

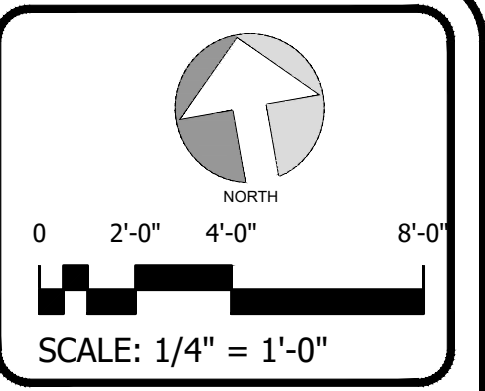
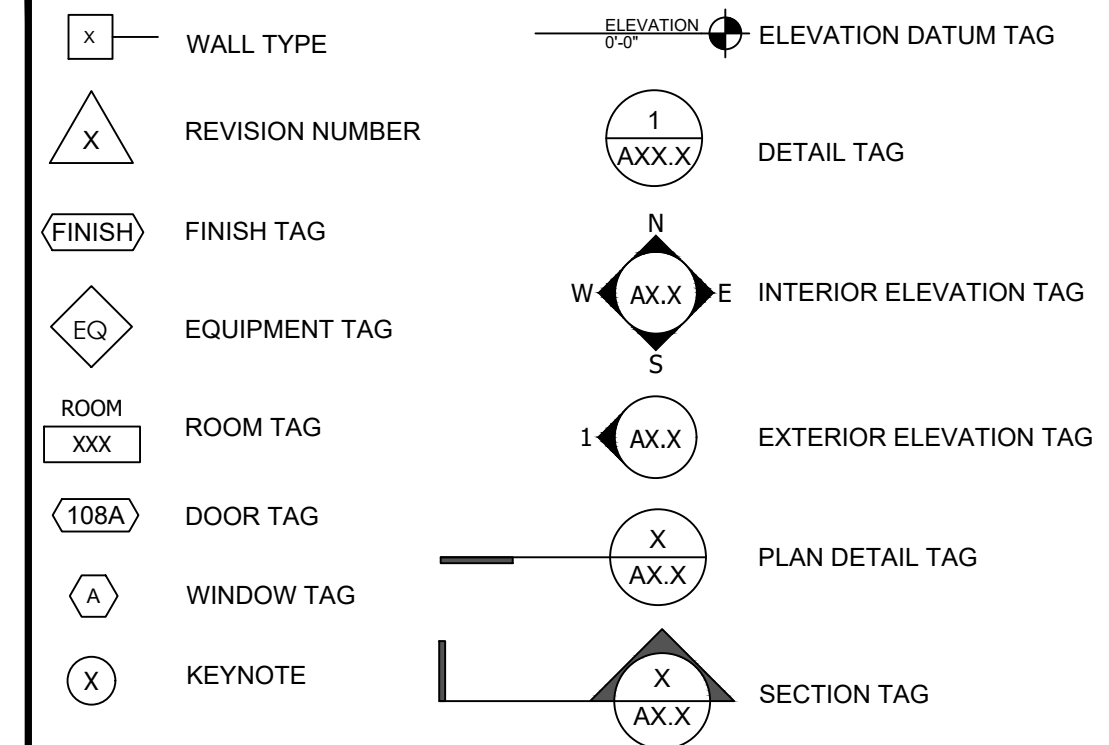
KEYED NOTES:

- 1 ALL INTERIOR WALLS AND EXPOSED WALK IN COOLER WALLS IN CUSTOMER AREA ARE TO BE COVERED W/ 5/8" FIRE CODE GYPSUM BOARD.
- 2 WALK IN COOLER FACES ARE TO BE COVERED WITH 1/4" GYPSUM BOARD LAMINATE TO WALL.
- 3 ALL WALK IN COOLER DOORS ARE TO BE COORDINATED WITH OWNER AND COOLER VENDOR (BASIS OF DESIGN: GEMTRON-SIERRA 30" X 75").
- 4 EXTERIOR ALUMINUM LADDER MODEL NO. 564HD-C WITH SECURITY DOORS MODEL NO. H-300 PRIMED AND PAINTED AS PER OWNERS SPECIFICATIONS PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
- 5 GAS READOUT AND TELEPHONE BOARDS WILL REQUIRE 5/8" F.R.T. CDX PLYWOOD PROVIDED AND INSTALLED BY GENERAL CONTRACTOR. PAINT MATTE WHITE. MUST BE CLEANABLE SURFACE. CPI PANELS TO BE INSTALLED BY VENDOR.
- 6 SECURITY SYSTEM: PROVIDE 3/4" CONDUIT STUBBED UP ABOVE CEILING HEIGHT. PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
- 7 GASOLINE EQUIPMENT LINES TO BE RUN UNDER FINISHED FLOOR. REFER TO TANK DRAWINGS.
- 8 BEVERAGE LINES BAG-N-BOX TO FOUNTAIN DRINK DISPENSER TO BE RUN ABOVE CEILING GRID. LOW VOLTAGE EQUIPMENT AREA; SEE LOW VOLTAGE PLAN FOR MORE DETAILED INFORMATION.
- 9 LOW VOLTAGE EQUIPMENT AREA; SEE LOW VOLTAGE PLAN FOR MORE DETAILED INFORMATION.
- 10 RECESSED JUNCTION BOX FOR BULK CO2 CONNECTION.
- 11 ALL WALLS TO RECEIVE FLOOR TO CEILING FRP AND COVE BASE. VERIFY SPECIFICATIONS WITH OWNER.
- 12 DOORS WITH CLOSERS SHALL BE ADJUSTED SUCH THAT FROM AN OPENING POSITION OF 90 DEGREES THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH SHALL TAKE 5 SECONDS MIN. ALL INTERIOR SWINGING EGRESS DOORS SHALL OPERATE WITH A PUSH/PULL FORCE OF 5 LBS. FLORIDA ADA CODES CHAPTER 4. ALL EXTERIOR DOORS WITH A CLOSER SHALL OPERATE WITH A PUSH/PULL FORCE OF 8.5 LBS. MAXIMUM.
- 13 ICs OR EQUAL WALK-IN COOLER, VAULT, AND RELATED EQUIPMENT FURNISHED & INSTALLED BY EQUIPMENT SUPPLIER
 - ELECTRICAL CONNECTIONS FOR FANS, CONDENSER
 - CONNECTIONS BY ELECTRICAL CONTRACTOR
 - PLUMBING CONNECTIONS FOR CONDENSATION LINES BY PLUMBING CONTRACTOR
 - REFRIGERATION CONNECTIONS BY HVAC CONTRACTOR
- 14 ALL WET AREAS: SINKS, LAVATORY, URINAL AND TOILET LOCATIONS SHALL HAVE CEMENT BOARD BACKING UP TO 48" AFF. USE MOISTURE RESISTANT COVERED GYPSUM BOARD ABOVE CEMENT BOARD WHERE APPLICABLE.
- 15 ALL CONDUITS FROM BACK ROOM OVER GYPSUM BOARD CEILING TO BE PLACED IN CONDUIT PROPERLY SIZED FOR SERVICE LINE. CONDUIT TO EXTEND TO EDGE OF GYPSUM BOARD CEILING WITH SWEEPS.
- 16 TWO REMOVABLE SMOOTH 3/8" PLYWOOD PANELS PAINTED BOTH SIDES. PANELS TO START AT APPROX. 1/2" ABOVE DRINK COUNTER TO 9'-8" AFF OR 4" FROM CEILING GRID WITH LATCH TO SECURE DOORS IN PLACE.
- 17 PARTIAL HEIGHT WALL (PART OF MILLWORK SYSTEM), SEE ELEVATIONS. SEE MILLWORK DRAWINGS FOR MORE DETAILS.
- 18 FURRED WALLS AT TOP OF COOLER TO BE 3'-8" METAL STUDS @ 16" O.C. WITH 5/8" MOISTURE RESISTANCE GYPSUM WALLBOARD. ALIGN FACE WITH 1/4" GYPSUM WALLBOARD ON COOLER.
- 19 FURNISH AND INSTALL NEW DIRECTIONAL SIGNAGE TO ADA ENTRANCE. SEE ACCESSIBILITY DETAILS FOR ADDITIONAL INFORMATION.
- 20 FURNISH AND INSTALL NEW HORIZONTAL TACTILE EXIT SIGN. SEE DETAIL A13.1 FOR MOUNTING HEIGHTS AND SPECIFICATION.
- 21 FURNISH AND INSTALL NEW VERTICAL TACTILE EXIT SIGN. SEE DETAIL A13.1 FOR MOUNTING HEIGHTS AND SPECIFICATION.
- 22 GC TO PROVIDE CHASE FOR ELECTRICAL AT HUSSMAN CASE.
- 23 GC TO INSTALL DOOR STOP AND RUBBER STOPPERS FOR THE HINGE, PROVIDED BY OWNER.

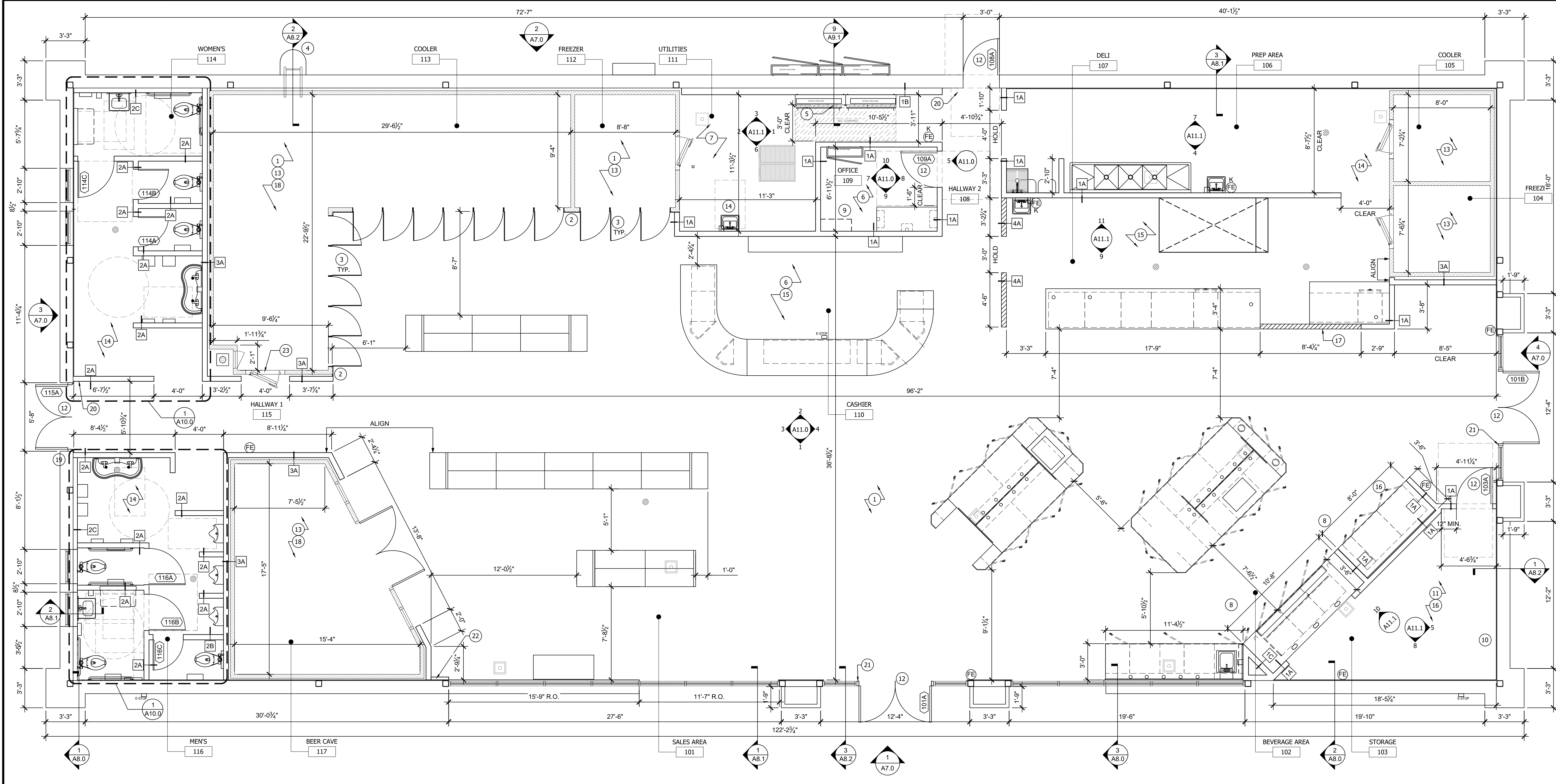
GENERAL NOTES

1. PROVIDE BLOCKING FOR ALL EQUIPMENT AS REQUIRED.
2. INTERIOR LAYOUT DIMENSIONS ARE FACE TO FACE OF DRYWALL OR FINISH SURFACE, (U.N.O.).
3. LAYOUT AS DIMENSIONED ONLY: DO NOT SCALE. REFER TO SHEET A9.1 FOR PARTITION TYPES.
4. ALL FIXTURES AND/OR EQUIPMENT FURNISHED AND INSTALLED BY GENERAL CONTRACTOR UNLESS OTHERWISE SPECIFIED.
5. SEE SHEET A9.0 FOR DOOR AND HARDWARE SCHEDULE.
6. SEE SHEET A11.2 FOR INTERIOR FINISH SPECIFICATIONS.
7. SEE SHEET A3.0 FOR EQUIPMENT SCHEDULE & LOCATION.
8. ALL CONSTRUCTION SHALL COMPLY W/ ALL CURRENT A.D.A. SPECIFICATIONS. GC TO ADDRESS ALL SELF-SERVICE & DISPENSING DEVICES.
9. SEE MEP DRAWINGS FOR LOCATIONS OF ALL CONDUIT.
10. EXTERIOR WALLS ARE SHOWN AS 6" METAL STUDS WITH STUCCO FINISH AND CREATIVE FAUX STONE SYSTEM. IF OTHER CONSTRUCTION METHODS ARE USED, IT BECOMES THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ADJUST THE OVERALL OUTSIDE DIMENSIONS IN ORDER TO MAINTAIN THE INSIDE CLEAR DIMENSIONS AS INDICATED.
11. G.C. TO MAINTAIN 2"-3" MOISTURE GAP BETWEEN COOLER AND SURROUNDING WALLS.
12. PARTIAL HEIGHT WALLS TO RECEIVE STAINLESS STEEL CAP. REFERENCE FINISH SCHEDULE FOR SPECIFICATION.

PLAN SYMBOLS



No.	Revision/Issue	Date
1	ISSUE FOR PERMIT	05/31/2024



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NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085

Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
FLOOR PLAN

Project No. 170-101.00
Drawn By: KM
Reviewed By: AFO

Sheet
A2.0

ITEM #	DESCRIPTION	MANUFACTURER	MODEL #	FURNISHED BY	INSTALLED BY
14	BEER CAVE	KPS	PDT1030	G.C.	G.C.
15	BEER CAVE CONDENSING UNIT	LEER	CC00303MCAZ A0200	G.C.	G.C.
16	BEER CAVE EVAPORATOR	LEER	CE01180856EM AD8699	G.C.	G.C.
17	WALK-IN COOLER DOORS	ANTHONY	101/103 LED	G.C.	G.C.
18	3-DOOR FREEZER	ICS	PDT1030	G.C.	G.C.
19	WALK-IN FREEZER	LEER	CC0045LCBZCA 0200	G.C.	G.C.
20	WALK-IN FREEZER CONDENSING UNIT	LEER	CE0130856EEA D8748	G.C.	G.C.
21	WALK-IN FREEZER EVAPORATOR	LEER	CE0130856EEA D8748	G.C.	G.C.
22	TEA BREWER DISPENSER	BUNN	39600.0047	OWNER	G.C.
23	CO2 BOTTLE			OWNER	G.C.
24	BAG-IN-BOX			OWNER	G.C.
25	FOUNTAIN FLAVOR FUSION	CORNELIUS	621057644	OWNER	G.C.
26	FUEL MANAGEMENT			OWNER	G.C.
27	CASH REGISTER			OWNER	G.C.
28	CREDIT CARD			OWNER	G.C.
29	GEMINI LOTTO	VERIFY W/OWNER		OWNER	G.C.
30	LOTTO MACHINE	A PER STATE		OWNER	G.C.
31	UNDER COUNTER SAFE	ARMOR	CS 7100	OWNER	G.C.
32	FILTER SYSTEM	EVERPURE	EV9328-06	OWNER	G.C.
33	TEA BREWER-TB VIF W/OWNER BEFORE PURCHASE	BUNN	52000.0301	OWNER	G.C.
34	NOT USED				
35	TRASH RECEPTACLE	RUBBERMAID	FG354060BLA	OWNER	OWNER
36	COFFEE DISPENSERS	BUNN	27850.0212	OWNER	G.C.
37	CAPPUCCINO MACHINE	BUNN	1MIX-35+ 38600.0001	OWNER	G.C.
38	ICB TWIN SH, COFFEE BREWER	BUNN	51200.0100	OWNER	G.C.
39	HEATED DISPLAY CASE (COUNTERTOP)	HATCO	GRSD5-36T	OWNER	G.C.

40	MICROWAVE	PANASONIC	NE-1054F	OWNER	G.C.
41	DRAWER WARMER	ALTO-SHAAM	500-2D	OWNER	G.C.
42	GONDOLA SHELVING	LOZIER OR EQUAL	PER MANUF. SPECS	OWNER	G.C.
43	ICE MAKER	HOSHIZAKI	KM-1601SRJ	OWNER	G.C.
44	ICE MAKER CONDENSER	HOSHIZAKI	URC-22F	OWNER	G.C.
45	ICE BAGGER	KLOPPENBERG	DISP-1000	OWNER	G.C.
46	ATM	ANY CARD		OWNER	G.C.
47	SANDWICH/SALAD PREP REFRIGERATOR	KELVINATOR	KCHMT48.18	OWNER	G.C.
48	3 SIDED BAKERY CASE	MILLWORK SUPPLIER			
49	FROZEN UNCARBONATED BEVERAGE MACHINE	BUNN	58000.0011	OWNER	G.C.
50	MOP SINK	ADVANCE TABCO	9-OP-24FM-SSR	OWNER	G.C.
51	3 COMPARTMENT SINK WITH BRASS FAUCET: 5PR-BW14-C	ADVANCE TABCO	FC-3-2424-24R-X	OWNER	G.C.
52	STORAGE SHELVING	THUNDER GROUP INC.	AMCO II	OWNER	G.C.
53	HOT DOG GRILL	STAR	75STBDE	OWNER	G.C.
54	LOTTERY STATION			OWNER	G.C.
55	CUSTOMER KIOSK	BY OWNER	CUSTOM	OWNER	G.C.
56	SANDWICH/SALAD PREP REFRIGERATOR	KELVINATOR	KCHMT29.12	OWNER	G.C.
57	REFRIGERATED COUNTERTOP DISPLAY	VOLLRATH	RDCCB-36SS	OWNER	G.C.
58	HEATED DISPLAY CASE (COUNTERTOP)	ALTO-SHAAM	ED2-48-SS	OWNER	G.C.
59	ICE MAKER	CORNELIUS	C5692000079	OWNER	G.C.
60	ICE MAKER CONDENSER	CORNELIUS	C638090690	OWNER	G.C.
61	HAND SINK (SPASH GUARDS)	ADVANCE TABCO	7-PS-EC-SP-1X	G.C.	G.C.
62	WORK TABLE	ADVANCE TABCO	KMSLAG-303-X	OWNER	G.C.
63	BOHA TERMINAL	TRANSCAT		OWNER	G.C.
64	DISPLAY CASE CONDENSING UNIT	TECLUMSEH ARGUS	ASH595122NAFP1	OWNER	G.C.
65	WORK TABLE	ADVANCE TABCO	KMSLAG-306-X	OWNER	G.C.
66	CHILI/CHEESE DISPENSER	GEHL'S 2.0		OWNER	G.C.

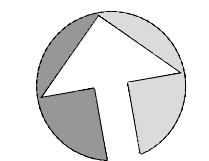
47	COLD CASE	HUSSMANN	IM-05-1N4-R	OWNER	G.C.
48	PIZZA PREP. REFRIGERATOR	KELVINATOR	KCHPT72.9	OWNER	G.C.
49	ICE MERCHANDISER	LEER	L060SASP	OWNER	G.C.
50	TANKLESS GAS WATER HEATER		REFER TO PLUMBING	G.C.	G.C.
51	WIRE SHELVING UNIT	THUNDER GROUP INC.		OWNER	G.C.
52	TYPE-1 9' HOOD WITH SUPPRESSION SYSTEM. (STAINLESS STEEL PANELS TO BE PROVIDED BY G.C.)	CAPTIVE AIRE	5424ND-2	OWNER	G.C.
53	HEATED DISPLAY CASE	ALTO-SHAAM	HSM-36/55/T	OWNER	G.C.
54	REFRIGERATED BASE	KELVINATOR	KCHC848R	OWNER	G.C.
55	HIGH/LOW DRINKING FOUNTAIN	ELKAY	EZ5TL8C	G.C.	G.C.
56	DUAL GAS FRYER	HENNY PENNY	OGA322	OWNER	G.C.
57	GAS GRIDDLE	AVANTCO	CAG-36-MG	G.C.	G.C.
58	HAND DRYER	WORLD DRYER CORP.	VERDEDRI Q-973A	G.C.	G.C.
59	STORAGE FREEZER CONDENSING UNIT	LEER	CC00303L0CBO ZAO200	G.C.	G.C.
60	DROP-IN HOT WELLS	ALTO-SHAAM	300-HW/D6	OWNER	G.C.
61	HAND SINK	EAGLE GROUP	SR19-16-13.5-1	OWNER	G.C.
62	EASIWASH HOSE		REFER TO PLUMBING	OWNER	G.C.
63	EASIWASH WASH		REFER TO PLUMBING	OWNER	G.C.
64	FRONT COUNTER MILLWORK	ROYSTON	CUSTOM	OWNER	G.C.
65	VECTOR MULTI-COOK OVEN	ALTO-SHAAM	VMC-H4	OWNER	G.C.
66	FLAT TORTILLA PLATE	WARING	WSC300	OWNER	G.C.
67	SSS COLD CASE	HUSSMANN	555-8M	OWNER	G.C.
68	STORAGE FREEZER EVAPORATOR	LEER	CE0080856EEA D8750	G.C.	G.C.
69	WALK-IN COOLER	ICS	PDT1030	G.C.	G.C.
70	WALK-IN COOLER CONDENSING UNIT	LEER	CC00555MCAZ A0100	G.C.	G.C.
71	WALK-IN COOLER EVAPORATOR	BOHN	ADT120AEK	G.C.	G.C.

72	STORAGE COOLER CONDENSING UNIT	LEER	CC00555MCAZ A0100	G.C.	G.C.
73	STORAGE COOLER EVAPORATOR	LEER	CE0060AS6GAMA D8701	G.C.	G.C.
74	ISLAND DISPLAY CASE CONDENSING UNIT	TECLUMSEH ARGUS	ASHR9460ZNAFP1	OWNER	G.C.
75	HAND SINK			OWNER	G.C.
76	GLASS SNEEZIE GUARD			OWNER	G.C.
77	DROP-IN COLD WELL	ALTO-SHAAM	100-CW	OWNER	G.C.
78	HEATED DISPLAY MERCHANDISER	HATCO	GRHW-15GD	OWNER	G.C.
79	2SH STAND	BUNN	27875.0200	OWNER	G.C.
80	VECTOR OVEN STAND	ALTO-SHAAM	VMC-H50281	OWNER	G.C.
81	GLASS DOOR COOLER	EXCELLENCE INDUSTRIES	GDR-12HC	OWNER	G.C.
82	SOAP DISPENSER, WALL MOUNTED	SCOTT	92145	OWNER	G.C.
83	WALL GRID SHELVING	METRO	SWK36-1	OWNER	G.C.
84	SERVICE SINK FAUCET	ADVANCE TABCO	K-240	OWNER	G.C.
85	UTILITY SHELF	ADVANCE TABCO	K-245	OWNER	G.C.
86	PAPER TOWEL DISPENSER	KIMBERLY-CLARK	09996	OWNER	G.C.
87	22" KDS MONITOR	DELL	E2216HV	OWNER	G.C.
88	TV SCREEN			OWNER	G.C.

- ### GENERAL NOTES
- GENERAL CONTRACTOR TO COORDINATE WORK AND PROVIDE FINAL MECHANICAL & ELECTRICAL HOOK-UPS TO ALL EQUIPMENT AS REQUIRED. EQUIPMENT SUPPLIERS TO MATCH THESE PLANS FOR FLOOR SINK AND/OR DRAIN LOCATIONS.
 - GENERAL CONTRACTOR TO VERIFY WALK-IN COOLERS SIZE, MANUFACTURER, & POWER REQUIREMENTS.
 - GENERAL CONTRACTOR SHALL PROVIDE SOLID WOOD BLOCKING BETWEEN STUDS FOR SUPPORT OF ALL WALL HUNG FIXTURES, WATER LINES, SHELVES, ETC.
 - ALL DIMENSIONS TO BE VERIFIED PRIOR TO EQUIPMENT FABRICATION.
 - LIGHTS: 12W / POST
DOOR & FRAME HEATER: 4 2A; 2-DOOR 30x75 (4.54A TOTAL)
16.5A 8-DOOR 30x75 (17.4A TOTAL)
 - 120V - 3x0.9A/36W (1) FAN MOTOR/DOOR
- 0.45A/54W LIGHTING
- 1.99A/229W DOOR HEATERS
208V - 8.65/1800W DEFROST
 - COORDINATE WITH EQUIPMENT MANUFACTURER FOR RECEPTACLE REQUIREMENTS.
 - PROVIDE 40A 3W + GND EQUIPMENT CORD AND PLUG WITH MATCHING RECEPTACLE.
 - REFER TO EQUIPMENT CUT-SHEETS FOR SPECIFICATIONS AND ELECTRICAL REQUIREMENTS.

INTERIOR ILLUMINATION LEVEL STD.

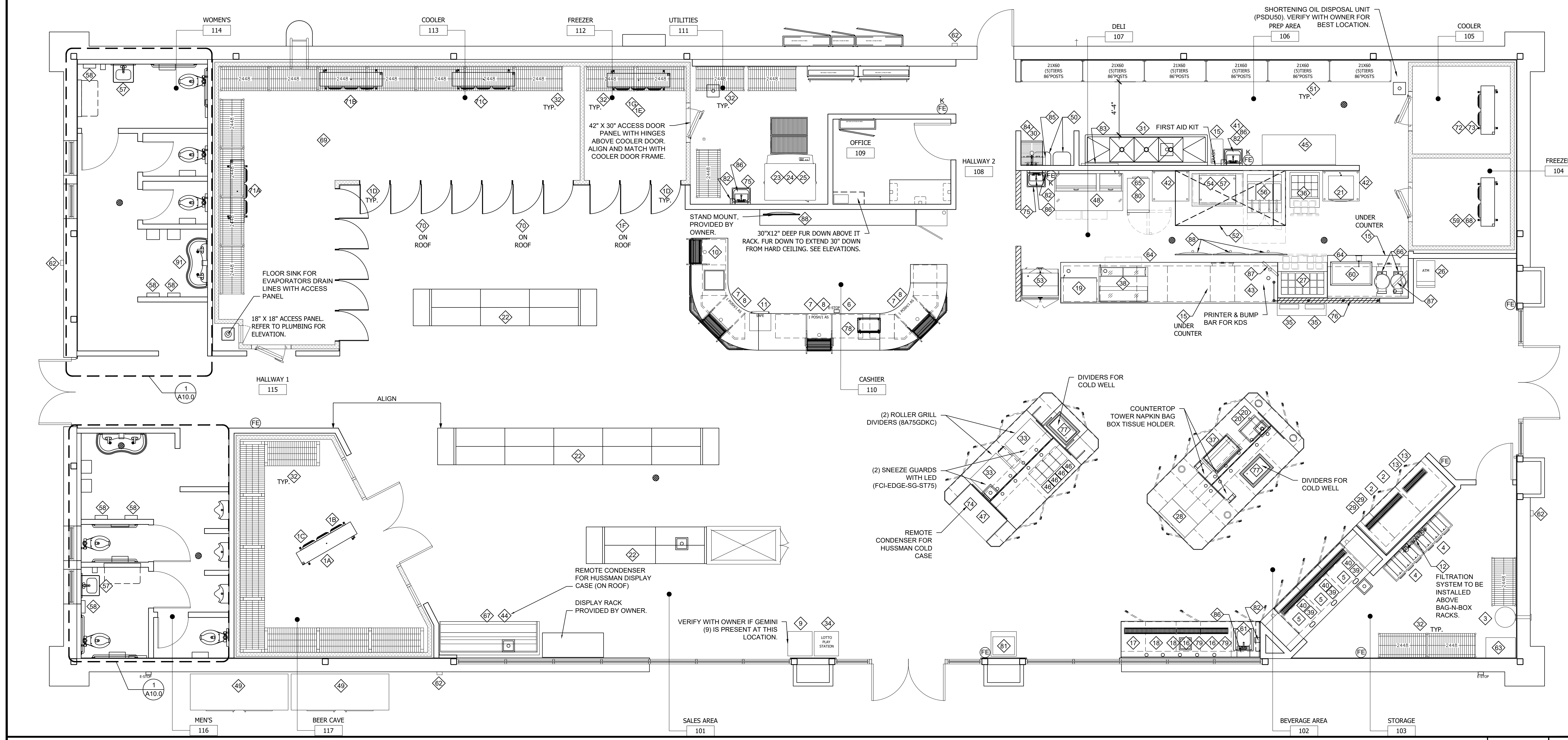
FUTURE KITCHEN	75 FOOT CANDLE AVERAGE
FRONT COUNTER	
RESTROOMS	50 FOOT CANDLE AVERAGE
STORAGE AREA	
UTILITY	30 FOOT CANDLE AVERAGE
WALK-IN COOLERS & FREEZER	




0 2'-0" 4'-0" 8'-0"

SCALE: 1/4" = 1'-0"

No.	Date	Revision/Issue
1	05/31/2024	ISSUE FOR PERMIT



FIXTURE AND EQUIPMENT PLAN SCALE 1/4"=1'-0" 1



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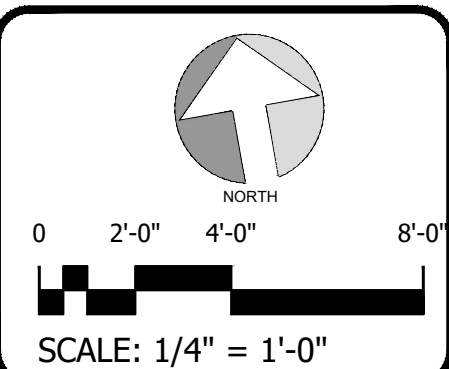
Date

Project Name and Address
CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title
EQUIPMENT PLAN AND SCHEDULE

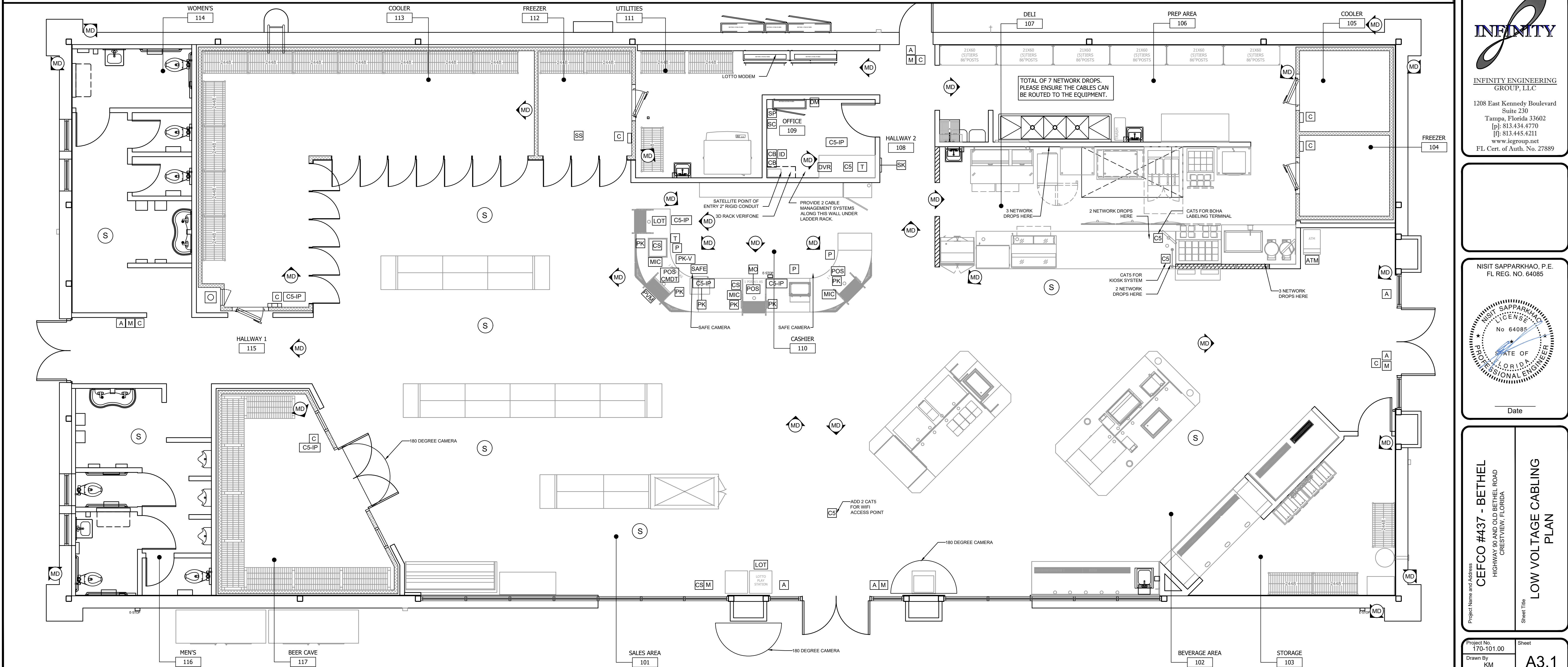
Project No. 170-101.00 Sheet
 Drawn By KM
 Reviewed By AFO
A3.0

CAMERAS CEFCO	DVR	SECURITY SYSTEM	TRUSONIC	GENERAL NOTES
<ul style="list-style-type: none"> CAT 5 CABLE (POWER AND COMMUNICATION ARE ATTACHED), 4 BOXES OF 500' LEAVE 10' OF EXTRA CABLE AT EACH CAMERA LOCATION POINT. LEAVE 6' OF EXTRA CABLE AT OFFICE TERMINATION POINT. LABEL ALL WIRES WITH CAMERA #S OR LOCATION. <p>#1 REGISTER 1 #2 REGISTER 2 #3 REGISTER 3 #4 BEHIND COUNTER #5 SAFE CAMERA #6 FRONT OF COUNTER #7 FRONT DOOR #8 SIDE DOOR #9 TRUCKER ENTRANCE #10 AISLE 1 #11 AISLE 2 #12 AISLE 3 #13 STORE VIEW #14 FOUNTAIN VIEW 1 #15 FOUNTAIN VIEW 2 #16 BEER CAVE ISLE #17 BEER CAVE #18 SODA COOLER 1 #19 SODA COOLER 2 #20 HALLWAY/ BACK DOOR #21 OFFICE #22 ICE STORAGE #23 STORAGE #24 KITCHEN 1 #25 KITCHEN 2 #26 KITCHEN WALK INS #27 KITCHEN 3</p> <p>GENERAL CONTRACTOR TO PROVIDE 2" X 12" X 16" +/- WOOD BLOCKING AT HEIGHT DETERMINED BY OWNER FOR ALL EXTERIOR SECURITY CAMERAS.</p>	<p>DVR 18/2 SHIELDED WITH GROUND. RUN FROM OFFICE TO FRONT COUNTER. (LEAVE EXTRA 10' AT BOTH TERMINATION POINTS)</p> <p>MIC MICROPHONE - 22/4 SHIELDED WITH GROUND. RUN UNDERGROUND AND TERMINATED ON THE INSIDE OF EACH POS SHROUD</p> <p>SAFE CAT 5 - RUN FROM OFFICE TO SAFE LOCATION (LEAVE EXTRA 10' AT BOTH TERMINATION POINTS)</p> <p>ATM (INDOOR) 2 - CAT 5 FROM THE OFFICE TO ATM POSITION</p> <p>LOTTO LOTTO - CAT 5 FROM MODEM TO FRONT COUNTER TERMINAL (LEAVE ADDITIONAL 10 FT) CAT 5 FROM SALES COUNTER TO TICKET SCANNER (LEAVE ADDITIONAL 10 FT) LOTTO MODEM AT D-MARK</p> <p>CONDUIT BOX CONDUIT BOX (LOCATED INSIDE WALL)</p> <p>PORT PATCH PANEL 24-PORT PATCH PANEL 4-PORT PATCH PANEL 4 PORT PATCH PANEL WITH VIDEO</p> <p>CONDUITS - SPARE CONDUIT STUB UP AUDIO CABLE</p>	<p>SP SECURITY PANEL - ORIGINATE AT THE SECURITY PANEL AT D-MARK (LEAVE ADDITIONAL 10 FT OF WIRE)</p> <p>A DOOR CONTACT: 22/4 WIRE (FRONT, SIDE, AND BACK DOORS) - ALL WIRING TO BE LOCATED WITHIN DOOR FRAMES</p> <p>P PANIC BUTTONS: 22/4 WIRE (TO ALL 3 REGISTERS)</p> <p>M MOTION DETECTORS: 22/4 WIRE MD#1 ATM MD#2 FRONT DOOR MD#3 SIDE DOOR MD#4 BACK DOOR</p> <p>SK SECURITY KEYPAD: 22/4 WIRE (TERMINATE FROM PUNCH BOARD AREA)</p> <p>SS SECURITY SIREN: 22/4 WIRE (TERMINATE IN STORE ABOVE FREEZER)</p> <p>TELEPHONE STANDARD PHONE LINE LOCATED AT D-MARK - PULL PHONE LINES FROM PATCH PANEL TO THE REQUIRED TERMINATED POSITIONS. TRIM OUT AND CONFIRM DIAL TONE.</p> <p>D-MARK STANDARD D-MARK 5-CAT 5 (FROM D-MARK TO OFFICE)</p> <p>CHIME CHIME CONNECTED TO ENTRY DOORS. CHIMES IN COOLERS, BACK OFFICE/STORAGE ROOM AREA AND DELI PREP AREA WILL BE 22/4 WIRING, WHICH WILL BE PULLED INTO THE BACK OFFICE/STORAGE ROOM AREA AND NEAR THE ALARM PANEL. (A CONTROL PANEL WILL BE LOCATED THERE) DOOR WIRING FOR THE ENTRY DOORS WILL BE TWO HOME RUNS (22/4 AT EACH FROM THE BACK OFFICE/STORAGE ROOM AREA AND WITH EACH WIRE BEING SPLIT TO EACH DOOR, PER EACH POINT OF ACCESS. THIS WILL BE IN ADDITION TO THE 22/4 WIRING AT EACH SET OF DOORS, PER THE ALARM CONTRACTORS.</p>	<p>SC SPEAKER CONTROLS - ORIGINATE SPEAKER WIRES IN OFFICE NEXT TO VOLUME CONTROLS.</p> <p>8 - TOTAL SPEAKERS</p> <p>4 - SPEAKERS IN RETAIL AREA (CEILING MOUNTED) - INTERIOR SALES AREA SPEAKERS USE ON EACH RUN OF 16/4 SPEAKER CABLE DAISY CHAINED FOR THESE FOUR SPEAKERS. SPK #1 HOT FOOD/DRINK AREA SPK #2 AISLE 2 AREA SPK #3 FREEZER AREA SPK #4 ATM AREA</p> <p>2 - SPEAKERS IN RESTROOMS 1 SPEAKER IN EACH RESTROOM (CEILING MOUNTED). RESTROOM SPEAKERS USE ONE RUN OF 16/4 SPEAKER CABLE DAISY CHAINED FOR THESE TWO SPEAKERS.</p> <p>3 - SPEAKERS CENTERED IN EACH LAND BETWEEN ISLANDS (CEILING MOUNTED). USE ONE RUN OF 16/4 CHEMICAL RESISTANT CABLE TO CANOPY SPEAKERS. DAISY CHAIN BETWEEN SPEAKERS.</p> <p>PRICER ID RUN A BELDON 1420A 060, SHIELDED, 20 AWG, 3 TWISTED PAIR COMMUNICATION CABLE FROM EACH PRICE SIGN TO THE BACK OFFICE. 500 FOOT LENGTH FOR EACH ID SIGN.</p> <p>DATA LINES RUN TWENTY-FOUR (24) CAT 5 LINES FROM OFFICE TO THE SALES AREA COUNTER. RUN TWO (2) AT CAT 5 LINES FROM OFFICE TO THE KITCHEN AREA BEHIND OVEN AREA. RUN THREE (3) CAT 5 PHONE LINES & THREE (3) ALARM PANIC BUTTON LINES FROM D-MARK. RUN CAT 5 FROM D-MARK TO PATCH PANEL (TWO LINES/PER PHONE #) CASHIER. RUN CAT 5 FROM AUTOMATIC TANK GAUGE TO BACK OFFICE. IP CAT 5 LINES (TERMINATE LINES AS SHOWN)</p>	<p>1. ALL CABLE RUNS ARE HOME RUNS (WITHOUT SPLICING) UNLESS OTHERWISE NOTED OR APPROVED BY OWNER.</p> <p>2. ALL CABLE TO THE SALES COUNTER TO BE IN ONE OF THE THREE (3) 2" UNDER SLAB CONDUITS DEPENDING ON THE CABLE'S POINT OF ORIGIN.</p> <p>3. ALL CAMERAS USE 18/2 RG 59 SIAMESE CABLE AND HOME RUN FOR EACH CAMERA. FOR EXTERIOR CAMERAS, PROVIDE LIQUID TIGHT FLEXIBLE METALLIC CONDUIT FROM THE EIFS LOCATION OF THE CAMERA TO ACCESSIBLE INTERIOR CEILING SPACE.</p> <p>4. ONE CONDUIT BOX TO BE MOUNTED ON THE 2" CONDUIT FROM THE SALES COUNTER. EACH CONDUIT BOX TO HAVE A 2" CONDUIT RAN FROM THE TOP OF THE BOX TO ACCESSIBLE CEILING NEAR THE OFFICE. BOTH BOXES OPEN INTO THE OFFICE AND SHOULD BE UNDER THE WORKER JUNCTION IF POSSIBLE.</p> <p>5. TELEPHONE OUTLET IN OFFICE AND ATM/LOTTO DATA BOX TO BE 1" CONDUIT RAN UP THE WALL TO ACCESSIBLE CEILING.</p> <p>6. ALL CABLING REQUIRED TO BE IN A WALL SPACE, TO AN EXTERIOR POINT, OR TO HARD SURFACED CEILING SPACE REQUIRE CONDUIT TO ACCESSIBLE CEILING AREA.</p> <p>7. ALL CABLING TO BE PERMANENTLY LABELED AT BOTH ENDS OF THE CABLE AND A LEGEND OF THE CABLE LABELS PROVIDED TO THE OWNER.</p> <p>8. DVR WILL BE IN THE CEFCO BACK OFFICE.</p> <p>POINT OF ENTRY (POE) RUN THE HUGHES SATELLITE AND THE LOTTO DISH THROUGH THE 2" POINT OF ENTRY (COMMUNICATIONS POE). INSTALL POINT OF ENTRY (POE) NEAR ROOF WALKING PATH.</p> <p>POINT OF SALES POINT OF SALES - COM DATA REMOTE MONEY ORDER</p>



NOTE: REFER TO OWNER FOR CAMERA LEGEND AND RELATED INFORMATION.

- LOW VOLTAGE EQUIPMENT NOTES**
- ONE MODEL # 4 U 2 POLE RACK WITH 19" MOUNT DISTANCE, SECURED TO FLOOR. COLOR: BLACK
 - FOUR VENTILATED 13" SHELVES - SINGLE SIDE MOUNT. COLOR: BLACK
 - ONE RACK MOUNT SURGE PROTECTOR WITH MOUNTING HARDWARE. MINIMUM SIX OUTLETS - WITH MINIMUM 15 AMPS CAPACITY. COLOR: BLACK
 - NE 48 PORT CAT5 PATCH PANEL. COLOR: BLACK
 - FLOOR BOX COLOR: BRUSHED BRASS.
 - OUTLET COVERS TO BE STAINLESS STEEL.
- THE FOLLOWING EQUIPMENT TO BE PROVIDED BY LOW VOLT CONTRACTOR.



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FL REG. NO. 64085

Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
LOW VOLTAGE CABLING PLAN

Project No. 170-101.00
Drawn By: KM
Reviewed By: AFO

Sheet
A3.1

CEILING FINISH SCHEDULE

SYMBOL	DESCRIPTION
CT-1	ARMSTRONG 'CIRRUS SERIES' SUSPENDED ACOUSTICAL LAY-IN CEILING PANELS. 24 X 24 X 3/4 SQUARE CUT WITH WHITE FINISH 15/16 PRELUDE T-BAR GRID SYSTEM WITH WHITE FINISH
CT-2	ARMSTRONG 'CLEAN ROOM VL' VINYL SUSPENDED ACOUST. LAY-IN CEILING PANELS. 24 X 24 X 3/4 SQUARE CUT WITH WHITE FINISH 15/16 PRELUDE T-BAR GRID SYSTEM WITH WHITE FINISH
CT-3	5/8" FIRE RATED GYPSUM WALLBOARD CEILING SMOOTH FINISH COLOR: PURE WHITE SW 7005
CT-4	5/8" FIRE RATED GYPSUM WALLBOARD CEILING SMOOTH FINISH COLOR: WHITE
CT-5	INSULATED COOLER/FREEZER CEILING

1. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING SPECIFICATIONS AND LOCATIONS OF SWITCHES.
2. REFER TO SITE PLAN DRAWING FOR SITE LIGHTING INFORMATION.
3. REFER TO CANOPY PLAN DRAWING FOR LIGHTING INFORMATION.
4. REFER TO ELECTRICAL DRAWINGS FOR EMERGENCY LIGHTING LOCATIONS.

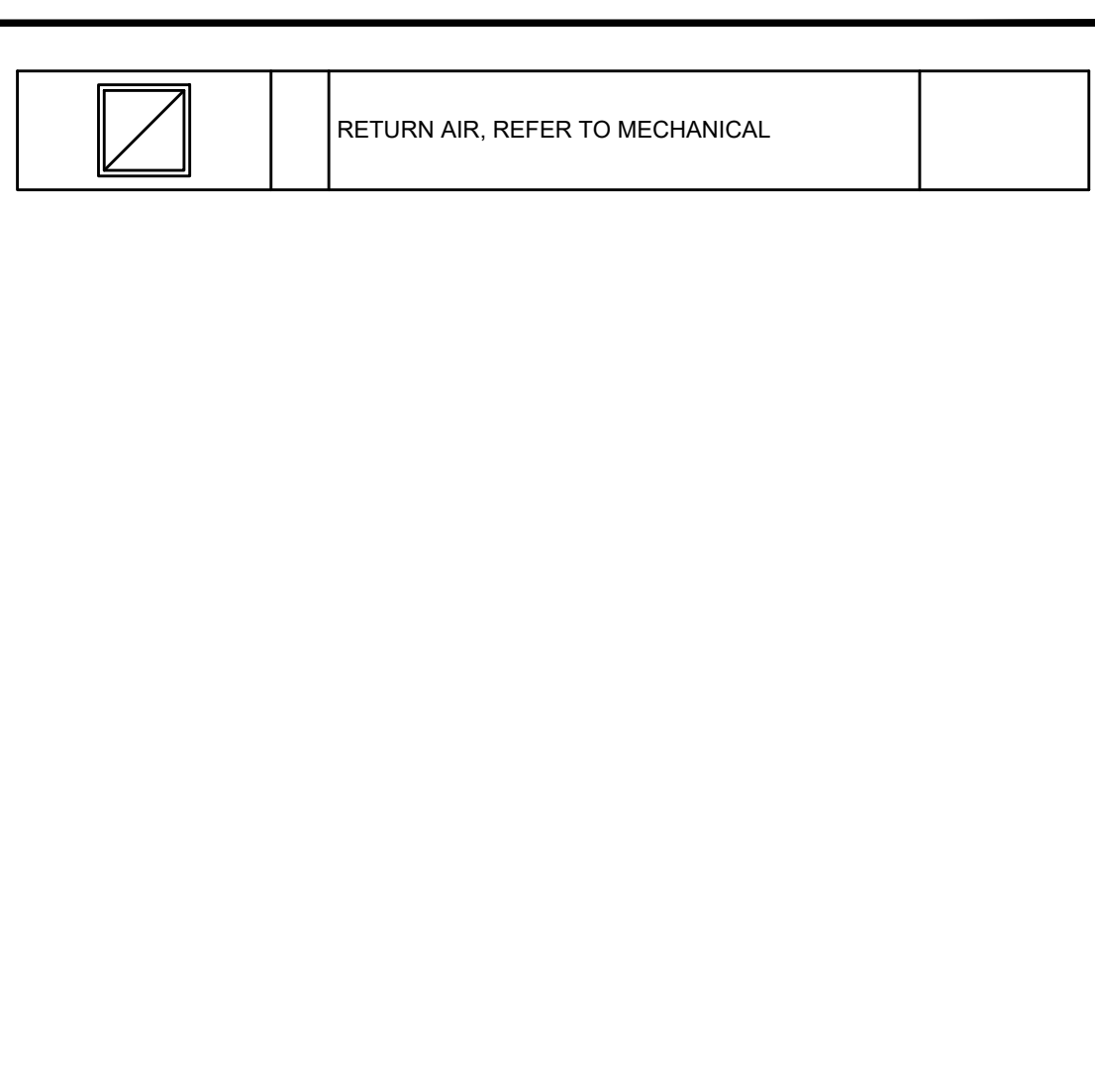
NOTE: VINYL COVERED CEILING PANELS REQUIRED IN ALL FOOD AREAS

	GYPSUM BOARD CEILING		2x2 ACOUSTICAL CEILING
	COOLER/FREEZER CEILING		YELLOW SOFFIT/BAND PROVIDED BY JIMCO

REFLECTED CEILING PLAN LEGEND

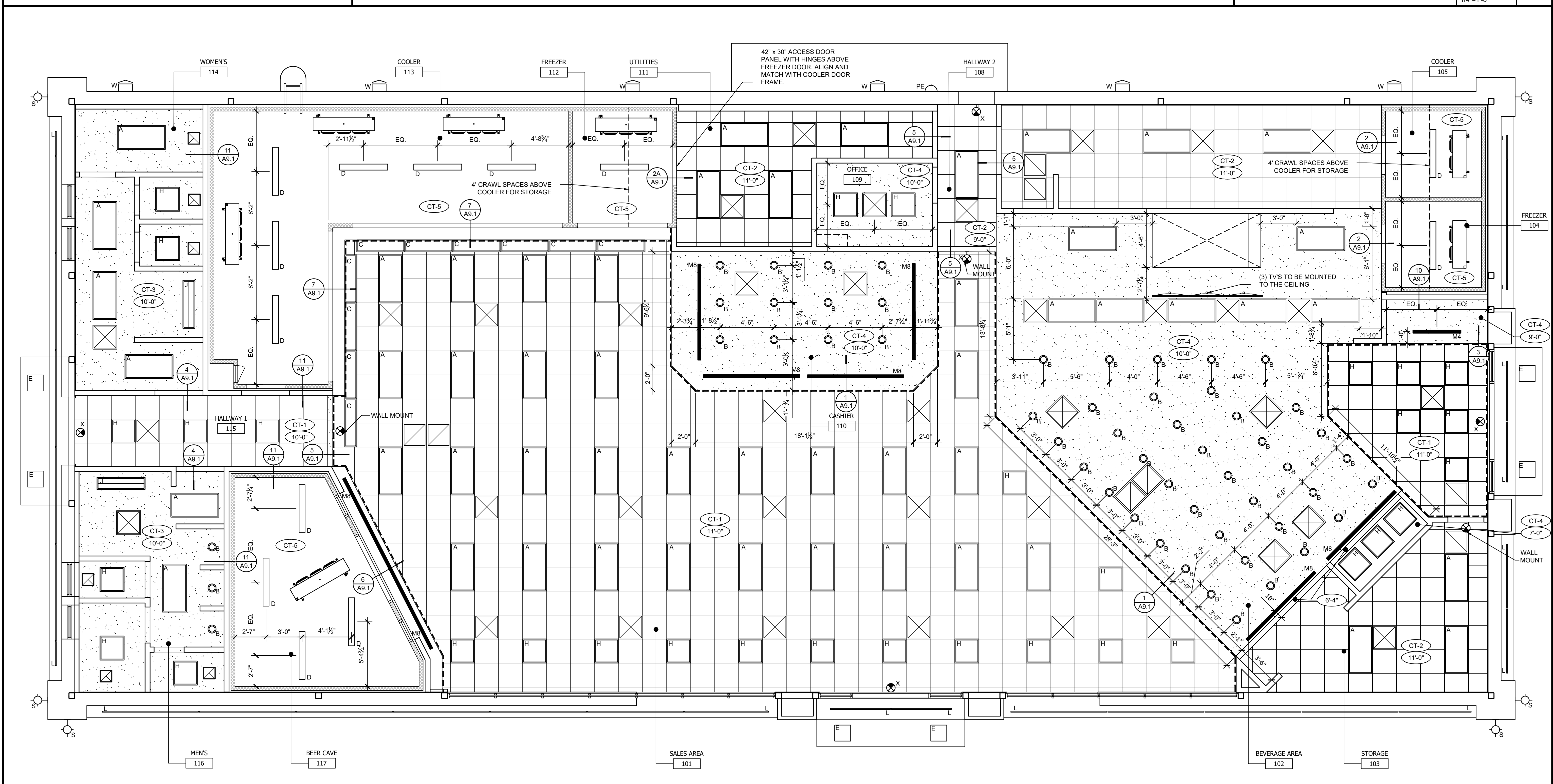
SYMBOL	ID	DESCRIPTION	QUANTITY
	A	2'-0" X 4'-0" LED ARCHITECTURAL TROFFER	
	B	6" DEEP RECESSED LED DOWNLIGHT	
	C	4'-0" LAY-IN FIXTURE (OUTSIDE COOLERS)	
	D	4'-0" WET LOCATION LINEAR (INSIDE COOLERS)	
	E	LED CANOPY LUMINAIRE	
	H	2'-0" X 2'-0" LED ARCHITECTURAL TROFFER	
	J	1'-0" X 4'-0" LED PANEL	
	L	QWIK STIK FLAT SERIES - VARIOUS LENGTHS. SEE ELECTRICAL FOR ADDITIONAL INFORMATION.	

	M4: 4'-0" LED STRIP DIFFUSED LUMINAIRE	
	M8: 8'-0" LED STRIP DIFFUSED LUMINAIRE	
	E-CONOLIGHT WALL SCONCE - WET LISTED NOTE: LOCATIONS NEAR DOORS TO HAVE BATTERY BACK-UP	
	WALL SCONCE	
	LED TRAPEZOID WALL PACK NOTE: LOCATIONS OVER DOORS TO HAVE BATTERY BACK-UP	
	EMERGENCY EXIT SIGN: CEILING MOUNT U.N.O.	
	EMERGENCY EXIT LIGHT	
	EXHAUST FAN, REFER TO MECHANICAL	
	SUPPLY AIR, REFER TO MECHANICAL	



SOFFIT DETAIL SCALE 1/4"=1'-0" **2**

SCALE: 1/4" = 1'-0"



REFLECTED CEILING PLAN SCALE 1/4"=1'-0" **1**

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Project No. 170-101.00
Drawn By KM
Reviewed By AFO

Sheet Title
REFLECTED CEILING PLAN

Sheet No. **A4.0**

KEYED NOTES

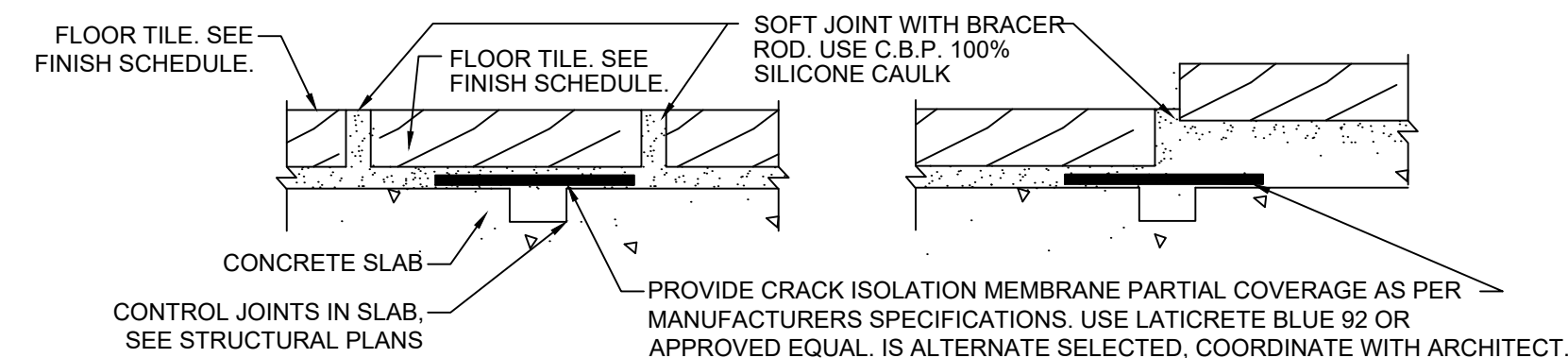
- 1 FLOOR DRAINS PROVIDED IN RESTROOMS, COORDINATE WITH PLUMBING DRAWINGS.
- 2 NO TILE REQUIRED, SEAL CONCRETE NON-SLIP FLOOR. CONTRACTOR TO ADD H&C SHARKGRIP TO COOLER AREAS.
- 3 INSTALL VINYL COVE BASE (VB1). SEE FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
- 4 INSTALL SCHLUTER 4" SCHLUTER RENO RAMP (FT-1).

KEYED LEGEND

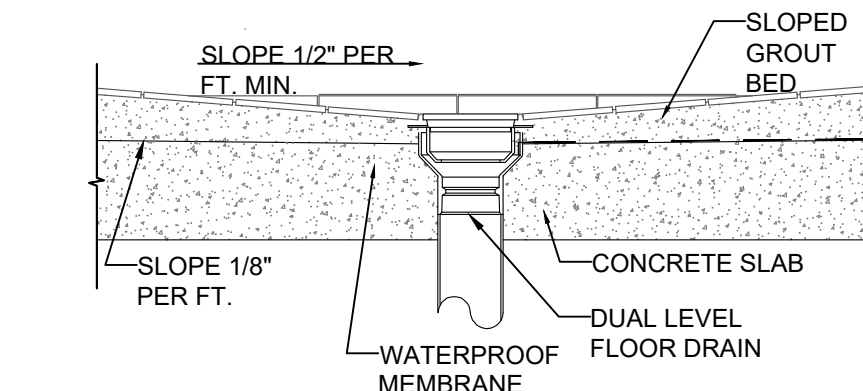
- FRP WALL
- STAINLESS STEEL WALL COVERING OVER FIRE RATED FRP

GENERAL NOTES

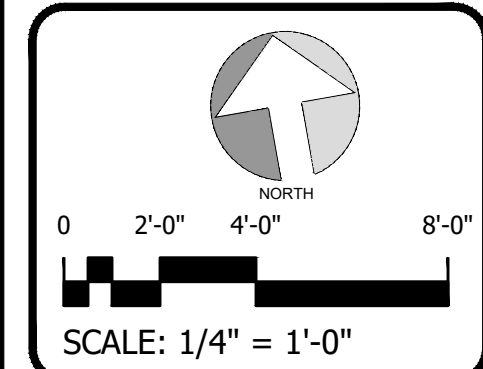
1. SEE REFLECTED CEILING PLAN FOR CEILING MATERIALS AND HEIGHTS.
2. SEE SHEET A-11.2 FOR FINISH LEGEND.
3. ALL CORNERS WITHOUT TILE TO RECEIVE ALUMINUM CORNER GUARDS. VERIFY WITH OWNER.
4. ALL CORNERS WITH TILE TO RECEIVE CLEAR, PLASTIC CORNER GUARDS FROM TOP OF BASE COVE TO 36" AFF. VERIFY WITH OWNER.
5. COORDINATE FLOOR DRAINS WITH PLUMBING DRAWINGS.
6. SLANT BASE TILE IS TO BE USED IN ANY AREA WHERE FLOOR TILE ABUTS WALL TILE.
7. SCHLUTER DILEX IS TO BE USED AT ALL FLOOR/WALL TILE TRANSITIONS, EXCEPT WHERE MILLWORK IS LOCATED.
8. ALL MATERIALS AND FINISHES THAT COME INTO CONTACT WITH RAW OR PREPARED FOODS ARE TO MEET THE REQUIREMENTS OF THE US FOOD CODE WITH STATE OF FLORIDA AMENDMENTS.
9. 4" SCHLUTER RENO RAMP IS TO BE USED AT ALL TILE TRANSITIONS.
10. FIRE RATED FRP TO BE INSTALLED BEHIND KITCHEN HOOD, ELECTRICAL PANELS, AND ALL INTERIOR SIGNS.



TILE CRACK ISOLATION MEMBRANE SCALE 1/4"=1'-0" 3

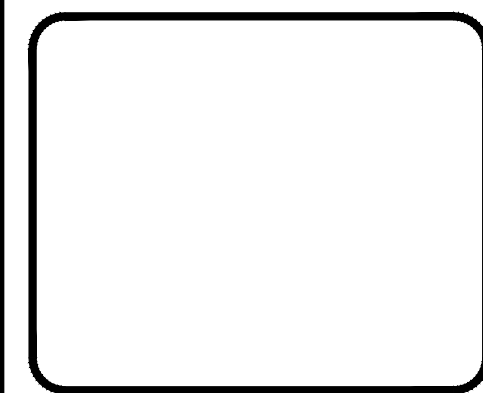


FLOOR DRAIN TILE DETAIL SCALE 1/4"=1'-0" 2



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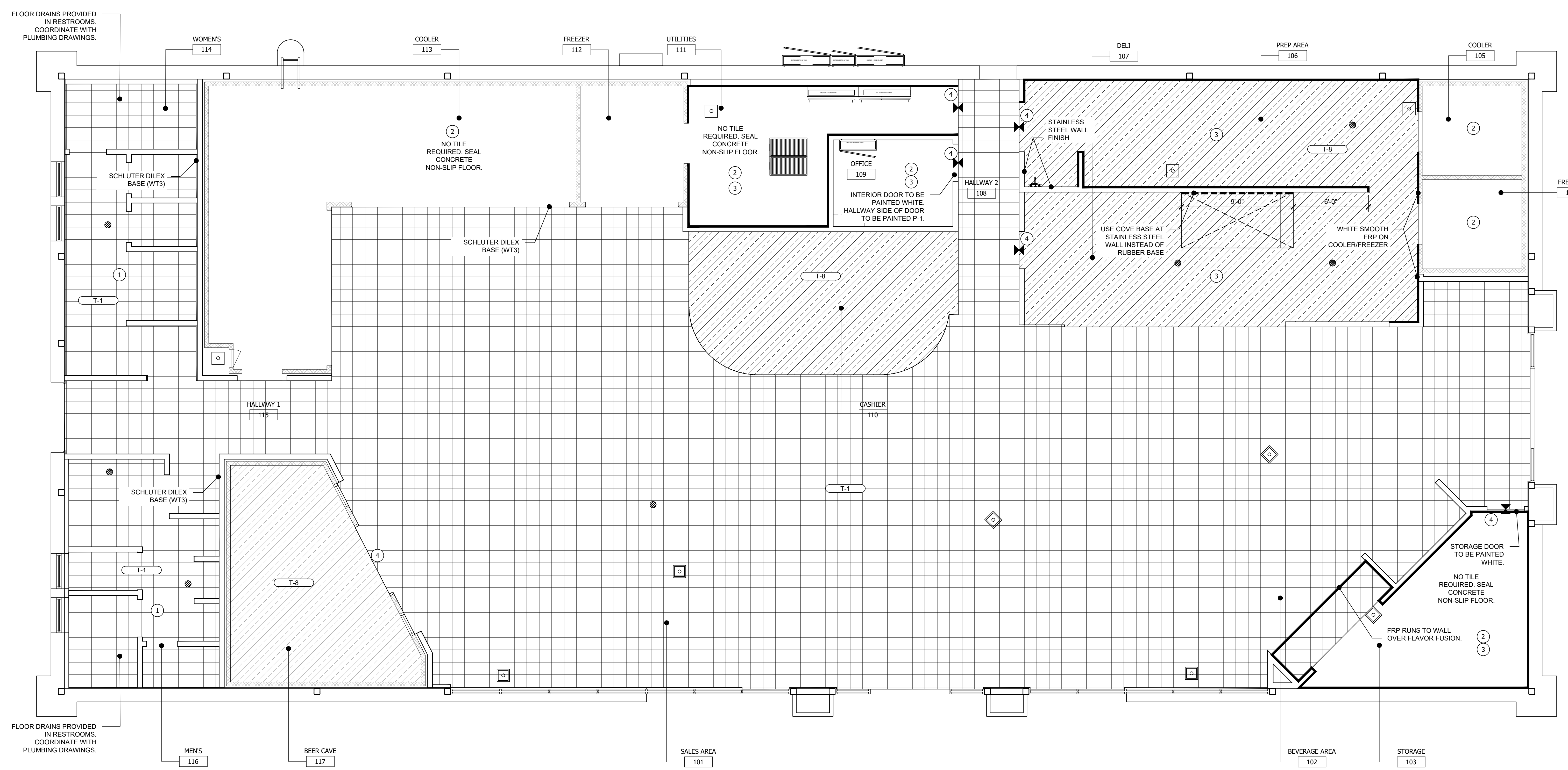


Project Name and Address
CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title
FINISH PLAN

Project No. 170-101.00
 Drawn By KM
 Reviewed By AFO

Sheet
A5.0



FINISH PLAN SCALE 1/4"=1'-0" 1

KEYED NOTES:

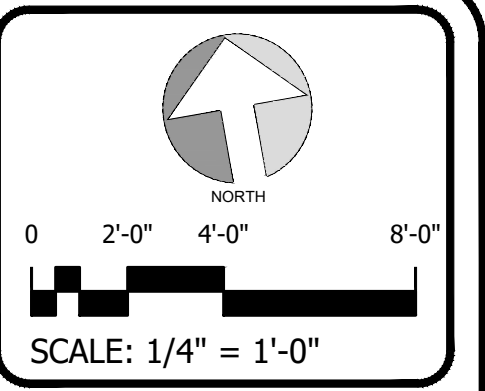
- 1 TPO FIRESTONE 60 MIL ROOFING SYSTEM OVER MINIMUM 5" FIRESTONE ISO 95+GL INSULATION ON 22 GAUGE METAL DECK.
- 2 PITCH PAN COORDINATE LOCATION WITH ELECTRICAL AND MECHANICAL CONTRACTOR. SEE DETAIL 3/A6.1 FOR MORE INFORMATION.
- 3 VENT THRU ROOF - PROVIDE PREFABRICATED DURO-LAST VENT FLASHING FOR ALL VENTS AND PIPE PENETRATIONS. COORDINATE LOCATION WITH PLUMBING CONTRACTOR. SEE DETAIL 1/A6.1 FOR MORE INFORMATION.
- 4 5"x5" DOWNSPOUTS LOCATED AS SHOWN. TIE INTO STORM DRAINAGE PIPING UNDERGROUND. REFER TO CIVIL PLANS FOR ADDITIONAL INFORMATION.
- 5 ROOF CRICKET WITH SLOPE EQUAL TO ROOF. SEE DETAIL 5/A6.1 FOR MORE INFORMATION.
- 6 MECHANICAL UNIT, REFER TO HVAC PLANS.
- 7 EXHAUST FAN, REFER TO HVAC PLANS.
- 8 CONDENSER UNITS, REFER TO MECHANICAL AND ELECTRICAL FOR SPECIFICATIONS.
- 9 X-TRED WALKWAY PAD, ITEM NUMBER W56TP0301X OR APPROVED EQUAL. VERIFY WITH OWNER. FURNISHED AND INSTALLED BY ROOFING SUBCONTRACTOR.
- 10 INSTALL CANDY CANE STYLE PENETRATIONS FOR ALL ROOFTOP EQUIPMENT.

GENERAL NOTES:

1. THE ROOF STRUCTURE SHALL NOT BE USED FOR STOCKPILING OF EQUIPMENT OR MATERIALS UNLESS APPROVED BY THE ARCHITECT, STRUCTURAL ENGINEER, AND THE JOIST MANUFACTURER.
2. THE ROOFING SYSTEM SHALL BE AS PER DRAWINGS AND PER CONSTRUCTION SPECIFICATIONS.
3. COORDINATE ROOF ELEVATIONS WITH STRUCTURAL DRAWINGS.
4. ROOF TOP UNITS: GENERAL CONTRACTOR TO INSTALL FLASHING AND COUNTER-FLASHING TO ROOFING MANUFACTURER SPECIFICATIONS.
5. PRESSURE WASH ROOF PRIOR TO COMPLETION OF THE STORE.
6. CONTRACTOR TO INSTALL OVERFLOW SENSORS TO ALL ROOF TOP RTU UNITS.
7. CONTRACTOR TO INSTALL TWO (2) LAYERS OF THREE (3) INCH ISO INSULATION STAGGERED OVER 1 1/2" METAL DECKING. THESE CREATE 17.4 X 2 = 34.8 LETTR R VALUE. THE INSULATION IS TO BE INSTALLED FULLY ADHERED USING GLY BOND 500 SPOT SHOT BY GAF. TPO 60 MIL WHITE IS FULLY ADHERED TO THE ISO INSULATION USING TPO BONDING ADHESIVE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS. ALL VERTICAL PARAPET WALLS SHALL HAVE 60 MIL WHITE TPO MATERIALS INCLUDING PARAPET CAP.
8. WHERE THE PARAPET IS NOT 42 INCHES IN HEIGHT AND EQUIPMENT IS LOCATED WITHIN 10 FEET OF THE ROOF EDGE, A GUARD SHALL BE REQUIRED TO BE PLACED TO PROTECT SERVICE PERSONNEL. GUARD SHALL NOT ALLOW THE PASSAGE OF A 21-INCH SPHERE AND SHALL EXTEND 30 INCHES BEYOND EACH END OF EQUIPMENT REQUIRING SERVICE. (PER FBC-MECH 304.11)

PLAN SYMBOLS

- REVISION NUMBER
- KEYNOTE
- EQUIPMENT TAG - REFER TO PAGE A3.0
- DETAIL TAG
- PLAN DETAIL
- ELEVATION DATUM TAG



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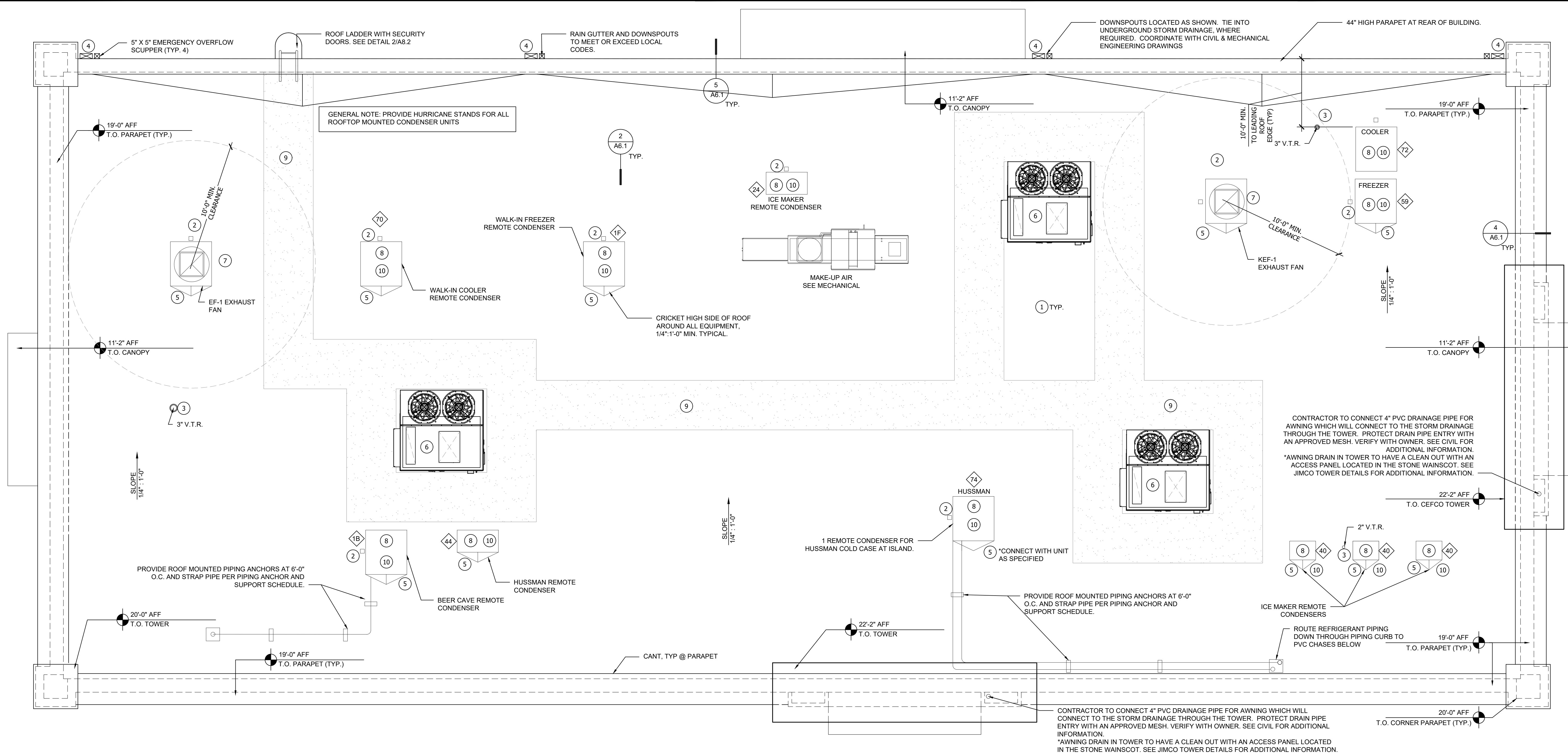
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Project Name and Address
CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title
ROOF PLAN

Project No. 170-101.00	Sheet A6.0
Drawn By KM	Reviewed By AFO



EXTERIOR FINISH SCHEDULE

EXTERIOR BUILDING SPECIFICATIONS

- 1 CREATIVE FAUX STONE AS PER OWNER'S SPECIFICATIONS.
 - 2 7/8" 3 - COAT CEMENT PLASTER CONTINUOUS INSULATED STUCCO SYSTEM ON METAL LATH. APPROVED STUCCO SYSTEMS:
-SENERGY PLATINUM CI STUCCO
-PAREX ARMOURWALL 300 STUCCO ASSEMBLY
-STO POWERWALL CI STUCCO SYSTEM
COLOR: SHERWIN WILLIAMS SW6112 BISCUIT.
 - 3 PREFABRICATED CEFCO TOWER FW-2805 #28 BY JIMCO. GENERAL CONTRACTOR TO PROVIDE AND COORDINATE INSTALLATION.
 - 4 METAL PANEL 26 GAUGE R-PANEL. PAINT SHERWIN WILLIAMS SW6112 BISCUIT.
- MANSARD ROOF SPECIFICATIONS**
- 5 36" / 56" FASCIA SYSTEM RED ACM FP-1
7" FASCIA SYSTEM YELLOW ACM FP-2.
- DOORS AND FRAMES**
- 6 PAINT TO MATCH BUILDING, SHERWIN WILLIAMS SW6112 BISCUIT.

FLASHING SPECIFICATIONS

- 7 DURO-LAST VINYL COATED METAL COPING, COLOR SW6112 BISCUIT. FROM DURO-LAST INC. 800-248-0280.
- 8 COLLECTOR BOXES AND DOWNSPOUTS - BOTTOM 42" PAINT SW6115 TOTALLY TAN. TO MEET OR EXCEED ALL LOCAL, STATE AND FEDERAL CODES.
- 9 COLLECTOR BOXES AND DOWNSPOUTS - ABOVE 42". PAINT SW6112 BISCUIT. TO MEET OR EXCEED ALL LOCAL, STATE AND FEDERAL CODES.

STOREFRONT SYSTEM SPECIFICATIONS

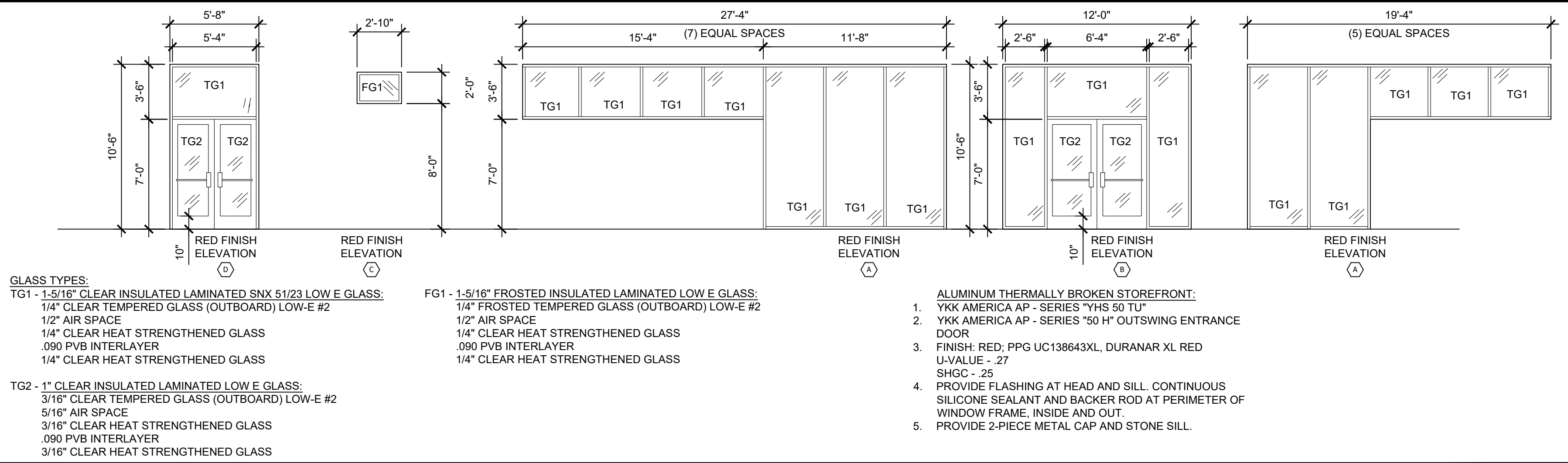
- 10 ALUMINUM STOREFRONT FRAMING SYSTEM FRAME COLOR: PG UC138643XL DURANAR XL RED.

BUILDING SIGNAGE

- 11 INTERNALLY ILLUMINATED CAN SIGN WITH CEFCO LOGO.
- 12 ACCESS LADDER SW6112 BISCUIT.
- 13 PRE-FAB AWNING COLOR TO BE CHOSEN BY OWNER.
- 14 CORNICE TRIM COLOR TO BE CHOSEN BY OWNER.
- 15 SIGNAGE PROVIDED BY OTHERS.
- 16 ADDRESS NUMBERS IN COMPLIANCE WITH NFPA 1, 2018 EDITION WILL BE PROVIDED BY OWNER, LOCATED ABOVE ENTRY DOORS.

GENERAL NOTES

- 1. GENERAL CONTRACTOR TO VERIFY ALL FINISHES WITH OWNER PRIOR TO CONSTRUCTION
- 2. PRODUCT SUPPLIER TO SUBMIT COLOR / MATERIAL SAMPLES OF ALL MATERIALS TO OWNER



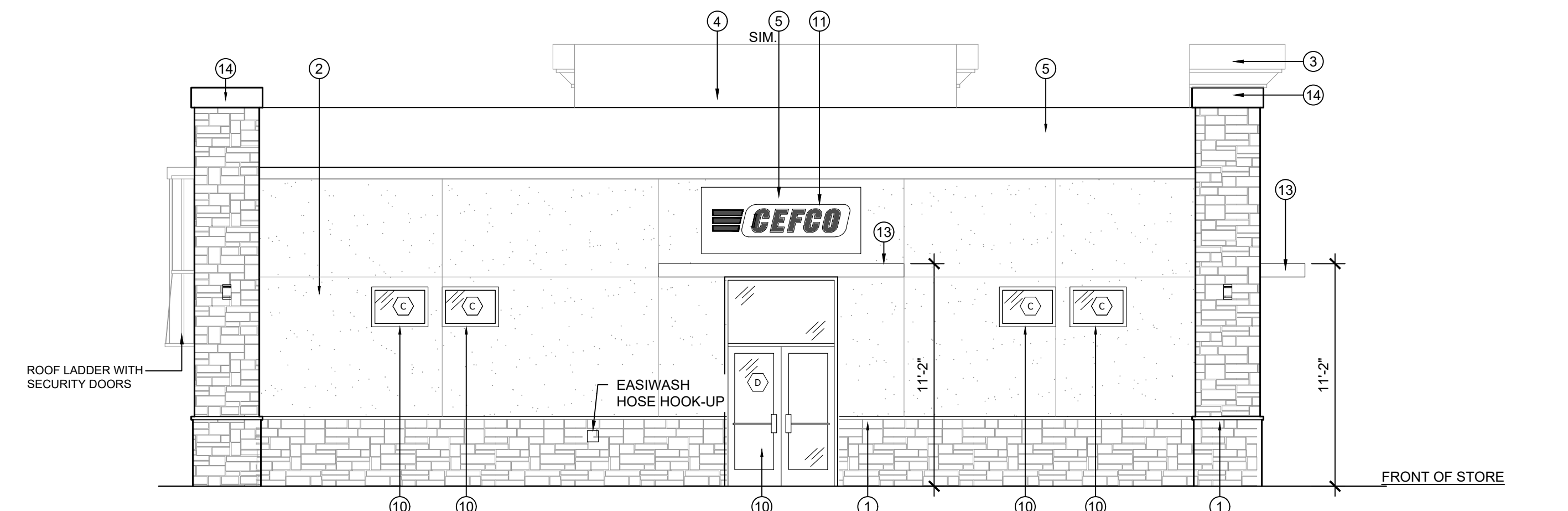
STOREFRONT ELEVATION AND LEGEND

SCALE	5
3/16"=1'-0"	



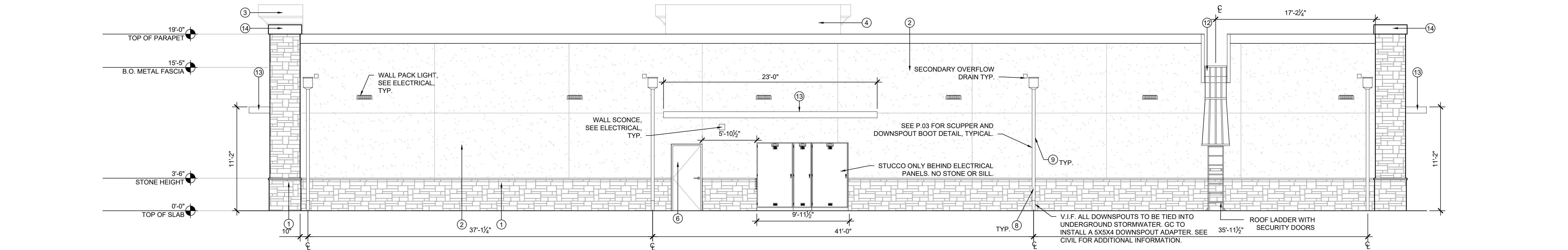
PLAN EAST - SIDE ELEVATION

SCALE	4
3/16"=1'-0"	



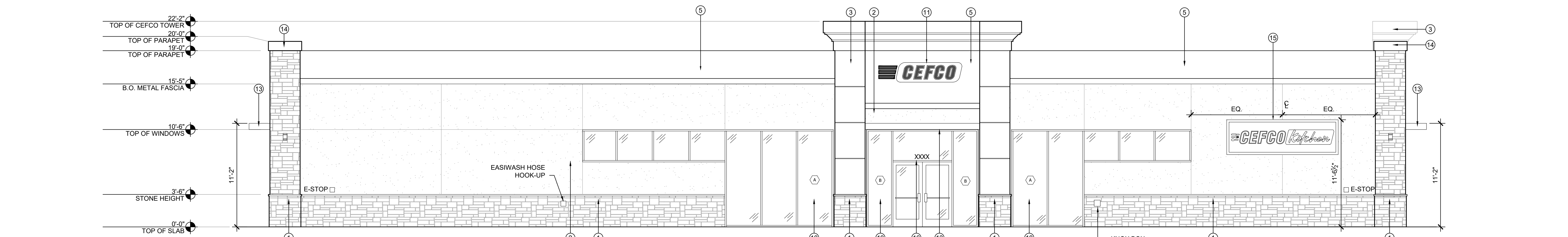
PLAN WEST - SIDE ELEVATION

SCALE	3
3/16"=1'-0"	



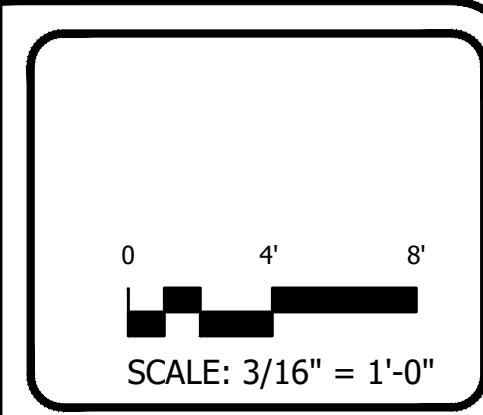
REAR ELEVATION

SCALE	2
3/16"=1'-0"	



FRONT ELEVATION

SCALE	1
3/16"=1'-0"	



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Sheet Title
EXTERIOR ELEVATIONS

Project No.
170-101.00

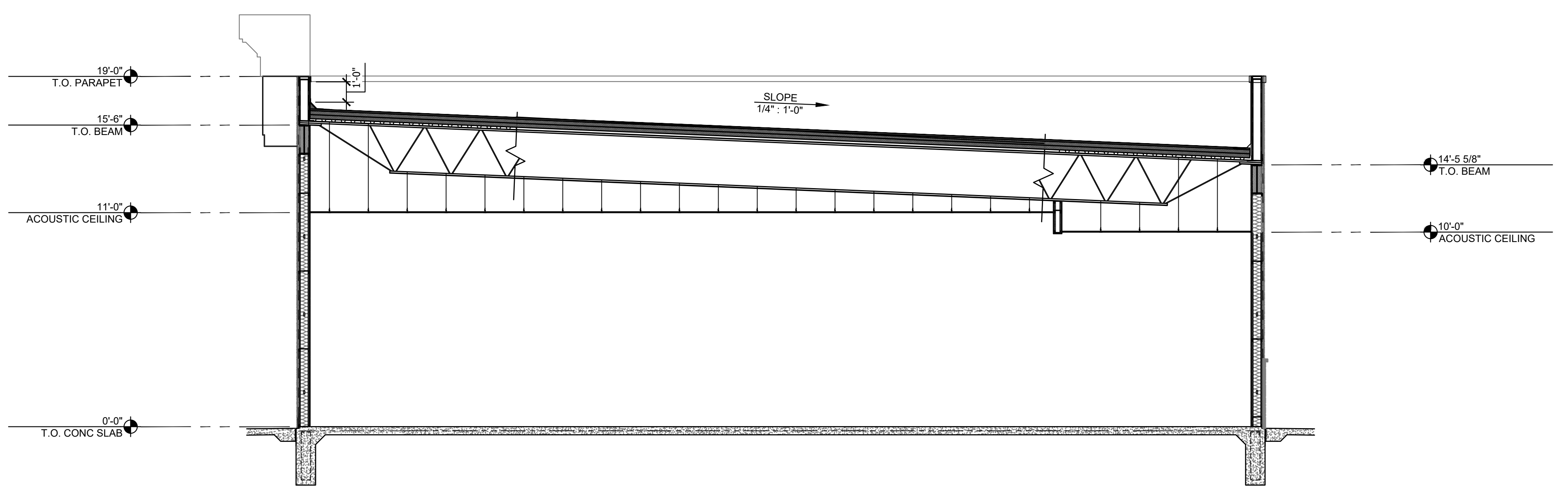
Drawn By
KM

Reviewed By
AFO

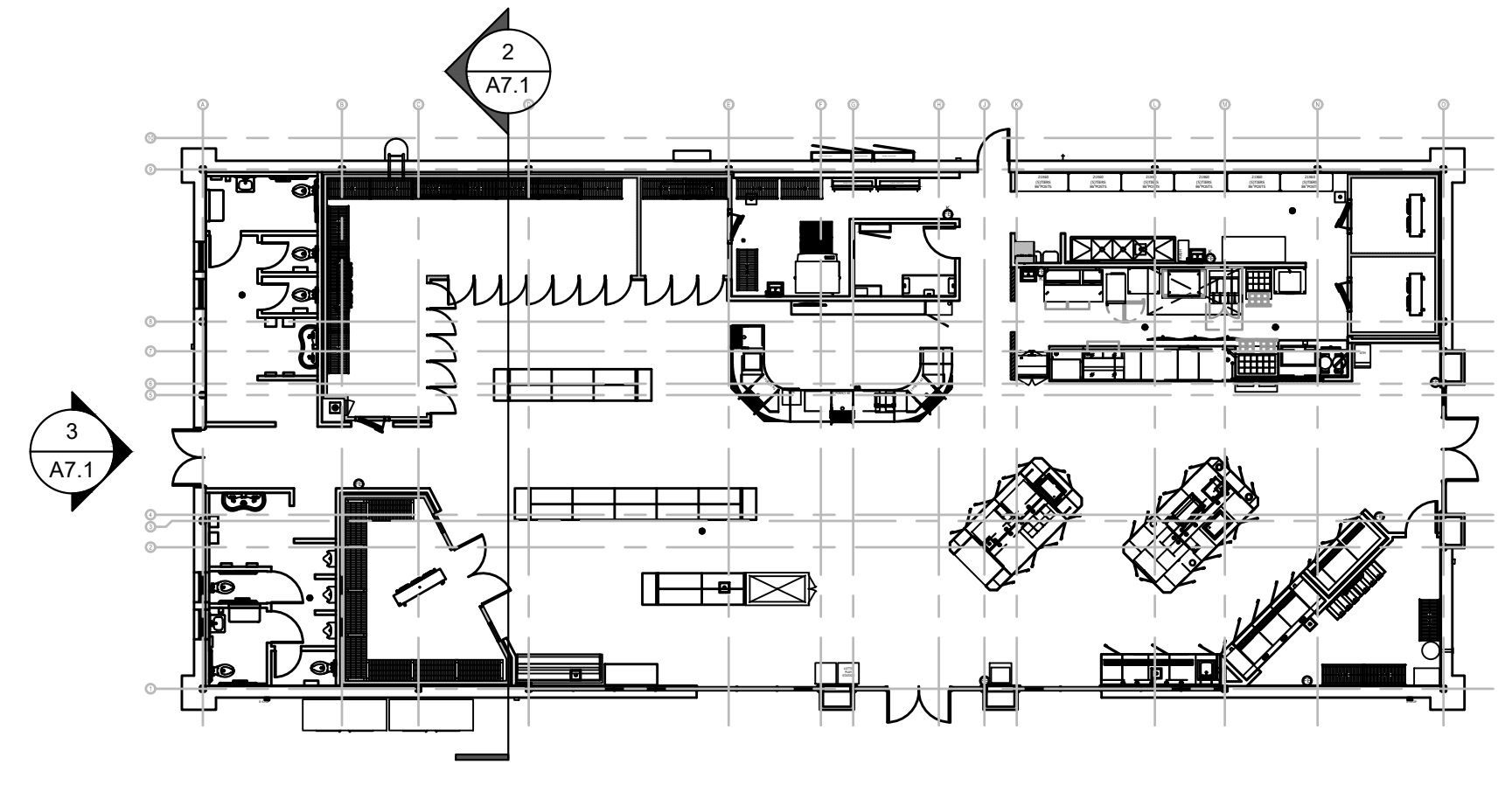
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A7.0



REFERENCE ELEVATION SCALE 1/4"=1'-0" **3**



BUILDING SECTION SCALE 1/4"=1'-0" **2**



REFERENCE PLAN SCALE 1/16" = 1'-0" **1**

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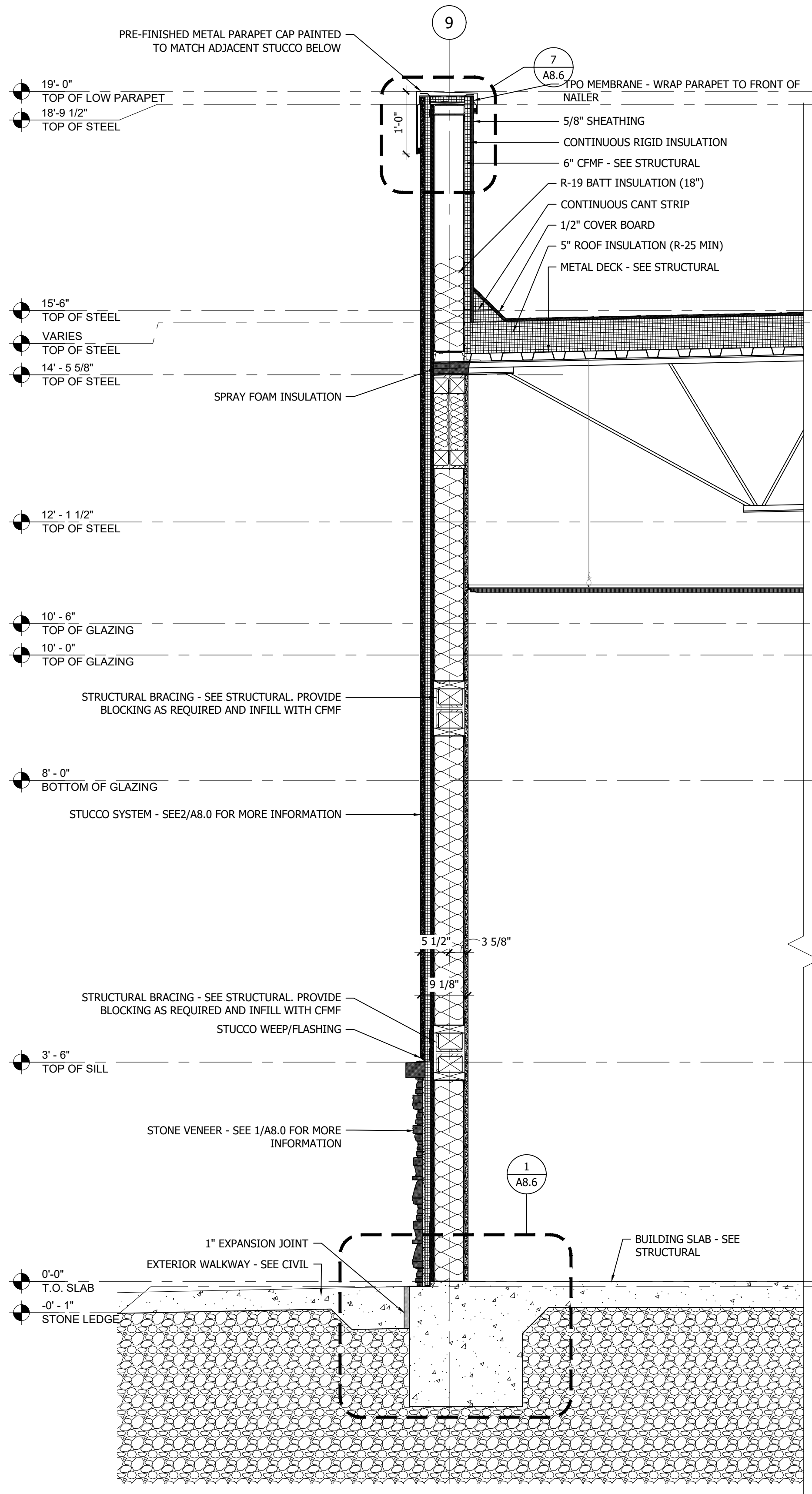
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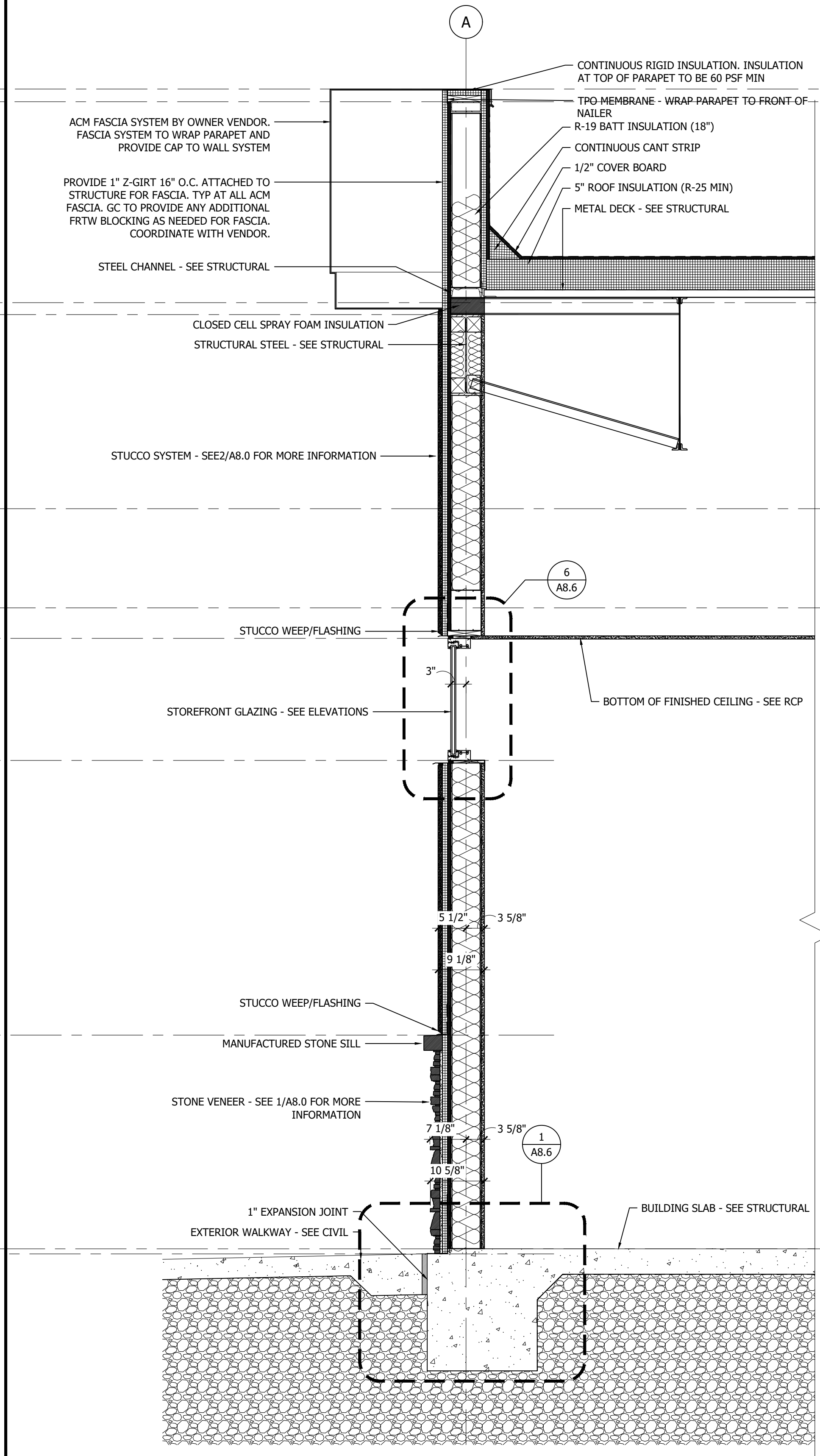
Sheet Title
BUILDING SECTION

Project No. 170-101.00
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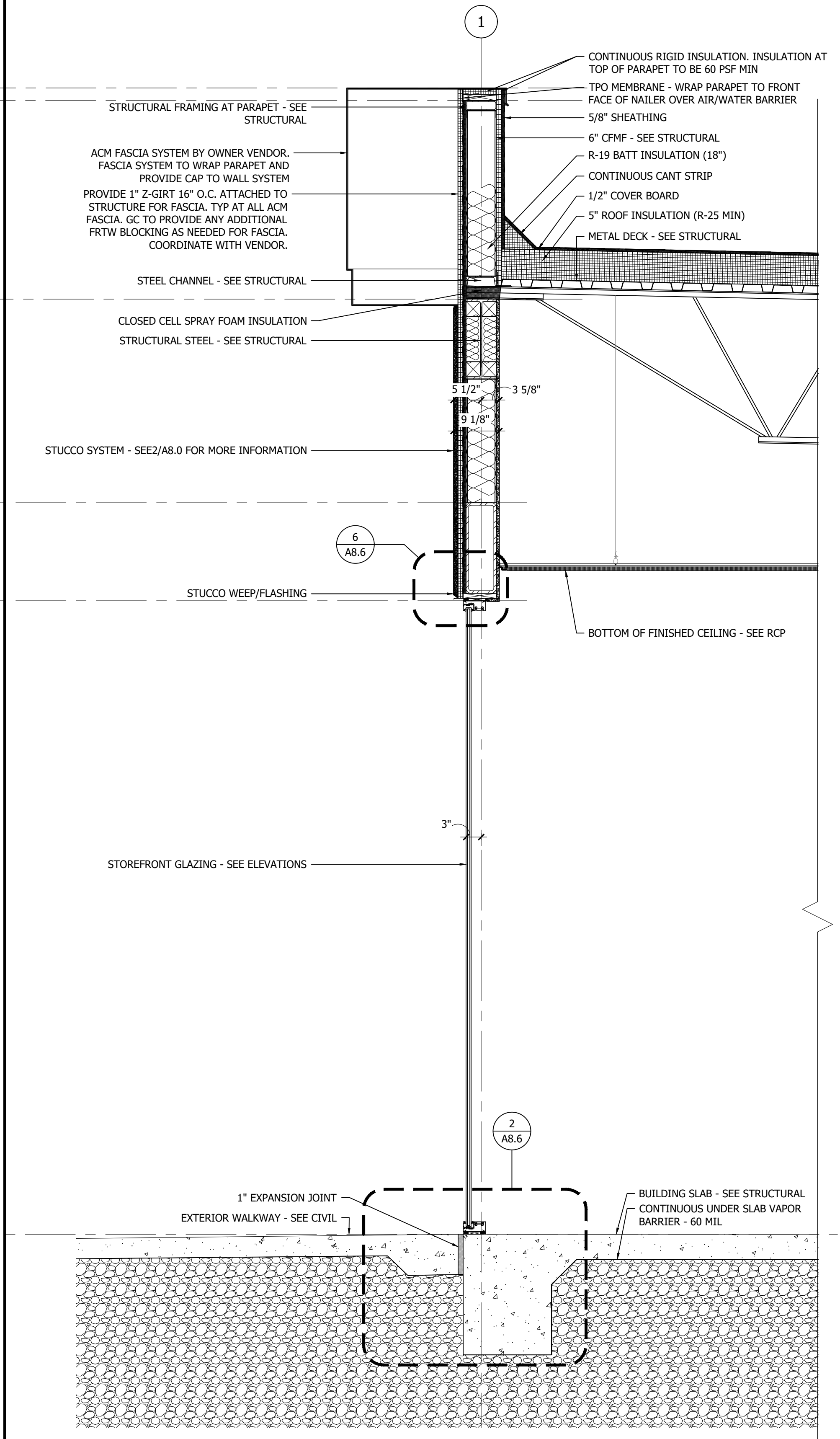
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WALL SECTION 3
SCALE 3/4"=1'-0"



WALL SECTION 2
SCALE 3/4"=1'-0"



WALL SECTION 1
SCALE 3/4"=1'-0"

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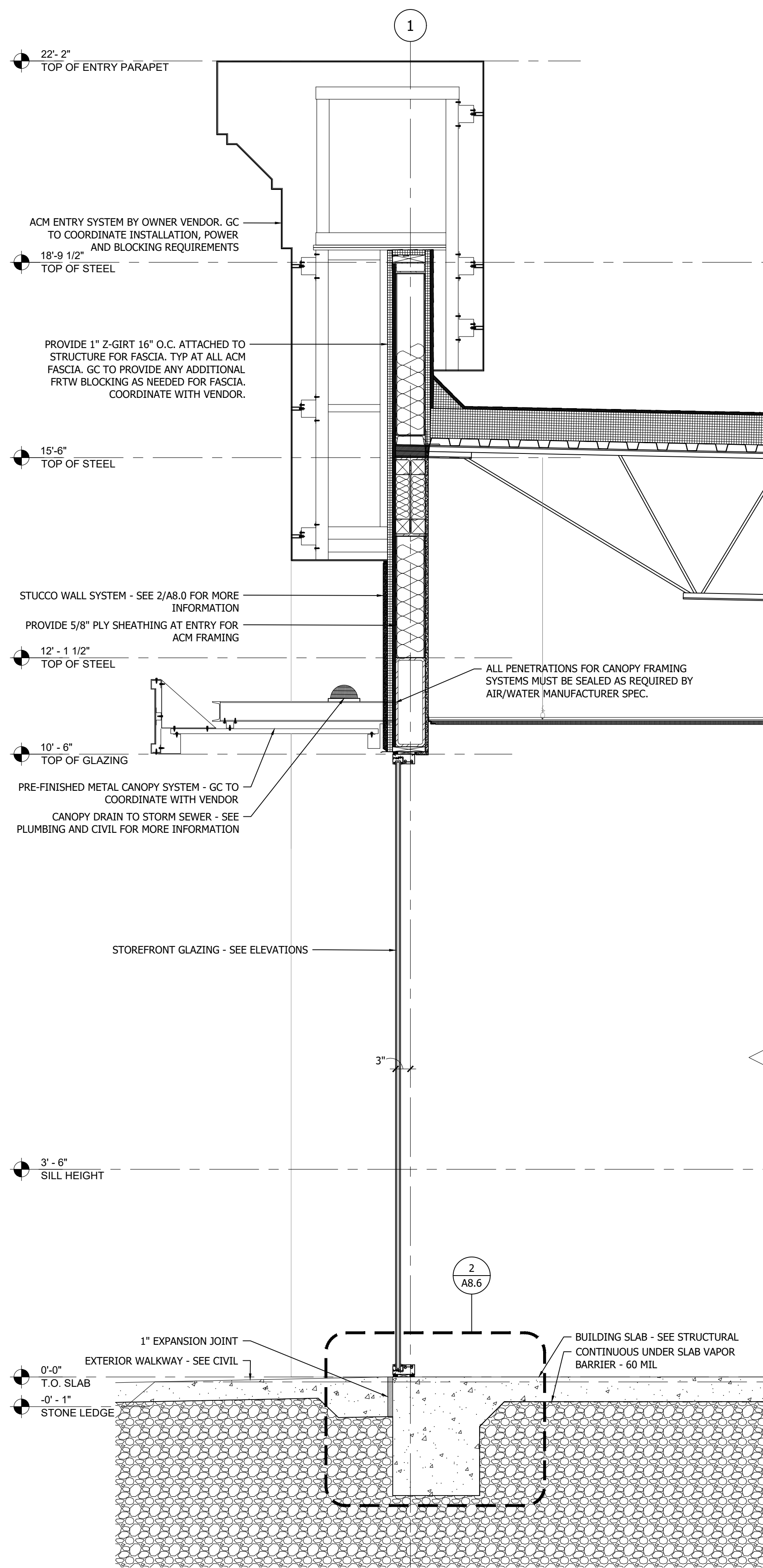
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WALL SECTIONS

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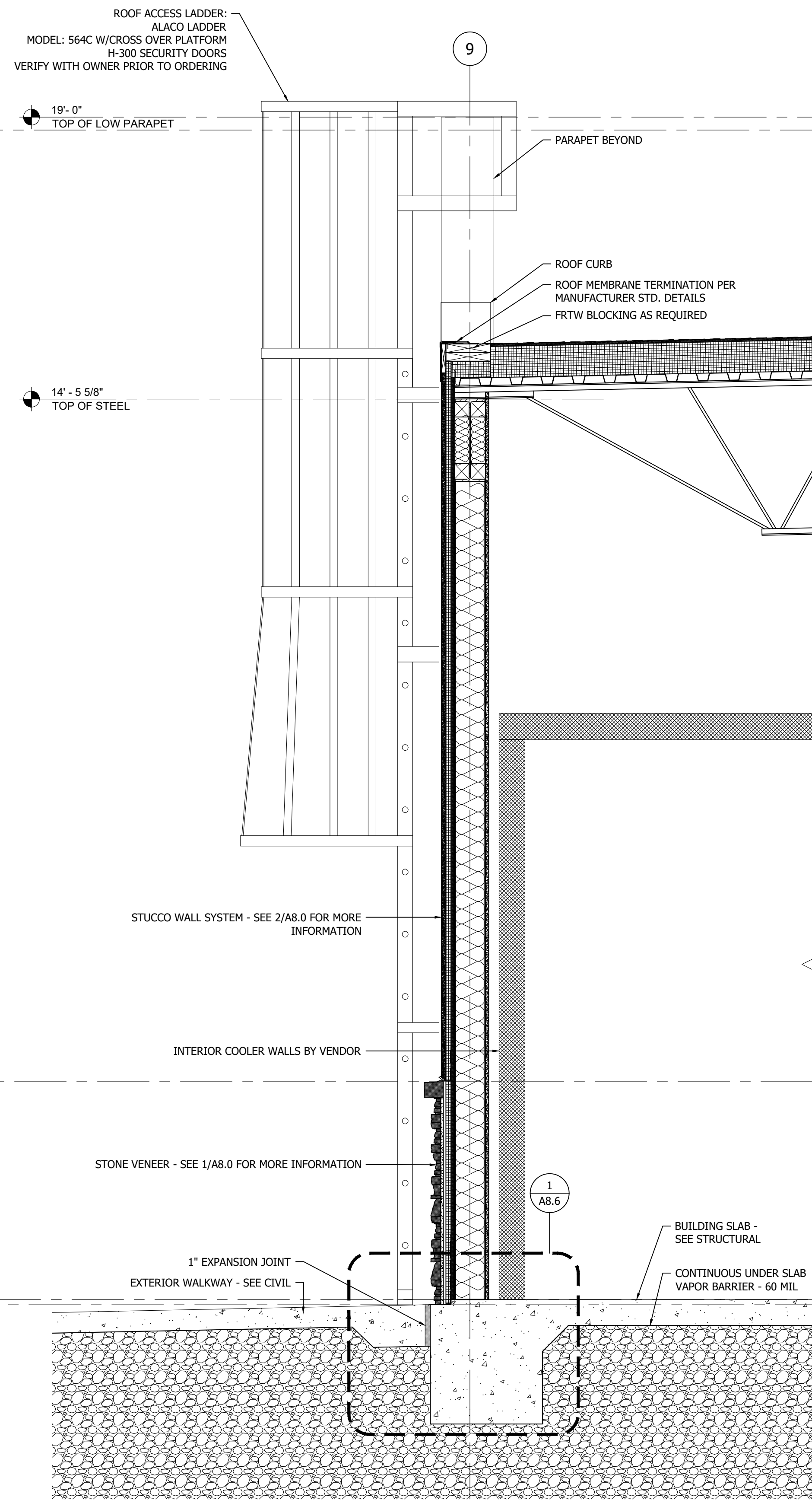
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WALL SECTION

SCALE
3/4"=1'-0"

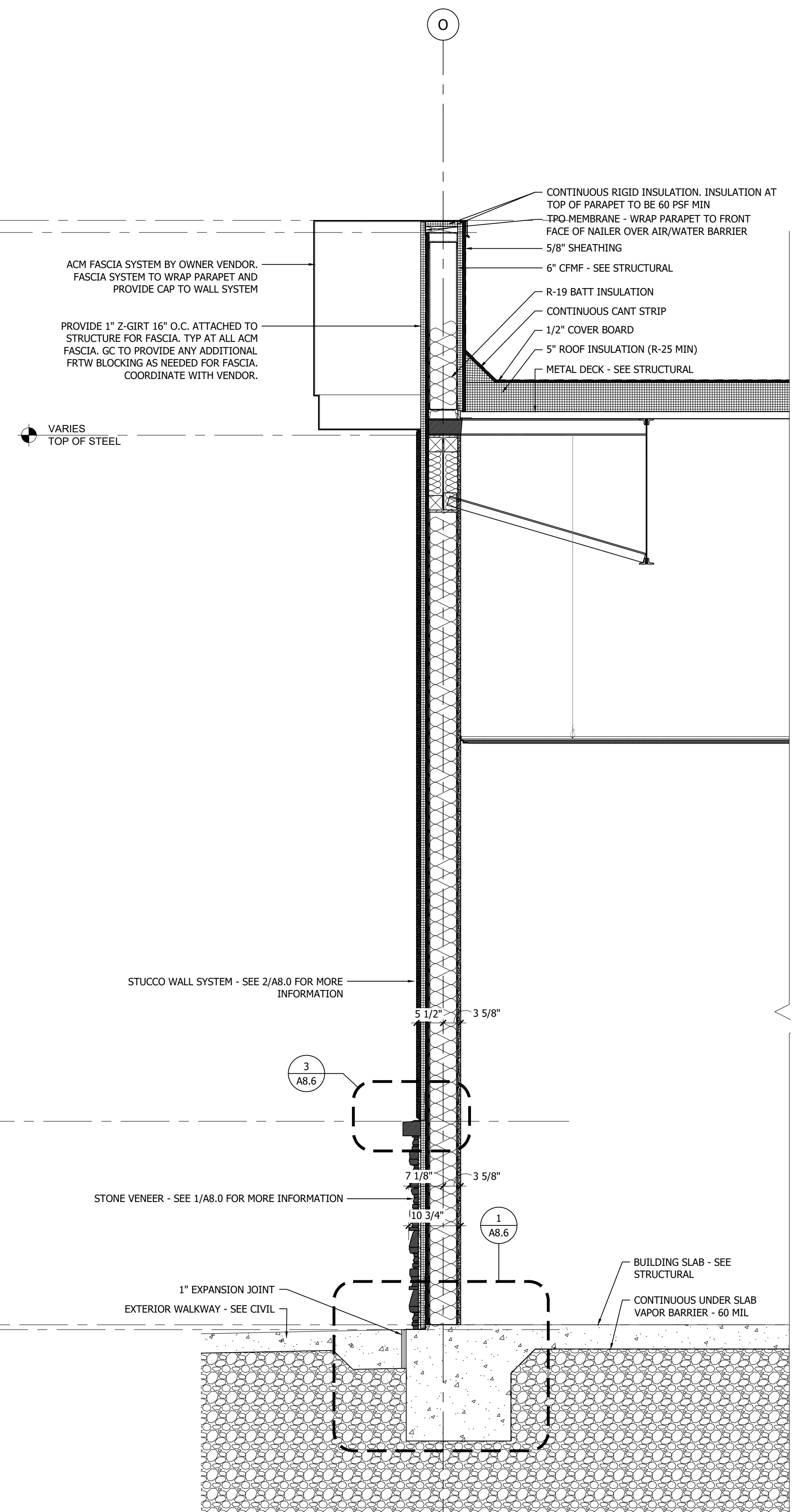
3



WALL SECTION

SCALE
3/4"=1'-0"

2



WALL SECTION

SCALE
3/4"=1'-0"

1

No.	Revision/Issue	Date
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Professional Engineer Seal: NISIT SAPPAKHAO, LICENSE No 64085, STATE OF FLORIDA, PROFESSIONAL ENGINEER

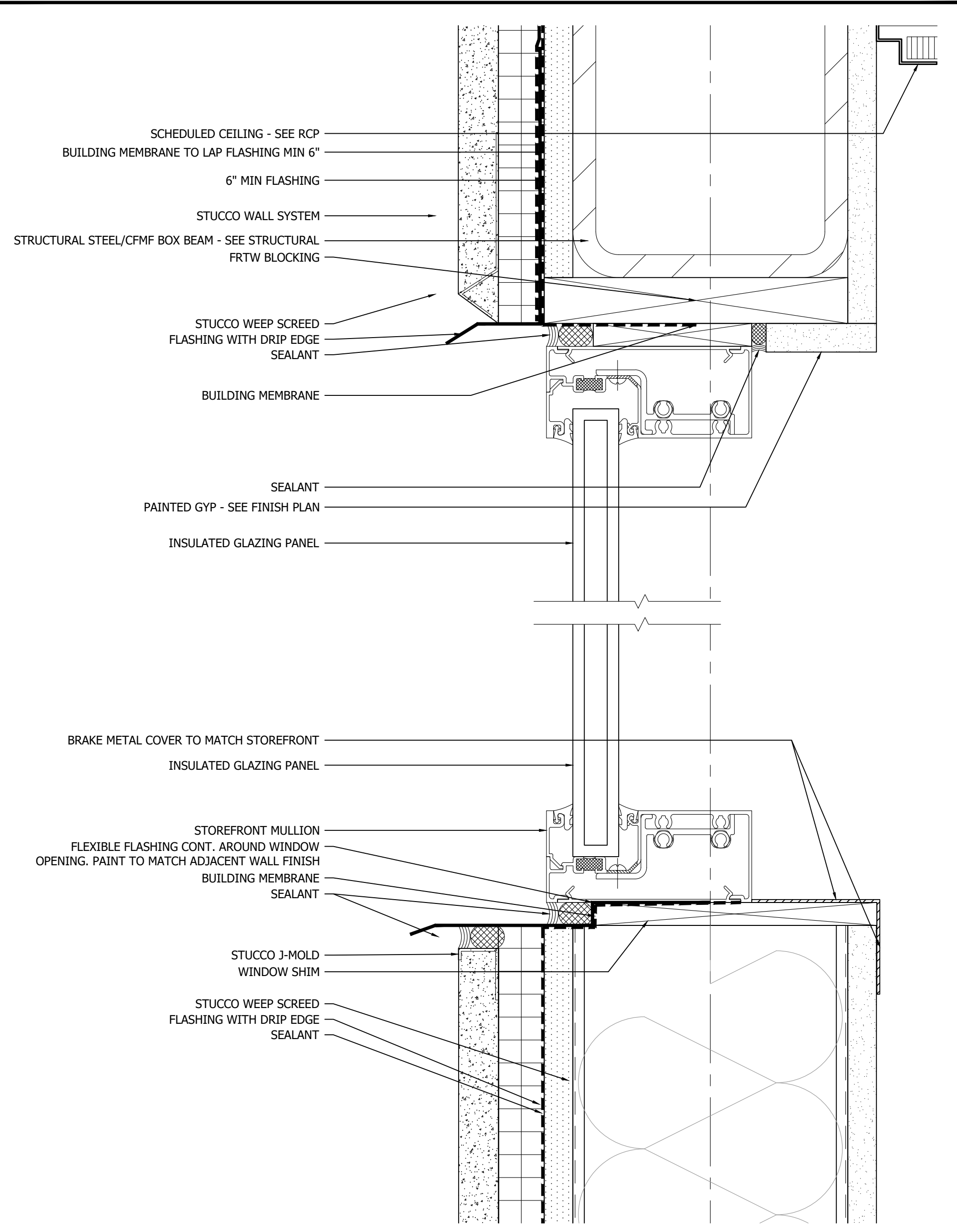
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Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

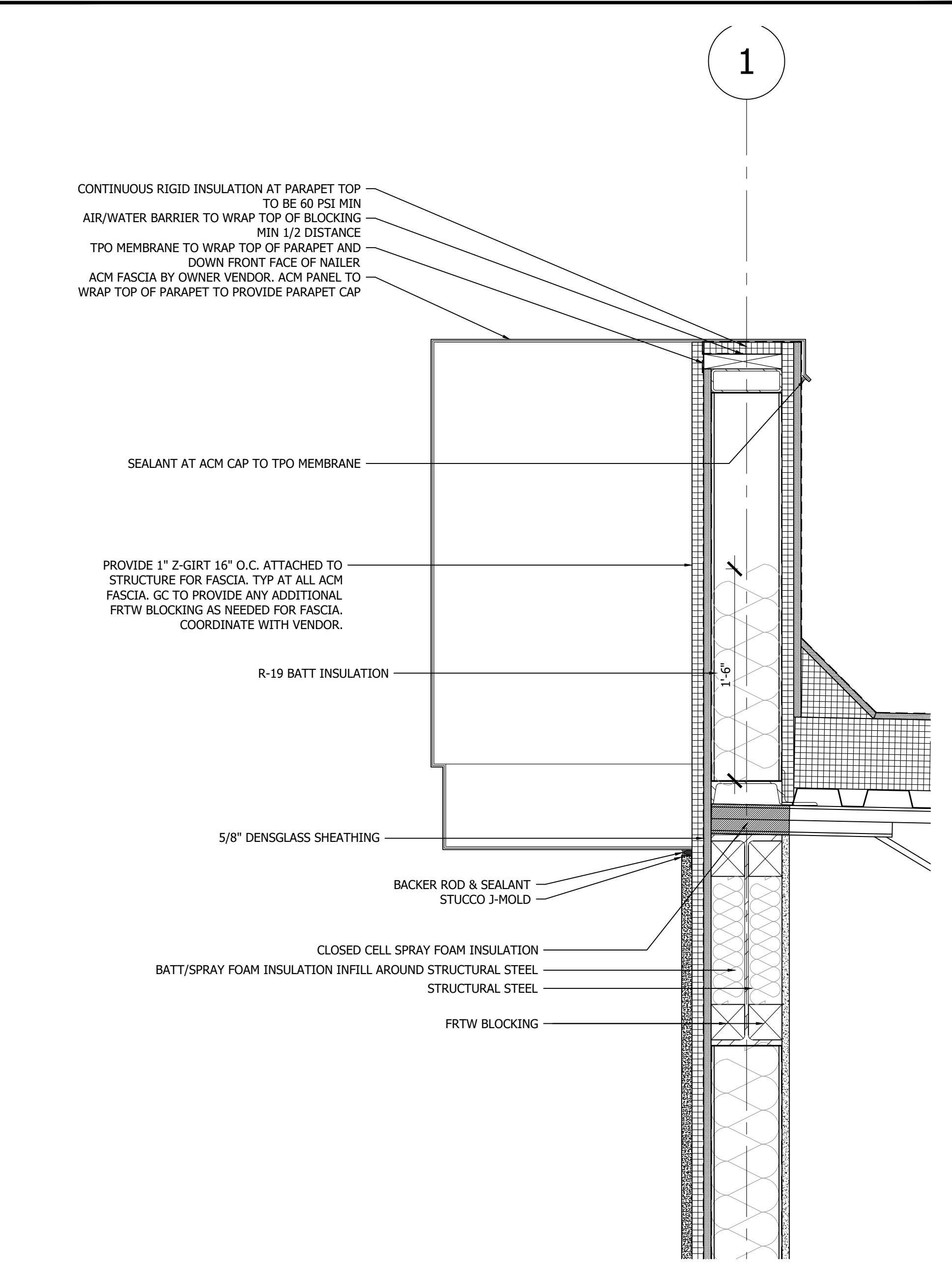
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WALL SECTIONS

Project No. 170-101.00
Drawn By KM
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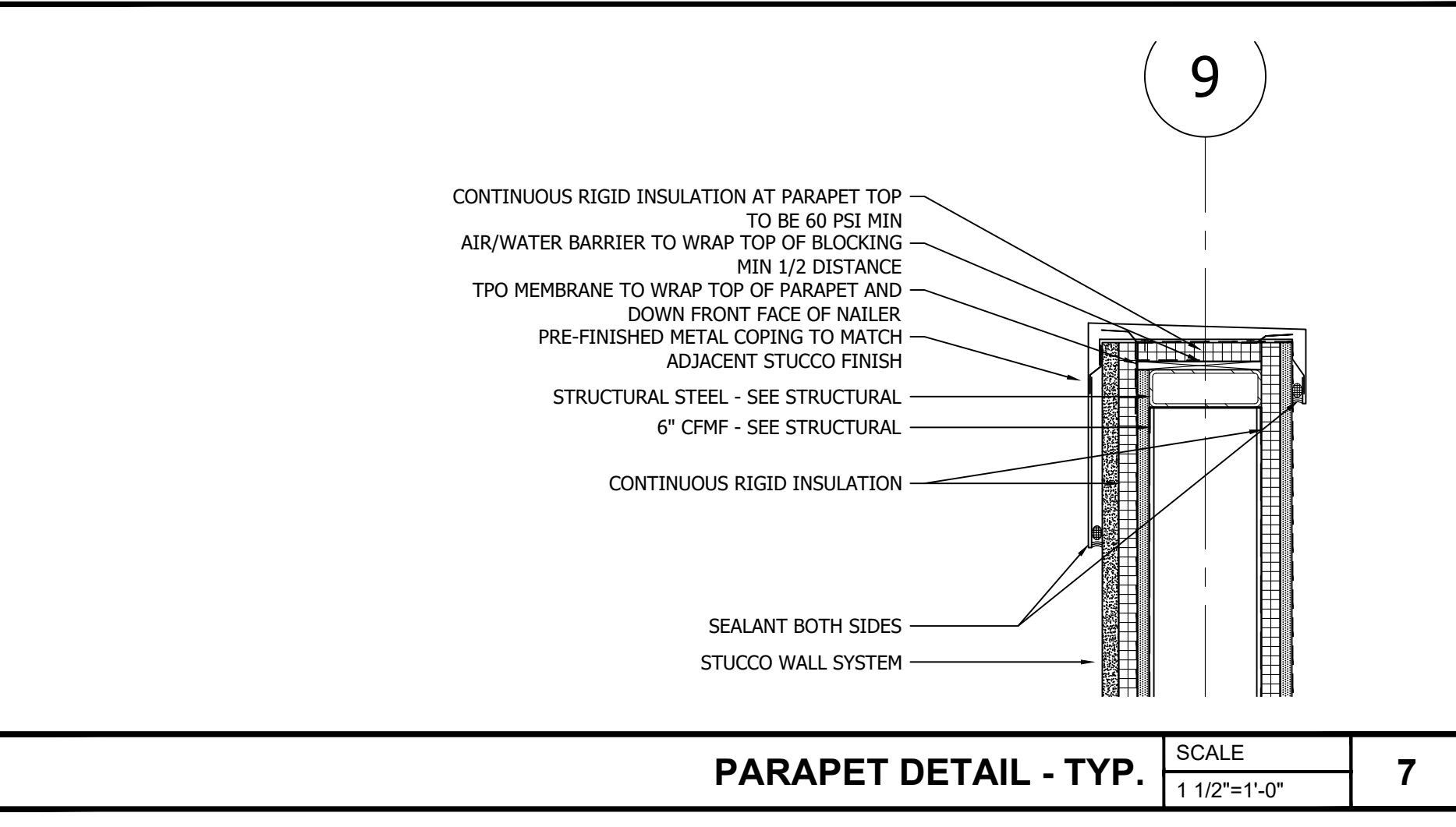
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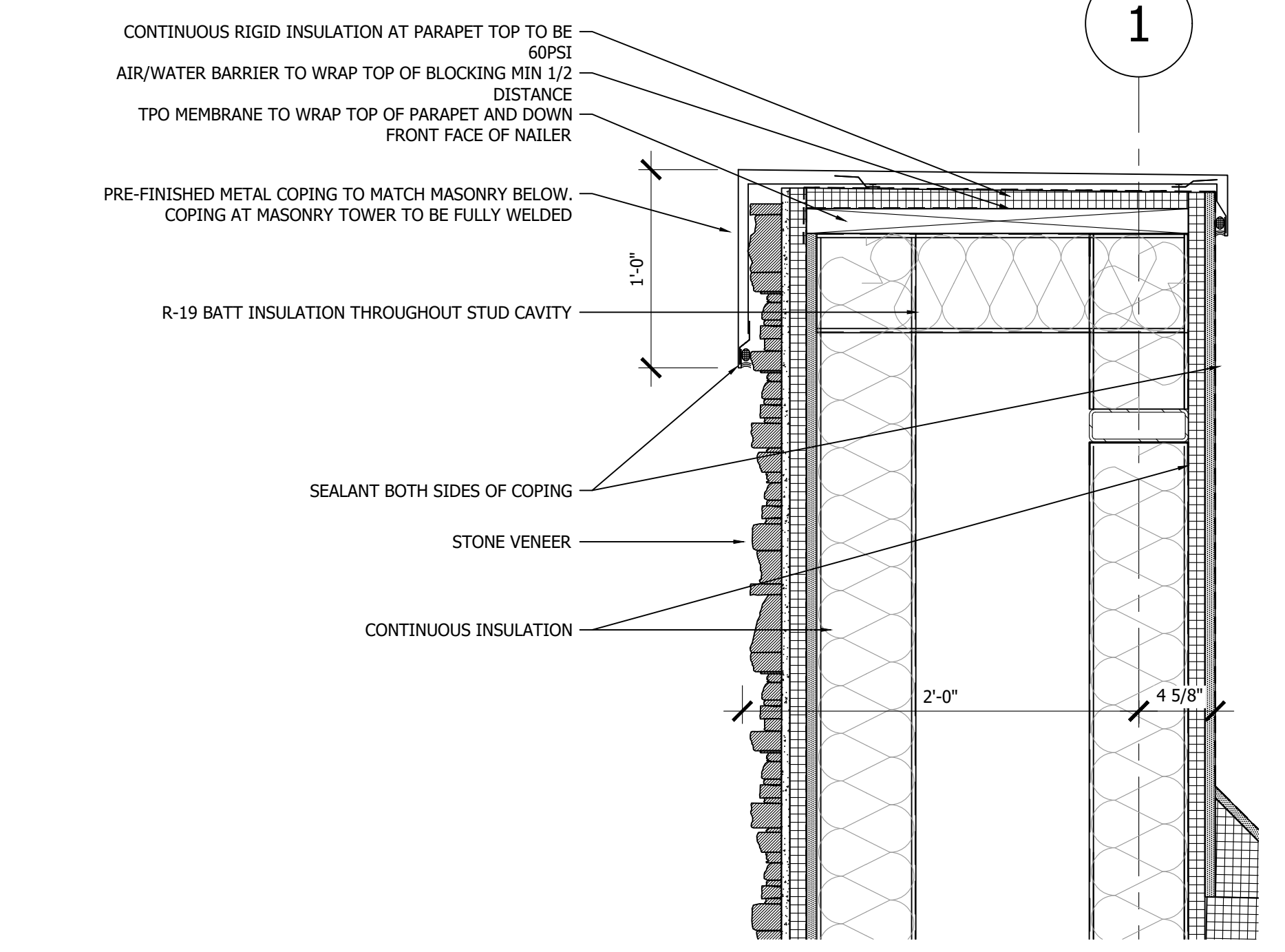
TOP/BOTTOM OF GLAZING AT STUCCO DETAIL SCALE 6"=1'-0" **6**



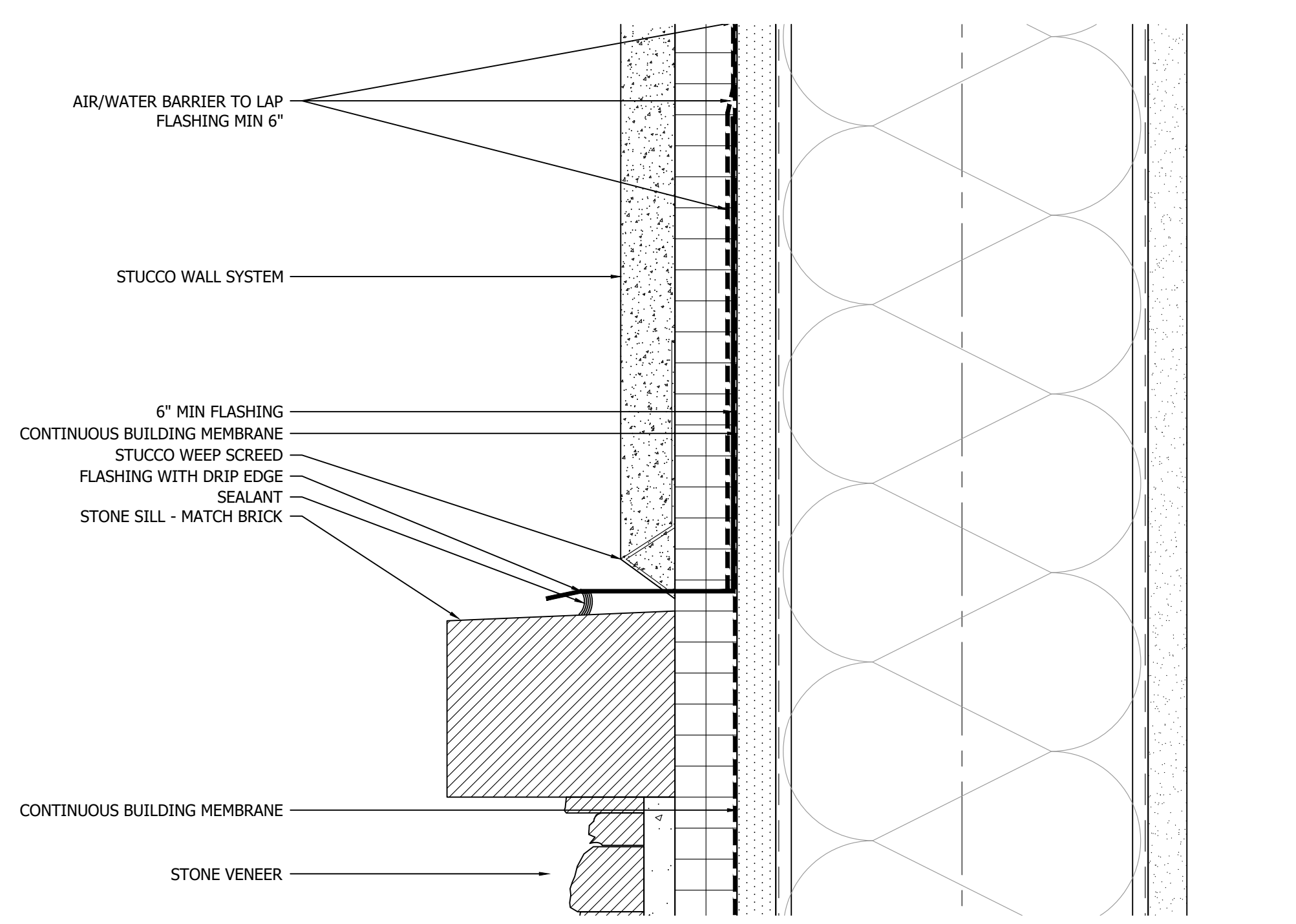
PARAPET DETAIL AT ACM PANEL SCALE 1 1/2"=1'-0" **5**



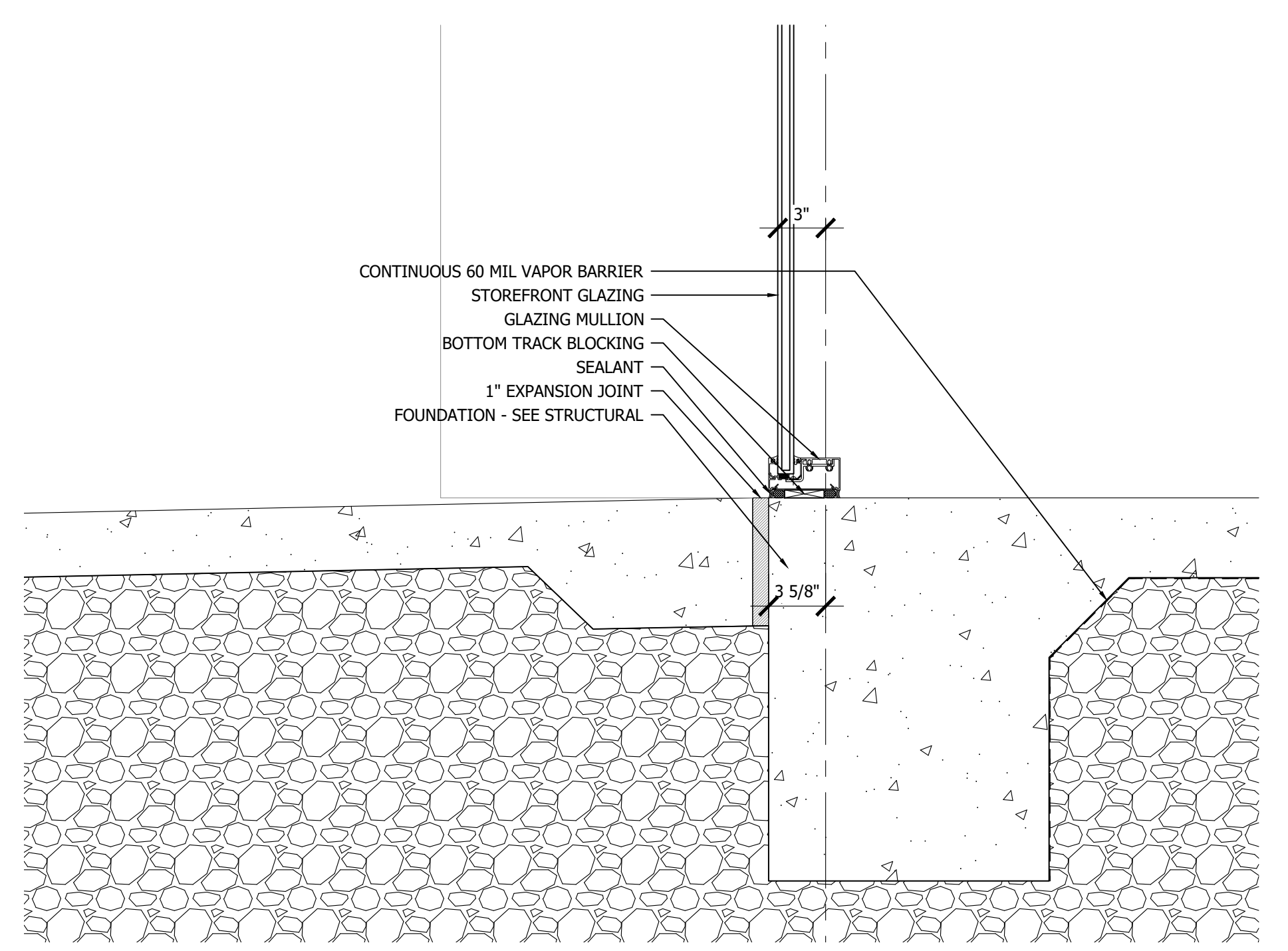
PARAPET DETAIL - TYP. SCALE 1 1/2"=1'-0" **7**



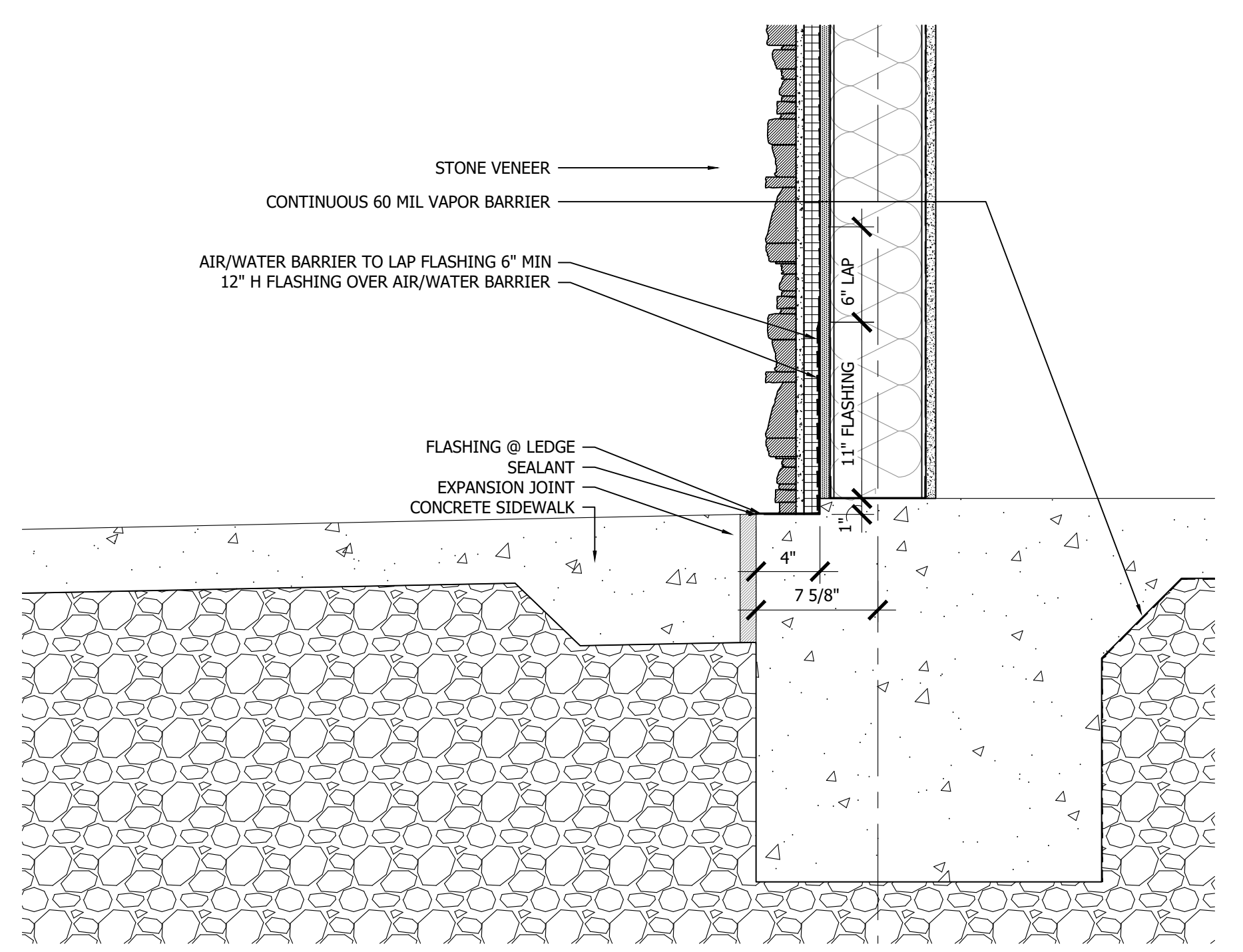
PARAPET DETAIL AT CORNER TOWER SCALE 1 1/2"=1'-0" **4**



STUCCO TO STONE DETAIL SCALE 6"=1'-0" **3**



FOUNDATION DETAIL AT STOREFRONT SCALE 1 1/2"=1'-0" **2**



FOUNDATION DETAIL AT STONE SCALE 1 1/2"=1'-0" **1**

05/31/2024	Date
1	No.
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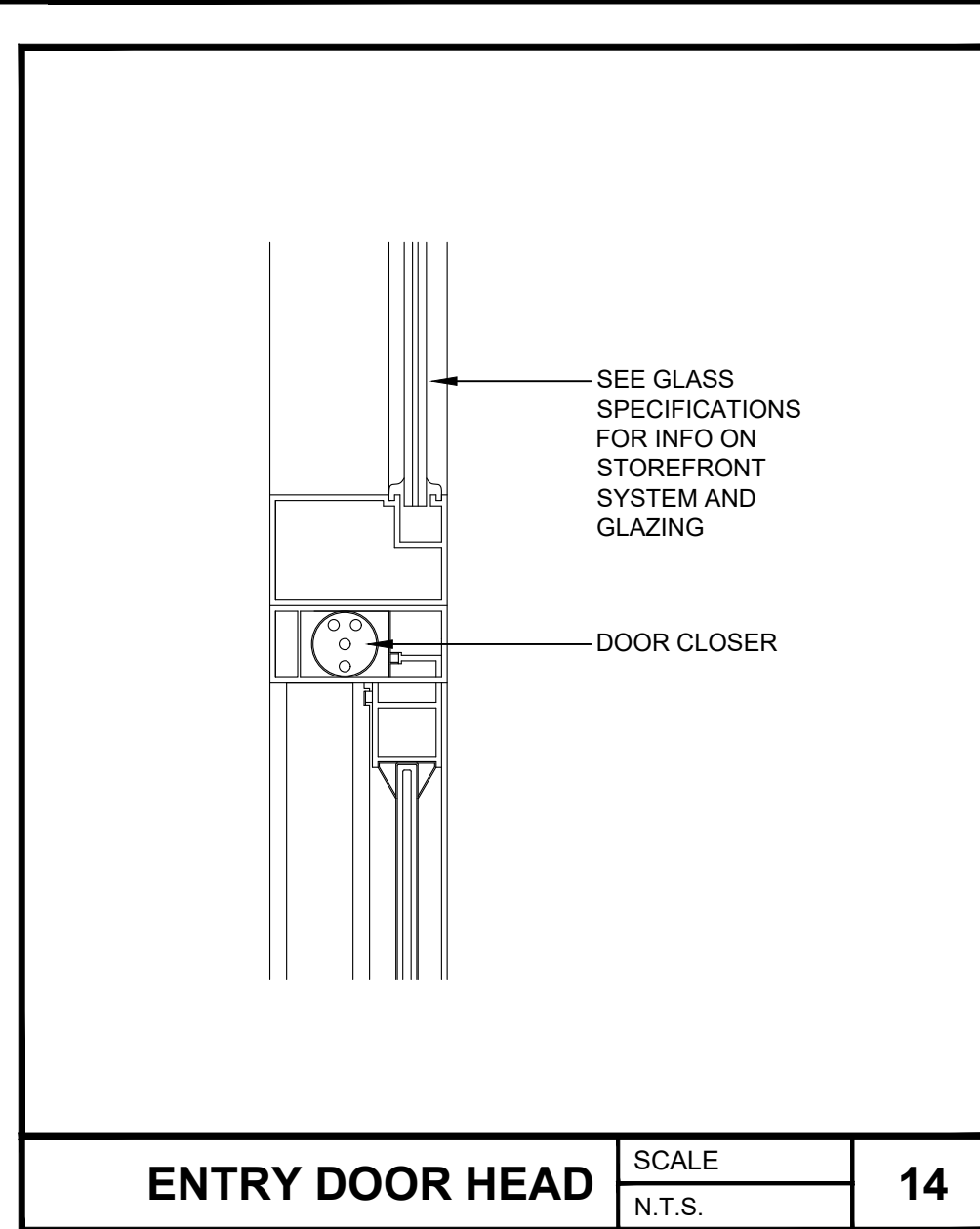
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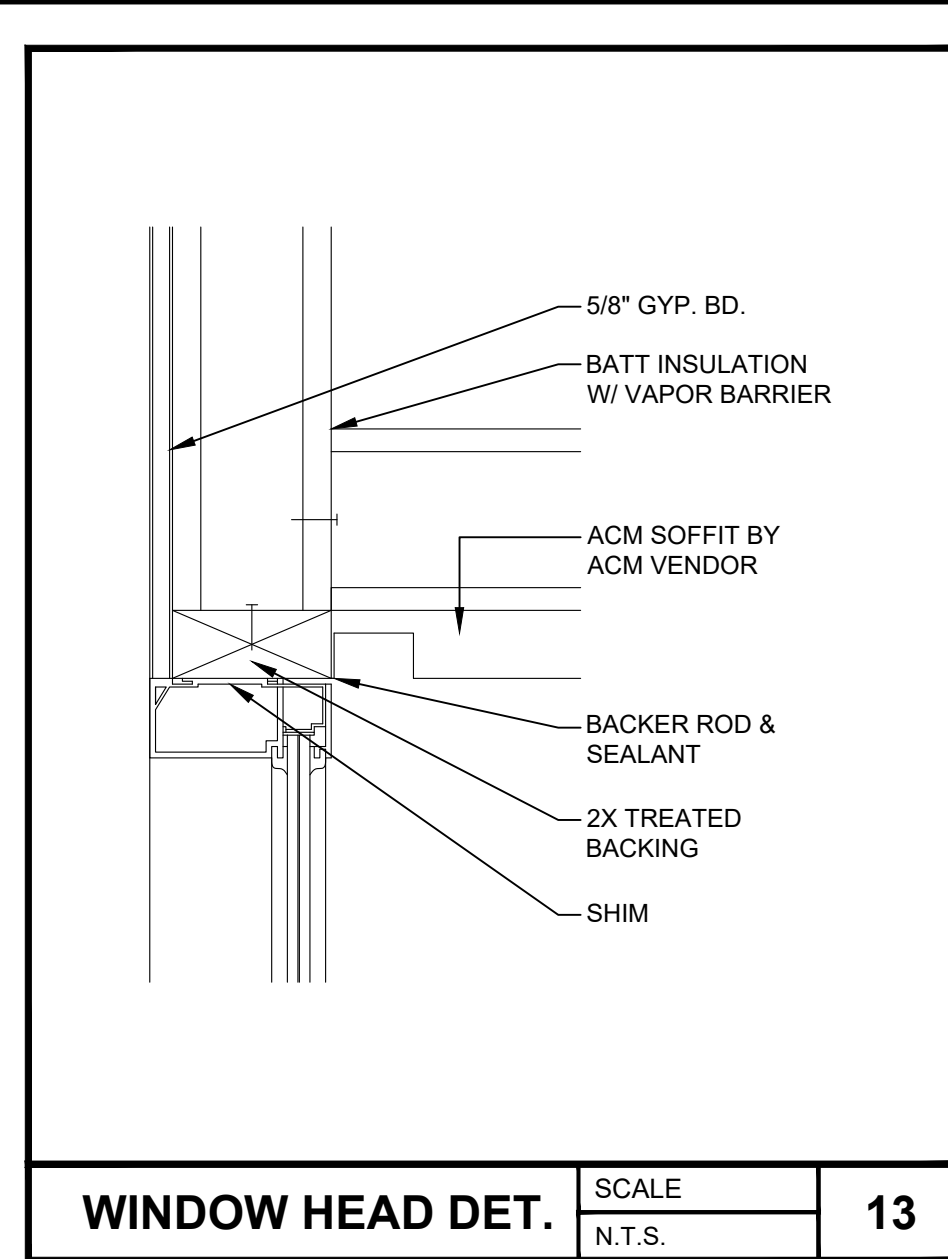
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WALL SECTION DETAILS

Project No. 170-101.00
 Drawn By KM
 Reviewed By AFO

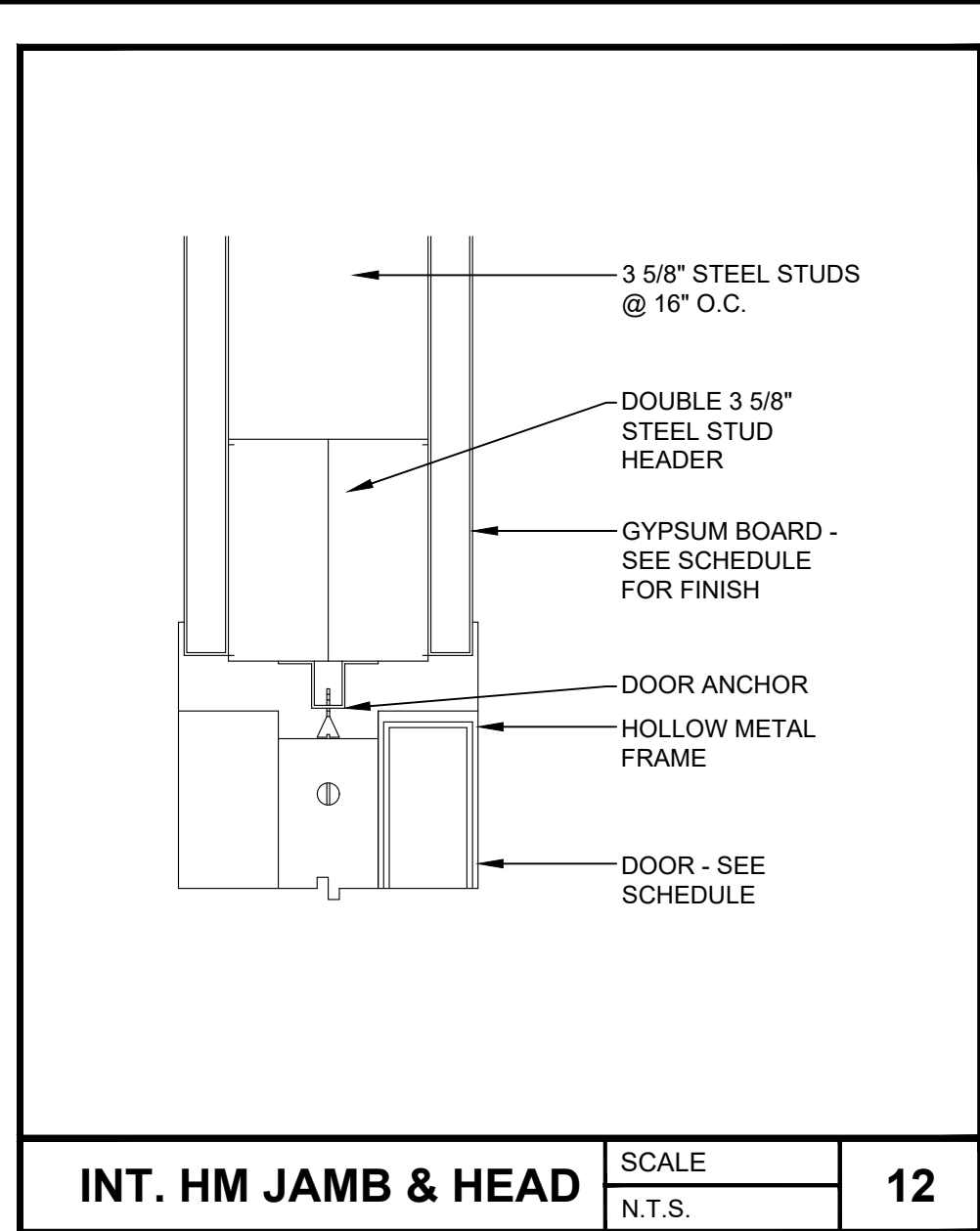
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A8.6



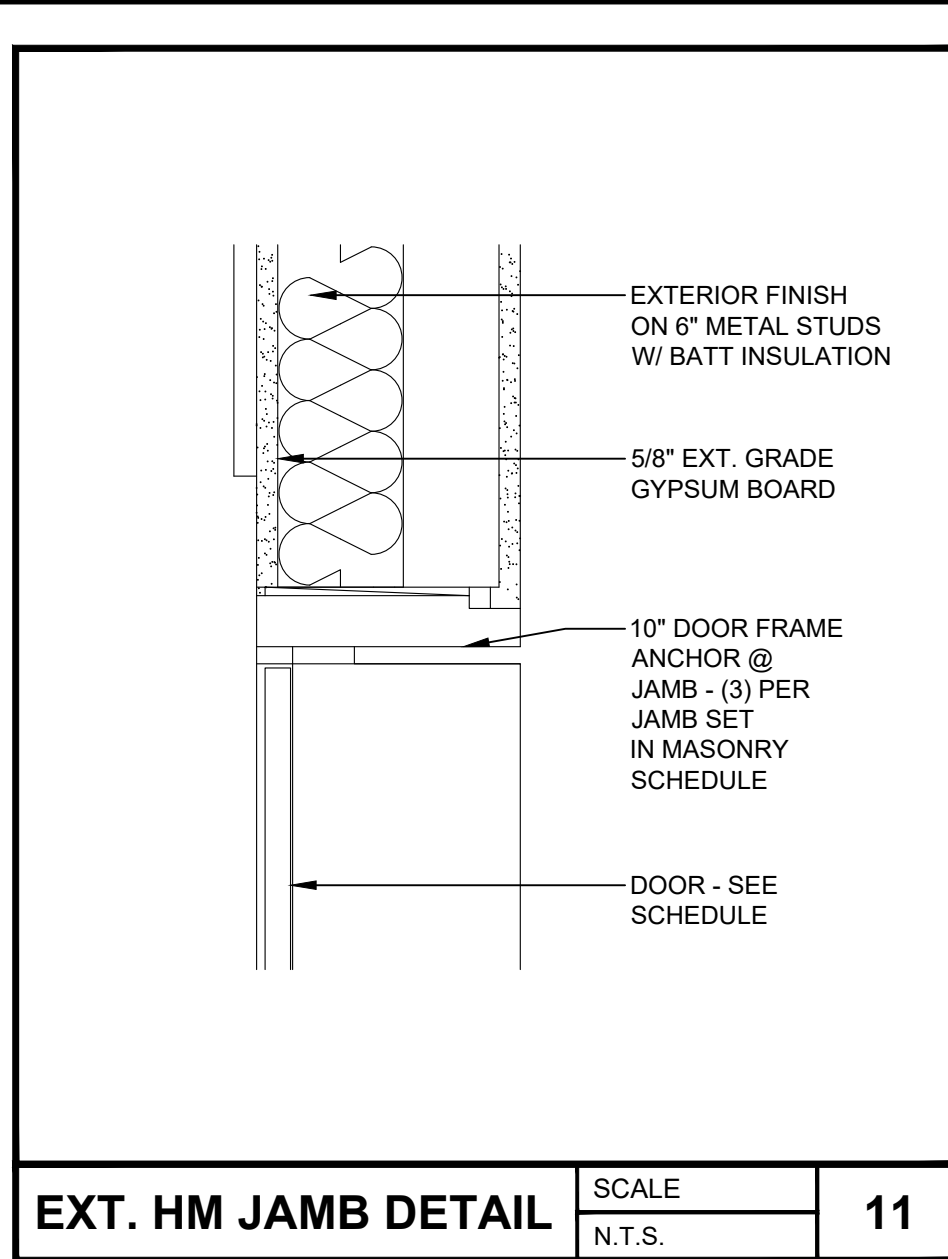
ENTRY DOOR HEAD SCALE N.T.S. **14**



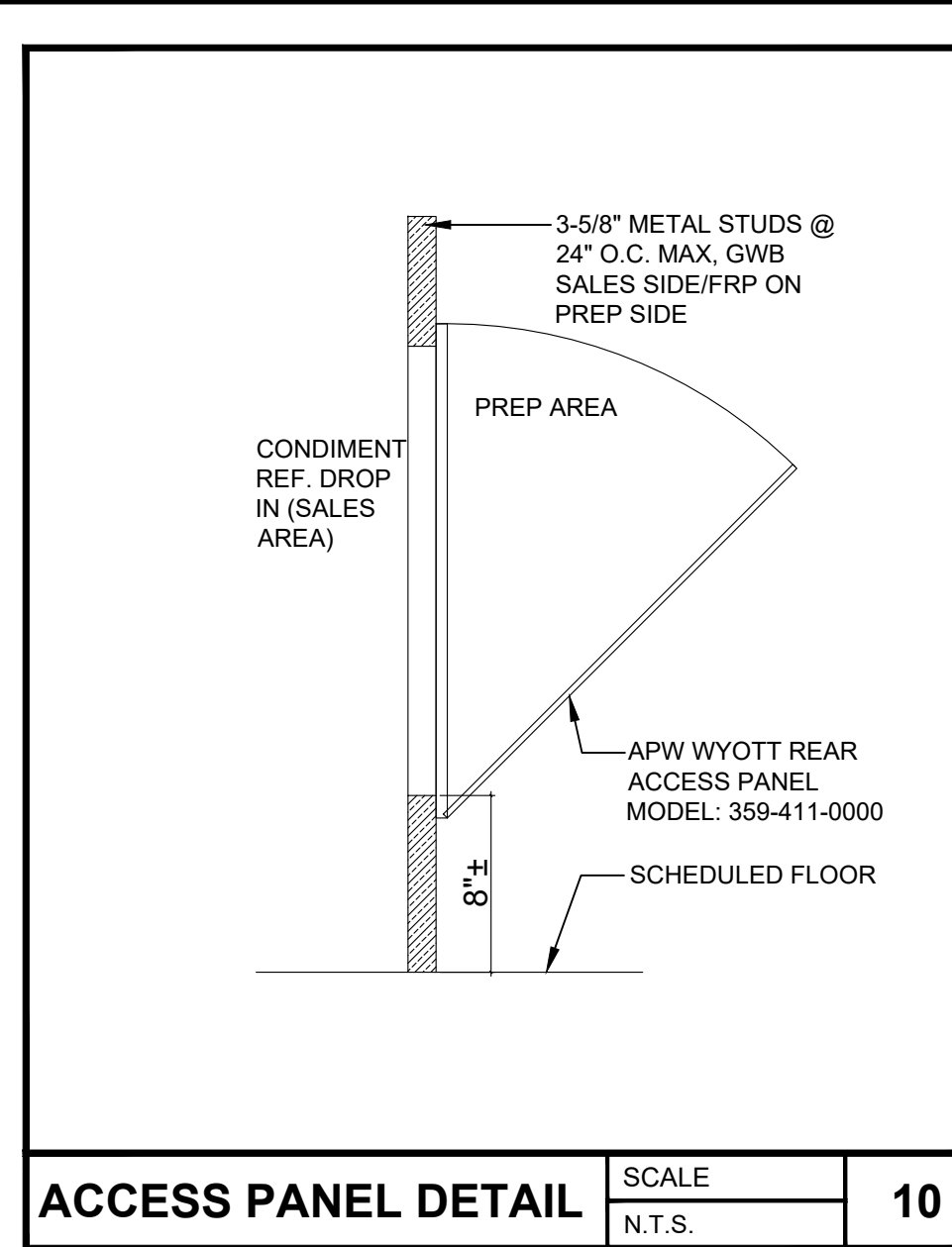
WINDOW HEAD DET. SCALE N.T.S. **13**



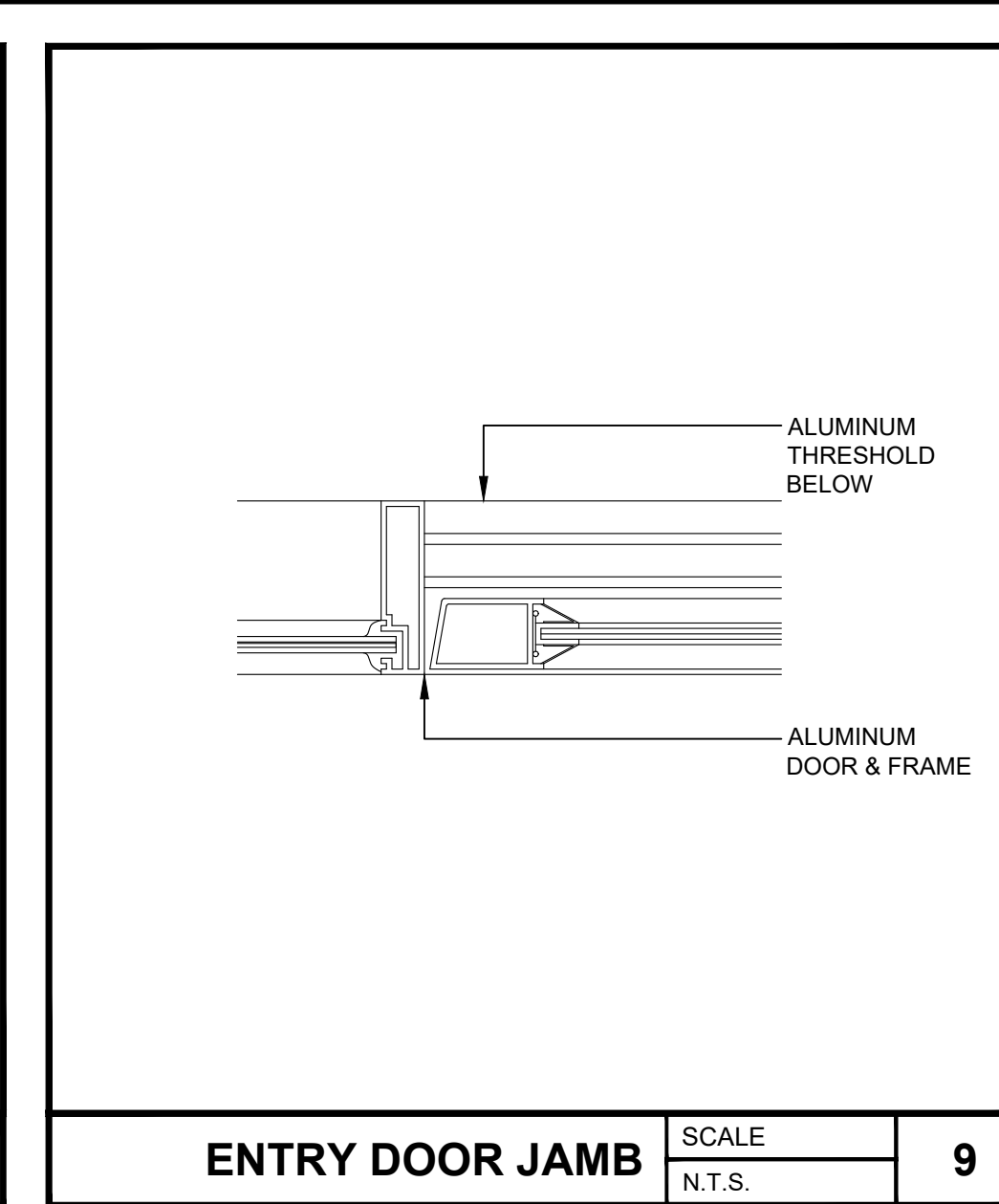
INT. HM JAMB & HEAD SCALE N.T.S. **12**



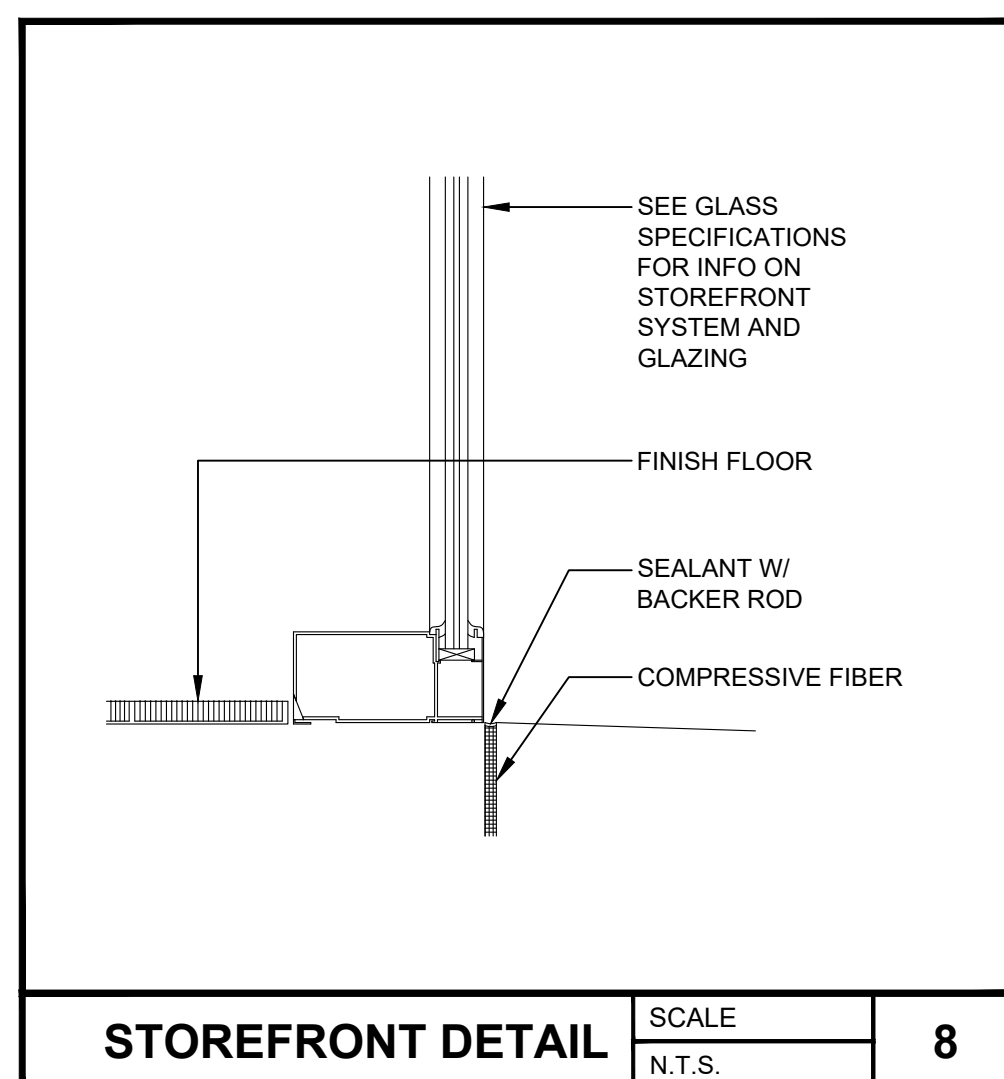
EXT. HM JAMB DETAIL SCALE N.T.S. **11**



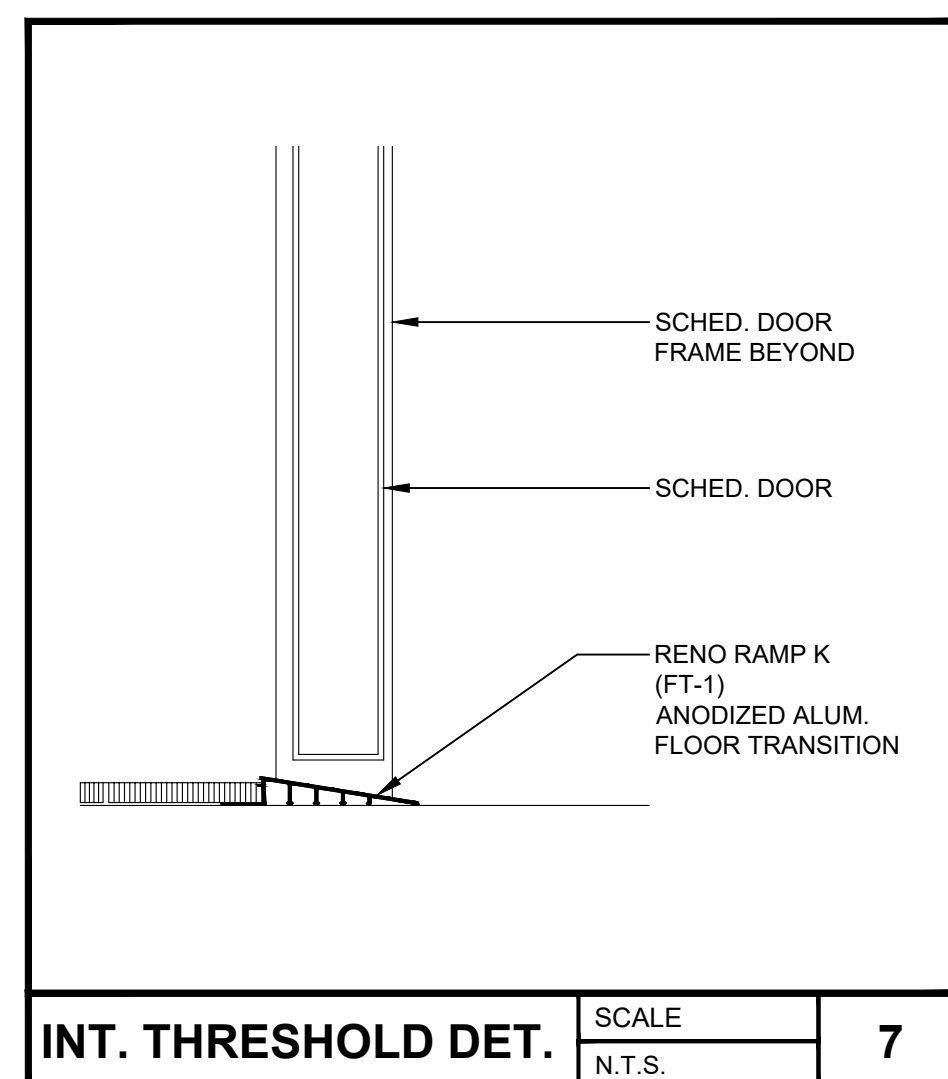
ACCESS PANEL DETAIL SCALE N.T.S. **10**



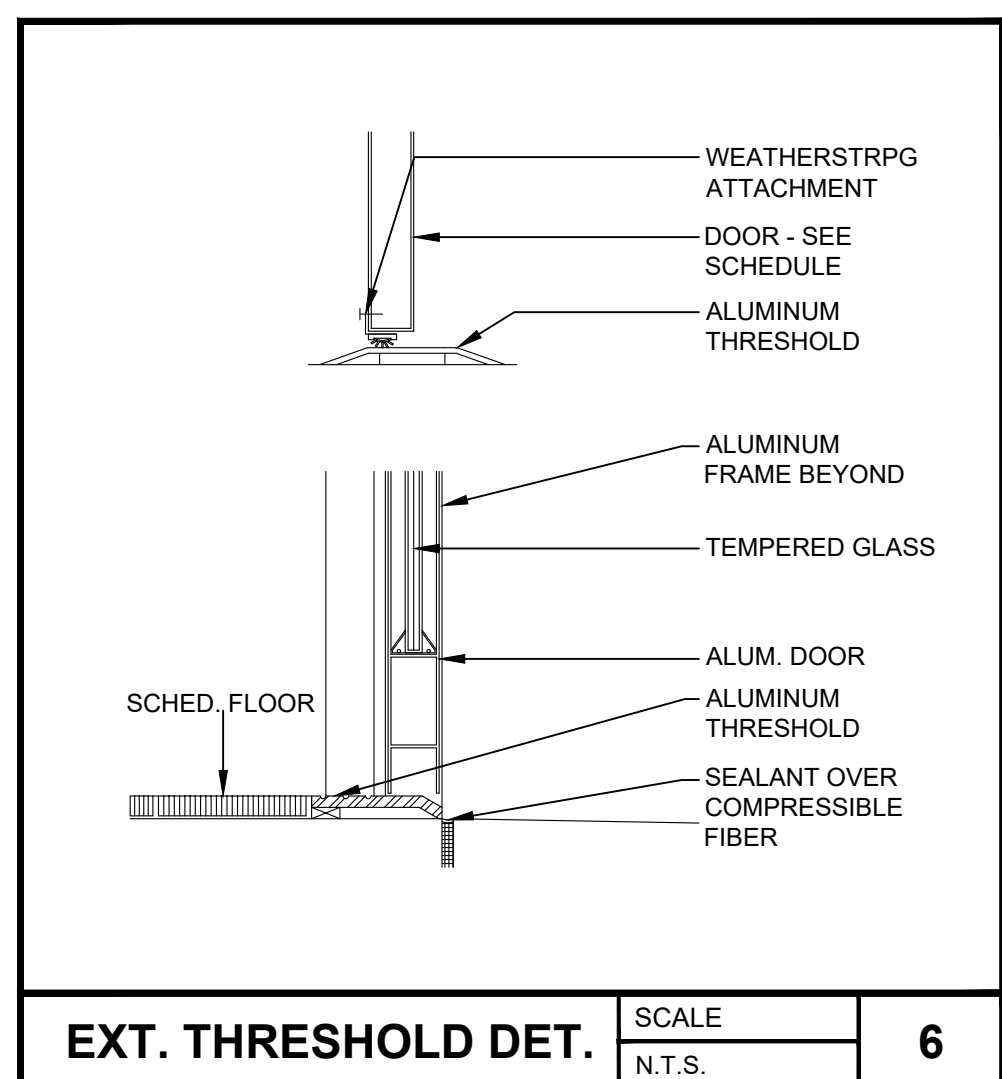
ENTRY DOOR JAMB SCALE N.T.S. **9**



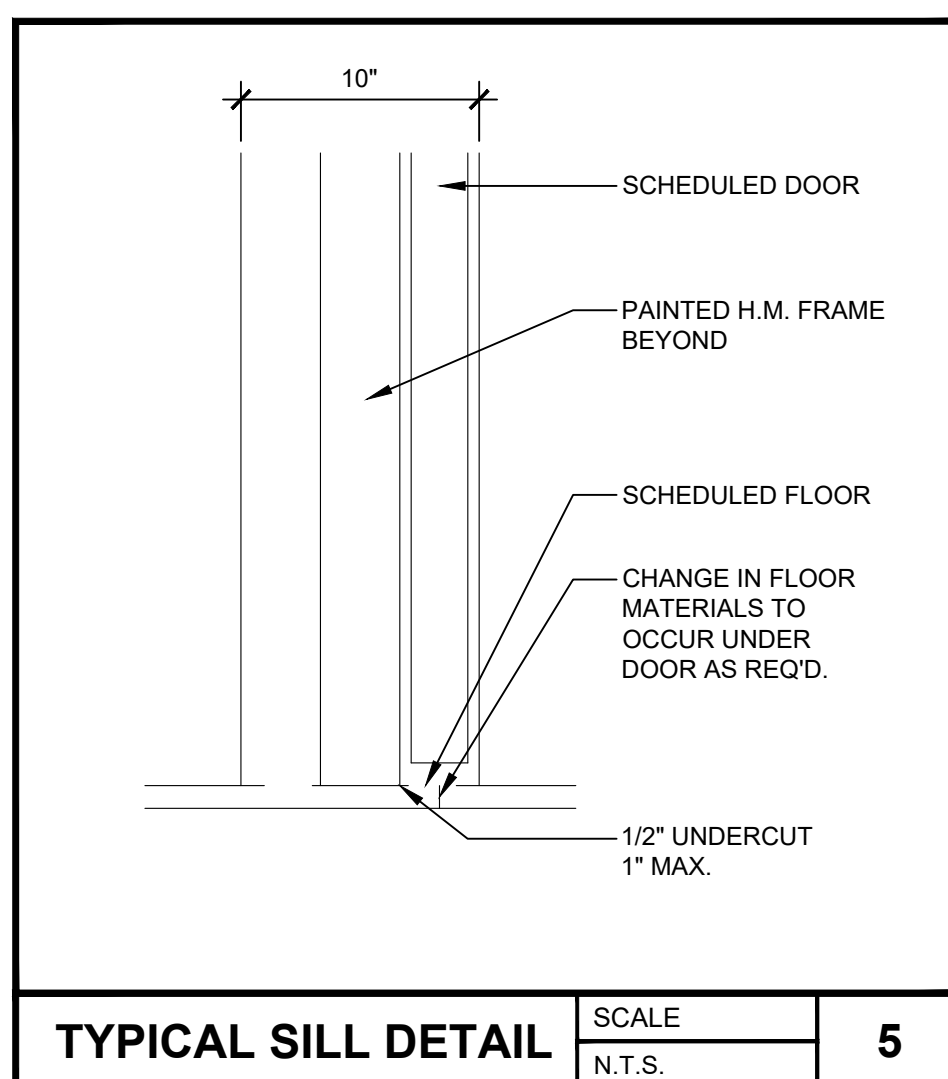
STOREFRONT DETAIL SCALE N.T.S. **8**



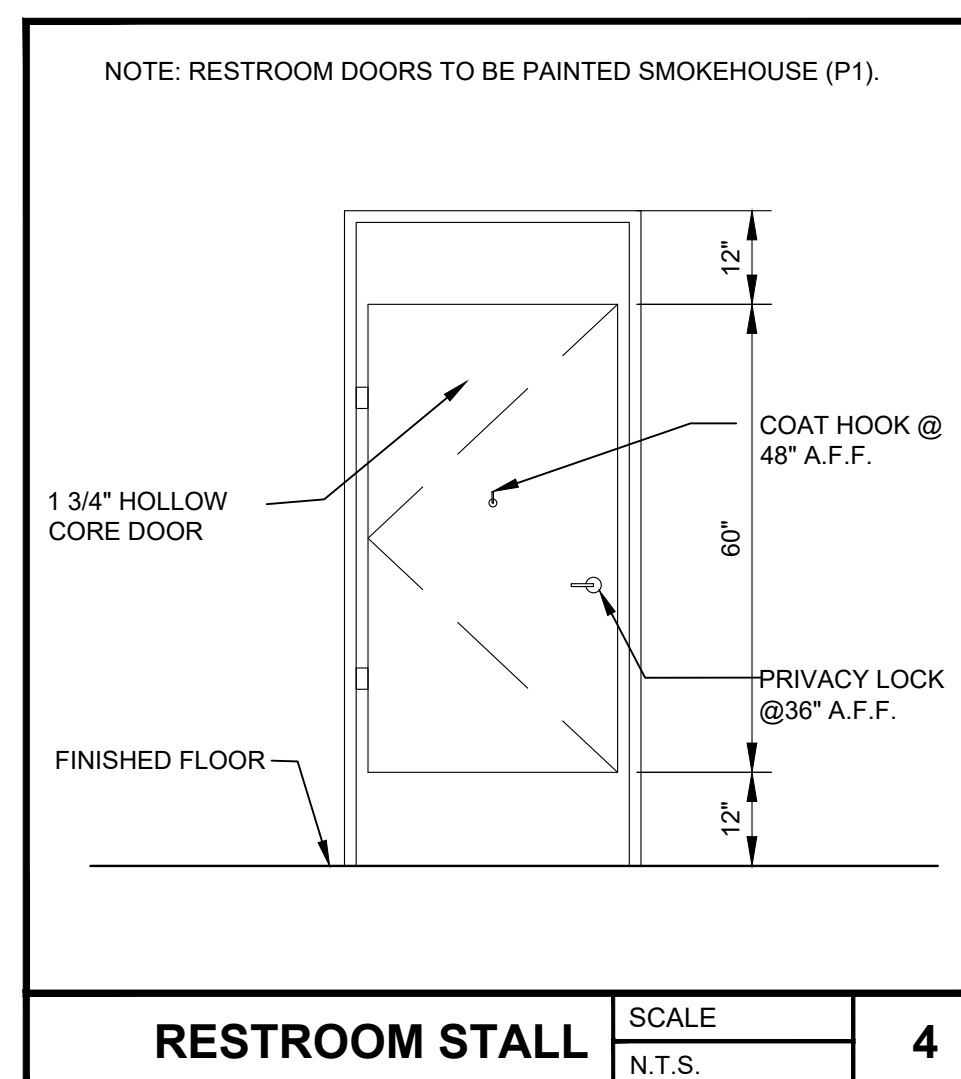
INT. THRESHOLD DET. SCALE N.T.S. **7**



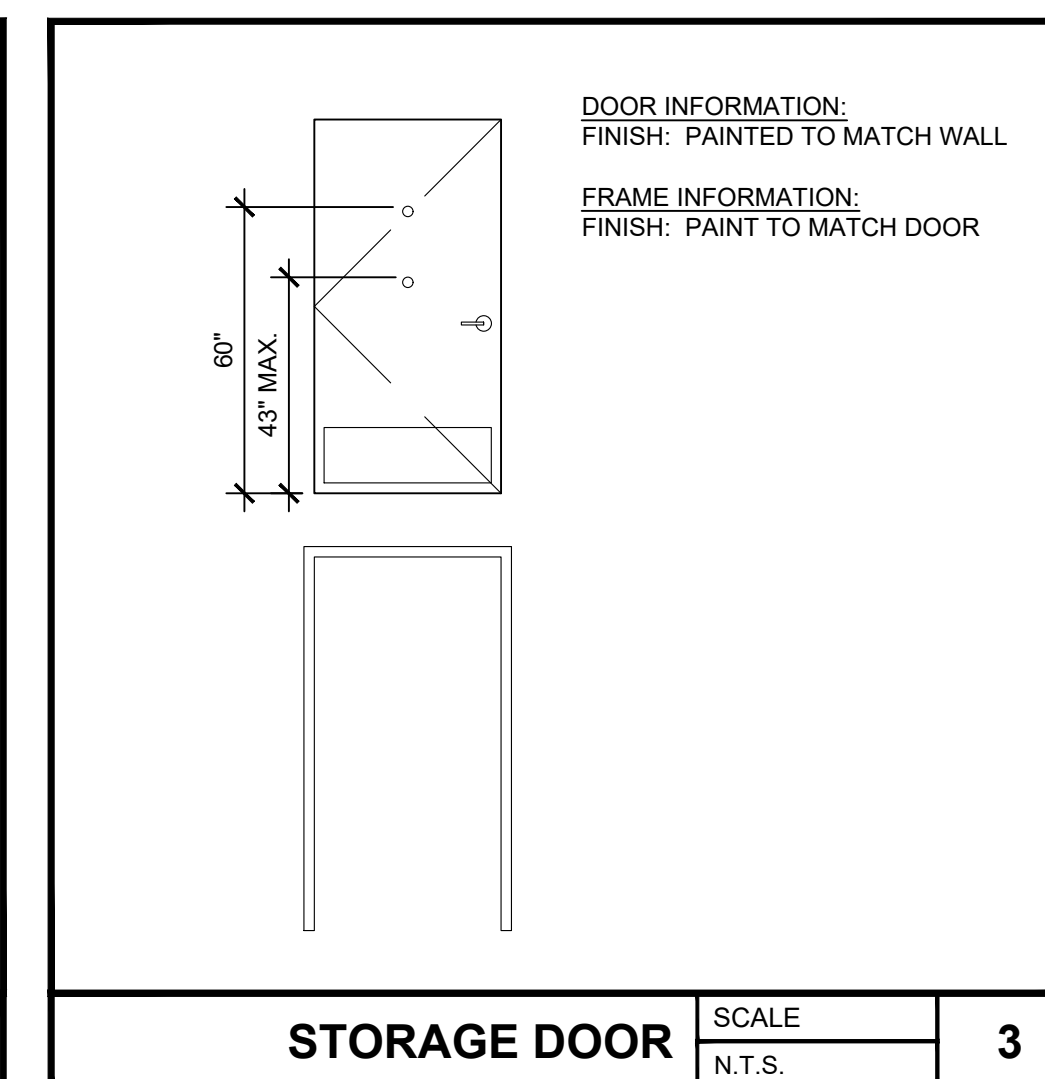
EXT. THRESHOLD DET. SCALE N.T.S. **6**



TYPICAL SILL DETAIL SCALE N.T.S. **5**



RESTROOM STALL SCALE N.T.S. **4**



STORAGE DOOR SCALE N.T.S. **3**

DOOR SCHEDULE											
DOOR #	DOOR			FRAME			DOOR		REMARKS		
	MATL	TYPE	THK.	MATL	SILL	JAMB	HEAD	HW			
101A	PR 3'-0"	7'-0"	AL/GL		AL/GL	6	9	14	3	TEMPERED GLASS	
101B	PR 3'-0"	7'-0"	AL/GL		AL/GL	6	9	14	5	TEMPERED GLASS	
103A	3'-0"	7'-0"	HM	FLUSH	1 3/4"	HM	7	12	12	6	STORAGE
108A	3'-0"	7'-0"	HM	FLUSH	1 3/4"	HM	5	11	11	2	EXTERIOR DOOR
109A	3'-0"	7'-0"	HM	FLUSH	1 3/4"	HM	7	12	12	4	OFFICE
114A	2'-6"	5'-0"	HM	FLUSH	1 3/4"	HM	-	-	-	1	RESTROOM STALL
114B	2'-6"	5'-0"	HM	FLUSH	1 3/4"	HM	-	-	-	1	RESTROOM STALL
114C	3'-0"	5'-0"	HM	FLUSH	1 3/4"	HM	-	-	-	1	RESTROOM ADA STALL
115A	PR 2'-8"	7'-0"	AL/GL	FLUSH	1 3/4"	HM	6	9	14	5	TEMPERED GLASS
116A	3'-0"	5'-0"	HM	FLUSH	1 3/4"	HM	-	-	-	1	RESTROOM AMBULATORY
116B	3'-0"	5'-0"	HM	FLUSH	1 3/4"	HM	-	-	-	1	RESTROOM ADA STALL
116C	2'-6"	5'-0"	HM	FLUSH	1 3/4"	HM	-	-	-	1	RESTROOM STALL
TRASH	PR 3'-0"	7'-0"	HM	FLUSH	1 3/4"	HM	-	-	-	*	DOOR AT TRASH ENCLOSURE

* REFER TO SD1.2 FOR DOOR AND HARDWARE INFORMATION AT THE EXTERIOR TRASH ENCLOSURE*

REFER TO SHEET AN2.0 FOR ADA STANDARDS AND REQUIREMENTS.

GENERAL NOTES

- ALL EXTERIOR DOORS TO HAVE WEATHER STRIPPING AND SWEEP.
- HARDWARE AND DOOR SPECIFICATIONS TO BE COORDINATED AND APPROVED BY OWNER PRIOR TO INSTALLATION.
- HARDWARE TO MEET ALL LOCAL, STATE AND NATIONAL BUILDING CODES.
- ALL HARDWARE IS SCHLAGE D SERIES UNLESS NOTED OTHERWISE.
- HARDWARE FINISH AS INDICATED IN HARDWARE SCHEDULE.
- HARDWARE SUPPLIER TO SUBMIT HARDWARE SCHEDULE TO G.C. FOR APPROVAL PRIOR TO CONSTRUCTION.
- ALL LOCKS TO BE ON "MASTER KEY SYSTEM".

HW SET NO.	BUTTS	CLOS	LOCKS	STOPS	P / P	MISCELLANEOUS	REMARKS
1	2	3	4	5	6	7	
1	2	1	1	3			RESTROOM STALLS
2	3	1			1	1 1 1 1 2	H.M. EXTERIOR DOOR
3	6	2		3	2 2		ALUM. & GLASS ENTRANCE DOUBLE DOORS
4	3	1	1	3 1		1	INTERIOR DOOR W/ PRIVACY LOCKSET
5	6	2	1	2 2		2	ALUM. & GLASS ENTRANCE DOUBLE DOORS
6	3	1	1 1	3 1		1 1 2 2 1	INTERIOR DOOR W/ PRIVACY LOCKSET

HARDWARE

BUTTS

B-1 MCKINNEY, TA2714, 4-1/2" X 4-1/2", US26D

B-2 MCKINNEY, TA2314 NRP, 4-1/2" X 4", DARK OXIDIZDE COPPER US32D

B-3 MCKINNEY SPRING HINGE 1502 4-1/2" X 4-1/2"

CLOSERS

C-1 YALE 2701

C-2 KAWNEER, SAM-11, SINGLE ACTING MANUAL CONCEALED OVERHEAD CLOSER

LOCKS

L-1 LOCKSET, SCHLAGE ND40S, RHO, 626

L-2 DEADBOLT, SCHLAGE, KEYED BOTH SIDES, B252PD

L-3 LOCKSET CYLINDER, KABA ILCO, 7181TK1-26D

STOPS, SILENCERS, ETC.

S-1 SILENCERS, ROCKWOOD 608-RKW, GRAY

S-2 DOOR STOP, TRIMCO, 1213ES, US26D

PULLS

P-1 KAWNEER, STYLE C09, US32D

PUSH

PB-1 PUSH BAR, STANDARD 1" TUBULAR PUSH BAR.

MISCELLANEOUS

M-1 SARGENT ALARMED PANIC BAR, #5304 (OUTSIDE KEY CONTROL)

WITH FULL TRIM SCHLAGE CYLINDER

M-2 WALL STOP, ROCKWOOD 404, US26D

M-3 THRESHOLD, PEMKO 2005AT X 36", ALUM.

M-4 STANDARD PERIMETER GASKET.

PEMKO ASTRAGAL 303AV X 84"

M-5 KICK PLATE, 12" HIGH X DOOR WIDTH LESS 2" STAINLESS STEEL, IVES 8400-826D

M-6 SCHLUTER TRANSITION STRIP, RENO-U

M-7 PEEP HOLE - DS2000

M-8 COATHOOK, BOBRICK B-233

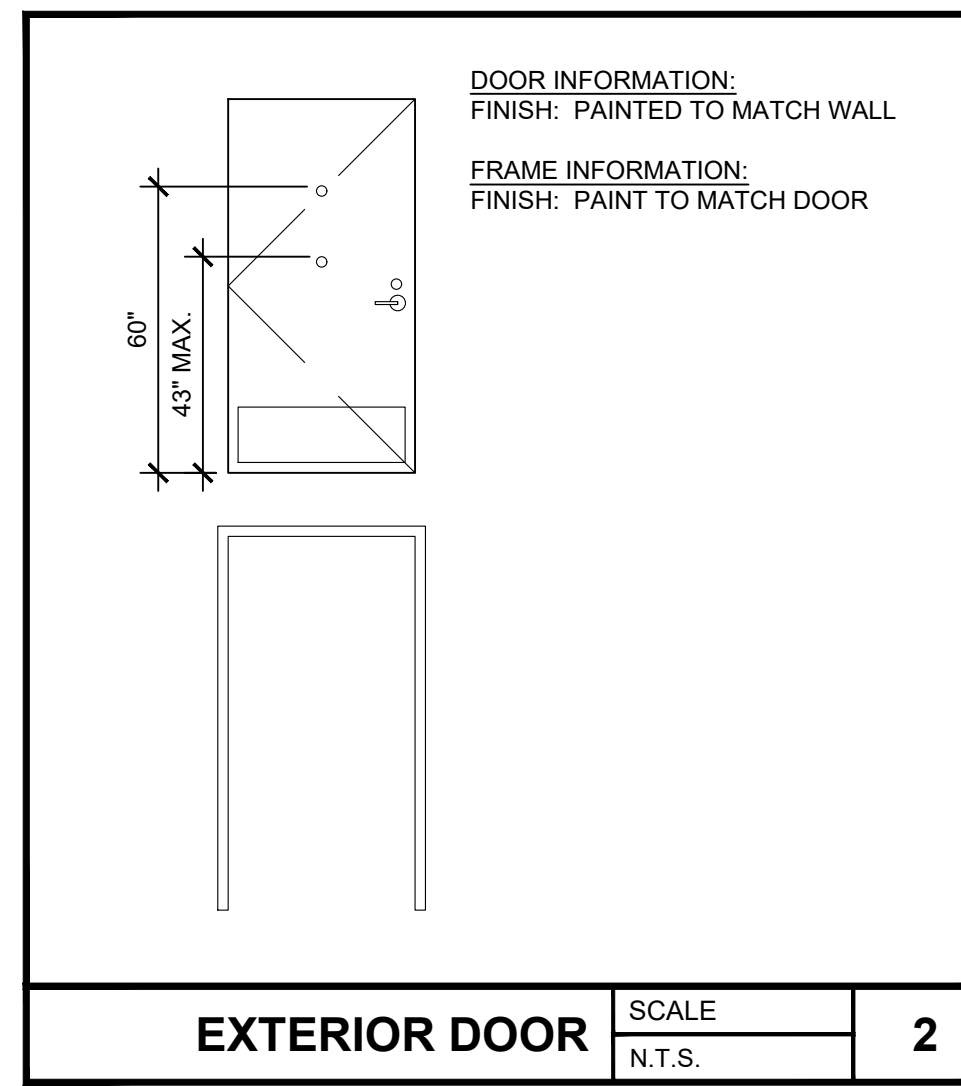
M-9 WRAP AROUND DOOR EDGE GUARD ENTRY AMOR, EWP-133-S OR EQUAL

4.13.5 ENSURE COMPLIANCE: DOORWAYS SHALL HAVE A MIN. CLEAR OPENING OF 32" WITH THE DOOR OPEN 90 DEGREES, MEASURED BETWEEN THE FACE OF THE DOOR AND THE OPPOSITE STOP.

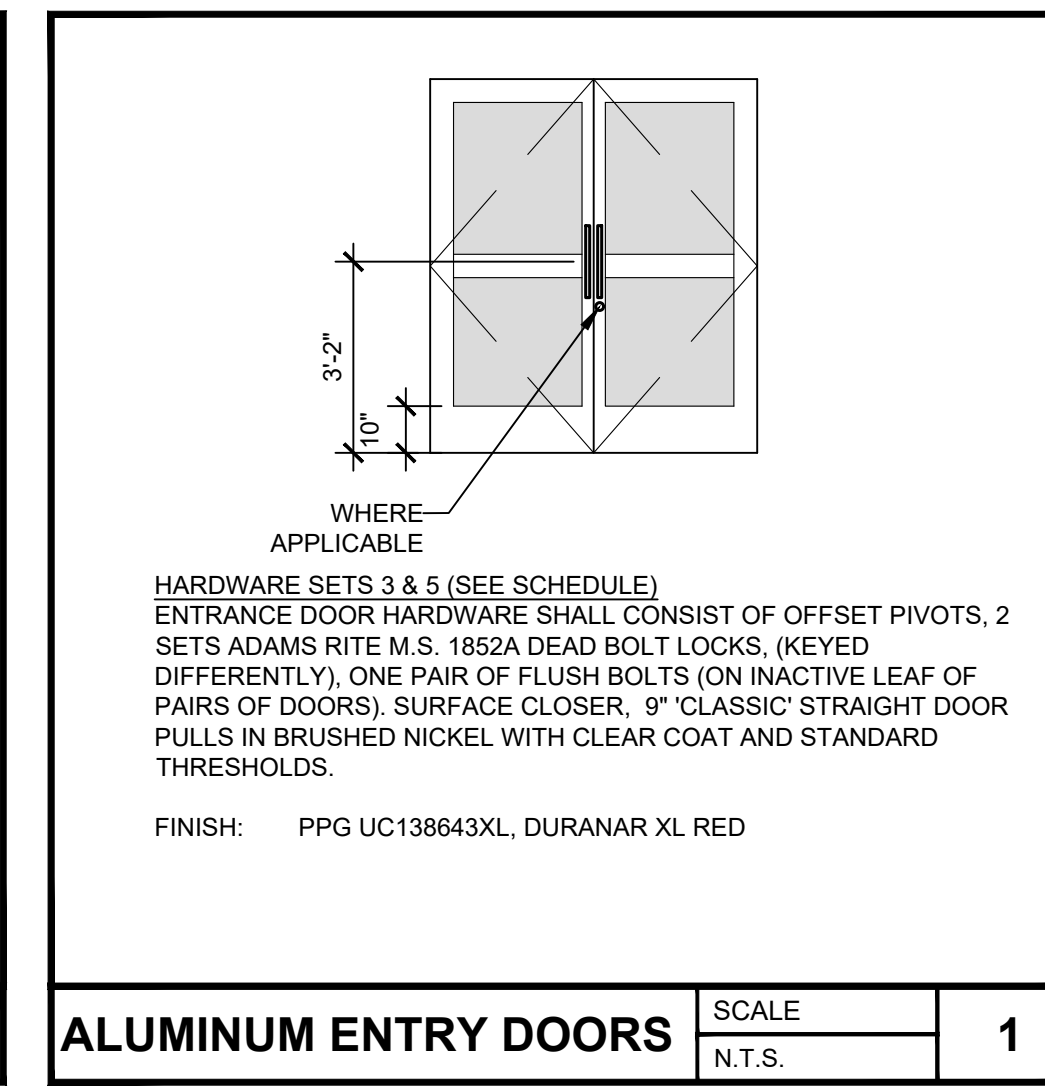
4.13.8 ENSURE COMPLIANCE: THRESHOLDS AT DOORWAYS SHALL NOT EXCEED 3". RAISED THRESHOLDS AND FLOOR LEVEL CHANGES AT ACCESSIBLE DOORWAYS SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.

4.13.10 ENSURE COMPLIANCE: THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.

404.2.9 DOOR AND GATE OPENING FORCE: INTERIOR HINGED DOORS AND GATES SHALL HAVE A MAX OPENING FORCE OF 5LBS. EXTERIOR HINGED DOORS AND GATES SHALL HAVE A MAX OPENING FORCE OF 8.5LBS.



