information.			1/10/25
70	1/8/2025	Gamma Construction		A9.11 detail 14-vinyl on type II substrate-do I quote?	Architectural	Clarification needed to answer question			1/10/25
71	1/8/2025	Gamma Construction		A9.11 detail 13 and A9.14 detail 7-digital graphics on type II substrate-do I quote?	Architectural	Clarification needed to answer question			1/10/25
72	1/8/2025	Gamma Construction		A9.12 detail 3-graphics on 3 M film-you want the letters on vinyl?	Architectural	Clarification needed to answer question			1/10/25
73	1/8/2025	Gamma Construction		A9.15 detail 8-graphic on vinyl II-same as digital graphics?	Architectural	Clarification needed to answer question			1/10/25
74	1/8/2025	Gamma Construction		Allow for thirty-five (70) 16" high letters at front entry canopy. Allow for seventy (70) 12" high letters, and seventy (70) 18" high letters to be used at roadway/entry signs.- A1.05 wall letters? All those letters are 6.5" h. Please clarify.	Architectural	Clarification needed to answer question			1/10/25
75	1/9/2025	Drymalla		Will there be a detail, or spec issued for the artificial turf in the courtyard, showing the base requirements, and turf type. Based on civil not showing concrete I would assume it will have an aggregate base with a Nailer at the edge of pavement for attachment.	Landscape				

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76	1/9/2025	Drymalla		Which detail should we follow for the track, the civil with surfacing, or architectural with no surfacing.		The track will be constructed of concrete according to Lamar CISD standards. Please refer to the updated Civil Detail in Addendum #2.			1/10/25
77	1/9/2025	Drymalla		There is no specification for Roof Drainage piping and Appurtenances, please have SOBE provide.	MEP/T	Please see Addendum #2 for additional information.			1/10/25
78	1/9/2025	Drymalla		IMB-1 is called out on the plumbing drawings, but is not on the plumbing schedule. Please advise.	MEP/T	Please see Addendum #2 for additional information.			1/10/25
79	1/9/2025	Drymalla		L-2 is called out on the plumbing drawings but not on the plumbing schedule. Please advise.	MEP/T	Please see Addendum #2 for additional information.			1/10/25
80	1/9/2025	Drymalla		When Robin visited the site, she observed a steel casing, likely from an irrigation well, located on the property, approximately located across from Veranda Point Drive, near the track. I researched the civil drawings and the survey, and nowhere is this addressed. How should this be handled during bidding, or can an allowance be established to plug and cap. I have pictures imbedded below for your review.	Architectural				
81	1/9/2025			I am submitting this question regarding the Lamar CISD Elementary School #38 project to your email address in accordance with the bid advertisement for this project: Can the construction documents be revised as noted o`n Page 7 of the attached letter regarding a plumbing code violation?	Architectural	No action required.			1/10/25
82	1/10/2025	Sterling Structures, Inc.		Is SAP1 and SAP3 ceiling tile to be similar to Armstrong Fine Fissured 1728 NRC .55 or Armstrong Fine Fissured 1713 NRC .70?	Architectural	Refer to spec section 09 51 00, 2.01 B			1/10/25
83	1/10/2025	Sterling Structures, Inc.		RCP has SAP2 in rooms B105, B128, D118, E115, E127, and F127. Finish Schedule has SAP1. Please clarify.	Architectural	Refer to Addendum #2			1/10/25
84	1/10/2025	Sterling Structures, Inc.		RCP does NOT indicate SAP2 in room C113 Walkin. Please clarify.	Architectural	Refer to Addendum #2			1/10/25
85	1/10/2025	Sterling Structures, Inc.		Should C100 Music, D107 Gym, and D108 Cafe receive a hi nrc ceiling tile of .90 similar to Armstrong Optima 3150?	Architectural				
86	1/10/2025	Sterling Structures, Inc.		Division 98413 indicates 2" and 4" wall panels. Where does each thickness occur at?	Architectural				
87	1/10/2025	Sterling Structures, Inc.		Does room C107 Gym receive hi impact 1/8" wall panels?	Architectural				