EXTERIOR DOOR SCALE N.T.S. **2**



ALUMINUM ENTRY DOORS SCALE N.T.S. **1**

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STATE OF FLORIDA
PROFESSIONAL ENGINEER

No. 64055

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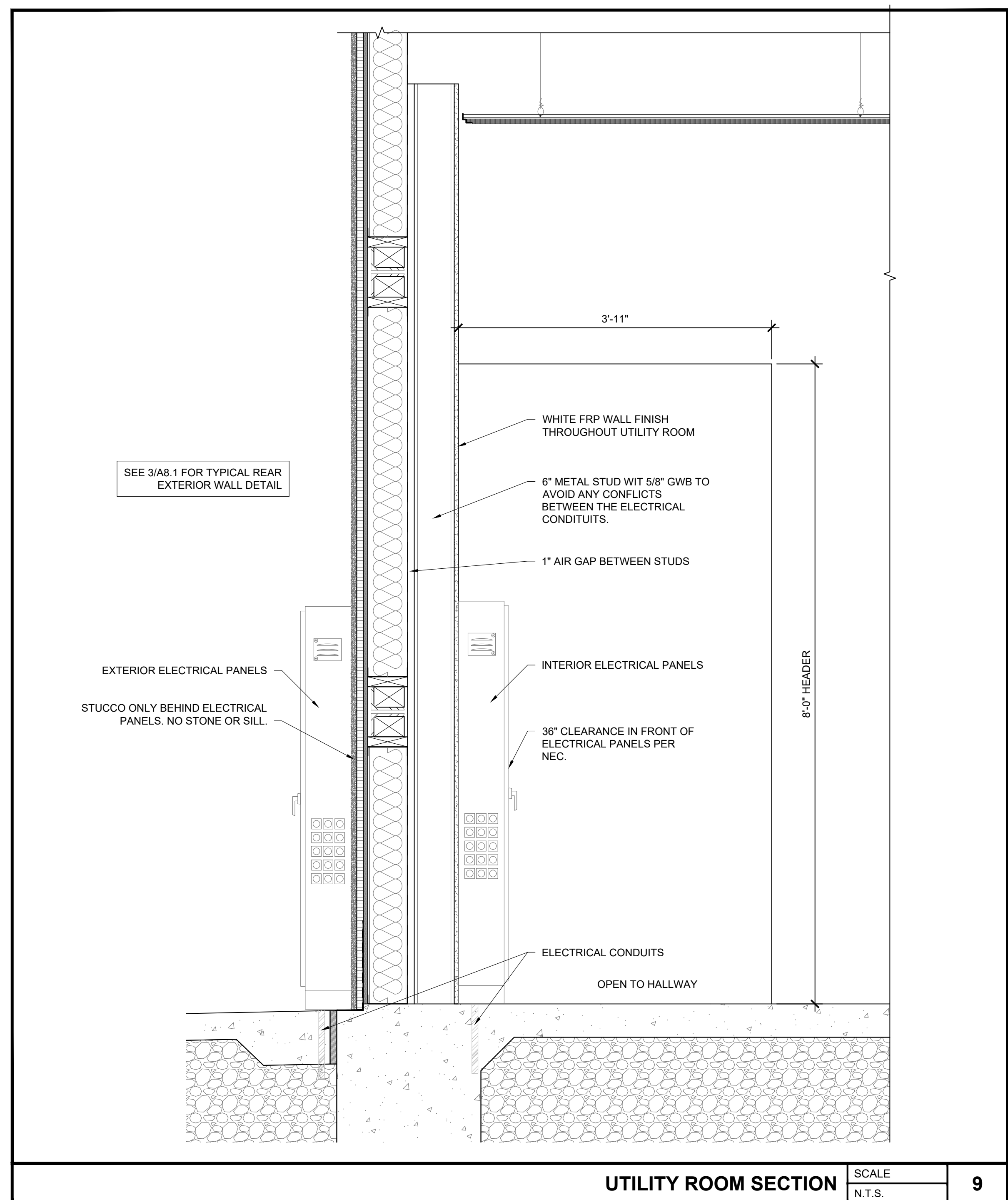
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DOOR SCHEDULE

Project No.
170-101.00

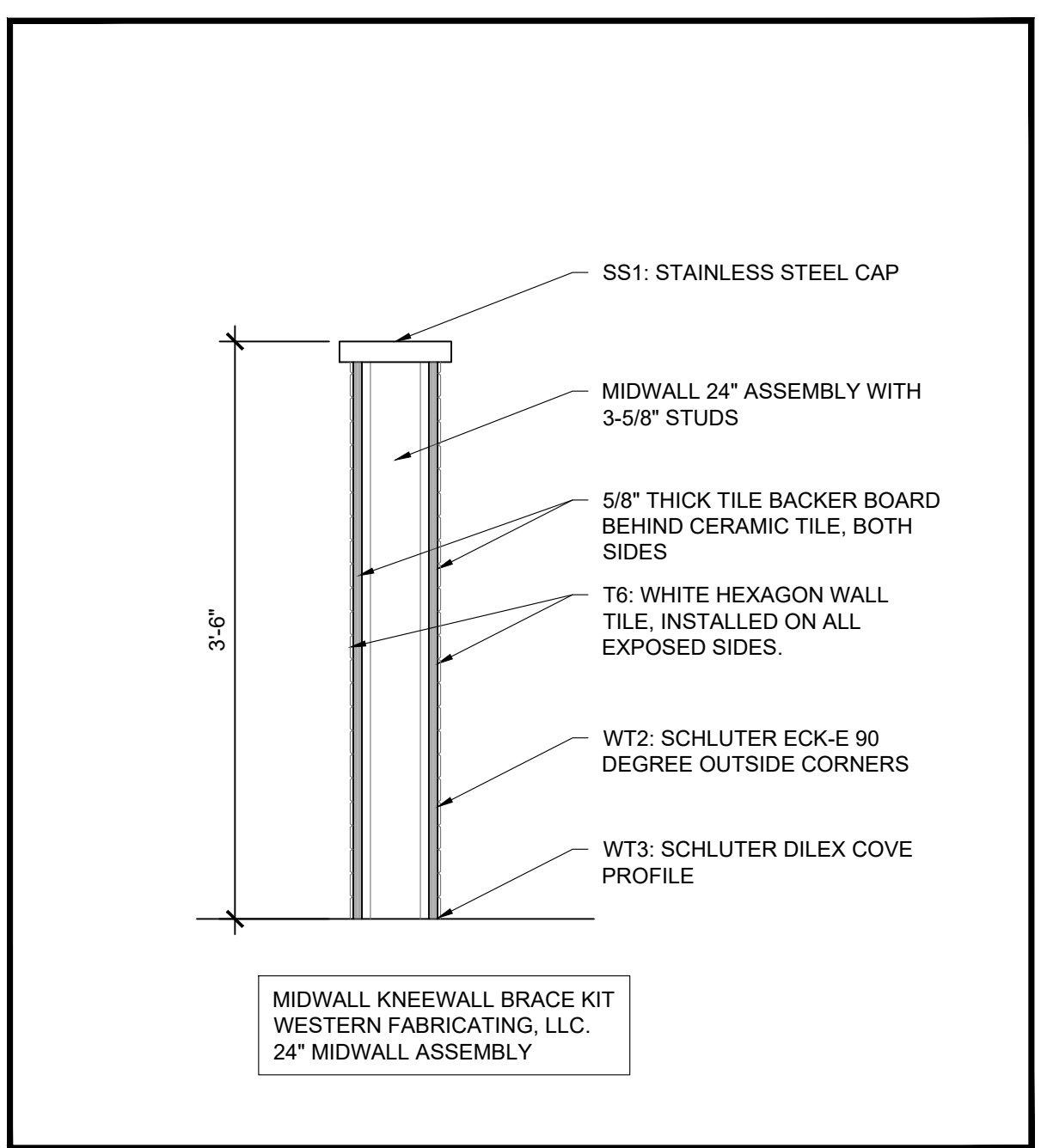
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Drawn By
KM

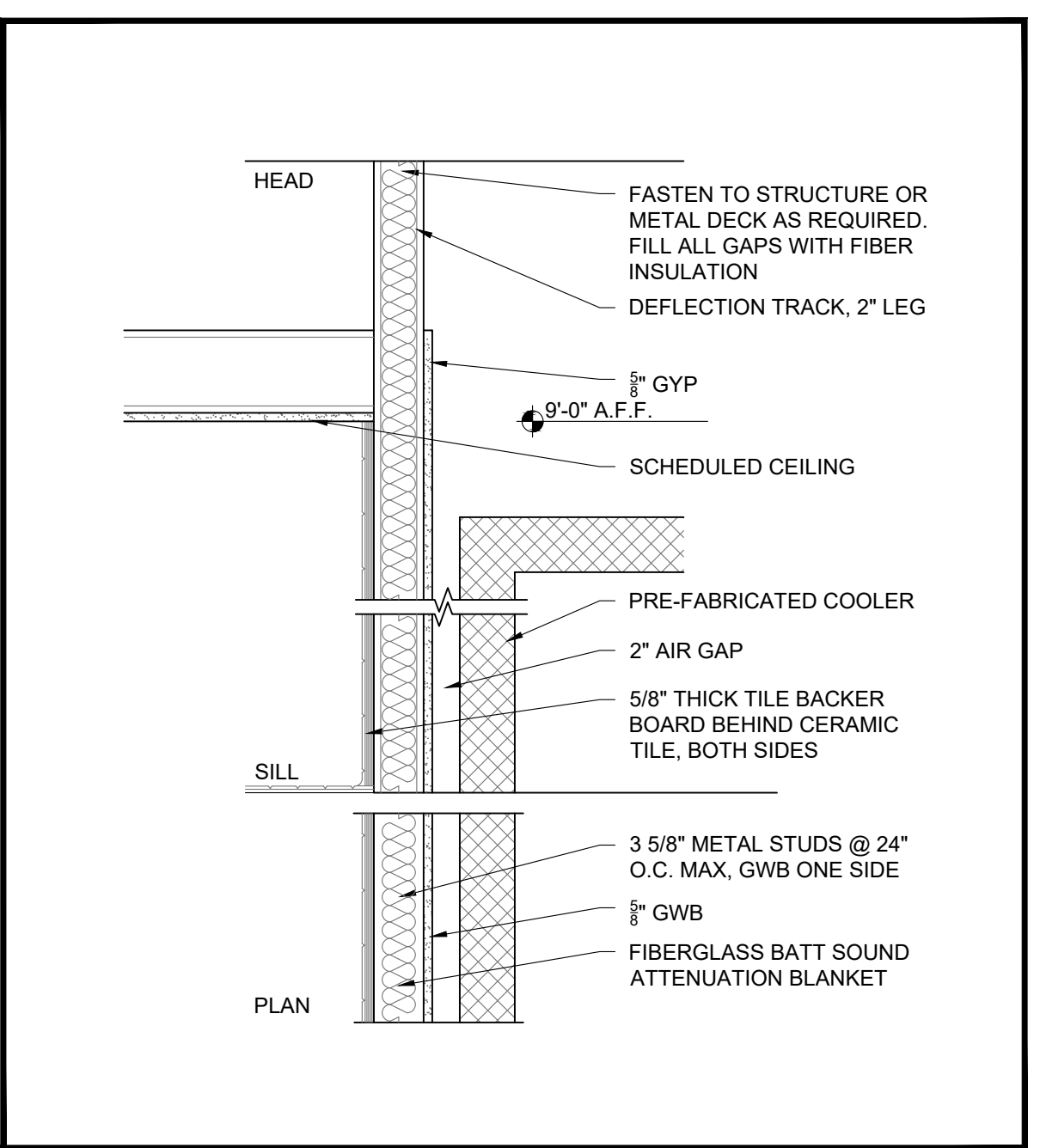
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AFO



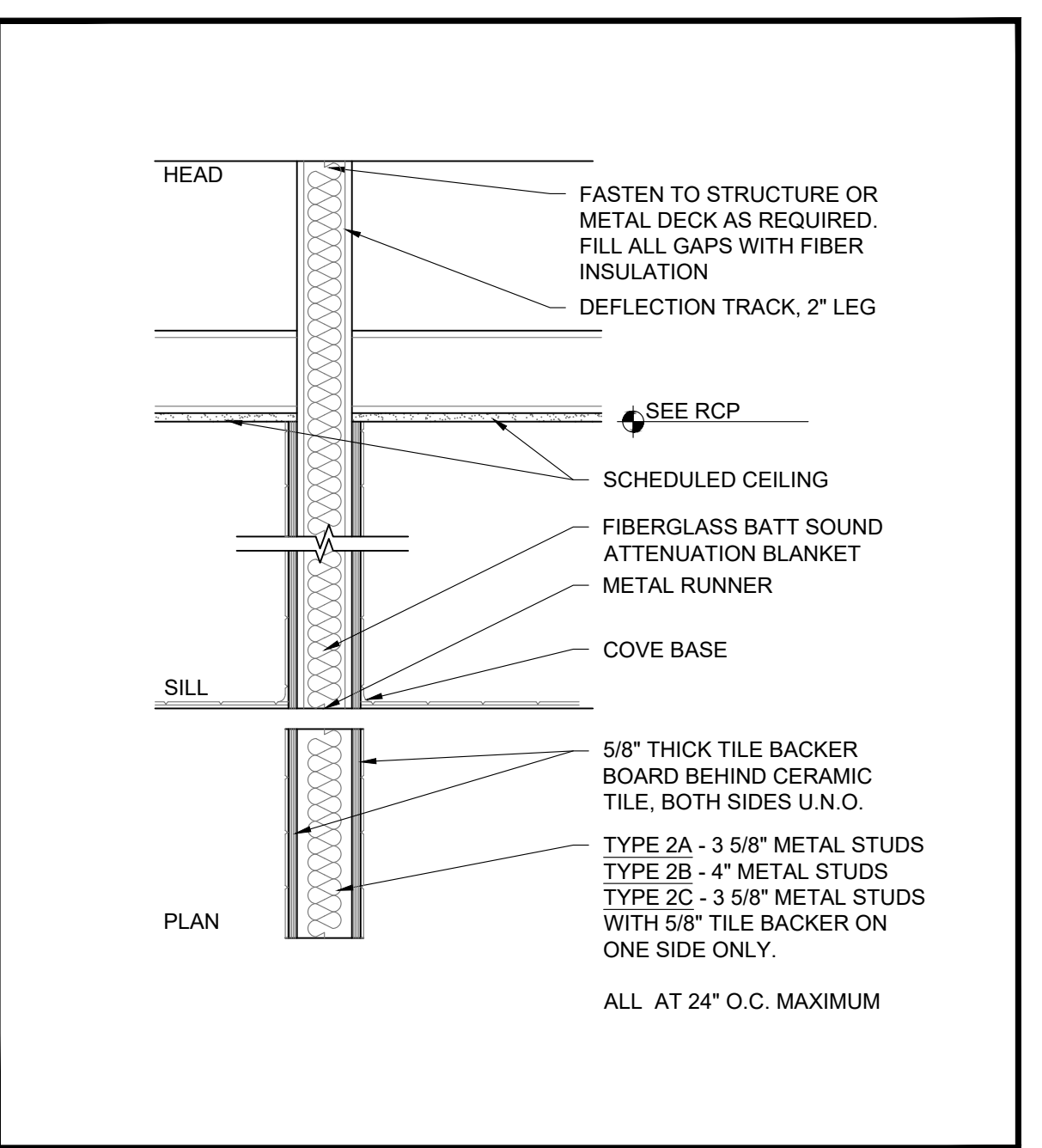
UTILITY ROOM SECTION SCALE N.T.S. **9**



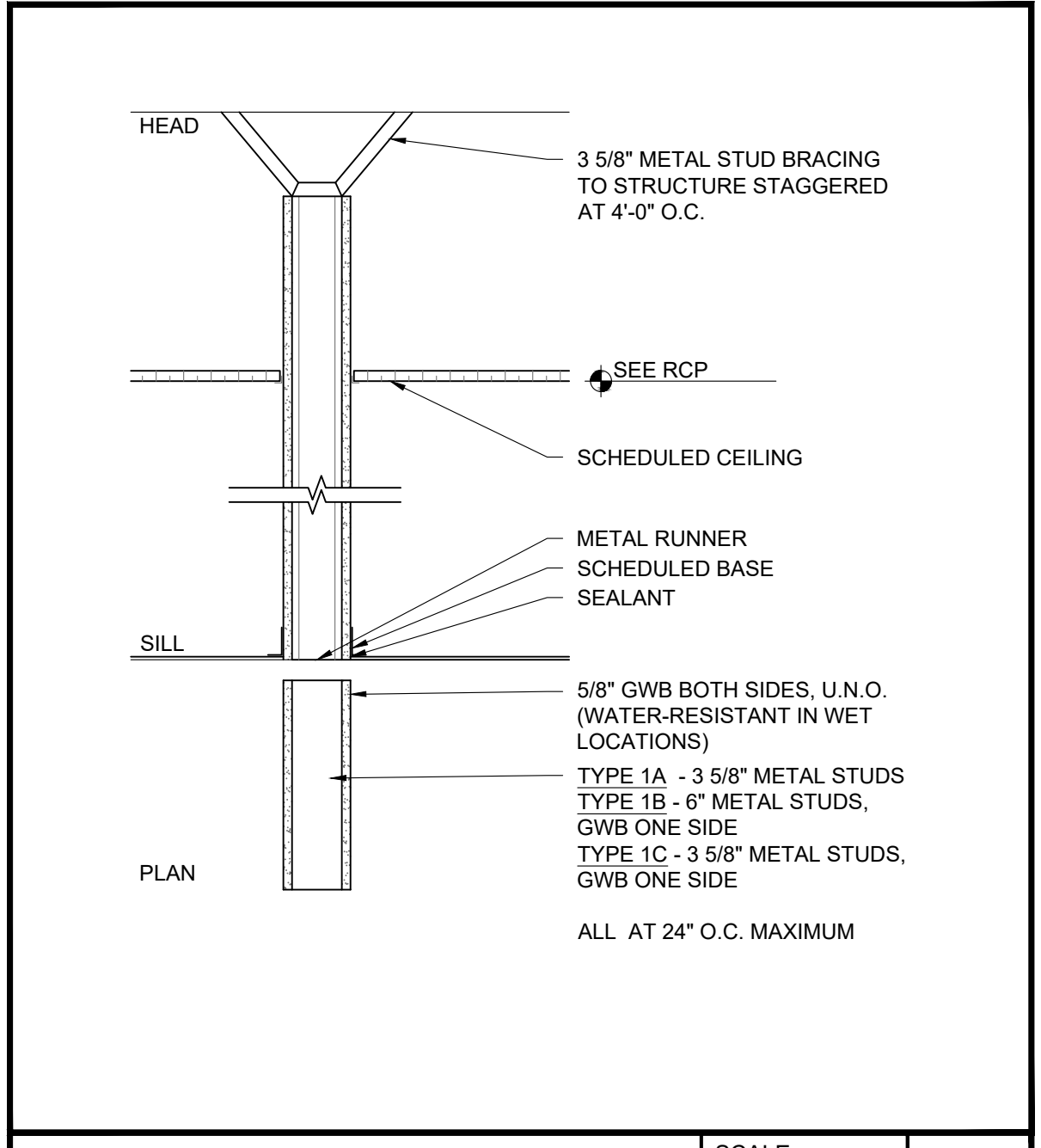
PARTITION TYPE 4 SCALE N.T.S. **12**



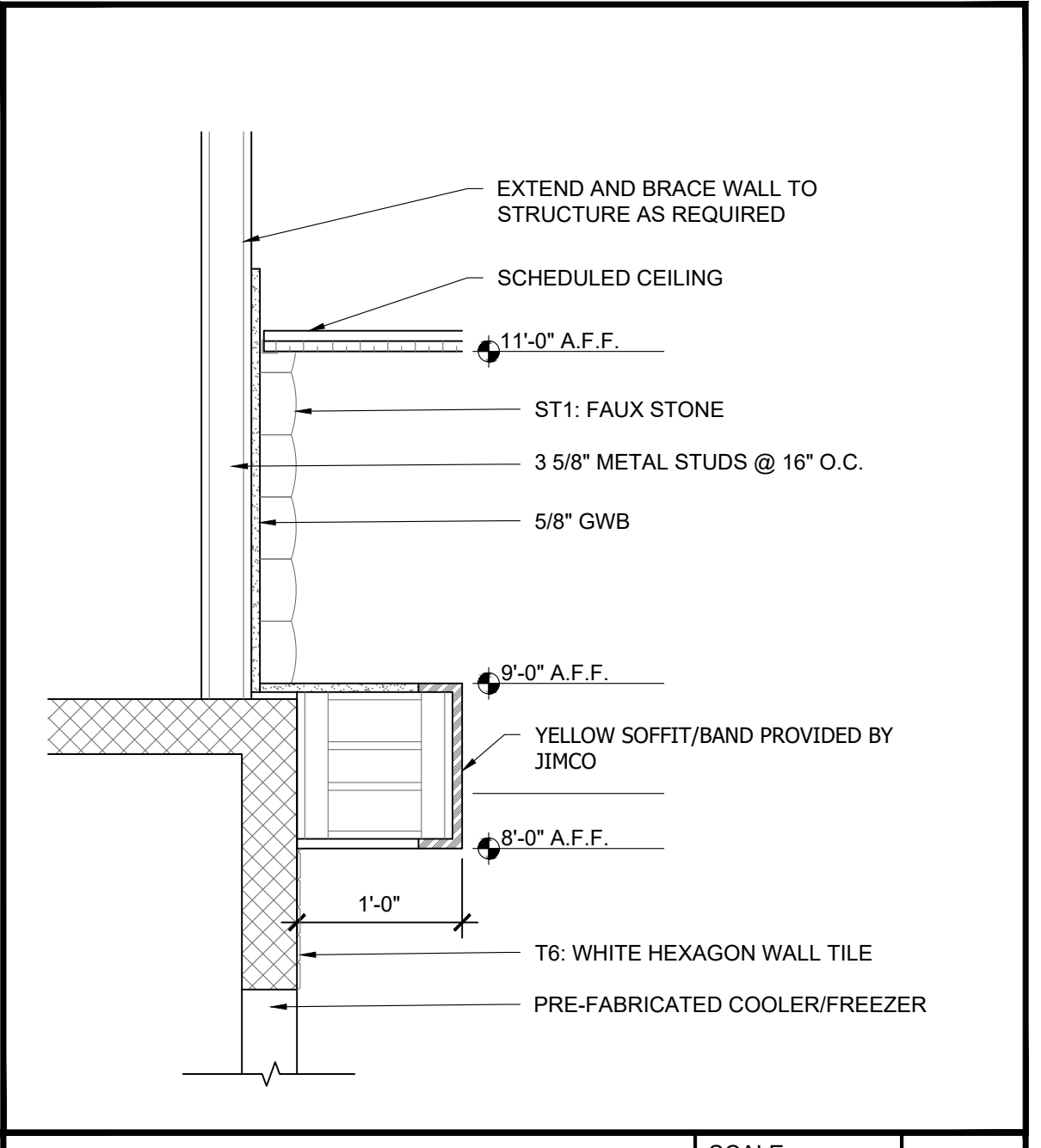
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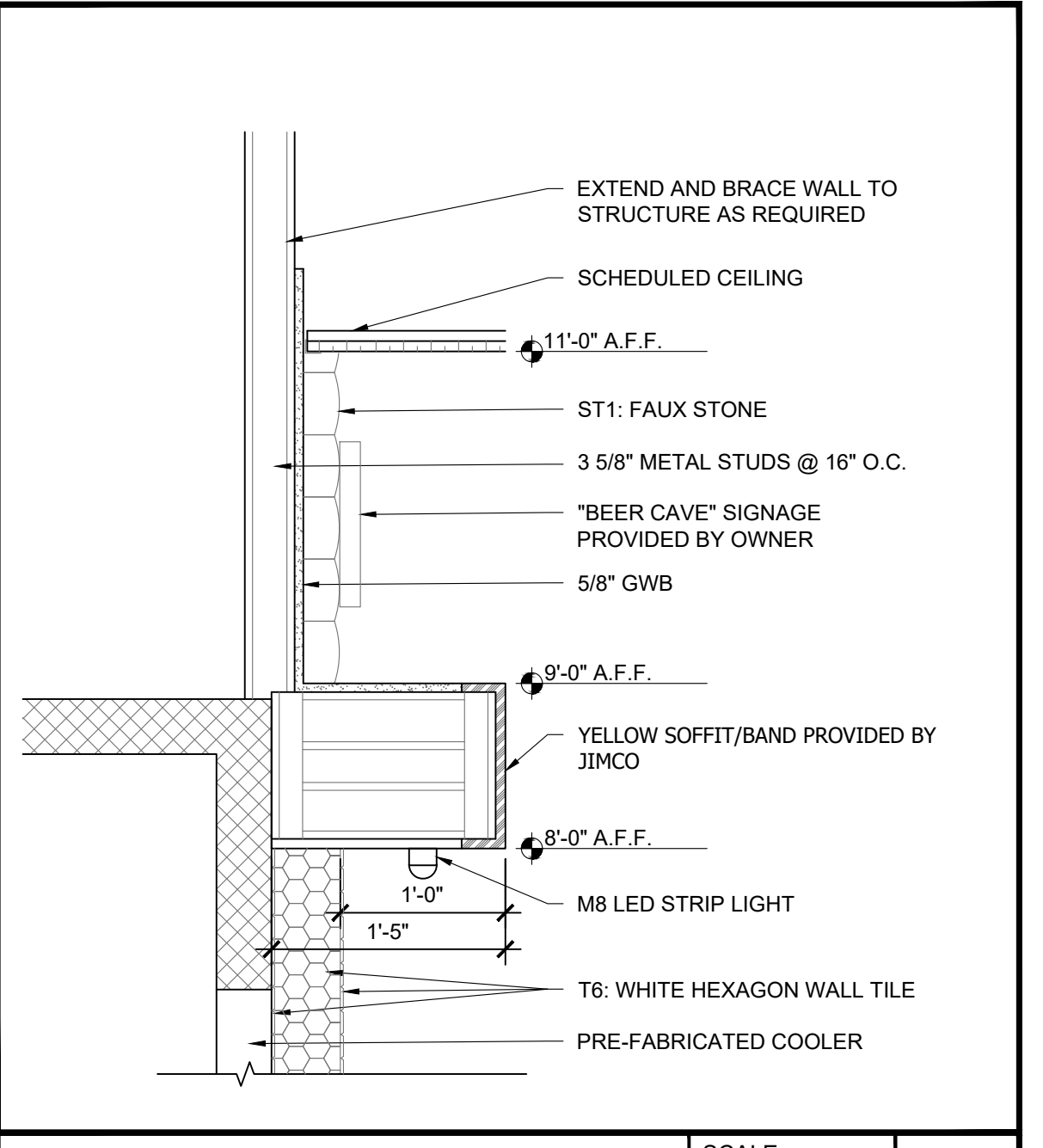
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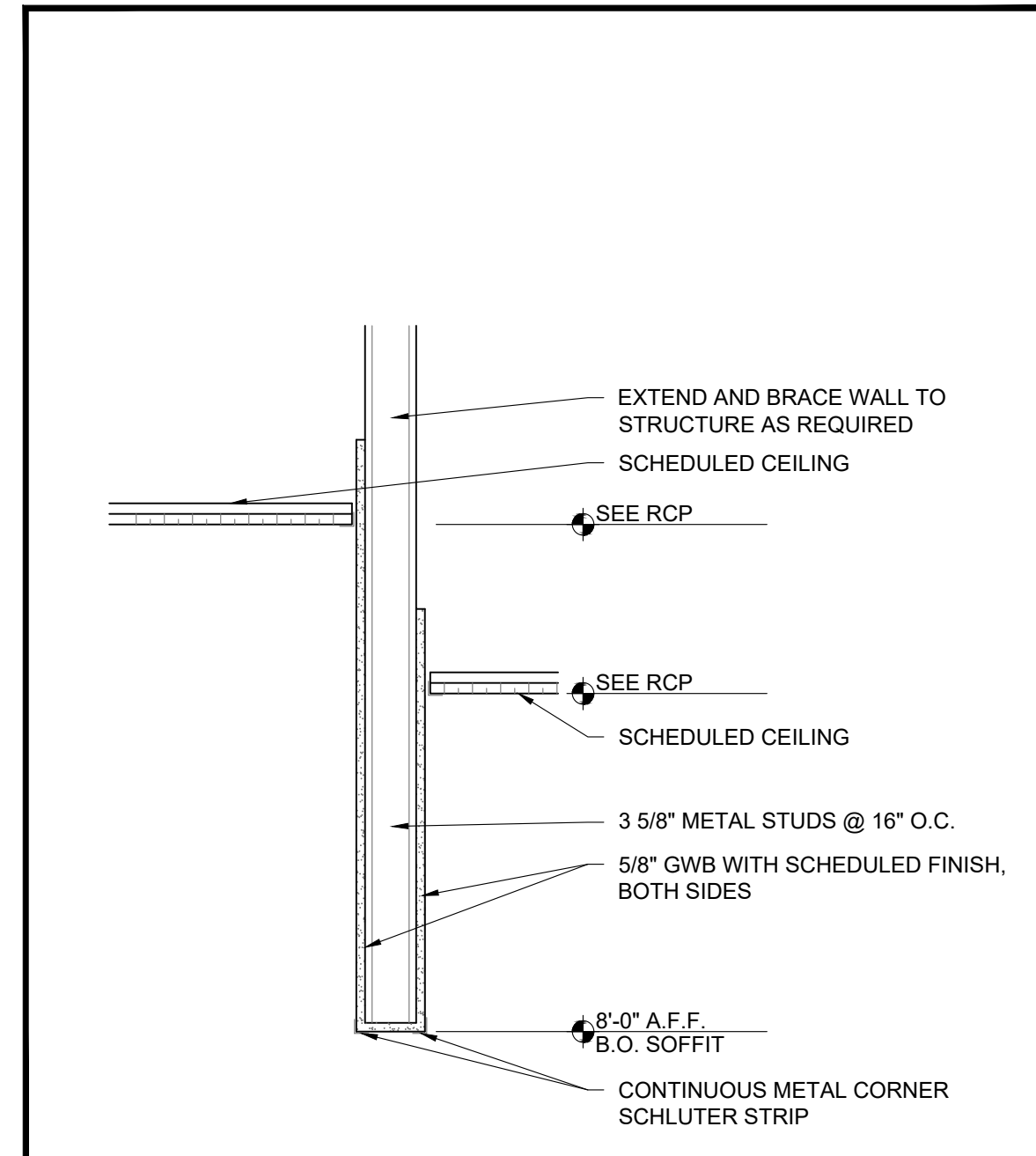
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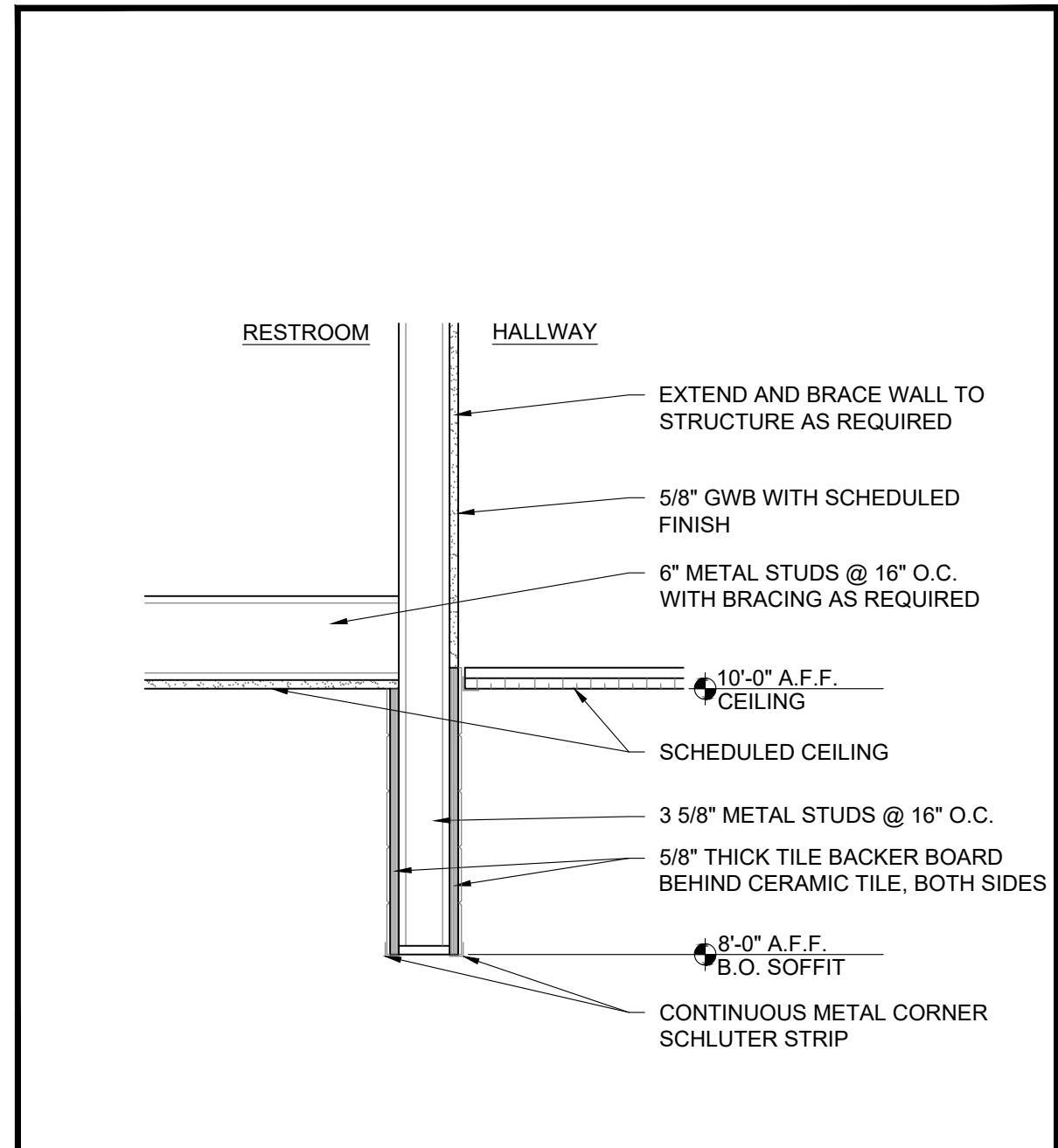
SOFFIT DETAIL - WALK-INS SCALE N.T.S. **7**



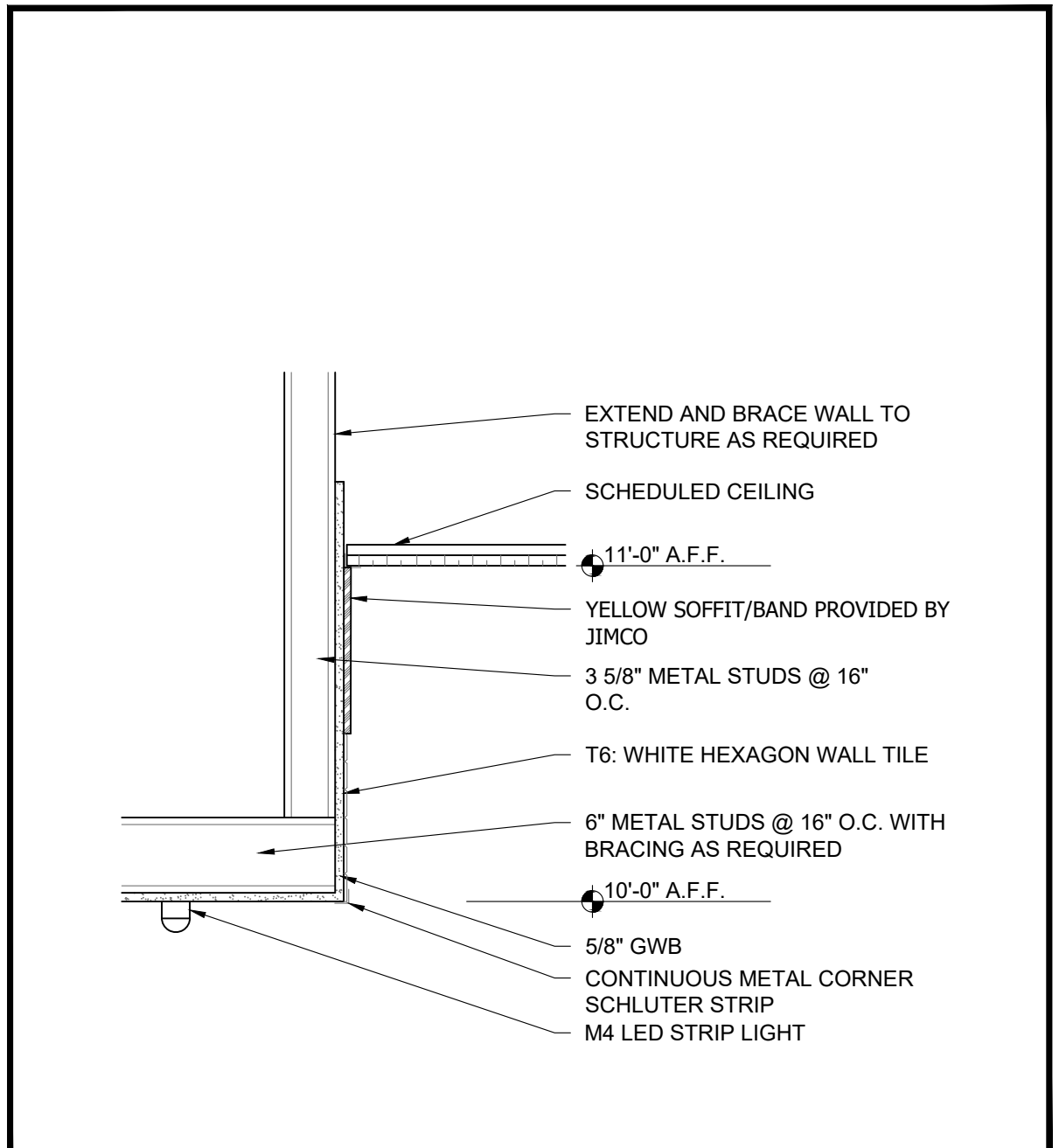
SOFFIT DETAIL - BEER CAVE SCALE N.T.S. **6**



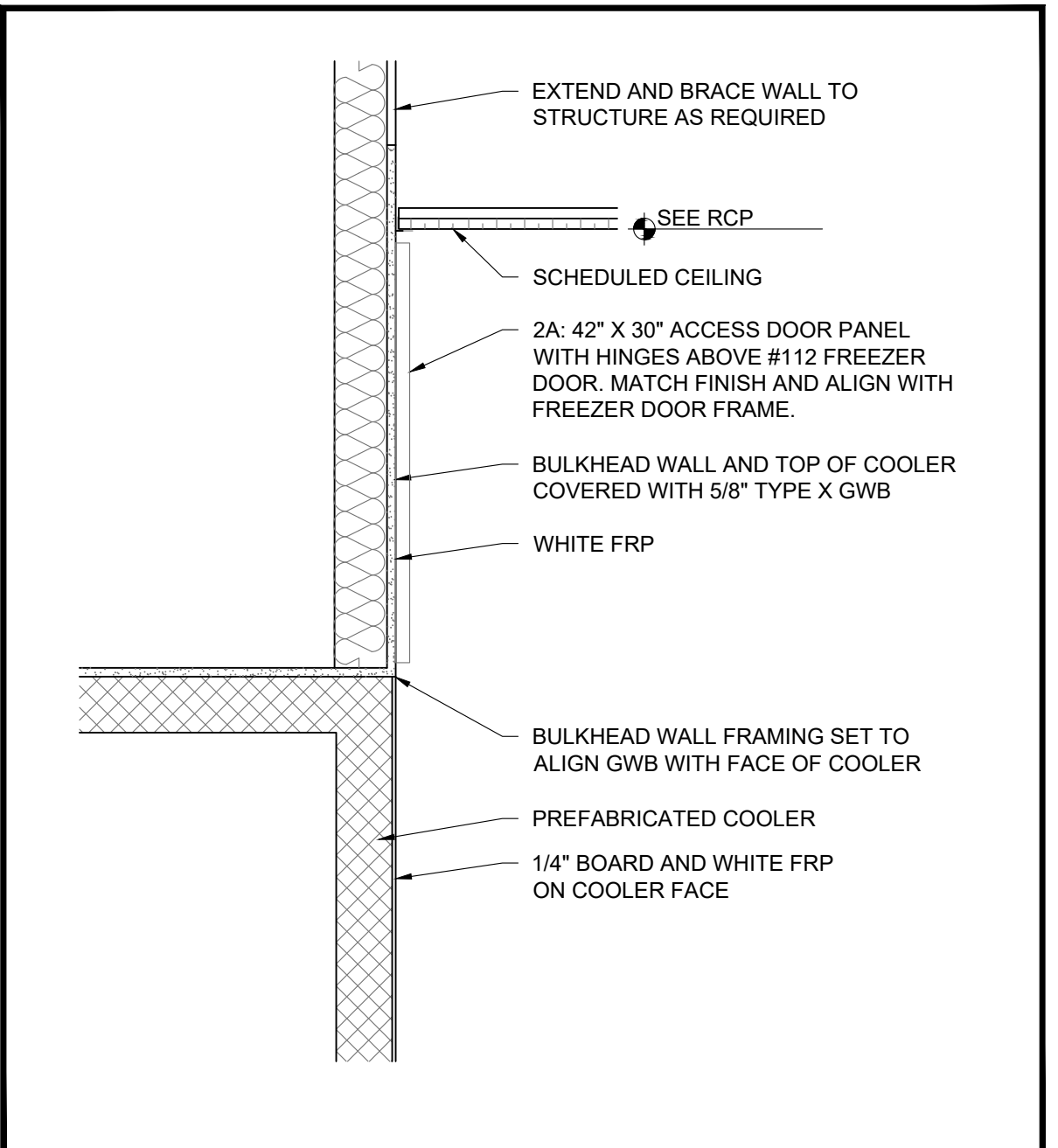
SOFFIT DETAIL - HALLWAY SCALE N.T.S. **5**



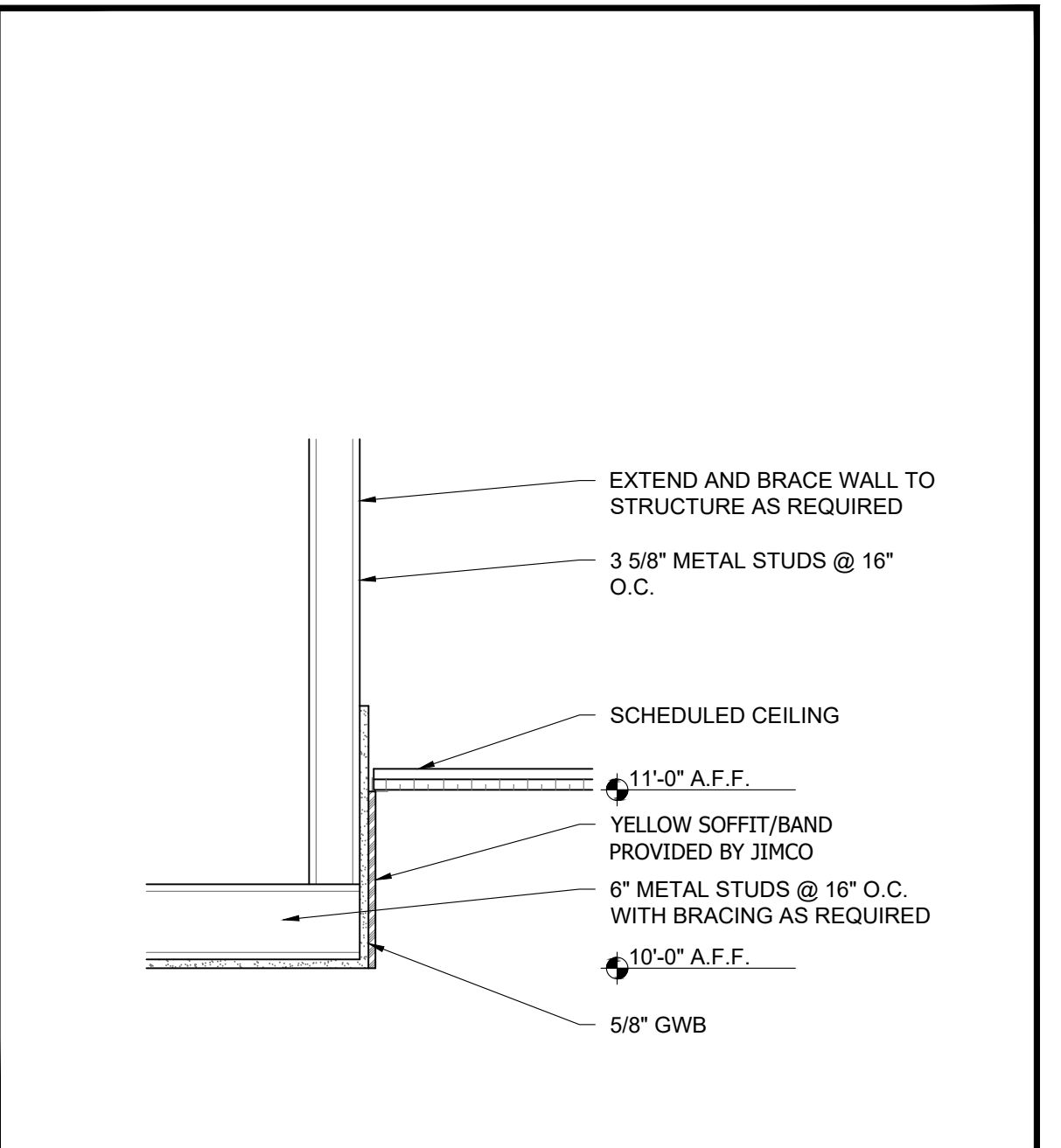
SOFFIT DET. - RESTROOM SCALE N.T.S. **4**



SOFFIT DETAIL - ATM SCALE N.T.S. **3**



SOFFIT DETAIL - COOLER SCALE N.T.S. **2**



SOFFIT DETAIL - SALES SCALE N.T.S. **1**

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PARTITION TYPES AND CONSTRUCTION DETAILS

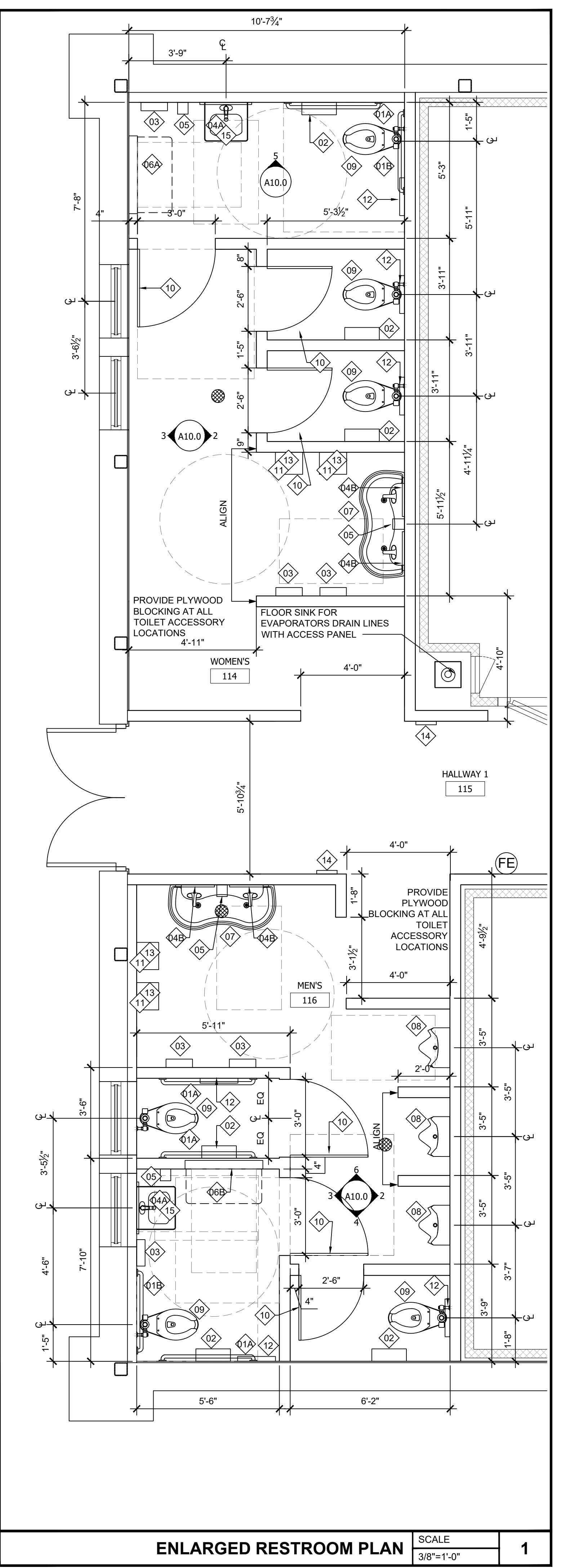
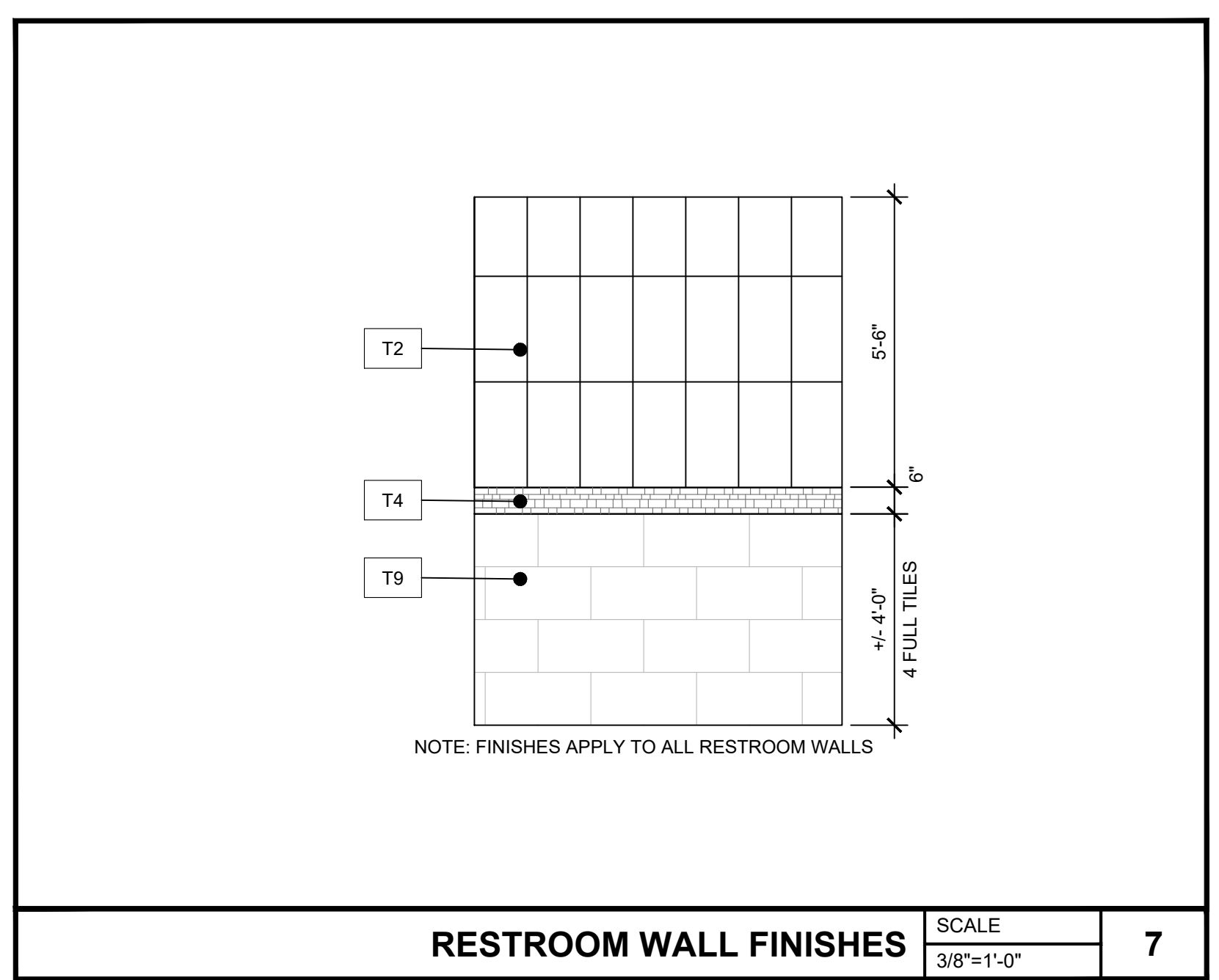
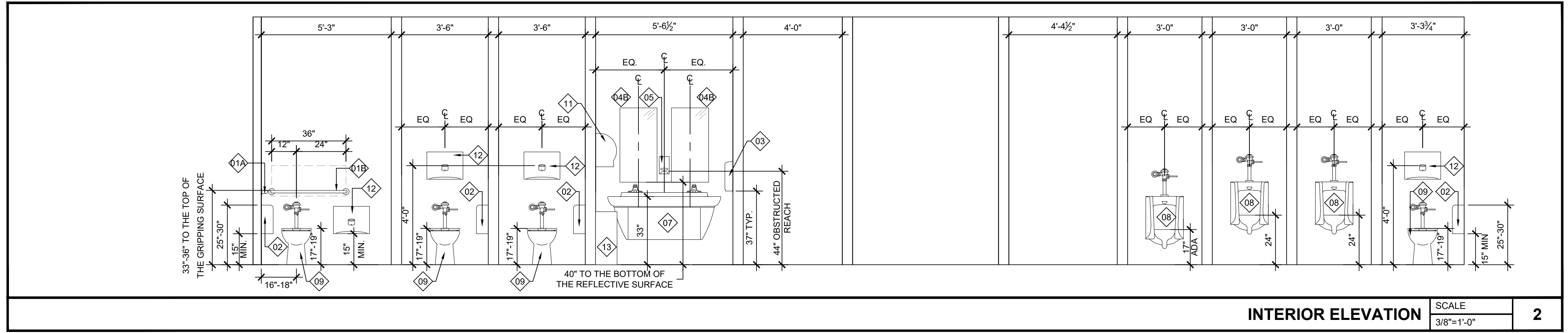
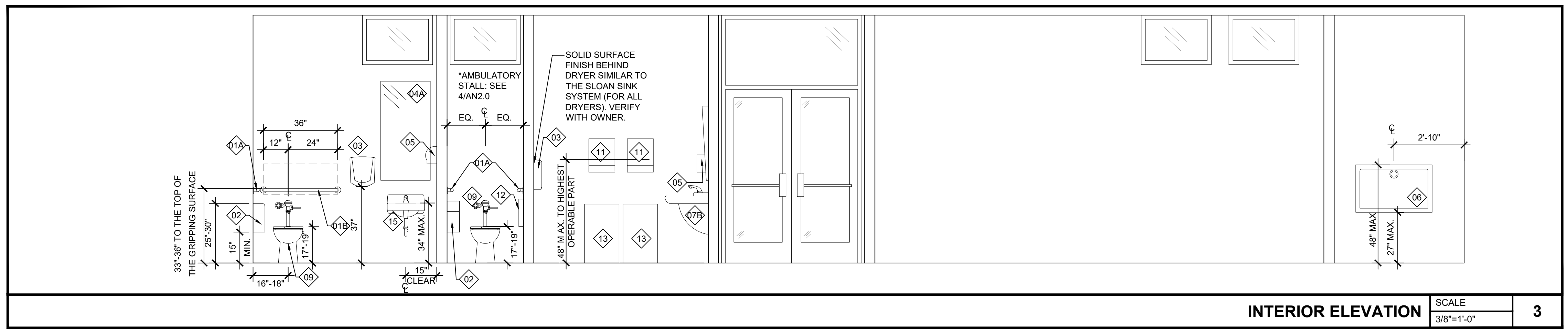
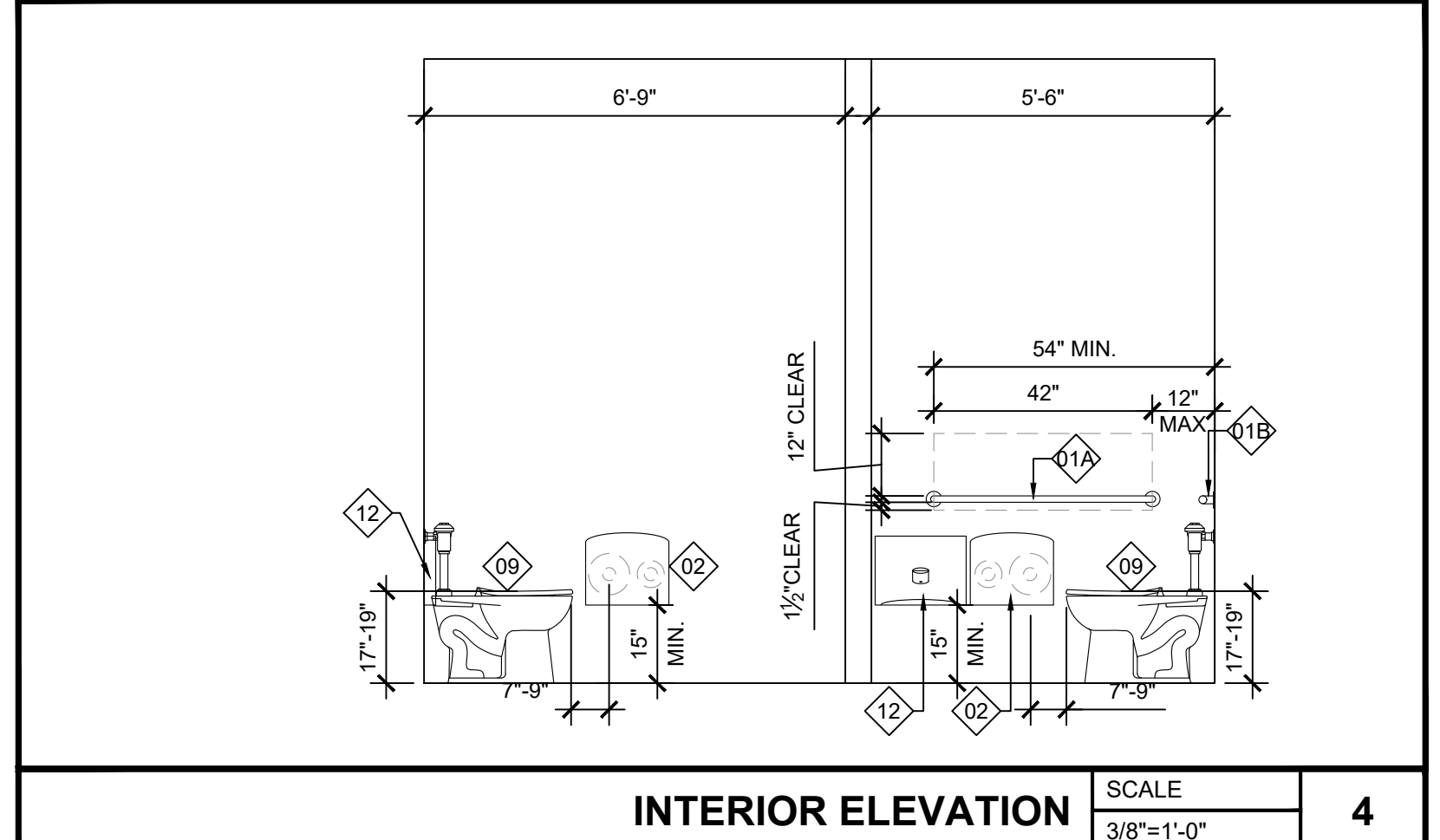
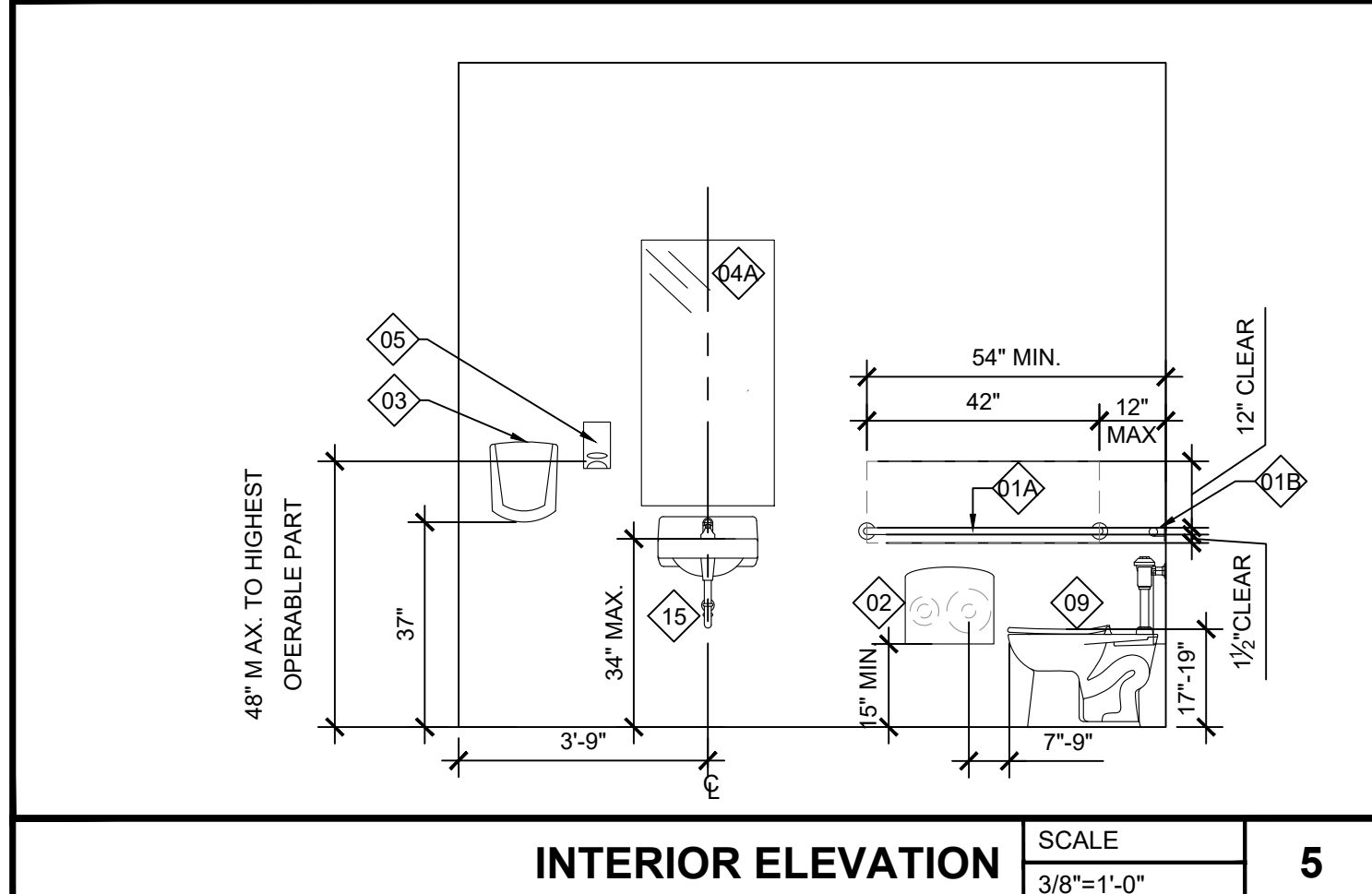
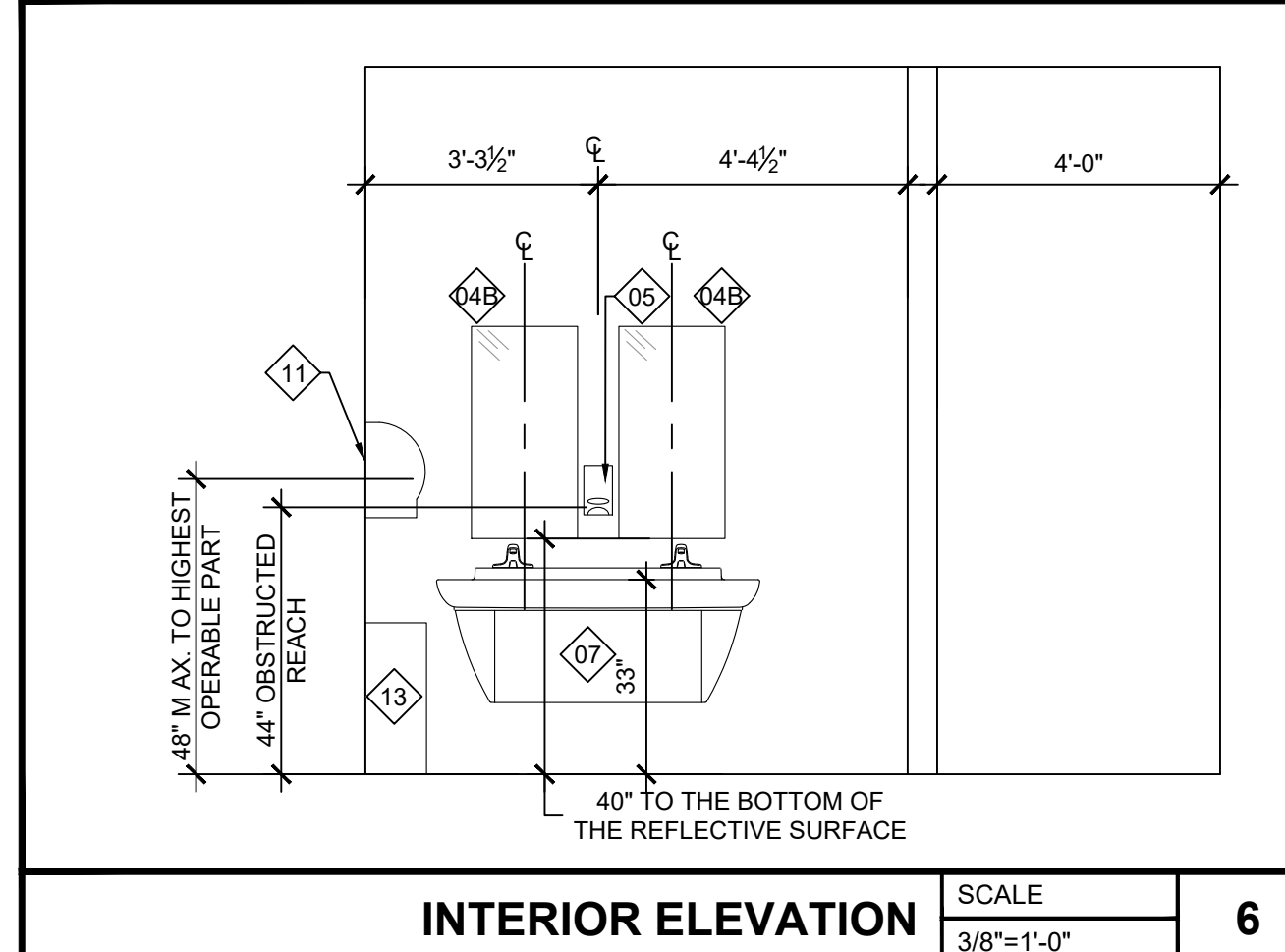
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Sheet
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RESTROOM FIXTURE AND ACCESSORY SCHEDULE

ITEM #	DESCRIPTION	MANUFACTURER	MODEL #	FURNISHED BY	INSTALLED BY	NOTES
01	A - GRAB BAR 42"	BOBRICK	B-6806 X 42	G.C.	G.C.	1-1/2" DIAMETER
	B - GRAB BAR 36"	BOBRICK	B-6806 X 36	G.C.	G.C.	1-1/2" DIAMETER
	C - GRAB BAR 24"	BOBRICK	B-6806 X 24	G.C.	G.C.	1-1/2" DIAMETER
02	TOILET TISSUE DISP. DOUBLE, SURFACE MOUNTED	KIMBERLY-CLARK	09507	OWNER	G.C.	
03	HAND DRYER	WORLD DRYER	VERDeDri Q-973A	G.C.	G.C.	SURFACE MOUNT. VERIFY WITH OWNER FOR SOLID SURFACE FINISH BEHIND DRYER. INSTALL STAINLESS STEEL PIECE BELOW DRYERS.
04	A - MIRROR ANGLE FRAME	BOBRICK	B-165 2448	G.C.	G.C.	40" MAX TO BOTTOM OF REFLECTIVE SURFACE
	B - MIRROR ANGLE FRAME	BOBRICK	B-165 1836	G.C.	G.C.	40" MAX TO BOTTOM OF REFLECTIVE SURFACE
05	SOAP DISPENSER, WALL MOUNTED	SCOTT	92145	OWNER	G.C.	OBSTRUCTED REACH: 44" MAX TO THE HIGHEST OPERABLE SURFACE UNOBSTRUCTED REACH: 48" MAX TO THE HIGHEST OPERABLE SURFACE
06	A - SURFACE MOUNT BABY CHANGER	KOALA KARE	KB300-SS	G.C.	G.C.	
	B - RECESSED BABY CHANGER	KOALA KARE	KB310-SSRE	G.C.	G.C.	WHITE GRANITE
07	LAVATORY - 2 BAY	SLOAN	ELS-72000	G.C.	G.C.	SOLID STONE: WALNUT
08	AUTOMATED SENSOR FAUCET	KOHLER	K-13462	G.C.	G.C.	FINISH: POLISHED CHROME. ELECTRIC SENSOR AND MIXER.
09	URINAL	AMERICAN STANDARD	6590001.020	G.C.	G.C.	
10	FLUSH VALVE	SLOAN	186-1.0	G.C.	G.C.	MANUAL FLUSH VALVE
11	TOILET	AMERICAN STANDARD	3043.001.020	G.C.	G.C.	FLOOR MOUNT
12	FLUSH VALVE	ZURN	Z6000AV	G.C.	G.C.	MANUAL FLUSH VALVE
13	TOILET SEAT	MAINLINE	ML 1055SSC000	G.C.	G.C.	WHITE ELONGATED OPEN FRONT SEAT
14	COAT HOOK	BOBRICK	B-233	G.C.	G.C.	MOUNT ON INSIDE OF EACH STALL DOOR AT 48" MAX. AFF.
15	PAPER TOWEL DISPENSER	KIMBERLY-CLARK	09996	OWNER	G.C.	SCOTT SLIMFOLD TOWEL DISPENSER
16	SURFACE MOUNT SANITARY SEAT COVER DISPENSER	SCOTT	09506	OWNER	G.C.	
17	TRASH CAN	-	18" X 36"	OWNER	G.C.	PLACE UNDER PAPER TOWEL DISPENSER.
18	ACCESSIBLE RESTROOM SIGNAGE	COMPLIANCE SIGNS	RRE-130_150_PAIREDS ET_WHITE_ON_BLACK	G.C.	G.C.	NON-GLARE MATTIE FINISH, COMPLIANT FONT AND TACTILE 1/32" LETTERS AND SYMBOLS. SEE 1/AN2.0 FOR MORE INFORMATION.
19	WALL MOUNTED SINK	KOHLER	SOHO K 2084	G.C.	G.C.	WHITE. 301PC P-TRAP, TRUEBRO LAV GUARD
20	FAUCET	KOHLER	K-16027-4-CP	G.C.	G.C.	FINISH: POLISHED CHROME.

NOTE: SEE 7/A10.0 FOR TYPICAL RESTROOM WALL FINISHES.
REFERENCE AN2.0 FOR ADA DETAILS AND MOUNTING HEIGHTS



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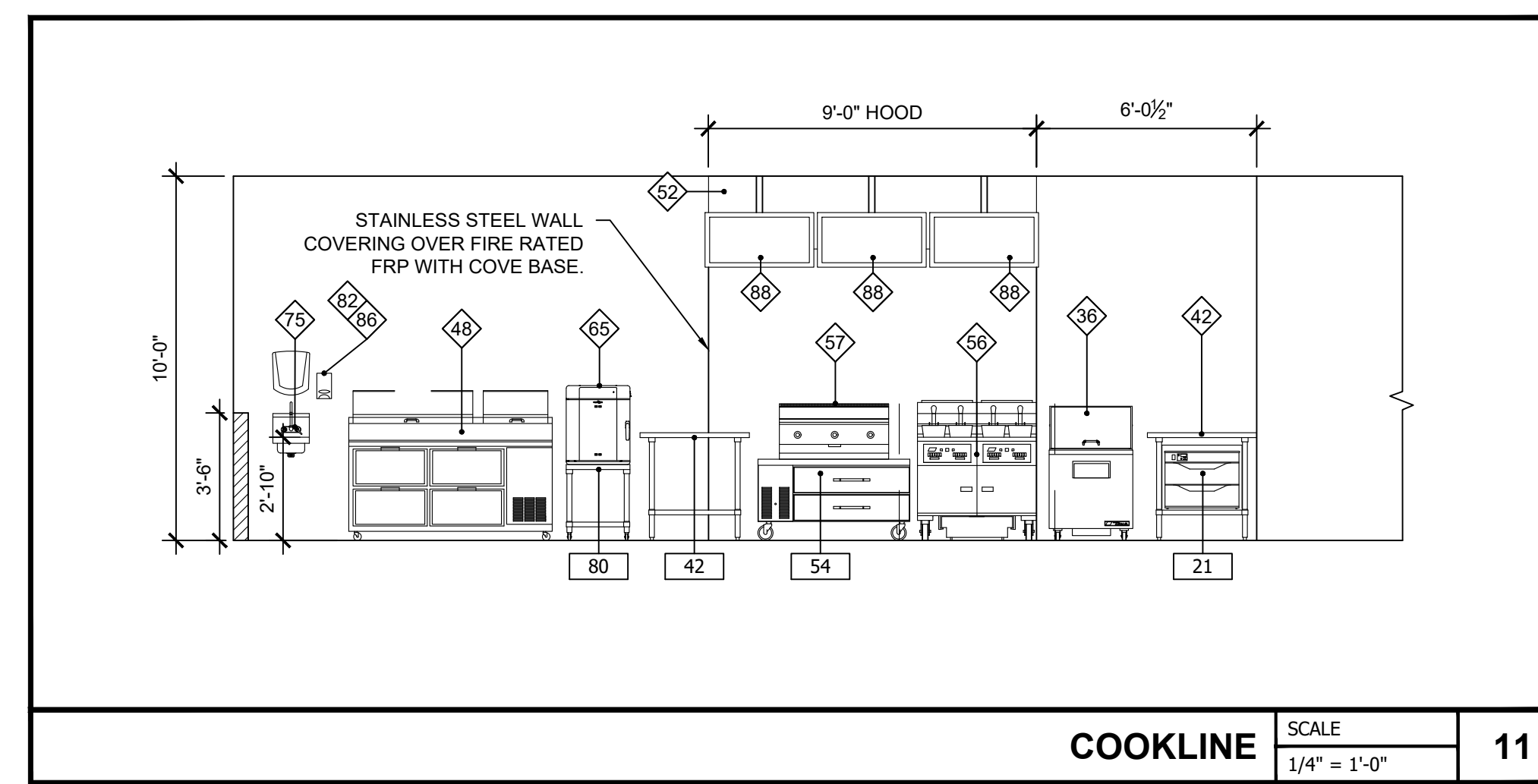
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Sheet Title
ENLARGED RESTROOM PLAN AND ELEVATIONS

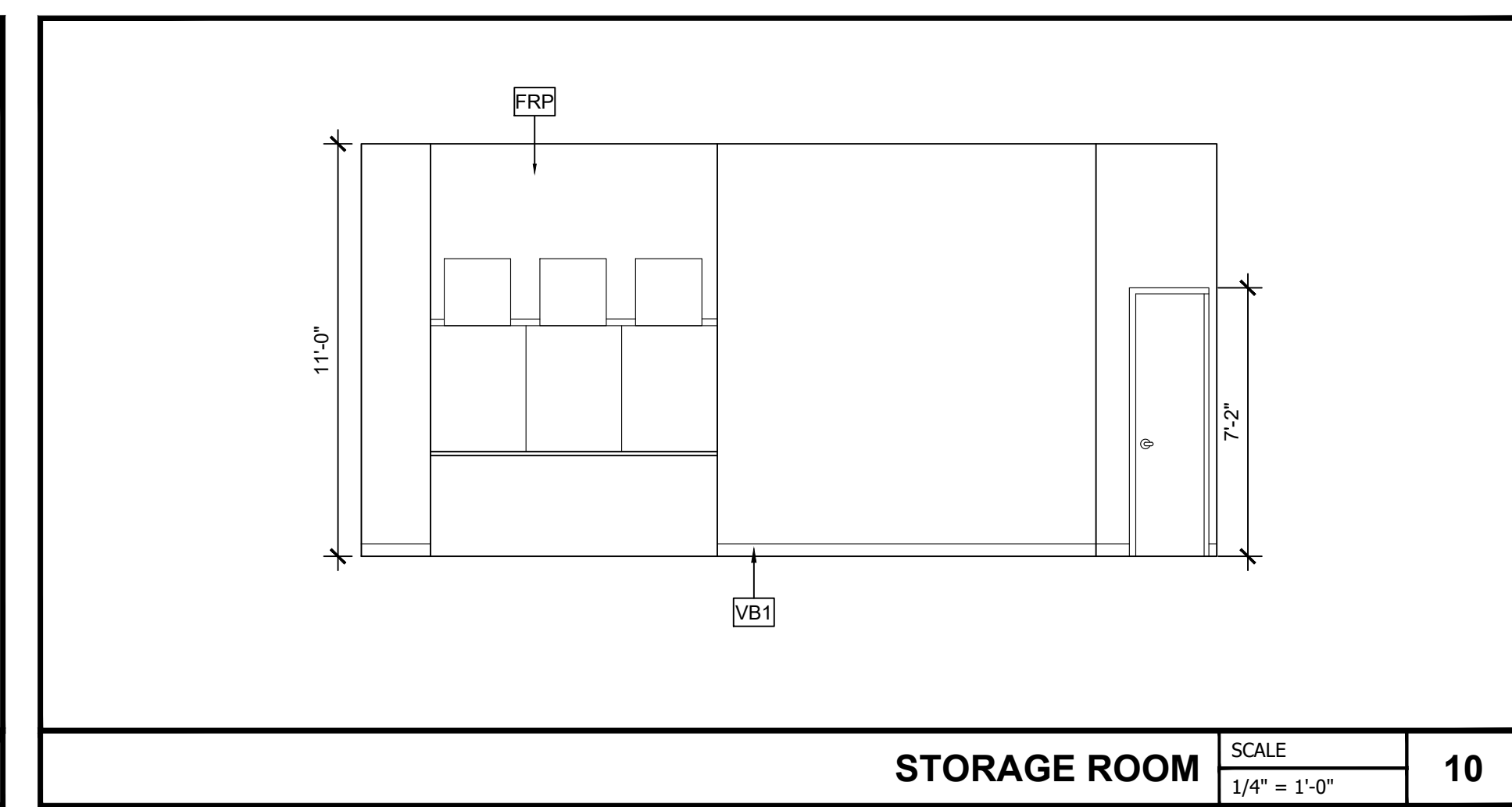
Project No. 170-101.00
Drawn By KM
Reviewed By AFO

Sheet
A10.0

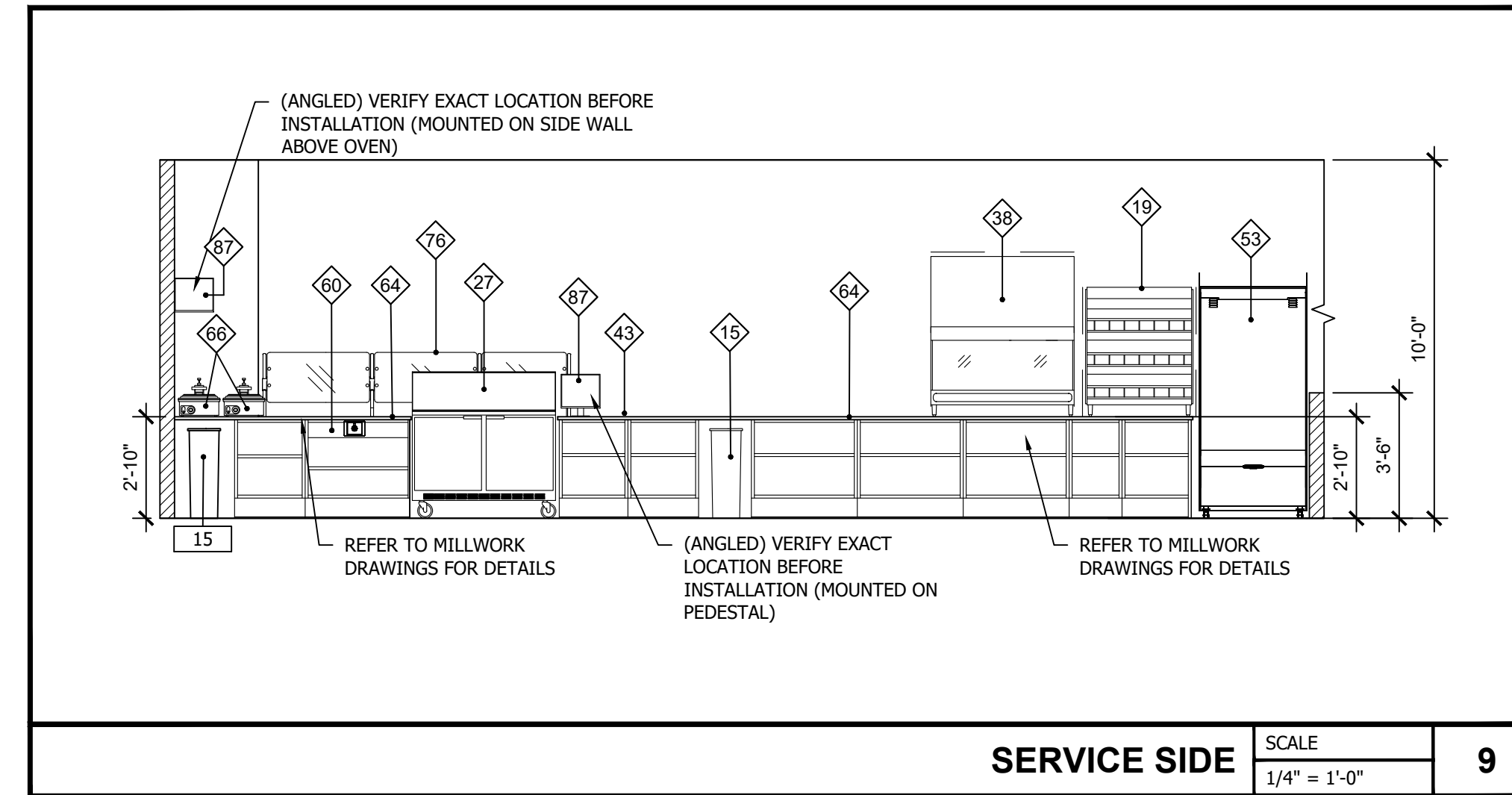
EQUIPMENT SCHEDULE				
ITEM NO.	QTY.	EQUIPMENT CATEGORY	MANUFACTURER	MODEL NUMBER
3	1	CO2 BOTTLE		
15	2	TRASH RECEPTACLE	RUBBERMAID	FG354060BLA
19	1	HEATED DISPLAY CASE (COUNTERTOP)	HATCO	GRSDS-36T
21	1	DRAWER WARMER	ALTO-SHAAM	500-2D
23	1	ICE MAKER	HOSHIZAKI	KM-1601SRJ
24	1	ICE MAKER CONDENSER	HOSHIZAKI	URC-22F
25	1	ICE BAGGER	KLOPPENBERG	DISP-1000
27	1	SANDWICH/SALAD PREP REFRIGERATOR	KELVINATOR	KCHMT48.18
30	1	MOP SINK	ADVANCE TABCO	9-OP-24FM-SSR
31	1	3 COMPARTMENT SINK WITH BRASS FAUCET: SPR-8W14-C	ADVANCE TABCO	FC-3-2424-24RL-X
32	SEE PLAN	STORAGE SHELVING	THUNDER GROUP INC.	AMCO II
36	1	SANDWICH/SALAD PREP REFRIGERATOR	KELVINATOR	KCHMT29.12
38	1	HEATED DISPLAY CASE (COUNTERTOP)	ALTO-SHAAM	ED2-48-SS
41	1	HAND SINK	ADVANCE TABCO	7-PS-EC-SP-1X
42	2	WORK TABLE	ADVANCE TABCO	KMSLAG-303-X
43	1	BOHA TERMINAL	TRANSACT	
45	1	WORK TABLE	ADVANCE TABCO	KMSLAG-306-X
48	1	PIZZA PREP. REFRIGERATOR	KELVINATOR	KCHPT72.9
50	2	TANKLESS GAS WATER HEATER	-	REFER TO PLUMBING
51	6	WIRE SHELVING UNIT	THUNDER GROUP INC.	C2160K
52	1	TYPE-1 9' HOOD WITH SUPPRESSION SYSTEM. (STAINLESS STEEL PANELS TO BE PROVIDED BY G.C.)	CAPTIVE AIRE	5424ND-2
53	1	HEATED DISPLAY CASE	ALTO-SHAAM	HSM-36/55/T
54	1	REFRIGERATED BASE	KELVINATOR	KCHC848R
56	1	DUAL GAS FRYER	HENNY PENNY	OGA322
57	1	GAS GRIDDLE	AVANTCO	CAG-36-MG
60	1	DROP-IN HOT WELLS	ALTO-SHAAM	300-HW/D6
64	1	FRONT COUNTER MILLWORK	ROYSTON	CUSTOM
65	1	VECTOR MULTI-COOK OVEN	ALTO-SHAAM	VMC-H4
66	2	FLAT TORTILLA PLATE	WARING	WSC300
75	2	HAND SINK	-	-
76	1	GLASS SNEEZE GUARD	-	-
80	1	VECTOR OVEN STAND	ALTO-SHAAM	VMC-H50281
82	3	SOAP DISPENSER, WALL MOUNTED	SCOTT	92145
83	1	WALL GRID SHELVING	METRO	SWK36-1
84	1	SERVICE SINK FAUCET	ADVANCE TABCO	K-240
85	1	UTILITY SHELF	ADVANCE TABCO	K-245
86	3	PAPER TOWEL DISPENSER	KIMBERLY-CLARK	09996
87	2	22" KDS MONITOR	DELL	E2216HV
88	3	TV SCREEN		



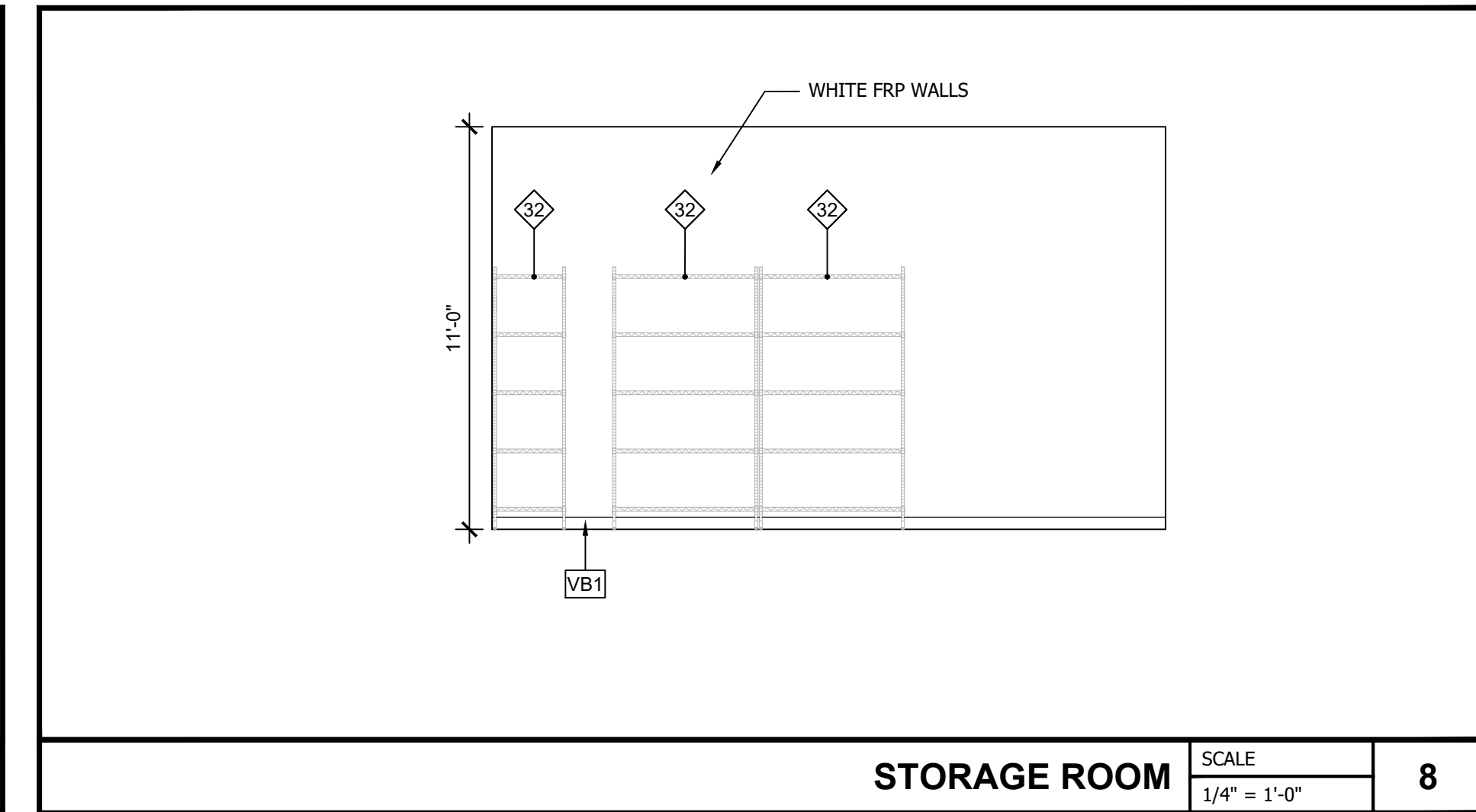
COOKLINE SCALE 1/4" = 1'-0" **11**



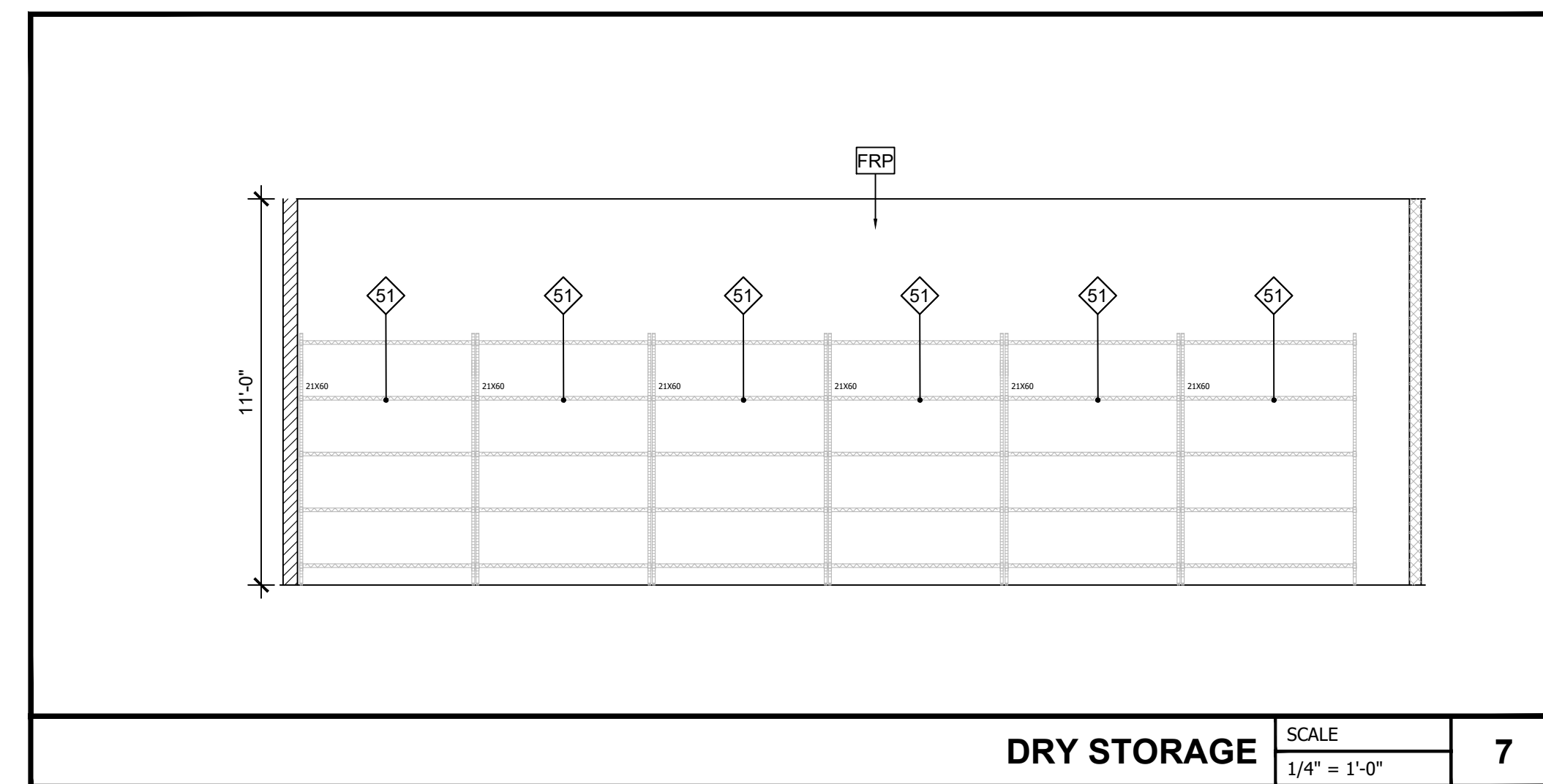
STORAGE ROOM SCALE 1/4" = 1'-0" **10**



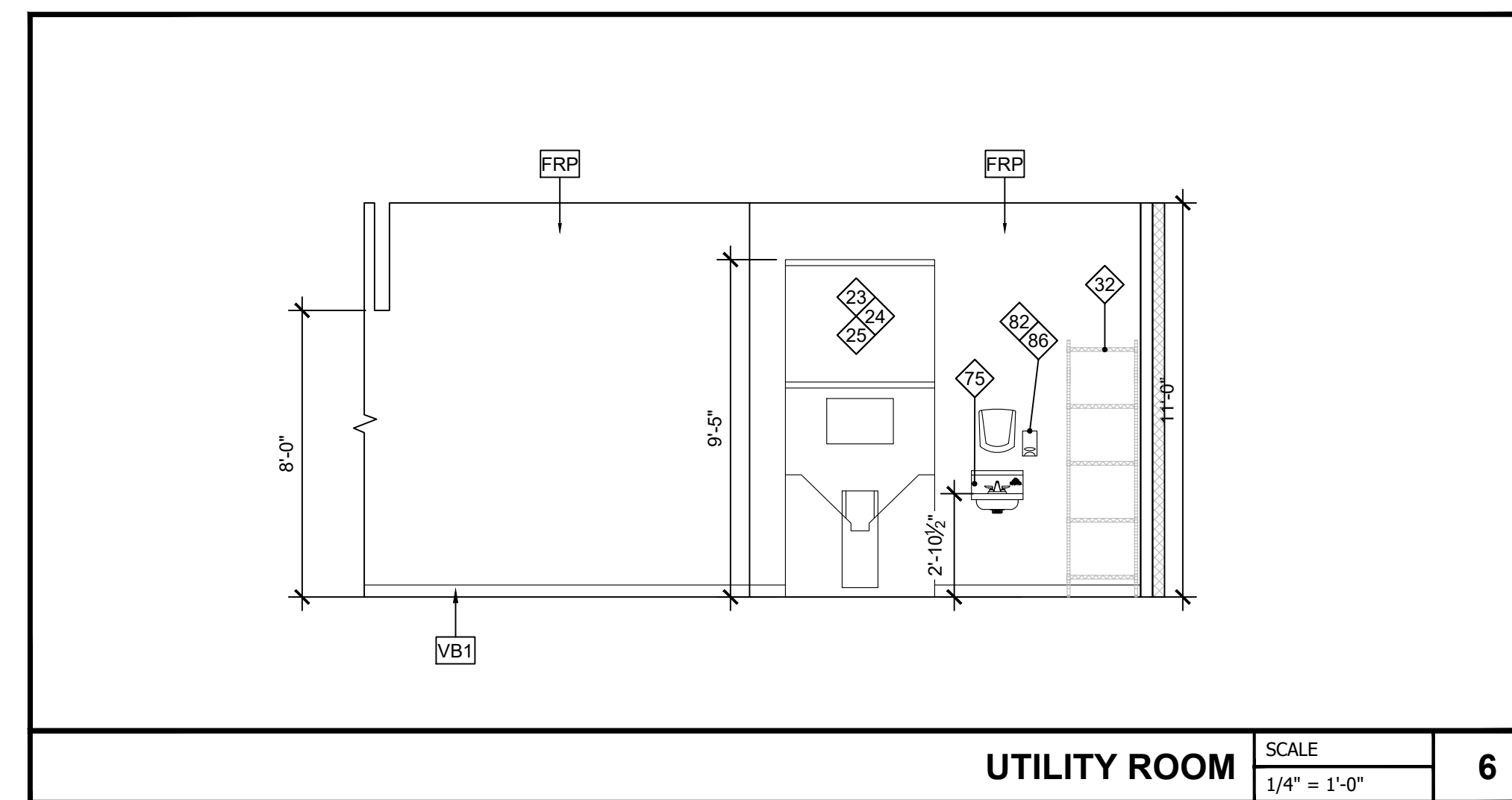
SERVICE SIDE SCALE 1/4" = 1'-0" **9**



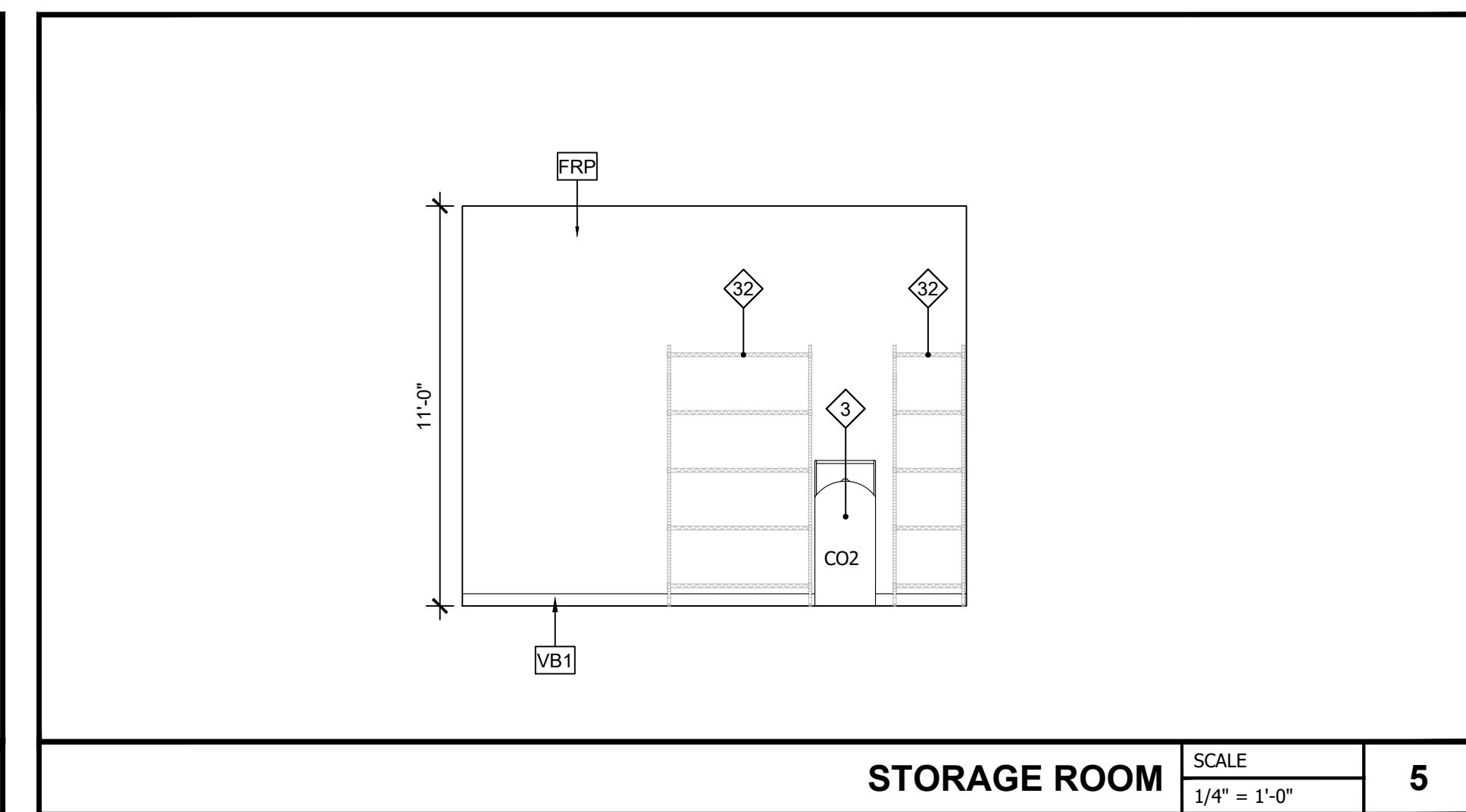
STORAGE ROOM SCALE 1/4" = 1'-0" **8**



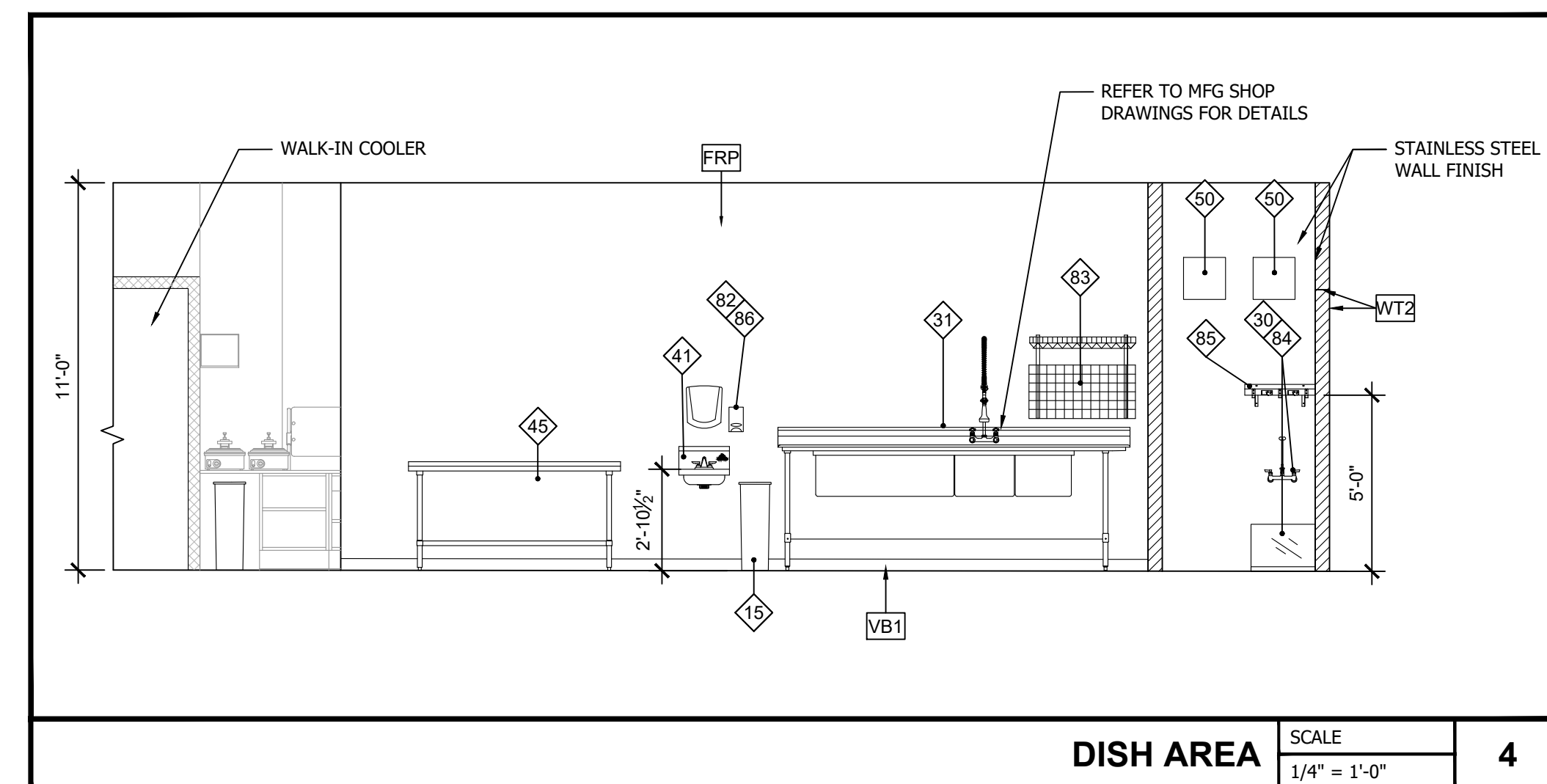
DRY STORAGE SCALE 1/4" = 1'-0" **7**



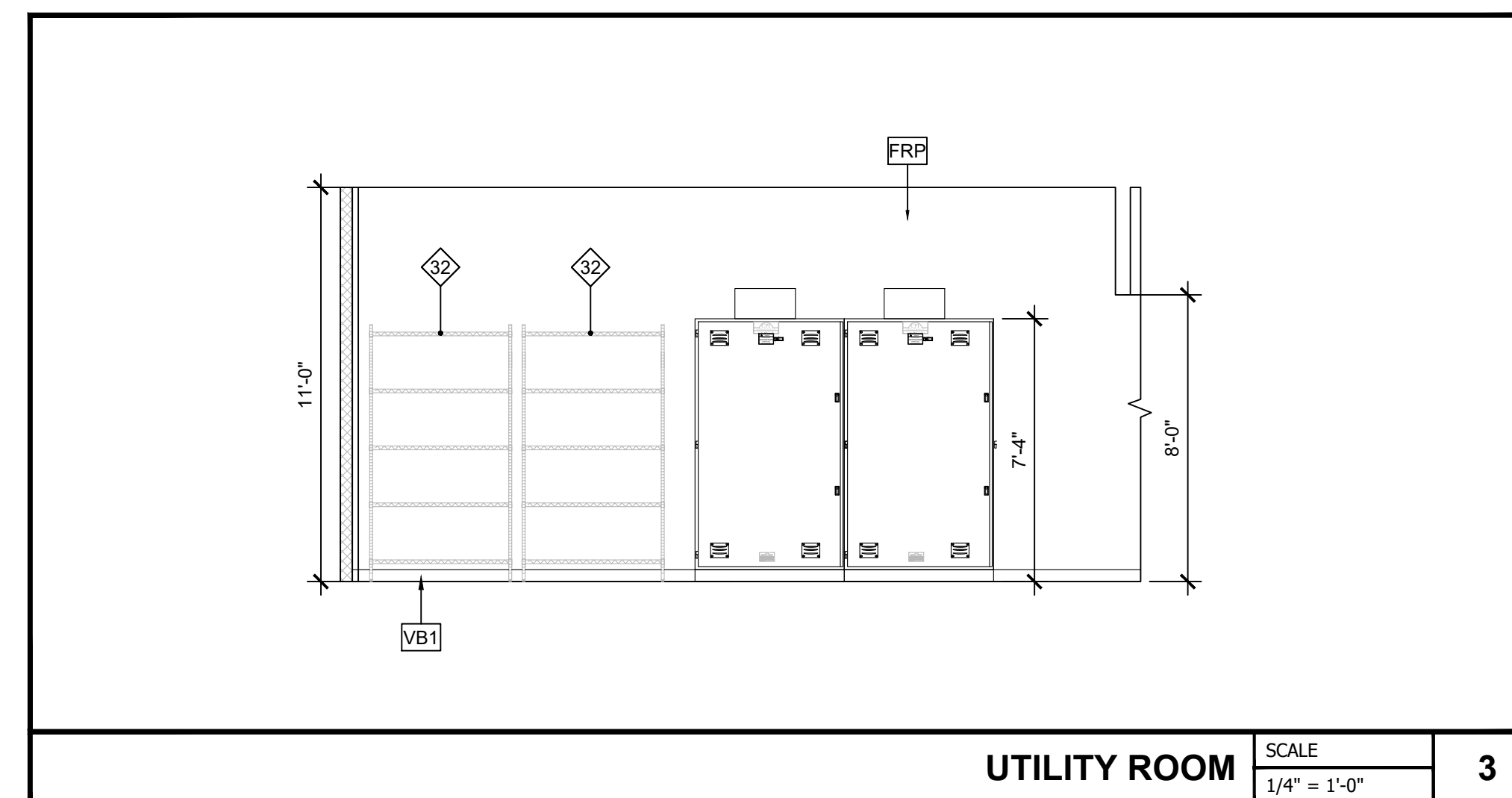
UTILITY ROOM SCALE 1/4" = 1'-0" **6**



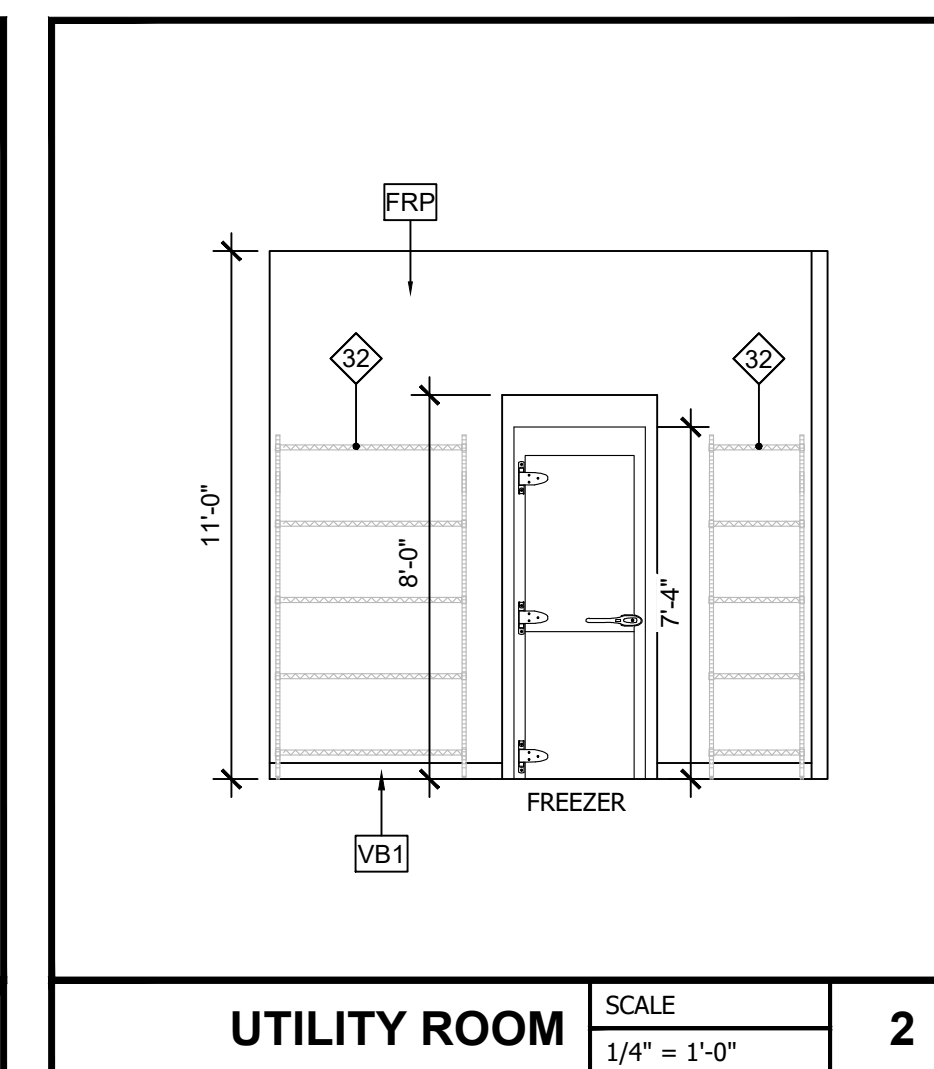
STORAGE ROOM SCALE 1/4" = 1'-0" **5**



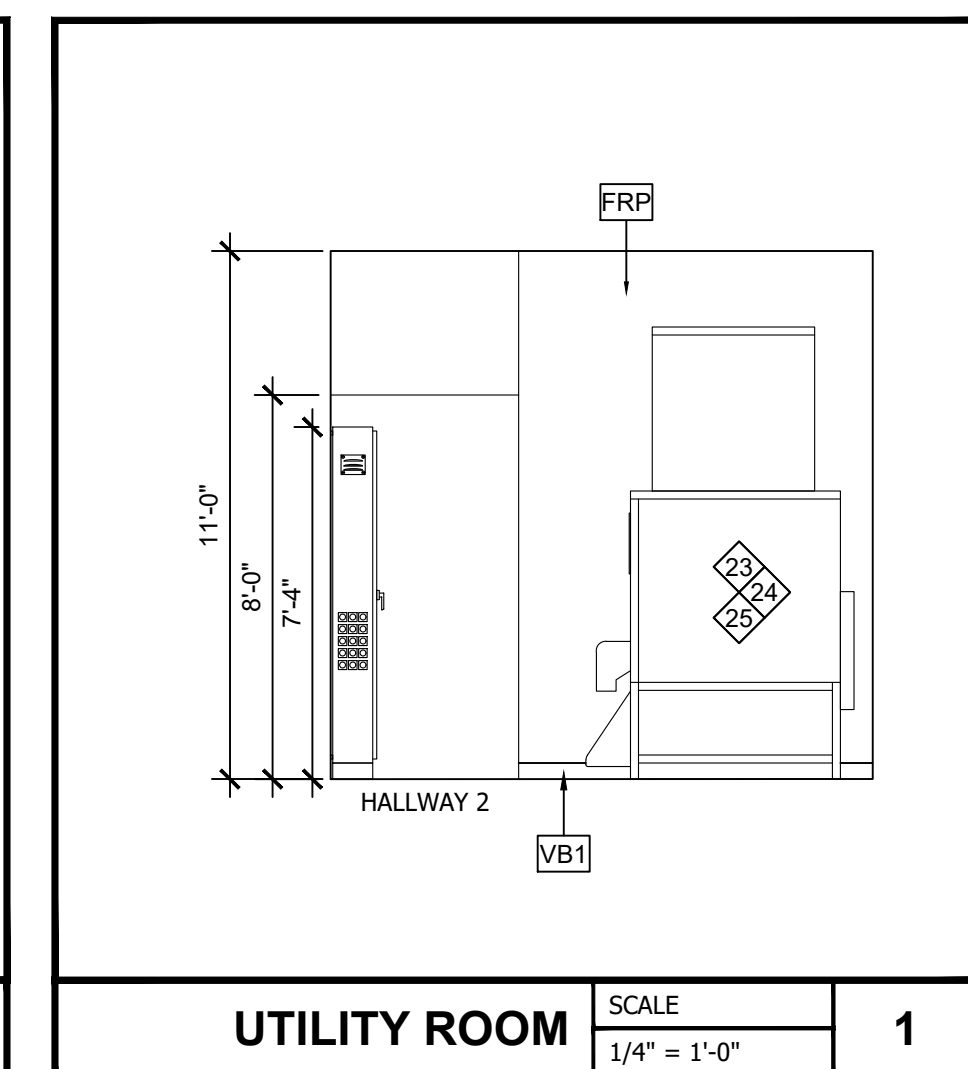
DISH AREA SCALE 1/4" = 1'-0" **4**



UTILITY ROOM SCALE 1/4" = 1'-0" **3**



UTILITY ROOM SCALE 1/4" = 1'-0" **2**



UTILITY ROOM SCALE 1/4" = 1'-0" **1**

Revision/Issue	Date
1	05/31/2024

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NISIT SAPPARKHAO, P.E.
 FL REG. NO. 64085

Date _____

Project Name and Address
CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title
INTERIOR ELEVATIONS

Project No. 170-101.00
 Drawn By KM
 Reviewed By AFO

Sheet
A11.1

LUMINAIRE SCHEDULE		
SYMBOL	QTY	DESCRIPTION
□	30	CANOPY LIGHT
—		LED CANOPY FASCIA
		3-ROWS LED LIGHTING

FIRE EXTINGUISHER AND CABINET:	
▲	5
CABINET BY LARSEN'S MANUFACTURING #2712-R-FULL PANEL-AL SQUARE TRIM RECESSED RED VERTICAL LETTERING. CABINET AND HIGH HAZARD FIRE EXTINGUISHER SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR. (ABC DRY CHEMICAL - 5 LB.) INSTALLATION: FE HANDLE TO BE 42" AFF.	

SCOPE OF WORK / CONTRACTORS RESPONSIBILITIES:

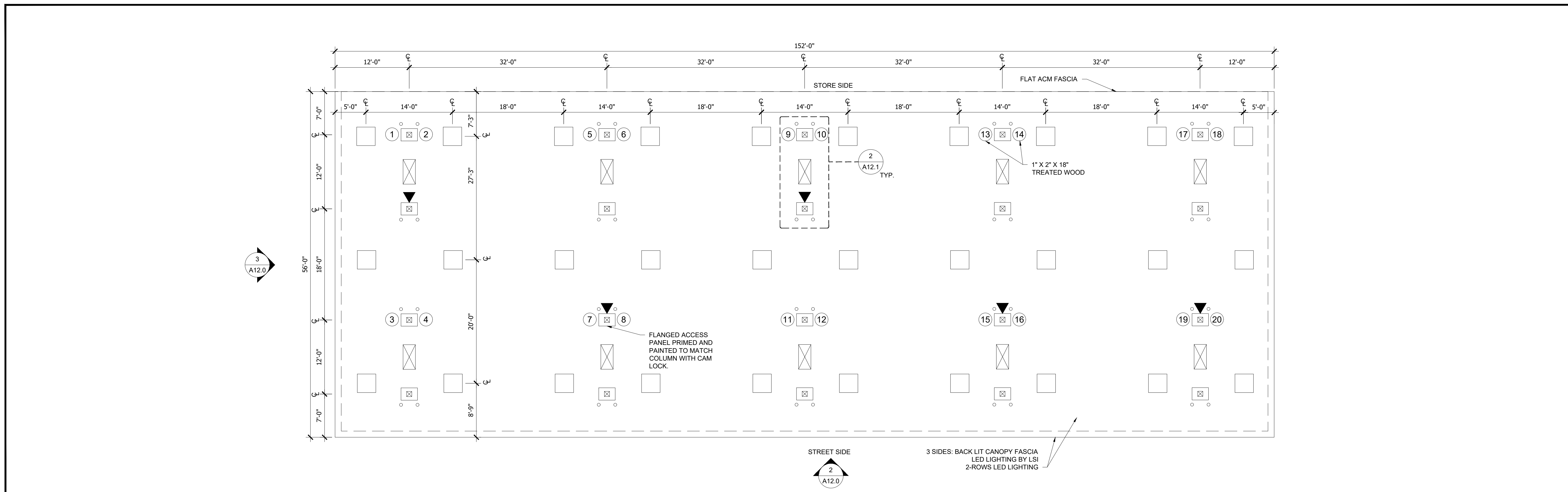
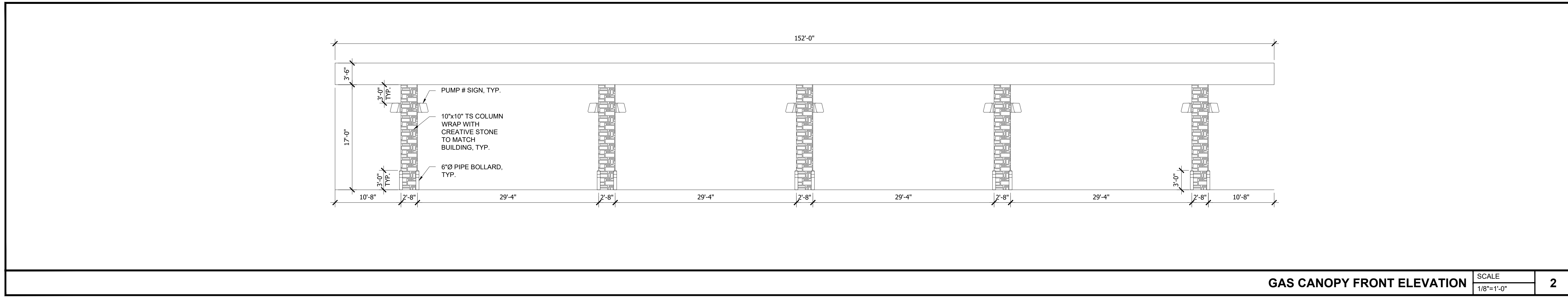
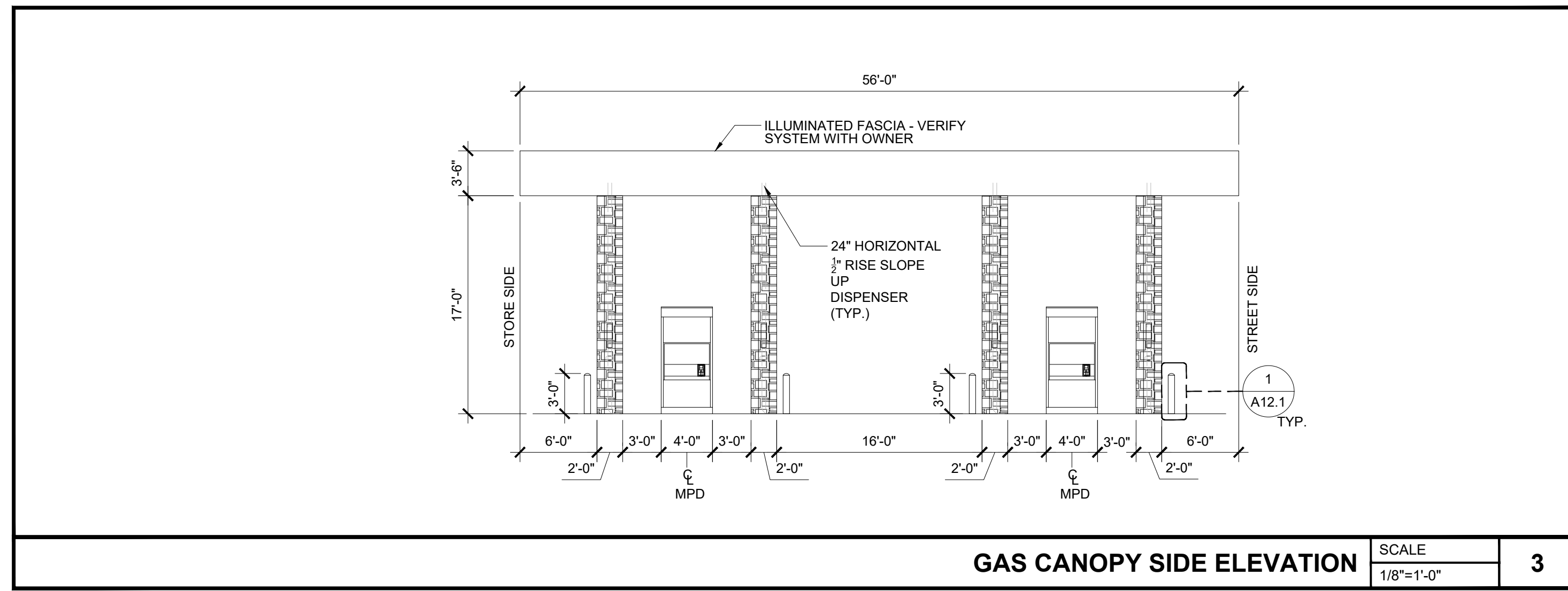
- CANOPY STRUCTURAL SYSTEM AND FASCIA SUPPLIED BY OWNER. INSTALLED BY GENERAL CONTRACTOR. FINAL ELECTRICAL CONNECTIONS BY GENERAL CONTRACTOR.
- FASCIA SYSTEM PROVIDED BY OWNER AND INSTALLED BY GENERAL CONTRACTOR. FINAL ELECTRICAL CONNECTIONS BY GENERAL CONTRACTOR.
- LIGHTS PROVIDED BY OWNER AND INSTALLED BY GENERAL CONTRACTOR. FINAL ELECTRICAL CONNECTIONS BY GENERAL CONTRACTOR.
- CANOPY COLUMN FRAMING SYSTEM AND STONE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.

GAS PUMP SIGNAGE:

- *MADE OF .063 HEAVY-DUTY ALUMINUM.
- *PRINTED ON TWO SIDES.
- *ROUNDED CORNERS.
- *1" BEND WITH INDUSTRIAL STRENGTH DOUBLE SIDED TAPE.
- *PREDRILLED MOUNTING HOLES FOR ADDITIONAL SECURITY.

NOTE:
FOR ILLUSTRATIVE PURPOSES AND DIMENSIONING OF LIGHTING/COLUMNS ONLY. FULL SET OF ENGINEERED CANOPY DRAWINGS PROVIDED. SEE SHEETS CS1, CS2, AND AB1.

BASIC WIND SPEED: V=155 MPH, V_{sd}=140 MPH
BUILDING RISK CATEGORY: II



No.	Revision/Issue	Date
1	ISSUE FOR PERMIT	05/31/2024

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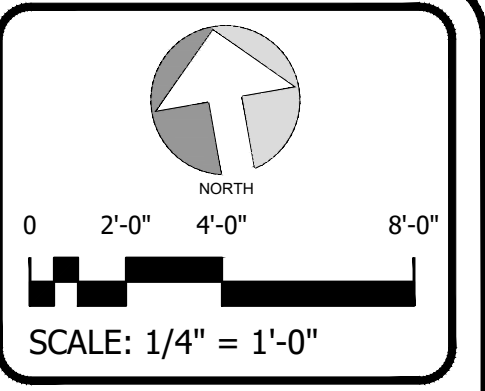
Date

Project Name and Address: **CEFCO #437 - BETHEL**
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

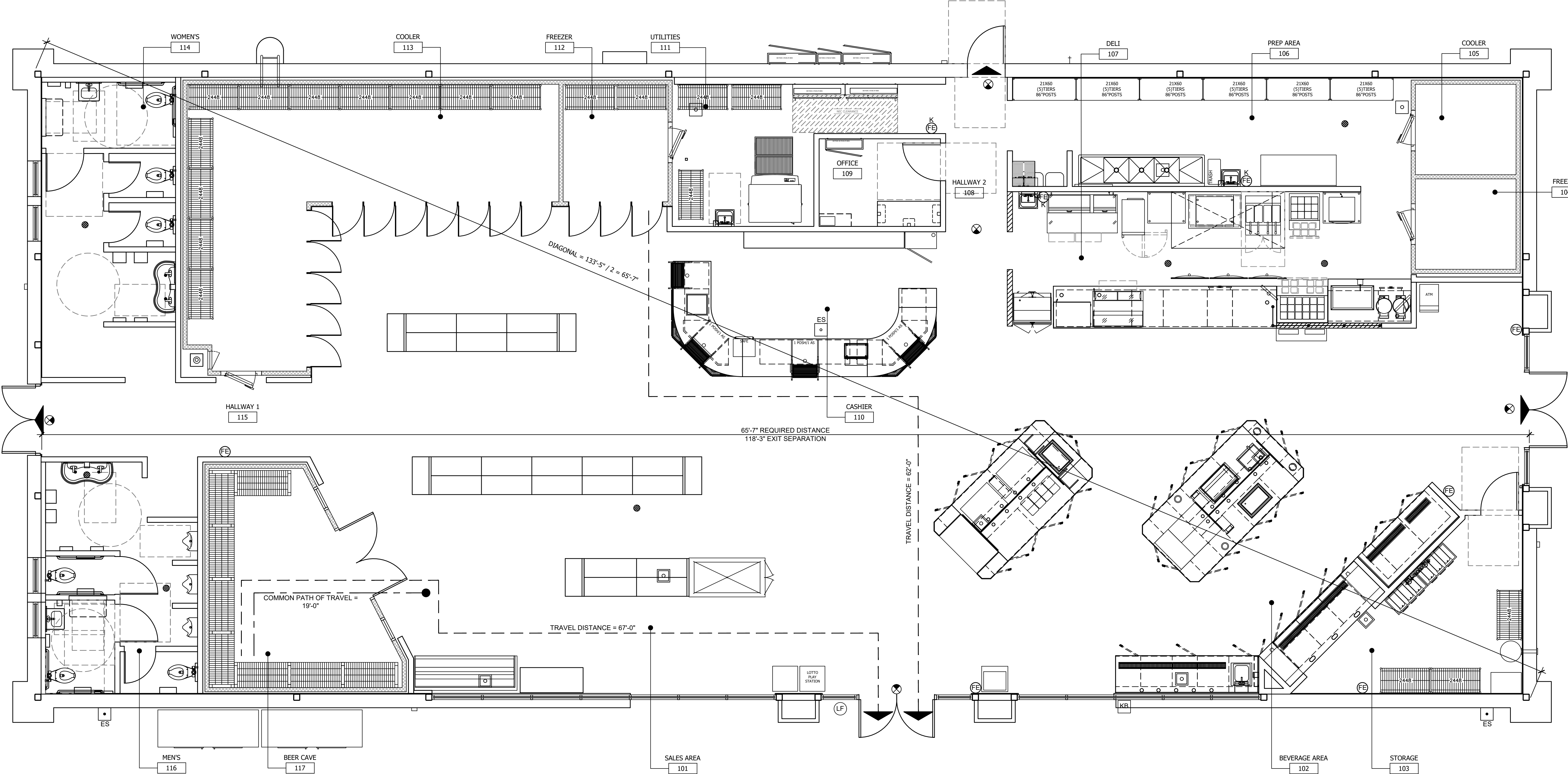
Sheet Title: **GAS CANOPY PLAN AND ELEVATIONS**

Project No. 170-101.00	Sheet
Drawn By KM	A12.0
Reviewed By AFO	

SYMBOLS LEGEND		PLUMBING FIXTURE REQUIREMENTS					BUILDING AREA		CODE ANALYSIS			
SYMBOL	DESCRIPTION	MINIMUM NUMBER OF PLUMBING FIXTURES: FBC-PLUMBING (TABLE 403.1)					C-STORE	SF	C-STORE			
	EGRESS WIDTH	WATER CLOSETS	LAVS	DRINKING FOUNTAINS	BATH / SHOWER	OTHER	SALES AREA - M	3,150	OCCUPANCY GROUP	M - MERCANTILE		
	EMERGENCY EXIT SIGN (DIRECTIONAL) WITH BATTERY BACKUP	1,500	1,750	1,1000	-	1 SERVICE SINK	WALK-IN COOLER/FREEZER - M	570	OCCUPANCY GROUP	S - ACCESSORY		
	NOTICE / WARNING SIGN FOR LIGHT-FRAME TRUSS TYPE CONSTRUCTION PER FBC	REQUIRED	1	1	1	0	BEER CAVE - M	255	CONSTRUCTION TYPE	IIB (UNPROTECTED)		
	FIRE EXTINGUISHER-BRACKET MOUNTED, MULTIPURPOSE DRY CHEMICAL 3-A-40-B-C	PROVIDED	6 WC & 3 URINALS	6	*0	0	RESTROOMS - S	539	OCCUPANT LOAD	86		
	FIRE EXTINGUISHER-BRACKET MOUNTED, KITCHEN UL 711A	*NOTE: SINGLE-USE CONTAINERS WILL BE AVAILABLE FOR CUSTOMERS AND EMPLOYEES TO ACCESS WATER FROM BEVERAGE MACHINE(S)										
	EMERGENCY PUSH-BUTTON SHUT-OFF SWITCH FOR FUEL SYSTEM. NFPA AND SIGNAGE @ 42" AFG	APPLICABLE CODES										
	KNOX BOX INSTALLED AS PER FIRE MARSHALL'S SPECIFICATIONS	2023 FLORIDA BUILDING CODE 8TH EDITION 2023 FLORIDA EXISTING BUILDING CODE 8TH EDITION 2023 FLORIDA ACCESSIBILITY CODE 8TH EDITION 2023 FLORIDA PLUMBING CODE 8TH EDITION 2023 FLORIDA MECHANICAL CODE 8TH EDITION 2023 FUEL GAS CODE 8TH EDITION 2023 FLORIDA ENERGY CONSERVATION CODE 8TH EDITION 2023 FLORIDA FIRE PREVENTION CODE 8TH EDITION 2020 NATIONAL ELECTRICAL CODE (NFPA 70)										
	DIAGONAL DISTANCE AND EXIT REMOTENESS											
	MAXIMUM TRAVEL DISTANCE / PATH OF TRAVEL FROM THE MOST REMOTE POINT TO NEAREST EXIT											
	COMMON PATH OF TRAVEL											
	CHOICE OF EXIT											
	PRIMARY EXIT											
							PREP AREA - M	380	WIND LOAD - PER FBC 1609, WIND LOAD = 155 MPH			
							STORAGE - S	197	MAXIMUM EXIT ACCESS TRAVEL DISTANCE			200'
							UTILITIES - S	192	MAXIMUM COMMON PATH OF TRAVEL			75'
							OFFICE - M	71	EXITS REQUIRED			2 REQUIRED
							CASHIER AREA - M	233	EXITS PROVIDED			4 PROVIDED
							DELI - M	233	OCCUPANCY (CONVENIENCE STORE)			OCCUPANT LOAD
							COOLER/FREEZER COMBO - S	154	M-MERCANTILE	4,892 SF	1 PER 60 SF GROSS	82
									S-ACCESSORY	1,082 SF	1 PER 300 SF GROSS	4
							GROSS BUILDING	5,974	SUBTOTAL	5,974 SF		86



No.	Revision/Issue	Date
1	ISSUE FOR PERMIT	06/07/2024



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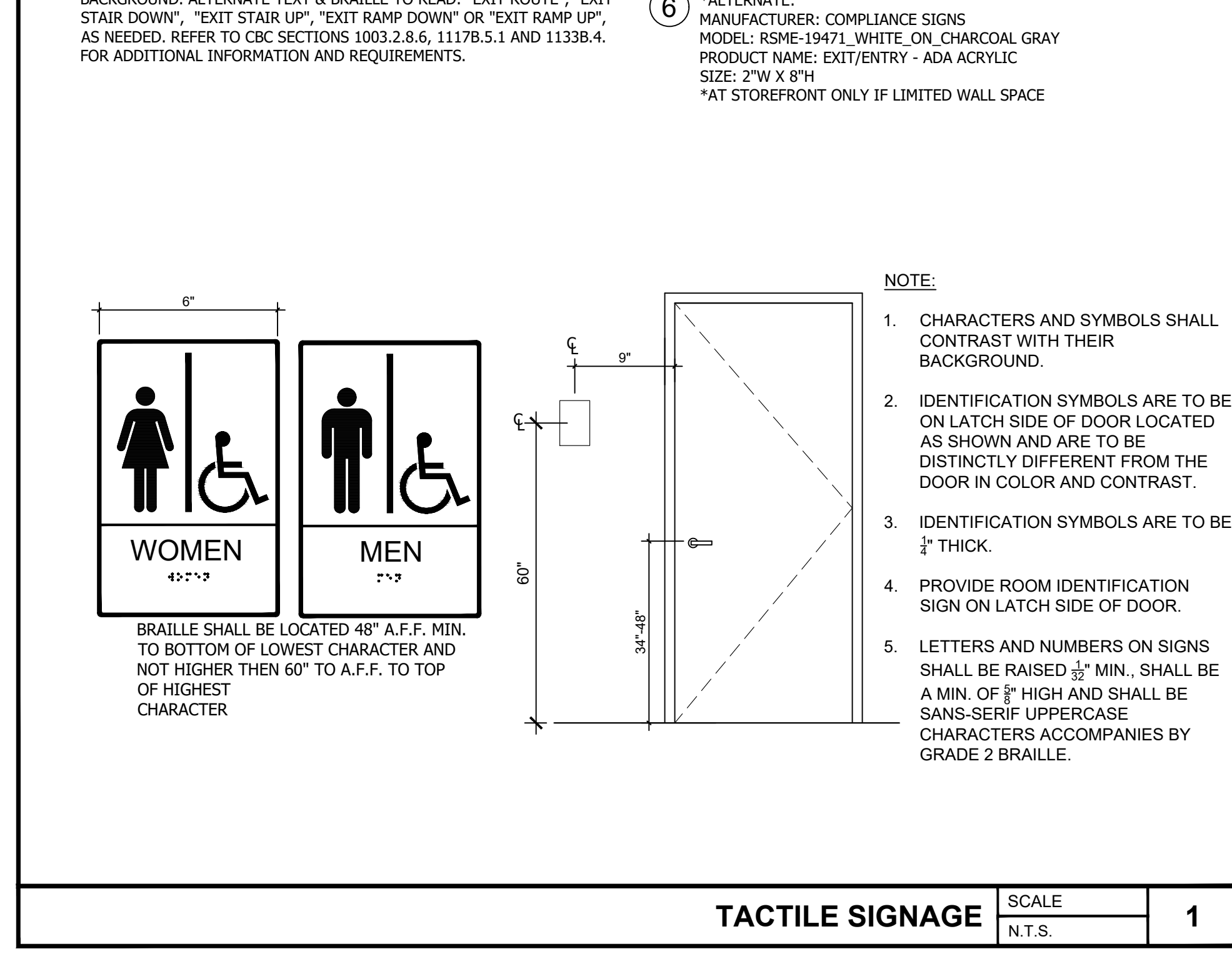
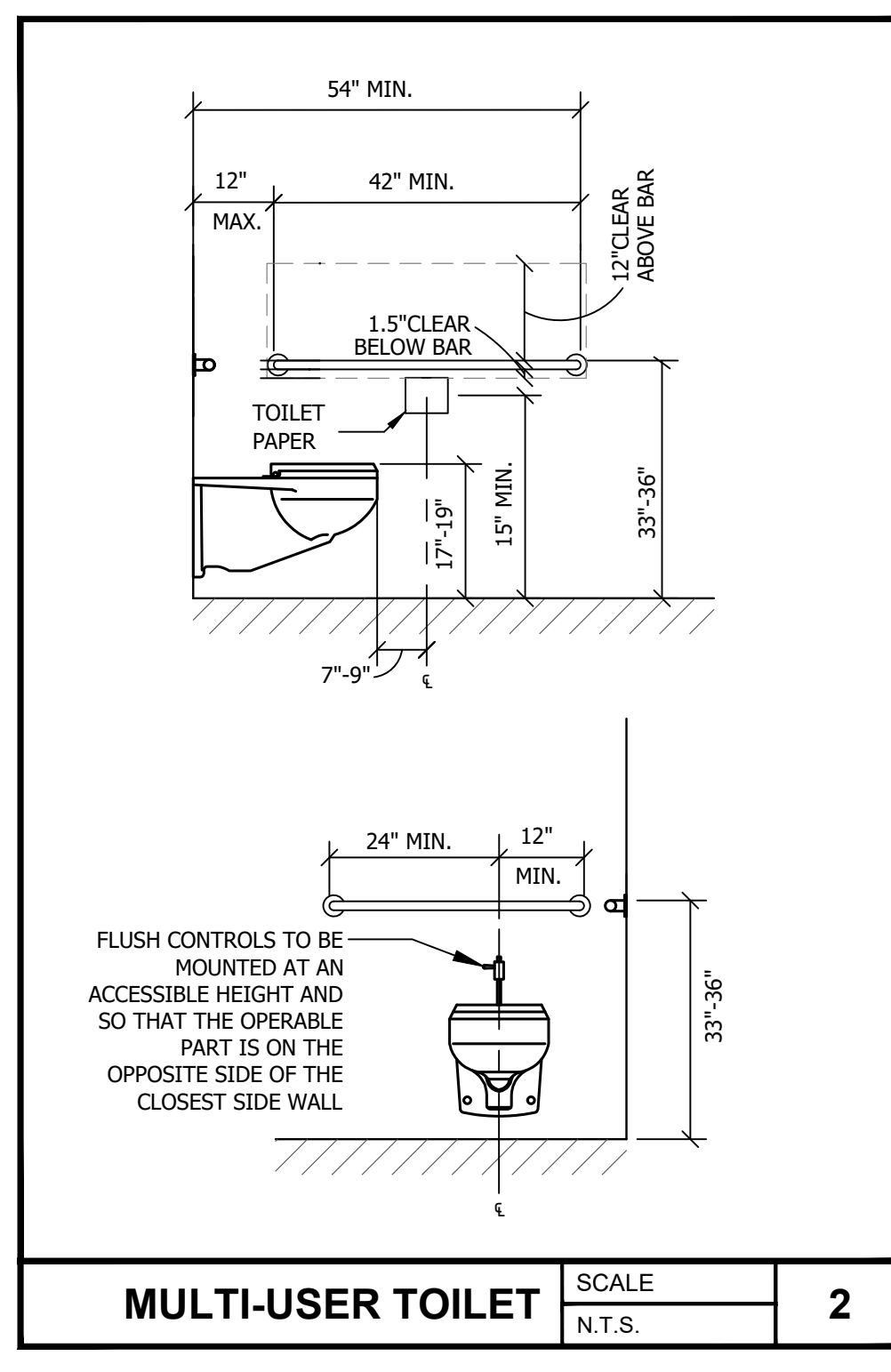
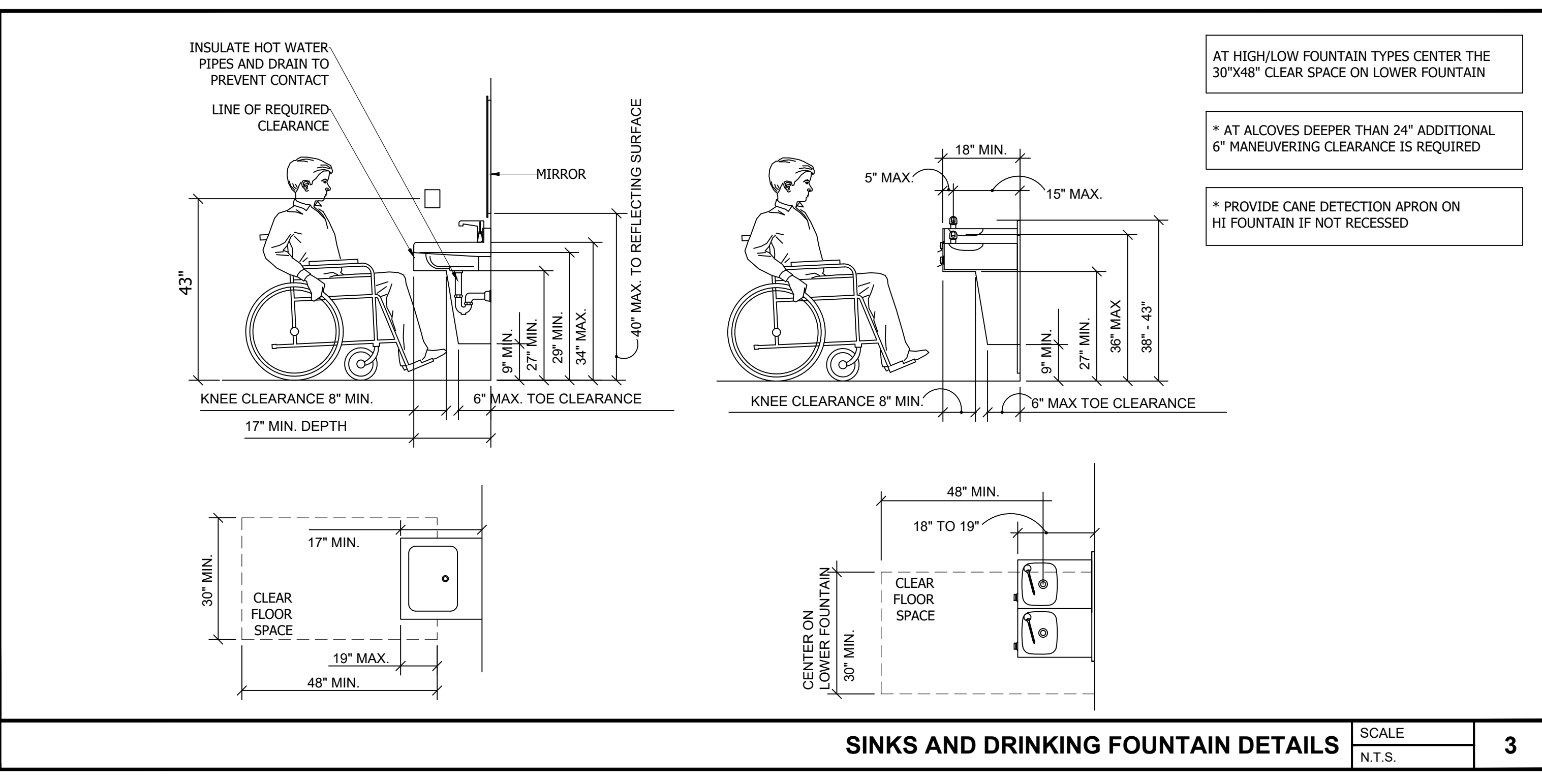
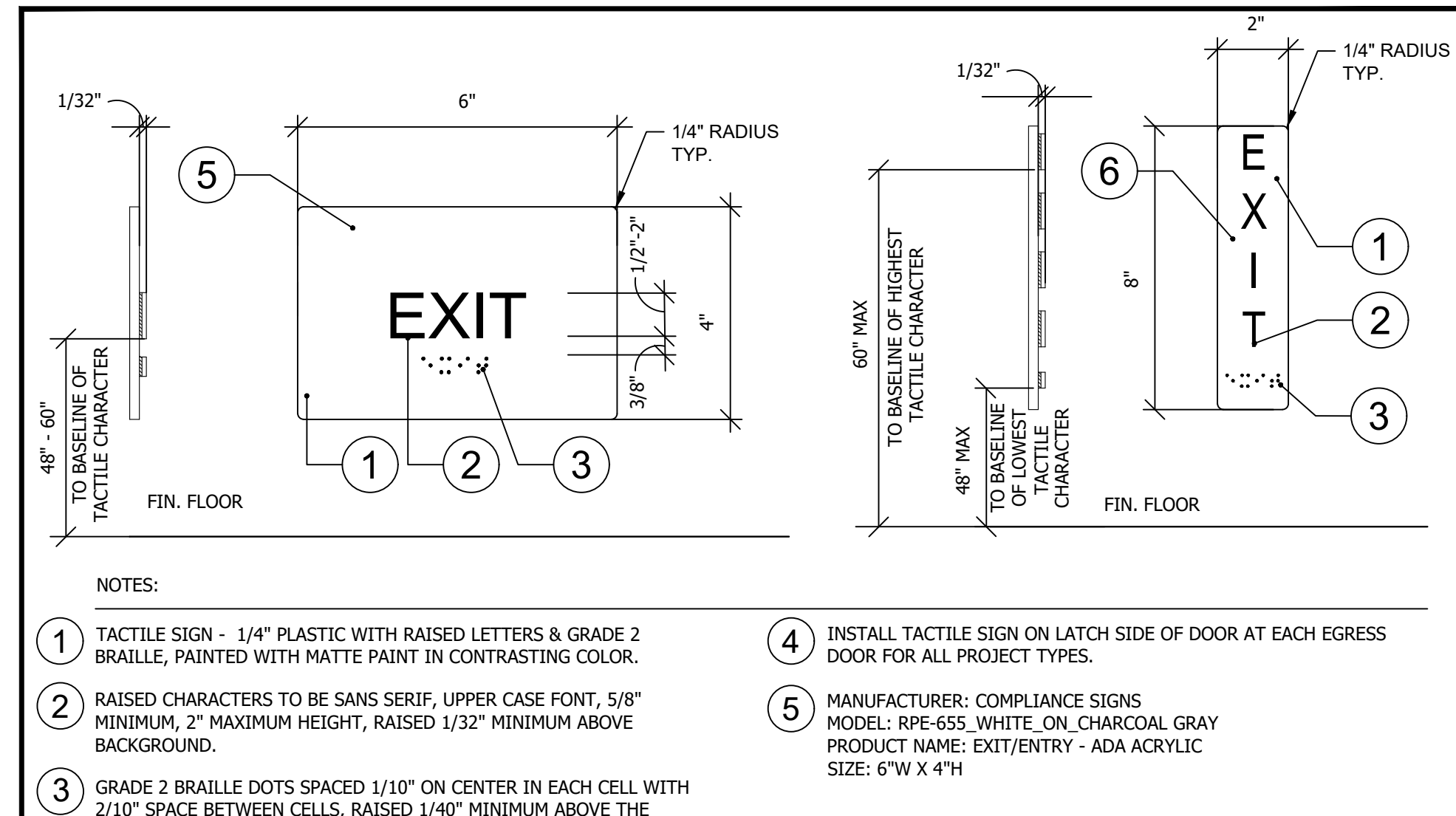
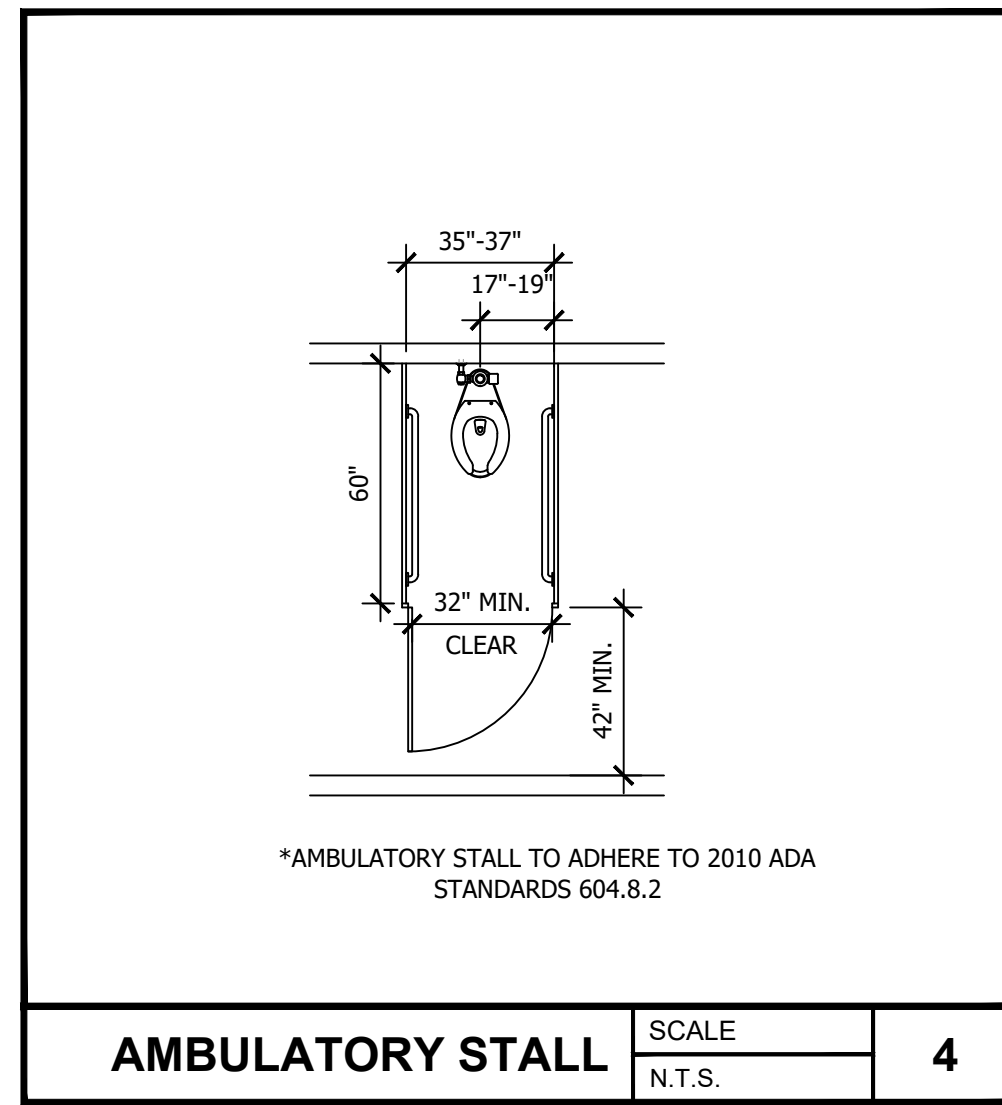
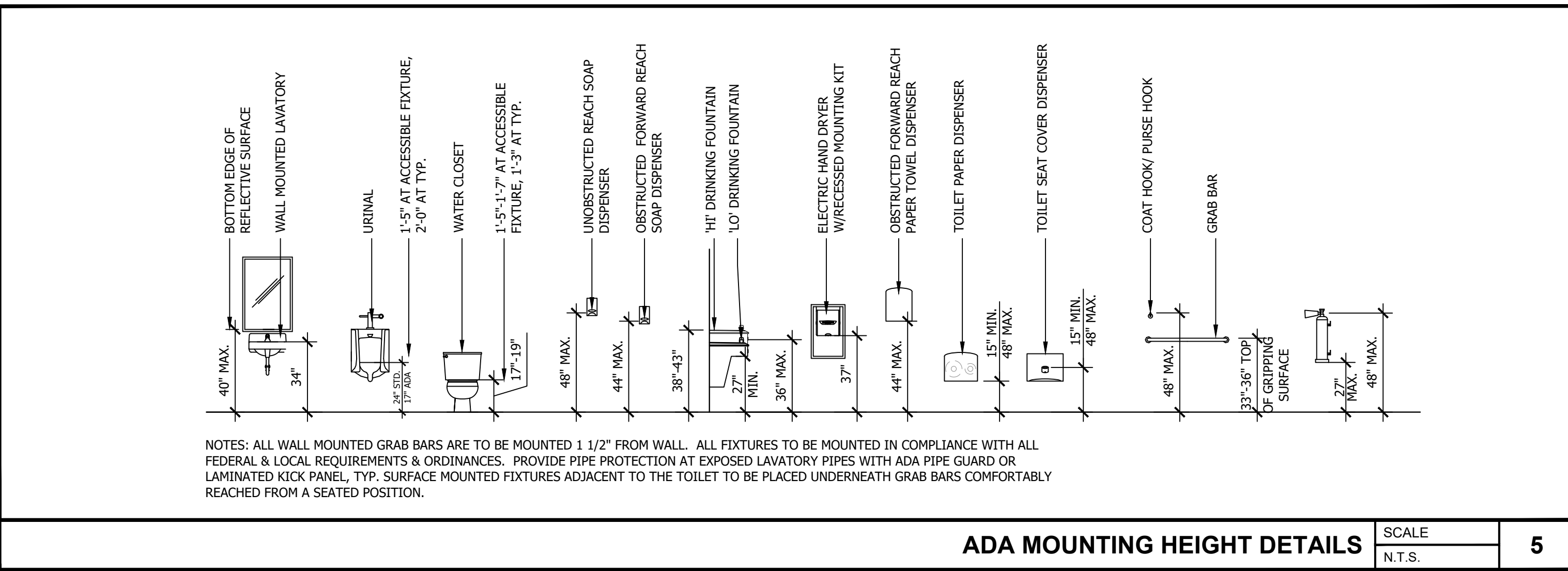
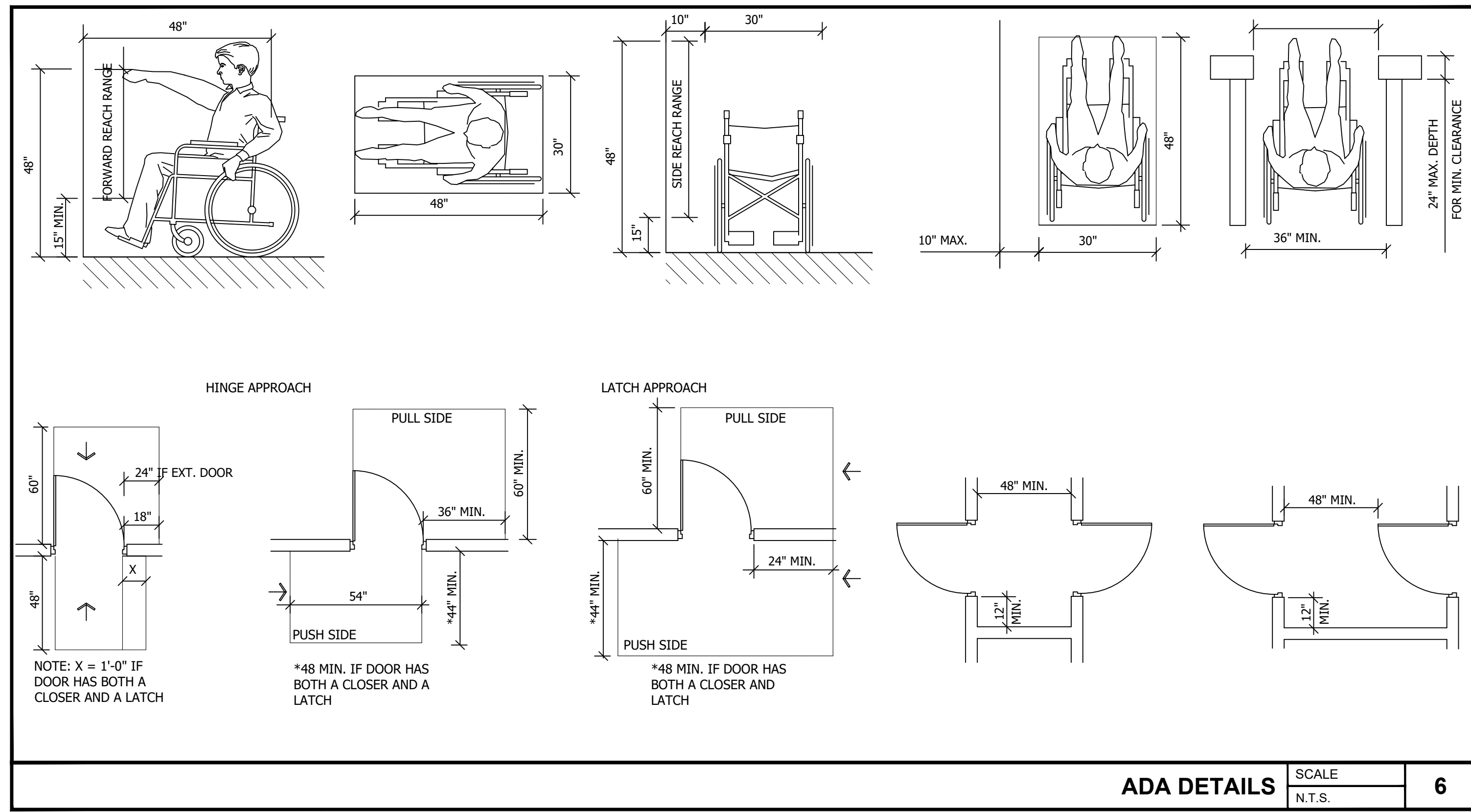
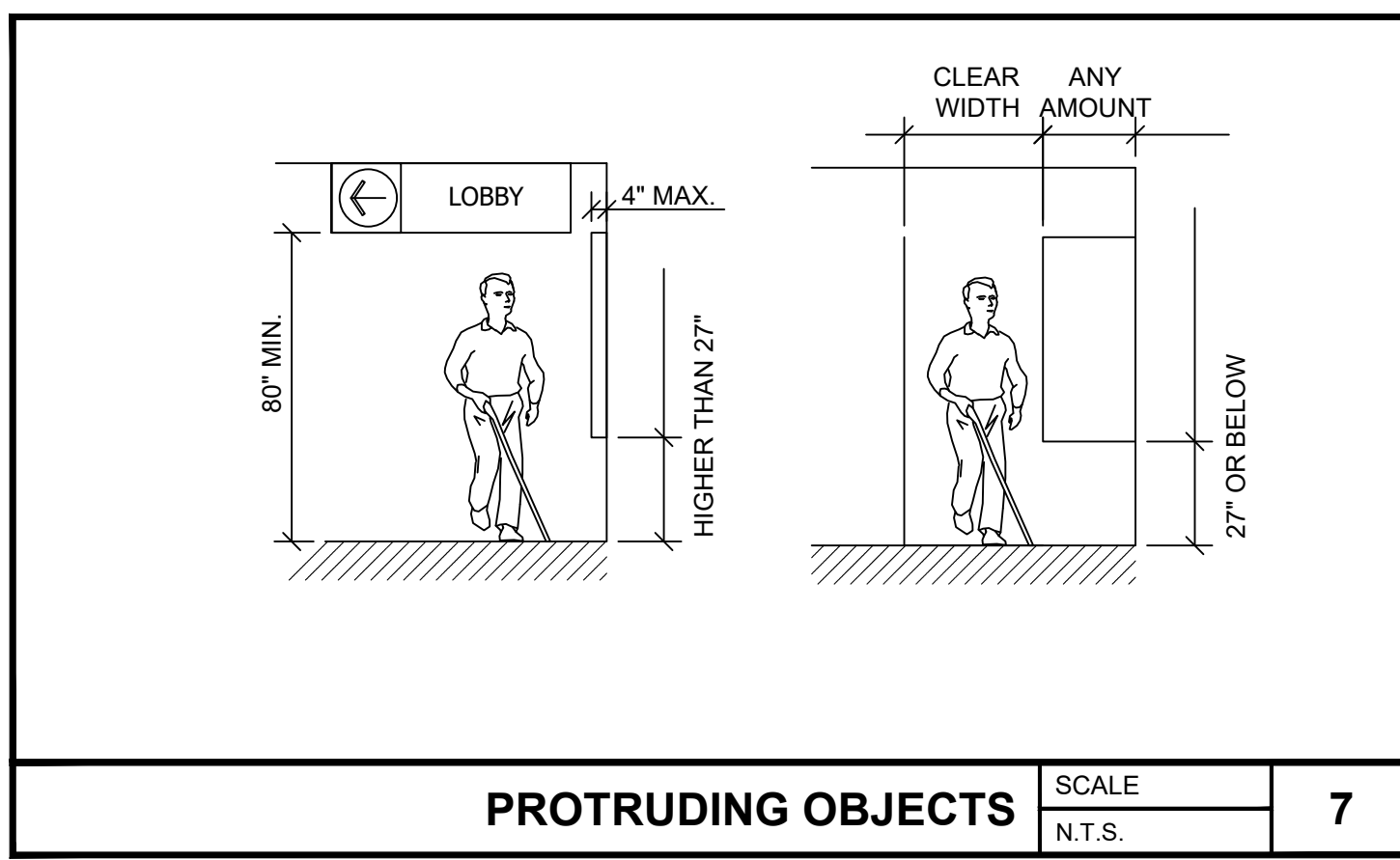
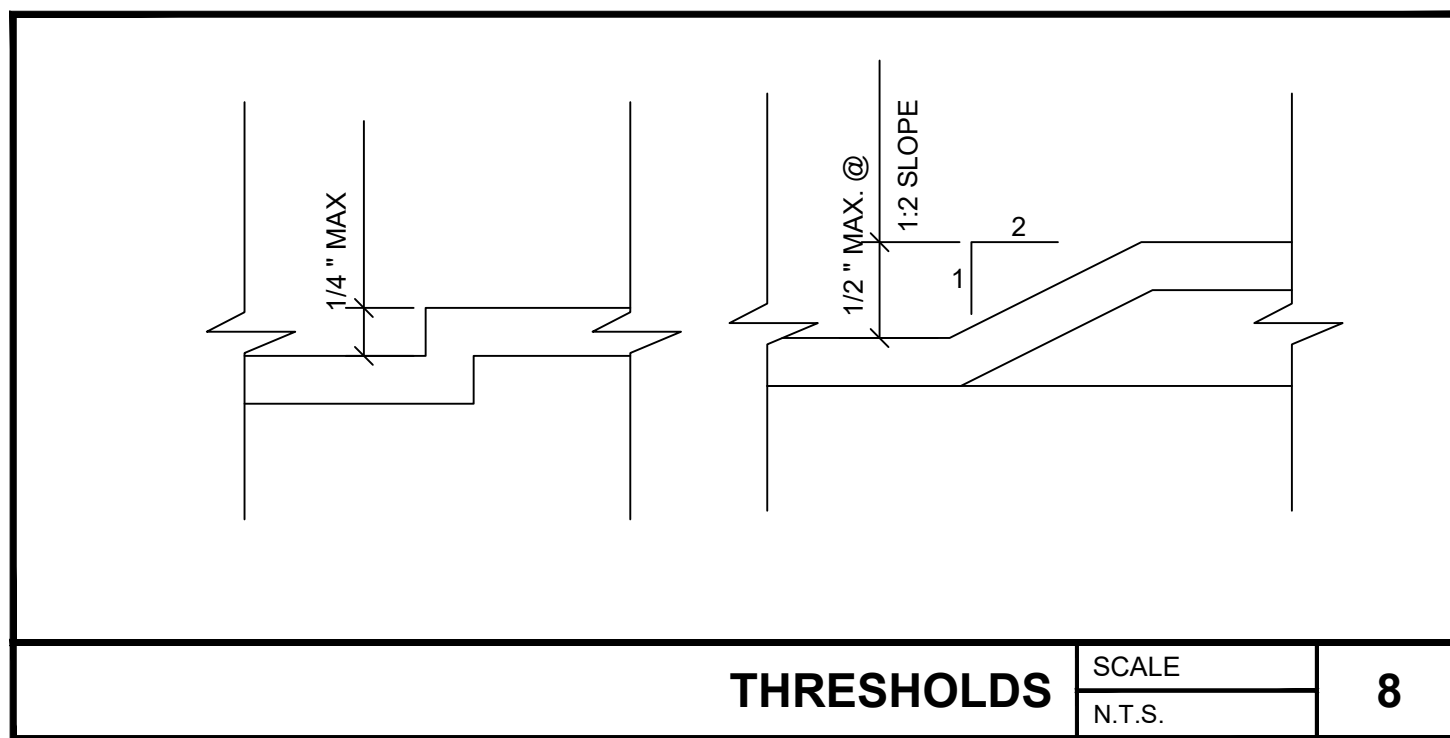
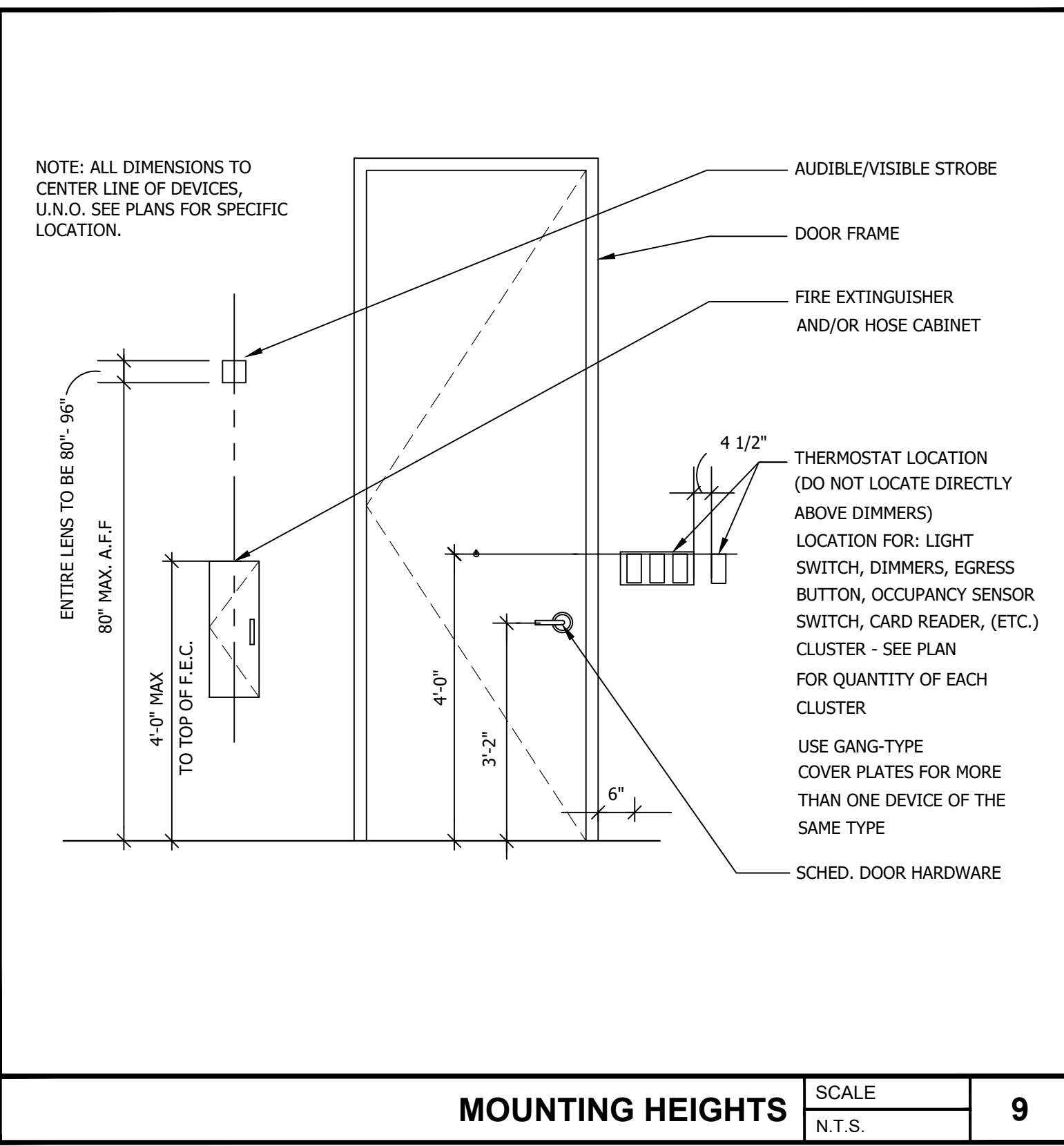
Date _____

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
LIFE SAFETY PLAN

Project No. 170-101.00
Drawn By KM
Reviewed By AFO

Sheet
AN1.0



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Project Name and Address: CEFECO #437 - BETHEL HIGHWAY 90 AND OLD BETHEL ROAD CRESTVIEW, FLORIDA

Sheet Title: ADA DETAILS

Project No: 170-101.00
 Drawn By: KM
 Reviewed By: AFO

Scale: AN2.0

Date: 06/01/2024
 Issue For Permit: 1
 Revision/Issue: No.

DEMOLITION NOTES

- CONTRACTOR TO DEMOLISH AND REMOVE ALL TRACES FROM SITE OF ALL EXISTING STRUCTURES ABOVE GROUND (AND BELOW GROUND AS INDICATED ON DRAWINGS) NOT NOTED AS REMAINING OR RELOCATED. DISREGARD THIS NOTE IF NO DEMOLITION IS INDICATED ON DRAWINGS.
- GENERAL CONTRACTOR TO PROVIDE AND MAINTAIN ALL FENCES, BARRICADES, LIGHTS, SHORING AND OTHER PROTECTIVE DEVICES NECESSARY FOR THE SAFETY OF WORKMEN, EQUIPMENT, THE PUBLIC AND PROPERTY AS REQUIRED BY STATE AND FEDERAL LAWS AND REGULATIONS AND LOCAL ORDINANCES. MAKE PROVISIONS TO CLOSE AND LOCK THE BUILDING AS SOON AS IT IS POSSIBLE TO DO SO. PROTECT ALL DOOR OPENINGS, WHEN NECESSARY, WITH TEMPORARY BATTEN DOORS. COVER WINDOWS AND OPENINGS WITH SUITABLE MATERIALS WHEN WEATHER CONDITIONS REQUIRE.
- THE SITE OF THIS OPERATION SHALL BE FULLY PROTECTED AS REQUIRED BY LOCAL AUTHORITIES. WARNING SIGNS, BARRICADES, ETC. SHALL BE PROVIDED BY THE CONTRACTOR.
- GENERAL CONTRACTOR TO PROVIDE SUFFICIENT FIRE EXTINGUISHERS ON THE JOB SITE DURING THE COURSE OF CONSTRUCTION, OF THE TYPES AND SIZES RECOMMENDED BY THE NBFU TO CONTROL FIRES RESULTING FROM THE PARTICULAR HAZARDOUS WORK BEING PERFORMED. INSTRUCT EMPLOYEES IN THE USE OF EXTINGUISHERS AND PLACE THEM IN THE IMMEDIATE VICINITY OF THE HAZARDOUS WORK, AVAILABLE FOR IMMEDIATE USE. COMMENCE NO HAZARDOUS WORK UNTIL FIRE EXTINGUISHERS OF AN APPROVED TYPE AND CAPACITY ARE PLACED IN THE WORKING AREA, AVAILABLE FOR IMMEDIATE USE.
- THE CONTRACTOR WILL BE VIGILANT AND RESPONSIBLE FOR MAINTAINING JOB SAFETY AND SECURITY. THE OCCUPATIONAL, SAFETY AND HEALTH ACT FEDERAL SAFETY REGULATIONS MUST BE FOLLOWED AT ALL TIMES.

INTERIOR NOTES

- ALL SURFACES SHALL BE PROPERLY PREPARED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS PRIOR TO THE INSTALLATION OF WALL COVERING. WALL FINISH TO BE SAMPLED FOR APPROVAL. FLAME SPREAD RATINGS FOR INTERIOR FINISHES ARE TO BE IN ACCORDANCE WITH APPLICABLE CODES.
- ALL WORK NOTED "N.I.C." OR "NOT IN CONTRACT" IS TO BE ACCOMPLISHED BY A CONTRACTOR OTHER THAN THE GENERAL CONTRACTOR AND IS NOT TO BE PART OF THE CONSTRUCTION AGREEMENT. THE GENERAL CONTRACTOR SHALL COORDINATE WITH "OTHER" CONTRACTORS AS REQUIRED.
- CONTRACTOR SHALL COOPERATE AND COORDINATE ALL JOB OPERATIONS WITH THE OPERATIONS OF OTHERS DOING ADJACENT WORK, SO AS TO PREVENT DELAYS AND CONFLICTS, OR DAMAGES TO EITHER PARTY'S OPERATIONS OR MATERIALS.
- WHERE CLEARANCE PROBLEMS ARISE IN LOCATION OF LIGHT FIXTURES, RETURN AIR GRILLES, SUPPLY DIFFUSERS AND TROFFERS, ETC., AS SHOWN BY DRAWINGS, CONTRACTOR HAS THE OPTION TO RELOCATE BUILDING SYSTEMS WITHIN EACH ROOM AREA WITHOUT AFFECTING THE REQUIRED LIGHT LEVELS AND CFM AIR DISTRIBUTION TO WORK WITHIN THE SPECIFIED CONSTRUCTION CLEARANCES.
- PARTITIONS ARE TO BE CONTINUOUS OVER DOORS, WHEN APPLICABLE, SIMILAR TO ADJACENT WALLS WHERE DRYWALL CONTINUES TO STRUCTURE ABOVE.
- UNLESS NOTED OTHERWISE, ALL PARTITIONS SHALL BE TYPE "A".
- CONTRACTOR SHALL PROVIDE WOOD TREATED AND FLAME RETARDANT BLOCKING OR REINFORCING IN PARTITIONS THAT ARE COMMON FOR THE NEED OF SUPPORTING FIXTURES, CABINETS, EQUIPMENT, FURNITURE ETC., AS MAY BE REQUIRED OR SHOWN BY DRAWINGS.
- CONTRACTOR SHALL PROVIDE WATER RESISTANT GYPSUM BOARD AT ALL PLUMBING CHASES INDICATED AND BEHIND ALL COUNTERS WHICH ACT AS WET PRONE AREAS.
- THE SUSPENSION GRID CEILING SYSTEM SHALL RUN CONTINUOUS AND NO MAIN TEES MAY BE CUT FOR ANY REASON, UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE OWNER.
- ALL FLOOR MATERIALS AND COLOR CHANGES FROM ROOM TO ROOM SHOULD OCCUR AT THE CENTER LINE OF DOOR PANEL, ENCASMENT OPENING, OR AS INDICATED BY THE DRAWINGS.
- CONTRACTOR TO CONFIRM ALL INDIVIDUAL LOCK SETS AND THEIR KEYING REQUIREMENTS, THE QUANTITY AND MASTERING SYSTEM WITH THE OWNER.
- ALL HEIGHTS ARE MEASURED FROM THE TOP OF SLAB UNLESS INDICATED OTHERWISE.
- ALL TELEPHONE EQUIPMENT, WIRING, CONDUITS, ETC., SHALL BE SUPPLIED AND INSTALLED BY THE OWNER AT THEIR EXPENSE. WHERE TELEPHONE COAXIAL OUTLETS ARE INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL PROVIDE PULL STRING. TELEPHONE OR COAXIAL CABLE REQUIRED TO BE LOCATED IN AN EXTERIOR OR INTERIOR WALL SILL BELOW A GLASS PANEL OR AN OPEN ENCASMENT OF THE WALL SHALL BE ACCESSED WITH THE MEANS OF CONDUIT AND PULL STRING.
- ALL TELEPHONE LINES SHALL BE TEFLON COATED AND MEET WITH THE LATEST CODE REQUIREMENTS IN JURISDICTION.
- CONTRACTOR SHALL PROVIDE 3/4" PLYWOOD PANEL PAINTED TO MATCH ADJACENT WALL, FOR TELEPHONE EQUIPMENT. MOUNT PANEL, SIZE AND LOCATION, AS SHOWN IN DRAWINGS.
- ALL OCCUPANT FURNITURE, EQUIPMENT AND MISCELLANEOUS WILL BE PROVIDED AND INSTALLED BY EQUIPMENT CONTRACTOR. THE EQUIPMENT LISTED IN DRAWINGS SHOULD BE INSTALLED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS. CONTRACTOR SHALL REVIEW EQUIPMENT AND ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY ANY DISCREPANCIES, ERRORS, OR OMISSIONS WITHIN THE CONTRACT DOCUMENTS. INDICATE ANY AND ALL CONFLICTS TO THE ARCHITECT BEFORE COMMENCEMENT OF THE WORK.
- MATERIALS WHICH ARE CUSTOM-ORDERED FOR THE PROJECT AND WHICH CANNOT BE RETURNED ARE TO BE SUBMITTED FOR SAMPLE APPROVAL PRIOR TO SHIPMENT OF MATERIAL. OWNER IS TO BE NOTIFIED IMMEDIATELY OF ANY ITEMS WITH LONG DELIVERY TIMES.
- SAMPLES OF CUSTOM PAINT COLORS ARE TO BE SUBMITTED FOR OWNER APPROVAL PRIOR TO PURCHASE OF MATERIALS.
- THE GENERAL CONTRACTOR AND THE SUBCONTRACTORS SHALL DOCUMENT AS-BUILT CONDITIONS WHEN DIFFERENT FROM THE CONSTRUCTION DOCUMENTS, AND SHALL PROVIDE SAID DOCUMENTATION TO THE ARCHITECT UPON COMPLETION OF THE WORK.

MILLWORK NOTES

- THE CONTRACTOR SHALL PROVIDE FOR THE MILLWORK TO CONFORM TO THE DETAILS SHOWN ON THE DRAWINGS AND SHALL BE FABRICATED IN ACCORDANCE WITH THE ARCHITECTURAL WOODWORKING INSTITUTE AND THEIR REQUIREMENTS FOR CUSTOM GRADE QUALITY CONSTRUCTION, UNLESS NOTED OTHERWISE.
- PROVIDE ALL FINISHES AS REFERENCED ON THE DRAWINGS AND ELEVATIONS AND AS NOTED IN THE SPECIFICATIONS FOR FINISHES.
- SUBMIT SAMPLES FOR REVIEW BY THE ARCHITECT FOR APPEARANCE AND FINISH ONLY.
- ALL MILLWORK FABRICATORS SHALL PROVIDE EDGING ON ALL EXPOSED WOOD PARTICLE BOARD AND/OR PLYWOOD EDGES. ALL EDGING SHALL RUN CONTINUOUSLY AND BE SOLID MATERIAL MATCHING FACE VENEER EXCEPT FOR FIR PLYWOOD, WHICH SHALL BE EDGE BANDED WITH FAS CLEARGLUM. MITER EDGING AT CORNERS AND GLUE SURFACES SOLIDLY.
- INSTALL THE WORK PLUMB, LEVEL, TRUE AND STRAIGHT WITH NO DISTORTIONS. ALL DIMENSIONS, PROFILES, JOINTS AND REVEALS SHALL BE HELD EXACT. INSTALL CABINET DOORS AND DRAWERS SO THEY FIT OPENINGS PROPERLY AND ARE PROPERLY ALIGNED - ADJUST HARDWARE TO CENTER DOORS AND DRAWERS IN OPENINGS AND TO PROVIDE UNENCUMBERED OPERATION. COMPLETE THE INSTALLATION OF HARDWARE AND ACCESSORY ITEMS AS INDICATED.
- CONTRACTOR SHALL SUBMIT SHOP DRAWING SHOWING THE LOCATION OF EACH ITEM, DIMENSIONED PLANS AND ELEVATIONS, LARGE SCALE DETAILS, ATTACHMENT DEVICES AND OTHER RELATED COMPONENTS. CONTRACTOR TO SUBMIT ONE (1) SEPIA MYLAR OF EACH ORIGINAL AND THREE (3) BLUE LINE PRINTS OF EACH ORIGINAL FOR ARCHITECTS APPROVAL.

MILLWORK HARDWARE

- UNLESS NOTED OTHERWISE, ALL CABINETS SHOWN IN DRAWINGS AND WHICH ARE APPLICABLE TO THE PROJECT SHALL RECEIVE THE FOLLOWING HARDWARE. REFER TO CABINET ELEVATIONS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

PULLS: "STANLEY 4484" / US 26

MAGNETIC CATCHES: STANLEY NO. 41 / ONE PER DOOR PANEL. TWO PER DOOR PANEL 4'-0" HIGH OR HIGHER.

DRAWER GLIDES: GRANT NO. 329 - ONE PAIR PER DRAWER.

HINGES: "STANLEY 335" / US 26 - EQUALLY PLACED AT TOP, MIDDLE, AND BOTTOM.

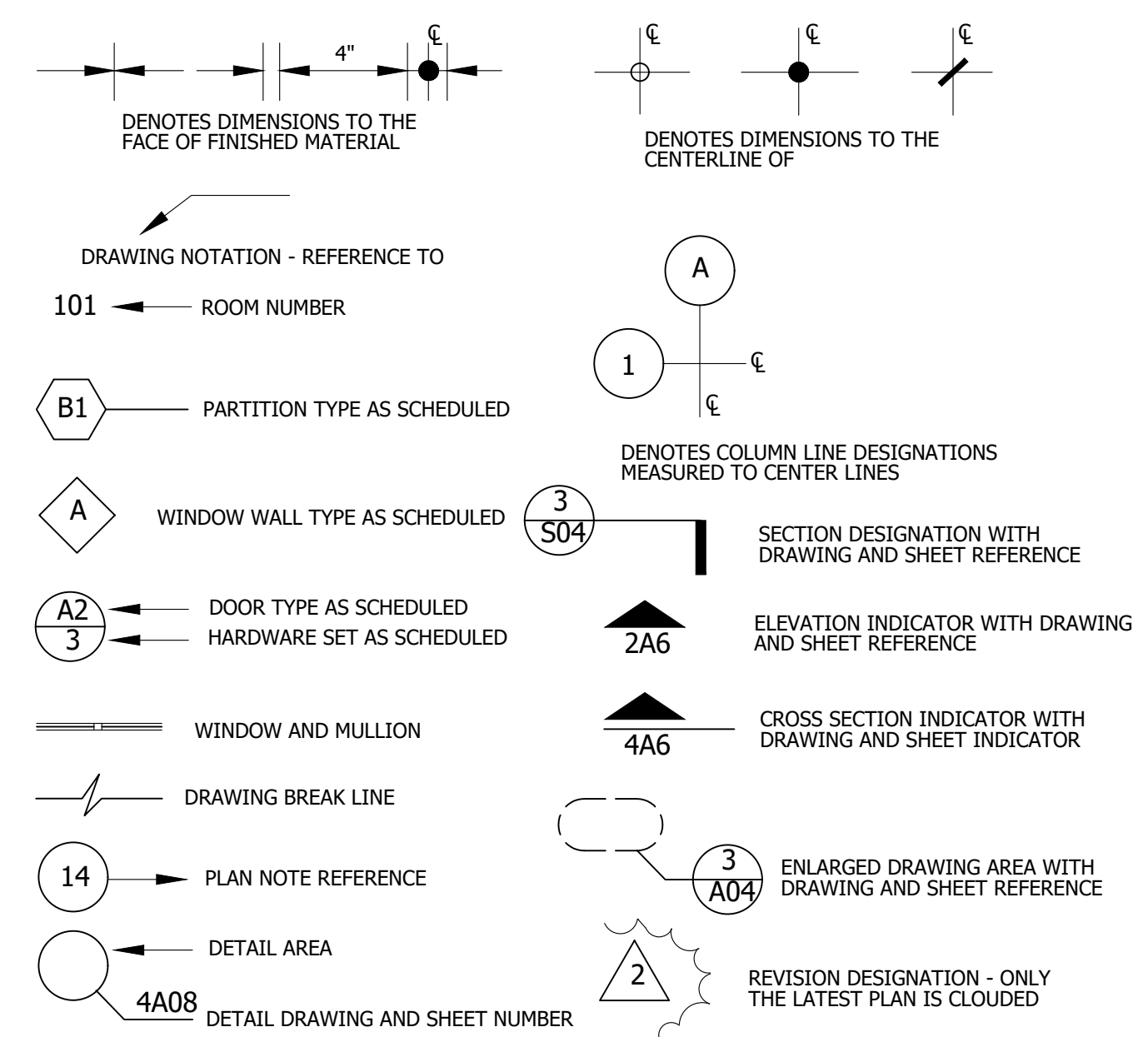
LOCKS: "CORBIN 15760" / US 26

CABINET SHELF STD. AND BRACKETS: K AND V 255NP AND 256NP, MAXIMUM 5'-0" FOR SHELF LENGTH, 4 PER SHELF

OPEN SHELVING STD. AND BRACKETS: K AND V 80 PLUS 180 MANUFACTURER STANDARD "WHITE" PAINTED FINISH AT 3'-0" ON CENTER, WITH MINIMUM 2 PER SHELF

IN CASE OF SUBSTITUTION, CONTRACTOR SHALL SUBMIT TO ARCHITECT SAMPLES OF PROPOSED MILLWORK HARDWARE WITH PRIOR APPROVAL OF OWNER FOR ARCHITECTS FINAL APPROVAL.

GENERAL GRAPHIC SYMBOLS



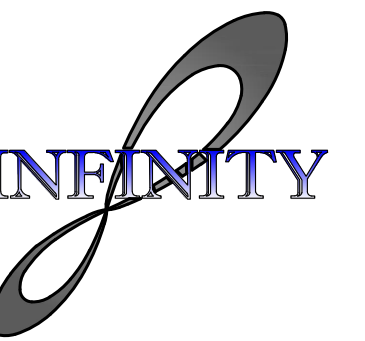
ABBREVIATIONS OF TEXT

ACST	ACOUSTICAL	ID	INSIDE DIAMETER	SATC	SUSPENDED ATC
ARCH	ARCHITECTURAL	INSF	INSULATING FILL	SECY	SECRETARY
ATC	ACCT CEILING TILE	INSUL	INSULATION	SHLV	SHELVING
BD	BOARD	JT	JOINT KIT KITCHEN	SHWR	SHOWER
BLK(G)	BLOCK(ING)	KP	KICK PLATE	SO	SENIOR OFFICER
BOL	BOLLARD	KS	KITCHEN SINK	SPC	SUSPENDED PLAS CLG
BR	BEDROOM	LAV	LAVATORY	SR	SENIOR
BSMT	BASEMENT	LAM	LAMINATE	STC	SOUND TRANSM COEFF.
CAB	CABINET	LAV	LAVATORY	STG	SEATING STOR STORAGE
CER	CERAMIC	LVR	LOUVER	SUB	SUBCONTRACTOR
CHBD	CHALK BOARD	LAB	LABORATORY	SYM	SYMMETRICAL
CJ	CONSTRUCTION JOINT	LDR	LABORATORY	TKBD	TACK BOARD
CJT	CONTROL JOINT	MLD	MOLDING	T&G	TONGUE AND GROOVE TB
CLO	CLOSET	MTR	METAL FURRING	TZ	TILE BASE
CLRM	CLASSROOM	MUL	MULLION	THR	THRESHOLD
CLWC	CLEAR WIRE GLASS	MWK	MILLWORK	TRWLD	TROWEL LED
COMP	COMPUTER	NO.	NUMBER	UNFN	UNFINISHED
CORR	CORRIDOR	NTS	NON-SLIP TREAD	US	UNLESS
CPL	CEMENT PLASTER	OFF	OFFICE	VCT	VINYL COMPOSITION TILE
CPT	CARPET	OPH	OPPOSITE HAND	VB	VINYL BASE
CT	CERAMIC TILE	OPENING	OPENING	VCB	VINYL COVE BASE
DC	DOOR CLOSER	OPH	OPPOSITE HAND	VWC	VINYL WALL COVERING
DEPT.	DEPARTMENT	VP	VISION PANEL	VP	VISION PANEL
DJ	DUMMY JOINT	PBD	PARTICLE BOARD	WDW	WINDOW
DR	DOOR	PLAS	PLASTER	WGL	WIRE GLASS
DWR	DRAWER	PLYWD	PLYWOOD	WHSE	WAREHOUSE
EF	EACH FACE	PREP	PREPARATION	WLCOV	WALL COVERING
EJC	EXPANSION JOINT COVER	PT	PAINT(ED)	WSCT	WAINSCOT
EJT	EXPANSION JOINT	PW	PASS WINDOW	WW	WINDOW WALL
EXEC	EXECUTIVE	QT	QUARRY TILE		
FAS	FASTEN	QTY	QUANTITY		
FJT	FLUSH JOINT	RB	RUBBER BASE		
FL(G)	FLOOR(ING)	RECEP	RECEPTION		
FRM	FRAME	REFL	REFLECTED		
GDR	GUARD RAIL	RPH	ROOF HATCH		
GL	GLASS	RH	RIGHT HAND		
GWB	GYPSUM WALL BOARD	RLG	RAILING		
GYP	GYPSUM	RT	RUBBER TILE		
		RVS	REVERSE		
HDW	HARDWARE				
HM	HOLLOW METAL				
HPT	HIGH POINT				

MANUFACTURERS STANDARDS

<p>APA AMERICAN PLYWOOD ASSOCIATION 1119 A STREET TACOMA, WASHINGTON 98401 (206) 272-2283</p>	<p>HPMA HARDWOOD PLYWOOD MANUFACTURERS ASSOCIATION BOX 6246 ARLINGTON, VIRGINIA 22206 (703) 671-6262</p>
<p>AWI ARCHITECTURAL WOODWORK INSTITUTE 5035 SOUTH CHESTERFIELD ROAD ARLINGTON, VIRGINIA 22206 (703) 671-9100</p>	<p>NPA NATIONAL PARTICLE BOARD ASSOCIATION 2306 PERKINS PLACE SILVER SPRINGS, MARYLAND 20910 (301) 587-2204</p>
<p>BHMA BUILDERS HARDWARE MANUFACTURERS ASSOCIATION 60 EAST 42ND STREET NEW YORK, NEW YORK 10017 (212) 682-8142</p>	<p>NPCA NATIONAL PAINT AND COATING ASSOCIATION 1500 RHODE ISLAND AVENUE N.W. WASHINGTON, D.C. 20005 (202) 462-6272</p>
<p>CRI THE CARPET AND RUG INSTITUTE 310 HOLIDAY DRIVE BOX 2040 DALTON, GEORGIA 30720 (404) 278-3176</p>	<p>TCA TITLE COUNCIL OF AMERICA, INCORPORATED BOX 326 PRINCETON, NEW JERSEY 08540 (609) 921-7050</p>
<p>DHI DOOR AND HARDWARE INSTITUTE 1815 N. FT. MYER DRIVE SUITE 412 ARLINGTON, VIRGINIA 22209 (703) 527-2069</p>	<p>UL UNDERWRITERS LABORATORIES INCORPORATED 207 EAST OHIO STREET CHICAGO, ILLINOIS 60611 (312) 642-6969</p>
<p>GA GYPSUM ASSOCIATION 1603 ORRINGTON AVENUE EVANSTON, ILLINOIS 60201 (312) 491-1744</p>	<p>WFI WOOD AND SYNTHETIC FLOORING INSTITUTE 1000 PICK WICK AVENUE GLEN VIEW, ILLINOIS 60029 (312) 724-7700</p>
	<p>WIC WOODWORK INSTITUTE OF CALIFORNIA 850 S VAN NESS SAN FRANCISCO, CALIFORNIA 94109</p>

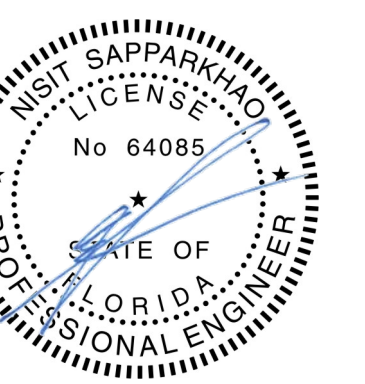
No.	Revision/Issue	Date
1	ISSUE FOR PERMIT	06/01/2024



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NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085



Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
ARCHITECTURAL INFORMATION

Project No. 170-101.00	Sheet
Drawn By KM	AN2.1
Reviewed By AFO	

SECTION 01010 - SUMMARY OF WORK

A. SCOPE: The Work, as defined in the general conditions as described in the Contract Documents is summarized as follows:

Construct a single story retail facility with metal stud frame construction, reinforced plaster wall panels, metal shell standard fascia, single ply membrane roof, on metal decking, aluminum windows and entrances, interior drywall partitions, millwork, hollow metal doors and frames, acoustic ceilings, floors, finishes toilet room accessories, equipment site work, and mechanical, plumbing and electrical work.

B. RELATED WORK PROVIDED BY THE OWNER Refer to schedules on drawings.

C. PRIOR ENTRY:

- 1. Owner reserves the right to prior entry to completed and partially completed areas for performance of other work to be performed under other contracts.
2. Confine construction operations, materials, and equipment storage, apparatus, temporary construction, equipment, and other construction related activities to such limits and portions of the Project Site, as designated by the owner, and indicated on the drawings.
3. Do not use adjacent properties including private properties and that of public domain, for material and equipment storage or for construction operations without the specific written approval of any and all authorities having full and proper jurisdiction.

SECTION 01018 - OWNER PROVIDED DOCUMENTS

- A. COPIES OF CONTRACT DOCUMENTS: The owner will supply to the contractor one set of contract documents, free of charge, for construction purposes. Additional sets will be available to the Contractor if he pays for the cost of reproduction.
B. COPIES OF SUPPLEMENTARY CONTRACT DOCUMENTS: The following owner provided documents are hereby designated as Supplementary Contract Documents. The architect does not guarantee their contents as to accuracy, completeness, or suitability.
1. Soils Report
2. Survey

SECTION 01025 - MEASUREMENTS AND PAYMENT

- A. PROGRESS SCHEDULE AND COST BREAKDOWN: Within 21 days after the execution of the Contract, submit, in acceptable form, anticipated progress schedule showing subdivision of contract into various items of permanent construction, stating quantities and prices as a basis for computing value to owner of permanent reusable parts of a facility to be paid for on monthly estimates. No payment will be made to the Contractor until such a schedule has been submitted and approved.
B. PROGRESS PAYMENTS: Monthly payments will be made of the value of completed work, and materials stored at the site, less retainage. Owner will not pay for materials stored of site. Payment of owner will be made in reasonable time of the date the application was received. Contractor will pay for all permits, fees, local and state taxes.
1. RETAINAGE: Retainage of 10 % of amount due to the Contractor will be held by the owner until 30 days after substantial completion.

SECTION 01070 - DEFINITIONS

A. THE CONTRACT DOCUMENTS: The Drawings are those enumerated in the "List of Drawings" and identified in the contract. The drawings in many instances are schematic and do not define exact locations of every part and piece of this work. Items furnished may vary in dimension and in other ways vary from specific items called for in the Contract Documents. In some cases determine the exact location of each part by measurements, drawings from equipment manufacturers, and coordination with other work.

B. SPECIFICATIONS:

- 1. The format of the Specifications divides the work into Major Divisions and Work Sections attempts to group the work in each section by source of material or by trade, solely for the convenience of the users. No trade jurisdictions are intended or implied.
2. The outline form and imperative voice are typically used to omit repetitious use of words or word groups (such as "furnish and install", "Contractor shall" and other similar statements) and to call for the type of materials and methods and limit the use in the briefest possible manner. Such words omitted from the text shall be construed to be included just as if they were repeated each time.

C. MINIMUM COMPLIANCE STANDARDS AND INDUSTRY SPECIFICATIONS:

Materials and operations specified by reference to published specifications of a manufacturer, a society, an association, a code, or other referenced standard, shall comply with the current requirements of referenced document, officially published on or before the date of the receipt of bids.

SECTION 01410 - TESTING LABORATORY SERVICES

- A. An independent testing laboratory may be selected by the owner to inspect and test the materials and methods of construction as hereinafter specified for compliance with the contract documents.
B. The owner will pay for the initial laboratory testing of materials that comply with the requirements of the contract documents. The contractor shall pay for the testing and retesting of the material that do not comply with the requirements of the contract document.
C. STRUCTURAL CONCRETE:
1. AGGREGATE TEST: Check the proposed aggregate in accordance with the ASTM C 33.
2. MIX DESIGN: Check the proposed mixes for proportions, water cement ratio and slump in accordance with ACI 613 and 318.
3. SLUMP TEST: Take slump test ASTM C 443 at the beginning of each days pouring operations and whenever water adjustments are noticeable of slump occurs
4. SAMPLING:
D. Make five standard cylinders at the beginning of each placement. Take extra samples at noticeable change in the concrete makeup.
E. Take four additional test cylinders for every one hundred cubic yards or fraction thereof. Cure of ASTM C 192.
F. Perform sampling in compliance with ASTM C 172
5. FIELDING: Test cylinders for compression in accordance to ASTM C 39.
6. LABORATORY CURE: 2 cylinders in accordance with ASTM C 192.
B. FIELD CURING: remaining cylinders in accordance with ASTM C 31.
C. Test Cylinders two at seven days, and two at twenty eight days averaging test results. Testing remaining cylinders at fifty five days.

SECTION 01510 - TEMPORARY FACILITIES

- A. CONSTRUCTION FACILITIES: Provide the following facilities for the use of all personnel, subcontractors and all authorized personnel.
1. TOILET FACILITIES: Provide sanitary and adequate facilities to meet the legal requirements.
2. DRINKING WATER: provide clean drinking water with disposable paper cups and containers for the used cups.
3. ELECTRIC: Provide connections and controls for 115V, single phase power with control within 200 feet of locations used.
4. LIGHTING: Provide 50 foot-candles for construction purpose where daylight is not adequate.
5. CONSTRUCTION WATER: provide adequate water lines and hoses with control within 200 feet of locations used
6. HOISTING FACILITIES: Provide hoisting equipment as necessary, for light construction material complying with jurisdictional safety codes.

B. FIELD OFFICE:

- 1. Provide and maintain a weathertight building with lockable door and windows to serve as job office available to the contractor, subcontractor and owner. Provide light, air-conditioning and heating as needed. Provide a drawing table with lockable doors and a drafting bench. Remove office from the premises when one can be set up inside the building.

A. STORAGE FACILITIES:

- 1. Provide and maintain a weathertight storage facilities raised with a six inch minimum above the ground with sides and tops enclosed, and lockable doors.
2. Replace materials improperly stored and damaged by normal or predicted weather conditions. Remove storage facility when materials can be properly stored in a weathertight condition.

D. GRAPHICS:

- 4. JOB SIGN:
a. SIZE: nominal 64 square feet
b. MATERIAL: 1/2 inch APA exposure 1 or exterior plywood A-C grade or MD overlay.
c. POSTS: 4 inches by 4 inches, 2 required
d. FRAMING AND BRACES: 2 inches by 4 inches.
e. LETTERING: Name of job, owner, contractor.
Project sign will be done by a professional sign painter
1. LAYOUT AND COLOR SELECTION: As selected sightly by the owner.

E. RESTORATION OF SIGNS: No advertising signs may be installed anywhere on the sight

SECTION 01600 - MATERIALS AND EQUIPMENT

A. SUBSTITUTIONS:

- 1. Submit all proposed substitutions after the award of the contract in writing with sufficient information samples and differences in cost of evaluation. Do not make substitutions unless approved in writing.
2. Prepare quotations for proposed changes in the work in a "break down" form giving the number of units, unit cost material, hours of labor, hourly cost of labor, tool costs, overhead and profit, reflecting credit as well as extras.
B. USE MATERIALS THAT ARE:
1. New and high quality suited to the use of intended except wherein noted as used.
2. Suitable for the function intended.
3. Corresponding in quality to related materials in the absence of a definitive Specification.
4. Of good experience where exposed to view.
5. Of one manufacturer or source for the same specific purpose with uniform appearance and physical properties.
6. Plainly marked and delivered to the site in original unopened containers when the nature of container is suitable for containers.

C. WORK BY OTHERS: Arrange to accommodate N.I.C. Work. When information is adequate request more information before proceeding.

D. Follow manufacturers instructions. When such instructions are in conflict with the Contract Documents make request for clarification before proceeding. Keep a copy of the manufacturers instructions on the job.

E. Perform high quality professional workmanship. Join material to uniform, accurate fit so that they meet with straight lines, free of smears or overlap. Install exposed materials appropriately leveled, plumb, and accurate right angles or flush with adjoining materials. Attach materials with sufficient strength, number and spacing of attachments that will not fail until materials joined and are broken or permanently deformed.

SECTION 01700 CONTRACT CLOSE-OUT

A. SUBSTANTIAL COMPLETION:

- 1. When the contractor determines that the Work is substantially complete, the contractor will send a written notice to the owner that the project is substantially complete and requests an inspection of the work.
2. Within a reasonable time after receipt of the contractors notice claiming substantial completion, the owner will make an inspection of the work to determine the state of completion and will prepare a punch list of items requiring completion or correction.
3. If during the course of inspection the owner determines the work substantially complete, he will discontinue the inspection and will notify the contractor that the work does not comply with requirements of substantial completion.
4. Immediately after the receipt of notice that the work is not substantially complete the contractor shall correct the deficiencies and send a second written notice to the owner as specified above.
5. When the owner feels the work meets the requirements of substantial completion, the owner will prepare a certificate of substantial completion, AIA Document G704.
6. The contractor shall prepare and submit to the owner a list of items to be completed or corrected within the time constraints established on the certificate of substantial completion.
7. The owner will review and amend the list of items to be completed or corrected and append the complete list to the certificate of substantial completion.

B. MANUALS, INSTRUCTIONS AND KEYS:

- 1. The contractor shall assemble and deliver to the owner printed or typewritten, operating servicing and maintenance and cleaning instructions and part list for all items of equipment provided as part of the contract. Include names and address of local representative of each unit of equipment include manuals and equipment containing items of different equipment.
2. Provide two copies of each required manual including mechanical and electrical portions of work.
3. The contractor shall provide services of skilled and competent supervisory personnel to instruct the owners personnel in operation and maintenance of all operating equipment and systems provided as part of the contract.
4. Upon completion of work, the contractor shall deliver all keys including master keys and any special keys and two copies of the keying ring to the owner and will assist the owner in deactivation of construction keyed locks used on the projects.

C. RELEASE OF LIENS:

- 1. The contractor shall deliver to the owner a blanket release of liens covering all work performed under this contract, including that of subcontractors, subcontractors, vendors and other suppliers of materials and labor. Execute the release of liens on the documents similar to AIA Document G706 "Contractors affidavit of payment of debtors and claims and G706A " Contractors affidavit of release of liens. "
2. The forms will be executed by authorized officer and notarized. All required attachments will be included as noted on AIA document G706. If exceptions are listed in either AIA G706 or Document G706A, the contractor shall furnish bond satisfactory to the owner for each exception.
3. No final payment will be made by the owner to the contractor until all release of liens have been delivered to the owner.

D. GUARANTEES, BONDS, AND INSPECTION CERTIFICATES:

- 1. The contractor shall have guarantees on upon materials and workmanship as required by article 13 of the AIA general conditions and special guarantees and bond required by the contract document executed in the owners name.
2. Prior to making the application to final payment, the contractor shall collect and assemble all required guarantees and bonds and deliver them to the owner.
3. The contractor shall collect and assemble all required guarantees and bonds and deliver them to the owner. The contractor shall collect and assemble all required certificates of inspection, testing, approval, and deliver them to the owner.
E. WARRANTIES:
1. Furnish written warranties to the owner including specific items in each product warranty stipulated in the individual section.
2. Secure and transmit required inspection certificates.
3. Repair and replace damaged portions of the construction, under warranty, when damages result from faulty materials and negligent workmanship.
4. Warrant that modifications or substitutions suggested by the contractor will give satisfactory results and that they will be equal or superior to the specified item or method unless shortcoming are specifically listed in the request for modification or substitution.

F. FINAL COMPLETION:

- 1. When the work has been completed fully in accordance with the requirements of the contract, the contractor shall send a written notice claiming final completeness and shall specify each note on the punch list as being complete or any incomplete item.
2. The contractor shall submit final application for payment indicating adjustment and accounts including original contract sum, additions and deductions as included on charge orders, cash allowances, deductions on incorrect work, and other requirements listed in the documents contract, including the Consent of Surety Company to final payment, AIA Document G707.
3. Upon receipt of the contractors notice claiming final completion the owner will perform a final inspection, and if the work is fully complete in accordance with the requirements of the document contract, the owner will issue a certificate of completion, and a certificate for final payment.

G. TERMINAL INSPECTION:

- 1. Immediately prior to expiration of the one year guarantee period, the contractor shall make an inspection of the project in the company of the owner. The owner shall not be given less than five days notice prior to the anticipated date of terminal inspection.
2. Where any portion of the work has been proven to be defective and requires replacement, repair, or adjusting, the contractor shall immediately provide materials and labor necessary to repair such defective work and shall execute work until completed and to the satisfaction of the owner even though that the date of completion has past the expiration date of the guarantee period.
3. The contractor shall not be responsible for work that has been damaged due to neglect or abuse by the owner nor the replacement parts necessitated by normal wear and tear.

SECTION 01710 - CLEANING

A. PERIODIC CLEANING:

- 1. GARBAGE COLLECTIONS: Provide a garbage can at each location on the site as used as an eating area. Pick up all garbage not deposited in cans daily. If garbage is left overnight cover cans. Remove garbage from cans weekly. Keep the site free from garbage, trash, and vermin infestation.
2. TRASH REMOVAL: Clean the work area of trash once a week. When rapid accumulation occurs remove trash more frequently. Remove highly combustible trash every day, paper cardboard, wood.
3. DISPOSITION OF DEBRIS: Remove debris from site and make legal disposition. Locations for disposal shall be of contractors choice No debris may be buried or burned on site. Take necessary precautions to prevent accidental burning of materials by avoiding large accumulations of combustible materials.

B. FINAL CLEANING:

- 1. The work area shall be thoroughly cleaned inside and outside. Cleaning includes removal of emudges marks and stains, fingerprints, soil dirt spots, dust lint, and any other foreign matter from finished and exposed surfaces.
2. Remove all temporary facilities.

SECTION 02110 - SITE CLEARING AND GRUBBING

A. VEGETATION PRESERVATION: Do not remove trees or shrubs without the specific approval of the architect. Damaged vegetation will be replaced.

B. REQUIREMENTS OF REGULATORY AGENCY: Adhere to state and local code requirements for the disposal of trees and shrubs removed from site.

C. OWNERSHIP OF REMOVED MATERIALS AND VEGETATION: Unless noted otherwise, removed property become property of the contractor.
D. PROTECTION OF VEGETATION: Rope or fence off vegetation that is to remain to prevent damage.
E. Grubbing: Grubb construction depth to a minimum of one foot to the existing grade.

SECTION 02200 - EARTHWORK

- A. The surface report governs existing subsurface conditions.
B. CONCEALED CONDITIONS: Variations from the contract document for conditions not apparent at the start of the work will be adjusted as described in the contract conditions.
C. SOIL STIFFNESS: When soil concerning subsurface soil stiffness is not available assume an angle of repose 45 degrees under optimum moisture conditions. No angle of repose can be assumed when soil is under adverse condition. Where concrete is shown vertical or steeper than the angle of repose forms are required.
D. GOVERNING DOCUMENTS: The following documents governs the work.
1. Occupational safety and Health administration, recommendations, Chapter XVII, 1926.625
2. IN TEXAS: Texas trench laws, HB 662 and HB 665

E. EXCAVATION INSPECTION: Do not place concrete in footing excavations without the owners inspection.

F. FILL AND BACK FILL MATERIAL: Select fill material under placed under slabs foundation and paving shall comply with the following requirements. Materials may be provided it is made to comply with the use of admixtures sand or lime.

- 1. LIQUID LIMIT: 30 to 45.
2. PLASTICITY INDEX: 7 to 20.
3. LINEAR SHRINKAGE: 10 % maximum.
4. PURITY: No stones or debris larger than 3 inches

G. COMPACTING: Provides 90 % maximum density under walks and grassy areas, 95 % minimum anywhere elsewhere. Add water and try out to maintain optimum moisture content. ASHTO compaction test method T-99, performed at optimum moisture. Place fill in layer not to exceed 6 inches after completion.

- H. COMPACTING OF GRANULAR FILL: Compact trenches under slabs as follows:
1. 12 INCHES OR LESS: well graded granular mineral soil enough to compact readily by water saturation.
2. BETWEEN 12 AND 36 INCHES: compact by water saturation to within two feet of the surface. The final 2 feet and 0 layers shall be compacted by six inch layers.
3. OVER 36 INCHES: compact at 6 inch layers starting at the bottom.

I. SAND LAYER:

- 1. LOCATION: Where sand cushion is noted under concrete slabs.
2. MATERIAL: well graded inorganic mineral sand in loose non stratified deposits per ASTM D 2488.
3. THICKNESS: 2 inches under walks and 4 inches elsewhere.
4. COMPACTING: Compact to support concrete without settlement during placing.

J. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

SECTION 02246 - SOIL STABILIZATION

A. Coordinate the requirements of the structural drawings with the requirements of this section. If a conflict exist notations on the structural drawings take precedence. Refer to the soil reports and survey for existing subsurface conditions. Geo-technical report referenced under structural drawings.

SECTION 02284 - TERMITE CONTROL

A. MINIMUM COMPLIANCE STANDARDS: Comply with all applicable governmental standards. unauthorized use of these chemicals is strictly prohibited.

- B. Warrant the work herein for five years. Defects shall include but not be limited to the following:
1. termite activity
2. Damage of building material caused by termites
C. Include replacement of materials caused by termites within the warranty period.

D. APPLICATOR: Applicator shall be bonded to reform this type of work. Where local licensing is available or required, applicator shall be licensed to perform this type of work.

E. POISON DILUTENT: Potable water

F. Provide EPA approved chemicals of the following types:
1. ORGANOPHOSPHATES: Durban TC, Dow chemicals USA, Midland MI 48974 (517) 658-1000.
2. PYRETHOIDS:
a. Dagnet FT: FMC Corp. Agricultural chemical group Philadelphia, PA. 19103 (215) 299-6000.
b. Demon TC: ICI Americas Inc. Wilmington DE 19899 (303) 575-3000
c. Torpedo: ICI Americas Inc. Wilmington DE 19899 (303) 575-3000
d. Tribute: Velisical chemical Corp. Rosemont IL 60018 (312) 698-0700

G. QUANTITIES OF WORKING SOLUTION: Provide one gallon per 10 square feet under the building slab, and 2 gallons per 5 linear feet at the slab perimeter.

H. PROCEDURES: Notify the supervising authority before commencing work, do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

I. APPLICATION: Apply control to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

J. INSPECTION: Notify the supervising authority before commencing work, do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

K. MAINTENANCE: Notify the supervising authority before commencing work, do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

L. WARRANTY: Notify the supervising authority before commencing work, do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

M. REMEDIATION: Notify the supervising authority before commencing work, do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

N. DISPOSAL: Notify the supervising authority before commencing work, do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

O. CLEANUP: Notify the supervising authority before commencing work, do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

P. PROTECTION: Notify the supervising authority before commencing work, do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

Q. SAFETY: Notify the supervising authority before commencing work, do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

R. RECORDS: Notify the supervising authority before commencing work, do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

S. REPORTS: Notify the supervising authority before commencing work, do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

T. TRAINING: Notify the supervising authority before commencing work, do not apply poison to soil that are excessively wet. Apply solution immediately after placing vapor barrier.

U. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

V. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

W. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

X. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

Y. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

Z. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

SECTION 06100 - ROUGH CARPENTRY

A. GENERAL REQUIREMENTS FOR LUMBER:
1. STANDARDS: PS-20-70 American softwood lumber standard and PS- 143 soft plywood.
2. GRADING: S.F.P.A. S.P.B. W.P.P.A. W.C.L.B. AND APA
3. MARKING: Stamp each piece with grade assoc.
4. SPECIES: Douglas Fir and Southern Yellow Pine
5. FINISH: Provide S4S finish unless otherwise specified
6. SEASONING REQUIREMENT: Kiln Dry or Air Dry to 15 % max. moisture content.

7. GRADES: comply with the minimum grades for each specific use as specified by the specific grading assoc. such as southern pine use guide. Table 2 as specified in the structural guide
B. WOOD TREATMENT FOR THE ABOVE GROUND LOCATIONS: Stamp each piece of lumber with the type of treatment and amount of retention. Redry water born treatment to 19 % and stamp S DRY
1. APPLICATION: apply pressure or vacuum treatment, comply with the AWPB standards.
2. LOCATIONS: Provide treated wood at the following locations:
a. where shown on the drawing
b. wood members resting on concrete or masonry
c. ground imbedded in concrete or masonry
d. Blocking or grounds imbedded in construction in such a manner as to prevent exposure to circulating air.
e. roof cutting
3. CUT TREATMENT: treat cuts by dipping in preservatives

C. PLYWOOD: Provide PS-1-43 softwood plywood marked with APA grade trademarks indicating quality of wood. Only plywood with APA stamp will be acceptable
D. PLYWOOD ROOF SHEATHING: Mark each piece with APA grade trademarks as noted above. Maintain a 1/8 inch gap between cross gaps.
1. PLYWOOD THICKNESS: 1/2 to 1 inch, use 8d common nails
2. SPACING: 6 inches at edges and 12 inches in field

E. INSTALLATION:
1. set wood framing accurately and neatly, brace well and nail securely. Frame on 16 inches from the center or as indicated on the drawing.
2. Set wood grounds for attachments of work specified in other sections.
3. Use washers on bolts to attach wood, use galvanized treated bolts and washers.
4. Use galvanized metal framing anchors beam seats and clips where indicated

F. MINIMUM COMPLIANCE STANDARDS: the following documents govern the work except where more restrictive requirements are specified.
1. AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
2. TRUSS PLATE INSTITUTE

B. APPROVED MANUFACTURES:
1. Automated building Systems: Dept. T, Lax Cox Drive BOX 537, Johnson city TN, 37601
2. Gang-Nail Southwest: 4707 west Westminster, Dallas TX, 75237
3. All Pan Inc.: Southwest Houston TX, 77054-4602

C. LOADING: unless noted otherwise comply with the strongest combination of the following:
1. building code
2. max deflection of 1/240 of a span with the ceiling
3. max deflection of 1/360 of a span with the ceiling
4. live load refer to the drawing

D. CONSTRUCTION DETAILS:
1. TRUSS MEMBERS: stress rated lumber; 19 % max moisture NO. 1
2. FASTENERS: galvanized steel gang nail plate connectors
E. INSTALLATION: Anchor the trusses in place as recommended by the manufacturer and in accordance with building codes

J. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

K. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

L. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

M. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

N. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

O. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

P. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

Q. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

R. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

S. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

T. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

U. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

V. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

W. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

X. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

Y. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

Z. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

AA. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

BB. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

CC. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

DD. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

EE. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

FF. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

GG. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

HH. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

II. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

JJ. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

KK. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

LL. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

MM. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

NN. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

OO. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

PP. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

QQ. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

RR. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

SS. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

TT. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

UU. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

VV. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

WW. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

XX. VAPOR BARRIER: Provide a 6 mil polyethylene plastic film vapor barrier under floor slabs placed on earth.

Table with 10 columns and 1 row, mostly empty cells.

Table with 10 columns and 1 row, mostly empty cells.

INFINITY ENGINEERING GROUP, LLC logo and contact information: 1208 East Kennedy Boulevard Suite 230 Tampa, Florida 33602

Professional Engineer seal for NISIT SAPPARKHAO, P.E. FL REG. NO. 64085

Professional Engineer seal for NISIT SAPPARKHAO, P.E. FL REG. NO. 64085

PERFORMANCE SPECIFICATIONS section header and project address: CEFECO #437 - BETHEL HIGHWAY 80 AND OLD BETHEL ROAD CRESTVIEW, FLORIDA

CONSTRUCTION PLANS FOR:

CEFCO HWY 90 & OLD BETHEL OKALOOSA COUNTY, FLORIDA

PREPARED FOR:

THE FIKES COMPANIES
c/o Denise Anderson, CCIM
9764 Whithorn Drive
Houston, TX 77095
Phone: (281) 382-7117



VICINITY MAP
NOT TO SCALE

DIRECTIONS TO LOCATE SITE:

LATITUDE = 30°45'56.11"N
LONGITUDE = 86°35'53.14"W
SECTION = 13
TOWNSHIP = 3 NORTH
RANGE = 24 WEST
COUNTY = OKALOOSA

THE PROJECT SITE IS LOCATED IN OKALOOSA COUNTY, FLORIDA, NORTHWEST CORNER OF THE INTERSECTION OF OLD BETHEL ROAD AND WEST JAMES LEE BOULEVARD (S.R. 10).

UTILITY PROVIDERS

(WATER/SEWER)
OKALOOSA COUNTY WATER
1804 LEWIS TURNER BLVD # 300
FT. WALTON BEACH, FL 32547
(850) 651-7171

(TELEPHONE)
CENTURYLINK
411 MARY ESTHER CUTOFF
FT. WALTON BEACH, FL 32548
(850) 244-1150

(FIRE DISTRICT)
NORTH OKALOOSA FIRE DISTRICT
5549 JOHN GIVENS RD
CRESTVIEW, FL 32539
(850) 682-1808

(ELECTRIC)
FLORIDA POWER & LIGHT (FPL)
140 HOLLYWOOD BLVD SW
FT. WALTON BEACH, FL 32548
(800) 225-5797

(GAS)
OKALOOSA GAS DISTRICT
20 HUGHES STREET NE
FT. WALTON BEACH, FL 32548
(850) 729-4700

GOVERNMENTAL AGENCIES HAVING JURISDICTION

OKALOOSA COUNTY
(DEPARTMENT OF GROWTH MANAGEMENT)
(850) 651-7795

FLORIDA DEPARTMENT OF
TRANSPORTATION
JACE ALBURY
(850) 836-5790

(PUBLIC WORKS - ENGINEERING)
SCOTT BITTERMAN, P.E.
(850) 689-5772

LEGAL DESCRIPTION (AS RECORDED):

(OFFICIAL RECORDS BOOK 2983, PAGE 2776)

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF OKALOOSA, STATE OF FLORIDA, AND IS DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF TRACT 3, PLAT 2, OAKCREST FARMS AND GROVES, AS RECORDED IN PLAT BOOK 1, PAGE 75, OF THE PUBLIC RECORDS OF OKALOOSA COUNTY, FLORIDA; THENCE RUN WEST 201.75 FEET; THENCE RUN SOUTH 311.95 FEET, MORE OR LESS, TO THE NORTHERLY RIGHT OF WAY LINE OF U.S. HIGHWAY 90; THENCE RUN NORTH 88°27'40" EAST ALONG SAID RIGHT OF WAY LINE, A DISTANCE OF 203.75 FEET TO A POINT SOUTH OF THE POINT OF BEGINNING; THENCE RUN NORTH ALONG THE EAST LINE OF SAID TRACT 3, A DISTANCE OF 303.80 FEET TO THE POINT OF BEGINNING.

(OFFICIAL RECORDS BOOK 2334, PAGE 3052)

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF OKALOOSA, STATE OF FLORIDA, AND IS DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF TRACT 3, PLAT 2, OAKCREST FARMS & GROVES IN SECTION 13, TOWNSHIP 3 NORTH, RANGE 24 WEST; THENCE RUN EAST ALONG THE NORTH LINE OF SAID TRACT 3 A DISTANCE OF 441.75 FEET TO A POINT; THENCE RUN SOUTH 358.58 FEET MORE OR LESS, TO A POINT ON THE NORTHERLY RIGHT OF WAY LINE OF U. S. HIGHWAY #90; THENCE RUN WEST ALONG THE NORTHERLY BOUNDARY LINE OF SAID U. S. HIGHWAY #90 A DISTANCE OF 441.75 FEET, MORE OR LESS, TO A POINT ON THE WEST LINE OF SAID TRACT 3 THENCE RUN NORTH ALONG THE WEST LINE OF SAID TRACT 3 A DISTANCE OF 360 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

DUTY TO INDEMNIFY

THE CONTRACTOR SHALL DEFEND, INDEMNIFY, KEEP AND SAVE HARMLESS THE OWNER AND ENGINEER AND THEIR RESPECTIVE MEMBERS, REPRESENTATIVES, AGENTS AND EMPLOYEES, IN BOTH INDIVIDUAL AND OFFICIAL CAPACITIES, AGAINST ALL SUITS, CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES, CAUSED BY, GROWING OUT OF, OR INCIDENTAL TO THE PERFORMANCE OF THE WORK UNDER THE CONTRACT BY THE CONTRACTOR OR ITS SUBCONTRACTORS TO THE FULL EXTENT AS ALLOWED BY THE LAWS OF THE STATE OF FLORIDA AND NOT BEYOND ANY EXTENT WHICH WOULD RENDER THESE PROVISIONS VOID OR UNENFORCEABLE. IN THE EVENT OF ANY SUCH INJURY (INCLUDING DEATH) OR LOSS OR DAMAGE, OR CLAIMS THEREFORE, THE CONTRACTOR SHALL GIVE PROMPT NOTICE TO THE OWNER.

AUTHORITY AND RESPONSIBILITY

THE ENGINEER, AS REPRESENTATIVE OF THE OWNER, SHALL NOT GUARANTEE THE WORK OF ANY CONTRACTOR OR SUBCONTRACTOR, SHALL HAVE NO AUTHORITY TO STOP WORK, SHALL HAVE NO SUPERVISION OR CONTROL AS TO THE WORK OR PERSONS DOING THE WORK, SHALL NOT HAVE CHARGE OF THE WORK, SHALL NOT BE RESPONSIBLE FOR SAFETY IN, ON, OR ABOUT THE JOB SITE OR HAVE ANY CONTROL OF THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENT, SCAFFOLDING, SUPPORTS, FORMS, OR OTHER WORK AIDS, AND SHALL HAVE NO DUTIES OR RESPONSIBILITIES IMPOSED BY THE STRUCTURAL WORK ACT.

OKALOOSA COUNTY
GROWTH MANAGEMENT DEPT.

Plans Approved by: *[Signature]*
Date: *6/12/24*

Florida Department of Health in
Okaloosa County
Plan Review Approval
Approved By: *[Signature]*
Date: *6-6-2024*

O.C.W.S. PRINT REVIEW
CHECK ALL THAT APPLY BELOW
 APPROVED
 NOT APPROVED
 APPROVED EXCEPT AS NOTED
REVIEWED BY: *[Signature]* DATE: *6/5/24*

OKALOOSA COUNTY BUREAU OF FIRE PREVENTION
 ACCEPTED
 ACCEPTED WITH CONDITIONS
REVIEWED BY: *[Signature]* DATE: *6/5/24*

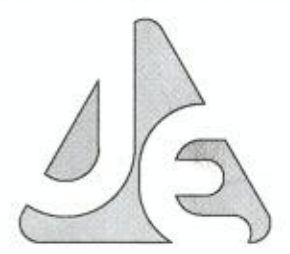
OKALOOSA COUNTY DEPT. OF PUBLIC WORKS
APPROVED BY: *[Signature]*
MICHAEL ANDERSON
DATE: *6/11/2024*

SHEET INDEX	
SHEET NO#	SHEET TITLE
01	COVER SHEET
02	EXISTING CONDITIONS
03	SITE PLAN
04	GRADING PLAN
05	DRAINAGE PLAN
06	UTILITY PLAN
07	MISCELLANEOUS DETAILS I
08	MISCELLANEOUS DETAILS II
09	MISCELLANEOUS DETAILS III
10	MISCELLANEOUS DETAILS IV
11	UTILITY DETAILS I
12	UTILITY DETAILS II

FOR F.D.O.T. CONNECTION
SEE PLANS PREPARED BY:
Jenkins Engineering, Inc.
73 EGLIN PARKWAY NE, SUITE 203
FORT WALTON BEACH, FLORIDA 32548
PHONE 850.837.2448
FAX 850.837.2450
Contact: Matt Zinke, P.E.

NOTE

USE LATEST OKALOOSA COUNTY AND/OR F.D.O.T. TECHNICAL SPECIFICATIONS AND DETAILS UNLESS OTHERWISE NOTED.



JENKINS ENGINEERING, INC.
73 EGLIN PARKWAY NE, SUITE 203
FORT WALTON BEACH, FLORIDA 32548
PHONE 850.837.2448
FAX 850.837.2450
JEICIVIL.COM

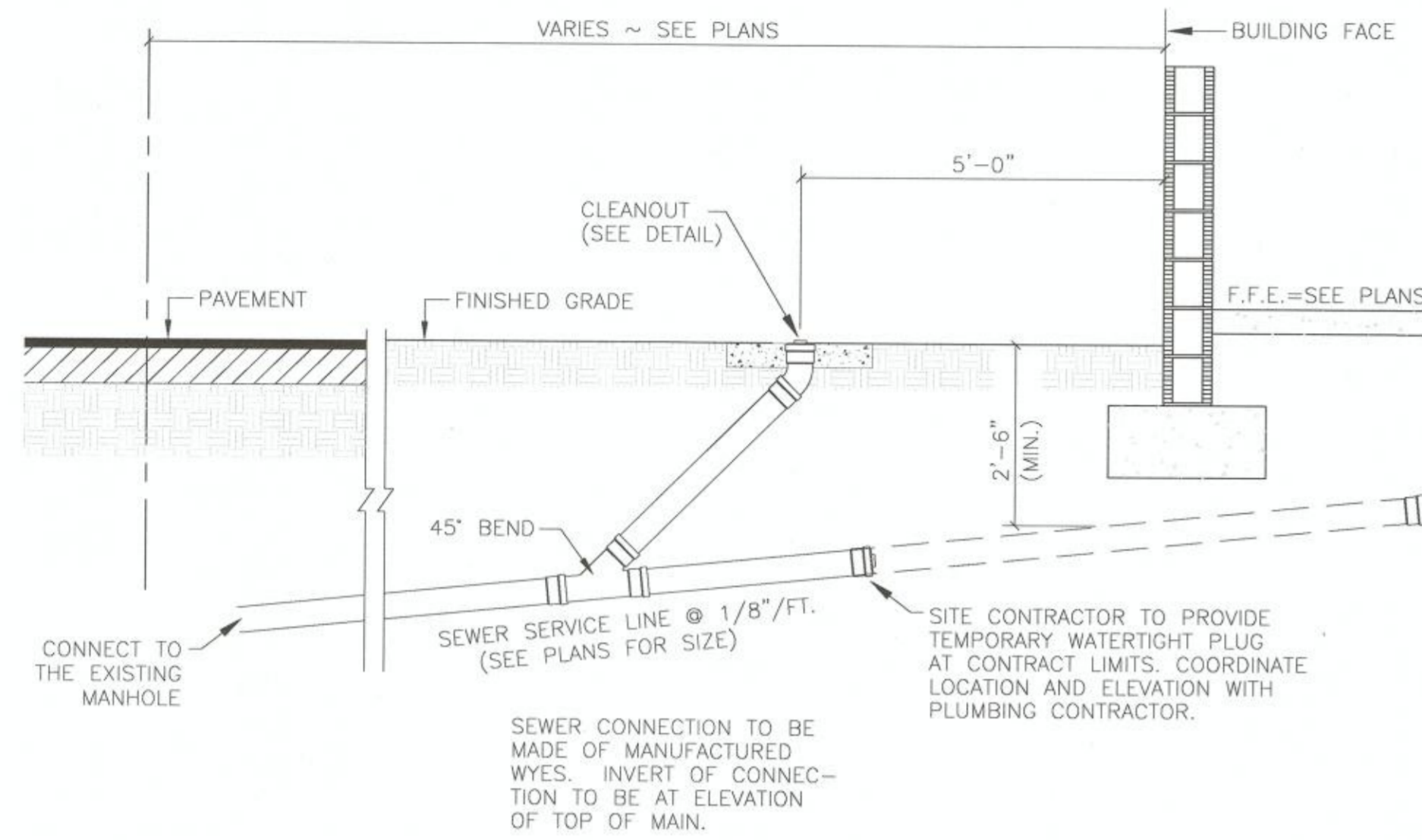


JUN 03 2024
MATTHEW H. ZINKE, P.E.
FL. REGISTRATION NO. 57642

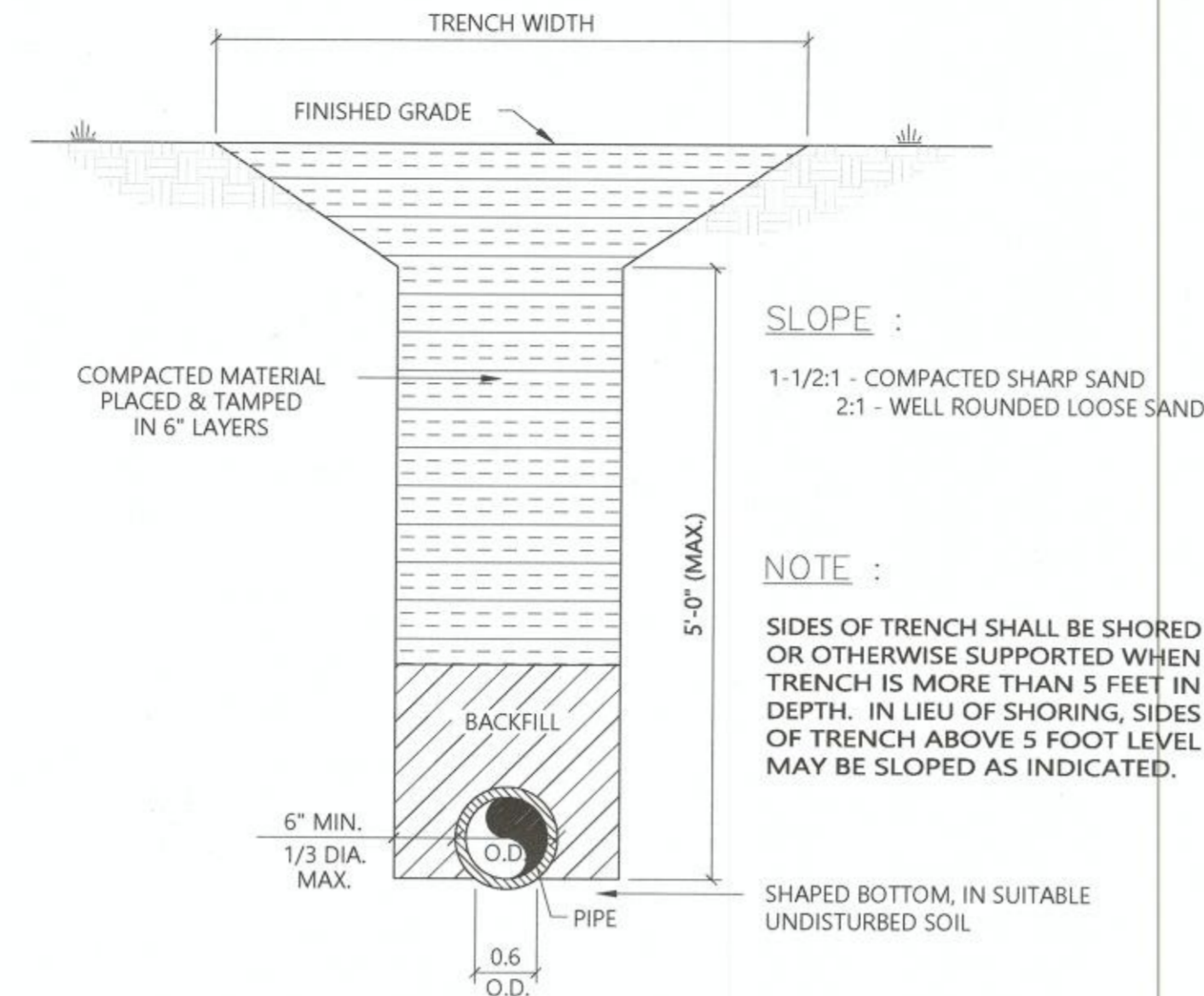
REV	DATE	DESCRIPTION
1	05-16-24	REVISED PER COUNTY AND FORWARD COMMENTS
2	05-23-24	REVISED PER COUNTY COMMENTS
3	05-23-24	REVISED PER COUNTY COMMENTS

THE FIKES COMPANIES
CEFCO HWY 90 & OLD BETHEL
OKALOOSA COUNTY, FLORIDA
COVER SHEET

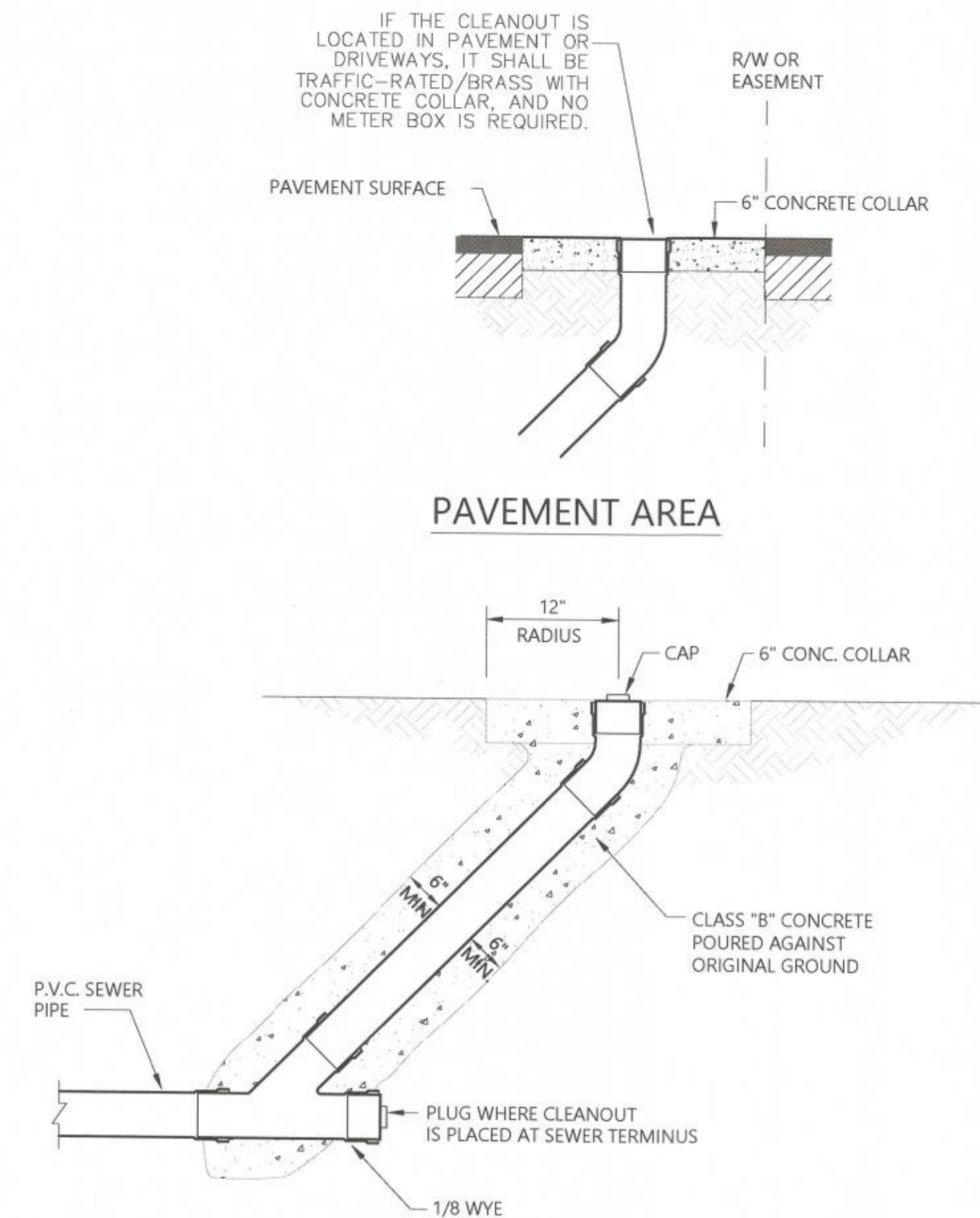
JOB: 23-72
DATE: 12-12-23
DESIGNED: MZ/MS
DRAWN: MS
BAR IS ONE INCH ON ORIGINAL
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY
DRAWING NUMBER
01 OF 12
SHEET NUMBER
C01



1
C12 **SEWER SERVICE DETAIL**
SCALE: 1/2" = 1'-0"



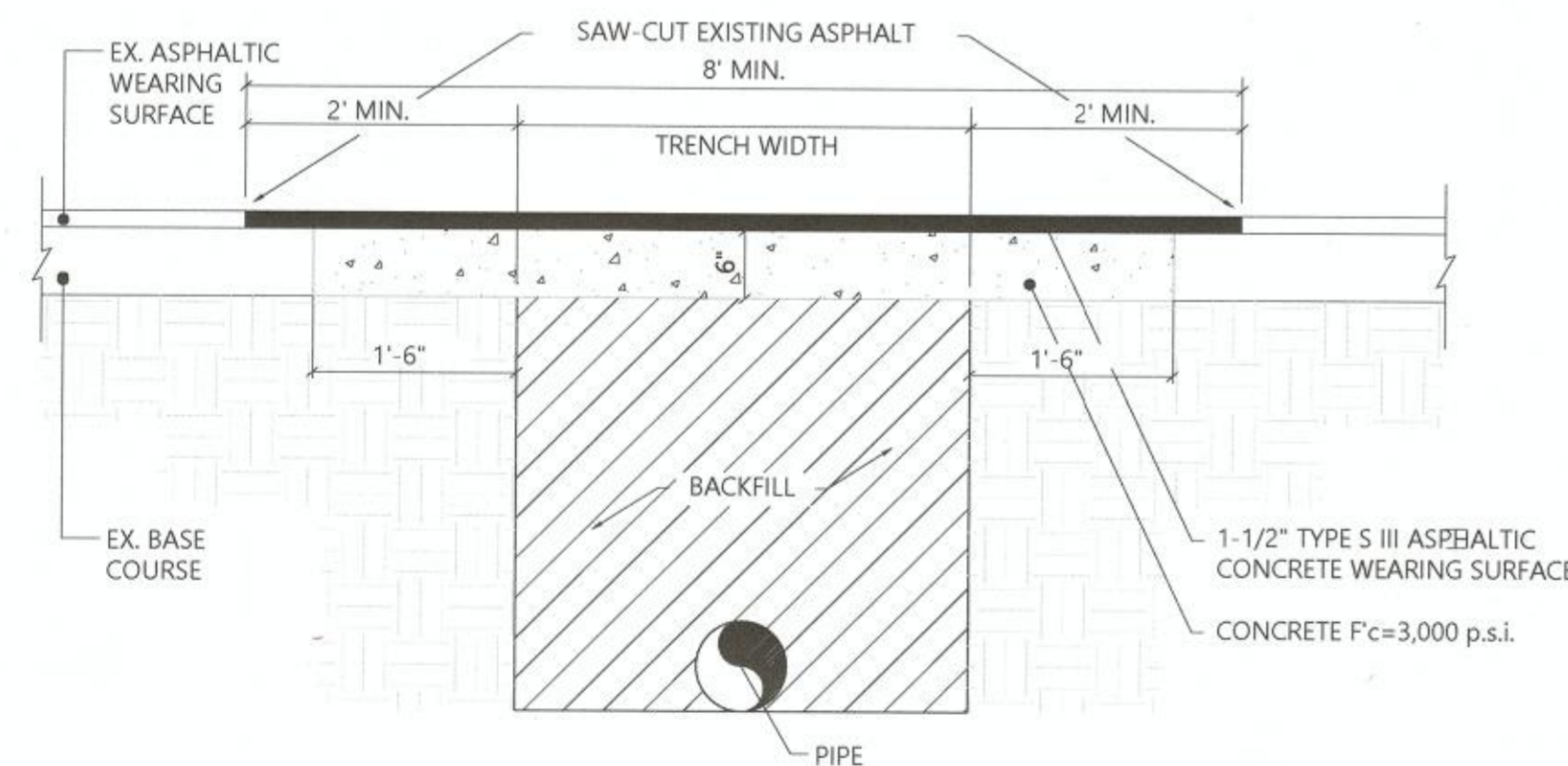
2
C12 **PIPE BEDDING DETAIL**
SCALE: 3/4" = 1'-0"



3
C12 **CLEANOUT DETAIL**
SCALE: 1" = 1'-0"

GENERAL NOTES :

1. ALL CONCRETE TO HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4000 P.S.I. UNLESS OTHERWISE NOTED.
2. PROVIDE MANHOLE STEPS FOR MANHOLES WITH DEPTHS GREATER THAN 42 INCHES.
3. GROUT ALL PIPE ENTRIES AND MANHOLE INVERTS.
4. INVERT GROUTING TO BE UNIFORM AND SMOOTH - SLOPED TO CENTER-LINE OF PIPE.



3
C12 **ASPHALT PAVEMENT PATCH DETAIL**
SCALE: 3/4" = 1'-0"

LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

Other Pipe	Horizontal Separation	Crossings (1)	Joint Spacing @ Crossings (Full Joint Centered)
Storm Sewer, Stormwater Force Main, Reclaimed Water (2)	Water Main 3 ft. minimum	Water Main 12 inches is the minimum, except for storm sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 3 ft. minimum Water Main
Vacuum Sanitary Sewer	Water Main 10 ft. preferred 3 ft. minimum	Water Main 12 inches preferred 6 inches minimum	Alternate 3 ft. minimum Water Main
Gravity or Pressure Sanitary Sewer, Sanitary Sewer Force Main, Reclaimed Water (4)	Water Main 10 ft. preferred 6 ft. minimum (3)	Water Main 12 inches is the minimum, except for gravity sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 6 ft. minimum Water Main
On-Site Sewage Treatment & Disposal System	10 ft. minimum	---	---

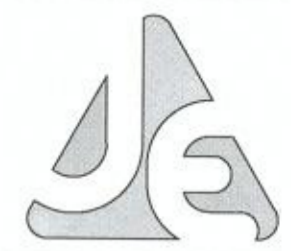
- (1) Water main should cross above other pipe. When water main must be below other pipe, the minimum separation is 12 inches.
- (2) Reclaimed water regulated under Part III of Chapter 62-610, F.A.C.
- (3) 3 ft. for gravity sanitary sewer where the bottom of the water main is laid at least 6 inches above the top of the gravity sanitary sewer.
- (4) Reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

Disclaimer - This document is provided for your convenience only. Please refer to F.A.C. Rule 62-555.314 for additional construction requirements.

O.C.W.S. PRINT REVIEW

ALL THAT APPLY BELOW
 APPROVED
 NOT APPROVED
 APPROVED EXCEPT AS NOTED
 RESUBMIT REQUIRED
 RESUBMIT NOT REQUIRED
 BY: *[Signature]* DATE: 6/5/24

5
C12 **WATER/SEWER SEPARATION DETAIL**
NOT TO SCALE



JENKINS ENGINEERING, INC.
73 EGLIN PARKWAY NE, SUITE 203
FORT WALTON BEACH, FLORIDA 32548
PHONE 850.837.2448
FAX 850.837.2450
JEICIVIL.COM



JUN 03 2024
MATTHEW H. ZINKE, P.E.
FL REGISTRATION NO. 57642

REV	DATE	DESCRIPTION
1	03-18-24	RENSED PER COUNTY AND INWFWD COMMENTS

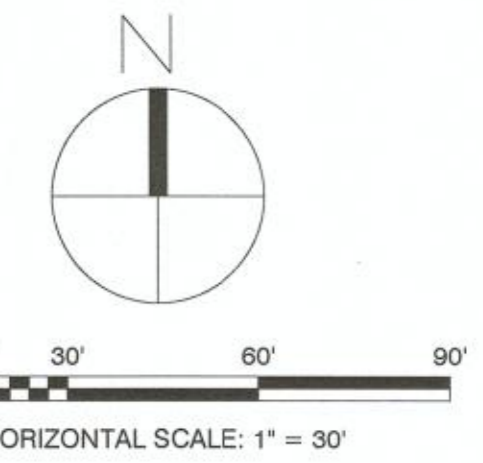
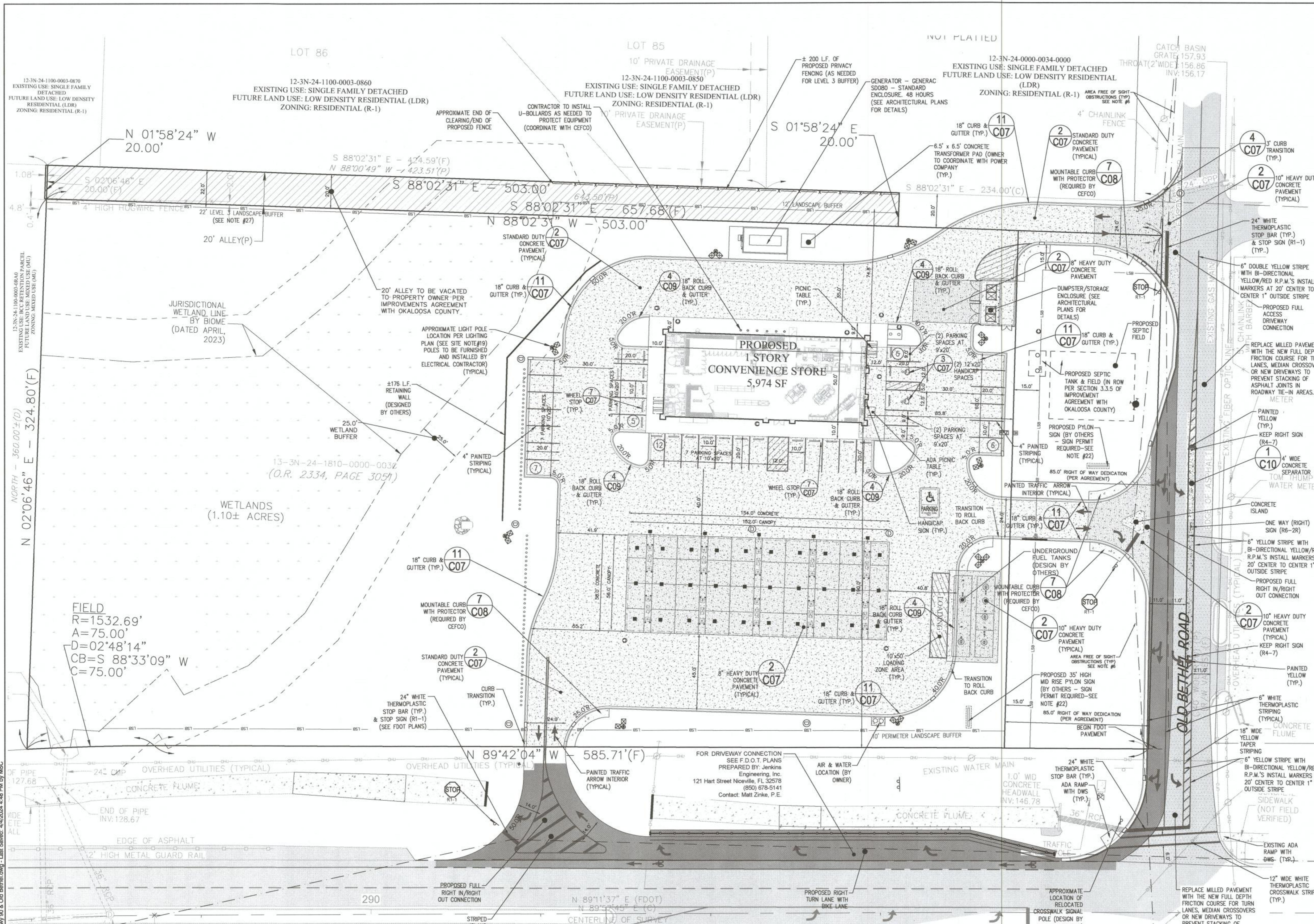
THE FIXES COMPANIES
CEFCO HWY 90 & OLD BETHEL
OKALOOSA COUNTY, FLORIDA
UTILITY DETAILS II
NOT VALID UNLESS BEARING ENGINEER'S ORIGINAL SIGNATURE

JOB: 23-72
DATE: 12-12-23
DESIGNED: MZ/MS
DRAWN: MS

BAR IS ONE INCH ON ORIGINAL
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY

DRAWING NUMBER
12 OF 12
SHEET NUMBER
C12

NOT RELEASE FOR CONSTRUCTION



LEGEND:

ASPHALTIC CONCRETE PAVEMENT	[Symbol]
CONCRETE PAVEMENT	[Symbol]
RIGHT-OF-WAY LINE	[Symbol]
PROPERTY LINE	[Symbol]
LOT LINE	[Symbol]
EASEMENT LINE	[Symbol]
BUILDING SETBACK LINE	[Symbol]

OKALOOSA COUNTY
GROWTH MANAGEMENT DEPT.
 Plans Approved by: *[Signature]*
 Date: *6/18/24*

SITE DATA TABLE:

PARCEL IDENTIFICATION:	13-3N-24-1810-0000-003A	13-3N-24-1810-0000-003C
EXISTING LAND USE:	SINGLE FAMILY DETACHED	
ZONING:	MIXED USE (MU)	
FUTURE LAND USE:	MIXED USE (MU)	
PARCEL AREA:	206,300 SQ.FT (4.74 ACRES)	
DESCRIPTION:	CONVENIENCE STORE	5,974 SQ. FT.
	(20) FUEL STATIONS	
LANDSCAPE AREA	REQUIRED	PROVIDED
NORTH (LEVEL 3)**	12/22**	12/15/22*
SOUTH (PERIMETER AREA)	10'	10'
EAST (PERIMETER AREA)	10'	15'*
WEST	0'	0'
* BUFFERS WITHIN COUNTY ROW PER SECTIONS 3.3.3 AND 3.3.4 OF IMPROVEMENTS AGREEMENT WITH OKALOOSA COUNTY.		
**12' WIDE LEVEL 3 BUFFER REQUIRES FENCE		
SETBACKS	REQUIRED MIN.	PROVIDED
	MU	
FRONT:	20'	190.5'
SIDE:	5'	168.8'
REAR:	10'	74.8'
	PROPOSED	
BUILDING HEIGHT:	1 STORY (± 22' HIGH)	
MAX. BUILDING HEIGHT	35"/200'	
IF HIGHER THAN 35', ADDITIONAL BUILDING SETBACKS WILL APPLY PER LDC SECTION 2.19.00 (2) (b)		
PROPOSED PARCEL DATA TABLE	ACRE	S.F.
PROPERTY LIMITS:	4.74	206,300
PROJECT LIMITS:	2.97	129,222
DRAINAGE AREA:	2.34	102,018
BUILDING AREAS:	0.1	5,974
VEHICULAR AREA/PARKING:	1.61	70,190
TOTAL IMPERVIOUS AREA:	1.75	76,164
TOTAL OPEN SPACE AREA:	2.98	130,136
FLOOR TO AREA RATIO (FAR)	TOTAL BUILDING FLOOR AREA 5,974 SQ.FT.	
	PROPOSED PARCEL FAR RATIO PROVIDED..... 0.03	
MAXIMUM FLOOR TO AREA RATIO	2.0	
MAXIMUM IMPERVIOUS SURFACE RATIO	0.75	
PROPOSED PARCEL IMPERVIOUS SURFACE RATIO PROVIDED.....	0.37	
PARKING REQUIREMENTS (LDC, 6.04.02)	CONVENIENCE STORES (5,974 SQ.FT)	
	5 SPACES PER 1,000 SQ.FT. 30 SPACES***	
	TOTAL 30 SPACES***	
*** 2 HANDICAP SPACES MUST BE INCLUDED WITHIN THE REQUIRED 30 SPACES		
	1 LOADING ZONE SPACE 10'x50' REQUIRED	
PROPOSED PARKING SPACES	33	
PROPOSED ADA COMPLIANT SPACES	2	
TOTAL PROPOSED PARKING SPACES	35	
PROPOSED LOADING ZONE SPACE	1	
CONCRETE PAVEMENT SUMMARY:		
10" THICK CONCRETE PAVEMENT	4,538 SQ.FT.	
8" THICK CONCRETE PAVEMENT	9,945 SQ.FT.	
6" THICK CONCRETE PAVEMENT	49,832 SQ.FT.	
COUNTY ASPHALT PAVEMENT	2,896 SQ.FT.	
COUNTY ASPHALT COURSE REPLACEMENT	7,787 SQ.FT.	

NOTES:

- PAVEMENT DIMENSIONS ARE MEASURED TO THE FACE OF CURB UNLESS OTHERWISE DIMENSIONED.
- RETURN RADIUS IS 25' UNLESS OTHERWISE DIMENSIONED. DISTANCES SHOWN ALONG CURVES ARE ARC LENGTHS.
- THIS PARCEL LIES IN FLOOD ZONE X (NO MINIMUM), AS DETERMINED BY SCALE FROM FEMA PANEL #12091C0185, DATED 03/09/2021, AND FURNISHED BY OKALOOSA COUNTY GEOGRAPHIC INFORMATION SYSTEM.
- ALL STREET STRIPING WITHIN RIGHT OF WAY WILL BE THERMOPLASTIC AND SIGNAGE WILL MEET THE MOST RECENT SIZE AND REFLECTIVITY STANDARDS.
- THE DEVELOPER SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL SIGNAGE IN ACCORDANCE WITH THE LATEST MUTCD STANDARDS.
- THE SIGHT DISTANCE WEST AND EAST ALONG STATE ROAD NO. 10 IS PART OF ROADWAY IMPROVEMENT PLANS PREPARED BY JEI, INC. PROMITEE WILL BE RESPONSIBLE FOR CONSTRUCTION IN COMPLIANCE WITH F.D.O.T. SIGHT DISTANCE REGULATION BASE ON ROADWAY IMPROVEMENT PLANS PREPARED BY JEI, INC. THE SIGHT DISTANCE NORTH AND SOUTH ALONG OLD BETHEL ROAD AS SHOWN IS PER FIGURE 3-2A SIGHT DISTANCE IN CURVE REGULATION OF FOOT MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS (GREEN BOOK) AS SPECIFIED IN OKALOOSA COUNTY LAND DEVELOPMENT CODE (6.03.15-CLEAR VISIBILITY TRIANGLE). WITHIN SIGHT OBSTRUCTION FREE AREA, NOTHING SHALL BE ERRECTED, PLACED, PARKED, OR ALLOWED TO GROW IN SUCH A MANNER AS TO MATERIALLY REDUCE VISION BETWEEN A HEIGHT OF TWO FEET AND TEN FEET ABOVE THE GRADE, MEASURED AT THE CENTERLINE OF THE INTERSECTION. CONTRACTOR WILL BE RESPONSIBLE FOR CONSTRUCTION IN COMPLIANCE WITH SIGHT DISTANCE REGULATION AS SPECIFIED IN OKALOOSA COUNTY LAND DEVELOPMENT CODE.
- FLORIDA STATE ROAD 10 (HWY 90) IS A STATE MAINTAINED RIGHT OF WAY REQUIRING A FLORIDA

- DEPARTMENT OF TRANSPORTATION (F.D.O.T) DRIVEWAY CONNECTION PERMIT. OLD BETHEL ROAD IS MAINTAINED BY OKALOOSA COUNTY.
- ALL WORK IN THE RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH LATEST ROADWAY & TRAFFIC DESIGN STANDARDS, LATEST SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, THE PLANS PREPARATION MANUAL (PPM), AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL PROPOSED IMPROVEMENTS THAT WILL BE DEDICATED TO OKALOOSA COUNTY ARE REQUIRED TO ENTER THE EIGHTEEN (18) MONTH WARRANTY PERIOD AND MUST MEET THE REQUIREMENTS OF CHAPTER 6, SECTION 6.01.053 (ACCEPTANCE), AND SECTION 6.03.14 (ROAD AND STREET DESIGN STANDARDS) OF THE OKALOOSA COUNTY LDC.
- NO WORK SHALL BE PERFORMED WITHIN THE RIGHT-OF-WAY UNTIL THE PROPER MAINTENANCE OF TRAFFIC IS IN PLACE ACCORDING TO THE APPROPRIATE 600 SERIES INDEX. A CERTIFIED WORKSITE TRAFFIC SUPERVISOR SHALL SET UP THE MOT.
- GRASS OR OTHER GROUND COVER SHALL BE PLACED ON ALL AREA NOT OCCUPIED BY LANDSCAPE MATERIAL.
- ALL DISTURBED AREAS WITHIN RIGHT OF WAY SHALL BE STABILIZED WITH SO2, AND MUST BE IRRIGATED UNTIL ESTABLISHED.
- THE SITE COMPLIES WITH THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION, LATEST EDITION

S.R. 10 (U.S. 90)

- BUILDING SETBACK IS MINIMUM HORIZONTAL DISTANCE PERMITTED AND MEASURED FROM FACE OF BUILDING TO THE NEAREST PROPERTY LINE.
- ALL COVERED/ENCLOSED STRUCTURES ARE SUBJECT TO SETBACK REQUIREMENTS.
- PARKING OR MATERIAL STORAGE IN ROAD RIGHT-OF-WAY AND INGRESS/EGRESS EASEMENT IS PROHIBITED.
- FOR WORK WITHIN F.D.O.T. RIGHT OF WAY SEE FDOT DRIVEWAY PLANS PREPARED BY JEI INC. FOR FURTHER DETAILS.
- A LIGHTING PLAN HAS BEEN INCLUDED WITH THIS SUBMITTAL FOR REVIEW AND APPROVAL ANY PROPOSED OUTDOOR LIGHTING FOR THE PROJECT MUST BE PROPERLY CUT OR SHIELDED TO PREVENT UPWARD GLARE (LIGHT FIXTURES TO BE "DARK-SKY COMPLIANT PER EQUIN AFB REQUIREMENT) OR LIGHT TRESPASS ONTO ADJACENT PROPERTIES.
- CONTROL LAYOUT LAYOUT PLAN PROVIDED BY INFINITY ENGINEERING GROUP LLC. (SEE ARCHITECTURAL PLANS FOR DETAILS).
- BOLLARD LOCATIONS ARE APPROXIMATE AND FINAL PLACEMENT TO BE DETERMINED BY CONTRACTOR/OWNER IN FIELD.
- SIGN LOCATION IS APPROXIMATE AND DEVELOPER TO PERMIT FINAL SIGNAGE AS PER SECTION 8 OF THE OKALOOSA COUNTY LDC. SEE SIGNAGE PLANS BY TEXAS REPUBLIC SIGNS.
- PER OKALOOSA COUNTY GROWTH MANAGEMENT POLICY NUMBER 20-01, EFFECTIVE 03/30/20, CONTRACTOR/OWNER TO PROVIDE SIGNED AND SEALED SITE AND LANDSCAPING AS-BUILT FOR REVIEW BY ENGINEER AND LANDSCAPE ARCHITECT AND FOR SUBMITTAL TO COUNTY.
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS, ONCE PROVIDED, FOR EXACT

- LOCATIONS AND DIMENSIONS OF IMPROVEMENTS INCLUDING, PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS.
- NON-MOUNTABLE CURBING TO BE TYPE "F" CURB AND GUTTER WITHIN COUNTY AND FDOT RIGHT OF WAY.
- REFERENCE LANDSCAPE PLAN BY ALAN HOLT.
- REFERENCE LANDSCAPE PLAN BY ALAN HOLT. MINIMUM OF 22' OF UNDISTURBED VEGETATION TO REMAIN IN PROPERTTY TO PROVIDE REQUIRED LANDSCAPE BUFFERING UNLESS REVISED LANDSCAPE PLAN IS PROVIDED IN THE FUTURE. MEETING LATEST COUNTY LANDSCAPE REQUIREMENTS AND LEVEL 3 BUFFER REQUIREMENTS EXISTING VEGETATION TO BE SUPPLEMENTED AS NEEDED TO MEET LEVEL 3 BUFFER REQUIREMENTS PER SECTION 6.05.074 OF THE LDC. ALONG THE AREA BEING IMPROVED FOR RETENTION BASIN.

NOTE: IF ARCHITECTURAL PLANS HAVE ANY DISCREPANCIES FROM THESE CIVIL PLANS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THESE CIVIL PLANS ARE REVISED BY THE ENGINEER TO CORRESPOND TO THE LATEST ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION COMMENCING.

Florida Department of Health in Okaloosa County
 Plan Review Approval
 Approved By: *[Signature]*
 Date: *6.6.2024*

REFERENCE TP-1 TREE PLAN BY ALAN D. HOLT LANDSCAPE ARCHITECT FOR PROTECTED TREE LOCATION, SPECIES, DBH, OKALOOSA COUNTY DEPT. OF PUBLIC WORKS AND IF IT IS TO BE REMOVED OR PROTECTED

APPROVED BY: *[Signature]*
 MICHAEL ANDERSON
 DATE: *6/18/24*

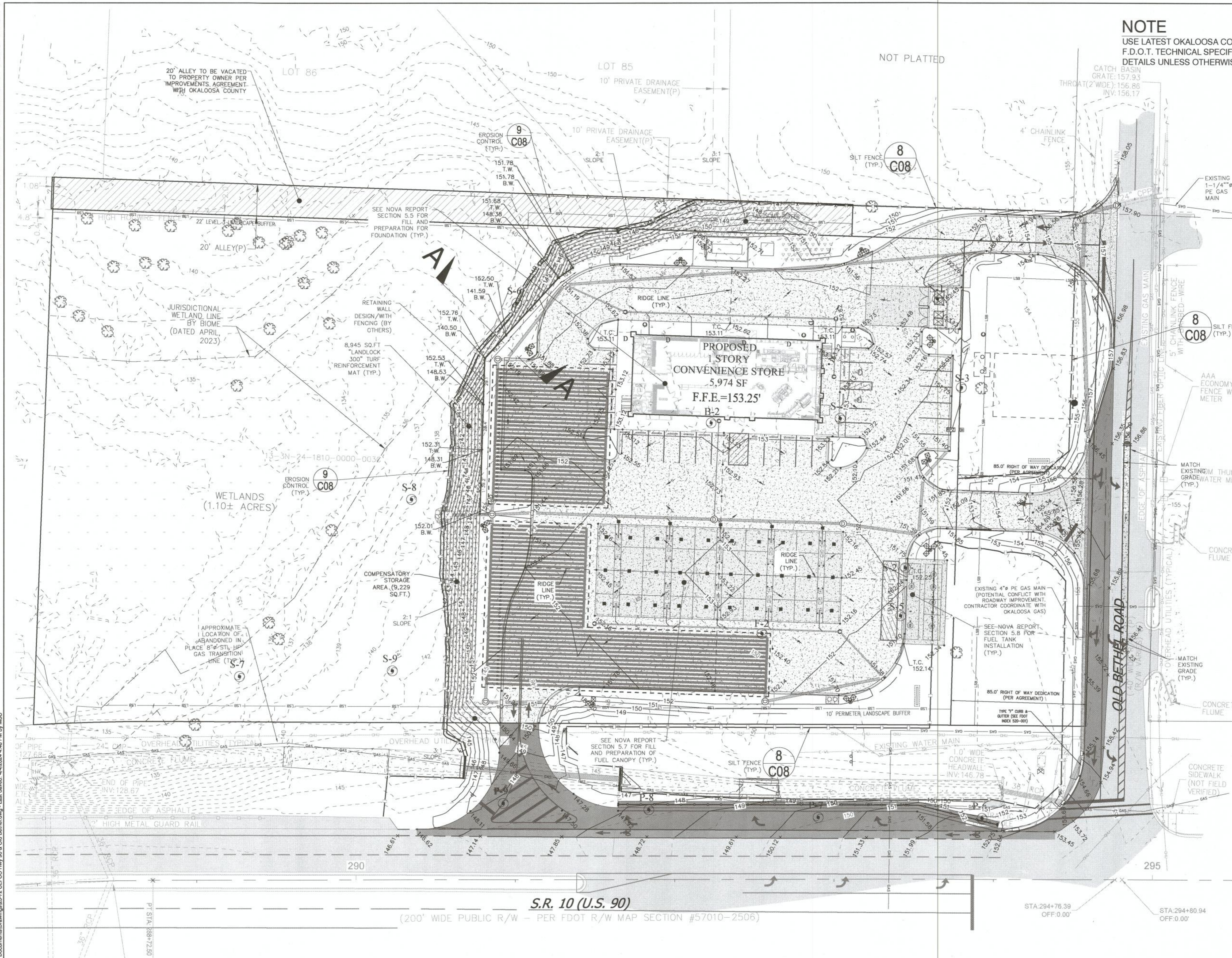
JENKINS ENGINEERING, INC.
 73 EGLIN PARKWAY NE, SUITE 203
 FORT WALTON BEACH, FLORIDA 32548
 PHONE 850.837.2448
 FAX 850.837.2450
 JEICVIL.COM

MATTHEW H. ZINKE
 LICENSE No. 57642
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 JUN 03 2024
 MATTHEW H. ZINKE, P.E.
 FL REGISTRATION NO. 57642

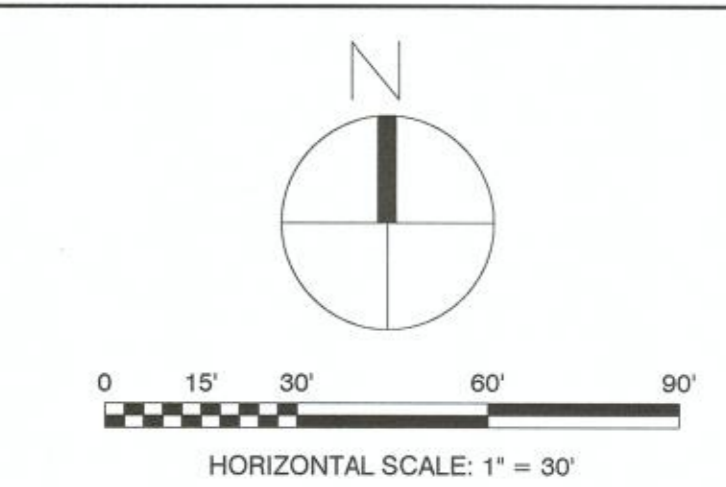
THE FIKES COMPANIES
 CEFCO HWY 90 & OLD BETHEL
 OKALOOSA COUNTY, FLORIDA
 SITE PLAN
 NOT VALID UNLESS BEARING ENGINEERS ORIGINAL SIGNATURE

JOB: 23-72
DATE: 12-12-23
DESIGNED: MZ/MS
DRAWN: MS
 BAR IS ONE INCH ON ORIGINAL
 IF NOT ONE INCH ON THIS SHEET
 ADJUST SCALES ACCORDINGLY
DRAWING NUMBER
 03 OF 12
SHEET NUMBER
 C03

NOT RELEASE FOR CONSTRUCTION



NOTE
USE LATEST OKALOOSA COUNTY AND/OR
F.D.O.T. TECHNICAL SPECIFICATIONS AND
DETAILS UNLESS OTHERWISE NOTED.



- LEGEND:**
- PROPERTY LINE
 - EX. GRADE CONTOUR (1' INTERVALS)
 - FINISHED GRADE CONTOUR
 - FINISHED GRADE SPOT ELEVATION
 - CROSS SECTION LOCATION SHOWING DRAWING NUMBER AND PAGE NUMBER
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 - CONTRACTOR SHALL PROVIDE A TEMPORARY COVER OF FILTER CLOTH FOR EACH INLET STRUCTURE TO PREVENT ENTRANCE OF SOIL. INLET STRUCTURES ARE TO REMAIN COVERED UNTIL AN ACCEPTABLE STAND OF GRASS IS ACHIEVED. CONTRACTOR TO CLOSELY MONITOR THE TEMPORARY COVERINGS ON DRAINAGE INLETS DURING CONSTRUCTION.
 - MATCH EXISTING EDGE OF PAVEMENT GRADE WHEREVER NEW PAVEMENT EDGE MEETS THE EXISTING EDGE.
 - CONTRACTOR SHALL PROVIDE SOLID SOODING WITHIN ALL OTHER CLEARED AND GRUBBED AREAS WITH SIDE SLOPES OF 4:1 OR STEEPER. ALL OTHER DISTURBED AREAS SHALL BE SEEDED AND MULCHED. ALL SOIL AND SEEDING AREAS MUST BE ESTABLISHED AND PROPERLY MAINTAINED.
 - PER SECTION 5.2 OF NOVA REPORT DATED JULY 7, 2023, PROPOSED PIPE TRENCH AREAS SHOULD BE UNDERCUT 0.5' BELOW PROPOSED PIPE BEARING ELEVATIONS AND STRUCTURAL FILL USED AS BEDDING MATERIALS.
 - FINISHED FLOOR ELEVATIONS SHALL BE SET AS SHOWN BY CONTRACTOR.
 - IF SOIL CONDITIONS ARE NOT CONSISTENT WITH SOIL BORINGS, OR IF MUCK IS ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
 - CONTRACTOR TO BE ADVISED THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION OF THE PROJECT AND CONTRACTOR TO PROVIDE APPROPRIATE MEANS AND METHODS FOR DEWATERING. IF DEWATERING WERE TO BE REQUIRED, COMPLETE DETAILS OF TEMPORARY DIKES, DISCHARGE LOCATIONS, TIME PERIODS, AND METHODS FOR PREVENTING TURBID DISCHARGES WILL BE PROVIDED BY THE CONTRACTOR TO THE REQUIRED AGENCIES AS NEEDED. DEWATERING ACTIVITIES WILL NEED TO BE CONDUCTED UNDER DEP DOCUMENT 62-621.300(2)(A), GENERAL PERMIT FOR DISCHARGE OF GROUND WATER FROM DEWATERING OPERATIONS. IN ADDITION, SECTION VI OF THE NPDES NOI MUST BE COMPLETED OR A SEPARATE APPLICATION, DEP FORM 62-621.300(2)(B), MUST BE SUBMITTED WITH THE PROPER FEE AND PROCESSED BY DEP PRIOR TO ANY DEWATERING ACTIVITIES OCCURRING. SEE REPORT BY NOVA ENGINEERING AND ENVIRONMENTAL, LLC., DATED JULY 7, 2023.
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 - SILT FENCE SHOWN OUTSIDE OF PROPERTY LINE FOR ILLUSTRATIVE PURPOSES ONLY. SILT FENCE TO BE INSTALLED INSIDE OR ALONG PROPERTY BOUNDARY.
 - BUILDING CONTRACTOR TO DIRECT ROOF DRAINAGE TO PARKING LOT OR TO DOWNSPOUT LOCATIONS CONNECTED TO STORM WATER SYSTEM.
 - WHERE LANDSCAPE AREAS ADJACENT TO THE BUILDING A MINIMUM 3% SLOPE SHALL BE MAINTAINED AWAY FROM BUILDINGS AT ALL THE TIMES.
 - SITE CONTRACTOR TO REFERENCE ARCHITECTURAL PLANS FOR THE EXACT LOCATION AND NUMBER OF ROOF DRAINS. COORDINATE CONNECTION OF ROOF DRAINS TO THE STORMWATER SYSTEM WITH THE BUILDING CONTRACTOR PER ARCHITECTURAL PLANS.
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 - ALL BACKFILL MATERIAL WITHIN THE EXFILTRATION AREA SHALL BE WITH A SAND HAVING LESS THAN 5% FINES AND A MINIMUM VERTICAL PERMEABILITY RATE OF 5 INCHES/HOUR. A REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER SHALL CONFIRM THAT THE BACKFILL MEETS ABOVE REQUIREMENTS.
 - BACKFILL OUTSIDE OF BUILDING ENVELOPE TO BE PLACED IN MAXIMUM 12" LIFTS AND COMPACTED TO 98% MAXIMUM DENSITY (MODIFIED PROCTOR) AS PER SECTION 5.4 OF THE NOVA GEOTECHNICAL REPORT DATED JULY 7, 2023.
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JENKINS ENGINEERING, INC.
73 EGLIN PARKWAY NE, SUITE 203
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PHONE 850.837.2448
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JECIVIL.COM

MATTHEW H. ZINKE
LICENSE No. 57642
STATE OF FLORIDA
PROFESSIONAL ENGINEER
JUN 03 2024
MATTHEW H. ZINKE, P.E.
FL REGISTRATION NO. 57642

REV	DATE	DESCRIPTION
1	03/18/24	REVISED PER COUNTY AND W/PAVING COMMENTS

THE FIXES COMPANIES

CEFCO HWY 90 & OLD BETHEL
OKALOOSA COUNTY, FLORIDA

GRADING PLAN
NOT VALID UNLESS BEARING ENGINEER'S ORIGINAL SIGNATURE

JOB: 23-72
DATE: 12-12-23
DESIGNED: MZ/MS
DRAWN: MS

BAR IS ONE INCH ON ORIGINAL
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY

DRAWING NUMBER
04 OF 12

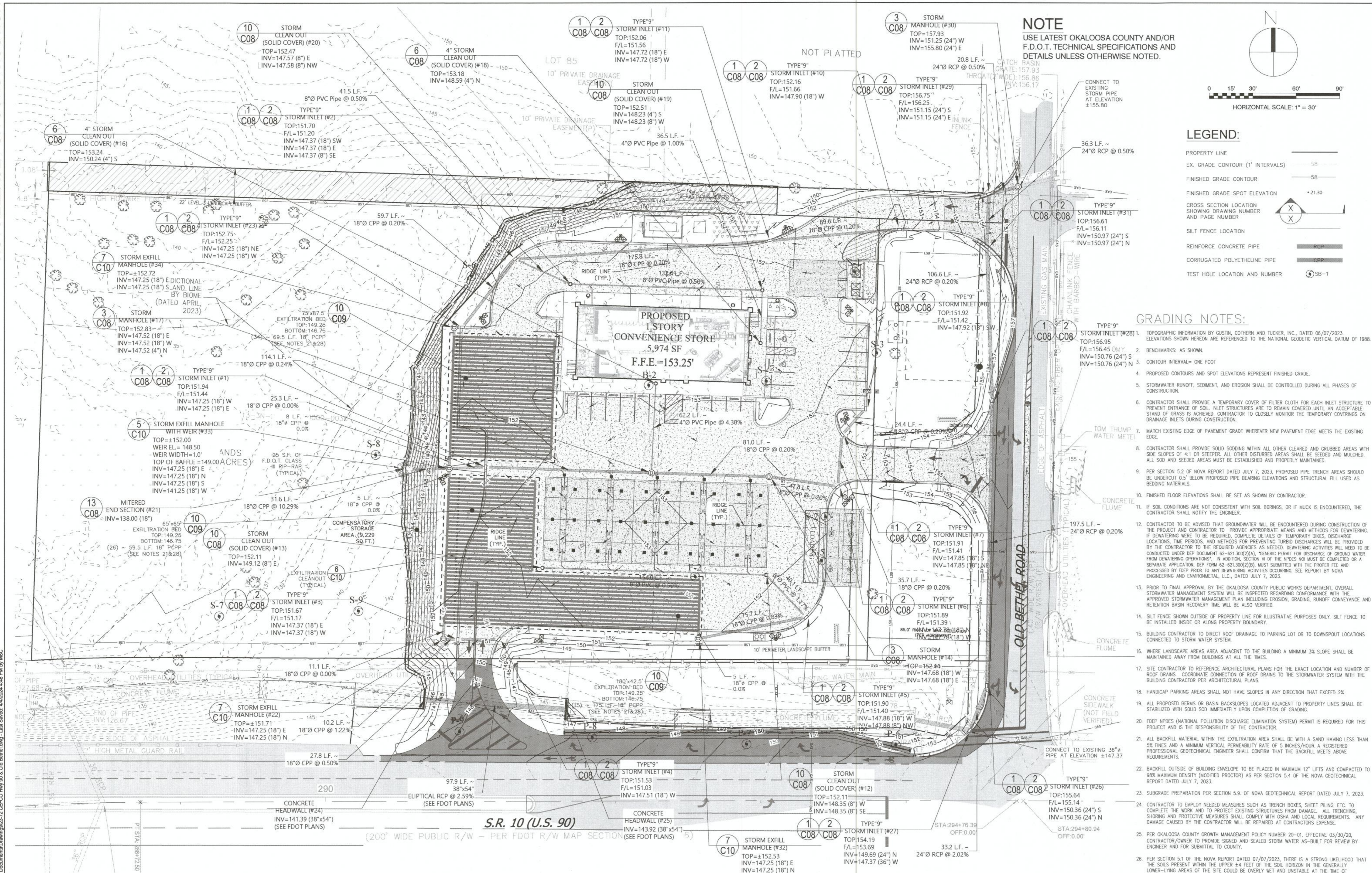
SHEET NUMBER
C04

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UNDERCUT/STABILIZE
UPPER ±4 FEET OF SOILS AS
REQUIRED.
(SEE NOTE#26)

ESTIMATED CUT/FILL REPORT:
CUT = 209.60 CU. YD.
FILL = 15,620.74 CU. YD.
NET FILL = 15,411.14 CU. YD.

NOT RELEASE FOR CONSTRUCTION



NOTE
 USE LATEST OKALOOSA COUNTY AND/OR
 F.D.O.T. TECHNICAL SPECIFICATIONS AND
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- PROPERTY LINE
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OKALOOSA COUNTY DEPT. OF PUBLIC WORKS
 APPROVED BY: *[Signature]*
 MICHAEL ANDERSON
 DATE: *6/12/2024*



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 73 EGLIN PARKWAY NE, SUITE 208
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 JECIVIL.COM



MATTHEW H. ZINKE
 LICENSE No. 57626
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION
1	03-18-24	REVISED PER COUNTY AND AFWERD COMMENTS

THE FIKES COMPANIES

CEFCO HWY 90 & OLD BETHEL
 OKALOOSA COUNTY, FLORIDA

DRAINAGE PLAN

JOB:	23-72
DATE:	12-12-23
DESIGNED:	MZ/MS
DRAWN:	MS

BAR IS ONE INCH ON ORIGINAL
 IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DRAWING NUMBER
05 OF 12
SHEET NUMBER
C05

NOT RELEASE FOR CONSTRUCTION

CONTRACTOR TO PROTECT EXISTING UTILITIES DURING CONNECTIONS TO EXISTING MAINS AND INSTALLATION OF IMPROVEMENTS

CALL SUNSHINE 48 HOURS BEFORE YOU DIG 1-800-432-4770 DIG SAFELY

UTILITY PROVIDERS

(WATER/SEWER) OKALOOSA COUNTY WATER 1804 LEWIS TURNER BLVD # 300 FT. WALTON BEACH, FL 32547 (850) 651-7171

(TELEPHONE) CENTURYLINK 411 MARY ESTHER CUTOFF FT. WALTON BEACH, FL 32548 (850) 244-1150

(FIRE DISTRICT) NORTH OKALOOSA FIRE DISTRICT 5549 JOHN GIVENS RD CRESTVIEW, FL 32539 (850) 682-1808

(ELECTRIC) FLORIDA POWER & LIGHT (FPL) 140 HOLLYWOOD BLVD SW FT. WALTON BEACH, FL 32548 (800) 225-5797

(GAS) OKALOOSA GAS DISTRICT 20 HUGHES STREET NE FT. WALTON BEACH, FL 32548 (850) 729-4700

COMPENSATORY STORAGE AREA (9,229 SQ.FT.)

APPROXIMATE LOCATION OF ABANDONED IN PLACE 8" ST. HP GAS TRANSITION LINE (TYP.)

290

UTILITY NOTES:

- 1. THE LOCATION OF UTILITIES IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION. IF THE LOCATION OR ELEVATION IS SUBSTANTIALLY DIFFERENT FROM THAT SHOWN ON THE PLANS OR IF CONFLICTS EXIST, THE ENGINEER SHALL BE NOTIFIED.
2. THE CONTRACTOR SHALL HAVE ALL APPLICABLE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND LOCAL PERMITS PRIOR TO BEGINNING CONSTRUCTION.
3. TAPS TO EXISTING UTILITIES SHALL BE COORDINATED WITH THE OWNER OF UTILITY & OCWS. ALL TAPS SHALL BE MADE IN AN EXPEDITIOUS MANNER TO MINIMIZE INTERRUPTION OF SERVICE.
4. ALL WATER SERVICE PIPING SHALL BE P.V.C. UNLESS OTHERWISE NOTED OR REQUIRED. A MINIMUM COVER OF 30" SHALL BE OVER THE WATER SERVICE.
5. ALL SEWER PIPING SHALL BE P.V.C. UNLESS OTHERWISE NOTED OR REQUIRED. A MINIMUM COVER OF 30" SHALL BE OVER THE SEWER SERVICE.
6. COORDINATE WITH OCWS ENGINEERING FOR ALL REQUIRED INSPECTIONS. A FORTY EIGHT (48) HOUR NOTICE IS REQUIRED.
7. ALL SEWER MAIN LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
8. ALL EXISTING UTILITIES WITHIN THE PROPERTY LIMITS THAT ARE NOT BEING UTILIZED BY NEW CONSTRUCTION ARE TO BE LOCATED AND REMOVED.
9. WHERE APPLICABLE CLEANOUTS TO BE INSTALLED AT EASEMENT LINE. CONTRACTOR TO PROVIDE A MINIMUM SEWER SERVICE SLOPE OF 1.0% AND CONTRACTOR CAN ADJUST SLOPE HIGHER AS LONG AS IT DOESN'T CONFLICT WITH THE EXISTING UTILITIES OR THE PROPOSED IMPROVEMENTS.
10. ANY EXISTING IMPROVEMENTS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER.
11. WHERE CONFLICTS OCCUR, A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE SHALL BE MAINTAINED.
12. EXTEND WATER & SEWER TO BUILDING AS INDICATED. SITE CONTRACTOR TO COORDINATE CONTINUATION OF SERVICES WITH PLUMBING CONTRACTOR, OWNER/BUILDING CONTRACTOR TO COORDINATE THE METERS FOR LOCATION WITH THE O.C.W.S. WATER AND SEWER DEPARTMENT.
13. OTHER UTILITIES SUCH AS CABLE, ELECTRIC, GAS, & TELEPHONE SHALL BE ENCASED IN PVC SLEEVES UNDER PAVEMENT. THESE UTILITIES SHALL NOT BE IN THE SAME DITCH AS WATER & SEWER LINES, NOR INTERFERE WITH THEM. DESIGNS FOR THESE SERVICES TO BE PROVIDED BY EACH INDIVIDUAL UTILITY AND REQUESTED/COORDINATED BY THE OWNER.
14. THE CONTRACTOR TO MAINTAIN ADEQUATE COVER OVER ANY EXISTING UTILITIES THAT WILL NOT BE RELOCATED.
15. THE O.C.W.S. IS THE SOLE AGENCY ALLOWED TO MAKE A MAIN LINE TAP INTO AN EXISTING WATER MAIN. HOWEVER, IT IS THE RESPONSIBILITY OF THE CUSTOMER TO CORRECTLY SIZE BOTH THE SERVICE TAP AND SERVICE LINE. ALSO, IT IS UP TO THE UTILITY CONTRACTOR REQUESTING THE TAP TO PROVIDE THE APPROPRIATE TAPPING SLEEVE, IMPLEMENT APPROPRIATE MAINTENANCE OF TRAFFIC PLAN (IF REQUIRED), DO ALL EXCAVATING IN ACCORDANCE WITH THE FLORIDA TRENCH SAFETY ACT, TO INSTALL THE PIPING, VALVE AND METER BOXES OR METER VAULTS, AND TO COMPLETE ALL BACKFILLING AND GRADE.

O.C.W.S WATER & SEWER NOTES:

- 1. A MANDATORY PRECONSTRUCTION MEETING SHALL BE HELD, AT THE OCWS ENGINEERING DEPT. WITH ALL INVOLVED PARTIES, INCLUDING THE DEVELOPER, ENGINEER-OF-RECORD, AND CONTRACTOR, A MINIMUM OF TWO (2) WEEKS PRIOR TO CONSTRUCTION, IN ORDER TO ADDRESS CONSTRUCTION AND INSPECTION REQUIREMENTS. FAILURE TO HOLD A PRECONSTRUCTION MEETING COULD RESULT IN EXPENSIVE REWORK OF ITEMS NOT ACCEPTABLE BY OCWS STANDARDS.
2. COORDINATE WITH LOCAL FIRE DEPARTMENT ON INSPECTION REQUIREMENTS AND TESTING.
3. COORDINATE ALL UTILITY TIE-INS WITH OCWS MAINTENANCE (850) 609-7034 A MINIMUM OF FIFTEEN (15) WORKING DAYS PRIOR TO CONSTRUCTION. OCWS WILL PERFORM AND/OR OVERSEE ALL CONNECTIONS TO EXISTING WATER OR SEWER MAINS.
4. ALL UTILITY CONSTRUCTION SHALL BE INSPECTED BY THE OCWS ENGINEERING DEPARTMENT (850) 609-5056, INCLUDING, BUT NOT LIMITED TO PRESSURE TESTING, FINISHED GRADE DEPTH, AND SERVICE LOCATIONS. AS A MINIMUM, A MANDATORY FORTY-EIGHT (48) HOUR NOTICE IS REQUIRED FOR ALL INSPECTIONS.
5. PRIOR TO OCWS SIGNING FDEP CLEARANCE APPLICATIONS (INVOLVING NEW MAINS), THE FOLLOWING ITEMS ARE REQUIRED:
a. TIEP CLEARANCE
b. PASSING PRESSURE TESTS
c. PASSING BACTERIOLOGICAL TESTS
d. SATISFACTORY INSPECTION
e. COMPLETE, ACCURATE AS-BUILTS RECEIVED
6. PRIOR TO OCWS ACCEPTANCE OF INFRASTRUCTURE AND THE SETTING OF WATER METERS, THE FOLLOWING ITEMS ARE REQUIRED:
a. TIEP CLEARANCE
b. PASSING FINAL INSPECTION, AT ESTABLISHED FINISHED GRADE
c. ASSOCIATED RIGHT-OF-WAY AND/OR EASEMENTS EXECUTED AND RECORDED
d. WATER & SEWER CONSTRUCTION COST
e. 12-MONTH WARRANTY AGREEMENT, TO COVER ANY DAMAGES TO OCWS MAINTAINED UTILITIES, WHICH MAY BE CAUSED BY THE INSTALLATION OF OTHER UTILITIES OR INFRASTRUCTURE. THE WARRANTY REQUIRES THE DEVELOPER AND CONTRACTOR TO MAKE ALL REPAIRS OR PAY ASSOCIATED COST REQUIRED TO CORRECT DAMAGE(S).
7. CAPACITY EXPANSION CHARGES SHALL BE PAID IN FULL PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

- 8. A MINIMUM 15'-0" CLEARANCE SHALL BE MAINTAINED BETWEEN UTILITY MAINS AND PROPOSED BUILDINGS. THE CONTRACTOR SHALL PROVIDE PROPER SEPARATION FROM PROPOSED DRAINAGE SYSTEMS AND UTILITY PIPES, INCLUDING SERVICES.
9. NO UTILITY CONNECTIONS WILL BE MADE INTO COUNTY/FOOT RIGHT-OF-WAY AND/OR EASEMENTS WITHOUT AN APPROVED UTILITY PERMIT. ALL CROSSINGS UNDER EXISTING ROADS WILL BE BORED, UNLESS PERMITTED OTHERWISE. THE CONTRACTOR MUST REPAIR ANY PAVEMENT CUTS WITHIN THE SPECIFIED PERMIT AND COORDINATE ALL CUTS WITH GOVERNING AUTHORITY A MINIMUM 15 DAYS PRIOR TO WORK BEING DONE.
10. THE CONTRACTOR WILL BE RESPONSIBLE FOR EXTENDING THE PROPOSED WATER AND SEWER MAINS FROM THE UTILITY MAIN CONNECTIONS PROVIDED BY OCWS INTO THE DEVELOPMENT.
11. ALL WATER UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH OCWS REQUIREMENTS AND SPECIFICATIONS. ALL WATER MAIN PIPING SHALL BE C-900 DR 18 OR LESS, WITH 2 EXCEPTIONS, DUCTILE IRON PIPE IS REQUIRED FROM TEES TO HYDRANTS, OR AS OTHERWISE SPECIFIED BY OCWS. HYDRANTS SHALL BE MUELLER SUPER CENTURION 4453 OR AMERICAN DARLING BISH.
12. A MINIMUM 36" (AND A MAXIMUM 42" FOR WATER) COVER IS REQUIRED FROM TOP OF ALL PROPOSED UTILITY LINES AND SERVICES FROM FINISHED GRADES, INCLUDING STABLES AND BASKS.
13. ALL LOT CORNERS, RIGHTS-OF-WAY, AND REAR EASEMENT LINES SHALL BE LOCATED AND PROPERLY MARKED, PRIOR TO THE CONTRACTOR INSTALLING MAINS AND SERVICES, THEN AGAIN PRIOR TO FINAL INSPECTION. OCWS ENGINEERING WILL REQUIRE EXACT VERIFICATION OF EACH SERVICE PLACEMENT, BEFORE FINAL ACCEPTANCE IS MADE.
14. A MINIMUM HORIZONTAL CLEARANCE OF 36" IS REQUIRED FROM POWER TRANSFORMER/BOX PERIMETER TO ANY UTILITY MAINS AND SERVICES.
15. CLEANOUTS ARE REQUIRED ON ALL SEWER SERVICES AND SHOULD BE LOCATED AT THE BACK OF THE RIGHT-OF-WAY OR EASEMENT LINE. THE TOP OF THE CLEANOUT SHALL BE 1'-15" BELOW GRADE AND INSIDE A PLASTIC METER BOX WITH A GREEN LID. IF THE CLEANOUT IS LOCATED IN PAVEMENT, IT SHALL BE TRAFFIC-RATED/BRASS, AND NO METER BOX IS REQUIRED.

THIS DRAWING IS THE PROPERTY OF JENKINS ENGINEERING, INC. AND IS NOT TO BE REPRODUCED WITHOUT EXPRESSED WRITTEN CONSENT



HORIZONTAL SCALE: 1" = 30'

LEGEND:

- WATER LINE (W.M.)
SEWER LINE
GATE VALVE
FIRE HYDRANT
SANITARY SEWER MANHOLE
SINGLE WATER SERVICE
SINGLE SEWER SERVICE

PROPOSED 1 STORY CONVENIENCE STORE 5,974 SF F.F.E.=153.25'

UTILITY LOCATION NOTES:

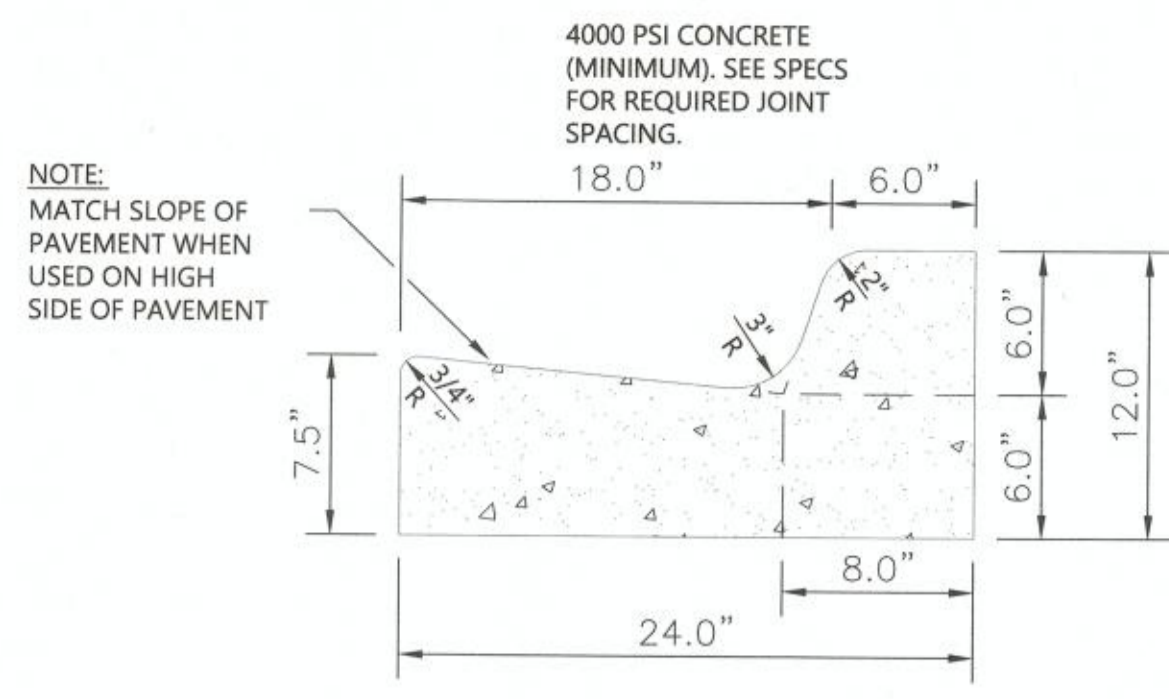
- 1. THE LOCATION OF EXISTING UTILITIES IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION. IF THE LOCATION OR ELEVATION IS SUBSTANTIALLY DIFFERENT FROM THAT SHOWN ON THE PLANS, OR IF CONFLICTS EXIST, THE ENGINEER SHALL BE NOTIFIED.
2. IN ADDITION TO THE RELOCATION OF THE EXISTING UTILITIES SHOWN ON THESE PLANS, FURTHER RELOCATION OF EXISTING UTILITIES MAYBE REQUIRED. CONTRACTOR/DEVELOPER TO COORDINATE WITH UTILITY COMPANIES AS NEEDED.

O.C.W.S. PRINT REVIEW table with columns for CHECKED THAT APPLY BELOW, APPROVED, NOT APPROVED, APPROVED EXCEPT AS NOTED, RESUBMISSIONS REQUIRED, RESUBMISSIONS NOT REQUIRED, and DATE 6/6/24.

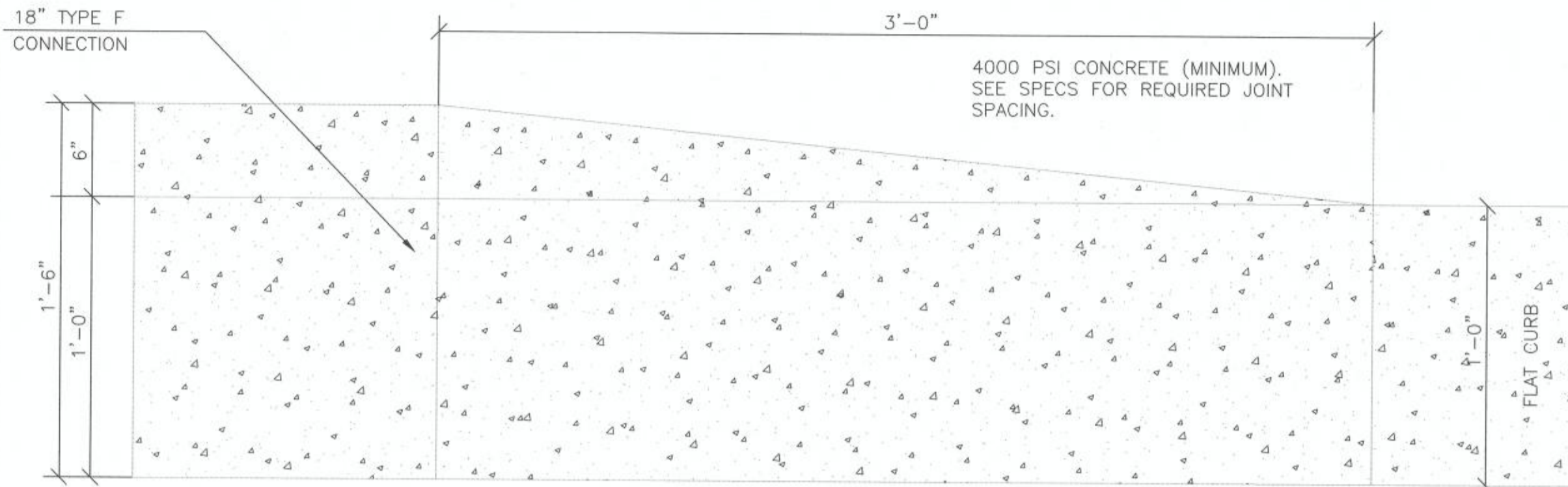
NOTE: IF ARCHITECTURAL PLANS HAVE ANY DISCREPANCIES FROM THESE CIVIL PLANS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THESE CIVIL PLANS ARE REVISED BY THE ENGINEER TO CORRESPOND TO THE LATEST ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION COMMENCING.

- 16. COORDINATE RELOCATION OF UTILITIES AND WORK WITHIN RIGHT OF WAY WITH EFFECTED UTILITY COMPANIES AND O.C.W.S. WATER AND SEWER DEPARTMENTS.
17. CONTRACTOR TO CONFIRM FINAL SIZE OF WATER SERVICE, SEWER SERVICE, GREASE TRAP AND SEPTIC TANK WITH ARCHITECT AND SEPTIC TANK DESIGNER.
18. BUILDING CONTRACTOR RESPONSIBLE FOR CONTINUATION OF SERVICE FROM POINT SHOWN TO WITHIN THE BUILDING.
19. CONTRACTOR TO BE ADVISED THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION OF THE PROJECT AND CONTRACTOR TO PROVIDE APPROPRIATE MEANS AND METHODS FOR DEWATERING IF NEEDED. IF DEWATERING WERE TO BE REQUIRED, COMPLETE DETAILS OF TEMPORARY DYES, DISCHARGE LOCATIONS, TIME PERIODS, AND METHODS FOR PREVENTING TURBID DISCHARGES WILL BE PROVIDED BY THE CONTRACTOR TO THE REQUIRED AGENCIES AS NEEDED. DEWATERING ACTIVITIES WILL NEED TO BE CONDUCTED UNDER DEP DOCUMENT 62-621.300(2)(A), "GENERIC PERMIT FOR DISCHARGE OF GROUND WATER FROM DEWATERING OPERATIONS". IN ADDITION, SECTION VI OF THE NOTES, NO MUST BE COMPLETED OR A SEPARATE APPLICATION, DEP FORM 62-621.300(2)(B), MUST BE SUBMITTED WITH THE PROPER FEE AND PROCESSED BY FDEP PRIOR TO ANY DEWATERING ACTIVITIES OCCURRING.
20. PER OKALOOSA COUNTY GROWTH MANAGEMENT POLICY NUMBER 20-01, EFFECTIVE 03/30/20, CONTRACTOR/OWNER TO PROVIDE SIGNED AND SEALED UTILITY AS-BUILT FOR REVIEW BY ENGINEER AND FOR SUBMITTAL TO COUNTY.
21. TOP OF SANITARY SEWER TO BE 3" ABOVE THE EXISTING GROUND WITHIN GRASSED AREAS.
22. THE PROPOSED IMPROVEMENTS ARE TO BE INSTALLED PRIOR TO THE ABANDONMENT OR REMOVAL OF THE EXISTING INFRASTRUCTURE. UTILITIES TO REMAIN OPERATIONAL AND ANY TEMPORARY INTERRUPTION IN SERVICE FOR THE CONNECTION TO BE MADE SHALL BE APPROVED BY AND COORDINATED WITH UTILITY COMPANIES.
23. COORDINATE AND RECEIVE PLAN APPROVAL FROM FLORIDA DEPARTMENT OF TRANSPORTATION (F.D.O.T.) AND/OR OKALOOSA COUNTY PUBLIC WORKS PRIOR TO ANY ROAD CLOSURE OR PROPOSED MAINTENANCE OF TRAFFIC.
24. SEPTIC SYSTEM MUST MAINTAIN A 50' SETBACK TO ANY NON-POTABLE WELL AND A 15' SETBACK TO ANY RETENTION AREA, WHICH MUST DRAW DOWN WITHIN THE REQUIREMENTS TO MEET 646-6 FAC. SEPTIC TANK AND DRAINFIELD TO BE DESIGNED AND PERMITTED BY CROFT ENVIRONMENTAL SERVICES.
25. MAINTENANCE OF ALL WATER, SEWER AND STORMWATER FACILITIES WITHIN THE PROPERTY LINES WILL BE THE RESPONSIBILITY OF THE LAND OWNER OR CUSTOMER. O.C.W.S. WILL MAINTAIN THE WATER METERS WITHIN THE METER BOXES.
26. SEPTIC TANK AND DRAIN FIELD TO BE LOCATED WITHIN PROPOSED RIGHT OF WAY DEDICATION AREA PER SECTION 3.3.5. OF IMPROVEMENTS AGREEMENT WITH OKALOOSA COUNTY.

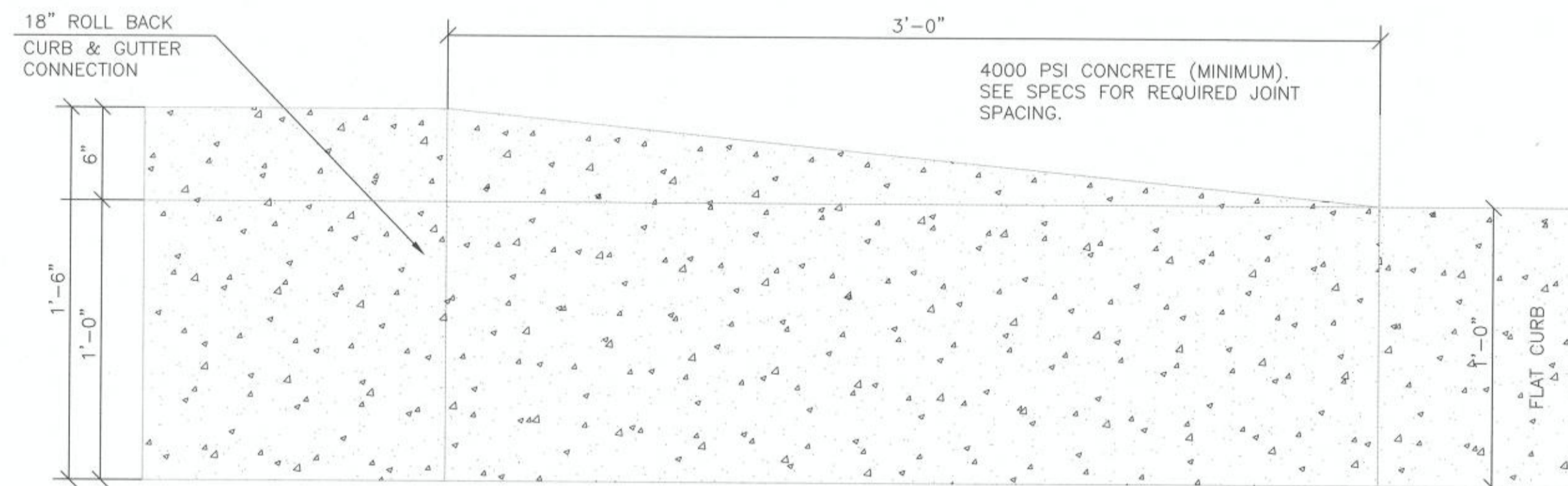
JENKINS ENGINEERING, INC. 73 EGLIN PARKWAY NE, SUITE 203 FORT WALTON BEACH, FLORIDA 32548 PHONE 850.837.2448 FAX 850.837.2450 JECIVIL.COM
MATTHEW H. ZINKE, P.E. LICENSE No. 57642 STATE OF FLORIDA PROFESSIONAL ENGINEER JUN 03 2024 MATTHEW H. ZINKE, P.E. FL REGISTRATION NO. 57642
THE FIKES COMPANIES JOB: 23-72 DATE: 12-12-23 DESIGNED: MZ/MS DRAWN: MS
DRAWING NUMBER 06 OF 12 SHEET NUMBER C06



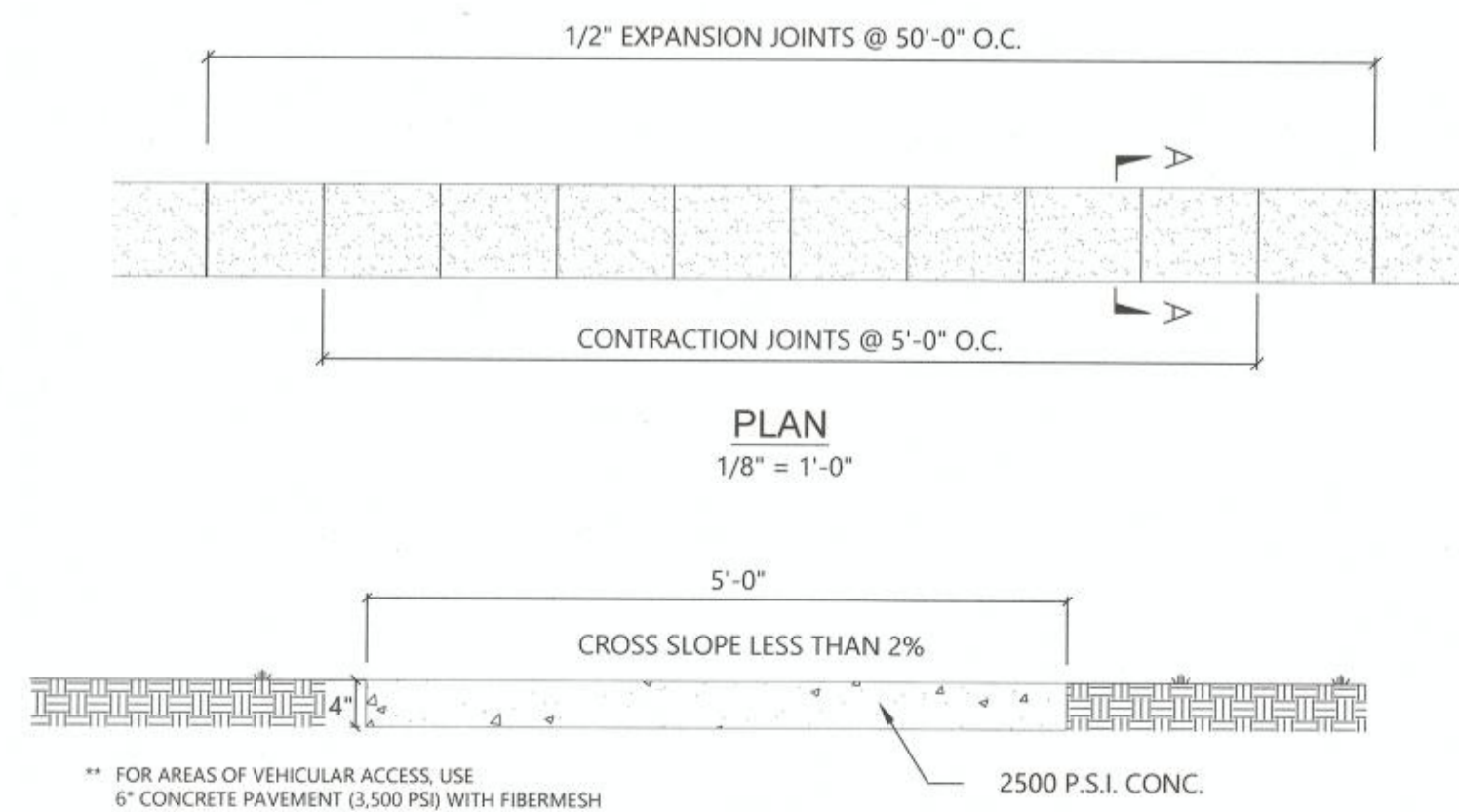
1
C07 TYPE "F" CURB & GUTTER (COUNTY)
SCALE: 1-1/2" = 1'-0"



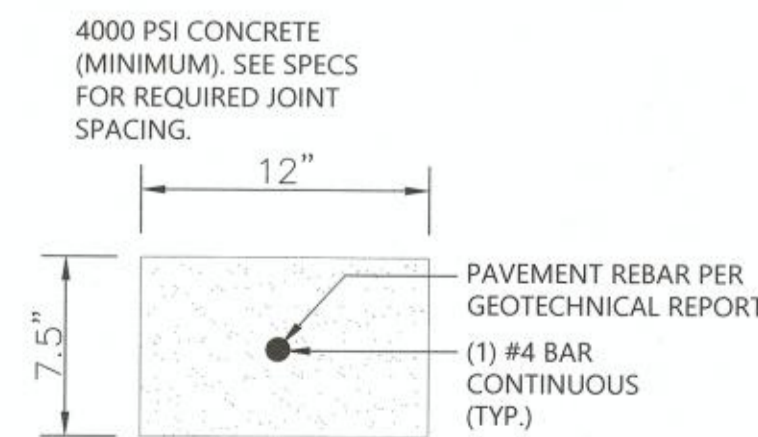
4
C07 3' TRANSITION FROM 18" TYPE F TO FLAT CURB
SCALE: 1-1/2" = 1'-0"



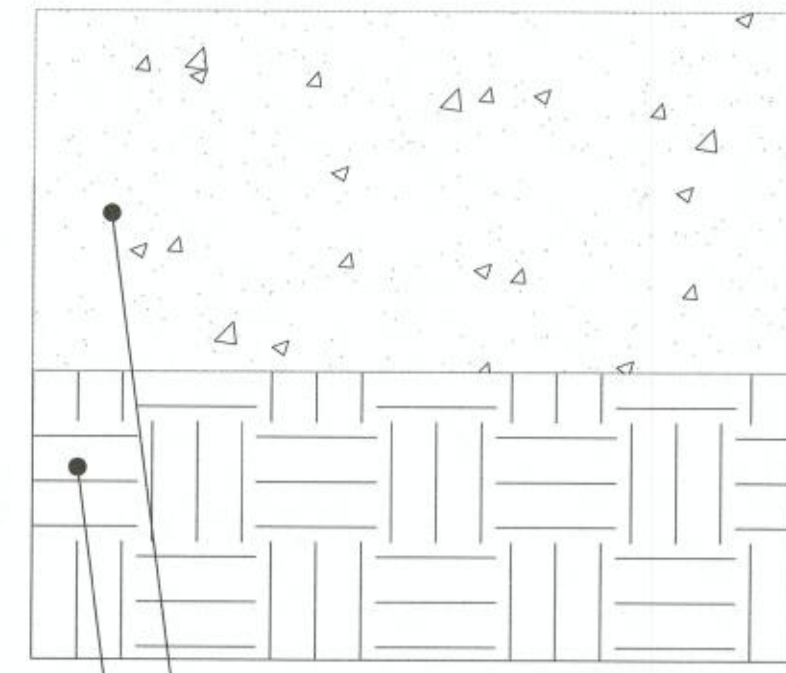
5
C07 3' TRANSITION FROM 18" ROLL BACK CURB TO FLAT CURB
SCALE: 1-1/2" = 1'-0"



6
C07 CONCRETE SIDEWALK DETAIL
SCALE: AS SHOWN



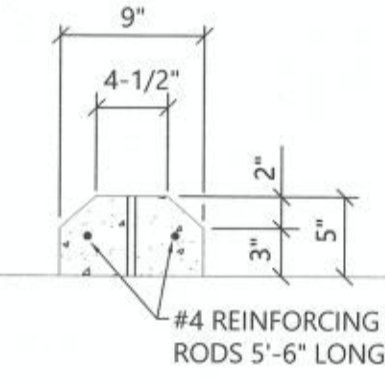
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C07 12" FLAT CURB
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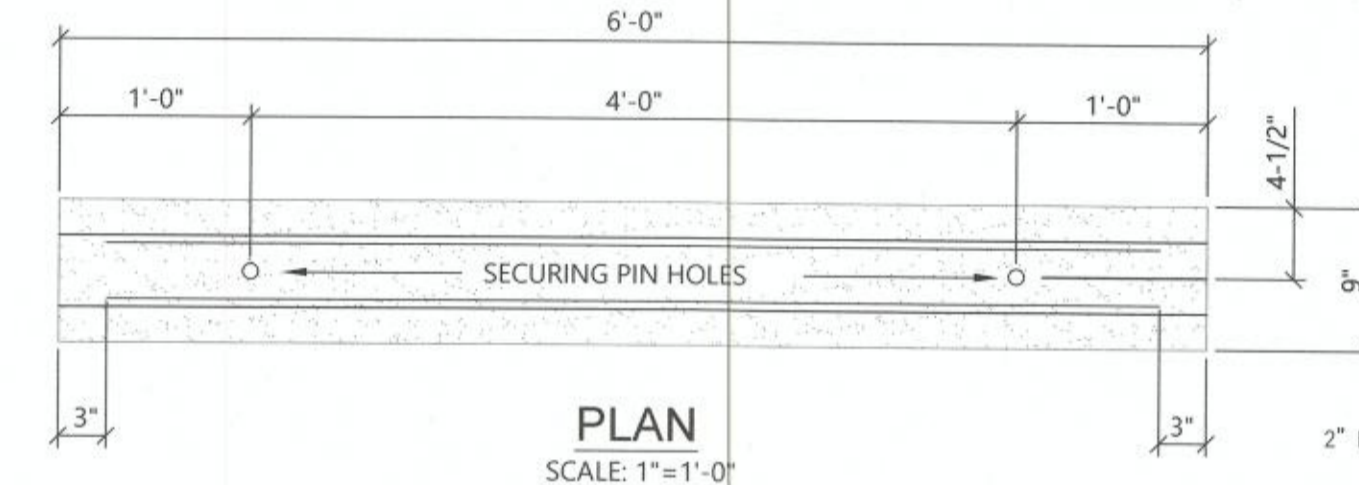
2
C07 CONCRETE PAVEMENT SECTION
N.T.S.

STANDARD DUTY - 6.0" CONCRETE (4,000 PSI) #3 REBAR @ 18" OCEW OR
HEAVY DUTY - 8.0" CONCRETE (4,000 PSI) #3 REBAR @ 18" OCEW (CANOPY AND DUMPSTER)
OR
HEAVY DUTY - 10.0" CONCRETE (4,000 PSI) #3 REBAR @ 18" OCEW (ENTRY APPROACHES AND FUEL TANKS)
18" OF FREE-DRAINING SUBGRADE PERMEABILITY OF LEAST 5FT PER DAY COMPACTED TO 98% MAX. DENSITY ASTM D 1557

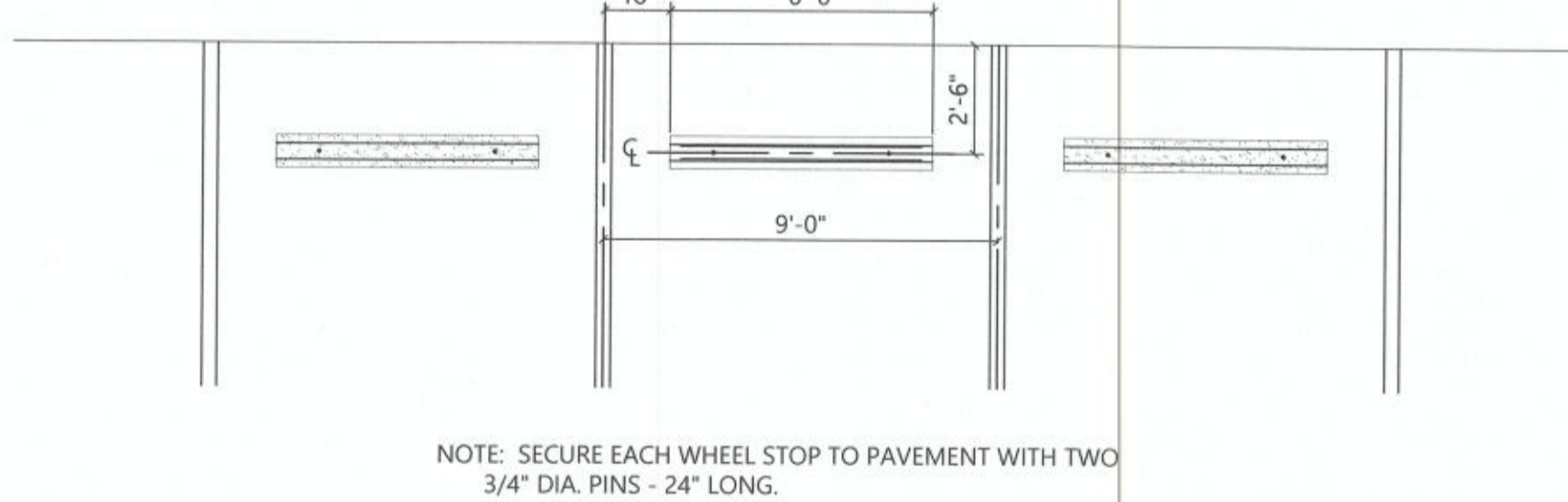
NOTES:
1. SEE NOVA ENGINEERING AND ENVIRONMENTAL GEOTECHNICAL REPORT DATED JULY 07, 2023
2. CONTROL JOINT AND LAYOUT PLAN TO BE PROVIDED BY IEG AND REVIEWED BY NOVA.
3. FOR REFERENCE SEE DETAIL 6/C09 TYPICAL EXPANSION JOINT SECTION AND DETAIL 5/C09 TYPICAL CONTROL JOINT SECTION.



7
C07 PRECAST CONCRETE WHEEL STOP DETAIL
SCALE: AS SHOWN

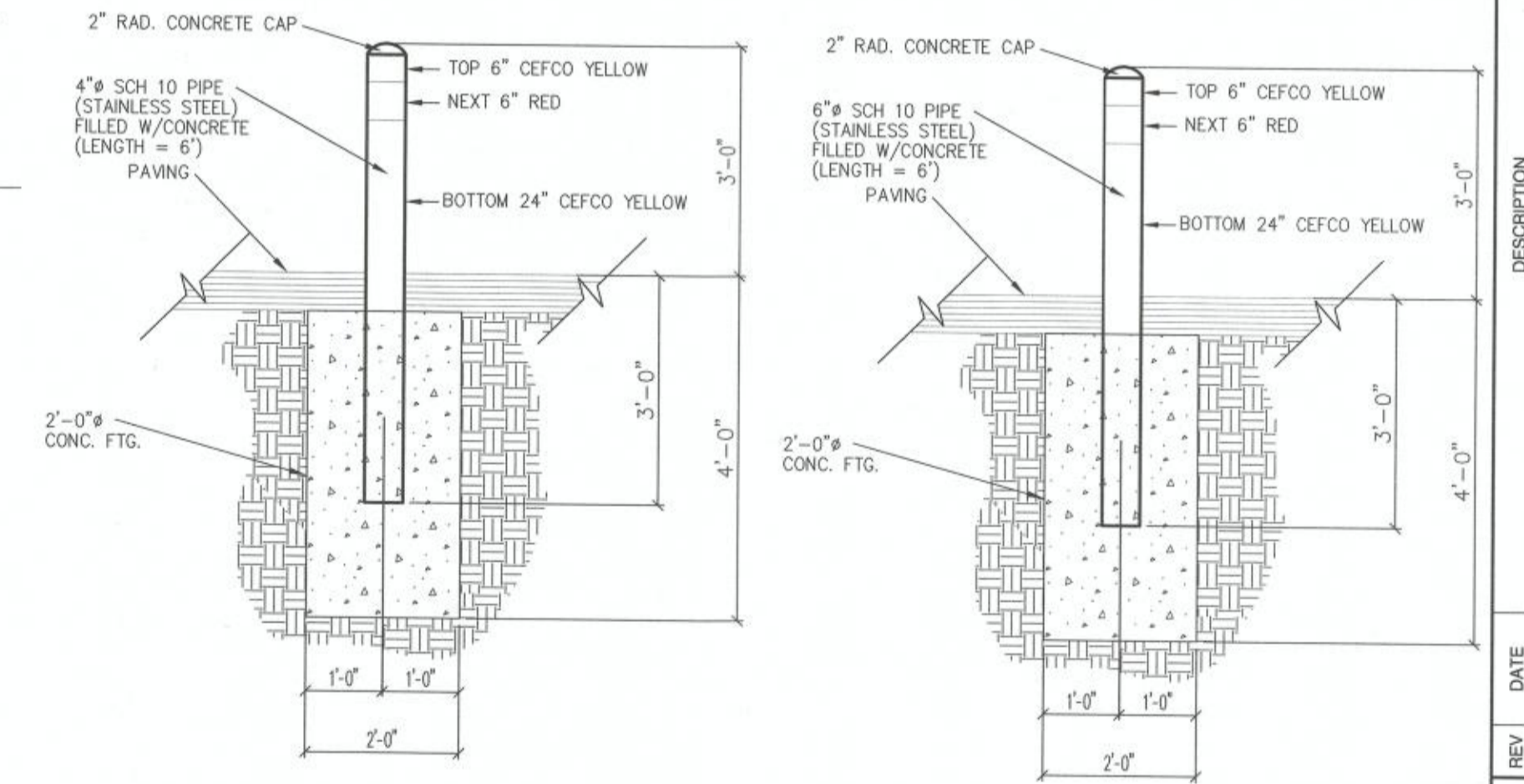


3
C07 HANDICAPPED PARKING DETAIL
SCALE: 1/4" = 1'-0"

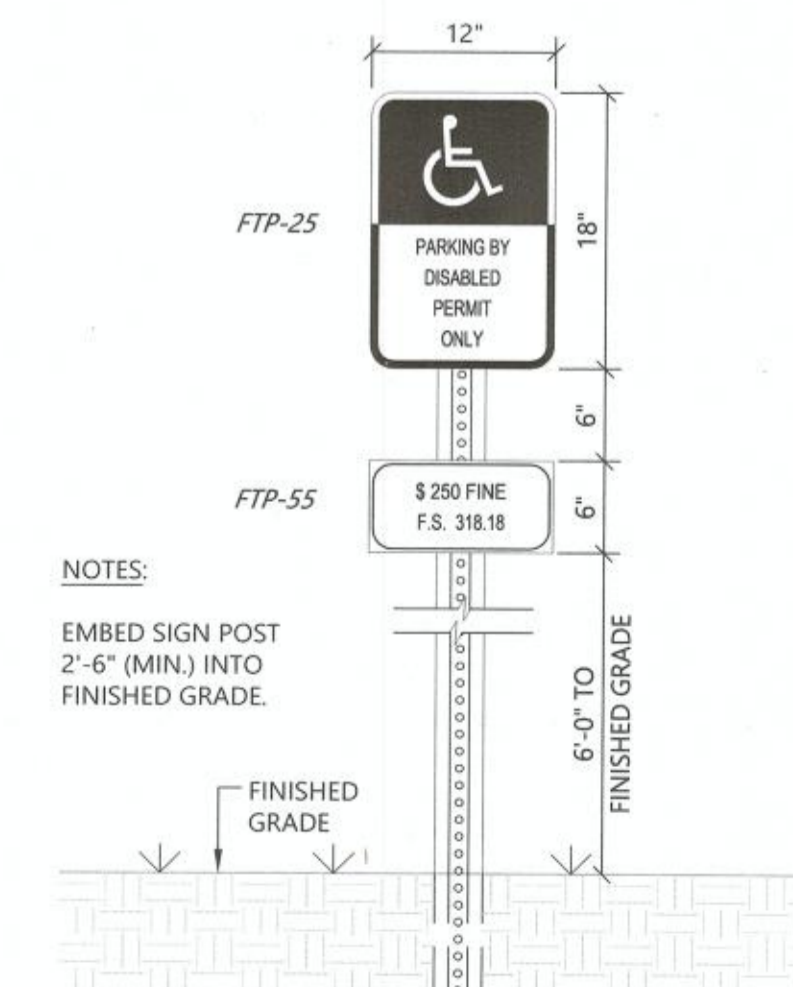


NOTE: SECURE EACH WHEEL STOP TO PAVEMENT WITH TWO 3/4" DIA. PINS - 24" LONG.

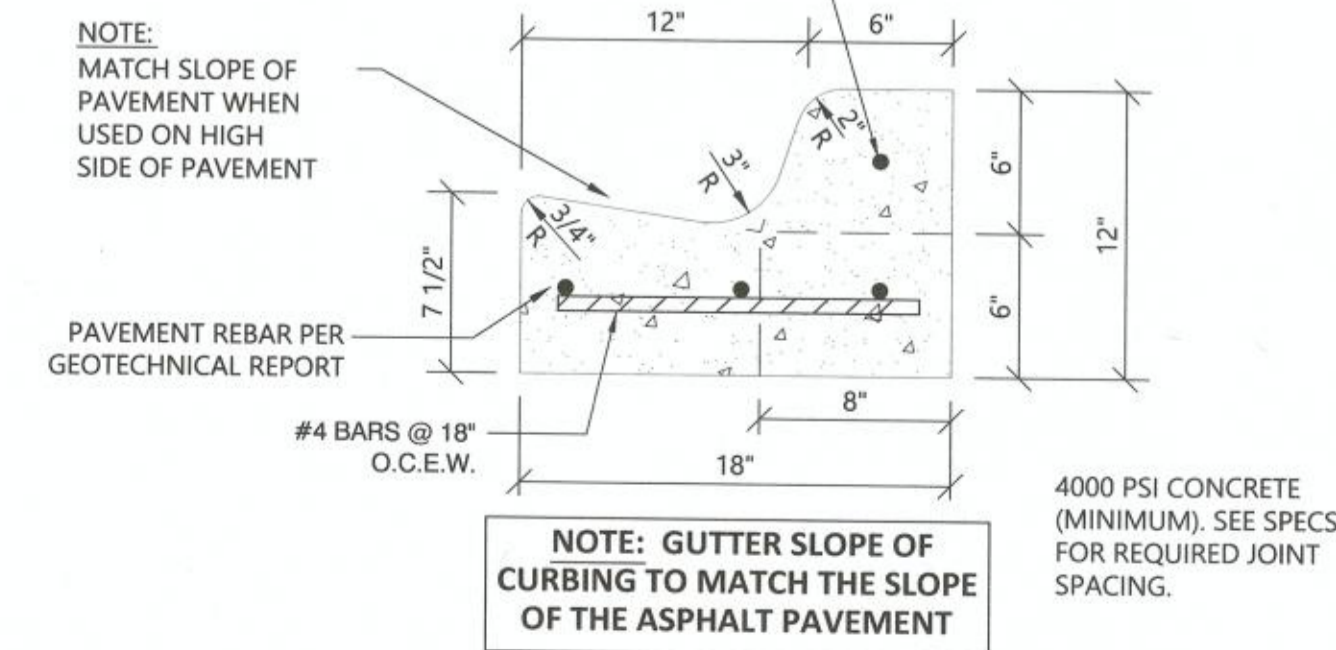
7
C07 PRECAST CONCRETE WHEEL STOP DETAIL
SCALE: AS SHOWN



8
C07 BOLLARD DETAILS
NOT TO SCALE



10
C07 HANDICAPPED PARKING SIGN DETAIL
SCALE: 1" = 1'-0"



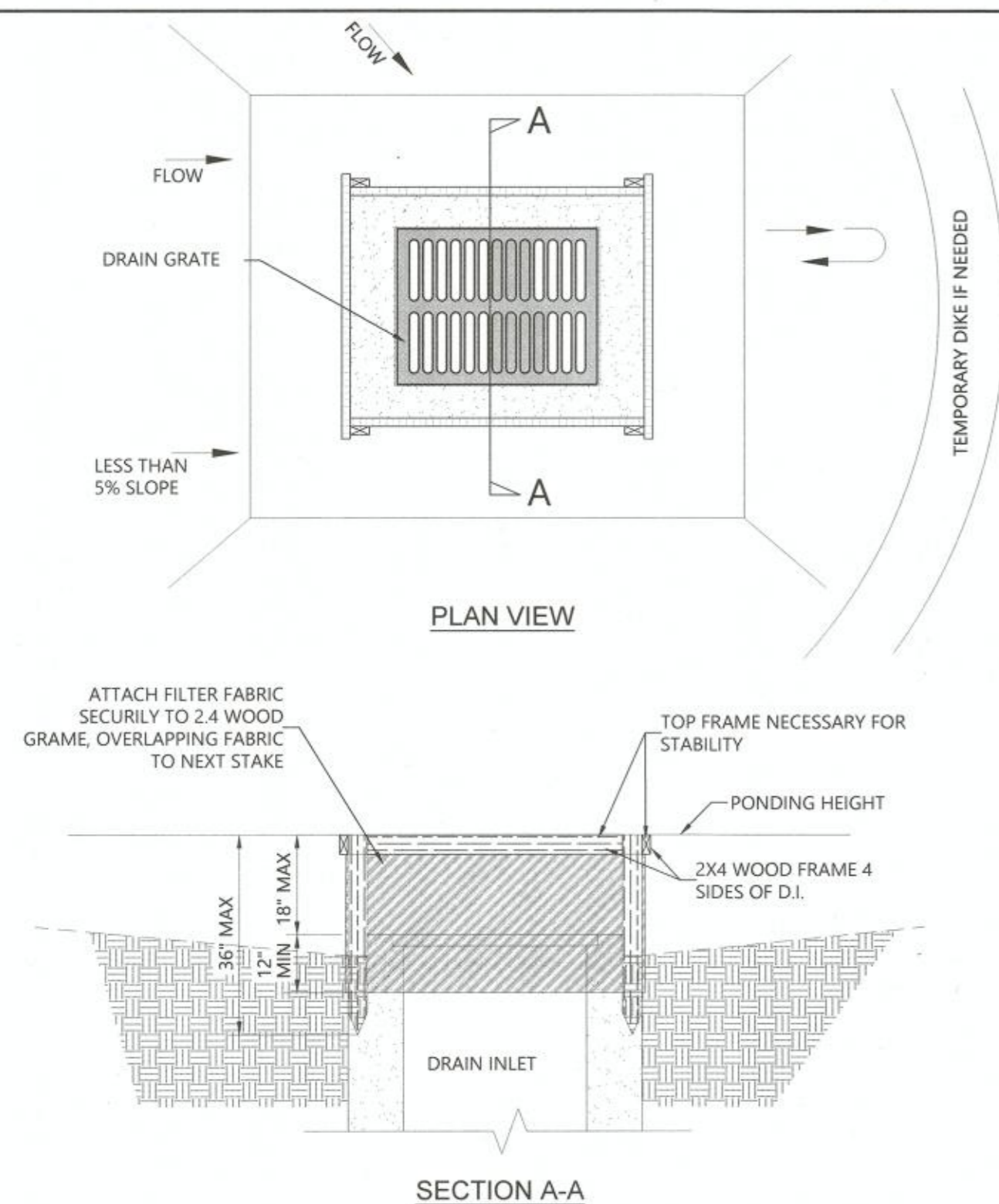
11
C07 18" CURB & GUTTER (CEFCO)
SCALE: 1-1/2" = 1'-0"

REV	DATE	DESCRIPTION
1	03-18-24	REVISED PER COUNTY AND NHP/PAID COMMENTS

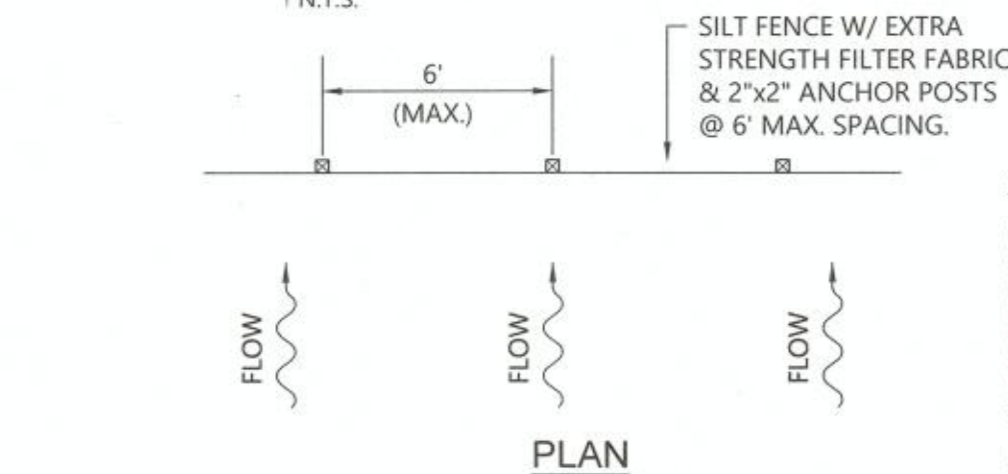
THE FIXES COMPANIES
CEFCO HWY 90 & OLD BETHEL
OKALOOSA COUNTY, FLORIDA
MISCELLANEOUS DETAILS I

JOB: 23-72
DATE: 12-12-23
DESIGNED: MZ/MS
DRAWN: MS
BAR IS ONE INCH ON ORIGINAL
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY
DRAWING NUMBER
07 OF 12
SHEET NUMBER
C07

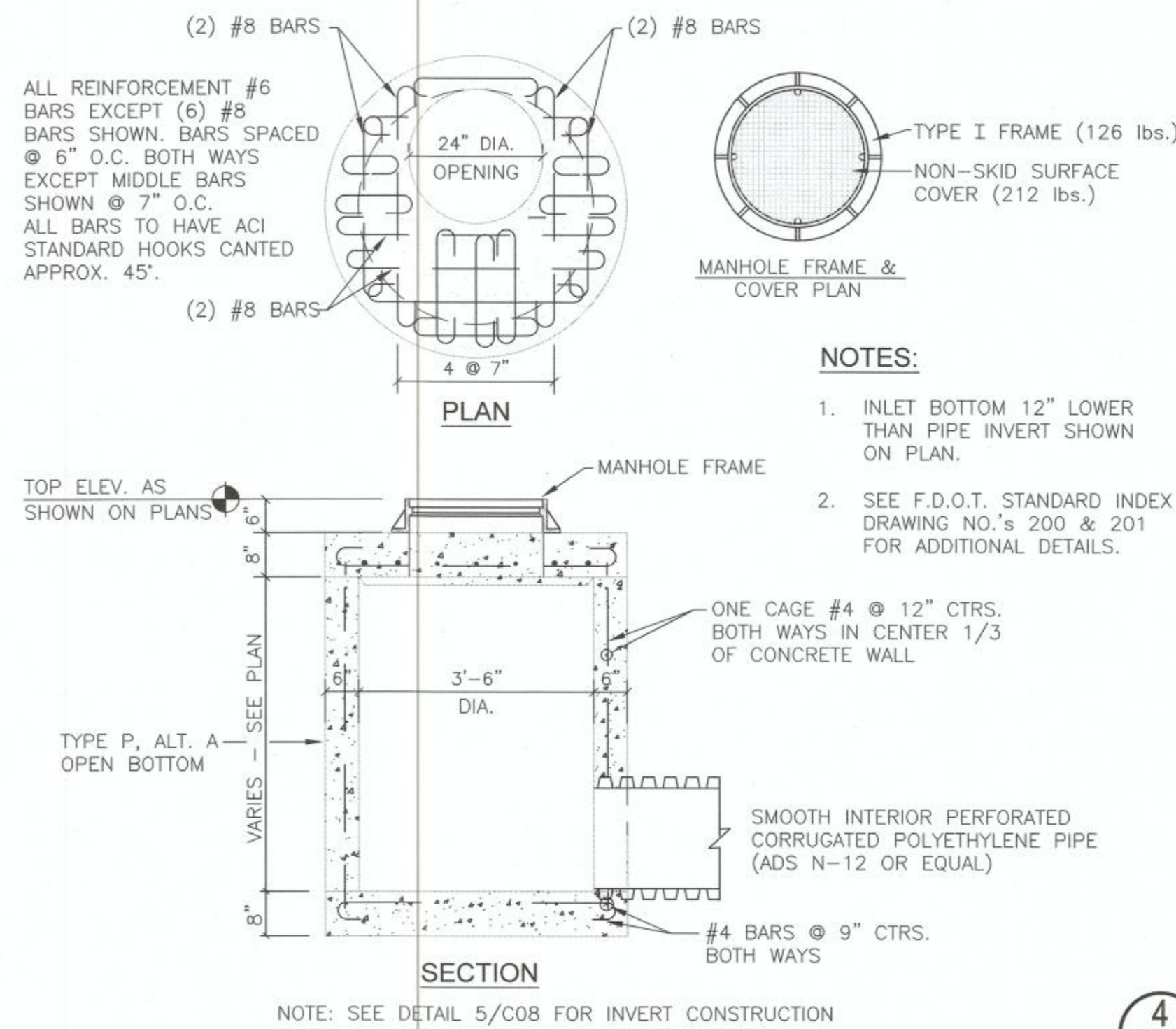
OKALOOSA COUNTY DEPT. OF PUBLIC WORKS
APPROVED BY: MICHAEL ANDERSON
DATE: 6/1/2024



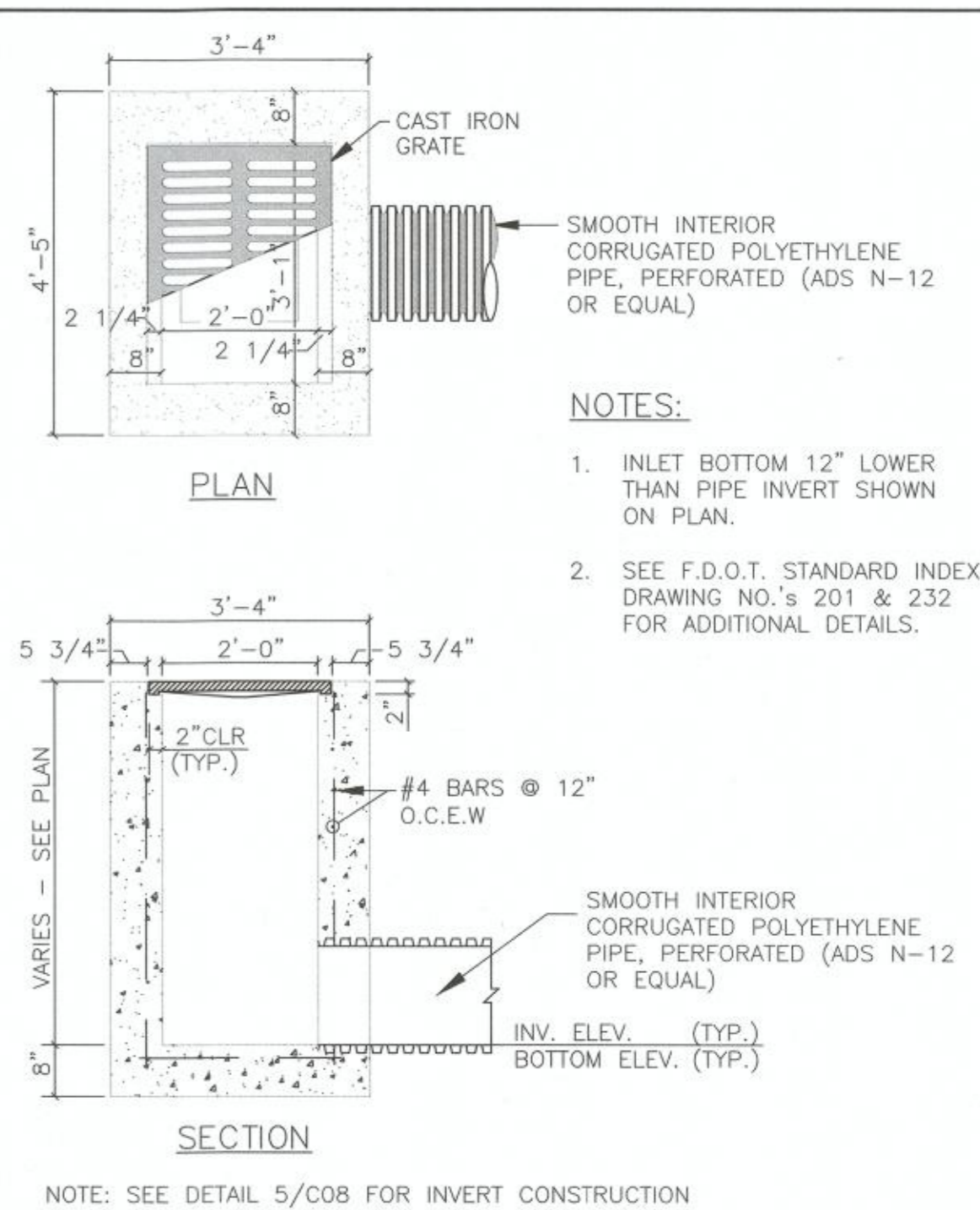
1 INLET PROTECTION DETAIL
SCALE: 1/2" = 1'-0"



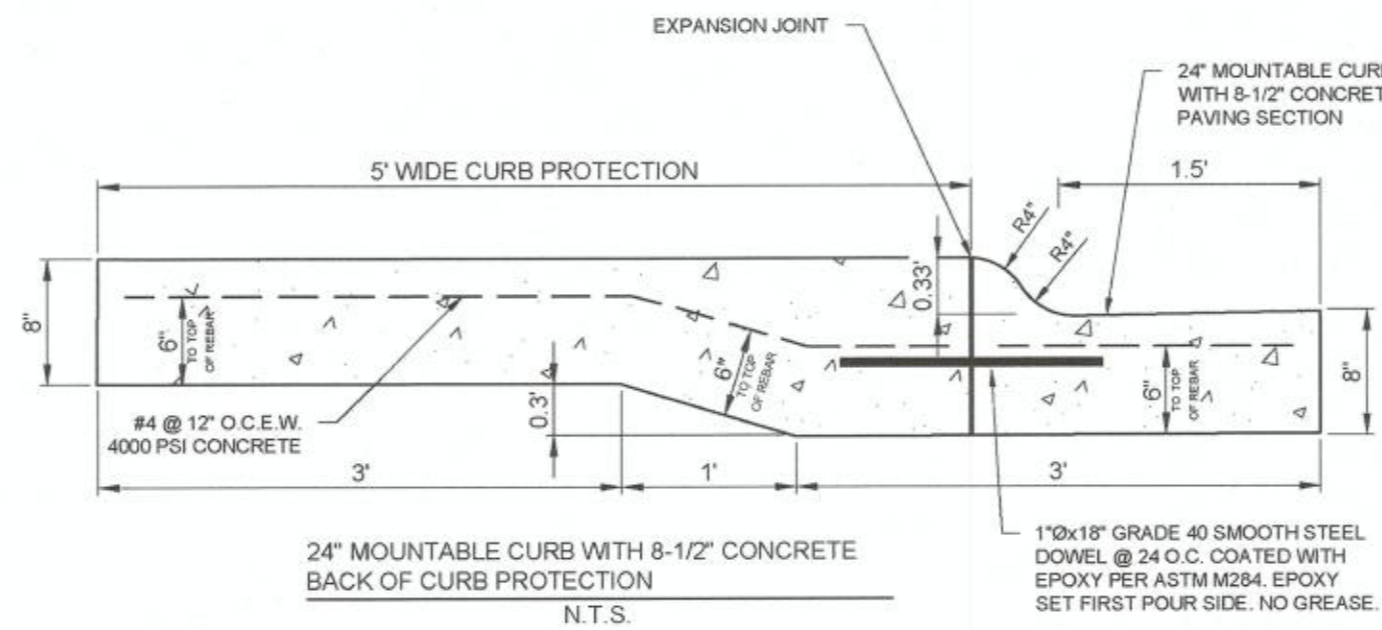
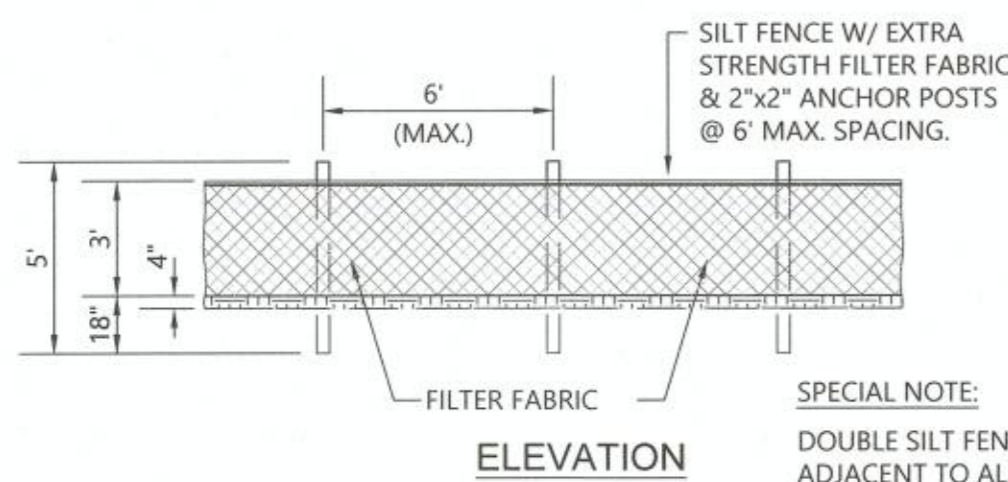
2 TYPE "9" CURB INLET
SCALE: 1/2" = 1'-0"



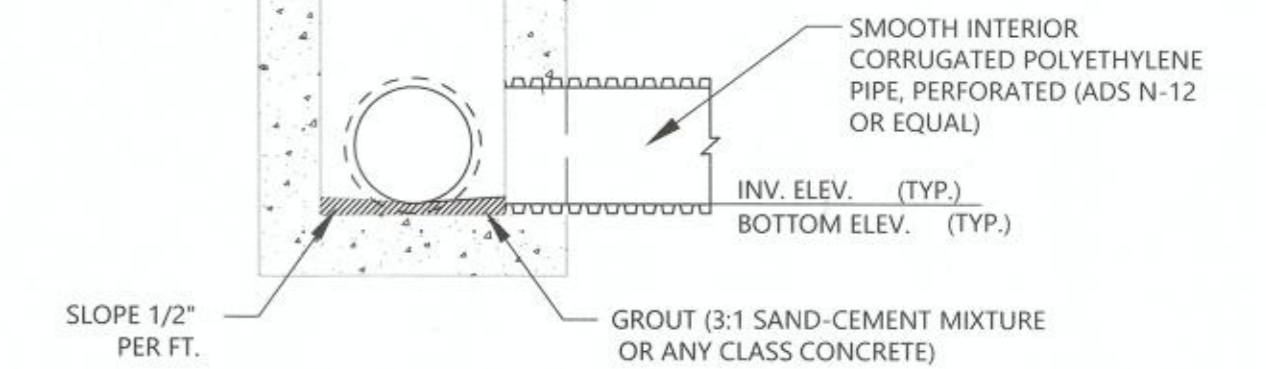
3 STORM MANHOLE
SCALE: 1/2" = 1'-0"



4 CLOSED BOTTOM TYPE "C" INLET
SCALE: 1/2" = 1'-0"



6 TYPICAL STORM SEWER CLEAN-OUT
SCALE: 1/2" = 1'-0"

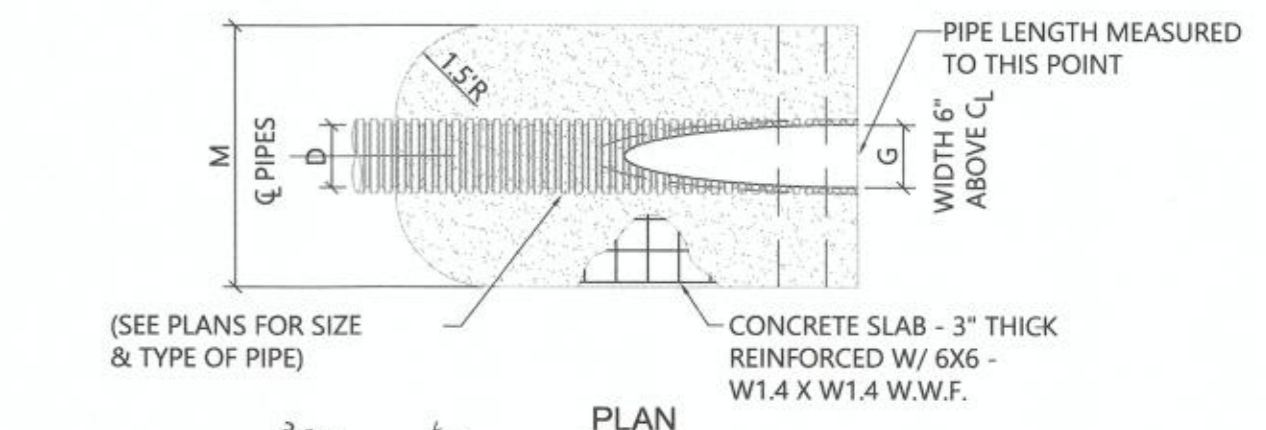


7 MOUNTABLE CURB PROTECTOR
SCALE: 1/2" = 1'-0"

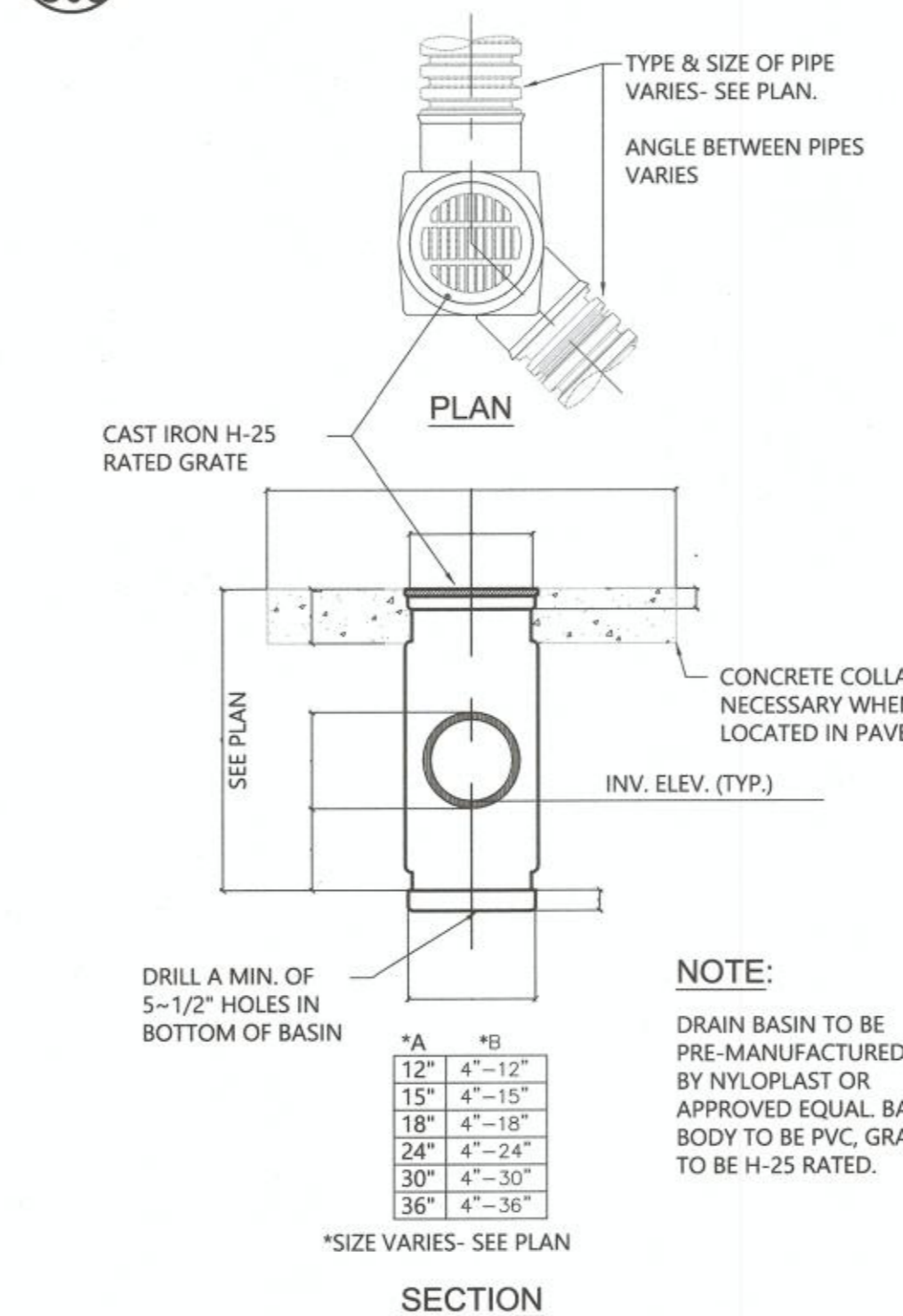
5 DRAINAGE STRUCTURE INVERT

DIMENSIONS

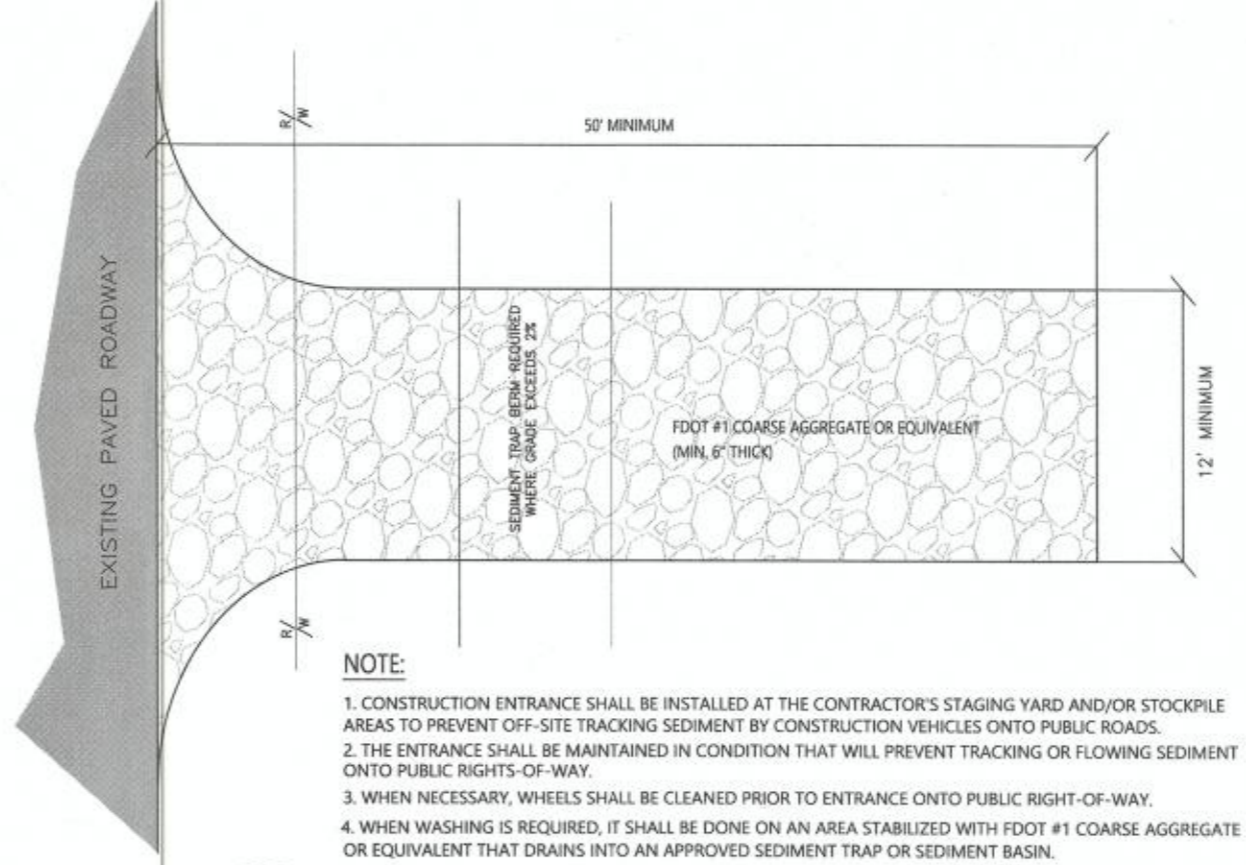
D	A	B	C	G	M	N	E
15"	2.27'	4.09'	6.36'	1.22'	4.63'	1.19'	4.03'
18"	2.36'	5.12'	7.48'	1.41'	4.92'	1.21'	5.03'
24"	2.53'	7.18'	9.71'	1.73'	5.50'	1.25'	7.03'



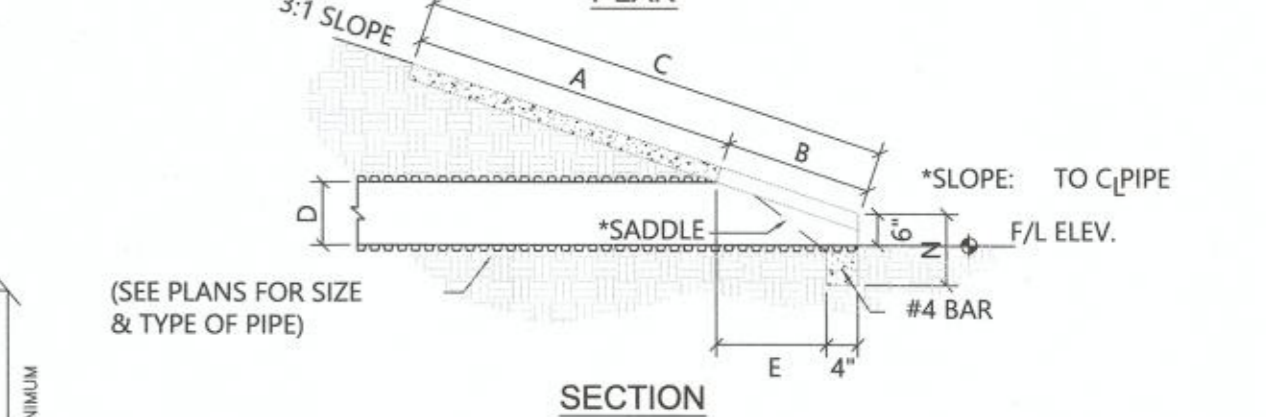
8 SILT FENCE DETAIL
SCALE: 1" = 5'-0"



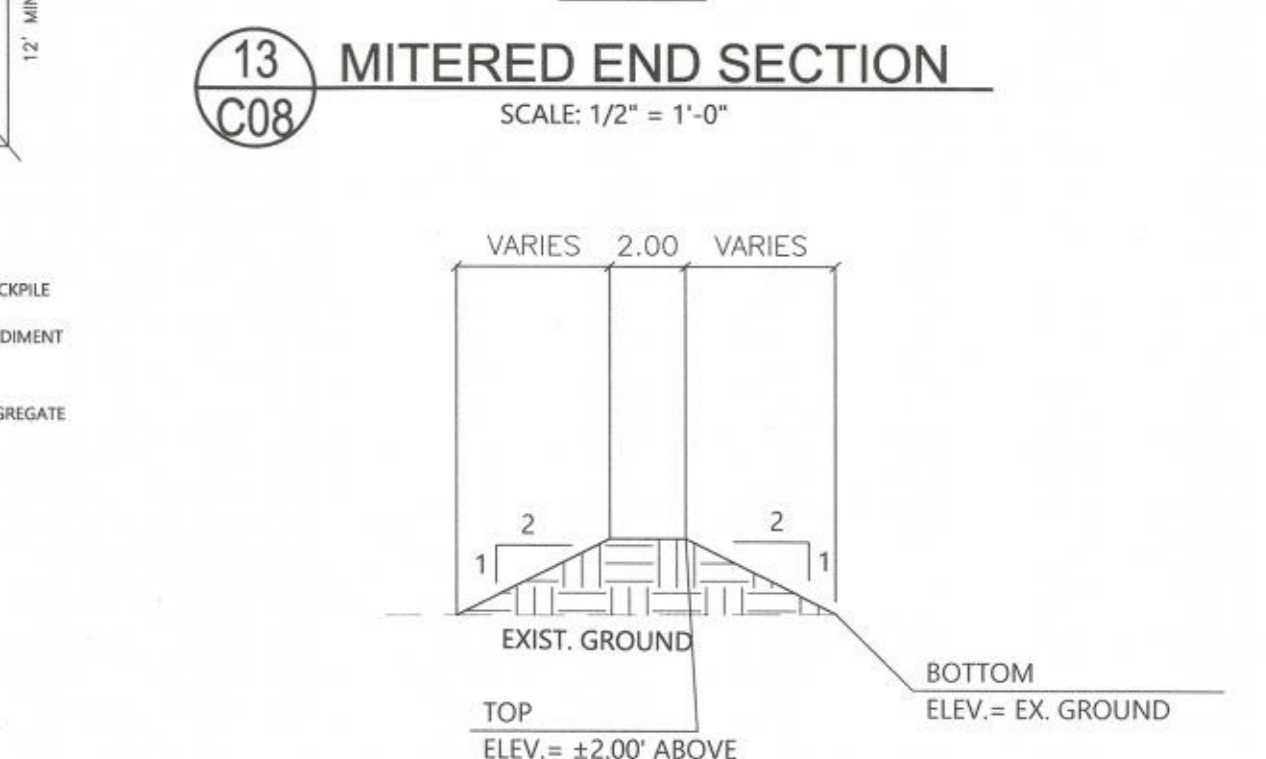
9 TYPICAL STORM CLEAN-OUT
SCALE: 1/2" = 1'-0"



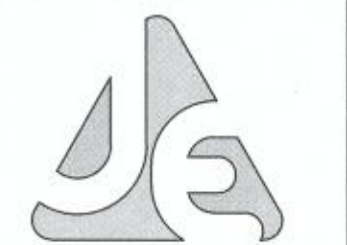
10 STABILIZED CONSTRUCTION ENTRANCE
SCALE: 1/2" = 1'-0"



11 MITERED END SECTION
SCALE: 1/2" = 1'-0"



12 SEDIMENT TRAP BERM SECTION
NOT TO SCALE



JENKINS ENGINEERING, INC.
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JECIVL.COM



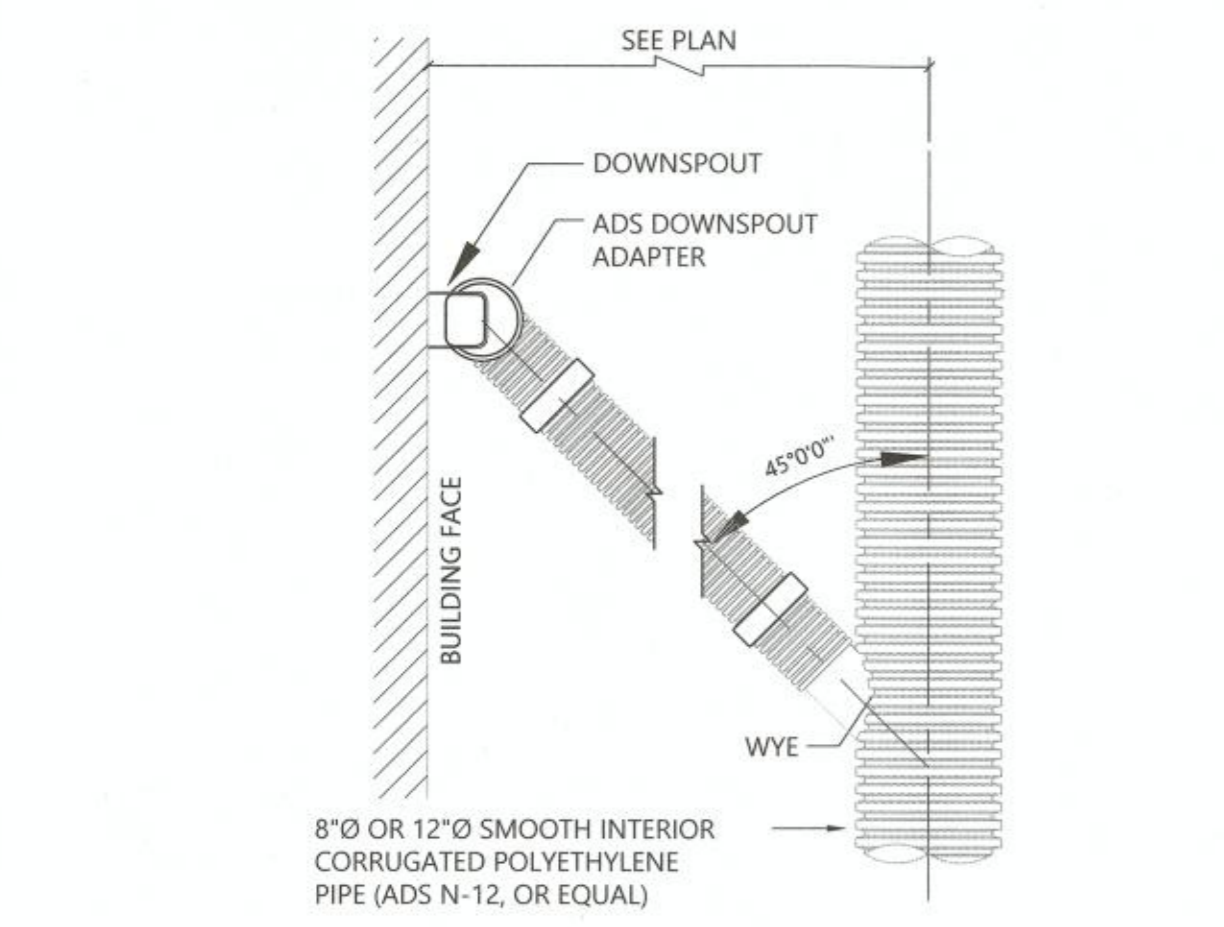
JUN 03 2024
MATTHEW H. ZINKE, P.E.
FL REGISTRATION NO. 57642

REVISIONS

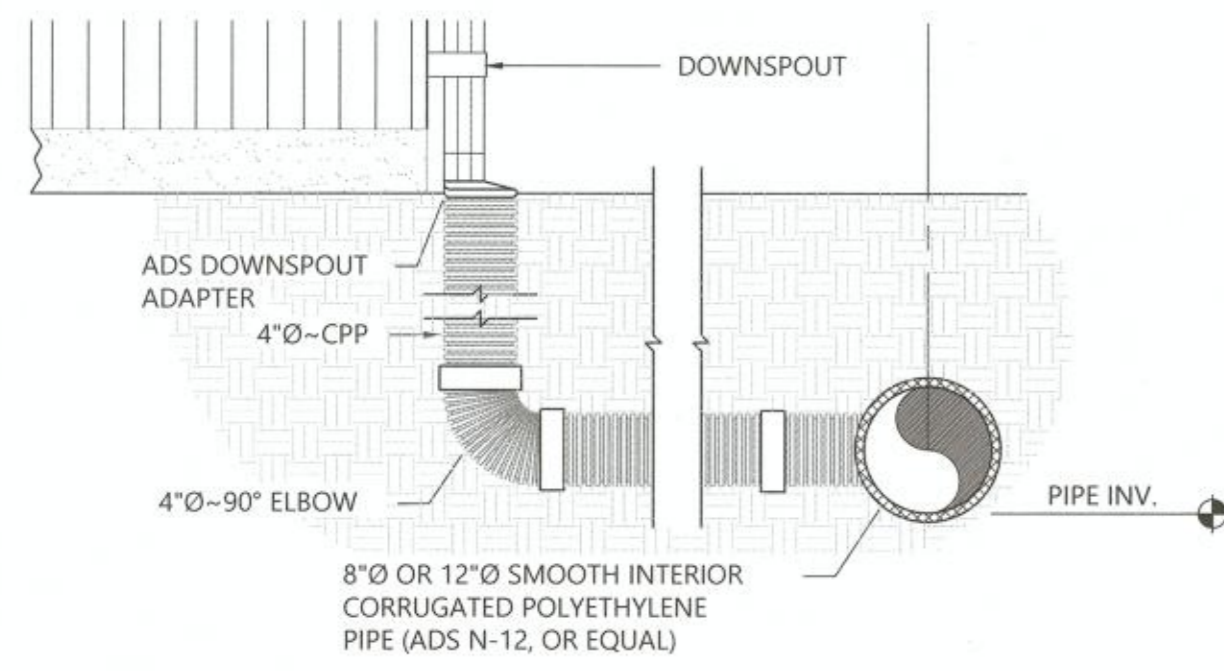
NO.	DATE	DESCRIPTION
1	03-18-24	REVISED PER COUNTY AND INFPWD COMMENTS

THE FIKES COMPANIES
CEFCO HWY 90 & OLD BETHEL
OKALOOSA COUNTY, FLORIDA
MISCELLANEOUS DETAILS II

JOB: 23-72
DATE: 12-12-23
DESIGNED: MZ/MS
DRAWN: MS
DRAWING NUMBER: 08 OF 12
SHEET NUMBER: C08

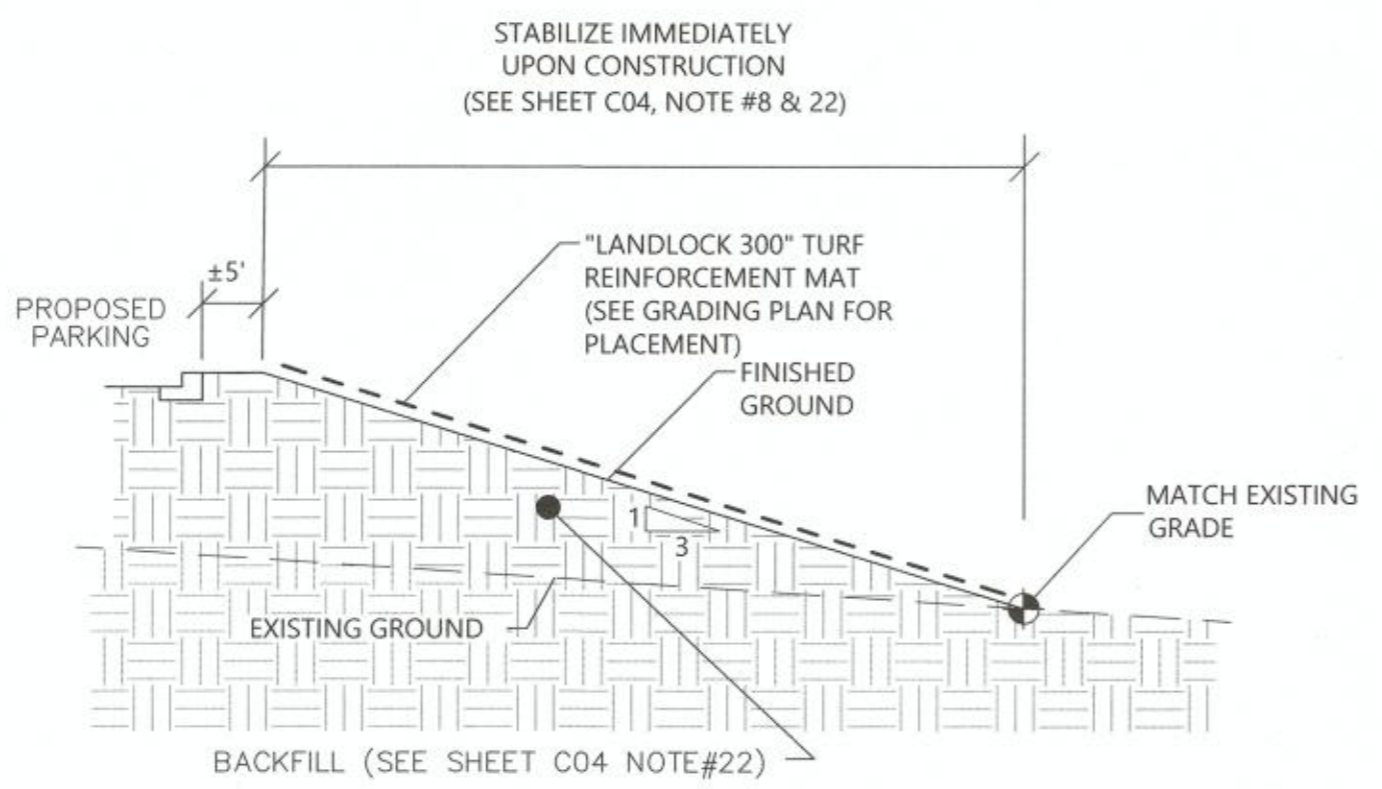


PLAN



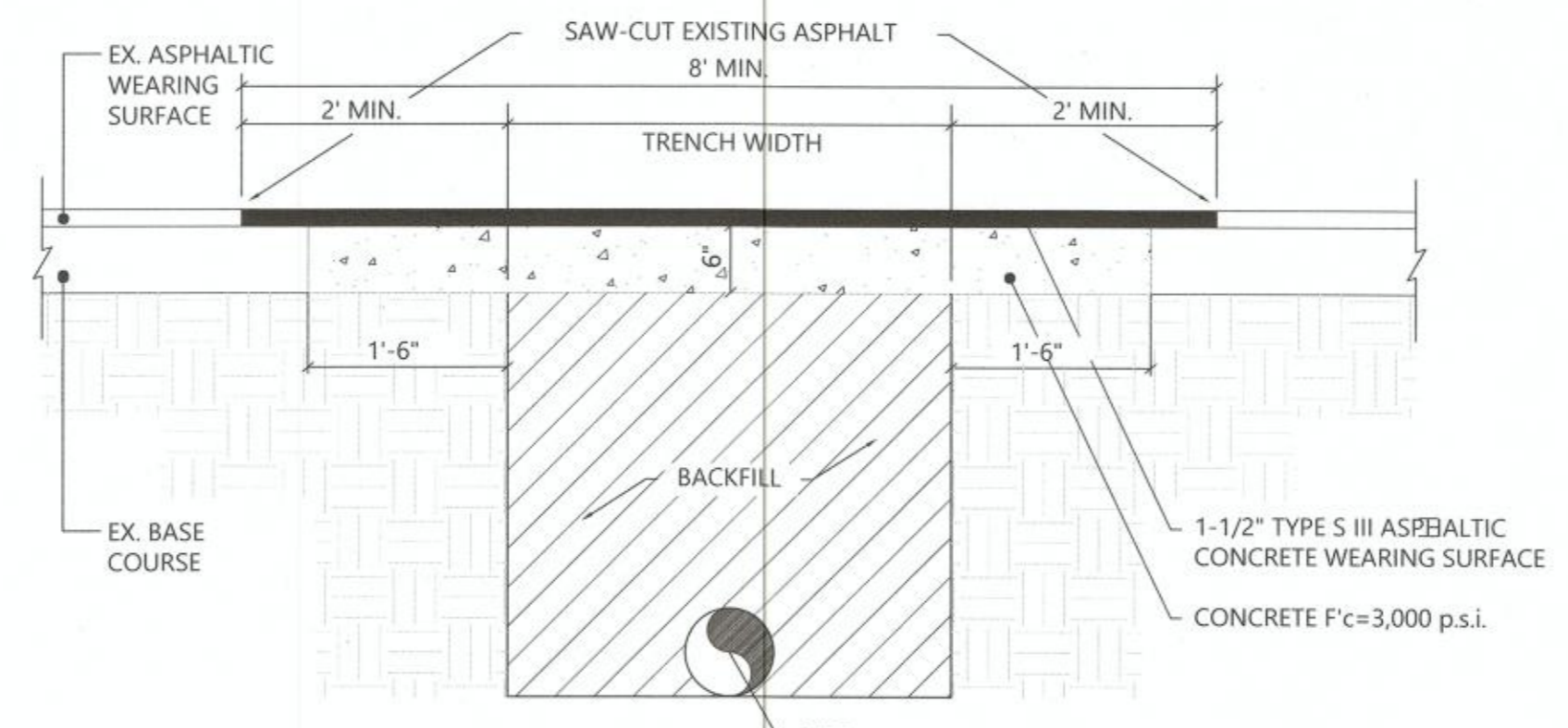
SECTION

1 ROOF DRAIN CONNECTION DETAIL
NOT TO SCALE

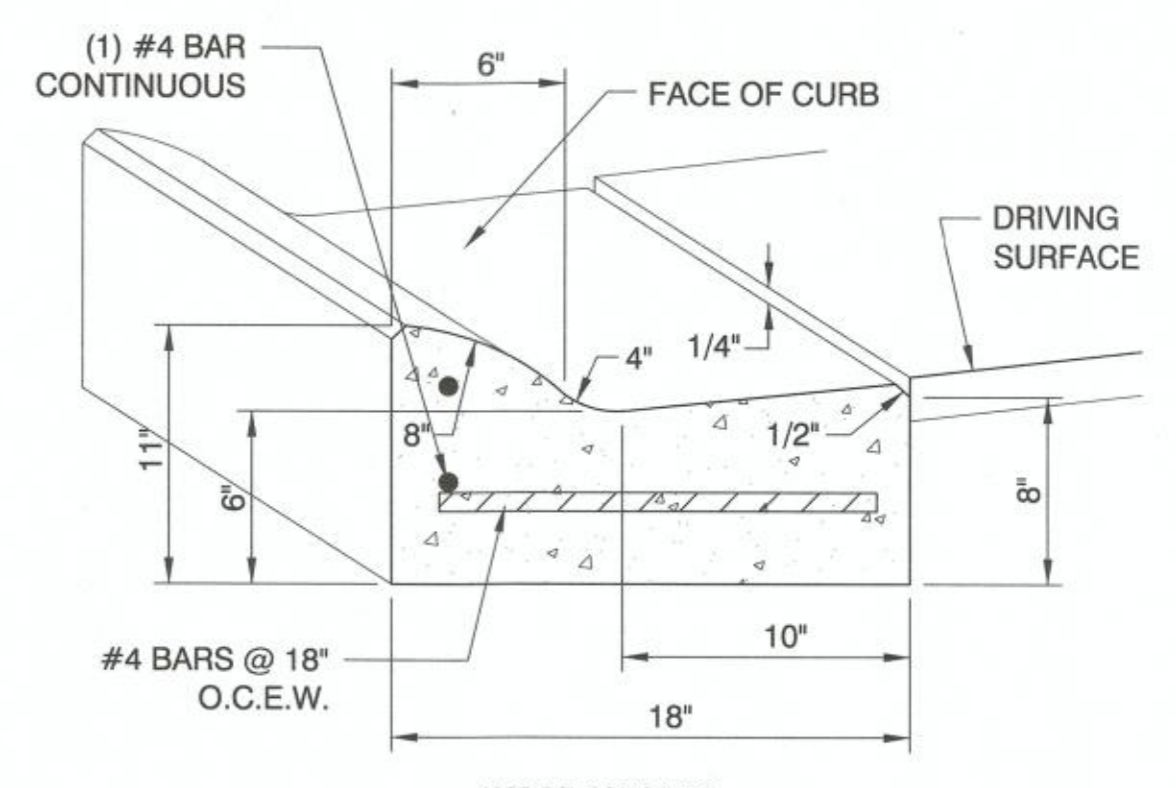


2 TYPICAL CROSS-SECTION
NOT TO SCALE

NOTE
SOLID SOD BASIN SLOPES
AND BOTTOM. (SEE SHEET C05, NOTE #8 & 22)



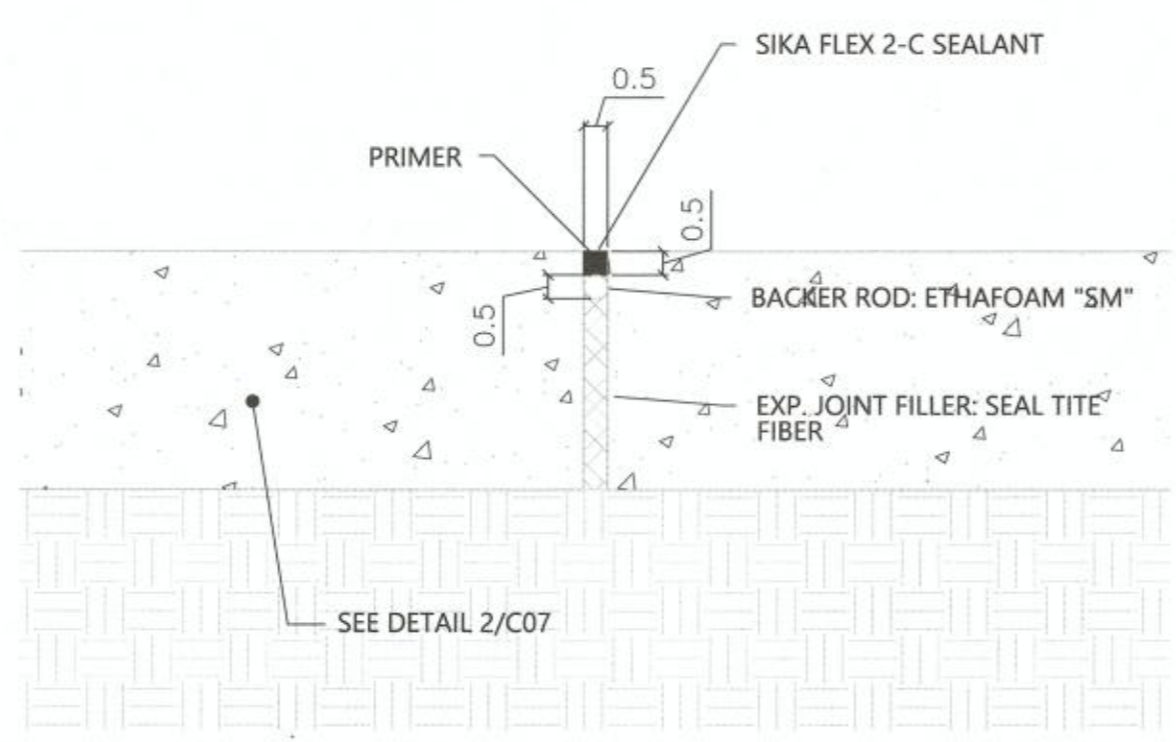
3 ASPHALT PAVEMENT PATCH DETAIL
SCALE: 3/4" = 1'-0"



4 ROLL BACK CURB & GUTTER
(MIAMI CURB)
N.T.S.

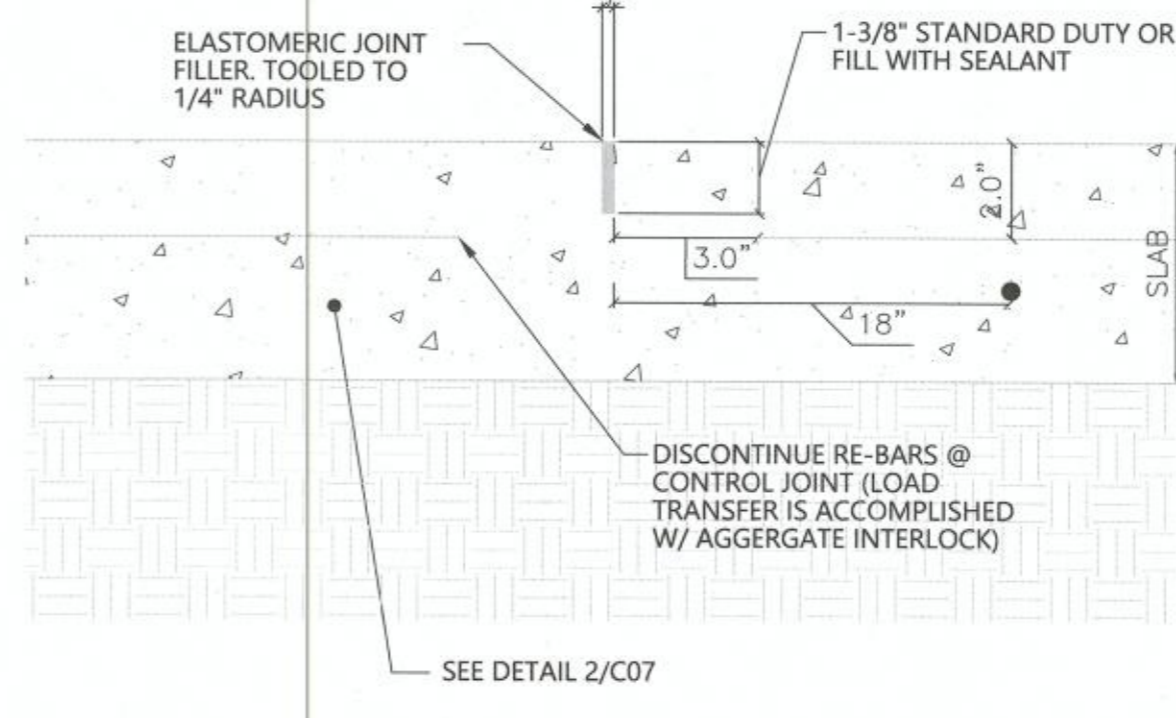
SEE DETAIL 7/C08 FOR MOUNTABLE CURB PROTECTOR
WHERE APPLICABLE FOR DOWEL AND EXPANSION JOINT
DETAILS.

- CONTROL JOINT GUIDELINES:
1. LONG DIMENSION SHOULD NOT EXCEED 1 1/2 TIMES SHORT DIMENSION.
 2. JOINT PATTERN SHOULD LINE UP WITH EDGE OF BUILDING WALK, CENTERLINE OF ISLANDS, AND OTHER FEATURES. ADJUST DISTANCES BETWEEN JOINTS TO FIT WITH MAXIMUM DISTANCE OF 15 FEET.
 3. NO "L-SHAPED" SLABS ARE ALLOWED
 4. NO "PIE SHAPED" SLABS ARE ALLOWED.
 5. JOINT MATERIAL SHOULD TIE INTO CURVED FEATURES ALONG THE RADIUS EXTENDED.
 6. MAXIMUM CONTROL JOINT SPACING IS 10'x10' FOR STANDARD DUTY PAVEMENT AND 12'x12' FOR HEAVY DUTY PAVEMENT.
 7. BUILDING SIDEWALK, PARKING AREAS AND VEHICULAR USE AREAS ARE TO BE SEPARATE POURS.

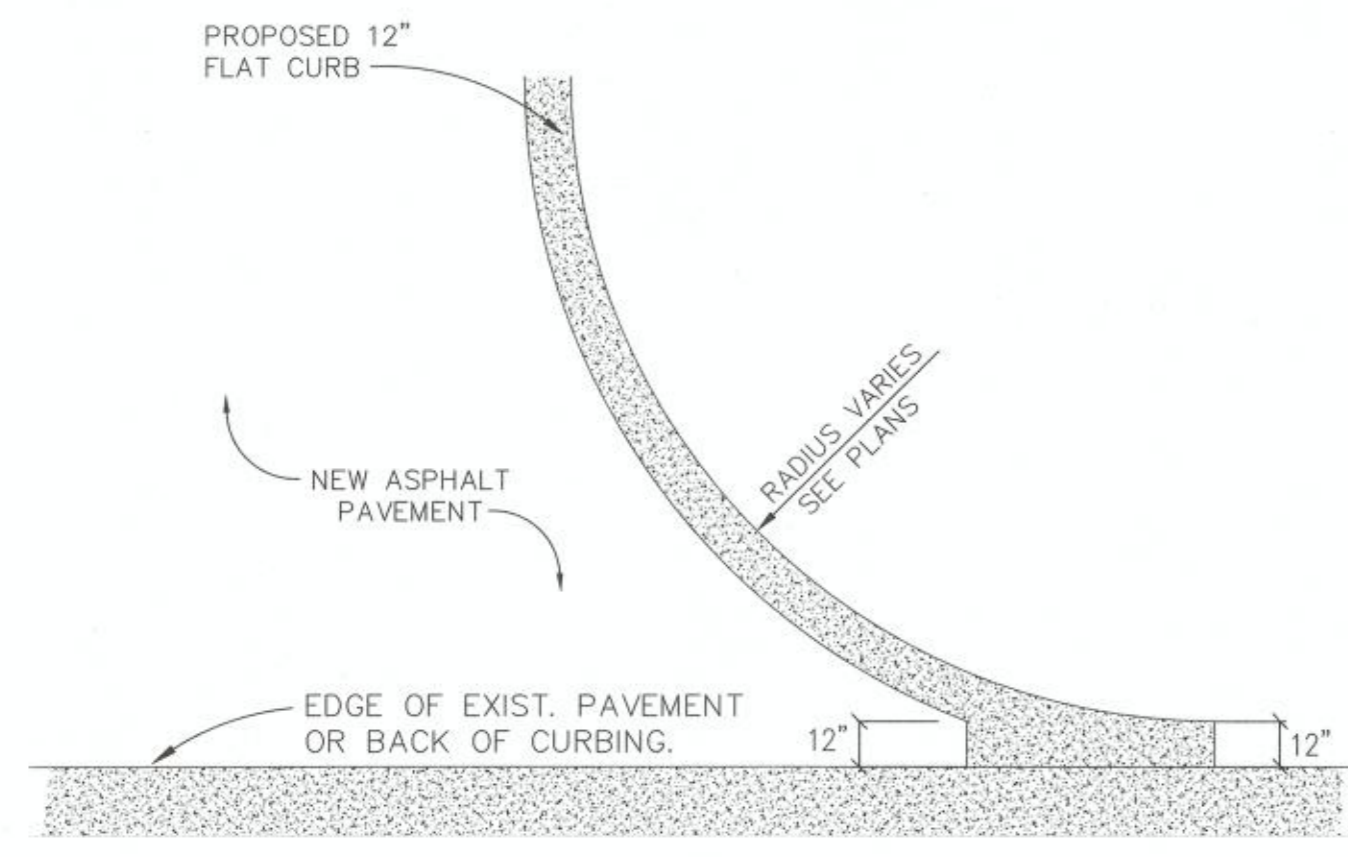


6 TYPICAL EXPANSION JOINT SECTION
SCALE: 3" = 1'-0"

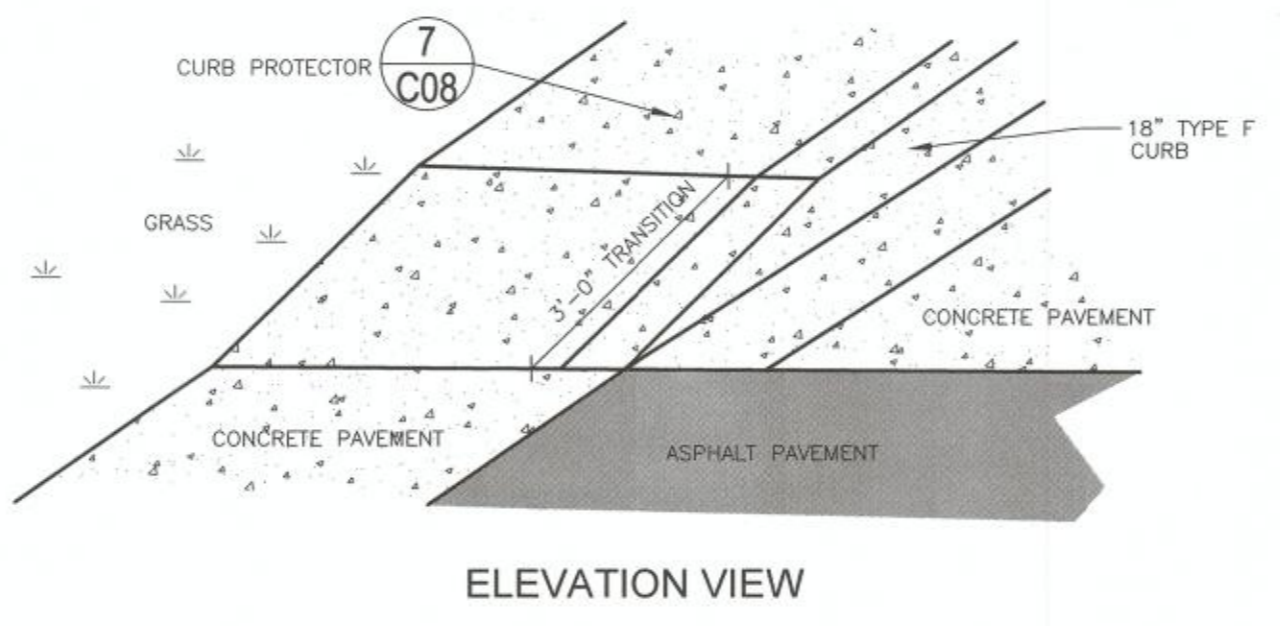
- 1) MASK SURFACE WITH DUCT TAPE DURING INSTALLATION OF PRIMER AND SEALANT REMOVE WHEN SEALANT HAS SET.
- 2) EXPANSION JOINTS ARE REQUIRED WHEN ABUTTING EXISTING OR SEPARATELY POURED RIGID CONCRETE/STRUCTURES.



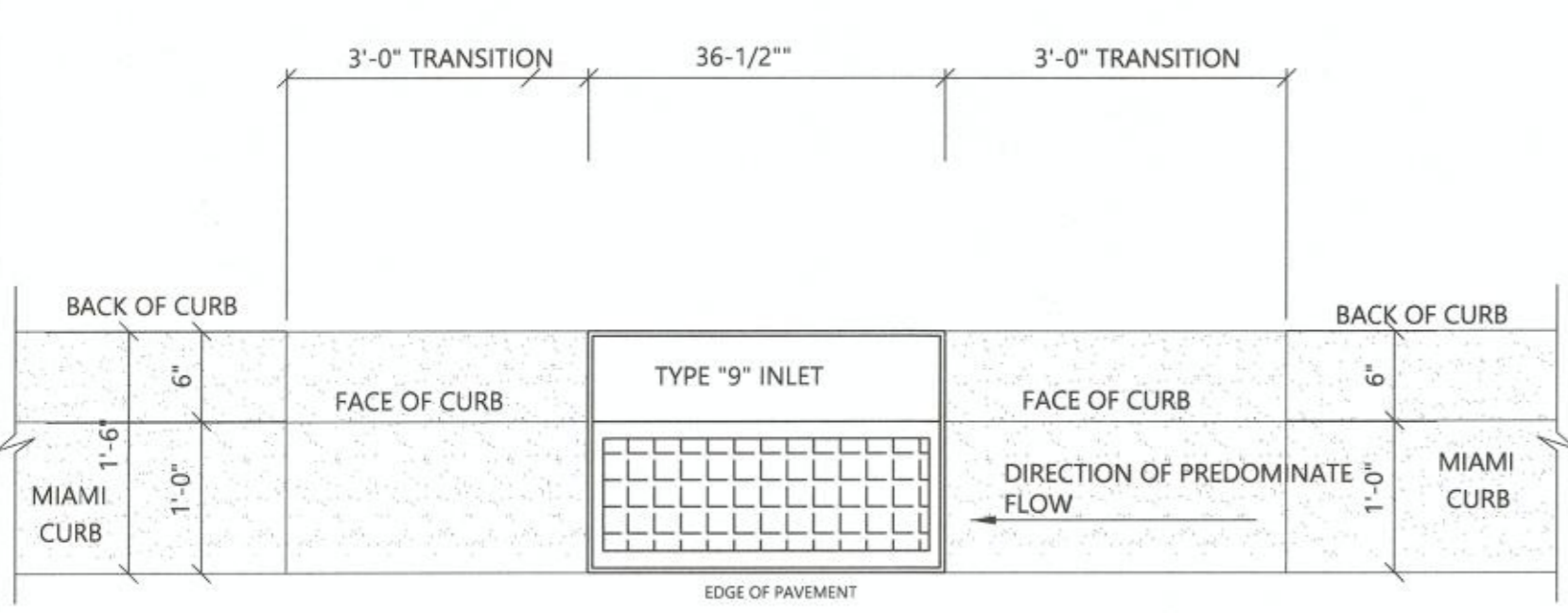
5 TYPICAL CONTROL JOINT SECTION
SCALE: 3" = 1'-0"



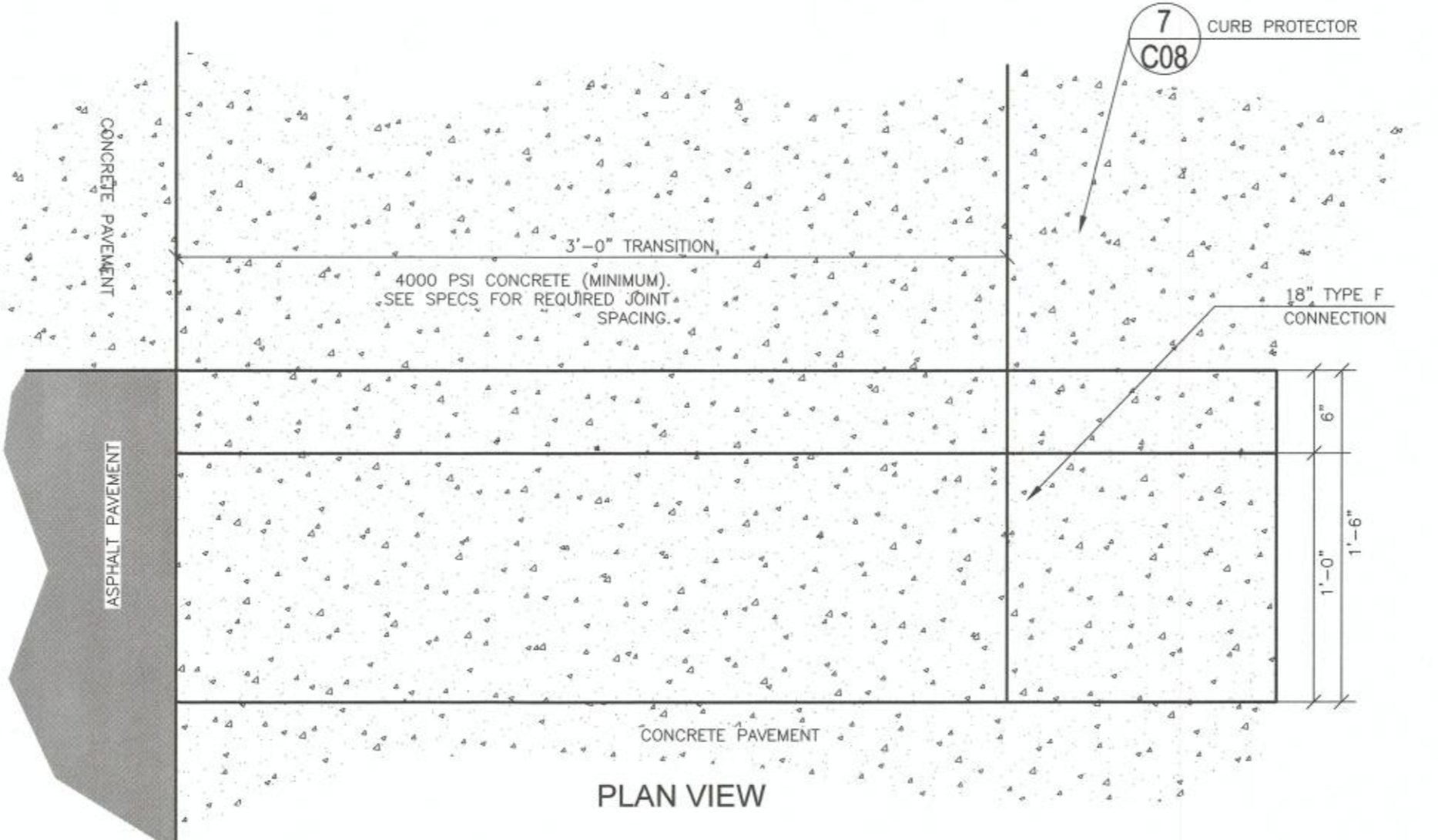
7 PROPOSED CURB TRANSITION DETAIL
SCALE: 1/4" = 1'-0"



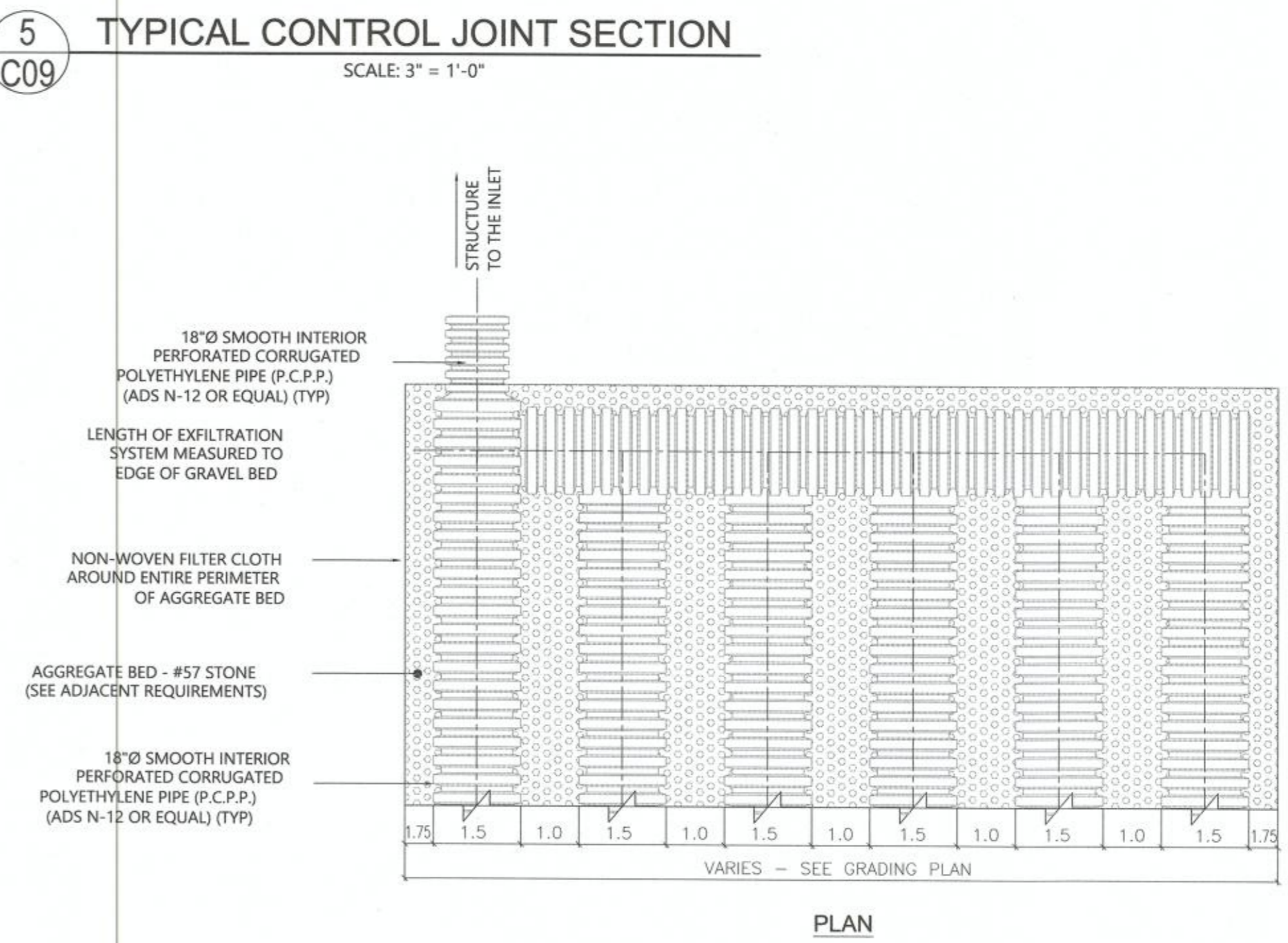
ELEVATION VIEW



8 TYPE "9"-GUTTER INLET TRANSITION
N.T.S.



4 3' TRANSITION FROM 18" TYPE F TO ASPHALT PAVEMENT
N.T.S.



10 TYPICAL EXFILTRATION PIPE SECTION
N.T.S.

GRADATION OF AGGREGATE
#57 STONE

% PASSING	SIEVE SIZE
100	1 1/2-inch
95-100	1-inch
25-50	1/2-inch
0-10	No. 4
0-5	No. 8

LOS ANGELES ABRASION - 32%
ATTERBERG LIMITS - NONPLASTIC
SPECIFIC GRAVITY - APPARENT 2.705,
BULK SSD 2.659
BULK 2.832

ABSORPTION - 1%
COMPRESSIVE STRENGTH
OF ROCK CORES - >10,000 PSI

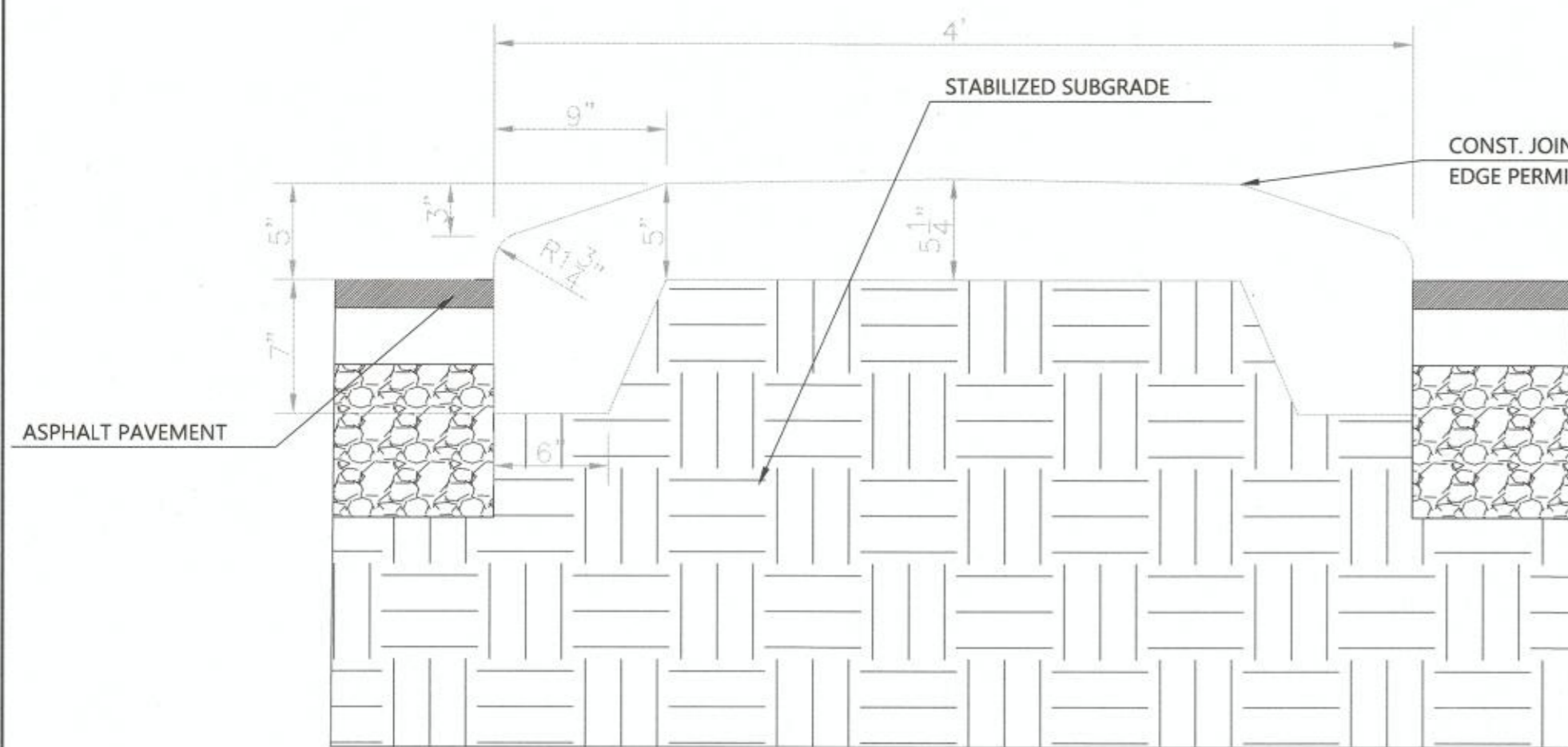
JENKINS ENGINEERING, INC.
73 EGLIN PARKWAY NE, SUITE 203
FORT WALTON BEACH, FLORIDA 32548
PHONE 850.837.2448
FAX 850.837.2450
JEICVIL.COM

STATE OF FLORIDA
MATTHEW H. ZINKE, P.E.
LICENSE No. 57642
FL REGISTRATION NO. 57642
JUN 03 2024

THE FIKES COMPANIES
CEFCO HWY 90 & OLD BETHEL
OKALOOSA COUNTY, FLORIDA
MISCELLANEOUS DETAILS III

JOB: 23-72
DATE: 12-12-23
DESIGNED: MZ/MS
DRAWN: MS
DRAWING NUMBER: 09 OF 12
SHEET NUMBER: C09

APPROVED BY: MICHAEL ANDERSON
DATE: 12/12/23



PROVIDE 1/8" - 1/4" CONTRACTION JOINTS AT 10' CENTERS (MAX). CONTRACTION JOINTS ADJACENT TO CONCRETE PAVEMENT OR CURB ON TANGENTS AND FLAT CURVES ARE TO MATCH THE PAVEMENT JOINTS, WITH INTERMEDIATE JOINTS NOT TO EXCEED 10' CENTERS.
CONCRETE TO BE 2,500 PSI (MIN.)

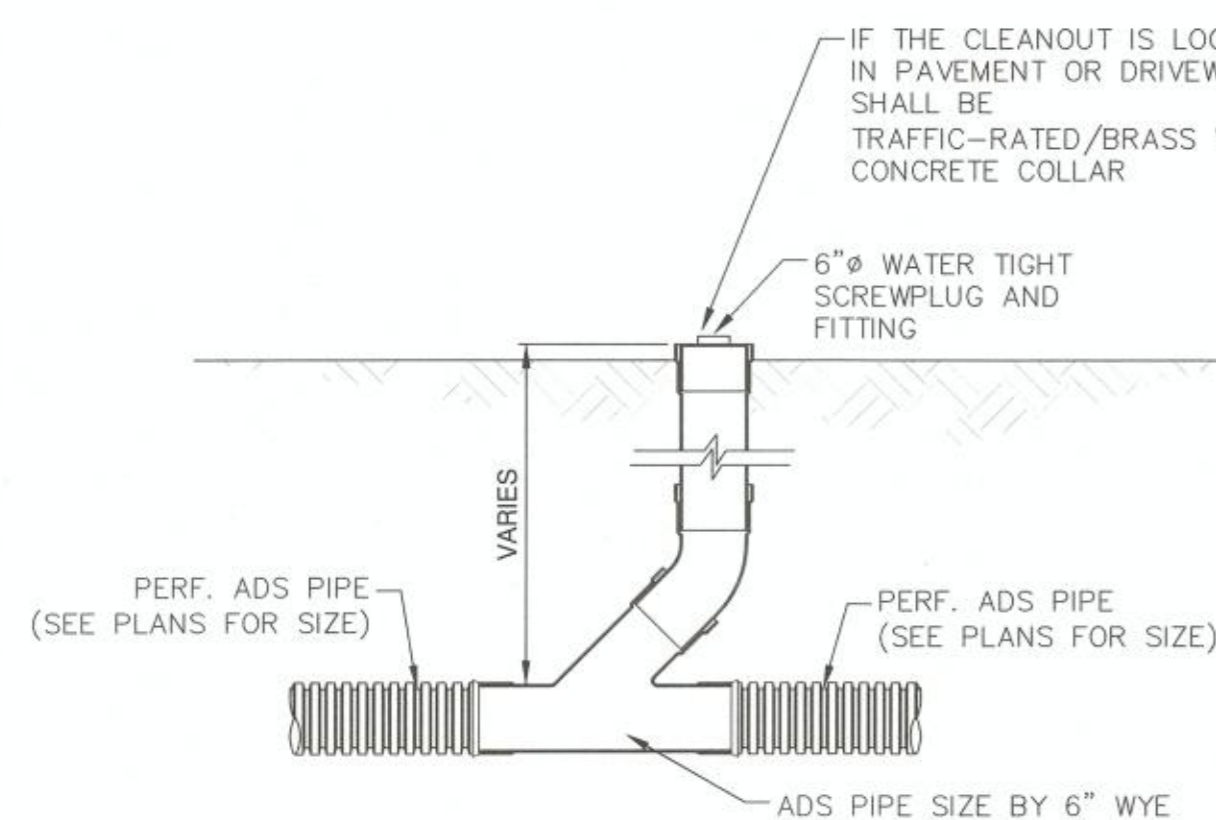
1
C10
CONCRETE SEPARATOR
TYPE I OPTION I
SCALE: 1-1/2" = 1'-0"



2" LAYER TYPE SP 12.5 ASPHALTIC CONCRETE (110#/IN/SY DENSITY) (SEE F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION)
8" LAYER GRADED AGGREGATE BASE, F.D.O.T. STANDARD, PLACE IN 2 LIFTS, INDEX 514 (COMPACTED TO 98% MAX. DENSITY AASHTO T 180) MINIMUM LBR OF 100 (SEE F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION)
FILL AND TOP 12" OF SUBGRADE (COMPACTED TO 98% MAX. DENSITY AASHTO T 180) MINIMUM LBR OF 40 (SEE F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION)

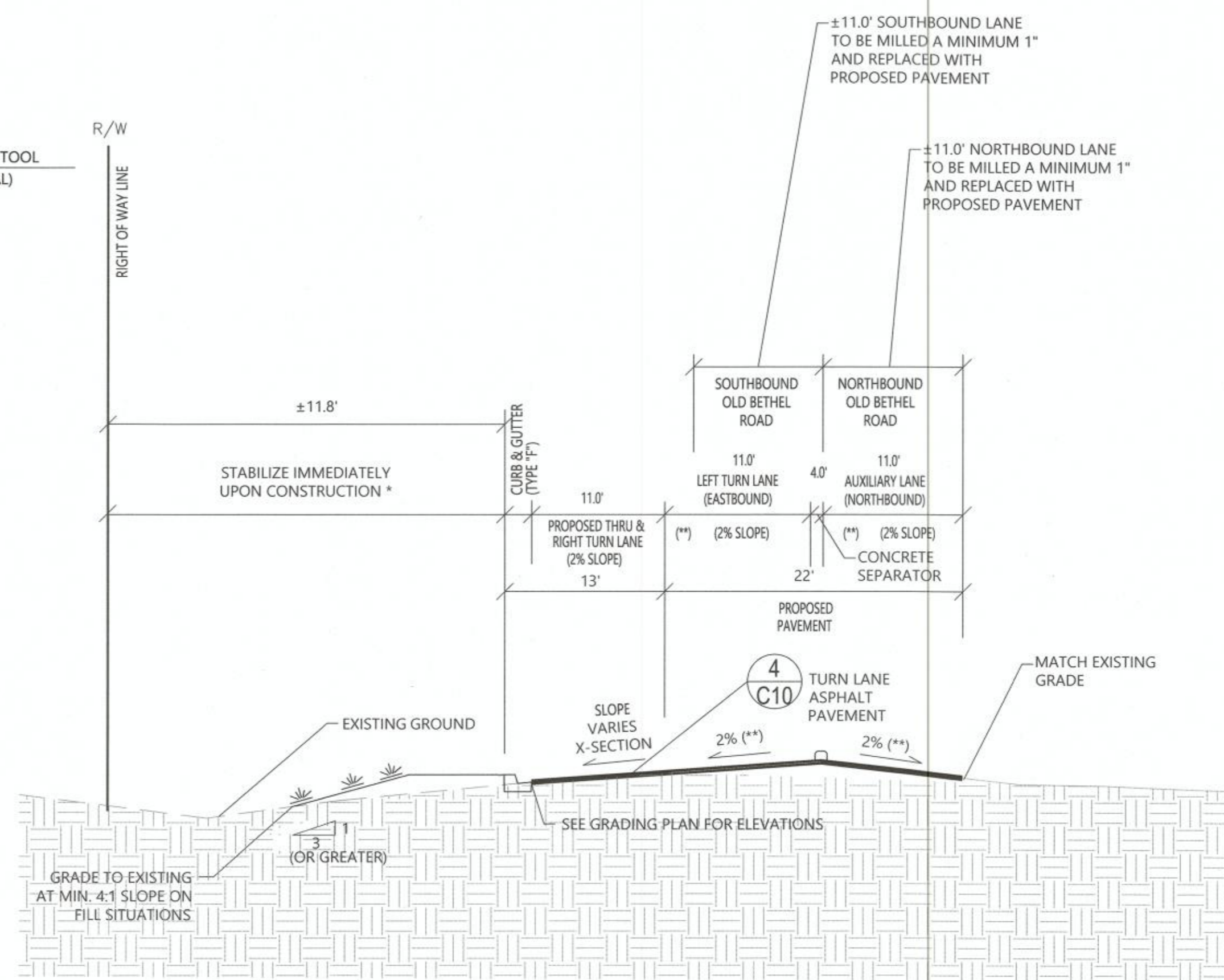
* PER OKALOOSA COUNTY LDC, ASPHALT TESTING FOR SURFACE COURSE AND DENSITY SHALL BE MADE AT INTERVALS OF NO MORE THAN 200 FEET; STAGGERED TO THE LEFT, RIGHT AND ON CENTER LINE.
** PER OKALOOSA COUNTY LDC, BASE TESTING FOR THICKNESS AND DENSITY SHALL BE MADE AT INTERVALS OF NO MORE THAN 300 FEET; STAGGERED TO THE LEFT, RIGHT AND ON CENTER LINE.
*** PER OKALOOSA COUNTY LDC, SUBGRADE TESTING FOR BEARING CAPACITY AND DENSITY SHALL BE MADE AT INTERVALS OF NO MORE THAN 300 FEET; STAGGERED TO THE LEFT, RIGHT AND ON CENTER LINE.

4
C10
COUNTY ASPHALTIC CONCRETE PAVEMENT SECTION
N.T.S.

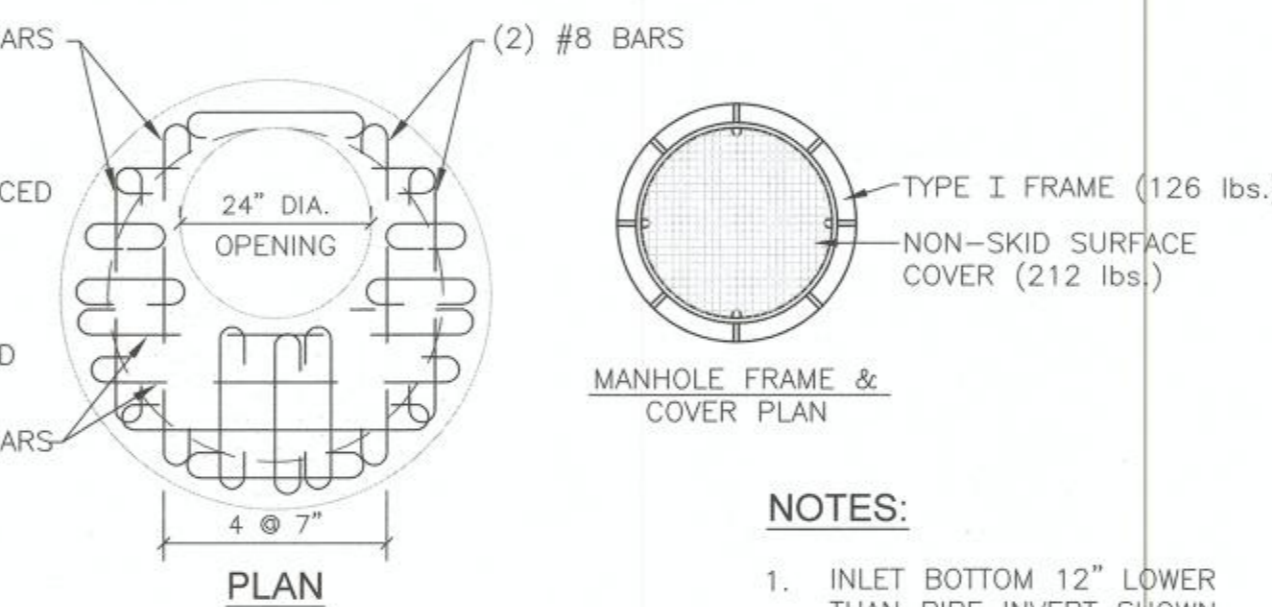


NOTE:
1. VERTICAL PORTIONS SHALL BE NON-PERFORATED.
2. CLEAN-OUT TOP/CAPS MUST EXTEND TO GROUND ELEVATION.

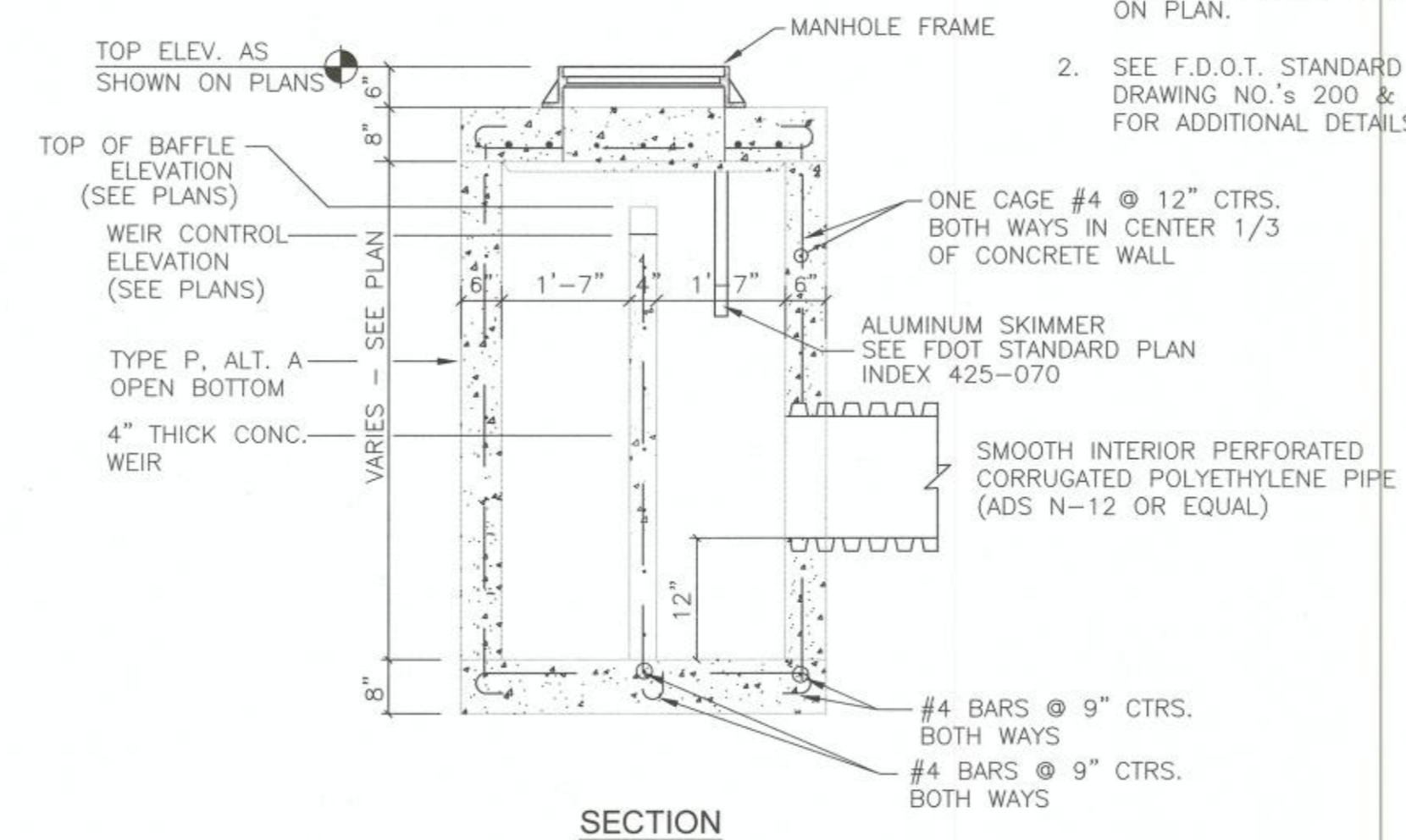
6
C10
EXFILTRATION CLEANOUT DETAIL
N.T.S.



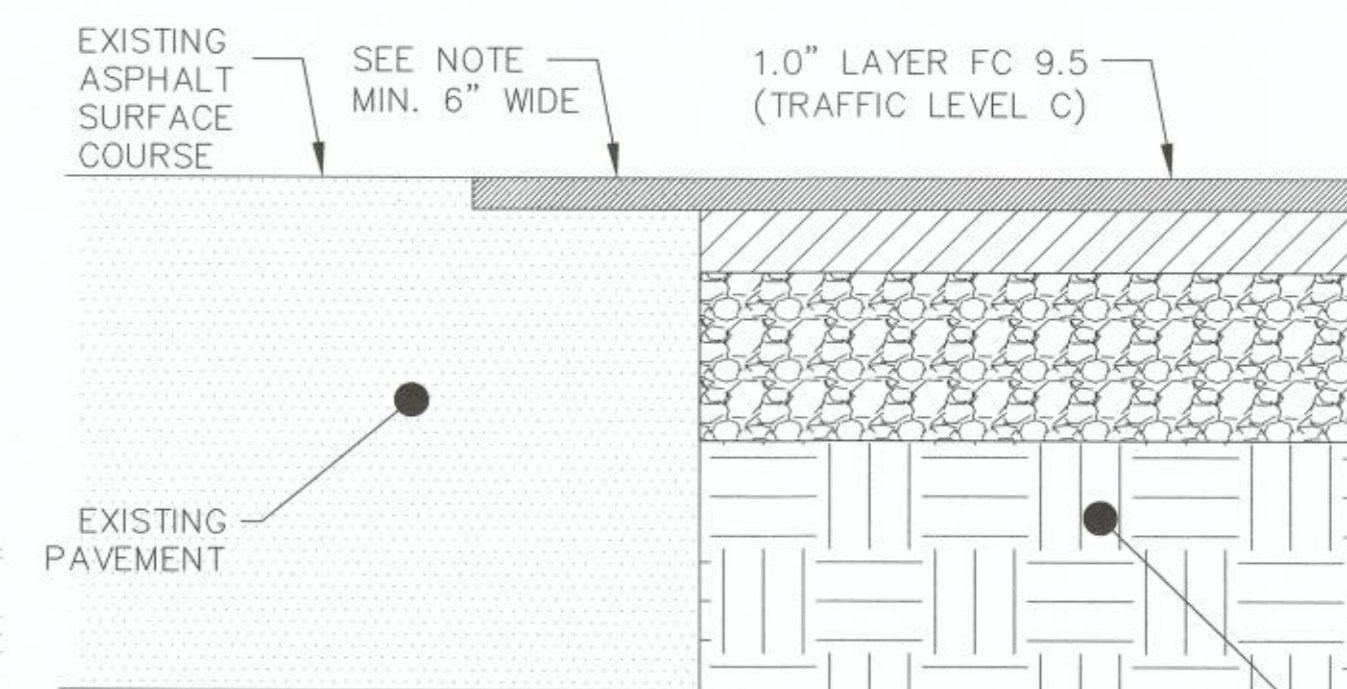
2
C10
TYPICAL PROPOSED RIGHT TURN LANE SECTION WITHIN EXISTING THRU LANES
NOT TO SCALE



NOTES:
1. INLET BOTTOM 12" LOWER THAN PIPE INVERT SHOWN ON PLAN.
2. SEE F.D.O.T. STANDARD INDEX DRAWING NO.'S 200 & 201 FOR ADDITIONAL DETAILS.

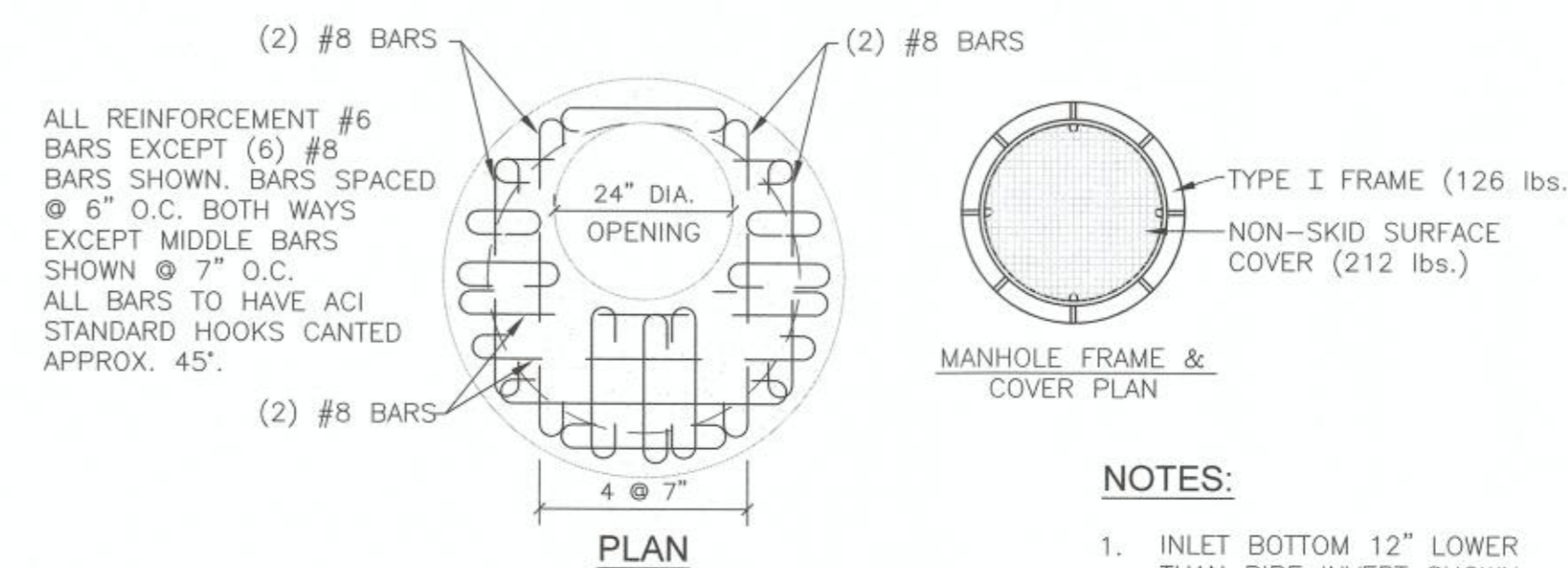


5
C10
STORM MANHOLE WITH INTERNAL WEIR
N.T.S.

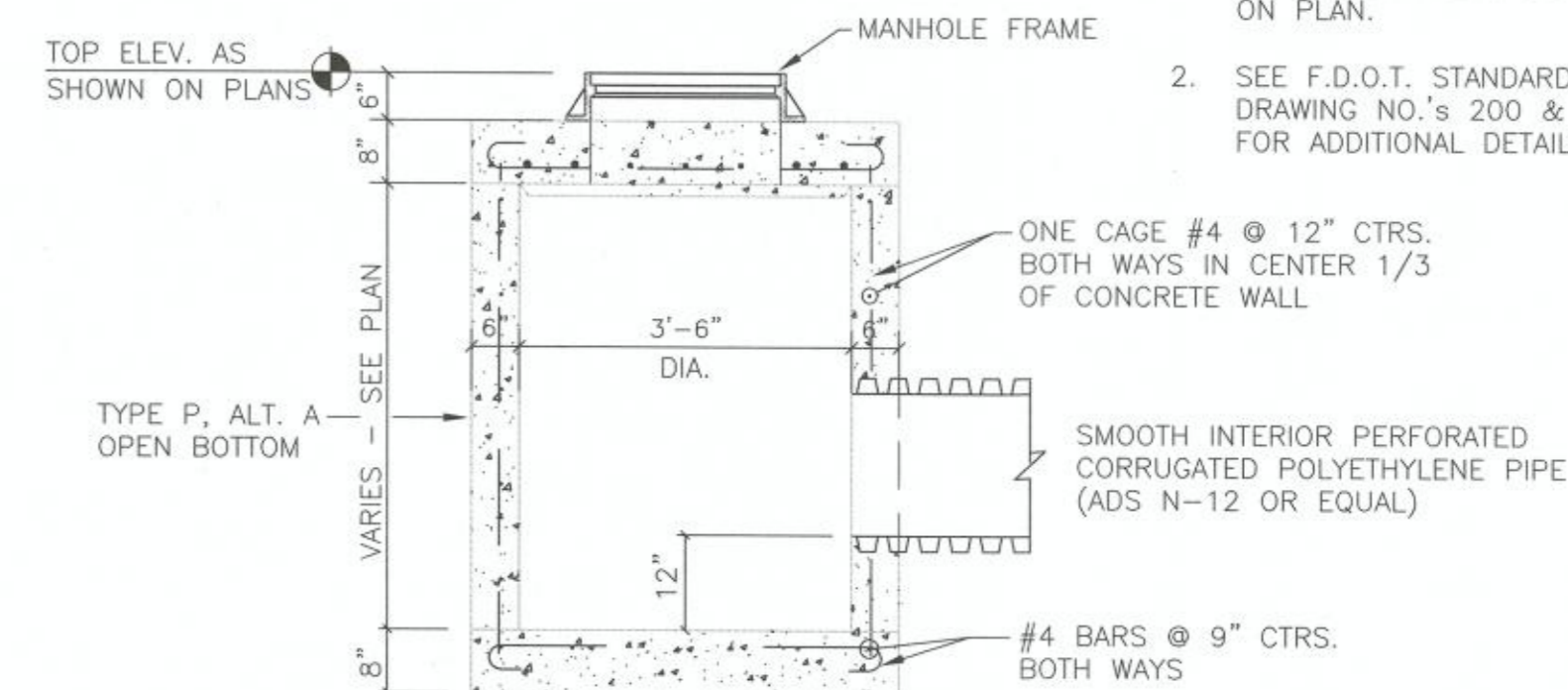


NOTE: KEY IN FRICTION COURSE TO PREVENT LATERAL MOVEMENT. MILL 6"-12" INTO EXISTING ROADWAY PAVEMENT TO INCLUDE REMOVAL OF WHITE/YELLOW LINE. REPLACE MILLED PAVEMENT WITH THE NEW FULL DEPTH FRICTION COURSE FOR TURN LANES, MEDIAN CROSSOVERS OR NEW DRIVEWAYS TO PREVENT STACKING OF ASPHALT JOINTS IN ROADWAY TIE-IN AREAS.

3
C10
PROPOSED LANE ABUTTING EXISTING PAVEMENT (COUNTY)
SCALE: N.T.S.



NOTES:
1. INLET BOTTOM 12" LOWER THAN PIPE INVERT SHOWN ON PLAN.
2. SEE F.D.O.T. STANDARD INDEX DRAWING NO.'S 200 & 201 FOR ADDITIONAL DETAILS.



7
C10
STORM MANHOLE EXFILTRATION
N.T.S.

OKALOOSA COUNTY DEPT. OF PUBLIC WORKS
APPROVED BY: *M. Anderson*
MICHAEL ANDERSON
DATE: *6/1/2024*

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JECIVIL.COM

MATTHEW H. ZINKE
LICENSE No 57642
STATE OF FLORIDA
PROFESSIONAL ENGINEER
JUN 03 2024
MATTHEW H. ZINKE, P.E.
FL REGISTRATION NO. 57642

REV	DATE	DESCRIPTION
1.	03-18-24	REVISED PER COUNTY AND NTP/MD COMMENTS

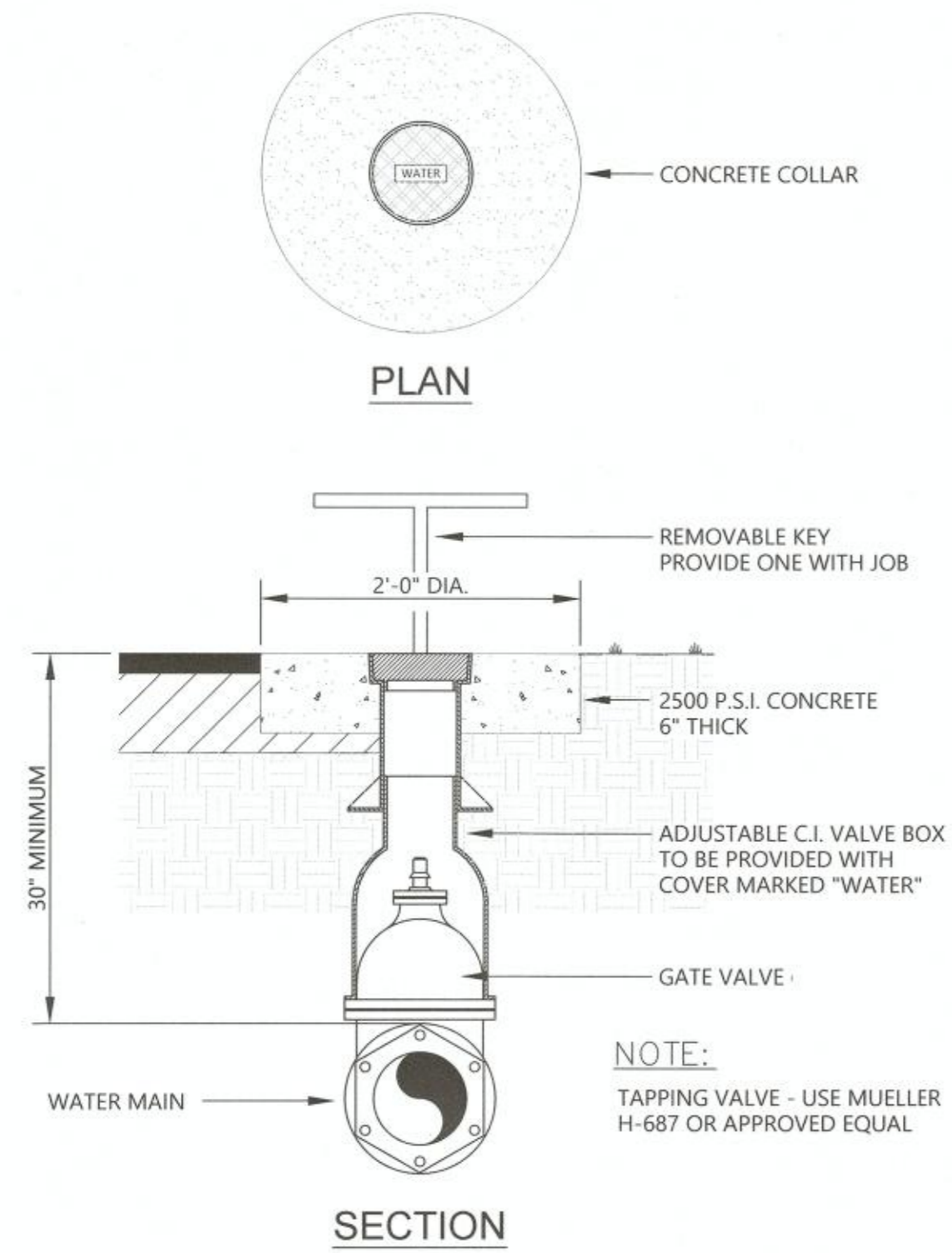
THE FIKES COMPANIES
CEFCO HWY 90 & OLD BETHEL
OKALOOSA COUNTY, FLORIDA
MISCELLANEOUS DETAILS IV
NOT VALID UNLESS BEARING ENGINEER'S ORIGINAL SIGNATURE

JOB: 23-72
DATE: 12-12-23
DESIGNED: MZ/MS
DRAWN: MS

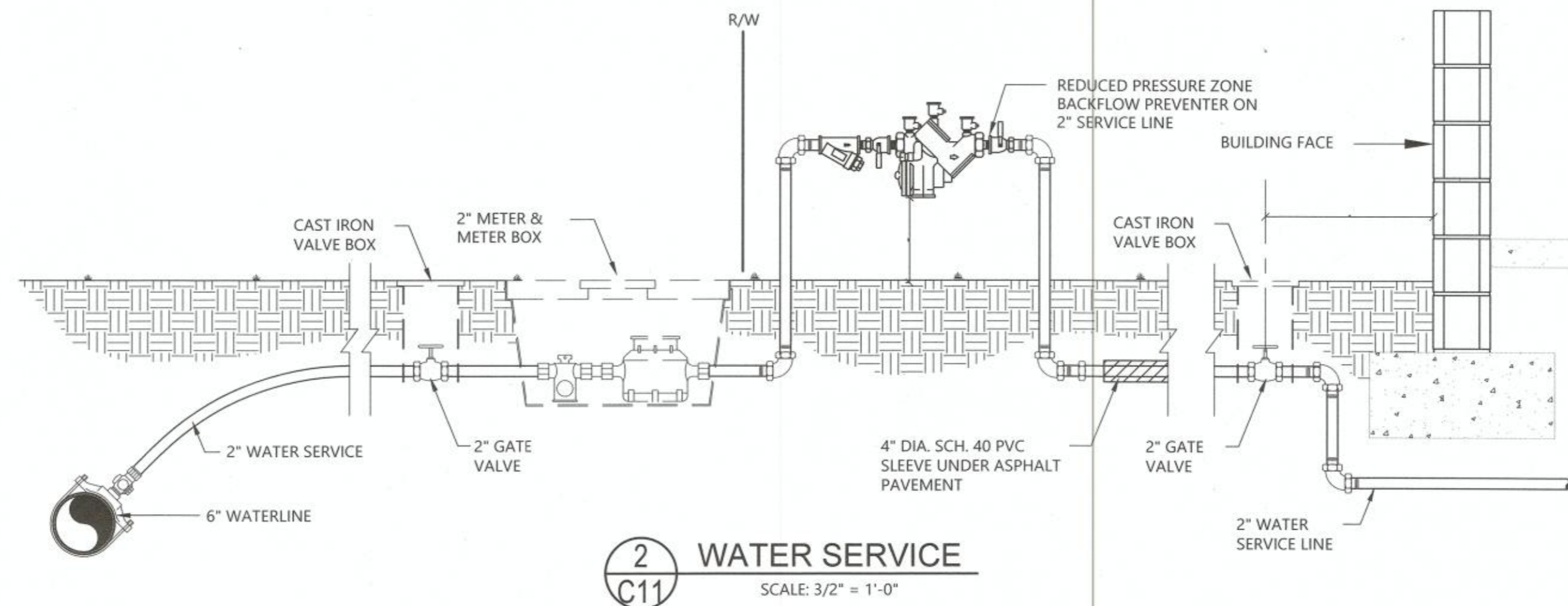
BAR IS ONE INCH ON ORIGINAL
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY

DRAWING NUMBER
10 OF 12

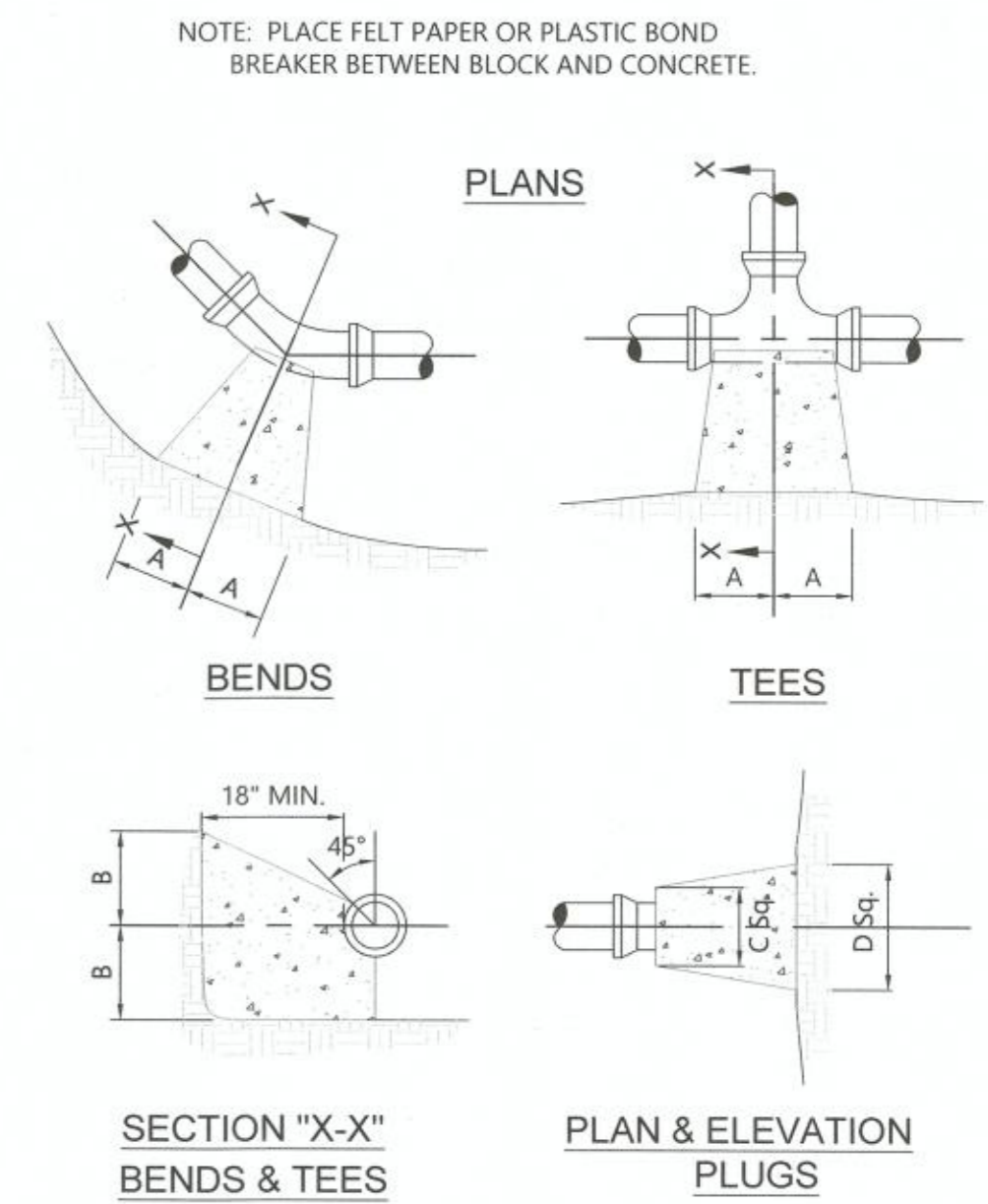
SHEET NUMBER
C10



1
C11 GATE VALVE AND VALVE BOX DETAIL
N.T.S.

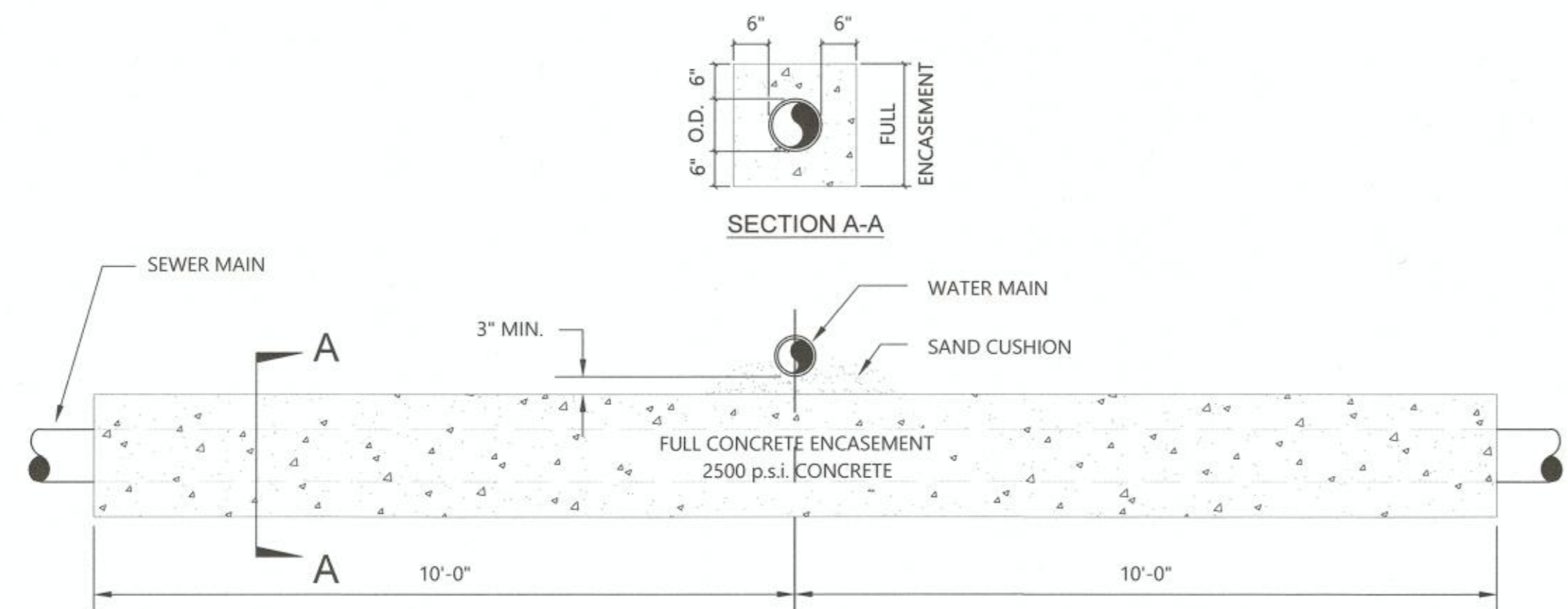


2
C11 WATER SERVICE
SCALE: 3/2" = 1'-0"



PIPE SIZE	1/4 BEND		1/8 BEND		1/16 BEND		TEES		PLUGS	
	A	B	A	B	A	B	A	B	C	D
4"	8"	10"	6"	8"	4"	6"	8"	10"	8"	10"
6"	12"	14"	8"	10"	6"	8"	10"	12"	10"	16"
8"	16"	18"	10"	12"	8"	10"	12"	14"	12"	22"

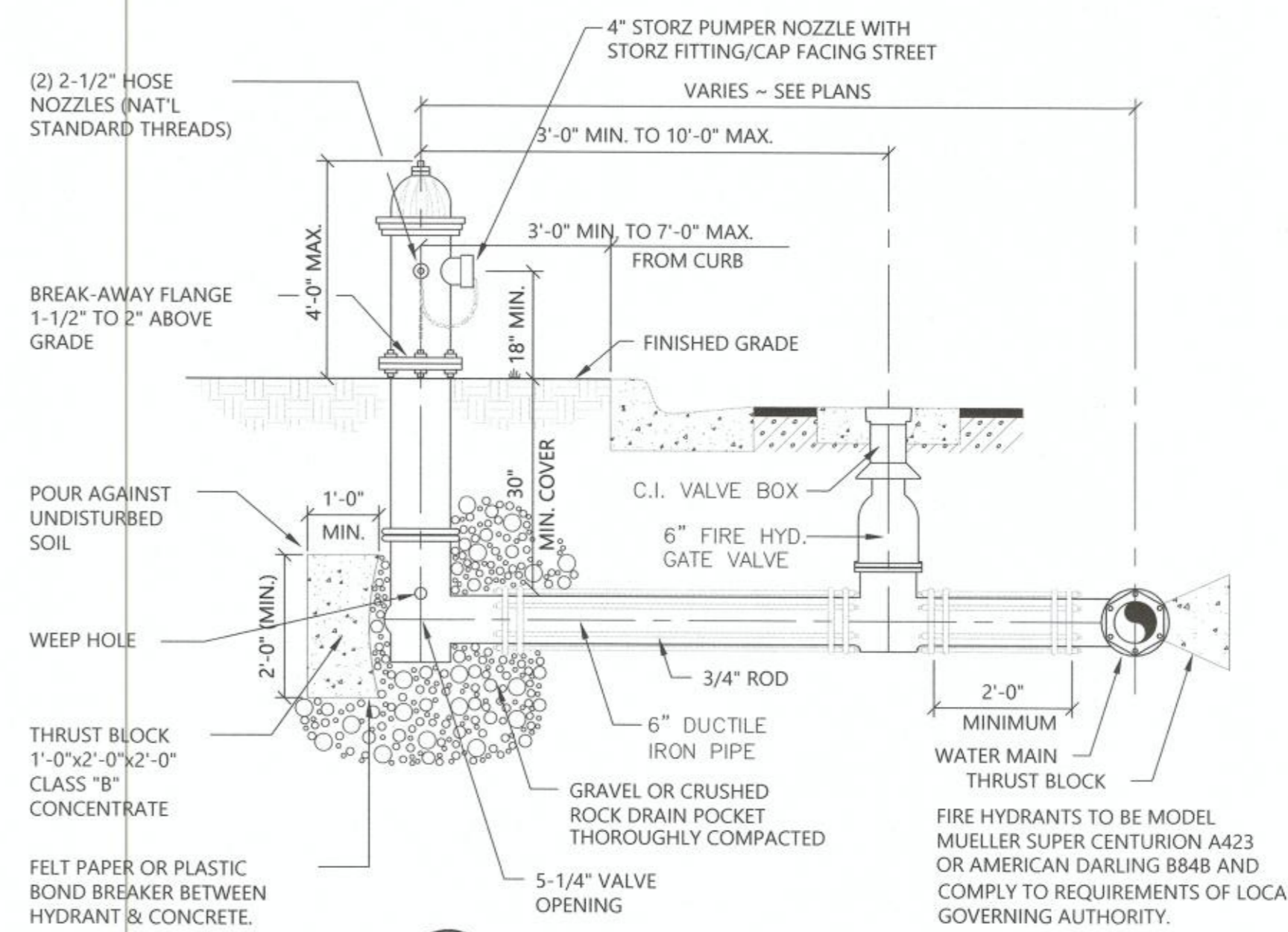
3
C11 THRUST BLOCK DETAILS
N.T.S.



NOTE: FOR POTABLE WATER LINE CROSSING, 1-1/2" DIAMETER AND LARGER, WATER MAIN SHALL BE LOCATED ABOVE OR BELOW ENCASMENT AS SHOWN ON PLANS OR AS DETERMINED IN THE FIELD. USE ENCASMENT WHERE VERTICAL CLEARANCE BETWEEN WATER MAIN AND SEWER IS LESS THAN 18".

FOR ALTERNATE:
CAST IRON OR DUCTILE IRON PIPES MAY BE USED IN LIEU OF CONCRETE ENCASMENT AT WATER LINE CROSSING, WITH A LENGTH OF PIPE CENTERED AT THE POINT OF CROSSING, SO AS TO LOCATE JOINTS AT A MAXIMUM DISTANCE FROM THE WATER LINE.

5
C11 ENCASMENT AT WATER LINE DETAIL
SCALE: 1/2" = 1'-0"



4
C11 FIRE HYDRANT DETAIL
SCALE: 1/2" = 1'-0"

O.C.W.S. PRINT REVIEW

CHECK ALL THAT APPLY BELOW

APPROVED

NOT APPROVED

APPROVED EXCEPT AS NOTED

RESUBMISSION REQUIRED

RESUBMISSION REQUIRED

BY: *[Signature]* DATE: 6/12/24

JENKINS ENGINEERING, INC.
73 EGLIN PARKWAY NE, SUITE 203
FORT WALTON BEACH, FLORIDA 32548
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MATTHEW H. ZINKE, P.E.
FLORIDA PROFESSIONAL ENGINEER
LICENSE NO. 57642
JUN 03 2024
FL REGISTRATION NO. 57642

REV	DATE	DESCRIPTION
1.	03-18-24	REVISED PER COUNTY AND NFWFWD COMMENTS

THE FIKES COMPANIES
CEFCO HWY 90 & OLD BETHEL
OKALOOSA COUNTY, FLORIDA
UTILITY DETAILS I

JOB: 23-72
DATE: 12-12-23
DESIGNED: MZ/MS
DRAWN: MS

BAR IS ONE INCH ON ORIGINAL
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY

DRAWING NUMBER
11 OF 12

SHEET NUMBER
C11

ELECTRICAL SPECIFICATIONS

GENERAL REQUIREMENTS

PART 1 - GENERAL

- 1.01 RELATED DOCUMENTS
- A. The general provisions of the contract including General and Special Conditions and General Requirements shall apply to all work under this Section.
- 1.02 REQUIREMENTS OF REGULATORY AGENCIES AND STANDARDS
- A. Equipment, fixtures, material and installation shall conform to the requirements of the local Building Department, the serving utility companies, the National Electrical Code, National Electrical Safety Code, Life Safety Code, Occupational Safety and Health Act, and applicable national, state and local codes, ordinances and regulations.
- B. All equipment shall be equal to or exceed the minimum requirements of NEMA, IEEE, and UL.
- C. Should any change in Drawings or Specifications be required to comply with governmental regulations, the Contractor shall notify Architect/Engineer prior to execution of the Work. The work shall be carried out according to the requirements of such code in accordance with the instruction of the Architect/Engineer and at no additional cost to the Owner.
- D. The provisions of Standards, Codes, Laws, Ordinances, etc., shall be considered minimum requirements. In case of conflict between their published requirements, the Owner's Representative shall determine which is to be followed and his decision shall be binding. Specific requirements of this specification or the drawings, which exceed the published requirements, shall take precedence over them.
- 1.03 FEES
- A. All local fees, permits, and services of inspection authorities shall be obtained and paid for by the Contractor. The Contractor shall cooperate fully with local companies with respect to their services. Contractor shall include in his bid any costs to be incurred relative to power service (primary and/or secondary) and telephone service.
- 1.04 SCOPE OF WORK
- A. This division of the specifications covers the electrical systems of the project. It includes work performed by the electrical trades as well as trades not normally considered as electrical trades.
- B. Provide all incidentals, equipment, appliances, services, hoisting, scaffolding, supports, tools, supervision, labor consumable items, fees, licenses, etc., necessary to provide complete systems. Perform start-up and checkout on each item and system to provide fully operable systems.
- C. Examine and compare the Electrical Drawings with these specifications, and report any discrepancies between them to the Architect/Engineer and obtain from him written instructions for changes necessary in the work. At time of bid the most stringent requirements must be included in the bid.
- D. Examine and compare the Electrical Drawings and Specifications with the Drawings and Specifications of other trades, and report any discrepancies between them to the Architect/Engineer and obtain from him written instructions for changes necessary in the work. At time of bid, the most stringent requirements must be included in said bid.
- E. Install and coordinate the electrical work in cooperation with other trades installing interrelated work. Before installation, make proper provisions to avoid interferences in a manner approved by the Architect/Engineer. All changes required in the work of the Contractor, caused by his neglect to do so, shall be made by him at his own expense.
- F. It is the intent of the Drawings and Specifications to provide a complete workable system ready for the Owner's operation. Any item not specifically shown on the Drawings or called for in the Specifications, but normally required to conform with the intent, are to be considered a part of the Contract.
- G. All materials furnished by the Contractor shall be new and unused (temporary lighting and power products are excluded) and free from defects. All materials used shall bear the Underwriter's Laboratory, Inc. label provided a standard has been established for the material in question.
- H. Except for conduit, conduit fittings, outlet boxes, wire and cable, all items of equipment or material shall be the product of one manufacturer throughout the entire project. Multiple manufacturers will not be permitted.
- 1.05 REFERENCES
- A. Utilize the following abbreviations and definitions for discernment within the Drawings and Specifications.
- Abbreviations:
 - NEC National Electrical Code.
 - OSHA Occupational Safety and Health Act.
 - ANSI American National Standards Institute.
 - NFPA National Fire Protection Association.
 - ASA American Standards Association.
 - IEEE Institute of Electrical and Electronics Engineers.
 - NEMA National Electrical Manufacturers Association.
 - UL Underwriters' Laboratories, Inc.
 - IES Illuminating Engineering Society.
 - ICEA Insulated Cable Engineers Association.
 - ASTM American Society of Testing Materials.
 - ETL Electrical Testing Laboratories, Inc.
 - CBM Certified Ballast Manufacturers.
 - EIA Electronic Industries Association.
 - LED Light Emitting Diode.
 - OEM Original Equipment Manufacturer.
- 1.06 DEFINITIONS
- A. "PROVIDE" means to supply, purchase, transport, place, erect, connect, test, and turn over to Owner, complete and ready for regular operation, the particular Work referred to.
- B. "INSTALL" means to join, unite, fasten, link, attach, set up, or otherwise connect together before testing and turning over to Owner, complete and ready for regular operation, the particular Work referred to.
- C. "FURNISH" means to supply all materials, labor, equipment, testing apparatus, controls, tests, accessories, and all other items customarily required for the proper and complete application for the particular Work referred to.
- D. "WIRING" means the inclusion of all raceways, fittings, conductors, connectors, tape, junction and outlet boxes, connections, splices, and all other items necessary and/or required in connection with such Work.
- E. "CONDUIT" means the inclusion of all fittings, hangers, supports, sleeves, etc.
- F. "AS DIRECTED" means as directed by the Architect/Engineer, or his representative.
- G. "CONCEALED" means embedded in masonry or other construction, installed behind wall furring or within double partitions, or installed above hung ceilings.
- 1.07 COORDINATION OF THE WORK
- A. Certain materials will be provided by other trades. Examine the Contract Documents to ascertain these requirements.
- B. Carefully check space requirements with other trades and the physical confines of the area to insure that all material can be installed in the spaces allotted thereto including finished suspended ceilings and the spaces within the existing building. Make modifications thereto as required and approved.
- C. Transmit to other trades all information required for work to be provided under their respective Sections in ample time for installation.
- D. Wherever work interconnects with work of other trades, coordinate with other trades to insure that all trades have the information necessary so that they may properly install all the necessary connections and equipment. Identify all items of work that require access so that the ceiling trade will know where to install access doors and panels.
- E. Coordinate, project and schedule work with other trades in accordance with the construction sequence.
- F. The Drawings show only the general run of raceways and approximate location of outlets. Any significant changes in location of outlets, cabinets, etc., necessary in order to meet field conditions shall be brought to the immediate attention of the Architect/Engineer and receive his approval before such alterations are made. All such modifications shall be made without additional cost to the Owner.
- G. Obtain from the Architect/Engineer in the field the location of such outlets or equipment not definitely located on the Drawings.
- H. Circuit "tags" in the form of arrows are used where shown to indicate the home runs of raceways to electrical distribution points. These tags show the circuits in each home run and the panel designation. Show the actual circuit numbers on the finished record drawings and on panel directory card. Where circuiting is not indicated, the Architect Subcontractor must provide required circuiting in accordance with the loading indicated on the drawings and/or as directed.
- I. Adjust location of conduits, panels, equipment, pull boxes, fixtures, etc. to accommodate the work to prevent interferences, both anticipated and encountered. Determine the exact route and location of each raceway prior to fabrication.
- Right-of-Way:
 - Lines that pitch have the right-of-way over those that do not pitch. For example: steam, condensate, and plumbing drains normally have right-of-way. Lines whose elevations cannot be changed to have right-of-way over lines whose elevations can be changed.
 - Make offsets, transitions and changes in direction in raceways as required to maintain proper headroom in pitch of sloping lines whether or not indicated on the Drawings.
- J. Wherever the work is of sufficient complexity, prepare additional Detail Drawings to scale similar to that of the bidding Drawings, prepared on tracing medium of the same size as Contract Drawings. With these layouts, coordinate the work with the work of other trades. Such detailed work to be clearly identified on the Drawings as to the area to which it applies. Submit for review Drawings clearly showing the work and its relation to the work of other trades before commencing shop fabrication or erection in the field.
- K. Coordinate with the local Electric Utility Company and the local Telephone Company as to their requirements for service connections and provide all necessary materials, labor and testing.
- L. Coordinate with contractors for work under other Divisions of this specification for all work necessary to accomplish this contractor's work.
- 1.08 EXAMINATION OF SITE
- A. Prior to the submitting of bids, the Contractor shall visit the site of the job and shall familiarize himself with all conditions affecting the proposed installation and shall make provisions as to the cost thereof. Failure to comply with the intent of this paragraph will in no way relieve the contractor of performing all necessary work shown on the Drawings.

- 1.09 PROGRESS OF WORK
- A. The Contractor shall order the progress of his work to conform to the progress of the work of other trades and shall complete the entire installation as soon as the conditions of the building will permit. Any cost resulting from the defective or ill-timed work performed under this section shall be borne by the Contractor.
- 1.10 DELIVERY, STORAGE, AND HANDLING
- A. Ship and store all products and materials in a manner that will protect them from damage, weather and entry of debris. If items are damaged, do not install, but take immediate steps to obtain replacement or repair. Any such repairs shall be subject to review and acceptance of the Architect/Engineer.
- B. Deliver materials in manufacturer's unopened container fully identified with manufacturer's name, trade name, type, class, grade, size and color.
- C. Store materials suitably sheltered from the elements, but readily accessible for inspection by the Architect/Engineer until installed. Store all items subject to moisture damage in dry, heated spaces.
- 1.11 EQUIPMENT ACCESSORIES
- A. Provide supports, hangers and auxiliary structural members required for support of the work.
- B. Furnish and set all sleeves for passage of raceways through structural, masonry and concrete walls of floors and elsewhere as will be required for the proper protection of each raceway passing through building surfaces.
- C. Wall mounted equipment may be directly secured to wall by means of steel bolts. Maintain at least 1" air space between equipment and supporting wall. Groups or arrays of equipment may be mounted on adequately sized steel angles, channels, or bars. Prefabricated steel channels providing a high degree of mounting flexibility, such as those manufactured by Kindorf, Glob-Strut and Unistrut, may be used for mounting arrays of equipment.
- 1.12 OPERATIONS AND MAINTENANCE MANUALS
- A. General: Provide operations & maintenance (O&M) manuals in accordance with the Contract Documents.
- Provide two (2) copies of each manual.
 - Manuals shall be 8-1/2 inches X 11 inches in hard cover 3-ring loose-leaf binders.
 - Manuals shall be complete and in Owner's hands prior to turning building over to Owner and at least 10 days prior to instruction to operating personnel.
- B. Provide manufacturer's literature as regularly published by the respective manufacturers for proper preventative and comprehensive maintenance.
- C. Provide O&M manuals including but not limited to the following.
- Alphabetical list of all system components, with the name, address, and 24-hour phone number of the company responsible for servicing each item during the first year of operation.
 - Operating instructions for complete system including:
 - Normal starting, operating, and shut-down.
 - Emergency procedures for fire or failure of major equipment.
 - Summer and winter special procedures, if any.
 - Day and night special procedures, if any.
 - Maintenance instruction including:
 - Proper lubricants and lubricating instructions for each piece of equipment, and date when lubricated.
 - Necessary cleaning, replacement and/or adjustment schedule.
 - Manufacturer's data for each piece of equipment including:
 - Installation instructions.
 - Drawings and specifications.
 - Parts list, including recommended items to be stocked.
 - Complete wiring diagrams.
 - Marked or changed prints locating all concealed parts and all variations from the original system design.
 - Test and inspection certificates.
- D. Refer to individual specification sections for additional O&M requirements.
- 1.13 RECORD DOCUMENTS
- A. During construction, keep an accurate record of all deviations between the work as shown on Drawings and that which is actually installed. Keep this record set of prints at the job site for review by the Architect/Engineer.
- B. Upon completion of the installation and acceptance by the owner, transfer all record drawing information to one neat and legible set of prints. Then deliver them to the Architect/Engineer for transmittal to the Owner.
- C. Provide in each main electrical switchboard room a framed copy under glass of the appropriate Single Line Riser Diagram as reviewed by the electrical engineer. Media shall be a high quality presentation type paper. Blueprints or other media which fade shall not be used.
- 1.14 GUARANTEE
- A. Guarantee all material and workmanship for a period of one (1) year from date of final acceptance by the Owner, except that where guarantees or warranties for longer terms are specified herein, such longer term to apply. Within 24 hours after notification, correct any deficiencies that occur during the guarantee period at no additional cost to the Owner, all to the satisfaction of the Owner and Architect/Engineer. Obtain similar guarantees from subcontractors, manufacturers, suppliers and subtrade specialists.
- PART 2 - PRODUCTS
- 2.01 MATERIALS
- A. Applicable equipment and materials shall be listed by Underwriters' Laboratories and Manufactured in accordance with ASME, NEMA, ANSI or IEEE standards, and as approved by local authorities having jurisdiction as mentioned in Division 1.
- B. If products and materials are specified or indicated on the Drawings for a specific item or system, use those products or materials. If products and materials are not listed in either of the above, use first class products and materials, subject to approval of Shop Drawings where Shop Drawings are required or as approved in writing where Shop Drawings are not required.
- C. All equipment capacities, etc. are listed for job site operating conditions. All equipment sensitive to altitudes or ambient temperatures to be derated and method of derating shown on Shop Drawings. Where operating conditions shown differ from the laboratory test conditions, the equipment to be derated and the method of derating shown on Shop Drawings.
- 2.02 SUBSTITUTION OF MATERIALS OR EQUIPMENT
- A. All requests for substitution of materials or equipment shall be made in writing by the Contractor. The request must be in the Engineers office not less than 10 days prior to the bid date. Samples of proposed substitute materials or equipment shall be submitted to the Engineer for review whenever they are requested. Bids shall be based only upon the specified materials and equipment, or substitutes that have received written acceptance from the Engineer prior to the bid.
- B. Wherever the words "for approval" or "approved" are used in regard to manufactured specialties, or wherever it is desired to substitute a different make or type of apparatus for that specified, submit all information pertinent to the adequacy and adaptability of the proposed apparatus, and secure Architect/Engineer's acceptance before apparatus is ordered.
- C. Wherever quantities or a definite make and size of apparatus is specified, the make and size of apparatus which is proposed must conform substantially (in regard to the operating results) to that specified or implied. Same shall apply to important dimensions relating to operation of apparatus in coordination with the rest of the system, or to properly fitting it into available space conditions. Any substitution of equipment or apparatus shall include all necessary revisions, as required to complete the installation.
- D. Acceptance of substitutions, for equipment specified herein, will not be given merely upon submission of manufacturer's names and will be given only after receipt of complete and satisfactory performance data covering the complete range of operating conditions in tabular and graphical form. Furnish complete and satisfactory information relative to equipment dimensions, weight, etc. Acceptance of all equipment specified or shown on the Drawings, or substitutions submitted for that specified or shown on the Drawings, will be granted if such equipment, in the opinion of the Architect/Engineer, conforms to the performance requirements, space conditions, weight requirements and quality requirements. Any additional construction and design costs incurred as a result of any accepted substitution shall be borne by the Contractor. The opinion and judgement of the Architect/Engineer shall be final, conclusive, and binding.
- 2.03 SHOP DRAWINGS
- A. Prepare and submit detailed Shop Drawings for materials, systems, and equipment as listed herein, including locations and sizes of all openings in floor decks, walls, and floors.
- B. The Work described in any Shop Drawing submission shall be carefully checked for all clearances (including those required for maintenance and servicing), field conditions, maintenance of architectural conditions, and proper coordination with all trades on the job. Each submitted Shop Drawing shall include a certification that all related job conditions have been checked and that no conflict exists.
- C. All drawings shall be submitted sufficiently in advance of field requirements to allow ample time for checking and resubmittal as may be required. All submittals shall be complete and contain all required and detailed information.
- D. Acceptance of any submitted data or Shop Drawings for material, equipment apparatus, devices, arrangements, and layout shall not relieve Contractor from responsibility of furnishing same of proper dimensions and weight, capacities, sizes, quantity, quality and installation details, to efficiently perform the requirements and intent of the Contract. Such acceptance shall not relieve Contractor from responsibility for errors, omissions, or inadequacies of any sort on submitted data or Shop Drawings.
- E. Each Shop Drawing shall contain the following information.
- Provide general information on each copy of the submittal.
 - Project title.
 - Reference to the applicable drawing and specification article.
 - Contractor and supplier identification, addresses and telephone numbers.
 - Submittal Date.
 - Certification that the contractor has reviewed the submittal.
 - Refer to individual specification sections for additional information requirements.
- F. Shop Drawing submittals shall be provided for each specific material, system, or equipment as identified herein.
- As a minimum, make submittals on the following items:
 - Raceways, conduit & wire

- Wiring devices and plates
 - Switchboards
 - Transformers
 - Panelboards
 - Fuses
 - Disconnect switches
 - Motor control centers
 - Motor controllers, starters, and contactors
 - Lighting fixtures, lamps
 - Instrumentation, metering equipment
 - Special systems - fire alarm, security, CCTV, intercom, etc.
2. Refer to individual specification sections for additional submittal requirements.

PART 3 - EXECUTION

- 3.01 INSTALLATION
- B. Follow manufacturer's instructions for installing, connecting, and adjusting all equipment. Provide one copy of such instructions to the Architect/Engineer before installing any equipment. Provide a copy of such instructions at the equipment during any work on the equipment. Provide all special supports, connections, wiring, accessories, etc.
- C. Use mechanics skilled in their trade for all work.
- D. Keep all items protected before and after installation. Clean up all debris.
- E. Before commencing Work, examine all adjoining, underlying, etc., Work on which this Work is in any way dependent for perfect workmanship and report any condition which prevents performance of first class work. Become thoroughly familiar with actual existing conditions to which connections must be made or which must be changed or altered.
- 3.02 PREMIUM TIME WORK
- A. The following Work shall be performed at night or weekend other than holiday weekends as directed and coordinated with the Owner.
- All tie-in, cut-over and modifications to the existing electrical system and other existing system requiring tie-ins or modifications shall be arranged and scheduled with the Owner to be done at a time as to maintain continuity of the service and not interfere with normal building operations.
- 3.03 EXCAVATION, TRENCHING AND BACKFILL
- A. Provide excavation for the Work. Excavate all material encountered, to the depths indicated on the drawings or required. Remove from the site, excavated materials not required or suitable for backfill. Provide grading, as may be necessary, to prevent surface water from flowing into trenches or other excavations. Remove any water accumulating therein. Provide sheeting and shoring as may be necessary for the protection of the Work and for the safety of personnel.
- B. Provide trenches of widths necessary for the proper execution of the Work. Grade bottom of the trenches accurately to provide uniform bearing and support the Work on undisturbed soil at every point along its entire length. Except where rock is encountered, do not excavate below the depths indicated. Where rock excavations are required, excavate rock to a minimum overdepth of four (4") inches below the trench depths indicated on the Drawings or required. Backfill overdepths in the rock excavation and unauthorized overdepths with loose granular, moist earth, thoroughly machine tamped, to a compaction level of at least 95 percent to standard proctor density or 75 percent relative density or as specified by the Architect. Whenever unstable soil that is incapable of properly supporting the Work, as determined by Architect/Engineer, is encountered in the bottom of the trench, remove soil to a depth required and backfill the trench to the proper grade with coarse sand, fine gravel, or other suitable material.
- C. Excavate trenches for utilities to a depth that will provide the following minimum depths of cover from existing grade or from indicated finished grade, whichever is lower, unless otherwise specifically shown.
- Primary electric service: four (4) feet (minimum)
 - Secondary electric service: two (2) feet (minimum)
 - Telephone service: two (2) feet (minimum)
- D. Trenches shall not be placed within ten (10) feet of foundation or soil surfaces which must resist horizontal forces.
- E. Do not backfill trenches until all required tests have been preformed and the installation observed by the Engineer. Comply with the requirements of other sections of these specifications. Backfill shall consist of non-expansive soil with limited porosity. Deposit in six (6") inch layers and thoroughly and carefully tamp until the Work has a cover of not less than one (1) foot. Backfill and tamp remainder of trench at twelve (12") inch intervals until complete. Uniformly grade the finished surface. Backfill and tamp with compaction at least equal to the surrounding area.
- 3.04 CUTTING, PATCHING AND REPAIRING
- A. The work shall be carefully laid out in advance. Where cutting, channeling, chasing or drilling of floors, walls, partitions, ceilings or other surfaces is necessary for the proper installation, support or anchorage of raceway, outlets or other equipment, the work shall be carefully done. Any damage to the building, piping, equipment or defaced finish plaster, woodwork, metalwork, etc. shall be repaired by skilled mechanics of the trades involved at no additional cost to the Owner.
- B. Where conduits, mounting channels, outlet, junction, or pull boxes are mounted on a painted surface, or a surface to be painted, they shall be painted to match the surface. Whenever support channels are cut, the bare metal shall be cold galvanized.
- 3.05 DEMOLITION AND CONTINUANCE OF EXISTING SERVICES
- A. All existing electrical services not specifically indicated to be removed or altered shall remain as they presently exist.
- B. Should any existing services interfere with new construction, the Contractor shall (after obtaining written approval from the Architect/Engineer) alter or reroute such existing equipment to facilitate new construction.
- C. Under no circumstances shall existing services be terminated or altered unless deemed necessary by the Architect/Engineer or specified herein; also, prior to altering any existing situation, the Contractor shall notify the Owner in writing giving two (2) weeks advance notice of planned alteration.
- D. It shall be solely the Contractor's responsibility to guarantee continuity of present facilities (with respect to damage or alteration due to new construction) and any unauthorized alteration to existing equipment shall be corrected by the Contractor to the Architect/Engineer's satisfaction at the Contractor's expense.
- 3.06 CLEANING UP
- A. Contractor shall take care to avoid accumulation of debris, boxes, crates, etc., resulting from the installation of his work.
- B. Contractor shall remove from the premises each day all debris, boxes, etc., and keep the premises clean.
- C. Contractor shall clean up all fixtures and equipment at the completion of the project.
- D. All switchboards, panelboards, wireways, trench ducts, cabinets and enclosures shall be thoroughly vacuumed clean prior to energizing equipment and at the completion of the project. Equipment shall be opened for observation by the Architect/Engineer as required.
- 3.07 WATERPROOFING
- A. Avoid, if possible, the penetration of any waterproof membranes such as roofs, machine room floors, basement walls, and the like. If such penetration is necessary, perform it prior to the waterproofing and furnish all steels or pitch-pockets required. Advise the Architect/Engineer and obtain written permission before penetrating any waterproof membrane, even where such penetration is shown on the Drawings.
- B. If Contractor penetrates any walls or surfaces after they have been waterproofed, he shall restore the waterproof integrity of that surface as directed by the Architect/Engineer at his own expense.
- 3.08 SUPPORTS
- A. Support work in accordance with the best industry practice and the following.
- B. Include supporting frames or racks extending from building structure for work indicated as being supported from walls where the walls are incapable of supporting the weight. In particular, provide such frames or racks in electric closets.
- C. Include supporting frames or racks for equipment, intended for vertical surface mounting, which is required in a free standing position.
- D. Supporting frames or racks shall be of standard angle, standard channel or specially support system steel members. They shall be rigidly bolted or welded together and adequately braced to form a substantial structure. Racks shall be of ample size to assure a workmanlike arrangement of all equipment mounted on them.
- E. Nothing, (including outlet, pull and junction boxes and fittings) shall depend on electric conduits, raceways, or cables for support, except that threaded hub type fittings having a gross volume not in excess of 100 cubic inches may be supported from heavy wall conduit, where the conduit is securely supported from the structure within five inches of the fitting on two opposite sides.
- F. Nothing shall rest on, or depend for support on, suspended ceilings media (tiles, lath, plaster, as well as splines, runners, bars and the like in the plane of the ceiling).
- G. Provide required supports and hangers for conduit, equipment, etc., so that loading will not exceed allowable loadings of structure.
- 3.09 FASTENINGS
- A. Fasten electric work to building structure in accordance with the best industry practice and the following.
- B. Floor or pad mounted equipment shall not be held in place solely by its own dead weight. Include anchor fastening in all cases.
- C. For items which are shown as being ceiling mounted at locations where fastening to the building construction element above is not possible, provide suitable auxiliary channel or iron bracing, tying to the building structural elements.
- 3.10 TESTING EQUIPMENT AND MATERIALS
- A. The Contractor shall provide all testing instruments, equipment and all materials, connections, labor, etc., required to perform tests.
- B. Test all circuits, fixtures, equipment, and systems for proper operation and freedom from grounds, shorts and open circuits before acceptance is requested.
- C. Measure voltage at panelboards and outlets after the building is fully occupied. Make final transformer tap adjustments based on these measurements.
- D. Perform all tests required by local authorities, such as tests of life safety systems, in addition to tests specified herein.
- E. Perform tests required by other specification sections.

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Professional Engineer
No. 73077
Date

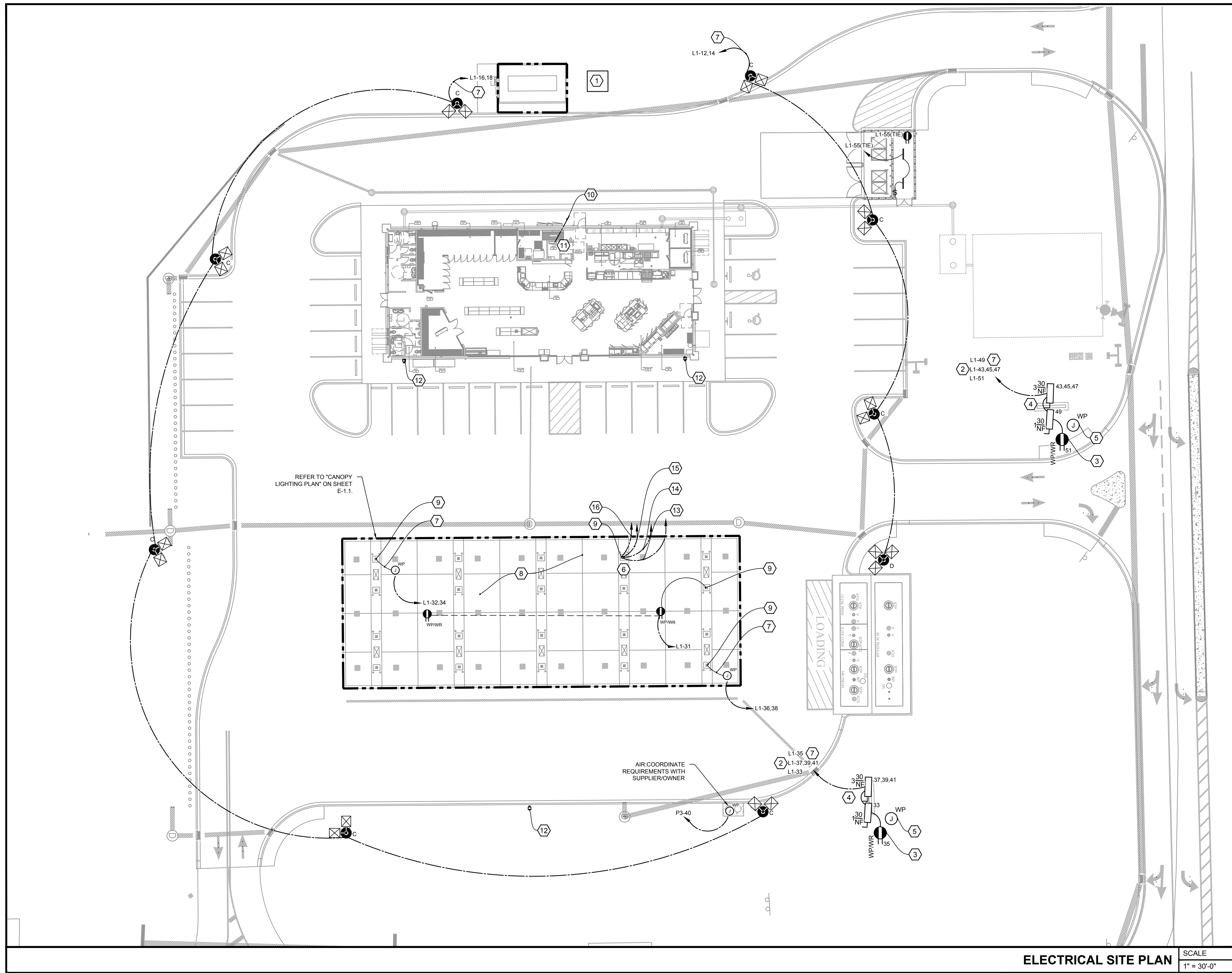
Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

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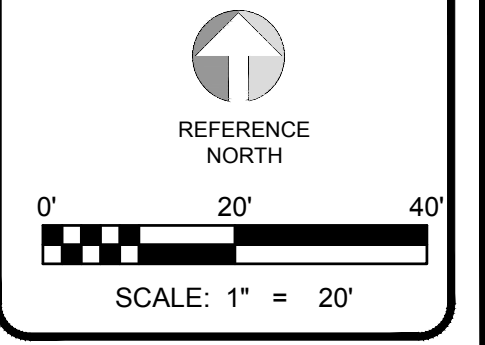


SHEET NOTES:

1. THE GENERAL CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO DETERMINE EXACT POINTS OF SERVICE CONNECTION AT EXISTING SITE UTILITIES. REFER TO THE BUILDING ELECTRICAL AND PLUMBING SHEETS FOR UTILITY SERVICE ENTRANCE LOCATIONS, SIZES AND CIRCUITING.
2. PROPOSED UTILITIES ARE SHOWN FOR SCHEMATIC ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY GENERAL CONTRACTOR FOR THE MOST ECONOMICAL INSTALLATION.
3. GENERAL CONTRACTOR SHALL SUPPLY ALL HOSE CONNECTIONS AND OTHER INSTALLATIONS, WHERE AIR GAP CANNOT BE ASSURED, WITH A CITY OF JURISDICTION APPROVED BACKFLOW PREVENTATIVE.
4. ID SIGN TO INCLUDE NON-FUSED DISCONNECT.
5. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH POWER COMPANY IN DETERMINING OUTLET LOCATION.
6. ALL ELECTRICAL CIRCUITS HAVE TO BE CLEARLY MARKED AS TO WHAT EACH CONTROLS.
7. ELECTRICAL CONTRACTOR TO PROVIDE AN ALTERNATE PRICE FOR ALL EXTERIOR/OUTSIDE LIGHT FIXTURES. SIGNS TO BE CONTROLLED BY PHOTOCELL WITH AN OVERRIDE SWITCH.
8. CONTRACTOR HAVE TO FURNISH A FILE SYSTEM FOR ALL EQUIPMENT AND MAINTENANCE OF EACH PIECE OF EQUIPMENT.
9. CONNECTIONS AND PROPOSED UTILITIES ARE SHOWN WHERE INTENDED TO BE CONSTRUCTED. ANY MOVEMENT OF THESE FACILITIES SHALL BE APPROVED BY THE DISTRICT ENGINEER PRIOR TO CONSTRUCTION.
10. CONTRACTOR TO PROVIDE ONE 3/4" CONDUIT FROM DISPENSER SPEAKER BOX TO CASHIER AREA.
11. CANOPY LIGHTING FIXTURES TO BE OF LED TYPE. FIXTURES ARE PROVIDED AND INSTALLED BY CANOPY SUPPLIER AND CIRCUITED BY ELECTRICAL CONTRACTOR.
12. ALL SITE LIGHTING CONDUITS TO BE SCHEDULED 80 ELECTRICAL UNDERGROUND.
13. ALL ELECTRICAL CONSTRUCTION IN THE AREA OF THE GASOLINE DISPENSER, GASOLINE TANK VENTS, AND UNDERGROUND STORAGE FUEL TANKS SHALL BE PER NEC ARTICLE 514 AND NFPA-30A.
14. ALL INTRINSICALLY SAFE (IS) WIRING SHALL BE PER NEC ARTICLE 504 AND ANSII/ISA RP 12.6. IN ADDITION, SPECIAL IS WIRING REQUIREMENTS FOR THE UNDERGROUND STORAGE FUEL TANK LEAK SENSORS INCLUDE SEPARATION FROM OTHER WIRING VIA SEPARATE RACEWAYS (INCLUDING TROUGHS) WHERE PRACTICAL, OR PERMANENTLY ATTACHED, GROUNDED DIVIDER.
15. UNDERGROUND STORAGE FUEL TANK LEAK MONITOR PANEL REQUIRES AN EQUIPMENT GROUND WIRE AND A BARRIER GROUND WIRE.

KEYED NOTES:

1. **POWER COMPANY TRANSFORMER:** INCLUDE ALL REQUIRED MATERIAL AND LABOR FOR A COMPLETE AND FULLY FUNCTIONAL POWER COMPANY PAD MOUNTED TRANSFORMER.
2. **ID/PRICER PORTION OF SIGN:** ID/PRICER SHALL ILLUMINATE CONTINUOUSLY.
3. **SIGN MAINTENANCE RECEPTACLE:** PROVIDE NEW WEATHER RESISTANT GFI, 20A, DUPLEX RECEPTACLE. PROVIDE METAL WHILE-IN-USE TYPE WEATHERPROOF COVER.
4. **MONUMENT SIGN:** PROVIDE A WEATHERPROOF LOCAL DISCONNECTING MEANS IF ONE IS NOT INCLUDED WITH SIGN PACKAGE DELIVERED TO SITE.
5. **SIGN DATA CABLE:** PROVIDE 1" CONDUIT W/ ID SIGN DATA CABLE. ROUTE TO POS EQUIPMENT IN C-STORE. COORDINATE W/ SIGN MANUFACTURER FOR REQUIREMENTS AND EXACT LOCATION.
6. **TOP OF CANOPY LOW VOLTAGE WIRING:** ALL TOP OF CANOPY LOW VOLTAGE CONDUCTORS SHALL BE IN CONDUIT. PROVIDE COMPLETE CONDUIT SYSTEMS TO SUPPORT LOW VOLTAGE SYSTEM REQUIREMENTS ON ARCHITECTURAL PLANS.
7. **CONTROL CIRCUIT FOR NIGHT OPERATION:** RUN THIS CIRCUIT VIA LIGHTING CONTACTOR IN UNITIZED GEAR. REFER TO OUTDOOR LIGHTING SCHEMATIC DETAIL #3 ON SHEET E5.0 FOR ADDITIONAL INFORMATION. FLORIDA ENERGY CODE LIGHTING SETBACK REQUIREMENTS PER C405.2.6.3. EXCLUDED TO COMPLY WITH FLORIDA STATUTE 812.173
8. **TOP OF CANOPY EQUIPMENT AND DEVICES:** COORDINATE EXACT LOCATION WITH CANOPY MANUFACTURER PRIOR TO START OF WORK.
9. **SEAL-OFF FITTING:** PROVIDE SEAL OFF FITTING FOR EACH CONDUIT WITHIN STEEL COLUMN AT HANDHOLE. REFER TO DETAIL 2 ON SHEET E5.0.
10. **TELEPHONE UTILITY SERVICE CONDUITS:** PROVIDE (2) 4" W/ NYLON PULL STRING FOR TELEPHONE SERVICE. ROUTE MINIMUM 30" BELOW GRADE FROM TELEPHONE SERVICE POINT AT EDGE OF PROPERTY LINE TO TELEPHONE BACKBOARD (TBB), STUB UP 6" ON EACH END AND PROVIDE TEMPORARY CAP. ROUTE CONDUIT BENDS IN LONG SWEEPS, DO NOT USE 90° ELBOWS. COORDINATE WITH TELEPHONE COMPANY FIELD REPRESENTATIVE FOR SERVICE REQUIREMENTS, EXACT ROUTING, AND LOCATION OF SERVICE POINT.
11. **TELEPHONE BACKBOARD:** REFER TO POWER PLAN FOR EXACT LOCATION. REFER TO DETAIL #1 ON SHEET E5.2.
12. **FUEL SYSTEM EMERGENCY FUEL SHUT OFF PUSHBUTTON STATION(EFSO):** REFER TO EFSO SCHEMATIC DETAIL 4 ON SHEET E5.0 FOR CONNECTIONS. REFER TO DETAIL 6 ON SHEET E5.0 FOR ADDITIONAL DETAILS. REFER TO TANK ELECTRICAL PLANS FOR EFSO PUSHBUTTON LOCATIONS.
13. **SPARE CANOPY CONDUITS:** PROVIDE (2) 1" CONDUITS FROM TOP OF CANOPY TO IT RACK LOCATION IN C-STORE.
14. **FUEL CANOPY CCTV CONDUIT:** PROVIDE A 1" CONDUIT FROM FUEL CANOPY TO VICINITY OF IT RACK AT C-STORE.
15. **FUEL CANOPY SOUND SYSTEM CONDUIT:** PROVIDE A 1" CONDUIT FROM FUEL CANOPY TO VICINITY OF IT RACK AT C-STORE.
16. **FUEL CANOPY SATELLITE DISH CONDUIT:** PROVIDE A 1" CONDUIT FROM FUEL CANOPY FOR SATELLITE DISH.



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Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
ELECTRICAL SITE PLAN

SITE LIGHTING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL NUMBER	MOUNTING HEIGHT	ARRANGEMENT	LAMP	VOLTAGE	TOTAL WATTAGE
C	COMMERCIAL MEDIUM TWO HEAD @90 DEGREE AREA LIGHT, 28L, TYPE FT, 5K CCT, CONCRETE POLE	LSI INDUSTRIES	MRL-LED-65L-SIL-FT-50-70CRI-D90	25'	2 @ 90 DEGREES	LED	208V	1554W
D	COMMERCIAL MEDIUM THREE HEAD @90 DEGREE AREA LIGHT, 28L, TYPE FT, 5K CCT, CONCRETE POLE	LSI INDUSTRIES	MRL-LED-65L-SIL-FT-50-70CRI-T90	25'	3 @ 90 DEGREES	LED	208V	1554W
WP	LED WALL PACK	LSI INDUSTRIES	XWM-FT-LED-08L-50	12'	WALL PACK	LED	208V	64W

NOTE: ALL AREA LIGHTS REQUIRING POLES SHALL BE PROVIDED WITH POLES AND POLE BASES TO MATCH OTHER CEFCO SITES IN THE STATE OF FLORIDA. POLE AND BASES SHALL BE PROVIDED TO MEET THE MINIMUM WIND LOADING REQUIREMENTS FOR THIS SPECIFIC SITE PER ASCE-7. INCLUDE ALL ACCESSORIES FOR COMPLETE AND FULLY FUNCTIONING AREA LIGHT ASSEMBLIES. ALL AREA POLE LIGHTS SHALL BE AIMED IN PRESENCE OF LUMINAIRE PROVIDER. PROVIDE EXACT LAYOUT REQUIRED TO ACHIEVE PHOTOMETRIC CALCULATION VALUES INDICATED IN THE LIGHTING MANUFACTURER'S SITE LIGHTING PHOTOMETRIC STUDY. THE MANUFACTURER'S PHOTOMETRIC STUDY SHALL GOVERN THIS SITE LIGHTING LAYOUT.

ELECTRICAL SITE WORK PHASING:
ELECTRICAL SITE WORK SHALL BE PHASED PER GC DIRECTIONS IN FIELD.

CCTV GENERAL NOTE:
EC SHALL PROVIDE 1" CONDUIT SYSTEMS FROM LIGHTING POLES THAT WILL HAVE CAMERAS MOUNTED ON THEM TO THE C-STORE IT RACK. EXACT QUANTITIES AND LOCATIONS OF LIGHT POLES WITH CCTV CAMERAS SHALL BE DETERMINED IN FIELD WITH OWNER REPRESENTATIVE AND CCTV PROVIDER.

AERIAL / EXTERIOR LIGHTS:
P.C - PHOTOCELL
T.C - TIMER CONTROLLED

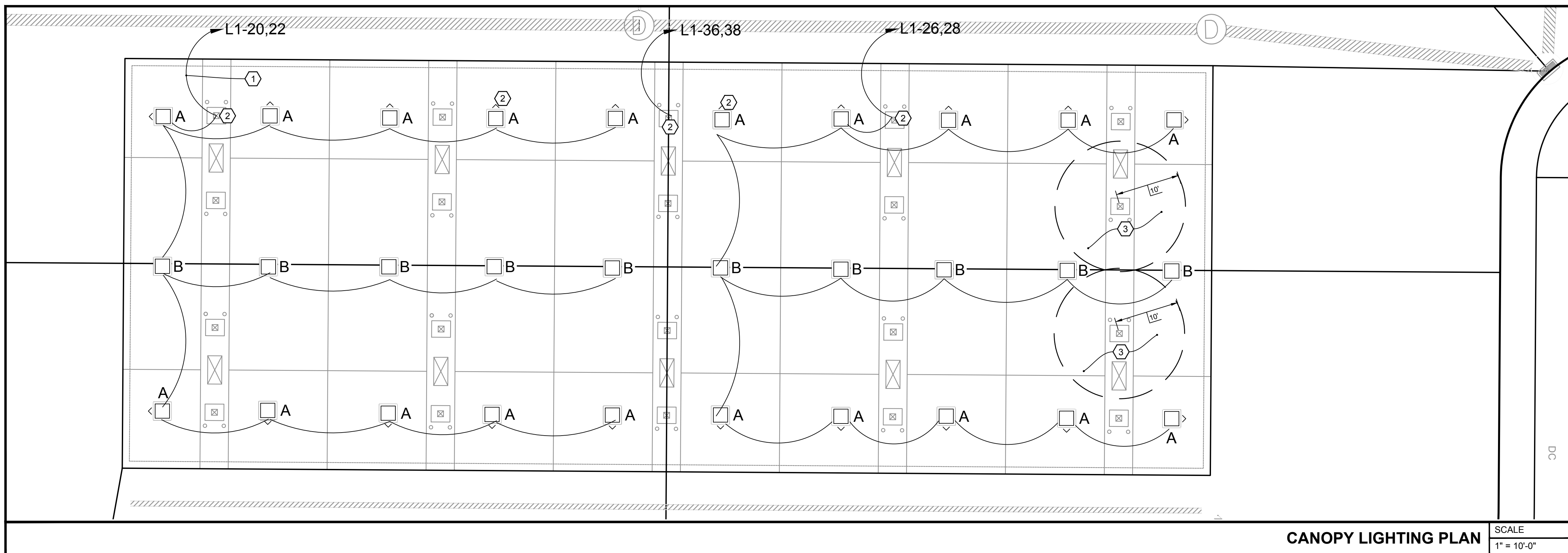
NOTE: TIMER CONTROLLED 24/7 DAYS OPERATIONAL WITH 10-HR BATTERY BACKUP POWER.
PHOTOCELL ON ALL OUTSIDE LIGHTING AND CANOPY LIGHTS UNLESS OTHERWISE NOTED.

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CANOPY LIGHTING PLAN
SCALE
1" = 10'-0"

- SHEET NOTES:**
1. VERIFY EXACT REQUIREMENTS FOR ELECTRICAL EQUIPMENT WITH OWNER FOR THIS PROJECT. IN THE CASE OF A DISCREPANCY BETWEEN THE ACTUAL SELECTION OF EQUIPMENT AND THESE DRAWINGS, ADVISE THE OWNER BEFORE WORK BEGINS.
 2. AS PER NEC ARTICLE 240.21 THE MAIN DISCONNECT MUST HAVE ADEQUATE SPACE FOR THE CONDUCTORS.
 3. COORDINATE ALL INSTALLATIONS W/ OTHER TRADES.
 4. CANOPY LIGHTING FIXTURES TO BE OF LED TYPE. FIXTURES ARE PROVIDED AND INSTALLED BY CANOPY SUPPLIER AND CIRCUITED BY ELECTRICAL CONTRACTOR.
 5. ALL ELECTRICAL CONSTRUCTION IN THE AREA OF THE GASOLINE DISPENSER, GASOLINE TANK VENTS, AND UNDERGROUND STORAGE FUEL TANKS SHALL BE PER NEC ARTICLE 514 AND NFPA-30A.
 6. ALL INTRINSICALLY SAFE (IS) WIRING SHALL BE PER NEC ARTICLE 504 AND ANSI/ISA RP 12.6. IN ADDITION, SPECIAL IS WIRING REQUIREMENTS FOR THE UNDERGROUND STORAGE FUEL TANK LEAK SENSORS INCLUDE SEPARATION FROM OTHER WIRING VIA SEPARATE RACEWAYS (INCLUDING TROUGHS) WHERE PRACTICAL, OR PERMANENTLY ATTACHED, GROUNDED DIVIDER.
 7. UNDERGROUND STORAGE FUEL TANK LEAK MONITOR PANEL REQUIRES AN EQUIPMENT GROUND WIRE AND A BARRIER GROUND WIRE.

- KEYED NOTES:**
- ① CONTROL CIRCUIT FOR NIGHT OPERATION. RUN THIS CIRCUIT VIA LIGHTING CONTACTOR IN UNITIZED GEAR. REFER TO OUTDOOR LIGHTING SCHEMATIC DETAIL #3 ON SHEET E5.0 FOR ADDITIONAL INFORMATION. PROVIDE NON FUSED DISCONNECT FOR SIGN.
 - ② SEAL-OFF FITTING: PROVIDE SEAL OFF FITTING FOR EACH CONDUIT WITHIN STEEL COLUMN AT HANDHOLE. REFER TO DETAIL 2 ON SHEET E5.0.
 - ③ HAZARDOUS CLASSIFIED AREA: VENTS FOR REGULAR, PREMIUM UNLEADED AND DIESEL ARE IN A HAZARDOUS CLASSIFIED AREA. AVOID ANY CONDUIT RUNS THROUGH CANOPY HAZARDOUS CLASSIFIED AREAS. IF UNAVOIDABLE, THE CONDUIT SYSTEM WILL REQUIRE A SEAL-OFF FITTING BEFORE ENTERING THE HAZARDOUS CLASSIFIED AREA AND UPON LEAVING THE HAZARDOUS CLASSIFIED AREA. EXACT LOCATION SHALL BE COORDINATED WITH OWNER.

SITE CANOPY LIGHTING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL NUMBER	MOUNTING HEIGHT	ARRANGEMENT	LAMP	VOLTAGE	TOTAL WATTAGE
B	LEGACY LED CANOPY LIGHT, STANDARD SYMMETRIC, VERY HIGH OUTPUT 5000K COOL WHITE	LSI INDUSTRIES	CRUS-SC-LED-VHO-50	17'	SINGLE	LED	208V	160W
A	LEGACY LED CANOPY LIGHT, STANDARD SYMMETRIC, VERY HIGH OUTPUT 5000K COOL WHITE	LSI INDUSTRIES	CRUS-SCFT-LED-VHO-50	17'	SINGLE	LED	208V	160W

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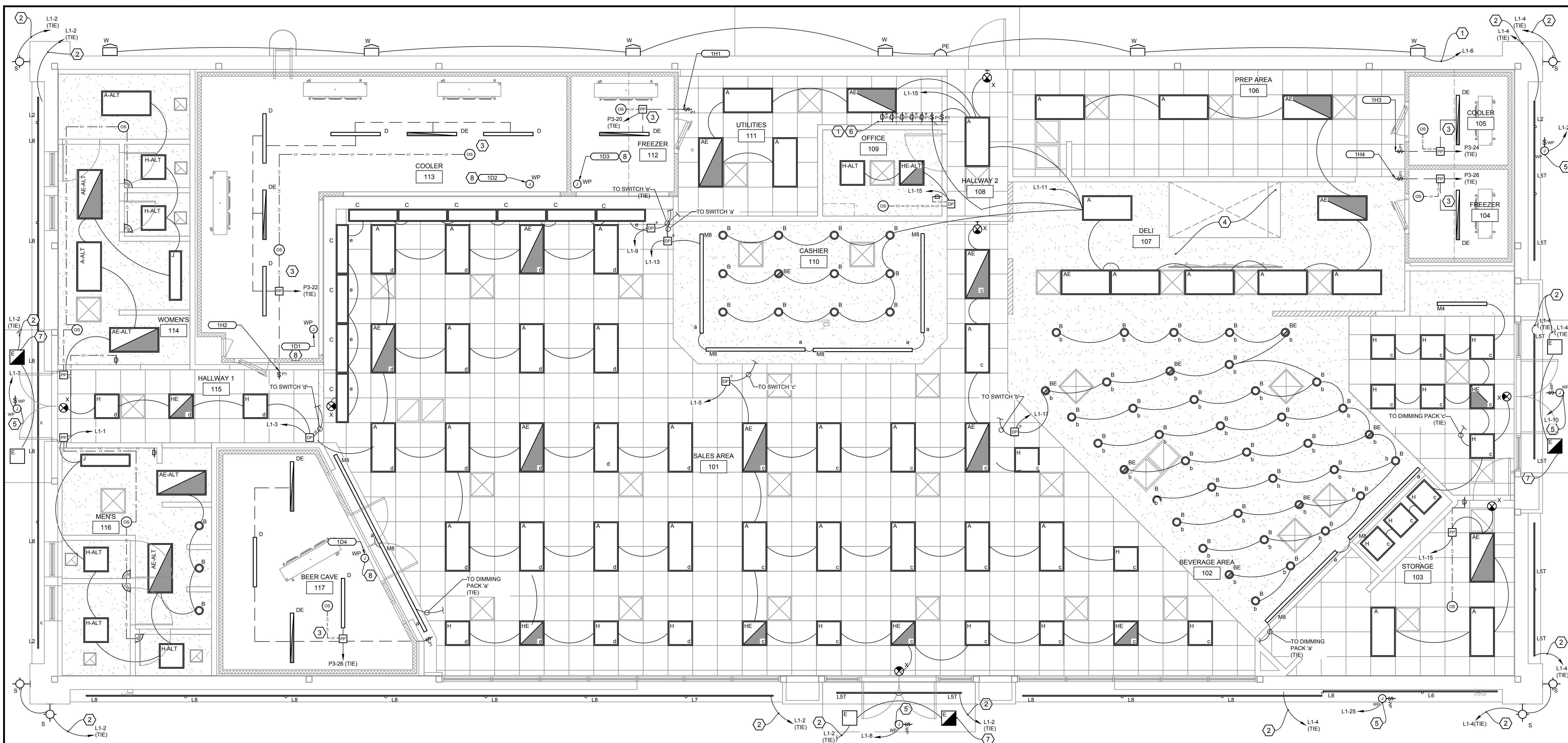
Sheet Title
CANOPY LIGHTING PLAN

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ELECTRICAL LIGHTING PLAN - CONVENIENCE STORE SCALE 1/4" = 1'-0"

SENSOR SCHEDULE						
TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	MOUNTING	RATINGS	NOTES
OC	OCCUPANCY SENSOR - CORNER MOUNT, PASSIVE INFRARED, DLM	WATTSTOPPER	LMPX-100	CORNER CEILING	UP TO 45' @ 10' MNT HGT	
OC	OCCUPANCY SENSOR - 360 DEGREE, PASSIVE INFRARED, DLM	WATTSTOPPER	LMPC-100	CEILING	15' RADIAL @ 10' MNT HGT	
DS	DIGITAL WALL SWITCH, ONE-BUTTON, ON/OFF, DLM	WATTSTOPPER	LMSW-101	WALL	--	
DS	DIGITAL WALL SWITCH, ONE-BUTTON, 2HR OVERRIDE, DLM ORDER CUSTOM ENGRAVED BUTTON: "2HR OVERRIDE" PROGRAM BUTTON: 2HR OVERRIDE ON FOR TIME-OF-DAY CONTROLLED LIGHTS	WATTSTOPPER	LMSW-101	WALL	--	
DS	DIGITAL WALL SWITCH, ON/OFF/RAISE/LOWER, DLM	WATTSTOPPER	LMDM-101	WALL	--	
DP	DIMMING PACK: DIGITAL ON/OFF/RAISE/LOWER 0-10V DIMMING ROOM CONTROLLER, ONE, TWO, OR THREE RELAY, DLM	WATTSTOPPER	ONE RELAY: LMRC-211 TWO RELAY: LMRC-212 THREE RELAY: LMRC-213	ABOVE CEILING	@120V, 20A", 1HP @277V, 20A", 1HP **16A FOR E-BALLAST, TOTAL LOAD PER ROOM CONTROLLER	NOTE 1
PP	POWER PACK: DIGITAL ON/OFF NON-DIMMING ROOM CONTROLLER, ONE OR TWO RELAY, DLM	WATTSTOPPER	ONE RELAY: LMRC-101 TWO RELAY: LMRC-102	ABOVE CEILING	@120V, 20A", 1HP @277V, 20A", 1HP **16A FOR E-BALLAST, TOTAL LOAD PER ROOM CONTROLLER	NOTE 1

GENERAL NOTES:
A. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT NECESSARILY BE REFLECTED IN CATALOG NUMBER AND/OR DESCRIPTION IN THE SCHEDULE.
B. PROVIDE ALL LIGHTING CONTROL COMPONENTS TO PERFORM FUNCTION AS DESCRIBED ON THESE PLANS. PROVIDE ALL BRIDGES, GATEWAYS, POWER SUPPLIES, POWER PACKS / ROOM CONTROLLERS, ACCESSORIES, AND PROGRAMMING FOR A COMPLETE AND FULLY FUNCTIONAL LIGHTING CONTROL SYSTEM. LIGHTING CONTROLS ARE INDICATED FOR DESIGN INTENT ONLY. EC SHALL PROVIDE SHOP DRAWINGS AND PRODUCT CUTSHEETS FOR REVIEW BY THE ENGINEER. PROVIDE DETAILED DESCRIPTIONS OF LIGHTING FUNCTIONS FOR EACH ROOM.
C. PROVIDE ALL PROGRAMMING, COMMISSIONING, AND TRAINING OF LIGHTING CONTROLS AS REQUIRED BY THESE PLANS, OWNER AND LANDLORD REQUIREMENTS, AND ENERGY CODE.
D. LIGHTING CONTROL SYSTEM FUNCTIONAL TESTING SHALL BE PROVIDED AND DOCUMENTS CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET THE PERFORMANCE CRITERIA OF THE PLANS AND SPECIFICATIONS SHALL BE PROVIDED TO THE OWNER AND ENGINEER WITHIN 90 DAYS FROM THE DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY.
E. POWER PACKS / ROOM CONTROLLERS ARE INDICATED ON PLANS AS SINGLE RELAY UNITS FOR CLARITY ONLY. MULTI-RELAY POWER PACKS / ROOM CONTROLLERS MAY BE USED IN LIEU OF SINGLE RELAY UNITS. COORDINATE WITH MANUFACTURER FOR SELECTIONS.

NOTES:
1. SELECT APPROPRIATE NUMBER OF CONTACTS BASED ON APPLICATION.

- KEYED NOTES:**
- MANUAL LIGHTING CONTROLS: MANUAL CONTROLS NOT LOCATED WHERE THE LIGHTS BEING CONTROLLED ARE VISIBLE SHALL HAVE LABELED INDICATION OF AREA SERVED AND A PILOT LIGHT TO INDICATE STATUS OF LIGHTS IN 'ON' AND 'OFF' STATES.
 - BUILDING LIGHTING CIRCUIT: ROUTE CIRCUIT VIA LIGHTING CONTACTORS IN CPI SWITCHGEAR.
 - WALK-IN COOLERS/FREEZERS: PROVIDE RACEWAYS, WIRING, AND ALL LIGHTING FIXTURES IN COOLER / FREEZER. COORDINATE THE INSTALLATION OF SWITCHES AND PLATES WITH THE EQUIPMENT SUPPLIER. REFER TO DETAIL #4 ON SHEET E2.1 FOR LOW TEMPERATURE OCCUPANCY SENSOR AND POWER PACK FOR AUTOMATED CONTROL OF LIGHTS. ALL PENETRATIONS IN WALK-IN/STEP-IN COOLERS/FREEZERS/BEER CAVE SHALL BE MADE THROUGH THE TOP OF THE BOX. MAKE ALL PENETRATIONS PER DETAIL 1 ON SHEET E5.1.
 - HOOD LIGHTS: REFER TO SHEET MC0.2 FOR HOOD LIGHTING.
 - SIGN: PROVIDE A WEATHER PROOF JUNCTION BOX FOR EXTERIOR SIGN. ROUTE CIRCUIT VIA "SIGNAGE LIGHTING ZONE" LIGHTING RELAY PANEL IN CPI SWITCHGEAR. REFER TO "OUTDOOR LIGHTING CONTROL SCHEMATIC", DETAIL #3 ON SHEET E5.0. PROVIDE WEATHERPROOF SWITCH FOR LOCAL DISCONNECTING MEANS IF ONE IS NOT INCLUDED INTEGRAL TO SIGN.
 - SWITCHBANK: PROVIDE PERMANENT ENGRAVED COVERPLATE INDICATING CONTROLLED AREA BELOW EACH LIGHT SWITCH.
 - EXTERIOR EMERGENCY EGRESS LIGHTING: CONNECT FIXTURES ABOVE ENTRANCE TO 100W EXTERNAL 90-MIN BATTERY BACKED EMERGENCY LIGHTING INVERTER, PHILIPS BODINE ELI-S-100 OR EQUAL. INSTALL ABOVE CPI SWITCHGEAR.
 - WALK-IN COOLER / FREEZER ANTHONY DOOR LIGHTING: COORDINATE WITH EQUIPMENT SUPPLIER FOR FINAL CONNECTION.

- SHEET NOTES:**
- HALF SHADED OR FULLY SHADED LUMINAIRES SHALL BE PROVIDED WITH SELF-CONTAINED 90-MINUTE BACK-UP BATTERY PACKS.
 - EMERGENCY LIGHTING FIXTURES SHALL SWITCH WITH LOCAL NORMAL LIGHTING UNLESS INDICATED AS "EM/IN" OR "NL" (NIGHT LIGHT).
 - EMERGENCY FIXTURES WITH INTEGRAL 90-MINUTE BATTERY PACKS SHALL BE PROVIDED WITH AN UN-SWITCHED HOT CONDUCTOR SO THAT EMERGENCY BATTERY PACK CAN CHARGE WHEN POWER TO THE LIGHT FIXTURES IS SWITCHED OFF.
 - EXIT AND NIGHT LIGHT FIXTURES SHALL BE CONNECTED TO UN-SWITCHED CIRCUIT AHEAD OF LIGHTING CONTROLLER.
 - LIGHT FIXTURES IN THE SAME ROOM SHALL HAVE THE SAME ORIENTATION.
 - THE CIRCUIT NEUTRAL CONDUCTOR SHALL BE ROUTED TO EACH LINE VOLTAGE WALL SWITCH, WHERE THE WIRING DEVICE DOES NOT REQUIRE THE USE OF A NEUTRAL CONDUCTOR, CAP FOR FUTURE USE.
 - REFER TO DETAIL #3 ON SHEET E5.0 FOR OUTDOOR LIGHTING CONTROL SCHEMATIC.
 - REFER TO ROOF PLAN FOR PHOTOCELL PROPOSED LOCATION AS WELL AS CONDUIT AND WIRING REQUIREMENTS.

No.	Revision/Issue	Date
1	ISSUE FOR PERMIT	05/31/2024

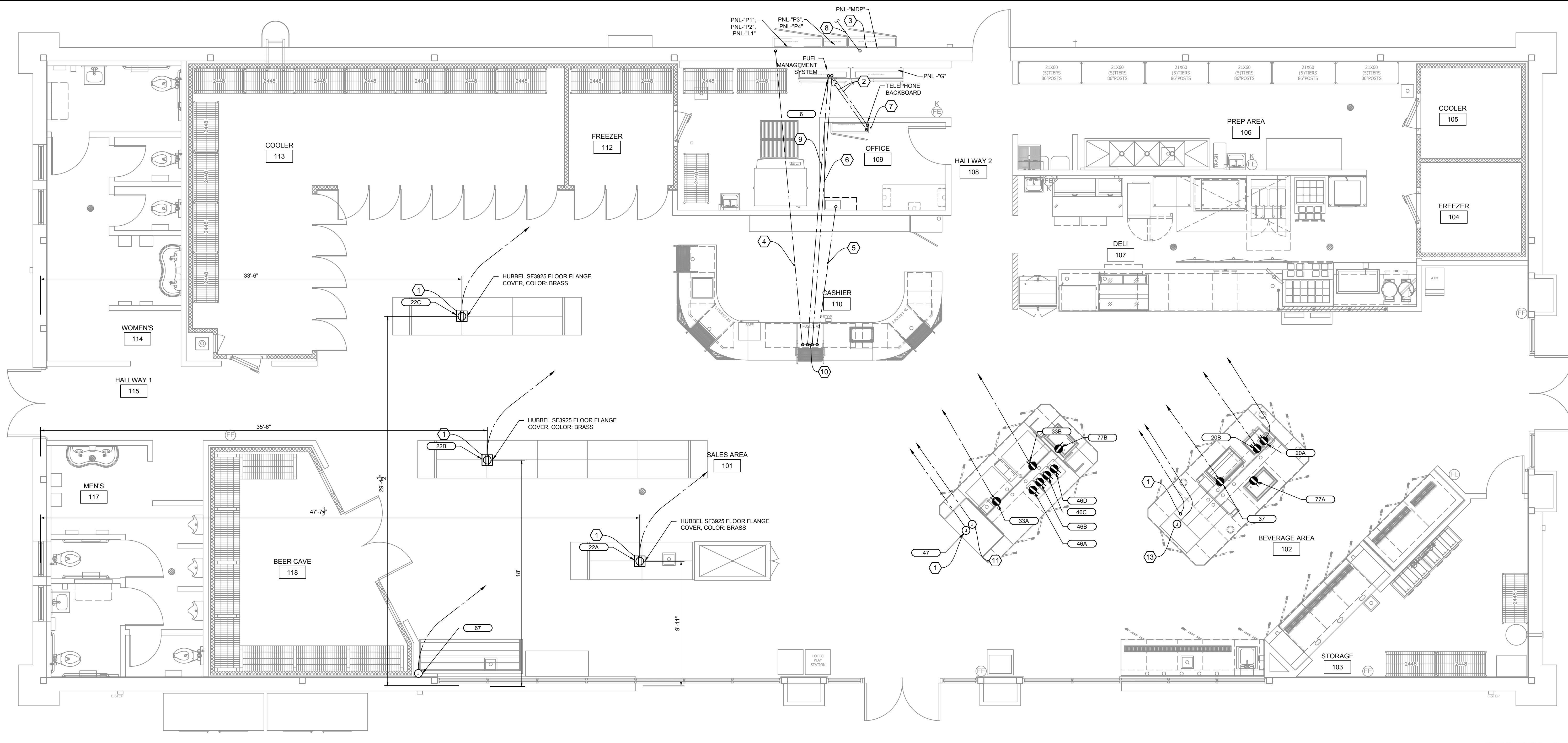
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Project Name and Address: **CEFCO #437 - BETHEL**
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title: **CEFCO ELECTRICAL LIGHTING PLAN**

Project No: 170-101.00
Sheet: **E2.0**
Reviewed By: _____



UNDERSLAB ELECTRICAL PLAN - CONVENIENCE STORE SCALE 1/4" = 1'-0"

- KEYED NOTES:**
- ① CONDUIT STUB-UP: COORDINATE EXACT STUB UP/RECEPTACLE LOCATION WITH EQUIPMENT VENDOR PRIOR TO START OF TRENCHING.
 - ② TELEPHONE SERVICE CONDUITS: REFER TO SITE ELECTRICAL PLAN FOR REQUIREMENTS AND ROUTING.
 - ③ CPI UNITIZED SWITCHGEAR: COORDINATE EXACT LOCATION WITH OTHER TRADES. REFER TO ELECTRICAL RISER DIAGRAM.
 - ④ CASHIER CONDUITS: ROUTE CONDUITS FOR CASHIER COUNTER EQUIPMENT POWER BELOW SLAB FROM ELECTRICAL PANELS TO CASHIER COUNTER.
 - ⑤ CASHIER COUNTER TO OFFICE CONDUIT: 2" W/ PULL STRING ROUTED BELOW SLAB FROM CASHIER COUNTER TO OFFICE. REFER TO LOW VOLTAGE PLAN.
 - ⑥ CASHIER COUNTER TO FUEL EQUIPMENT CONDUIT: 2" W/ PULL STRING ROUTED BELOW SLAB FROM CASHIER COUNTER TO FUEL EQUIPMENT IN UNITIZED SWITCHGEAR.
 - ⑦ TELECOMMUNICATIONS CABINET: CPI TELECOM CABINET WITH FIRE-RATED PLYWOOD BACKBOARD AND INTERSYSTEM GROUND BUS BAR. CONNECT GROUND BUS BAR TO BUILDING GROUNDING ELECTRODE SYSTEM WITH (1) #3/0 GROUND CONDUCTOR. COORDINATE WITH TELEPHONE COMPANY FOR REQUIREMENTS. COORDINATE WITH OWNER FOR FINAL LOCATION.
 - ⑧ C-STORE INCOMING FEEDERS: REFER TO SITE PLAN AND RISER DIAGRAM.
 - ⑨ EMERGENCY FUEL SHUT-OFF (EFSO) PUSHBUTTON: 3/4" CONDUIT FOR EFSO WIRING FROM CASHIER COUNTER TO DISPENSER DISCONNECT IN CPI SWITCHGEAR.
 - ⑩ CASHIER COUNTER CONDUITS: STUB CASHIER COUNTER UNDERGROUND LV CONDUITS INTO FLUSH MOUNT 12"x12" ENCLOSURE. INSTALL ENCLOSURE BELOW COUNTER. COORDINATE WITH MILLWORK PRIOR TO ROUGH-IN.
 - ⑪ MERCHANDISER EQUIPMENT: ROUTE 3/4" CONDUIT WITH CONTROL WIRING FROM MERCHANDISER TO REMOTE CONDENSER ON ROOF.
 - ⑫ NOT USED.
 - ⑬ CABINET LED: PROVIDE JUNCTION BOX FOR CABINET LED.

- GENERAL NOTES:**
1. CONTRACTOR SHALL REFER TO EQUIPMENT VENDOR, AND ARCHITECTURAL DRAWINGS FOR ALL REQUIRED ELECTRICAL DEVICES, DEVICE LOCATIONS, AND DEVICE MOUNTING HEIGHTS PRIOR TO BID / INSTALLATION. DRAWINGS ARE NOT TO BE SCALED.
 2. COORDINATE ELECTRICAL REQUIREMENTS, MOUNTING AND CONNECTIONS WITH ALL EQUIPMENT VENDORS PRIOR TO PURCHASING ELECTRICAL DEVICES.

THERE ARE ADDITIONAL UNDERGROUND CONDUITS THAT WILL BE REQUIRED FOR SITE, FUEL SYSTEMS AND OTHER MISCELLANEOUS ITEMS. IT IS THE RESPONSIBILITY OF THE GC TO PROVIDE THE EC WITH A COMPLETE SET OF PLANS. THE EC SHALL PROVIDE ALL UNDERGROUND CONDUIT SYSTEMS NEEDED FOR A COMPLETE AND FULLY FUNCTION BUILDING INCLUDING UNDERGROUND CONDUIT SYSTEMS

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 PROFESSIONAL ENGINEER
 STATE OF FLORIDA

Date _____

Project Name and Address
CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title
CEFCO UNDERSLAB ELECTRICAL PLAN

Project No.
 170-101.00

Drawn By
 E3.1

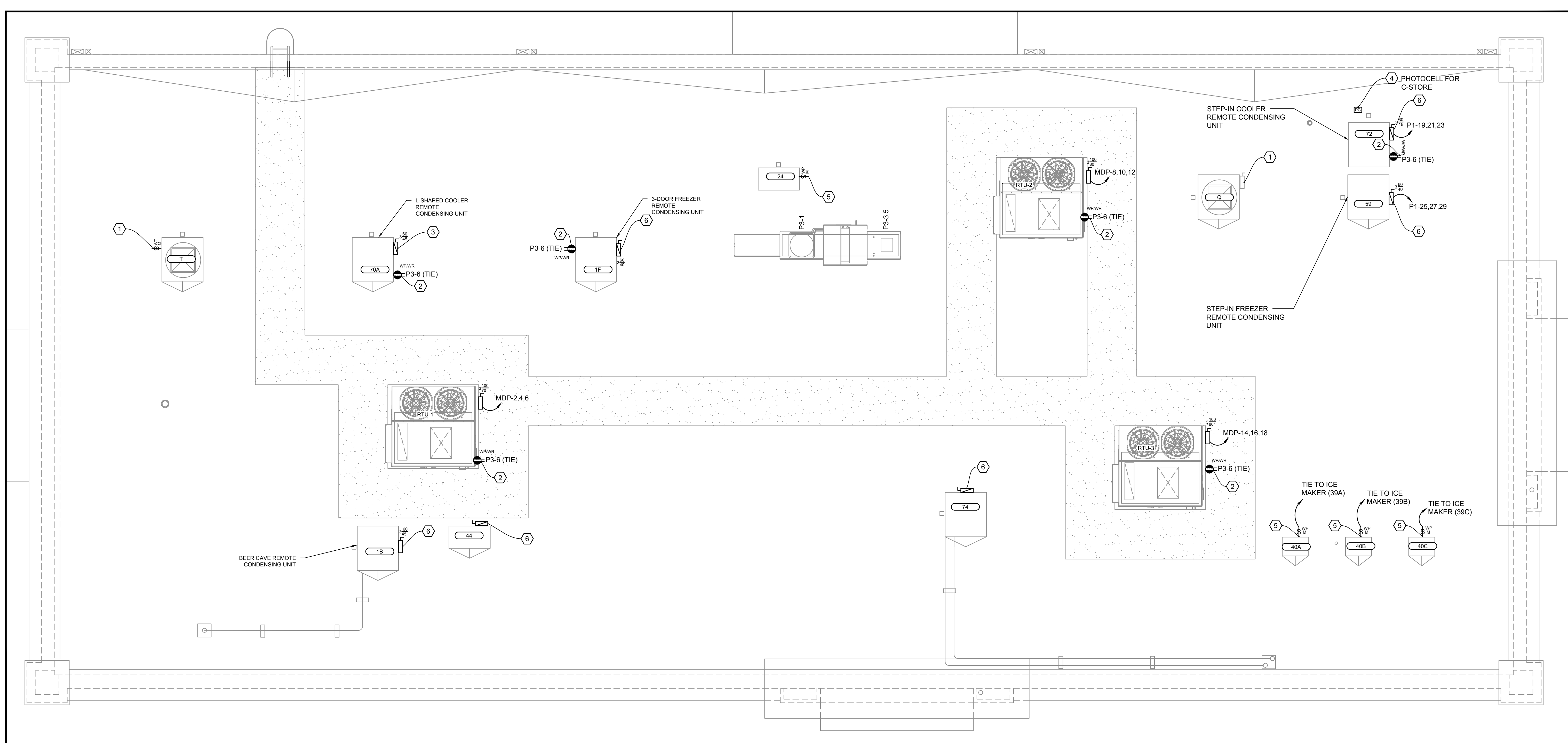
Reviewed By

ELECTRICAL EQUIPMENT SCHEDULE (CONTINUED):

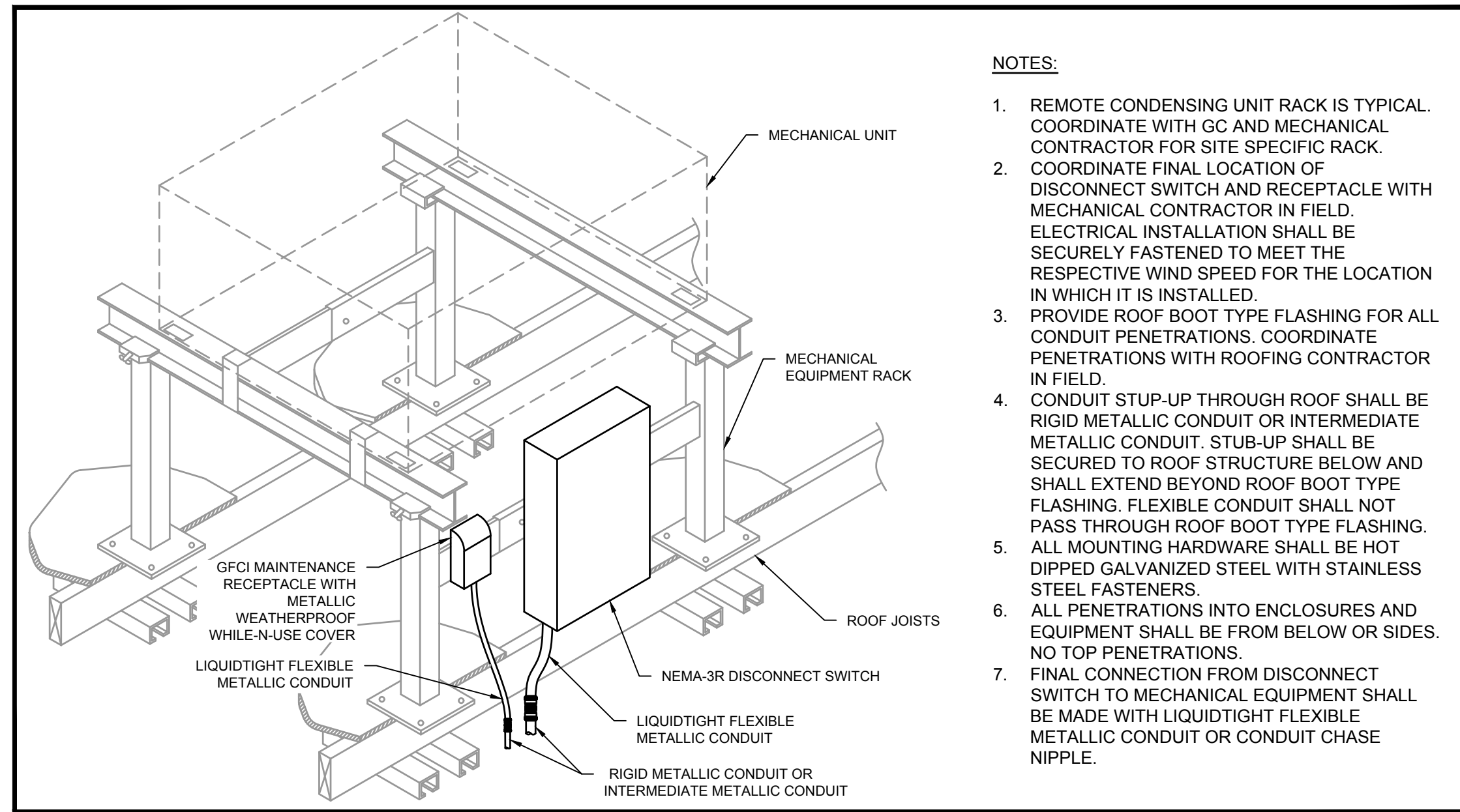
ITEM #	DESCRIPTION	MANUFACTURER	MODEL NUMBER	PHASE	VOLTAGE	AMPS	LOAD/W	CONNECTION TYPE	CIRCUIT #	MOUNTING HEIGHT (AFF)	REMARKS
88A	TV SCREEN	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-22(TIE)		
88B	TV SCREEN	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-22(TIE)		
88C	TV SCREEN	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-22(TIE)		
88D	TV SCREEN	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-22(TIE)		
35A	CUSTOMER KIOSK	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-11(TIE)		
35B	CUSTOMER KIOSK	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-11(TIE)		
35C	CUSTOMER KIOSK	AS PER OWNER		1	120	0.6	72	PLUG-IN	P4-11(TIE)		
58A	HAND DRYER	WORLD DRYER	VERDEDRI	1	120	12.2	1464	HARDWIRE	P3-23		
58B	HAND DRYER	WORLD DRYER	VERDEDRI	1	120	12.2	1464	HARDWIRE	P3-25		
58C	HAND DRYER	WORLD DRYER	VERDEDRI	1	120	12.2	1464	HARDWIRE	P3-27		
58D	HAND DRYER	WORLD DRYER	VERDEDRI	1	120	12.2	1464	HARDWIRE	P3-29		
71A	L-SHAPED COOLER - EVAPORATOR	LEER	CELO125AS6AMAD8749	1	120	1.8	216	HARDWIRED	P1-2(TIE)		
71B	L-SHAPED COOLER - EVAPORATOR	LEER	CELO125AS6AMAD8749	1	120	1.8	216	HARDWIRED	P1-2(TIE)		
71C	L-SHAPED COOLER - EVAPORATOR	LEER	CELO125AS6AMAD8749	1	120	1.8	216	HARDWIRED	P1-2(TIE)		
78A	HEATED DISPLAY MERCHANDISER	WASSERSTROM	6655	1	120	2.9	348	PLUG-IN	P2-6		
78B	HEATED DISPLAY MERCHANDISER	WASSERSTROM	6655	1	120	2.9	348	PLUG-IN	P2-8		
79A	2 SH STAND	BUNN	27875.0200	1	120	1.8	216	PLUG-IN	P2-10		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
79B	2 SH STAND	BUNN	27875.0200	1	120	1.8	216	PLUG-IN	P2-12		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
81	GLASS DOOR COOLER	EXCELLENCE	GDR-12HC	1	120	4	600	PLUG-IN	P3-9,11,13		
87A	DELL MONITOR	22" KDS	E2216HV	1	120	0.6	72	PLUG-IN	P4-39(TIE)		
87B	DELL MONITOR	22" KDS	E2216HV	1	120	0.6	72	PLUG-IN	P4-39(TIE)		

ELECTRICAL EQUIPMENT SCHEDULE:

ITEM #	DESCRIPTION	MANUFACTURER	MODEL NUMBER	PHASE	VOLTAGE	AMPS	LOAD/W	NEMA CONFIGURATION	CONNECTION TYPE	CIRCUIT #	MOUNTING HEIGHT (AFF)	REMARKS
1B	BEER CAVE REMOTE CONDENSING UNIT	LEER	CCH0030MCAZ0200	3	208	37.5	10808	-	HARDWIRED	P1-7,9,11	ROOF	
1C	BEER CAVE EVAPORATORS	LEER	CECO1180B56EAD8699	1	208	23.0	4968	-	HARDWIRED	P1-8,10	DOWN FROM ABOVE	ELECTRIC DEFROST
1D1	COOLER DOOR HEATERS/LTS - RM 113	ANTHONY	1018 NT 30X75 5DOOR	1	120	4.80	576	-	HARDWIRED	P3-8	DOWN FROM ABOVE	COORDINATE WITH DOOR SUPPLIER FOR FINAL CONNECTIONS
1D2	COOLER DOOR HEATERS/LTS - RM 112	ANTHONY	1018 NT 30X75 7DOOR	1	120	6.72	806	-	HARDWIRED	P3-10	DOWN FROM ABOVE	COORDINATE WITH DOOR SUPPLIER FOR FINAL CONNECTIONS
1D3	FREEZER DOOR HEATERS/LTS - RM 112	ANTHONY	1018 LT 30X75 3DOOR	1	120	2.88	346	-	HARDWIRED	P3-12	DOWN FROM ABOVE	COORDINATE WITH DOOR SUPPLIER FOR FINAL CONNECTIONS
1D4	BEER CAVE DOOR HEATERS/LTS - RM 118			1	120	2.88	346	-	HARDWIRED	P3-14	DOWN FROM ABOVE	COORDINATE WITH DOOR SUPPLIER FOR FINAL CONNECTIONS
1F	3 DOOR FREEZER - REMOTE COND. UNIT	LEER	CCH0045LBCZ0200	3	208	37	13330	-	HARDWIRED	P1-13,15,17	ROOF	ELECTRIC DEFROST
1G	3 DOOR FREEZER - EVAPORATOR	LEER	CELO130B56EAD8748	1	208	15	3120	-	HARDWIRED	P1-14,16	DOWN FROM ABOVE	EC MOTOR, ELECTRIC DEFROST
1H1	WIF DOOR HEATER AND LIGHTS - RM 112			1	120	12.5	1500	-	HARDWIRED	P3-20		
1H2	WIC DOOR HEATER AND LIGHTS - RM 113			1	120	12.5	1500	-	HARDWIRED	P3-22		
1H3	STEP-IN COOLER DOOR HTR & LTS RM 105			1	120	12.5	1500	-	HARDWIRED	P3-24		
1H4	STEP-IN FREEZER DOOR HTR & LTS RM 104			1	120	12.5	1500	-	HARDWIRED	P3-26		
4A	BAG-N-BOX	AS PER OWNER		1	120	3	360	5-20	PLUG-IN	P4-34	+80"	
4B	BAG-N-BOX	AS PER OWNER		1	120	3	360	5-20	PLUG-IN	P4-36	+80"	
5A	FOUNTAIN DISPENSER	CORNELIUS	FLAVOR FUSION	1	120	9.3	1116	5-20	PLUG-IN	P2-14		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER. RECEPTACLE SHALL BE MOUNTED BEHIND THE UNIT IN THE STORAGE ROOM.
5B	FOUNTAIN DISPENSER	CORNELIUS	FLAVOR FUSION	1	120	9.3	1116	5-20	PLUG-IN	P2-16		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER. RECEPTACLE SHALL BE MOUNTED BEHIND THE UNIT IN THE STORAGE ROOM.
5C	FOUNTAIN DISPENSER	CORNELIUS	FLAVOR FUSION	1	120	9.3	1116	5-20	PLUG-IN	P2-18		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER. RECEPTACLE SHALL BE MOUNTED BEHIND THE UNIT IN THE STORAGE ROOM.
6A	FUEL MANAGEMENT SYSTEM	AS PER OWNER		1	120	3	360	5-20	PLUG-IN	P4-42 (TIE)		
6B	FUEL MANAGEMENT SYSTEM	AS PER OWNER		1	120	3	360	5-20	PLUG-IN	P4-42 (TIE)		
6C	FUEL MANAGEMENT SYSTEM	AS PER OWNER		1	120	3	360	5-20	PLUG-IN	P4-42 (TIE)		
7A	CASH REGISTER	AS PER OWNER		1	120	1.67	200	5-20	PLUG-IN	MV-2 (TIE)	UNDER COUNTER	CONNECTED TO MAC VICTOR UPS
7B	CASH REGISTER	AS PER OWNER		1	120	1.67	200	5-20	PLUG-IN	MV-2 (TIE)	UNDER COUNTER	CONNECTED TO MAC VICTOR UPS
7C	CASH REGISTER	AS PER OWNER		1	120	1.67	200	5-20	PLUG-IN	MV-3	UNDER COUNTER	CONNECTED TO MAC VICTOR UPS
8A	CREDIT CARD	AS PER OWNER		1	120	1.67	200	5-20	PLUG-IN	-	UNDER COUNTER	PLUG INTO CASH REGISTER 7A RECEPTACLE
8B	CREDIT CARD	AS PER OWNER		1	120	1.67	200	5-20	PLUG-IN	-	UNDER COUNTER	PLUG INTO CASH REGISTER 7B RECEPTACLE
8C	CREDIT CARD	AS PER OWNER		1	120	1.67	200	5-20	PLUG-IN	-	UNDER COUNTER	PLUG INTO CASH REGISTER 7B RECEPTACLE
10	LOTTO MACHINE	AS PER OWNER		1	120	1.67	200	5-20	PLUG-IN	P4-20		
11	UNDER COUNTER SAFE	ARMOR	CS 7100	1	120	3.33	400	5-20	PLUG-IN	P4-16	UNDER COUNTER	
11A	UNDER COUNTER SAFE	ARMOR	CS 7100	1	120	3.33	400	5-20	PLUG-IN	P4-24	UNDER COUNTER	
13A	TEA BREWER	BUNN	ITB-DBC DUAL	1	120	14	1680	5-20	PLUG-IN	P2-20		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER. 2WIRES PLUS GND
13B	TEA BREWER	BUNN	ITB-DBC DUAL	1	120	14	1680	5-20	PLUG-IN	P2-22		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER. 2WIRES PLUS GND
17	CAPPUCCINO MACHINE	BUNN	IMIX-5	1	120	15	1800	5-20	PLUG-IN	P2-23		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER. 2WIRES PLUS GND
18A	COFFEE BREWER	-	OWNER PROVIDED	1	208	20	4160	-	PLUG-IN	P2-28,30		EC TO COORDINATE WITH MANUFACTURER FOR CIRCUIT BREAKER SIZE PRIOR TO INSTALLATION. REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
18B	COFFEE BREWER	-	OWNER PROVIDED	1	208	20	4160	-	PLUG-IN	P2-32,34		EC TO COORDINATE WITH MANUFACTURER FOR CIRCUIT BREAKER SIZE PRIOR TO INSTALLATION. REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
19	HEATED DISPLAY CASE	HATCO	GRSDS-36T	1	120	15	1752	L14-20	PLUG-IN	P1-1		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
20A	MICROWAVE	VOLLRATH	MWA7025	1	120	12.1	1452	5-20	PLUG-IN	P2-37		
20B	MICROWAVE	VOLLRATH	MWA7025	1	120	12.1	1452	5-20	PLUG-IN	P2-39		
21	DRAWER WARMER	ALTO SHAM	500-2D	1	120	5.3	636	5-20	PLUG-IN	P3-17		
22A	GONDOLA RECEPTACLE			1	120	3	360	5-20	PLUG-IN	P4-26	FLOOR	
22B	GONDOLA RECEPTACLE			1	120	3	360	5-20	PLUG-IN	P4-28	FLOOR	
22C	GONDOLA RECEPTACLE			1	120	3	360	5-20	PLUG-IN	P4-30	FLOOR	
23	ICE MAKER	HOSHIZAKI	KM-1601SRH	1	208	12.8	2662	-	HARDWIRED	P1-31,33		3 WIRE WITH NEUTRAL
24	ICE MAKER CONDENSER	HOZHIZAKI	URC-22F	1	120	-	-	-	HARDWIRED	P1-33	ROOF	POWER PROVIDED FROM ICE MAKER [23]
25	ICE BAGGER	KLOPPENBERG	DISP-1000	1	120	8.8	1056	5-20	PLUG-IN	P3-21		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
26	ATM - ANY CARD	AS PER OWNER		1	120	11.5	1380	5-20	PLUG-IN	P4-1		COORDINATE WITH EQUIP. MANUF. FOR RECEPTACLE REQUIREMENTS
27	PIZZA PREPARATION REFRIGERATOR	TRAUSLEN	TB046SL3S	1	115	10	1200	5-15	PLUG-IN	P4-21		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
29A	FROZEN CARBONATED BEV MC	BUNN	58000.0011	1	120	12	1440	5-20	PLUG-IN	P4-23		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
29B	FROZEN CARBONATED BEV MC	BUNN	58000.0011	1	120	12	1440	5-20	PLUG-IN	P3-37		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
33A	HOT DOG GRILL	STAR	75SCBDE	1	120	14.4	1728	5-20	PLUG-IN	P2-36		
33B	HOT DOG GRILL	STAR	75SCBDE	1	120	14.4	1728	5-20	PLUG-IN	P2-38		
36	SANDWICH PREP	KELVINATOR	KCHMT29.12	1	120	2	240	5-20	PLUG-IN	P2-19		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
37	REFRIGERATED COUNTER DISPLAY	VOLLRATH	40682	1	120	3.9	468	5-20	PLUG-IN	P4-29		
38	HEATED DISPLAY CASE	ALTO SHAM	ED2-48-SJ	1	208	13.3	3300	L14-20	PLUG-IN	P4-31,33		
39A	ICE MAKER	HOSHIZAKI	FD-1002MAJ-C	1	120	13.7	1644	-	HARDWIRED	P1-35 (TIE)		
39B	ICE MAKER	HOSHIZAKI	FD-1002MAJ-C	1	120	13.7	1644	-	HARDWIRED	P1-37 (TIE)		
39C	ICE MAKER	HOSHIZAKI	FD-1002MAJ-C	1	120	13.7	1644	-	HARDWIRED	P1-39 (TIE)		
40A	ICE MAKER CONDENSER	HOSHIZAKI	URC-5F	1	120	-	-	-	HARDWIRED	P1-35 (TIE)		POWER SUPPLIED FROM ICE MAKER[39A]
40B	ICE MAKER CONDENSER	HOSHIZAKI	URC-5F	1	120	-	-	-	HARDWIRED	P1-37 (TIE)		POWER SUPPLIED FROM ICE MAKER[39B]
40C	ICE MAKER CONDENSER	HOSHIZAKI	URC-5F	1	120	-	-	-	HARDWIRED	P1-39 (TIE)		POWER SUPPLIED FROM ICE MAKER[39C]
43	BOHA FOOD LABEL MAKER	TRANSACT	ACCUDATE 9700	1	120	10	1200	5-20	PLUG-IN	P4-35		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
44	HUSSMAN REMOTE CONDENSING UNIT	TECUMEMSEH ARGUS	ASHR9512ZNAFP1	1	208	16.03	3335	-	HARDWIRED	P2-27,29		ROOF. PROVIDE 25A CIRCUIT BREAKER
46A	CHILI / CHEESE DISPENSER	GEHL'S		1	120	1.7	204	-	PLUG-IN	P4-37 (TIE)		
46B	CHILI / CHEESE DISPENSER	GEHL'S		1	120	1.7	204	-	PLUG-IN	P4-37 (TIE)		
46C	CHILI / CHEESE DISPENSER	GEHL'S		1	120	1.7	204	-	PLUG-IN	P4-37 (TIE)		
46D	CHILI / CHEESE DISPENSER	GEHL'S		1	120	1.7	204	-	PLUG-IN	P4-37 (TIE)		
47	MULTI-DECK MERCHANDISER (MEDIUM TEMP)	HUSSMAN	IM-05-EN4-R	1	120	1.2	144	-	HARDWIRED	P1-38		END PIECE
48	REF. PIZZA PREP TABLE	KELVINATOR	KCHPT72.9	1	120	7.5		5-20	PLUG-IN	P1-6		
49A	ICE MECHANDISER	POLAR TEMP	600AD	1	120	7.2	864	5-20	PLUG-IN	P1-24		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
49B	ICE MECHANDISER	POLAR TEMP	600AD	1	120	7.2	864	5-20	PLUG-IN	P1-26		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
50	GAS TANKLESS WATER HEATER - [GWH-1]	RHEEM	RTGH-CM95DVL	1	120	4	480	-	HARDWIRED	P4-21	ADJACENT TO UNIT	
53	HEATED DISPLAY CASE	ALTO SHAM	HSM-36/SS/T	1	208	16.7	3474	-	HARDWIRED	P2-15,17		
54	REFRIGERATED BASE	KELVINATOR	KCHC848R	1	120	3	360	5-20	PLUG-IN	P4-30		
55	DRINKING WATER FOUNTAIN	ELKAY	EZ2TL8C	1	120	3	360	5-20	PLUG-IN	P4-12		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
56	GAS DUAL FRYER	HENNY PENNY	OGA322	1	120	4	831	-	HARDWIRED	P2-4		
57	GAS GRIDDLE	AVANTCO	CAG-36-MG	1	120	4	831	-	HARDWIRED	P2-4		
59	STEP-IN FREEZER - CONDENSING UNIT	LEER	CCH0030LBCZ0200	3	208	28.8	8301	-	HARDWIRED	P1-25,27,29		END PIECE
60	DROP-IN HOT WALL	ALTO-SHAM	300HW D6	1	208	6.5	1352	-	HARDWIRED	P1-3.5		
63	EASIWASH WASH SYSTEM			1	208	19.2	3994	6-30	PLUG-IN	P3-28,30		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
65	MULTICOOK OVEN	ALTO SHAM	VMC I4	3	208	40	10.60	15-50	PLUG-IN	P2-1.3.5		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
66A	FLAT TORTILLA PLATE	WARING	WSC 300	1	120	15	1800	5-20	PLUG-IN	P2-21		
66B	SANDWICH PRESS	VOLLRATH	40972	1	120	15	1800	5-20	PLUG-IN	P2-25		
67	REMOTE COOLED CASE	HUSSMAN	RGD30 96 R	1	120	2.7	318	-	HARDWIRED	P3-16		REQUIRED GFCI PROTECTION PROVIDED BY GFCI BREAKER
68	STEP-IN FREEZER -EVAPORATOR	LEER	CEL0080B56EAD8750	1	208	10.1	1681	-	HARDWIRED	P1-20,22		ELECTRIC DEFROST
70	12 DOOR COOLER - CONDENSING UNIT	LEER	CCH0055MCAZ0100	3	208	27.5	9907	-	HARDWIRED	MDP-26,28,30		
72	STEP-IN COOLER - CONDENSING UNIT	LEER	CCH0009MCAZ0100	3	208	15	4323	-	HARDWIRED	P1-19,21,23		
73	STEP-IN COOLER - EVAPORATOR	LEER	CEL0060A56AMAD8701	1	120	1.8	216	-	HARDWIRED	P1-4		AIR DEFROST
74	HUSSMAN REMOTE CONDENSING UNIT	TECUMEMSEH ARGUS	ASHR9460ZNAFP1	1	208	7.9	1643	-	HARDWIRED	P2-31,33	ROOF	
77A												



ELECTRICAL ROOF PLAN - CONVENIENCE STORE SCALE 1/4" = 1'-0"



- NOTES:**
1. REMOTE CONDENSING UNIT RACK IS TYPICAL. COORDINATE WITH GC AND MECHANICAL CONTRACTOR FOR SITE SPECIFIC RACK.
 2. COORDINATE FINAL LOCATION OF DISCONNECT SWITCH AND RECEPTACLE WITH MECHANICAL CONTRACTOR IN FIELD. ELECTRICAL INSTALLATION SHALL BE SECURELY FASTENED TO MEET THE RESPECTIVE WIND SPEED FOR THE LOCATION IN WHICH IT IS INSTALLED.
 3. PROVIDE ROOF BOOT TYPE FLASHING FOR ALL CONDUIT PENETRATIONS. COORDINATE PENETRATIONS WITH ROOFING CONTRACTOR IN FIELD.
 4. CONDUIT STUP-UP THROUGH ROOF SHALL BE RIGID METALLIC CONDUIT OR INTERMEDIATE METALLIC CONDUIT. STUB-UP SHALL BE SECURED TO ROOF STRUCTURE BELOW AND SHALL EXTEND BEYOND ROOF BOOT TYPE FLASHING. FLEXIBLE CONDUIT SHALL NOT PASS THROUGH ROOF BOOT TYPE FLASHING.
 5. ALL MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL WITH STAINLESS STEEL FASTENERS.
 6. ALL PENETRATIONS INTO ENCLOSURES AND EQUIPMENT SHALL BE FROM BELOW OR SIDES. NO TOP PENETRATIONS.
 7. FINAL CONNECTION FROM DISCONNECT SWITCH TO MECHANICAL EQUIPMENT SHALL BE MADE WITH LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT OR CONDUIT CHASE NIPPLE.

ROOF REMOTE CONDENSING UNIT DISCONNECT AND RECEPTACLE DETAIL SCALE N.T.S. 1

- GENERAL NOTES:**
1. ALL CONTROL & POWER WIRING SHALL BE COORDINATED WITH EQUIPMENT SUPPLIERS.
 2. FINAL LOCATION OF EQUIPMENT SHALL BE COORDINATED WITH MECHANICAL CONTRACTOR.
 3. VERIFY NUMBER & SIZES OF CONDENSER UNITS WITH EQUIPMENT SUPPLIERS.

- KEYED NOTES:**
- (1) DISCONNECT: DISCONNECT FURNISHED WITH UNIT.
 - (2) ROOF MAINTENANCE RECEPTACLE: WEATHER RESISTANT GFCI DUPLEX RECEPTACLE IN WEATHERPROOF SURFACE MOUNTED METAL BELL BOX WITH METALLIC "IN-USE" COVER MOUNT ADJACENT TO DISCONNECT.
 - (3) REMOTE CONDENSER DISCONNECT: MOUNT 240V, NEMA-3R, HEAVY DUTY, NON-FUSIBLE DISCONNECT SWITCH ON RACK AT LOCATION DETERMINED BY EQUIPMENT INSTALLER. ROUTE LIQUID TIGHT FLEXIBLE METALLIC CONDUIT TO UNIT AS REQUIRED.
 - (4) PHOTOCELL FOR CEFCO: PROVIDE 1/2" CONDUIT FROM PROPOSED PHOTOCELL LOCATION TO CPI UNITIZED GEAR FOR SITE LIGHTING CONTROLS. INSTALL A 2 WIRE SHIELDED CABLE. REFER TO CPI UNITIZED GEAR SUBMITTALS.
 - (5) REMOTE ICE MAKER CONDENSER: PROVIDE WEATHERPROOF 1P-20A MOTOR RATED SWITCH MOUNTED ON CONDENSER.
 - (6) REMOTE CONDENSER FUSIBLE DISCONNECT: MOUNT 240V, NEMA-3R, HEAVY DUTY, FUSIBLE DISCONNECT SWITCH ON RACK AT LOCATION DETERMINED BY EQUIPMENT INSTALLER. ROUTE LIQUID TIGHT FLEXIBLE METALLIC CONDUIT TO UNIT AS REQUIRED. PROVIDE FUSES FOR DISCONNECT PER UNIT NAMEPLATE MAXIMUM OVERCURRENT PROTECTION (MOCP).

No.	Revision/Issue	Date
1	ISSUE FOR PERMIT	05/31/2024

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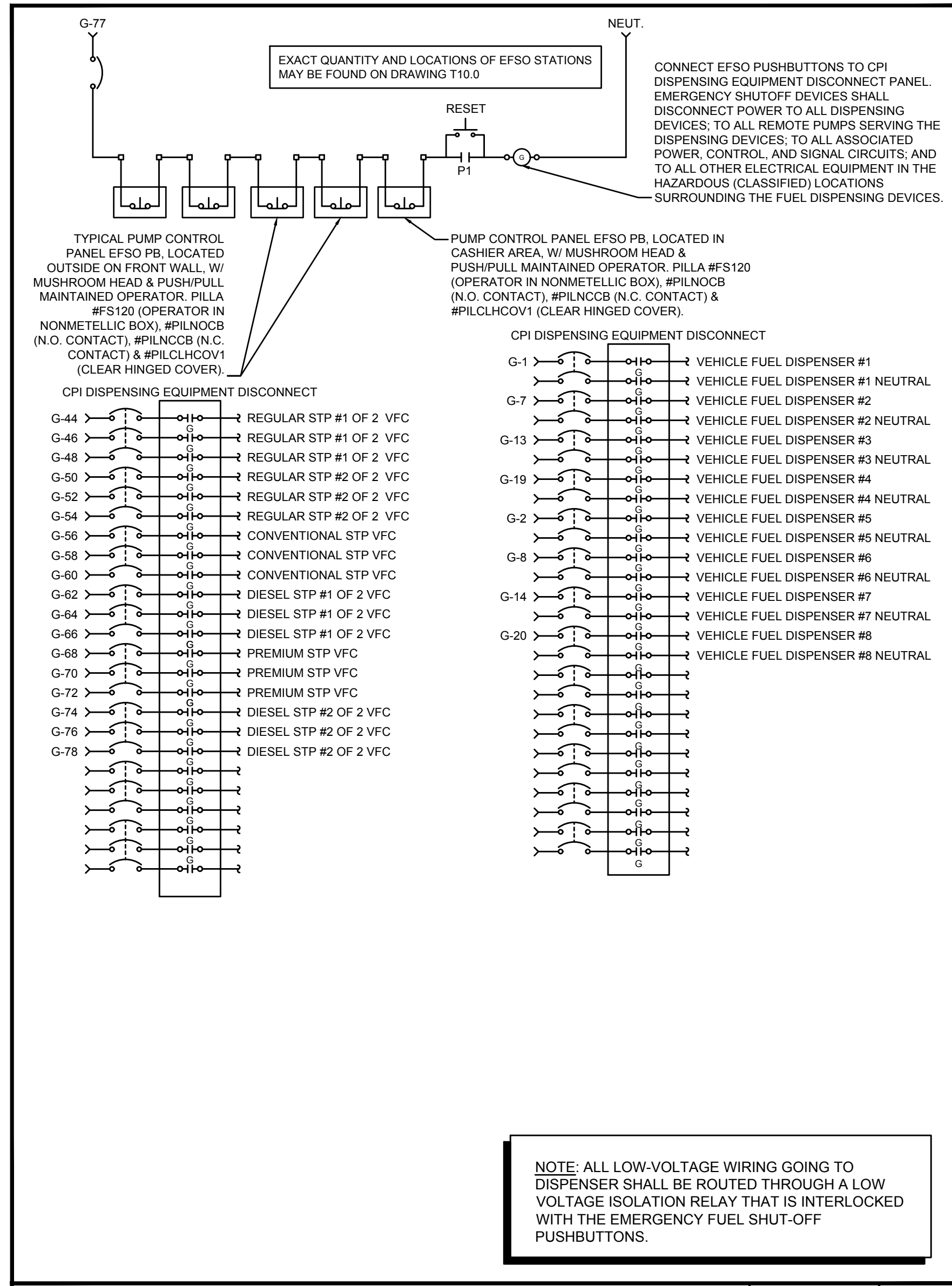
Date

Project Name and Address
CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

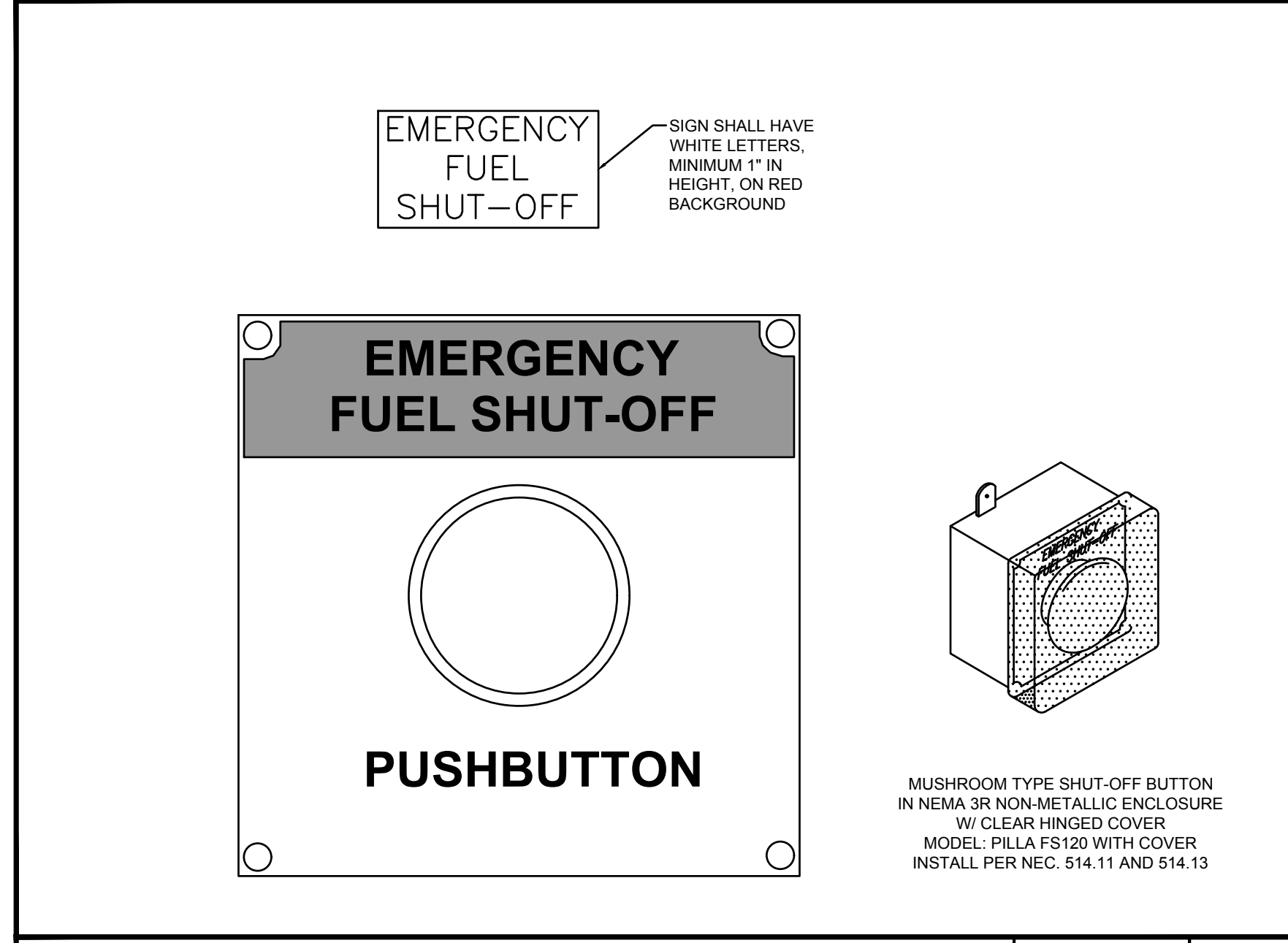
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CEFCO ELECTRICAL ROOF PLAN

Project No. 170-101.00
 Drawn By
 Reviewed By

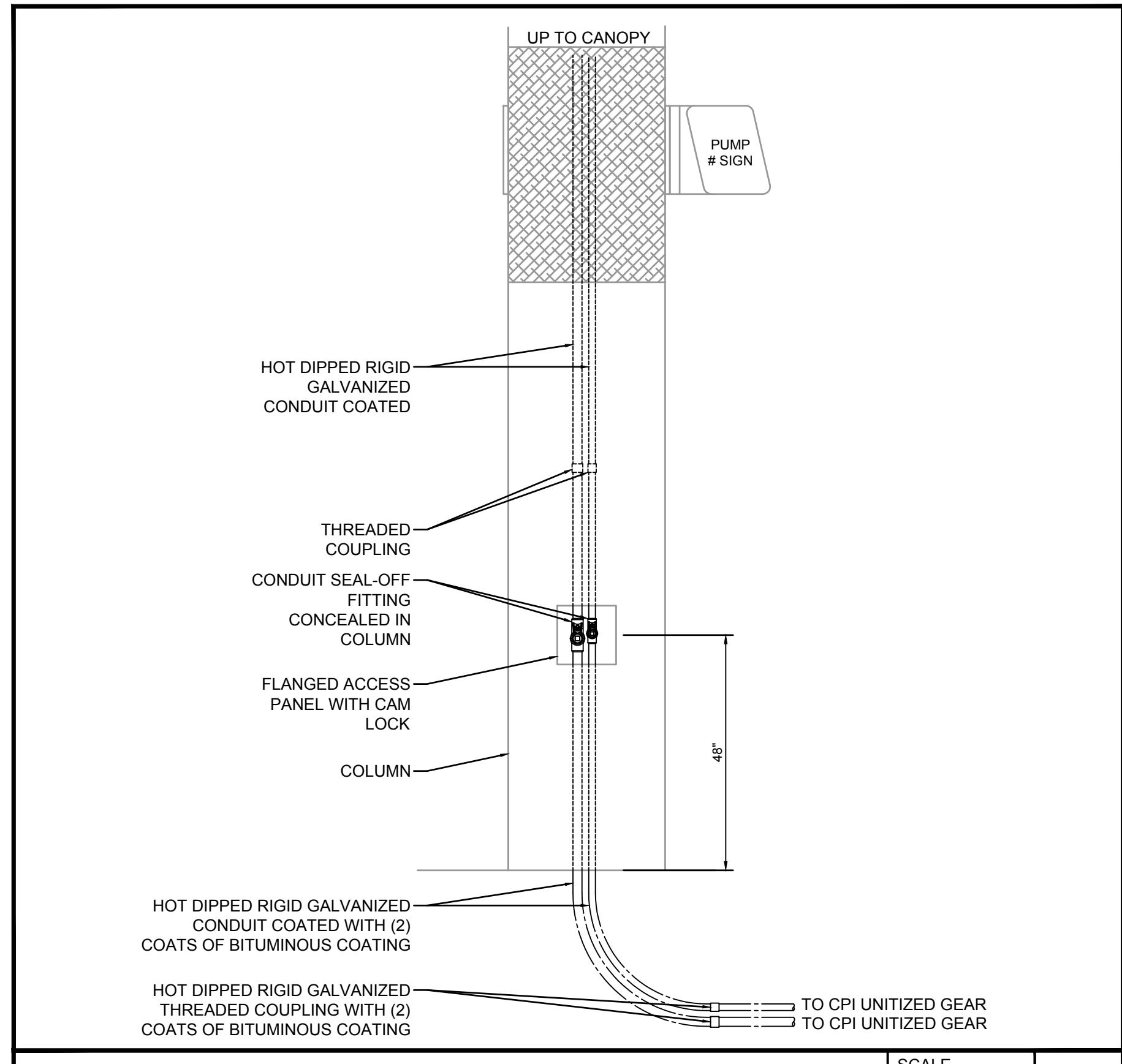
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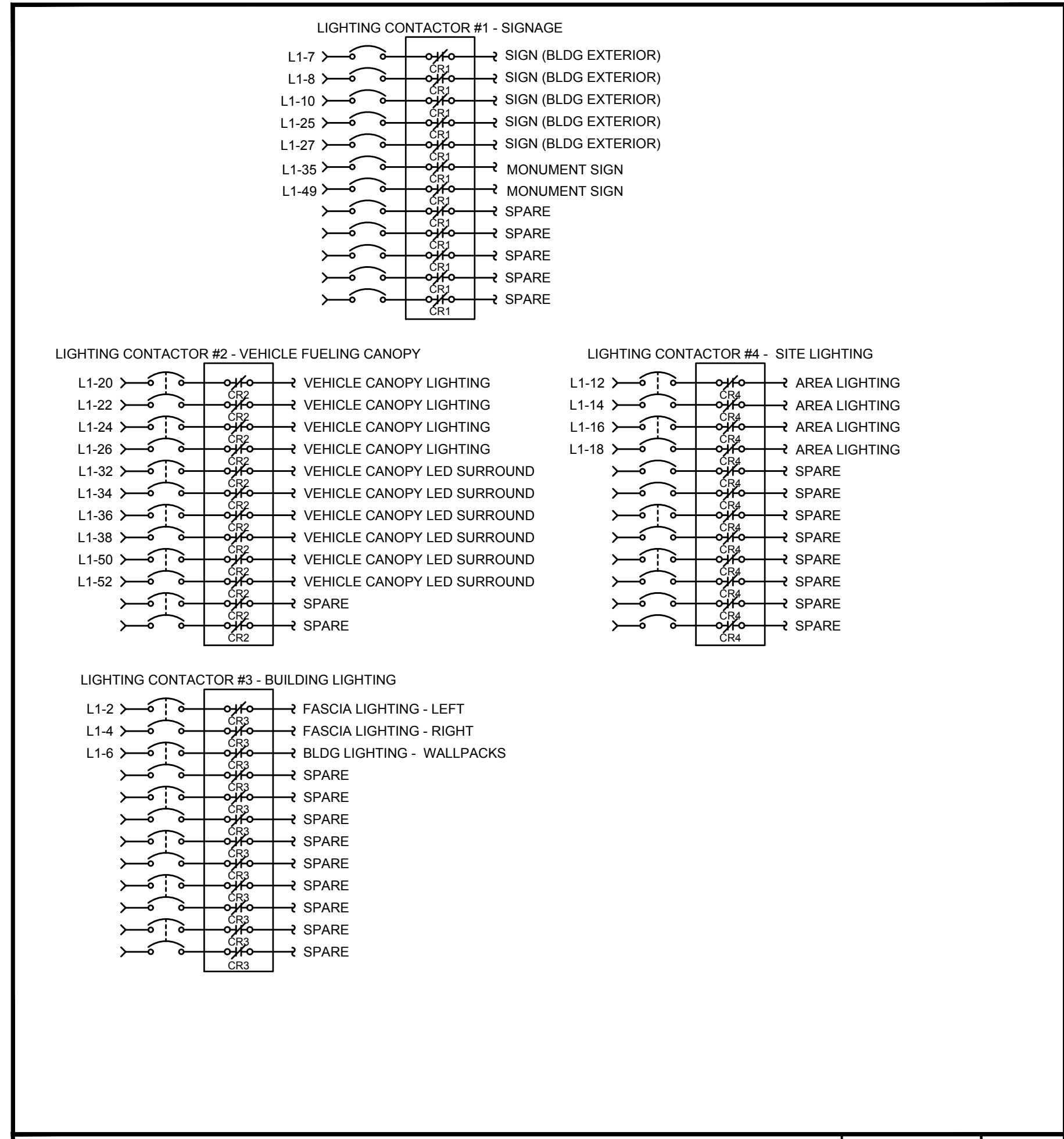
EMERGENCY FUEL SHUT OFF (EFSO) SCHEMATIC SCALE N.T.S. 4



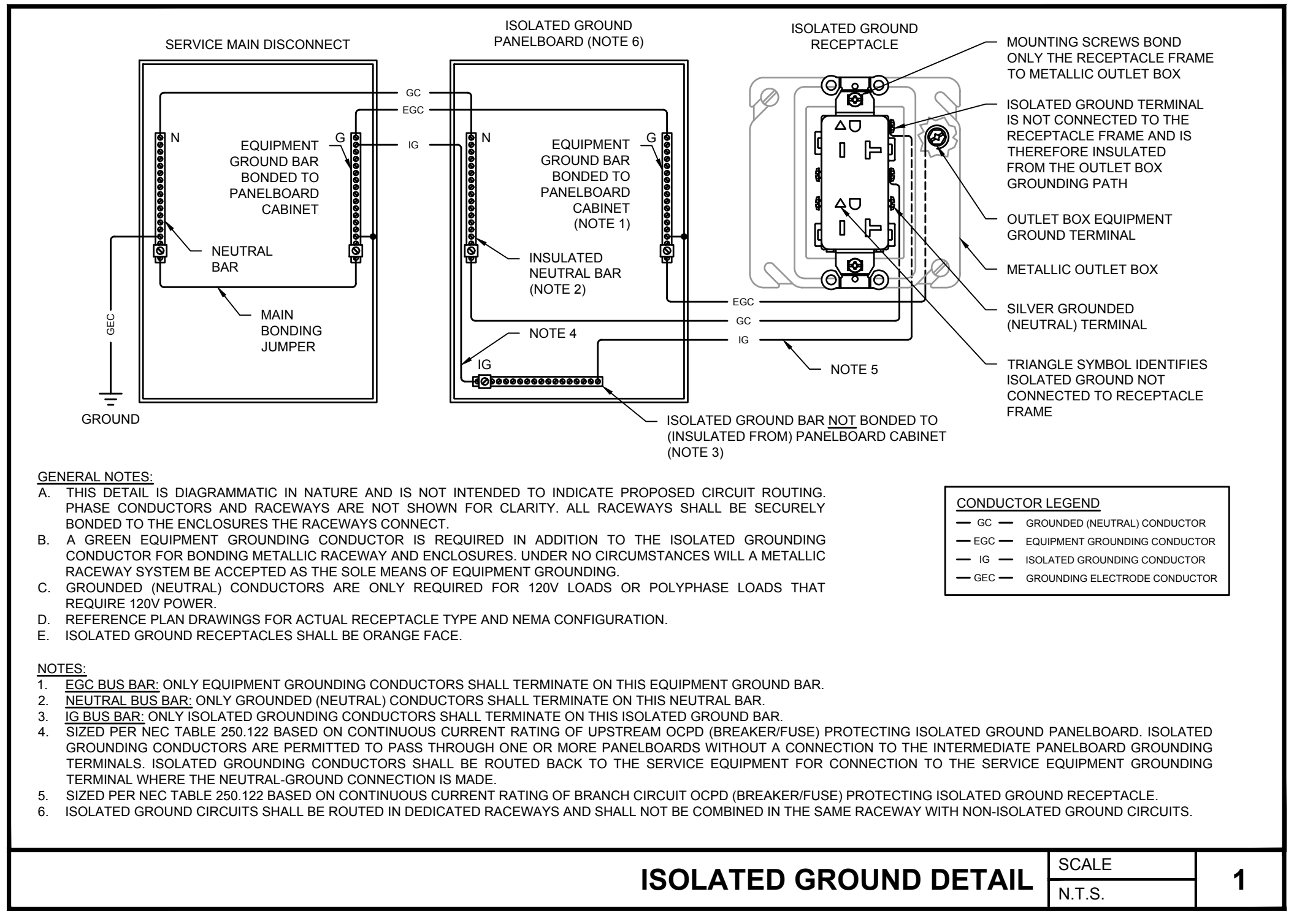
EMERGENCY FUEL SHUT-OFF PUSHBUTTON SCALE N.T.S. 6



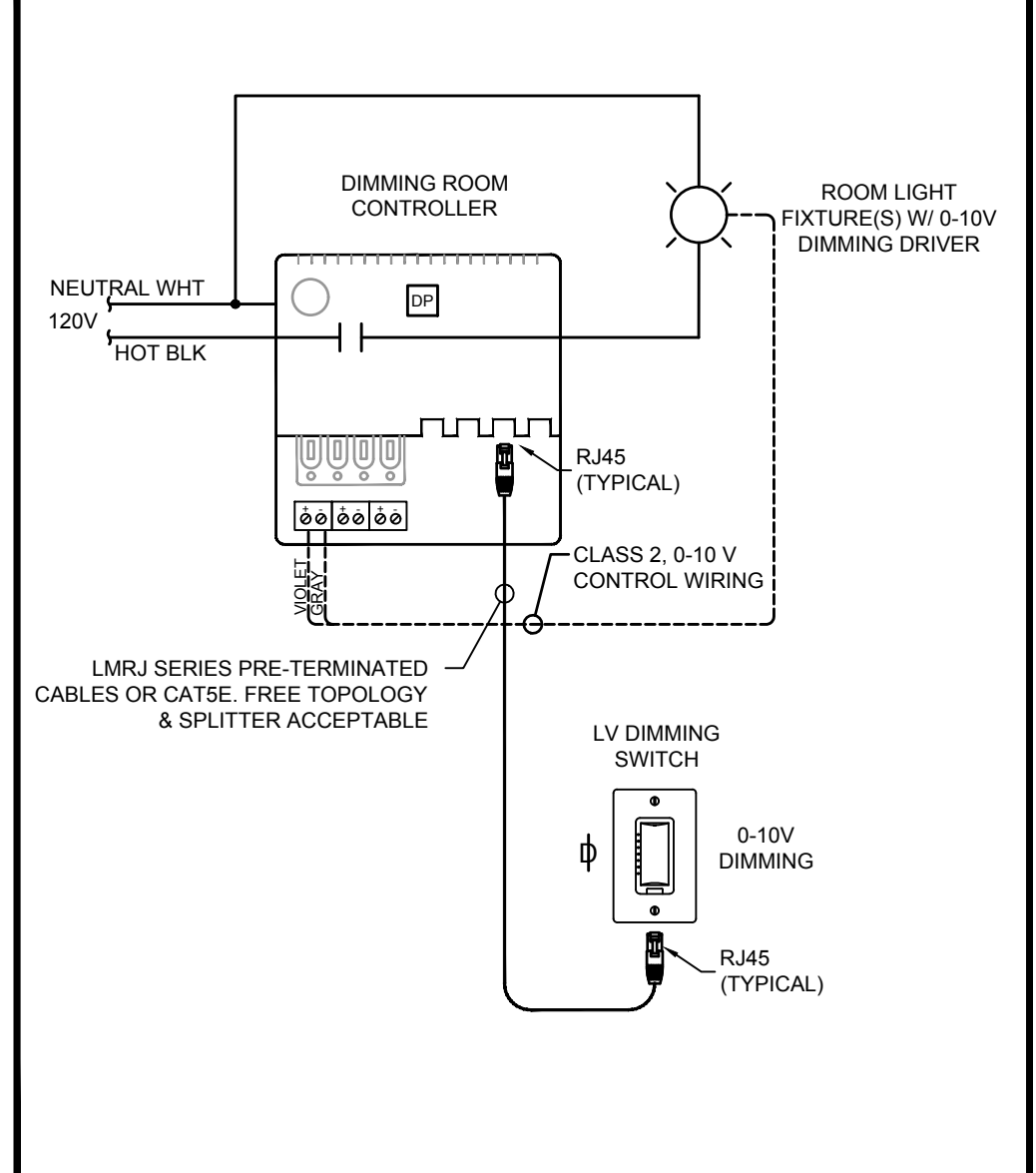
CANOPY CONDUIT SEAL-OFF SCALE N.T.S. 2



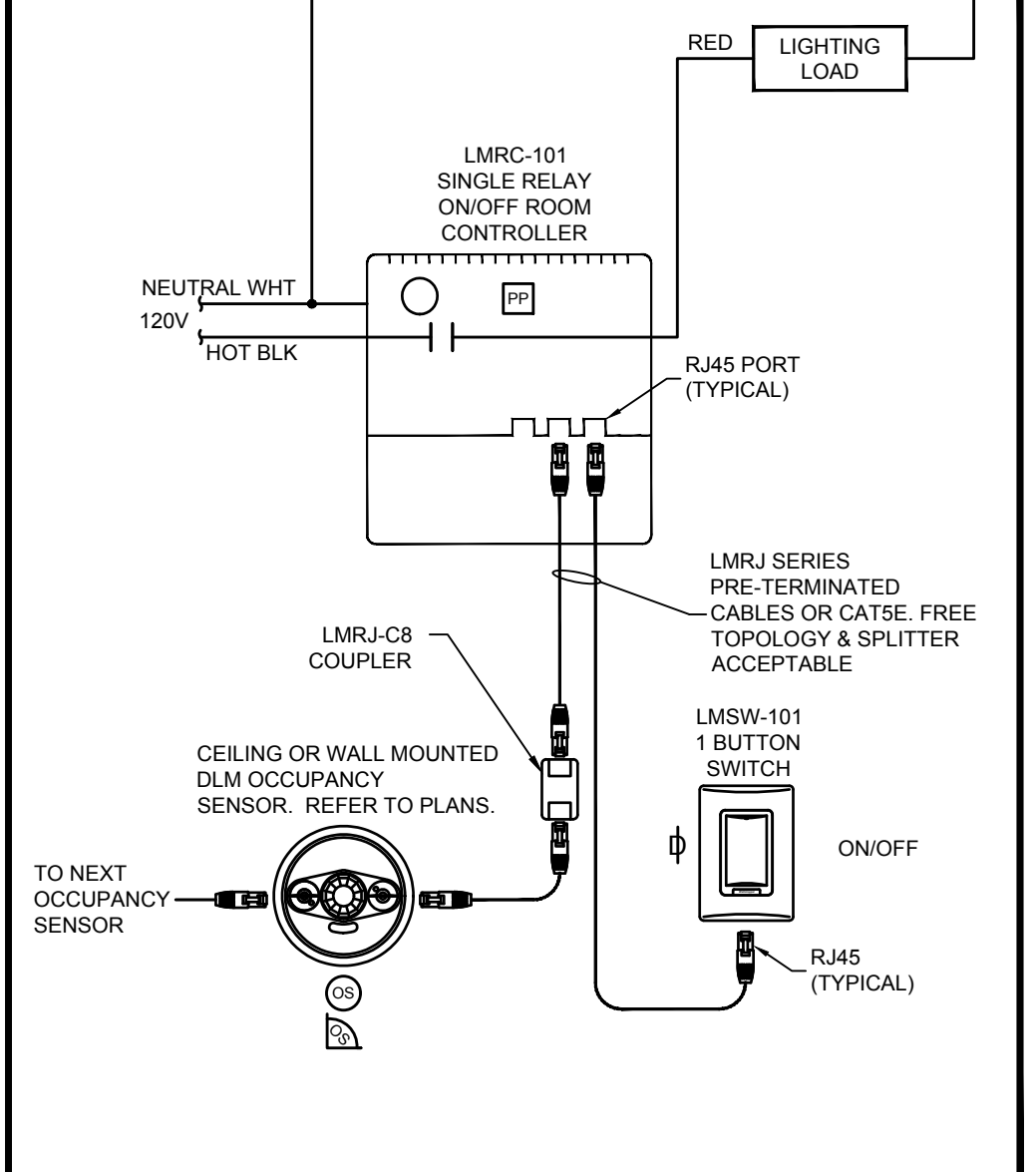
OUTDOOR LIGHTING CONTROL SCHEMATIC SCALE N.T.S. 3



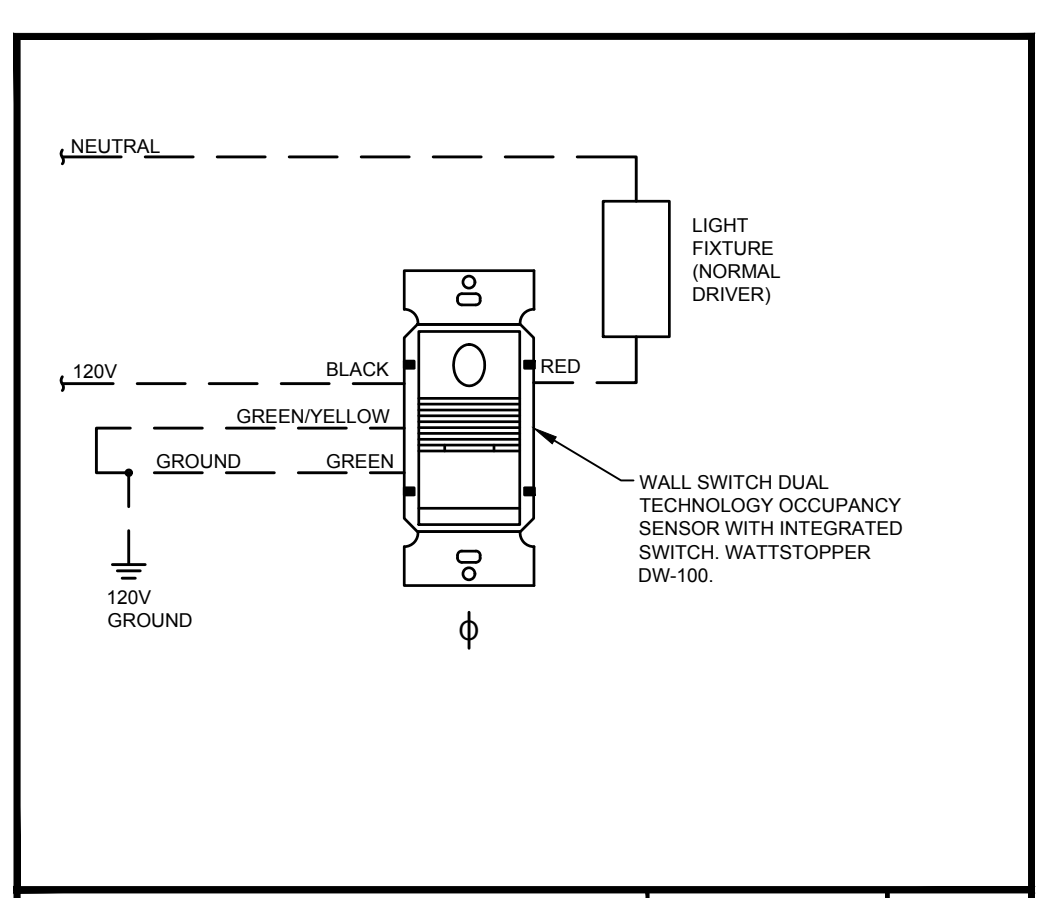
ISOLATED GROUND DETAIL SCALE N.T.S. 1



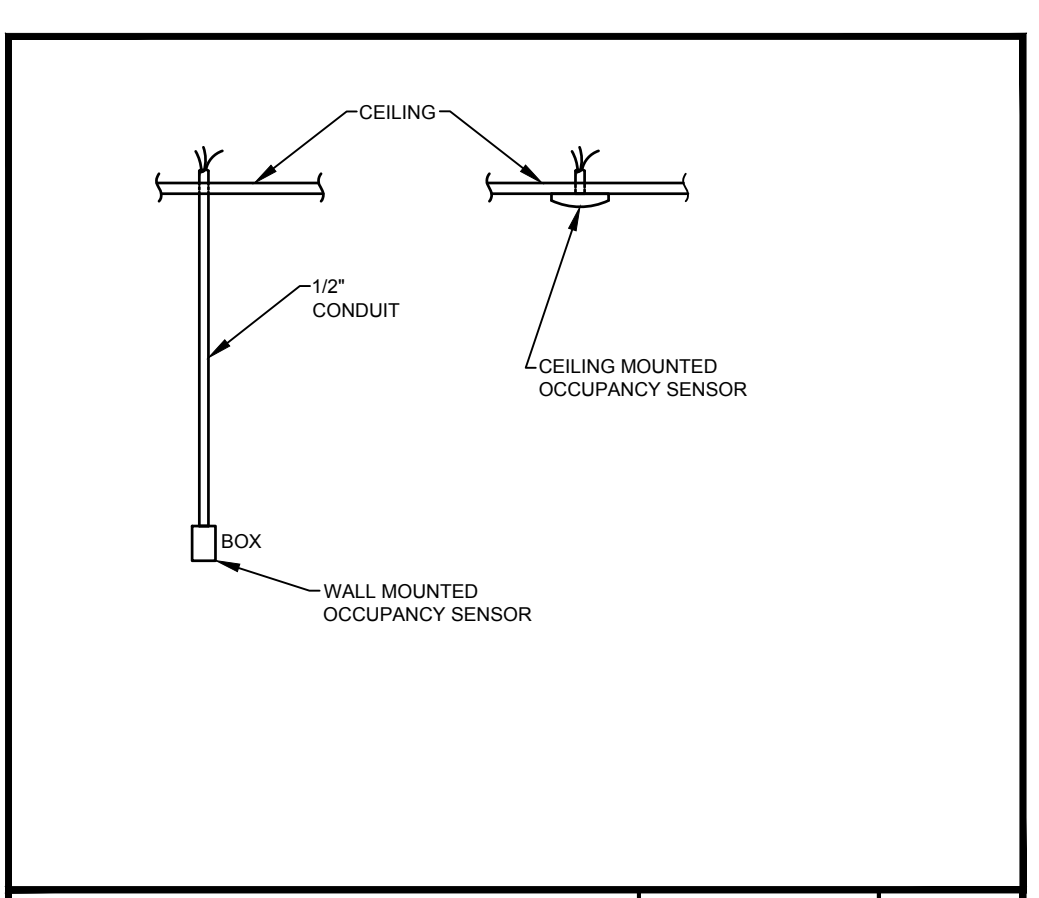
SALES AREA LIGHTING CONTROL WIRING DIAGRAM SCALE N.T.S. 5A



STORAGE AND RESTROOM LIGHTING CONTROL WIRING SCALE N.T.S. 5B



WALL SWITCH OCCUPANCY SENSOR WIRING DIAGRAM SCALE N.T.S. 5C



OCCUPANCY AND DIMMING PHOTOSENSOR ELEVATION SCALE N.T.S. 5D

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Issue For Permit	1
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PROFESSIONAL ENGINEER
FLORIDA

Date

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CEFCO #437 - BETHEL
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CRESTVIEW, FLORIDA

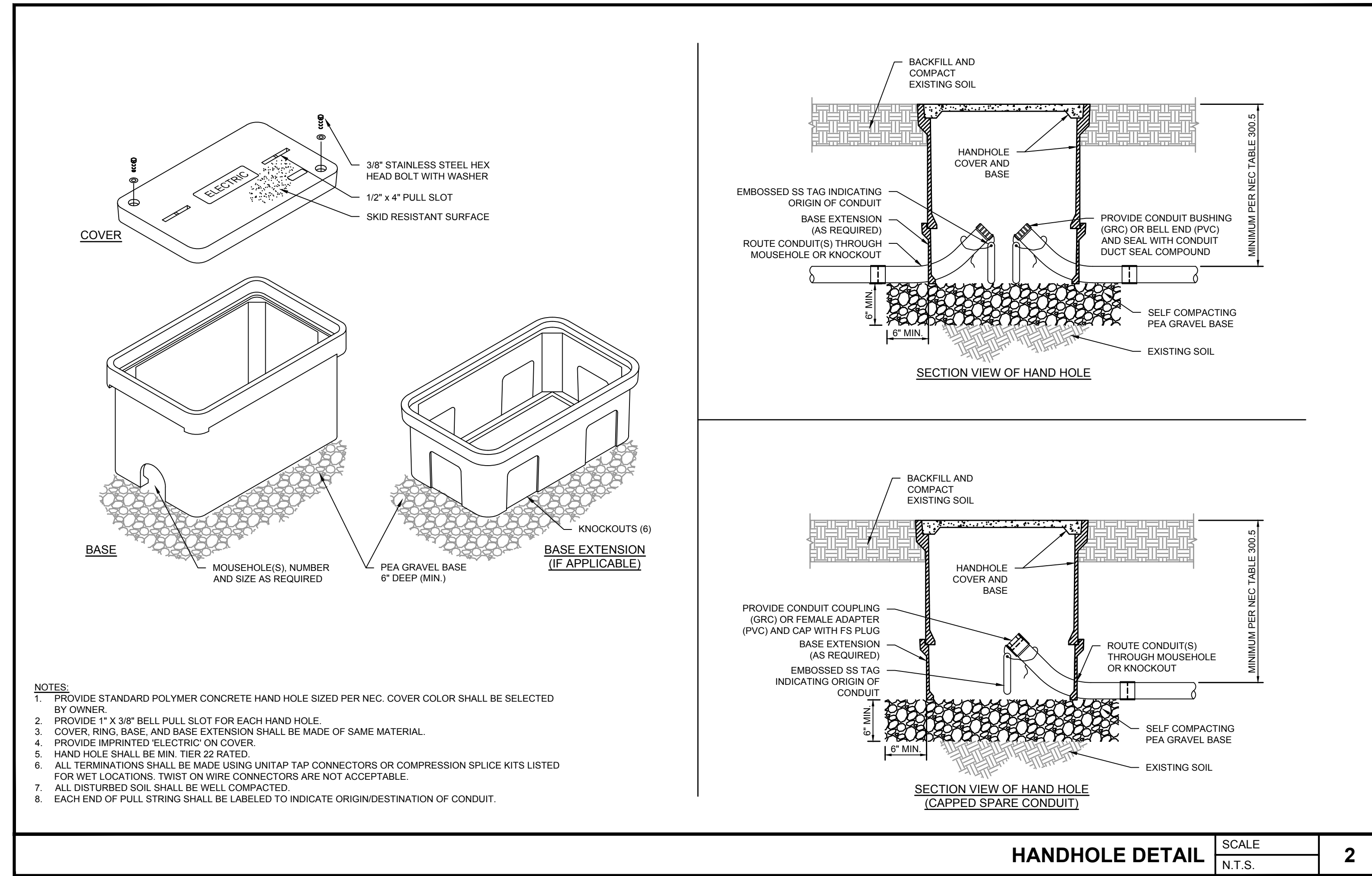
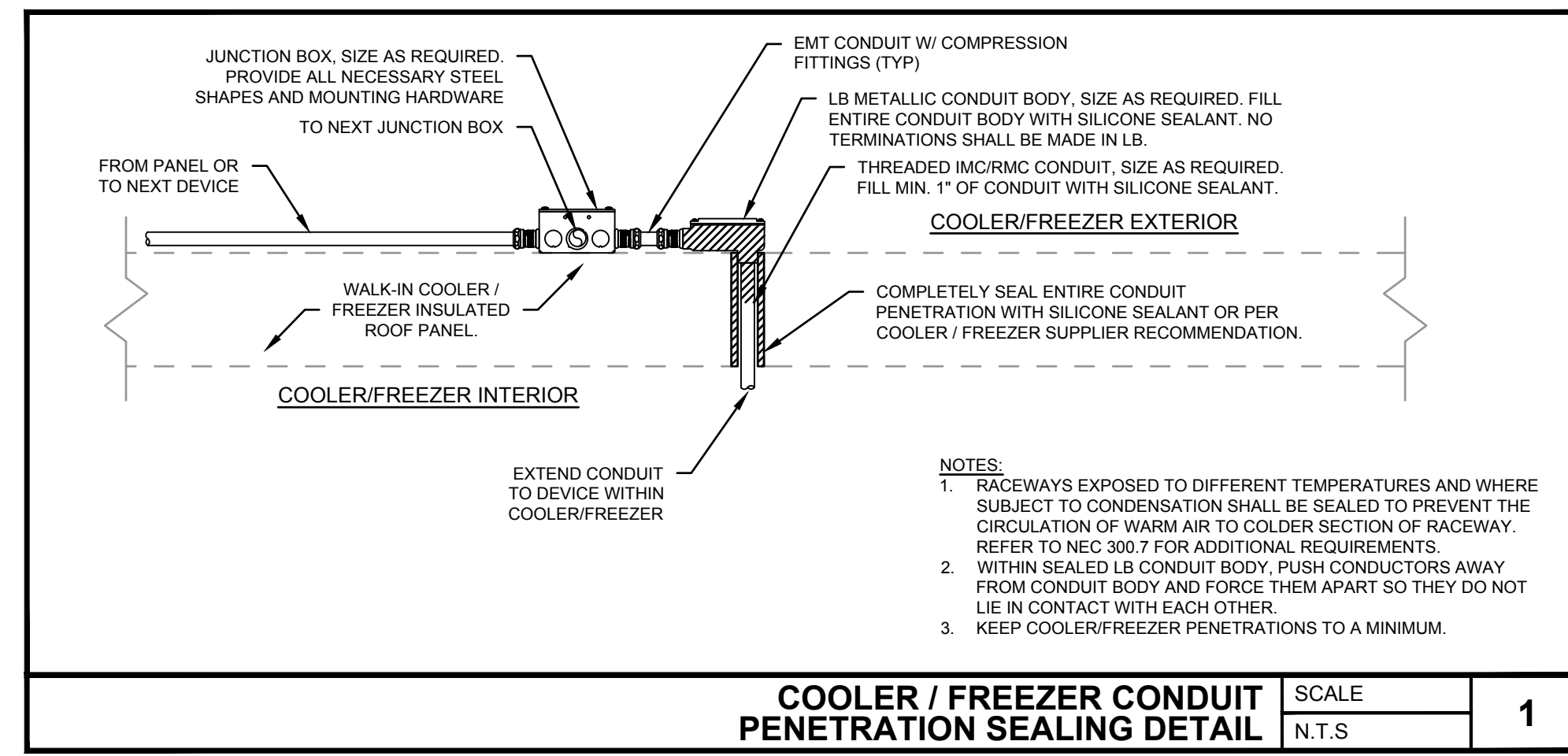
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Project No
170-101.00

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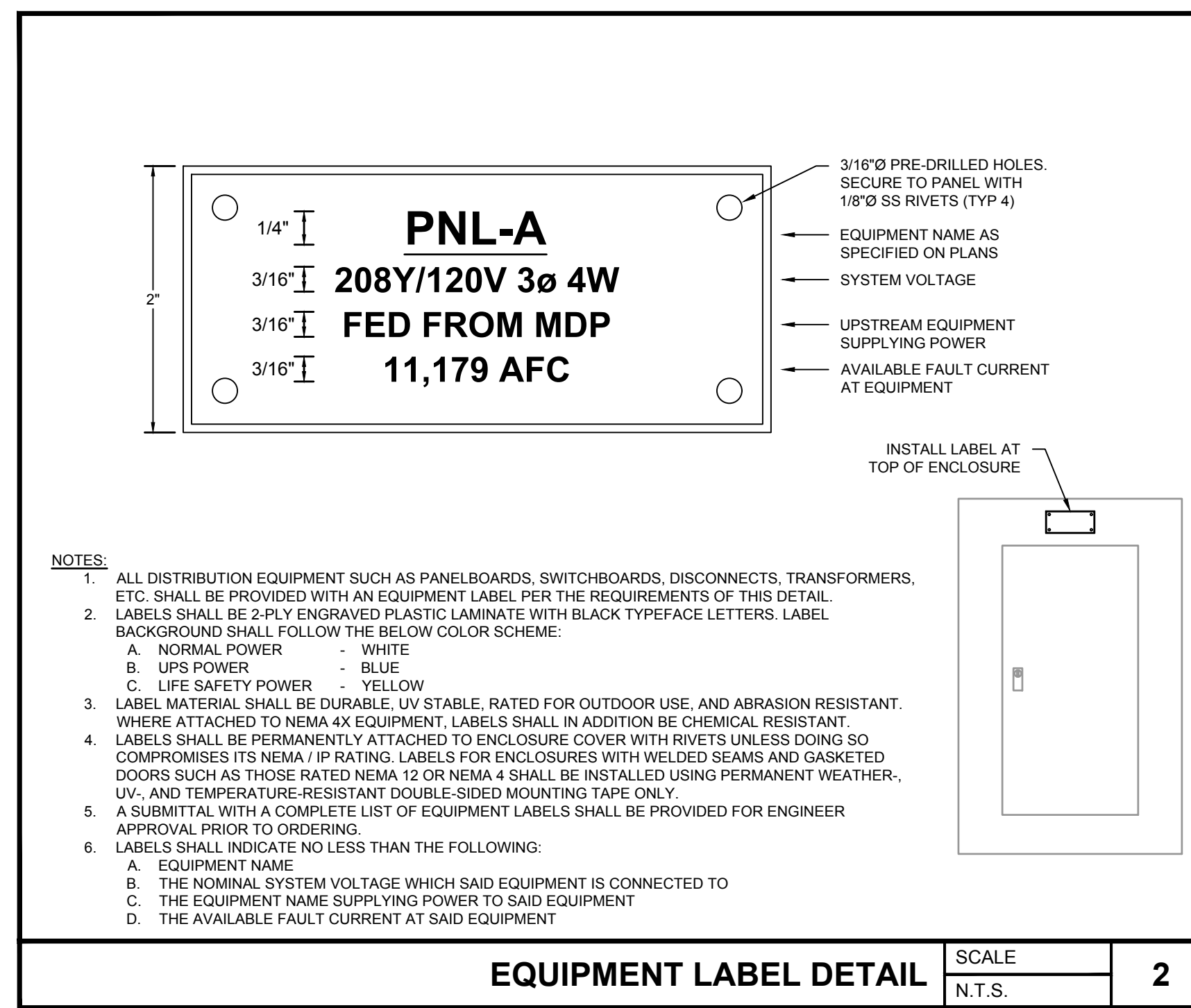
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Project No.
 170-101.00

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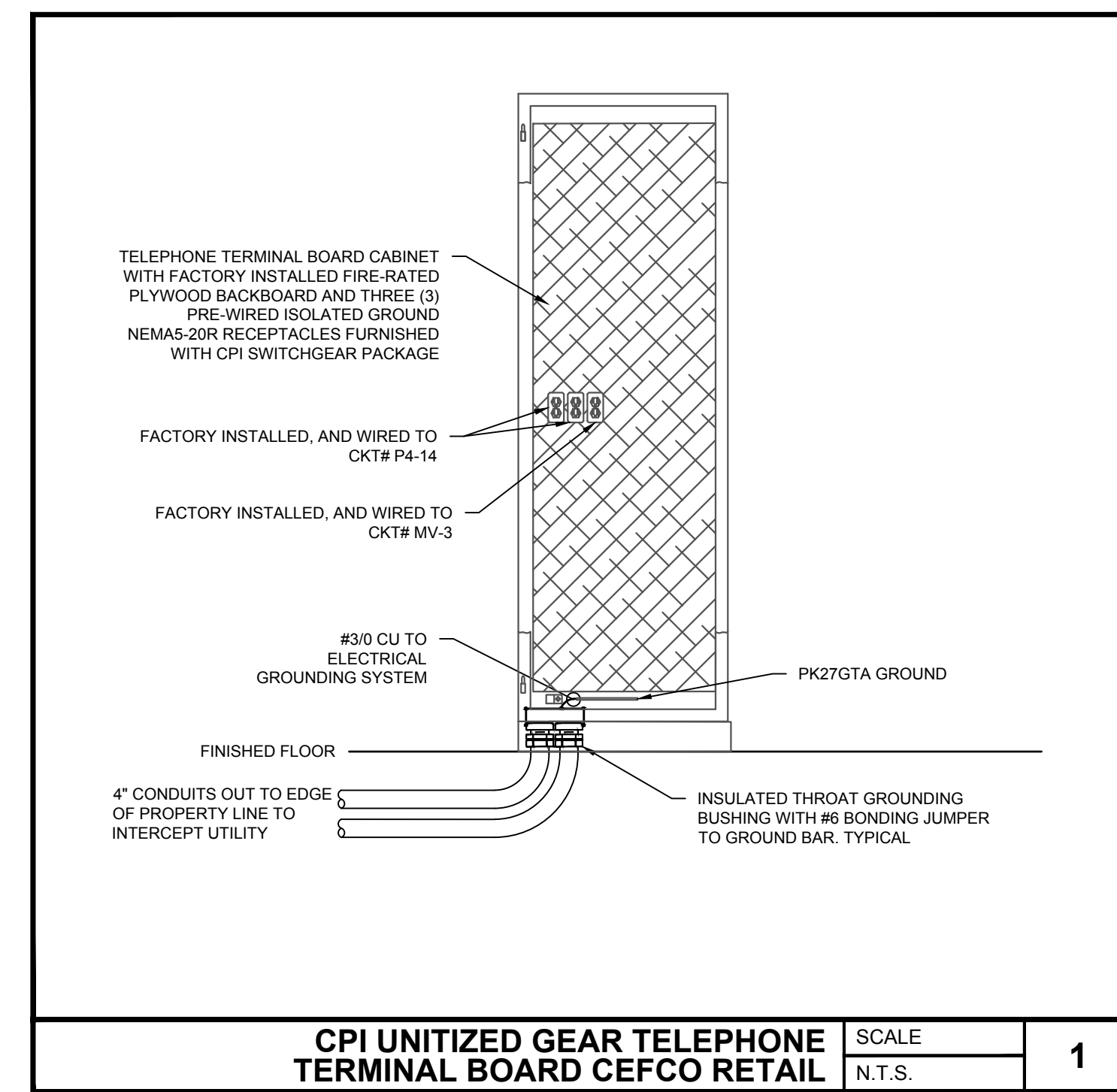
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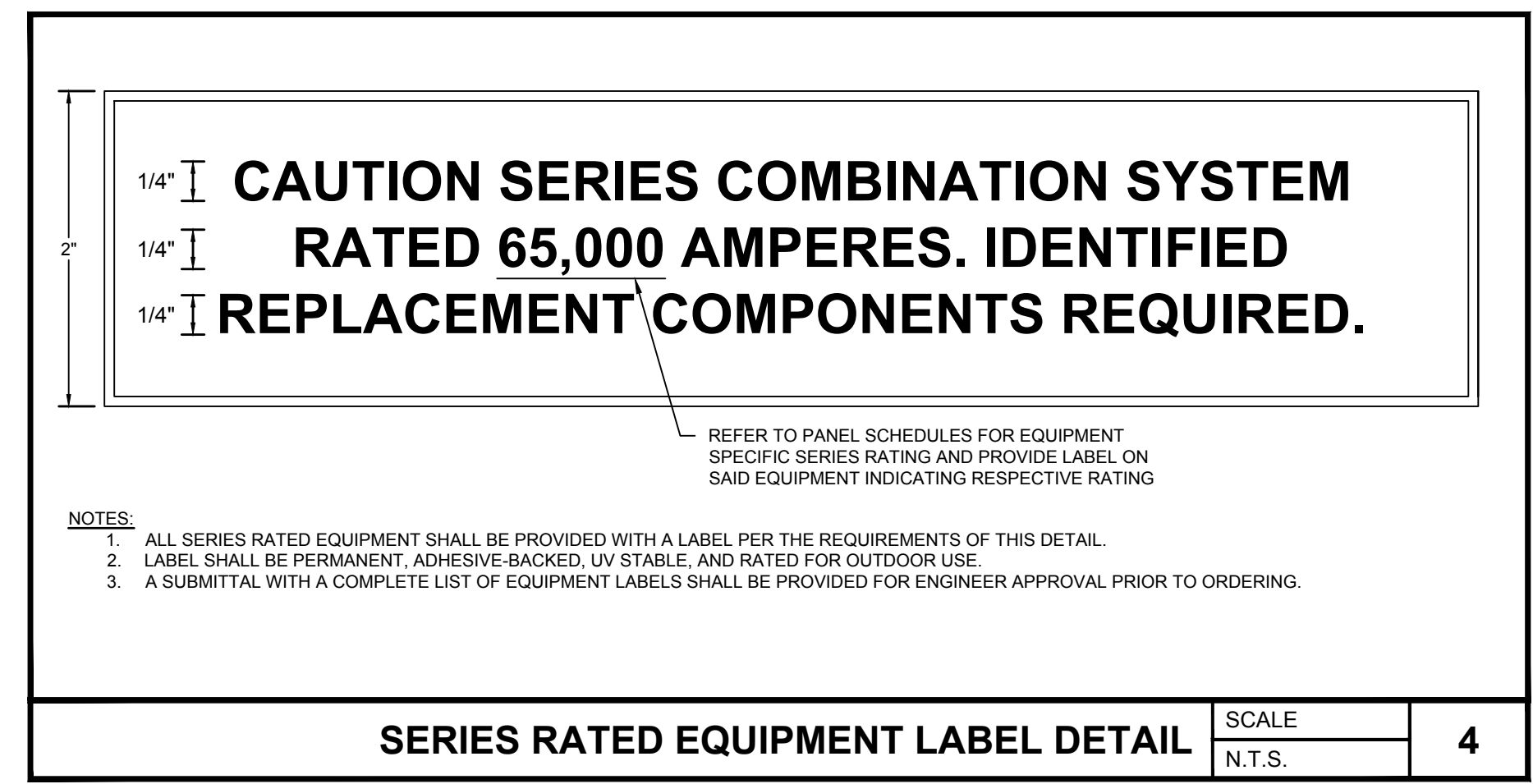


- NOTES:**
- ALL DISTRIBUTION EQUIPMENT SUCH AS PANELBOARDS, SWITCHBOARDS, DISCONNECTS, TRANSFORMERS, ETC. SHALL BE PROVIDED WITH AN EQUIPMENT LABEL PER THE REQUIREMENTS OF THIS DETAIL.
 - LABELS SHALL BE 2 PLY ENGRAVED PLASTIC LAMINATE WITH BLACK TYPEFACE LETTERS. LABEL BACKGROUND SHALL FOLLOW THE BELOW COLOR SCHEME:
 - A. NORMAL POWER - WHITE
 - B. UPS POWER - BLUE
 - C. LIFE SAFETY POWER - YELLOW
 - LABEL MATERIAL SHALL BE DURABLE, UV STABLE, RATED FOR OUTDOOR USE, AND ABRASION RESISTANT. WHERE ATTACHED TO NEMA 4X EQUIPMENT, LABELS SHALL IN ADDITION BE CHEMICAL RESISTANT.
 - LABELS SHALL BE PERMANENTLY ATTACHED TO ENCLOSURE COVER WITH RIVETS UNLESS DOING SO COMPROMISES ITS NEMA / IP RATING. LABELS FOR ENCLOSURES WITH WELDED SEAMS AND GASKETED DOORS SUCH AS THOSE RATED NEMA 12 OR NEMA 4 SHALL BE INSTALLED USING PERMANENT WEATHER-, UV-, AND TEMPERATURE-RESISTANT DOUBLE-SIDED MOUNTING TAPE ONLY.
 - A SUBMITTAL WITH A COMPLETE LIST OF EQUIPMENT LABELS SHALL BE PROVIDED FOR ENGINEER APPROVAL PRIOR TO ORDERING.
 - LABELS SHALL INDICATE NO LESS THAN THE FOLLOWING:
 - A. EQUIPMENT NAME
 - B. THE NOMINAL SYSTEM VOLTAGE WHICH SAID EQUIPMENT IS CONNECTED TO
 - C. THE EQUIPMENT NAME SUPPLYING POWER TO SAID EQUIPMENT
 - D. THE AVAILABLE FAULT CURRENT AT SAID EQUIPMENT

EQUIPMENT LABEL DETAIL SCALE N.T.S. 2

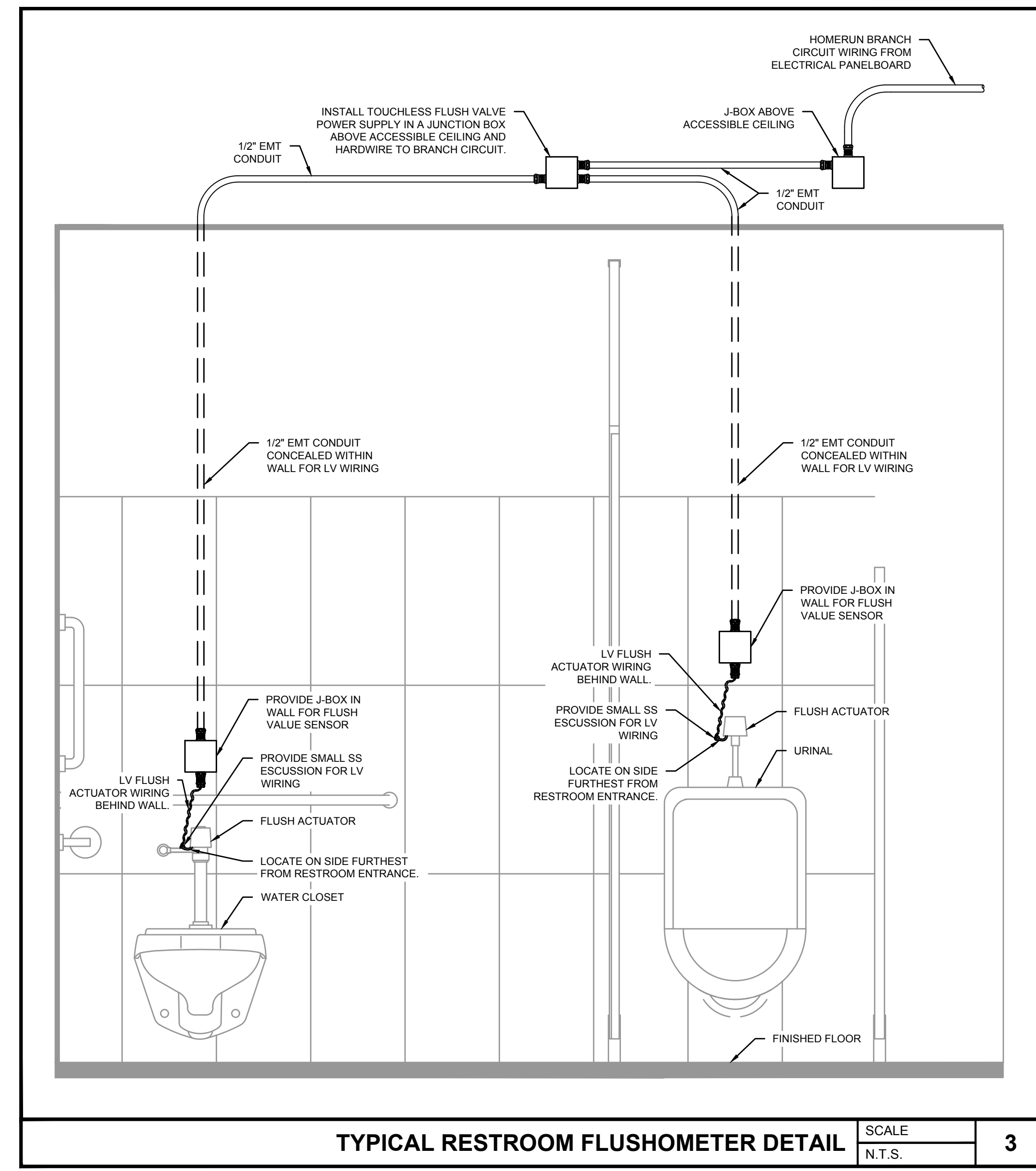


CPI UNITIZED GEAR TELEPHONE TERMINAL BOARD CEFCO RETAIL SCALE N.T.S. 1

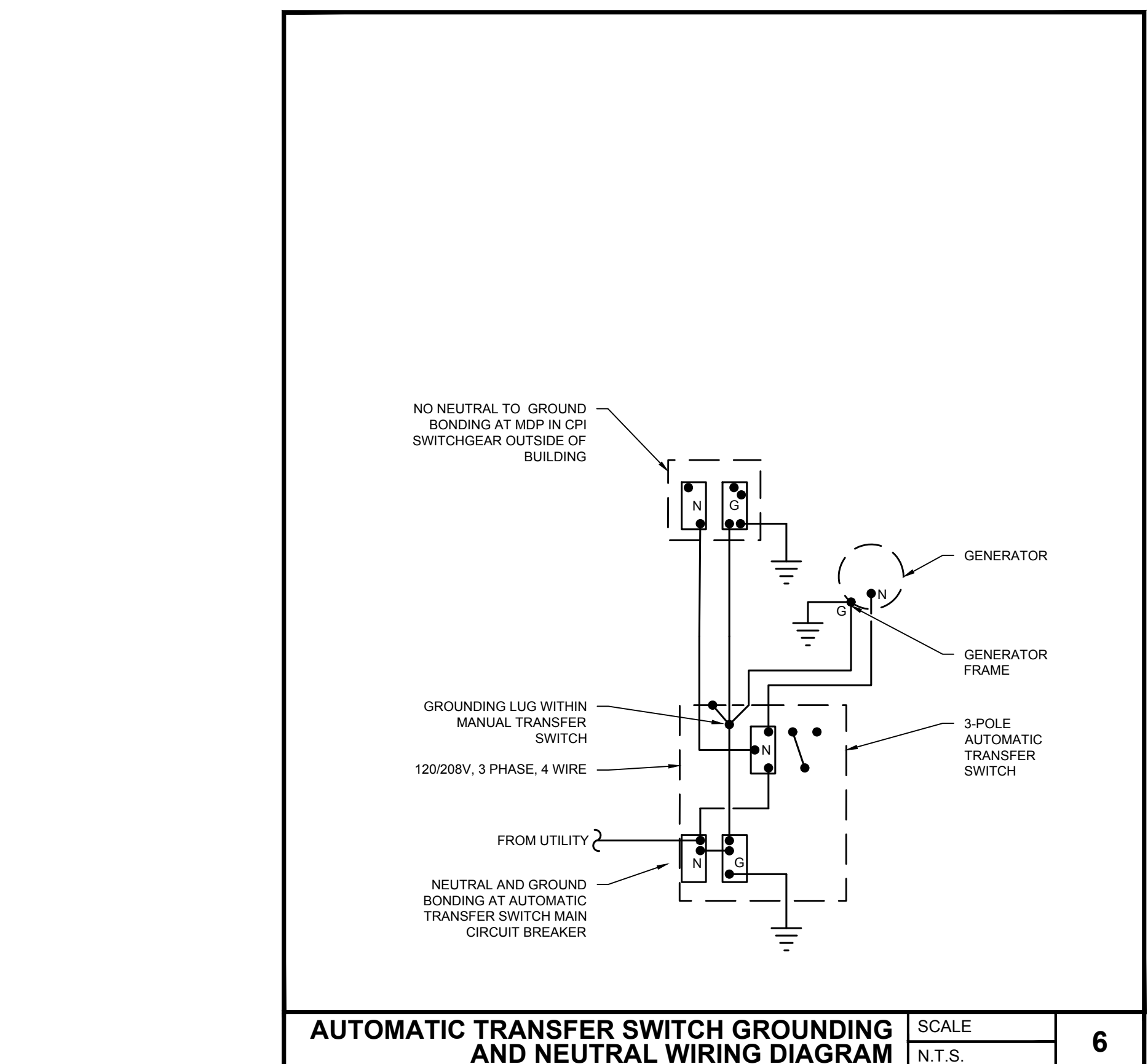


- NOTES:**
- ALL SERIES RATED EQUIPMENT SHALL BE PROVIDED WITH A LABEL PER THE REQUIREMENTS OF THIS DETAIL.
 - LABEL SHALL BE PERMANENT, ADHESIVE-BACKED, UV STABLE, AND RATED FOR OUTDOOR USE.
 - A SUBMITTAL WITH A COMPLETE LIST OF EQUIPMENT LABELS SHALL BE PROVIDED FOR ENGINEER APPROVAL PRIOR TO ORDERING.

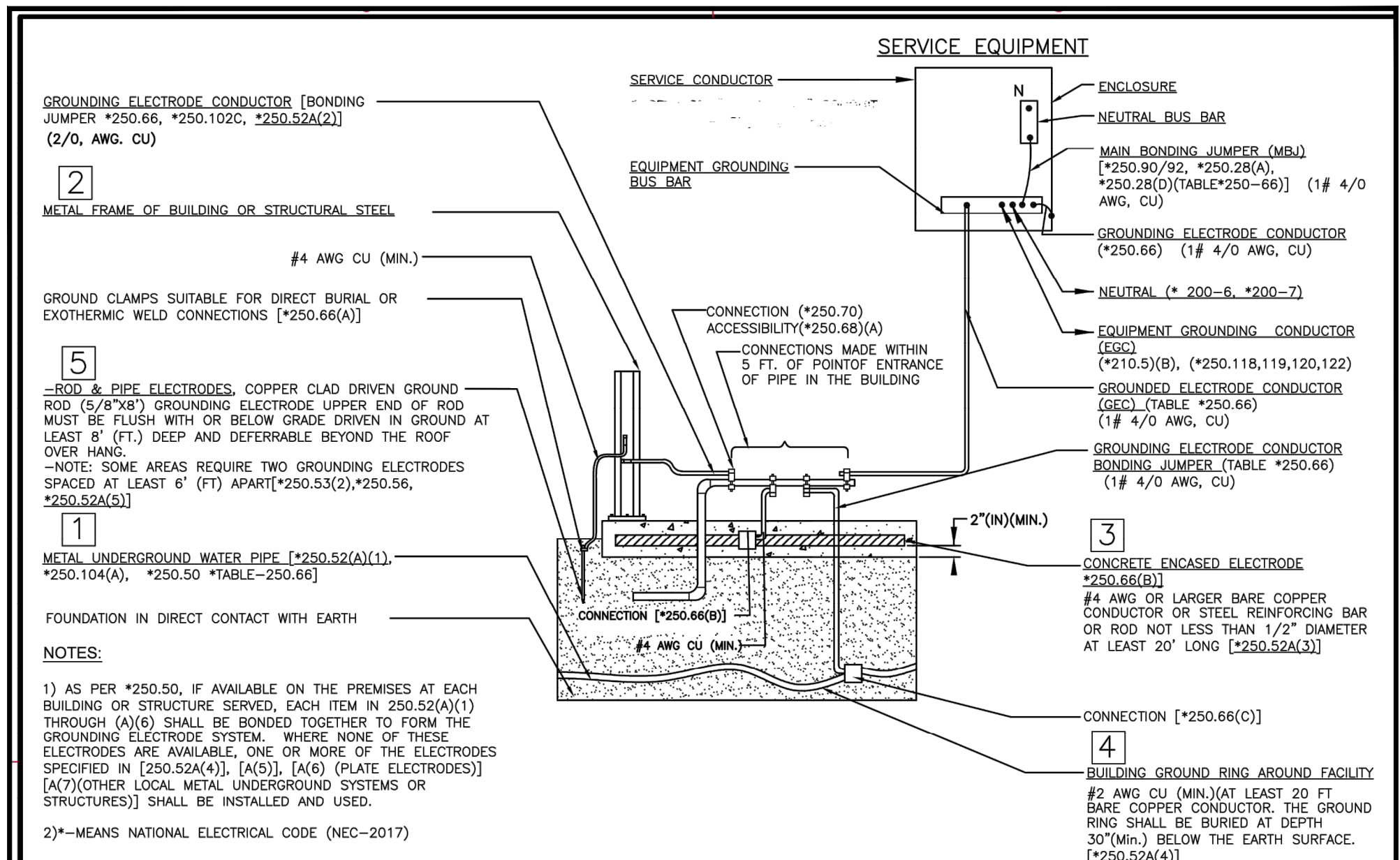
SERIES RATED EQUIPMENT LABEL DETAIL SCALE N.T.S. 4



TYPICAL RESTROOM FLUSHOMETER DETAIL SCALE N.T.S. 3



AUTOMATIC TRANSFER SWITCH GROUNDING AND NEUTRAL WIRING DIAGRAM SCALE N.T.S. 6



DETAILS OF GROUNDING ELECTRODE SYSTEM (*250.50) AND GROUNDING ELECTRODES (*250.52) AT SERVICE
GROUNDING DETAIL - G
NOT TO SCALE

LIGHTING FOR ALL EXTERIOR APPLICATIONS NOT EXEMPT IN 9.1 SHALL HAVE AUTOMATIC CONTROLS CAPABLE OF TURNING OFF EXTERIOR LIGHTING WHEN SUFFICIENT DAYLIGHT IS AVAILABLE OR WHEN THE LIGHTING IS NOT REQUIRED DURING NIGHT TIME HOURS. LIGHTING NOT DESIGNATED FOR DUSK-TO DAWN OPERATION SHALL BE CONTROLLED BY AN ASTRONOMICAL EXTERIOR LIGHTING CONTROL TIME SWITCH OR PHOTO SENSOR. ASTRONOMICAL TIME SWITCHES SHALL BE CAPABLE OF RETAINING PROGRAMMING AND THE TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST 10 HOURS.

EXCEPTION TO 9.4.1.3: LIGHTING FOR COVERED VEHICLE ENTRANCES OR EXITS FROM BUILDING OR PARKING STRUCTURES WHERE REQUIRED FOR SAFETY, SECURITY, OR EYE ADAPTATION

ALL METAL WIREWAYS WITH PARALLEL CONDUCTORS WITH AN AMPACITY OF OVER 800 AMPERES SHALL HAVE INSULATED STEP BUS CONDUCTORS. AS PER SECTION 504.4 OF NEC.

GENERAL CONTRACTOR IS TO INSURE THAT ALL GROUNDING AND BONDING IS TO OCCUR AT THE MAIN SERVICE GUTTER ONLY

SERVICE CONDUCTORS OCP 230.90(A) UNDERGROUND CONDUCTORS SHALL BE PROTECTED WITH AN OVER-CURRENT DEVICE IN SERIES WITH EACH UNGROUNDED CONDUCTOR HAVING A RATING OR SETTING NO HIGHER THAN THE ALLOWABLE AMPACITY OF THE CONDUCTOR. THIS REFERS TO ALL MAIN CIRCUIT BREAKERS AT THE PANELS.

GASOLINE DISPENSING SEALING;
514 GASOLINE DISPENSING STATIONS: SEALING AT DISPENSER AND AT BOUNDARY AS PER ARTICLE 514.9(A) AND (B), NEC.

LIGHTING AND ITS CIRCUITRY FOR THE CANOPY NOT INCLUDED AS PART OF THIS PART OF PERMITTING. CANOPY ELECTRICAL WILL BE SUBMITTED SEPARATELY

GROUNDING NOTE:
THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONNECTED TO THE SERVICE CONDUCTOR AT ANY ACCESSIBLE POINT FROM THE LOAD END OF THE SERVICE DROP OR LATERAL TERMINAL OR BUS TO WHICH THE SERVICE GROUNDED CONDUCTOR IS CONNECTED AT THE SERVICE DISCONNECTING MEANS. A GROUNDING CONNECTION SHALL NOT BE MADE TO ANY GROUNDED CIRCUIT CONDUCTOR ON THE LOAD SIDE OF THE SERVICE DISCONNECTING MEANS EXCEPT AS PERMITTED IN THIS ARTICLE. NEC 250.24

IMPORTANT NOTE:
WHERE MULTIPLE SERVICES ARE TO BE CONNECTED TO A SINGLE SERVICE A SERVICE CABLE TAP BOX SHALL BE REQUIRED. THE SERVICE CABLE TAP BOX SHALL BE WEATHER-PROOF AND COMPLY WITH THE FOLLOWING:
1. THE SERVICE CABLE TAP BOX SHALL BE LOCKABLE WITH PROVISIONS TO ACCEPT THE UTILITY LOCKS.
2. COVERS SHALL BE FASTENED WITH MACHINE SCREWS OR BOLTS. HINGED COVERS SHALL NOT BE PERMITTED.
3. COVERS SHALL HAVE TWO HANDLES FOR COVER REMOVAL.
4. BUSBARS SHALL BE PROTECTED FROM PHYSICAL DAMAGE AND HELD FIRMLY IN PLACE.
5. BUSBARS SHALL BE SIZED TO PHYSICALLY ACCOMMODATE THE MAXIMUM NUMBER OF TENANT SERVICES ANTICIPATED AND PREDRILLED.

GROUNDING DETAIL AND NOTES SCALE N.T.S. 7

Revision	Date
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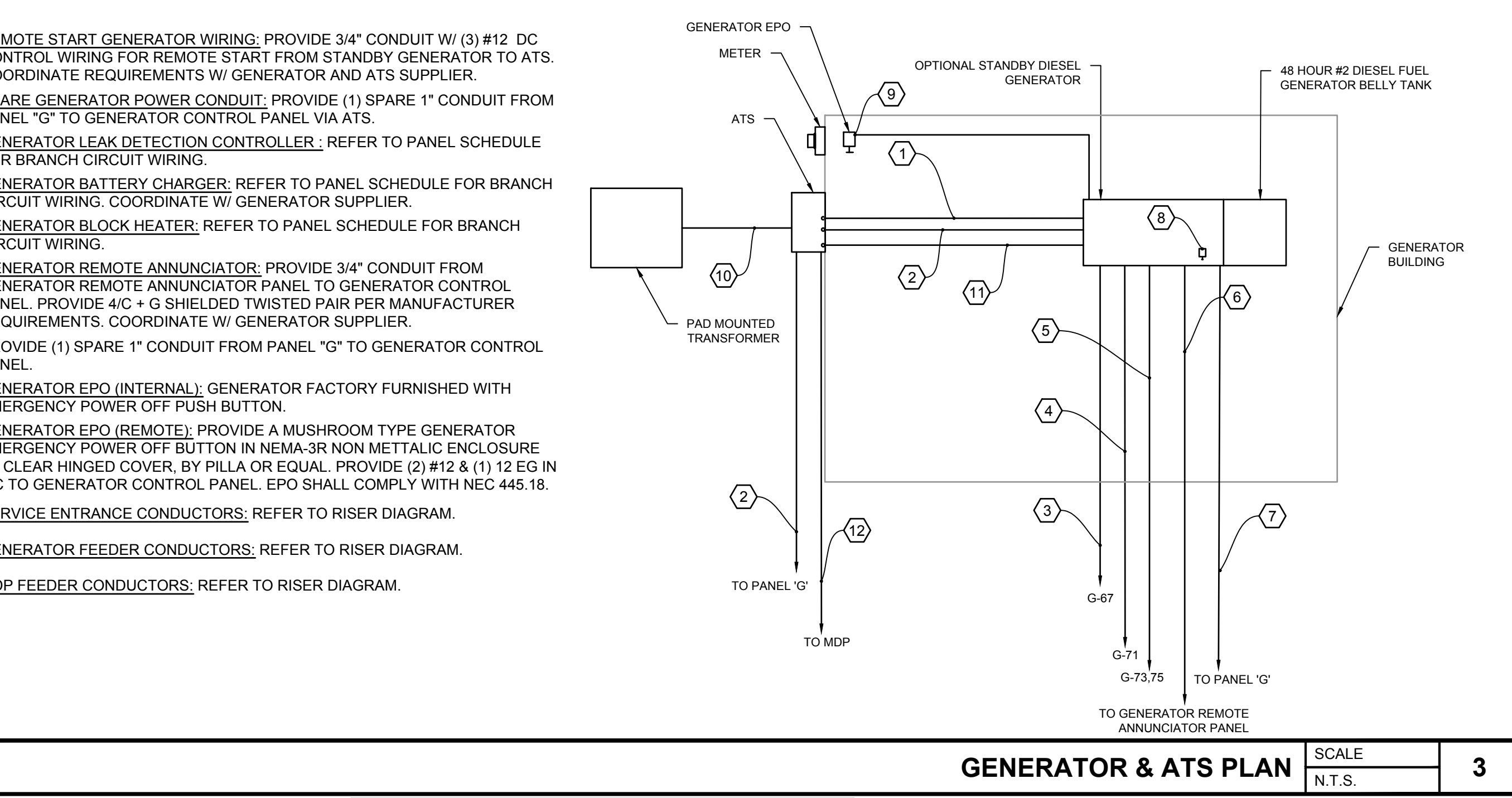
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PANELBOARD: P3 (NEW)												PANELBOARD: P3 (NEW)												PANELBOARD: P3 (NEW)																							
BUS AMPS: 225A MAIN SIZE/TYP: MLO VOLTS/PHASE: 208Y/120V, 3PH, 4W												FAULT CURRENT: AIC RATING: SERVES: MOUNTING: SURFACE LOCATION:												REFER TO ONE-LINE DIAGRAM 65000 SERIES RATED												PROVIDE EQUIPMENT GROUND BUS PROVIDE ISOLATED GROUND BUS											
CKT NO.	DESCRIPTION	CONDUCTOR & CONDUIT						BREAKER			VOLTAMPS/PHASE			CONDUCTOR & CONDUIT			DESCRIPTION	CKT NO.																													
		PH	NEUT	GND	IG	COND	TYP	AMP	POLE	A	B	C	PH	NEUT	GND	IG			COND	TYP	AMP	POLE	A	B	C																						
1	MTR-MJA UNIT-FAN	10	10	10		3/4"	25	1	1,872				360				12	12	12	REC - WF DRAIN HEATERS	2																										
3	MTR-MJA CONDENSER	10		10		3/4"	30	2	1,882				500				12	12	12	MISC-IRRIGATION TIMER	4																										
7	SPACE	10										575				12	12	12	REC-HVAC MAINTENANCE	6																											
9	SPACE											805				12	12	12	MISC-COOLER DOOR[10]	8																											
11	SPACE											345				12	12	12	MISC-COOLER DOOR[10]	10																											
13	REC-CONV	12	12	12		3/4"	20	1	400				1			12	12	12	MISC-COOLER DOOR[10]	12																											
15	REC-CONV	12	12	12		3/4"	20	1	400				318			12	12	12	REC-REMOT COOLCASE [8]	14																											
17	REC-DRAWER WARMER	12	12	12		3/4"	20	1					1			12	12	12	SPARE	16																											
19	REC-INSECT LIGHT	12	12	12		3/4"	20	1	180				1,500			12	12	12	MISC-DR HTR AND LTS[11H]	18																											
21	REC-ICE BAGGER [25]	12	12	12		3/4"	GFCI	20	1	1,012			1,500			12	12	12	MISC-DR HTR AND LTS[12]	20																											
23	MISC - HAND DRYER [58A]	10	10	10		3/4"	L/OFF	20	1	1,464			1,500			12	12	12	MISC-DR HTR AND LTS[13]	22																											
25	MISC - HAND DRYER [58B]	10	10	10		3/4"	L/OFF	20	1	1,464			1,500			12	12	12	MISC-DR HTR AND LTS[14]	24																											
27	MISC - HAND DRYER [58C]	10	10	10		3/4"	L/OFF	20	1	1,464			2,000			12	12	12	MISC-DR HTR AND LTS[14]	26																											
29	MISC - HAND DRYER [58D]	10	10	10		3/4"	L/OFF	20	1	1,464			2,000			12	12	12	EASIWASH SYSTEM [63]	28																											
31	MTR - EXHAUST FAN [KEF-1]	10	10	10		3/4"	L/OFF	20	1	1,812						10	10	10	SPARE	30																											
33	SPACE																		SPARE	32																											
35	REC - RECIRC PUMP	12	12	12		3/4"	GFCI	20	1	800			360			12	12	12	SPARE	34																											
37	REF-FZN BEVMC [29A]	12	12	12		3/4"	GFCI	20	1	1,440			360			12	12	12	REC - EXTERIOR GEN RECP	36																											
39	SPACE												2,220			12	12	12	MISC-AIR MACHINE	38																											
41	MTR-EXHAUST FAN [EF-1]	12	12	12		3/4"	L/OFF	20	1	426			900			12	12	12	REC - EXTERIOR GEN RECP	40																											
SUBTOTAL												6,968	4,758	6,478	4,295	7,343	5,825	SUBTOTAL																													
LOAD												CONN. VA	DF	LOAD	CONN. VA	DF	TOTAL PHASE A - VA																														
COOLING												1.00		REFRIGERATION	1,440	1.00	CONN. AMPS																														
HEATING												0		SIGN/DISPLAY		1.25	TOTAL PHASE B - VA																														
LIGHTING												1.25		KITCHEN		1.00	CONN. AMPS																														
RECEPTACLES												7,570	1.0/5	EXISTING		1.00	TOTAL PHASE C - VA																														
MOTORS												8,574	1.00	LARGEST MOTOR		1.25	CONN. AMPS																														
WATER HEATER												1.00		SHOW WINDOW		1.25	TOTAL PN.LBD - VA																														
MISC EQUIP												18,081	1.00	LTG TRACK		1.00	AMPS																														
SUBTOTAL												35,865		35,865	TOTAL DEMAND																																
												99		99	SCALE																																
															N.T.S.																																
															4																																

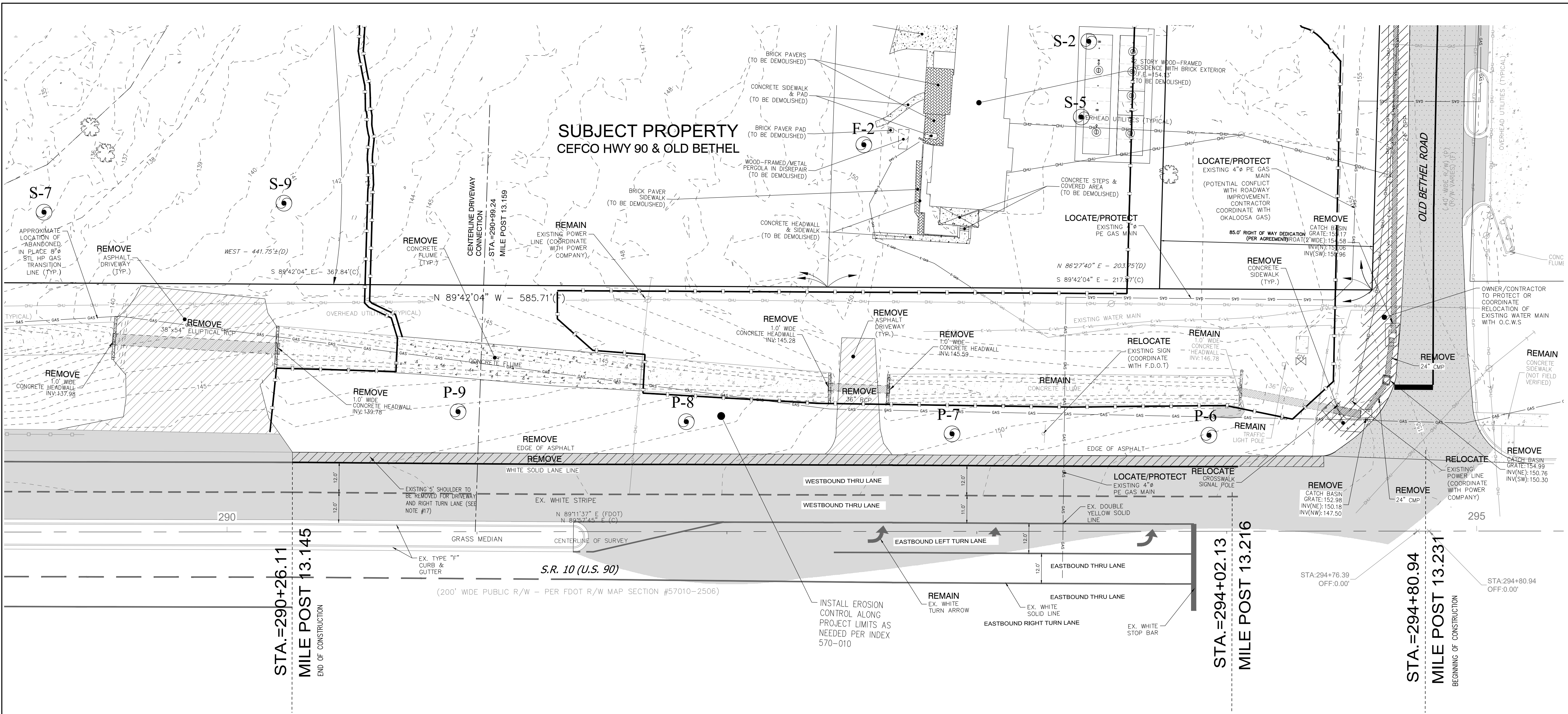
PANELBOARD: P4 (NEW)												PANELBOARD: P4 (NEW)												PANELBOARD: P4 (NEW)																							
BUS AMPS: 150A MAIN SIZE/TYP: MLO VOLTS/PHASE: 208Y/120V, 3PH, 4W												FAULT CURRENT: AIC RATING: SERVES: MOUNTING: SURFACE LOCATION:												REFER TO ONE-LINE DIAGRAM 65000 SERIES RATED												PROVIDE EQUIPMENT GROUND BUS PROVIDE ISOLATED GROUND BUS											
CKT NO.	DESCRIPTION	CONDUCTOR & CONDUIT						BREAKER			VOLTAMPS/PHASE			CONDUCTOR & CONDUIT			DESCRIPTION	CKT NO.																													
		PH	NEUT	GND	IG	COND	TYP	AMP	POLE	A	B	C	PH	NEUT	GND	IG			COND	TYP	AMP	POLE	A	B	C																						
1	REC-ATM-ANY CARD [28]	12	12	12		3/4"	25	1	1,380				360			12	12	12	REC - OFFICE QUAD	2																											
3	MISC - MAC VICTOR	10	10	10		3/4"	25	1	2,000				360			12	12	12	REC - CASHIER EQ QUAD	4																											
5	REC - OFFICE CPU	12	12	12		3/4"	20	1	750				360			12	12	12	REC - TBB EQ QUAD	6																											
7	MISC - GAS SOLONOID VALVE	12	12	12		3/4"	20	1	200				360			12	12	12	REC - OFFICE QUAD	8																											
9	REC-CASHIER	12	12	12		3/4"	20	1	400				144			12	12	12	REC - RESTROOM SENSORS	10																											
11	REC-CUSTOMER KIOSK	12	12	12		3/4"	20	1	504				360			12	12	12	REC - DRINK FOUNTAIN	12																											
13	REC-BEHIND CASHIER	12	12	12		3/4"	20	1	180				540			12	12	12	REC - TBB RECEPTACLES	14																											
15	EWI-INSTANTANEOUS	10		10		3/4"	25	2	1,788				400			12	12	12	REC - UC SAFE[11]	16																											
17	WATER HEATER [W]	10							1,788				200			12	12	12	REC - GEMINI LOTTO [9]	18																											
19	REC-FRONT ENTRANCE	12	12	12		3/4"	20	1	360				400			12	12	12	REC - CASHIER	20																											
21	REF-PIZZA PREP [REF27]	12	12	12		3/4"	GFCI	20	1	1,200			1,440			12	12	12	REC - TNS[B8A,B,C,D]	22																											
23	REF-FZN BEVMC [29A]	12	12	12		3/4"	GFCI	20	1	1,440			360			12	12	12	REC-UC SAFE[11A]	24																											
25	SPACE												360			12	12	12	REC-GONDOLAREC[22A]	26																											
27	REF-REFRIG DISPLAY [37]	12	12	12		3/4"	20	1	696				360			12	12	12	REC-GONDOLAREC[22B]	28																											
31	KIT-HTD DISPLAY CASE [38]	12				3/4"	L/OFF	20	2	1,373			540			12	12	12	REC-GONDOLAREC[22C]	30																											
33	REC-FOOD LABEL MKR[43]	12	12	12		3/4"	GFCI	20	1	1,373			360			12	12	12	REC - GEN BOH	32																											
35	REC-FOOD LABEL MKR[43]	12	12	12		3/4"	GFCI	20	1	1,200			360			12	12	12	REC-BAG-N-BOX [4A]	34																											
37	REC-CHILLIES[46ABCD]	10	10	10		3/4"	GFCI	20	1	720			800			12	12	12	REC-BAG-N-BOX [4B]	36																											
39	REC-DELL MONITOR	12	12	12		3/4"	GFCI	20	1	360			720			12	12	12	REC - GEN BOH	38																											
41	MISC-HOOD CONTROL SYS	12	12	12		3/4"	20	1	600				600			12	12	12	REC - RESTROOM	40																											
SUBTOTAL												4,213	7,101	6,958	3,360	3,784	2,240	SUBTOTAL																													
LOAD												CONN. VA	DF	LOAD	CONN. VA	DF	TOTAL PHASE A - VA																														
COOLING												1.00		REFRIGERATION	3,336	1.00	CONN. AMPS																														
HEATING												0		SIGN/DISPLAY		1.25	TOTAL PHASE B - VA																														
LIGHTING												1.25		KITCHEN		1.00	CONN. AMPS																														
RECEPTACLES												12,418	1.0/5	EXISTING		1.00	TOTAL PHASE C - VA																														
MOTORS												3,536	1.00	LARGEST MOTOR		1.25	CONN. AMPS																														
WATER HEATER												1.00		SHOW WINDOW		1.25	TOTAL PN.LBD - VA																														
MISC EQUIP												5,620	1.00	LTG TRACK		1.00	AMPS																														
SUBTOTAL												26,447		26,447	TOTAL DEMAND																																
												73 A		73 A	SCALE																																
															N.T.S.																																
															5																																



PANELBOARD: MDP (NEW)												PANELBOARD: MDP (NEW)												PANELBOARD: MDP (NEW)																							
BUS AMPS: 2200A MAIN SIZE/TYP: 1200AMCB VOLTS/PHASE: 208Y/120V, 3PH, 4W												FAULT CURRENT: AIC RATING: SERVES: MOUNTING: SURFACE LOCATION:												REFER TO ONE-LINE DIAGRAM 65000 FULLY RATED												PROVIDE EQUIPMENT GROUND BUS PROVIDE ISOLATED GROUND BUS											
CKT NO.	DESCRIPTION	CONDUCTOR & CONDUIT						BREAKER			VOLTAMPS/PHASE			CONDUCTOR & CONDUIT			DESCRIPTION	CKT NO.																													
		PH	NEUT	GND	IG	COND	TYP	AMP	POLE	A	B	C	PH	NEUT	GND	IG			COND	TYP	AMP	POLE	A	B	C																						
1	PANEL P1	4/0	4/0	4		2-1/2"	225A	3	24,099				3,482			3	40	1-1/4"	CLG - RTU-1 [ELEC]	2																											
3	PANEL P2	4/0	4/0	4		2-1/2"	225A	3	13,913				17,149			3	50	1-1/2"	CLG - RTU-2 [ELEC]	4																											
7	PANEL P3	4/0	4/0	4		2-1/2"	225A	3	11,283				4,683			3	50	1-1/2"	CLG - RTU-3 [ELEC]	6																											
11	PANEL P4	4/0	4/0	4		2-1/2"	225A	3	12,101				4,683			3	50	1-1/2"	CLG - RTU-3 [ELEC]	8																											
15	PANEL P4	4/0	4/0	4		2-1/2"	225A	3	12,301				4,683			3	50	1-1/2"	CLG - RTU-3 [ELEC]	10																											
19	PANEL P4	4/0	4/0	4		2-1/2"	225A	3	10,885				9,198			3	50	1-1/2"	CLG - RTU-3 [ELEC]	12																											
23	PANEL L1	4/0	4/0	4		2-1/2"	225A	3	16,602				3,302			3	45	3/4"	REF-L-SHAPED COOLER 113	14																											
27	PANEL L1	4/0	4/0	4		2-1/2"	225A	3	12,372				3,302			3	45	3/4"	REMOTE CONDENSING UNIT	16																											
31	PANEL G	4/0	4/0	4		2-1/2"	225A	3	10,260				10,360			3	45	3/4"	[70A]	18																											
35	PANEL G	4/0	4/0	4		2-1/2"	225A	3	17,860				10,360			3	45	3/4"	REMOTE CONDENSING UNIT	20																											
39	SPACE																		SPARE	22																											
43	SPACE																		SPACE	24																											
47	SPACE																		SPACE	26																											
51	SPACE																		SPACE	28																											
53	SPACE																		SPACE	30																											
SUBTOTAL												83,708	92,606	76,569	16,150	16,150	16,150	SUBTOTAL																													
LOAD												CONN. VA	DF	LOAD	CONN. VA	DF	TOTAL PHASE A - VA																														
COOLING												38,544	1.00	REFRIGERATION	79,028	1.00	CONN. AMPS																														
HEATING												0		SIGN/DISPLAY	12,000	1.25	TOTAL PHASE B - VA																														
LIGHTING												28,827	1.25	KITCHEN		0.65	CONN. AMPS																														
RECEPTACLES												25,036	1.0/5	EXISTING		1.00	TOTAL PHASE C - VA																														
MOTORS												39,354	1.00	LARGEST MOTOR		1.25	CONN. AMPS																														
WATER HEATER												3,536	1.00	SHOW WINDOW		1.25	TOTAL PN.LBD - VA																														
MISC EQUIP												33,253	1.00	LTG TRACK		1.00	AMPS																														
SUBTOTAL												289,408 VA		289,408 VA	TOTAL DEMAND																																
												803 A		803 A	SCALE																																
															N.T.S.																																
															1																																

PANELBOARD: P1 (NEW)												PANELBOARD: P1 (NEW)												PANELBOARD: P1 (NEW)																							
BUS AMPS: 225A MAIN SIZE/TYP: MLO VOLTS/PHASE: 208Y/120V, 3PH, 4W												FAULT CURRENT: AIC RATING: SERVES: MOUNTING: SURFACE LOCATION:												REFER TO ONE-LINE DIAGRAM 65000 SERIES RATED												PROVIDE EQUIPMENT GROUND BUS											
CKT NO.	DESCRIPTION	CONDUCTOR & CONDUIT						BREAKER			VOLTAMPS/PHASE			CONDUCTOR & CONDUIT			DESCRIPTION	CKT NO.																													
		PH	NEUT	GND																																											

NOT RELEASED FOR CONSTRUCTION



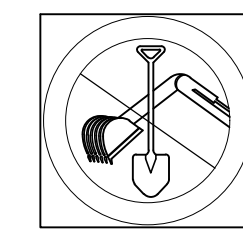
F.D.O.T. NOTES

- ALL WORK IN THE RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE CURRENT EDITION OF THE FDOT STANDARD PLANS FOR ROADWAY CONSTRUCTION, FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, FLORIDA DESIGN MANUAL, FLORIDA GREENBOOK, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL LANES MUST BE OPENED TO TRAFFIC WITHIN 12 HOURS AFTER RECEIVING NOTIFICATION OF A HURRICANE EVACUATION OR ANY OTHER CATASTROPHIC EVENT AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVACUATION OR EVENT AS DIRECTED BY THE PERMITS MANAGER.
- ENGINEER SHALL SCHEDULE AND HAVE AN ON-SITE PRE-WORK MEETING WITH REPRESENTATIVES FROM THE ENGINEERING FIRM, FDOT, QUALITY CONTROL TESTING LABORATORY, PRIME CONTRACTOR, AND ANY OTHER INTERESTED PARTY PRESENT.
- NO WORK SHALL BE PERFORMED WITHIN THE RIGHT-OF-WAY UNTIL THE PROPER MAINTENANCE OF TRAFFIC (MOT) IS IN PLACE ACCORDING TO THE APPROPRIATE 600 SERIES INDEX. A CERTIFIED WORKSITE TRAFFIC SUPERVISOR SHALL SET UP THE MOT.
- PAVING CONTRACTOR SHALL SCHEDULE A PRE-PAVING MEETING WITH FDOT. PROPOSED ASPHALT MIX DESIGNS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO OR AT THE PRE-PAVING MEETING.
- CONTRACTOR MUST SUBMIT A QUALITY CONTROL PLAN FOR FDOT REVIEW AND APPROVAL BEFORE OR AT THE REQUIRED PRE-WORK MEETING. QUALITY CONTROL TESTING SHALL BE PERFORMED BY FDOT CERTIFIED TECHNICIANS AND TESTING LABORATORY. ALL TEST RESULTS SHALL BE PROVIDED TO FDOT AS SOON AS PRACTICAL.
- SOD AREAS WITHIN 32' OF EDGE OF PAVEMENT & SLOPES GREATER THAN 1:3. OTHER DISTURBED AREAS MAY BE REPAIRED BY SEEDING OR HYDRO-SEEDING. SEE FDOT STANDARD PLANS INDEX 570-010 AND SECTION 570 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION.
- ALL STRIPING WITHIN FDOT RIGHT OF WAY SHALL BE THERMOPLASTIC AND ADHERE TO STANDARD PLANS INDEX 711-001 AND SECTION 711 OF THE STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION. STANDARD SPEC 711-4.1 STATES: WAIT AT LEAST 14 DAYS AFTER CONSTRUCTING THE FINAL ASPHALT COURSE TO PLACE THERMOPLASTIC PAVEMENT MARKINGS. INSTALLATION OF THERMOPLASTIC ON CONCRETE REQUIRES A CLEAN, DRY SURFACE. FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR SURFACE PREPARATION FOR THERMOPLASTIC ON CONCRETE. PROVIDE TEMPORARY PAVEMENT MARKINGS DURING THE INTERIM PERIOD, PRIOR TO OPENING THE ROAD TO TRAFFIC. APPLY OR RECAP STANDARD THERMOPLASTIC PAVEMENT MARKINGS FOR LONGITUDINAL LINES TO ATTAIN A MINIMUM THICKNESS OF 0.10 INCH OR 100 MILS AND A MAXIMUM THICKNESS 0.15 INCH OR 150 MILS

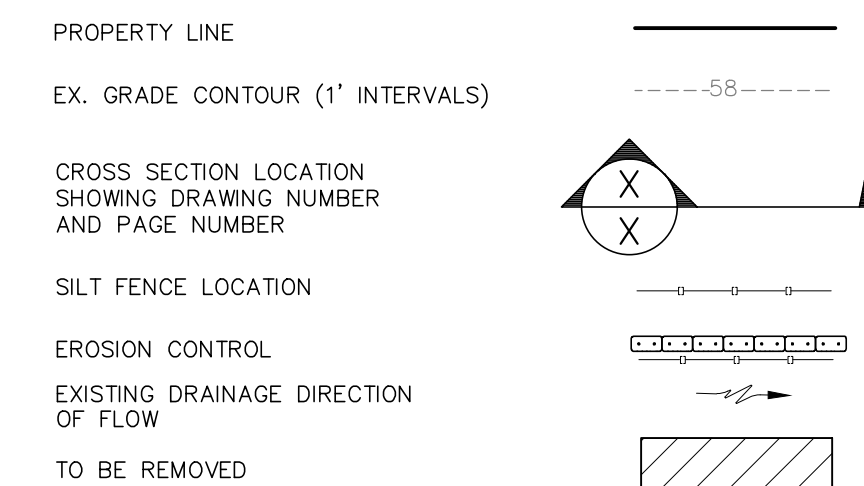
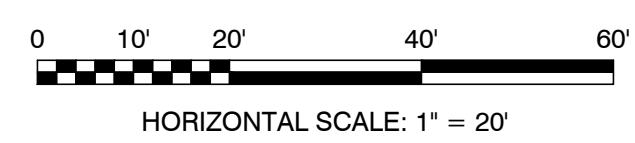
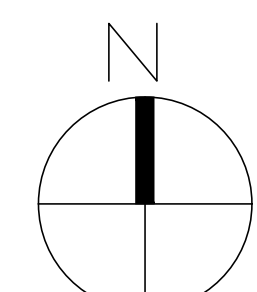
- WHEN MEASURED ABOVE THE PAVEMENT SURFACE, MARKINGS OTHER THAN LONGITUDINAL LINES, WHEREVER LOCATED, WILL HAVE A THICKNESS OF 0.09 INCH OR 90 MILS TO 0.12 INCH OR 120 MILS WHEN MEASURED ABOVE THE PAVEMENT SURFACE.
- ALL LANE AND SHOULDER CLOSURES MUST BE REQUESTED IN WRITING AND APPROVED A MINIMUM OF 48 HOURS PRIOR TO WORK STARTING. ALLOW UP TO 2 WEEKS FOR APPROVAL PROCESS. CONTACT LOCAL PERMITS OFFICE FOR MORE DETAILS AT 850-836-5790 OR 850-836-5742.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO PLACE SIDE DRAIN PIPES AT PROPER ELEVATIONS TO MATCH THE FLOW LINE OF THE DRAINAGE DITCH (NO SEDIMENT BUILDUP) TO ENSURE POSITIVE STORM WATER FLOW.
- APPROVAL FOR ALL LANE CLOSURES, MOBILE OPERATIONS, AND TRAFFIC PACING OPERATIONS IS REQUIRED. SUBMIT ROUTINE REQUESTS TO THE ENGINEER FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF PLANNED LANE CLOSURES, MOBILE OPERATIONS, AND TRAFFIC PACING OPERATIONS. FOR UNFORESEEN EVENTS THAT REQUIRE CANCELING OR RESCHEDULING LANE CLOSURES, MOBILE OPERATIONS, AND TRAFFIC PACING OPERATIONS, REVISE THE LANE CLOSURE REQUEST AS SOON AS POSSIBLE.
- WITHIN SIGHT OBSTRUCTION FREE AREA, NOTHING SHALL BE CONSTRUCTED OR PLANTED BETWEEN 1.5' AND 10' ABOVE THE CENTERLINE OF THE INTERSECTION.
- REMOVAL OF EXISTING CURB AND GUTTER AND SIDEWALK SHALL BE TO THE NEAREST CONSTRUCTION JOINT.
- CONTACT JACE ALBURY FDOT PONCE DE LEON OPS (850) 836-5790 TO OBTAIN ANY NEEDED UTILITY PERMITS FOR PROJECT.
- THE POSTED SPEED LIMIT FOR THE US-90/SR 10 CONNECTION IS 45 MPH.
- THE PERMITTEE AGREES AND OBLIGATES HIMSELF TO PERFORM AT HIS OWN EXPENSE THE RELOCATION, CLOSURE, ALTERATION OF THE PERMITTED CONNECTION SHOULD THE DEPARTMENT DETERMINE THAT THE TRAFFIC PATTERNS, POINTS OF CONNECTION, ROADWAY GEOMETRICS OR TRAFFIC CONTROL DEVICES ARE CAUSING AN UNDUCE DISRUPTION OF TRAFFIC OR CREATING SAFETY HAZARDS AT THE EXISTING CONNECTION.
- FULL WIDTH OF PAVED SHOULDER TO BE REMOVED AND REPLACED WITH FULL DEPTH BASE ACROSS THE ENTIRE ACCESS FRONTAGE.

NOTES:

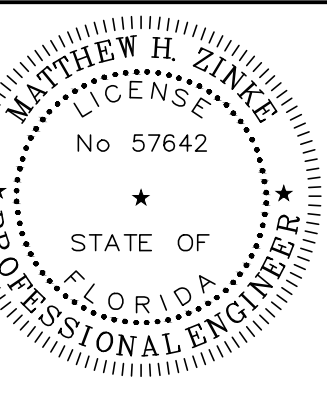
- THE LOCATION OF EXISTING UTILITIES IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION. IF THE LOCATION OR ELEVATION IS SUBSTANTIALLY DIFFERENT FROM THAT SHOWN ON THE PLANS, OR IF CONFLICTS EXIST, THE ENGINEER SHALL BE NOTIFIED.
- ALL EXISTING AND PROPOSED UTILITIES WITHIN LIMITS OF THE PROJECT MUST MEET MINIMUM DEPTH REQUIREMENTS UNDER PAVEMENT AND IN NATURAL AREAS. ANY EXISTING UTILITY THAT MAY BE IN CONFLICT WITH APPROVED ROADWAY FEATURES FOR THIS PROJECT MUST BE RELOCATED.
- IN ADDITION TO THE RELOCATION OF THE EXISTING UTILITIES SHOWN ON THESE PLANS, FURTHER RELOCATION OF EXISTING UTILITIES MAYBE REQUIRED. CONTRACTOR/DEVELOPER TO COORDINATE WITH UTILITY COMPANIES AS NEEDED.



CALL SUNSHINE
48 HOURS BEFORE YOU DIG
1-800-432-4770
DIG SAFELY



JENKINS ENGINEERING, INC.
73 EGLIN PARKWAY NE, SUITE 203
FORT WALTON BEACH, FLORIDA 32548
PHONE 850.837.2448
FAX 850.837.2450
JEICVIL.COM



MATTHEW H. ZINKE, P.E.
FL REGISTRATION NO. 57642

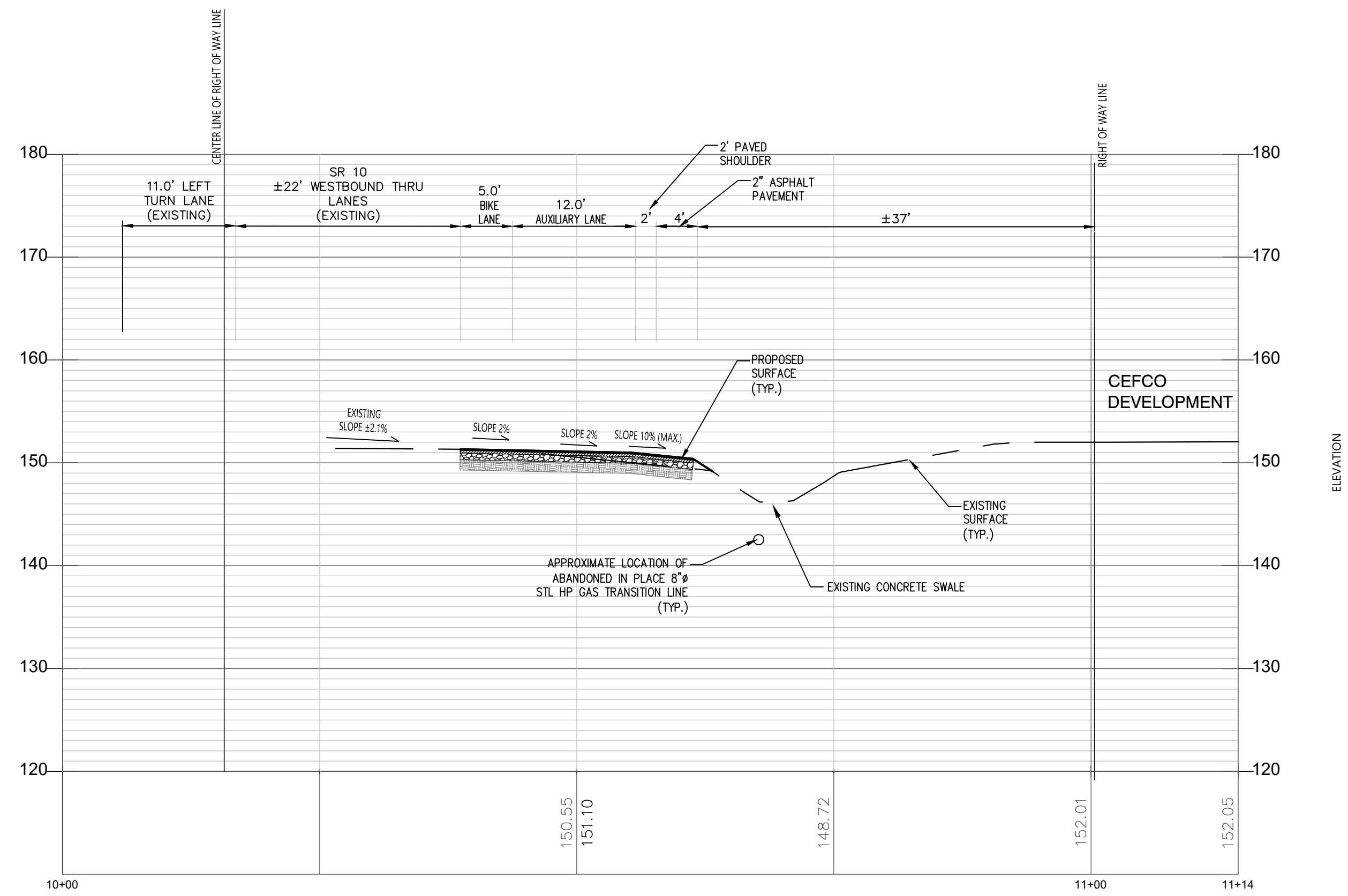
REV	DATE	DESCRIPTION
1.	08-18-24	REVISED PER FDOT COMMENTS
2.	04-02-24	REVISED PER FDOT COMMENTS

THE FIXES COMPANIES
CEFCO HWY 90 & OLD BETHEL
OKALOOSA COUNTY, FLORIDA
DEMOLITION PLAN

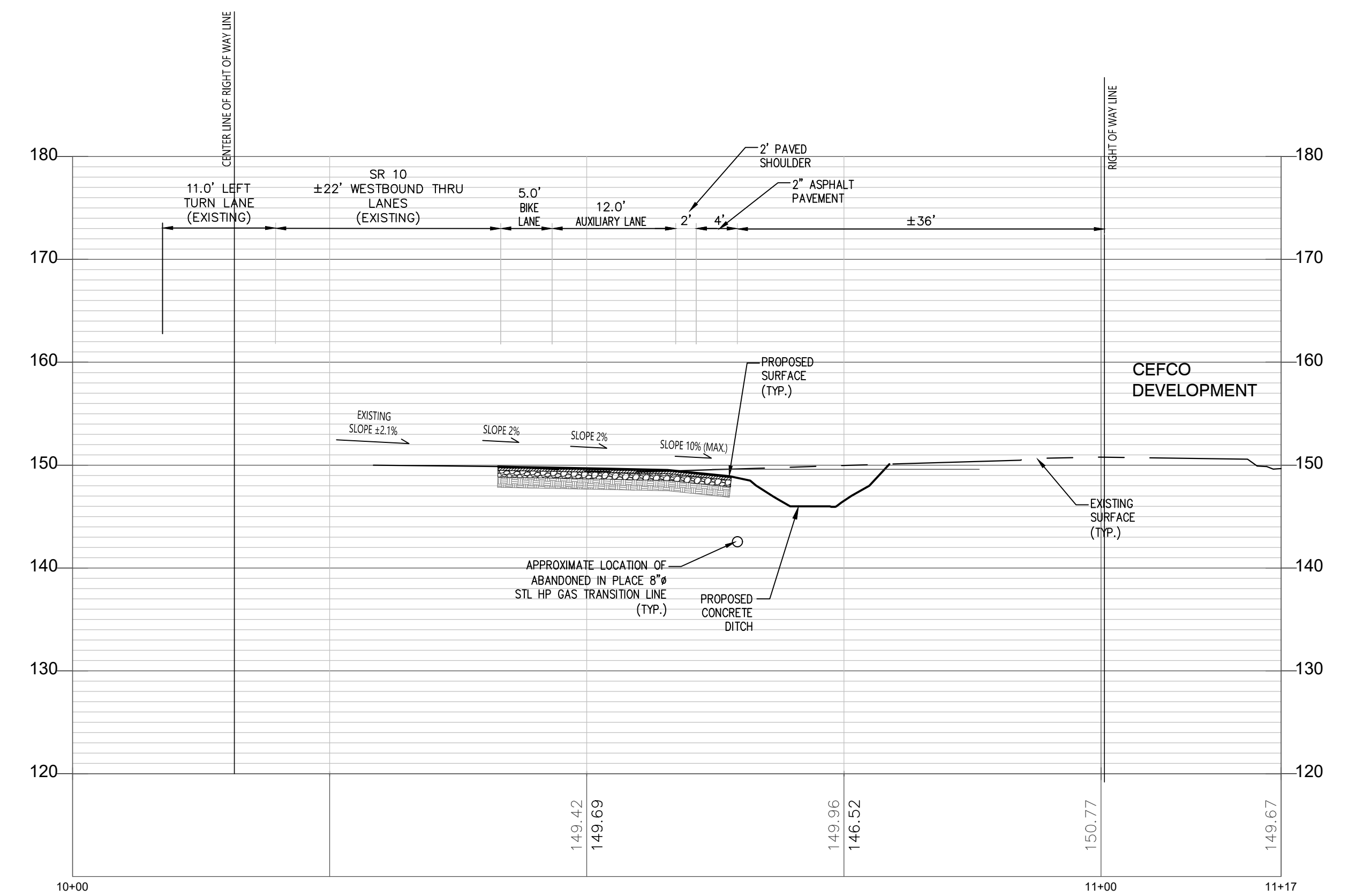
JOB: 23-72
DATE: 01-04-24
DESIGNED: MZ/MS
DRAWN: MS

BAR IS ONE INCH ON ORIGINAL
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY

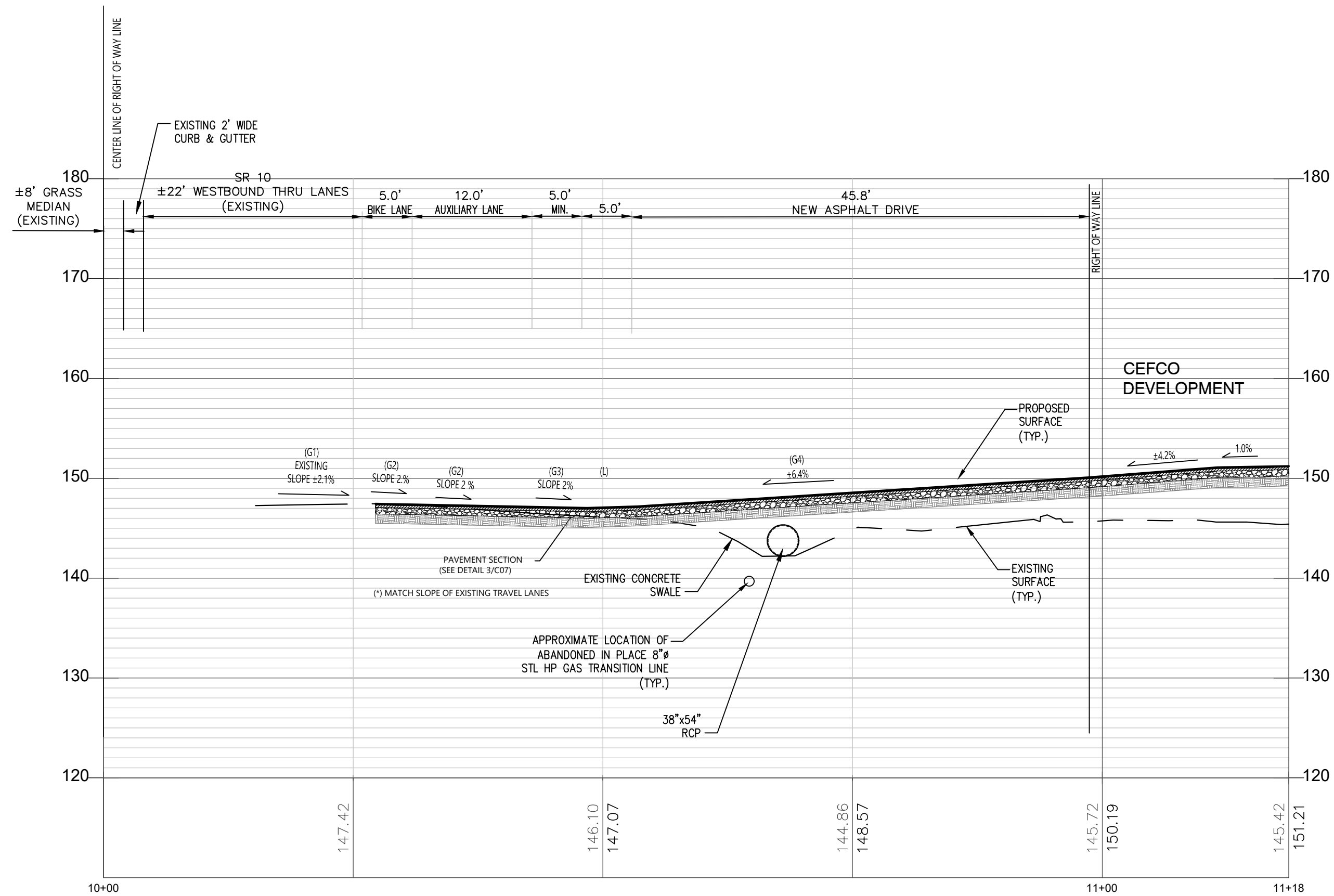
DRAWING NUMBER
03 OF 8
SHEET NUMBER
C03



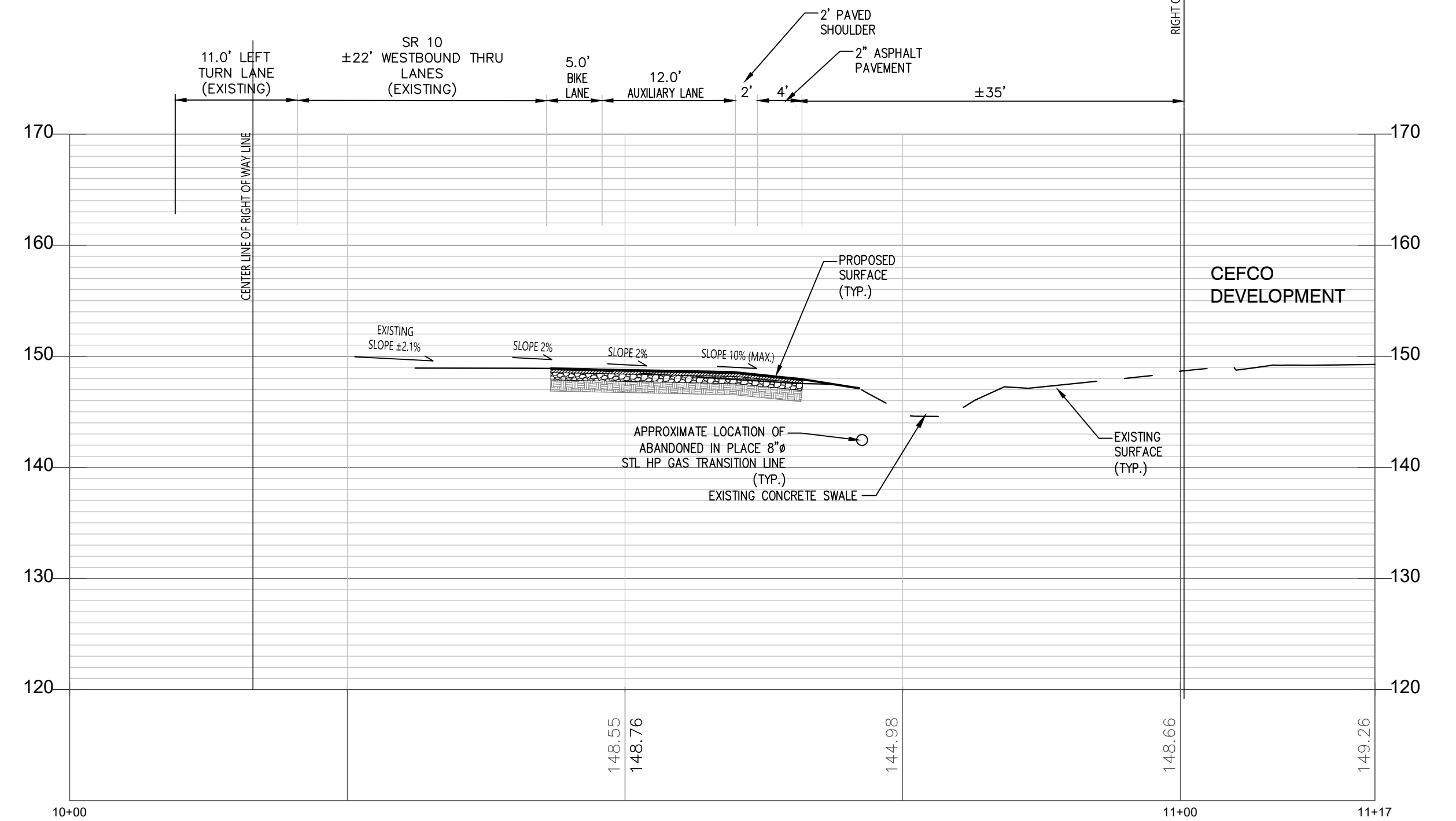
1 TURN LANE SECTION
C08 (FOR MORE DETAIL SEE 1/C07)



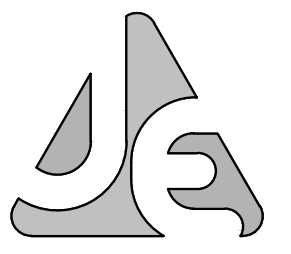
2 TURN LANE SECTION
C08 (FOR MORE DETAIL SEE 1/C07)



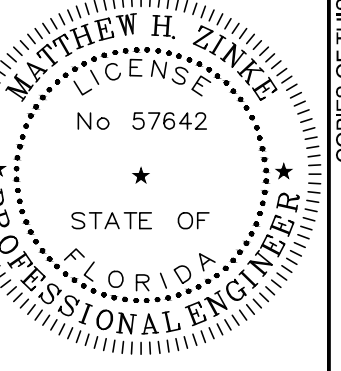
SR 10 MILE POST 13.159
DRIVEWAY SECTION



3 TURN LANE SECTION
C08 (FOR MORE DETAIL SEE 1/C07)



JENKINS ENGINEERING, INC.
73 EGLIN PARKWAY NE, SUITE 203
FORT WALTON BEACH, FLORIDA 32548
PHONE 850.837.2448
FAX 850.837.2450
JEICIVIL.COM



MATTHEW H. ZINKE, P.E.
FL REGISTRATION NO. 57642

BY: [Signature]

REV	DATE	DESCRIPTION
1.	08-18-24	REVISED PER FOOT COMMENTS

THE FIKES COMPANIES	CEFCO HWY 90 & OLD BETHEL OKALOOSA COUNTY, FLORIDA
SECTIONS	NOT VALID UNLESS BEARING ENGINEER'S ORIGINAL SIGNATURE

JOB: 23-72
DATE: 01-04-24
DESIGNED: MZ/MS
DRAWN: MS

BAR IS ONE INCH ON ORIGINAL
IF NOT ONE INCH ON THIS SHEET
ADJUST SCALES ACCORDINGLY

DRAWING NUMBER
08 OF 8

SHEET NUMBER
C08

F.D.O.T. DRIVEWAY CONNECTION CONSTRUCTION PLANS FOR:

CEFCO HWY 90 & OLD BETHEL OKALOOSA COUNTY, FLORIDA



VICINITY MAP
NOT TO SCALE

DIRECTIONS TO LOCATE SITE:

LATITUDE = 30°45'56.11"N
 LONGITUDE = 86°35'53.14"W
 SECTION = 13
 TOWNSHIP = 3 NORTH
 RANGE = 24 WEST
 COUNTY = OKALOOSA

THE PROJECT SITE IS LOCATED IN OKALOOSA COUNTY, FLORIDA, NORTHWEST CORNER OF THE INTERSECTION OF OLD BETHEL ROAD AND WEST JAMES LEE BOULEVARD (S.R. 10).

UTILITY PROVIDERS

(WATER/SEWER) OKALOOSA COUNTY WATER 1804 LEWIS TURNER BLVD # 300 FT. WALTON BEACH, FL 32547 (850) 651-7171	(TELEPHONE) CENTURYLINK 411 MARY ESTHER CUTOFF FT. WALTON BEACH, FL 32548 (850) 244-1150	(FIRE DISTRICT) NORTH OKALOOSA FIRE DISTRICT 5549 JOHN GIVENS RD CRESTVIEW, FL 32539 (850) 682-1808
(ELECTRIC) FLORIDA POWER & LIGHT (FPL) 140 HOLLYWOOD BLVD SW FT. WALTON BEACH, FL 32548 (800) 225-5797	(GAS) OKALOOSA GAS DISTRICT 20 HUGHES STREET NE FT. WALTON BEACH, FL 32548 (850) 729-4700	

GOVERNMENTAL AGENCIES HAVING JURISDICTION

OKALOOSA COUNTY (DEPARTMENT OF GROWTH MANAGEMENT) (850) 651-7795	FLORIDA DEPARTMENT OF TRANSPORTATION JACE ALBURY (850) 836-5790
(PUBLIC WORKS - ENGINEERING) SCOTT BITTERMAN, P.E. (850) 689-5772	

PREPARED FOR:

THE FIKES COMPANIES
 c/o Denise Anderson, CCIM
 9764 Whithorn Drive
 Houston, TX 77095
 Phone: (281) 382-7117

LEGAL DESCRIPTION (AS RECORDED):

(OFFICIAL RECORDS BOOK 2983, PAGE 2776)

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF OKALOOSA, STATE OF FLORIDA, AND IS DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF TRACT 3, PLAT 2, OAKCREST FARMS AND GROVES, AS RECORDED IN PLAT BOOK 1, PAGE 75, OF THE PUBLIC RECORDS OF OKALOOSA COUNTY, FLORIDA; THENCE RUN WEST 201.75 FEET; THENCE RUN SOUTH 311.95 FEET, MORE OR LESS, TO THE NORTHERLY RIGHT OF WAY LINE OF U.S. HIGHWAY 90; THENCE RUN NORTH 86°27'40" EAST ALONG SAID RIGHT OF WAY LINE, A DISTANCE OF 203.75 FEET TO A POINT SOUTH OF THE POINT OF BEGINNING; THENCE RUN NORTH ALONG THE EAST LINE OF SAID TRACT 3, A DISTANCE OF 303.80 FEET TO THE POINT OF BEGINNING.

(OFFICIAL RECORDS BOOK 2334, PAGE 3052)

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF OKALOOSA, STATE OF FLORIDA, AND IS DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF TRACT 3, PLAT 2, OAKCREST FARMS & GROVES IN SECTION 13, TOWNSHIP 3 NORTH, RANGE 24 WEST; THENCE RUN EAST ALONG THE NORTH LINE OF SAID TRACT 3 A DISTANCE OF 441.75 FEET TO A POINT; THENCE RUN SOUTH 358.58 FEET MORE OR LESS, TO A POINT ON THE NORTHERLY RIGHT OF WAY LINE OF U. S. HIGHWAY #90; THENCE RUN WEST ALONG THE NORTHERLY BOUNDARY LINE OF SAID U. S. HIGHWAY #90 A DISTANCE OF 441.75 FEET, MORE OR LESS, TO A POINT ON THE WEST LINE OF SAID TRACT 3 THENCE RUN NORTH ALONG THE WEST LINE OF SAID TRACT 3 A DISTANCE OF 360 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

DUTY TO INDEMNIFY

THE CONTRACTOR SHALL DEFEND, INDEMNIFY, KEEP AND SAVE HARMLESS THE OWNER AND ENGINEER AND THEIR RESPECTIVE MEMBERS, REPRESENTATIVES, AGENTS AND EMPLOYEES, IN BOTH INDIVIDUAL AND OFFICIAL CAPACITIES, AGAINST ALL SUITS, CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEYS FEES, CAUSED BY, GROWING OUT OF, OR INCIDENTAL TO THE PERFORMANCE OF THE WORK UNDER THE CONTRACT BY THE CONTRACTOR OR ITS SUBCONTRACTORS TO THE FULL EXTENT AS ALLOWED BY THE LAWS OF THE STATE OF FLORIDA AND NOT BEYOND ANY EXTENT WHICH WOULD RENDER THESE PROVISIONS VOID OR UNENFORCEABLE. IN THE EVENT OF ANY SUCH INJURY (INCLUDING DEATH) OR LOSS OR DAMAGE, OR CLAIMS THEREFORE, THE CONTRACTOR SHALL GIVE PROMPT NOTICE TO THE OWNER.

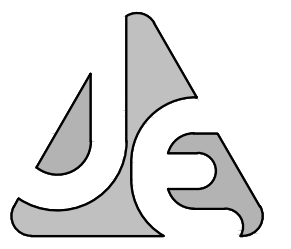
AUTHORITY AND RESPONSIBILITY

THE ENGINEER, AS REPRESENTATIVE OF THE OWNER, SHALL NOT GUARANTEE THE WORK OF ANY CONTRACTOR OR SUBCONTRACTOR, SHALL HAVE NO AUTHORITY TO STOP WORK, SHALL HAVE NO SUPERVISION OR CONTROL AS TO THE WORK OR PERSONS DOING THE WORK, SHALL NOT HAVE CHARGE OF THE WORK, SHALL NOT BE RESPONSIBLE FOR SAFETY IN, ON, OR ABOUT THE JOB SITE OR HAVE ANY CONTROL OF THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENT, SCAFFOLDING, SUPPORTS, FORMS, OR OTHER WORK AIDS, AND SHALL HAVE NO DUTIES OR RESPONSIBILITIES IMPOSED BY THE STRUCTURAL WORK ACT.

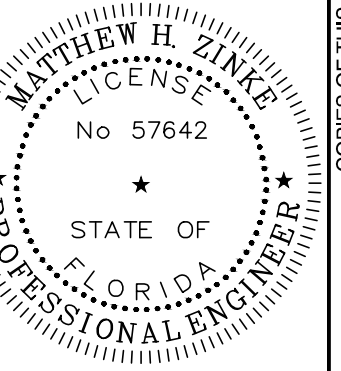
SHEET INDEX	
SHEET NO#:	SHEET TITLE
01	COVER SHEET
02	NEIGHBORING CONNECTION SURVEY
03	DEMOLITION PLAN
04	NEIGHBORING CONNECTION PLAN
05	SITE PLAN
06	GRADING PLAN
07	DETAILS
08	SECTIONS

NOTE

USE LATEST F.D.O.T. TECHNICAL SPECIFICATIONS AND DETAILS UNLESS OTHERWISE NOTED.



JENKINS ENGINEERING, INC.
 73 EGLIN PARKWAY NE, SUITE 203
 FORT WALTON BEACH, FLORIDA 32548
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 FAX 850.837.2450
 JEICIVIL.COM



MATTHEW H. ZINKE, P.E.
 FL REGISTRATION NO. 57642

REV	DATE	DESCRIPTION
1.	01-12-24	REVISED PER FOOT COMPLETENESS REVIEW
2.	03-18-24	REVISED PER FOOT COMMENTS
3.	04-02-24	REVISED PER FOOT COMMENTS

THE FIKES COMPANIES
CEFCO HWY 90 & OLD BETHEL
 OKALOOSA COUNTY, FLORIDA
COVER SHEET
NOT VALID UNLESS BEARING ENGINEER'S ORIGINAL SIGNATURE

JOB: 23-72
 DATE: 01-04-24
 DESIGNED: MZ/MS
 DRAWN: MS

BAR IS ONE INCH ON ORIGINAL
 0" = 1"
 IF NOT ONE INCH ON THIS SHEET
 ADJUST SCALES ACCORDINGLY

DRAWING NUMBER
 01 OF 8

SHEET NUMBER
C01

NOT RELEASED FOR CONSTRUCTION



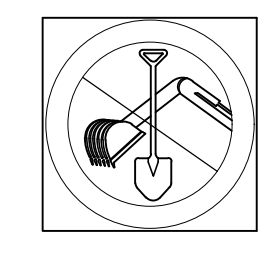
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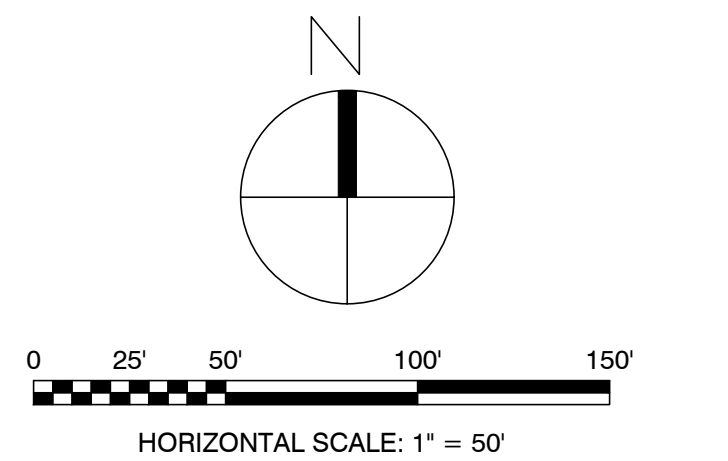
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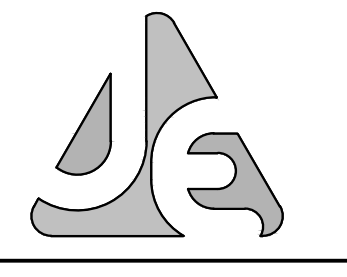
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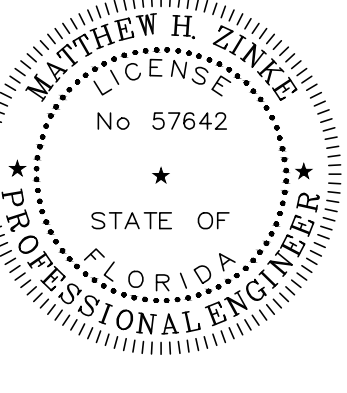
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1-800-432-4770
DIG SAFELY



- PROPERTY LINE
- EX. GRADE CONTOUR (1' INTERVALS)
- CROSS SECTION LOCATION SHOWING DRAWING NUMBER AND PAGE NUMBER
- SILT FENCE LOCATION
- EROSION CONTROL
- EXISTING DRAINAGE DIRECTION OF FLOW
- TO BE REMOVED



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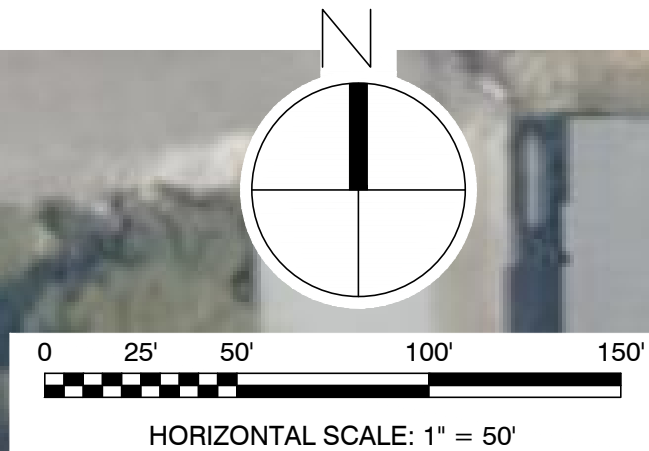
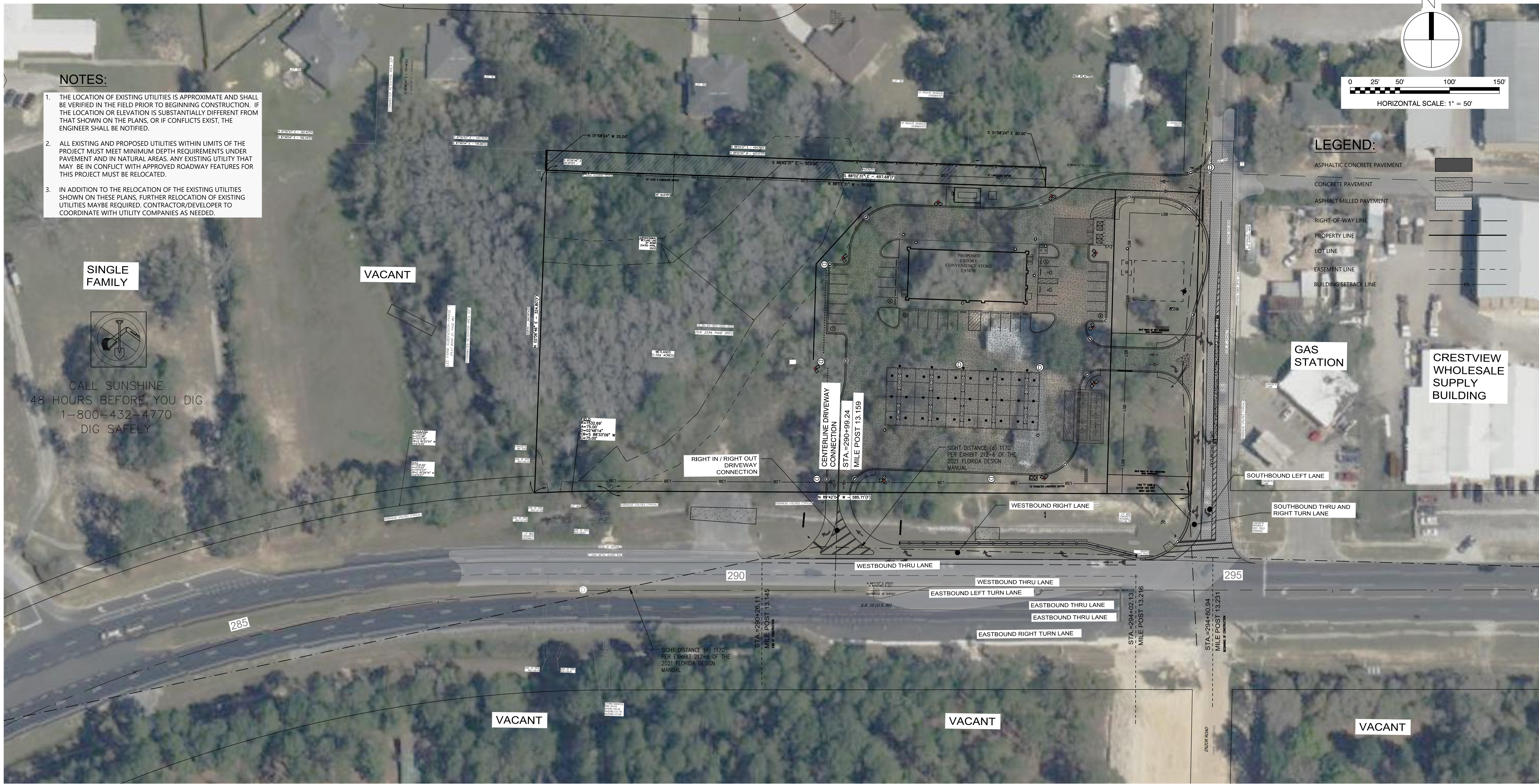


MATTHEW H. ZINKE, P.E.
FL REGISTRATION NO. 57642

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02 OF 8
SHEET NUMBER
C02



LEGEND:

- ASPHALTIC CONCRETE PAVEMENT
- CONCRETE PAVEMENT
- ASPHALT MILLED PAVEMENT
- RIGHT-OF-WAY LINE
- PROPERTY LINE
- LOT LINE
- EASEMENT LINE
- BUILDING SETBACK LINE

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SINGLE FAMILY

VACANT

GAS STATION

CRESTVIEW WHOLESALE SUPPLY BUILDING

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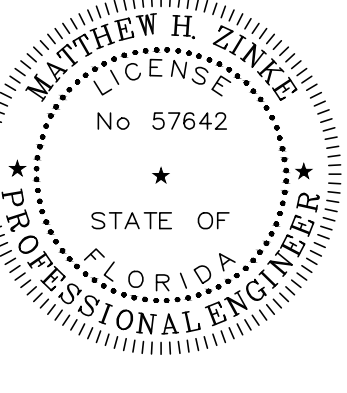
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REFER TO THE FOLLOWING LATEST F.D.O.T. STANDARD PLANS INDEX DRAWINGS FOR ADDITIONAL DETAILS :

INDEX NO.	DETAILS	INDEX NO.	DETAILS
102-600	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONE	522-001	CONCRETE SIDEWALK
102-601	TWO-LANE AND MULTILANE WORK BEYOND THE SHOULDER	522-002	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS
102-602	TWO-LANE AND MULTILANE, WORK ON SHOULDER	524-001	DITCH PAVEMENT AND SODDING
102-613	MULTILANE ROADWAY, LANE CLOSURES	536-001	GUARDRAIL
102-660	SIDEWALK CLOSURES	570-001	PERMANENT EROSION CONTROL
330-001	PAVED AND GRADED DRIVEWAYS	570-010	SHOULDER SODDING AND TURF ON EXISTING FACILITIES
425-001	SUPPLEMENTARY DETAILS FOR DRAINAGE STRUCTURES	700-010	SINGLE COLUMN GROUND SIGNS
425-024	CURB INLET TOP-TYPE 9	700-101	TYPICAL SECTION FOR PLACEMENT OF SINGLE & MULTI-COLUMN SIGNS
430-001	MISCELLANEOUS DRAINAGE DETAILS	700-102	SPECIAL SIGN DETAILS
430-030	STRAIGHT CONCRETE ENDWALLS - SINGLE AND MULTIPLE PIPE	706-001	TYPICAL PLACEMENT OF RAISED PAVEMENT MARKERS
520-001	CURB AND GUTTER	711-001	PAVEMENT MARKINGS
520-020	TRAFFIC SEPARATORS		

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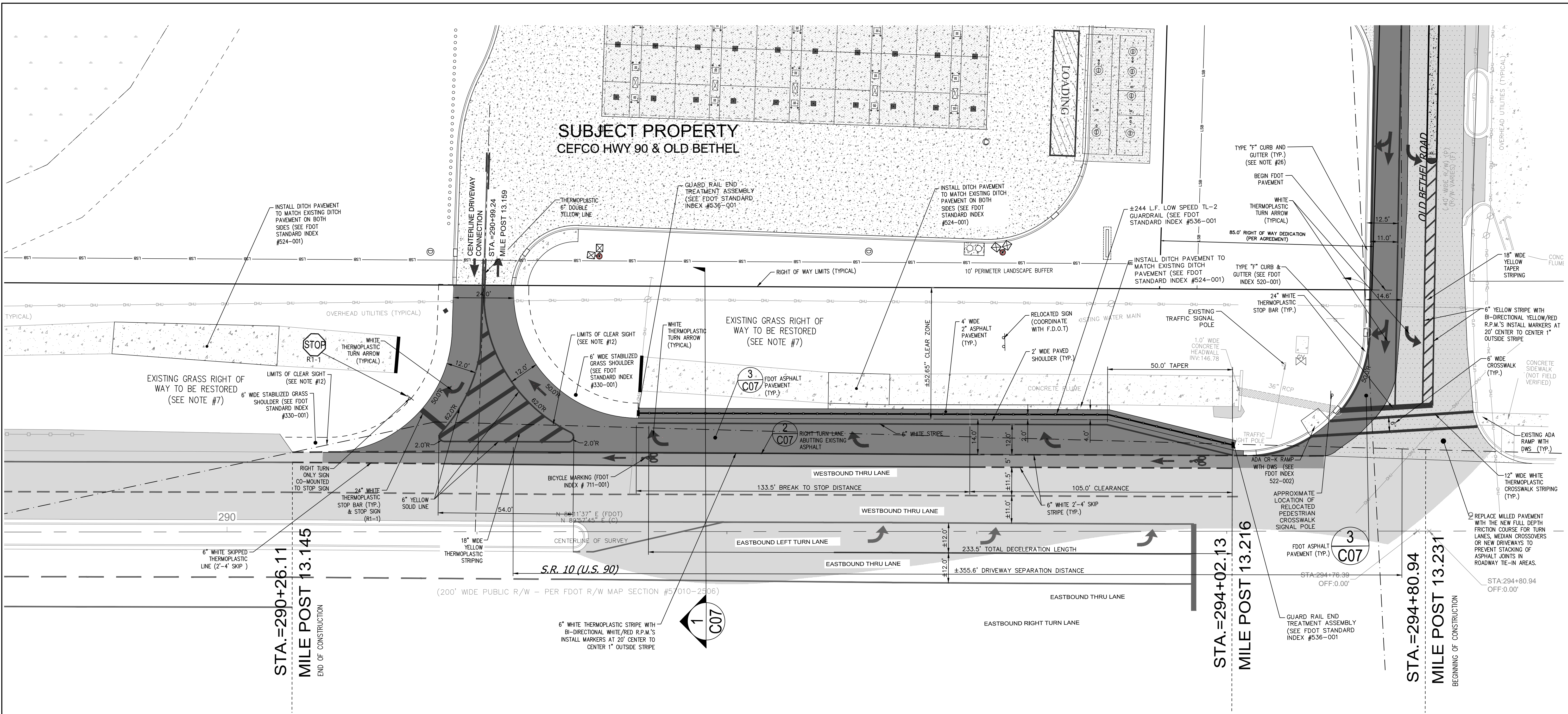
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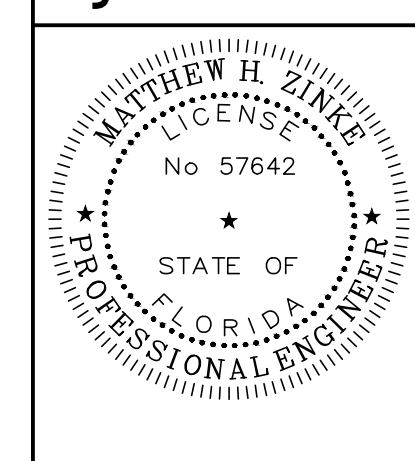
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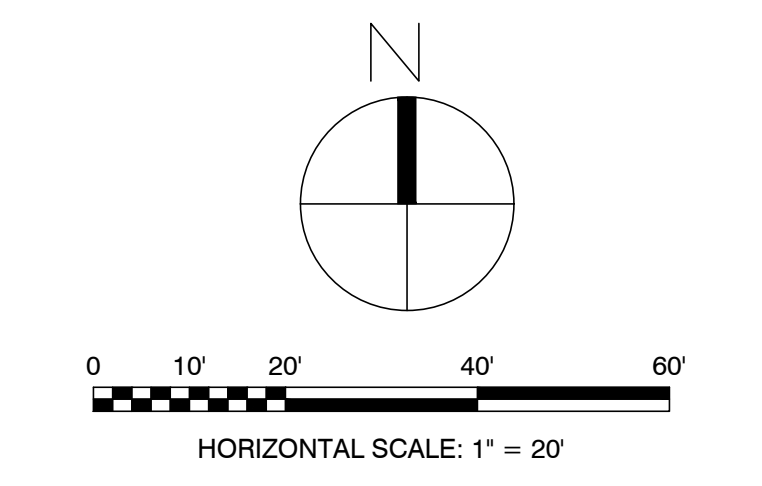
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- SOD AREAS WITHIN 32' OF EDGE OF PAVEMENT & SLOPES GREATER THAN 1:3. OTHER DISTURBED AREAS MAY BE REPAIRED BY SEEDING OR HYDRO-SEEDING. SEE FDOT STANDARD PLANS INDEX 570-010 AND SECTION 570 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION.
- ALL STRIPING WITHIN FDOT RIGHT OF WAY SHALL BE THERMOPLASTIC AND ADHERE TO STANDARD PLANS INDEX 711-001 AND SECTION 711 OF THE STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION. STANDARD SPEC 711-4.1 STATES: WAIT AT LEAST 14 DAYS AFTER CONSTRUCTING THE FINAL ASPHALT COURSE TO PLACE THERMOPLASTIC PAVEMENT MARKINGS. INSTALLATION OF THERMOPLASTIC ON CONCRETE REQUIRES A CLEAN, DRY SURFACE. FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR SURFACE PREPARATION FOR THERMOPLASTIC ON CONCRETE. PROVIDE TEMPORARY PAVEMENT MARKINGS DURING THE INTERIM PERIOD, PRIOR TO OPENING THE ROAD TO TRAFFIC. APPLY OR RECAP STANDARD THERMOPLASTIC PAVEMENT MARKINGS FOR LONGITUDINAL LINES TO ATTAIN A MINIMUM THICKNESS OF 0.10 INCH OR 100 MILS AND A MAXIMUM THICKNESS 0.15 INCH OR 150 MILS WHEN MEASURED ABOVE THE PAVEMENT SURFACE. MARKINGS OTHER THAN LONGITUDINAL LINES, WHEREVER LOCATED, WILL HAVE A THICKNESS OF 0.09 INCH OR 90 MILS TO 0.12 INCH OR 120 MILS WHEN MEASURED ABOVE THE PAVEMENT SURFACE.
- ALL LANE AND SHOULDER CLOSURES MUST BE REQUESTED IN WRITING AND APPROVED A MINIMUM OF 48 HOURS PRIOR TO WORK STARTING. ALLOW UP TO 2 WEEKS FOR APPROVAL PROCESS. CONTACT LOCAL PERMITS OFFICE FOR MORE DETAILS AT 850-836-5790 OR 850-836-5742.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO PLACE SIDE DRAIN PIPES AT PROPER ELEVATIONS TO MATCH THE FLOW LINE OF THE DRAINAGE DITCH (NO SEDIMENT BUILDUP) TO ENSURE POSITIVE STORM WATER FLOW.
- APPROVAL FOR ALL LANE CLOSURES, MOBILE OPERATIONS, AND TRAFFIC PACING OPERATIONS IS REQUIRED. SUBMIT ROUTINE REQUESTS TO THE ENGINEER FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF PLANNED LANE CLOSURES, MOBILE OPERATIONS, AND TRAFFIC PACING OPERATIONS. FOR UNFORESEEN EVENTS THAT REQUIRE CANCELING OR RESCHEDULING LANE CLOSURES, MOBILE OPERATIONS, AND TRAFFIC PACING OPERATIONS, REVISE THE LANE CLOSURE REQUEST AS SOON AS POSSIBLE.
- WITHIN SIGHT OBSTRUCTION FREE AREA, NOTHING SHALL BE CONSTRUCTED OR PLANTED BETWEEN 1.5' AND 10' ABOVE THE CENTERLINE OF THE INTERSECTION.
- REMOVAL OF EXISTING CURB AND GUTTER AND SIDEWALK SHALL BE TO THE NEAREST CONSTRUCTION JOINT.
- CONTACT JACE ALBURY FDOT PONCE DE LEON OPS (850) 836-5790 TO OBTAIN ANY NEEDED UTILITY PERMITS FOR PROJECT.
- THE POSTED SPEED LIMIT FOR THE US-90/SR 10 CONNECTION IS 45 MPH.
- THE PERMITTEE AGREES AND OBLIGATES HIMSELF TO PERFORM AT HIS OWN EXPENSE THE RELOCATION, CLOSURE, ALTERATION OF THE PERMITTED CONNECTION SHOULD THE DEPARTMENT DETERMINE THAT THE TRAFFIC PATTERNS, POINTS OF CONNECTION, ROADWAY GEOMETRICS OR TRAFFIC CONTROL DEVICES ARE CAUSING AN UNDUE DISRUPTION OF TRAFFIC OR CREATING SAFETY HAZARDS AT THE EXISTING CONNECTION.
- FULL WIDTH OF PAVED SHOULDER TO BE REMOVED AND REPLACED WITH FULL DEPTH BASE ACROSS THE ENTIRE ACCESS FRONTAGE.

REFER TO THE FOLLOWING LATEST F.D.O.T. STANDARD PLANS INDEX DRAWINGS FOR ADDITIONAL DETAILS :

INDEX NO.	DETAILS	INDEX NO.	DETAILS
102-600	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONE	522-001	CONCRETE SIDEWALK
102-601	TWO-LANE AND MULTILANE WORK BEYOND THE SHOULDER	522-002	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS
102-602	TWO-LANE AND MULTILANE, WORK ON SHOULDER	524-001	DITCH PAVEMENT AND SODDING
102-613	MULTILANE ROADWAY, LANE CLOSURES	536-001	GUARDRAIL
102-660	SIDEWALK CLOSURES	570-001	PERMANENT EROSION CONTROL
330-001	PAVED AND GRADED DRIVEWAYS	570-010	SHOULDER SODDING AND TURF ON EXISTING FACILITIES
425-001	SUPPLEMENTARY DETAILS FOR DRAINAGE STRUCTURES	700-010	SINGLE COLUMN GROUND SIGNS
425-024	CURB INLET TOP-TYPE 9	700-101	TYPICAL SECTION FOR PLACEMENT OF SINGLE & MULTI-COLUMN SIGNS
430-001	MISCELLANEOUS DRAINAGE DETAILS	700-102	SPECIAL SIGN DETAILS
430-030	STRAIGHT CONCRETE ENDWALLS - SINGLE AND MULTIPLE PIPE	706-001	TYPICAL PLACEMENT OF RAISED PAVEMENT MARKERS
520-001	CURB AND GUTTER	711-001	PAVEMENT MARKINGS
520-020	TRAFFIC SEPARATORS		



LEGEND:

ASPHALTIC CONCRETE PAVEMENT	[Pattern]
CONCRETE PAVEMENT	[Pattern]
ASPHALT MILLED PAVEMENT	[Pattern]
RIGHT-OF-WAY LINE	[Line Style]
PROPERTY LINE	[Line Style]
LOT LINE	[Line Style]
EASEMENT LINE	[Line Style]
BUILDING SETBACK LINE	[Line Style]

THE FIKES COMPANIES
CEFCO HWY 90 & OLD BETHEL
 OKALOOSA COUNTY, FLORIDA
SITE PLAN

JOB: 23-72
 DATE: 01-04-24
 DESIGNED: MZ/MS
 DRAWN: MS

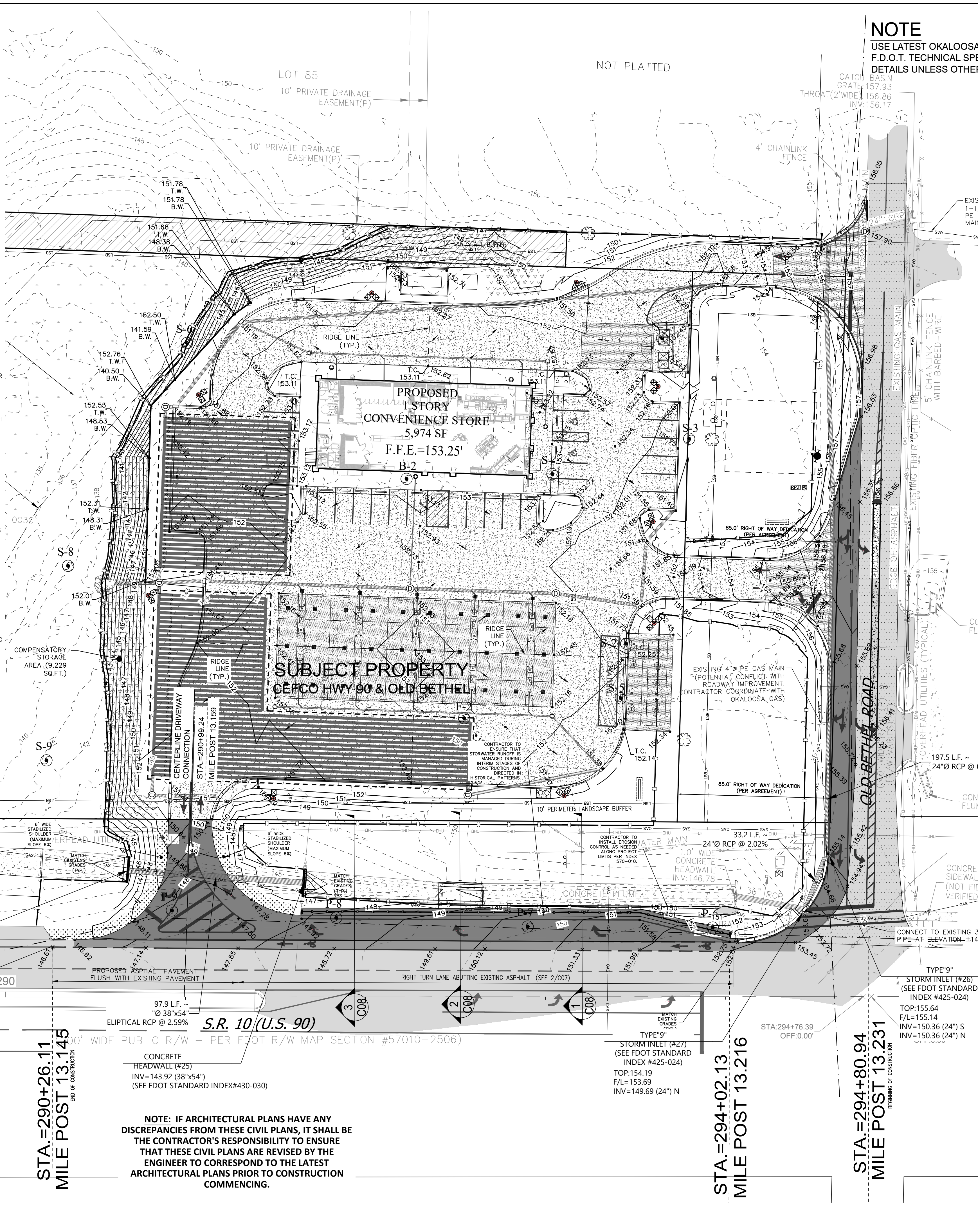
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 05 OF 8
 SHEET NUMBER
C05

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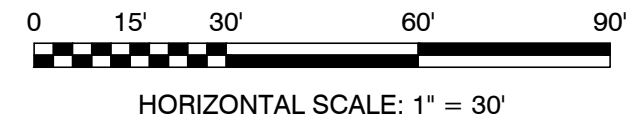
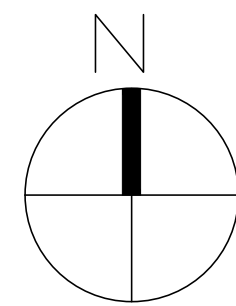
F.D.O.T. NOTES

- 1. ALL WORK IN THE RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE CURRENT EDITION OF THE FDOT STANDARD PLANS FOR ROADWAY CONSTRUCTION... 17. FULL WIDTH OF PAVED SHOULDER TO BE REMOVED AND REPLACED WITH FULL DEPTH BASE ACROSS THE ENTIRE ACCESS FRONTAGE.



NOTE

USE LATEST OKALOOSA COUNTY AND/OR F.D.O.T. TECHNICAL SPECIFICATIONS AND DETAILS UNLESS OTHERWISE NOTED.



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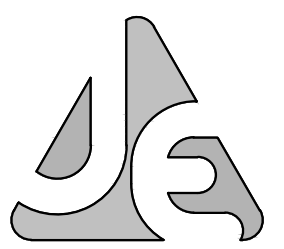
- EXISTING ASPHALTIC CONCRETE PAVEMENT
ASPHALT MILLED PAVEMENT
ASPHALTIC CONCRETE PAVEMENT
CONCRETE PAVEMENT
PROPERTY LINE
EX. GRADE CONTOUR (1' INTERVALS)
FINISHED GRADE CONTOUR
FINISHED GRADE SPOT ELEVATION
EXISTING GRADE SPOT ELEVATION
SILT FENCE LOCATION
REINFORCED CONCRETE PIPE

REFER TO THE FOLLOWING LATEST F.D.O.T. STANDARD PLANS INDEX DRAWINGS FOR ADDITIONAL DETAILS :

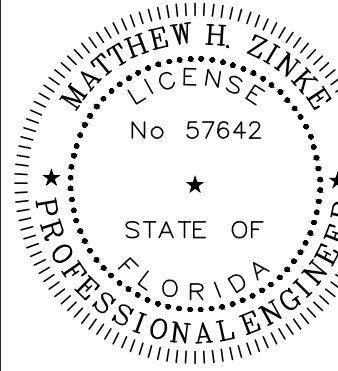
Table with 2 columns: INDEX NO. and DETAILS. Lists various construction details like 102-600 GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONE, 102-601 TWO-LANE AND MULTILANE WORK BEYOND THE SHOULDER, etc.

NOTES:

- 1. THE LOCATION OF EXISTING UTILITIES IS APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION... 3. IN ADDITION TO THE RELOCATION OF THE EXISTING UTILITIES SHOWN ON THESE PLANS, FURTHER RELOCATION OF EXISTING UTILITIES MAYBE REQUIRED.



JENKINS ENGINEERING, INC.
73 EGLIN PARKWAY NE, SUITE 203
FORT WALTON BEACH, FLORIDA 32548
PHONE 850.837.2448
FAX 850.837.2450
JEICVIL.COM

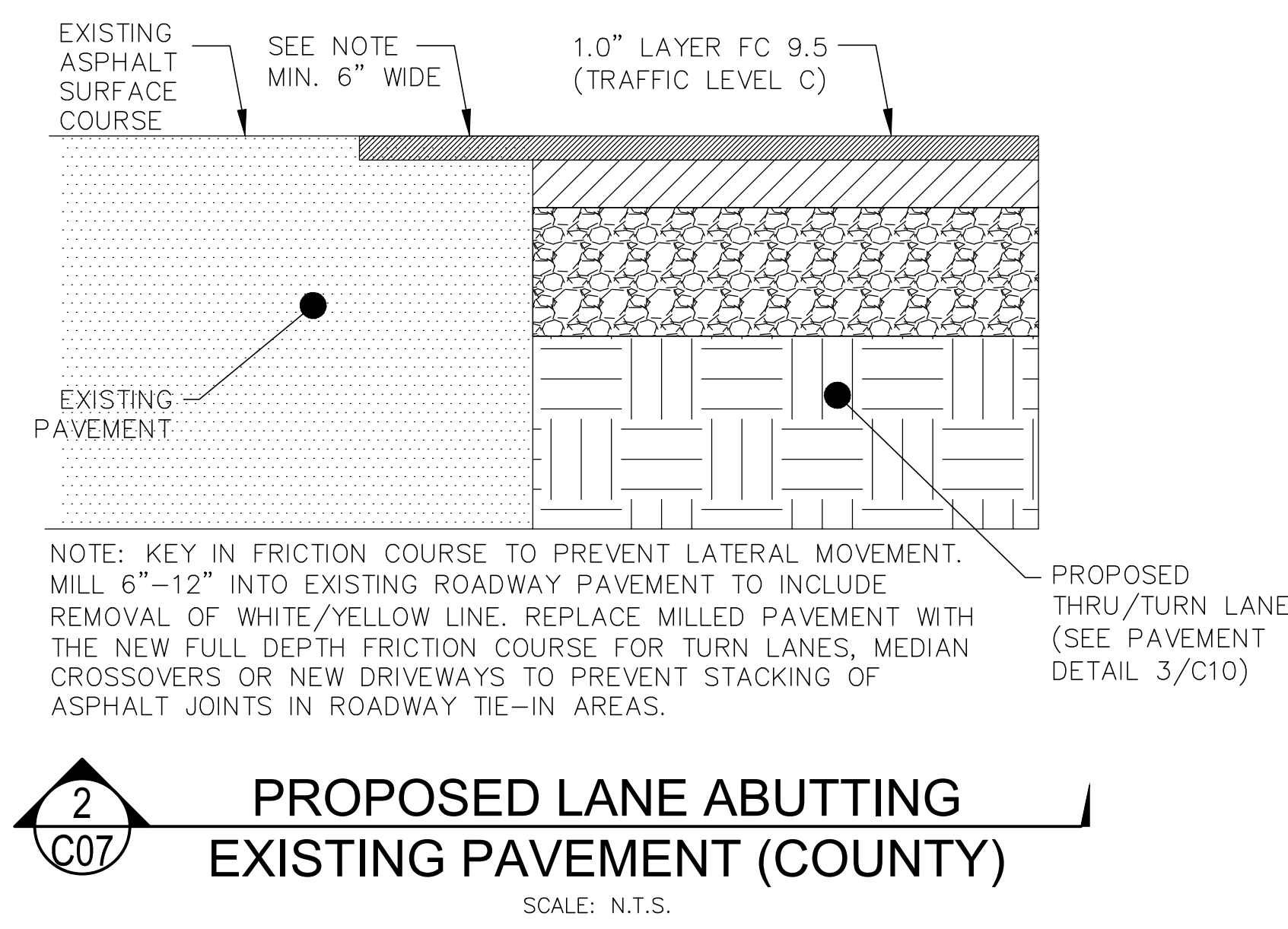
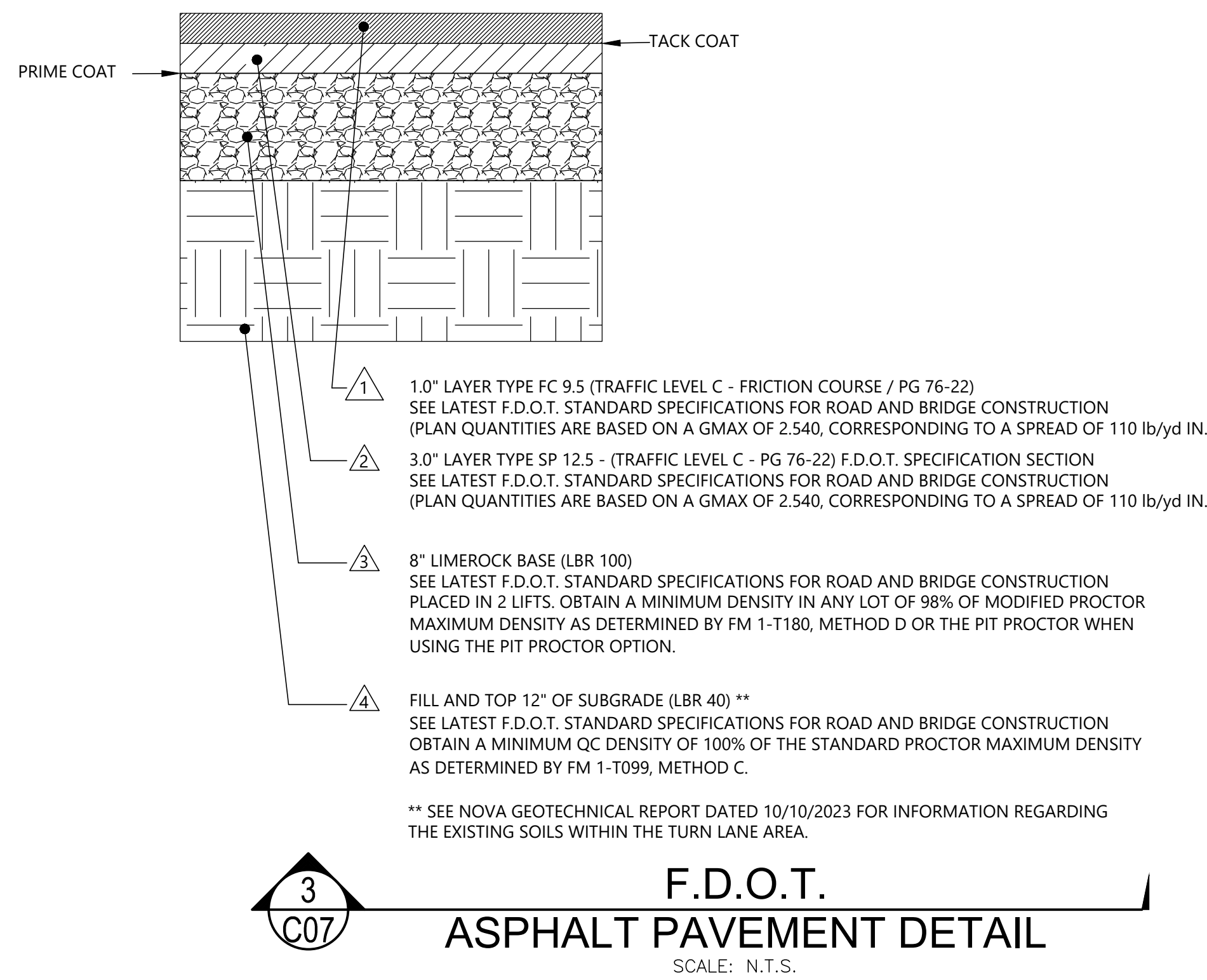
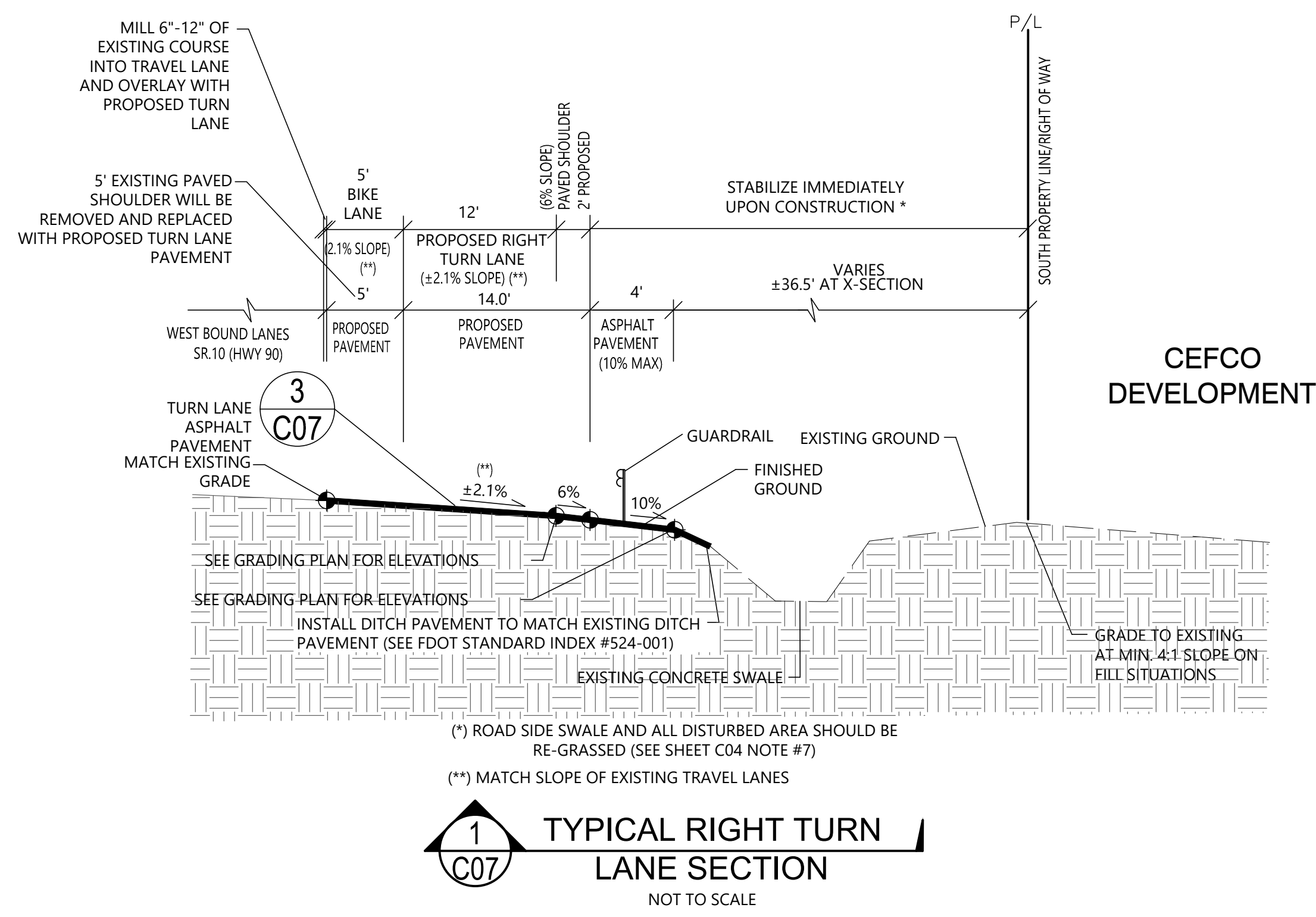


MATTHEW H. ZINKE, P.E.
FL REGISTRATION NO. 57642

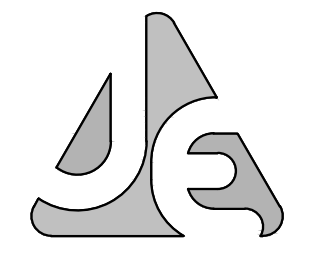
Revision table with columns: REV, DATE, DESCRIPTION. Lists revisions 1 through 3.

THE FIKES COMPANIES
CEFCO HWY 90 & OLD BETHEL
OKALOOSA COUNTY, FLORIDA
GRADING PLAN
JOB: 23-72
DATE: 01-04-24
DESIGNED: MZ/MS
DRAWN: MS
DRAWING NUMBER 06 OF 8
SHEET NUMBER C06

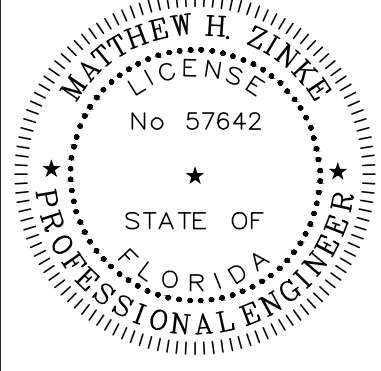
NOTE: IF ARCHITECTURAL PLANS HAVE ANY DISCREPANCIES FROM THESE CIVIL PLANS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THESE CIVIL PLANS ARE REVISED BY THE ENGINEER TO CORRESPOND TO THE LATEST ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION COMMENCING.



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JENKINS ENGINEERING, INC.
 73 EGLIN PARKWAY NE, SUITE 203
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 JECIVIL.COM



MATTHEW H. ZINKE, P.E.
 FL. REGISTRATION NO. 57642

REV	DATE	DESCRIPTION
1.	08-18-24	REVISED PER FOOT COMMENTS

BY: **

THE FIKES COMPANIES

CEFCO HWY 90 & OLD BETHEL
 OKALOOSA COUNTY, FLORIDA

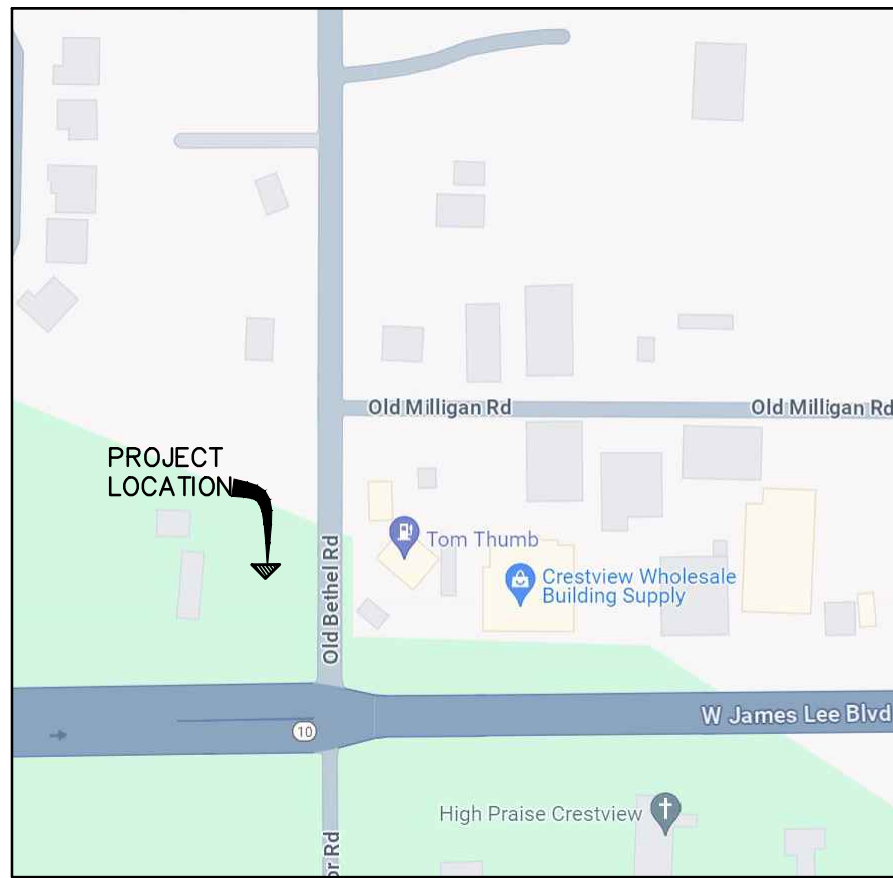
DETAILS
NOT VALID UNLESS BEARING ENGINEER'S ORIGINAL SIGNATURE

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 DRAWN: MS

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 07 OF 8

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VICINITY MAP
N.T.S.

EPA TECHNICAL STANDARDS:

LEAK DETECTION:
PIPING: AUTOMATIC SHUTOFF DEVICE OR FLOW RESTRICTOR
TANKS: AUTOMATIC TANK MONITORING AND INVENTORY CONTROL.

OVERFILL PREVENTION - SPILL CONTAINMENT:

SPILL CONTAINMENT MANHOLE: RE: FP6
OVERFILL PREVENTION VALVE: FE: FP6

CORROSION PROTECTION:

TANKS: ACT100 STEEL FIBERGLASS COATED
PIPING: DOUBLE WALL PRODUCT PIPING
ALL METALLIC COMPONENTS OF THE PIPING SYSTEM TO BE ELECTRICALLY ISOLATED FROM THE BACKFILL BY COATING WITH A SUITABLE DIELECTRIC MATERIAL. RE:FP6

FUEL ISLANDS

- FUEL ISLANDS MUST BE MAINTAINED AND KEPT CLEAN AND FREE OF TRASH OR OTHER UNSIGHTLY ITEMS AT ALL TIMES.
- FUEL ISLANDS MUST HAVE A CONCRETE PAD UNDER THE CANOPY.
- DISTRIBUTOR MUST PROVIDE OWNER APPROVED TRASH CANS AND WINDSHIELD WASHER CABINETS ON ALL FUEL ISLANDS.
- WHEN REQUIRED - FUEL ISLANDS MUST HAVE WELL MAINTAINED, PAINTED CURBS REFLECTIVE OF THE OWNER BRAND IMAGE.

FUEL WARNING/REGULATORY DECALS

DISTRIBUTORS ARE SOLELY RESPONSIBLE FOR PROVIDING PROPER NOTICE AND PLACEMENT OF WARNING/REGULATORY DECALS ON ALL FUEL DISPENSERS USED TO NOTIFY THE PUBLIC ABOUT THE DANGERS ASSOCIATED WITH DISPENSING AND USING FUEL AND FUEL PRODUCTS.

FUELING FACILITIES

THE CANOPY MUST BE A MODERN HORIZONTAL STRUCTURE WITH VERTICAL, SMOOTH AND FLAT FASCIA CONSTRUCTED OF METAL, ACM, OR OTHER SIMILAR MATERIAL APPROVED IN WRITING BY OWNER. THE CANOPY MUST HAVE A CANOPY PAN ON THE UNDERNEATH SIDE OF THE CANOPY AND MUST ALSO HAVE LIGHTING (NON FLUORESCENT) WORKING AND SUITABLE TO THE OVERALL SIZE OF THE CANOPY. MARKS MAY ONLY BE UTILIZED WITHIN OR ON ANY CANOPY AS APPROVED BY OWNER.

CANOPY COLUMNS

CANOPY COLUMNS WILL BE COVERED FULL HEIGHT OF THE COLUMN.

UNAUTHORIZED SIGNAGE ON COLUMNS

UNDER NO CIRCUMSTANCES IS IT ACCEPTABLE TO INSTALL OR DISPLAY SIGNAGE ON THE COLUMNS OF EITHER A TEMPORARY OR PERMANENT NATURE WITHOUT PRIOR, WRITTEN AUTHORIZATION FROM OWNER. THIS INCLUDES BANNERS, PROMOTIONAL SIGNS, POLE WRAP SIGNS, WARNING DECALS, HANDWRITTEN SIGNS AND NOTICES, ETC.

AUTOMATION

EACH STATION SHALL UTILIZE, AT DISTRIBUTOR'S EXPENSE, AUTOMATION EQUIPMENT FOR THE PURPOSE OF CREDIT CARD TRANSACTION AND AUTHORIZATION SERVICES, AND OTHER AGREED UPON SERVICES WHICH SHALL AT A MINIMUM MEET CEFCO'S CRITERIA FOR SPEED, CAPACITY AND SERVICES IN THE MANNER AND AS DETERMINED BY CEFCO.

DISPENSERS

- A MINIMUM OF 2 MPD'S WITH CRINDS ARE REQUIRED.
- MPD'S MUST BE MODERN AND IN GOOD WORKING CONDITION.
- DISPENSERS MUST DISPLAY GRAPHICS AND DECALS ACCORDING TO THE IMAGE SPECIFICATIONS SET BY CEFCO. VERIFY WITH OWNER.
- MARKS MAY ONLY BE UTILIZED WITHIN OR ON THE PUMP SKIRT AS APPROVED BY CEFCO. IN NO EVENT MAY DISTRIBUTOR OR ITS DEALER(S) UTILIZE ANY TRADEMARKS, COLOR SCHEMES, TRADE DRESS, SERVICE MARKS, SIGNS, SYMBOLS, SLOGANS OR DESIGNS OTHER THAN THE MARKS ON THE DISPENSERS OR WITHIN OR ON THE PUMP SKIRT.

TANK, PIPING & INSTALLATION NOTES:

GENERAL NOTES:

- ALL NEW PETROLEUM EQUIPMENT, MATERIALS, AND ACCESSORIES SHALL BE DEP APPROVED. ALL PETROLEUM EQUIPMENT, MATERIALS AND ACCESSORIES SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH APPLICABLE MANUFACTURER'S INSTRUCTIONS.
- ALL TANKS AND PIPING INSTALLATION WORK IS TO BE PERFORMED BY A STATE REGISTERED POLLUTANT STORAGE SPECIALTY CONTRACTOR.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICANT STATE, COUNTY AND MUNICIPAL BUILDING CODE REQUIREMENT AND ORDINANCES; AND THE FOLLOWING REFERENCE STANDARDS:

NATIONAL FIRE PROTECTION ASSOCIATION:
30 FLAMMABLE AND COMBUSTIBLE LIQUID CODE
30A AUTOMOTIVE SERVICE STATION CODE
329 UNDERGROUND LEAKAGE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS
70 NATIONAL ELECTRIC CODE

AMERICAN PETROLEUM INSTITUTE:
1615 INSTALLATION OF UNDERGROUND PETROLEUM STORAGE SYSTEMS
1604 RECOMMENDED PRACTICE FOR ABANDONMENT OR REMOVAL OF USED U.G. STORAGE TANKS

PETROLEUM EQUIPMENT INSTITUTE:
RP1DO RECOMMENDED PRACTICES FOR INSTALLATION OF U.G LIQUID STORAGE TANKS

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION:
CONSTRUCTION SAFETY AND HEALTH REGULATIONS SUBPART P. 1902.50 THRU 1926.653

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR GIVING REQUIRED NOTICE(S) AND SCHEDULING APPLICABLE CITY, COUNTY AND/OR STATE INSPECTIONS AS REQUIRED FOR PERMIT CLOSE OUT(S).

5. STANDARD TANK/PIPING TEST SPECIFICATIONS
-CERTIFIED CONTRACTOR TO PERFORM CARB TP-201.3, IN ADDITION TO THE FOLLOWING STANDARD TESTING:
*** HYDROSTATIC TESTING FOR SPILL BUCKETS AND SUMPS
*** PRECISION PRESSURE TESTING OF TANKS AND LINES

GENERAL PIPING NOTES:

1. GENERAL:

PIPING:

- PRIMARY PRODUCT PIPING TO UTILIZE UPP PIPING AND PIPING LENGTHS SHALL USE 33 FT. STICKS BETWEEN DISPENSER POINTS. THESE WILL HAVE TO BE SHORTENED, AS NEEDED.
- STEEL PIPE TO BE SCHEDULE 40 GALVANIZED. ALL PIPING AND SEALANT TO BE ALCOHOL COMPATIBLE. SCHEDULE 40 BLACK PIPE ON DIESEL PRODUCT. STAINLESS STEEL PIPE FOR DEF CONNECTIONS.
- PIPE JOINT SEAL:
 - GASOILA SOFT SET SHALL BE USED ON ALL STEEL PIPE FITTINGS AND THREADED METAL CONNECTIONS.
- TANK VENTS:
 - ALL TANKS VENTS SHALL BE S/W UPP PIPING. RISERS WILL BE SCHEDULED 40 GALVANIZED STEEL. CANOPY MANUFACTURER SUPPLIES IN-COLUMN PORTION OF VENT-RISER.
- BACKFILL:
 - BACKFILL OVER PRODUCT PIPING SHALL BE CLEAN, COMPACTED PEA GRAVEL. PIPING SHALL BE LAID AND CONTINUOUSLY SUPPORTED ON 6" OF COMPACTED PEA GRAVEL.
 - NO PIPING SHALL BE SUPPORTED BY BLOCKS, PLANKS OR OTHER DEBRIS.
 - PIPING SHALL BE SEPARATED BY AT LEAST THE DIAMETER OF THE LARGER PIPE.
- SLOPE:
 - ALL PIPING MUST SLOPE TO UNDERGROUND TANKS, VENT AND VAPOR RECOVERY PIPING MUST SLOPE AT A MINIMUM RATE OF 1/8" PER FOOT.
- MINIMUM 18" BEND RADIUS FOR CONDUIT. MINIMUM 5' RADIUS FOR PRODUCT PIPING.

ELECTRICAL NOTES:

- N.E.C. ARTICLE 500 & 514 CONDITIONS FOR HAZARDOUS AREAS AND FUEL DISPENSING FACILITIES APPLY.
- PROVIDE EXPLOSION PROOF SEALS-OFFS IN ACCORDANCE WITH ARTICLES 500, 501 AND 514 (CLASS 1, DIVISION 1 & 2) OF THE 2014 NATIONAL ELECTRICAL CODE TYPICAL FOR ALL CONDUITS IN CLASS 1 LOCATIONS, INCLUDING LOW VOLTAGE CONDUITS.
- ALL CONDUITS IN CLASS 1 LOCATIONS SHALL BE GROUNDED AS PER NEC. 250.100 & 501.30. MATERIALS:

MATERIAL:

- UPP SYSTEM SOLUTION PIPING IS TO PROVIDE SUFFICIENT PIPING AND FITTINGS TO COMPLETE ANY TYPICAL INSTALLATION TO THE INSTALLER BY THE OWNER. UNUSED MATERIALS SHALL BE INVENTORIED AND RETURNED CEFCO REPRESENTATIVE.
- THERE ARE TWO TYPES OF PIPING:
 - COAXIAL, SECONDARILY CONTAINED DIRECT BURIAL FLEXIBLE PIPING "UPP UL971" WITH A 50 MM (2") LD. PRIMARY AND A 65 MM (2 1/2") O.D. SECONDARY. THIS PIPING IS TYPICALLY DELIVERED IN ROUND ROLLS.
 - UPP PIPING TO BE SHIPPED IN STRAIGHT PIPING FOR USE IN VENTING AND IF SPECIFIED BY THE OWNER, VAPOR RECOVERY PIPING.
- INSTALLATION REQUIREMENTS ARE SIMILAR FOR BOTH THE DOUBLE WALL AND THE SINGLE THICKNESS PIPING.
- FITTINGS FOR ELBOWS, TEES, NPT ADAPTORS AND BULKHEAD PENETRATION WITH UPP ARE PROPRIETARY, AND NO SUBSTITUTIONS ARE PERMITTED.
- TOOLS FOR HANDLING AND INSTALLATION ARE PROPRIETARY FOR UPP PIPING AND SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE INSTALLER.
- DISPENSER SUMPS ARE POLYETHYLENE PRODUCTS OF UPP. WHILE THE TANK SUMP ARE OF FIBERGLASS CONSTRUCTION, FOR BONDING TO THE SECONDARY CONTAINER RING OF THE UNDERGROUND TANK. THIS SUMP IS PRESENTLY NOT A UPP PRODUCT.

HANDLING:

- HANDLE UPP PIPING AND FITTINGS WITH CARE, AS WITH ANY PETROLEUM PIPING. DO NOT ACCEPT PIPING FOR USE WHERE SURFACE DAMAGE, CUTS, GOUGES, EXCEEDS ONE TENTH(LD%) OF THE MATERIAL THICKNESS.
- USE NO METALLIC SLINGS TO LIP UPP PIPING.
- UPP PIPING, WHILE FLEXIBLE, MAY CONTAIN MORE STORED ENERGY THAN COMPARABLE PRODUCTS SHIPPED IN ROLLS. USE ADDITIONAL PERSONNEL AND SLIP KNOT ROPE AROUND BUNDLE WITHIN RELEASING PACKING BANDS.
- USE ONLY UPP CUTTERS AND SHAVERS FOR PIPE PREPARATIONS.
- THE ELECTOR FUSION WELDER IS NOT EXPLOSION PROOF. DO NOT POSITION THE UNIT IN ANY CLASSIFIED HAZARDOUS AREAS OR WHERE AN EXPLOSIVE ATMOSPHERE MAY EXIST.
- UPP SYSTEM SOLUTION PIPING USES TECHNOLOGY WHICH MAY BE UNFAMILIAR TO THE INSTALLER. DO NOT ATTEMPT INSTALLATION PRIOR TO TRAINING BY AUTHORIZED PETROTECNIC PERSONNEL.

LEGEND

- UNDERGROUND STEEL FIBERGLASS COATED FUEL STORAGE TANKS (10"-6" DIA TYP.) OR APPROVED EQUAL.
 - TANK OF 30,500 GALLONS REGULAR.
 - TANK OF 30,500 GALLONS DIVIDED AT 10,250 GAL PREMIUM, 6,250 GAL ETHANOL AND 14,000 GAL DIESEL.
 ALL TANK INSTALLATIONS SHALL BE IN ACCORDANCE WITH FBC AND ALL FLORIDA DEP GUIDELINES AND RULES. (or latest issue)
- PROPOSED DUMPSTER ENCLOSURE, RE: S03A & S03B
- ID SIGN - ALL SIGNAGE SHALL BE ON PRIVATE PROPERTY ONLY AND MUST BE PERMITTED SEPARATELY BY A SIGN CONTRACTOR.
- AIR UNIT
- PROPOSED LED AREA LIGHT FIXTURE TO MATCH EXISTING. VERIFY WITH OWNER.

CONTRACTOR REQUIREMENTS:

- OBTAIN PERMIT FOR TANK INSTALLATION
- EXCAVATE TANK PIT AND DISPOSE OF DIRT (VERIFY WITH CONTRACTOR PRIOR TO THE DISPOSAL OF DIRT).
- CONTRACTOR MUST BID SLOPE TOLL
- SET TANKS TO MANUFACTURERS REQUIREMENTS. FURNISH NECESSARY GRAVEL AND/OR SAND FOR TANKS AND TRENCHES FOR LINES.
- FURNISH AND INSTALL ALL PIPE AND FITTINGS.
- INSTALL ALL EPA COMPONENTS, VALVES, FITTINGS, MANHOLES AS REQUIRED AND SHOWN.
- FURNISH AND INSTALL ALL RISER PIPES.
- FURNISH AND INSTALL ALL OBSERVATION WELLS AS REQUIRED.
- INSTALL UNDER DISPENSER CONTAINMENT AND ISLANDS WHERE REQUIRED.
- INSTALL REMOTE PUMPS, LEAKS DETECTORS, AND DISPENSERS.
- PURGE LINES AND CALIBRATE DISPENSERS BEFORE SYSTEM IS SET INTO FULL OPERATION.
- PRECISION TEST TANKS AND LINES IN ACCORDANCE WITH EPA/FLORIDA DEP REGULATIONS AND THEIR RESPECTIVE LOCAL AGENCIES.

ELECTRICAL REQUIREMENTS:

ELECTRICAL REQUIREMENTS: FOR THE EMERGENCY SHUT-OFF AT FUEL ISLANDS

THE CONTRACTOR SHALL COMPLIED WITH THE NEW NFPA 70 SECTION 514.11 CIRCUIT DISCONNECTS

514.11: REVISED TO IDENTIFY ALL OF THE TYPES OF CIRCUITS THAT ARE REQUIRED TO BE DISCONNECTED AND TO CHANGE "ACCEPTABLE" TO "APPROVED" IN REGARD TO OTHER TYPES OF DISCONNECTING MEANS.

(A) GENERAL. EACH CIRCUIT LEADING TO OR THROUGH DISPENSING EQUIPMENT, INCLUDING ALL ASSOCIATED POWER, COMMUNICATION, DATA, AND VIDEO CIRCUITS, AND EQUIPMENT FOR REMOTE PUMPING SYSTEMS, SHALL BE PROVIDED WITH A CLEARLY IDENTIFIED AND READILY ACCESSIBLE SWITCH OR OTHER APPROVED MEANS, LOCATED REMOTE FROM THE DISPENSING DEVICES, TO DISCONNECT SIMULTANEOUSLY FROM THE SOURCE OF SUPPLY, ALL CONDUCTORS OF THE CIRCUITS, INCLUDING GROUNDED CONDUCTOR, IF ANY.

SINGLE-POLE BREAKERS UTILIZING HANDLE TIES SHALL NOT BE PERMITTED.

(B) ATTENDED SELF SERVICE MOTOR FUEL DISPENSING FACILITIES. EMERGENCY CONTROLS AS SPECIFIED IN 514.11(A) SHALL BE INSTALLED AT A LOCATION ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, BUT CONTROLS SHALL NOT BE MORE THAN 30M (100FT) FROM DISPENSERS. [30A:6.7.1]

2203.0 EMERGENCY DISCONNECT SWITCHES: (2020 FBC) (or latest issue)

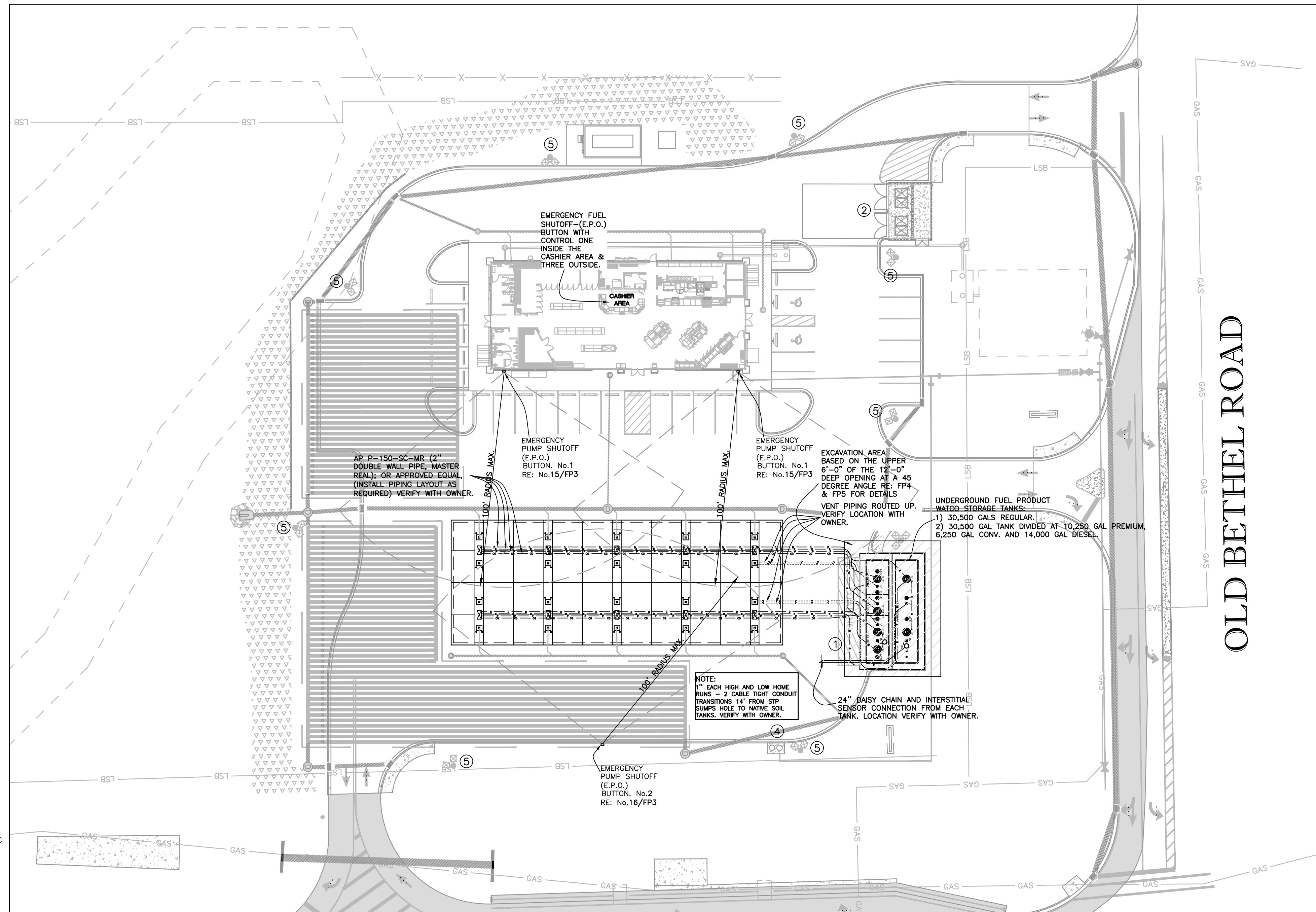
AN APPROVED, CLEARLY IDENTIFIED READILY ACCESSIBLE EMERGENCY DISCONNECT SWITCH SHALL BE PROVIDED AT AN APPROVED LOCATION, TO STOP THE TRANSFER OF FUEL DISPENSERS IN THE EVENT OF A FUEL SPILL OR OTHER EMERGENCY. AN EMERGENCY DISCONNECT SWITCH FOR EXTERIOR FUEL DISPENSERS SHALL BE LOCATED WITHIN 100 FEET (30 480 mm) OF, BUT NOT FOR LESS THAN 20 FEET (6096 mm) FROM THE FUEL DISPENSERS.

FOR INTERIOR FUEL-DISPENSING OPERATIONS, THE EMERGENCY DISCONNECT SWITCH SHALL BE INSTALLED AT AN APPROVED LOCATION. SUCH DEVICES SHALL BE DISTINCTLY LABELED AS: EMERGENCY FUEL SHUTOFF. SIGNS SHALL BE PROVIDED IN APPROVED LOCATIONS.

EMERGENCY PROCEDURE SIGN WILL BE PLACED BY EMERGENCY DISCONNECT SWITCH AND SHALL READ:

IN CASE OF FIRE, SPILL, OR RELEASE USE EMERGENCY PUMP SHUTOFF REPORT THE ACCIDENT! FIRE DEPARTMENT TELEPHONE NO. 9-1-1 FACILITY ADDRESS: LOCAL FIRE DEPARTMENT

FIRE EXTINGUISHERS WITH A RATING OF 2-A:20-B-C SHALL BE REQUIRED AND INSTALLED IN A MANNER TO PROVIDE ONE WITHIN 75 FT. OF EACH MOTOR FUEL DISPENSING PUMP.



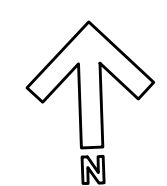
NOTE:
FUEL TANK TESTING MUST CONSIST OF THE FOLLOWING.
A) BEDDING INSPECTION.
B) PRESSURE TEST OF THE TANKS INSTALLED.
C) PRESSURE TEST AGAIN WITH THE BACKFILL TO THE TOP OF THE TANKS.
D) SUBMIT TESTING LABORATORIES TEST RESULTS.
E) UTILITY EASEMENTS MUST BE PLATTED AND DOCUMENTED BEFORE
THE FINAL INSPECTION WILL BE SCHEDULED.

TOP OF MANHOLE AND SPILL BUCKET NOTE:
ALL MANHOLES AND SPILL BUCKETS SHALL BE ELEVATED BY 2-INCHES FROM SURROUNDING/ADJACENT CONCRETE PAVEMENT. THE CONCRETE PAVEMENT SHALL GENTLY SLOPE UP TO MATCH THE TOP OF THE MANHOLES AND SPILL BUCKETS.

NOTE:
RE: E01, E04C, E06, E06A

NOTE:
THE TANK VENTS SHOULD EITHER EXTEND TO THE AUTO CANOPY OR THE TRUCK CANOPY. (DEPENDING ON INSTALL LIMITATIONS, DISTANCE, ETC.)

GENERAL FIRE EXTINGUISHER NOTE:
AS PER IFC, 2021 SFP 907.2, PROVIDE FIRE EXTINGUISHER OF MIN. SIZE 2A-20BC TYPICAL @ EACH MPD LOCATION (WITH ORANGE BAG COVER).



SITE PLAN - FUEL PRODUCT LAYOUT
SCALE: 1:30
RE: SURVEY
TOTAL LAND AREA: 3.65 ACRES (159,183± SQ. FT.)

GENERAL NOTE:
COORDINATE SITE DRAWINGS WITH CIVIL DRAWINGS.

1	No.	05/31/2024	Date
ISSUE FOR PERMIT		Revision/Issue	

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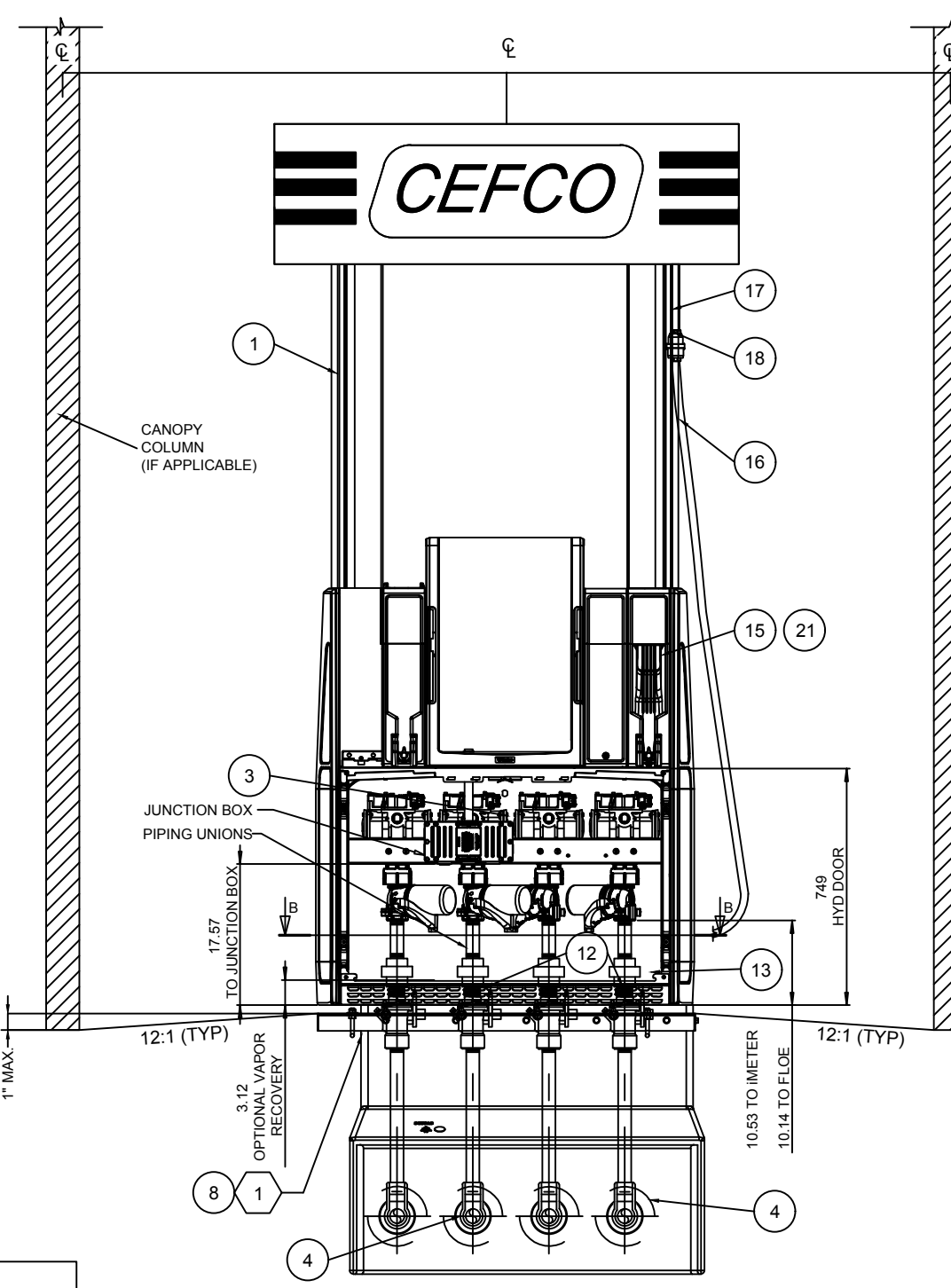
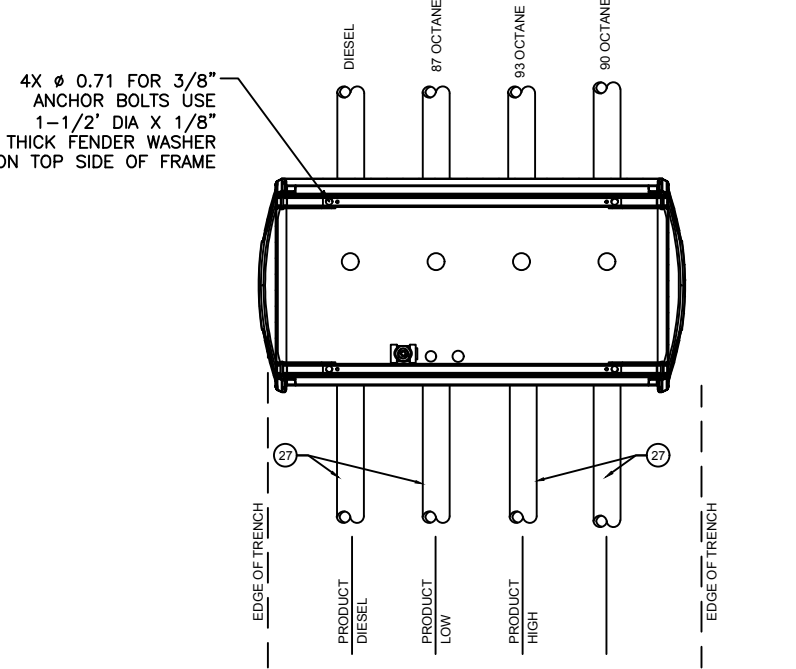
Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
FUEL PRODUCT LAYOUT SITE PLAN

Project No. 170-101.00
Sheet
Drawn By
Reviewed By
FP1

- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL PIPING AND ELECTRICAL INSTALLATIONS MUST CONFORM TO ALL APPLICABLE REGULATIONS INCLUDING NFPA70, FLAMMABLE & COMBUSTIBLE LIQUIDS CODE, NFPA70A, AUTOMOTIVE & MARINE SERVICE STATION CODE, NFPA70, NATIONAL ELECTRICAL CODE. DO NOT "DAISY CHAIN" THE DISPENSER POWER CIRCUIT TO ANY OTHER EQUIPMENT.
 2. PIPING FROM TANK TO DISPENSER SHOULD SLOPE UPWARDS TO AVOID AIR OR LIQUID TRAPS.
 3. USE UNIVERSAL JOINTS AT DISPENSER TO ALLOW FOR GROUND MOVEMENT.
 4. FIRMLY MOUNT THE DISPENSER TO THE ISLAND USING THE ANCHOR BOLT AT LOCATIONS SHOWN.
 5. EMERGENCY SHUTOFF VALVES AND BREAKAWAY DEVICES ARE EXAMPLES OF REQUIREMENTS STATED IN THE NFPA70A AUTOMOTIVE & MARINE SERVICE STATION CODE. THESE, AS WELL AS ANY OTHER SAFETY DEVICES REQUIRED BY NFPA70 & 70A, MUST BE INSTALLED AND MAINTAINED PER THE MANUFACTURER'S INSTRUCTIONS.
 6. CONNECT OPTIONAL INTERCOM CIRCUIT TO A LISTED CLASS 2 POWERED INTERCOM ONLY WITH 18 GAUGE MINIMUM, AT LEAST 90 DEGREE C, 600 V GAS & OIL RESISTANT UL LISTED WIRE. WIRES BACK TO INTERCOM POWER MUST BE RUN IN SEPARATE DEDICATED LISTED METALLIC CONDUIT.
 7. THE COUPLING SHOULD BE TIGHTENED WITH A TORQUE OF 120 Nm AND THE SPANNER SIZE FOR THIS IS 90 mm.



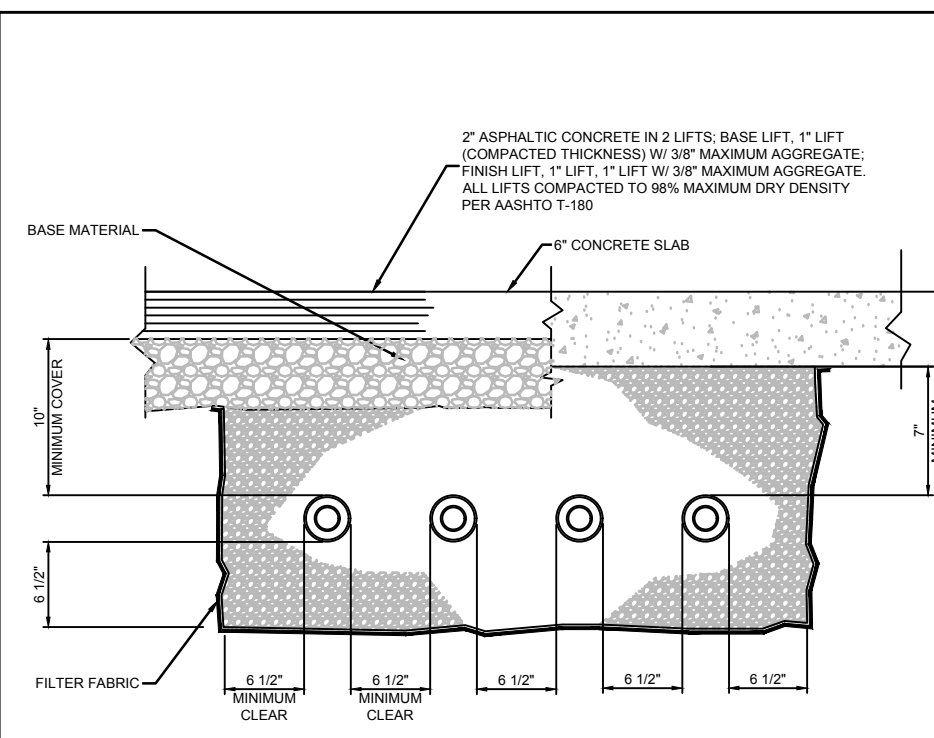
20 TYPICAL DISPENSER W/ FRANKLIN POLY SUMP

SAFETY NOTE
WHEN DISPENSERS ARE INSTALLED AS SHOWN ON THIS DRAWING, THE REQUIREMENTS OF NFPA 30A 4-3.6 AND 4-3.7 REGARDING SHEAR SECTIONS ARE FULLY MET.

FOLLOW THE MANUFACTURER'S GUIDELINES FOR INSTALLING GOODYEAR FLEX STEEL VAPOR ASSIST HOSES. VAPOR ASSIST HOSE ASSEMBLIES TO BE 45 OR 50 FT. LBS. TORQUE TO ALLOW FOR PROPER SWIVELING.

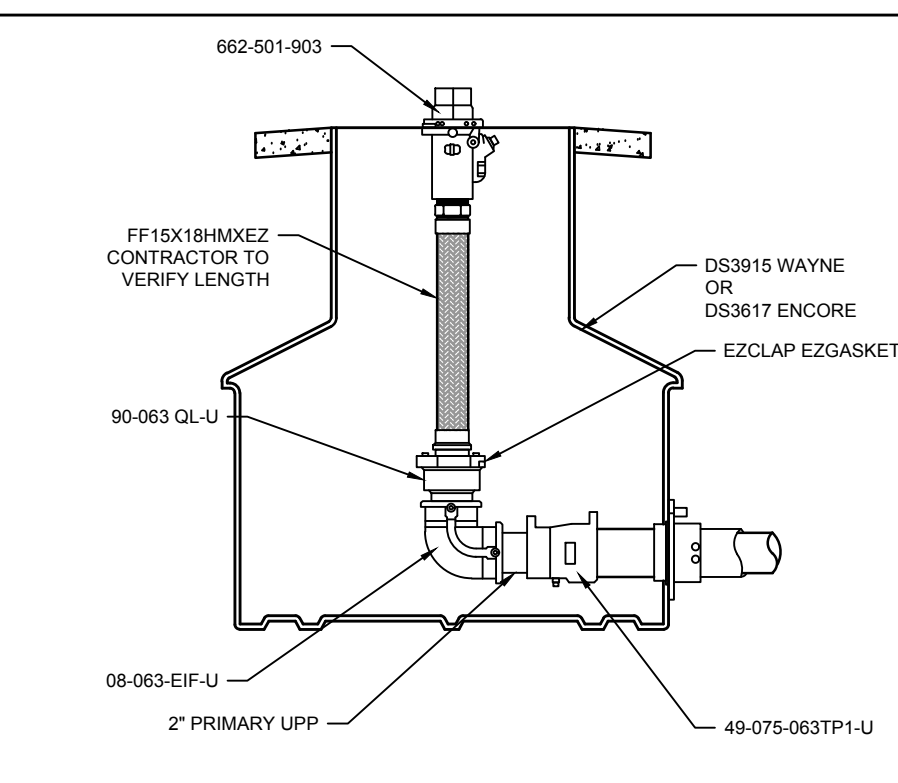
EQUIPMENT DESCRIPTION	
NO.	EQUIPMENT
1	3 + 2 PRODUCT MPD
2	THREE PRODUCT MPD
3	VAPOR VAC (IF REQUIRED)
4	UPP BULKHEAD FITTINGS ARE ELECTRO-FUSED (PRODUCT PIPING)
5	"BLANK"
6	"BLANK"
7	1 1/2"x18" FxM SWIVEL FLEX CONNECTOR (PRODUCT)
8	WAYNE HELIX SUMP BOX
9	"BLANK"
10	1" FLEXIBLE ENTRY BOOTS (POWER HOME RUN, DISPENSER DATA LOOPED)
11	1" FLEXIBLE ENTRY BOOTS (INTERCOM - LOOPED)
12	1-1/2" MALE, EMERGENCY VALVE W/ DOUBLE POPPET (COMBO BODY)
13	"BLANK"
14	3" THREADED 3" WC PRESSURE VACUUM VENT CAP
15	NOZZLE - BLACK
16	3/4"HOSES - 8'-6" FLEXSTEEL VAPOR ASSIST HOSE
17	WHIP HOSE - 1' FLEXSTEEL VAPOR ASSIST HOSE, WHIP HOSE - 1' (NON-STAGE II ALT.) (OR EQUIVALENT)
18	INVERTED BREAKAWAY, BREAKAWAY (NON-STAGE II ALT.) (OR EQUIVALENT)
19	WATER INDICATING PASTE (TO BE LEFT @ STORE)
20	3"x2" TERMINATING REDUCER @ DISPENSERS - NO TEST POST
21	SPLATTER SHIELD, BLACK
22	3 M INTERCOM / WIRED TO MPD SPEAKERS
23	JUNCTION BOX
24	SEAL OFF
25	BOLLARD
26	"BLANK"
27	2" DOUBLEWALL UPP ELECTRO PRODUCT PIPE
28	3"x3"x2" UPP ELECTRO TEE
29	SECONDARY CONTAINMENT FITTING
30	3" FRP 90° FITTING
31	COAXIAL FIBERGLASS PIPE

NOTES:
GAS PUMP DISCONNECT NEUTRAL
CIRCUIT DISCONNECTS: EACH CIRCUIT LEADING TO OR THROUGH A DISPENSING PUMP SHALL PROVIDE FOR THE SIMULTANEOUSLY DISCONNECTING FROM THE SOURCE OF SUPPLY ALL CONDUCTORS INCLUDING THE GROUNDING CONDUCTOR, IF ANY. NEC 514.11

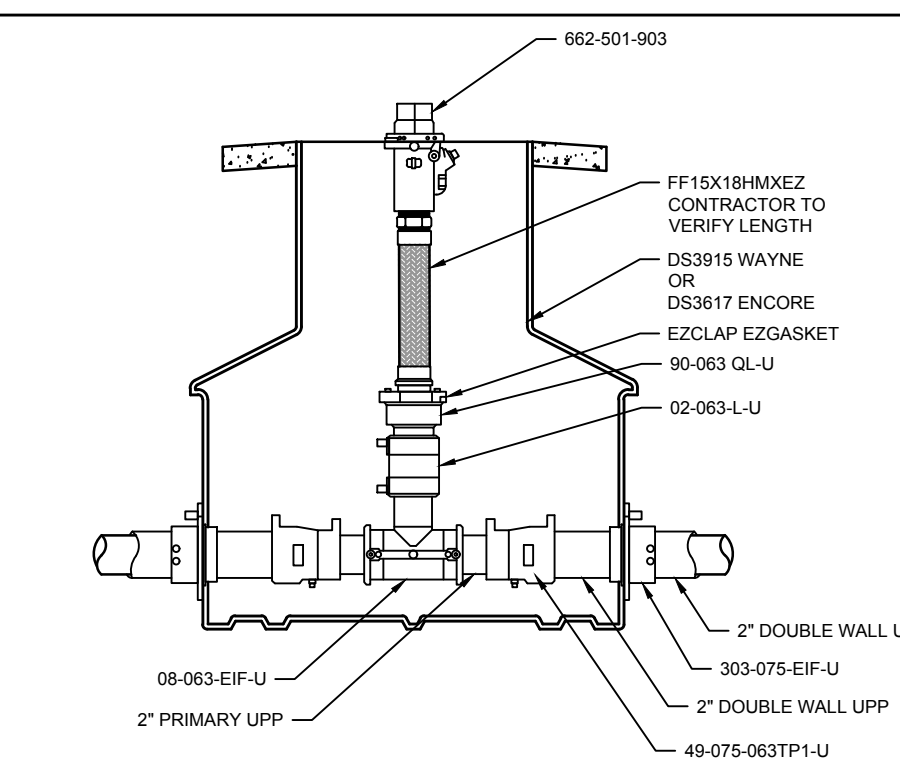


NOTE: PIPE TRENCHES MUST ALLOW ADEQUATE CLEARANCE AND COVER TO PROTECT PIPING AND COATINGS FROM PHYSICAL DAMAGE.

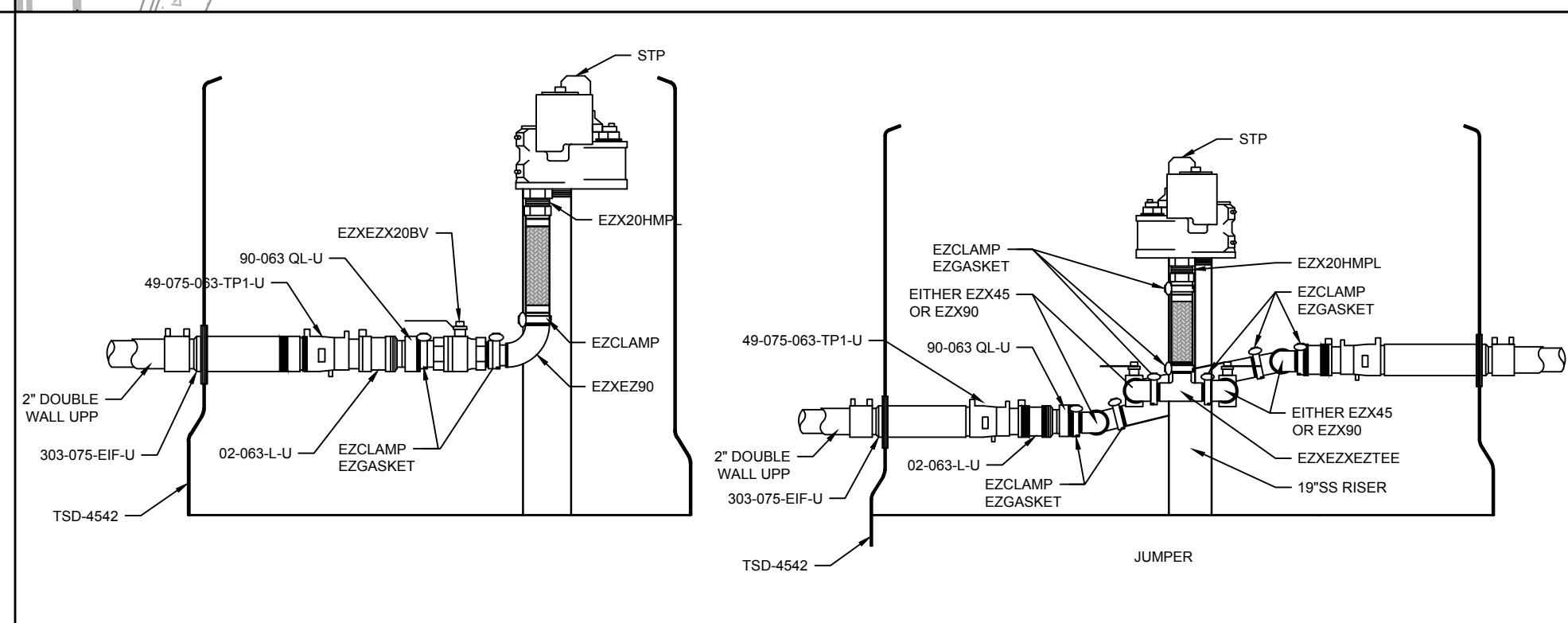
19 TYPICAL PIPING PRODUCT LINE TRENCH DETAIL



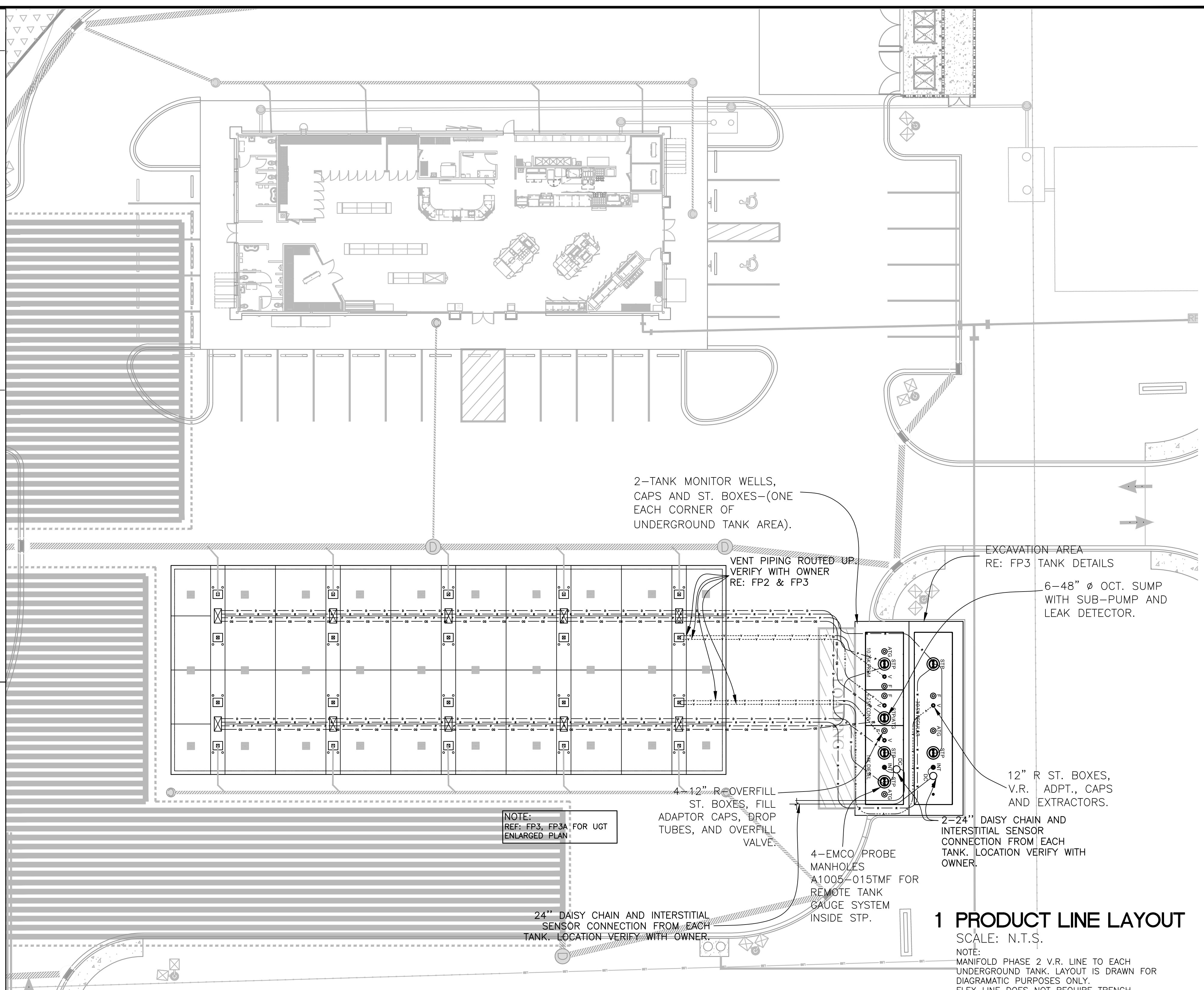
21 DISPENSER SUMP-PRODUCT PIPING SECTION LINE 'ELBOW' FITTING
NOT TO SCALE
RE:



17 DISPENSER SUMP-PRODUCT PIPING SECTION LINE 'TEE' FITTING
NOT TO SCALE
RE:



13 SUBMERSIBLE PUMP PART NO. DETAIL
NOT TO SCALE
RE:



1 PRODUCT LINE LAYOUT
SCALE: N.T.S.
NOTE: MANIFOLD PHASE 2 V.R. LINE TO EACH UNDERGROUND TANK. LAYOUT IS DRAWN FOR DIAGRAMATIC PURPOSES ONLY. FLEX LINE DOES NOT REQUIRE TRENCH.

FUEL NOTES

PIPING NOTES:
ALL BACKFILL TO BE COMPACTED TO 95% S.P.D. BACKFILL AND BEDDING MATERIAL TO BE:
GRAVEL: WASHED ROUNDED PEA GRAVEL WITH A MINIMUM DIAMETER 1/4" AND A MAXIMUM DIAMETER OF 1/2".
STONE CRUSHINGS: WASHED AND FREE FLOWING WITH ANGULAR PARTICLE SIZE BETWEEN 1/8" AND 1/2" AND MEET ASTM C-33 PARAGRAPH 9.1.
NOTE: NO MORE THAN 3% OF BACKFILL MATERIAL SHALL PASS THROUGH A #8 SIEVE.

LINE TESTING:
GENERAL CONTRACTOR TO COMPLETE THE "INSTALLATION CHECKLIST" INCLUDED IN THE SPECIFICATIONS AND SUBMIT THE INFORMATION REQUESTED TO THE OWNER.
POST-INSTALLATION TESTING: ISOLATE LINES FROM UNDERGROUND STORAGE TANKS. PRESSURIZE LINES TO A MINIMUM OF 25 P.S.I. FOR A PERIOD LONG ENOUGH TO DETERMINE THAT THERE ARE NO LEAKS AS INDICATED BY SOAP BUBBLES OR A DROP IN THE PRESSURE OF THE LINE.
DURING SITE WORK TESTING: MAINTAIN A LINE PRESSURE OF 10 PSI IN THE PIPE DURING CONSTRUCTION OF THE REST OF THE FACILITY. TO MONITOR THE INTEGRITY OF THE PIPING, CHECK GAUGES AT REGULAR INTERVALS.
POST-SITE WORK INSTALLATION TESTING: GENERAL CONTRACTOR TO HAVE A TESTING LABORATORY PERFORM A PRECISION LINE TEST AFTER ALL PAVING AND SITE WORK HAS BEEN DONE.

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1	ISSUE FOR PERMIT	05/31/2024

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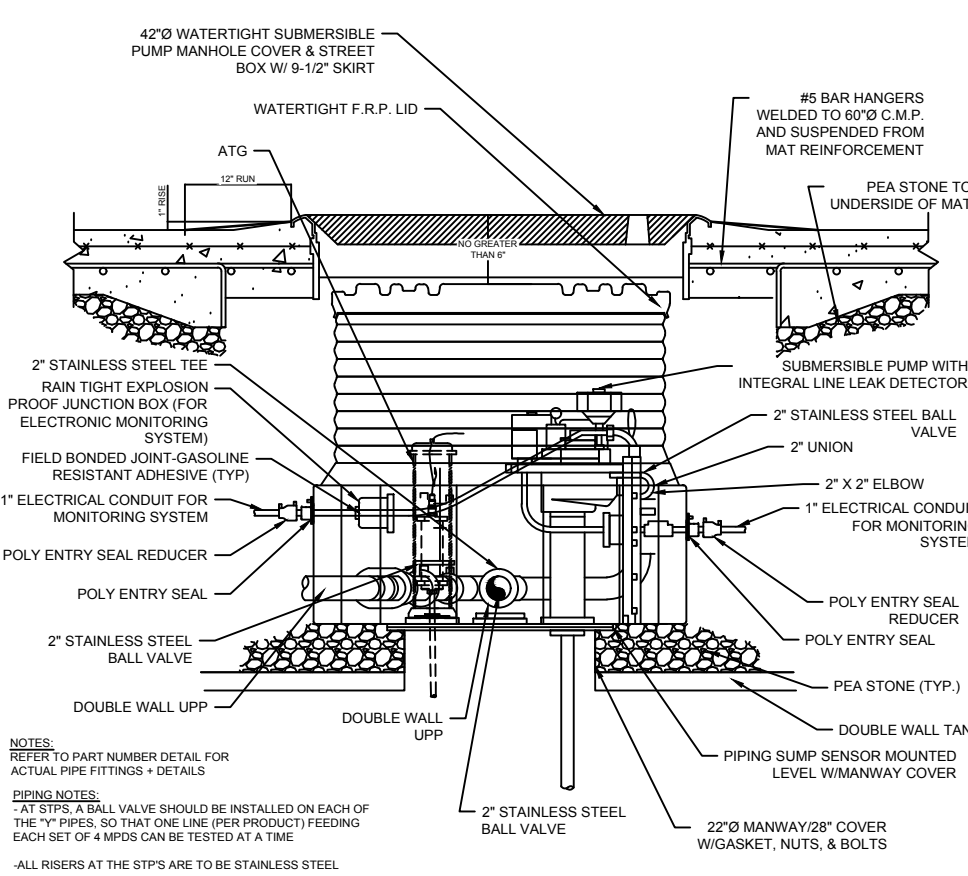
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PRODUCT LINE LAYOUT DETAILS

Project No.
170-101.00

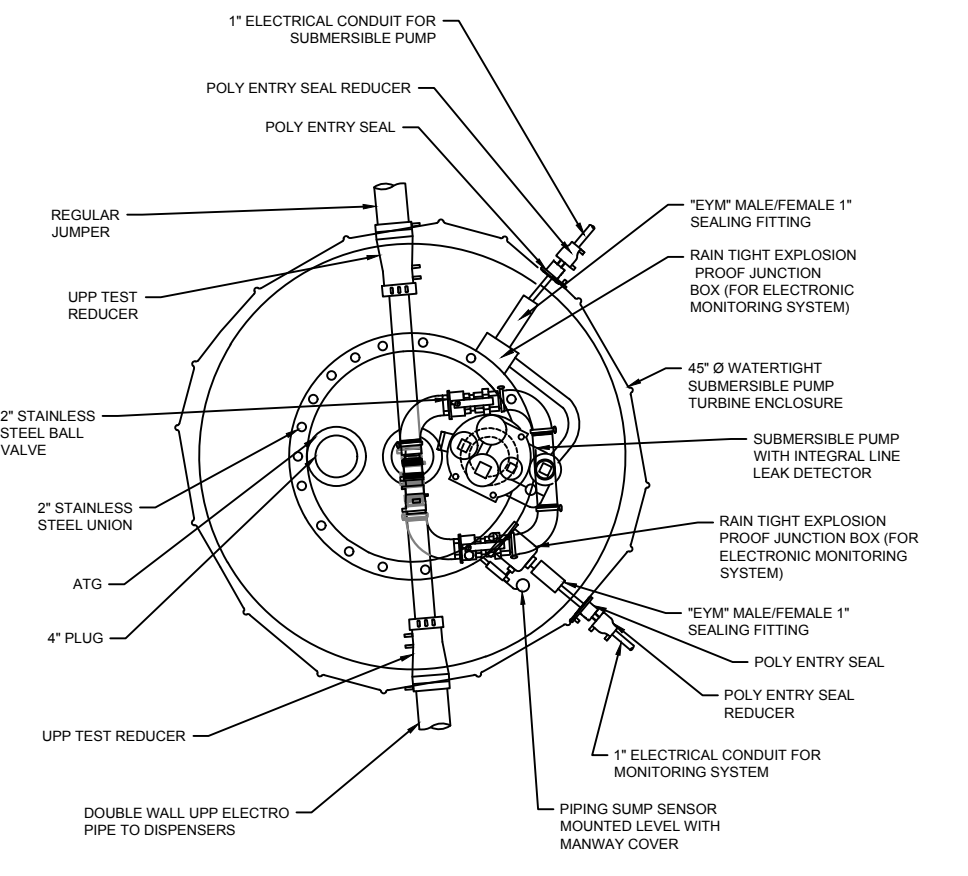
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Drawn By

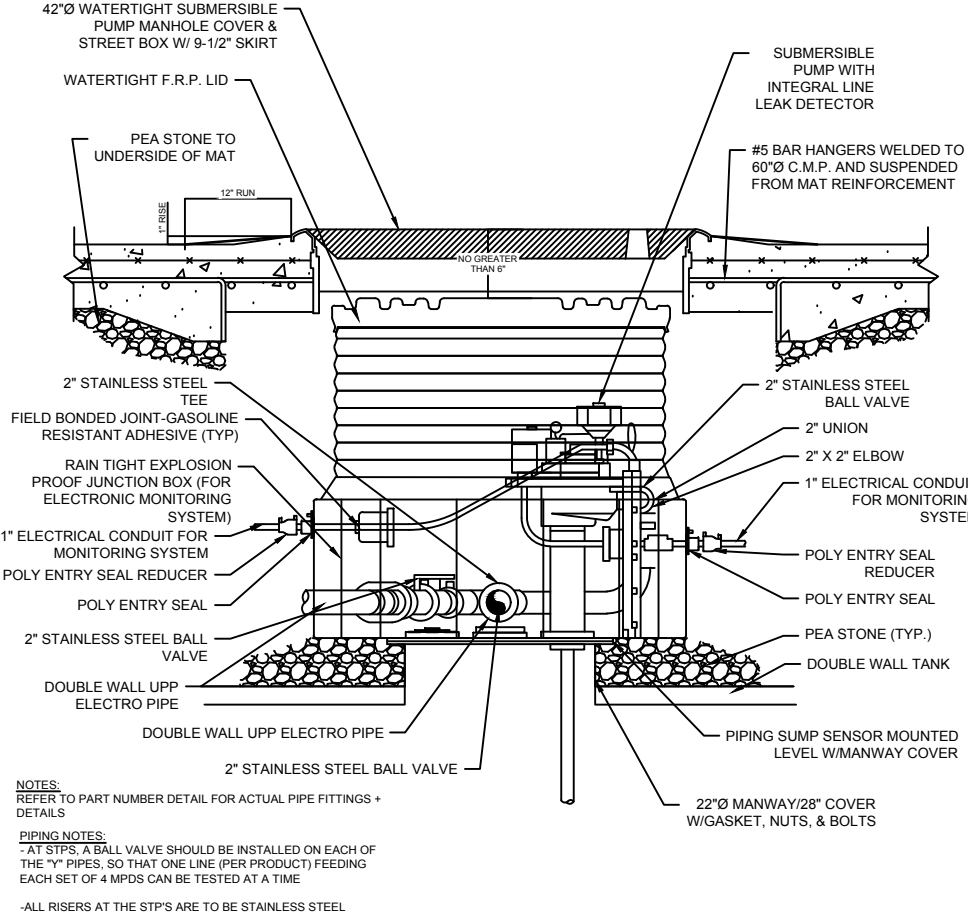
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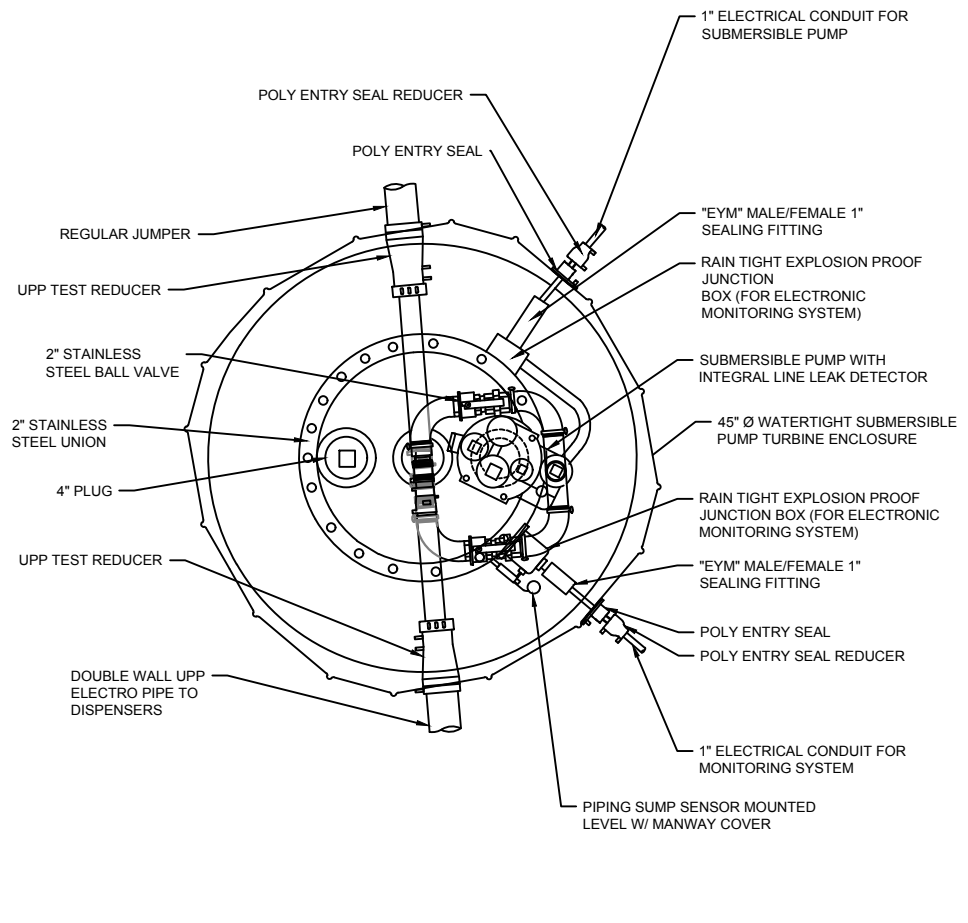
24 SUBMERSIBLE PUMP WITH ATG ENCLOSURE DETAIL
NOT TO SCALE



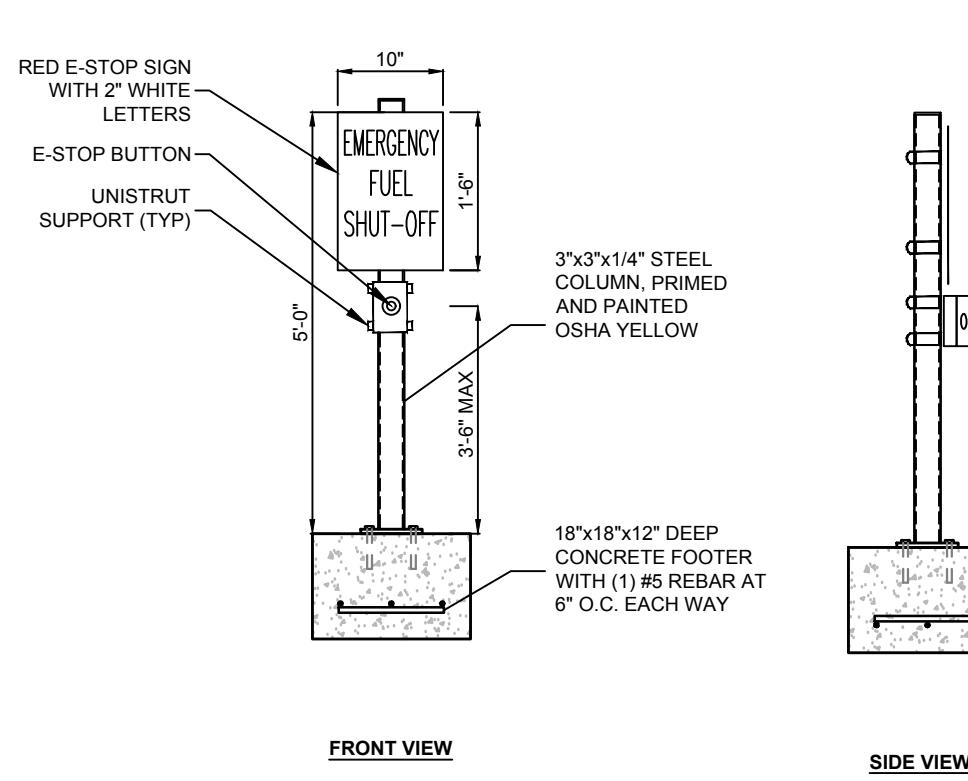
20 SUBMERSIBLE PUMP WITH ATG ENCLOSURE PLAN
NOT TO SCALE



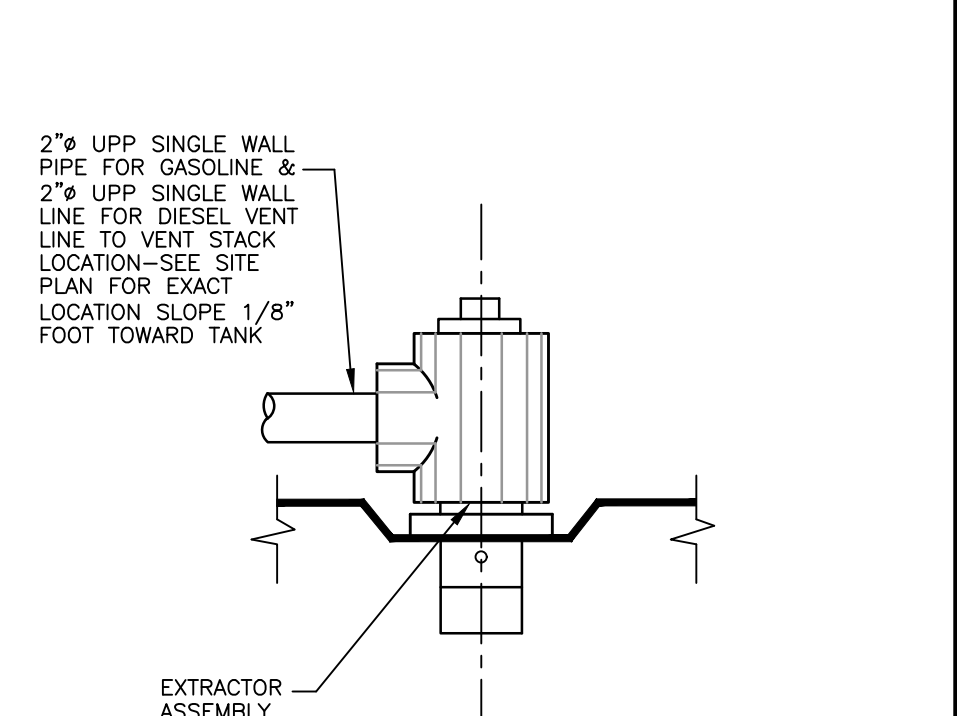
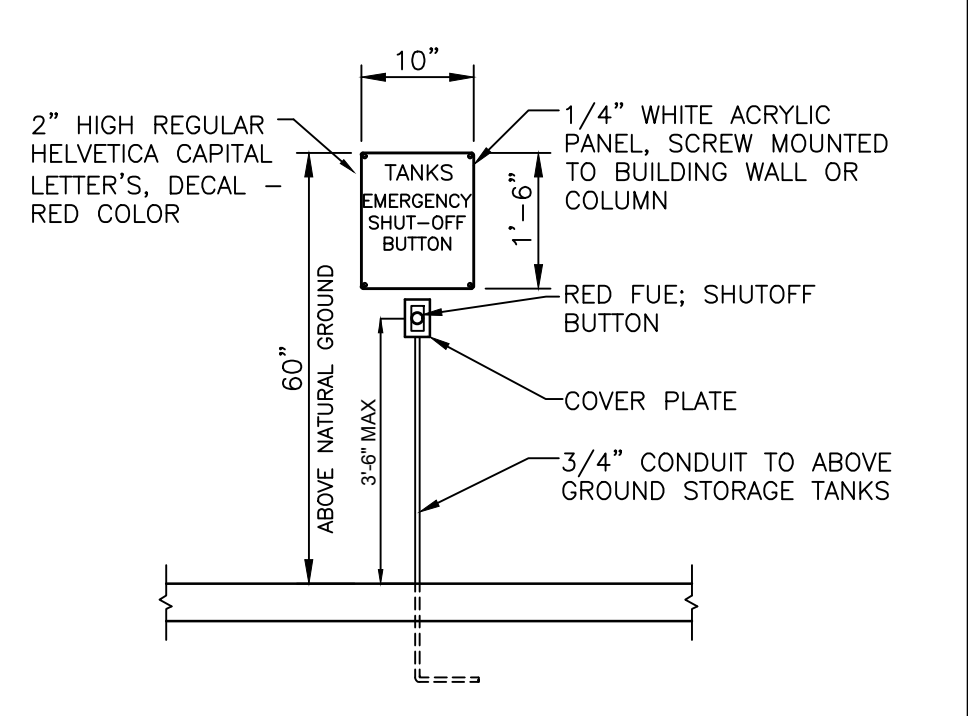
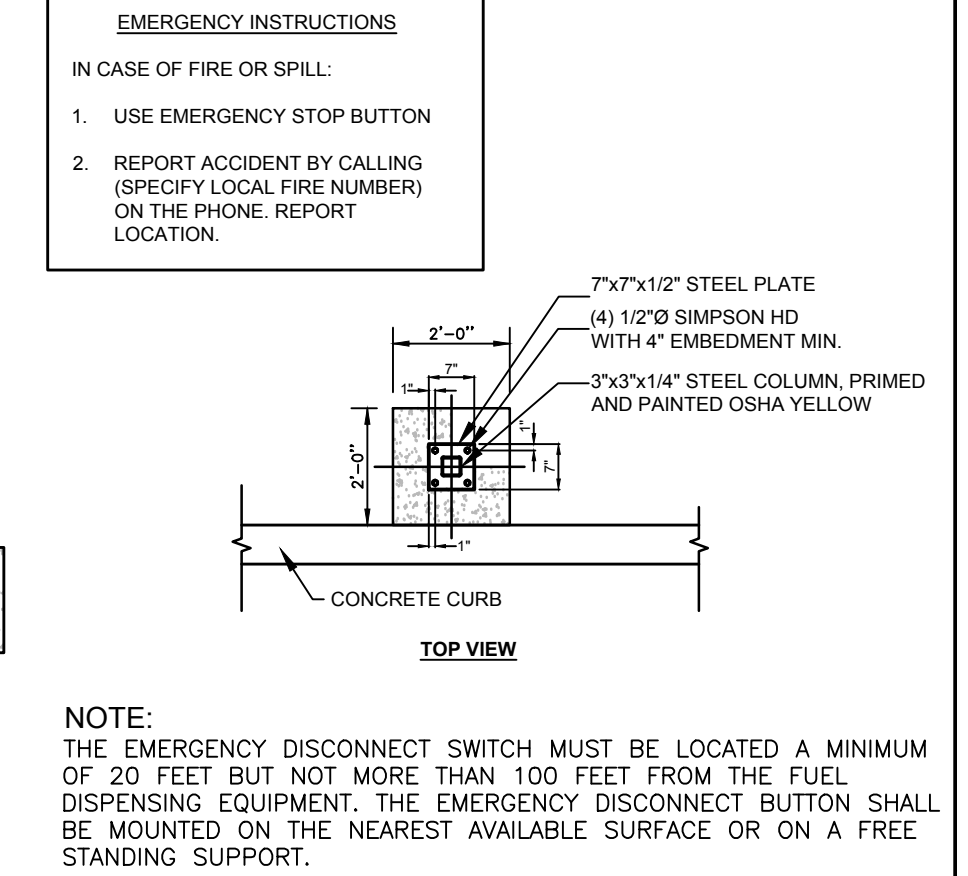
23 SUBMERSIBLE PUMP DETAIL
NOT TO SCALE



19 SUBMERGED PUMP PLAN
NOT TO SCALE

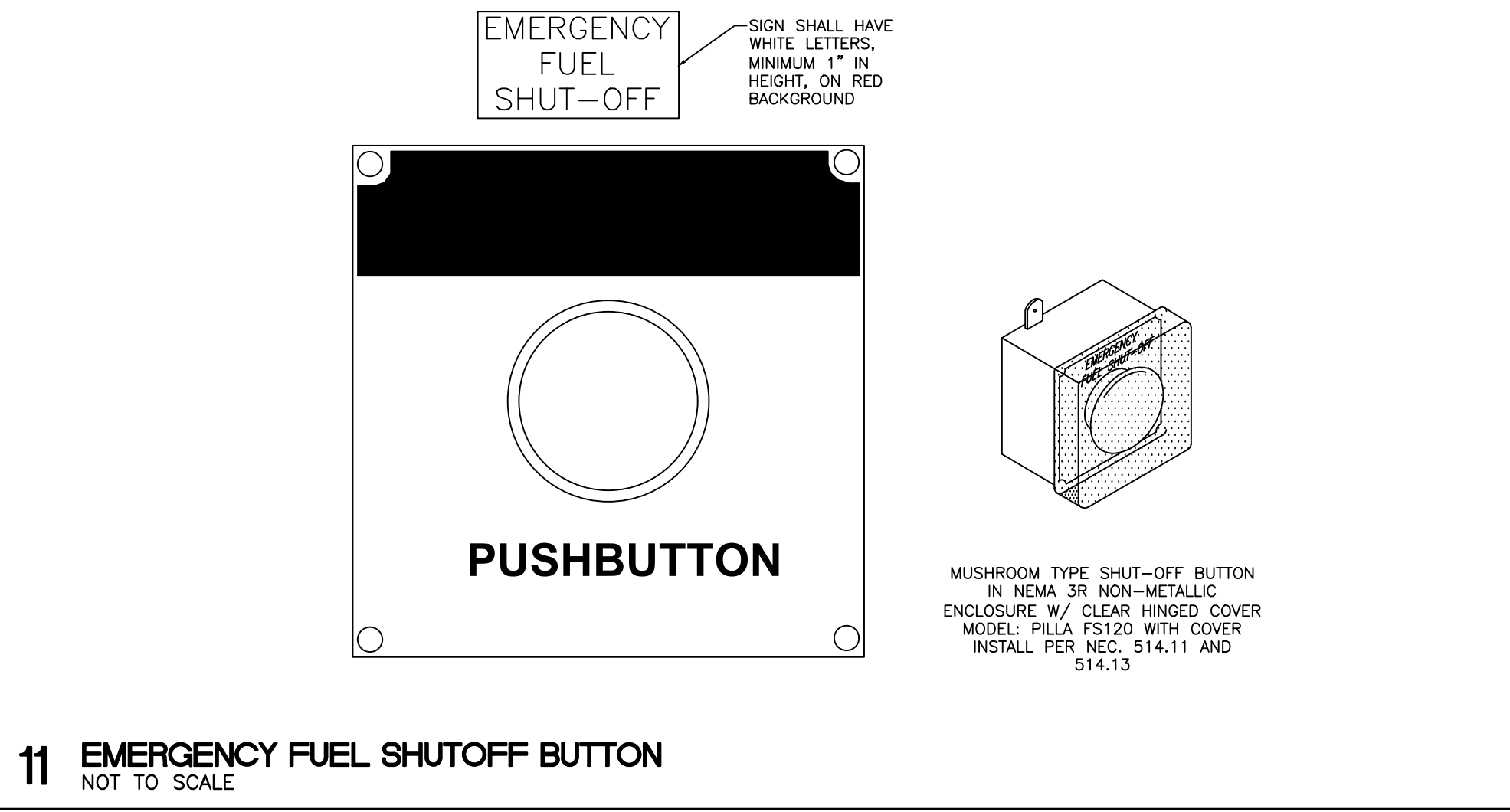
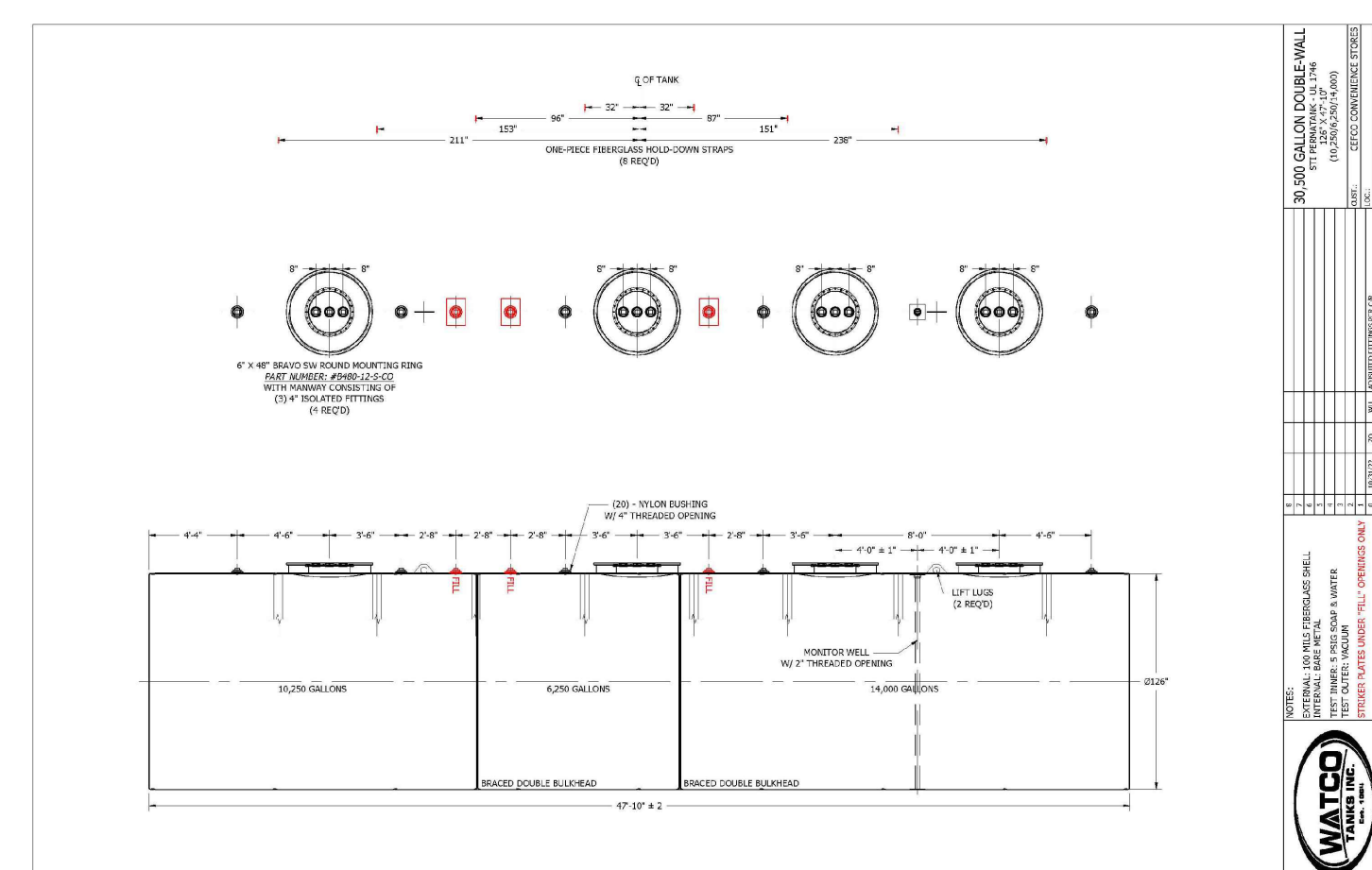
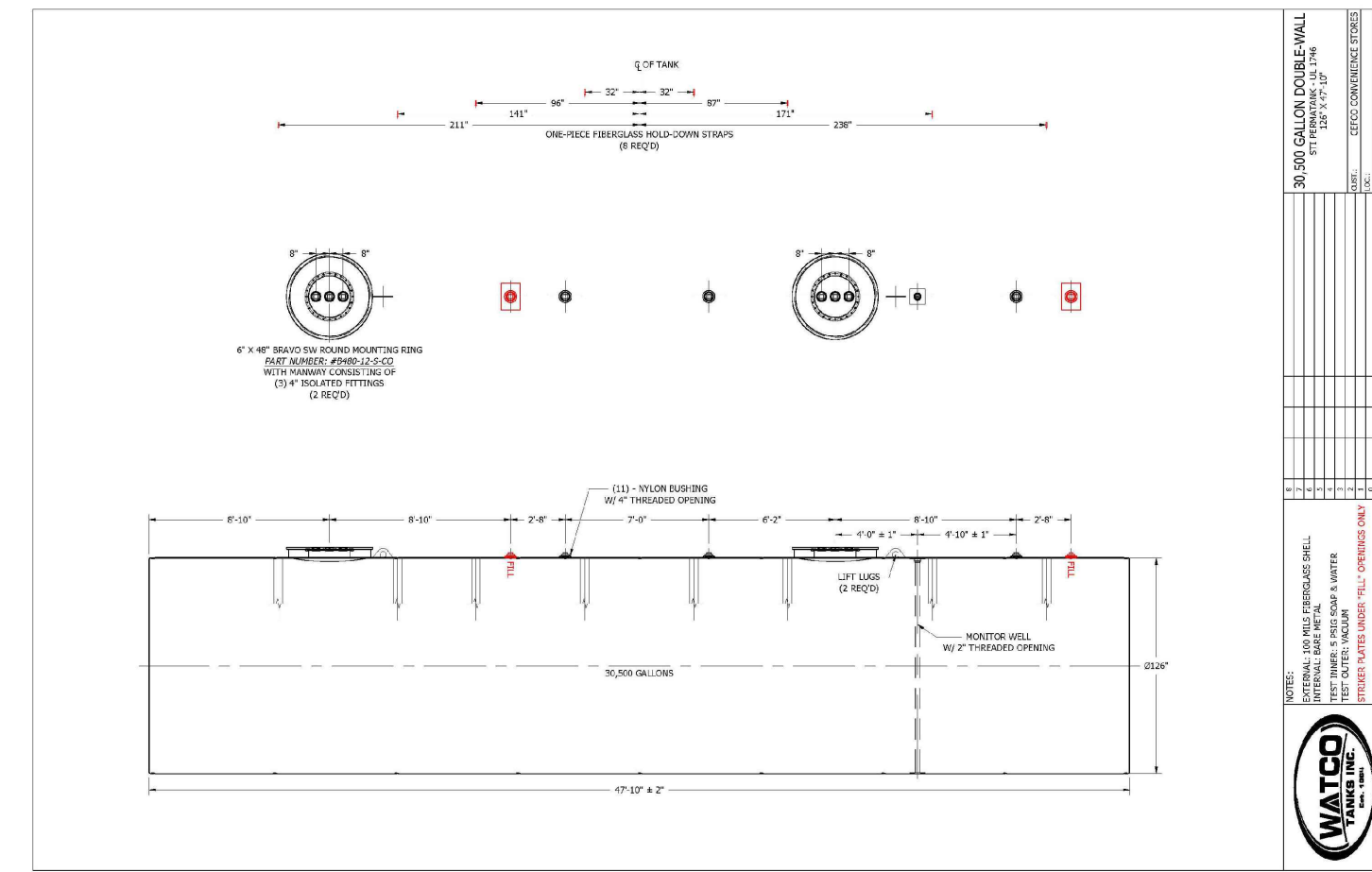


16 EMERGENCY FUEL SHUTOFF BUTTON ON STEEL POST
NOT TO SCALE

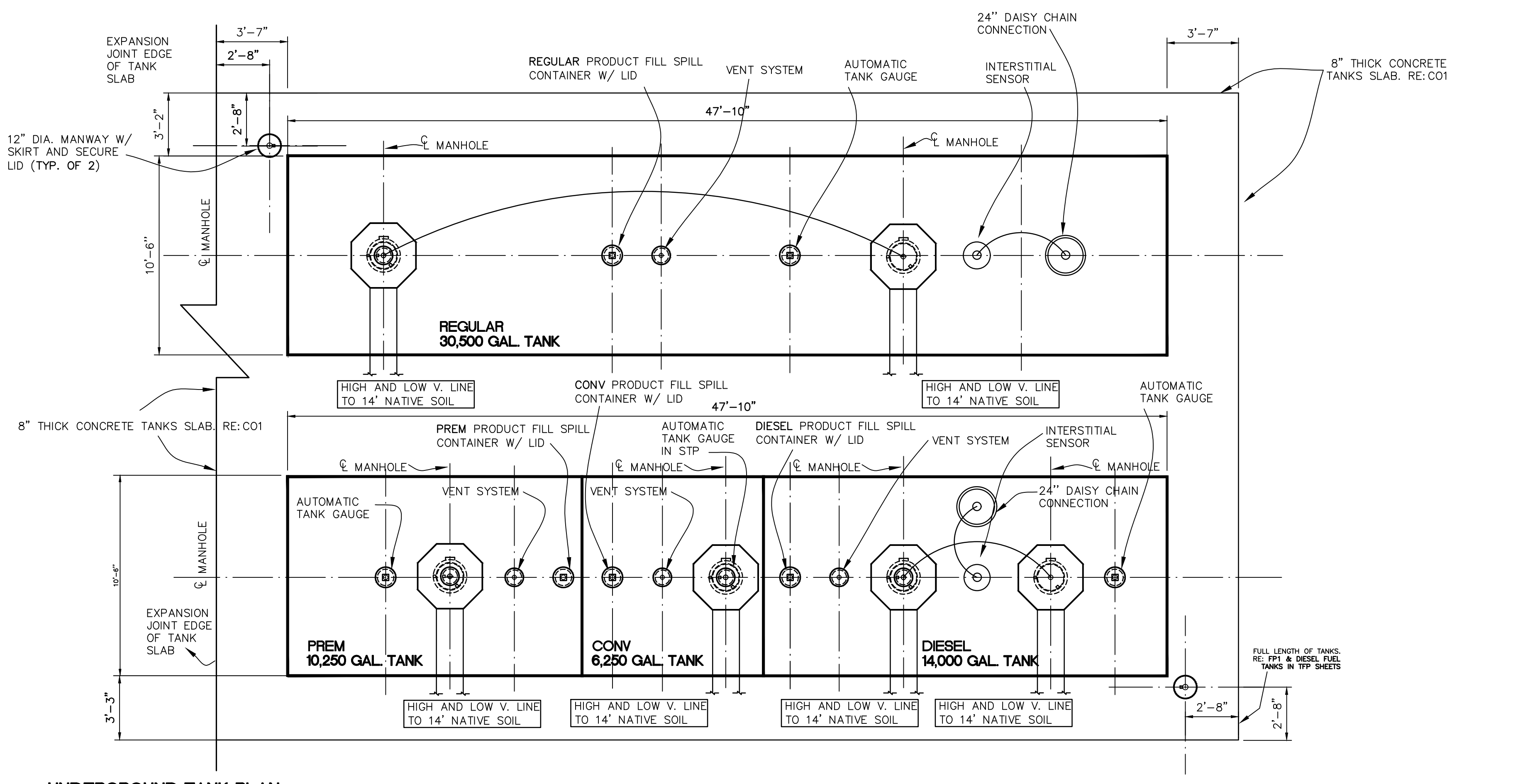


15 EMERGENCY FUEL SHUTOFF BUTTON ON BUILDING
NOT TO SCALE

11 EXTRACTOR ASSEMBLY DETAIL
NOT TO SCALE



11 EMERGENCY FUEL SHUTOFF BUTTON
NOT TO SCALE



17 UNDERGROUND TANK PLAN
SCALE: NOT TO SCALE
RE: SITE PLAN FP1
PLAN VIEW IS FOR INFORMATION SIMULATION ONLY. REFER TO DRAWING FP4 FOR TYPE AND SIZES.

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1	ISSUE FOR PERMIT	06/11/2024

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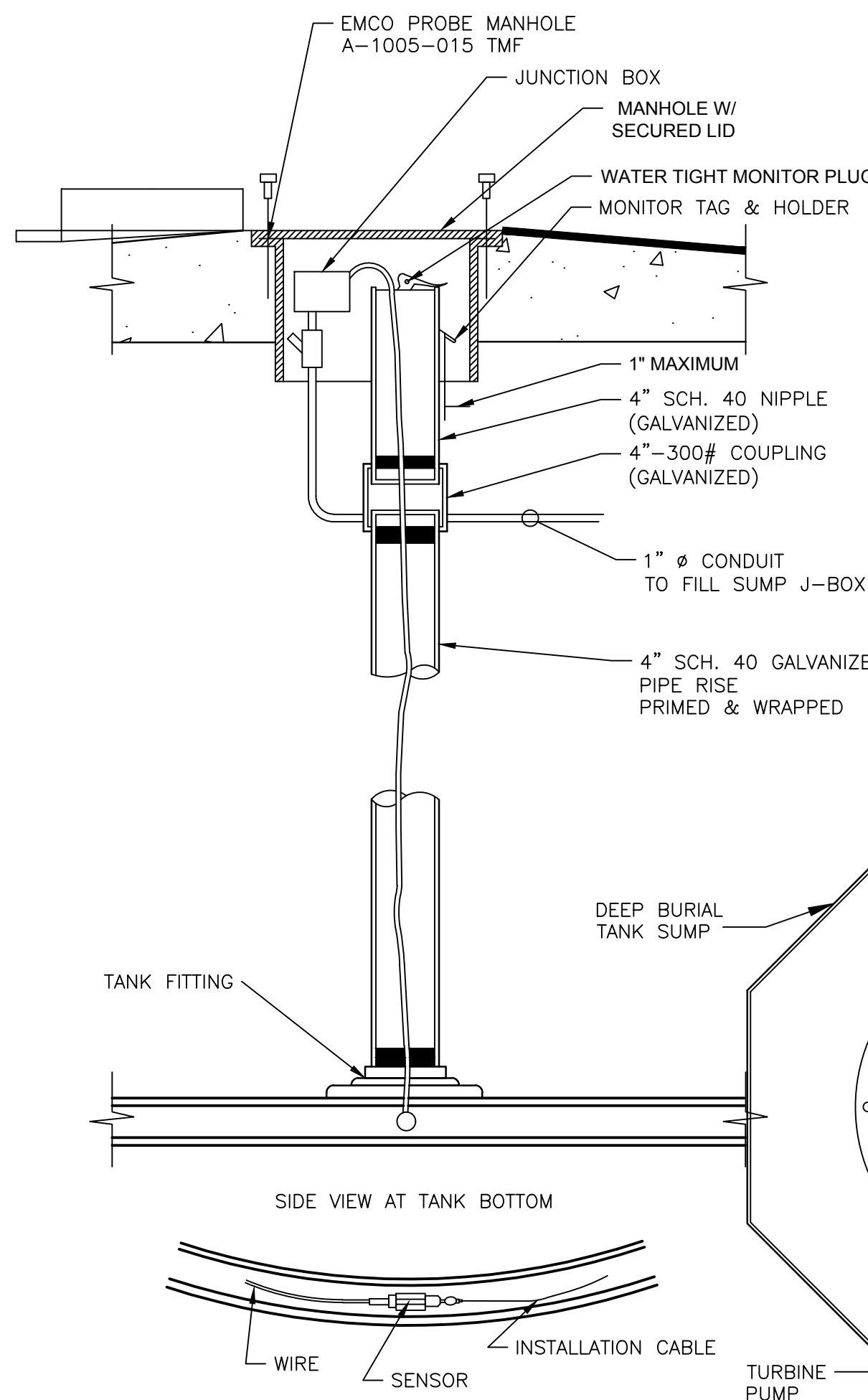
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HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

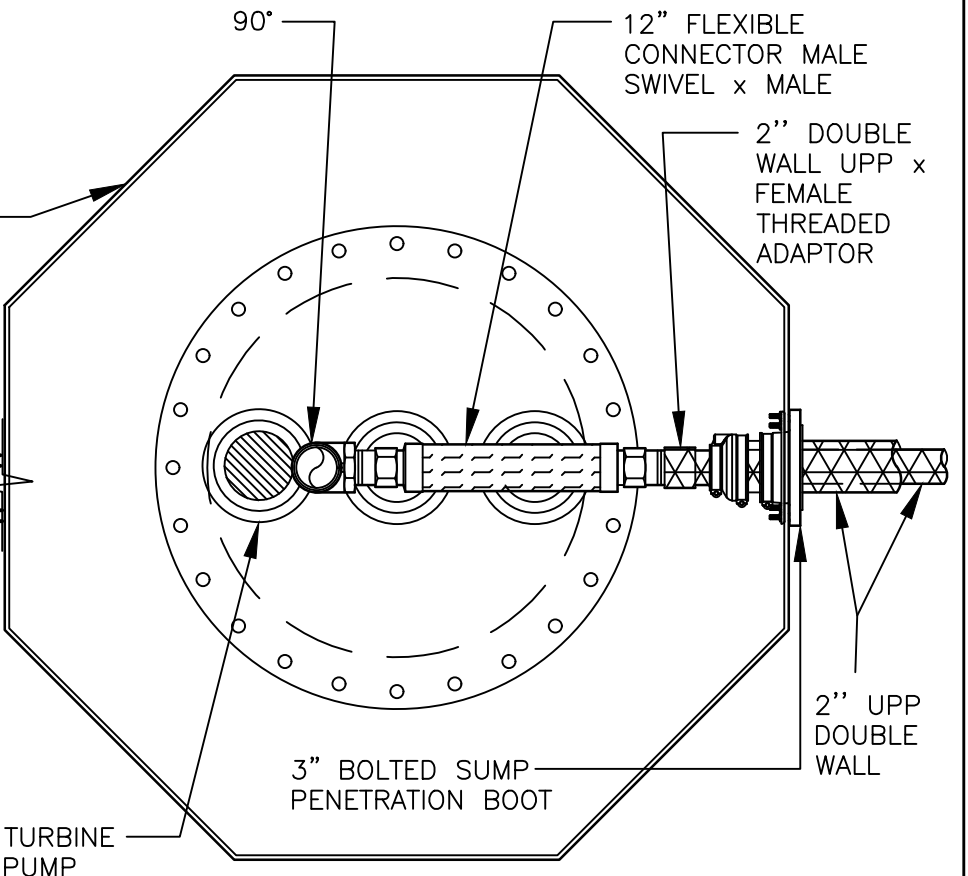
Sheet Title
FUEL PRODUCT UNDERGROUND TANK PLAN

Project No. 170-101.00	Sheet FP3
Drawn By	
Reviewed By	

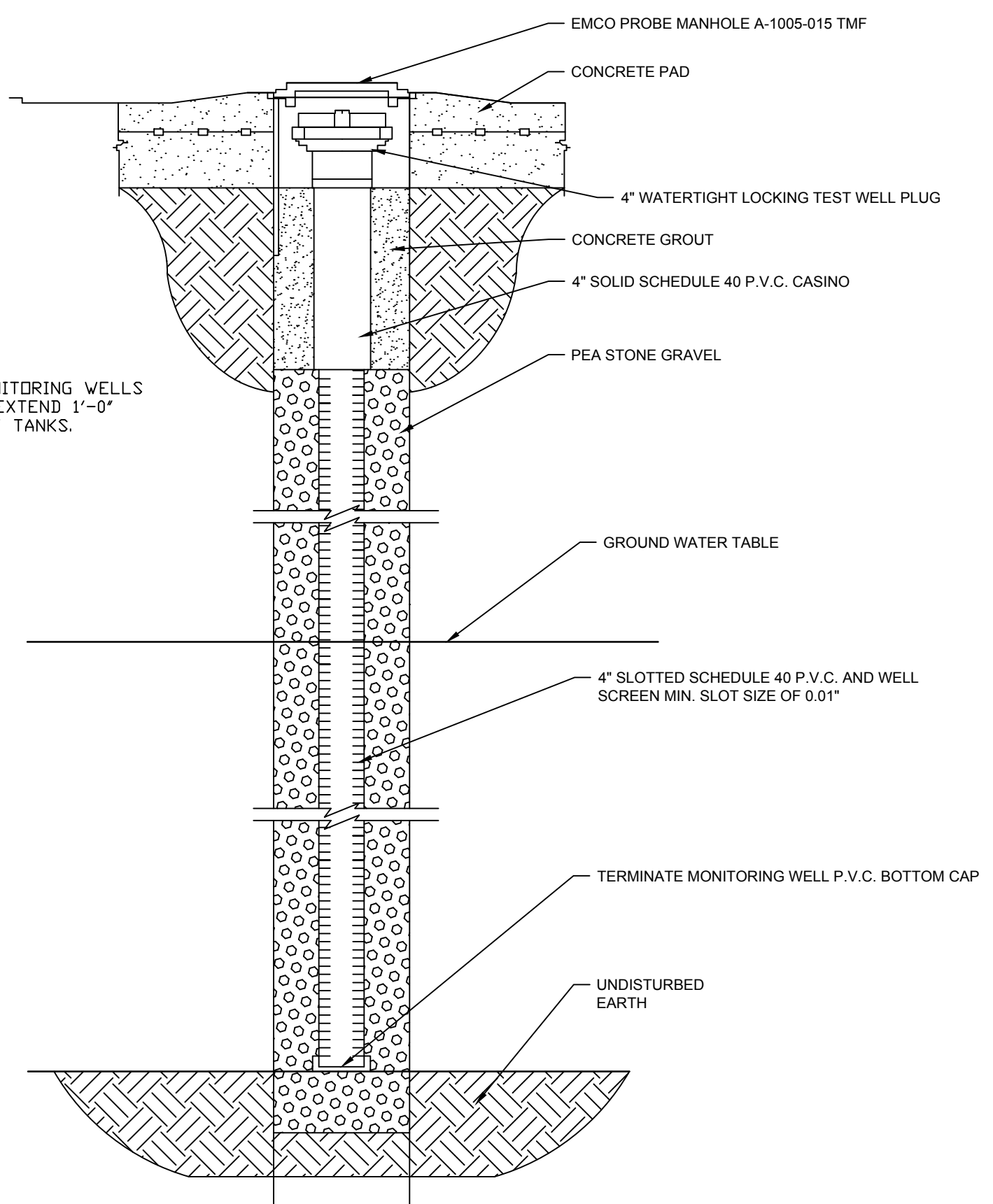


INSTALL INSTRUCTIONS:
 A PULL STRING MAY BE IN THE TANK. INSTALL A NEW PULL IN COATED WIRE CABLE 3/16TH. IF THE STRING IS MISSING, LOST OR BROKEN, THE PULL STRING IS NOT A TANK MANUFACTURER WARRANTY ITEM. INSTALL THE INTERSTITIAL MONITOR AT THE BOTTOM CENTERLINE OF THE FRP TANK. INSERT FISH TAPE THROUGH THE ANNULAR SPACE. TAG BOTH THE PULL STRING TO THE PROBE SIGNAL CABLE AT 12.5 FT. PLUS THE BURIAL DEPTH. ATTACH THE PULL STRING TO THE PROBE AND TO THE FISH TAPE AND PULL PROBE INTO TANK. WHEN THE TAGS ON THE SIGNAL CABLE AND PULL STRING MATCH, THE PROBE IS AT THE BOTTOM CENTERLINE OF THE TANK. THE PULL STRING IS TO REMAIN IN PLACE FOR FUTURE ACCESSIBILITY.

23 INTERSTITIAL SPACE MONITORING
 NOT TO SCALE
 RE:



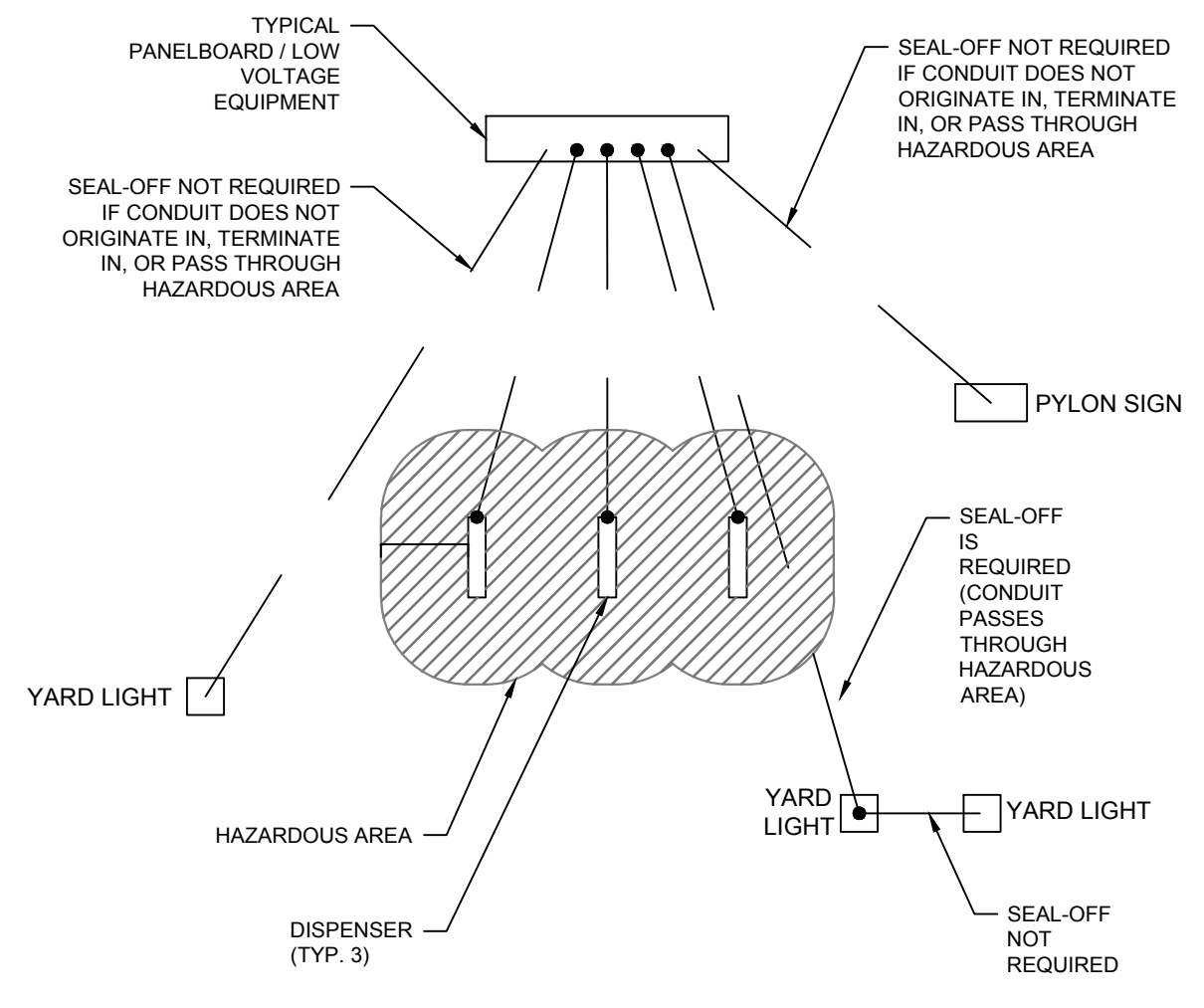
19 OCTAGON TANK SUMP PUMP PLAN
 NOT TO SCALE
 RE:



NOTE:
 WELL SCREENS OF MONITORING WELLS AT TANK FIELD MUST EXTEND 1'-0" MIN. BELOW BOTTOM OF TANKS.

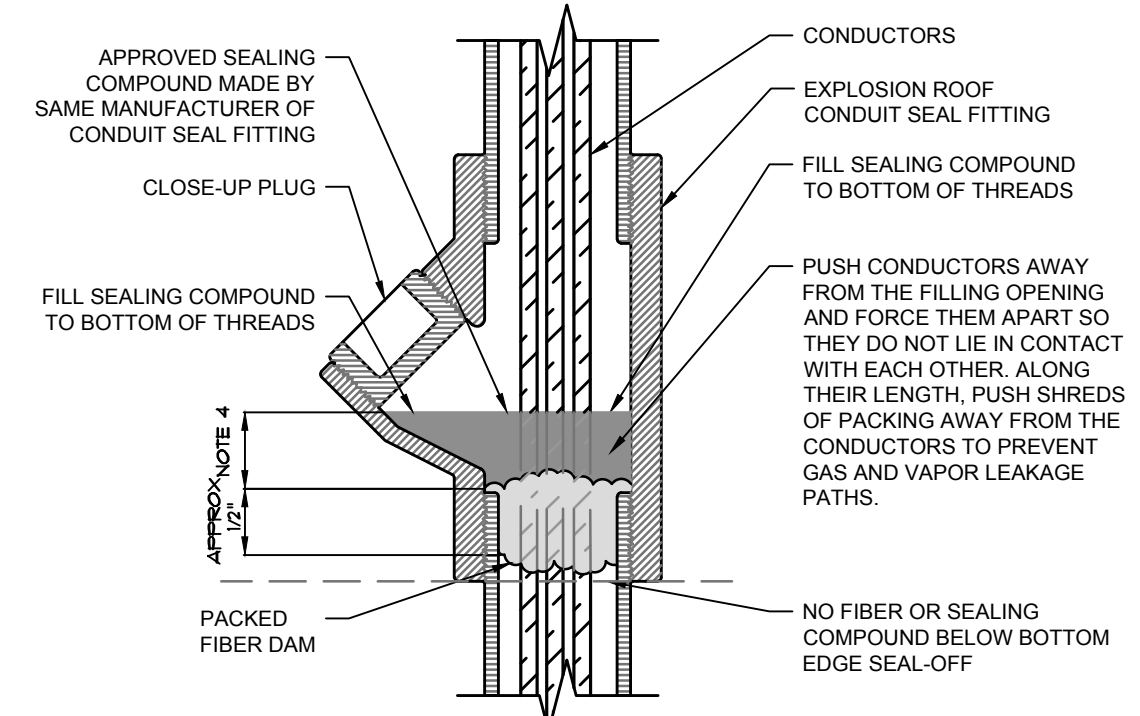
NOTE:
 1. ALL TANKER LINES AND LEAK DETECTORS TO BE PRECISION TESTED AT COMPLETION OF PROJECT. RESULTS TO BE SUBMITTED TO THE CEFCO CONSTRUCTION MANAGER.
 2. PERFORM WATER TEST ON ALL SUMPS TO ENSURE SUMPS ARE LIQUID TIGHT. RESULTS OF TEST SHALL BE SUBMITTED TO THE CEFCO PROJECT MANAGER PRIOR TO COMPLETION OF THE PROJECT.
 3. ALL MANHOLES WILL BE SET AT GRADE, WHERE SURFACE WATER FLOWS AROUND AND NOT OVER THEM, UNLESS APPROVED BY CEFCO CONSTRUCTION MANAGER.

15 MONITORING WELL DETAIL
 NOT TO SCALE
 RE:



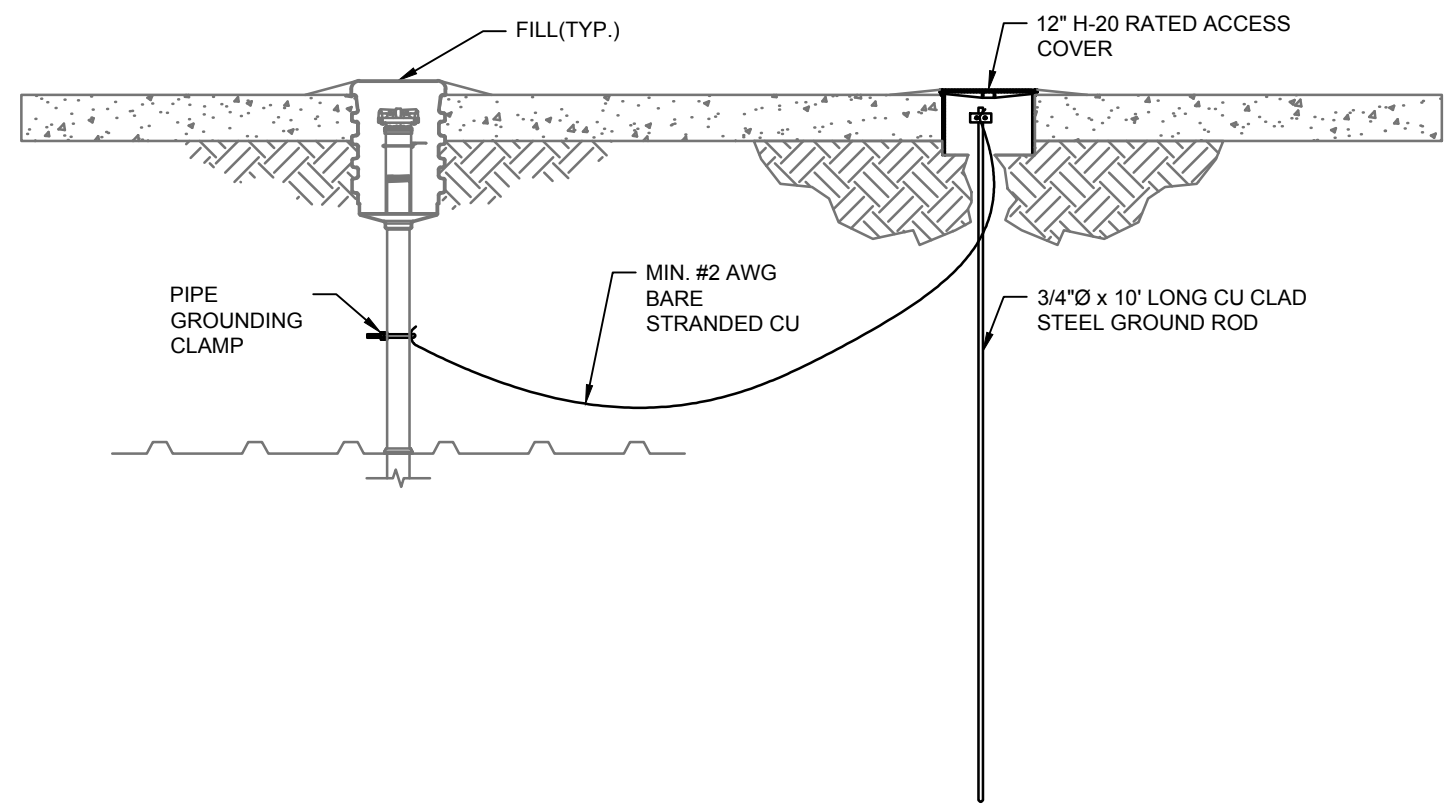
NOTES:
 ELECTRICAL WIRING SHALL BE DONE IN ACCORDANCE WITH APPROVED LOCAL ELECTRICAL CODES AND BY A LICENSED ELECTRICIAN. THE PUMP SHALL BE PROPERLY GROUNDED. THE RGS CONDUIT SHALL BE USED WHEN INSTALLING ELECTRICAL WIRING.

7 TYPICAL SEAL-OFF REQUIREMENTS DETAIL
 NOT TO SCALE
 RE:



NOTES:
 1. EXPLOSION PROOF CONDUIT SEAL-OFFS SHALL BE PROVIDED IN ACCORDANCE WITH NEC ARTICLES 500, 501, AND 514 (CLASS 1, DIVISION 1 & 2).
 2. CONDUIT SEAL SHALL BE FILLED WITH A UL LISTED COMPOUND SUITABLE FOR USE IN HAZARDOUS (CLASSIFIED) AREAS.
 3. PER NEC 501.15(C)(6), CONDUIT FILL SHALL NOT EXCEED 25% OF SEAL-OFF TRADE SIZE UNLESS THE SEAL-OFF FITTING IS SPECIFICALLY IDENTIFIED FOR A HIGHER PERCENTAGE FILL. PROVIDE OVERSIZED SEAL-OFF FITTINGS OR 40% RATED SEAL-OFF FITTINGS FOR ANY CONDUIT THAT HAS A FILL CAPACITY GREATER THAN 25%.
 4. THE THICKNESS OF THE SEALING COMPOUND SHALL BE MINIMUM THE TRADE SIZE OF THE SEALING FITTING AND NO LESS THAN 5/8\"/>

13 SEAL-OFF DETAIL
 NOT TO SCALE
 RE:



NOTES:
 1. ALL FILL AND VAPOR RISER ADAPTERS SHALL BE ELECTRICALLY GROUNDED TO PROMOTE THE RELAXATION OF STATIC CHARGE. SEE MANUFACTURER'S GROUNDING INSTALLATION FOR ADDITIONAL REQUIREMENTS.
 2. THE BONDING AND GROUNDING FOR STATIC ELECTRICITY PROTECTION SHALL BE IN COMPLIANCE PER ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES INCLUDING NFPA 30, FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE, NFPA 77, RECOMMENDED PRACTICE ON STATIC ELECTRICITY, NFPA 70, 2011 EDITION OF THE NATIONAL ELECTRIC CODE, AND THE CALIFORNIA CODE OF REGULATIONS, SUBCHAPTER 15, PETROLEUM SAFETY ORDERS-REFINING, TRANSPORTATION AND HANDLING, ARTICLE 5, FIRE AND EXPLOSIONS.
 3. PER SECTION 6.4.1.3 OF NFPA 77, THE MEASURED TOTAL RESISTANCE IN THE GROUND PATH TO EARTH SHALL BE LESS THAN 1 MEGAOHM WHICH IS CONSIDERED ADEQUATE FOR RELAXATION OF STATIC CHARGE. THE MAXIMUM ALLOWABLE GROUND PATH TO EARTH RESISTANCE FOR STATIC ELECTRICITY GROUNDING APPLICATIONS SHALL NOT EXCEED 100,000 OHMS.
 4. PER SECTION 6.4.1.3 OF NFPA 77, THE RESISTANCE IN METALLIC BONDING AND OR GROUNDING SYSTEMS SHALL BE LESS THAN 10 OHMS. RESISTANCE HIGHER THAN 10 OHMS INDICATES INADEQUATE CONNECTIONS.
 5. A GROUNDING SYSTEM PER NEC CODE FOR CURRENT CARRYING CONDUCTORS SHALL BE CONSIDERED MORE THAN ADEQUATE FOR A STATIC ELECTRICITY GROUNDING SYSTEM.
 6. PER THE NFPA 30, SECTION 5-6.3.4 ALL PARTS OF THE FILL PIPE ASSEMBLY, INCLUDING THE DROP TUBE, SHALL FORM A CONTINUOUS ELECTRICAL CONDUCTIVE PATH.
 7. THE MINIMUM WIRE SIZE FOR BONDING AND GROUNDING SHALL BE COPPER AWG #2.
 8. A 3/4\"/>

9 TANK GROUNDING DETAILS
 NOT TO SCALE
 RE:

06/31/2024	Date
1	No.
ISSUE FOR PERMIT	Revision/Issue

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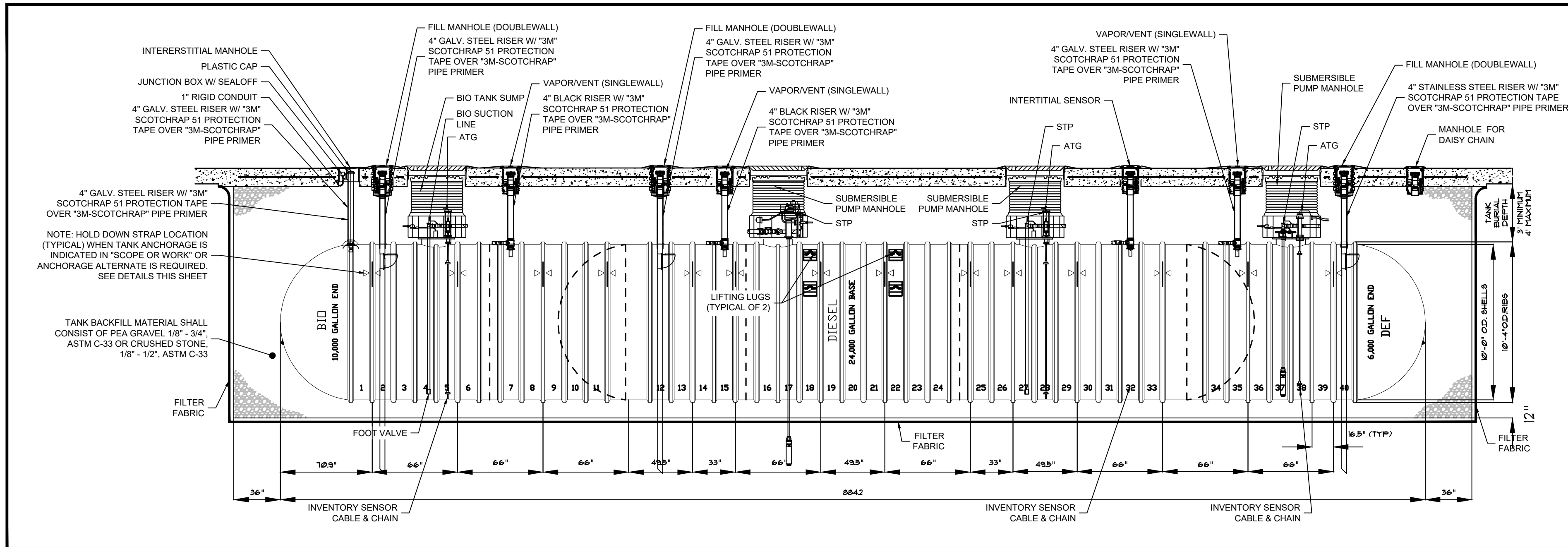
Sheet Title
FUEL PRODUCT STORAGE TANK SECTION AND DETAILS

Project No.
 170-101.00

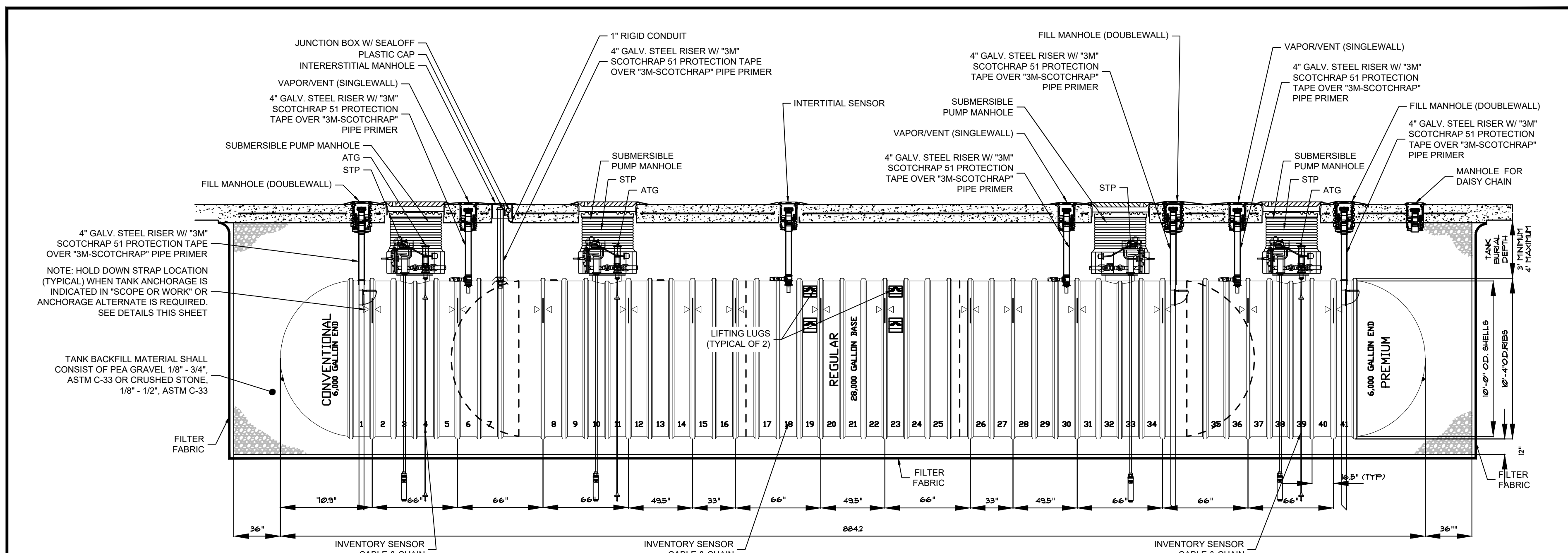
Sheet
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Drawn By

Reviewed By



NOTE: FOR EQUIPMENT REFERENCE ONLY COMPARTMENTED 40K TANK SECTION - 10K BIO, 24K DIESEL, 6K DEF



NOTE: FOR EQUIPMENT REFERENCE ONLY COMPARTMENTED 40K TANK SECTION - 6K CONVENTIONAL, 28K REGULAR, 6K PREMIUM

NOTE:
FOR ILLUSTRATION ONLY. REFER TO SHEET FP1 FOR ORIENTATION AND TANK SIZE.

TOP OF MANHOLE AND SPILL BUCKET NOTE:
ALL MANHOLES AND SPILL BUCKETS SHALL BE ELEVATED BY 2-INCHES FROM SURROUNDING/ADJACENT CONCRETE PAVEMENT. THE CONCRETE PAVEMENT SHALL GENTLY SLOPE UP TO MATCH THE TOP OF THE MANHOLES AND SPILL BUCKETS.

TANK INSTALLATION

- 1.0 CONTRACTOR SHALL COORDINATE DELIVERY DATE OF TANKS WITH THE MANUFACTURER, CEFCO CONSTRUCTION MANAGER, AND THE PROJECT SCHEDULE.
- 2.0 TANK MANUFACTURER'S INSTALLATION PROCEDURE SHALL BE FOLLOWED, AND THE INSTALLATION CHECKLIST SHALL BE INITIALED/SIGNED BY CONTRACTOR AND CEFCO CONSTRUCTION MANAGER, AS APPROPRIATE, AS EACH STEP IS COMPLETED.
- 3.0 AN UNDERGROUND EQUIPMENT INSTALLATION AFFIDAVIT SHALL BE FILLED OUT BY CONTRACTOR 7.0 AND SUBMITTED TO THE CEFCO CONSTRUCTION MANAGER IN BOUND PROJECT CLOSE OUT FOLDER
- 4.0 LIFTING EQUIPMENT SHALL BE ADEQUATE TO HANDLE TANK WITHOUT DRAGGING. USE ALL LIFTING LUGS AND GUIDELINES WHEN LIFTING TANKS. REST TANKS ON SMOOTH AND DEBRIS FREE GROUND. CHOCK TANKS TO PREVENT ROLLING AND TIE THEM DOWN IF HIGH WINDS ARE EXPECTED. USE MINIMUM 1/2" DIAMETER NYLON OR HEMP ROPE OVER TANK AND TIE TO WOODEN STAKES OF ADEQUATE SIZE TO PREVENT TANKS FROM BEING MOVED BY HIGH WINDS. DO NOT DRAG, ROLL, OR IMPACT TANKS.
- 5.1 TANKS SHALL BE PLACED ACCORDING TO THE TANK MANUFACTURER'S INSTALLATION MANUAL AND THE CEFCO TANK DRAWINGS. PLEASE NOTE THAT IF THE SOIL IS UNSTABLE, THE STANDARDS MAY BE INCREASED. DISTANCE BETWEEN TANKS SHALL BE GOVERNED BY MANUFACTURER'S OR STATE AND LOCAL REQUIREMENTS WHICHEVER IS GREATER.
- 5.1 TANKS SHALL BE CONTINUOUSLY VENTED, BY CONTRACTOR, AT ALL TIMES THROUGHOUT CONSTRUCTION.
- 6.0 PRE-INSTALLATION TANK TESTING.
- 6.1 CEFCO CONSTRUCTION MANAGER SHALL WITNESS PRE-INSTALLATION TANK TESTING.
- 6.2 CONTRACTOR SHALL NOTIFY CEFCO CONSTRUCTION MANAGER TWO WORKING DAYS PRIOR TO TESTING AND TANK INSTALLATION.
- 6.3 TANKS ARE TO BE SET LEVEL AND BACKFILLED TO TOP OF TANK THE SAME DAY AS TESTING.
- 6.4 CONTRACTOR TO PROVIDE TANK TEST MANIFOLD PER MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.
 - A. CONTRACTOR TO FURNISH AIR PRESSURE GAUGE WITH A MAXIMUM FULL SCALE READING OF 15 PSIG WITH 1/4 OR 1/10 PSIG INCREMENTS. PRESSURE GAUGE TO BE IN GOOD REPAIR AND HAVE A CALIBRATION DATE WITHIN 30 DAYS OF USE. PRESSURE GAUGES DAMAGED OR OUT OF CALIBRATION WILL NOT BE PERMITTED.
 - B. THE PRESSURE RELIEF VALVE ON THE TEST MANIFOLD MUST BERATED AT 6 PSIG TO REDUCE THE RISK OF OVER PRESSURIZING THE TANK.
 - 6.5 TESTING THE PRIMARY (INTERNAL) TANK
 - A. CONNECT THE TEST MANIFOLD TO AN AVAILABLE SERVICE FITTING. CHECK EACH REMAINING SERVICE FITTING TO ENSURE TANK SERVICE FITTINGS ARE PROPERLY SEATED, ADEQUATELY DOPED, PLUGGED, AND TIGHTENED.
 - B. PRESSURIZE THE PRIMARY TANK TO 5 PSIG. ADD OR REMOVE AIR AS NECESSARY AND ALLOW THE PRESSURE TO STABILIZE. CLOSE THE VALVE ON THE TEST MANIFOLD AIR SUPPLY LINE.
 - C. MONITOR THE PRESSURE FOR 1 HOUR. SOAP TEST (USING HIGH FOAMING TEST SOLUTION - SEAM TEST SOLUTION MANUFACTURED BY WITHIN PRODUCTS, CHARLOTTE, NC, AMWAY LOC SOAP, OR APPROVED EQUAL) ALL SERVICE FITTING, MANWAYS AND PLUGS. WATCH FOR ACTIVE AIR BUBBLES WHICH INDICATE A LEAK.
 - D. CONNECT THE TEST MANIFOLD TO AN AVAILABLE SERVICE FITTING CHECK EACH REMAINING SERVICE FITTING TO ENSURE TANK SERVICE FITTINGS ARE PROPERLY SEATED, ADEQUATELY DOPED, PLUGGED, AND TIGHTENED.
 - 6.6 THE SECONDARY (EXTERNAL) TANK
 - A. MAINTAIN PRESSURE ON THE PRIMARY TANK. PLUG ALL OPEN FITTINGS ON THE SECONDARY TANK.
 - B. FREE THE HOSE FROM THE SERVICE TINTING BY CUTTING THE NYLON SAFETY TIE.
 - C. INSERT THE HOSE INTO THE QUICK DISCONNECT CHECK VALVE. THIS WILL ALLOW AIR TO TRANSFER FROM THE PRIMARY TO THE SECONDARY TANK.
 - D. PRESSURIZE THE 5 PSIG. ADD OR REMOVE AIR VIA THE SUPPLY VALVE AS NEEDED AND ALLOW PRESSURE TO STABILIZE. CLOSE THE VALVE ON THE TEST MANIFOLD TO THE AIR SUPPLY LINE. **DO NOT USE AN AIR COMPRESSOR TO PRESSURIZE THE SECONDARY TANK.**
 - E. MONITOR THE PRESSURE FOR 1 HOUR, SOAP THE ENTIRE EXTERIOR OF THE TANK AND WATCH FOR ACTIVE AIR BUBBLES WHICH INDICATE A LEAK.
 - F. WHEN THE TEST IS COMPLETE, SLOWLY RELEASE AIR PRESSURE FROM THE TANK BY DISCONNECTING THE SUPPLY LINE AND OPENING THE SUPPLY VALVE ON THE TEST MANIFOLD. WHEN AIR FLOW FROM THE SUPPLY VALVE STOPS, REMOVE THE TEST MANIFOLD.

INSTALLATION

- 7.1 INSTALLING CONTRACTOR SHALL BE CERTIFIED BY TANK MANUFACTURER ON PROPER TANK INSTALLATION PROCEDURES.
- 7.2 BEDDING AND BACKFILL MATERIAL SHALL BE WELL WASHED AND FREE OF ICE AND SNOW AND MEET ASTM D-48. ASTM C-33 AND AASHTO M-43 FOR QUALITY AND SOUNDNESS. CONTRACTOR SHALL PROVIDE SIEVE ANALYSIS ACCEPTABLE TO CEFCO CONSTRUCTION MANAGER. THE TANK WARRANTY IS AUTOMATICALLY VOIDED IF MATERIAL OTHER THAN THE FOLLOWING APPROVED BED AND BACKFILL MATERIALS ARE EMPLOYED WITHOUT PRIOR WRITTEN APPROVAL FROM THE TANK MANUFACTURER.
 - 7.2.1 PEA GRAVEL WITH PARTICLE SIZE NOT LESS THAN 1/8" OR MORE THAN 3/4" DIAMETER WITH NO MORE THAN 5% PASSING A NO. 8 SIEVE.
 - 7.2.2 CRUSHED STONE WITH PARTICLE SIZE NOT LESS THAN 1/8" OR MORE THAN 1/2" DIAMETER WITH NO MORE THAN 5% PASSING A NO. 8 SIEVE.
 - 7.3 STANDARD INSTALLATION: PROCEDURE - DRY HOLE:
 - 7.3.1 PLACE MINIMUM 12" BEDDING MATERIAL SMOOTH AND LEVEL OVER EXCAVATION FLOOR. TANK TO BE SET LEVEL.
 - 7.3.2 SET TANKS LEVEL ON BEDDING MATERIAL. USE ALL LIFTING LUGS PROVIDED AND GUIDE ROPES AT EACH TANK END. DO NOT SET TANKS DIRECTLY ON DEADMAN OR CONCRETE SLAB IF USED. MEASURE TANK DIAMETER.
 - 7.3.3 PLACE 12" BACKFILL MATERIAL EVENLY AROUND TANKS. USE WOODEN DOWEL PROBE TO WORK BACKFILL COMPLETELY UNDER TANK BETWEEN RIBS AND UNDER ENDCAPS. USE EXTREME CARE IN BACKFILLING BENEATH TANK BOTTOM. BETWEEN RIBS AND UNDER END CAPS TO PROVIDE A SOLID SUPPORT FREE OF VOIDS. IT IS EXTREMELY IMPORTANT THAT CARE BE EXERCISED IN THE BACKFILLING OF THE TANKS UP TO TWO FEET IN DEPTH FROM THE TANK BOTTOM AS TANK FAILURES HAVE RESULTED WHERE VOIDS WERE EVIDENT UNDER THE TANKS. GOOD COMPACTION AND SUPPORT FOR THE TANK CAN BE OBTAINED BY SHAPING THE GRAVEL WITH A SHOVEL ALL AROUND THE PERIMETER OF EACH TANK.
 - 7.3.4 REPEAT 7.3.3 FOR NEXT 12", PROBING TO FILL ALL VOIDS AT THE CRITICAL 5 TO 7 O'CLOCK SUPPORT AREAS OF THE TANK
 - 7.3.5 FREELY ADD ADDITIONAL BACKFILL TO TANK TOPS. (ADDITIONAL PROBING NOT REQUIRED.) MEASURE TANK DIAMETER.
 - 7.4 INSTALLATION PROCEDURE - WET HOLE
 - 7.4.1 THE FOLLOWING PROCEDURE SHALL APPLY WHERE HIGH WATER TABLE IS EVIDENT OR WHERE A FUTURE WATER CONDITION IS ANTICIPATED.
 - 7.4.2 WATER LEVEL SHOULD BE MAINTAINED AT THE LOWEST PRACTICAL LEVEL DURING INSTALLATION. A SUMP AND PUMP OR A SYSTEM OF WELL POINTS AND PUMPS IS THE RECOMMENDED METHOD TO MINIMIZE WATER LEVEL IN THE HOLE. IT IS RECOMMENDED THAT AN EXPERIENCED DEWATERING CONTRACTOR BE EMPLOYED TO DEWATER THE EXCAVATION. THE TYPE OF SYSTEM REQUIRED WILL DEPEND ON THE WATER FLOW RATE INTO THE HOLE. THE HOLE BOTTOM SHOULD BE LEVEL AND FREE OF ROCKS AND DEBRIS.
 - 7.4.3 PROVIDE A MINIMUM 12" THICK PEA GRAVEL BED AT BOTTOM OF HOLE. PEA GRAVEL MUST BE GRADED SMOOTH, COMPACTED AND LEVEL TO RECEIVE TANKS. CAREFULLY PLACE TANKS ON PEA GRAVEL BED. TANK IS TO BE SET LEVEL.
 - 7.4.4 BALLASTING:
 - 7.4.4.1 IF WATER IS REQUIRED TO SINK TANKS IN HIGH WATER TABLE CONDITION, THE MANUFACTURER'S TANK INSTALLATION INSTRUCTIONS MUST BE ADHERED TO EXACTLY.
 - 7.4.4.2 WATER WITHIN THE TANK CANNOT BE AT A HIGHER LEVEL THAN THE OUTSIDE GROUND WATER. IF WATER IS REQUIRED TO MAKE TANK INSTALLATION, THE CONTRACTOR WILL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR AND PAY FOR ALL WATER USED.
 - 7.4.4.3 BALLAST TANKS USING POTABLE WATER. REMOVE WATER ONLY AFTER TANK SLAB IS CURED. CONSULT CEFCO CONSTRUCTION MANAGER FOR PROPER DISPOSAL OF WATER REMOVED FROM TANK.
 - 7.4.5 WHILE LEVELING TANKS, INSURE THAT A MINIMUM DISTANCE OF 2'-0" FOR 8' DIAMETER TANKS AND 3'-0" FOR 10' DIA. TANKS IS MAINTAINED BETWEEN TANKS. WHEN ANCHORING, PLACE STRAPS OVER TANKS AND FOLLOW PROCEDURE AS OUTLINED HEREINAFTER.
 - 7.4.6 TANKS MUST BE ANCHORED WITH DEADMAN ON ALL WET HOLE INSTALLATIONS. ANCHORING SHALL BE DONE IN ACCORDANCE WITH THE TANK MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 - 7.4.7 USE PERFORMED FIBERGLASS HOLD DOWN STRAPS FURNISHED BY TANK FABRICATOR ON TOP OF DESIGNATED RIBS. DO NOT USE STRAPS OR CABLES AGAINST THE TANK SHELL BETWEEN RIBS. ATTACH HOLD DOWN STRAP TO ANCHOR POINTS WITH 1/2" DIA. 6X19 PLOW STEEL WIRE ROPE LOOPS USING AT LEAST THREE CABLE CLAMPS. ALL STRAPS SHOULD BE TIGHTENED WITH TURNBUCKLES TO GIVE SNAUG FIT OF STRAPS TO TANK RIB. TURNBUCKLE DIA. TO BE 1 1/2" HOOK TYPE OR 3/4" TYPE. ONE TANK AT A TIME SHALL BE SET ON PEA GRAVEL AND SECURELY ANCHORED AND TIGHTENED WITH THE ANCHORING STRAPS.

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Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
FUEL PRODUCT STORAGE TANK SECTION AND DETAILS

Project No
170-101.00

Sheet
FP4A

Drawn By

Reviewed By

STANDARD CEFCO FUEL WIRE SIZES

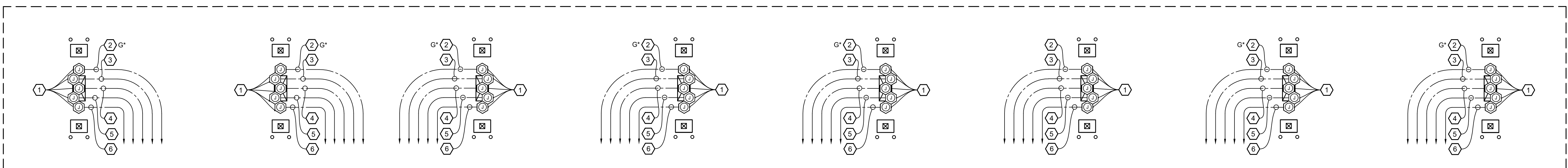
Dispenser Type/Description	Size Of Conduit	Function Of The Wire	Quantity Of Wire In Conduit	Size Of Wire	Quantity Of Wire In Conduit	Size Of Wire	Quantity Of Wire In Conduit	Size Of Wire
3+2 Wayne Helux	1 Inch	Power	3	# 12	4	# 14	2	# 18/2 Twisted Pair
	3/4 Inch	Intercom	1	# 18/4 Cable				
	3/4 Inch	Data	2	Cat 5				
	3/4 Inch	Spare	2	Raceway Only				
Master Dispenser	1 Inch	Power	3	# 12	2	# 14	2	# 18/2 Twisted Pair
	3/4 Inch	Intercom	1	# 18/4 Cable				
	3/4 Inch	Data	2	Cat 5				
	3/4 Inch	Spare	2	Raceway Only				
Satellite	3/4 Inch	Sensor	1	# 18/2 Cable	1	# 12 Ground		
	3/4 Inch	Sensor	2	# 18/2 Cable	1	# 12 Ground		
Master/Satellite Loop		Power	1	# 12 Ground	5	# 14		
Auto Gas Canopy	1 Inch	Power	2	Raceway Only				
	1 Inch	Spare	4	Raceway Only				
Truck Canopy	1 Inch	Power	1	Raceway Only				
	1 Inch	Spare	3	Raceway Only				
STP	1 Inch	Power	4	# 14				
Tank Sensor Home Run	1 Inch	Sensor	Per Sensor	# 1/2 Red Cabels	Per Sensor	# 12 Ground		
ATG & Interstial Loops	3/4 Inch	Sensor	Per Sensor	# 1/2 Red Cabels	Per Sensor	# 12 Ground		
Remote E Stop	3/4 Inch			3 # 12				

- KEYED NOTES:**
- 1 EXPLOSION PROOF JUNCTION BOX: CROUSE-HINDS GUA SERIES OR EQUAL.
 - 2 FUEL DISPENSER CONDUITS AND CONDUCTORS: 2-#8 (DISPENSER PWR), 10-#14 (FIVE PRODUCT DISPENSER CONTROL), 1- SHL'D CABLE (DISPENSER DATA), 1-SHL'D CABLE (CARD READER) & 1-#8 GND, 1" C. ROUTE TO GAS 'G' PANELBOARD, PUMP CONTROL PANEL & FUEL MANAGEMENT SYSTEM.
 - 3 DISPENSER INTERCOM: PROVIDE (2) 2/C #18 SHL'D CABLES IN 1" CONDUIT. ROUTE TO INTERCOM MASTER STATION IN CPI UNITIZED SWITCHGEAR.
 - 4 DISPENSER VGA SCREEN: PROVIDE (1) CAT5 UL AWM STYLE 21146 CABLE IN 1" CONDUIT. ROUTE TO VEEDER-ROOT ADVERTISEMENT EQUIPMENT IN C-STORE. COORDINATE WITH OWNER FIELD REPRESENTATIVE FOR EXACT LOCATION PRIOR TO SLAB POUR.
 - 5 DISPENSER SUMP SENSOR: PROVIDE 2/C #18 SHL'D & 2/C #18 SHL'D (SPARE) IN 3/4" CONDUIT. ROUTE TO FUEL TANK MONITOR PANEL.
 - 6 DISPENSER SPARE CONDUIT: PROVIDE (1) SPARE 1" CONDUIT W/ PULL STRING TO CPI UNITIZED SWITCHGEAR.
 - 7 TRUCK DISPENSER INTERCOM: (2) 2/C #18 SHIELDED CABLES (DISPENSER INTERCOM) ROUTE FROM DISPENSER TO INTERCOM MASTER STATION IN CPI UNITIZED GEAR.
 - 8 TRUCK DISPENSER VGA SCREEN: PROVIDE (1) CAT 5 UL AWM STYLE 21146 IN 1" CONDUIT FROM DISPENSER TO VEEDER-ROOT ADVERTISEMENT EQUIPMENT IN C-STORE. OBTAIN EXACT LOCATION OF VEEDER ROOT EQUIPMENT FROM OWNER FIELD REPRESENTATIVE.
 - 9 TRUCK DISPENSER POWER AND CONTROL: PROVIDE 2-#10 (DISPENSER POWER), 6-#14 (3 PRODUCT DISPENSER CONTROL), 1 SHIELDED CABLE (DISPENSER DATA), 1 SHIELDED CABLE (CARD READER) & 1-#10 EQUIPMENT GROUND IN 1" CONDUIT. ROUTE FROM DISPENSER TO GAS 'G' PANELBOARD, PUMP CONTROL PANEL & FUEL MANAGEMENT SYSTEM.
 - 10 MASTER/SLAVE DISPENSER CONDUCTORS: PROVIDE (1) SHIELDED CABLE (SLAVE DISPENSER HANDLE) AND (1) SHIELDED CABLE (SLAVE DISPENSER VALVE). ROUTE 1" CONDUIT FROM MASTER DISPENSER TO SLAVE DISPENSER.
 - 11 SLAVE DISPENSER POWER: PROVIDE 2-#12 AND 1-#10 EQUIPMENT GROUND IN 1" CONDUIT FROM SLAVE DISPENSER TO MASTER DISPENSER. SLAVE AND MASTER DISPENSER SHALL BE FED BY THE SAME CIRCUIT.
 - 12 TRUCK DISPENSER POWER AND CONTROL: PROVIDE 4-#10 (DISPENSER POWER), 6-#14 (3 PRODUCT DISPENSER CONTROL), 1 SHIELDED CABLE (DISPENSER DATA), 1 SHIELDED CABLE (CARD READER) & 1-#10 EQUIPMENT GROUND IN 1" CONDUIT. ROUTE FROM DISPENSER TO GAS 'G' PANELBOARD, PUMP CONTROL PANEL & FUEL MANAGEMENT SYSTEM.

- GENERAL NOTES:**
- A. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE, CURRENT EDITION OF BUILDING CODE AND APPLICABLE LOCAL ORDINANCES.
 - B. VERIFY ALL MECHANICAL EQUIPMENT SIZES PRIOR TO ROUGH-IN.
 - C. COORDINATE ALL INSTALLATIONS WITH OTHER TRADES.
 - D. ALL ELECTRICAL CONSTRUCTION IN THE AREA OF THE UNDERGROUND STORAGE FUEL TANKS SHALL BE PER NEC ARTICLE 514 AND NFPA 30A.
 - E. ALL INTRINSICALLY SAFE(IS) WIRING SHALL BE PER NEC ARTICLE 504 AND ANSI/ISA RP 12.6. IN ADDITION, SPECIAL (IS) WIRING REQUIREMENTS FOR THE UNDERGROUND STORAGE FUEL TANK LEAK SENSORS INCLUDE SEPARATION FROM OTHER WIRING VIA SEPARATE RACEWAYS (INCLUDING TROUGHS). TROUGHS SHALL HAVE A PERMANENTLY ATTACHED METAL DIVIDER THAT IS EQUIPOTENTIALLY BONDED TO EARTH.
 - F. FURNISH AND INSTALL POURED SEALING FITTINGS AT BOTH ENDS OF ALL CONDUITS FROM FUEL DISPENSERS AND UNDERGROUND FUEL STORAGE TANKS.
 - G. REFERENCE MANUFACTURER INSTALLATION MANUALS FOR UNDERGROUND FUEL STORAGE TANK EQUIPMENT WIRING INTERCONNECTIONS.
 - H. ALL POWER CONDUCTORS SHALL BE STRANDED WITH DUAL RATED THHN/THWN INSULATION.
 - I. INTERMEDIATE METAL CONDUIT(IMT) SHALL NOT BE USED.
 - J. HOMERUN CONDUITS TO DISPENSERS AND TANKS TO BE RIGID METAL HOT DIPPED GALVANIZED CONDUIT AND SCHEDULE 40 PVC PER NEC ARTICLE 514.8. EXCEPTION #2.
 - K. ALL CONDUIT ROUTED BETWEEN TANK SUMPS SHALL BE RIGID METAL HOT DIPPED GALVANIZED CONDUIT.
 - L. PENETRATE SUBMERSIBLE TURBINE PUMP(STP) WITH ONLY (1) VEEDER-ROOT CONDUIT.
 - M. PROVIDE 'EYS' SEALING FITTINGS WHERE CONDUITS ENTER OR LEAVE ANY HAZARDOUS CLASSIFIED AREA.
 - N. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL POWER AND INTRINSICALLY SAFE CONDUITS.
 - O. REFER TO BUILDING ELECTRICAL DRAWINGS FOR PANEL SCHEDULES.
 - P. THE TERM PROVIDE MEANS THAT THE CONTRACTOR WILL 'FURNISH' AND 'INSTALL' ITEM.

NOTE:
REFER TO STANDARD CEFCO FUEL WIRE SIZES (FP4B) FOR WIRE INFORMATION.

NOTE:
FOR ILLUSTRATION ONLY. REFER TO TANK INSTALLATION GUIDE.



21 ENLARGED ELECTRICAL FUEL STATION DETAIL VEHICLE #1 OF 2.
NOT TO SCALE
RE: SITE PLAN

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Project Name and Address
CEFECO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

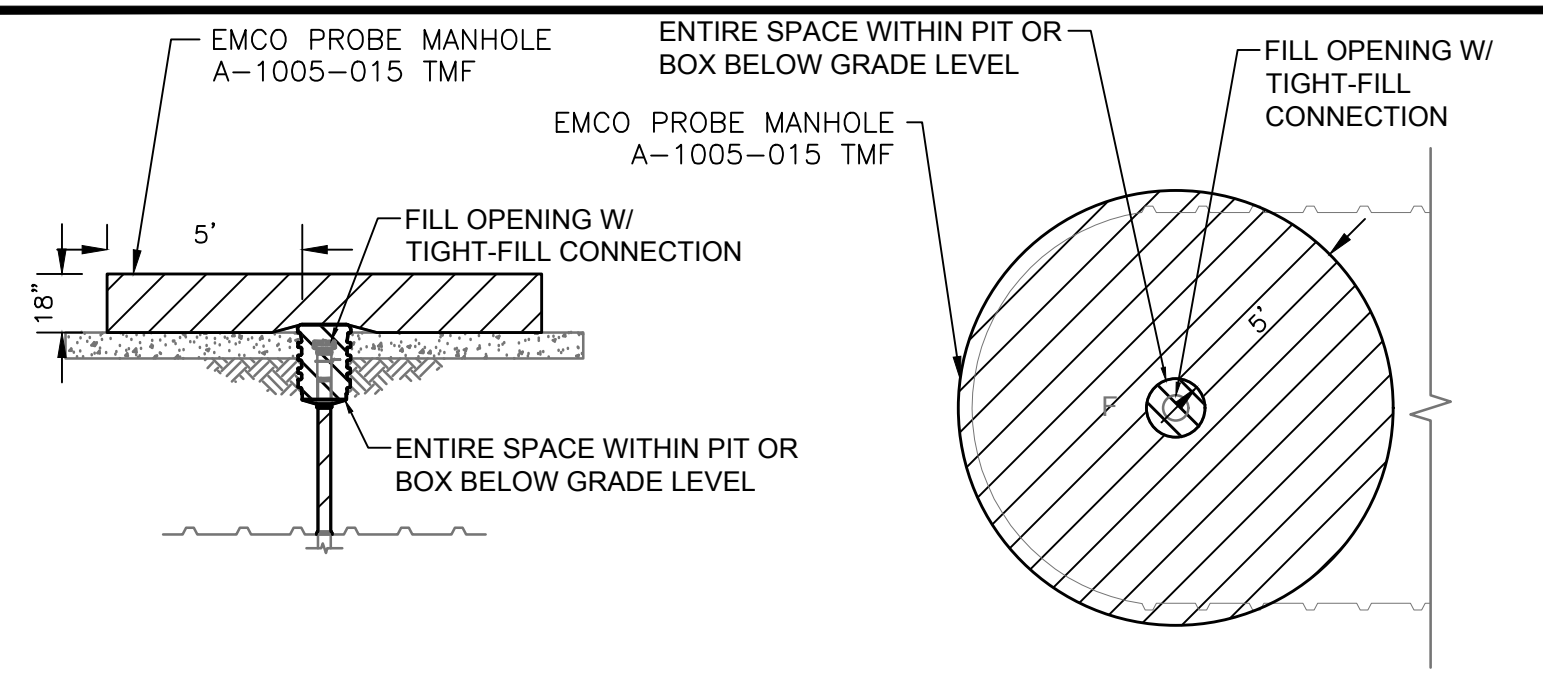
Sheet Title
FUEL PRODUCT STORAGE TANK SECTION AND DETAILS

Project No.
170-101.00

Sheet
FP4B

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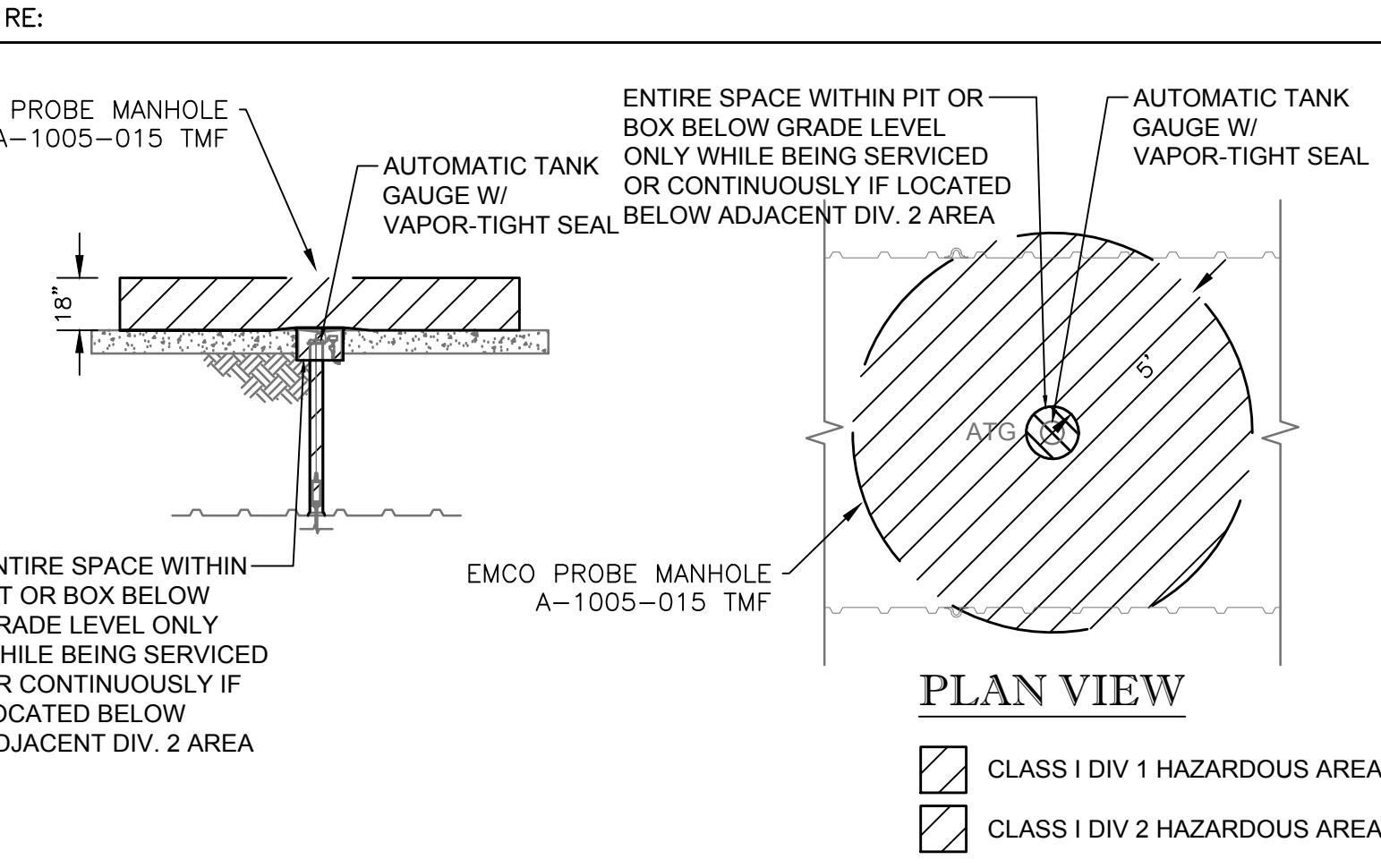


NOTES:

- FOR LOOSE-FILL CONNECTIONS, DIVISION 2 AREA EXTENDS 10' HORIZONTALLY IN ALL DIRECTIONS. VERIFY FILL CONNECTION TYPE WITH MANUFACTURER / GENERAL CONTRACTOR.

CLASS 1 DIV 1 HAZARDOUS AREA
 CLASS 1 DIV 2 HAZARDOUS AREA

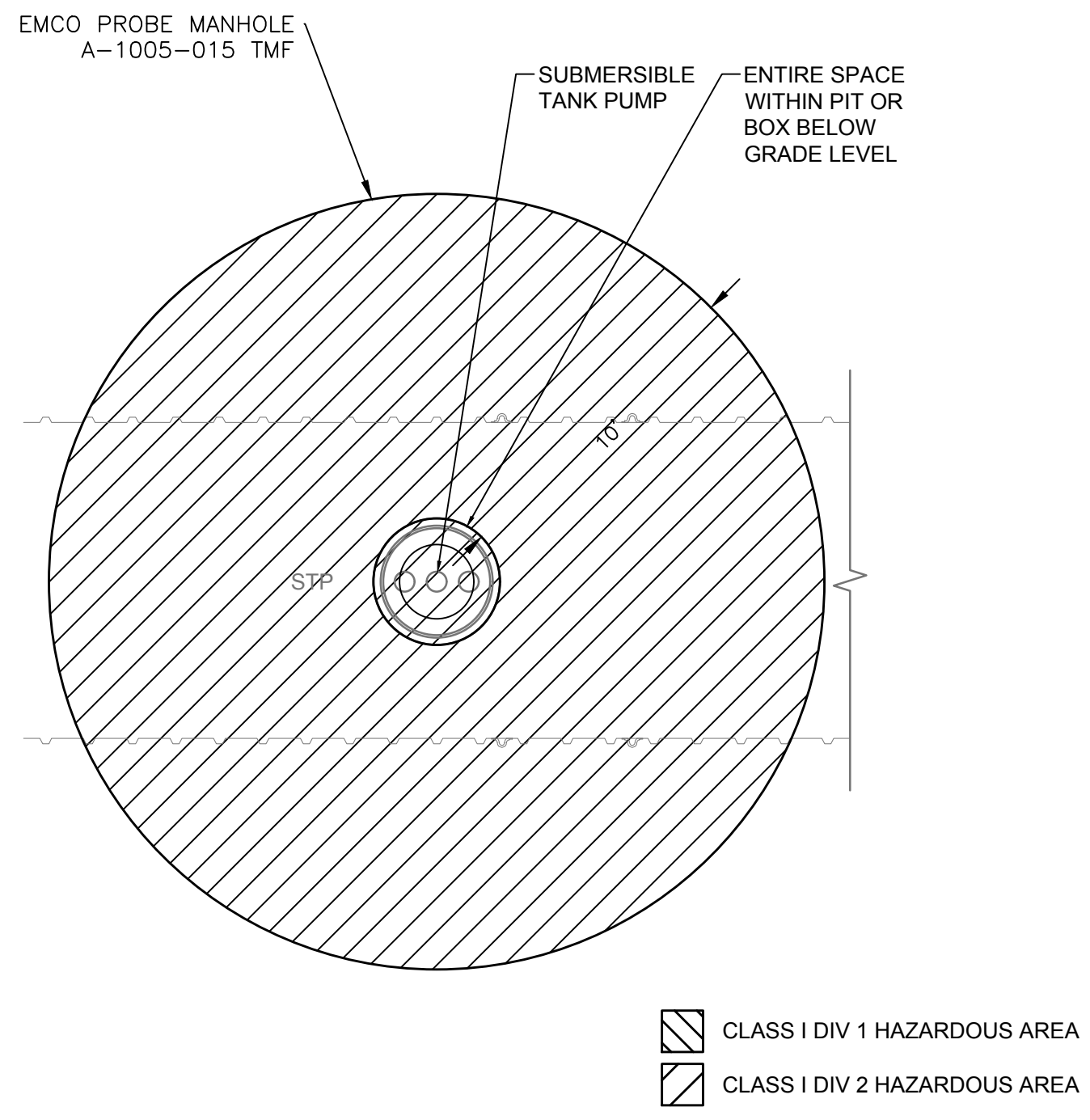
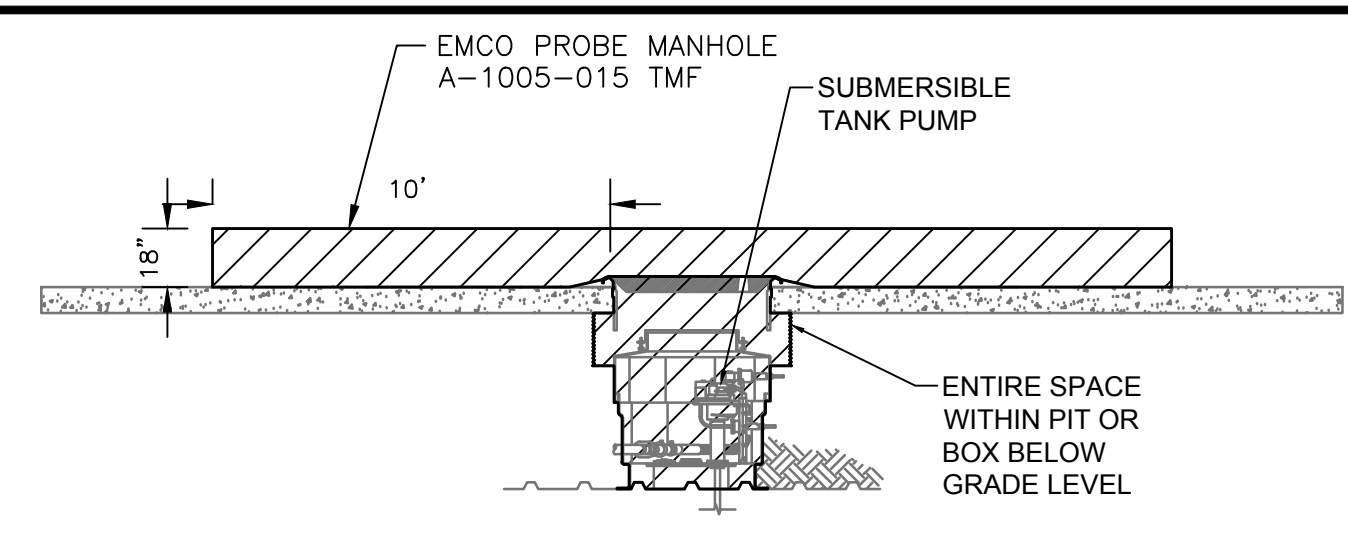
22 TANK FILL SUMP HAZARDOUS AREA CLASSIFICATION DETAILS



23 AUTOMATIC TANK GAUGE (ATG) SUMP HAZARDOUS AREA CLASSIFICATION DETAILS

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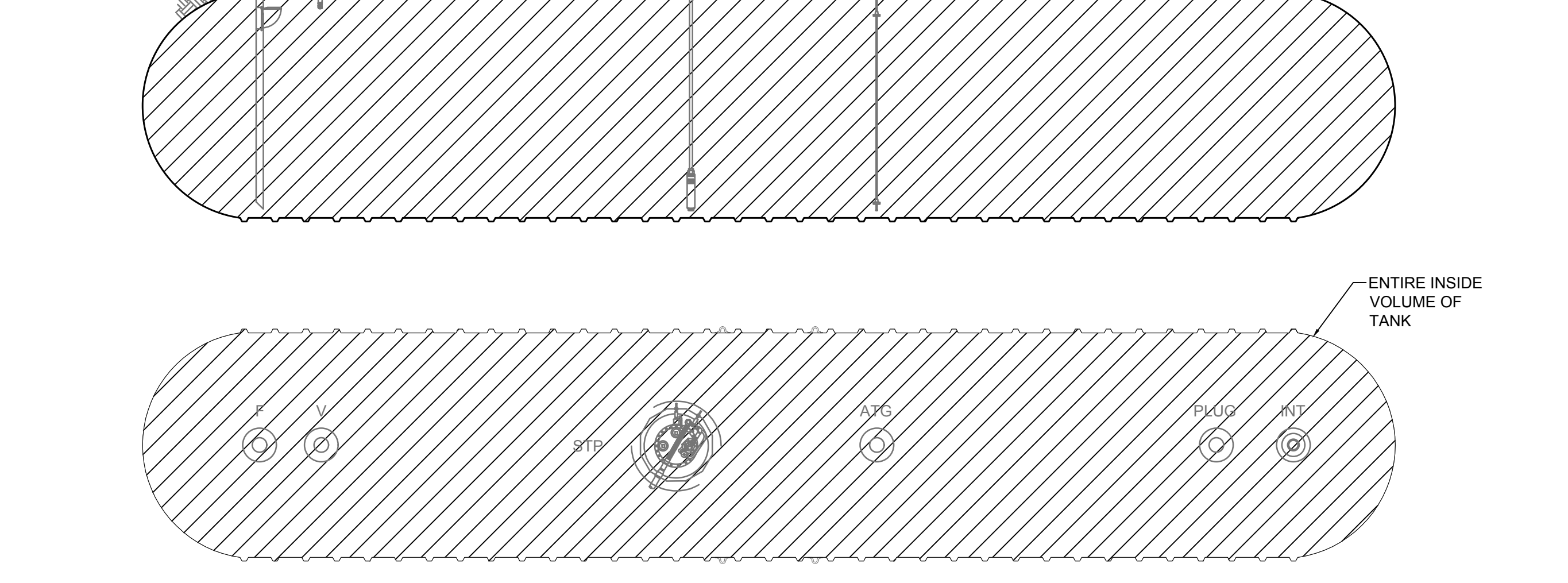
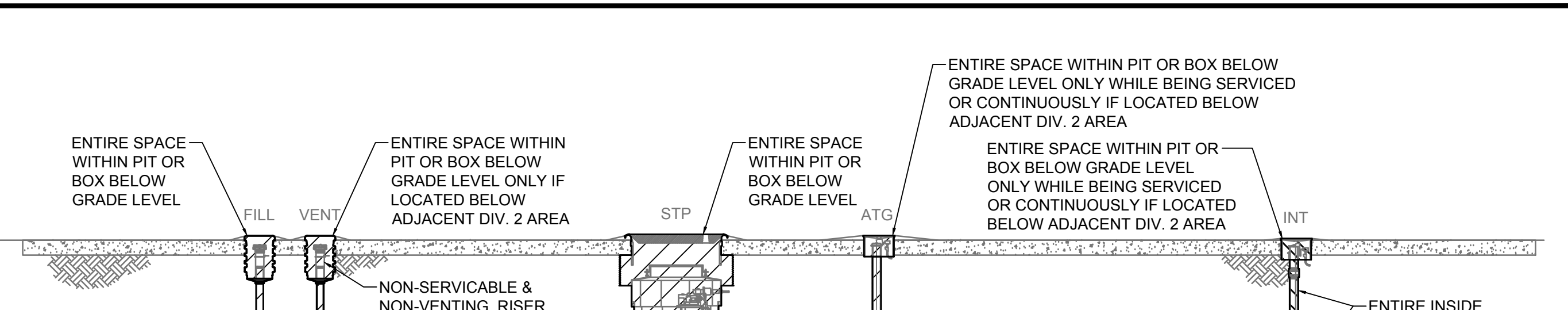
CLASS 1 DIV 1 HAZARDOUS AREA
 CLASS 1 DIV 2 HAZARDOUS AREA



15 SUBMERSIBLE TANK PUMP (STP) SUMP HAZARDOUS AREA CLASSIFICATION DETAILS

NOT TO SCALE
RE:

CLASS 1 DIV 1 HAZARDOUS AREA
 CLASS 1 DIV 2 HAZARDOUS AREA



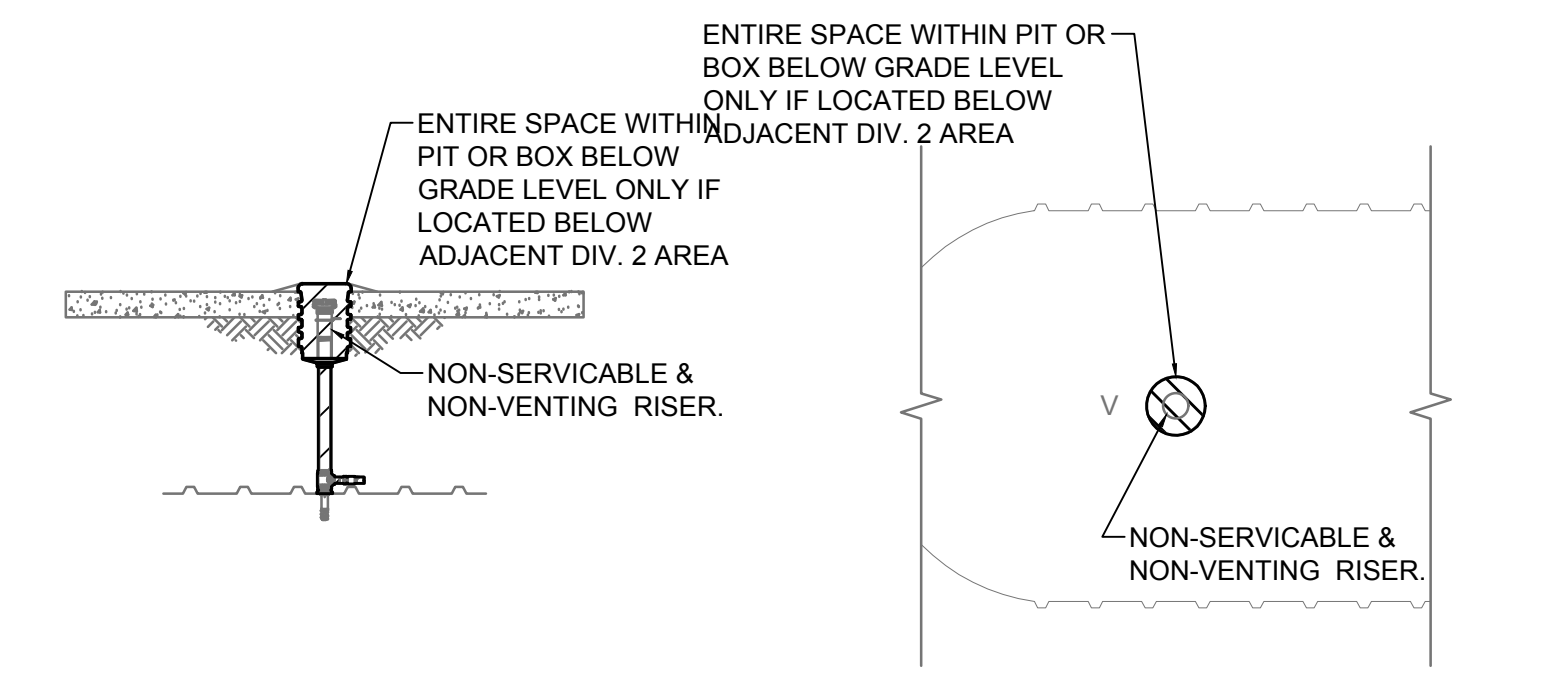
11 UNDERGROUND FUEL STORAGE TANK HAZARDOUS AREA CLASSIFICATION DETAILS

NOT TO SCALE
RE:

NOTES:

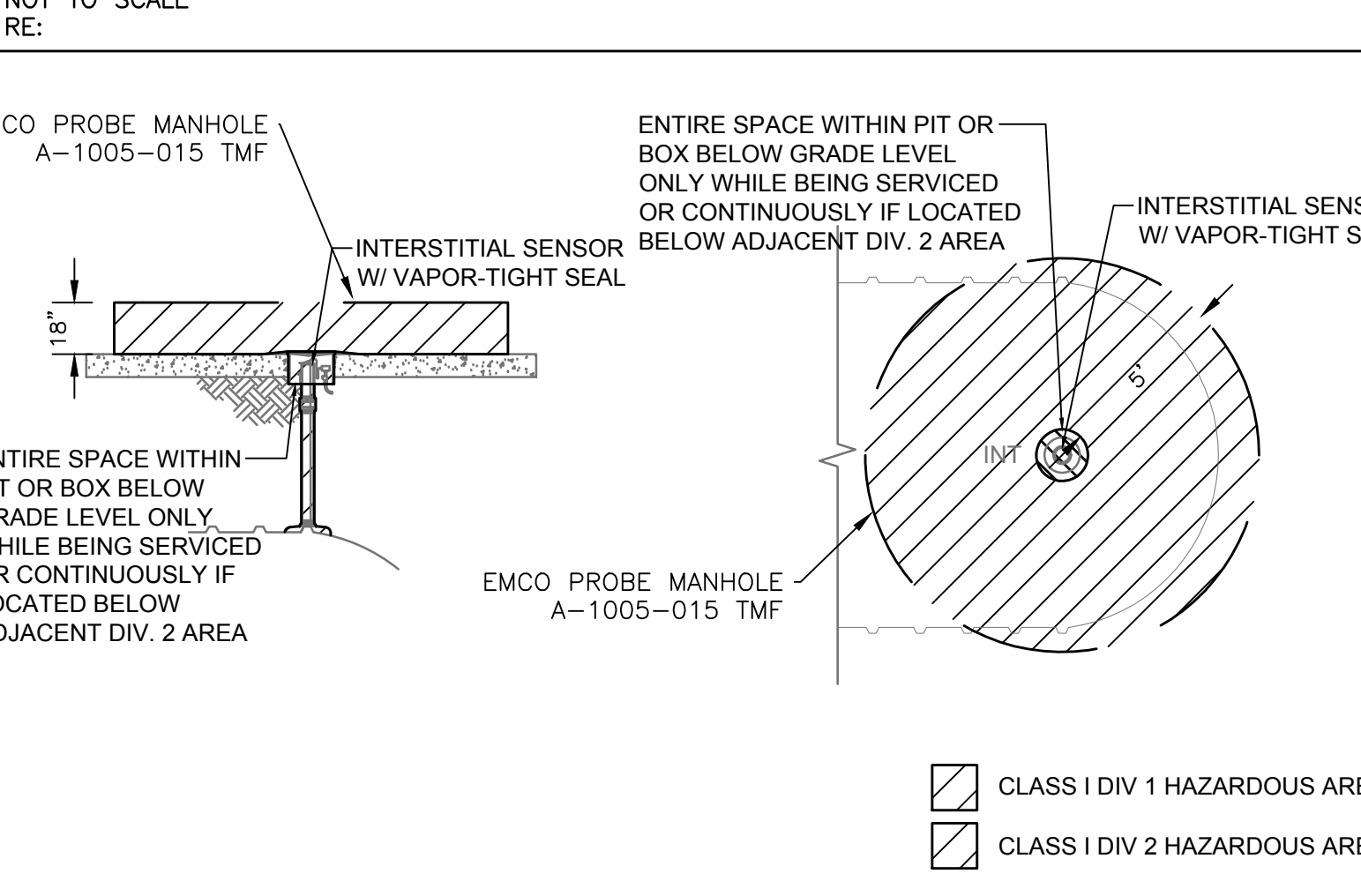
- FOR CLARITY, ABOVE GROUND HAZARDOUS AREA CLASSIFICATION IS NOT SHOWN. REFERENCE INDIVIDUAL SUMP DETAILS FOR ABOVE GROUND HAZARDOUS AREA CLASSIFICATION.
- UNDER NORMAL OPERATIONS, AUTOMATIC TANK GAUGE (ATG) AND INTERSTITIAL SUMPS ARE CLASSIFIED AS NON-HAZARDOUS AREAS WHEN LOCATED MORE THAN 10' FROM THE EDGE OF THE SUBMERSIBLE TANK PUMP (STP) SUMP AND 5' FROM THE EDGE OF THE FILL SUMP. DURING FUEL SYSTEM MAINTENANCE WHEN RISER CAPS TO ATG OR INTERSTITIAL ARE OPEN, SUMPS ARE CLASSIFIED AS SHOWN.
- VENT SUMP CONTAINS A NON-SERVICABLE, NON-VENTING RISER. SUMP IS CLASSIFIED AS NON-HAZARDOUS WHEN LOCATED MORE THAN 10' FROM THE EDGE OF THE SUBMERSIBLE TANK PUMP (STP) SUMP AND 5' FROM THE EDGE OF THE FILL SUMP.

CLASS 1 DIV 1 HAZARDOUS AREA
 CLASS 1 DIV 2 HAZARDOUS AREA



CLASS 1 DIV 1 HAZARDOUS AREA
 CLASS 1 DIV 2 HAZARDOUS AREA

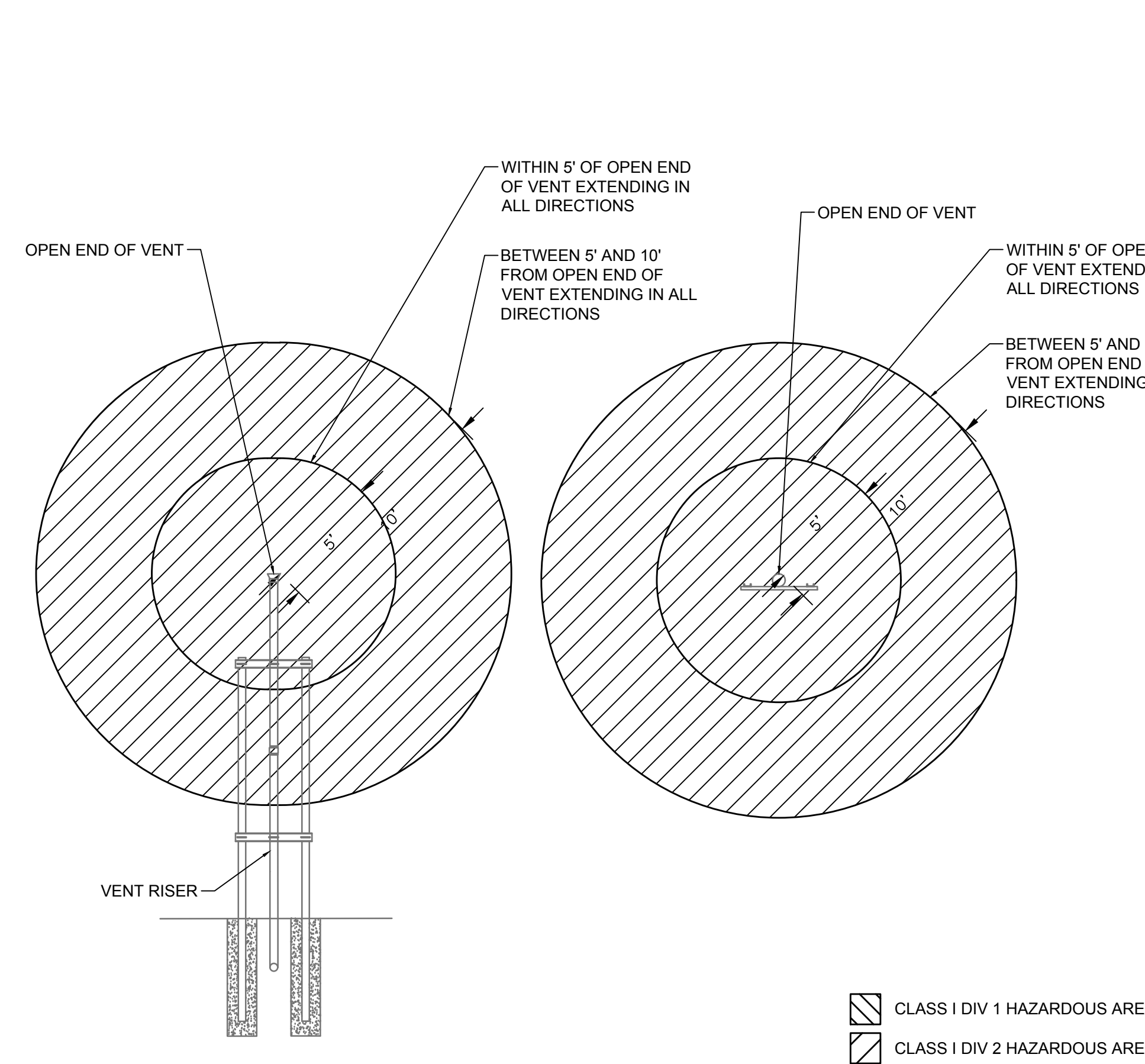
22 TANK VENT SUMP HAZARDOUS AREA CLASSIFICATION DETAILS



21 TANK INTERSTITIAL SUMP HAZARDOUS AREA CLASSIFICATION DETAILS

NOT TO SCALE
RE:

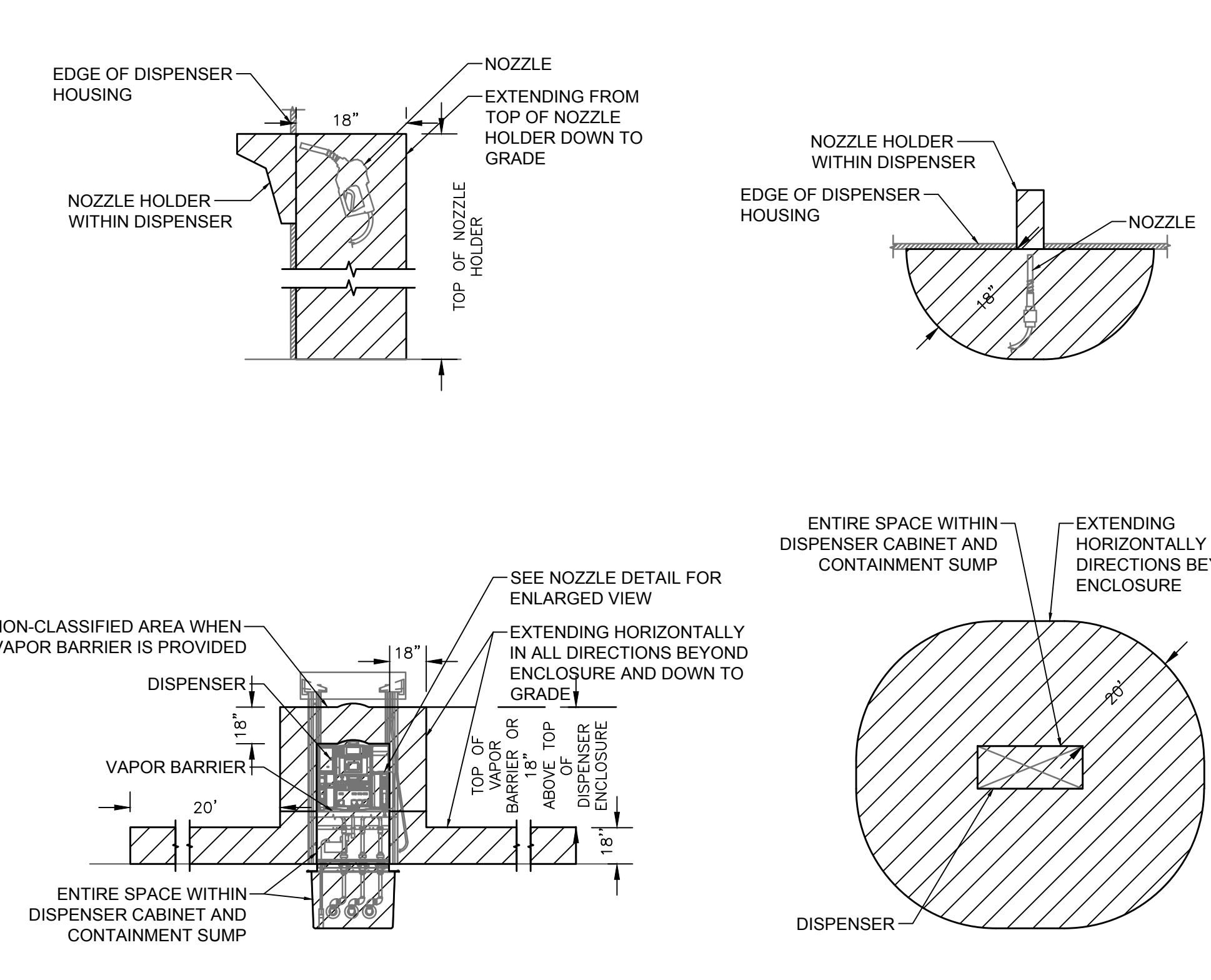
CLASS 1 DIV 1 HAZARDOUS AREA
 CLASS 1 DIV 2 HAZARDOUS AREA



CLASS 1 DIV 1 HAZARDOUS AREA
 CLASS 1 DIV 2 HAZARDOUS AREA

13 VENT HAZARDOUS AREA CLASSIFICATION DETAILS

NOT TO SCALE
RE:



5 DISPENSER HAZARDOUS AREA CLASSIFICATION DETAILS

NOT TO SCALE
RE:

NOTES:

- VAPOR BARRIER IS TYPICALLY INSTALLED ON ROOF OF LOWER LIQUID HANDLING COMPARTMENT. VERIFY WITH MANUFACTURER / GENERAL CONTRACTOR FOR LOCATION OF VAPOR BARRIER, IF PROVIDED. WHEN NOT PROVIDED, ENTIRE SPACE WITHIN DISPENSER CABINET IS CLASSIFIED AS DIVISION 1 AND AREA WITHIN 18' OF TOP AND SIDES OF DISPENSER EXTERIOR EXTENDING IN ALL DIRECTIONS IS CLASSIFIED AS DIVISION 2.

CLASS 1 DIV 1 HAZARDOUS AREA
 CLASS 1 DIV 2 HAZARDOUS AREA

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Date

Project Name and Address: **CEFCO #437 - BETHEL**, HIGHWAY 90 AND OLD BETHEL ROAD, CRESTVIEW, FLORIDA

Sheet Title: **FUEL PRODUCT STORAGE TANK SECTION AND DETAILS**

Project No. 170-101.00, Sheet FP5

Drawn By, Reviewed By

DISPENSER, PUMP, AND TANK FITTINGS AND EQUIPMENT LIST - AUTO & TRUCK FUELING			
EQUIPMENT	FURNISHED BY: (TO BE INSTALLED BY CONTRACTOR)		DESCRIPTION
	CEFCO	CONTR.	
DISPENSER PRODUCT CONTROL SYSTEM	X		VERIFONE COMMANDER RUBY2/COMM TRIPLE NO UPS/DISPENSER BOARD
	X		GIBARCO D-BOX TRUCK SIDE DISPENSERS
	X		Comdata SmartDESQ Include Nexgen detail
V169-RUBY2/COM-TTERM	X		COMMAND SITE CONTROLLER, STANDARD, 1PCB, 1HDD, 1PWR M149-111-00-NAA
	X		FORECOURT FUEL CONTROLLER, FCI M149-901-01-R
OC-DISPENSER BOARD	X		KIT, (CLGB) SPP CURRENT LOOP 29721-01
	X		KIT, RS485 8-CHANNEL INTERFACE BOARD SFC 29376-01
	X		RUBY 2 M169-000-01-NAA
	X		CUSTOMER DISPLAY, TOPAZ 2X20 P050-01-101-R
	X		MEDIA DRAWER, PETRO SYSTEMS P050-01-200
	X		PRINTER, RECEIPT, THERMAL, RP-310 P040-02-020
	X		ROUTER, CYBERA ZONE ROUTER P039-09-001-NAA (6462)
	X		CABLE, SHLD RS232, RJ45-RJ45, GEM II 13836-01
	X		ADAPTER, NULL MODEM, DB25M-RJ45 13581-01
	X		CABLE, ETHERNET SAPPHIRE 7.62M 22278-25
	X		CABLE, ETHERNET SAPPHIRE 15.2M 22278-50
	X		CABLE, ETHERNET SAPPHIRE 100' 22278-100
	X		CABLE, SHLD RS232, RJ45-RJ45, 100FT 13836-100
	X		Onceac UPS - Conditioned 250VA P040-07-050
	X		MX 915 PCI 3. X, 4.3" M132-409-01-R
	X		MX9XX - PWR, AUD, BERG 132-602-00-R
	X		W/TAILOUT, ETH, USB OTG, COM2
	X		PS+FERRITE, 120VAC/12VDC/1A, 5.5X2.1MM/C, USA PW132-003-01-A
	X		STAND, MX915, LOW CONTOUR, LOCKING, ANTI-SKIMMING, DATA PORT BLOCKING MET132-019-01-A
	X		STAND, MX915/925 LOW CONTOUR MET132-009-01-A
	X		DATALOGIC GRYPHON GD440030 2D IMAGER GD440030-BC-B
	X		DATALOGIC CAB-327 SH3630 RUBY VERIFONE SERIAL CABLE, 8 90A051939
	X		20 STATION INTERCOM W/ COUNT BEING X 2 20 STATION (78-6911-4799-1) FOR AUTO AND 8 STATION (79-6911-4796-7) FOR TRUCK
	X		BRAVO EPOXY KIT PART NUMBER EP100
DISPENSERS	X		DRESSER WAYNE HELIX SERIES - 3+2 PRODUCT 000-920895
	X		WAYNE OVATION 2 ULTRA HIGH FOR DIESEL PLUS DEF (SEE SITE PLAN FOR LAYOUT WITH ALPHA NUMERIC KEYPAD
	X		NOTE: CONTRACTOR SUPPLIED FUEL DISPENSER FILTERS AS FOLLOWS AND FOR
	X		VERSION 4 FLINT LOCS SHOULD BE PRESENT BOTH MANUFACTURERS PETROCLEAR ETHANOL 40510AAD & FOR DIESEL IT WILL BE THE PETROCLEAR 40530WAD
	X		OR DRESSER WAYNE OVATION 2 SERIES - HI SPEED W/ALPHA
	X		NUMERIC (NO FLINT LOC'S W/THESE) (PETROCLEAR 4093WAD) FUSION GATEWAY (IX) PRODUCT NO. 000-920895
DISPENSER CONTAINMENT BOX, VALVES & FITTINGS	X		UPP SUMP FOR ENCORE OR HELIX POLY DISPENSOR SUMP
	X		2" UPP ENTRY FOR FIBERGLASS SUMPS PART NUMBER FEB-075
DISPENSER HOSE, NOZZLE & FITTINGS	X		006310 SWIVEL/STB COMBO 3/4" AND 159504 N, 10S UNL W CP UL HUSKY 3/4" FOR UNLEADED AND 159503 N, 10S LDD W/CP UL HUSKY 3/4" DSL NOZZLE FOR DIESEL
	X		HUSKY 005969 SWIVEL/STB 1" COMBO ASSEMBLY AND HUSKY 173310N, 8 W/CP PHG NL HUSKY 1" DSL NOZZLE AND UPDATE THE CURB HOSE TO THE FLEXING HOSE, FLHFR301000BLK, ASSY HW 1" X 10' BLK, FIXED ENDS
TANKS	X		WATCO CORPORATION -10.5'DIA. AS PER LOCATION. DOUBLE WALL STEEL FIBERGLASS COATED TANKS - SEE SITE PLAN FOR TANK CONFIGURATION
	X		ADD OR BLACK PIPE ON DIESEL BESIDE STAINLESS UNLESS ON A STP THEN ITS STAINLESS (VERIFY WITH OWNER)
	X		WATCO CORPORATION -10.5'DIA. AS PER LOCATION.
SUBMERSIBLE MANHOLE COVER	X		14U-RT4210 STP 42" COMPOSITE STANDARD
SUBMERSIBLE PUMP TURBINE ENCLOSURE & FITTINGS	X		602402922 42" FRP SUMP
	X		ADHESIVE KIT: 602366924 SEAL KIT: 602366901
	X		CABLE TIGHT FLEXIBLE 1" CONDUIT, 000-100-1000-EC.
	X		2" DOUBLE WALL ELECTROFUSION, 303-075-EIF-U
SUBMERSIBLE PUMPS & FITTINGS (ADVANCE PROTECTION PUMPS)	X		REGULAR x2, PREMIUM x 1, AUTO DIESEL x 1, (4 HP VARIABLE) TRUCK DIESEL x2 (5 HP MAG FLO, 6" OPENINGS)(4 HP VARIABLE STP) DEF MOTOR 403479901 AND ADD ROW BELOW FOR DEF STP. PLUMP CONTROL BOX, 401220903 WITH MECHANICAL LEAK DETECTOR
	X		1.5 HP
	X		BRAVO ENTRY FITTING PART NUMBER F-10-F VFC CONTROLLER 4H.P
	X		FFS, STP-MLD+G (GASOLINE), MECHANICAL LINE LEAK DETECTOR 403168901
	X		FFS, STP-MLD+D (DIESEL), 403170901 MECHANICAL LINE LEAK DETECTOR
	X		UNIVERSAL 213 FP
	X		JEFFERSON 1731 - 300 2" STAINLESS STEEL UNION
VAPOR RECOVERY/VENT	X		FFS 4" PLUG CAP GALV. STEEL

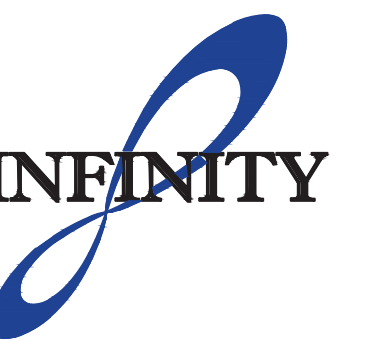
	X	4" RISER	4" GALV. STEEL RISER W/ "3M" SCOTCHRAP51 PROTECTION TAPE OVER "3M-SCOTCHRAP" PIPE PRIMER (GALV. FOR UNLEADED PRODUCTS AND BLACK STL FOR DIESEL)
REMOTE DIRECT VAPOR RECOVERY	X	FFS DEFENDER SERIES SPILL BUCKETS #70545012CI-GKT	SINGLE WALL SPILL BUCKET
DIRECT FILL/GAUGE	X	EMCO SPILL BUCKET A1004EVR-31755101	5 GAL DOUBLE WALL NPT, ND
	X	EMCO A 1100 EOR 056T	4" FILL TUBE W/OVERFILL PREVENTION VALVE
	X	FFS; SWIVEL ADAPTOR (SWF-100-SS),	
	X	FFS; VAPOR CAP (777-201-02)	VENT CAP
	X	FFS; FILL CAP (4" EVR 304-301-01)	FILL CAP
	X	FFS; 2" PRESS VAC. VENT EVR 80020702	PRESSURE VENT
	X	FFS; SWIVEL ADAPTOR (SWV-100-SS)	
	X	FFS; 78710009	RU-REGULAR UNLEADED KIT
	X	FFS; 78710006	SU-SUPER UNLEADED KIT
	X	FFS; 78710003	D-DIESEL KIT
	X	4" RISER	4" GALV. STEEL RISER W/ "3M" SCOTCHRAP51 PROTECTION TAPE OVER "3M-SCOTCHRAP" PIPE PRIMER (GALV. FOR UNLEADED PRODUCTS AND STAINLESS STL FOR DEF)
INVENTORY SENSOR MANHOLE/COVER	X	EMCO	EMCO PROBE MANHOLE PART NUMBER A1005-01STM
	X	FFS EQUIVALENT	DIAMETER MANHOLES TWO WITH 24" MANHOLES
MONITORING WELL & MANHOLE/COVER	X	FFS EQUIVALENT	12" DIA MANHOLE
	X	FFS EQUIVALENT	MONITORING WELL WITH BOTTOM 4"x15"
	X	FFS EQUIVALENT	4" WATERTIGHT LOCKING TEST WELL CAP
PRODUCT PIPING, SECONDARY CONTAINMENT PIPING	X	UPP ELECTRO PIPING UL971	UPP PIPING, FITTINGS, ADHESIVE, ETC. (USE ALL PRODUCTS OF A SINGLE MANUFACTURER)
SYSTEM AND FITTINGS	X	UPP PIPING UL971	ALCOHOL RESISTANT ADHESIVE
	X	T6000EDP	TS-6000 EVO FUEL MANAGEMENT SYSTEM W/PRINTER
FFS TANK MONITORING SYSTEM	X	TS-TT	(24HR) SCALD TANK TESTING SOFTWARE
NOTE: ALL STP TANK RISERS MUST BE STAINLESS STEEL, PER FFS ADVANCED PROTECTION STPS	X	TS-TRAC	DISPENSER RECONCILIATION SOFTWARE
ATG WIRING REQUIREMENT: FFSATG WIRING BY CONTR	X	TS-PRB	12 INPUT PROBE MODULE
THHN, TFFN OR THWN, 18 AWG, WHITE & BLACK, OR ALPHA CABLE #58411, 0.114 O.D. - 1,500 FEET (457 METERS) MAX. LENGTH ALPHA CABLE #58411 MUST BE USE WITH NONMETALLIC CONDUIT.	X	TS-2WSNS	12 INPUT 2-WIRE SENSOR MODULE
	X	TS-3WSNS	8 INPUT 2-WIRE SENSOR MODULE
	X	4" RISER	4" GALV. STEEL RISER W/ "3M" SCOTCHRAP51 PROTECTION TAPE OVER "3M-SCOTCHRAP" PIPE PRIMER (GALV. FOR UNLEADED PRODUCTS AND BLACK FOR DIESEL)
INTERSTITIAL WIRING REQUIREMENT:	X	TSP-IGF4P	4" FLOAT SET FOR GASOLINE AND ETHANOL BLENDED TANKS
THHN, TFFN OR THWN, 18 AWG: RED, WHITE & BLACK OR ALPHA CABLE #58113, 0.131 O.D. - 1,500 FEET (457 METERS) MAX. LENGTH. ALPHA CABLE #58113 (INCON P/N 600-0063) MUST BE USED WHEN USING NONMETALLIC (PVC) CONDUIT.	X	TSP-IDF4	4" FLOAT SET FOR DIESEL/FUEL OIL TANKS
	X	TSP-C4A	MAG PROBE INSTALL KIT FOR 4" RISER PIPES - BOTTOM MOUNT
	X	FMP-LL3-125	MAGNETOSTRICTIVE PROBE FOR 10 FOOT (3.05 M) DIAMETER TANKS
	X	TSP-ULS	UNIVERSAL LIQUID SUMP SENSOR
	X	TSP-EIS	ELECTRO-OPTIC INTERSTITIAL SENSOR
	X	TSP-KI2	INTERSTITIAL 2" RISER INSTALL KIT
TANK HOLD-DOWN HARDWARE*	X	WATCO	HOLD-DOWN STRAP
TANK AND HOLD-DOWN HARDWARE PROVIDE BY THE FIKES COMPANY	X	BREWER-TICHENER #444-G OR "CROSBY" #G277	1" DIA 12" TAKE-UP JAW AND JAW TURNBUCKLE (SAFE WORKING LOAD LIMIT 10,000 LBS)
	X	BRODERICK & BASCOM - "YELLOW STRAND"	5/8" DIA DRAWN GALV WIRE ROPE 6 X 19 CLASS IWRC IMP. PLOW STEEL - (MIN BREAKING
	X	BREWER-TICHENER #755G OR "CROSBY" #G408	STRENGTH 17.9 TONS, SAFE WORKING LOAD = 7160 LBS
	X	COVERT #3300 OR "CROSBY" #450 FIBERGLASS	STANDARD WIRE ROPE THIMBLE (OPEN PATTERN) HOT DIP GALV
TESTING	X	CERTIFIED CONTRACTOR TO PERFORM CARB TP-201.3	5/8" WIRE ROPE CLIPS, HOT DIP GALV
"U" POLE BUMPERS -STAINLESS STEEL, 3.5 O.D.	X	OPW 6PGR355-4350	HYDROSTATIC TESTING FOR SPILL BUCKETS AND SUMPS PRECISION PRESSURE TESTING OF TANKS AND LINES
STRAIGHT POLE BUMPERS-PAINTED STEEL	X	OPW SPG4-63	SEE SITE PLAN FOR TYPE & SIZES
BIO	X	TSBB1M1A-RT	CONTROLLER - TRUCK STOP BIO BLENDER, 1 MAIN FLOW, 1 ADDITIVE FLOW, REAL-TIME RATIO BLENDING
	X	BP-CFCO-1N30	PRE-ASSEMBLED BLENDING PLATFORM, CEFCO EDITION, 1 IN TO 3 OUT
	X	BRAVO SUMP 5x5	BRAVO SUMP, 5FT X 5FT
	X	140-020-000	2" CLASS 150 RAISED FACE THREADED STEEL FLANGE FOR OUTBOUND LINES, THREE INCLUDED

		140-030-000	3" CLASS 150 RAISED FACE THREADED STEEL FLANGE FOR INBOUND LINE, ONE INCLUDED
		VF-515	TOSHIBA VF-515 7.5 HP VARIABLE FREQUENCY DRIVE FOR BIO PUMP MOTOR
FILTER FABRIC	X	MANUFACTURE	ANY SITE WHERE POOR SOIL CONDITIONS OR FLUCTUATING WATER TABLES ARE PRESENT (I.E. LOOSE SAND, TIDAL OR RAPIDLY CHANGING WATER, SILTY SOIL WITH WATER CONDITIONS, LOW STABILITY SOIL WITH LESS THAN 250 LBS/SQ.FT COHESION OR AN ULTIMATE BEARING CAPACITY OF LESS THAN 500 LBS/SQ.FT FOLLOW TANK AND FILTER FABRIC MANUFACTURER'S INSTALLATION INSTRUCTIONS.
ELECTRIC WIRING	X	Bravo F-10-F	
	X		
	X	Flexible conduit	000-100-1000-EC
	X	Flexible conduit	000-100-1500-EC
	X	Coupler	02-033
	X	Spigotted rigid metal conduit	000-100-06-ERMC
*DEADMAN FURNISHED BY WATCO (DELIVERED WITH TANKS TO JOBSITE)			
MANUFACTURERS OF CONTRACTOR-FURNISHED PRODUCTS			
AMERON			"VERIFONE", PHONE 800/837-4366; 402-232-7800
"BREWER-TICHENER" (COOPER TOOLS), PHONE 919/362-7510			"WATCO", PHONE
"BRODERICK & BASCOM", PHONE 908/964-4477			"BELDEN", PHONE 800/235-3361
"COVERT" (COOPER TOOLS), PHONE 919/362-7510			"RED JACKET", PHONE 800/777-2480; 913/831-5700
"CROSBY", PHONE 918/834-4611			"VEEDER-ROOT", PHONE 860/651-2753; 860/651-2700
"FFS", FRANKLIN FUELING SYSTEMS, PHONE 608/838-8786			"WATTS", PHONE 603/934-1107
"MORRISON BROS. CO.", PHONE 800/553-4840			"OPW", PHONE 800/422-2525
"OPW", PHONE 800/422-2525			"BIO" PHONE 217/224-9725 EXT 102

NOTE:

CEFCO WILL PROVIDE LIST OF FUEL SYSTEMS MATERIALS BEING PROVIDED.

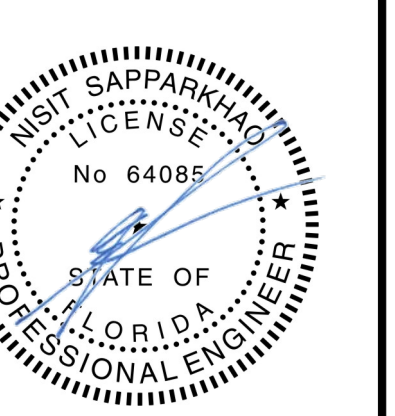
Date	Revision/Issue
05/31/2024	1



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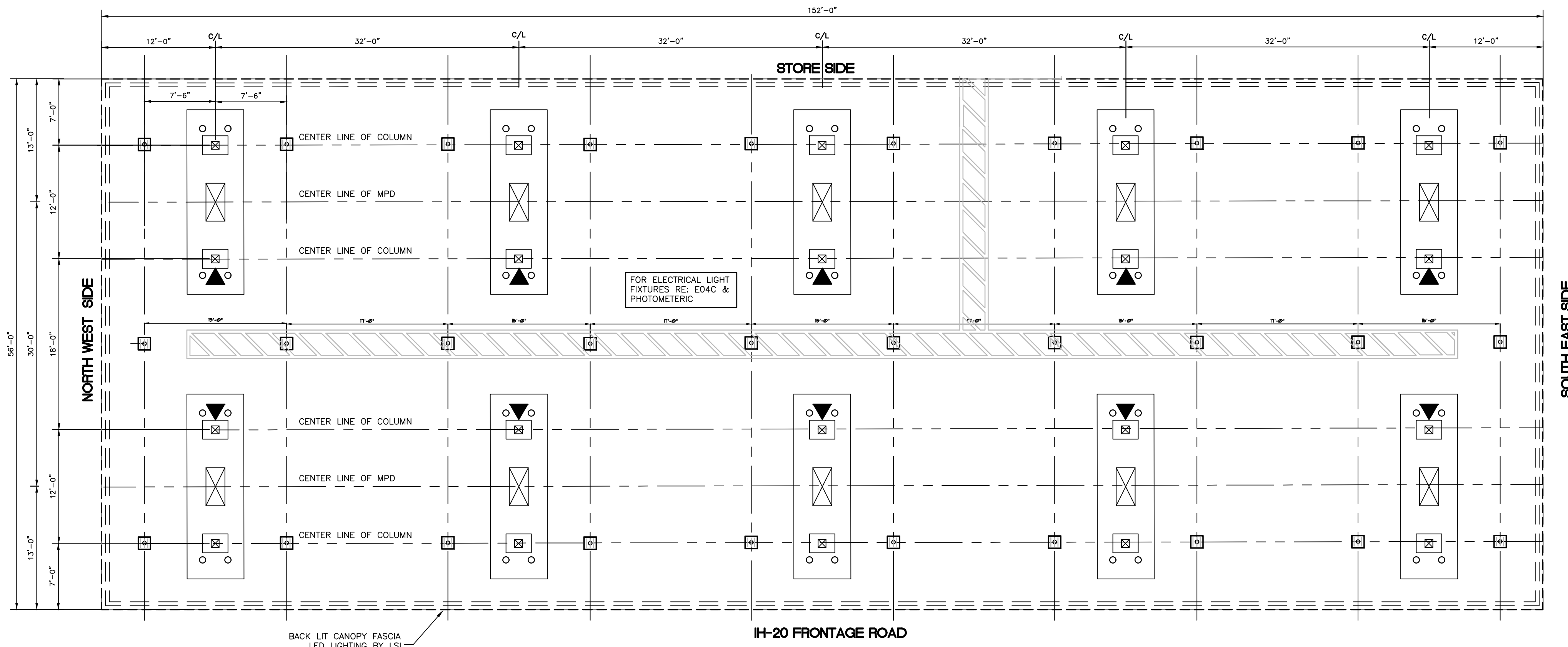
NISIT SAPPARKHAO, P.E. FL REG. NO. 64085



Date

Project Name and Address: CEFCO #437 - BETHEL HIGHWAY 80 AND OLD BETHEL ROAD CRESTVIEW, FLORIDA
Sheet Title: FUEL EQUIPMENT SCHEDULE

Project No. 170-101.00
Drawn By: FP6
Reviewed By:

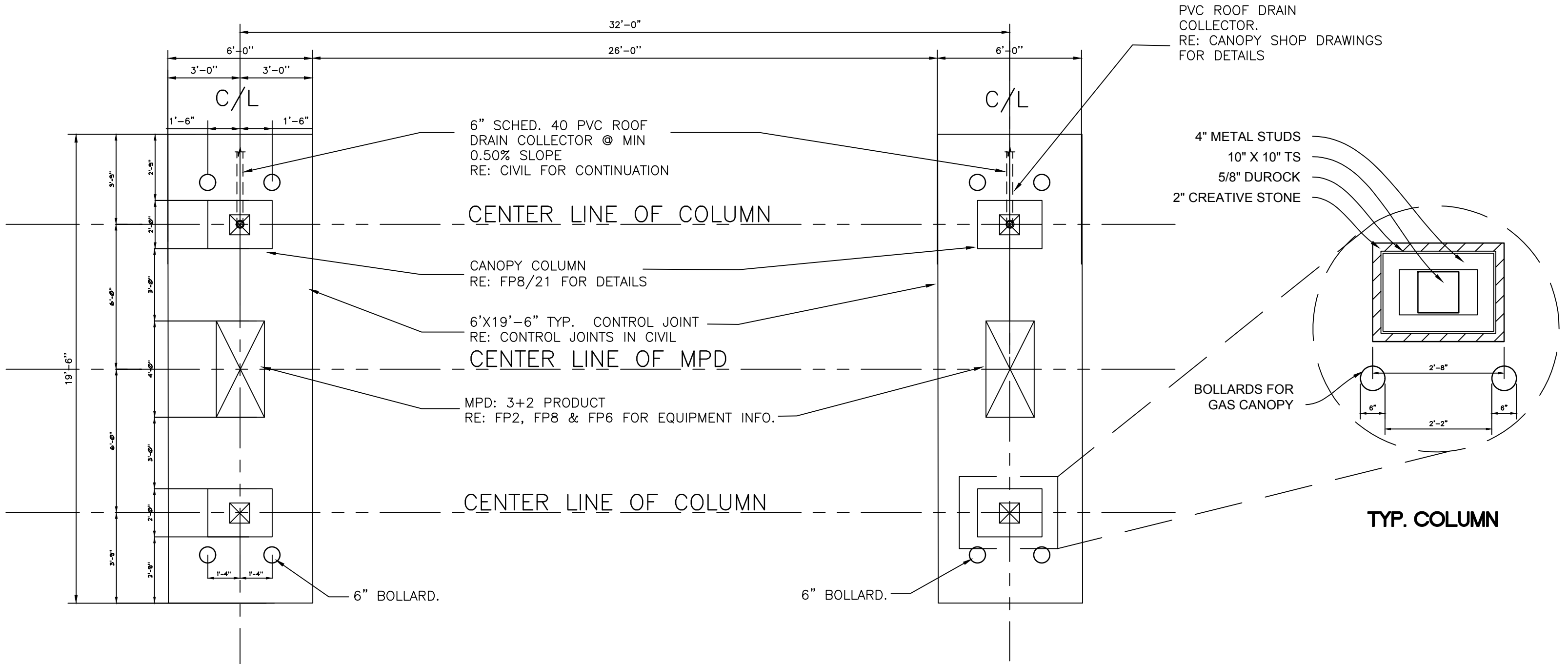


23 PLAN - CANOPY
SCALE: 1/8" = 1'-0"
RE: SITE PLAN

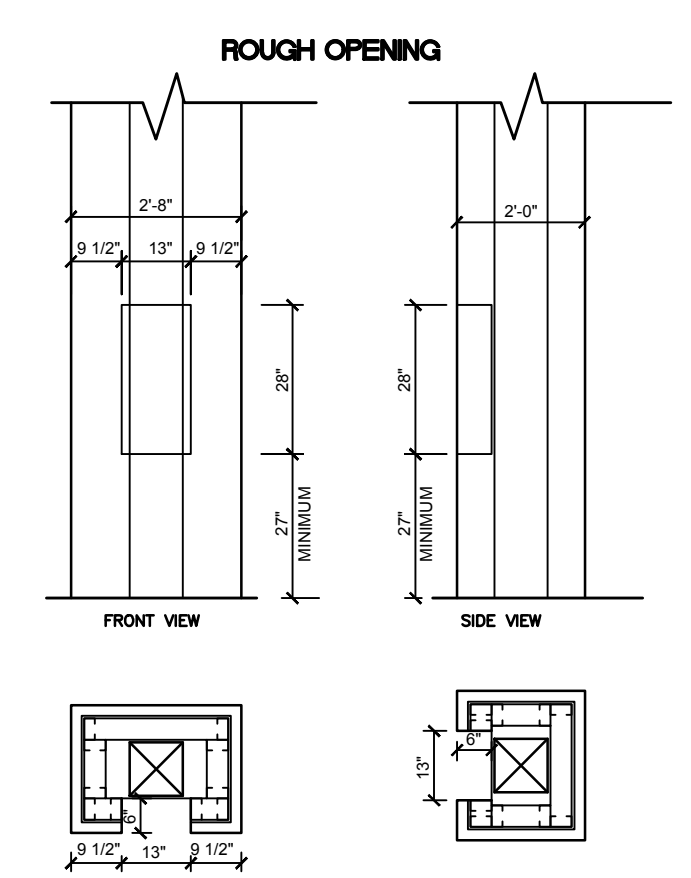
LUMINAIRE SCHEDULE					
SYMBOL	QTY	LIGHT TYPE	LABEL	ARRANGEMENT	DESCRIPTION
☐	30	Canopy Light	LEGACY LED	SINGLE	CRUS-SC-LED-VHO-CW-UE
—	—	LED Canopy Fascia	3-ROWS LED LIGHTING		
FIRE EXTINGUISHER AND CABINET:					
▲	10	CABINET BY LARSEN'S MANUFACTURING #2712-RK-FULL PANEL-AL SQUARE TRIM SEMI-RECESSED RED VERTICAL LETTERING. CABINET AND FIRE EXTINGUISHER SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR. (ABC DRY CHEMICAL - 5 LB.)			

RE: E04 FOR ELECTRICAL LIGHTING

NOTES:
CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR OWNER APPROVAL BEFORE COMMENCEMENT OF WORK. VERIFY WITH OWNER ALL ITEMS WHICH ARE APPLICABLE.



21 PLAN - FUEL PUMP DISPENSER
SCALE: N.T.S.
RE: SITE PLAN

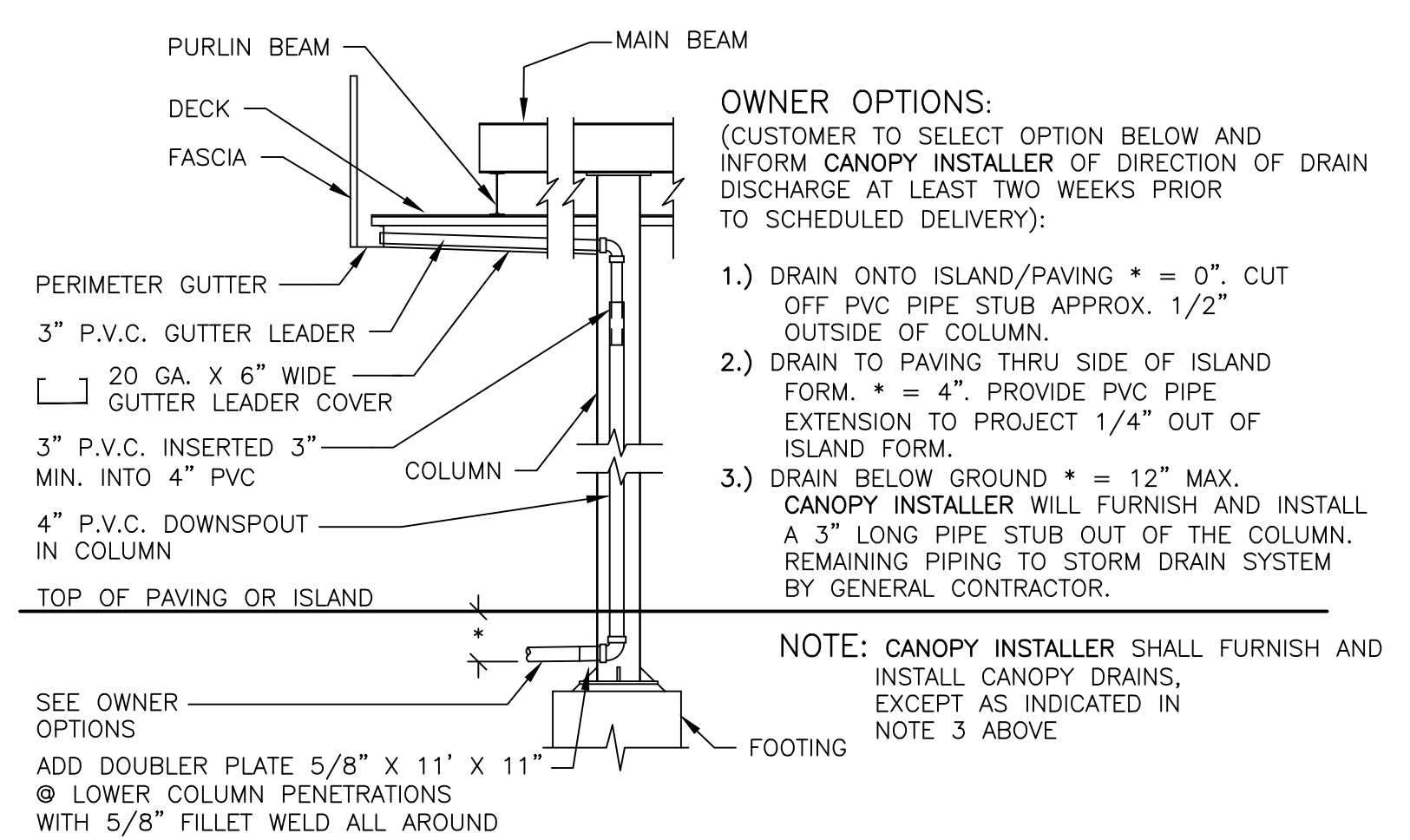


3 TYPICAL FIRE EXTINGUISHER DETAIL
SCALE: N.T.S.
RE: FIRE EXTINGUISHER AND CABINET CHART FP7 FOR MORE INFORMATION.

NOTE:
CANOPY ON THIS DOCUMENT ARE FOR ILLUSTRATION ONLY. VERIFY WITH SITE PLAN FOR THE LOCATION OF PRODUCT DISPENSER UNITS.
RE: FP1/SITE PLAN FOR THE EXACT LOCATION.

GAS PUMP SIGNAGE:
*MADE OF .063 HEAVY-DUTY ALUMINUM.
*PRINTED ON TWO SIDES.
*ROUNDED CORNERS.
*1" BEND WITH INDUSTRIAL STRENGTH DOUBLE SIDED TAPE.
*PREDRILLED MOUNTING HOLES FOR ADDITIONAL SECURITY.

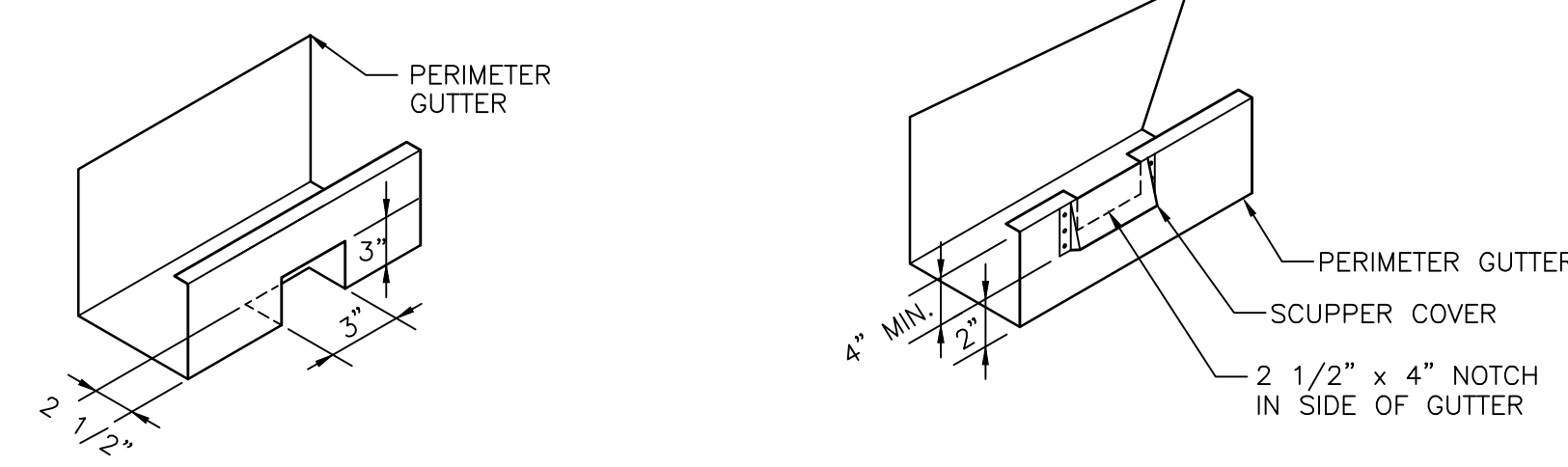
RE: CIVIL FOR DRAINAGE SPECIFICATIONS.



11 INTERNAL DRAIN DETAIL
SCALE: N.T.S.
RE: SITE PLAN

SCOPE OF WORK / CONTRACTORS RESPONSIBILITIES:

- CANOPY STRUCTURAL SYSTEM AND FASCIA SUPPLIED BY OWNER. INSTALLED BY GENERAL CONTRACTOR.
- FASCIA SYSTEM PROVIDED BY OWNER AND INSTALLED BY GENERAL CONTRACTOR. FINAL ELECTRICAL CONNECTIONS BY GENERAL CONTRACTOR.
- LIGHTS PROVIDED BY OWNER AND INSTALLED BY GENERAL CONTRACTOR. FINAL ELECTRICAL CONNECTIONS BY GENERAL CONTRACTOR.
- CANOPY COLUMN FRAMING SYSTEM AND STONE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.



9 LEADER CONNECTION DETAIL
SCALE: N.T.S.
RE: CANOPY SHOP DRAWINGS

5 OVERFLOW SCUPPER DETAIL
SCALE: N.T.S.
RE: CANOPY SHOP DRAWINGS

CONSISTENT BRANDING
ALL DISPENSERS THAT DELIVER CEFCO-BRANDED FUELS IN THE US SHOULD HAVE VALANCES INSTALLED. DISPENSER VALANCES ARE AVAILABLE TO FIT NEARLY ALL DISPENSERS IN THE CEFCO NETWORK.

CUSTOMER EXPERIENCE
PUMP ISLANDS ARE DESIGNED TO ACCOMMODATE ALL DISPENSER TYPES AND A VARIETY OF FACILITIES TO MAKE REFUELING EASY AND CONVENIENT. THEY ALSO ENABLE SAFE, EFFICIENT AND SIMPLE REFUELING. THE POSITIONING OF RV EVOLUTION ELEMENTS IS ESSENTIAL TO CREATE A CONSISTENT CUSTOMER EXPERIENCE AT EVERY SITE.

DISPENSER VALANCE
ALL DISPENSERS THAT DELIVER CEFCO-BRANDED FUELS IN THE US SHOULD HAVE VALANCES INSTALLED. DISPENSER VALANCES ARE AVAILABLE TO FIT NEARLY ALL DISPENSERS IN THE CEFCO NETWORK.

DECAL APPLICATION & ORIENTATION
THE VALANCE DECAL IS TO CEFCO STANDARDS.

POSITIONING
PUMP NUMBERS SHOULD BE ARRANGED TO PROVIDE MAXIMUM VISIBILITY WHEN VIEWED FROM THE STORE. THIS EXAMPLE ILLUSTRATES PUMP NUMBER POSITIONING AT SITES WHERE THE PUMP ISLANDS ARE PERPENDICULAR TO THE STOREFRONT. DIFFERENT SITE LAYOUTS WILL HAVE AN IMPACT ON THEIR EFFECTIVENESS, AND MAY REQUIRE SOME VARIATIONS IN PUMP NUMBER PLACEMENT.

NUMBERING
WHEN ALLOCATING NUMBERS TO PUMPS, START NEAREST THE MAIN SITE ENTRANCE.

PUMP LIVERY
THE OBJECTIVE OF THE PUMP LIVERY IS TO ENSURE THAT ALL FUEL DISPENSERS AT ALL RVI SITES IN ALL NETWORKS, REGARDLESS OF SHAPE OR FORM, ARE CLEARLY IDENTIFIED AS CEFCO FUEL DISPENSERS.

EXCLUSIONS
THE DISPENSER MAY NOT BE USED FOR DISPLAYING ANY FORM OF PROMOTIONAL SIGNS OR GRAPHICS OTHER THAN APPROVED ON-SITE CEFCO SERVICES, PRODUCTS AND PROMOTIONS.

ALLOWANCES
AT LEGACY LOCATIONS, DISPENSERS WITH STAINLESS STEEL END PANELS ARE PERMITTED IF ALL THE DISPENSERS AT THE SITE ARE CLAD WITH STAINLESS STEEL END PANELS. BLACK BEZEL AREAS (FACES) ON EXISTING DISPENSERS ARE ALLOWED TO REMAIN UNTIL REPLACED. HOWEVER, DISPENSERS WITH ANY OTHER FACE COLOR, OTHER THAN WHITE OR BLACK) MUST BE RETROFITTED WITH CEFCO FACES.

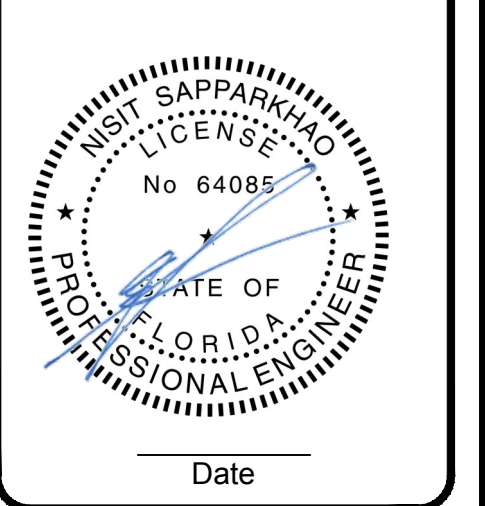
LABEL APPLICATION
PRODUCT LABELS VARY IN SIZE AND SHAPE ACCORDING TO THE DISPENSER TO WHICH THEY ARE BEING APPLIED. GENERALLY, PRODUCT NAMES SHOULD CENTER OVER THE PUMP ACTIVATOR, AND ALL PRODUCT NAMES SHOULD ALIGN TO THE SAME BASELINE. ON ANY DISPENSER, ALL PRODUCT NAMES MUST BE DISPLAYED IN THE SAME SIZE FONTS.

COLOR CODING
FUEL DISPENSER NOZZLES SHOULD BE COLORCODED ACCORDING TO FUEL TYPE:
- GASOLINE: BLACK NOZZLE BOOT AND SPLASH GUARD
- DIESEL: GREEN NOZZLE BOOT AND SPLASH GUARD
- ETHANOL: BLACK NOZZLE BOOT AND SPLASH GUARD
ALL PRODUCT HOSES ARE NORMALLY BLACK, BUT FOR EMPHASIS DIESEL HOSES MAY BE GREEN.

Revision	Date
1	05/31/2024

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NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085



Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

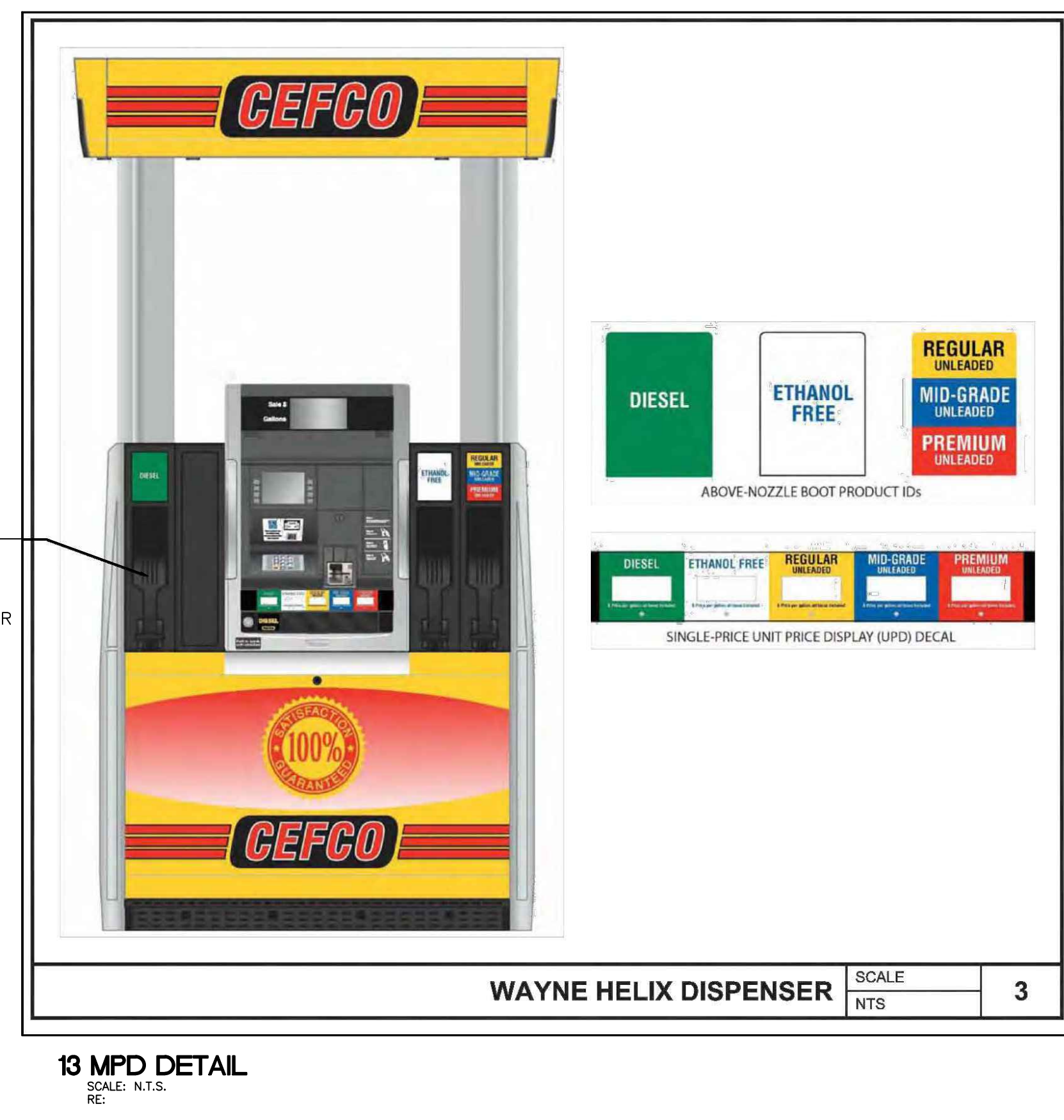
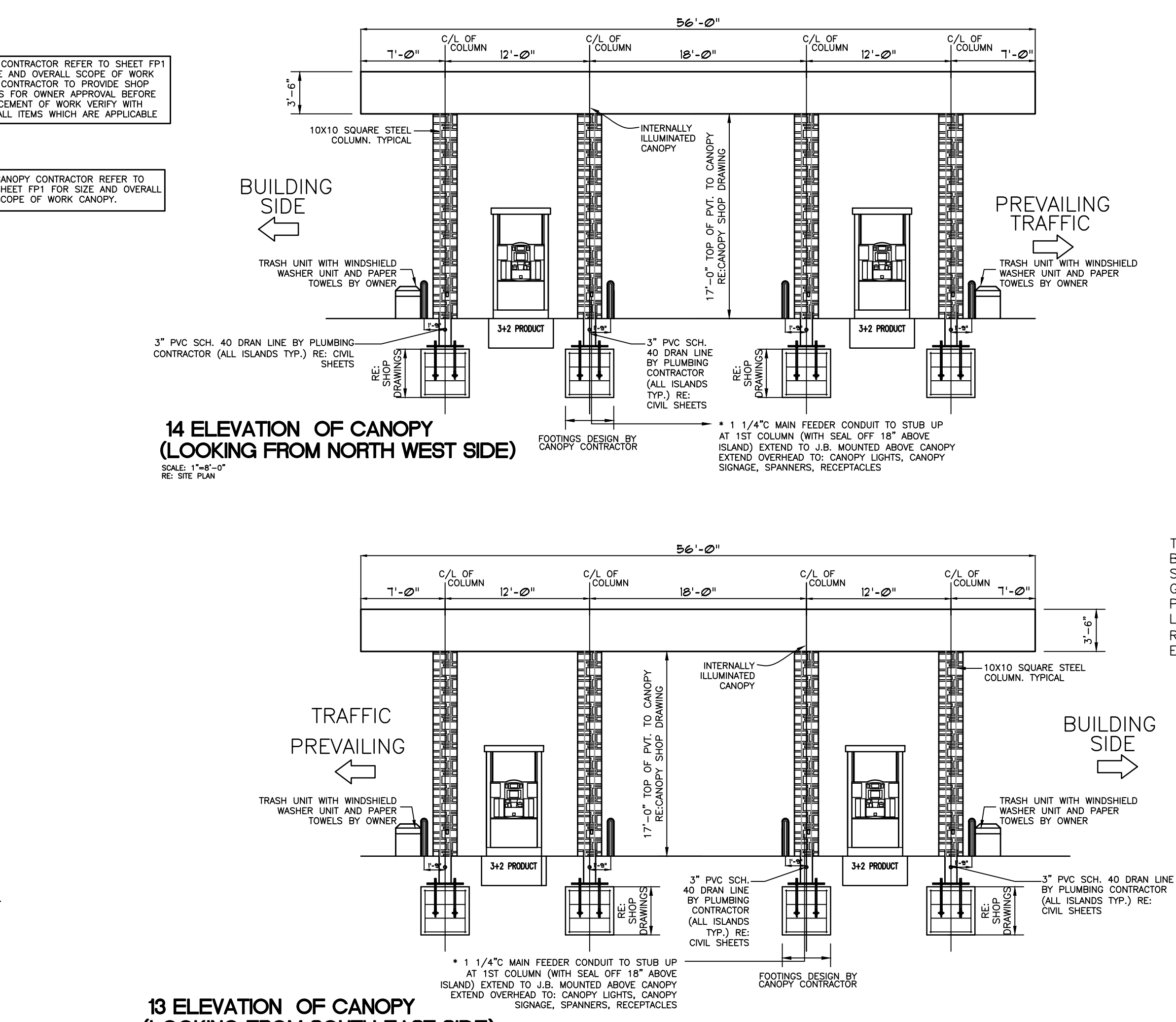
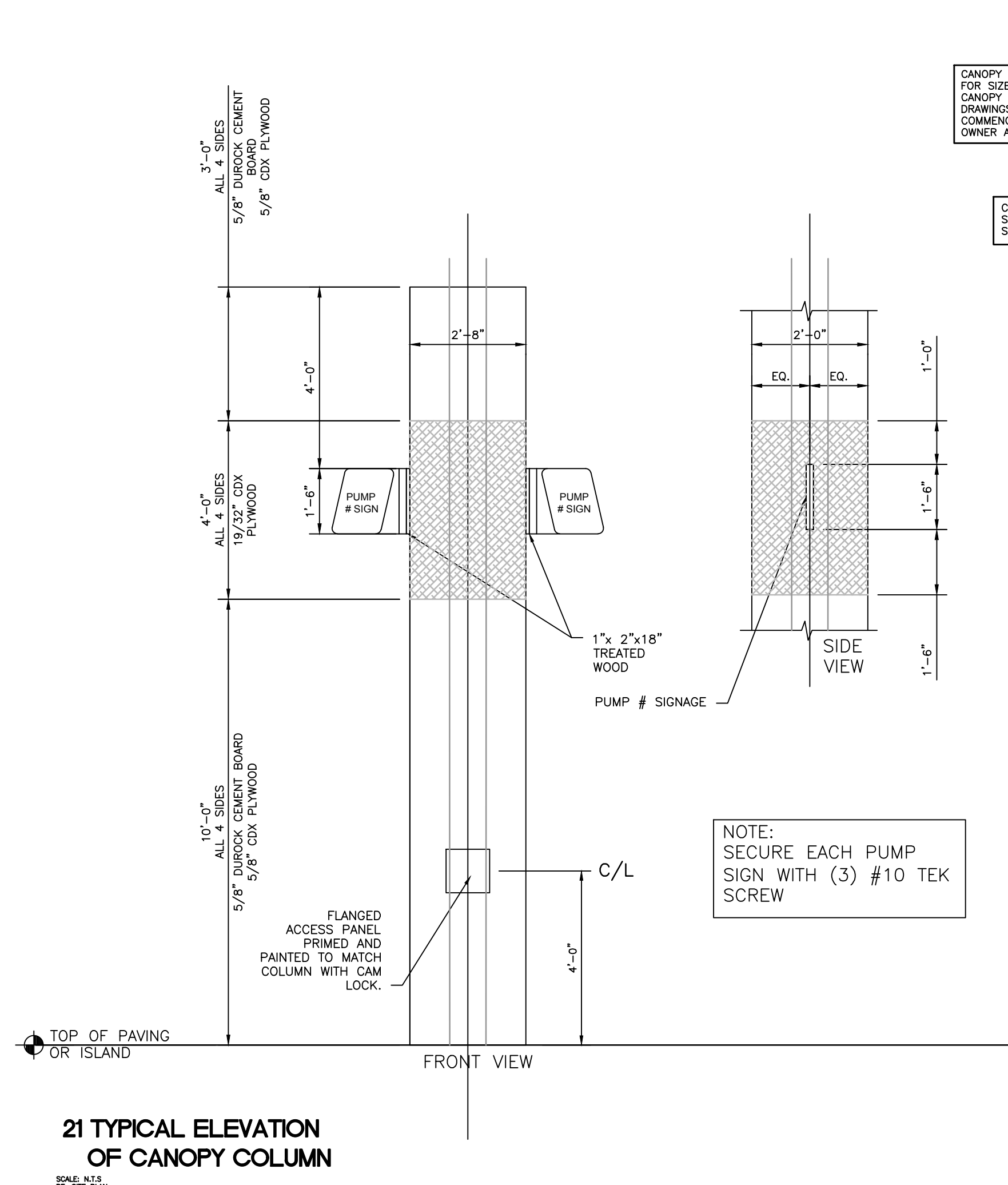
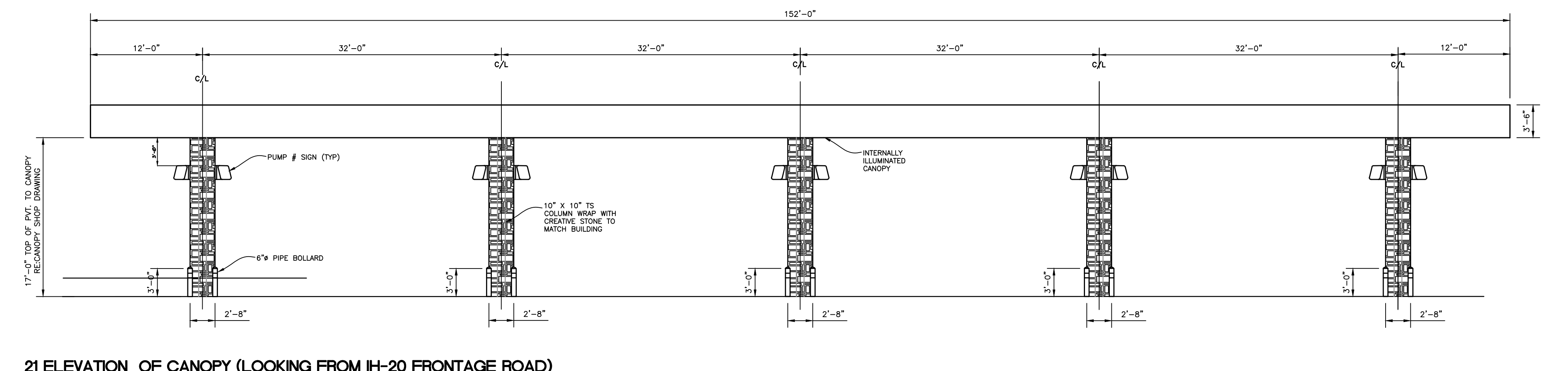
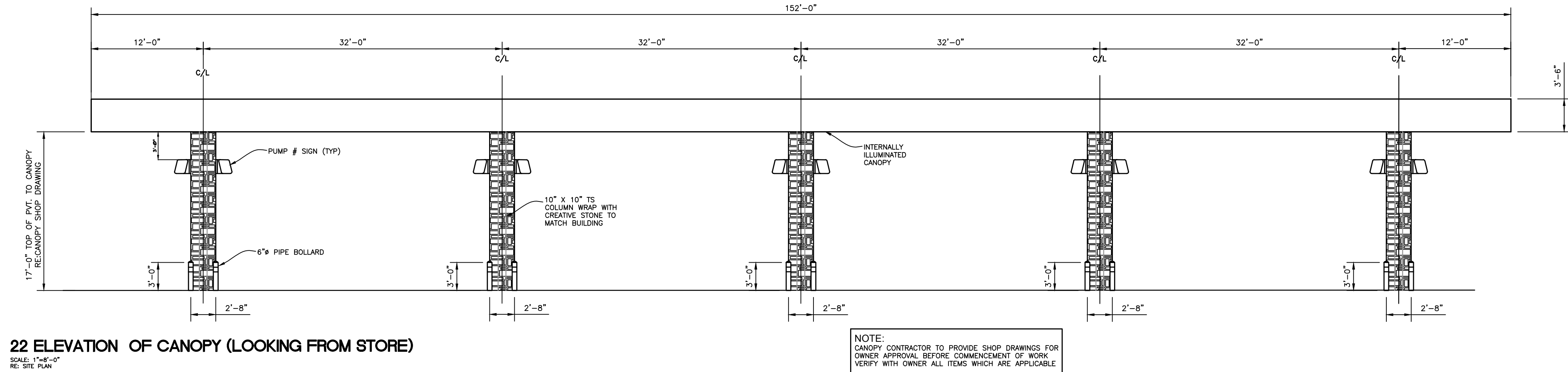
Sheet Title
FUEL PRODUCT AND ISLAND FLOOR PLAN AND ISLAND DETAILS

Project No.
170-101.00

Sheet
FP7

Drawn By

Reviewed By



NOTE - MINIMUM FUEL CANOPY DESIGN CRITERIA:
WIND LOAD 154 MPH W/ 3 SEC. GUST OF 154.0 MPH

308.1 GENERAL REACH RANGES SHALL COMPLY WITH 308.

NOTE: VEHICLE PROTECTION: IN COMPLIANCE WITH SECTIONS 312.2 AND 2306.7.3

DISPENSER HOSE: HOSES SHALL BE A MAXIMUM OF 18 FEET LENGTH PER SECTION 2206.7.5

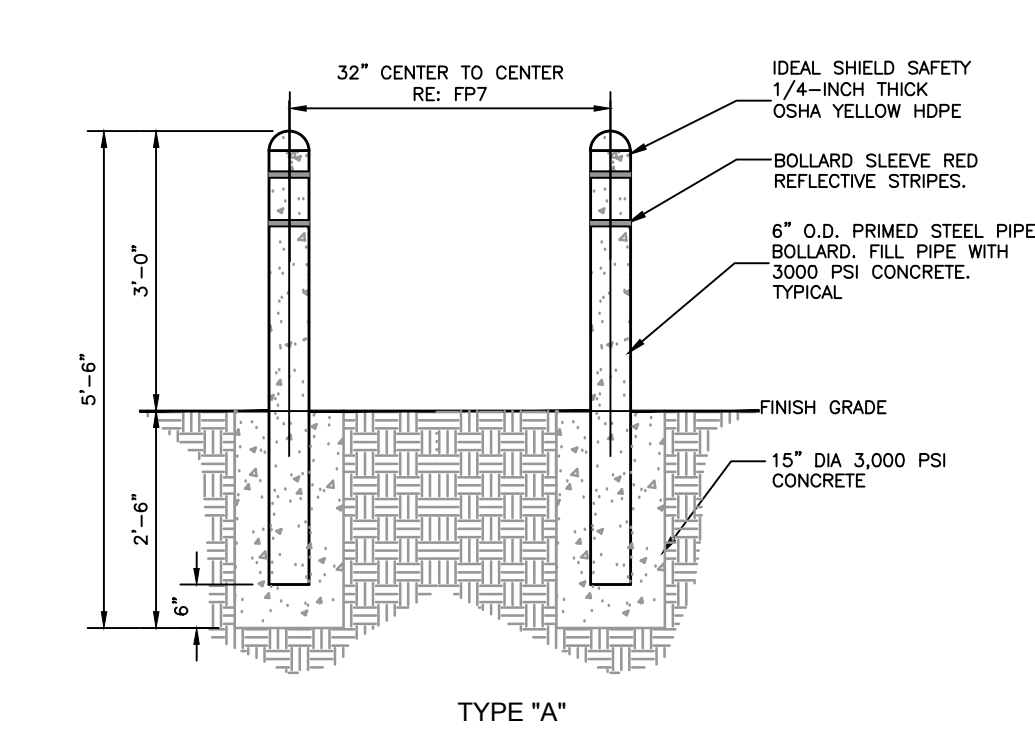
BREAKAWAY DEVICES: TO COMPLY WITH UL LISTED BREAKAWAY DEVICE FOR EACH HOSE PER SECTION 2206.7.5.1

FIRE EXTINGUISHERS: TO COMPLY WITH SECTION 205. REFER TO SHEET FP7 FOR A CABINET DETAILS AND SPECIFICATIONS.

WARNING SIGNS: TO COMPLY WITH PER SECTION 2205.6

NOTE: WARNING SIGNS IN ACCORDANCE WITH FBC SHALL BE POSTED. (or latest issue)

- NO SMOKING
- SHUT OFF MOTOR
- DISCHARGE YOUR STATIC ELECTRICITY BEFORE FUELING BY TOUCHING A METAL SURFACE AWAY FROM NOZZLE. TO PREVENT STATIC CHARGE, DO NOT REENTER YOUR VEHICLE WHILE GASOLINE IS PUMPING.
- IF A FIRE STARTS, DO NOT REMOVE NOZZLE - BACK AWAY IMMEDIATELY
- IT IS UNLAWFUL AND GENEROUS TO DISPENSE GASOLINE INTO UNAPPROVED CONTAINERS.
- NO FILLING OF PORTABLE CONTAINERS IN OR ON A MOTOR VEHICLE. PLACE CONTAINER ON GROUND BEFORE FILLING.



No.	Revision/Issue	Date
1	ISSUE FOR PERMIT	05/31/2024

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FL REG. NO. 64085

Professional Engineer License Seal: No 64085, State of Florida, Professional Engineer

Date

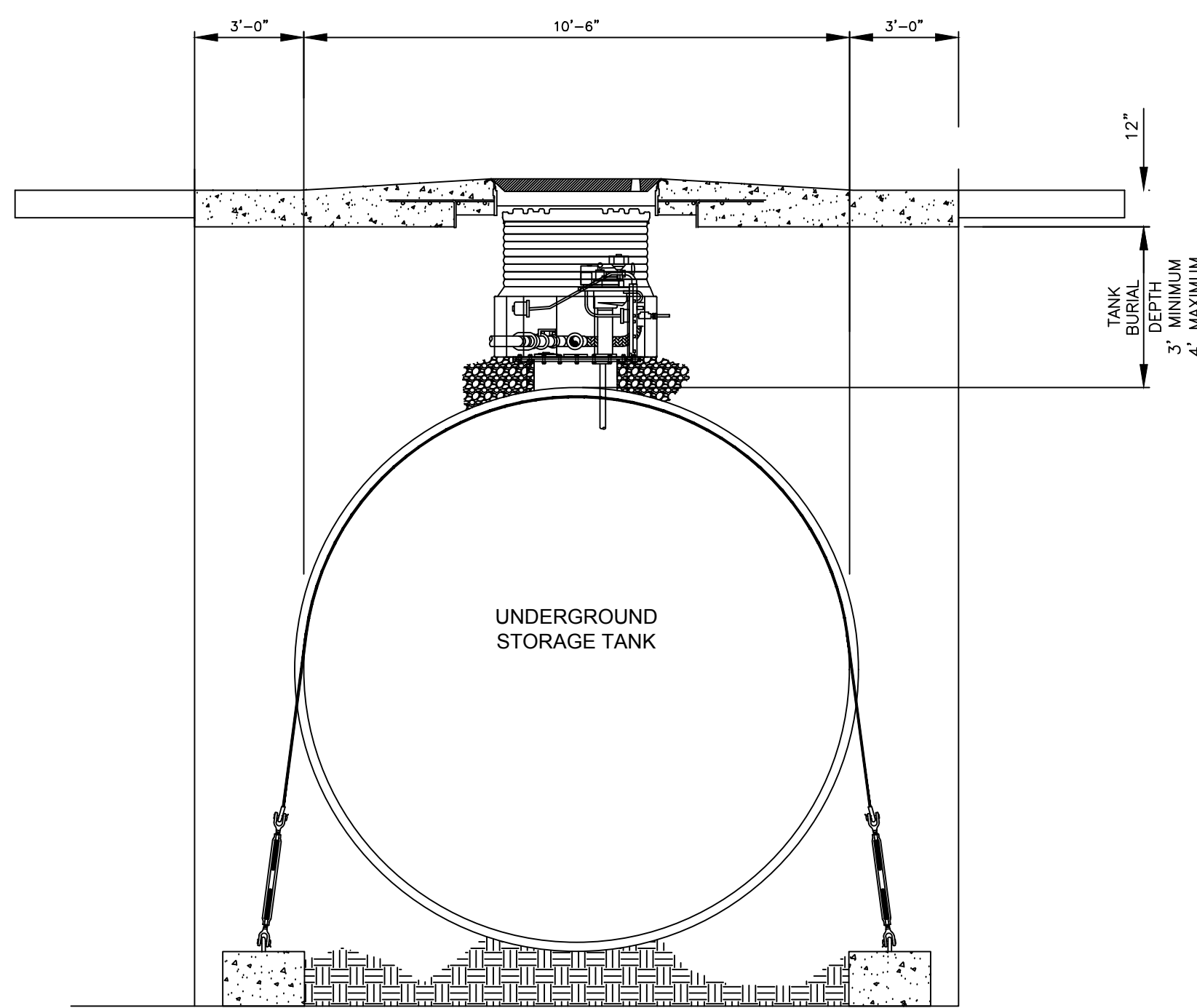
Project Name and Address: **CEFCO #437 - BETHEL**, HIGHWAY 90 AND OLD BETHEL ROAD, CRESTVIEW, FLORIDA

Sheet Title: **FUEL PRODUCT CANOPY ELEVATIONS**

Project No: 170-101.00, Sheet: FP8

Drawn By: [Blank]

Reviewed By: [Blank]



TANK DIMENSIONS NOTE:

SOIL BORINGS SHALL BE REVIEWED FOR EACH INSTALLATION. CONTRACTORS SHALL CONSIDER THE USE OF 6" OR 10.5" DIAMETER TANKS AND/OR COMPARTMENTALIZED TANKS AND USE THEM WHENEVER FINANCIALLY JUSTIFIABLE. ALL TANK SIZE CHANGES SHALL BE APPROVED BY THE OWNER.

TANK BACKFILL AND FILTER FABRIC NOTE:

USE MANUFACTURER APPROVED FILTER FABRIC TO LINE THE SIDES AND BOTTOM OF THE TANK HOLE EXCAVATION AT ANY SITE WHERE POOR SOIL CONDITIONS OR FLUCTUATING WATER TABLES ARE PRESENT (I.E. LOOSE SAND, TIDAL OR RAPIDLY CHANGING WATER TABLES, SILTY SOIL WITH WATER CONDITIONS, LOW STABILITY SOIL WITH LESS THAN 250 LBS/SQ. FT. COHESION OR AN ULTIMATE BEARING CAPACITY OF LESS THAN 500 LBS/SQ.FT. FOLLOW TANK AND FILTER FABRIC MANUFACTURER'S INSTALLATION INSTRUCTIONS.

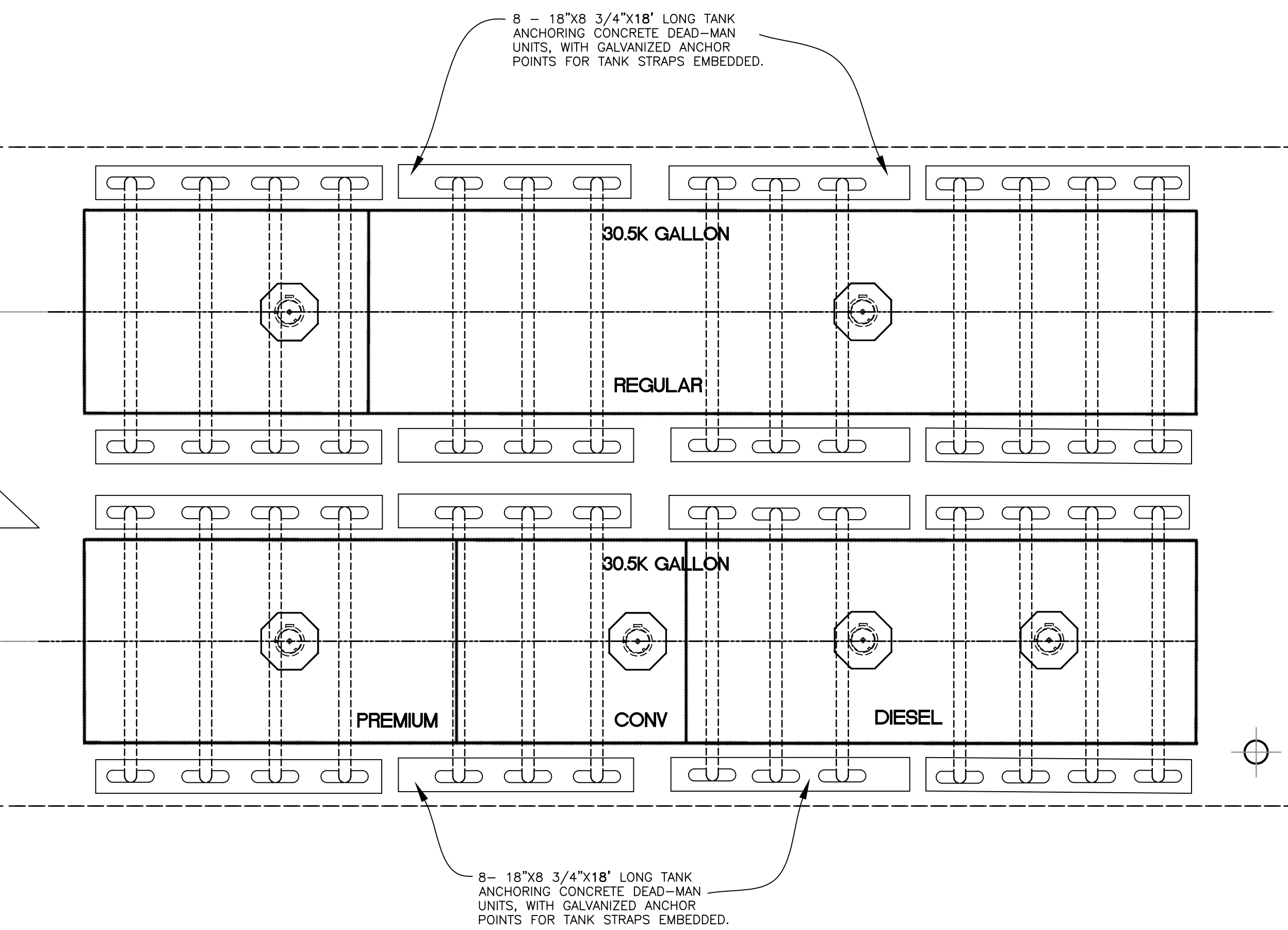
TANK ANCHORING NOTE:

INSTALL TWO DEADMAN ANCHORS PER TANK PER TANK MANUFACTURER'S INSTRUCTIONS. TANK SLAB 8" MIN. THICKNESS

NOTE:

TANK BURIAL DEPTH 36" BELOW CONCRETE AND NO DEEPER THAN 48" UNLESS APPROVED IN WRITING BY THE OWNER.

23 TANK BACKFILL AND DEADMAN DETAILS
NOT TO SCALE
RE:



21 FUEL TANK ACHORAGE LAYOUT
NOT TO SCALE
RE: FP3, TFP3, DEF3, FP4, TFP4 AND DEF4 FOR TANK DETAILS

DISPENSER SUMP FITTING INSTALLATION

GENERAL:

1. UPP BULKHEAD FITTINGS ARE ELECTRO-FUSED TO THE POLYETHYLENE SUMP WALL.
2. POLY OR FIBERGLASS SUMP UNITS ARE TO BE SEALED PER MANUFACTURER INSTALLATION INSTRUCTIONS. EACH SUMP SHALL BE FILLED WITH WATER FOR 24 HOURS BEFORE BACKFILL TO VERIFY WATER TIGHTNESS.

INSTALLATION

1. LAY OUT THE BULKHEAD FITTING LOCATIONS ACCORDING TO THE APPLICABLE PIPING DIAGRAM FOR THE SITE. IN ORDER THAT THE REQUIRED SCOPE BACK TO THE TANK CAN BE ACCOMMODATED. IT IS RECOMMENDED THAT THE CALCULATIONS BE MADE AFTER THE TANKS HAVE BEEN SET TO HEIGHT. THERE IS NO NEED TO ACCOUNT FOR SLOPE WITHIN THE SUMPS THEMSELVES.
2. MARK A CENTERLINE ON THE SUMP FACE SUCH THAT FITTING FLANGES ALL NO INTERFERE. POSITION THE BULKHEAD FITTING SO THAT ITS EDGE WILL BE AT LEAST ONE INCH FROM ANY SUMP EDGE. NOW MARK VERTICAL CENTERLINE INTERSECTION
3. USING APPROPRIATE DIAMETER HOLE, SAW CUT THE HOLE FOR THE BULKHEAD FITTING USING A SHARP KNIFE, TRIM ANY BURRS FROM THE RESULTING WORK PIECE.
4. USING TOOL SKA, DE-GLAZE SUMP IN CONTACT AREA OF FITTING PIPE. WIPE DE-GLAZED AREA USING CLOTH MOISTENED WITH ACETONE.
5. ROUGHEN CONTACT AREA OF BULKHEAD FITTING USING EMERY CLOTH, NOT STEEL WOOL OR SAND PAPER. WIPE PREPARED AREA WITH ACETONE CLOTH.
6. POSITION BULKHEAD FITTING AND CLAMP TO SUMP WALL USING TOOL 305.
7. AUTO FORECOURT ONLY, ALL UPP PIPING SHALL BE 3/3 FT STICKS THAT SHOULD BE USED BETWEEN DISPENSER POINTS. THESE WILL HAVE TO BE SHORTENED, AS NEEDED.

ENTRY BOOT WELD

1. WELD FITTING TO SUMP USING ELECTRO FUSION WELDER PER MANUFACTURER'S INSTRUCTIONS. MARK TIME OF WELD COMPLETION ON A SUMP ABOVE WELDING LEADS. DO NOT REMOVE CLAMP UNTIL TWENTY MINUTES HAVE PASSED.

PIPE PREPARATION AND JOINT MAKING:

1. MEASURE SUMP-TO-SUMP CENTERLINE DISTANCE, ACCOUNTING FOR NECESSARY DETOURS AROUND INTERVENING OBJECTS, AND OTHER PIPES.
2. USING THE PIPES CUTTING TOOL, P. CUT. MAKE A BURR-FREE, AND SQUARE CUT ON THE PIPE.

PIPE CUTS:

3. IF USING COAXIAL PIPE, USE CUTTING TOOL TO PREPARE CONTAINMENT SLEEVE. CUT SLEEVE BACK END OF THE PRIMARY PIPE.
4. DE-GLAZE SECONDARY PIPE SKIN IN PREPARATION FOR WELDING.

PIPE SCRAPERS:

AS AN ALTERNATE, A RAZOR EDGED SCRAPER, SCR. SKA CAN BE USED TO LONGITUDINALLY ROUGHEN THE SKIN OF THE PRIMARY PIPE, AND HOWEVER, CARE MUST BE TAKEN TO LEAVE NO UNSCRAPED AREAS.

5. WIPE THE MATING SURFACES USING AN ACETONE MOISTENED LINT FREE CLOTH.
6. POSITION FITTINGS ON THE PIPE, INSERT PIPE THROUGH BULKHEAD FITTING. POSITION TEST FITTING.
7. INSERT THE PREPARED PIPE END(S) IN TO THE FITTING TO THE SPECIFIED DEPTH. CLAMP PIPES TOGETHER USING UPP TOOL CLAM(S) OR CLAMP (A) AS APPROPRIATED. IF COUPLING OCCURS IN CURVED RUN, LAY OUT JOINT STRAIGHT, WELD. ALLOW TO COOL, THEN BEND INTO POSITION. FAILURE TO PROPERLY MAINTAIN JOINT GEOMETRY FOR AT LEAST 20 MINUTES AFTER WELDING IS COMPLETE WILL RESULT IN AN UNSATISFACTORY JOINT.
8. COMPLETE THE JOINT WELDING AS SPECIFIED BY UPP. USING CHINA MARKER, NOTE TIME OF COMPLETION NEXT TO WELD. DO NOT REMOVE CLAMPS BEFORE TWENTY (20) MINUTES HAVE PASSES BEYOND THIS TIME.
9. RECORD BATCH NUMBERS FROM PIPING MARKING INTO UPP INSTALLATION CHECKLIST.

SPECIFICATIONS

NOTE:
UNDERGROUND FUEL TANKS ON THIS DOCUMENT ARE FOR ILLUSTRATION ONLY. VERIFY WITH THE OWNER AND MANUFACTURE INSTALLATION GUIDE FOR MORE INFORMATION.

NOTE:
RE: SITE PLAN FOR THE EXACT LOCATION AND SIZE OF UNDERGROUND TANKS.

3.1 TANK HOLD-DOWNS (TIE-DOWNS):

- A. HOLD-DOWN, WHEN SPECIFIED THE HOLD-DOWN LOGS SHALL BE INSTALLED PRIOR TO THE BED MATERIAL.
- B. CAUTION - DO NOT PLACE FRP TANKS ON CONCRETE SLABS, TIMBERS, BEAMS, CRADLES OR GROUT THE TANKS IN WET CEMENT. THE TANK, WHETHER TIED DOWN OR NOT, MUST NEVER BE LEFT ON THE BED WITHOUT A BACKFILL TO THE TOP OF THE TANK IF THERE IS ANY CHANCE OF WATER, 12" OR MORE ABOVE THE TANK BOTTOM, IN THE HOLE.

3.2 TANK HOLD-DOWN INSTALLATION

- A. GENERAL REQUIREMENTS ANCHOR ALL UNDERGROUND STORAGE TANKS WITH CONCRETE HOLD-DOWNS ("LOGS" OR "DEADMEN") WHEN SPECIFIED IN THE SCOPE OF WORK.
1. TANK BEDDING, BALLASTING AND TANK HOLE BACKFILL PROCEDURE ARE DESCRIBED IN THESE SPECIFICATIONS.
2. THE TANK ANCHORAGE SYSTEM SHOWN ON THE DRAWINGS IS DESIGNED FOR A MAXIMUM LEVEL OF GROUND WATER EQUAL TO THE SUBGRADE LEVEL.

3.3 MATERIALS

- A. CONCRETE HOLD-DOWNS: PRECAST. REINFORCED CONCRETE "LOGS", FURNISHED BY THE TANK MANUFACTURE WITH CHAMFERED EDGES. LENGTH, AS SHOWN ON THE DRAWINGS. 1/2" DIAMETER GALVANIZED STEEL ANCHOR LOOPS ARE TO BE CAST INTO "LOGS" AT LOCATIONS SHOWN. PRECAST MATERIAL SHALL HAVE ACHIEVED ITS ULTIMATE COMPRESSIVE STRENGTH OF 2500 PSI (28 DAYS) PRIOR TO INSTALLATION.
- NOTE: PRECAST CONCRETE FOUNDATION PILES WHICH MEET OR EXCEED ABOVE SPECIFICATIONS ARE ACCEPTABLE.

- B. WIRE ROPE CABLE: HOT-DIP GALVANIZED STEEL WIRE ROPE, MINIMUM 1/2" DIAMETER, BREAKING STRENGTH. 20AK.

- C. HARDWARE: CABLE CLAMPS, CABLE GUIDES, GUARDS, ETC., FURNISHED BY THE TANK MANUFACTURER, SHALL BE HOT-DIP GALVANIZED STEEL.

- D. PROTECTIVE COATING: PRIOR TO BACKFILLING TANKS, APPLY A GENEROUS QUANTITY OF "ASPHALT COATING" BY BRUSH TO ALL EXPOSED STEEL CABLES, LOOPS AND HARDWARE.

- A. PREPARE THE TANK HOLE TO RECEIVE THE HOLD-DOWN "LOGS". INSTALL SHORING (OR SIDE SLOPING) IN ACCORDANCE WITH SECTION 1.3.

- B. PUMP THE WATER OUT OF THE TANK HOLE. KEEP WATER OUT OF THE TANK HOLE UNTIL TANKS HAVE BEEN SET, TIED DOWN, BALLASTED AND BACKFILLED.

- C. INSERT EACH CABLE THROUGH ITS OWN ANCHOR LOOP IN THE "LOG" RESERVING SUFFICIENT CABLE SO THAT BOTH ENDS OF THE CABLE WILL BE KEPT AT THE TOP OF THE TANK HOLE AFTER THE "LOGS" ARE SET. LOWER AND POSITION THE "LOGS" IN THE TANK HOLE KEEPING BOTH ENDS OF THE CABLES AT THE TOP OF THE HOLE. INSTALL THE 12" MINIMUM THICK BEDDING MATERIAL IN TANK HOLE. SMOOTH AND SLOPE PER THE TANK BEDDING INSTRUCTIONS.

- D. PROCEED WITH SETTING THE TANKS BY ADDING BALLAST AS NECESSARY TO SINK AND KEEP DOWN THE TANKS. USE ONLY ENOUGH BALLAST TO HOLD THE TANKS DOWN UNTIL THE BACKFILL IS EVEN WITH THE TOP OF THE TANKS. (REFER TO SECTION 1.1 FOR TANK SETTING REQUIREMENTS.) CAUTION: BALLAST LEVEL IN TANK MUST NEVER EXCEED WATER (OR BACKFILL) LEVEL IN TANK HOLE DURING INSTALLATION.

- E. INSTALL THE CABLE GUARDS, GUIDES, ETC., FURNISHED BY THE TANK MANUFACTURER ON THE DESIGNATED RIBS OF THE TANK. (NOTE: "DESIGNATED RIBS" ARE MARKED BY ARROWS ON THE TANK SURFACE.) CAUTION: DO NOT PLACE STRAPS OR CABLES BETWEEN THE RIBS OF THE TANK.

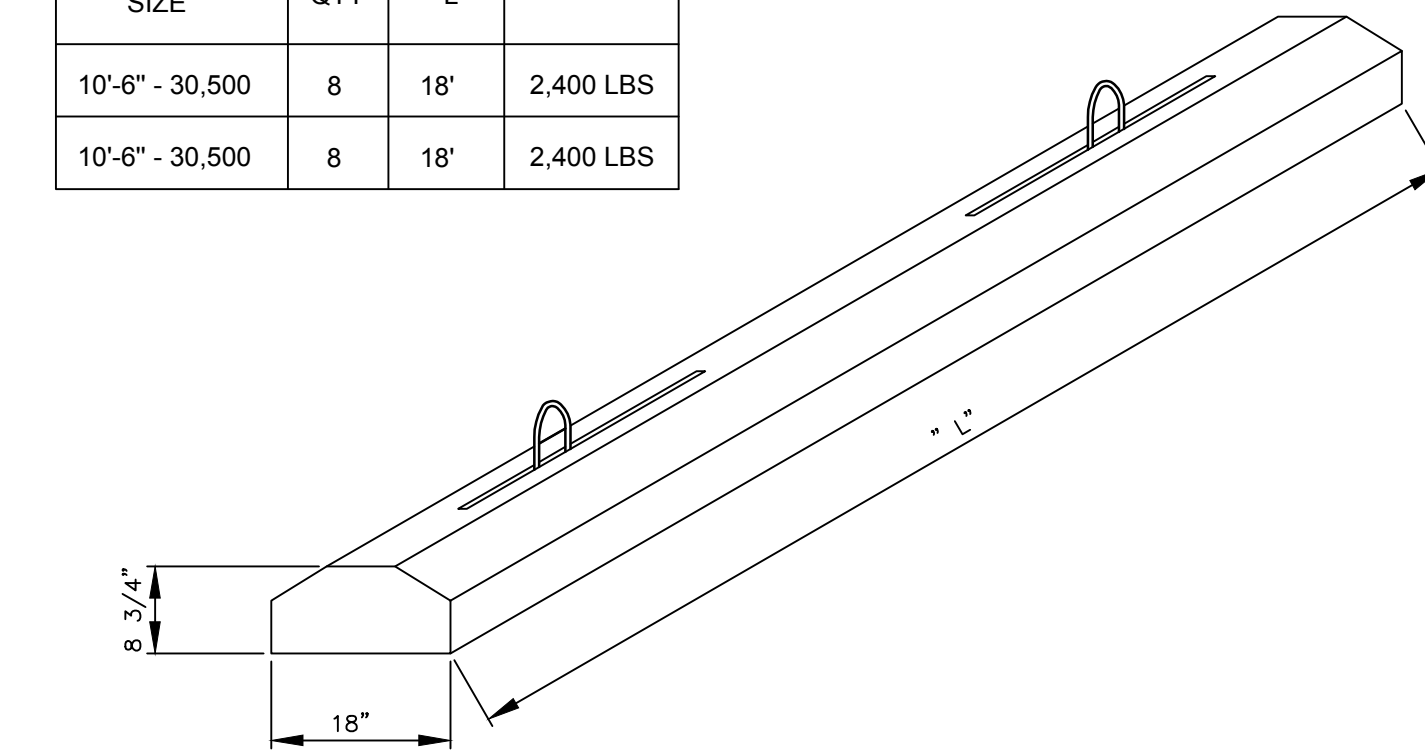
- F. PASS EACH SET OF CABLES (A SET OF CABLES ARE THOSE PASSING THROUGH THE MATCHING, OR OPPOSITE, LOOPS ON THE "LOGS") THROUGH THE GUIDES AND LOOPS AS SHOWN ON THE DRAWING.

1. ONE END OF EACH CABLE IS TO BE CROSSED OVER THE TOP OF THE TANK IN THE RETAINER PORTION OF THE HOLD-DOWN STRAP. USING THREE CABLE CLAMPS ON EACH SET OF CABLES. CLAMP BOTH CABLES TOGETHER ON TOP OF THE TANK. PRIOR TO TIGHTENING THE CLAMPS, TENSION THE CABLES WITH "COME-A-LONGS" SECURED OUTSIDE THE TANK HOLE. USE ENOUGH TENSION TO TIGHTEN THE CABLES BUT NOT TO LIFT THE "LOGS" OR CRUSH THE TANK. CAUTION: ALL SETS OF CABLES ON A TANK MUST BE TIGHTENED EQUALLY TO AVOID TANK DEFORMATION.

2. THE CABLE MUST REST ON THE TOP OF THE HOLD-DOWN STRAP BETWEEN THE GUIDES PROVIDED. REPEAT THIS PROCESS FOR EACH SET OF TIE-DOWN CABLES.

3. AFTER ALL TIE-DOWNS ARE COMPLETED. COMMENCE THE BACKFILL PROCEDURES TO THE TOP OF THE TANKS.

WATCO DEADMAN			
TANK SIZE	QTY	"L"	
10'-6" - 30,500	8	18'	2,400 LBS
10'-6" - 30,500	8	18'	2,400 LBS



WATCO PRECAST DEADMAN

- WATCO DEADMAN ARE ENGINEERED AND DESIGNED TO BE USED WITH WATCO TANKS.

- IN MULTIPLE TANK INSTALLATIONS, EACH TANK REQUIRES ITS OWN SET OF DEADMAN.

- FOR CAST IN PLACE OR DEADMAN CONSTRUCTED OFF SITE. REFER TO WATCO INSTALLATION MANUAL AND OPERATING GUIDELINES FOR PROPER SIZING AND ANCHOR POINT SPECIFICATIONS.

05/31/2024	Date
1	No.
ISSUE FOR PERMIT	Revision/Issue

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Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

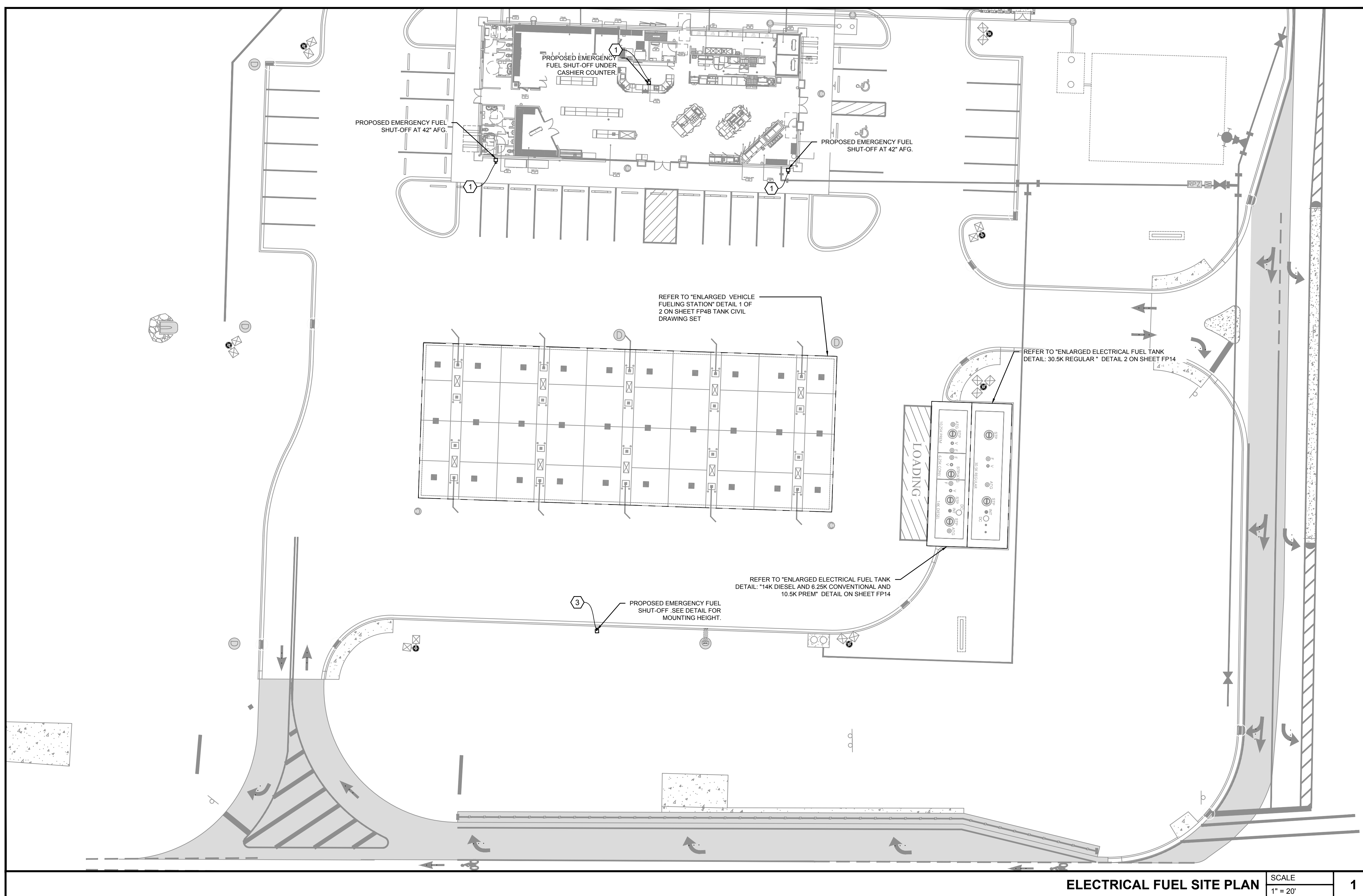
Sheet Title
FUEL PRODUCT TANK ANCHORING/DEADMAN DETAILS

Project No.
170-101.00

Sheet
FP11

Drawn By

Reviewed By



ELECTRICAL FUEL SITE PLAN SCALE 1" = 20' 1

GENERAL NOTES:

- A. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE, CURRENT EDITION OF BUILDING CODE AND APPLICABLE LOCAL ORDINANCES.
- B. VERIFY ALL MECHANICAL EQUIPMENT SIZES PRIOR TO ROUGH-IN.
- C. COORDINATE ALL INSTALLATIONS WITH OTHER TRADES.
- D. ALL ELECTRICAL CONSTRUCTION IN THE AREA OF THE UNDERGROUND STORAGE FUEL TANKS SHALL BE PER NEC ARTICLE 514 AND NFPA 30A.
- E. ALL INTRINSICALLY SAFE(IS) WIRING SHALL BE PER NEC ARTICLE 504 AND ANSI/ISA RP 12.6. IN ADDITION, SPECIAL (IS) WIRING REQUIREMENTS FOR THE UNDERGROUND STORAGE FUEL TANK LEAK SENSORS INCLUDE SEPARATION FROM OTHER WIRING VIA SEPARATE RACEWAYS (INCLUDING TROUGHS). TROUGHS SHALL HAVE A PERMANENTLY ATTACHED METAL DIVIDER THAT IS EQUIPOTENTIALLY BONDED TO EARTH.
- F. FURNISH AND INSTALL POURED SEALING FITTINGS AT BOTH ENDS OF ALL CONDUITS FROM FUEL DISPENSERS AND UNDERGROUND FUEL STORAGE TANKS.
- G. REFERENCE MANUFACTURER INSTALLATION MANUALS FOR UNDERGROUND FUEL STORAGE TANK EQUIPMENT WIRING INTERCONNECTIONS.
- H. ALL POWER CONDUCTORS SHALL BE STRANDED WITH DUAL RATED THHN/THWN INSULATION.
- I. INTERMEDIATE METAL CONDUIT(IMT) SHALL NOT BE USED.
- J. HOMERUN CONDUITS TO DISPENSERS AND TANKS TO BE RIGID METAL HOT DIPPED GALVANIZED CONDUIT AND SCHEDULE 40 PVC PER NEC ARTICLE 514.8, EXCEPTION #2.
- K. ALL CONDUIT ROUTED BETWEEN TANK SUMPS SHALL BE RIGID METAL HOT DIPPED GALVANIZED CONDUIT.
- L. PENETRATE SUBMERSIBLE TURBINE PUMP(STP) WITH ONLY (1) VEEDER-ROOT CONDUIT.
- M. PROVIDE 'EYS' SEALING FITTINGS WHERE CONDUITS ENTER OR LEAVE ANY HAZARDOUS CLASSIFIED AREA.
- N. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL POWER AND INTRINSICALLY SAFE CONDUITS.
- O. REFER TO BUILDING ELECTRICAL DRAWINGS FOR PANEL SCHEDULES.
- P. THE TERM PROVIDE MEANS THAT THE CONTRACTOR WILL 'FURNISH' AND 'INSTALL' ITEM.

KEYED NOTES:

- ① C-STORE EFSO PUSHBUTTON STATION: PROVIDE SIGNAGE AND PUSHBUTTON PER DETAIL 3 ON SHEET T10.0.
- ② CASHIER EFSO PUSHBUTTON STATION: PROVIDE SIGNAGE AND PUSHBUTTONS FOR EMERGENCY OFF AND RESET.
- ③ REMOTE EFSO PUSHBUTTON STATION: PROVIDE SIGNAGE AND PUSHBUTTON PER DETAIL 5 ON SHEET T10.0.

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Date

STANDARD CEFCO FUEL WIRE SIZES

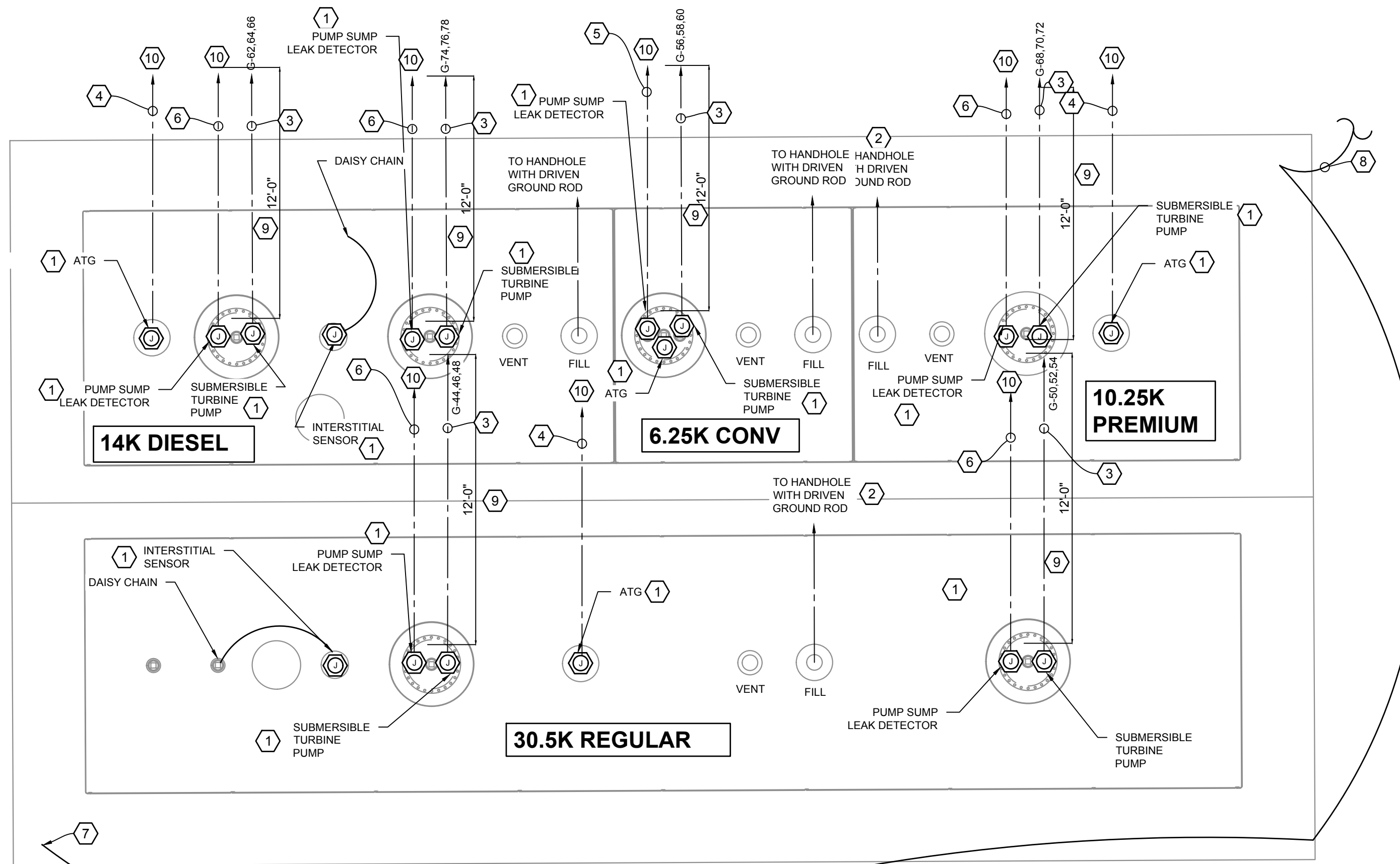
Dispenser Type/Description	Size Of Conduit	Function Of The Wire	QTY Of Wire In Conduit	Size Of Wire	QTY Of Wire In Conduit	Size Of Wire	QTY Of Wire In Conduit	Size Of Wire
312 Wayne Helix	1/4 Inch	Power	3	# 12	2	# 14	2	# 18/2 Twisted Pair
	3/4 Inch	Intercom	1	# 18/4 Cable	1			
	3/4 Inch	Data	2	Cat 5				
	3/4 Inch	Spare	2	Raceway Only				
Master Dispenser	1/4 Inch	Power	3	# 12	2	# 14	2	# 18/2 Twisted Pair
	3/4 Inch	Intercom	1	# 18/4 Cable	1			
	3/4 Inch	Data	2	Cat 5				
	3/4 Inch	Spare	2	Raceway Only				
Satellite	3/4 Inch	Sensor	2	# 18/2 Cable	1	# 12 Ground		
	3/4 Inch	SPARE	1	# 18/2 Cable	1	# 12 Ground		
Master/Satellite Loop		Power	1	# 12 Ground	2	# 14		
Auto Gas Canopy	1/4 Inch	Power	1	7	Raceway Only			
	1/4 Inch	Spare	3	7	Raceway Only			
Truck Canopy	1/4 Inch	Power	1	3	Raceway Only			
	1/4 Inch	Spare	3	3	Raceway Only			
STP	1/4 Inch	Power	4	# 10				
Tank Sensor Home Run	1/4 Inch	Sensor	EACH SUMP	# 18/2 Cable	Per Sensor	# 12 Ground	1-1" to each stp Sump for sen's wt. 1 spare	
ATG & Interstitial Loops Home Run	1/4 Inch	Sensor	Per Sensor	# 18/2 Cable	Per Sensor	# 12 Ground	1-1" Home Run for ATG & Int. Loops	
Remote E Stop	3/4 Inch		3	# 12				

Project Name and Address
CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Project No. 170-101.00
 Drawn By
 Reviewed By

Sheet Title
FUEL SYSTEM ELECTRIC SITE PLAN

Sheet
FP13



NOTE: ALL VOLTAGE THAT IS RUN TO THE TANKS AND ARE NOT ENTERING STP SUMP WILL BE DAISY CHAINED

KEYED NOTES:

- 1 EXPLOSION PROOF JUNCTION BOX; CROUSE-HINDS GUA SERIES OR EQUAL.
- 2 FUEL FILL GROUND FOR UST; REFER TO DETAIL 9 ON SHEET FP4
- 3 SUBMERSIBLE TURBINE PUMP(STP) POWER; 3-#10 & 1-#10 GND, 1" C. STP POWER. ROUTE TO PUMP CONTROL PANEL. PROVIDE HOME RUN FROM CONTROL PANEL TO PANEL 'G'.
- 4 SENSOR CONDUIT AND CONDUCTORS; PROVIDE (1) 3/C #18 SHIELDED(AUTOMATIC TANK GAUGE) AND (1) 3/C #18 SHIELDED(SPARE) IN 1" CONDUIT.
- 5 SENSOR CONDUIT AND CONDUCTORS; PROVIDE (1) 3/C #18 SHIELDED(AUTOMATIC TANK GAUGE), (1) 2/C SHIELDED(PUMP SUMP LEAK DETECTOR) AND (1) 3/C #18 SHIELDED(SPARE) IN 1" CONDUIT.
- 6 SENSOR CONDUIT AND CONDUCTORS; PROVIDE (1) 2/C #18 SHIELDED(PUMP SUMP LEAK DETECTOR) AND (1) 2/C #18 SHIELDED SPARE IN 1" CONDUIT.
- 7 MONITOR WELL;
- 8 1" CONDUIT TO J-BOX IN THE STORAGE ROOM WITH PULL WIRE.
- 9 FRANKLIN FUELING 'CABLE TIGHT' WIRE MANAGEMENT SYSTEM; THESE (2) CONDUITS SHALL UTILIZE THE CABLE TIGHT SYSTEM FOR THE FIRST 12'-0" TRANSITION TO SCHEDULE 40 PVC FOR THESE CONDUIT RUNS BEYOND THE 12'-0" DISTANCE.
- 10 FUEL MONITORING PANEL; ROUTE CONDUIT AND CONDUCTORS TO FUEL MONITORING PANEL PORTION OF THE UTILIZED GEAR.

GENERAL NOTES:

- A. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE, CURRENT EDITION OF BUILDING CODE AND APPLICABLE LOCAL ORDINANCES.
- B. VERIFY ALL MECHANICAL EQUIPMENT SIZES PRIOR TO ROUGH-IN.
- C. COORDINATE ALL INSTALLATIONS WITH OTHER TRADES.
- D. ALL ELECTRICAL CONSTRUCTION IN THE AREA OF THE UNDERGROUND STORAGE FUEL TANKS SHALL BE PER NEC ARTICLE 514 AND NFPA 30A.
- E. ALL INTRINSICALLY SAFE(IS) WIRING SHALL BE PER NEC ARTICLE 504 AND ANS/ISA RP 12.6. IN ADDITION, SPECIAL (S) WIRING REQUIREMENTS FOR THE UNDERGROUND STORAGE FUEL TANK LEAK SENSORS INCLUDE SEPARATION FROM OTHER WIRING VIA SEPARATE RACEWAYS (INCLUDING TROUGHS). TROUGHS SHALL HAVE A PERMANENTLY ATTACHED METAL DIVIDER THAT IS EQUIPOTENTIALLY BONDED TO EARTH.
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- G. REFERENCE MANUFACTURER INSTALLATION MANUALS FOR UNDERGROUND FUEL STORAGE TANK EQUIPMENT WIRING INTERCONNECTIONS.
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- N. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL POWER AND INTRINSICALLY SAFE CONDUITS.
- O. REFER TO BUILDING ELECTRICAL DRAWINGS FOR PANEL SCHEDULES.
- P. THE TERM PROVIDE MEANS THAT THE CONTRACTOR WILL 'FURNISH' AND 'INSTALL' ITEM.

ENLARGED ELECTRICAL FUEL TANK DETAIL: SCALE 1/4" = 1'-0" **1**

Date	05/31/2024
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Date

Project Name and Address
CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title
ENLARGED ELECTRICAL TANK PLANS

Project No. 170-101.00	Sheet FP14
Drawn By	
Reviewed By	

FRANKLIN FUELING CABLE TIGHT WIRE MANAGEMENT SPECIFICATION

PART 1 GENERAL

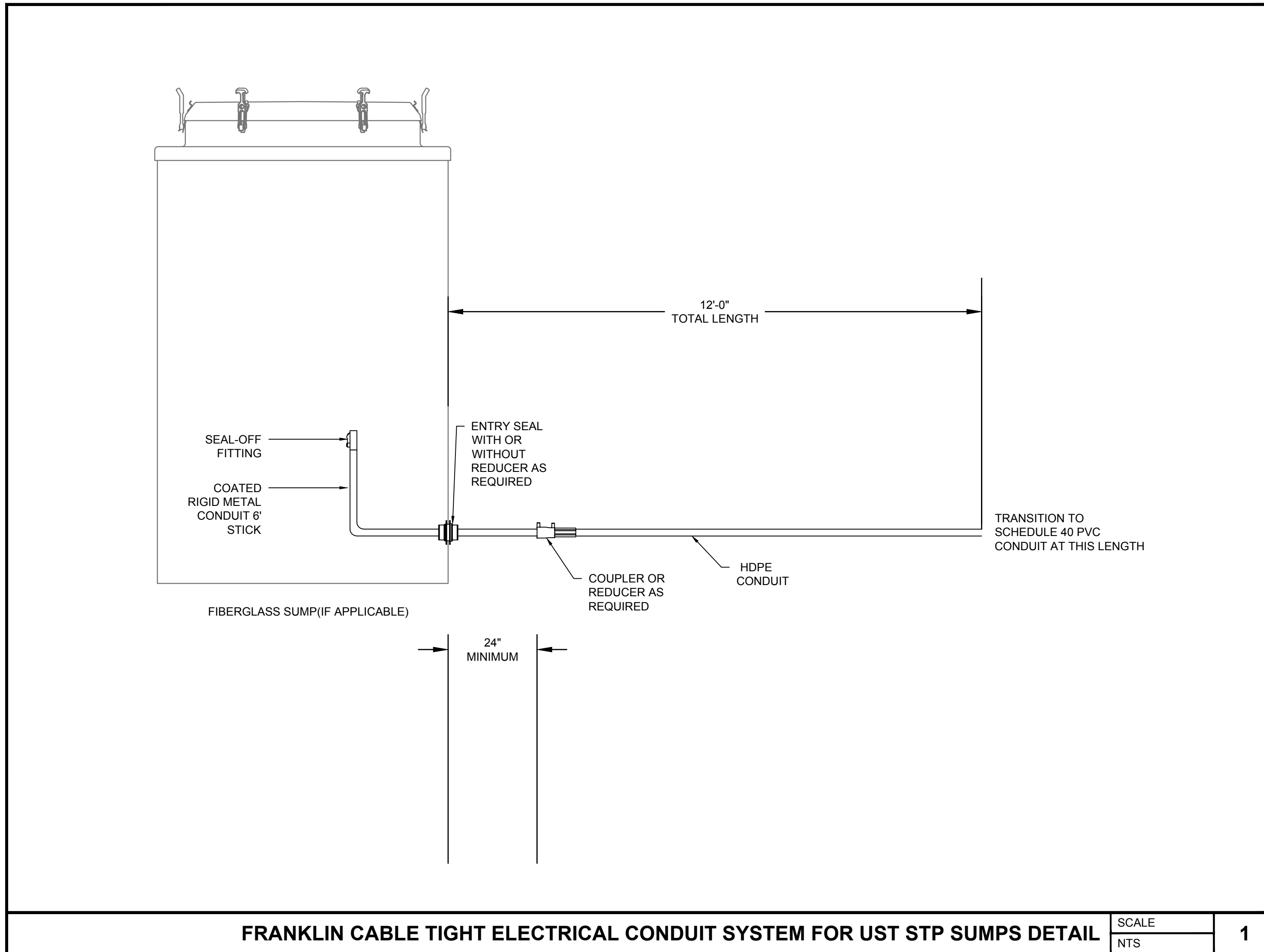
1. SECTION INCLUDES:
 - 1.1. THE UNDERGROUND WIRE MANAGEMENT SYSTEM SHALL BE CABLE TIGHT AS MANUFACTURED BY FRANKLIN FUELING SYSTEMS. SYSTEM SHALL CONSIST OF IMPACT RESISTANT, CORROSION-RESISTANT HDPE (HIGH DENSITY POLYETHYLENE) CONSTRUCTION.
2. REFERENCES:
 - 2.1. NFPA 30 - FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE
 - 2.2. NFPA 30A - CODE FOR MOTOR FUEL DISPENSING FACILITIES AND REPAIR GARAGES
 - 2.3. UNDERWRITERS LABORATORIES - UL-651 HDPE CONDUIT
 - 2.4. FFS 408001007 UPP PIPING SYSTEMS ELECTROFUSION WELDING INSTRUCTIONS
 - 2.5. FFS 408001010 EF1-230V HAND-HELD WELDER OPERATING MANUAL
 - 2.6. FFS 408001016 UPP PIPING INSTALLATION GUIDE
 - 2.7. FFS 408001017 UPP ELECTROFUSION ENTRY SEAL INSTALLATION GUIDE
 - 2.8. FFS 771-125-00 CONDUIT RIGID ENTRY BOOTS INSTALLATION INSTRUCTIONS
 - 2.9. UL6 & UL971 RIGID METAL CONDUITS
 - 2.10. UL 971 ELECTROFUSION FITTINGS
3. QUALITY ASSURANCE:
 - 3.1. THE WIRE MANAGEMENT SYSTEM SHALL BE INSTALLED AS SPECIFIED ON CONTRACT DRAWINGS AND OR AT THE DISCRETION OF THE RESPONSIBLE INSTALLING CONTRACTOR TO PROVIDE A COMPLETE AND TESTED WIRE MANAGEMENT SYSTEM AS REQUIRED FOR THE PROJECT AND PER FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
4. DELIVERY, STORAGE, AND HANDLING:
 - 4.1. CONDUIT AND FITTINGS SHALL BE PROTECTED FROM DAMAGE DUE TO IMPACT AND POINT LOADING. THE CONTRACTOR SHALL NOT ALLOW DIRT, DEBRIS OR OTHER EXTRANEIOUS MATERIALS TO GET INTO THE CONDUIT AND FITTINGS.
5. PROJECT CONDITIONS:
 - 5.1. PERFORM GROUND PENETRATING RADAR STUDY, SITE SURVEY, RESEARCH PUBLIC UTILITY RECORDS AND VERIFY EXISTING UTILITY LOCATIONS. CONTACT UTILITY-LOCATING SERVICE FOR AREA WHERE PROJECT IS LOCATED.

PART 2 PRODUCTS

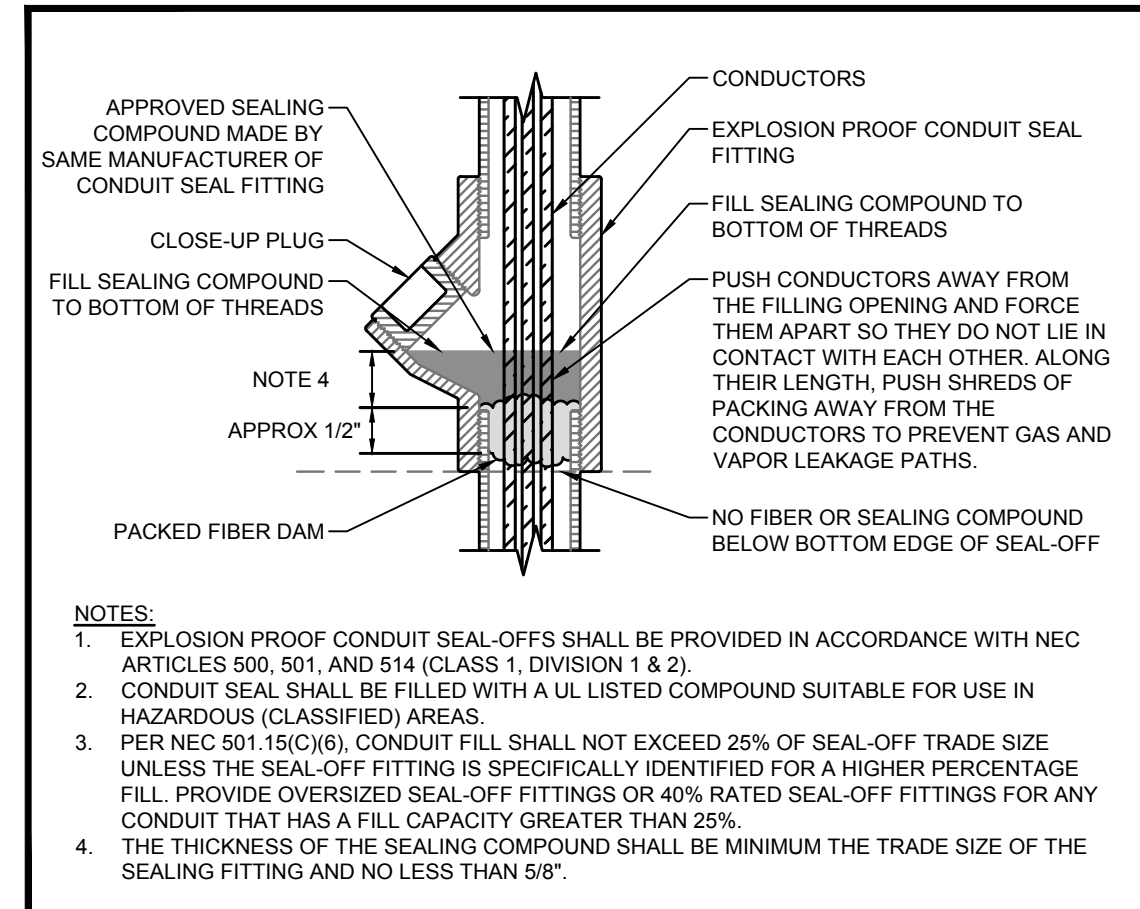
6. ACCEPTABLE MANUFACTURERS:
 - 6.1. ALL CONDUIT, FITTINGS AND SPECIALTY COMPONENTS FOR COMPLETE AND CODE COMPLIANT CONDUIT SYSTEMS PER FRANKLIN FUELING CABLE TIGHT.
 - 6.2. CABLE TIGHT FITTINGS AND ENTRIES SHALL BE UL971 LISTED ELECTROFUSION TYPE AND MADE OF MOLDED HDPE WITH NYLON BASED POLYMERS. FITTINGS INCLUDE COUPLERS, REDUCERS, TERMINATION FITTINGS, UNIONS AND ENTRY FITTINGS.
 - 6.3. ALL CONDUIT TIGHT FITTINGS AND CONDUIT ARE TO BE ELECTROFUSED USING THE ELECTROFUSION WELDER IN ACCORDANCE WITH MANUFACTURER INSTALLATION REQUIREMENTS.
 - 6.4. CONDUIT:
 - 6.4.1. CONDUIT SHALL BE AVAILABLE IN 3/4" THRU 1" DIAMETERS.
 - 6.4.2. ALL PART NUMBER BELOW ARE FRANKLIN FUELING (ONLY PROVIDE WHAT IS NEEDED FOR THE APPLICATION):

• 000-075-1000-EC-U	• 000-075-1500-EC-U	• 000-075-06-ERM-C-PE	• 000-075-06-ERM-C	• 91-027 NPT	• REB-C-0075	• REB-C-R-0075	• 303-063	• 49-063-031	• 02-027	• 000-100-1000-EC-U	• 000-100-06-ERM-C-PE	• 000-100-06-ERM-C	• 91-033 NPT	• REB-C-0100	• REB-C-R-0100	• 303-063	• 49-063-038	• 02-033	• EF1-110V-A	• EF1-230V	• 408032001	• EF1-BC 2MM	• ROTOSCRAPER075	• ROTOSCRAPER100	• SCR-025-125	• SCR.HAR	• SCR.HAR(B)	• 303-CLAMP-1	• 408179001	• 408179002	• 408179003	• 408179004	• 408005901
• 1/2" FLEXIBLE CONDUIT REEL 1000'	• 1/2" FLEXIBLE CONDUIT REEL 1500'	• 1" COATED RIGID METAL CONDUIT-12 PACK	• 1/2" SPIGOTTED RIGID METAL CONDUIT(6" STICK) 12 PACK	• 1/2" SPIGOTTED RIGID METAL CONDUIT(8" STUB)	• 1/2" FIBERGLASS ENTRY SEAL(FLAT SURFACE)	• 1/2" FIBERGLASS ENTRY SEAL(ROUND SURFACE)	• POLYETHYLENE ENTRY SEAL (USED FOR 3/4" AND 1" SYSTEMS)	• 1/2" POLYETHYLENE ENTRY SEAL REDUCER	• 1/2" COUPLER	• 1" FLEXIBLE CONDUIT REEL 1000'	• 1" COATED RIGID METAL CONDUIT(6" STICK) 12 PACK	• 1" SPIGOTTED RIGID METAL CONDUIT(6" STICK) 12 PACK	• 1" SPIGOTTED RIGID METAL CONDUIT(8" STUB)	• 1" FIBERGLASS ENTRY SEAL(FLAT SURFACE)	• 1" FIBERGLASS ENTRY SEAL(ROUND SURFACE)	• POLYETHYLENE ENTRY SEAL (USED FOR BOTH 3/4" AND 1" SYSTEMS)	• 1" REDUCING COUPLER	• 1" COUPLER	• ELECTROFUSION WELDER 110V	• HANDHELD ELECTROFUSION WELDER, 230V	• STEP-UP TRANSFORMER REQUIRED FOR HAND-HELD WELDER OPERATION	• EF1 WELDER BRIGING CABLE	• 1/2" SPEED SCRAPER TOOL	• 1" SPEED SCRAPER TOOL	• ROTARY SCRAPER	• HANDHELD SCRAPER	• SPARE BLADES FOR HANDHELD SCRAPER	• POLYETHYLENE ENTRY SEAL WELDING CLAMP	• 1/2" SPIGOTTED RIGID METAL CONDUIT TO 1/2" FLEXIBLE CONDUIT CLAMP	• 1" SPIGOTTED RIGID METAL CONDUIT TO 1" FLEXIBLE CONDUIT CLAMP	• 1/2" COATED RIGID METAL CONDUIT TO 1/2" FLEXIBLE CONDUIT CLAMP	• 1" COATED RIGID METAL CONDUIT TO 1" FLEXIBLE CONDUIT CLAMP	• CONSUMABLES KIT INCLUDING LINT FREE RAGS, MARKERS, SPRAY BOTTLES, NITRILE GLOVES, EMERY CLOTH AND PAINT SCRAPERS.

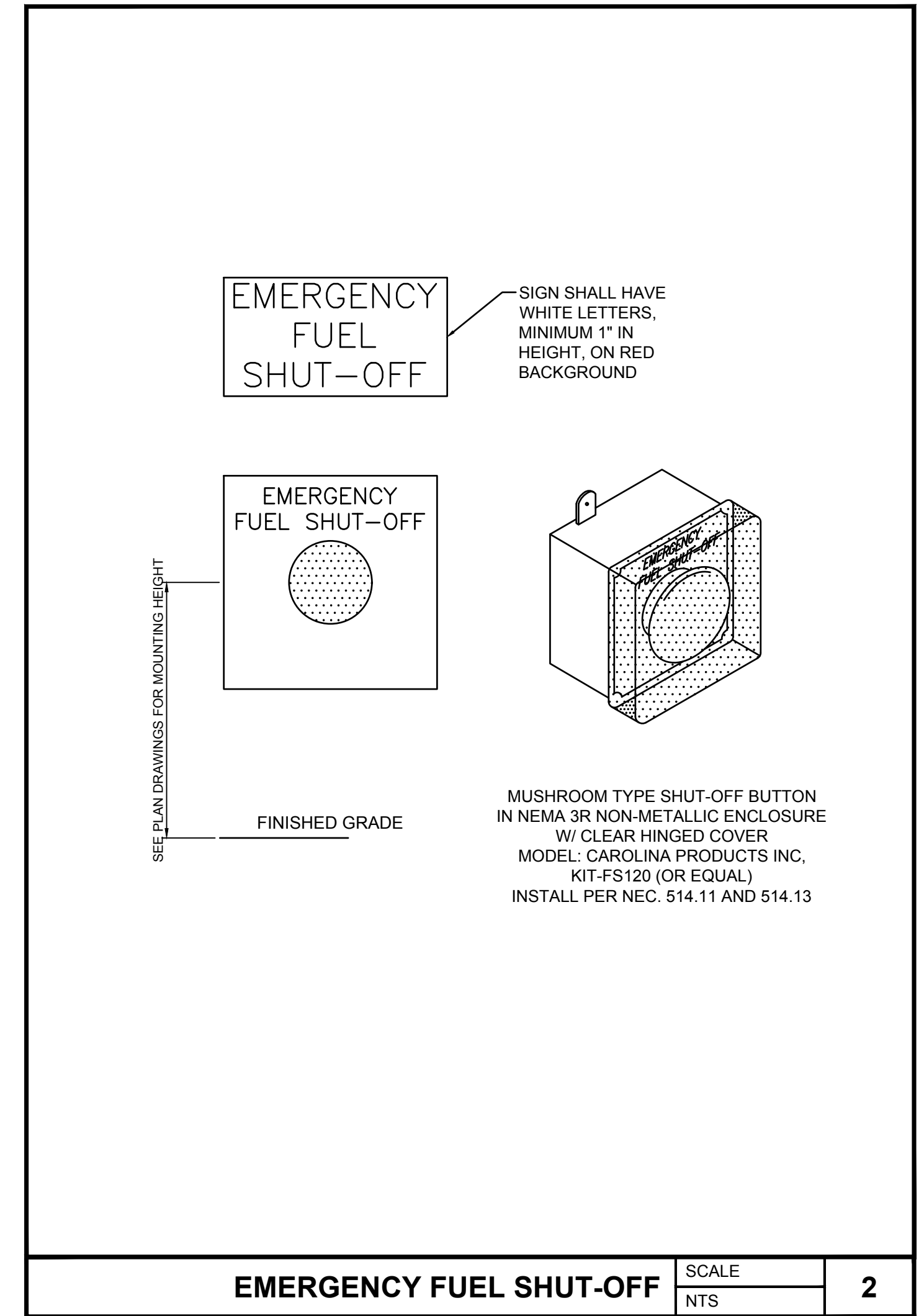
IMPORTANT:
 EC SHALL PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE AND CODE COMPLIANT WIRE MANAGEMENT SYSTEM BY FRANKLIN FUELING SYSTEMS 'CABLE TIGHT' FOR THE (2) CONDUITS FROM EACH STP SUMP EXTENDING 12'-0" FROM THE STP SUMP AND TRANSITION TO SCHEDULE 40 PVC CONDUIT UNDERGROUND ONLY.



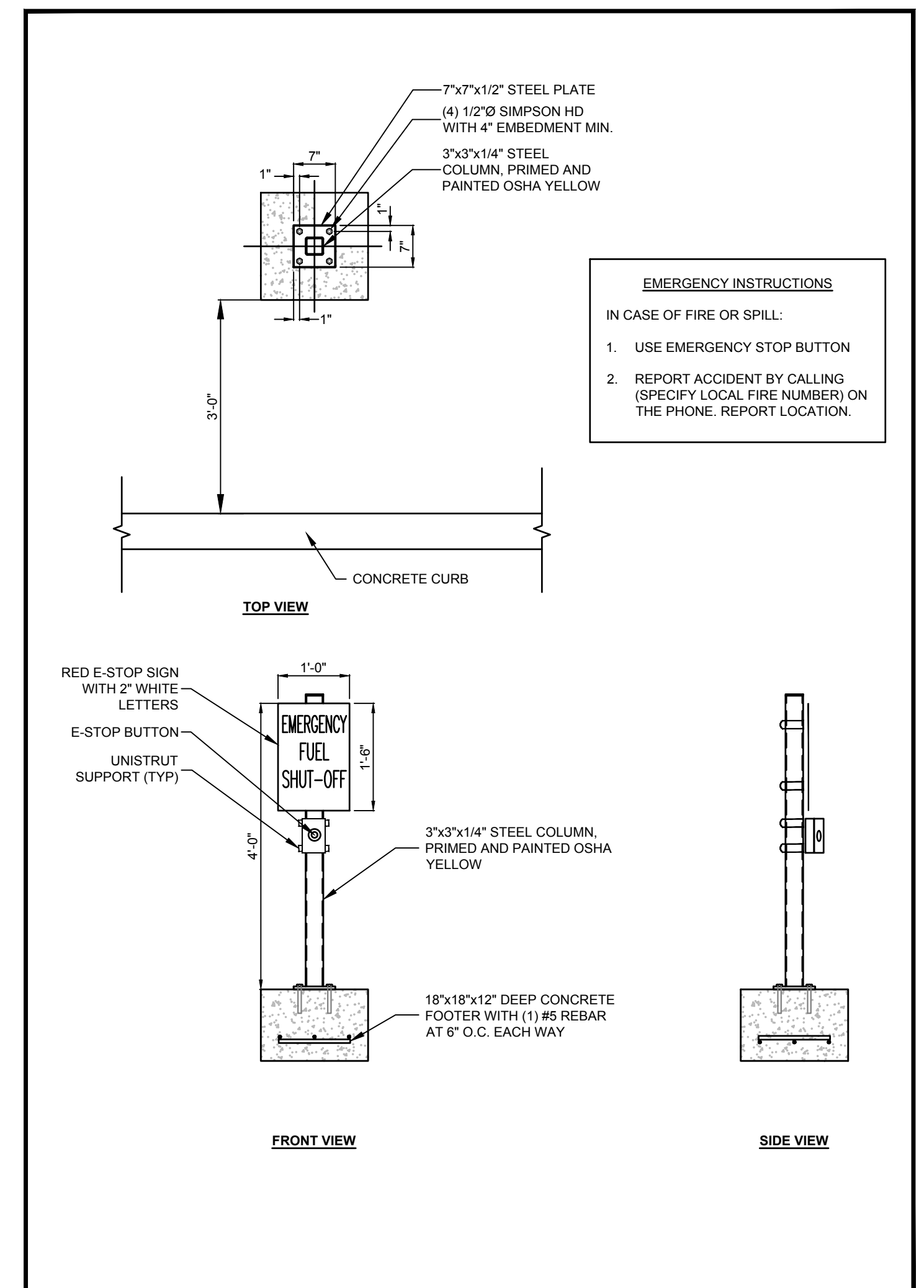
FRANKLIN CABLE TIGHT ELECTRICAL CONDUIT SYSTEM FOR UST STP SUMPS DETAIL SCALE NTS 1



EXPLOSION PROOF CONDUIT SEAL-OFF DETAIL SCALE N.T.S. 4



EMERGENCY FUEL SHUT-OFF SCALE NTS 2



REMOTE EMERGENCY FUEL SHUT-OFF SCALE NTS 3

	Date 05/31/2024
	Revision/Issue ISSUE FOR PERMIT
	No. 1

INFINITY

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ANDREW MOHR, P.E.
FL REG. NO. 73077

Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

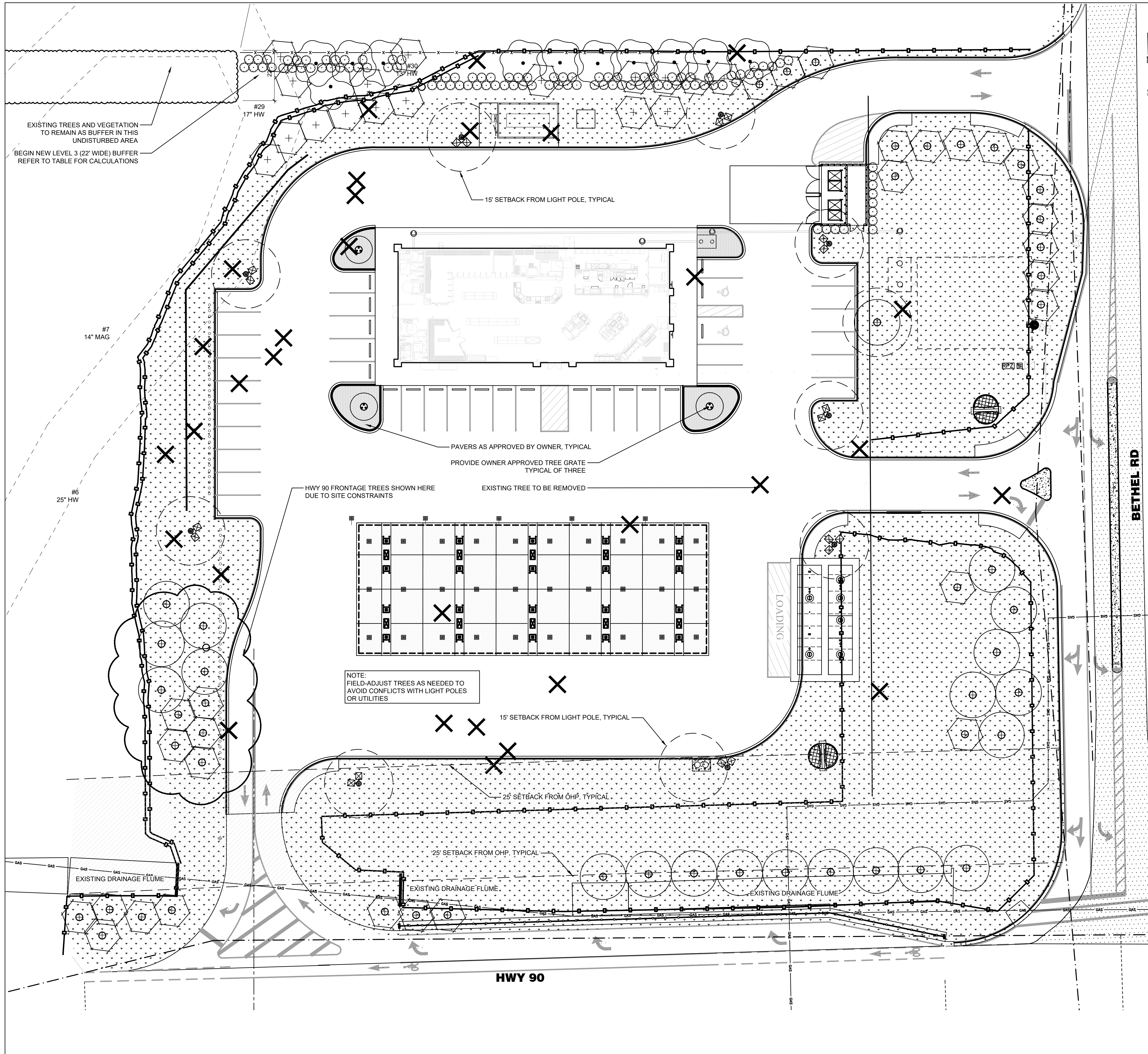
Sheet Title
TANK ELECTRICAL DETAILS

Project No.
170-101.00

Sheet
FP15

Drawn By

Reviewed By



UNDERSTORY TREES

- 11 QUERCUS VIRGINIANA / LIVE OAK 6' HT.
- 21 TAXODIUM DISTICHUM / BALD CYPRESS 6' HT.
- 3 SABAL PALMETTO / CABBAGE PALM 6-8' HT. STAGGERED
- 46 MYRICA CERIFERA / WAX MYRTLE 6' HT.

SHRUBS

- 103 VIBURNUM OBOVATUM 'NANA' / WALTER'S VIBURNUM 3 GAL. 4" O.C.

GROUND COVERS

- 66,500 SF CYNODON DACTYLON 'TIF 419' / TIF 419 BERMUDA SOD INCLUDING 10% FOR WASTE
- 160 SF DIANELLA TASMANICA 'VARIEGATA' 1 GAL. 18" O.C.

PAVERS

- 1,300 SF COMMERCIALLY AVAILABLE 4X8 PRECAST CONCRETE PAVERS INCLUDING 10% FOR WASTE

OVERALL REQUIREMENT - (15% LANDSCAPE REQUIREMENT)

TOTAL SITE AREA	LANDSCAPE AREA REQUIRED	LANDSCAPE AREA PROVIDED
221,720 SF	33,256 SQ. FT. (15%)	143,567 SQ. FT. (64%)

LANDSCAPING REQUIREMENTS

FRONTAGE REQUIREMENTS
(1 TREE/25' ROAD FRONTAGE)

PROPERTY LINE	LENGTH	TREES REQUIRED	TREES PROVIDED
WEST-HWY 85	-	-	-
SOUTH	644'	26 (13 SHADE TREES)	26 (13 SHADE TREES)
EAST	285'	12 (6 SHADE TREES)	12 (6 SHADE TREES)
WEST	-	-	-

REFORESTATION REQUIREMENTS
(1 TREE FOR EVERY 1/10TH ACRE)

SITE AREA	TREES REQUIRED	TREES PROVIDED
5.08 ACRES	51	51

PRESERVATION REQUIREMENTS
(1 TREE FOR 4,300 S.F. IMPERVIOUS AREA)

IMPERVIOUS AREA	TREES REQUIRED TO BE PRESERVED	TREES PRESERVED
76,481 S.F.	18	27

PARKING LOT REQUIREMENTS

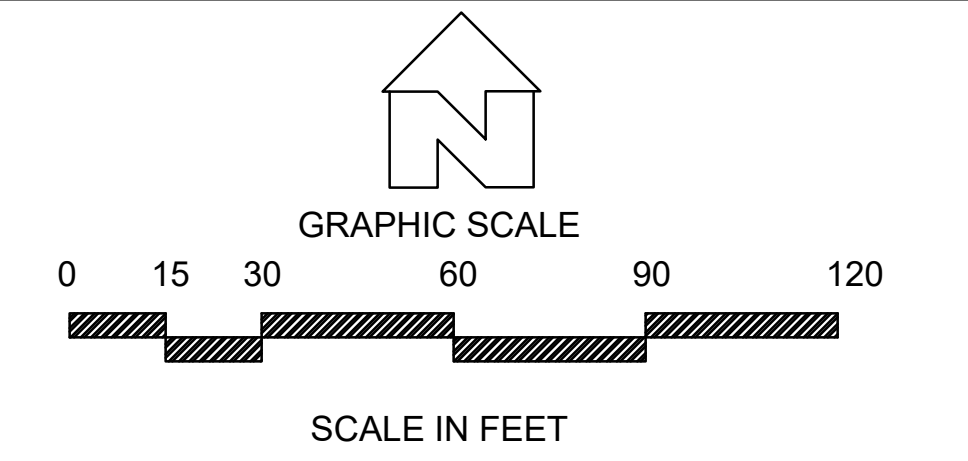
REQUIRED	REQUIRED	PROVIDED
PER PARKING SPACES	FOR 38 PARKING SPACES	
1 CANOPY TREE PER 15	2 CANOPY TREES	2 CANOPY TREES
1 UNDERSTORY TREE PER 10	3 UNDERSTORY TREES	3 UNDERSTORY TREES
1 SHRUB PER 4	9 SHRUBS	12 SHRUBS

LEVEL 3 BUFFER REQUIREMENTS (22' WIDE)

PER 100 L.F.	REQUIRED FOR 228 L.F.	PROVIDED
5 CANOPY TREES	11 CANOPY TREES	11 CANOPY TREES
4 UNDERSTORY TREES	9 UNDERSTORY TREES	9 UNDERSTORY TREES
40 SHRUBS	91 SHRUBS	91 SHRUBS

- LANDSCAPE NOTES:**
- LOCATE ALL UTILITIES BEFORE DIGGING. PROTECT ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION.
 - ELIMINATE EXISTING VEGETATION IN AREAS TO BE PLANTED. SPRAY WITH ROUNDUP AT MANUFACTURER'S RECOMMENDED RATE TWICE IN 14 DAYS.
 - TOP DRESS ALL AREAS TO RECEIVE PLANTINGS WITH 2" FINISHED MUSHROOM COMPOST PRIOR TO PLANTING.
 - ALL PLANT MATERIAL FLORIDA #1 OR BETTER.
 - DECREASE PLANT SPACING AS REQUIRED TO ALLOW PLACEMENT OF THE DESIGNATED NUMBER OF PLANTS PER GROUPING.
 - FERTILIZE ALL PLANTINGS WITH OSMOCOTE OR OTHER APPROVED SLOW RELEASE FERTILIZER AT MANUFACTURER'S RECOMMENDED RATE BEFORE MULCHING.
 - APPLY PREEN OR OTHER APPROVED PRE-EMERGENT HERBICIDE TO ALL PLANTING AREAS BEFORE MULCHING.
 - MULCH ALL AREAS OF TREE, SHRUB AND GROUND COVER MASS PLANTINGS WITH 3" PINESTRAW MULCH.
 - QUANTITIES SHOWN IN PLANT LIST ARE FOR CONTRACTOR'S CONVENIENCE. VERIFY ALL PLANT QUANTITIES SHOWN ON PLAN AND IN PLANT LIST.
 - B&B MATERIAL MAY BE SUBSTITUTED FOR CONTAINER GROWN MATERIAL PROVIDED IT EXCEEDS THE MINIMUM SIZES NOTED.
 - SOD ALL DISTURBED AREAS WITH SPECIES SHOWN ON PLAN.
 - WARRANTY ALL PLANTS FOR A PERIOD OF ONE (1) YEAR FROM FINAL ACCEPTANCE.

- IRRIGATION NOTES:**
- AUTOMATIC IRRIGATION SYSTEM TO PROVIDE 100% COVERAGE OF ALL LANDSCAPE AREAS.
 - CONTRACTOR RESPONSIBLE FOR LOCATING AND SUPPLYING ELECTRICAL POWER TO CONTROLLER.
 - CONTRACTOR TO PROVIDE AND PAY FEES FOR SEPARATE IRRIGATION METER.
 - PROVIDE BACKFLOW PREVENTION PER CITY REQUIREMENTS.
 - PROVIDE RAIN SHUT OFF DEVICE PER FLA. STATE LAW.



23160 - CEFCO HWY90/OLD BETHEL
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CEFCO
GAS STATION
 HWY 90 & OLD BETHEL ROAD
 OKALOOSA COUNTY, FL

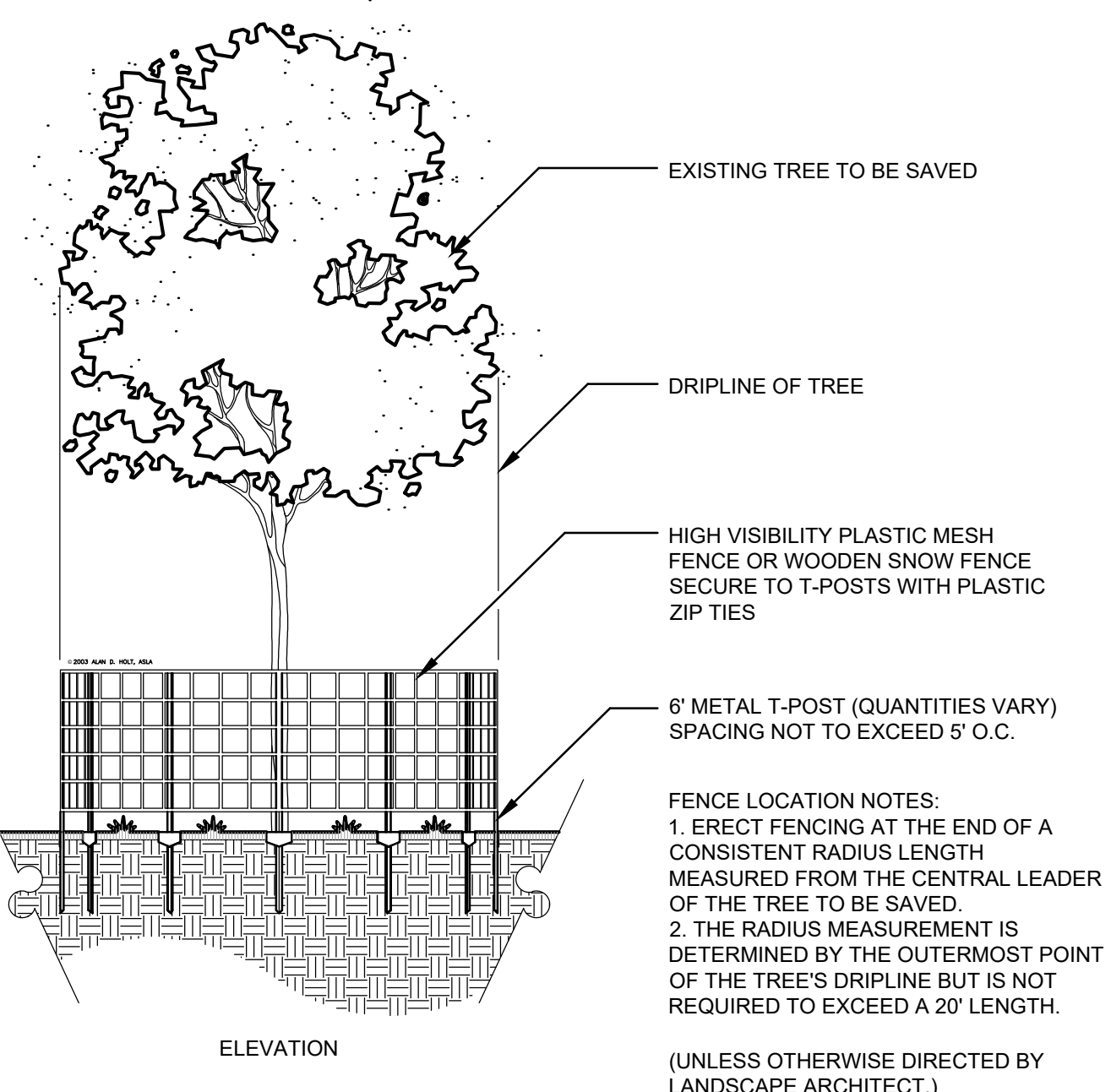
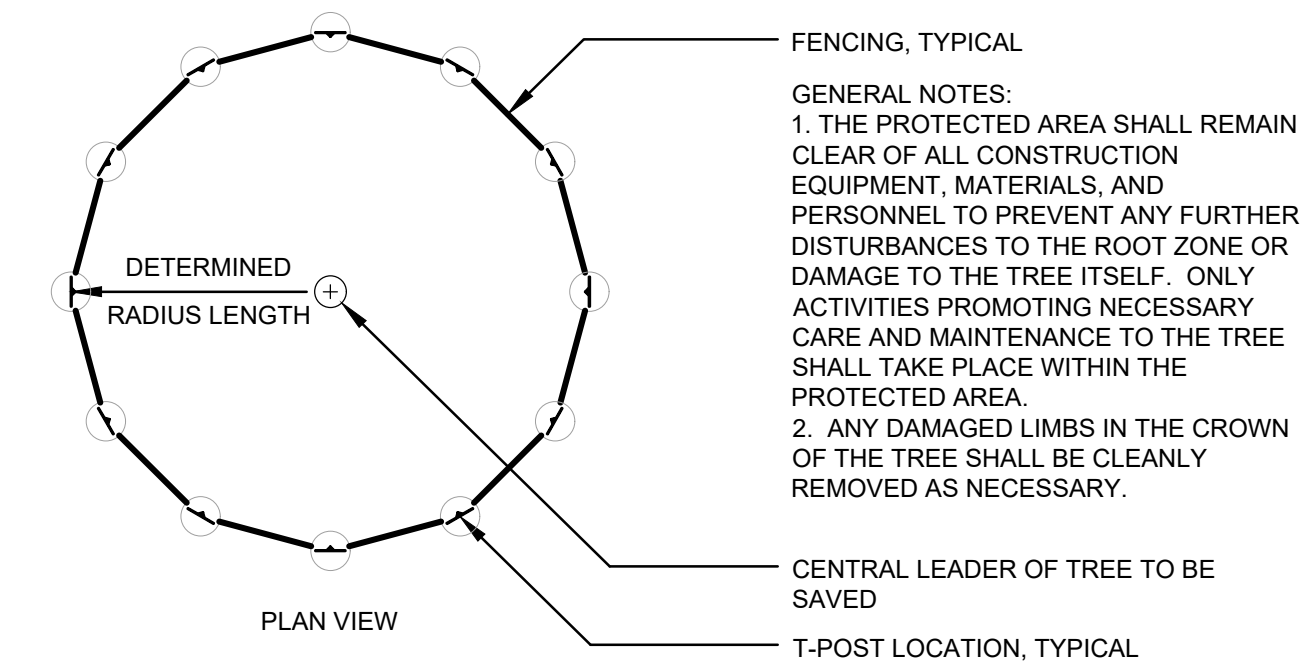
DATE	ISSUE/REVISION
3/22/24	COUNTY COMMENTS

LANDSCAPE PLAN
 SHEET NUMBER

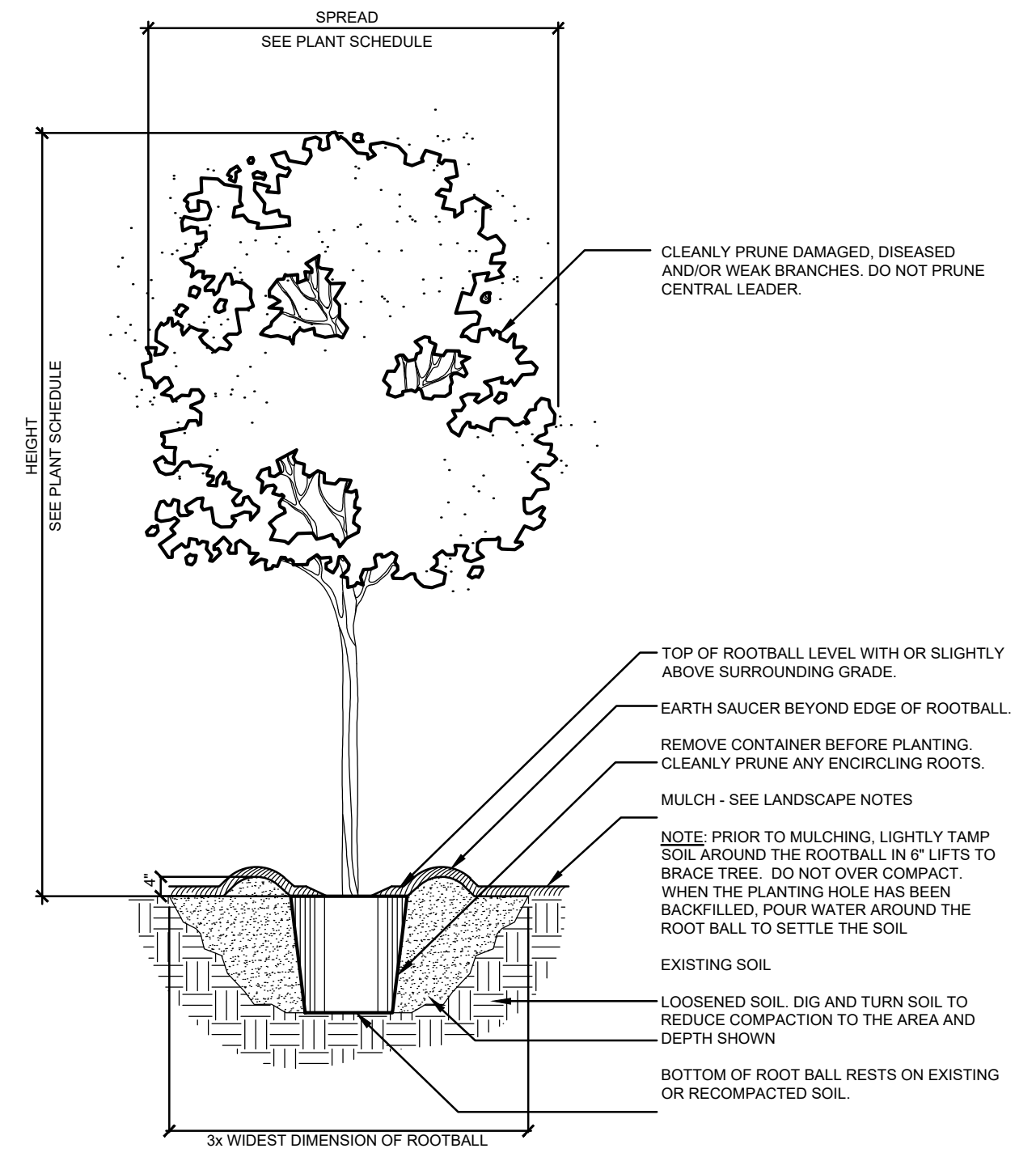
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ONE OF FOUR

DATE	ISSUE/REVISION

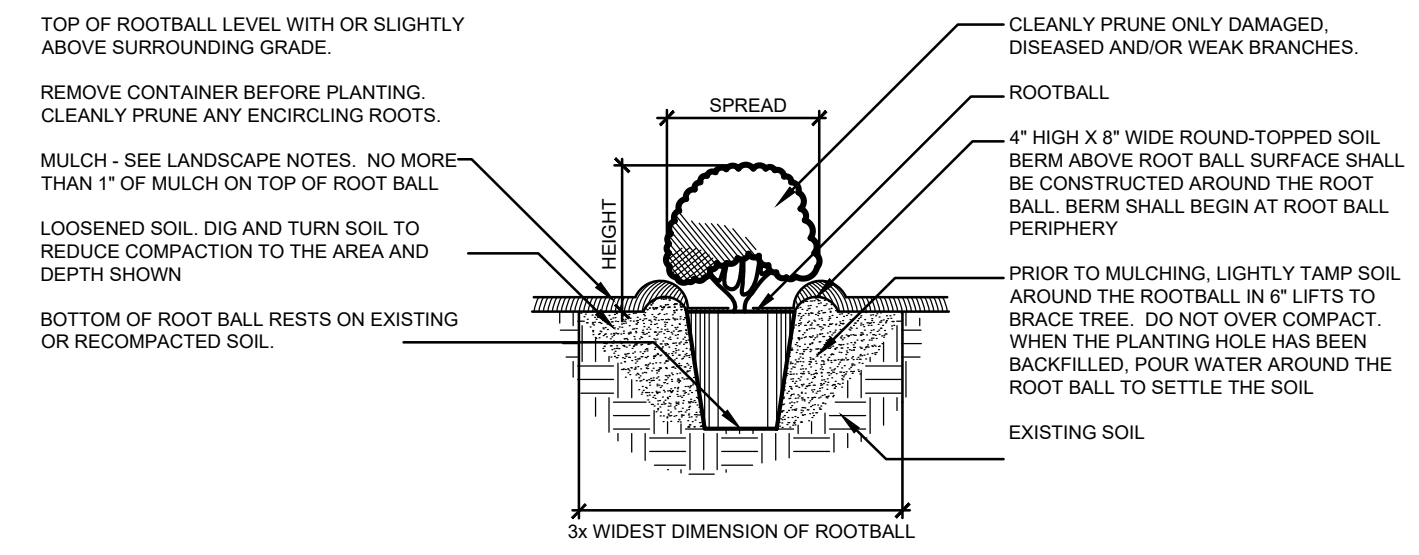


2 TREE PROTECTION
SCALE: NOT TO SCALE



- NOTES:
1. REMOVE ALL STRING &/OR WIRE WRAPPED AROUND TRUNK.
2. REMOVE ALL STRAPS, ROPES, WIRE &/OR STRINGS USED TO LIFT THE ROOTBALL.
3. REMOVE ALL BURLAP &/OR WIRE FROM THE TOP OF THE ROOT BALL.
4. TOP OF FIRST FEEDER ROOT TO BE SET SLIGHTLY ABOVE SURROUNDING FINISH GRADE.

1 TREE PLANTING
SCALE: NOT TO SCALE



- NOTE: MEASURE HEIGHT FROM TOP OF ROOT BALL SEE PLANT SCHEDULE FOR REQUIRED HEIGHT AND SPREAD FOR EACH SPECIES

3 PLANTING DETAIL FOR SHRUBS
SCALE: NOT TO SCALE

MECHANICAL SPECIFICATIONS:

PART 1 - GENERAL

1.1 SUBMITTALS
A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.

1.2 WARRANTY
A. WARRANT NEW AND MODIFIED DUCTWORK FOR PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF JOB, AGAINST NOISE AND VIBRATION UNDER FULL RANGE OF OPERATING CONDITIONS.

PART 2 - PRODUCTS

2.1 METAL DUCTS
A. CONTINUOUS HOT-DIP MILL GALVANIZED, MINIMUM COATING OF G60, LOCK-FORMING QUALITY STEEL SHEETS IN ACCORDANCE WITH ASTM A653.
B. GAUGES: SHEET METAL GAUGE AS SPECIFIED IN SMACNA - HVAC DUCT CONSTRUCTION STANDARDS BUT NOT LESS THAN THE FOLLOWING:
1. RECTANGULAR DUCT: 26 GAUGE FOR ALL SIZES.
2. ROUND DUCT: PRIME GRADE STEEL SHEET.
a. 14 INCH DIAMETER AND SMALLER: 26 GAUGE.
b. 15 INCH DIAMETER THRU 26 INCH DIAMETER: 24 GAUGE.
C. ROUND DUCT SHALL BE SPIRAL SEAM WHERE EXPOSED AND NOT INSULATED. IN ALL OTHER AREAS SPIRAL OR LONGITUDINAL SHALL BE USED.

2.2 TURNING VANES
A. MANUFACTURED TURNING VANES FOR METAL DUCTS: CURVED BLADES OF GALVANIZED SHEET STEEL. SUPPORT WITH BARS PERPENDICULAR TO BLADES SET; SET INTO VANE RUNNERS SUITABLE FOR DUCT MOUNTING.
B. GENERAL REQUIREMENTS: COMPLY WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE"; FIGURES 4-3 "VANES AND VANE RUNNERS," 4-4, "VANE SUPPORT IN ELBOWS."
C. VANE CONSTRUCTION: SINGLE WALL

2.3 SEALANT AND GASKET
A. GENERAL SEALANT AND GASKET REQUIREMENTS: SURFACE-BURNING CHARACTERISTICS FOR SEALANTS AND GASKETS SHALL BE A MAXIMUM FLAME-SPREAD INDEX OF 25 AND A MAXIMUM SMOKE-DEVELOPED INDEX OF 50 WHEN TESTED ACCORDING TO UL 723; CERTIFIED BY AN NRTL.

2.4 HANGERS AND SUPPORTS
A. HANGER RODS: CADMIUM-PLATED STEEL RODS AND NUTS.
B. STRAP AND ROD SIZES: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" TABLE 5-1. "RECTANGULAR DUCT HANGERS MINIM SIZE," AND TABLE 5-2 "MINIMUM HANGER SIZES FOR ROUND DUCT."
C. STEEL CABLES FOR GALVANIZED STEEL DUCTS: GALVANIZED STEEL COMPLYING WITH ASTM A 603.
D. STEEL CABLE END CONNECTIONS: CADMIUM PLATED STEEL ASSEMBLIES WITH BRACKETS, SWIVEL, AND BOLTS DESIGNED FOR DUCT HANGER SERVICE; WITH AN AUTOMATIC-LOCKING AND CLAMPING DEVICE.
E. DUCT ATTACHMENTS: SHEET METAL SCREWS, BLIND RIVETS, OR SELF-TAPPING METAL SCREWS; COMPATIBLE WITH DUCT MATERIALS.

2.5 MECHANICAL EQUIPMENT
A. PROVIDE EQUIPMENT INDICATED ON DRAWINGS.
B. PRODUCTS REQUIRING ELECTRICAL CONNECTION: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES, INCORPORATED, AND ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.
C. OPERATION AND MAINTENANCE DATA: INCLUDE MANUFACTURER'S DESCRIPTIVE LITERATURE, OPERATING INSTRUCTIONS, MAINTENANCE AND REPAIR DATA, AND PARTS LISTING FOR MECHANICAL EQUIPMENT.

2.6 CONTROLS
A. PROVIDE COMPLETE CONTROLS SYSTEM INCLUDING STEP-DOWN TRANSFORMERS FOR 24 VAC CONTROL, RELAYS, RELAY BOARDS, RELAY BASES, PRINTED CIRCUIT BOARDS, THERMOSTATS, TIMERS, SENSORS, INDICATORS, ACTUATORS, AND OTHER NECESSARY DEVICES REQUIRED FOR COMPLETE INSTALLATION INCLUDING ENCLOSURES FOR EQUIPMENT. LOCATIONS AND TYPES OF THERMOSTATS, TIMERS, AND OTHER CONTROLS EQUIPMENT ARE INDICATED ON DRAWINGS.
B. POWER SUPPLIES: TRANSFORMERS WITH CLASS 2 CURRENT-LIMITING TYPE OR OVERCURRENT PROTECTION; LIMIT CONNECTED LOADS TO 80 PERCENT OF RATED CAPACITY. DC POWER SUPPLY SHALL MATCH OUTPUT CURRENT AND VOLTAGE REQUIREMENTS AND BE FULL WAVE RECTIFIER TYPE.
C. DEVICES
1. TEMPERATURE SENSORS
a. ACCURACY: PLUS OR MINUS 0.36 DEG F OR 0.2 PERCENT AT CALIBRATION POINT.

MECHANICAL SPECS. (CONT):

b. WIRE: TWISTED SHIELDED PAIR - CABLE.
c. OUTSIDE AIR SENSORS: WATERTIGHT INLET FITTING, SHIELDED FROM DIRECT SUNLIGHT.
2. PROGRAMMABLE THERMOSTAT
a. ELECTRIC, SOLID STATE, MICROCOMPUTER-BASED ROOM THERMOSTAT WITH REMOTE SENSOR.
b. AUTOMATIC SWITCHING FROM HEATING TO COOLING.
3. LOW VOLTAGE ON OFF THERMOSTATS
a. 24-VAC, BIMETAL-OPERATED, SNAP-ACTING, MERCURY FREE, WITH ANTICIPATION HEATER, SET-POINT ADJUSTMENT, AND 3 DEG F MAXIMUM DIFFERENTIAL.
D. LOW VOLTAGE CONTROL WIRING
1. JACKETED, INDIVIDUALLY SHIELDED TWISTED PAIRS OF STRANDED INSULATED TINNED COPPER CONDUCTORS.
2. STRANDED TINNED COPPER DRAIN WIRE.
3. PLENUM-RATED JACKET FOR PLENUM APPLICATIONS.
4. CONDUCTOR SIZES BASED ON 10% MAXIMUM VOLTAGE DROP.
5. MINIMUM WIRE SIZE: 22 AWG, MAXIMUM WIRE SIZE: 14 GAUGE.

PART 3 - EXECUTION

3.1 GENERAL
A. UNLESS OTHERWISE DICTATED BY APPLICABLE CODES OR THE AUTHORITY HAVING JURISDICTION, ALL MATERIALS WITHIN RETURN AIR PLENUM MUST BE NONCOMBUSTIBLE AND/OR HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX NOT MORE THAN 50 IN ACCORDANCE WITH ASTM E 84 TESTING.
B. PROTECT WORK, EQUIPMENT AND MATERIAL TO PREVENT OBSTRUCTION, DAMAGE OR BREAKAGE. CLOSE PIPE OPENINGS WITH CAPS OR PLUGS DURING INSTALLATION. COVER AND PROTECT EQUIPMENT AGAINST DIRT, WATER, CHEMICAL OR MECHANICAL INJURY. AT THE COMPLETION OF WORK, THOROUGHLY CLEAN ALL EQUIPMENT AND DELIVER THE ENTIRE SYSTEM IN AN UNBLEMISHED CONDITION.
C. MAKE CHANGES IN PULLEYS, BELTS, DUCTWORK, AND DAMPERS AS REQUIRED FOR CORRECT BALANCE AS RECOMMENDED BY AIR BALANCE AGENCY.
D. PROVIDE PENETRATION FIRESTOPPING THAT IS PRODUCED AND MAINTAINED TO MAINTAIN ORIGINAL FIRE-RESISTANCE RATING OF CONSTRUCTION PENETRATED. PENETRATION FIRESTOPPING SYSTEMS SHALL BE COMPATIBLE WITH ONE ANOTHER, WITH THE SUBSTRATES FORMING OPENING, AND WITH PENETRATING ITEMS IF ANY.
1. COORDINATE SIZING OF SLEEVES, OPENINGS CORE-DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE PENETRATION FIRESTOPPING.
2. INSTALL PENETRATION FIRESTOPPING TO COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND PUBLISHED DRAWINGS FOR PRODUCTS AND APPLICATIONS INDICATED.

3.2 DUCT INSTALLATION
A. INSTALL DUCTS ACCORDING TO SMACNA STANDARDS.
B. PROTECT DUCT INTERIORS FROM MOISTURE, CONSTRUCTION DEBRIS, AND OTHER FOREIGN MATERIALS.
C. FABRICATE, ERECT, AND INSTALL DUCTWORK FOR HEATING, VENTILATING, AND AIR CONDITIONING PER SMACNA STANDARDS AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
D. MAKE JOINTS AIR TIGHT ON ALL DUCTWORK. SEAL EXHAUST DUCTWORK WITH EXTERIOR SEAL AS REQUIRED TO ASSURE POSITIVE SEAL. COMPLY WITH SMACNA DUCT CLASS A.
E. INSTALL FACTORY FABRICATED FITTINGS FOR CHANGES IN DIRECTION, SIZE, AND SHAPE AND FOR BRANCH CONNECTIONS.

3.3 HANGERS AND SUPPORT INSTALLATION
A. COMPLY WITH SMACNA STANDARDS.
B. INSTALL HANGERS AND SUPPORTS WITHIN 24" OF EACH ELBOW AND WITH 48" OF EACH BRANCH INTERSECTION.
C. DO NOT USE FASTENERS THAT PENETRATE ROOF DECK.
3.4 MECHANICAL EQUIPMENT
A. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
3.5 CONTROLS
A. COORDINATE LOCATION OF THERMOSTATS, HUMIDISTATS, AND OTHER EXPOSED CONTROL SENSORS WITH PLANS AND ROOM DETAILS BEFORE INSTALLATION.
B. CONNECT AND CONFIGURE EQUIPMENT AND SOFTWARE TO ACHIEVE SEQUENCE OF OPERATIONS.
C. LOW VOLTAGE CONTROL WIRING
1. COMPLY WITH NECA 1.

MECHANICAL SPECS. (CONT):

2. COMPLY WITH TIA/EIA-568-B-1.
3. BUNDLE AND HARNESS MULTICONDUCTOR INSTRUMENT CABLE IN PLACE OF SINGLE CABLES WHERE SEVERAL CABLES FOLLOW A COMMON PATH.
4. NUMBER-CODE OR COLOR-CODE CONDUCTORS FOR FUTURE IDENTIFICATION AND SERVICE OF CONTROL SYSTEM, EXCEPT LOCAL INDIVIDUAL ROOM CONTROL CABLES.
5. CONCEAL CABLE, EXCEPT IN MECHANICAL ROOMS AND AREAS WHERE OTHER CONDUIT AND PIPING ARE EXPOSED.
6. INSTALL PLENUM-RATED CABLE IN ENVIRONMENTAL AIR SPACES INCLUDING PLENUM CEILINGS.
7. WIRING WITHIN ENCLOSURES
a. BUNDLE, LACE, AND TRAIN CONDUCTORS TO TERMINAL POINTS WITH NO EXCESS.
b. INSTALL CONDUCTORS PARALLEL, WITH OR AT RIGHT ANGLES TO SIDES AND BACK OF ENCLOSURE.

D. AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, START UNITS TO CONFIRM PROPER UNIT OPERATION. REMOVE AND REPLACE MALFUNCTIONING UNITS AND RETEST.
E. TEST EACH SYSTEM FOR COMPLIANCE WITH SEQUENCE OF OPERATION.
F. OCCUPANCY ADJUSTMENTS, WHEN REQUESTED WITHIN 12 MONTHS OF DATE OF SUBSTANTIAL COMPLETION, PROVIDE ON-SITE ASSISTANCE IN ADJUSTING SYSTEM TO SUIT ACTUAL OCCUPIED CONDITIONS. PROVIDE UP TO THREE VISITS TO PROJECT DURING OTHER THAN NORMAL OCCUPANCY HOURS FOR THIS PURPOSE.

3.6 EQUIPMENT LABEL INSTALLATION
A. INSTALL OR PERMANENTLY FASTEN LABELS ON EACH MAJOR ITEM OF MECHANICAL EQUIPMENT.
B. LABEL ACCESS DOORS TO INDICATE THE PURPOSE OF ACCESS DOOR.
C. LOCATE EQUIPMENT LABELS WHERE ACCESSIBLE AND VISIBLE.
D. WHERE EQUIPMENT, SUCH AS A VAV BOX, IS CONCEALED BY ACCESSIBLE DROP OR LAY-IN CEILINGS OR OTHER ACCESSIBLE BARRIER, ATTACH LABEL TO CEILING GRID OR A VISIBLE LOCATION TO IDENTIFY LOCATION OF HIDDEN EQUIPMENT.

3.7 TESTING, ADJUSTING, AND BALANCING
A. PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM ACCORDING TO THIS SECTION AND THE PROCEDURES CONTAINED IN ONE OF THE FOLLOWING:
1. AABC'S "NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE"
2. NEBB'S "PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, AND BALANCING OF ENVIRONMENTAL SYSTEMS."
B. COMPLY WITH REQUIREMENTS IN ASHRAE 62.1 SECTION 7.2.2 - "AIR BALANCING."
C. AIRFLOW VALUES ARE TO BE ADJUSTED TO PLUS OR MINUS 5% OF DESIGN FLOW.
D. SET DAMPERS TO FAIL SAFE POSITION BEFORE TESTING, ADJUSTING, AND BALANCING.
E. MARK EQUIPMENT AND BALANCING DEVICES, INCLUDING DAMPER-CONTROL POSITIONS, VALVE POSITION INDICATORS, FAN-SPEED-CONTROL LEVERS, AND SIMILAR CONTROLS AND DEVICES, WITH PAINT OR OTHER SUITABLE, PERMANENT IDENTIFICATION MATERIAL TO SHOW FINAL SETTINGS.
F. ADJUST FANS TO DELIVER DESIGN AIRFLOW WITHIN THE DESIGN FAN SPEED LISTED BY FAN MANUFACTURER.
G. AFTER TESTING AND BALANCING IS COMPLETE, OPERATE EACH SYSTEM AND RANDOMLY CHECK MEASUREMENTS TO VERIFY THAT THE SYSTEMS ARE OPERATING IN ACCORDING TO THE FINAL TEST AND BALANCE READINGS.

3.8 OPERATION PRIOR TO ACCEPTANCE
A. CONTRACTOR MAY OPERATE ANY EQUIPMENT PROVIDED THAT THE OPERATION IS SUPERVISED AND THE CONTRACTOR RETAINS FULL RESPONSIBILITY FOR PROPERLY MAINTAINING EQUIPMENT AND THE FULL MANUFACTURER'S WARRANTY REMAINS UNAFFECTED FROM THE TIME OF OWNER'S POSSESSION.

GENERAL NOTES:

A. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
B. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK (HVAC, PLUMBING, AND FIRE PROTECTION) ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
C. INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.

GENERAL NOTES (CONT):

D. PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE.
E. PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS CONNECTED TO AND WITHIN 50 FEET OF ISOLATED EQUIPMENT (EXCEPT AT BASE ELBOW SUPPORTS AND ANCHOR POINTS) THROUGHOUT MECHANICAL EQUIPMENT ROOMS. DO THE SAME FOR SUPPORTS OF STEAM MAINS WITHIN 50 FEET OF BOILER OR PRESSURE REDUCING VALVES.
F. PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS OF STEAM MAINS WITHIN 50 FEET OF BOILERS AND PRESSURE REDUCING VALVES.
G. THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
H. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
I. MAINTAIN A MINIMUM OF 6'-8" CLEARANCE TO UNDERSIDE OF PIPES, DUCTS, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.
J. ALL TESTS SHALL BE COMPLETED BEFORE ANY MECHANICAL EQUIPMENT OR PIPING INSULATION IS APPLIED.
K. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UP- AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.
L. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). TESTING, ADJUSTING, AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE AABC STANDARDS.
M. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.
N. REINFORCEMENT, DETAILING, AND PLACEMENT OF CONCRETE SHALL CONFORM TO ASTM 315 AND ACI 318. CONCRETE WORK SHALL CONFORM TO ASTM C94. CONCRETE WORK SHALL CONFORM TO ACI 318, PART ENTITLED "CONSTRUCTION REQUIREMENTS." COMPRESSIVE STRENGTH IN 28 DAYS SHALL BE 3,000 PSI. TOTAL AIR CONTENT OF EXTERIOR CONCRETE SHALL BE BETWEEN 5 AND 7 PERCENT BY VOLUME. SLUMP SHALL BE BETWEEN 3 AND 4 INCHES. CONCRETE SHALL BE CURED FOR 7 DAYS AFTER PLACEMENT.
O. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL DUCT AND PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
P. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND DIVISION 16 OF THE SPECIFICATION.
Q. CONCRETE HOUSEKEEPING PADS TO SUIT MECHANICAL EQUIPMENT SHALL BE SIZED AND LOCATED BY THE MECHANICAL CONTRACTOR. MINIMUM CONCRETE PAD THICKNESS SHALL BE 6 INCHES. PAD SHALL EXTEND BEYOND THE EQUIPMENT A MINIMUM OF 6 INCHES ON EACH SIDE. CONCRETE HOUSEKEEPING PADS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE SIZE AND LOCATION OF CONCRETE HOUSEKEEPING PADS WITH GENERAL CONTRACTOR.
R. ALL MECHANICAL ROOM DOORS SHALL BE A MINIMUM OF 4'-0" WIDE.
S. WHERE BEAMS ARE INDICATED TO BE PENETRATED WITH DUCTWORK OR PIPING, COORDINATE DUCTWORK AND PIPING LAYOUT WITH BEAM OPENING SIZE AND OPENING LOCATIONS. COORDINATION SHALL BE DONE PRIOR TO FABRICATION OF DUCTWORK, CUTTING OF PIPING, OR FABRICATION OF BEAMS.
T. WHEN MECHANICAL WORK (HVAC, PLUMBING, SHEET METAL, FIRE PROTECTION, ETC.) IS SUBCONTRACTED, IT SHALL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE SUBCONTRACTORS AND THE ASSOCIATED CONTRACTS. WHEN DISCREPANCIES ARISE PERTAINING TO WHICH CONTRACTOR PROVIDES A PARTICULAR ITEM OF THE MECHANICAL CONTRACT OR WHICH CONTRACTOR PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE MECHANICAL CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE MECHANICAL CONTRACTOR, WHOSE DECISION SHALL BE FINAL.

GENERAL NOTES (CONT.):

U. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.
V. ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR PIPING, DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.
W. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS, AND OTHER CONCEALED MECHANICAL EQUIPMENT. ACCESS PANELS SHALL BE TURNED OVER TO GENERAL CONTRACTOR FOR INSTALLATION.
X. ALL EQUIPMENT, PIPING, DUCTWORK, ETC., SHALL BE SUPPORTED AS DETAILED, SPECIFIED, AND REQUIRED TO PROVIDE A VIBRATION FREE INSTALLATION.
Y. ALL DUCTWORK, PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH GENERAL CONTRACTOR. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED. THE USE OF C-CLAMPS SHALL NOT BE PERMITTED.
Z. MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHALL NOT BE SUPPORTED FROM METAL DECK.
AA. ALL ROOF MOUNTED EQUIPMENT CURBS FOR EQUIPMENT PROVIDED BY THE MECHANICAL CONTRACTOR SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR.
AB. LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.
AC. ALL OPENINGS IN FIRE WALLS DUE TO DUCTWORK, PIPING, CONDUIT, ETC., SHALL BE FIRE STOPPED WITH A PRODUCT SIMILAR TO 3M OR APPROVED EQUAL.
AD. ALL AIR CONDITIONING CONDENSATE DRAIN LINES FROM EACH AIR HANDLING UNIT AND ROOFTOP UNIT SHALL BE PIPED FULL SIZE OF THE UNIT DRAIN OUTLET, WITH "P" TRAP, AND PIPED TO NEAREST DRAIN. SEE DETAILS SHOWN ON THE DRAWINGS OR THE CONTRACT SPECIFICATIONS FOR DEPTH OF AIR CONDITIONING CONDENSATE TRAP.
AE. REFER TO TYPICAL DETAILS FOR DUCTWORK, PIPING, AND EQUIPMENT INSTALLATION.
AF. INSTALL WORK AS INDICATED ON THE DRAWINGS. VERIFY EXACT LOCATION AND ELEVATIONS AT THE SITE. DO NOT SCALE THE DRAWINGS. MAKE NECESSARY CHANGES IN ELEVATION, FITTINGS OR OFFSETS TO ACCOMMODATE OBSTACLES OR INTERFERENCES. ALL DIMENSIONS ARE TO BE FIELD VERIFIED BEFORE START OF WORK.
AG. CONTRACTOR MUST REVIEW ALL CONSTRUCTION DOCUMENTS PRIOR TO BID. IF MODIFICATIONS TO THESE PLANS IS NECESSARY TO PROPERLY COORDINATE THE SYSTEM WITH OTHER TRADES IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL FOR THE CHANGES FROM BOTH THE AUTHORITY HAVING JURISDICTION AND THE OWNER'S DESIGNATED REVIEW CONSULTANT. THE CONTRACTOR MUST MAKE NOTE OF ANY FIELD OR COORDINATION CHANGES ON THE INSTALLATION DRAWINGS, AND PROVIDE A SET OF AS-BUILT DRAWINGS ONCE COMPLETE.
AH. CONTRACTOR TO VERIFY ALL MEASUREMENTS BEFORE ORDERING MATERIALS OR DOING ANY WORK. NO EXTRA COMPENSATION OR CHANGE ORDERS WILL BE ISSUED DUE TO DIFFERENCES BETWEEN THE ACTUAL MEASUREMENT AND THE DIMENSIONS ON THE DRAWINGS. CONTRACTOR SHALL LAY OUT ALL EQUIPMENT PRIOR TO FABRICATION OR INSTALLATION TO ASSURE PROPER FIT AND AVOIDANCE OF OBSTRUCTIONS, AND SHALL THOROUGHLY COORDINATE WORK WITH ALL TRADES AND DETERMINE EXACT ROUTE AND LOCATION OF EACH ELEMENT AND PIECE OF EQUIPMENT BEFORE FABRICATION AND INSTALLATION.
AI. ALL DEFECTS IN EQUIPMENT OR MATERIALS, OR ERRORS IN THE DRAWINGS DISCOVERED DURING THE PERFORMANCE OF THE WORK SHALL BE REPORTED PROMPTLY TO THE ARCHITECT. IN NO EVENT SHALL THE WORK PROCEED UNTIL DEFECTS AND/OR ERRORS HAVE BEEN RESOLVED.
AJ. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK, BOTH ON AND OFF SITE. IF ANY OF THE CONTRACT DOCUMENTS ARE AT VARIANCE THERewith IN ANY RESPECT, CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT IN WRITING.

GENERAL NOTES (CONT.):

AK. THE CONTRACTOR IS TO PROTECT FURNISHINGS, EQUIPMENT, ETC., AND PROPERLY STORE MATERIAL UNTIL COMPLETION OF THE PROJECT.
AL. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE GENERAL WORK AREA CLEAN AND FREE OF DIRT AND CONSTRUCTION MATERIALS, AND FOR CLEANING THE AREA AT THE END OF EACH DAY. ANY DAMAGE TO THE WALLS, CEILINGS, FLOOR, ETC., THAT OCCURS DURING THE WORK SHALL BE REPAIRED. IF THE SPECIFIC METHOD OF REPAIR IS IN QUESTION, THE CONTRACTOR WILL CONFER WITH THE ARCHITECT BEFORE COMMENCING THE REPAIR.
AM. ALL MATERIALS AND EQUIPMENT ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS, UNLESS OTHERWISE NOTED.
B. MECHANICAL CONTRACTOR SHALL PROVIDE ALTERNATE BID FOR DUCT CLEANING EXISTING TO REMAIN BRANCH AND MAIN DUCTWORK. MECHANICAL CONTRACTOR SHALL VERIFY EXISTING CONDITION OF EXISTING TO REMAIN DUCTWORK AND COORDINATE WITH G.S. ENTRY POINTS FOR DUCT CLEANING PRIOR TO COMMENCEMENT OF WORK.

MECHANICAL DRAWING LIST:

Table with 2 columns: SHEET, TITLE. Rows include MO.1 MECHANICAL NOTES & SPECIFICATIONS, MO.2 MECHANICAL LEGEND & SCHEDULES, M1.0 MECHANICAL VENTILATION SCHEDULES, M2.0 MECHANICAL PROPOSED PLAN, etc.

Revision table with columns for No., Date, and Revision/Issue. Includes revision 1 on 06/31/2024.

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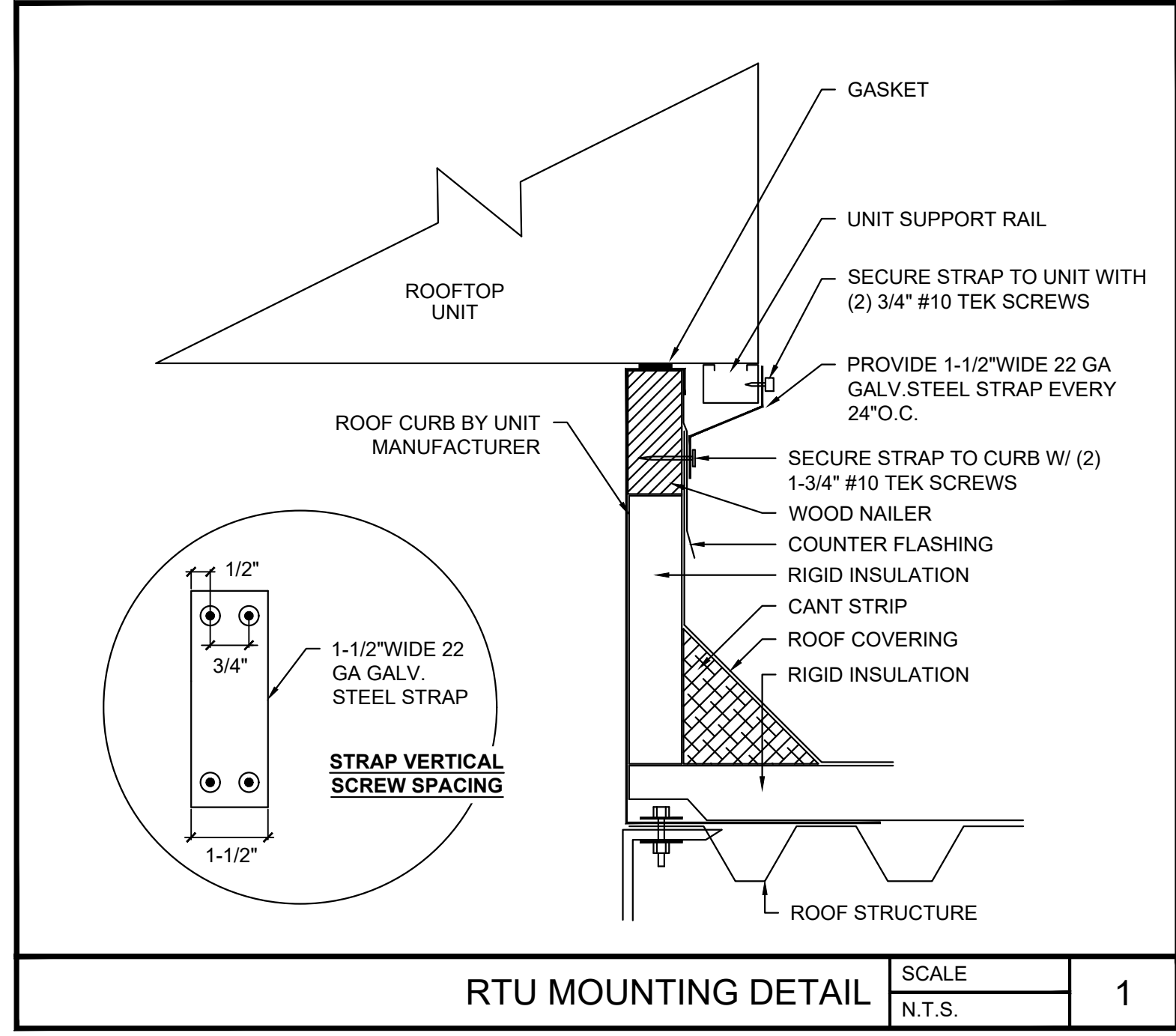
Professional Engineer seal for RICHARD KIMBALL, P.E., License No. 79067, State of Florida.

Project information: Project Name and Address: CEFCO #437 - BETHEL, HIGHWAY 90 AND OLD BETHEL ROAD, CRESTVIEW, FLORIDA. Sheet Title: MECHANICAL NOTES & SPECIFICATIONS. Project No: 170-101.00. Sheet: MO.1.

ROOFTOP AIR CONDITIONING UNITS SCHEDULE

TAG	AREA SERVED	MFG.	MODEL	NOMINAL SIZE (TONS)	SUPPLY AIR FLOW (CFM)	MIN. OUTDOOR AIR FLOW (CFM)	FAN TYPE	EXT SP (IN W.C.)	FAN MOTOR		COOLING CAPACITY			HEATING CAPACITY		ELECTRICAL				EER	SEER	BASE WEIGHT (LBS)
									RPM	HP	SENSIBLE COOLING LOAD (MBH)	TOTAL COOLING LOAD (MBH)	MEDIA	TOTAL HEATING CAPACITY (MBH)	MEDIA	VOLT	PH	HZ	MCA/ MOCPP			
RTU-1	STORE - WEST	CARRIER	48HCEB06B	5	2000	255	CENTRIFUGAL	0.8	1,100	0.5	46.6	56.9	R-410A	41	NAT. GAS	208	3	60	29/40	12.45	15.3	610
RTU-2	KITCHEN-FOOD PREP	CARRIER	48HCEB09B	8.5	3400	285	CENTRIFUGAL	0.8	1,100	0.75	78.60	97.8	R-410A	63.5	NAT. GAS	208	3	60	39/50	12.2	14.8	925
RTU-3	STORE-EAST	CARRIER	48HCEB09B	8.5	3400	375	CENTRIFUGAL	0.8	1,100	0.75	78.60	97.8	R-410A	63.5	NAT. GAS	208	3	60	39/50	12.2	14.8	925

NOTES:
 1. COOLING PERFORMANCES ARE RATED AT 105° F AMBIENT, 80° F ENTERING DRY BULB, 67° F ENTERING WET BULB.
 2. ALTERNATE MANUFACTURERS: TRANE, DAIKIN, YORK.
 3. PROVIDE 4 SETS OF 16"X16"X2" MERV 8 FILTERS FOR RTU-1.
 4. PROVIDE 4 SETS EACH OF 20"X20"X2" MERV 8 FILTERS FOR RTU-2 AND RTU-3.
 5. PROVIDE DUCT MOUNTED SMOKE DETECTOR AT THE RETURN SIDE OF THE ROOFTOP UNITS.
 6. PROVIDE FACTORY COATED PHENOLIC SEACOAST PROTECTION FOR UNITS LOCATED WITHIN 20 MILES OF THE COASTLINE.
 7. PROVIDE 14" FACTORY INSULATED ROOF CURB PITCHED 1/4" PER FOOT ACCORDING TO ROOF SLOPE WITH HURRICANE TIE DOWNS AND ENGINEERED WIND LOAD CALCULATIONS.
 8. PROVIDE ALL RTUS WITH MANUFACTURER'S HAIL GUARDS.
 9. PROVIDE ALL RTUS WITH CARRIER HUMIDIMIZER SYSTEM FOR HUMIDITY CONTROL.



DUCT SIZING GUIDE

SUPPLY DUCT (0.08SP)				RETURN DUCT (0.05SP)			
ROUND DUCT		SQUARE DUCT		ROUND DUCT		SQUARE DUCT	
CFM RANGE	SIZE (IN)	CFM RANGE	SIZE (IN)	CFM RANGE	SIZE (IN)	CFM RANGE	SIZE (IN)
1 - 100	6	1 - 125	6 X 6	1 - 75	6	1 - 100	6 X 6
101 - 210	8	126 - 260	8 X 8	76 - 160	8	101 - 200	8 X 8
211 - 395	10	261 - 470	10 X 10	161 - 290	10	201 - 365	10 X 10
396 - 625	12	471 - 760	12 X 12	291 - 470	12	366 - 595	12 X 12
626 - 910	14	761 - 1,145	14 X 14	471 - 710	14	596 - 895	14 X 14
911 - 1,300	16	1,146 - 1,635	16 X 16	711 - 1,010	16	896 - 1,275	16 X 16
1,301 - 1,800	18	1,636 - 2,235	18 X 18	1,011 - 1,375	18	1,276 - 1,745	18 X 18
1,801 - 2,325	20	2,236 - 2,955	20 X 20	1,376 - 1,815	20	1,746 - 2,310	20 X 20

NOTES:
 1. FOR RECOMMENDED SQUARE SIZE DUCT AN APPROXIMATE EQUIVALENT RECTANGULAR CROSS SECTIONAL AREA IS ALSO ACCEPTABLE FOR ALTERNATIVE RECTANGULAR DUCT DIMENSIONS. DO NOT EXCEED A 3:1 DIMENSION RATIO.
 2. ROUND AND SQUARE DUCT DIMENSIONS HAVE BEEN SIZED BASED ON 0.08 INCHES OF FRICTION HEAD LOSS FOR SUPPLY DUCT AND 0.05 FOR RETURN DUCT.

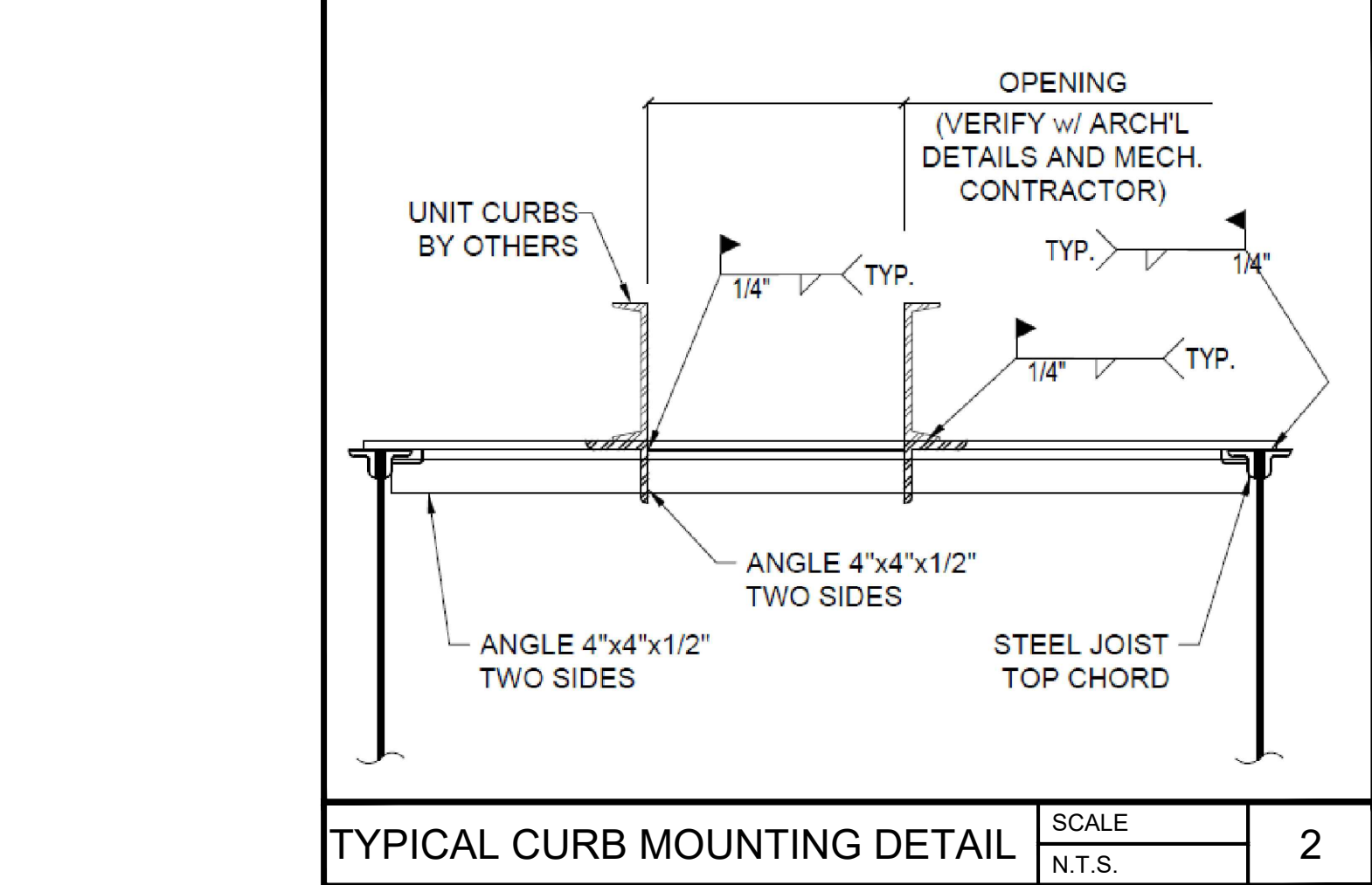
MINIMUM VENTILATION RATES

AREAS	OCCUPANCY LOAD	PEOPLE OUTDOOR AIRFLOW RATE (CFM/PERSON)	AREA (SQFT)	AREA OUTDOOR AIRFLOW RATE (CFM/SQFT)	MINIMUM TOTAL OUTSIDE AIR FLOW (CFM)
SALES	30	7.5	3,150	0.12	603
PREP AREA	4	7.5	380	0.12	76
STORAGE	-	7.5	197	0.12	24
OFFICE	1	7.5	71	0.12	16
TOTAL AIRFLOW					719

GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE

MARK	NECK	MAX CFM	DESCRIPTION
S-1A	6" Ø	110	ALUMINUM HIGH PERFORMANCE THREE CONE DIFFUSER, MODULE SIZE 24X24, TITUS TMS-AA.
S-1B	8" Ø	210	
S-1C	10" Ø	330	
S-1D	12" Ø	480	
S-1E	14" Ø	650	
S-1F	6" Ø	110	S-1F FACE SIZE SHALL BE 12X12.
R-1A	10" X 10"	800	EGGCRATE RETURN AIR GRILLE - CORE OF 1/2"X1/2"X1" ALUMINUM GRID, R-1A-24X12, R-1B-24X24, R-1C-48X24, R-1D-10X10. PANEL SIZE; TITUS 50F. (PROVIDE SQUARE TO ROUND TRANSITION AS NEEDED)
R-1B	22" X 22"	2,000	
R-1C	22" X 46"	4,000	
R-1D	10" X 10"	400	
E-1	10" X 10"	210	EGGCRATE RETURN AIR GRILLE - CORE OF 1/2"X1/2"X1" ALUMINUM GRID, E-1 10X10 PANEL SIZE; TITUS 50F (PROVIDE SQUARE TO ROUND TRANSITION AS NEEDED)
DG-1	SIZE AS SHOWN ON DRAWINGS		ALUMINUM DOOR RETURN GRILLE WITH SIGHT-PROOF BLADES PARALLEL TO LONG DIMENSION; TITUS CT-700 (ALTERNATIVE DIMENSIONS ACCEPTABLE WITH EQUIVALENT CORE AREA)

NOTES:
 1. FURNISH WITH STANDARD WHITE BAKED ENAMEL FINISH (#26 WHITE), UNO.
 2. FURNISH "RAPID-MOUNT" FRAMES FOR S-1 & R-1 DEVICES LOCATED IN DRYWALL CEILINGS. COORDINATE MOUNTING GRAME WITH CEILING/WALL TYPE
 3. ITEMS GRAYED OUT ARE NOT USED IN THIS PROJECTS'S SCOPE OF WORK (PART OF CLIENT STANDARDS).
 4. SIZE FOR MAXIMUM NOISE CRITERION <30 FOR DIFFUSERS, REGISTERS, AND GRILLES.
 5. PROVIDE DIRECTIONAL BLOW CLIPS WHERE REQUIRED OR DIRECTIONAL NECK BAFFLES WHERE INDICATED FOR BLOCKED AIRFLOW.
 6. PROVIDE REMOTE CABLE OPERATED VOLUME DAMPERS LOCATED IN INACCESSIBLE CEILING/WALL CONSTRUCTION.
 7. PROVIDE 120/240 VAC TRANSFORMER POWER MODULE, CONTROLLER/THERMOSTAT AND PRESSURE RELIEF RING FOR ALL VAV DIFFUSERS.
 * BASIS OF DESIGN PRODUCTS ARE INDICATED FOR REFERENCE ONLY. COMPARABLE PRODUCTS WILL BE ACCEPTED PROVIDED COMPLIANCE WITH TECHNICAL SPECIFICATION REQUIREMENTS.



HVAC ABBREVIATIONS:

CFM	AIR FLOW RATE (CUBIC FEET PER MINUTE)
GPM	WATER FLOW RATE (GALLONS PER MIN.)
MBH	1,000 BTU/H
HP	HORSEPOWER
DB	DRY BULB TEMPERATURE (°F)
WB	WET BULB TEMPERATURE (°F)
RH	RELATIVE HUMIDITY (%)
EAT	ENTERING AIR TEMPERATURE (°F)
LAT	LEAVING AIR TEMPERATURE (°F)
LWT	LEAVING WATER TEMPERATURE (°F)
SP	STATIC PRESSURE (IN. W.G.)
ESP	EXTERNAL STATIC PRESSURE (IN. W.G.)
TSP	TOTAL STATIC PRESSURE (IN. W.G.)
FLA	FULL LOAD AMPS
LRA	LOCKED ROTOR AMPS
MCA	MINIMUM CIRCUIT AMPS
MOP	MAXIMUM OVERCURRENT PROTECTION
FPM	FEET PER MINUTE
RPM	REVOLUTIONS PER MINUTE
APD	AIR PRESSURE DROP (IN. W.G.)
WPD	WATER PRESSURE DROP (FT. H2O)
PRV	PRESSURE REDUCING VALVE (PSIG)
RV	RELIEF VALVE (PSIG)
PSIG	POUNDS PER SQUARE INCH
SA	SUPPLY AIR
RA	RETURN AIR
OA	OUTSIDE AIR
EXH	EXHAUST AIR
RFA	RELIEF AIR
CC	COOLING COIL
HC	HEATING COIL
PHC	PREHEAT COIL
RHC	REHEAT COIL
ΔT	DELTA T, TEMP. DIFFERENCE, °F
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CW	CONDENSER SUPPLY
CR	CONDENSER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
LPS	LOW PRESSURE STEAM, PSIG
LPC	LOW PRESSURE CONDENSATE
MPS	MEDIUM PRESSURE STEAM, PSIG
HPS	HIGH PRESSURE STEAM, PSIG

MINIMUM DUCT INSULATION R-VALUES:

LOCATION (1)	SUPPLY DUCT	RETURN DUCT
EXTERIOR OF BUILDING	R-6	R-4.2
VENTILATED ATTIC	R-6	R-4.2
UNVENTED ATTIC ABOVE INSULATED CEILING	R-6	R-4.2
UNVENTED ATTIC WITH ROOF INSULATION	R-4.2	NONE
UNCONDITIONED SPACES (2)	R-4.2	R-4.2
INDIRECTLY CONDITIONED SPACES (3)	NONE	NONE
CONDITIONED SPACES	NONE	NONE
BURIED	R-4.2	NONE

NOTES:
 1. INCLUDES CRAWL SPACES, BOTH VENTILATED AND NONVENTILATED.
 2. INCLUDES RETURN AIR PLENUMS WITH OR WITHOUT EXPOSED ROOFS ABOVE.

EQUIPMENT ROOF CURB INFORMATION:

MECHANICAL DESIGN:
 IBC 1510.10 MECHANICAL UNITS - ROOF MOUNTED MECHANICAL UNITS SHALL BE MOUNTED ON CURBS RAISED A MINIMUM OF 8 INCHES ABOVE THE ROOF SURFACE, OR WHERE ROOFING MATERIALS EXTEND BENEATH THE UNIT, ON RAISED EQUIPMENT SUPPORTS PROVIDING A MINIMUM CLEARANCE HEIGHT IN ACCORDANCE WITH TABLE 1510.10.

MOUNTED MECHANICAL UNITS	
WIDTH OF MECHANICAL UNIT (INCHES)	MINIMUM CLEARANCE ABOVE SURFACES (INCHES)
< 24	14
25 - 36	18
37 - 48	24
49 - 60	30
> 60	48

RTU WIND MITIGATION INFORMATION:

STRUCTURAL DESIGN:
 • DESIGN FOR BASIC WIND SPEED = 155 MPH.
 • EXPOSURE CATEGORIES: C
 • RISK CLASSIFICATION CATEGORY: II
 • MEAN ROOF HEIGHT = 15 FT.

REFER TO STRUCTURAL DRAWINGS FOR DETAILED INFORMATION.

HVAC LEGEND DOUBLE LINE:

HVAC SYMBOLS:

T	THERMOSTAT CONTROL
TS	TEMPERATURE SENSOR
C	CO2 SENSOR
HS	HUMIDITY SENSOR
SD	SMOKE DETECTOR
AT	AVERAGING TEMPERATURE SENSOR
□	EQUIPMENT DESIGNATION
U	3/4" DOOR UNDERCUT
⊖	OPEN VAULT DOOR WITH BARS

HVAC/PIPING SYMBOLS:

Date	05/31/2024
Revision/Issue	ISSUE FOR PERMIT
No.	1

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Date

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CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title
MECHANICAL LEGEND & SCHEDULES

Project No. 170-101.00	Sheet M0.2
Drawn By IV	
Reviewed By RK	

RTU-3 VENTILATION SCHEDULE:

System name and number	RTU-3
Condition analyzed (impacts Ez, Vdz, Vpz and Vps)	Cooling
All zones are included in the VRP calculation	Yes

Zone Name and Number	Occupancy Category	Zone Floor Area Az (sq ft)	Are you using default value for zone population?	Zone Population Pz (people)	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow Voz (cfm)	Zone Discharge Airflow Vdz (cfm)	Zone Primary Airflow Vpz (cfm)	Zone Secondary Recirculation Fraction Er	Zone Primary Air Fraction Ep
Storage (Beverge)	Occupiable storage rooms for dry materia	168	No	1.00	0.8	25	300	300	1.00	1.0
Sales - East	Sales	1,510	No	12.00	0.8	441	3,000	3,000	1.00	1.0

Add Rows Delete Rows

System area	As (sq ft)	1,678
System population	Ps (people)	13.00
Sum of zone population	sum of Pz (people)	13.00
Occupant diversity	D	1.0
Uncorrected outdoor air intake	Vou (cfm)	372
System primary airflow (at condition analyzed)	Vps (cfm)	3,300
Average outdoor air fraction	Xs	0.11

Which method from ASHRAE 62.1 is being used to determine system ventilation efficiency (Ev)?	Table 6-3	
Ventilation efficiency	Ev	1.00
Outdoor air intake flow (30% above 62.1 requirement)	Vof (cfm)	372
Outdoor air intake flow provided (measured or design)	(cfm)	372

RTU-1 VENTILATION SCHEDULE:

System name and number	RTU-1
Condition analyzed (impacts Ez, Vdz, Vpz and Vps)	Cooling
All zones are included in the VRP calculation	Yes

Zone Name and Number	Occupancy Category	Zone Floor Area Az (sq ft)	Are you using default value for zone population?	Zone Population Pz (people)	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow Voz (cfm)	Zone Discharge Airflow Vdz (cfm)	Zone Primary Airflow Vpz (cfm)	Zone Secondary Recirculation Fraction Er	Zone Primary Air Fraction Ep
Restroom Corridor	Corridors	122	No	0.00	0.8	12	110	110	1.00	1.0
Sales - West	Sales	1,008	No	6.00	0.8	270	1,050	1,050	1.00	1.0

Add Rows Delete Rows

System area	As (sq ft)	1,130
System population	Ps (people)	6.00
Sum of zone population	sum of Pz (people)	6.00
Occupant diversity	D	1.0
Uncorrected outdoor air intake	Vou (cfm)	225
System primary airflow (at condition analyzed)	Vps (cfm)	1,050
Average outdoor air fraction	Xs	0.21

Which method from ASHRAE 62.1 is being used to determine system ventilation efficiency (Ev)?	Table 6-3	
Ventilation efficiency	Ev	0.89
Outdoor air intake flow (30% above 62.1 requirement)	Vof (cfm)	253
Outdoor air intake flow provided (measured or design)	(cfm)	253

RTU-2 VENTILATION SCHEDULE:

System name and number	RTU-2
Condition analyzed (impacts Ez, Vdz, Vpz and Vps)	Cooling
All zones are included in the VRP calculation	Yes

Zone Name and Number	Occupancy Category	Zone Floor Area Az (sq ft)	Are you using default value for zone population?	Zone Population Pz (people)	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow Voz (cfm)	Zone Discharge Airflow Vdz (cfm)	Zone Primary Airflow Vpz (cfm)	Zone Secondary Recirculation Fraction Er	Zone Primary Air Fraction Ep
Corridor	Corridors	77	No	0.00	0.8	8	70	70	1.00	1.0
Kitchen	Cafeteria / fast food dining	243	No	2.00	0.8	95	750	750	1.00	1.0
Deli Area	Kitchen (cooking)	410	No	6.00	0.8	153	1,000	1,000	1.00	1.0
Cashier	Sales	255	No	5.00	0.8	111	320	320	1.00	1.0
Electrical	Telephone closets	173	No	1.00	0.8	0	700	700	1.00	1.0
Storage	Occupiable storage rooms for dry materia	125	No	0.00	0.8	12	200	200	1.00	1.0
Fro-Yo	Sales	112	No	2.00	0.8	46	290	290	1.00	1.0
Office	Office space	61	No	1.00	0.8	14	70	70	1.00	1.0

Add Rows Delete Rows

System area	As (sq ft)	1,456
System population	Ps (people)	3.00
Sum of zone population	sum of Pz (people)	17.00
Occupant diversity	D	0.2
Uncorrected outdoor air intake	Vou (cfm)	226
System primary airflow (at condition analyzed)	Vps (cfm)	3,400
Average outdoor air fraction	Xs	0.07

Which method from ASHRAE 62.1 is being used to determine system ventilation efficiency (Ev)?	Table 6-3	
Ventilation efficiency	Ev	0.80
Outdoor air intake flow (30% above 62.1 requirement)	Vof (cfm)	282
Outdoor air intake flow provided (measured or design)	(cfm)	282

WALK-IN EVAPORATOR AND CONDENSING UNIT SCHEDULE

TAG	LOCATION	MANUFACTURER	INDOOR UNIT MODEL	INDOOR UNIT MOUNTING TYPE	SYSTEM TYPE	PAIRED CONDENSING UNIT	CONDENSING UNIT MODEL	REFRIGERANT TYPE	COOLING			ELECTRICAL		PHYSICAL		
									CAPACITY (MBH)	ΔT	CFM (PER FAN)	OUTDOOR UNIT VOLT / PH / HZ	INDOOR UNIT	OUTDOOR UNIT	INDOOR UNIT WEIGHT LBS.	OUTDOOR UNIT WEIGHT LBS.
1C	BEER CAVE (117)	LEER	CEC01180BS6 EMAD8699	CENTER MOUNT	AIR DEFROST	1B	CCH0030MCAC ZA0200	R-404A	13.0	10	1950	208 / 3 / 60	23	37.5	141	208
1G	FREEZER (112)	LEER	CEL0130BS6E EAD8748	LOW SILHOUETTE	AIR DEFROST	1F	CCH0045LCBC ZA0200	R-404A	21.0	10	2100	208 / 3 / 60	15	37	66	275
71A 71B 71C	COOLER (113)	LEER	CEL0125AS6A MAD8749	LOW SILHOUETTE	AIR DEFROST	70	CCH0055MCAC ZA0100	R-404A	48.0	10	1300	208 / 3 / 60	2.25	27.5	66	275
73	COOLER (105)	LEER	CEL0060AS6A MAD8701	LOW SILHOUETTE	AIR DEFROST	72	CCH0009MCAC ZA0100	R-404A	7.0	10	1460	208 / 3 / 60	2.25	15	62	234
68	FREEZER (104)	LEER	CEL0080BS6E EAD8750	LOW SILHOUETTE	AIR DEFROST	59	CCH0030LCBC ZA0200	R-404A	9.0	10	1460	208 / 3 / 60	10	28.8	49	216

NOTES:
1. REFRIGERATION EQUIPMENT SHALL BE SUPPLIED AND INSTALLED PER MANUFACTURER'S GUIDELINES AND INSTALLATION MANUAL. NO SUBSTITUTIONS OR ALTERNATE VENDORS SHALL BE PERMITTED WITHOUT APPROVAL FROM OWNER.

Date	05/31/2024
Revision/Issue	1



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RICHARD KIMBALL, P.E.
FL REG. NO. 79067



Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
MECHANICAL VENTILATION SCHEDULES

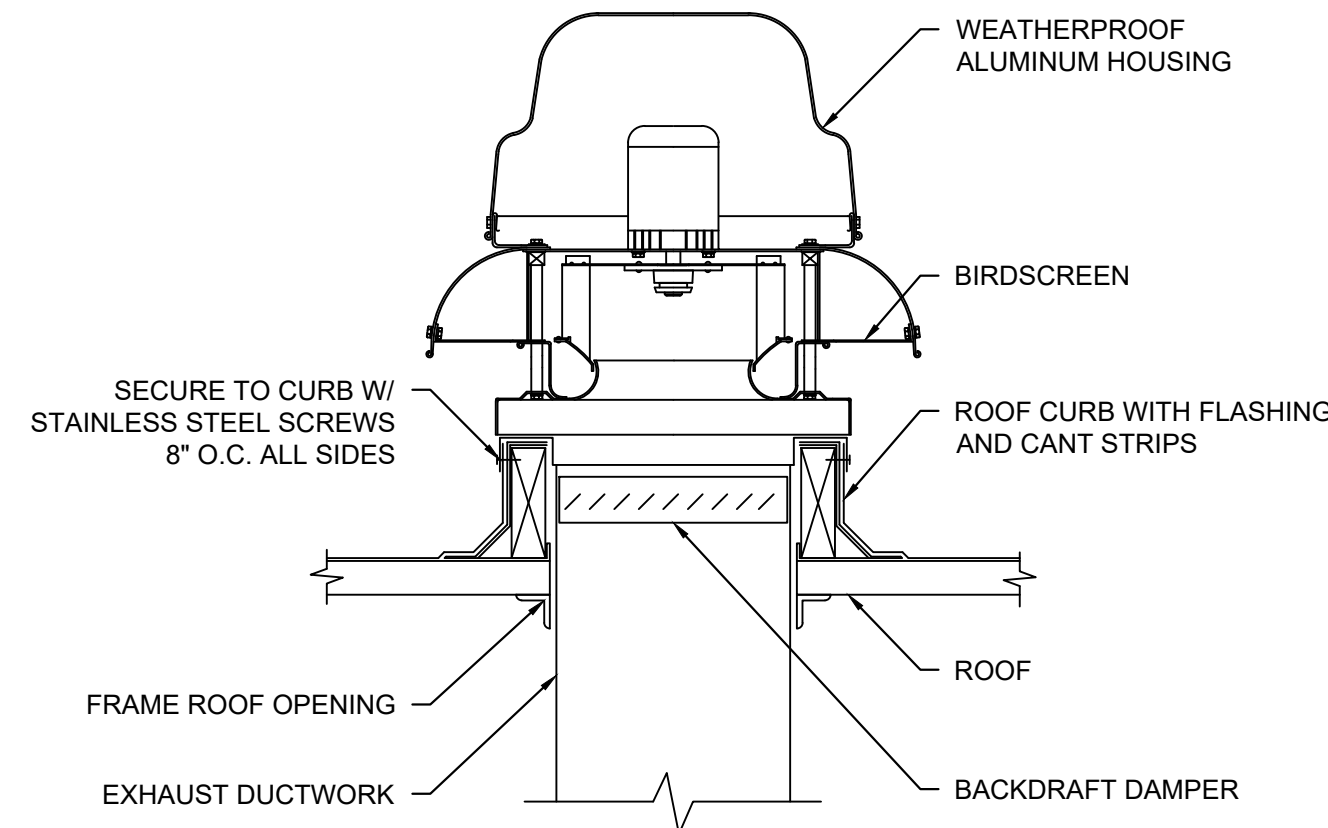
Project No.
170-101.00

Sheet
IV

Drawn By
IV

Reviewed By
RK

M0.3

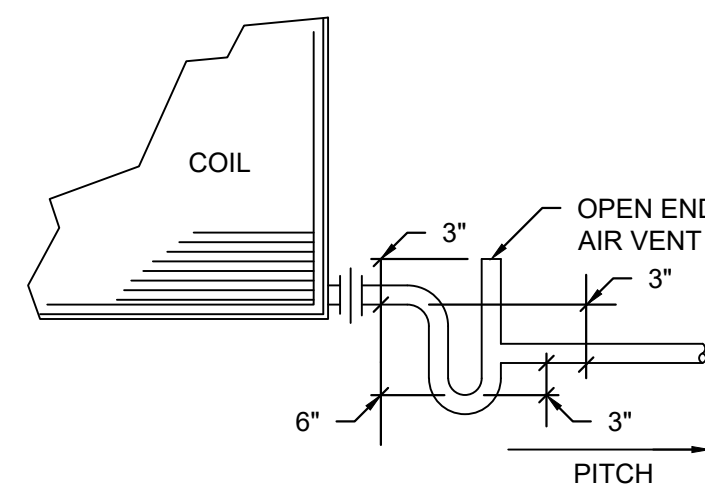


EQUIPMENT ROOF CURB INFORMATION:

MECHANICAL DESIGN:
ROOF MOUNTED MECHANICAL UNITS SHALL BE MOUNTED ON CURBS RAISED A MINIMUM OF 8 INCHES ABOVE THE ROOF SURFACE, OR WHERE ROOFING MATERIALS EXTEND BENEATH THE UNIT. ON RAISED EQUIPMENT SUPPORTS PROVIDING A MINIMUM CLEARANCE HEIGHT IN ACCORDANCE WITH TABLE 1510.10.

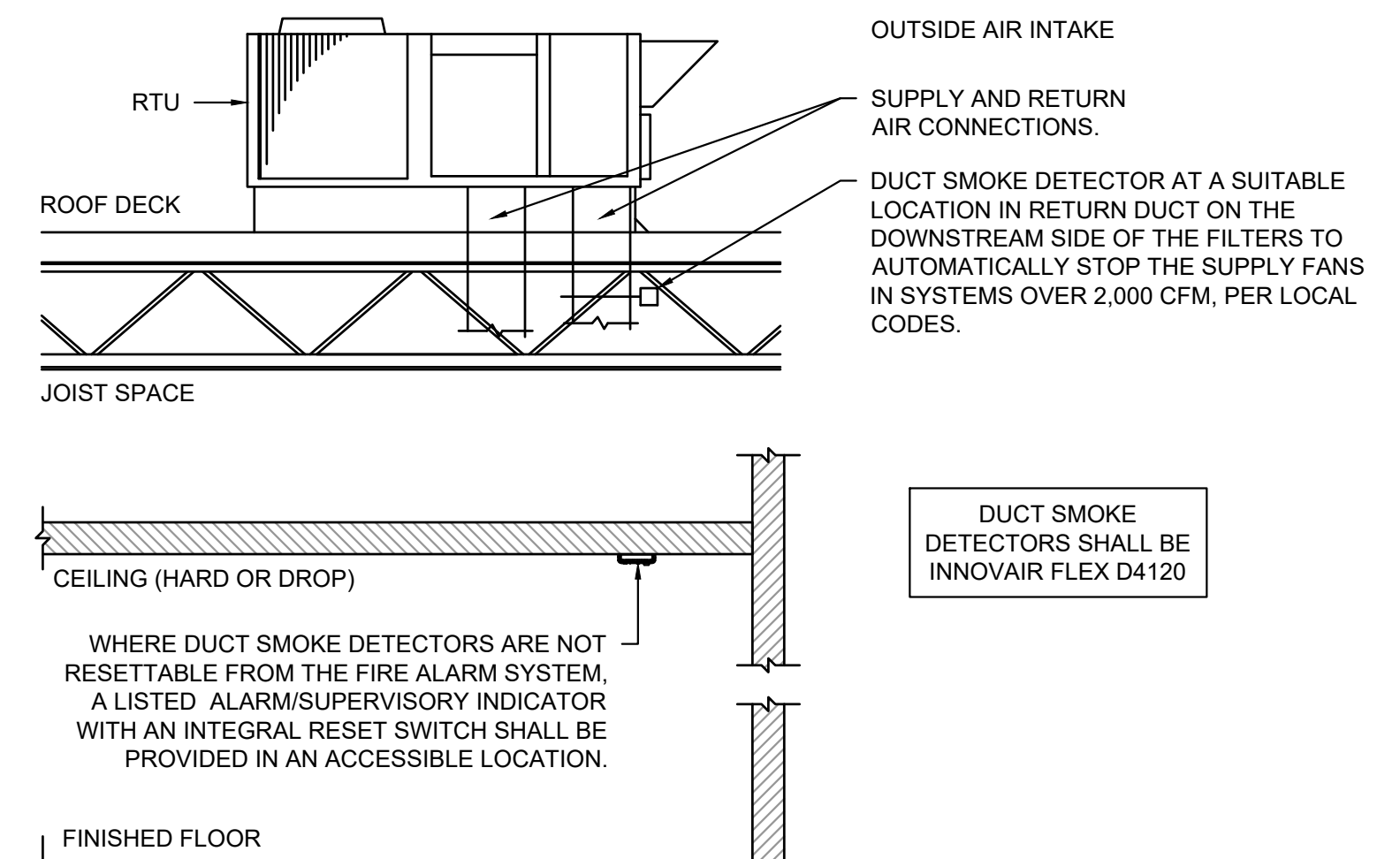
MOUNTED MECHANICAL UNITS	
WIDTH OF MECHANICAL UNIT (INCHES)	MINIMUM CLEARANCE ABOVE SURFACES (INCHES)
< 24	14
25 < 36	18
37 < 48	24
49 < 60	30
> 60	48

ROOF MOUNTED EXHAUST FAN DETAIL SCALE N.T.S. 1



- NOTES:**
- CONDENSATE PIPING SHALL BE OF CORROSION RESISTANT MATERIAL AND SHALL NOT BE SMALLER THAN THE DRAIN CONNECTION ON THE APPLIANCE.
 - CONDENSATE WASTE AND DRAIN LINE SIZE SHALL BE NOT LESS THAN 3/4".
 - MINIMUM HORIZONTAL SLOPE IN THE DIRECTION OF DISCHARGE OF NOT LESS THAN 1/8 UNIT VERTICAL IN 12 UNITS HORIZONTAL.
 - CONDENSATE PUMPS LOCATED IN UNINHABITABLE SPACES, SUCH AS ATTICS AND CRAWL SPACES, SHALL BE CONNECTED TO THE APPLIANCE OR EQUIPMENT SERVED SUCH THAT WHEN THE PUMP FAILS, THE APPLIANCE OR EQUIPMENT WILL BE PREVENTED FROM OPERATING.

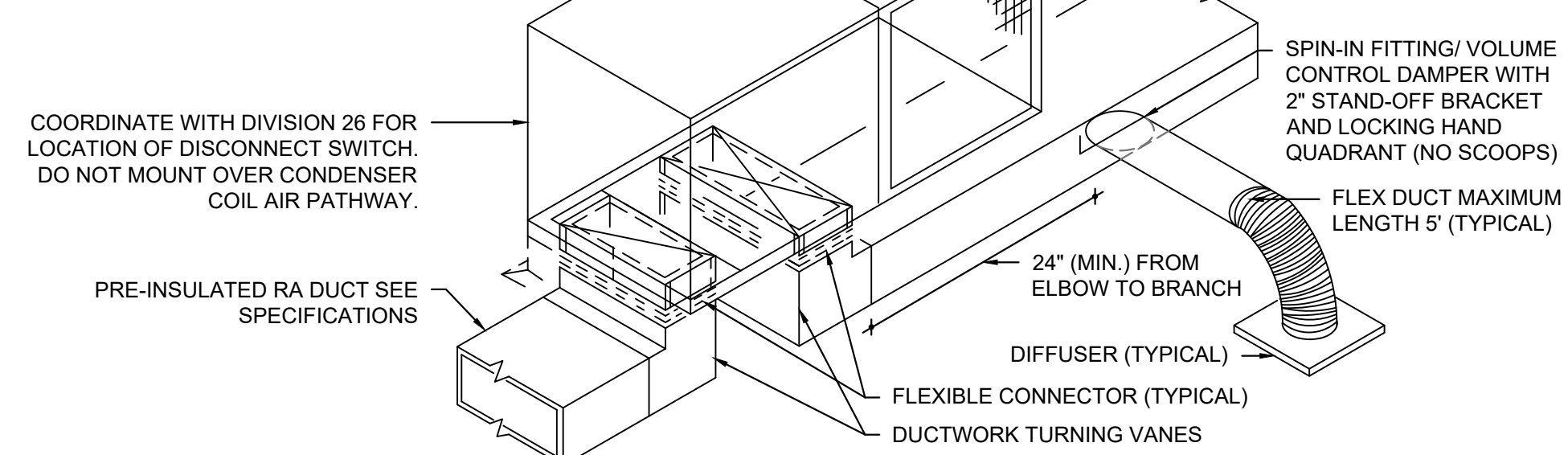
CONDENSATE DRAIN TRAP DETAIL SCALE N.T.S. 4



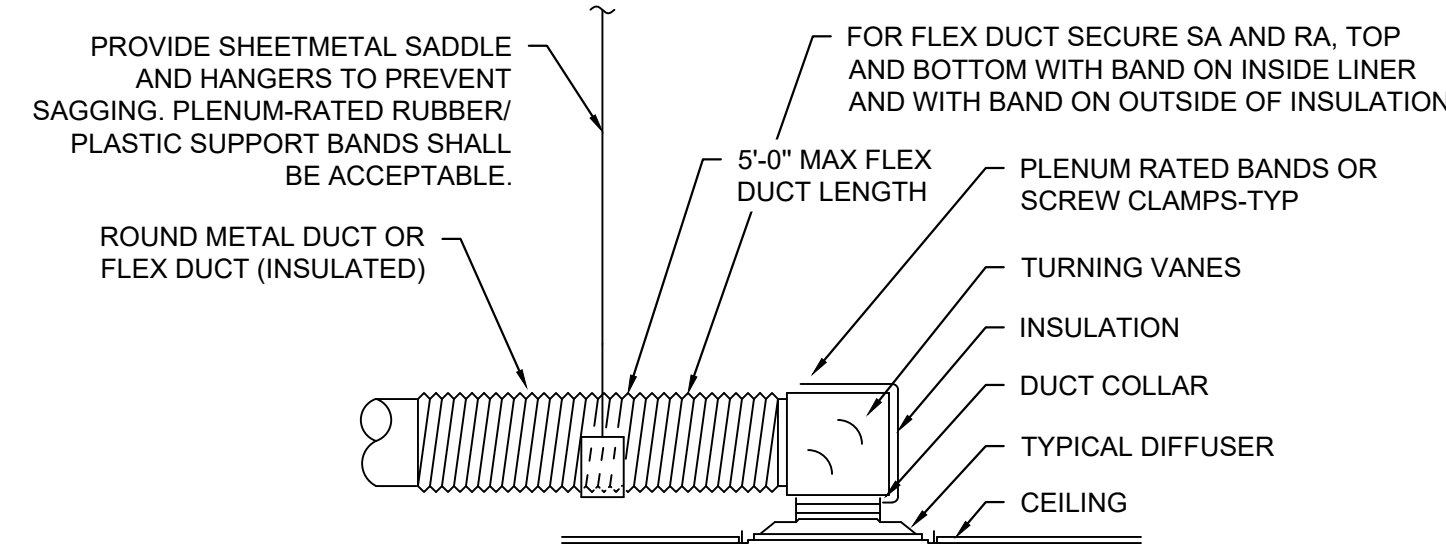
TYPICAL HVAC DUCT SMOKE DETECTOR DETAIL SCALE N.T.S. 6

ROOFTOP UNIT NOTES:

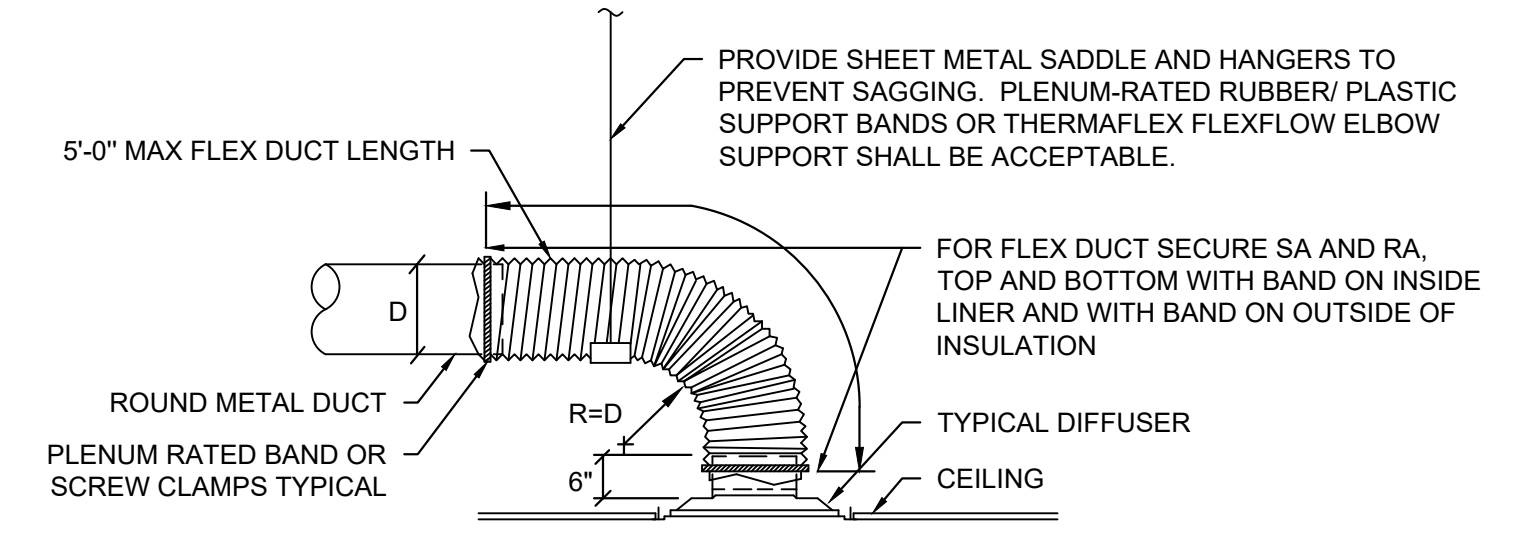
- ALL POWER AND CONTROL WIRING FOR ROOFTOP-MOUNTED HVAC EQUIPMENT SHALL BE RUN THROUGH THE BASE INSIDE THE CURB.
- UNITS SHALL BE MOUNTED LEVEL. SEE ARCHITECTURAL PLANS FOR ROOF PENETRATION FLASHING DETAILS.
- SEE ARCHITECTURAL CURB DETAILS. IT IS VERY IMPORTANT CURB CORNERS AND FLASHING ARE SEALED WATER-TIGHT.



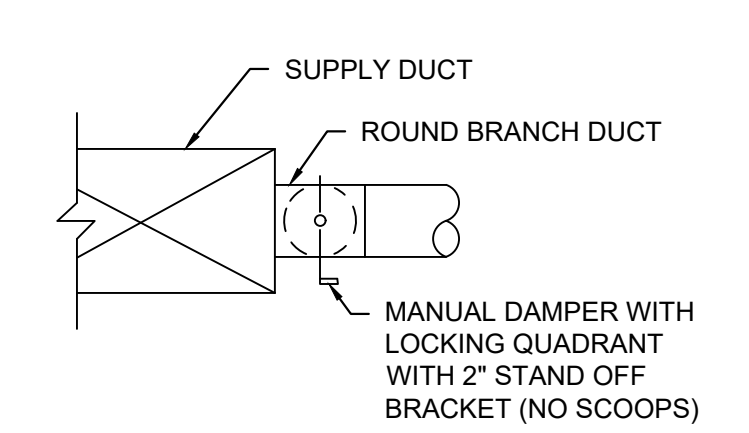
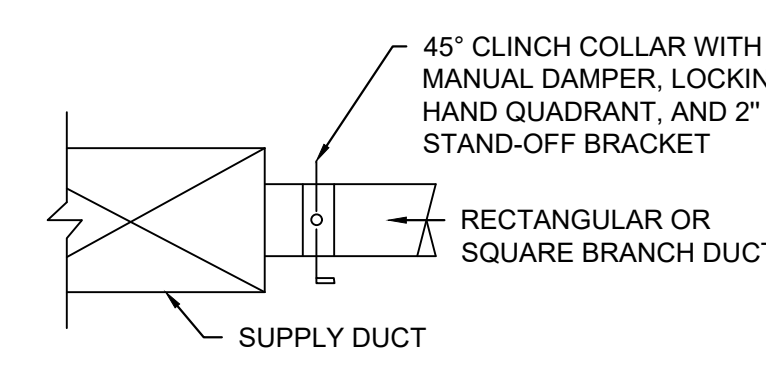
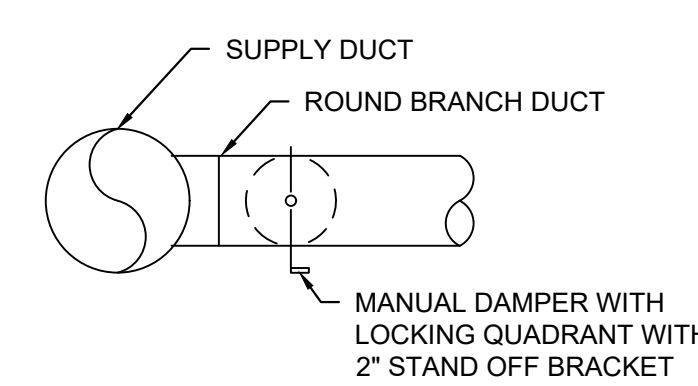
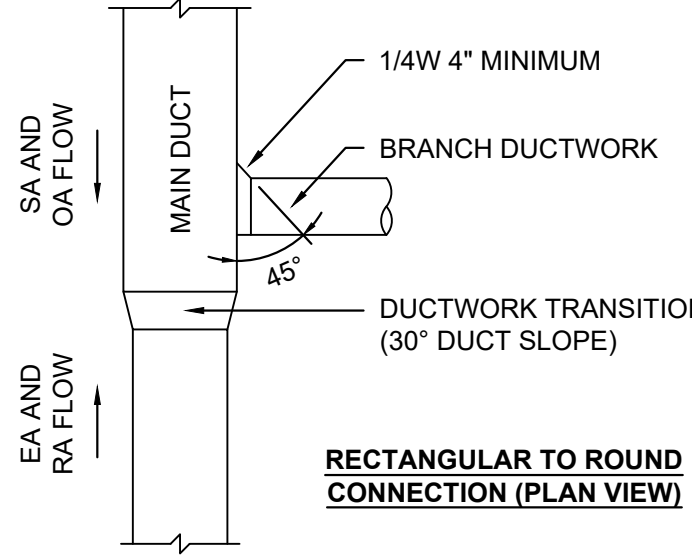
ROOF TOP UNIT W/DISTRIBUTION DUCT DETAIL SCALE N.T.S. 8



DIFFUSER CONNECTION DETAIL - LOW CLEARANCE SCALE N.T.S. 2



DIFFUSER CONNECTION DETAIL - TYPICAL CLEARANCE SCALE N.T.S. 3



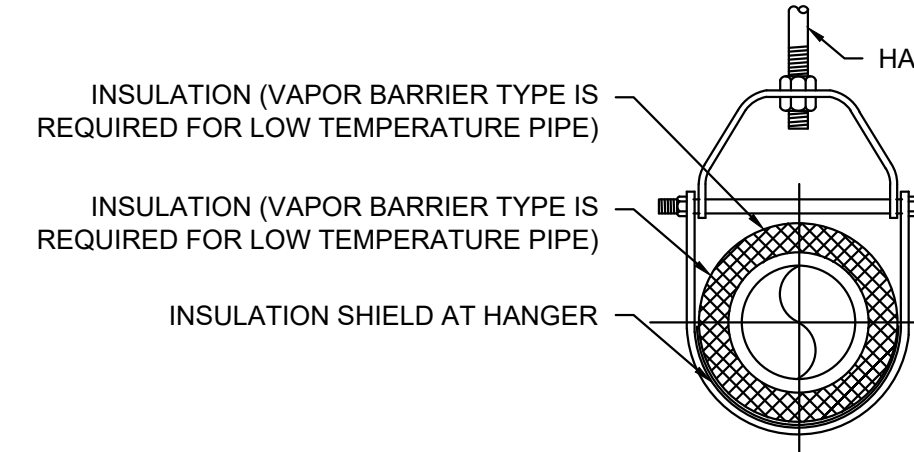
RECTANGULAR TO ROUND CONNECTION (PLAN VIEW)

ROUND TO ROUND CONNECTION

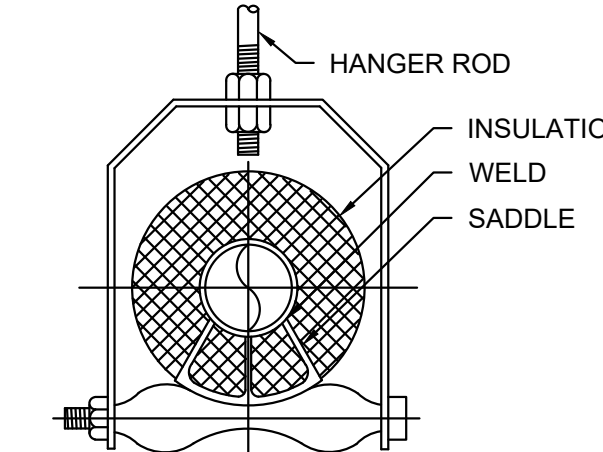
RECTANGULAR/SQUARE TO RECTANGULAR/SQUARE CONNECTION

RECTANGULAR/SQUARE TO ROUND CONNECTION

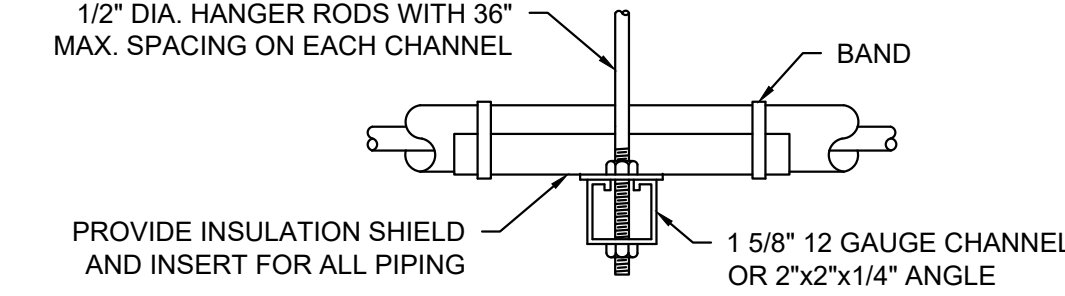
BRANCH DUCT CONNECTION DETAIL SCALE N.T.S. 5



ADJUSTABLE CLEVIS HANGER TYPE 1 IN SPECIFICATIONS



ADJUSTABLE ROLLER HANGER TYPE 44 IN SPECIFICATIONS



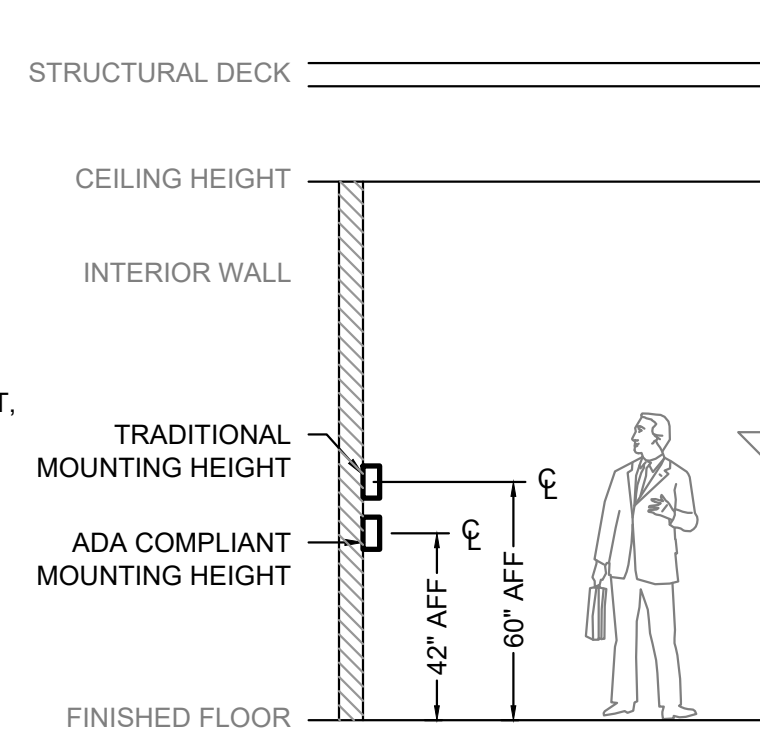
(SIDE VIEW) TRAPEZE HANGER FOR UP TO 1000 LB. UNIFORM LOAD

MAXIMUM PIPE/TUBING SUPPORT SPACING (FT)										
NOM. SIZE	THRU 3/4"	1	1-1/4	1-1/2	2	2-1/2	3	4	6	10
PIPE	7 (FT)	7	7	9	10	11	12	14	16	17
TUBING	5 (FT)	6	7	8	8	9	10	12	13	14

PIPE HANGERS DETAIL SCALE N.T.S. 7

NOTES:

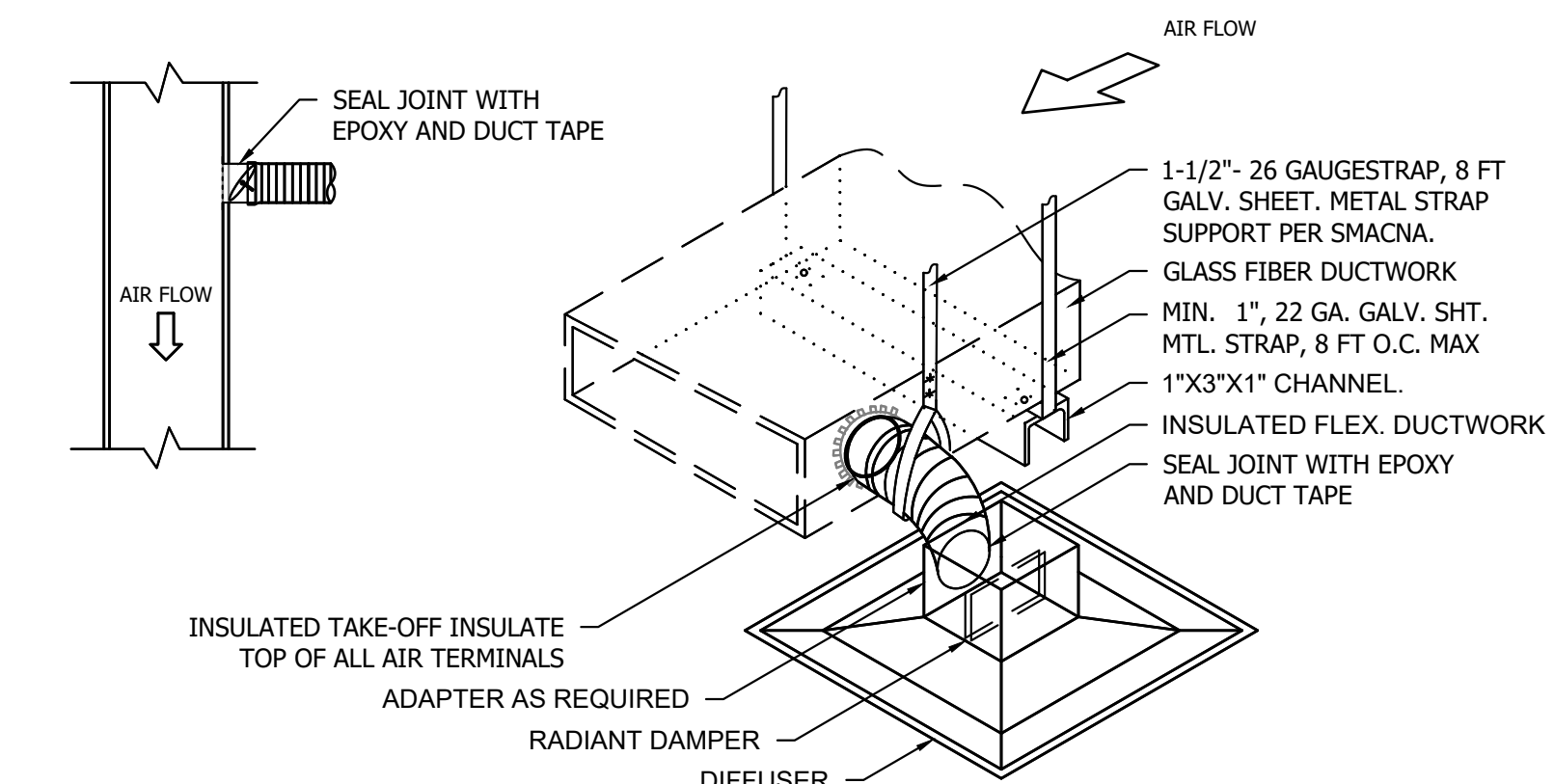
- ALL THERMOSTATS SHALL BE INSTALLED AT 42" AFF UNLESS NOTED OTHERWISE.
- MAINTAIN 16" FROM ADJACENT EXTERIOR WALLS. WHERE INSTALLATION IS REQUIRED ON EXTERIOR WALL, PROVIDE INSULATED MOUNTING PAD FOR BASE PLATE.
- REFRAIN FROM INSTALLING THERMOSTAT NEAR ANY HEATING OR COOLING SOURCES, SUCH AS EQUIPMENT, WINDOWS, OR UNDER SUPPLY DIFFUSERS.
- ENSURE THERMOSTAT IS INSTALLED IN CORRECT ORIENTATION AND ACCORDING TO ALL MANUFACTURER INSTALLATION INSTRUCTIONS.
- COORDINATE FINAL LOCATION WITH IN FIELD CONDITIONS, MAINTAIN CLEARANCE FROM NEARBY SWITCHES AND OTHER DEVICES AS NEEDED.



THERMOSTAT MOUNTING DETAIL SCALE N.T.S. 9

NOTES:

- SEE SMACNA STANDARDS FOR ADDITIONAL DETAILS.
- NOT MORE THAN ONE TRANSVERSE JOINT BETWEEN HANGERS.



FIBERGLASS DUCT HANGER DETAILS SCALE N.T.S. 10

DETAILS NOTE: NOT ALL DETAILS ON THIS SHEET MAY APPLY TO THIS PROJECT. REFER TO PROJECT MECHANICAL PLANS FOR DETAILS APPLICABLE TO THIS PROJECT.

Date	Revision
05/31/2024	1

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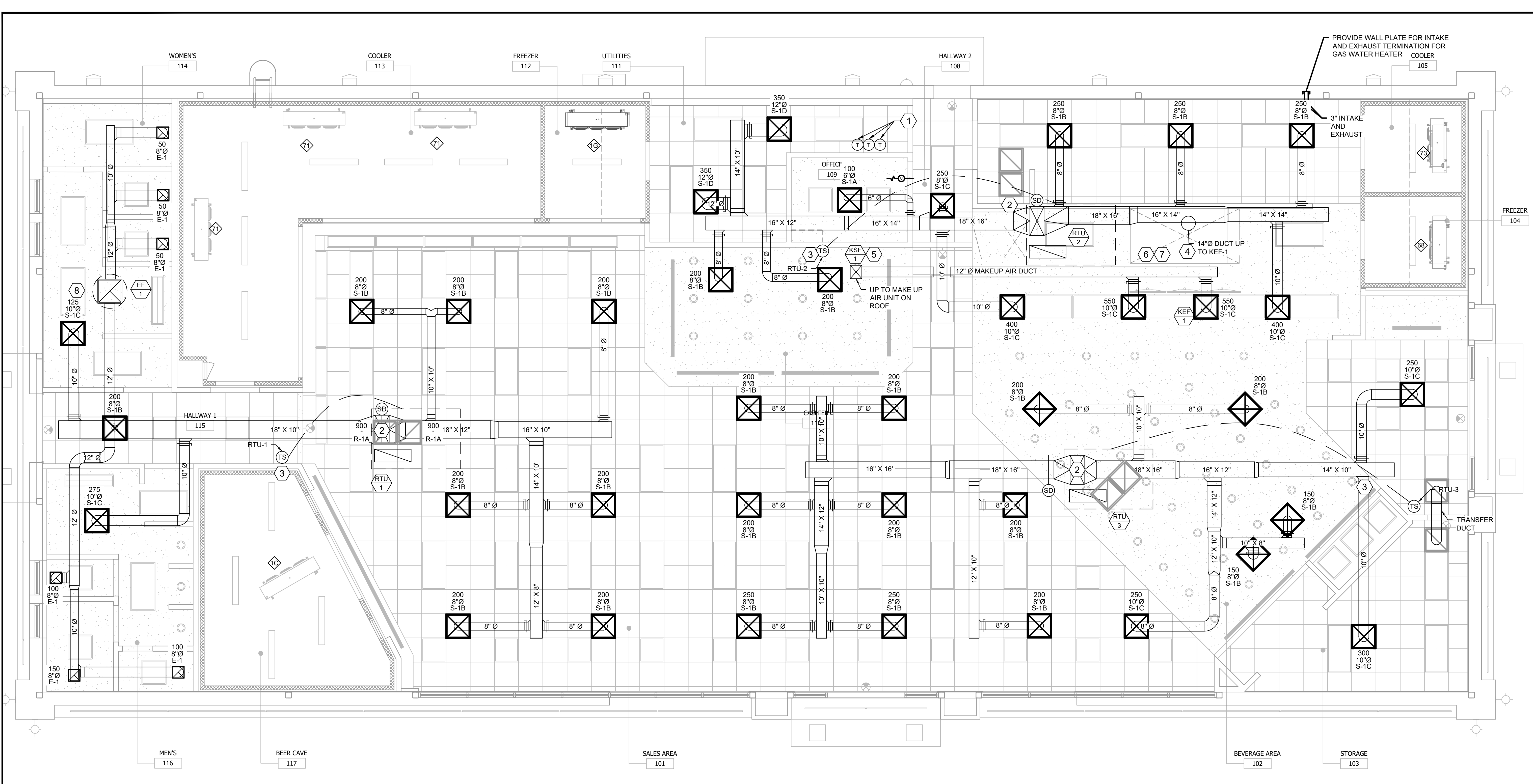
RICHARD KIMBALL, P.E. FL REG. NO. 79067

Project Name and Address: **CEFCO #437 - BETHEL**
HIGHWAY 90 AND OLD BETHEL ROAD CRESTVIEW, FLORIDA

MECHANICAL DETAILS

Project No: 170-101.00
Drawn By: IV
Reviewed By: RK

Sheet: **M1.0**



MECHANICAL PROPOSED PLAN
SCALE 1/4" = 1'-0"

PLAN SHEET NOTES:

- ① THERMOSTAT LOCATIONS FOR RTU-1, RTU-2, AND RTU-3. REFER TO DETAIL FOR MOUNTING HEIGHT AND INSTRUCTIONS. PROVIDE CLEAR LOCKABLE COVER. INSTALL SMOKE DETECTOR REMOTE TEST RESET SWITCH IN AUDIBLE AND VISIBLE LOCATION NEARBY. REFER TO DETAIL.
- ② SUPPLY AND RETURN DUCTWORK UP TO MECHANICAL UNIT LOCATED ON ROOF. REFER TO ROOF PLAN FOR EXACT LOCATION.
- ③ ROOFTOP UNIT REMOTE TEMPERATURE SENSOR. MOUNT AT 6' A.F.F.
- ④ 14" ROUND DUCT UP TO KEF-1 ON ROOF. REFER TO ROOF PLAN FOR EXACT LOCATION.
- ⑤ 12" MAKEUP AIR DUCT UP TO KSF-1. SEE ROOF PLAN FOR LOCATION OF KSF. REFER TO CAPTIVEAIRE DRAWINGS FOR SPECS, DETAILS AND ADDITIONAL INFORMATION.
- ⑥ GREASE HOOD DUCT SYSTEMS SHALL BE DESIGNED AND INSTALLED SO AS TO PROVIDE AN AIR VELOCITY WITHIN THE DUCT SYSTEM OF NOT LESS THAN 1,500 FT/MIN AND NO GREATER THAN 2,500 FT/MIN. TO PREVENT ACCUMULATION OF GREASE, DUCT SYSTEMS SHALL BE CONSTRUCTED AND INSTALLED AT A SLOPE OF NOT LESS THAN 1/4 UNIT VERTICAL IN 12 UNITS HORIZONTAL TOWARD THE HOOD. WHERE HORIZONTAL DUCT EXCEEDS 75' IN LENGTH, SLOPE SHALL NOT BE LESS THAN ONE UNIT VERTICAL IN 12 UNITS HORIZONTAL PER MECHANICAL CODE.
- ⑦ TYPE-1 9' KITCHEN HOOD WITH SUPPRESSION SYSTEM. REFER TO CAPTIVEAIRE DETAILS AND SUBMITTAL FOR MORE INFORMATION. PROVIDE MANUAL PULL STATION.
- ⑧ 12" ROUND EXHAUST DUCT UP TO EF-1. SEE ROOF PLAN FOR LOCATION OF FAN.

No.	Revision/Issue	Date
1	ISSUE FOR PERMIT	05/31/2024

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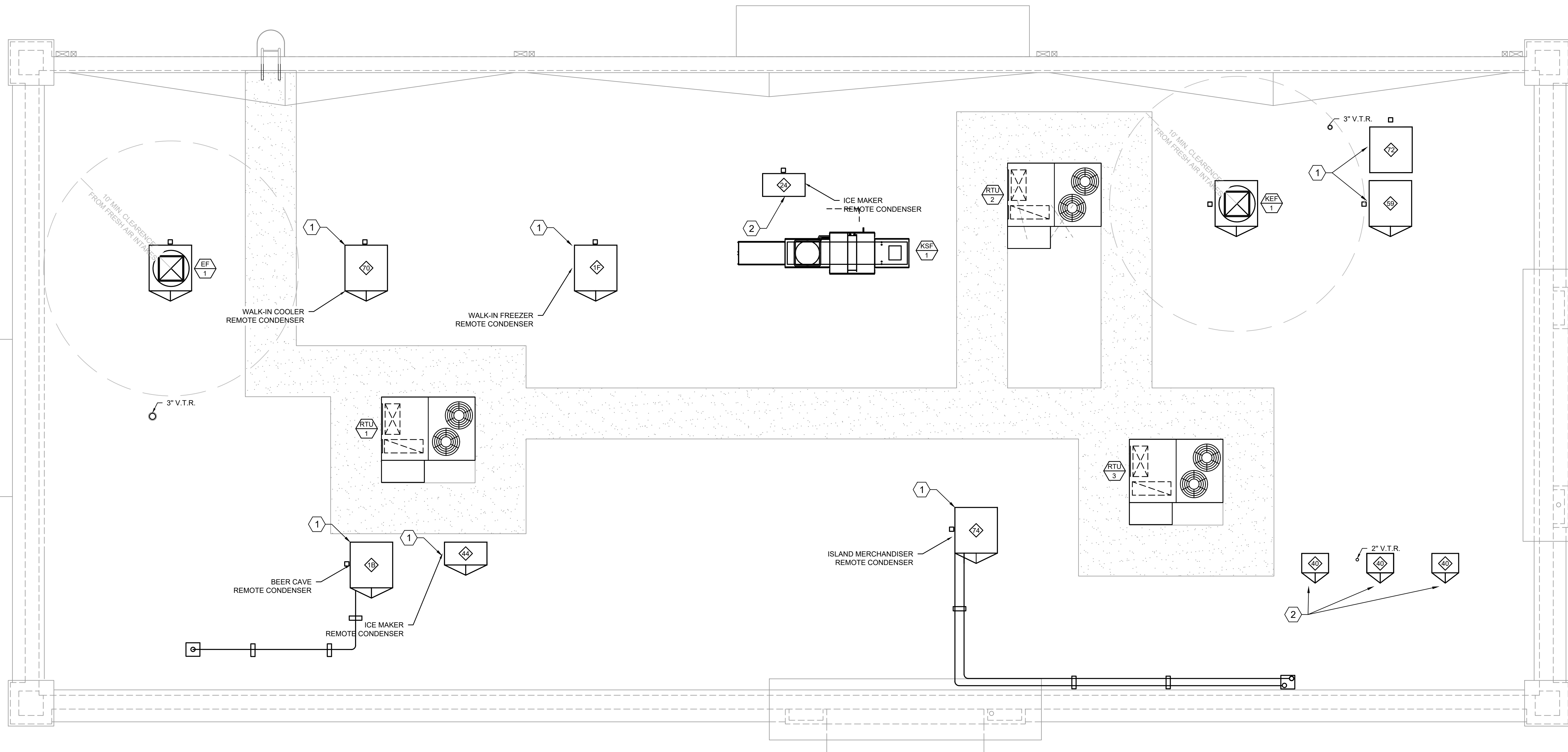
Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
MECHANICAL PROPOSED PLAN

Project No. 170-101.00
Drawn By IV
Reviewed By RK

Sheet M2.0



MECHANICAL PROPOSED ROOF PLAN

SCALE
1/4" = 1'-0"

PLAN SHEET NOTES:

- ① EVAPORATOR CONDENSING UNIT. REFER TO ARCHITECTURAL AND EQUIPMENT SCHEDULES FOR EQUIPMENT INFORMATION.
- ② ICE MAKER REMOTE CONDENSER. REFER TO ARCHITECTURAL FOR EQUIPMENT INFORMATION.

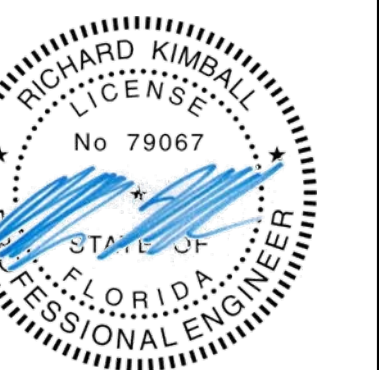
No.	Revision/Issue	Date
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FL REG. NO. 79067



Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
MECHANICAL PROPOSED ROOF PLAN

Project No.
170-101.00
Drawn By
IV
Reviewed By
RK

Sheet
M3.0

FOR REFERENCE ONLY

REFER TO SEPARATE PERMIT CAPTIVE-AIR (OR EQUAL) EXHAUST FAN, HOOD, AND MAKE UP AIR UNIT PLANS FOR ADDITIONAL INFORMATION

FOR QUESTIONS, CALL THE
Austin Office
REGION 47
PHONE: (512) 539 - 0483
EMAIL: reg47@captiveaire.com

HOOD INFORMATION - JOB#6765605

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)					MUA CFM	AC CFM	HOOD CONSTRUCTION	HOOD CONFIG			
										WIDTH	LENG	HEIGHT	DIA	CFM				VEL	SP	END TO END	ROW
1	Hd-1	5424 ND-2-ACPS-P	CAPTIVEAIRE	8' 0"	600 DEG	I	HEAVY	225	1800			4'	14'	1800	1684	-0.930'	1440	500	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	TYPE	FILTER(S)		EFFICIENCY @ 7 MICRONS	QTY	LIGHT(S)		UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WEIGHT			
			QTY	HEIGHT			LENGTH	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM			ELECTRICAL	SWITCHES	
1	Hd-1	CAPTRATE SOLID FILTER	5	16"	16"	85% SEE FILTER SPEC	2	RECESSED ROUND	NO	LEFT	12"x54"x24"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	895 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	Hd-1	FIELD WRAPPER 18.00' HIGH FRONT, LEFT, RIGHT. BACKSPLASH 80.00' HIGH X 108.00' LONG 430 SS VERTICAL. RIGHT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS. LEFT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	PDS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG	DIA	CFM	SP
1	Hd-1	Front	108'	24'	6'	MUA	12"	28"		720	0.168'
						MUA	12"	28"		720	0.168'
						AC	8"	16"		250	0.059'
						AC	8"	16"		250	0.059'

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLID FILTER

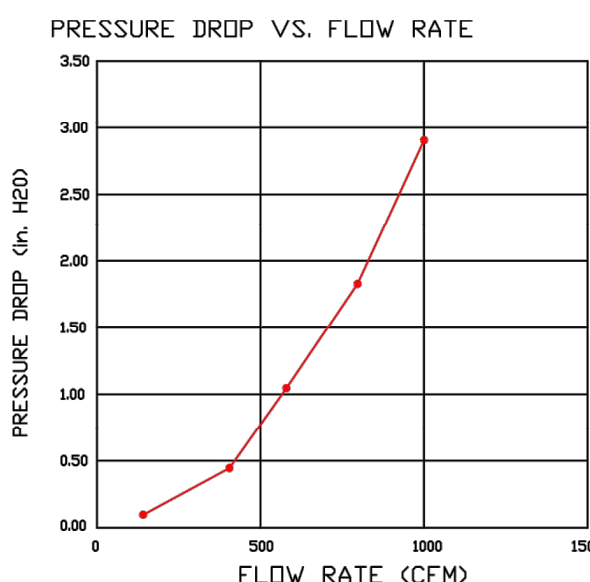
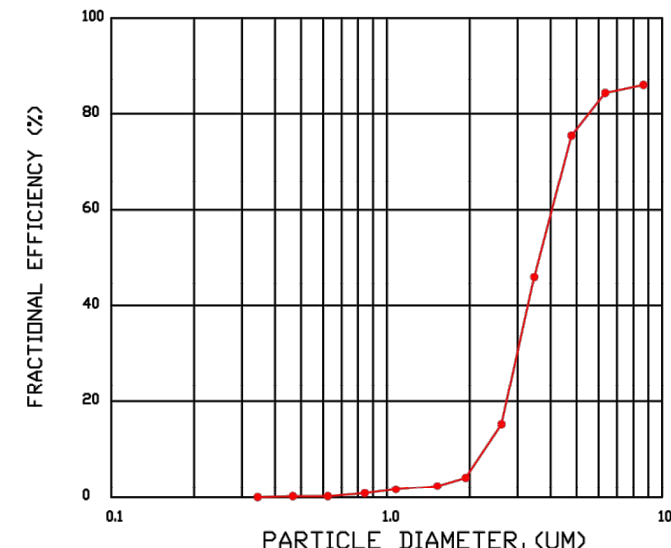
THE CAPTRATE GREASE-STOP SOLID FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLID WAS TESTED TO ASTM STANDARD ASTM F2519-05 MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER. EFFICIENCY VS. PARTICLE DIAMETER



CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.



PATENT NUMBERS

AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
AC-PSP WALL (CANADA) - CA PATENT 2820509.
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

CAPTIVEAIRE HOODS ARE BUILT IN COMPLIANCE WITH
UL 710 AND NFPA 96
AND ARE RECOGNIZED BY ONE OR MORE OF THE FOLLOWING:

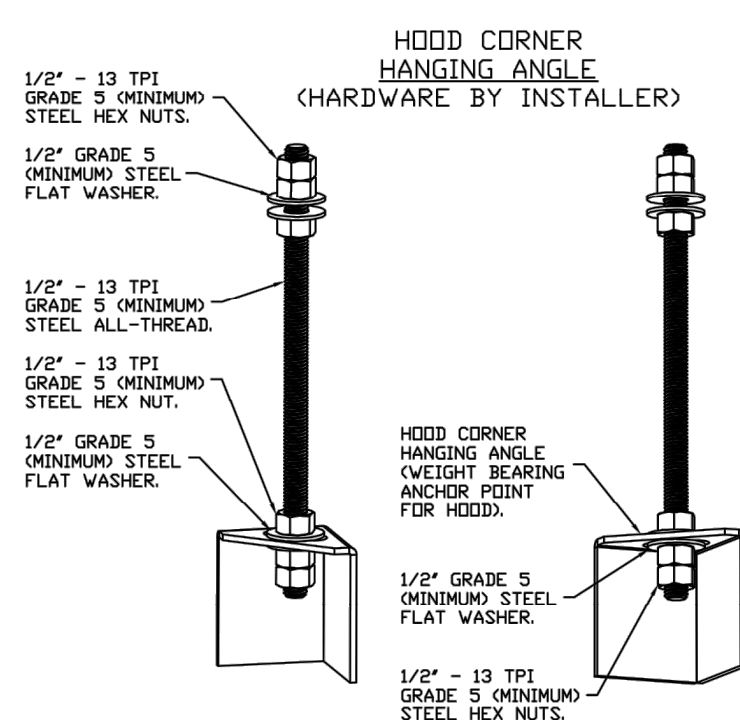
ETL SANITATION LISTED

ETL LISTED FILE# 3054804-001

CAPTIVEAIRE HOODS ARE BUILT IN COMPLIANCE WITH

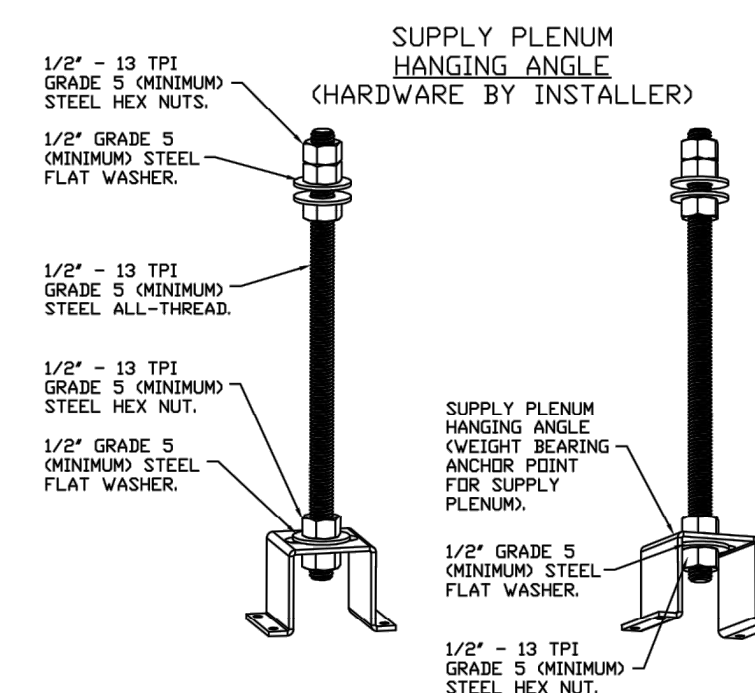


NFPA #96
NSF
ETL LISTED #3054804-001



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

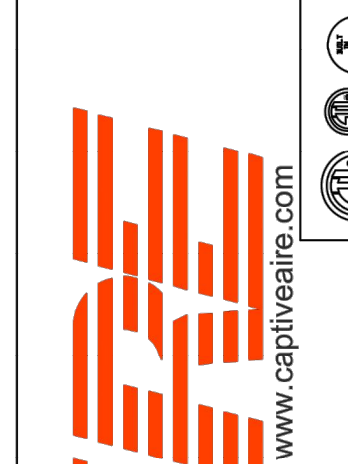


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REVISIONS

DESCRIPTION	DATE



CEFCO #437 Crestview, FL - MPU
MOBILE, AL, 36603

DATE: 5/7/2024
DWG.#: 6765605
DRAWN BY: JLB-47
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 1

No.	Revision/Issue	Date
1	ISSUE FOR PERMIT	05/31/2024

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RICHARD KIMBALL, P.E.
FL REG. NO. 79067

Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS

Project No. 170-101.00
Drawn By JLB
Reviewed By RK

Sheet MC0.1

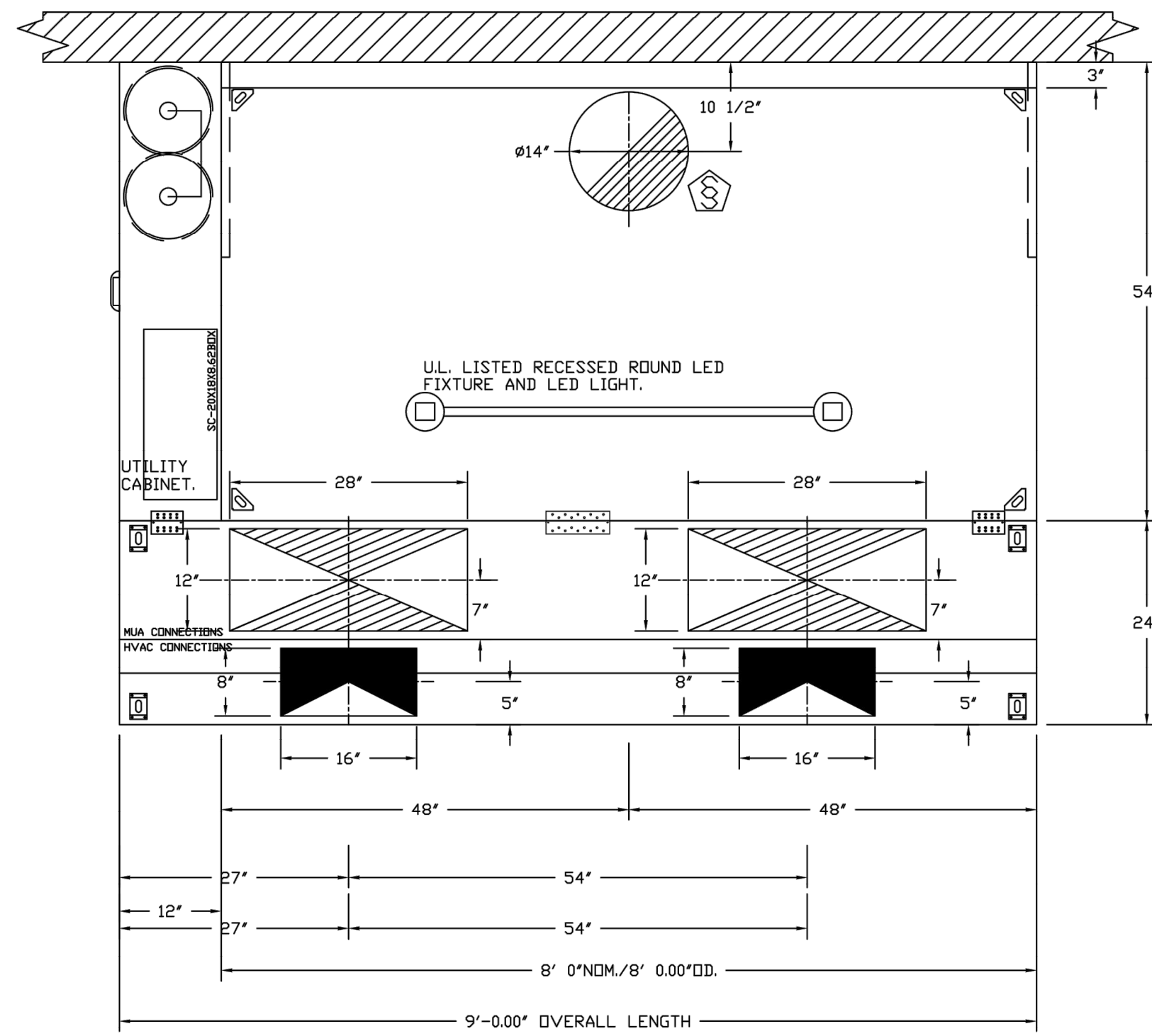
FOR REFERENCE ONLY

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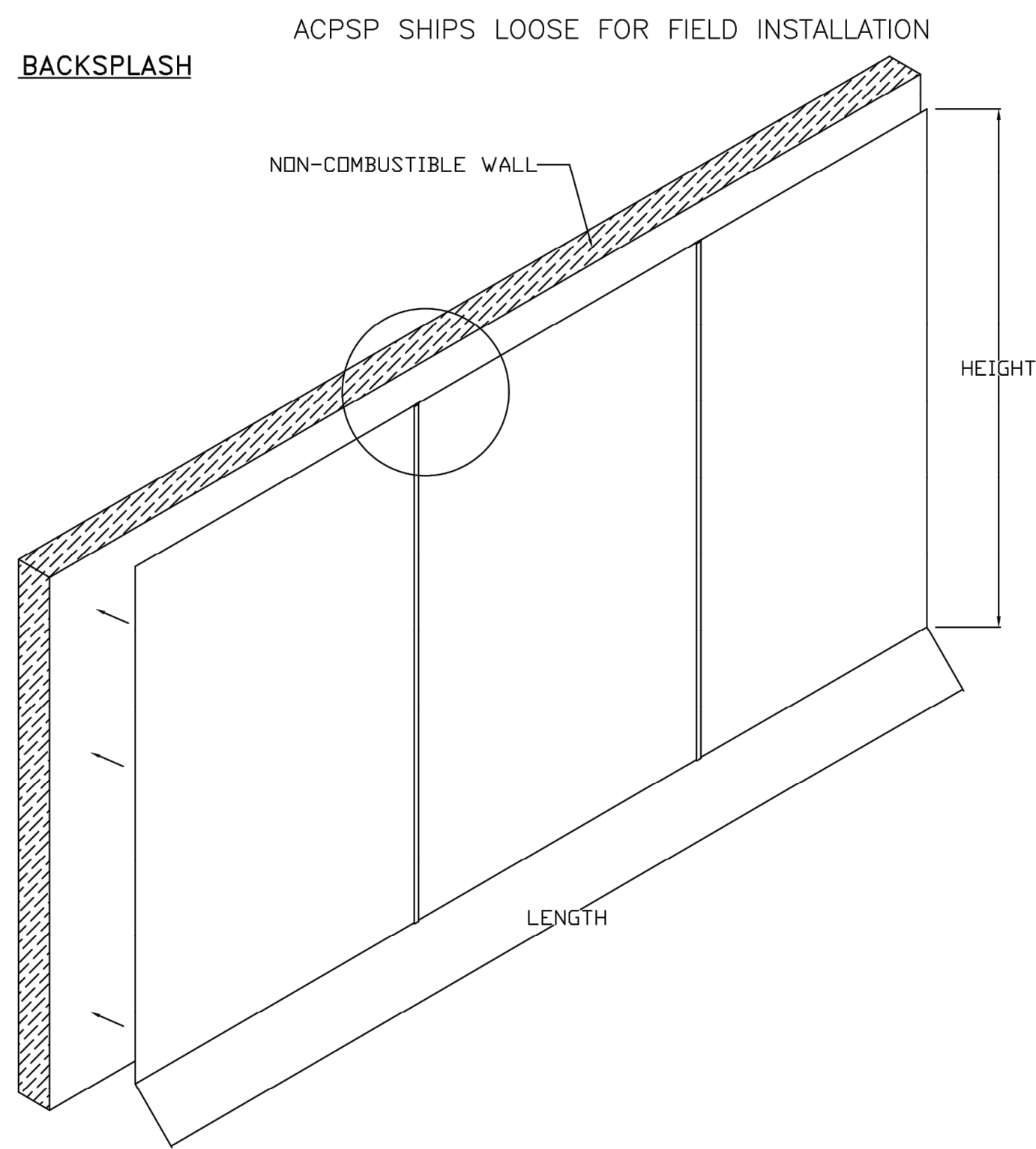
CLEARANCE TO COMBUSTIBLES

HOODS #	SURFACE	*CLEARANCE
1	TOP	18"
	FRONT	0"
	BACK	18"
	LEFT	0"
	RIGHT	18"

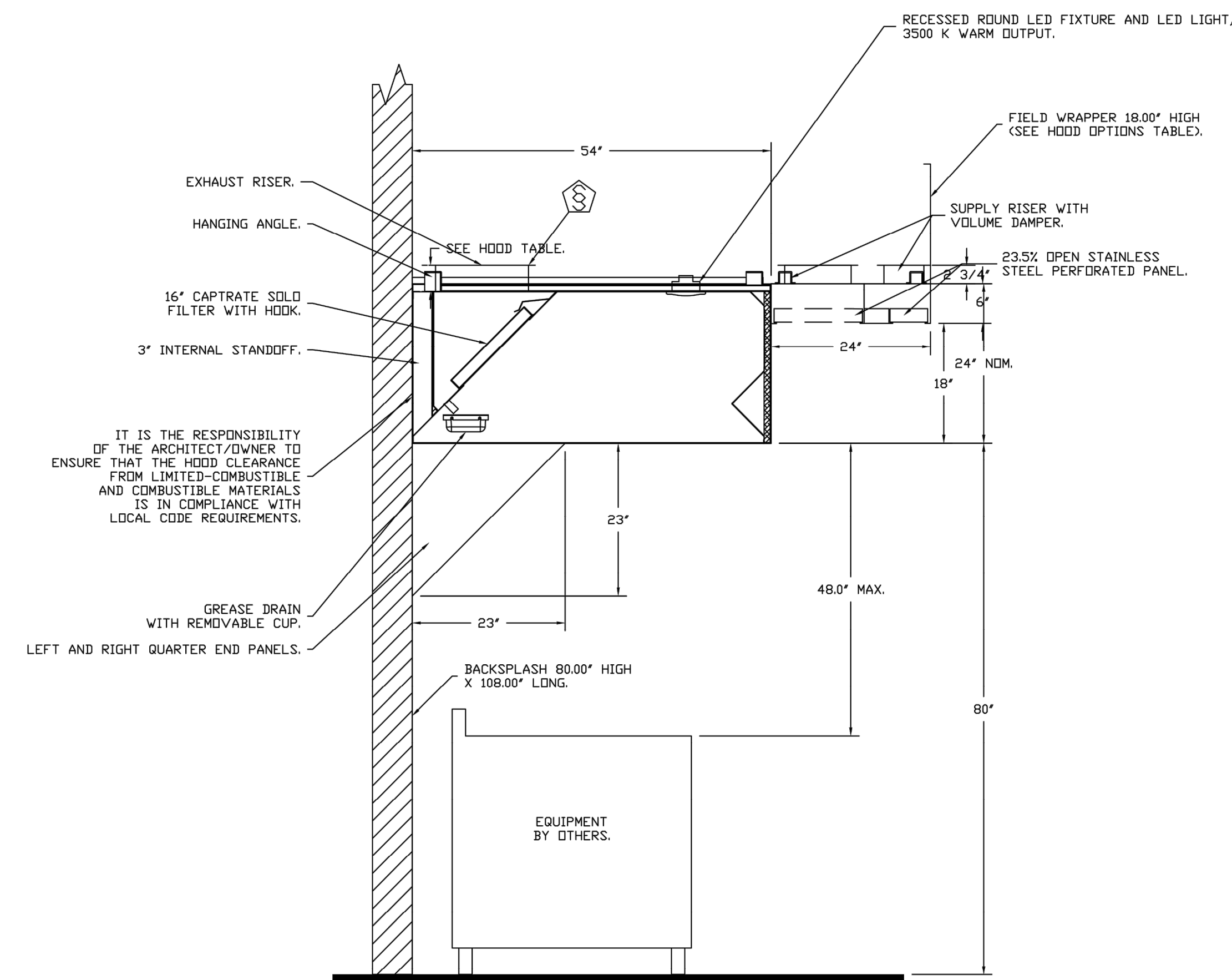
- *0" CLEARANCE TO COMBUSTIBLES CONFORMS TO UL710 STANDARD.
- HOOD MOUNTED UTILITY CABINETS REQUIRE 36" SERVICE CLEARANCE.



PLAN VIEW - HOOD #1 (Hd-1)
8' 0.00" LONG 5424ND-2-ACPSP-F



- BACKSPASH IS NOT INSULATED AND IS UNSUITABLE FOR INSTALL AGAINST COMBUSTIBLE WALLS



SECTION VIEW - MODEL 5424ND-2-ACPSP-F
HOOD - #1 (Hd-1)

REVISIONS

NO.	DESCRIPTION	DATE
1	ISSUE FOR PERMIT	05/31/2024

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CEFCO #437 Crestview, FL - MPU
MOBILE, AL, 36603

DATE: 5/7/2024

DWG.#: 6765605

DRAWN BY: JLB-47

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 2

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RICHARD KIMBALL, P.E.
FL REG. NO. 79067

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS

Project No. 170-101.00
Drawn By: JLV
Reviewed By: RK

Sheet MC0.2

FOR REFERENCE ONLY

REFER TO SEPARATE PERMIT CAPTIVE-AIR (OR EQUAL) EXHAUST FAN, HOOD, AND MAKE UP AIR UNIT PLANS FOR ADDITIONAL INFORMATION

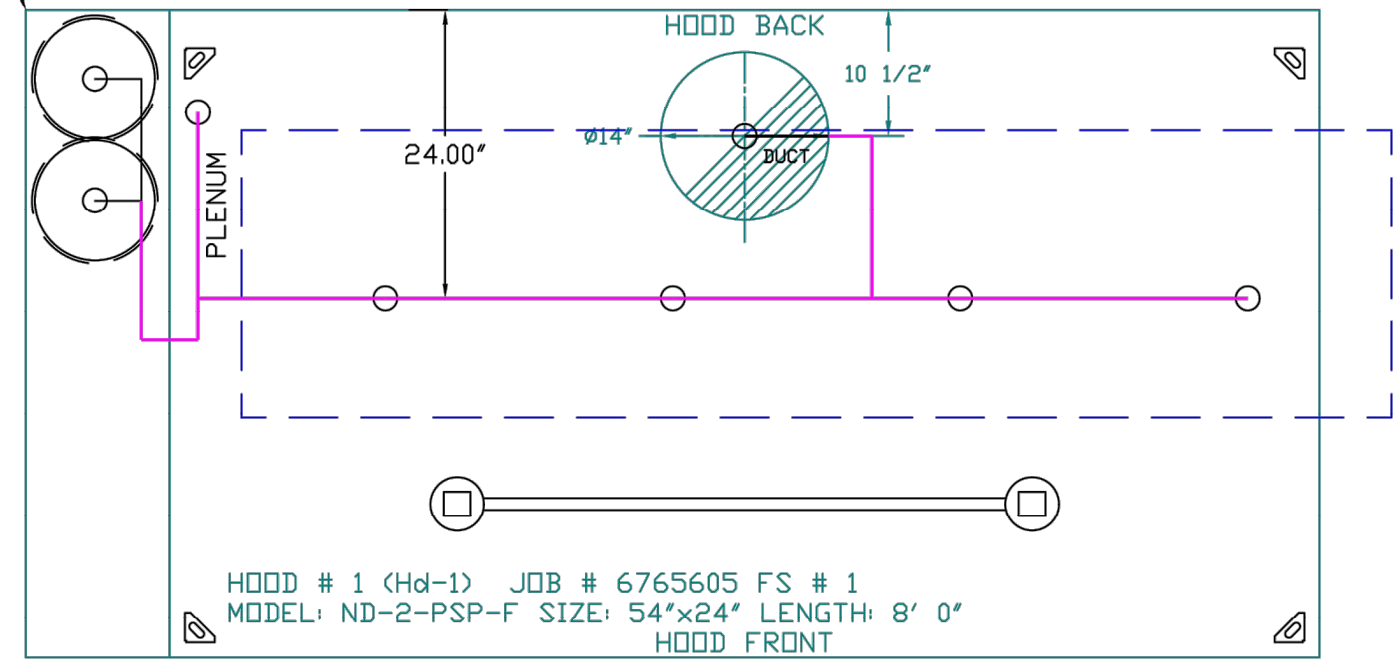
FIRE SYSTEM INFORMATION - JOB#6765605

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0	40	28	FIRE CABINET LEFT	LEFT, HOOD 1

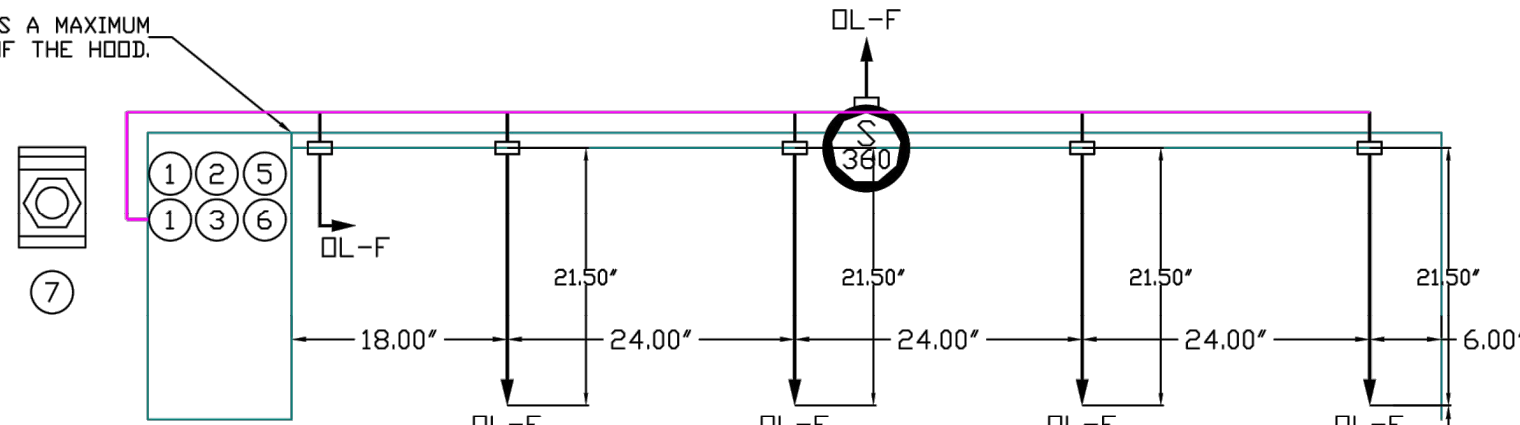
GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS

- SYSTEM REQUIRES A MINIMUM OF 7 FT OF EQUIVALENT PIPE LENGTH BETWEEN TANK AND NEAREST APPLIANCE NOZZLE FOR MOST APPLIANCES. EACH 90 DEGREE ELBOW ADDS 1.3 FT OF EQUIVALENT LENGTH. SEE MANUAL FOR DETAILS



FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.



NOZZLE HEIGHT 35'-50" FROM COOKING SURFACE. (45.25')

TANK OVERLAPPING PROTECTION - 30" HIGH PROXIMITY 96.00" L X 24.00" D

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1		0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - 12-F28021-32144-DT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. ND, CLOSE ON TEMP RISE AT 360°F.	1	0
		0 - 0 - 32-00002 QUIK SEAL - 1/2" (UL).	1	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	2	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	1	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2" NPT FEMALE CONNECTION, VIEGA.	2	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5" BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	8	0
		0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	5	0
		0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	5	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION, 1.5" DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES, 1/4" FLARE X 1/4" MPT HALF UNION, USED ON TANK SERVICE PORT.	1	0
		0 - 0 - B1145 3/8" BLACK IRON 90 ELL.	2	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	6	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	2	0
		16 - 16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	6	0
		16 - 16 - DL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	6	0
		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	6	0
		34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT, RED COLOR.	1	0

NOTES

- FIELD PIPE DROPS AS SHOWN
- PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH UL 300 REQUIREMENTS.

- DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 6765605.
JOB NAME: CEFCD #437 CRESTVEIW, FL - MPU.

SYSTEM SIZE: TANK-SP-2 DESIGN FP: 28, MAXIMUM FP: 40.
HOOD # 1 8' 0.00' LONG X 54' WIDE X 24" HIGH.
RISER # 1 SIZE: 14" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

LEGEND - FIRE CABINET TANK SYSTEM

- | | |
|---|---------------------------------|
| 1 | 4 GALLON TANK. |
| 2 | PRIMARY ACTUATOR RELEASE. |
| 3 | SECONDARY ACTUATOR RELEASE. |
| 4 | PRESSURE SUPERVISION SWITCH. |
| 5 | PRIMARY HOSE ASSEMBLY. |
| 6 | SECONDARY HOSE ASSEMBLY. |
| 7 | REMDTE MANUAL ACTUATION DEVICE. |

REVISIONS

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SHEET NO. 3

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1	05/31/2024

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FL REG. NO. 79067
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Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS

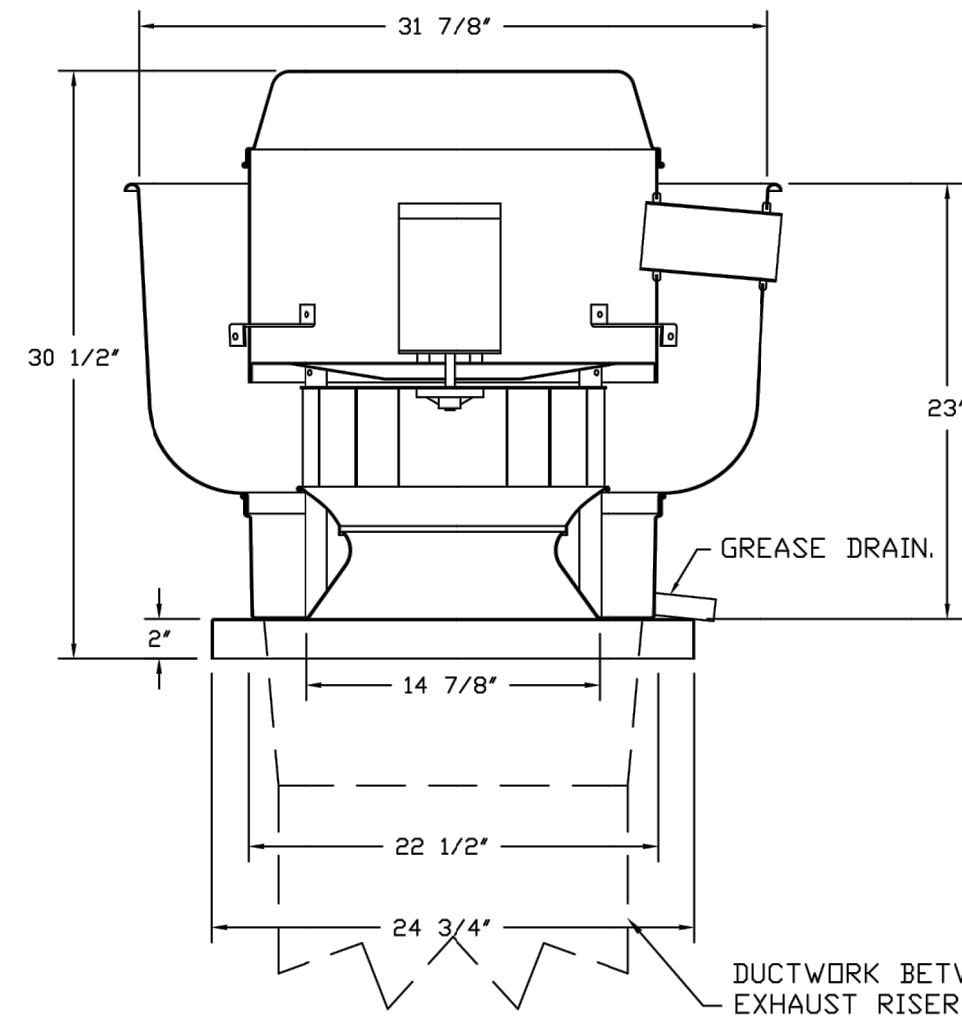
Project No. 170-101.00
Drawn By JLV
Reviewed By RK

Sheet MC0.3

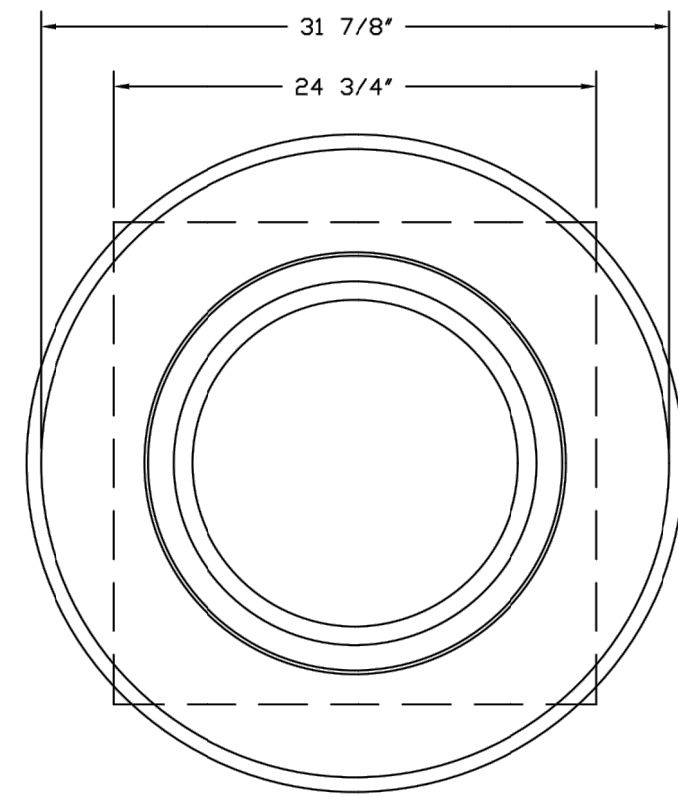
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REFER TO SEPARATE PERMIT CAPTIVE-AIR (OR EQUAL) EXHAUST FAN, HOOD, AND MAKE UP AIR UNIT PLANS FOR ADDITIONAL INFORMATION

FAN #1 DUBSHFA - EXHAUST FAN (KEF-1)



DUCTWORK BETWEEN EXHAUST RISER ON HOOD AND FAN (BY OTHERS).



TOP VIEW

FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST

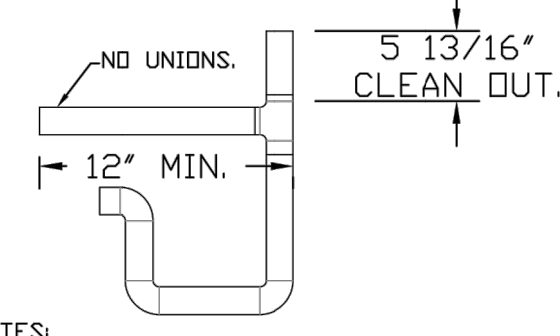
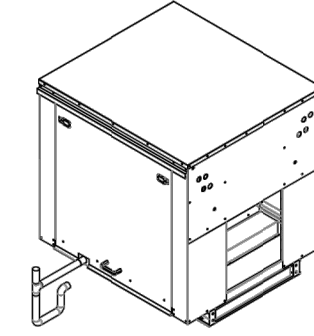
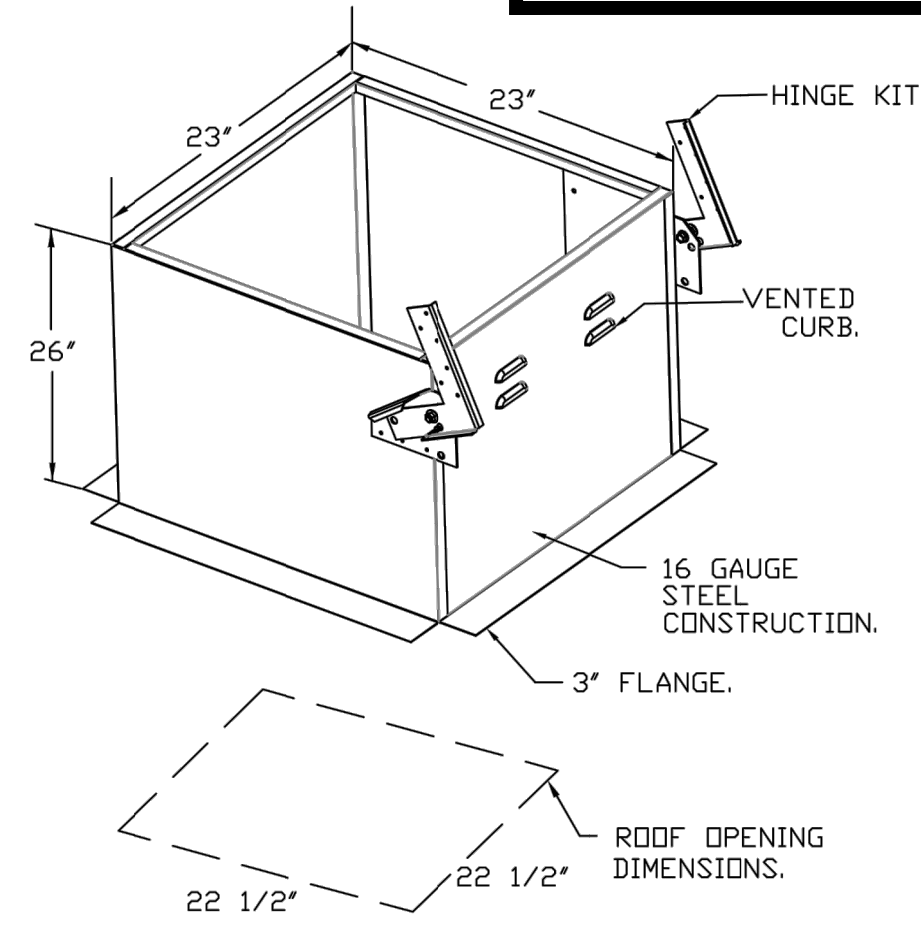
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

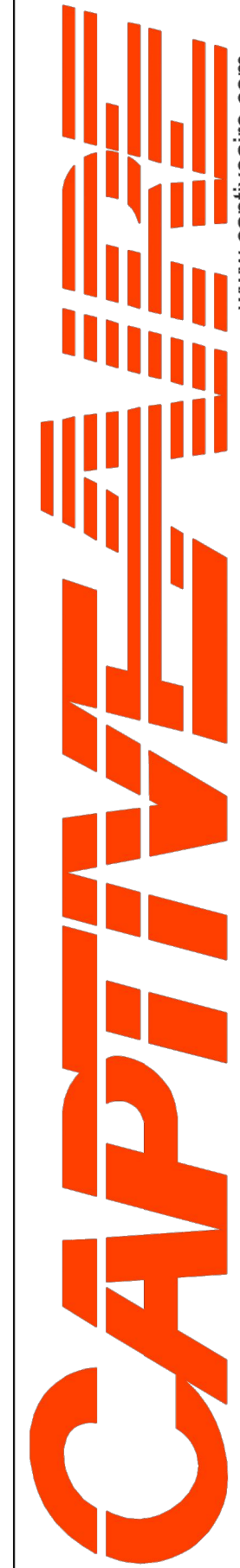
- GREASE BOX.
- ECM WIRING PACKAGE - PWM SIGNAL FROM EDM33 PREWIRE (TELCD MOTOR), CCW ROTATION.
- FAN BASE CERAMIC SEAL - DU/DR89HFA
- INSTALLED AT PLANT - FOR GREASE DUCTS.
- MIAMI DADE CERTIFICATION - NDA-1 ALUMINUM UPBLAST.
- 2 YEAR PARTS WARRANTY.



- NOTES:
- 1) 1" DIAMETER PVC PIPE ONLY.
 - 2) USE ONLY LOW PROFILE COUPLINGS.
 - 3) ADD CLEAN OUT AS SHOWN.

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DRAWN BY: JLB-47
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SHEET NO. 5

No.	Revision/Issue	Date
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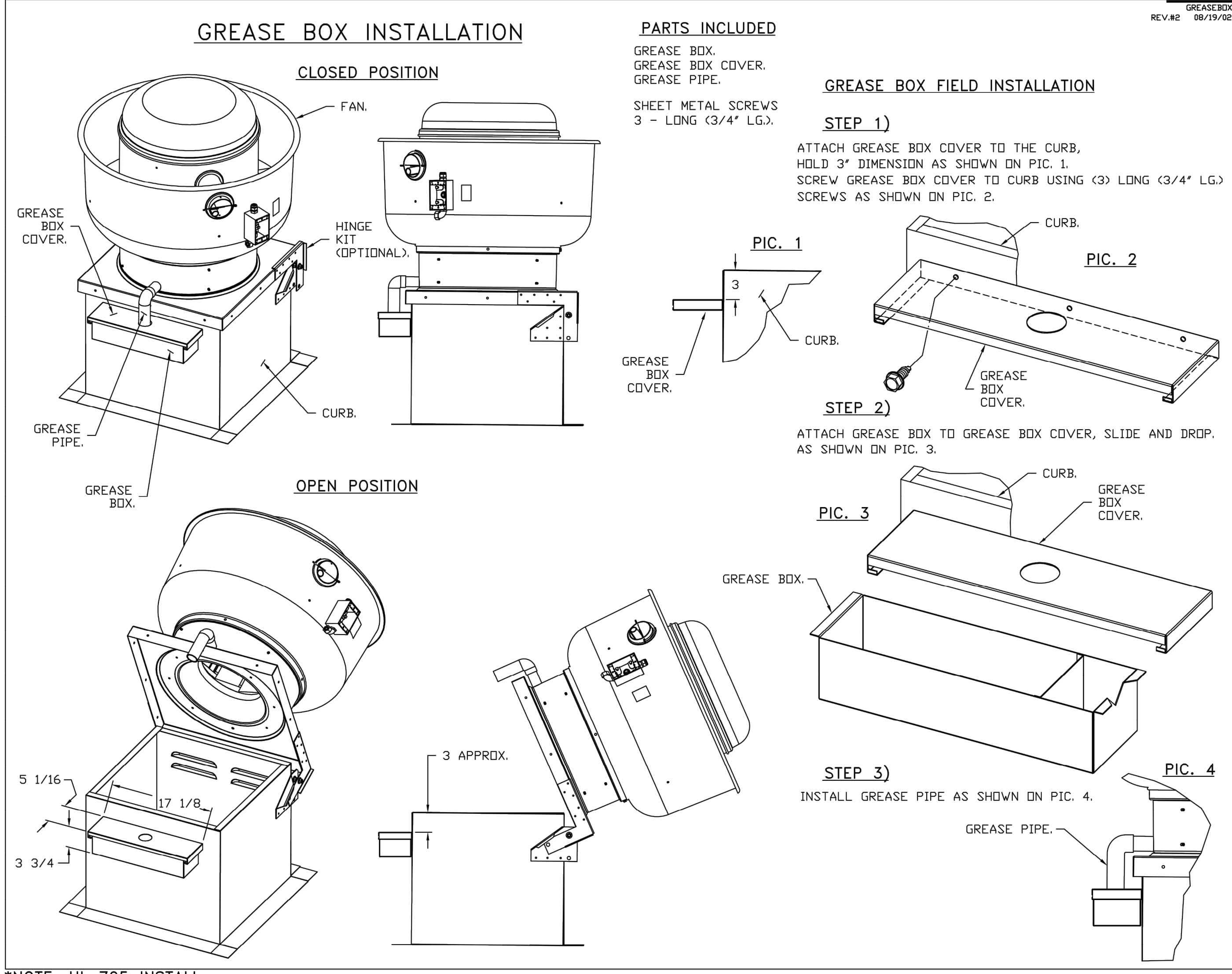
RICHARD KIMBALL, P.E.
FL REG. NO. 79067
Date

Project Name and Address: CEFCO #437 - BETHEL HIGHWAY 90 AND OLD BETHEL ROAD CRESTVIEW, FLORIDA
Sheet Title: KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS

Project No: 170-101.00
Drawn By: IV
Reviewed By: RK
Sheet: MC0.5

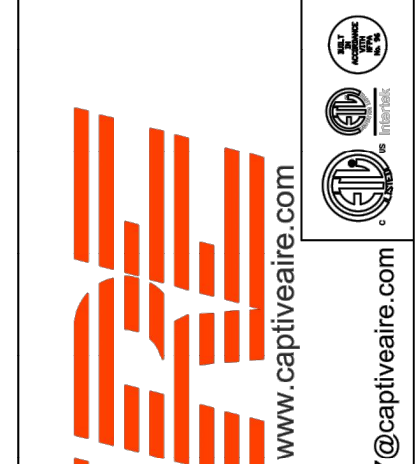
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*NOTE: UL 705 INSTALL.

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RICHARD KIMBALL, P.E.
 FL REG. NO. 79067

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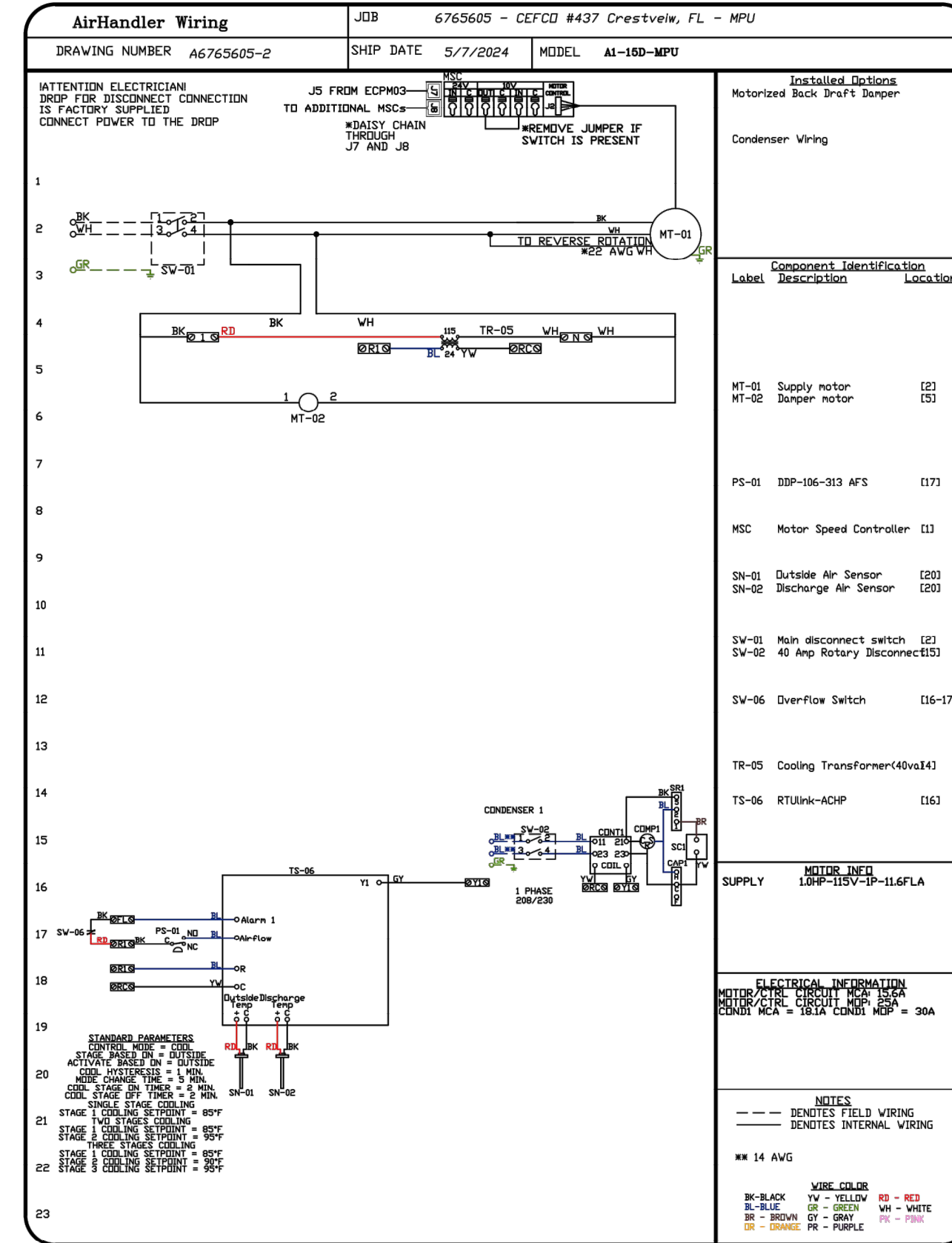
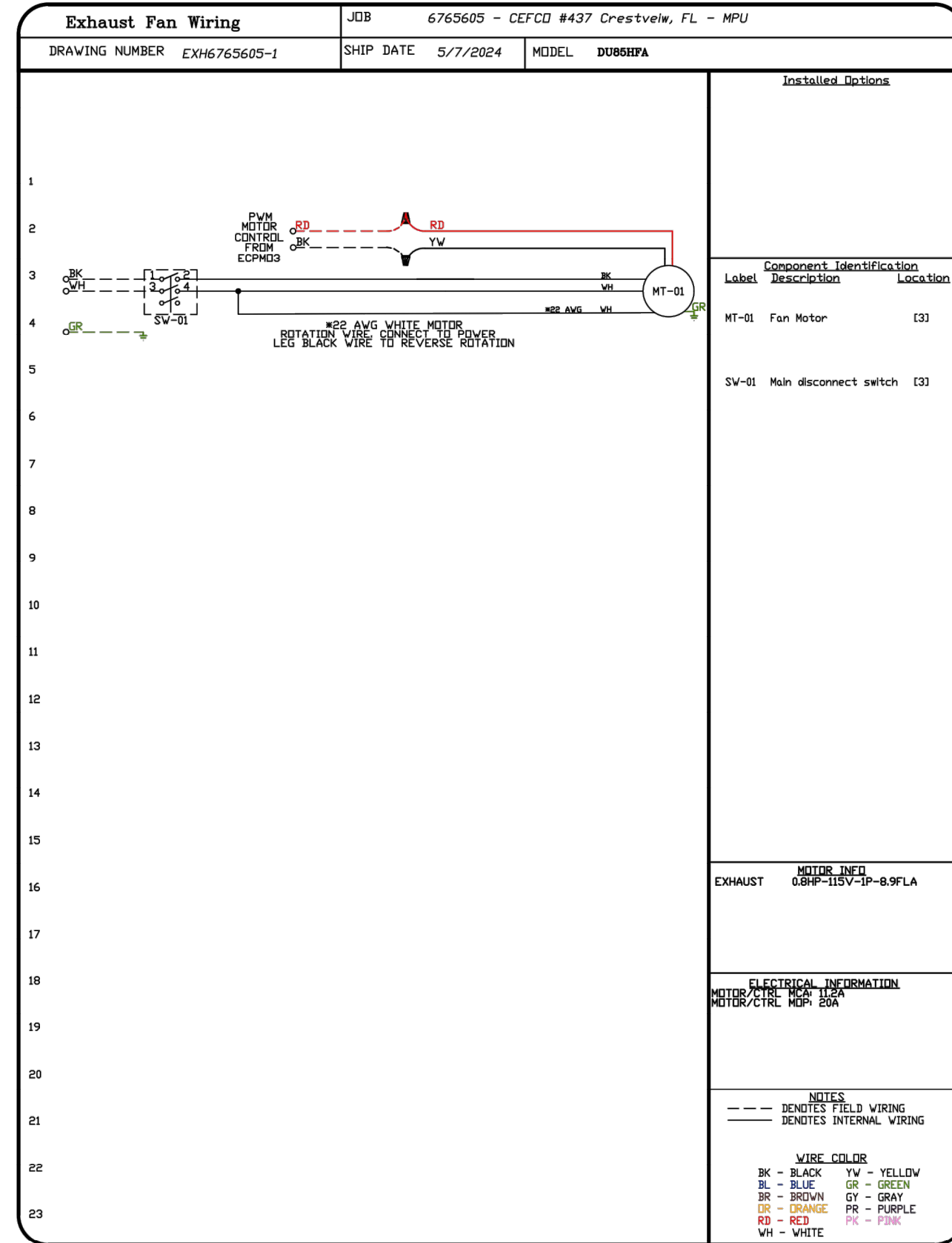
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Reviewed By RK

Sheet MC0.6

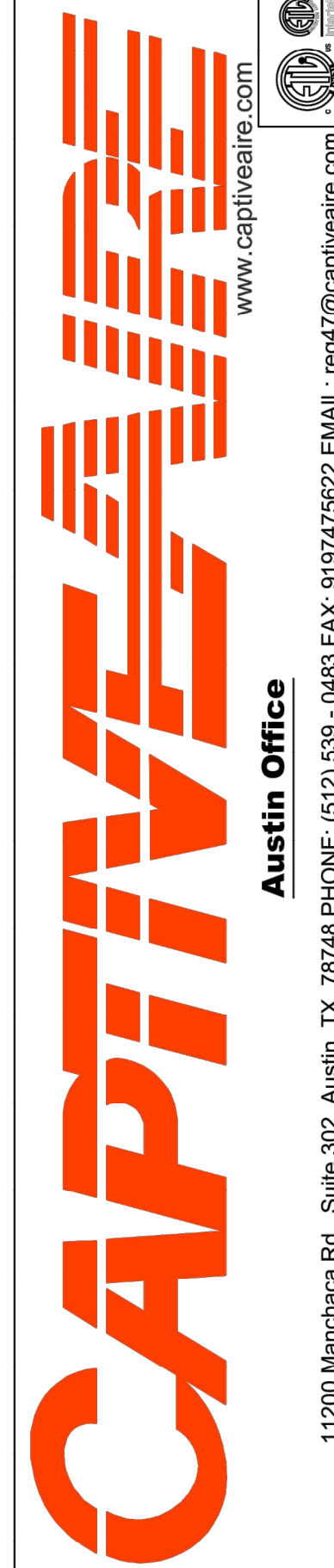
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Project No.
 170-101.00

Sheet
MC0.7

Drawn By
 IV

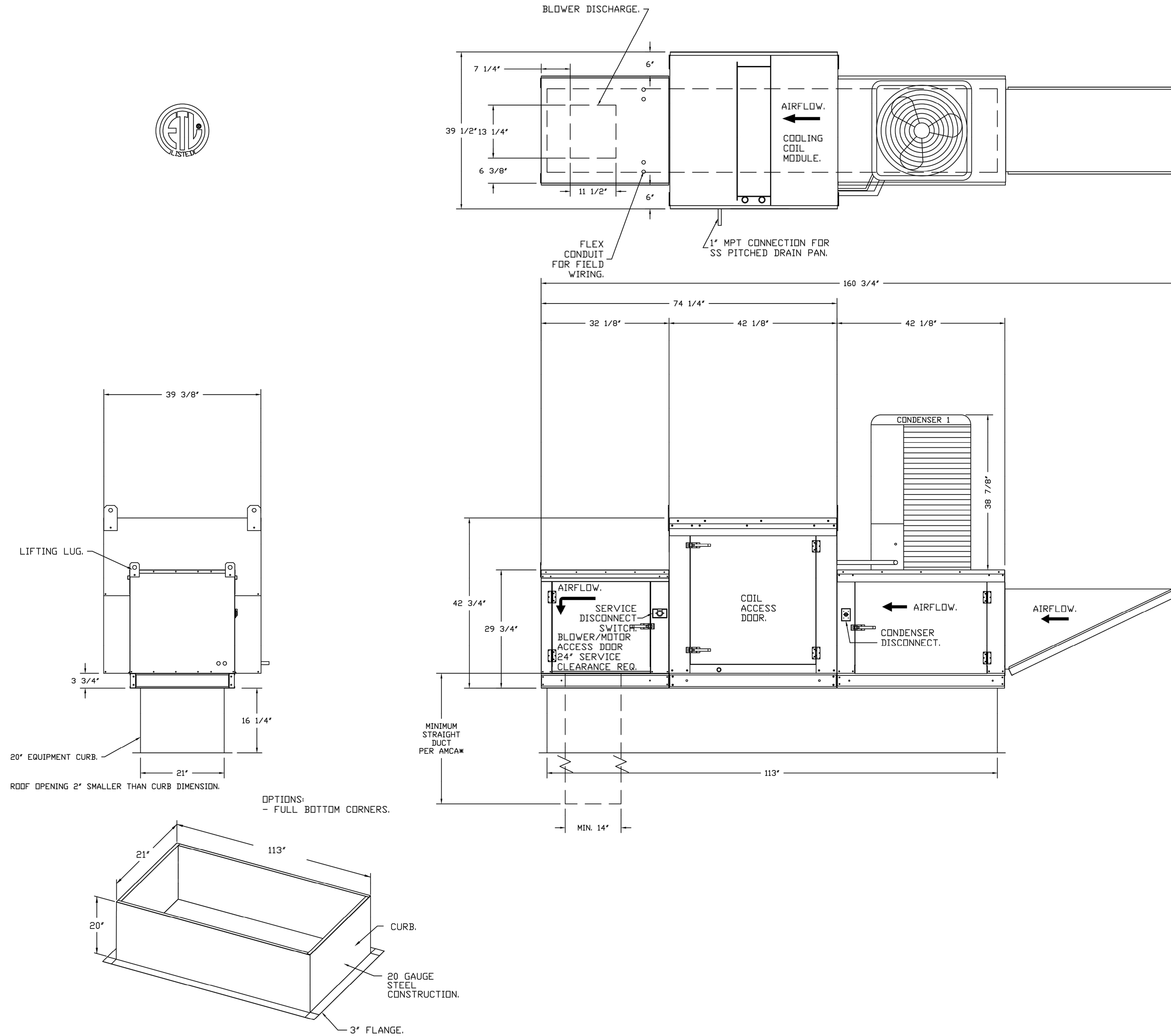
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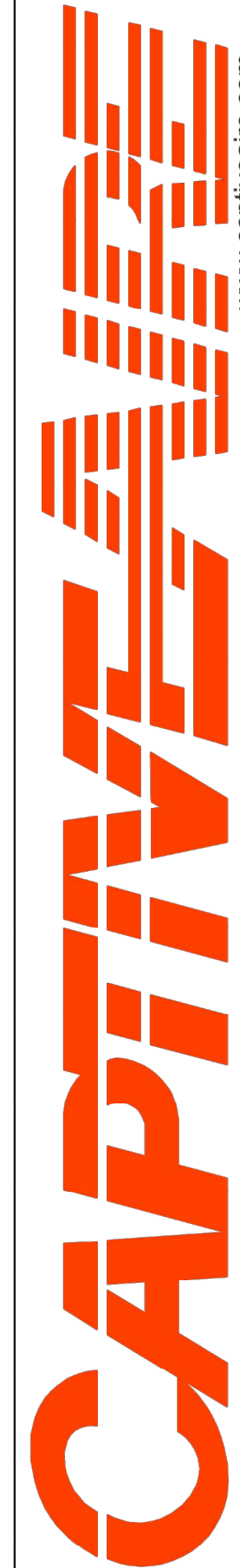
- FAN #2 A1-15D-MPU - SUPPLY FAN (KSF-1)
 1. SUPPLY UNIT WITH 15" MIXED FLOW DIRECT DRIVE FAN IN SIZE #1 HOUSING.
 2. INTAKE HOOD WITH EZ FILTERS.
 3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
 4. INSULATED BLOWER HOUSING SIZES 1-2 COMMERCIAL MODULAR.
 5. SUPPORT SHELL FOR SIZE 1 MODULAR PACKAGE UNIT. INCLUDES CONTROL VESTIBULE. INCLUDES CONDENSER SUPPORTS. DOES NOT INCLUDE RETURN AIR OR INLET AIR DAMPER.
 6. MOTORIZED BACK DRAFT DAMPER 16" X 18" FOR SIZE 1 UNTEMPERED UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, TRIBOS ACTUATOR INCLUDED.
 7. DOWN DISCHARGE CONSTRUCTION FOR SIZE 1 UNTEMPERED DIRECT DRIVE AHUS.
 8. 3 TON, SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 1 MODULAR PACKAGED UNIT. INCLUDES CONDENSER, DX COIL, FILTER/DRYER KIT, HARD START KIT, THERMAL EXPANSION VALVE, R410A REFRIGERANT, AND REFRIGERANT PIPING CL100 TO 1800 CFM WHEN ORDERED WITH OPPOSITE AIRFLOW CONDENSERS ACCESS AND COIL PIPING WILL REMAIN IN STANDARD POSITION. DRAIN AND SLEDS WILL MOVE TO THE OPPOSITE SIDE. ANY OTHER CHANGE WILL REQUIRE CLI. CONDENSERS REQUIRE SEPARATE 208V, 1 PHASE POWER SUPPLY UNLESS ORDERED WITH SINGLE POINT CONNECTION. COIL = 22Z100IN.
 9. CONTROL PACKAGE FOR MOD PACKAGE UNIT COOLING ONLY UNIT. INCLUDES AIRFLOW PREVING SWITCH, RTULINK-ACHP BOARD AND TERMINAL BLOCKS.
 10. ECM WIRING PACKAGE MODBUS CONTROL FOR SUPPLY EC MOTORS. MSC CONTROLLER. **DO NOT ORDER UNDER WARRANTY, SEE PART NUMBER *CAS MSC**.
 11. MIAMI DADE IMPACT AND WIND LOAD CERTIFICATION +30 / -130 PSF - MIAMI DADE COUNTY PRODUCT CONTROL APPROVED. FLORIDA BUILDING CODE APPROVAL. ROOF MOUNT EXHAUST CURBS UP TO 20" HIGH MUST BE 18 GAUGE ALUMINIZED.
 12. LOCKING CAPS FOR SINGLE CONDENSER UNITS. CONSISTS OF 2 LOCKING CAPS, PART# NCP-4, AND 1 KEY, PART# NC-KEY.
 13. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/MPU SECTION).
 14. 2 YEAR PARTS WARRANTY.

*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 14" X 14".



REVISIONS

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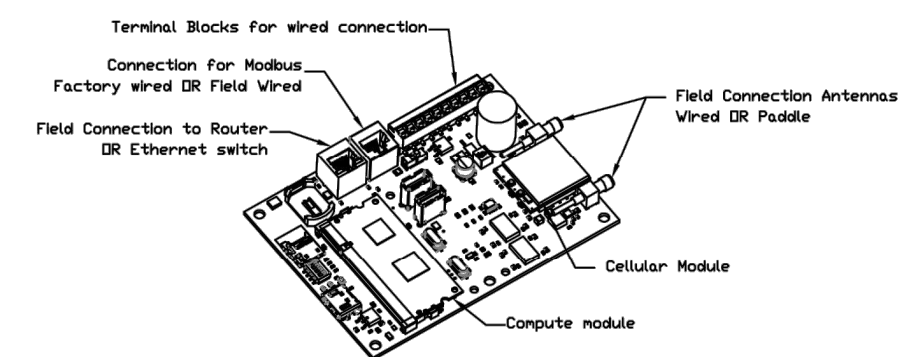
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ELECTRICAL PACKAGE -- JOB#6765605

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	#	HP	VOLT	FLA
1		DCV-1111	UTILITY CABINET LEFT	UTILITY CABINET LEFT	1 LIGHT	SMART CONTROLS DCV	KEF-1	EXHAUST	1	0.750	115	8.9
				HOOD # 1	1 FAN		KSF-1	SUPPLY	1	1.000	115	11.6

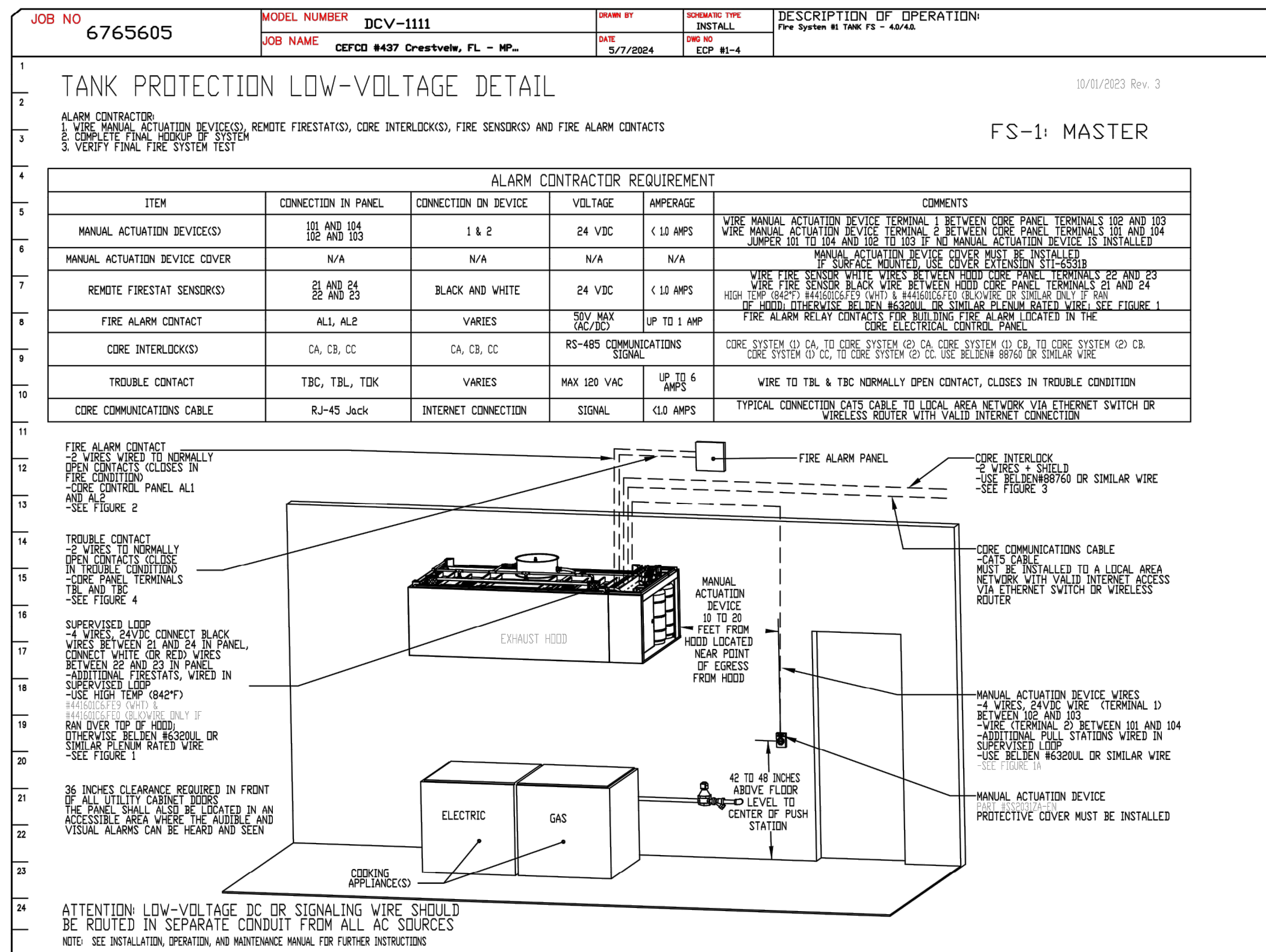
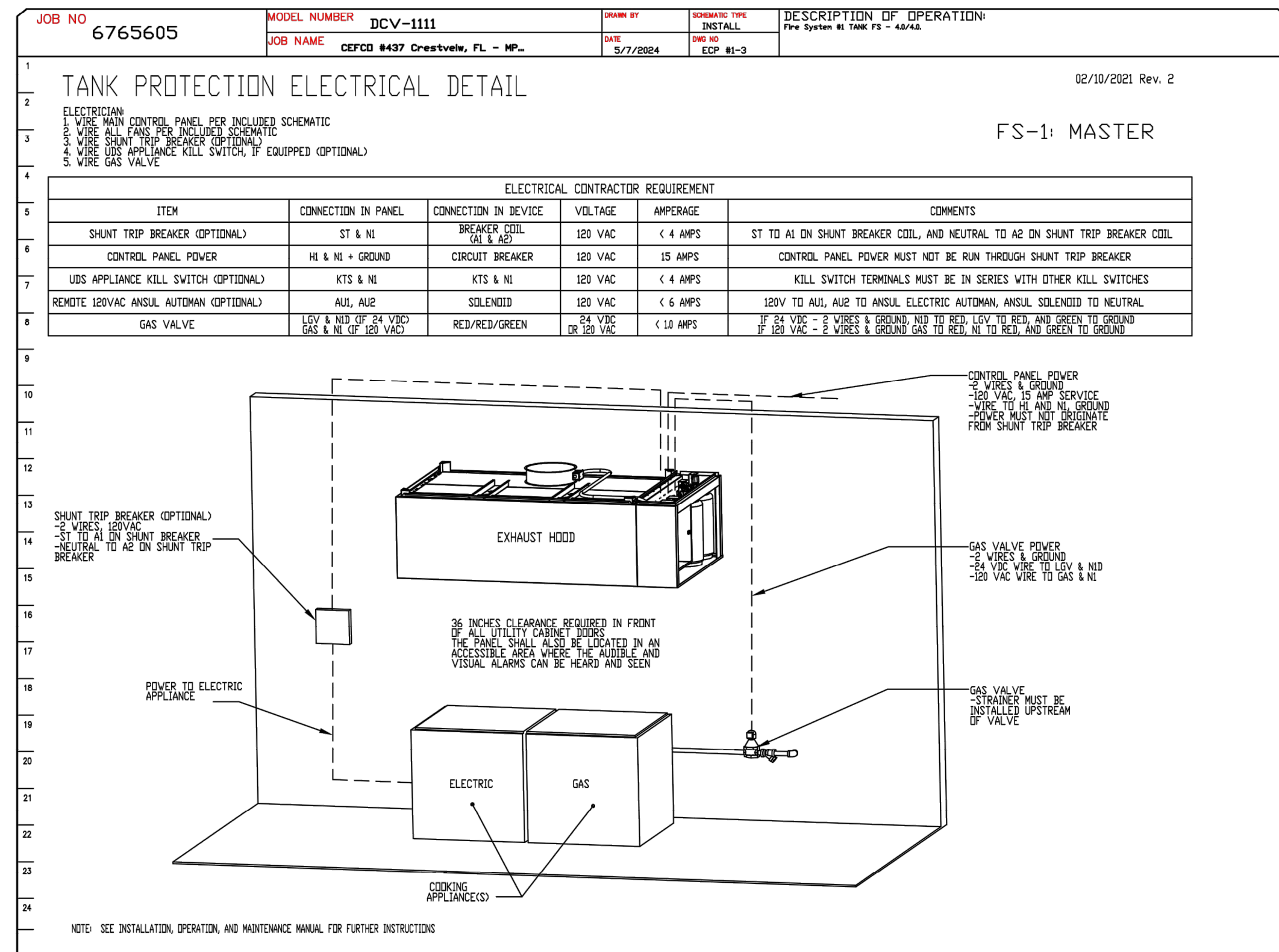
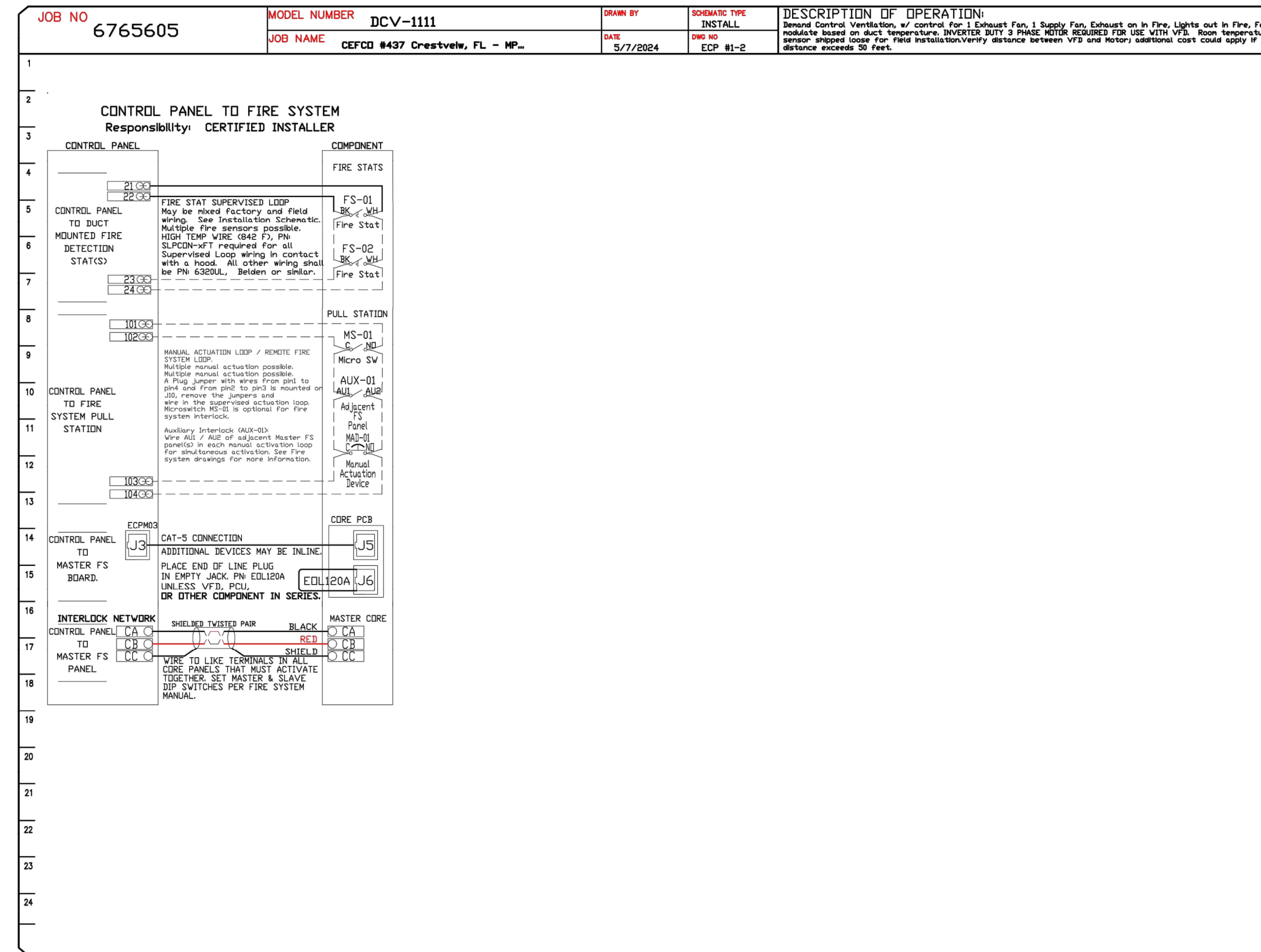
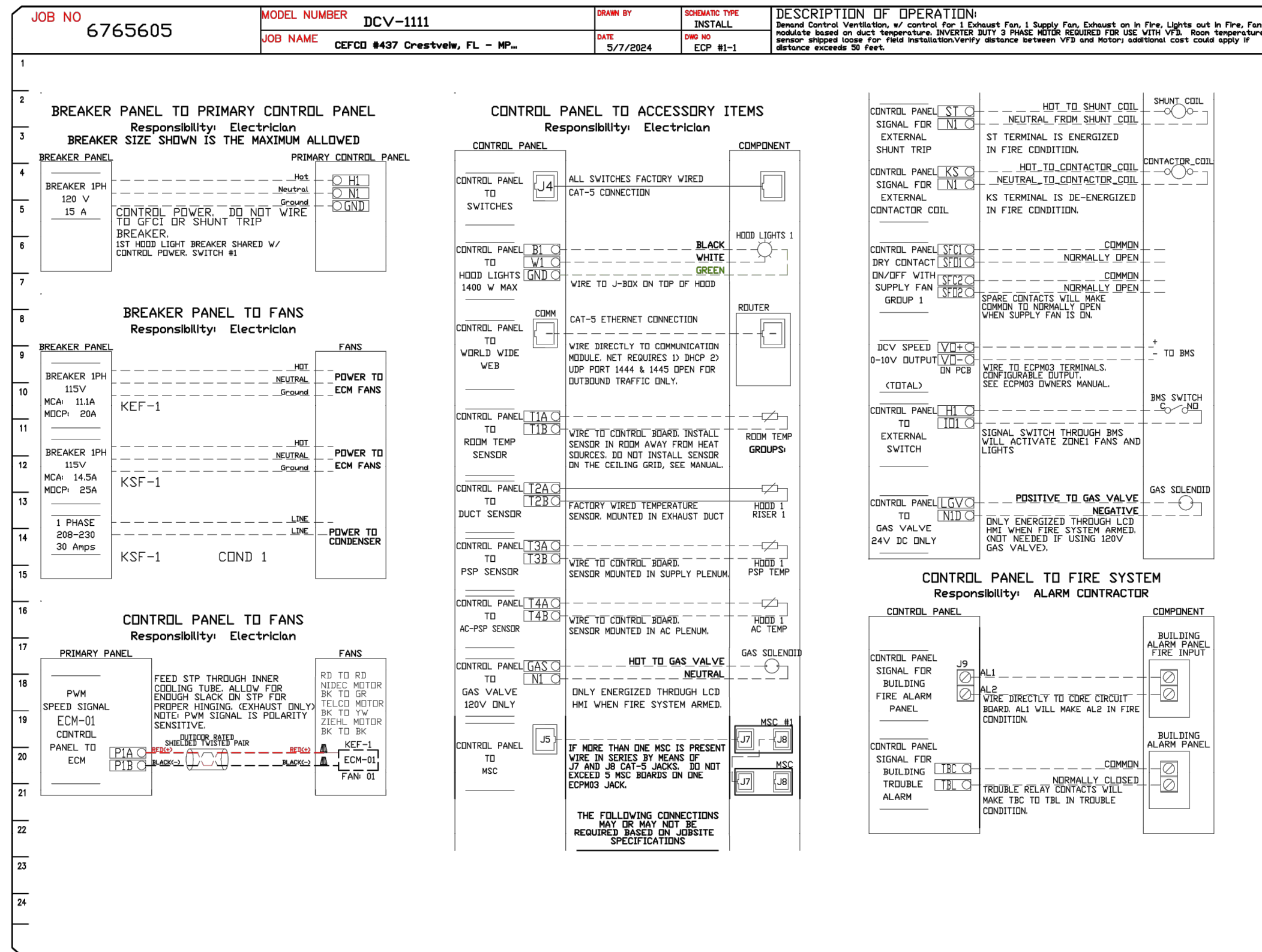


CASlink Monitor and Control

Hood control panel to support communications to cloud-based Building Management System.
 Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
 Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.
 Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

MONITORING AND CONTROL POINTS LIST

DCV Packages	Function	DC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR	Duct Temperature(s)	MONITOR
MHA Discharge Temperature	MONITOR	MHA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR	Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Control Fan(s)	MONITOR
Fan Amperage	MONITOR	Fan Faults	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
YFP Faults	MONITOR	PCV Faults	MONITOR
Control Fan(s)	MONITOR	PCV Filter Clap Percentages	MONITOR
Fan Faults	MONITOR	Fire Condition	MONITOR
Fan Status	MONITOR	CO2 Fire System	MONITOR
PCV Faults	MONITOR	Building Pressure	MONITOR
PCV Filter Clap Percentages	MONITOR	Light(s) Button(s)	MONITOR & CONTROL
Fire Condition	MONITOR	Light(s) Button(s)	MONITOR & CONTROL
CO2 Fire System	MONITOR	Prep Time Button	MONITOR & CONTROL
Building Pressure	MONITOR	Flame Button	MONITOR & CONTROL
Prep Time Button	MONITOR & CONTROL	Light(s) Button	MONITOR & CONTROL
Flame Button	MONITOR & CONTROL	Flame Button	MONITOR & CONTROL



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Project Name and Address	Sheet Title	Date
CEFCO #437 - BETHEL HIGHWAY 90 AND OLD BETHEL ROAD CRESTVIEW, FLORIDA	KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS	05/17/2024

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RICHARD KIMBALL, P.E.
 FL REG. NO. 79067

Project Name and Address
 CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title
 KITCHEN EXHAUST, HOOD
 AND MAKEUP AIR UNIT
 DETAILS

Project No
 170-101.00

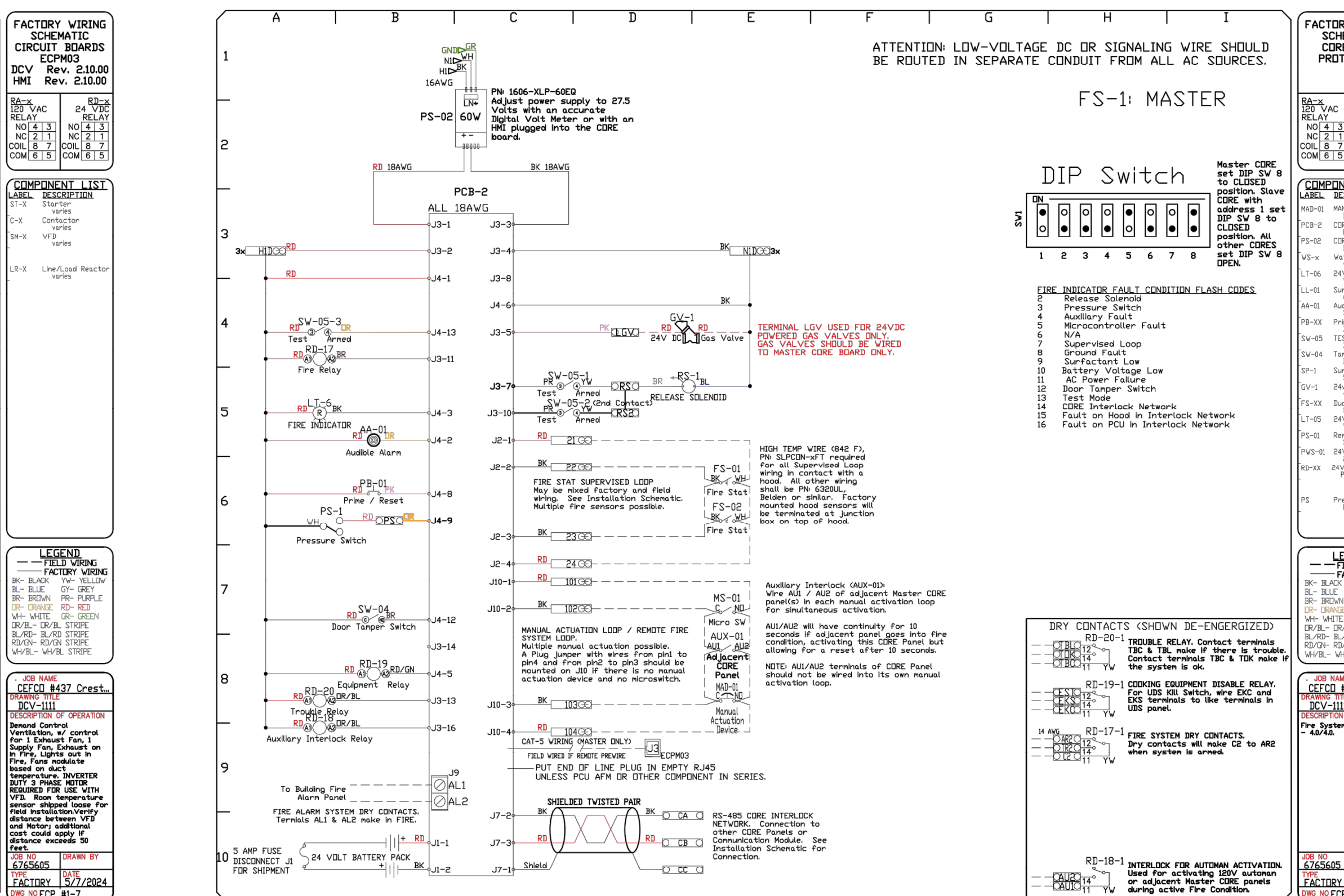
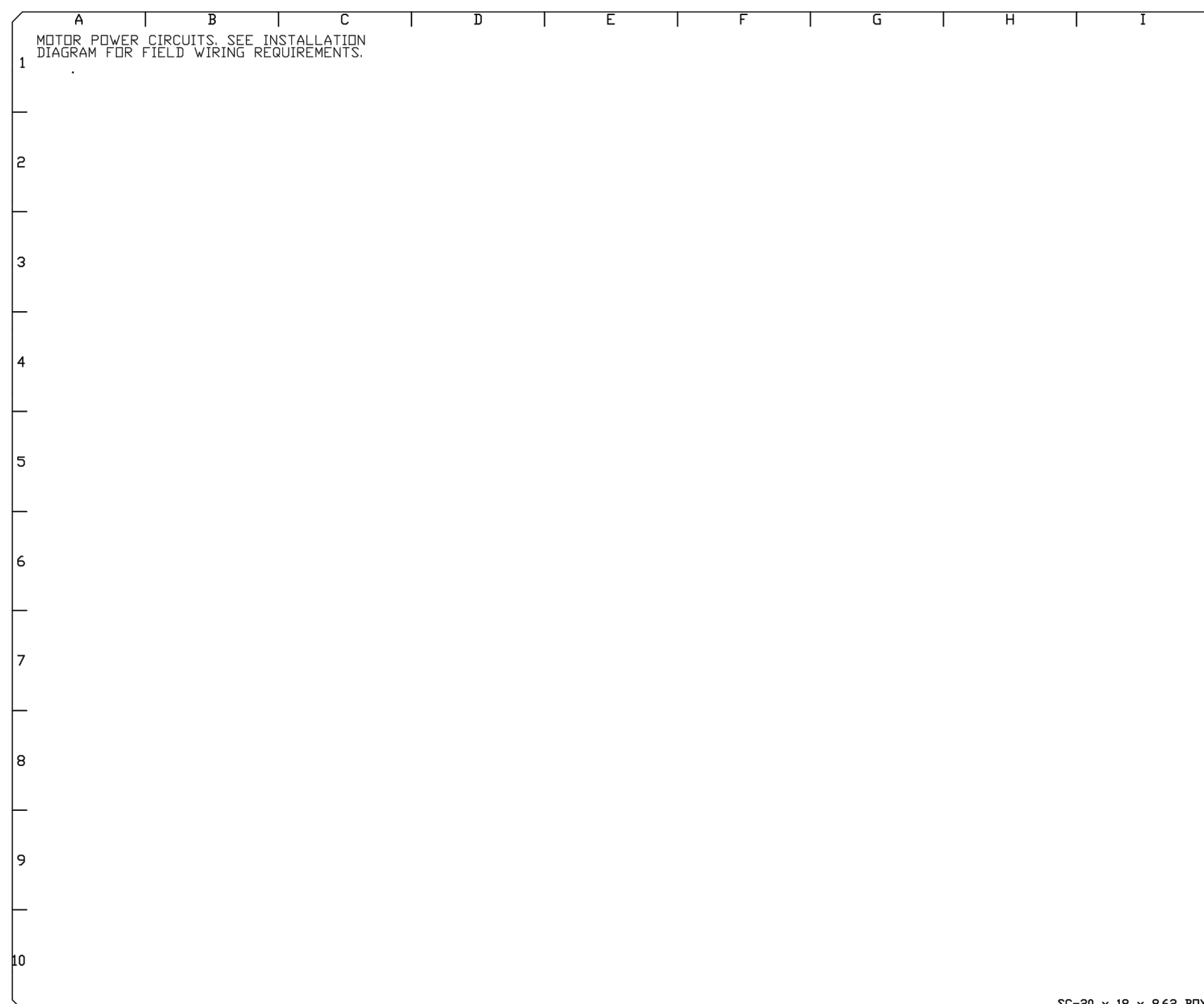
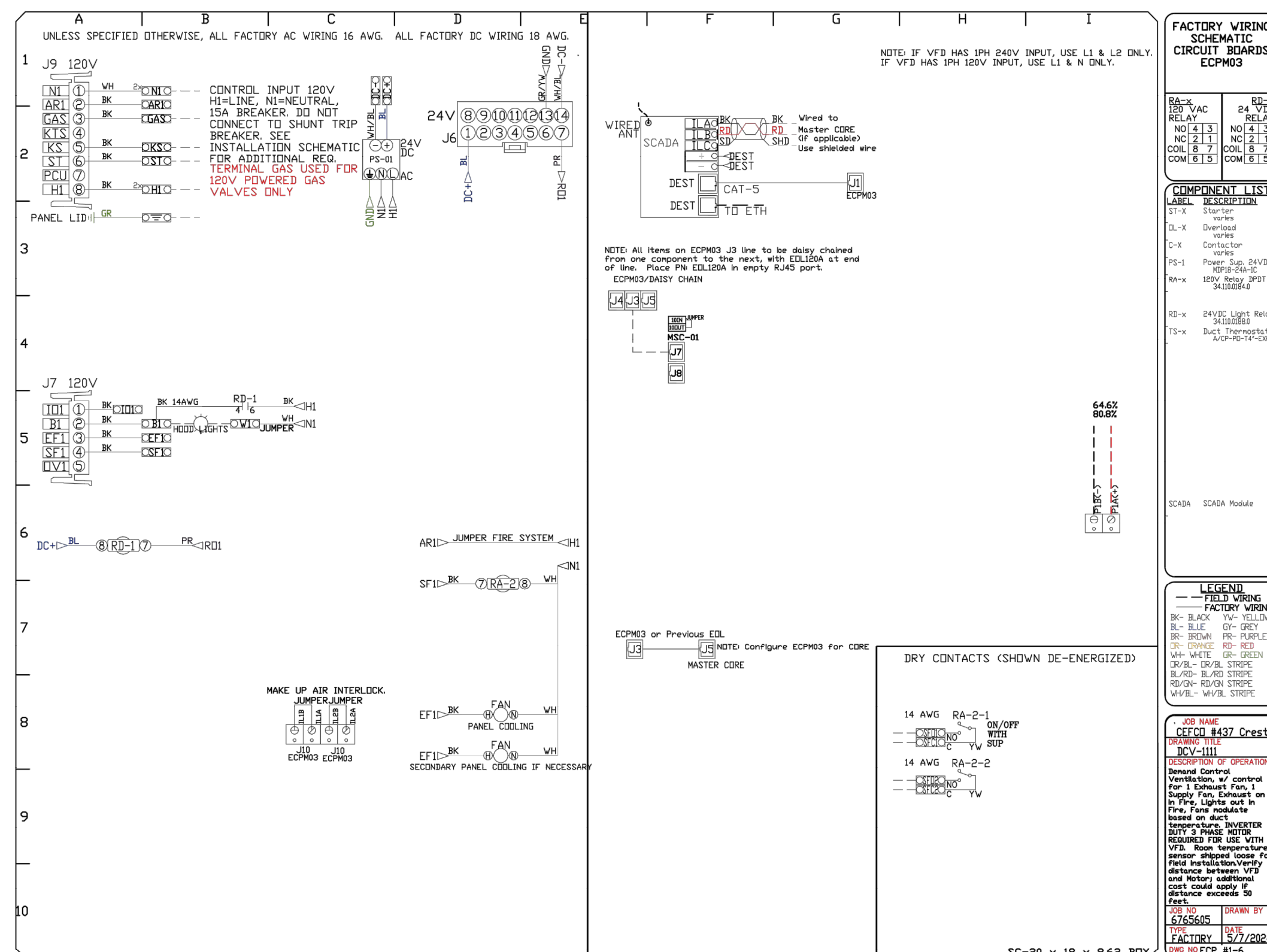
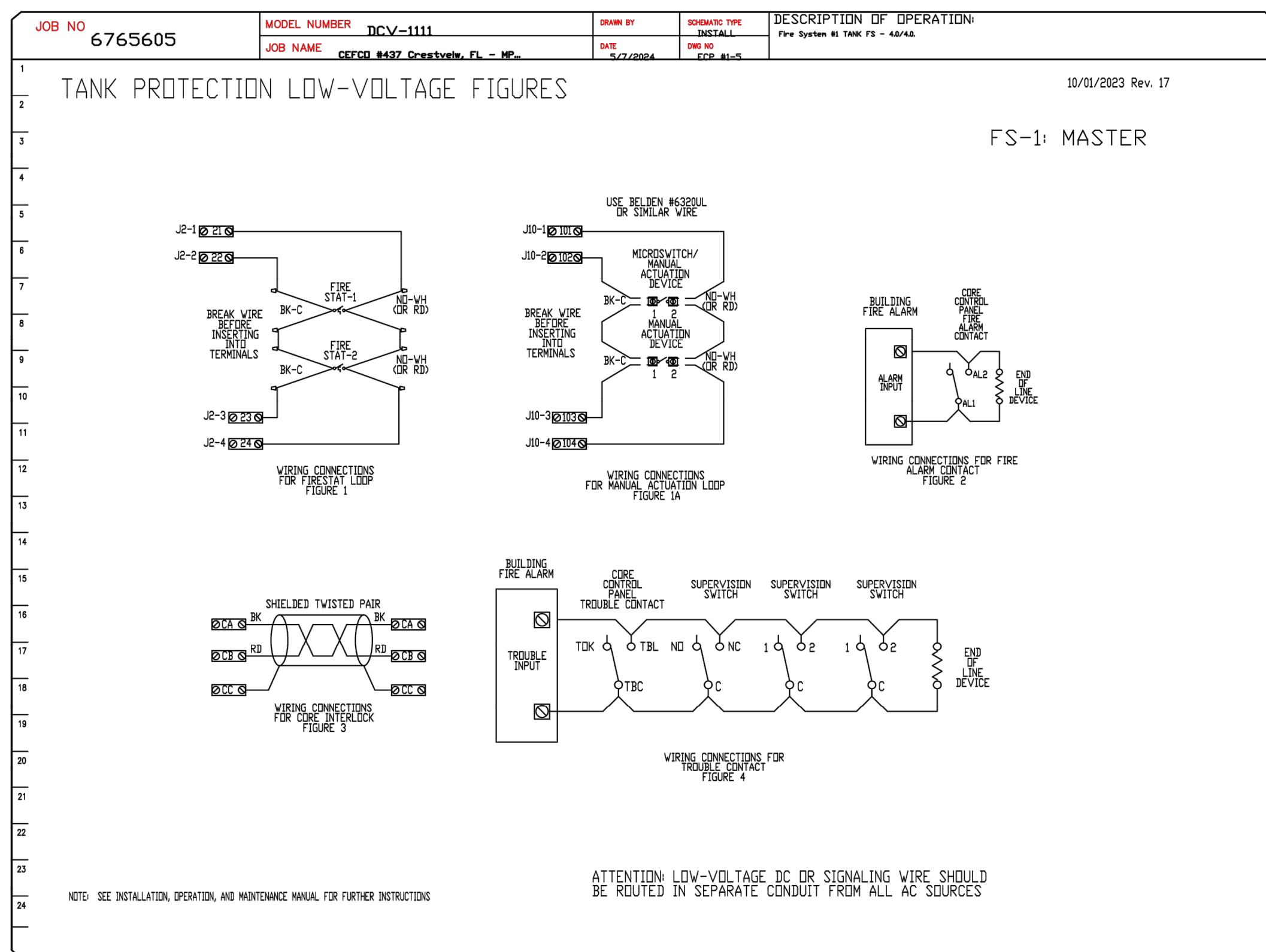
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 RK

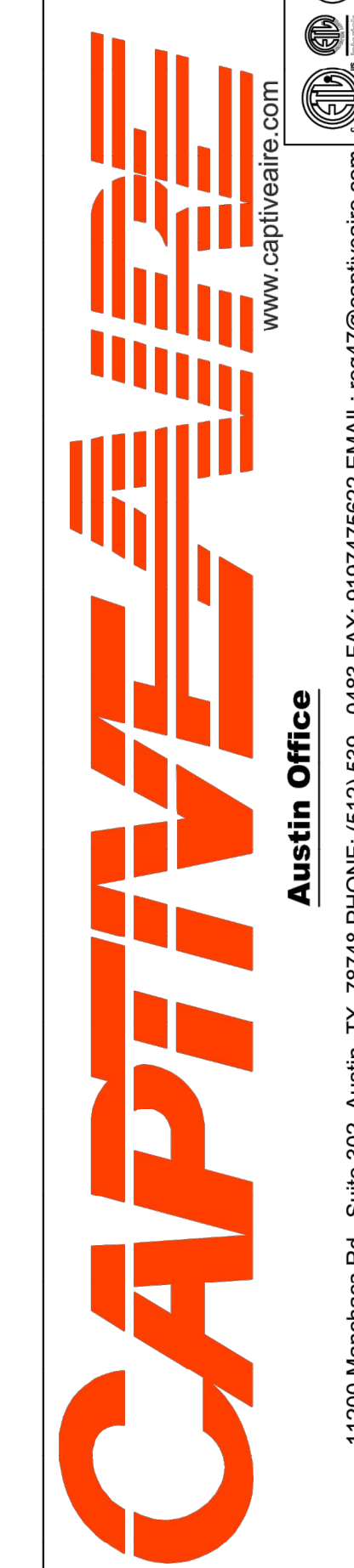
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Project Name and Address	Sheet
CEFCO #437 - BETHEL HIGHWAY 90 AND OLD BETHEL ROAD CRESTVIEW, FLORIDA	MC0.10

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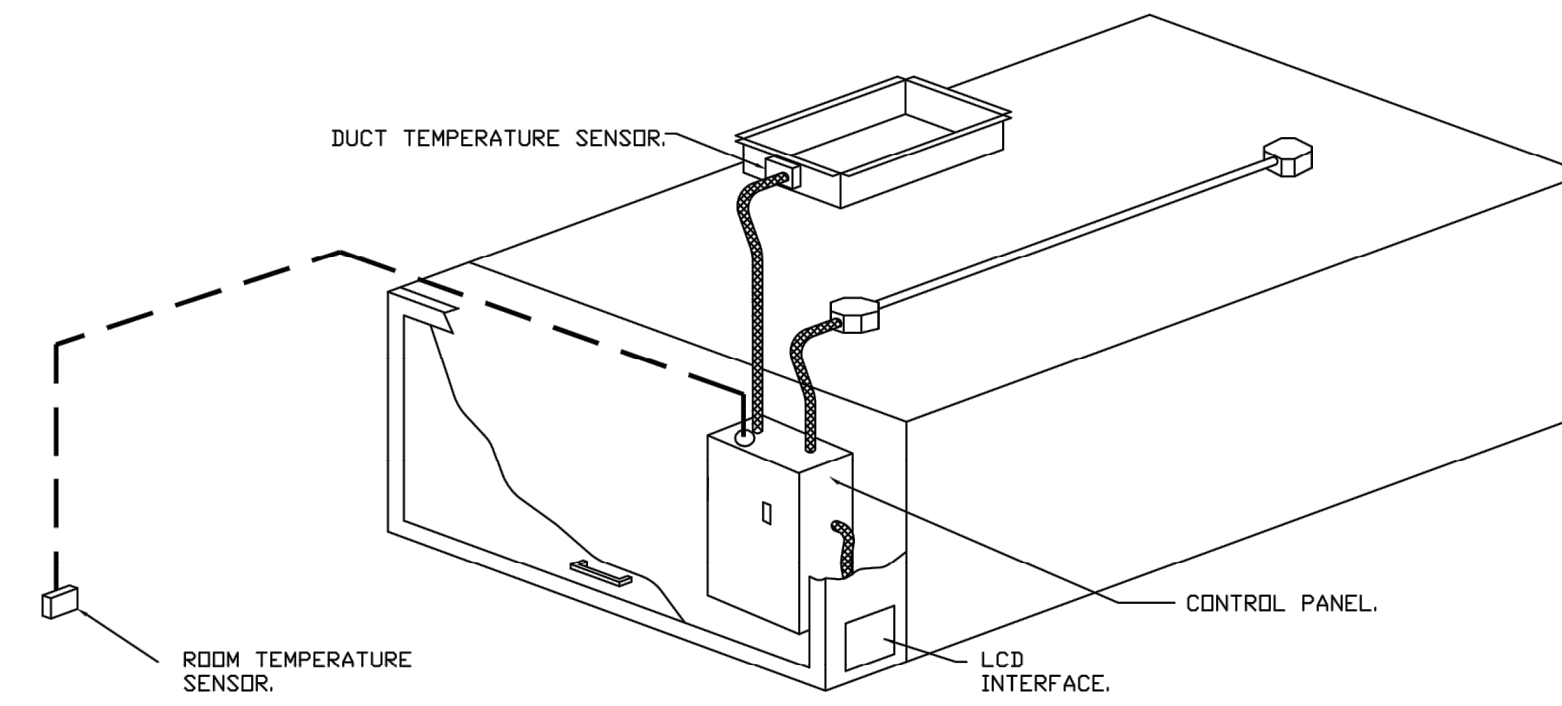
KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS

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DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

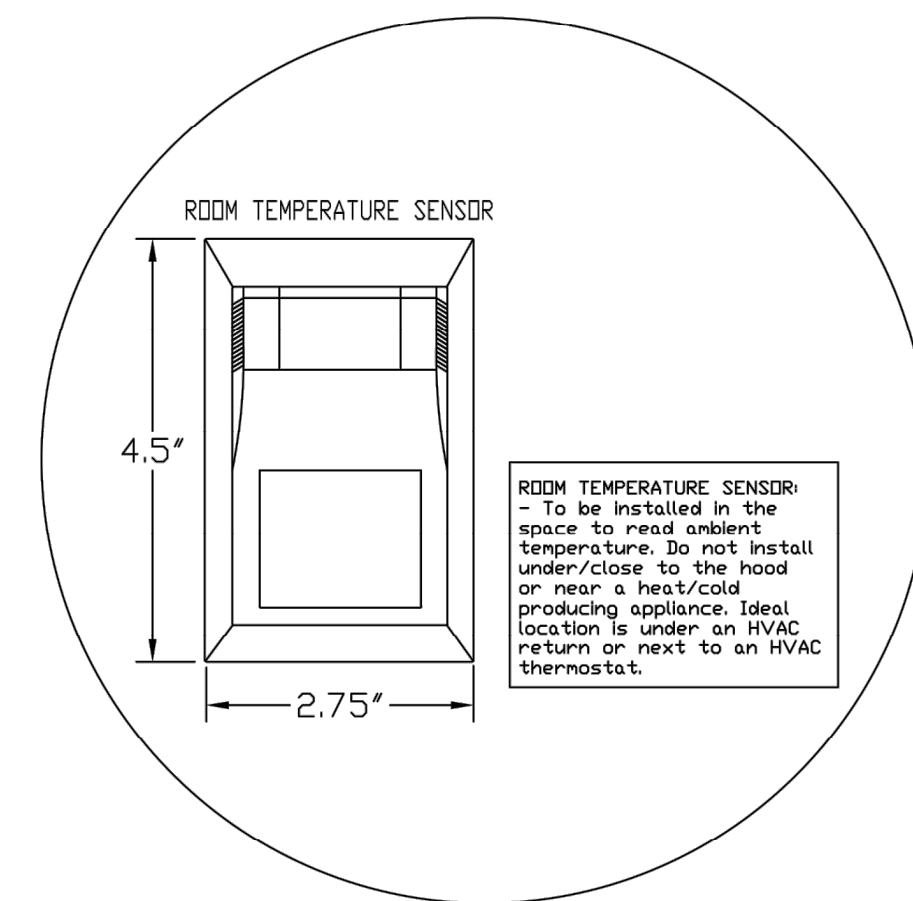
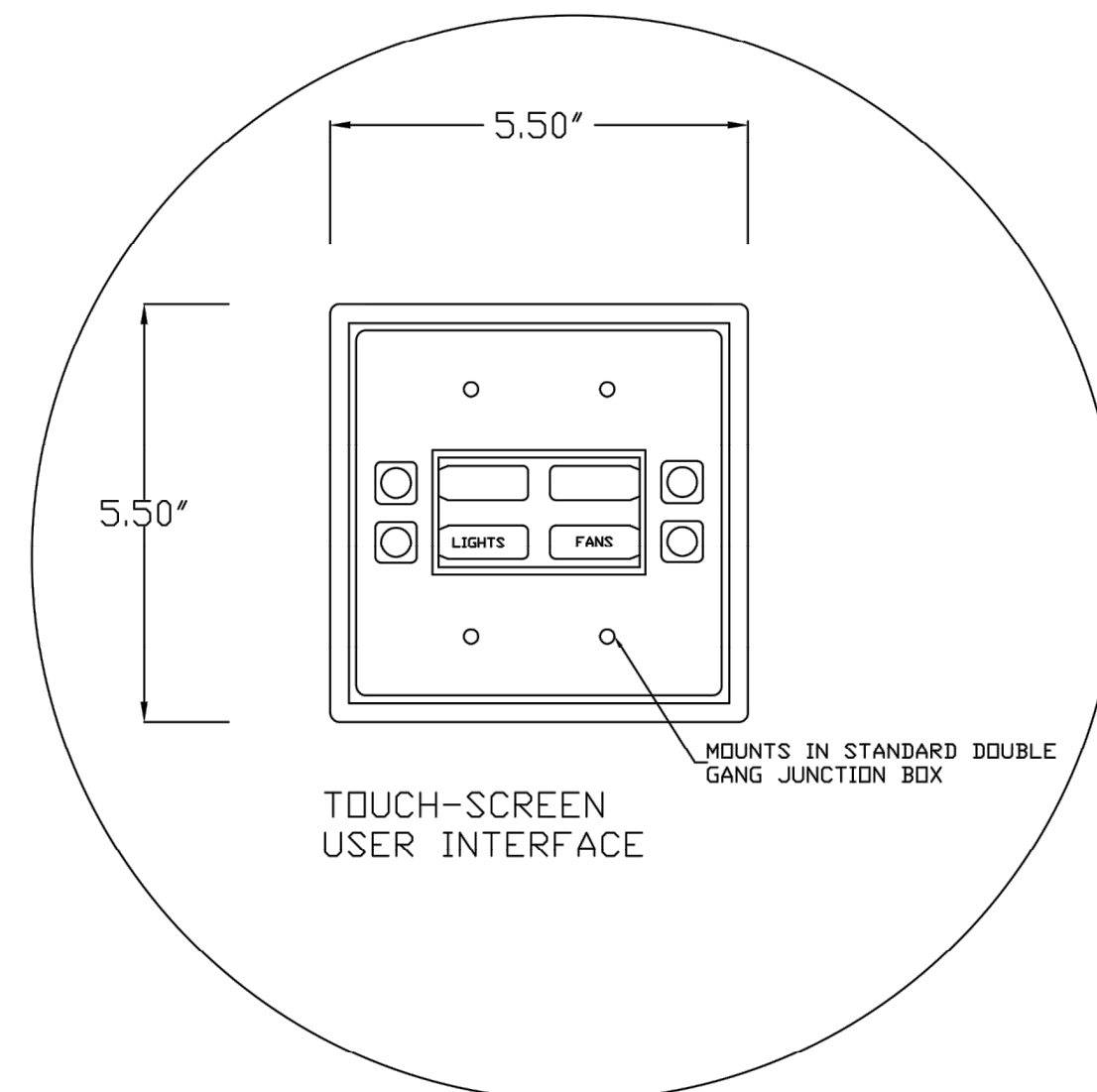
- CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.
- TEMPERATURE PROBE(S) LOCATED IN THE EXHAUST DUCT RISER(S) SHALL BE CONSTRUCTED OF STAINLESS STEEL.
- A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIXED DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURES SENSORS. THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 507.1.1.
- A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCES HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
- A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
- VARIABLE FREQUENCY DRIVES (VFDS) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL CONTROLLER SHALL MODULATE THE VFDS BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DUCT TEMPERATURE SENSOR INPUT(S) TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.
- THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.
- AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEED PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN GROUP AS THE SUPPLY FAN.
- THE SYSTEM SHALL OPERATE IN PREP MODE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN SUFFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED. OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.
- A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FAN(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION IS DETECTED ON A COVERED HOOD.
- A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT (EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE).
- AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
 - ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.
 - INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).
 - VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
 - DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
 - MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
 - A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
 - AN ENERGY SAVINGS INDICATOR THAT UTILIZES MEASURED KWH FROM THE VFDS.



TYPICAL HOOD CONTROL PANEL INSTALLATION

SEQUENCE OF OPERATIONS:

- THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY GIVEN TIME:
- **AUTOMATIC:** THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD. DEPENDING ON THE JOB CONFIGURATION EACH FAN ZONE CAN BE CONFIGURED AS STATIC OR DYNAMIC. THESE TERMS REFER TO WHETHER A VARIABLE MOTOR (SUCH AS EC MOTORS OR VFD DRIVEN MOTORS) MODULATE WITH TEMPERATURE. IF THE PANEL IS EQUIPPED WITH VARIABLE SPEED FANS AND THE ZONE IS DEFINED AS "DYNAMIC", THESE WILL MODULATE WITHIN A USER-DEFINED RANGE BASED ON THE TEMPERATURE DIFFERENTIAL. PANELS EQUIPPED WITH VARIABLE SPEED FANS AND A FAN ZONE DEFINED AS "STATIC", FANS WILL RUN AT A SET SPEED CALCULATED FOR THE DRIVE. DEMAND CONTROL VENTILATION SYSTEMS ARE CAPABLE OF MODULATING EXHAUST AND MAKE UP AIR FAN SPEEDS PER THE REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
 - **MANUAL:** THE SYSTEM OPERATES BASED ON HUMAN INPUT FROM AN HMI.
 - **SCHEDULE:** A WEEKLY SCHEDULE CAN BE SET TO RUN FANS FOR A SPECIFIED PERIOD THROUGHOUT THE DAY. THERE ARE THREE OCCUPIED TIMES PER DAY TO ALLOW FOR THE USER TO SET UP A TIME THAT IS SUITABLE TO THEIR NEEDS. ANY TIME THAT IS WITHIN THE DEFINED OCCUPIED TIME, THE SYSTEM WILL RUN AT MODULATION MODE AND FOLLOW THE FAN PROCEDURE ALGORITHM BASED ON TEMPERATURE DURING THIS TIME. DURING UNOCCUPIED TIME, THE SYSTEM WILL HAVE AN EXTRA OFFSET TO PREVENT UNINTENDED ACTIVATION OF THE SYSTEM DURING A TIME WHERE THE SYSTEM IS NOT BEING OCCUPIED.
 - **OTHER:** THE SYSTEM OPERATES BASED ON THE INPUT FROM AN EXTERNAL SOURCE (DDC, BMS OR HARD-WIRED INTERLOCK).
 - **FIRE:** UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO RUN, THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICIAN. FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.



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FL REG. NO. 79067
Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
KITCHEN EXHAUST, HOOD AND MAKEUP AIR UNIT DETAILS

Project No.
170-101.00

Sheet
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Drawn By
IV

Reviewed By
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REFER TO SEPARATE PERMIT CAPTIVE-AIR (OR EQUAL) EXHAUST FAN, HOOD, AND MAKE UP AIR UNIT PLANS FOR ADDITIONAL INFORMATION

DUCTWORK #1 PARTS - JOB#6765605 DOUBLE WALL

TAG	PART #	CFM	GPM	ZONE	COVERED BY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
HI-E1	DW18DWRISER-2R-S	1800				-0.93	8.15	0.00	1	DOUBLE WALL RISER COVER - USED ON 14" INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
P1	DW1445DWASY-2R-S	1800				-0.0473	19.87	1683.79	1	DOUBLE WALL DUCT - 14" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL.
P2	DW1427DWAJD-2R-S	1800				-0.007	52.12	1683.79	1	DOUBLE WALL ADJUSTABLE DUCT - 14" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 24.5' / ADJUSTMENT = 13.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
P3	DW1822SADKIT						7.25		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 18" DD - INCLUDES UNI-STRUT CUT TO LENGTH, DW1822SAD, & HARDWARE BAG 4.
P4	DW1445DWASY-2R-S	1800				-0.0675	19.87	1683.79	1	DOUBLE WALL DUCT - 14" INNER 45 DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL.
P5	DW1447DWAJD-2R-S	1800				-0.014	93.18	1683.79	1	DOUBLE WALL ADJUSTABLE DUCT - 14" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 48.5' / ADJUSTMENT = 30.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
P6 ASSEMBLED W/P7	DW1435DWLTP-2R-S	1800				-0.015	48.06	1683.79	1	DOUBLE WALL DUCT - 14" INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL - USED WITH TRANSITION PLATE.
P7 ASSEMBLED W/P6 & B SYSTEM AT P7	DW2314TP	1800					8.49	1683.79	1	DUCT TO CURB TRANSITION, 23' CURB TO 14" DUCT, 16 GA ALUMINIZED. USED ON BDU15, DU75 & 85.
						-1.0808	0.00			
RC1	DW18DWRISER-2R-S						8.15		1	DOUBLE WALL RISER COVER - USED ON 14" INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
	3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
TOTAL WEIGHT							266.74			

DOUBLE WALL FACTORY BUILT DUCTWORK

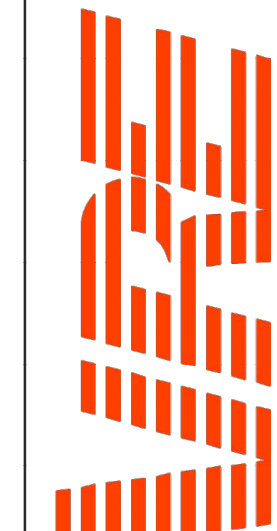
- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5"	7'
6"	7'
7"	7'
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'
26"	5'
28"	5'
30"	5'
32"	5'
34"	5'
36"	5'

VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
2R & 2R HT (5'-16')	20'	24'	24'
2R (18')	18'	24'	24'
3R & 3Z (5'-24')	10'	24'	24'
3Z (26'-36')	10'	20'	20'

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

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CEFCO #437 - BETHEL
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Sheet Title
KITCHEN EXHAUST, HOOD
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DETAILS

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IV

Reviewed By
RK

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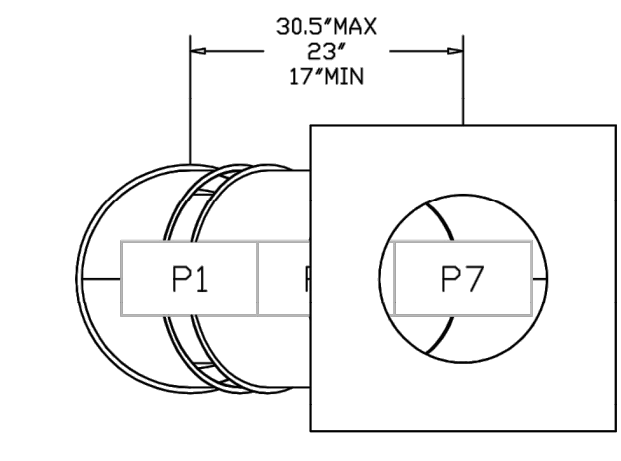
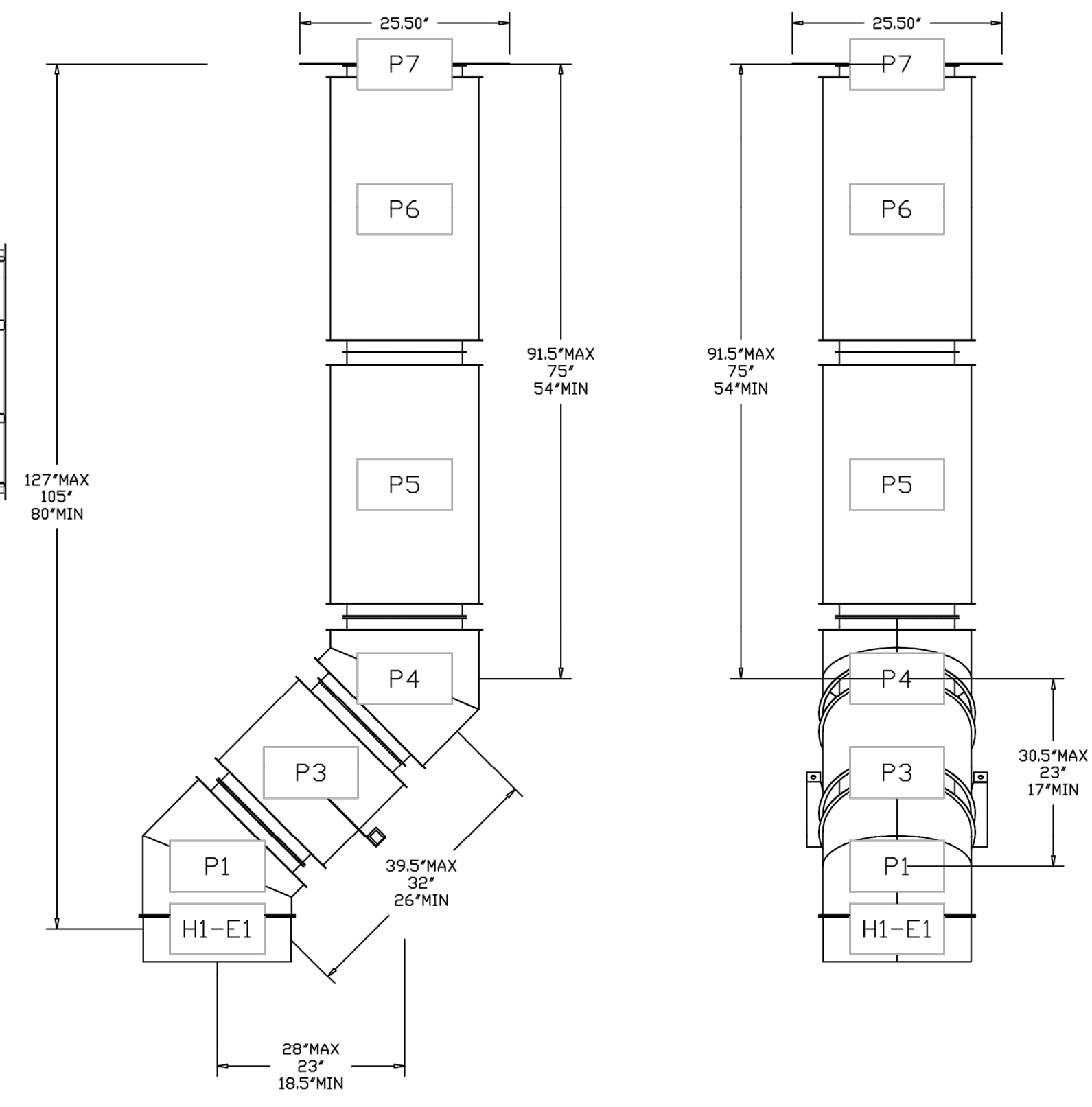
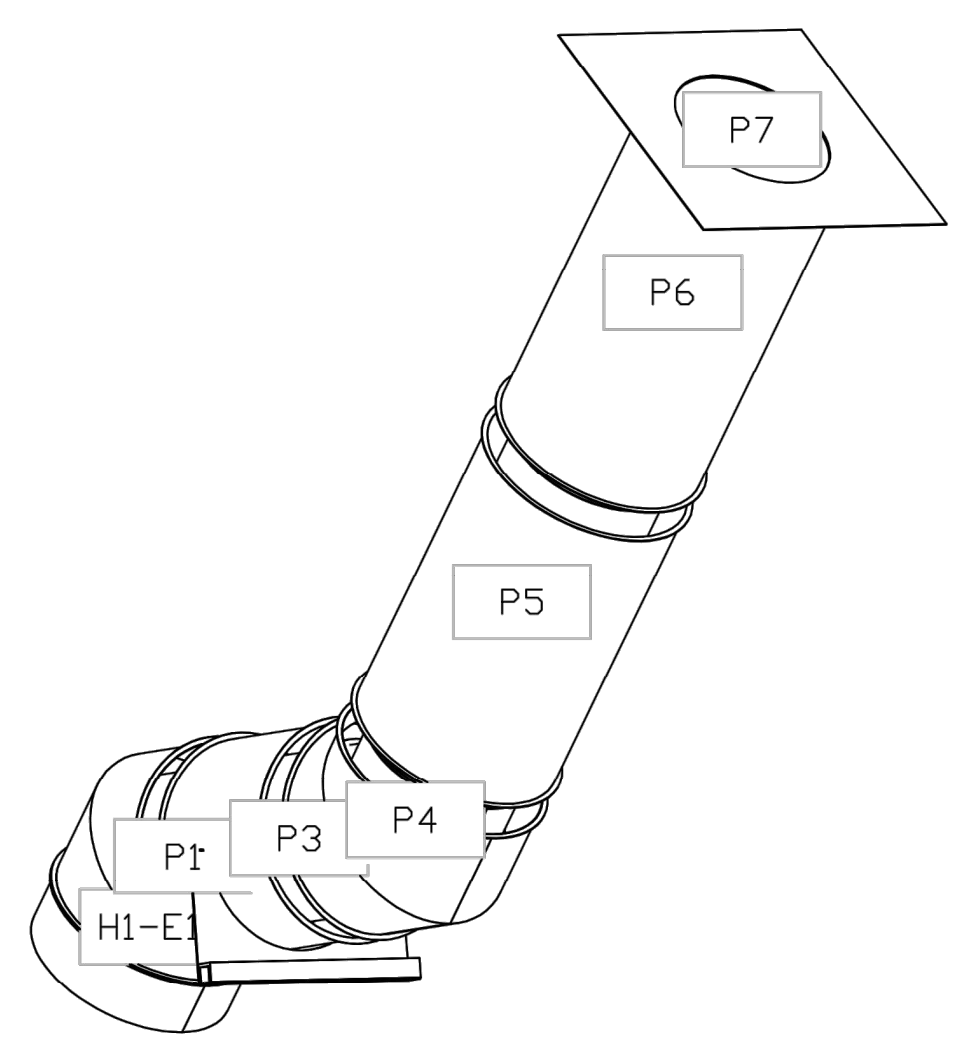
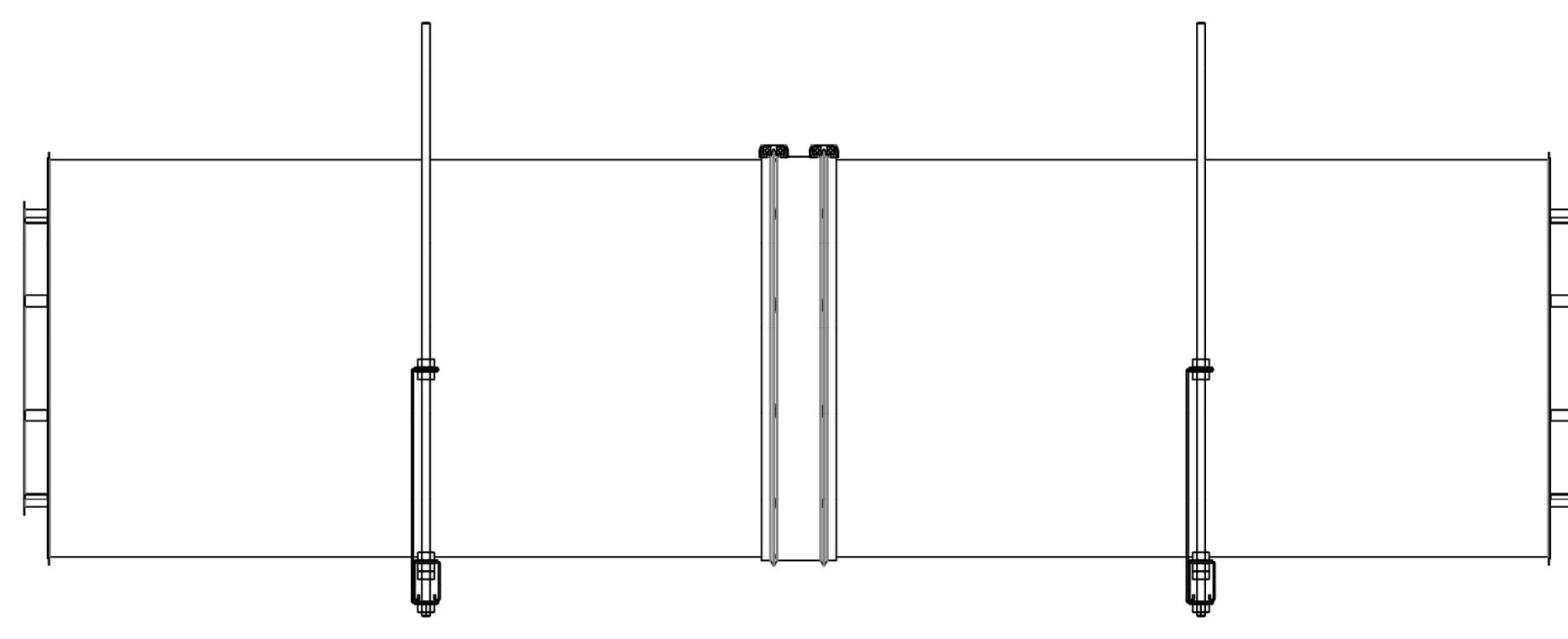
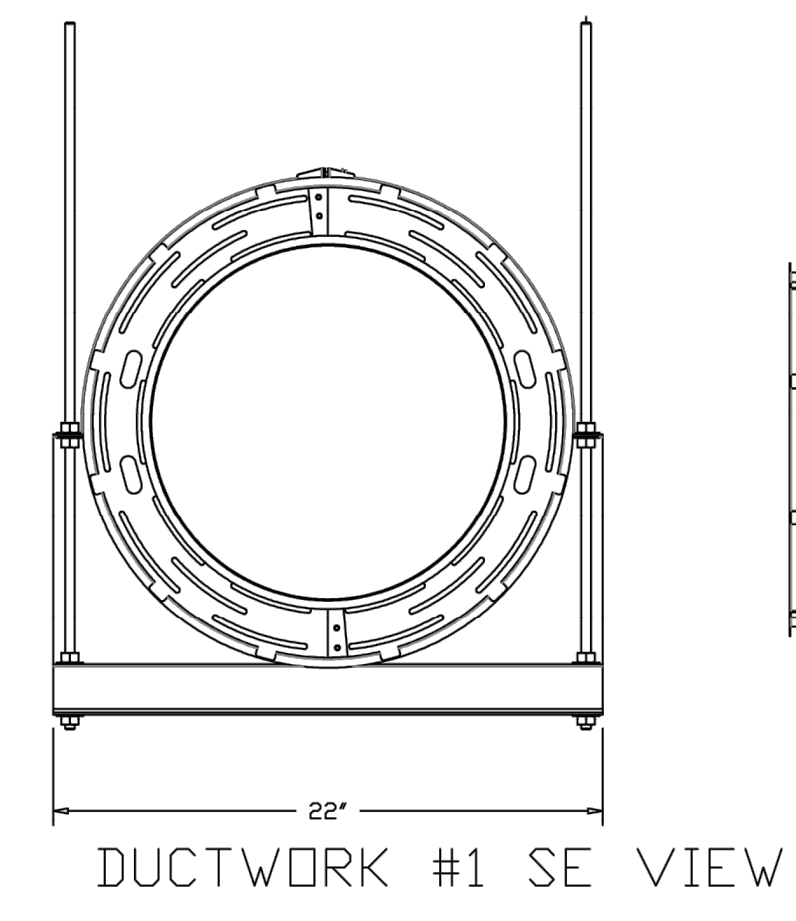
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SUPPORT SYSTEM DETAILS #1

DUCTWORK #1 FRONT VIEW DUCTWORK #1 SIDE VIEW DUCTWORK #1 TOP VIEW

DW1822SADKIT - HORIZONTAL SUPPORTS



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Project No. 170-101.00
Drawn By: JLV
Reviewed By: RK

Sheet MC0.13

PLUMBING LINE LEGEND:

LINE NOTE:

ALL LINE TYPES SHOWN MAY NOT APPEAR IN ALL DRAWINGS. REFER TO PLANS FOR PLUMBING SCOPE.

- SANITARY SEWER PIPING
- GREASE WATER PIPING
- SANITARY VENT PIPING
- COLD WATER PIPING
- HOT WATER PIPING
- HOT WATER RECIRCULATION PIPING
- SOFT WATER PIPING
- FILTERED WATER PIPING
- REVERSE OSMOSIS WATER PIPING
- REVERSE OSMOSIS WATER PIPING SCALE CONTROL
- REVERSE OSMOSIS WATER PIPING NO SCALE CONTROL
- STORM DRAIN PIPING
- OVERFLOW DRAIN PIPING
- CONDENSATE DRAIN PIPING

PLUMBING SYMBOL LEGEND:

SYMBOL NOTE:

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS SHOWN ARE SCHEMATIC AND MAY NOT BE TO SCALE.

- PIPE ELBOW DOWN
- PIPE ELBOW UP
- PIPE RISE
- PIPE DROP
- PIPE BOTTOM T
- PIPE TOP T
- PIPE STRAIGHT T
- PIPE END CAP
- BACK FLOW PREVENTER
- FIXTURE DESIGNATION
- PIPE BREAK
- UNION
- GLOBE VALVE
- CHECK VALVE
- GATE VALVE
- BALL VALVE
- STRAINER

PLUMBING SPECIFICATIONS:

PART 1 - GENERAL

1.1 SUBMITTALS
 A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.

PART 2 - PRODUCTS

2.1 PIPING MATERIALS
 A. COMPLY WITH REQUIREMENTS IN "PLUMBING PIPING SCHEDULE" ARTICLE FOR APPLICATIONS OF PIPE, TUBE, AND FITTING MATERIALS, AND FOR JOINING METHODS, INSULATION, AND HANGING REQUIREMENTS FOR SPECIFIC SERVICES, SERVICE LOCATIONS, AND PIPE SIZES.

2.2 VALVES

A. NSF COMPLIANCE: NSF 61 FOR VALVE MATERIALS FOR POTABLE WATER SERVICE.
 B. WATER SHUTOFF SERVICE: TWO-PIECE, FULL PORT, BRASS BALL VALVES WITH BRASS TRIM.
 C. CHECK VALVES: BRASS SILENT CHECK VALVES WITH NONMETALLIC DISC SUITABLE FOR HORIZONTAL OR VERTICAL INSTALLATION.
 D. FUEL GAS SHUTOFF SERVICE: TWO-PIECE, FULL PORT, BRASS BALL VALVES WITH BRASS TRIM, UL LISTED FOR GAS SERVICE.
 E. FUEL GAS PRESSURE REGULATORS: COMMERCIAL STYLE REGULATORS WITH INTERNAL PRESSURE RELIEF VALVES.

2.3 HANGERS AND SUPPORTS

A. PROVIDE HANGERS INDICATED ON DRAWINGS.
 B. WALL SUPPORTS
 1. PIPING 3" AND SMALLER: STEEL RISER CLAMP.
 C. VERTICAL SUPPORT: STEEL RISER CLAMP.

PART 3 - EXECUTION

3.1 PIPING INSTALLATION

A. INSTALL ESCUTCHEONS AT EACH WALL, FLOOR, AND CEILING PENETRATION IN EXPOSED FINISHED LOCATIONS AND WITHIN CABINETS AND MILLWORK. USE DEEP PATTERN ESCUTCHEONS WHERE REQUIRED TO CONCEAL PROTRUDING PIPE FITTINGS.
 B. INSTALL SLEEVES FOR PIPING PENETRATIONS OF WALLS, CEILINGS, AND FLOORS.
 C. INSTALL SLEEVE SEALS FOR PIPING PENETRATIONS OF CONCRETE WALLS AND SLABS.
 D. MAKE SOLDERED JOINTS USING LEAD FREE SOLDER AND A NON-CORROZIVE, PASTE-TYPE FLUX. CORE SOLDER IS NOT PERMITTED SOLDER SHALL BE SOLID STRING OR WIRE TYPE. WHERE SOLDERED COPPER PIPING IS CONNECTED TO THREADED BRASS PIPING, USE CAST BRASS ADAPTOR.
 E. PLACE PLUGS IN ENDS OF UNCOMPLETED PIPING AT END OF EACH DAY OR WHEN WORK STOPS.
 F. MINIMUM SLOPE OF HORIZONTAL DRAIN PIPING SHALL BE 1/4" PER FOOT FOR PIPING 2-1/2" OR LESS, 1/8" PER FOOT FOR PIPING 3" TO 6", AND 1/16" PER FOOT FOR PIPING 8" OR LARGER.
 G. MAKE CHANGES IN DIRECTION IN DRAIN PIPING WITH INDIVIDUAL EIGHT BENDS AND WYES.
 H. QUARTER BENDS, SWEEPS, TEES, AND COMBINATION WYE & EIGHT BEND FITTINGS ARE NOT PERMITTED FOR USE ON DRAIN PIPING.
 I. EXTEND RIGID GAS PIPING TO EXTERIOR GAS APPLIANCES AND INSTALL SHUTOFF VALVE, DIRT LEG, AND UNION AT EACH APPLIANCE.

3.2 JOINT CONSTRUCTION

A. REAM ENDS OF PIPES AND TUBES AND REMOVE BURRS. BEVEL PLAIN ENDS OF STEEL PIPE
 B. REMOVE SCALE, SLAG, DIRT, AND DEBRIS FROM INSIDE AND OUTSIDE OF PIPES, TUBES, AND FITTINGS BEFORE ASSEMBLY.
 C. THREADED JOINTS: THREAD PIPE WITH TAPERED PIPE THREADS ACCORDING TO ASME B1.20.1; CUT THREADS FULL AND CLEAN USING SHARP DIES. REAM THREADED PIPE ENDS TO REMOVE BURRS AND RESTORE FULL ID. JOINT PIPE FITTINGS AND VALVES AS FOLLOWS:
 1. APPLY APPROPRIATE TAPE OR THREAD COMPOUND TO EXTERNAL PIPE THREADS.
 2. DAMAGED THREADS: DO NOT USE PIPE OR FITTINGS WITH THREADS THAT ARE CORRODED OR DAMAGED
 D. DISSIMILAR-MATERIAL PIPING JOINTS: MAKE JOINTS USING ADAPTERS COMPATIBLE WITH MATERIALS OF BOTH PIPING SYSTEMS.

3.3 HANGERS AND SUPPORT INSTALLATION

A. SUPPORT PIPES THROUGHOUT BUILDING, BOTH HORIZONTALLY AND VERTICAL IN ACCORDANCE WITH REQUIREMENTS HEREIN AND AS SHOWN ON THE DRAWINGS. DO NOT USE FASTENERS WHICH PENETRATE THE ROOF DECK.
 B. PROVIDE COPPER PLATED HANGERS AND SUPPORTS FOR UNINSULATED COPPER PIPING. PROVIDE PLASTIC INSERTS FOR UNINSULATED COPPER PIPING PENETRATING METAL STUDS.
 C. IN AREAS WITHOUT CEILINGS, SECURE INSULATION SHIELDS TO INSULATION WITH PRESSURE SENSITIVE TAPE AT EACH END OF SHIELD. INSTALL HANGERS TO PROVIDE MINIMUM

PLUMBING SPECIFICATIONS:

1/2" CLEAR SPACE BETWEEN FINISHED COVERING AND ADJACENT WORK.
 E. PLACE A HANGER WITHIN ONE FOOT OF EACH HORIZONTAL ELBOW.
 F. SUPPORT VERTICAL PIPE RUNS AT ROOF, AT FLOOR, AND AT MAXIMUM 15-FOOT INTERVALS.
 G. SPACE SUPPORTS NOT MORE THAN FIVE FEET APART AT VALVES, STRAINERS OR PIPING ACCESSORIES LARGER THAN 2"
 H. INSTALL LATERAL BRACING WITH PIPE HANGERS AND SUPPORTS TO PREVENT SWAYING.

I. INSTALL HANGERS AND SUPPORTS TO ALLOW CONTROLLED THERMAL AND SEISMIC MOVEMENT OF PIPING SYSTEMS, TO PERMIT FREEDOM OF MOVEMENT BETWEEN PIPE ANCHORS, AND TO FACILITATE ACTION OF EXPANSION JOINTS, EXPANSION LOOPS, EXPANSION BENDS, AND SIMILAR UNITS.
 J. ADJUSTING

- 1. HANGER ADJUSTMENTS: ADJUST HANGERS TO DISTRIBUTE LOADS EQUALLY ON ATTACHMENTS AND TO ACHIEVE INDICATED SLOPE OF PIPE.
- 2. LOAD DISTRIBUTION: ADJUST HANGERS AND SUPPORTS SO THAT PIPING LIVE AND DEAD LOADS AND STRESSES FROM MOVEMENT WILL NOT BE TRANSMITTED TO CONNECTED EQUIPMENT.
- 3. PIPE SLOPES: ADJUST HANGERS AND SUPPORTS TO PROVIDE INDICATED PIPE SLOPES AND TO NOT EXCEED MAXIMUM PIPE DEFLECTIONS ALLOWED BY ASME B31.9 FOR BUILDING SERVICES PIPING.
- 4. TRIM EXCESS LENGTH OF CONTINUOUS - THREAD HANGER AND SUPPORT RODS TO 1-1/2".

3.4 PIPE INSULATION INSTALLATION

A. INSULATE FITTINGS AND VALVES WITH PREFORMED INSULATION FITTINGS WITH PVC JACKET.
 B. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE CONCEALED PLUMBING EQUIPMENT. ACCESS PANELS SHALL BE TURNED OVER TO GENERAL CONTRACTOR FOR INSTALLATION.

3.5 VALVE AND SPECIALTIES INSTALLATION

A. PROVIDE DEEP SEAL P-TRAPS FOR FLOOR DRAINS AND MOP BASINS.
 B. FOR CLEANOUTS LOCATED IN CONCEALED PIPING, INSTALL CLEANOUT WALL ACCESS COVERS OF TYPES INDICATED, WITH FRAME AND COVER FLUSH WITH FINISHED WALL.
 C. PROTECT DRAINS DURING CONSTRUCTION PERIOD TO AVOID CLOGGING WITH DIRT OR DEBRIS AND TO PREVENT DAMAGE FROM TRAFFIC OR CONSTRUCTION WORK.

GENERAL NOTES:

- A. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
- B. CONTRACT DOCUMENT DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
- C. INSTALL ALL PLUMBING EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
- D. PROVIDE VIBRATION ISOLATION FOR ALL PLUMBING EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE.
- E. PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS CONNECTED TO AND WITHIN 50 FEET OF ISOLATED EQUIPMENT (EXCEPT AT BASE ELBOW SUPPORTS AND ANCHOR POINTS) THROUGHOUT MECHANICAL EQUIPMENT ROOMS. DO THE SAME FOR SUPPORTS OF STEAM MAINS WITHIN 50 FEET OF BOILER OR PRESSURE REDUCING VALVES.
- F. PROVIDE VIBRATION ISOLATORS FOR ALL PIPING SUPPORTS OF STEAM MAINS WITHIN 50 FEET OF BOILERS AND PRESSURE REDUCING VALVES.
- G. THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PAY FOR AND REPAIR ALL DAMAGES CAUSED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES UNLESS OTHERWISE INDICATED.
- H. COORDINATE CONSTRUCTION OF ALL PLUMBING WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
- I. ALL TESTS SHALL BE COMPLETED BEFORE ANY PLUMBING EQUIPMENT OR PIPING INSULATION IS APPLIED.
- J. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.

GENERAL NOTES (CONT.):

K. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.

L. REINFORCEMENT, DETAILING, AND PLACEMENT OF CONCRETE SHALL CONFORM TO ASTM 315 AND ACI 318. CONCRETE SHALL CONFORM TO ASTM C94. CONCRETE WORK SHALL CONFORM TO ACI 318, PART ENTITLED "CONSTRUCTION REQUIREMENTS." COMPRESSIVE STRENGTH IN 28 DAYS SHALL BE 3,000 PSI. TOTAL AIR CONTENT OF EXTERIOR CONCRETE SHALL BE BETWEEN 5 AND 7 PERCENT BY VOLUME. SLUMP SHALL BE BETWEEN 3 AND 4 INCHES. CONCRETE SHALL BE CURED FOR 7 DAYS AFTER PLACEMENT.

M. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL PIPING DIMENSIONS BEFORE FABRICATION.

N. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND DIVISION 16 OF THE SPECIFICATION.

O. WHERE BEAMS ARE INDICATED TO BE PENETRATED WITH PIPING, COORDINATE PIPING LAYOUT WITH BEAM OPENING SIZE AND OPENING LOCATIONS. COORDINATION SHALL BE DONE PRIOR TO CUTTING OF PIPING, OR FABRICATION OF BEAMS.

P. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.

Q. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE CONCEALED PLUMBING EQUIPMENT. ACCESS PANELS SHALL BE TURNED OVER TO GENERAL CONTRACTOR FOR INSTALLATION.

R. ALL EQUIPMENT, PIPING, ETC., SHALL BE SUPPORTED AS DETAILED, SPECIFIED, AND REQUIRED TO PROVIDE A VIBRATION FREE INSTALLATION.

S. ALL PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH GENERAL CONTRACTOR. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS. PROVIDE BEAM CLAMP MEETING MSS STANDARDS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED. THE USE OF C-CLAMPS SHALL NOT BE PERMITTED.

T. PLUMBING EQUIPMENT AND PIPING SHALL NOT BE SUPPORTED FROM METAL DECK.

U. LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.

V. ALL OPENINGS IN FIRE WALLS DUE TO PIPING, CONDUIT, ETC., SHALL BE FIRE STOPPED WITH A PRODUCT SIMILAR TO 3M OR APPROVED EQUAL.

W. REFER TO TYPICAL DETAILS FOR PIPING AND EQUIPMENT INSTALLATION.

PIPING NOTES:

- A. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PIPING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
- B. ELEVATIONS AS SHOWN ON THE DRAWINGS ARE TO THE CENTERLINE OF ALL PRESSURE PIPING AND TO THE INVERT OF ALL GRAVITY PIPING.
- C. MAINTAIN A MINIMUM OF 3/6" OF GROUND COVER OVER ALL UNDERGROUND HVAC PIPING.
- D. UNLESS OTHERWISE NOTED, ALL CHILLED WATER AND HEATING WATER PIPING SHALL BE 3/4 INCH SIZE.
- E. PROVIDE AN AIR VENT AT THE HIGH POINT OF EACH DROP IN THE HEATING WATER, CHILLED WATER, AND OTHER CLOSED WATER PIPING SYSTEMS. ALL PIPING SHALL GRADE TO LOW POINTS. PROVIDE HOSE END DRAIN VALVES AT THE BOTTOM OF ALL RISERS AND LOW POINTS.
- F. UNLESS OTHERWISE NOTED, ALL PIPING IS OVERHEAD. TIGHT TO UNDERSIDE OF STRUCTURE OR SLAB, WITH SPACE FOR INSULATION IF REQUIRED.
- G. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.
- H. ALL VALVES SHALL BE INSTALLED SO THAT VALVE REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED.

PIPING NOTES (CONT.):

I. ALL BALANCING VALVES AND BUTTERFLY VALVES SHALL BE PROVIDED WITH POSITION INDICATORS AND MAXIMUM ADJUSTABLE STOPS (MEMORY STOPS).

J. PROVIDE CHAINWHEEL OPERATORS FOR ALL VALVES IN EQUIPMENT ROOMS MOUNTED GREATER THAN 7'-0" ABOVE FLOOR LEVEL; CHAIN SHALL EXTEND TO 7'-0" ABOVE FLOOR LEVEL.

K. ALL VALVES (EXCEPT CONTROL VALVES) AND STRAINERS SHALL BE FULL SIZE OF PIPE BEFORE REDUCING SIZE TO MAKE CONNECTIONS TO EQUIPMENT AND CONTROLS.

L. UNIONS AND/OR FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT, IN BYPASSES, AND IN LONG PIPING RUNS (100 FEET OR MORE) TO PERMIT DISASSEMBLY FOR ALTERATION AND REPAIRS.

M. PITCH STEAM PIPING DOWNWARD IN THE DIRECTION OF FLOW 1/4 INCH IN 10 FEET (1 INCH IN 40 FEET) MINIMUM. PITCH ALL STEAM RETURN LINES DOWNWARD IN THE DIRECTION OF CONDENSATE FLOW 1/2 INCH PER 10 FEET (1 INCH IN 20 FEET) MINIMUM. WHERE LENGTH OF BRANCH LINES ARE LESS THAN 8 FEET, PITCH BRANCH LINES TOWARD MAINS 1/2 INCH PER FOOT MINIMUM.

N. PITCH UP ALL STEAM AND CONDENSATE RUNOUTS TO RISERS AND EQUIPMENT 1/2 INCH PER FOOT. WHERE THIS PITCH CANNOT BE OBTAINED, RUNOUTS OVER 8 FEET IN LENGTH SHALL BE ONE SIZE LARGER THAN NOTED.

O. TAP ALL BRANCH LINES FROM TOP OF STEAM MAINS (45 DEGREES PREFERRED, 90 DEGREES ACCEPTABLE).

P. PROVIDE AN END OF MAIN DRIP AT EACH RISE IN THE STEAM MAIN. PROVIDE CONDENSATE DRIPS AT THE BOTTOM OF ALL STEAM RISERS, DOWNFED RUNOUTS TO EQUIPMENT, RADIATORS, ETC., AT END OF MAINS AND LOW POINTS, AND AHEAD OF ALL PRESSURE REGULATORS, CONTROL VALVES, ISOLATION VALVES, AND EXPANSION JOINTS.

Q. ON STRAIGHT STEAM PIPING RUNS WITH NO NATURAL DRAINAGE POINTS, INSTALL DRIP LEGS AT INTERVALS NOT EXCEEDING 200 FEET WHERE PIPE IS PITCHED DOWNWARD IN THE DIRECTION OF STEAM FLOW AND A MAXIMUM OF 100 FEET WHERE THE PIPE IS PITCHED UP SO THAT CONDENSATE FLOW IS OPPOSITE OF STEAM FLOW.

R. STEAM TRAPS SHALL BE MINIMUM 3/4" SIZE.

S. INSTALL ALL PIPING WITHOUT FORCING OR SPRINGING.

T. ALL PIPING SHALL CLEAR DOORS AND WINDOWS.

U. ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION.

V. ALL PIPING WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

W. PROVIDE FLEXIBLE CONNECTIONS IN ALL PIPING SYSTEMS CONNECTED TO PUMPS, CHILLERS, COOLING TOWERS, AND OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION EXCEPT WATER COILS. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AS CLOSE TO THE EQUIPMENT AS POSSIBLE OR AS INDICATED ON THE DRAWINGS.

X. SLOPE REFRIGERANT PIPING ONE PERCENT IN THE DIRECTION OF OIL RETURN. LIQUID LINES MAY BE INSTALLED LEVEL.

Y. INSTALL HORIZONTAL REFRIGERANT HOT GAS DISCHARGE PIPING WITH 1/2" PER 10 FEET DOWNWARD SLOPE AWAY FROM THE COMPRESSOR.

Z. INSTALL HORIZONTAL REFRIGERANT SUCTION LINES WITH 1/2" PER 10 FEET DOWNWARD SLOPE TO THE COMPRESSOR, WITH NO LONG TRAPS OR DEAD ENDS WHICH MAY CAUSE OIL TO SEPARATE FROM THE SUCTION GAS AND RETURN TO THE COMPRESSOR IN DAMAGING SLAGS.

AA. PROVIDE LINE SIZE LIQUID INDICATORS IN MAIN LIQUID LINE LEAVING CONDENSER OR RECEIVER. INSTALL MOISTURE-LIQUID INDICATORS IN LIQUID LINES BETWEEN FILTER DRYERS AND THERMOSTATIC EXPANSION VALVES AND IN LIQUID LINE TO RECEIVER.
 AB. PROVIDE LINE SIZE STRAINER UPSTREAM OF EACH AUTOMATIC VALVE. PROVIDE SHUTOFF VALVE ON EACH SIDE OF STRAINER.
 AC. PROVIDE PERMANENT FILTER DRYERS IN LOW TEMPERATURE SYSTEMS AND SYSTEMS USING HERMETIC COMPRESSORS.
 AD. PROVIDE REPLACEABLE CARTRIDGE FILTER DRYERS WITH THREE VALVE BYPASS ASSEMBLY FOR SOLENOID VALVES. ADJACENT TO RECEIVERS.
 AE. PROVIDE REFRIGERANT CHARGING VALVE CONNECTIONS IN LIQUID LINE BETWEEN RECEIVER SHUTOFF VALVE AND EXPANSION VALVE.

PLUMBING NOTES:

A. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.

B. RUN ALL SOIL WASTE AND VENT PIPING WITH 2% MINIMUM GRADE UNLESS OTHERWISE NOTED. HORIZONTAL VENT PIPING SHALL BE GRADED TO DRIP BACK TO THE SOIL OR WASTE PIPE BY GRAVITY.

C. ELEVATIONS AS SHOWN ON THE DRAWINGS ARE TO THE CENTERLINE OF ALL PRESSURE PIPING AND TO THE INVERT OF ALL GRAVITY PIPING.

D. ADJUST SEWER INVERTS TO KEEP TOPS OF PIPE IN LINE WHERE PIPE SIZE CHANGES.

E. MAINTAIN A MINIMUM OF 3'6" OF GROUND COVER OVER ALL UNDERGROUND WATER MAINS AND A MINIMUM OF 3'0" OF GROUND COVER OVER ALL UNDERGROUND SEWERS AND DRAINS.

F. PROVIDE SHUTOFF VALVES IN ALL DOMESTIC WATER PIPING SYSTEM BRANCHES IN WHICH BRANCH PIPING SERVES TWO OR MORE FIXTURES.

G. UNLESS OTHERWISE NOTED, ALL DOMESTIC COLD AND HOT WATER PIPING SHALL BE 1/2 INCH SIZE.

H. UNLESS OTHERWISE NOTED, ALL PIPING IS OVERHEAD, TIGHT TO UNDERSIDE OF SLAB, WITH SPACE FOR INSULATION IF REQUIRED.

I. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.

J. WHERE DOMESTIC COLD AND HOT WATER PIPING DRIPS INTO A PIPE CHASE, THE SIZE SHOWN FOR THE PIPE DROPS SHALL BE USED TO THE LAST FIXTURE.

K. INSTALL ALL PIPING WITHOUT FORCING OR SPRINGING.

L. ALL PIPING SHALL CLEAR DOORS AND WINDOWS.

M. ALL PIPING SHALL GRADE TO LOW POINTS. PROVIDE HOSE END DRAIN VALVES AT THE BOTTOM OF ALL RISERS AND LOW POINTS.

N. UNIONS AND/OR FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT, IN BYPASSES, AND IN LONG PIPING RUNS (100 FEET OR MORE) TO PERMIT DISASSEMBLY FOR ALTERATION AND REPAIRS.

O. ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION.

P. ALL VALVES (EXCEPT CONTROL VALVES) AND STRAINERS SHALL BE FULL SIZE OF PIPE BEFORE REDUCING SIZE TO MAKE CONNECTIONS TO EQUIPMENT AND CONTROLS.

Q. PROVIDE CHAINWHEEL OPERATORS FOR ALL VALVES IN EQUIPMENT ROOMS MOUNTED GREATER THAN 7'-0" ABOVE FLOOR LEVEL; CHAIN SHALL EXTEND TO 7'-0" ABOVE FLOOR LEVEL.

R. PROVIDE ALL PLUMBING FIXTURES AND EQUIPMENT WITH ACCESSIBLE STOPS.

S. UNLESS OTHERWISE NOTED, DRAINS SHALL BE INSTALLED AT THE LOW POINT OF ROOFS, AREAWAYS, FLOORS, ETC.

T. PROVIDE CLEANOUTS IN SANITARY AND STORM DRAINAGE SYSTEMS AT ENDS OF RUNS, AT CHANGES IN DIRECTION, NEAR THE BASE OF STACKS, EVERY 50 FEET IN HORIZONTAL RUNS AND ELSEWHERE AS INDICATED.

PLUMBING ABBREVIATIONS:

- AP ACCESS PANEL
- BT BATH TUB
- BWV BACK WATER VALVE
- CFH CUBIC FEET PER HOUR
- CFM CUBIC FEET PER MINUTE
- CI CAST IRON
- CLDI CEMENT LINED DUCTILE IRON
- CO CLEANOUT
- CONC CONCRETE
- CP CHROME PLATED
- CT CONNECT TO EXISTING
- CW COLD WATER
- CWR COLD WATER RETURN
- CWS COLD WATER SUPPLY
- DF DRINKING FOUNTAIN
- DIA DIAMETER
- ELEV ELEVATION
- EWG ELECTRICAL WATER COOLER (DRINKING FOUNTAIN)
- FCO FLOOR CLEANOUT
- FEC FIRE EXTINGUISHER CABINET
- FHV FIRE HOSE VALVE
- FLR FLOOR
- FR FIRE PROTECTION
- FPWH FREEZE PROOF WALL HYDRANT
- FS FLOW SWITCH
- FT FOOT OR FEET
- FV FLUSH VALVE
- GALV GALVANIZED
- GCO GROUND CLEAN OUT
- GI GREASE INTERCEPTOR
- GPF GALLONS PER FLUSH
- GPM GALLONS PER MINUTE
- HC HANDICAPPED
- HW HOT WATER
- HWR HOT WATER RETURN
- HWS HOT WATER SUPPLY
- ID INTERNAL DIAMETER
- INV INVERT
- IW INDIRECT WASTE
- MECH MECHANICAL
- MOP MOP SERVICE BASIN
- NC NORMALLY CLOSED
- NO NORMALLY OPEN
- OD OUTSIDE DIAMETER
- OED OPEN END DRAIN
- PV POST INDICATOR VALVE
- PLBG PLUMBING
- PSI POUNDS PER SQUARE INCH
- RPBP REDUCED PRESSURE BACKFLOW PREVENTER
- SA SHOCK ABSORBER
- SD SANITARY DRAIN
- SHWR SHOWER
- SK SINK
- SS SOIL STACK / STAINLESS STEEL
- TLT TOILET
- TS TAMPER SWITCH
- TW TEMPERED WATER
- TYP TYPICAL
- U URINAL
- V VENT
- VB VACUUM BREAKER
- VFD VARIABLE FREQUENCY DRIVE
- VS VENT STACK
- VTR VENT THROUGH ROOF
- W WASTE
- WC WATER CLOSET (TOILET)
- WH WALL HYDRANT
- WS WASTE STACK

PLUMBING DRAWING LIST:

SHEET	TITLE
P0.1	PLUMBING SPECIFICATIONS, LEGENDS AND NOTES
P0.2	PLUMBING DETAILS AND SCHEDULES
P0.3	PLUMBING ISOMETRIC DIAGRAMS - SANITARY & VENT
P0.4	PLUMBING ISOMETRIC DIAGRAMS - DOMESTIC WATER
P1.0	PLUMBING PROPOSED PLAN - SANITARY & VENT
P2.0	PLUMBING PROPOSED PLAN - DOMESTIC WATER
P3.0	PLUMBING PROPOSED ROOF PLAN
P4.0	PLUMBING PROPOSED PLAN - NATURAL GAS

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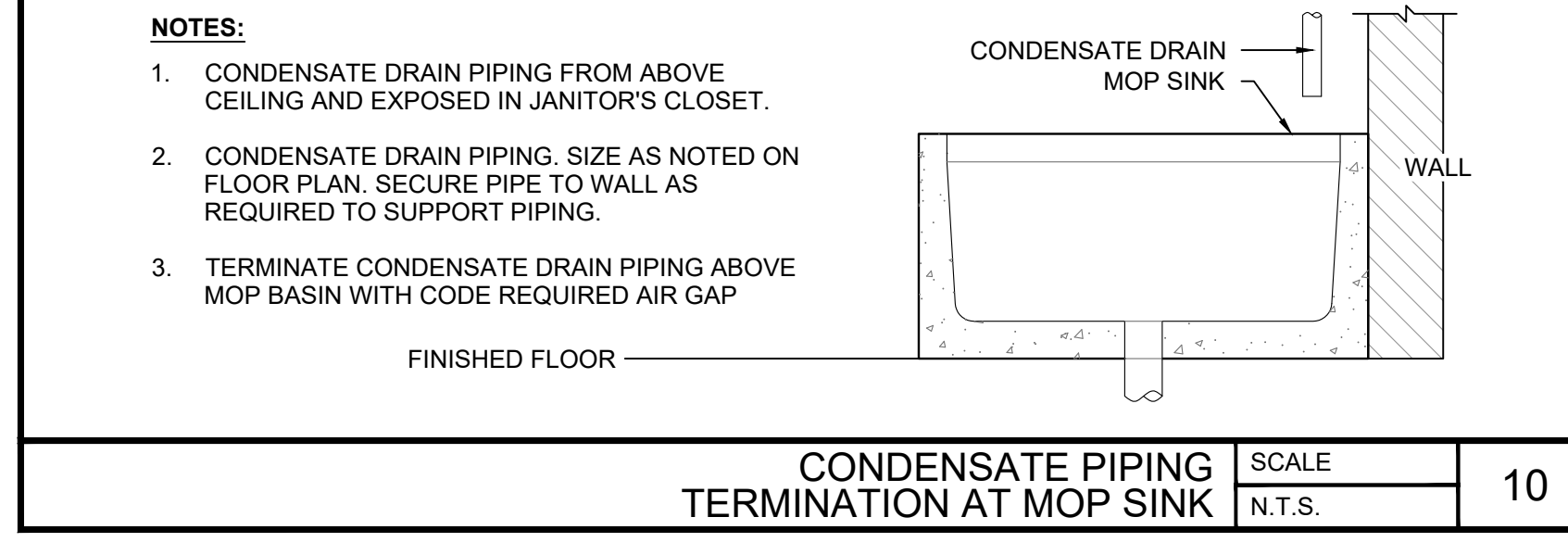
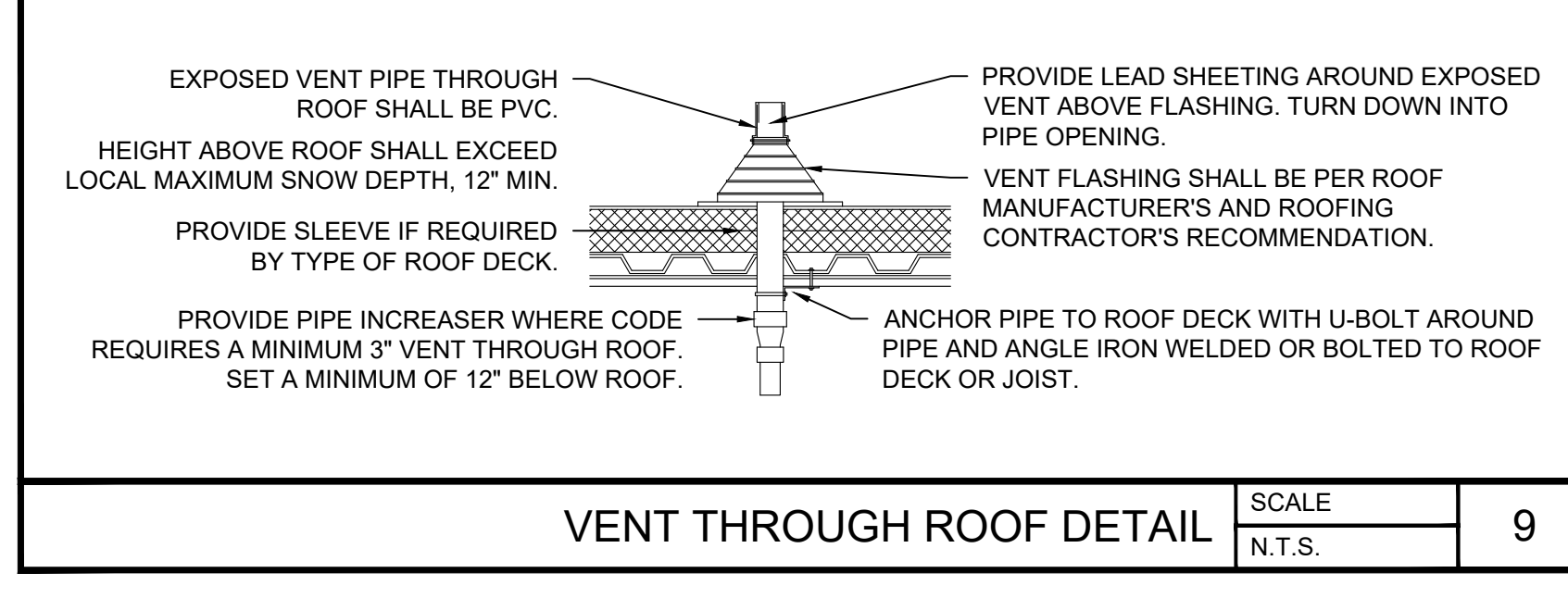
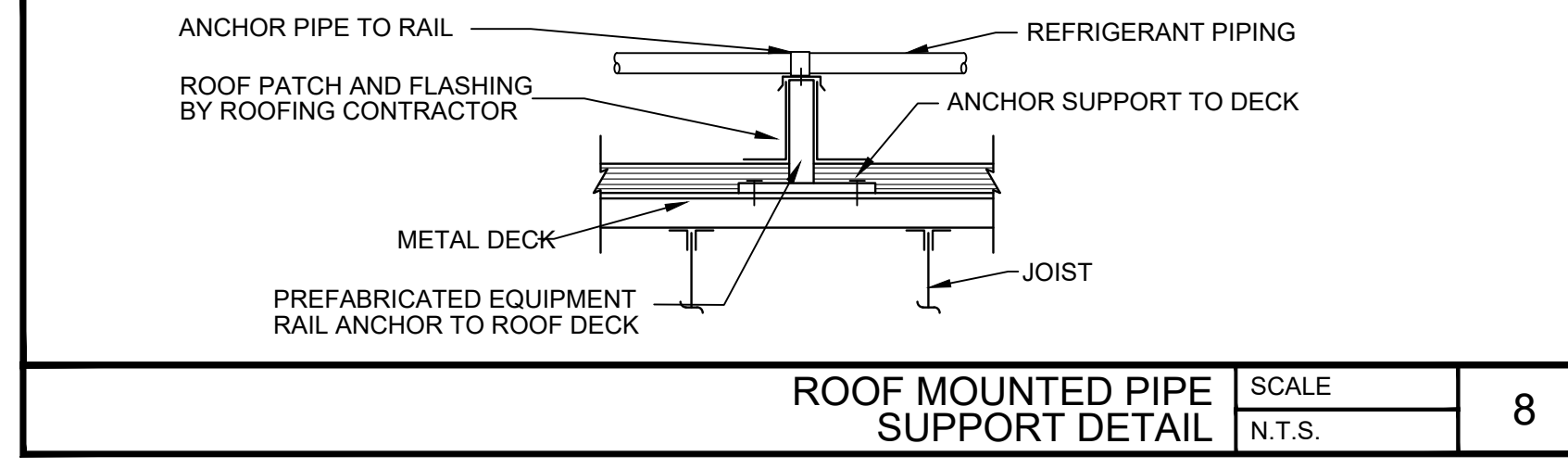
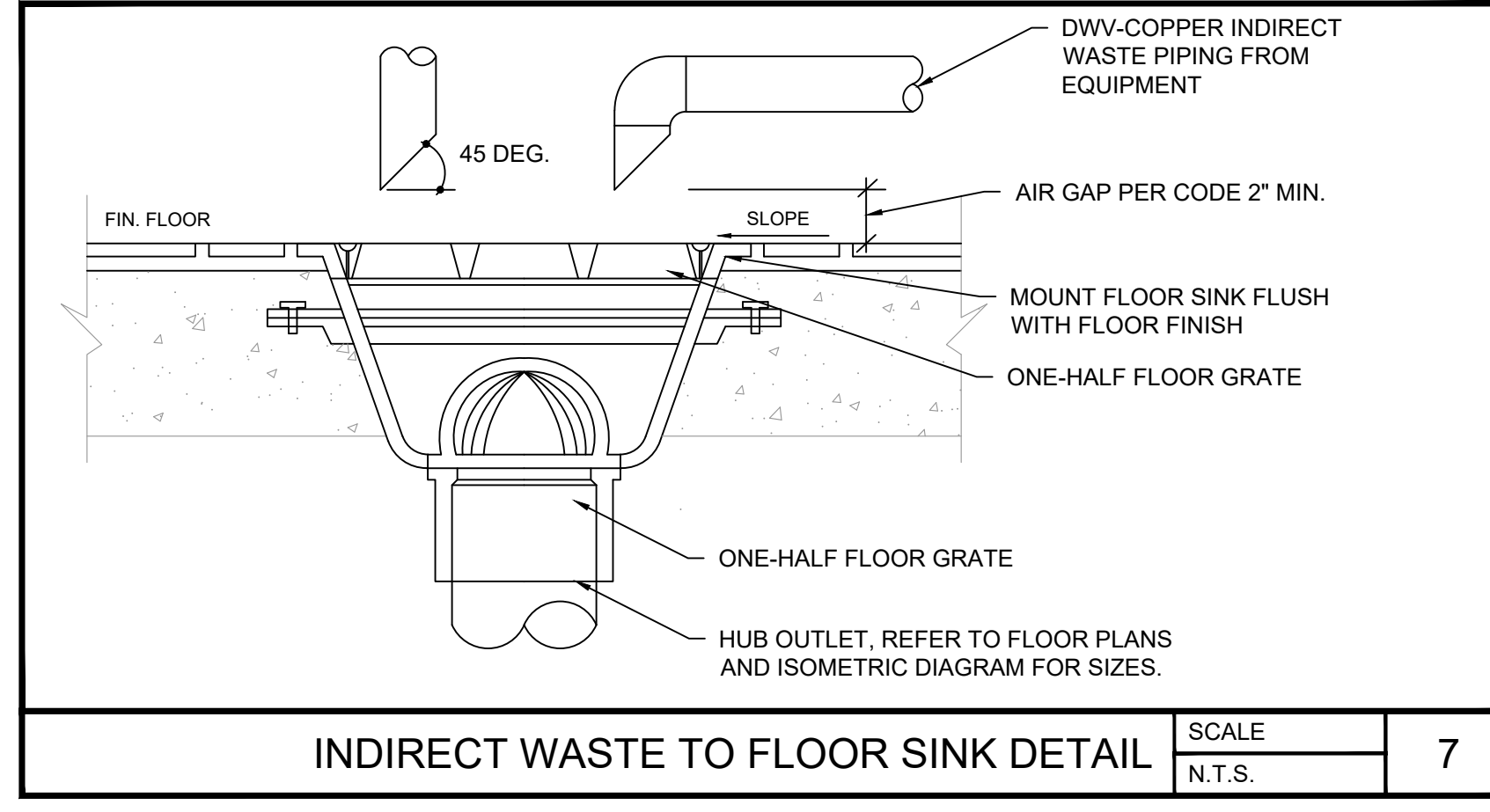
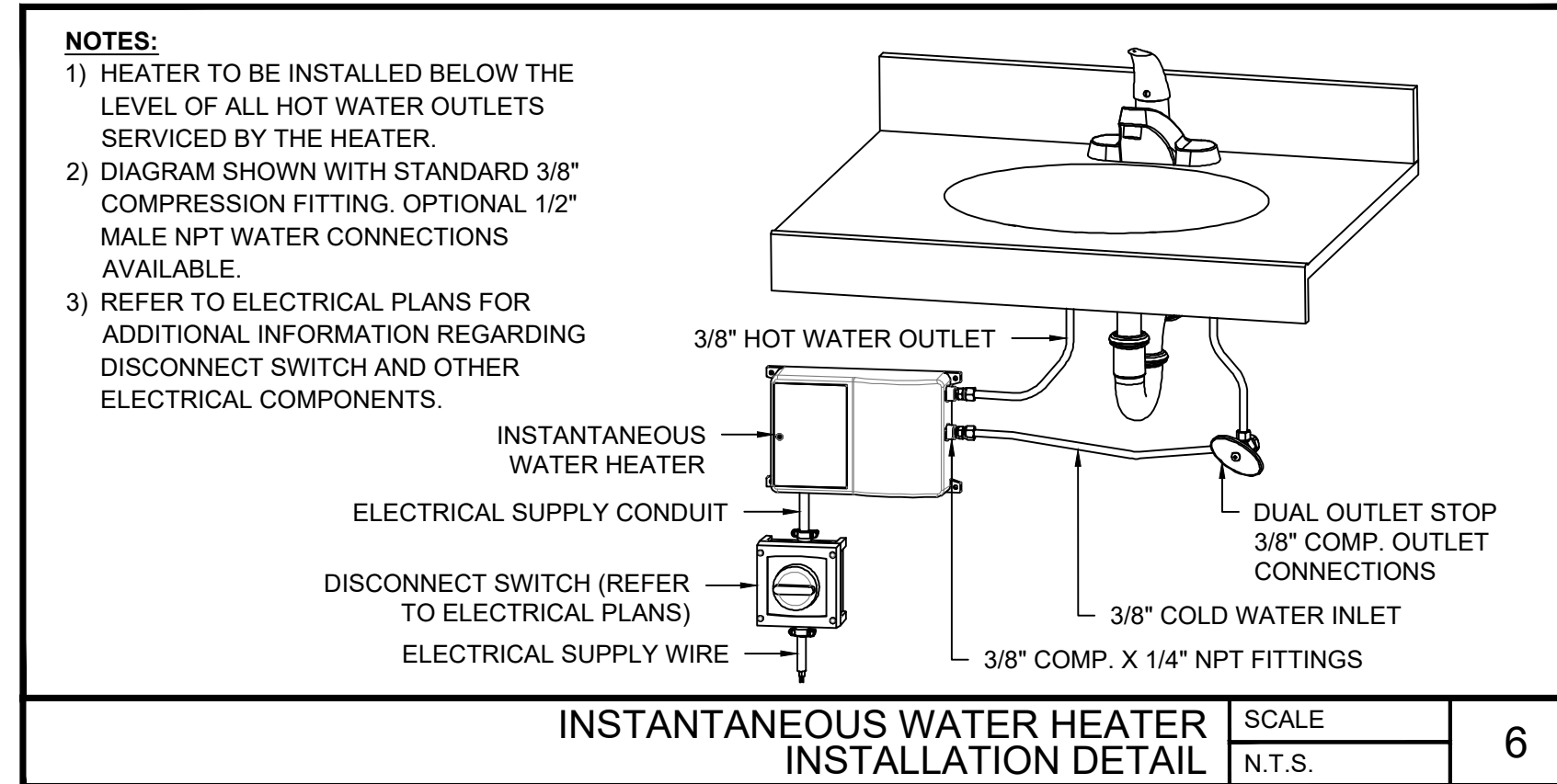
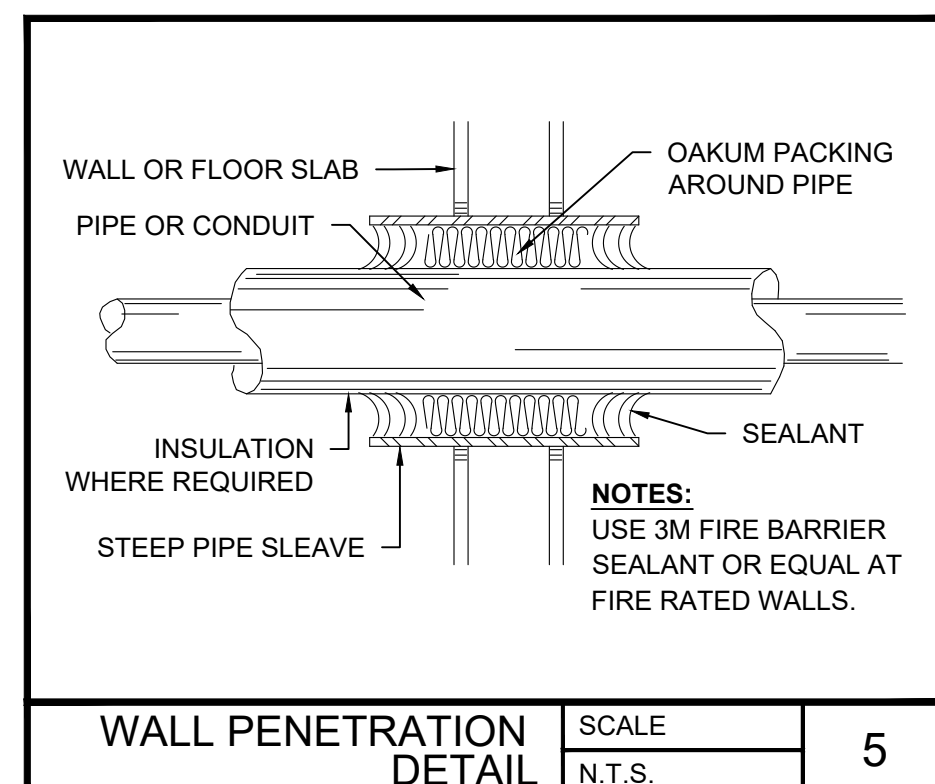
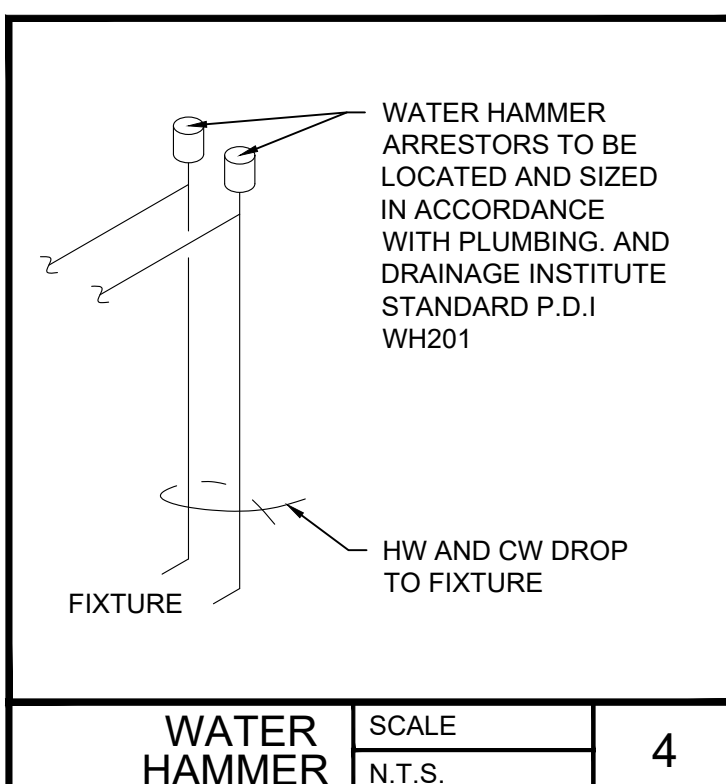
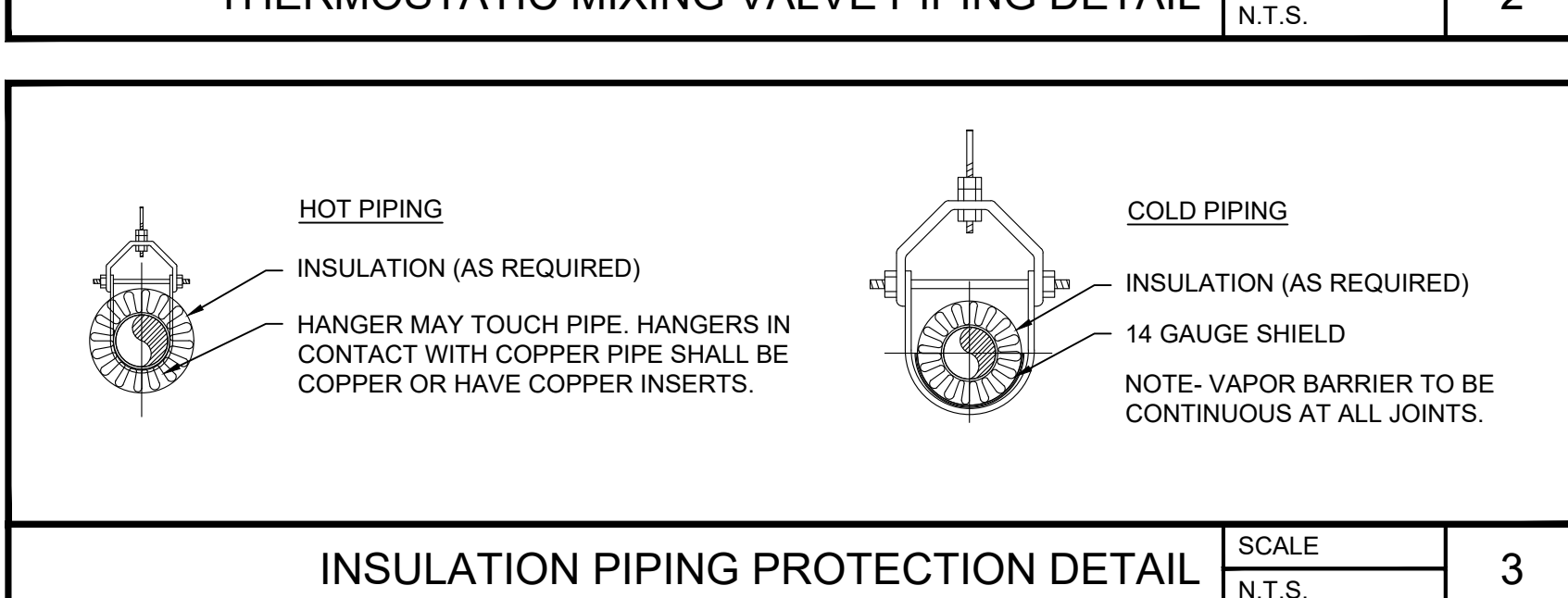
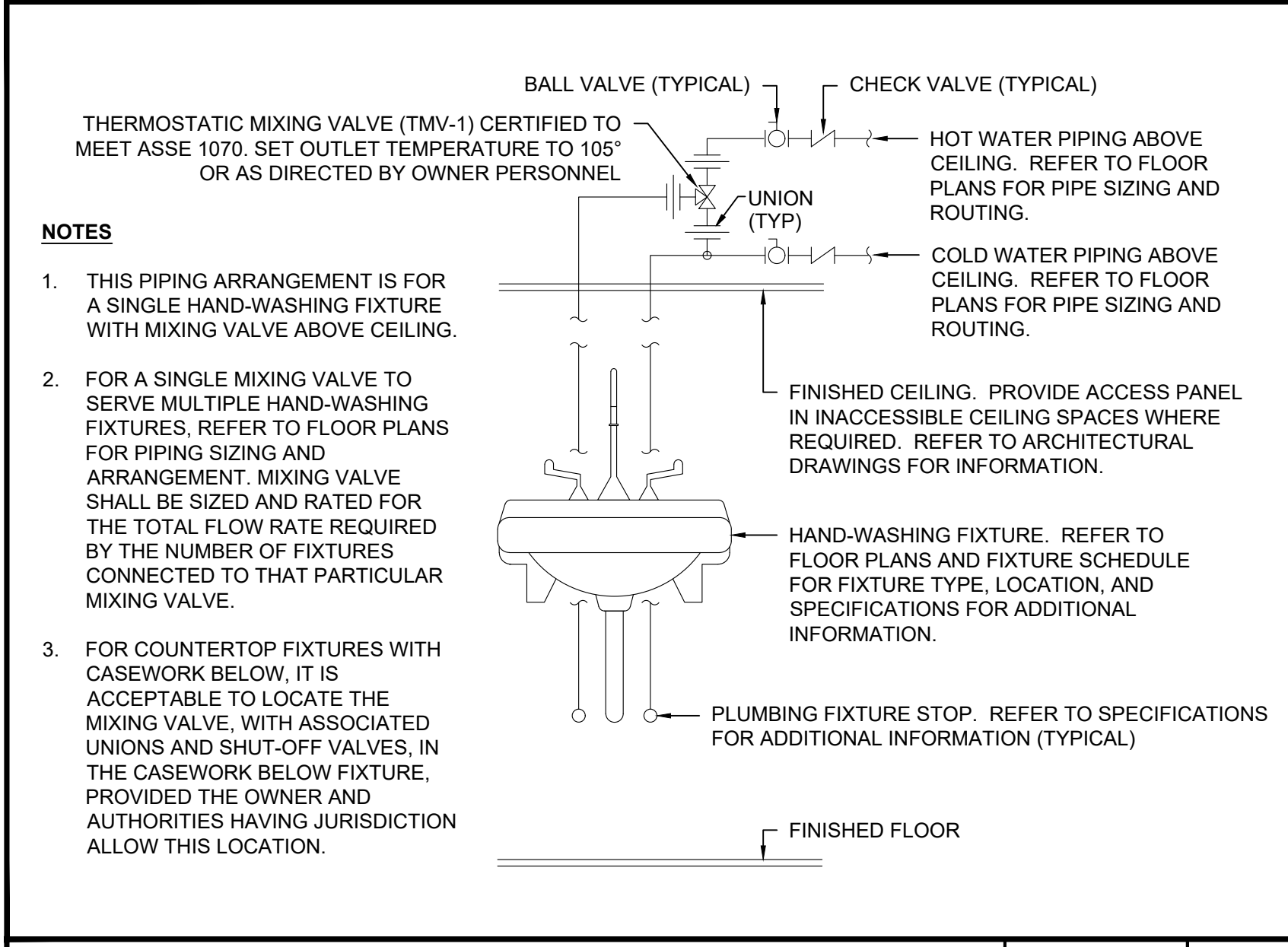
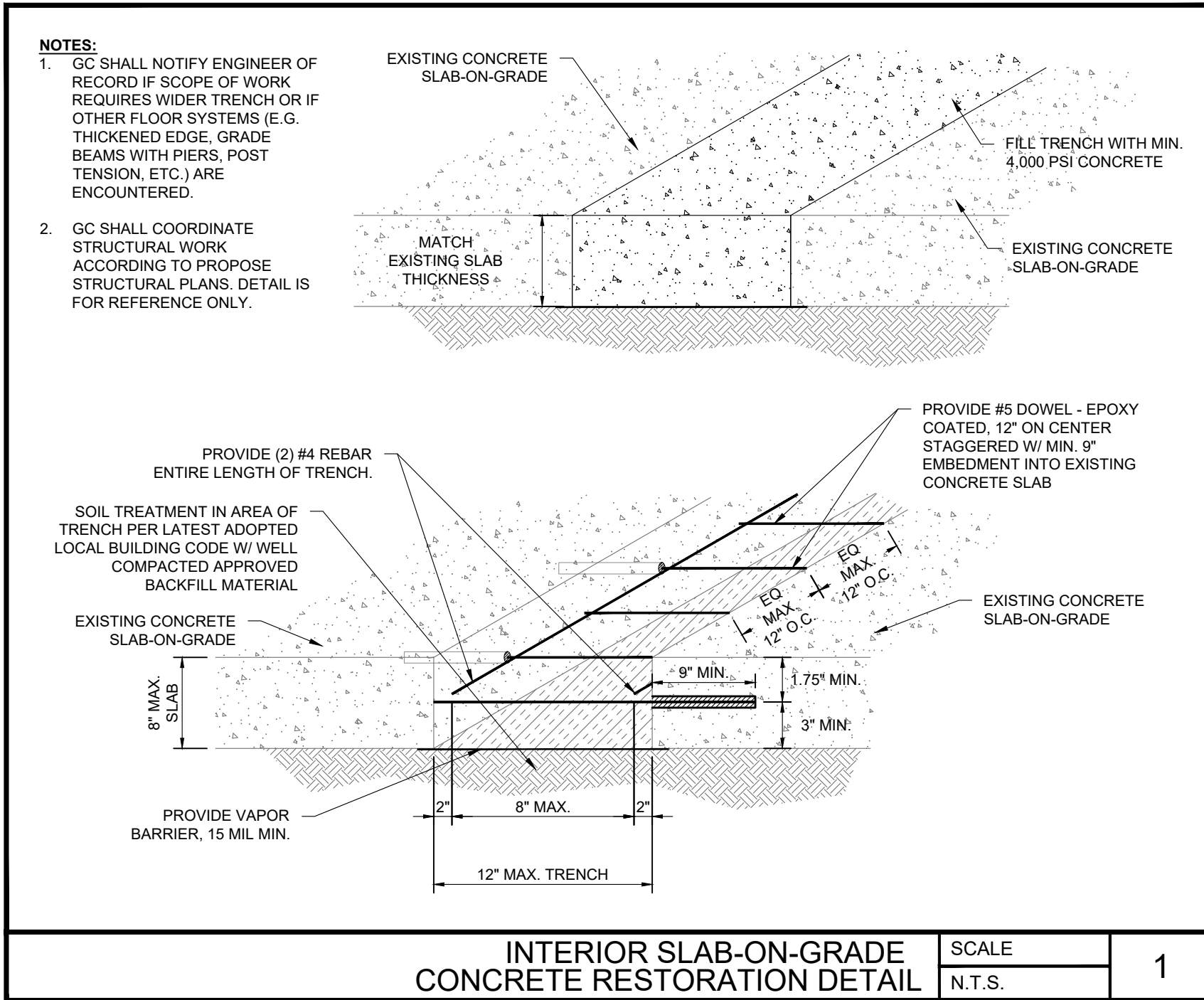
Date

Project Name and Address: **CEFCO #437 - BETHEL**
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title: **PLUMBING SPECIFICATIONS, LEGENDS AND NOTES**

Project No: 170-101.00
 Drawn By: IV
 Reviewed By: RK

Sheet: **P0.1**



PLUMBING FIXTURE SCHEDULE:

FIXTURE MARK	MANUFACTURER SERIES NUMBER	DESCRIPTION	CONNECTIONS			
			CW	HW	W	V
HS-1	HAND SINK ADVANCE TABCO 7-PS-EC-SP-1X	STAINLESS STEEL BOEL, SPLASH MOUNTED GOOSENECK FAUCET WITH BASKET DRAIN	1/2"	1/2"	1-1/2"	1-1/2"
HS-2	HAND SINK EAGLE GROUP SR19-16-13.5-1	DROP-IN SINK, 1-COMPARTMENT, 20"x16"x13-1/2", 18 GAUGE STAINLESS STEEL, WITH DECK MOUNTED FAUCET, SWING NOZZLE, BASKET DRAIN. PROVIDE THERMOSTATIC MIXING VALVE, SET OUTLET TEMPERATURE TO 105°F.	1/2"	1/2"	1-1/2"	1-1/2"
LAV-1	LAVATORY SLOAN ELS-72000	SLOAN 2 STATION WALL MOUNTED SINK, 301PC P-TRAP. PROVIDE ASSE 1070 THERMOSTATIC MIXING VALVE, SET OUTLET TEMPERATURE TO 100°F.	1/2"	1/2"	2"	1-1/2"
LAV-2	LAVATORY KOHLER SOHO K-2084	KOHLER SOHO K2084 WALL MOUNT LAVATORY WITH KOHLER K-16027-4-CP 0.5 GPM FAUCET	1/2"	1/2"	2"	1-1/2"
WC-1	WATER CLOSET AMERICAN STANDARD 3043.001.020	FLOOR MOUNTED WATER CLOSET WITH ZURN Z6000AV MANUAL FLUSH VALVE, MAINLINE ML 1055SSC000 WHITE ELONGATED PLASTIC OPEN FRONT TOILET SEAT	1"	-	4"	2"
UR-1	URINAL AMERICAN STANDARD 6590001.020	TOP SPUD URINAL WITH SLOAN ECOS 186 1.0 GPF FLUSH VALVE	3/4"	-	2"	2"
FS-1	FLOOR SINK JOSAM FS-143	12"x12"x8" PORCELAIN COATED CAST IRON FLOOR SINK, NO-HUB BOTTOM OUTLET, ALUMINUM DOME STRAINER, AND 3" WASTE CONNECTION.	-	-	3"	1-1/2"
3CS-1	3 COMPARTMENT SINK ADVANCE TABCO FC-3-2424-24RL-X	3 COMPARTMENT SINK WITH 5PR-8W14-C BRASS FAUCET	1/2"	1/2"	3"	1-1/2"
MS-1	MOP SINK ADVANCE TABCO 9-OP-24FM-SSR	FLOOR MOUNTED MOP SINK WITH ADVANCE TABCO K-240 UTILITY FAUCET	3/4"	3/4"	3"	1-1/2"
FD-1	FLOOR DRAIN JAY R. SMITH	3" PIPE FLOOR DRAIN.	-	-	3"	1-1/2"
RH-1	ROOF HYDRANT WATTS HY900	NON-FREEZE ROOF HYDRANT WITH 3/4" INLET FEMALE THREADED INLET CONNECTION. ROUTE 1/8" DRAIN LINE TO NEAREST FLOOR SINK.	3/4"	-	1/8"	-
TD-1	TRENCH DRAIN	18" X36" FLOOR TROUGH TRENCH DRAIN WITH STAINLESS STEEL GRATING	-	-	3"	-
WF-1	EVERPURE EV-9328	EVERPURE EV-9328 HIGH FLOW CSR TRIPLE WATER FILTRATION SYSTEM, 5 GPM	3/4"	3/4"	-	-

NOTES:

- ALL NOTED FIXTURES SHALL BE ACCESSIBLE TO INDIVIDUALS WITH DISABILITIES IN ACCORDANCE WITH THE "AMERICANS WITH DISABILITIES ACT OF 1990". FIXTURES AND THEIR INSTALLATION SHALL ALSO COMPLY WITH AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) PUBLICATION A117.1 - "PROVIDING ACCESSIBILITY AND USABILITY FOR PHYSICALLY HANDICAPPED PEOPLE" AND/OR GOVERNING CODE.
- ALL PLUMBING FIXTURES, EQUIPMENT, TRIM, AND FITTINGS SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL REGULATIONS AND CODES, INCLUDING, BUT NOT LIMITED TO, WATER AND ENERGY CONSERVATION CODES. THE SCHEDULED AND/OR SPECIFIED PLUMBING FIXTURES AND EQUIPMENT REPRESENT THE MINIMUM CRITERIA AND SHALL BE THE BASIS FOR THE CONTRACTOR'S BASE BID. IF THE SCHEDULED OR SPECIFIED FIXTURES OR EQUIPMENT DO NOT COMPLY WITH GOVERNING CODES OR REGULATIONS IN ALL RESPECTS, THE CONTRACTOR SHALL PROVIDE AN ALTERNATE BID FOR COMPLYING FIXTURES, EQUIPMENT, TRIM, AND FITTINGS. THE ABSENCE OF AN ALTERNATE BID SHALL BE CONSTRUED TO MEAN THAT THE CONTRACTOR'S BID INCLUDES ALL COSTS NECESSARY TO MEET ALL REGULATIONS AND CODES.

FIXTURE UNIT LOAD VALUES:

FIXTURE TYPE	OCCUPANCY	CONTROL TYPE	QTY.	FIXTURE UNITS			
				DRAINAGE	WATER SUPPLY		
				COLD	HOT	TOTAL	
FLOOR DRAIN	PRIVATE / PUBLIC	TRAP PRIMER	9	2.0	0.0	0.0	
3 COMPARTMENT SINK	PRIVATE	FAUCET	1	6.0	2.25	2.25	
HAND SINK	PUBLIC	FAUCET	4	1.0	1.5	1.5	
LAVATORY	PUBLIC	FAUCET	6	1.0	1.5	1.5	
SERVICE SINK	OFFICES	FAUCET	1	2.0	2.25	2.25	
URINAL	PUBLIC	FLUSH VALVE	3	4.0	5.0	0.0	
WATER CLOSET	PUBLIC	FLUSH VALVE	6	4.0	10.0	0.0	
TOTAL FIXTURE UNIT LOAD VALUES				64.50	99.75	19.5	105.25
CORRESPONDING INTERMITTENT USE (GPM)				-	67.5	17.5	67.5
MINIMUM CORRESPONDING MAIN PIPE SIZE (INCHES)				4"	2"	1"	2"

NOTES:

- DRAINAGE FIXTURE UNITS BASED ON INTERNATIONAL PLUMBING CODE TABLE 709.1. WATER SUPPLY FIXTURE UNITS BASED ON INTERNATIONAL PLUMBING CODE TABLE E103.3(2).
- CORRESPONDING DOMESTIC WATER PIPE SIZES ARE BASED OFF OF ASSUMED AVERAGE PRESSURE OF ABOUT 5FT/SEC FLOW VELOCITY.

WATER HEATER SCHEDULE:

TAG	DESCRIPTION	PRODUCT		MAX FLOW GPM	ELECTRICAL VOLT / PH / HZ	WATER	
		MFR.	MODEL			SIZE	TEMP.
WH-1	INSTANTANEOUS GAS WATER HEATER	NAVIER	NPE-240A2-NG	6	120V/60	3/4"	120°F
WH-2	INSTANTANEOUS GAS WATER HEATER	NAVIER	NPE-240A2-NG	6	120V/60	3/4"	105°F

NOTES: 72°F COLD WATER TEMPERATURE USED FOR CALCULATIONS

GREASE INTERCEPTOR SIZING:

- 3 COMPARTMENT SINK
EA. BASIN IS 16"x20"x14"
(2) HAND SINK-1 (X2)
BASIN IS 16"x14"x6"
(3) HAND SINK-2 (X1)
BASIN IS 20"x16"x13-1/2"
(4) MOP SINK
BASIN IS 20"x28"x6"
- 1) GAL./MIN. CALCULATIONS FOR 3 COMP. SINK**
[16x20x14] [3] = 13,440 C.I.
[13,440 C.I.] [75] = 10,080 C.I.
[10,080] / [231] = 43.6 GAL/MIN.
- 2) GAL./MIN. CALCULATIONS FOR HAND SINK-1**
[16x14x10] [2] = 4,480 C.I.
[4,480 C.I.] [75] = 3,360 C.I.
[3,360] / [231] = 14.6 GAL/MIN.
- 3) GAL./MIN. CALCULATIONS FOR HAND SINK-2**
[20x16x13.5] = 4,320 C.I.
[4,320 C.I.] [75] = 3,240 C.I.
[3,240] / [231] = 14.1 GAL/MIN.
- 4) GAL./MIN. CALCULATIONS FOR MOP SINK**
[20x28x6] = 3,360 C.I.
[3,360 C.I.] [75] = 2,520 C.I.
[2,520] / [231] = 11.0 GAL/MIN.

TOTAL FLOW = 83.3 GAL./MIN. FLOW RATE
TOTAL CAPACITY = 83.3GPMX10(RETENTION TIME)
= 833 GALLONS
GREASE TRAP SIZE SHALL BE MINIMUM. 1000 GALS.

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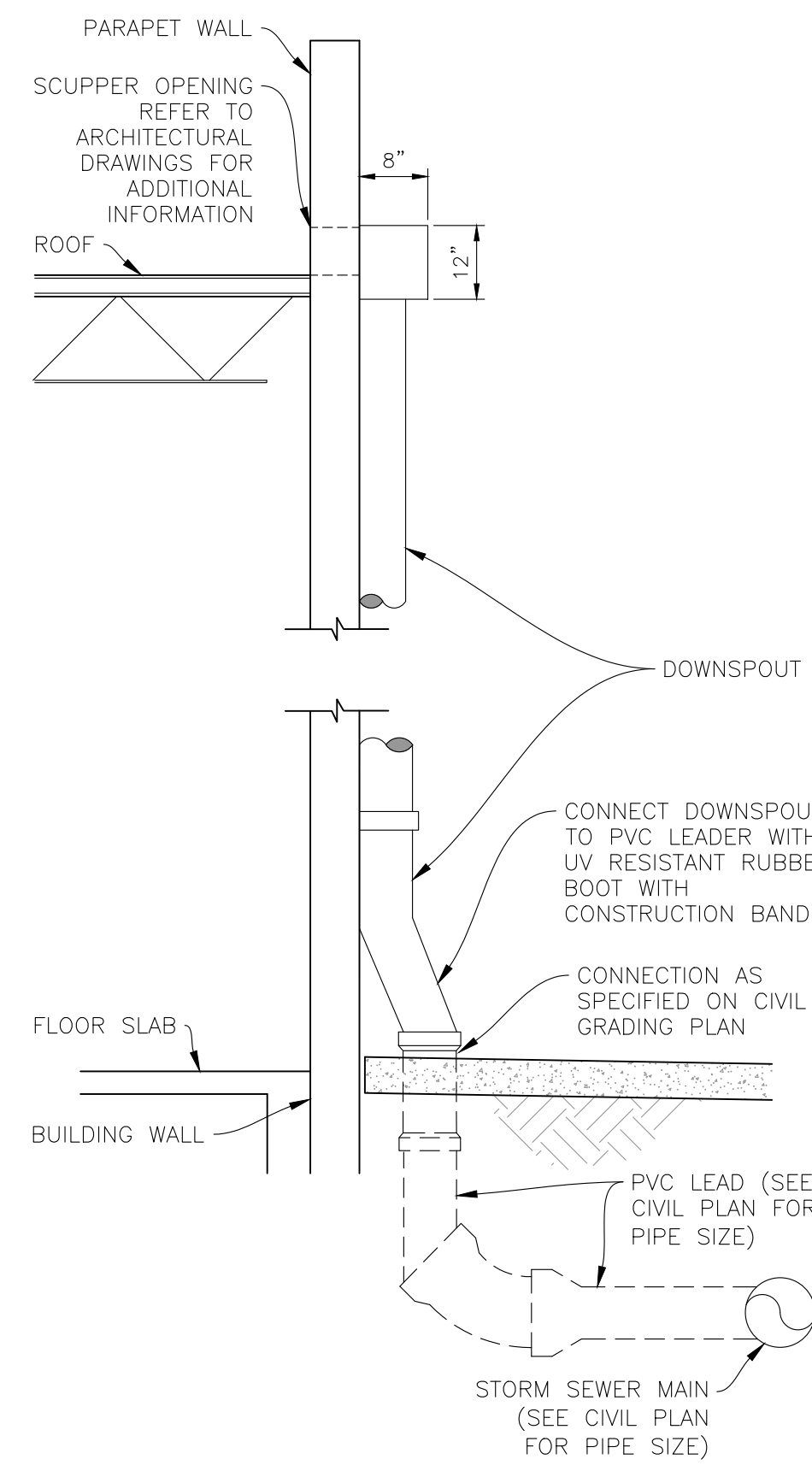
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Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Project No. 170-101.00
Drawn By IV
Reviewed By RK

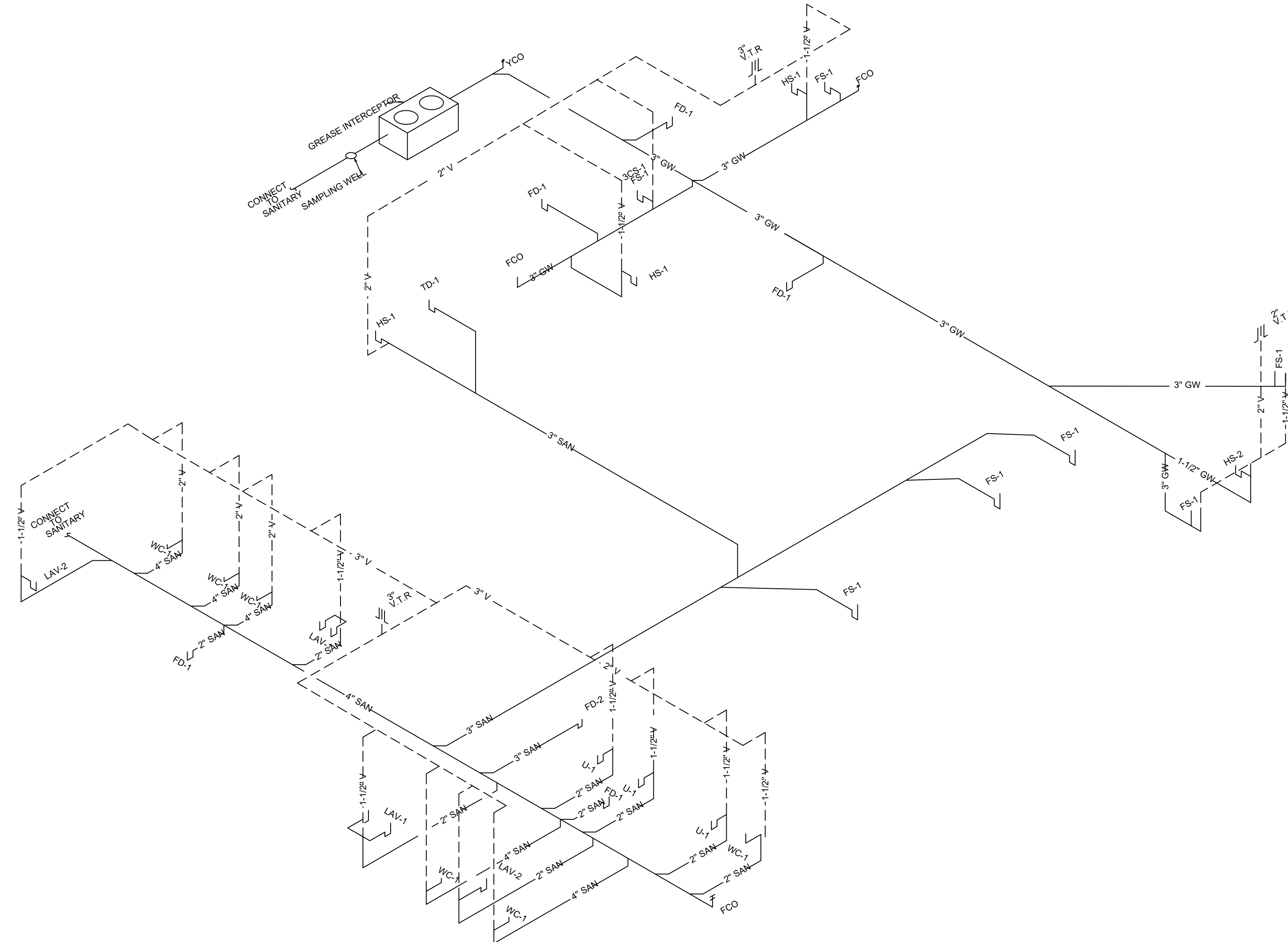
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Sheet Title
PLUMBING DETAILS AND SCHEDULES



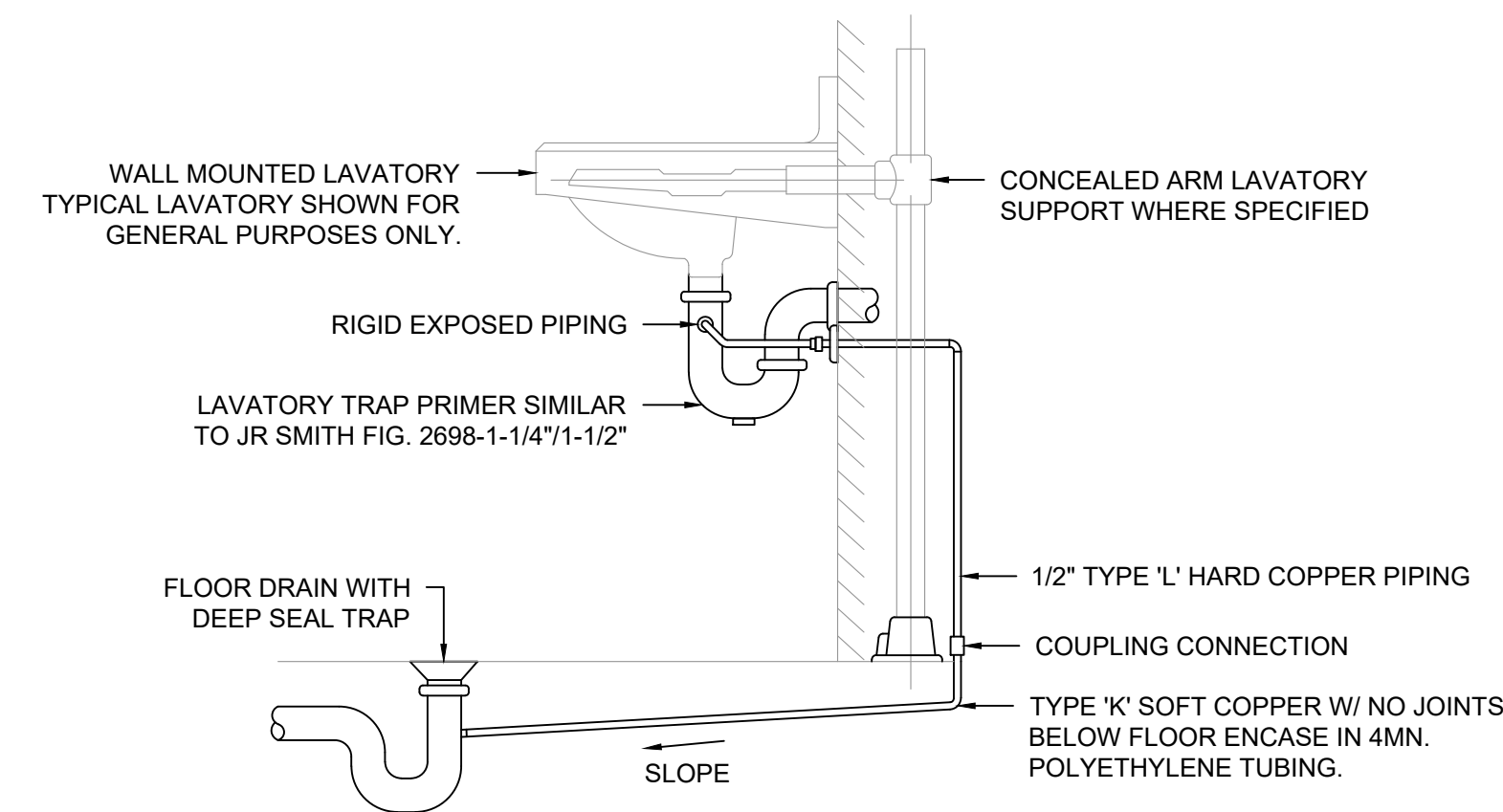
SCUPPER/DOWNSPOUT DETAIL

SCALE
N.T.S.



PLUMBING ISOMETRIC DIAGRAM - SANITARY&VENT

SCALE
N.T.S.



LAVATORY TRAP PRIMER DETAIL

SCALE
N.T.S.

1

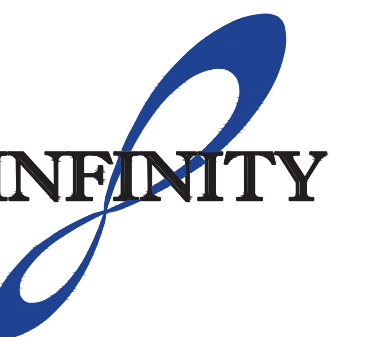
MIN. SIZES AND MAX. FLOW RATES OF
FIXTURE WATER SUPPLY PIPES:

FIXTURE (1)	MIN. PIPE SIZE (INCH)	MAX. FLOW RATE
HOSE BIBBS	1/2	-
KITCHEN SINK (2)	1/2	2.2 GPM
LAVATORY (PUBLIC)	3/8	0.5 GPM
SINKS, SERVICE	1/2	-
URINAL, FLUSHOMETER VALVE	3/4	1.0 GPM
WATER CLOSET, FLUSHOMETER VALVE	1	1.6 GPF

NOTES:

- TABLE INFORMATION GATHERED FROM 2023 FLORIDA PLUMBING CODE TABLE 604.5
- WHERE THE DEVELOPED LENGTH OF THE DISTRIBUTION LINE IS 50 FEET OR LESS, AND THE AVAILABLE PRESSURE AT THE METER IS 35 PSI OR GREATER, THE MINIMUM SIZE OF AN INDIVIDUAL DISTRIBUTION LINE SUPPLIED FROM A MANIFOLD AND INSTALLED AS PART OF A PARALLEL WATER DISTRIBUTION SYSTEM SHALL BE ONE NOMINAL TUBE SIZE SMALLER THAN THE SIZES INDICATED.

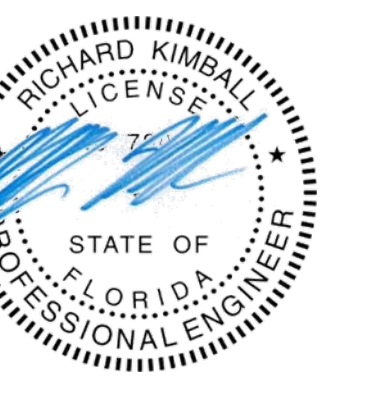
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PLUMBING ISOMETRIC
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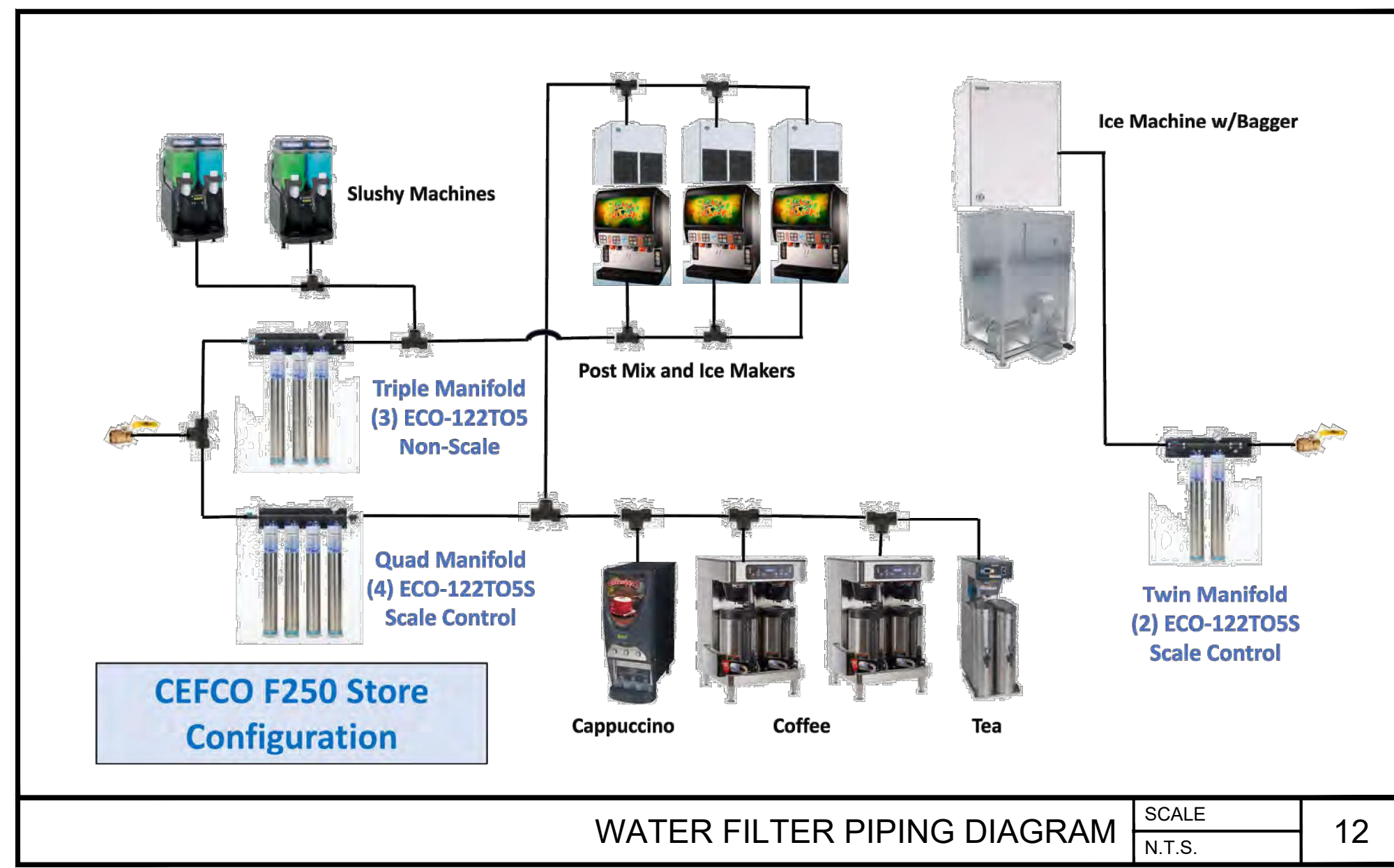
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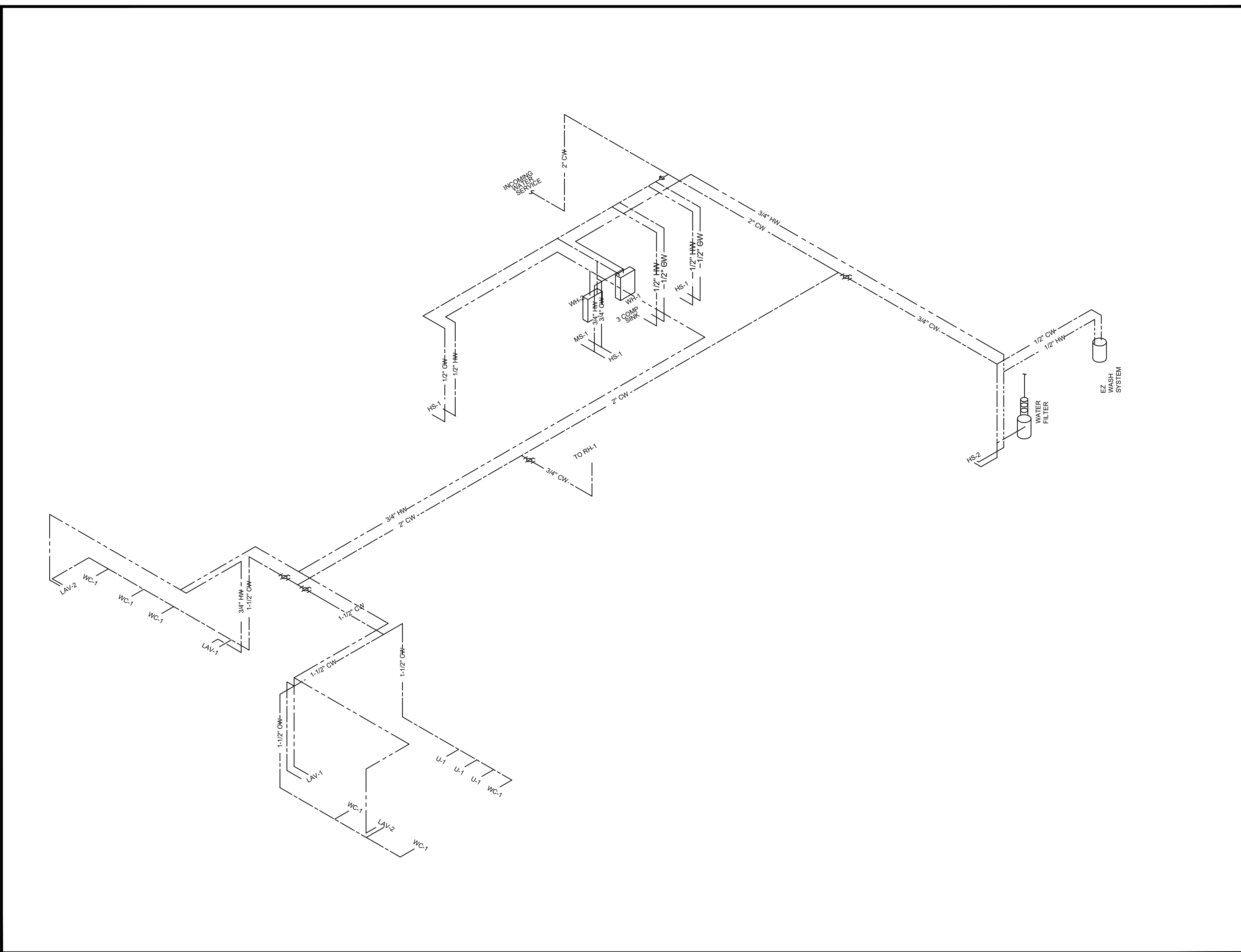
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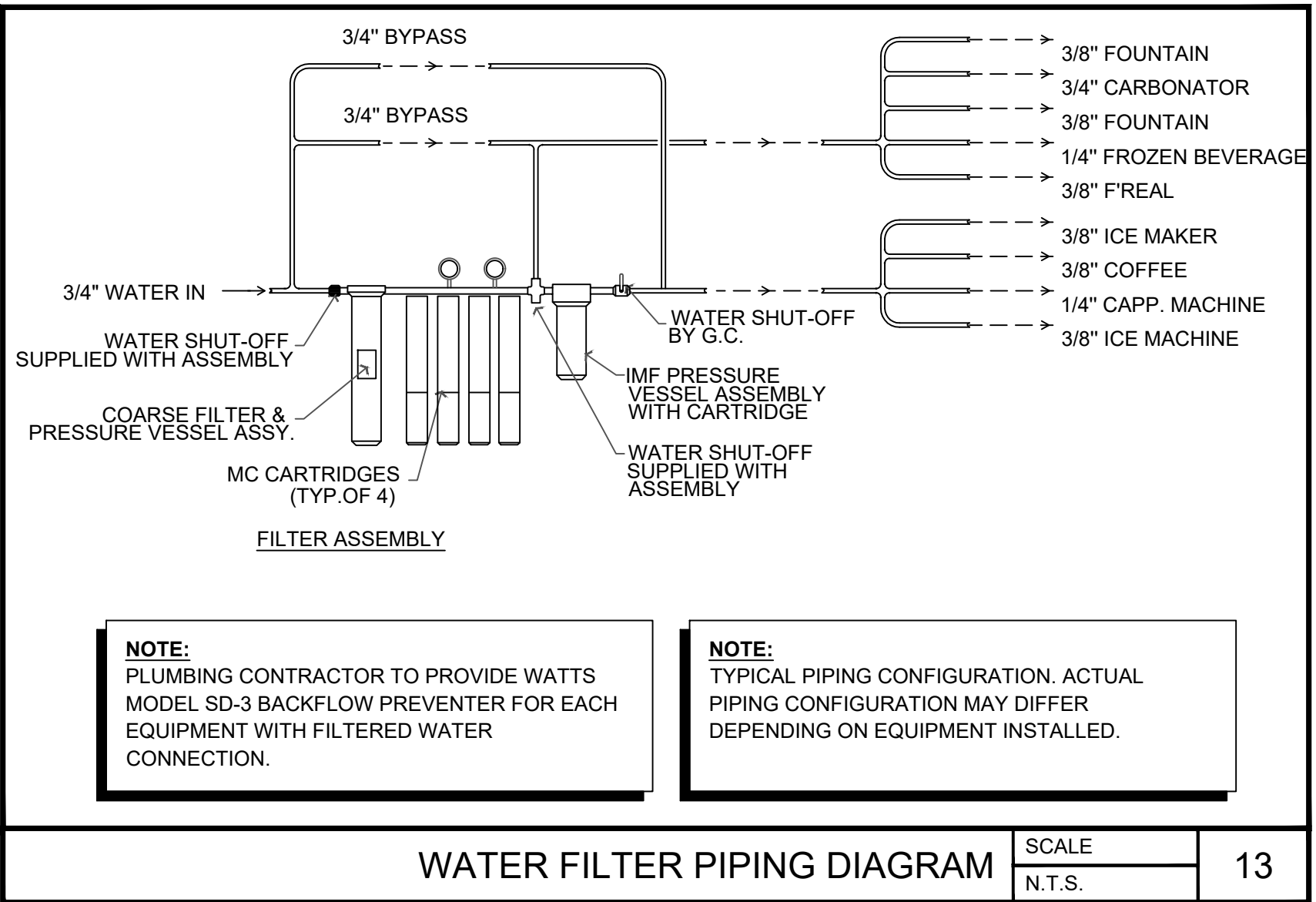
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WATER FILTER PIPING DIAGRAM SCALE N.T.S. 12



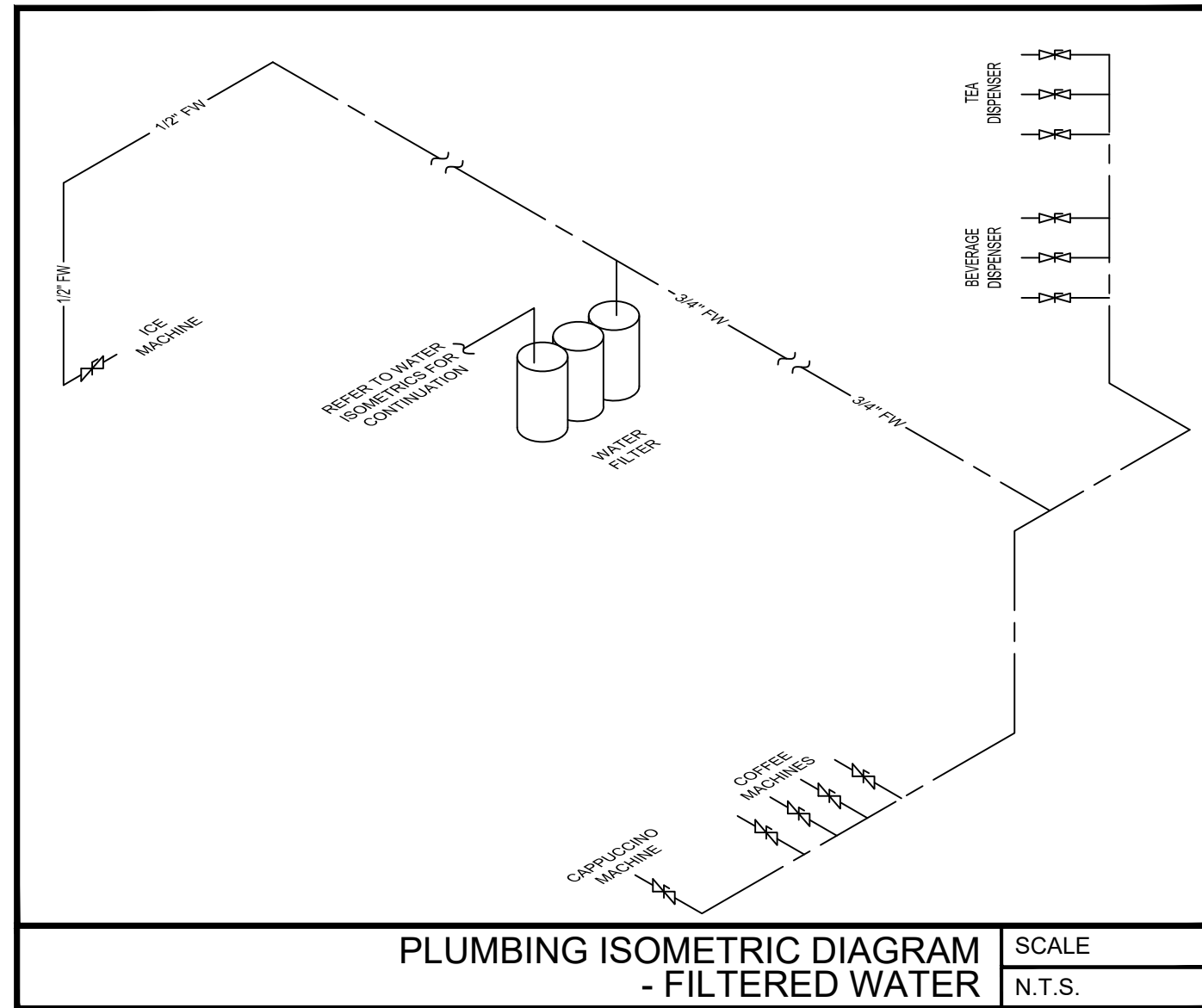
PLUMBING ISOMETRIC DIAGRAM - DOMESTIC WATER SCALE N.T.S.



NOTE:
PLUMBING CONTRACTOR TO PROVIDE WATTS MODEL SD-3 BACKFLOW PREVENTER FOR EACH EQUIPMENT WITH FILTERED WATER CONNECTION.

NOTE:
TYPICAL PIPING CONFIGURATION. ACTUAL PIPING CONFIGURATION MAY DIFFER DEPENDING ON EQUIPMENT INSTALLED.

WATER FILTER PIPING DIAGRAM SCALE N.T.S. 13



PLUMBING ISOMETRIC DIAGRAM - FILTERED WATER SCALE N.T.S.

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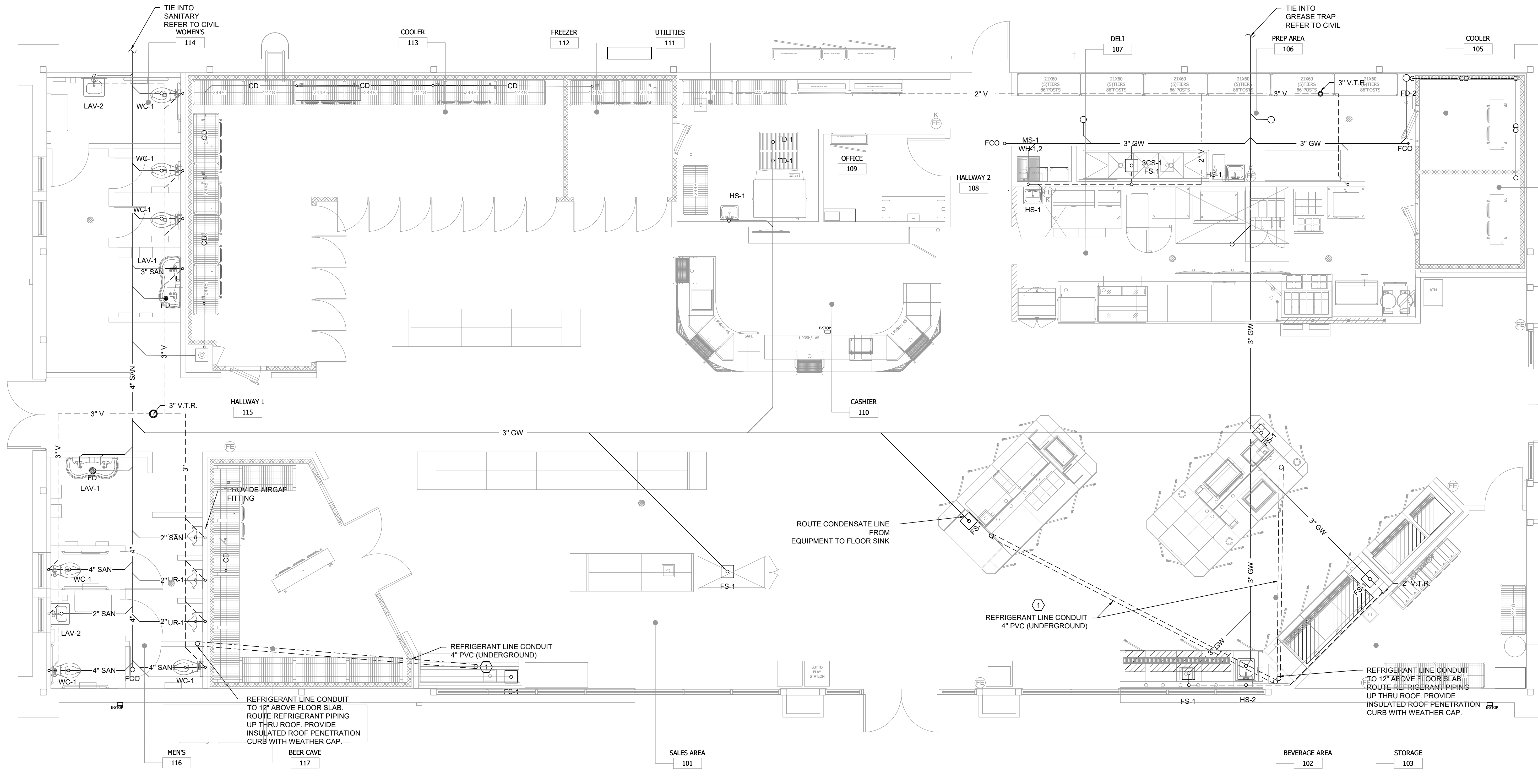
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PLUMBING ISOMETRIC DIAGRAMS - DOMESTIC WATER

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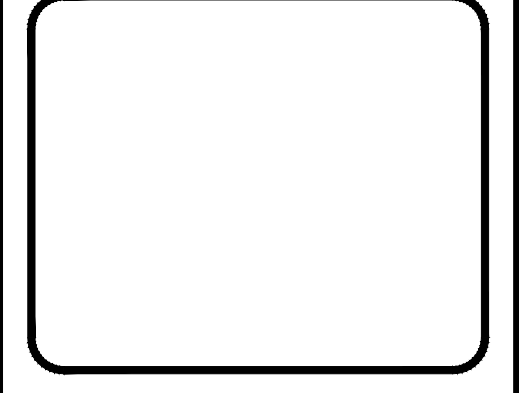
PLUMBING PROPOSED PLAN - SANITARY & VENT
 SCALE 1/4" = 1'-0"

PROPOSED PLAN KEYED NOTES:

① UNDER FLOOR REFRIGERANT LINE CHASE. 4" PVC INSTALLED WITH LONG RADIUS SWEEPS (MINIMUM 24" R.). BED PIPE IN 4" GRAVEL. INSTALL WITH MINIMUM NUMBER OF JOINTS POSSIBLE.

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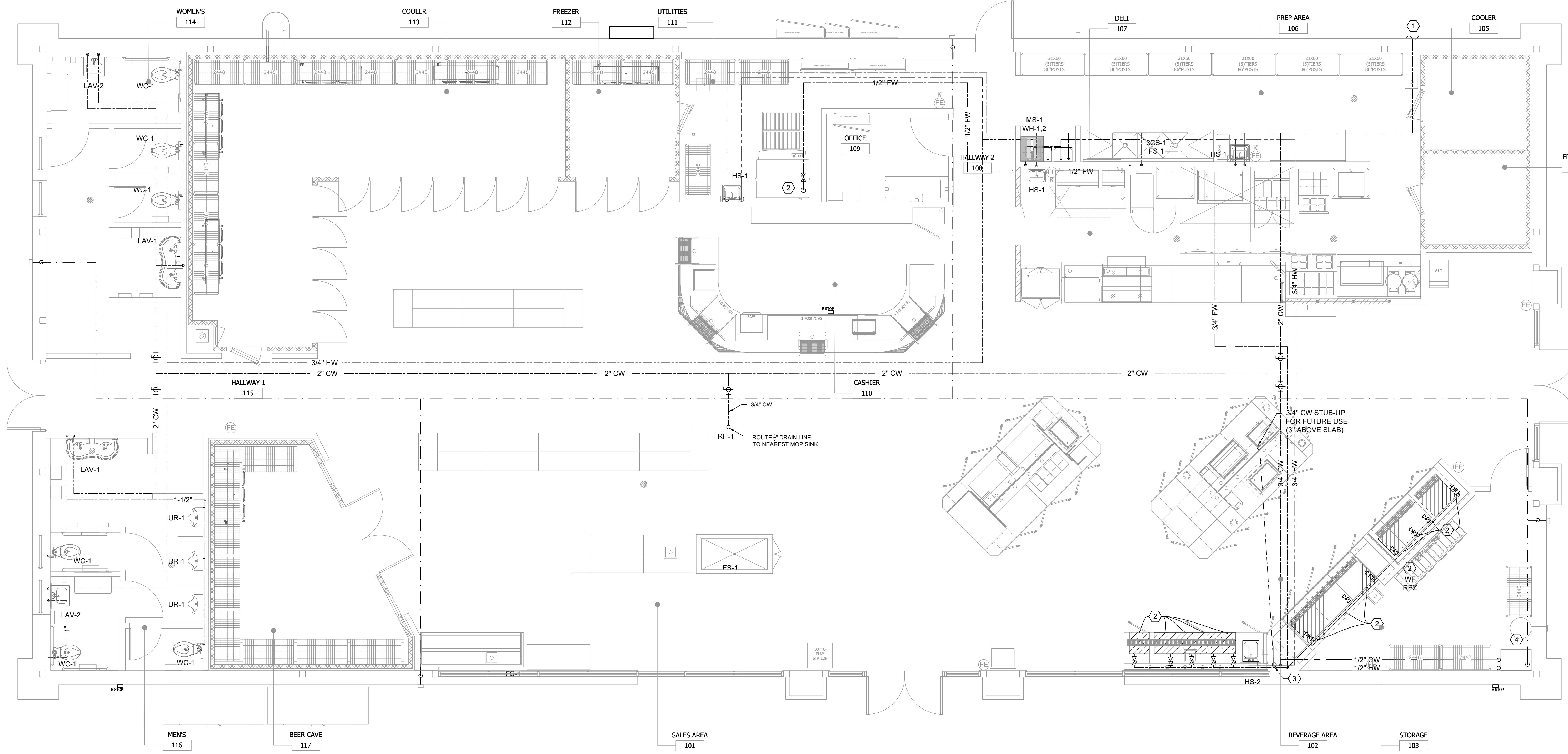
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Sheet Title
PLUMBING PROPOSED PLAN - SANITARY & VENT

Project No. 170-101.00
 Drawn By: IV
 Reviewed By: RK

Sheet P1.0



PLUMBING PROPOSED PLAN - WATER SCALE 1/4" = 1'-0"

- PROPOSED PLAN KEYED NOTES:**
- ① REFER TO CIVIL DRAWINGS FOR EXACT LOCATION OF WATER METER AND BACKFLOW PREVENTER.
 - ② PLUMBING CONTRACTOR TO PROVIDE RPZ BACKFLOW PREVENTER FOR EACH ICE MACHINE AND WATER FILTER. PROVIDE WATTS MODEL SD-3 BACKFLOW PREVENTER FOR EACH BEVERAGE AND TEA/COFFEE DISPENSER.
 - ③ 4" PVC REFRIGERANT LINE CHASES AT FLOOR. ROUTE REFRIGERANT LINES UP TO CONDENSING UNIT LOCATED ON ROOF. RUN REFRIGERANT PIPING SUCH THAT MANUFACTURERS MAXIMUM REFRIGERANT PIPE LENGTH IS MAINTAINED.
 - ④ **EASIWASH SYSTEM:** INSTALL EASIWASH SYSTEM PER MANUFACTURER'S INSTRUCTIONS. CONNECT 1/2" HOT AND COLD WATER LINES TO NEAREST MAINS. ROUTE HIGH PRESSURE WATER LINES THRU 2" SCHEDULE 40 PVC WITH LONG RADIUS SWEEP ABOVE CEILING TO HOSE CONNECTION POINTS ON EXTERIOR WALL. REFER TO ARCHITECTURAL EQUIPMENT PLAN FOR ADDITIONAL INFORMATION.

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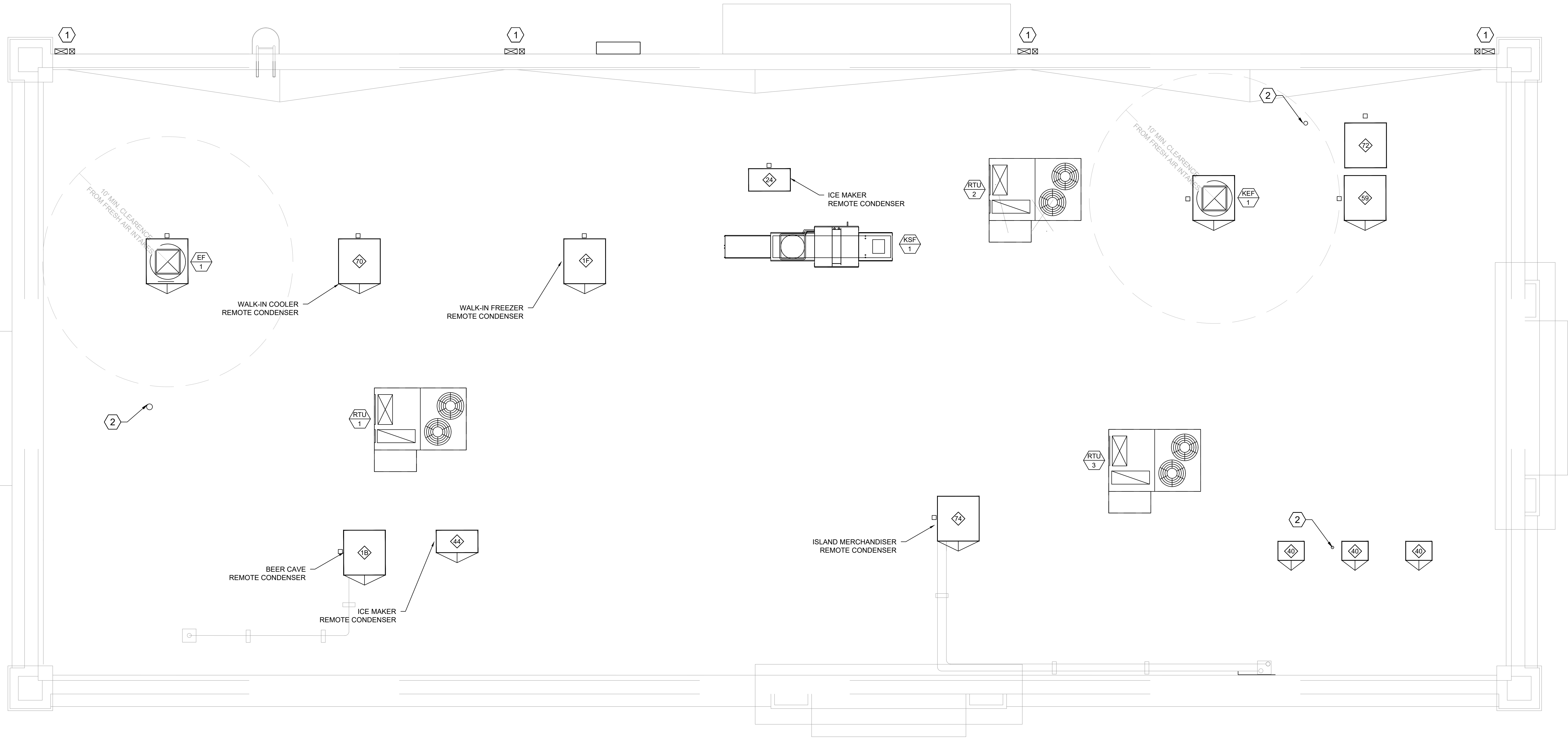
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Sheet Title
PLUMBING PROPOSED PLAN - DOMESTIC WATER

Project No. 170-101.00	Sheet P2.0
Drawn By IV	
Reviewed By RK	



PLUMBING PROPOSED ROOF PLAN
SCALE
1/4" = 1'-0"

PROPOSED PLAN KEYED NOTES:

① 5"X5" DOWNSPOUTS LOCATED AS SHOWN. TIE INTO STORM DRAINAGE PIPING UNDERGROUND. REFER TO CIVIL PLANS FOR ADDITIONAL INFORMATION.

② VENT THROUGH ROOF. SEE P1.0 FOR SIZES. ENSURE 10 FT CLEARANCES FROM ALL INTAKES.

ROOF DRAIN CALCULATIONS:

ROOF AREA = 5800 FT²

BUILDING DRAINS:

ROOF: 5800 FT² X 144 $\frac{\text{GPM}}{\text{IN}^2}$ X 4.5 $\frac{\text{IN}}{\text{IN}}$

= 3,758,400 $\frac{\text{GPM}}{\text{IN}^2}$ X $\frac{1}{2500}$

= 271,169 GPM

4 SETS OF DRAINS AT 67.75 EACH:

= 4"

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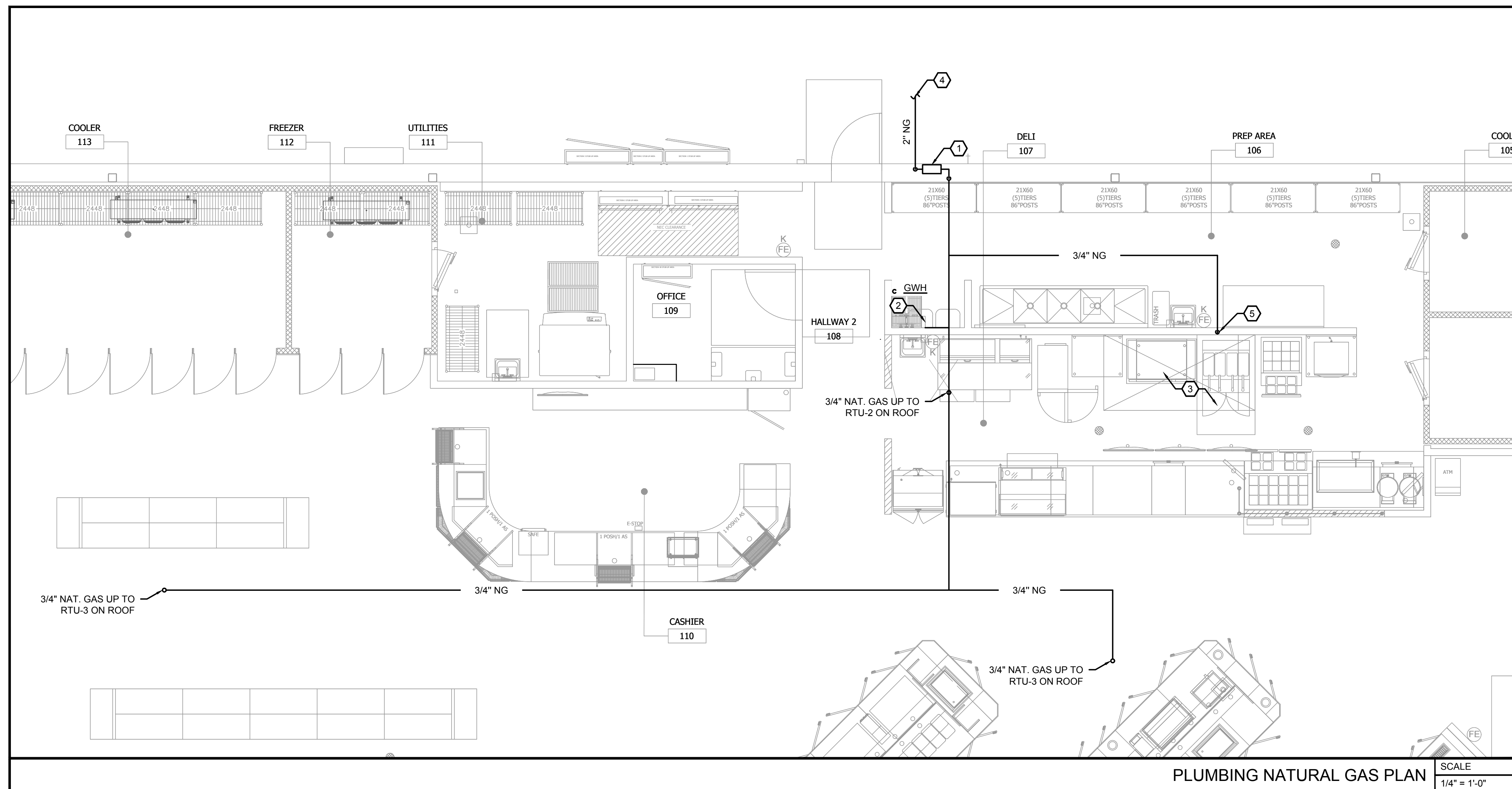
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PLUMBING PROPOSED ROOF PLAN

Project No.
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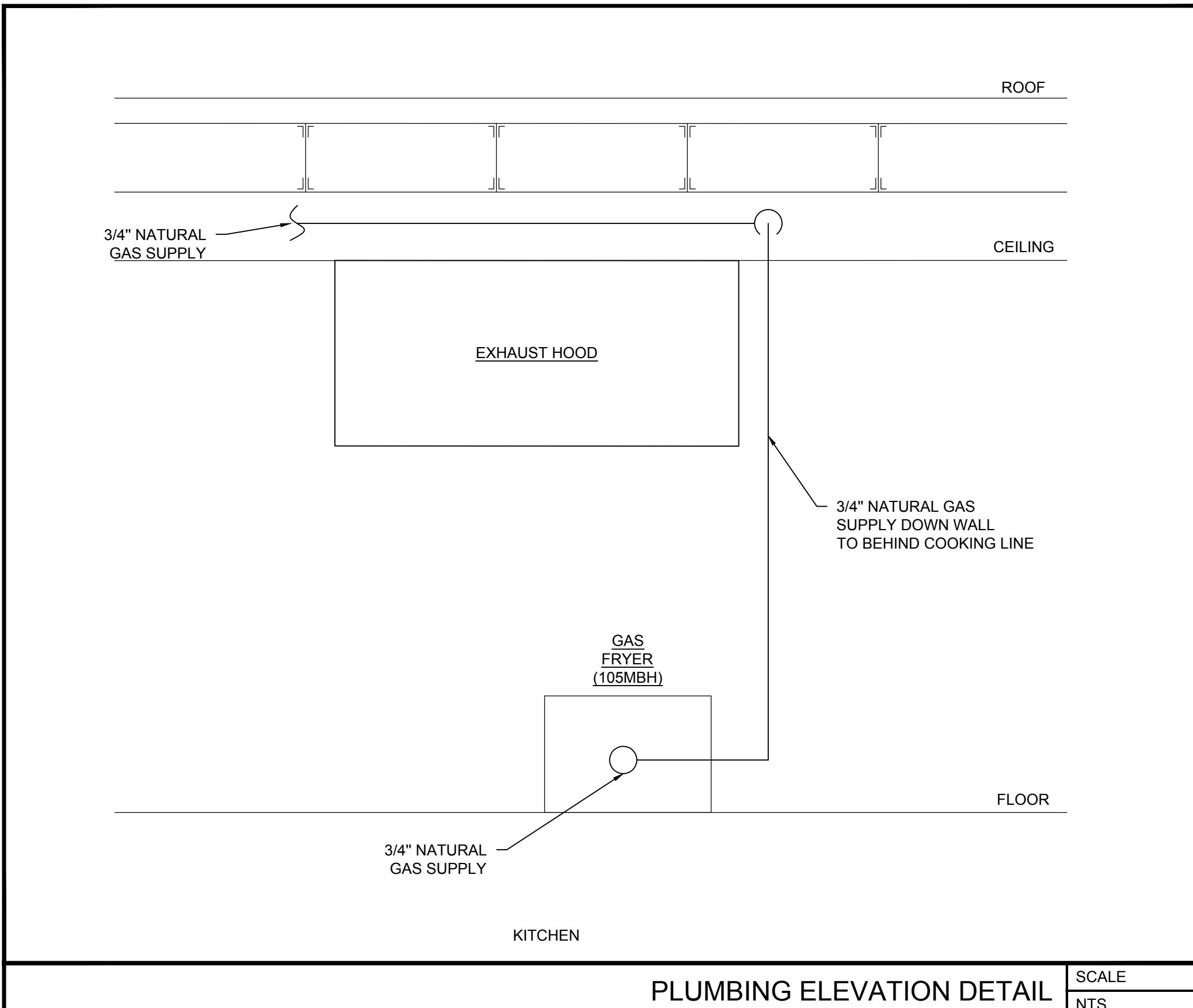
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PLUMBING NATURAL GAS PLAN SCALE 1/4" = 1'-0"



PLUMBING ELEVATION DETAIL SCALE NTS

PLAN SHEET NOTES:

- ① INSTALL NEW GAS METER, PROVIDE GAS PRESSURE REGULATOR, AND MAIN BUILDING SHUTOFF VALVE. COORDINATE EXACT LOCATION WITH UTILITY COMPANY AND CIVIL.
- ② INSTALL GAS INSTANTANEOUS WATER HEATER PER MANUFACTURERS INSTRUCTIONS. CONNECT 3/4" NATURAL GAS LINE TO NEAREST MAIN. PROVIDE SHUT OFF VALVE. CONNECT 3" PVC DIRECT VENT AND ROUTE THRU ROOF. TERMINATE MINIMUM 12" ABOVE ROOF.
- ③ ALL COOKING EQUIPMENT UNDER HOOD MUST BE SHUT-OFF AUTOMATICALLY UPON ACTIVATION OF HOOD SUPPRESSION SYSTEM, PER NFPA CODES, UTILIZING SHUNT-TRIP BREAKERS BY CONTRACTOR, AS FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, OR GAS SUPPLY SHUTOFF VALVES, AS FURNISHED BY KITCHEN EQUIPMENT CONTRACTOR AND INSTALLED BY PLUMBING CONTRACTOR. GAS VALVE SERVING HOOD GAS EQUIPMENT SHALL BE A 120V SOLENOID TYPE THAT FAILS IN THE CLOSED POSITION.
- ④ 2" NATURAL GAS PIPING. REFER TO CIVIL FOR CONTINUATION.
- ⑤ 3/4" GAS TO DUAL FRYER, INSTALL REGULATOR SUPPLIED WITH UNIT AND FLEX LINE TO EQUIPMENT WHERE ALLOWED BY LOCAL CODES.

NATURAL GAS CALCULATION:

EQUIPMENT REQUIRING NAT. GAS	APPLIANCE	INLET SIZE	BTU
GAS FRYER		3/4"	105,000
WH-1,2		3/4"	199,000 (x2)
RTU-1,2,3		1/2"	60,000 (x3)
TOTAL BTU = 684,000 BTU			
PIPE LENGTH TO MOST REMOTE FIXTURE = 80FT			
REQUIRED PIPE SIZE = 2"			

NOTE: ALL COOKING EQUIPMENT UNDER HOOD MUST BE SHUT-OFF AUTOMATICALLY UPON ACTIVATION OF HOOD SUPPRESSION SYSTEM, PER NFPA CODES, UTILIZING SHUNT-TRIP BREAKERS BY CONTRACTOR, AS FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, OR GAS SUPPLY SHUT-OFF VALVES, AS FURNISHED BY KITCHEN EQUIPMENT CONTRACTOR AND INSTALLED BY PLUMBING CONTRACTOR. GAS VALVE SERVING HOOD GAS EQUIPMENT SHALL BE A 120V SOLENOID TYPE THAT FAILS IN THE CLOSED POSITION.

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Sheet Title
PLUMBING PROPOSED PLAN - NATURAL GAS

Project No. 170-101.00
 Drawn By: IV
 Reviewed By: RK

Sheet P4.0

GENERAL NOTES

1. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB SITE PRIOR FOR ERECTOR STARTING WORK.
2. ANY DEVIATIONS FROM THESE DRAWINGS DUE TO FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD.
3. THE GENERAL CONTRACTOR SHALL PROVIDE PEDESTRIAN PROTECTION DURING THE CONSTRUCTION TO COMPLY WITH LOCAL CODES, FEDERAL, AND OSHA REGULATIONS.
4. THE GENERAL CONTRACTOR SHALL GRADE, BACKFILL, LEVEL AND OTHERWISE PREPARE THE JOBSITE FOR SAFE WORKING CONDITIONS PRIOR TO ERECTION OF ANY KIND.
5. NO STEEL SHALL BE ERECTED ON THE FOUNDATIONS / FOOTINGS UNTIL THE CONCRETE HAS CURED A MINIMUM OF (3) DAYS.
6. ALL ELECTRICAL WORK TO BE DONE IN ACCORDANCE WITH THE NEC, AND PERFORMED BY A LICENSED ELECTRICIAN.
7. A TYPICAL FOUNDATION DESIGN WILL BE PROVIDED. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT SOIL CONDITIONS AT THE SITE ARE ADEQUATE FOR TYPICAL FOUNDATIONS PROVIDED, UPON REQUEST, THE ENGINEER OF RECORD WILL PROVIDE THE REQUIRED DESIGN LOADS AND ANCHOR BOLT PATTERNS FOR A CUSTOM FOUNDATION DESIGNED BY OTHERS.
8. THE GENERAL CONTRACTOR SHALL PROVIDE ALL THE NECESSARY MEANS FOR GARBAGE AND DEBRIS REMOVAL.

SITE CONDITIONS

1. PROVIDE A DRIVE ACCESSIBLE TO WITHIN 15' OF THE PERIMETER OF THIS STRUCTURE IN ORDER TO UNLOAD MATERIALS AND PERFORM WORK.
2. FILL ALL OPEN TANK HOLES AND TRENCHES WITHIN 15' OF THE PERIMETER OF THIS STRUCTURE FROM THE TIME THAT THE STRUCTURE ANALYSIS UNTIL ERECTION IS COMPLETE.
3. THE JOBSITE MUST BE DRY ENOUGH FOR VEHICLES AND PERSONNEL TO PERFORM WORK. IF NECESSARY, THE GENERAL CONTRACTOR SHOULD LAY GRAVEL IN EXCESSIVELY MUDDY AREAS TO ENSURE ADEQUATE WORKING CONDITIONS.
4. POURED CONCRETE PAVING UNDER AND AROUND THE PERIMETER OF THE STRUCTURE TO BE EXCLUSIVELY FOR WORK SPACE AND STAGING OF MATERIALS.
5. ALL OVERHEAD OBSTRUCTIONS ARE TO BE REMOVED PRIOR TO THE ARRIVAL OF MATERIALS.
6. FORM, SET, AND POUR FOUNDATIONS AS PER PROVIDED FOUNDATION PLAN. ALL FORMS SHALL BE REMOVED PRIOR TO ARRIVAL OF MATERIALS AND ALL ANCHOR BOLT THREADS SHALL BE FREE OF DEBRIS / DUST AND SHALL BE ACCESSIBLE.
7. ALL ANCHOR BOLTS (WITH NUTS INSTALLED) SHALL BE SET AT THE PROPER ELEVATIONS WITH NO MORE THAN 1/4" TOLERANCE.
8. PROVIDE TEMPORARY POWER SOURCE (110 VOLTS) WITHIN 100 FEET OF THE STRUCTURE FOR THE ERECTORS USE.
9. OBTAIN ALL REQUIRED PERMITS FROM LOCAL AUTHORITIES AND ARRANGE ALL LOCAL INSPECTIONS UNLESS PROVIDED BY THE ENGINEER OF RECORD.

ERECTORS NOTES

1. VERIFY ALL ITEMS UNDER THE SITE CONDITIONS IF THESE ITEMS HAVE NOT BEEN ADDRESSED. CONTACT YOUR SUPERVISOR PRIOR TO UNLOADING MATERIALS.
2. VERIFY DIMENSIONS OF ALL FOOTING LOCATIONS PRIOR TO UNLOADING MATERIALS.
3. DESIGNATE A SAFE AND SECURE STAGING AREA AND UNLOAD ALL MATERIALS.
4. SET LEVELING NUTS TO PROPER ELEVATIONS.
- 4.1 NOTE: ALL LEVELING NUTS TO BE AT THE SAME ELEVATION.
5. SET COLUMNS IN PLACE. LEVEL, PLUM, AND TIGHTEN NUTS ON ALL COLUMNS PRIOR TO PROCEEDING.
6. INSTALL ALL OVERHEAD STEEL FRAMING ONCE ALL FRAMING HAS BEEN INSTALLED. SQUARE UP FRAMING BY VERIFYING LATER DIMENSIONS.
7. CLEAN ALL DECKING PRIOR TO INSTALLATION. INSTALL ALL FASTENERS AT THE CENTERLINES OF THE DECK RIBS.
8. INSTALL OVERFLOW SCUPPERS AND WATERPROOF ENTIRE GUTTER.. 9.INSTALL DECK SUPPORTS AT COLUMNS WHERE DECK RIBS WERE CUT FOR INSTALLATION PURPOSES.
10. WATERPROOF THE ENTIRE STRUCTURE AND CLEAN ALL PRE-FINISHED MATERIALS. TOUCH UP ALL EXPOSED FASTENERS.
11. CLEAN UP ALL DEBRIS AND REMOVE FROM JOBSITE (EACH DAY AT THE COMPLETION).
12. REMOVE ALL METAL SHAVINGS FROM CANOPY.

STRUCTURAL STEEL

1. STRUCTURAL STEEL ROLLED SHAPES SHALL CONFORM TO ASTM A-992, GRADE 50, FY = 50 KSI
2. SQUARE AND RECTANGULAR TUBING SHALL CONFORM TO ASTM A500, GRADE B, FY = 46 KSI
3. STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B, FY = 35 KSI
4. CHANNELS, ANGLES AND PLATES ASTM A36
5. STRUCTURAL STEEL DESIGN SHALL BE DONE IN ACCORDANCE WITH AISC "MANUAL OF STEEL CONSTRUCTION".
6. ALL STRUCTURAL STEEL TO BE PAINTED ONE SHOP COAT OF RUST INHIBITIVE PAINT OR EQUAL TO RUSTOLEUM.
7. STRUCTURAL STEEL FABRICATIONS AND ERECTION SHALL BE DONE IN ACCORDANCE WITH THE AISC LA TEST CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.

ANCHOR BOLTS

1. ANCHOR BOLTS SHALL BE ASTM A325N MATERIAL.
2. INSTALLATION OF ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH THE ANSI CODE OF STANDARD PRACTICE, SECTIONS 7.5.

WELDING

1. STRUCTURAL WELDING SHALL CONFORM TO AWS D1.1.
2. STRUCTURAL LIGHT GAUGE WELDING SHALL CONFORM TO AWS 1.3.
3. STRUCTURAL WELDING SHALL BE DONE IN THE SHOP OF A LICENSED FABRICATOR.
4. ALL STRUCTURAL FIELD WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER.
5. AWS E70XX ELECTRODES SHALL BE USED FOR ALL STRUCTURAL WELDS, EXCEPT FOR SPECIAL CLIPS.
6. ALL STRUCTURAL WELDS TO BE 1/4" FILLET, FULL PENETRATION WELDS, UNLESS OTHERWISE SPECIFIED.

BOLTS

1. ALL BOLTS SHALL BE ASTM A325 HIGH STRENGTH BOLTS UNLESS NOTED OTHERWISE ON THESE DRAWINGS.
2. HIGH STRENGTH BOLTS SHALL BE INSTALLED USING THE "TURN OF BUT" TIGHTENING METHOD. BOLTS SHALL BE BROUGHT TO THE SNUG TIGHT CONDITION AND THEN TIGHTENED 1/3 TURN.

SCREWS

1. SHEET METAL SCREWS SHALL BE MADE FROM CARBON STEEL WIRE.
2. SIZE AND SPACING SHALL BE INDICATED ON DETAIL SHEETS.

POP RIVETS

1. ALL POP RIVETS SHALL BE THE BREAK MANDREL BLIND RIVET TYPE AND SHALL CONFORM TO IFI STANDARD 114.
2. FINISHES SHALL BE ALUMINUM OR STAINLESS STEEL.
3. SIZE AND SPACING SHALL BE INDICATED ON THESE DRAWINGS.
4. POP RIVETS SHALL NOT BE USED IN STRUCTURAL APPLICATIONS UNLESS SPECIFICALLY CALLED FOR BY THE DESIGN CALCULATIONS.

ROOFING NOTES

1. ROOFING MATERIAL SHALL BE ATTACHED PER MANUFACTURERS SPECIFICATIONS TO MEET THE DESIGN CRITERIA PRESCRIBED IN THESE PLANS.
2. ROOF TO BE PITCHED A MINIMUM OF 1/4" PER FOOT.

FOUNDATION NOTES

1. SOIL TO BE COMPACTED TO AT LEAST 95% MAX. DRY DENSITY AS DETERMINED BY ASTM - 1557 (MODIFIED PROCTOR).
2. FOUNDATIONS ARE DESIGNED BASED ON A PRESUMPTIVE MINIMUM SOIL BEARING PRESSURE OF 2000 PSF.
3. FOOTINGS SHALL BE PLACED ON COMPACTED SOIL FREE OF ORGANIC DEBRIS.
4. ASSUMED BEARING CAPACITY OF SOIL = 2000 PSF.

STEEL STUD NOTES

1. MATERIALS:
 - 1.1 STUDS AND TRACKS : 16 GA & 18 GA. STUDS. TRACKS TO MATCH GAUGE OF STUDS.
- 1.1.1. ASTM A446 GRADE D, FY - 50 KSI MIN.
2. ALL WELDING TO BE DONE BY A CERTIFIED WELDER.
3. CONNECTIONS:
 - 3.1 FIELD BOLTED / TEK SCREWED W/ #14 x 3/8" GALV. TEK SCREWS (4 MIN. PER CONNECTION).
 - 3.2. ALL MATERIAL IS GALVANIZED COATED IN ACCORDANCE WITH ASTM 525-G60.
 - 3.3 APPLY ZIN RICH COATING TO ALL FIELD WELDS.
 4. SUBMIT SHOP DRAWINGS FOR ALL STUD MATERIAL PRIOR TO FABRICATION.
 5. ALL EXTERIOR STUDS ARE TO BE 6" WIDE, 16 GA. MIN @ 16" O.C.
 6. ALL STUD MEMBERS AND THEIR CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR/ INSTALLER FOR A HORIZONTAL WIND LOAD NOTES IN THESE DESIGN PARAMETERS, PROVIDE CALCUALTIONS STMAPED AND SIGNED BY A REGISTERED ENGINEER IN THE STATE WHERE PROJECT IS LOCATED.
 7. DEFLECTION LIMIT IS L/240OR L/360 FOR PLASTER APPLICATIONS.
 8. WELD SIZES ARE TO BE 1/8" MIN. WITH AWS TYPE 6013 OR 7014 FILLER.
 9. PROVIDE CONTINUOUS BRIDGING @ 4'-0" O.C. MAX. FOR ALL WALLS.
 10. BRIDGING FOR ROOF JOISTS SHALL BE 8'-0" O.C. MAX.

STEEL ROOF DECK NOTES

1. DECK SHALL BE 1-1/2", 22 GA. GALV. (G60), TYPE F.
2. DECK ENDS MAY BE EITHER BUTTED OR LAPPED OVER SUPPORTS.
3. ON JOIST FRAMING, APPROPRIATE END LAPS SHALL OCCUR OVER A TOP CHORD SUPPORT ANGLE FOR ANCHORAGE.
4. ATTACH METAL DECK TO STRUCTURAL STEEL WITH A 5/8" DIA. PUDDLE WELD @ 6" O.C. AT THE EDGES AND 10" O.C. IN THE FIELD.
5. FASTEN SIDE LAPS WITH #12 X 3/4" GALV. TEK SCREWS @ 6" O.C.

STEEL BAR JOIST NOTES

1. FABRICATION AND ERECTION PER SJI REQUIREMENTS.
2. JOIST BRIDGING:
 - 2.1 THE NUMBER OF ROWS AS SHOWN ON THE CONTRACT DRAWINGS.
 - 2.2 SHOULD NOT BE LESS THAN REQUIRED BY SJI.
 - 2.3 USE HORIZONTAL BRIDGING FOR K-SERIES.
 - 2.4 USE DIAGONAL ROW NEAREST TO THE MID SPAN WHERE 4 OR 5 ROWS ARE REQUIRED BY SJI.
 - 2.5 DIAGONAL BRIDGING TO BE BOLTED TO THE JOISTS AT THEIR POINT OF INTERSECTION.
 - 2.6 ENDS TO BE ANCHORED W/ HORIZ. BRIDGING.
 - 2.7 HORIZ. BRIDGING MAY BE IN NO MORE THAN (2) CONSECUTIVE BAYS TO PROVIDE PASSAGE FOR DUCT WORK.
3. JOIST BEARING:
 - 3.1 WELD ALL JOISTS TO THE SUPPORTING STEEL W/ (3) INCHES OF 1/8" FILLET WELDS FOR K-SERIES JOIST EA. SIDE OF BEARING.
 - 3.2 JOIST TO BE FIELD BOLTED NEAR OR ON THE COLUMN LINES.
 - 3.3 IF THERE IS NO JOIST @ COLUMN LINE, FIELD BOLT CLOSEST TO THE COLUMN ON EA. SIDE.
 - 3.4 EXTEND BOTTOM CHORDS OF THE SAME JOISTS AND WELD THEM W/ 1/4" WELDS TO THE BEAM OR COLUMN.
 - 3.5 EXTEND ALL JOISTS 1" MIN. PAST THE CENTERLINE OF THE SUPPORTING STEEL MEMBERS (WHERE POSSIBLE).
 - 3.6 BEARING LOCATION TO BE PER SHOP DRAWINGS ACCORDING TO THE STANDARD PROVISIONS OF SJI.
4. SHOP DRAWINGS:
 - 4.1 FURNISH (2) PRINTS OF EA. SHOP AND ERECTION DRAWINGS FOR REINFORCING STEEL, STRUCTURAL STEEL, STEEL JOISTS, AND MISC. STEEL TO STRUCTURAL ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION.

WINDOWS AND DOOR NOTES

1. WINDOWS, DOORS, SHUTTERS, AND ALL COMPONENTS SHALL BE DESIGNED AND INSTALLED PER THE MINIMUM DESIGN PRESSURES AS PRESCRIBED IN THESE PLANS.
2. ALL WINDOWS ARE TO BE INSTALLED ON 2X PRESSURE TREATED BUCKS, AND AS PER MANUFACTURERS SPECIFICATIONS UNLESS OTHERWISE NOTED.

SHOP DRAWINGS

1. SHOP DRAWINGS ARE TO BE SUBMITTED FOR ALL STRUCTURAL ELEMENTS OF THE BUILDING, FOUNDATION, ETC., FOR REVIEW IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
- 1.1 DRAWINGS SHALL BE LEGIBLE AND CLEARLY MARKED WITH MATERIAL SIZE, SPECIFICATION, ETC.
- 1.2 ALLOW A MINIMUM OF 2 WEEKS FOR SHOP DRAWING REVIEW.
- 1.3 CONTRACTOR IS RESPONSIBLE FOR CLEAR AND CONCISE SHOP DRAWING SUBMITTAL FOR REVIEW TO THE ENGINEER OF RECORD.
- 1.3.1 ALL DIMENSIONS, SIZES, DESIGN COMPLIANCE, ETC., IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BEFORE DRAWINGS ARE SUBMITTED TO THE ENGINEER OF RECORD FOR FINAL REVIEW.
- 1.4 IF THERE ARE ANY DISCREPANCIES BETWEEN THE SHOP DRAWINGS AND STRUCTURAL DRAWINGS, THE STRUCTURAL DRAWINGS SHALL GOVERN.
2. PROVIDE SUBMITTALS FOR THE FOLLOWING MATERIALS:
 - 2.1 CONCRETE MIX DESIGN
 - 2.2 CURING COMPOUND
 - 2.3 REINFORCING STEEL AND ALL STRUCTURAL STEEL
 - 2.4 METAL DECKING 2.4.1 LAYOUT, TYPES, ANCHORAGE, CHANNELS, OPENINGS, ACCESSORIES, ETC.

CONCRETE NOTES

1. ENGINEER OF RECORD MUST BE NOTIFIED WITHIN 48 HOURS OF PLACING CONCRETE.
2. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF ACI 301 "SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
3. STRUCTURAL CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 301 AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH IN 28 DAYS OF 3000 PSI UNLESS OTHERWISE NOTED.
4. CONCRETE, WHEN PLACED, SHALL HAVE A SLUMP OF 4" PLUS OR MINUS 1".
5. PROVIDE A MINIMUM OF 6 MIL. VAPOR BARRIER AT ALL AIR CONDITIONED SPACES AND GARAGES. HOLES IN VAPOR BARRIER ARE NOT PERMITTED AROUND ALL SEAMS AND CUT-OUTS.
6. ALL REINFORCING SHALL CONFORM TO ASTM A615 FOR GRADE 60, STEEL/WELDED WIRE MESH TO CONFORM TO ASTM A-185.
 - 6.1. PROVIDE CHAIRS AND BOLSTERS.
 - 6.1.1. BOLSTERS TO HAVE PLASTIC COATED LEGS AND FEET (IF EXPOSED TO EXTERIOR ELEMENTS).
 - 6.2 ENSURE MESH IS EMBEDDED 1" FROM THE TOP SLAB. LAP JOINTS @ 8" AND TIE.
 7. WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A185 AND SHALL BE ADEQUATELY SUPPORTED @ 3'-0" O.C. EACH WAY.
 8. THE MINIMUM CONCRETE COVERAGE SHALL BE AS FOLLOWS:
 - CAST AGAINST EARTH: 3"
 - EXPOSED TO EXTERIOR ELEMENTS: 1"
 - FORMED SURFACES: 1"
 8. CONSTRUCTION JOINTS DESIGN AND LOCATIONS SHALL CONFORM STRICTLY TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. ANY CONSTRUCTION OR CONTROL DESIRED OR PREFERRED BY THE CONTRACTOR SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION OF THOSE AREAS INVOLVED.
 9. CHECK ALL DRAWINGS AND APPLICABLE MANUFACTURER'S SHOP DRAWINGS FOR LOCATION OF ALL EMBEDDED ITEMS SUCH AS PIPE SLEEVES, ANCHOR BOLTS, ETC., PRIOR TO PLACING CONCRETE.
 10. REINFORCEMENT FOR CONTINUOUS FOOTINGS SHALL BE CONTINUOUS AND SPLICED WITH A FULL 30" LAP. PROVIDE CORNER BARS.
 11. CONTRACTOR SHALL PROVIDE SAWCUTS IN SLAB @ A MAX. SPACING OF 20'-0" ON CENTER EACH WAY OR 400 S.F. AND AT ALL RE-ENTRANT CORNERS. SAW CUT SHALL BE 1/4 OF THE SLAB DEPTH AND SHALL BE PERFORMED AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY ENOUGH TO PREVENT THE AGGREGATE FROM DISLODGING BY THE SAW BLADE. THIS IS AN EFFORT TO CONTROL THE STRESSES, AN INHERENT PROPERTY OF CONCRETE WHICH SOMETIMES RESULTS IN CRACKS (WHICH IS NOT UNCOMMON).
 12. CONCRETE FOR SLABS ON GRADE AND ELEVATED SLABS SHALL HAVE 3/4" LARGE AGGREGATE. "PEAROCK" IS NOT PERMITTED FOR SLABS.
 13. ELEVATED SLABS SHALL BE TEMPORARILY SHORED UNTIL FULLY CURED.
 14. ALL CONCRETE THAT IS ALTERED (WATER, ADDITIVES, ETC.) SHALL BE TESTED TO ENSURE STRENGTH REQUIREMENTS ARE MET.

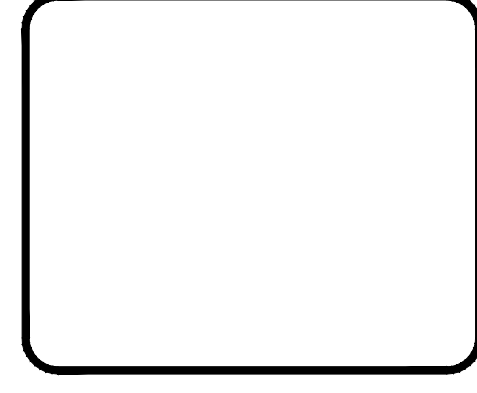
CONT'D ON S1.1



												05/31/2024	Date

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FL REG. NO. 64085

Date

Project Name and Address: **CEFCO #437 - BETHEL**
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title: **STRUCTURAL GENERAL NOTES**

Project No. 170-101.00	Sheet
Drawn By: LR	S1.0
Reviewed By: RP	

CONCRETE NOTES (CONT'D)

- TERMINATE ALL VERTICAL REINFORCING AT THE TOP AND BOTTOM WITH 10" ACI HOOKS.
- SOILS SHALL BE TREATED.

LIGHT GAUGE STEEL

- STRUCTURAL LIGHT GAUGE STEEL SHALL CONFORM TO ASTM A1003/A1003M WITH MIN. FY = 33 KSI
- BUYOUT LIGHT GAUGE STEEL SHAPES SHALL CONFORM TO MANUFACTURERS SPECIFICATIONS AS CALLED OUT IN THE DESIGN CALCULATIONS/DRAWINGS.
- DESIGN OF LIGHT GAUGE STRUCTURAL STEEL SHALL BE DONE IN ACCORDANCE WITH THE ANSI COLD FORMED STEEL DESIGN MANUAL.

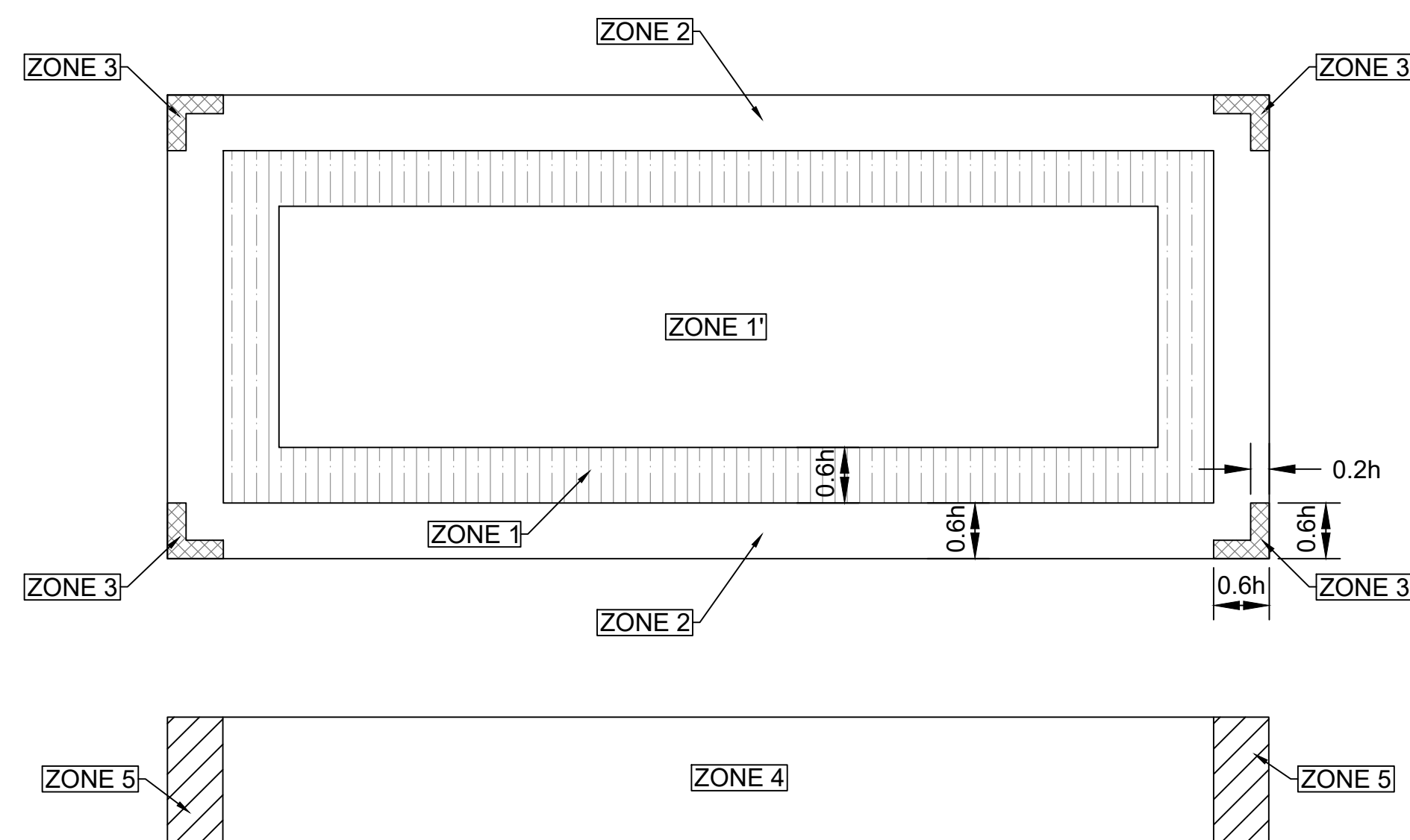
DESIGN PARAMETERS FOR WIND LOAD COMPLIANCE

- RISK CATEGORY II
- FLORIDA BUILDING CODE 2023 (EIGHTH EDITION), INTERNATIONAL BUILDING CODE 2018 (IBC) AND ASCE 7-22
- BUILDING DESIGN IS ENCLOSED
- MEAN ROOF HEIGHT IS (h=)15'- 0"
- ROOF PITCH 1/4":.12" DEGREES
- INTERNAL PRESSURE COEFFICIENT ± 0.18
- WIDTH OF END ZONE A = 5'-3"
- WIND SPEED (VULT) 155 MPH 3-SECOND GUST (VASD) 120 MPH 3-SECOND GUST
- WIND EXPOSURE CLASSIFICATION: C
- ADJUSTMENT FACTOR FOR EXPOSURE AND HEIGHT = 1.21

WIND COMPONENTS AND CLADDING PRESSURES (PSF)						
EFF. AREA (SQ.FT.)	ROOF				WALL	
	ZONE 1'	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5
< 10	+21.30/-45.01	+21.30/-78.41	+21.30/-103.39	+21.30/-140.90	+52.39/-56.81	+52.39/-70.12
20	+19.90/-45.01	+19.90/-73.20	+19.90/-96.73	+19.90/-127.65	+50.03/-51.83	+50.03/-61.40
50	+18.21/-45.01	+18.21/-66.37	+18.21/-87.91	+18.21/-110.05	+46.83/-51.30	+46.83/-51.30
100	+16.82/-45.01	+16.82/-61.23	+16.82/-81.31	+16.82/-96.74	+44.53/-48.94	+44.53/-48.94

ALL THESE WIND PRESSURES ARE MULTIPLIED WITH ADJUSTMENT FACTOR FOR BUILDING AND HEIGHT AND REDUCED PRESSURES PER FBC /IBC WITH MULTIPLYING FACTOR: 0.6
 THE DESIGN WIND PRESSURE FOR C&C OF BUILDINGS SHALL NOT BE LESS THAN A NET PRESSURE OF 16 LBS/SQ. FT. ACTING IN EITHER DIRECTION NORMAL TO THE SURFACE.

- LOADS:
 ROOF / DEAD : 25 PSF
 ROOF / LIVE : 30 PSF



WIND COMPONENT AND CLADDING PRESSURES DIAGRAM

JOIST NET UPLIFT LOADS				
WIND SPEED = 155 MPH GROSS UPLIFT				
	10PSF	20PSF	50PSF	100PSF
ZONE 1	-78.408	-73.2	-66.37	-61.23
ZONE 1'	-45.01	-45.01	-45.01	-45.01
ZONE 2	-103.39	-96.74	-87.91	-81.31
ZONE 3	-140.9	-127.66	-110.1	-96.74
JOIST NET UPLIFT FOR ASD COMBINATION 0.60+0.6W D= 12PSF				
ZONE 1	-39.8448	-36.72	-32.62	-29.54
ZONE 1'	-19.806	-19.806	-19.81	-19.81
ZONE 2	-54.834	-50.844	-45.55	-41.59
ZONE 3	-77.34	-69.396	-58.83	-50.84
JOIST NET UPLIFT FOR STRENGTH DESIGN COMBINATION 0.9D + 1.0 W D= 12PSF				
ZONE 1	-67.608	-62.4	-55.57	-50.43
ZONE 1'	-34.21	-34.21	-34.21	-34.21
ZONE 2	-92.59	-85.94	-77.11	-70.51
ZONE 3	-130.1	-116.86	-99.25	-85.94
USE MIN. 16 PSF AT SPECIFIED AREA ABOVE (SEE COLOR RED)				

DESIGN PARAMETERS FOR SEISMIC LOAD COMPLIANCE

- IMPORTANCE FACTOR = 1.0
- OCCUPANCY RISK CAT. II
- SPECTRAL RESPONSE ACCELERATIONS
 $S_s = 0.082$
 $S_1 = 0.057$
- SITE CLASS D
 SPECTRAL RESPONSE COEF.
 $S_{ds} = 0.087$
 $S_{d1} = 0.091$
 SEISMIC DESIGN CAT. B
- SEISMIC FORCE RESISTING SYSTEM
 STEEL ORDINARY CONCENTRICALLY
- BRACE FRAMES R=3.25
- ANALYSIS PROCEDURE
 EQUIVALENT LATERAL FORCE
- SEISMIC BASE SHEAR 3.8% OF W

LATERAL FORCE-RESISTING SYSTEMS SHALL MEET SEISMIC DETAILING REQUIREMENTS AND LIMITATIONS PRESCRIBED IN ASCE 7, EXCLUDING CHAPTER 14 AND APPENDIX 11A, EVEN WHEN WIND LOAD EFFECTS ARE GREATER THAN SEISMIC LOAD EFFECTS. ALL STRUCTURAL FRAMING SHALL MEET ULTIMATE WIND SPEED REQUIREMENTS AS SET FORTH IN CHAPTER 16, IBC 2018

SOIL:
 GEOTECHNICAL REPORT:
 NOVA JOB NO.: 10116-2023126 PROVIDED BY NOVA ENGINEERING AND ENVIRONMENTAL LLC(NOVA).
 DATE: JULY 7, 2023, SUGGESTED TO USE 2FT. SOIL FILL W/ LOW PLASTICITY SELECT FILL. PROOF ROLLED & PROPERLY COMPACTED BEFORE ANY FOUNDATIONS POURED. SEE GEOTECHNICAL REPORT & CIVIL FOR MORE INFORMATION.

STRUCTURAL DRAWING LIST

S1.0	STRUCTURAL GENERAL NOTES
S1.1	STUCTURAL GENERAL NOTES
S2.0	FOUNDATION PLAN
S3.0	ROOF FRAMING PLAN
S4.0	BUILDING ELEVATIONS
S5.0	BUILDING ELEVATIONS
SD1.0	FOUNDATION DETAILS
SD1.1	TRASH ENCLOSURE FLOOR PLAN AND DETAILS
SD1.2	TRASH ENCLOSURE EXTERIOR ELEVATIONS
SD1.3	TRASH ENCLOSURE SECTION AND DETAILS
SD1.4	GENERATOR ENCLOSURE FLOOR PLAN AND DETAILS
SD1.5	GENERATOR ENCLOSURE EXTERIOR ELEVATIONS
SD1.6	GENERATOR ENCLOSURE SECTION AND DETAILS
SD2.0	STEEL FRAMING DETAILS
SD3.0	STEEL FRAMING DETAILS
SD4.0	ROOF FRAMING DETAILS
SD4.1	ROOF FRAMING DETAILS
SD5.0	LIGHT GAUGE DETAILS
SD6.0	MISCELLANEOUS DETAILS

No.	Revision/Issue	Date
1	ISSUE FOR PERMIT	05/31/2024

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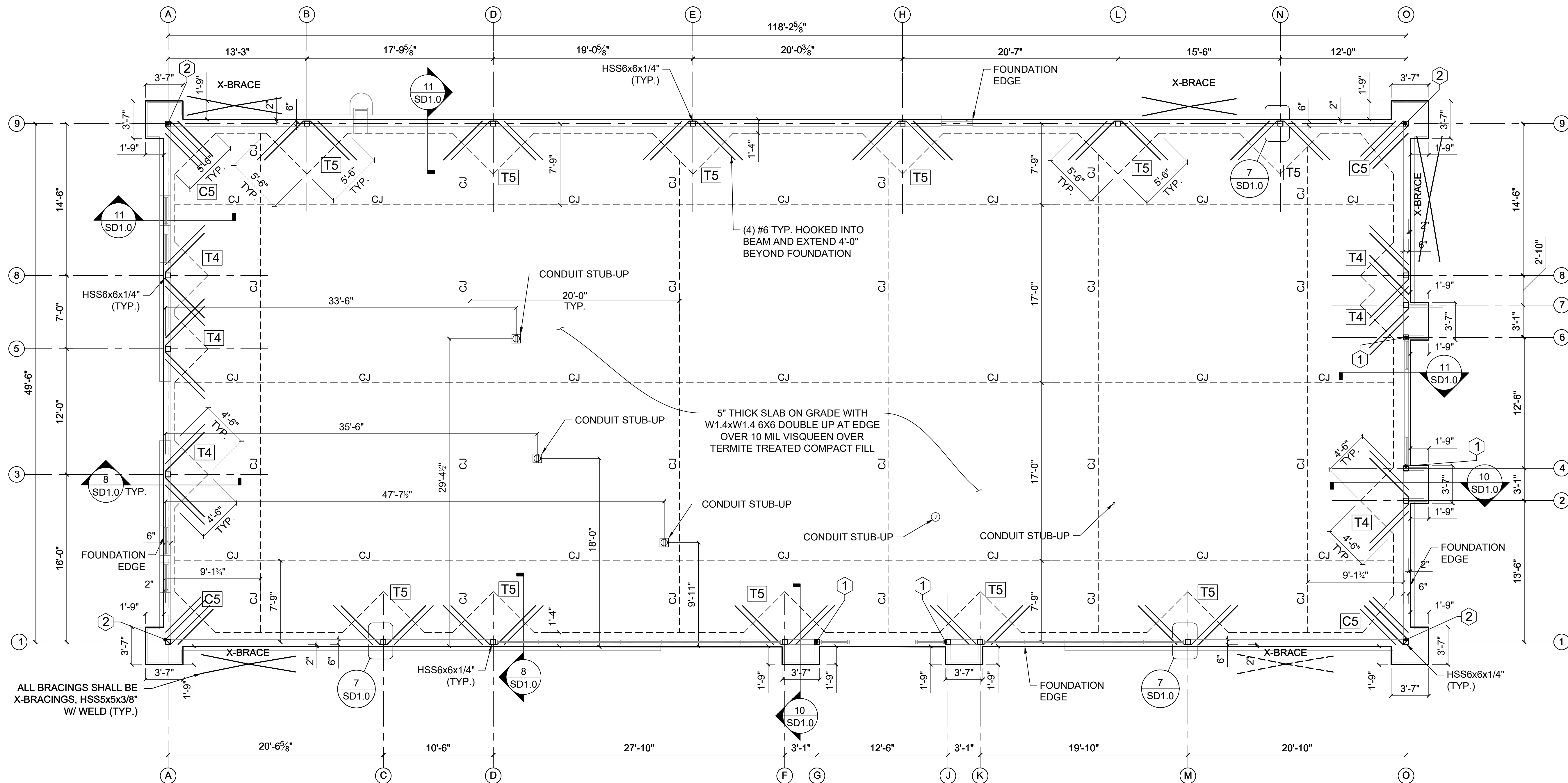
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Date

Project Name and Address
CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title
STRUCTURAL GENERAL NOTES

Project No. 170-101.00	Sheet S1.1
Drawn By LR	
Reviewed By RP	



- FOUNDATION NOTES:**
- THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF EMBEDMENT, PLUMBING, FIXTURES, AND DRAINS.
 - REFERENCE ARCHITECTURAL PLANS FOR ALL DIMENSIONS AND VERIFY.
 - SEE SHEET S1.0 & S1.1 FOR ALL MATERIAL SPECIFICATIONS.
 - FOOTING SIZES REFERENCED IN THE PLAN:
 - C5: 5'-6" W x 5'-6" L x 2'-0" D CEE FOOTING
 - T4: 4'-6" W x 4'-6" L x 2'-0" D TEE FOOTING
 - T5: 5'-6" W x 5'-6" L x 2'-0" D TEE FOOTING
 - T6: 6'-0" W x 6'-0" L x 2'-0" D SPREAD FOOTING
 - PROVIDE 1/2" DENSGLOSS OVER METAL STUD FRAMING. FASTEN PER MANUFACTURERS INSTRUCTIONS.
 - ALL COLUMNS ARE HSS6x6x1/4", U.N.O., INCLUDING BRACING COLUMNS.
 - ALL COLUMNS SHALL EXTEND TO TOP OF PARAPET, U.N.O.

- KEYNOTE:**
- 1 TOP OF COLUMN TO BE AT B.O. STOREFRONT BEAM
 - 2 SEE DETAIL 1/SD1.0 FOR BASE PLATE & ANCHOR BOLTS. (TYP.)

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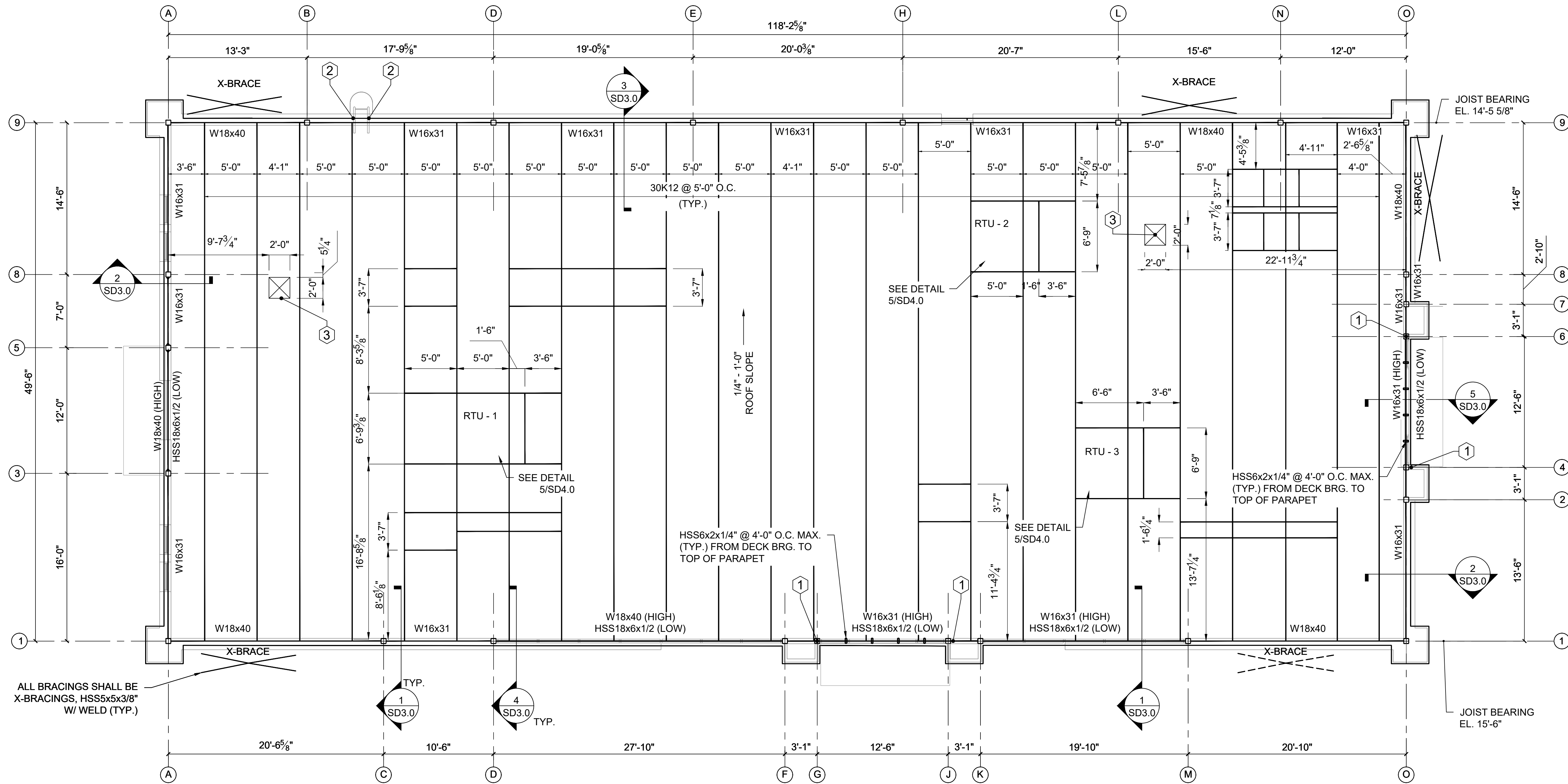
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Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title
FOUNDATION PLAN

Project No. 170-101.00	Sheet
Drawn By LR	S2.0
Reviewed By RP	



ROOF FRAMING NOTES:

1. THE ROOF STRUCTURE SHALL NOT BE USED FOR STOCKPILING OF EQUIPMENT OR MATERIALS UNLESS APPROVED BY THE ARCHITECT, STRUCTURAL ENGINEER, AND THE JOIST MANUFACTURER.
2. THE ROOFING SYSTEM SHALL BE AS PER DRAWINGS AND PER CONSTRUCTION SPECIFICATIONS.
3. COORDINATE ROOF ELEVATIONS WITH ARCH. AND STRUCTURAL DRAWINGS.
4. ROOF TOP UNITS: GENERAL CONTRACTOR TO INSTALL FLASHING AND COUNTER-FLASHING TO ROOFING MANUFACTURER SPECIFICATIONS.
5. ALL COLUMNS SHALL BE HSS6x6x1/4", U.N.O.
6. ALL COLUMNS SHALL EXTEND TO TOP OF PARAPET (19'-0" TYP.) U.N.O.
7. SEE S1.0 & S1.1 FOR ADDITIONAL NOTES.
8. CEFCO TOWER INFILL FRAMING AND METAL STUD WALL FRAMING BY OTHERS.
9. ALL PARAPET BEAMS TO BE HSS6X2X3/16, U.N.O. REFER TO ELEVATIONS FOR MORE INFORMATION.
10. THE JOIST MANUFACTURER SHALL DESIGN THE JOISTS FOR ADDITIONAL RTU LOADS AS MENTIONED BELOW:

RTU - 1	800LBS
RTU - 2	1200LBS
RTU - 3	1200LBS
MAKE-UP AIR	1200LBS
11. ▶ DENOTES MOMENT CONNECTION

KEYNOTE:

- 1 TOP OF COLUMN TO BE B.O. STOREFRONT BEAM
- 2 G.C. TO PROVIDE DOUBLE STUDS AT LADDER VERTICAL CONNECTION (TYP.). TO BE DESIGNED BY OTHERS
- 3 REFER TO DETAIL 2/SD4.1 FOR MECHANICAL EQUIPMENT OPENING

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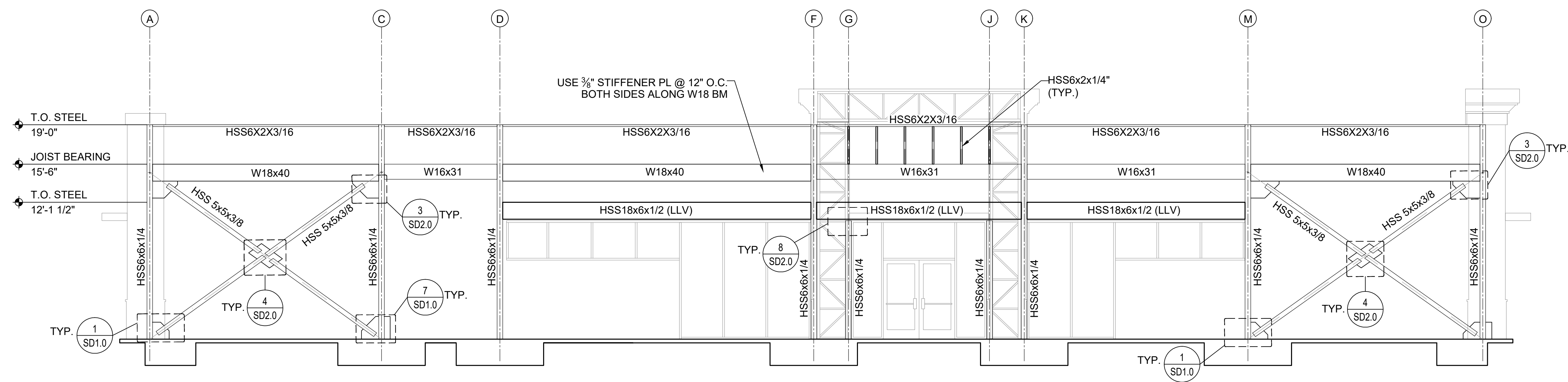
Project Name and Address

CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

Sheet Title

ROOF FRAMING PLAN

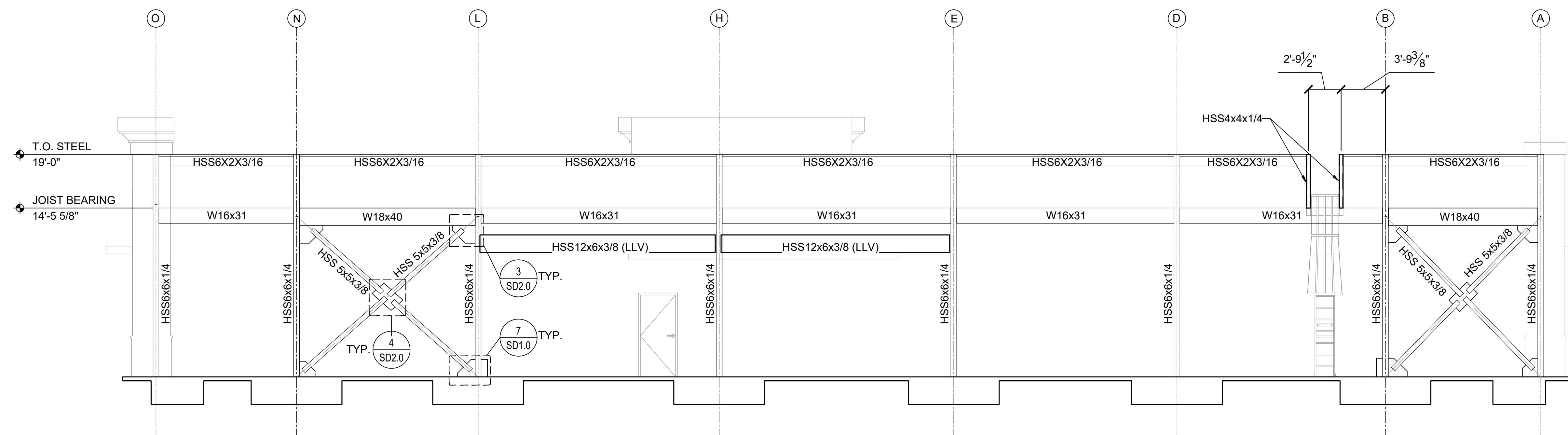
Project No. 170-101.00	Sheet
Drawn By LR	S3.0
Reviewed By RP	



BUILDING ELEVATION AT GRID 1

SCALE
3/16"=1'-0"

2



BUILDING ELEVATION AT GRID 9

SCALE
3/16"=1'-0"

1

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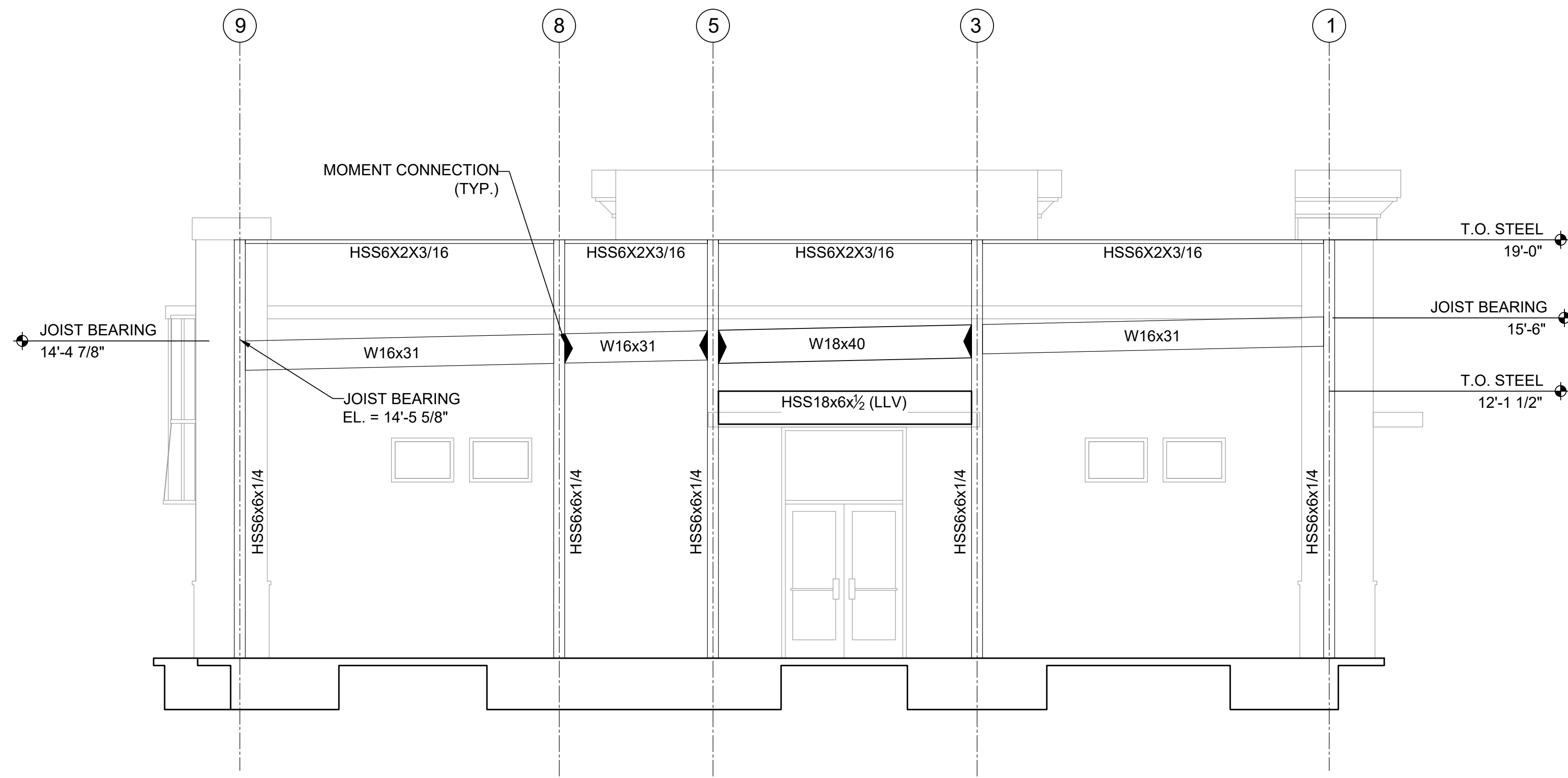
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BUILDING ELEVATIONS

Project No.
170-101.00

Sheet
S4.0

Drawn By
LR

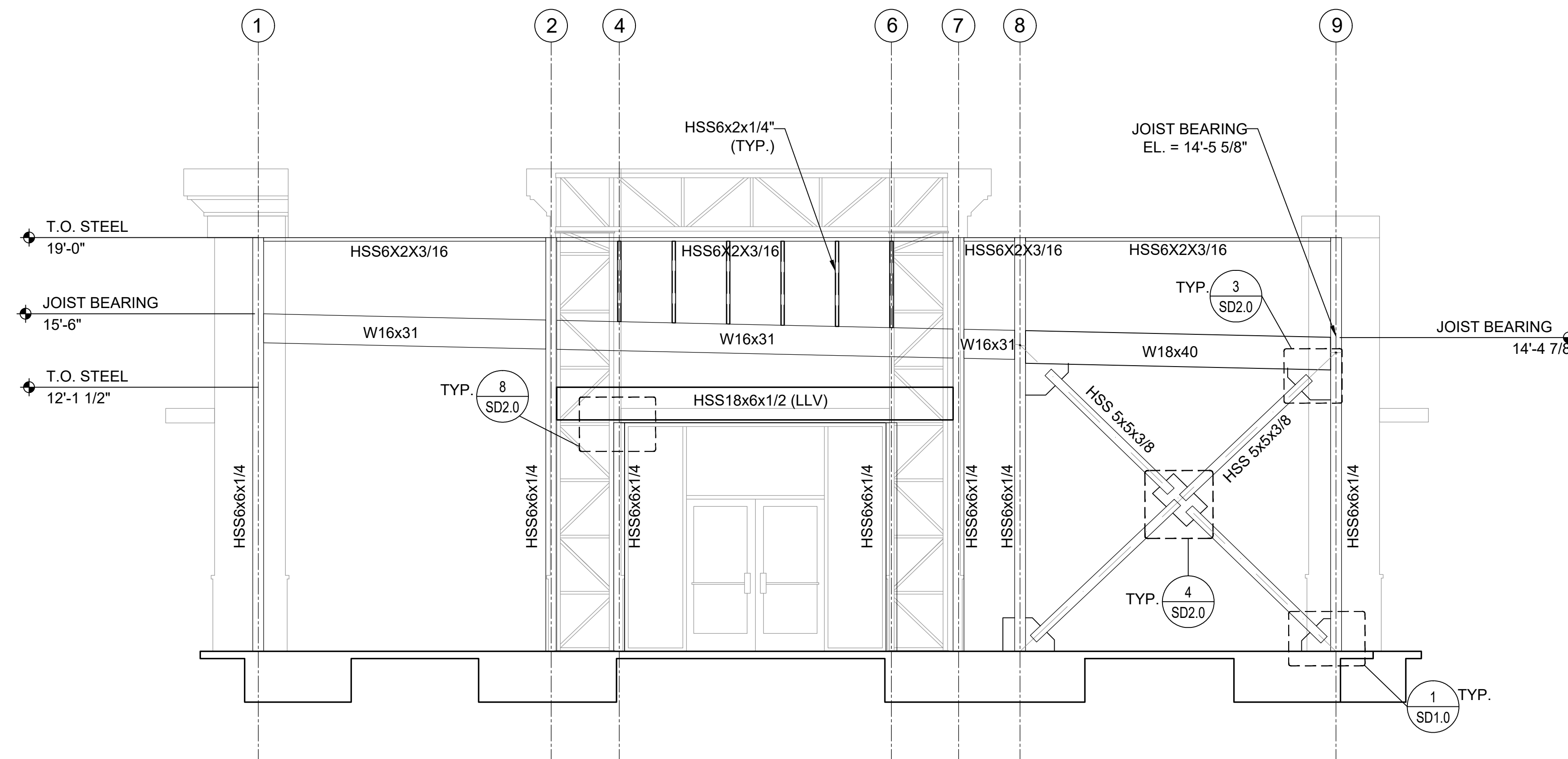
Reviewed By
RP



BUILDING ELEVATION AT GRID A

SCALE
1/4"=1'-0"

2



BUILDING ELEVATION AT GRID O

SCALE
1/4"=1'-0"

1

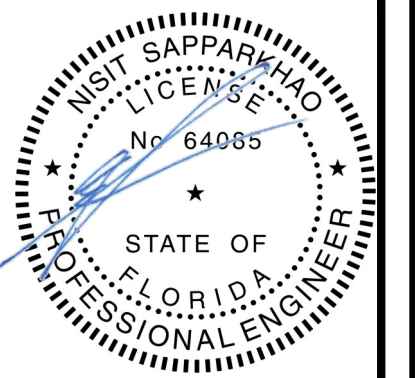
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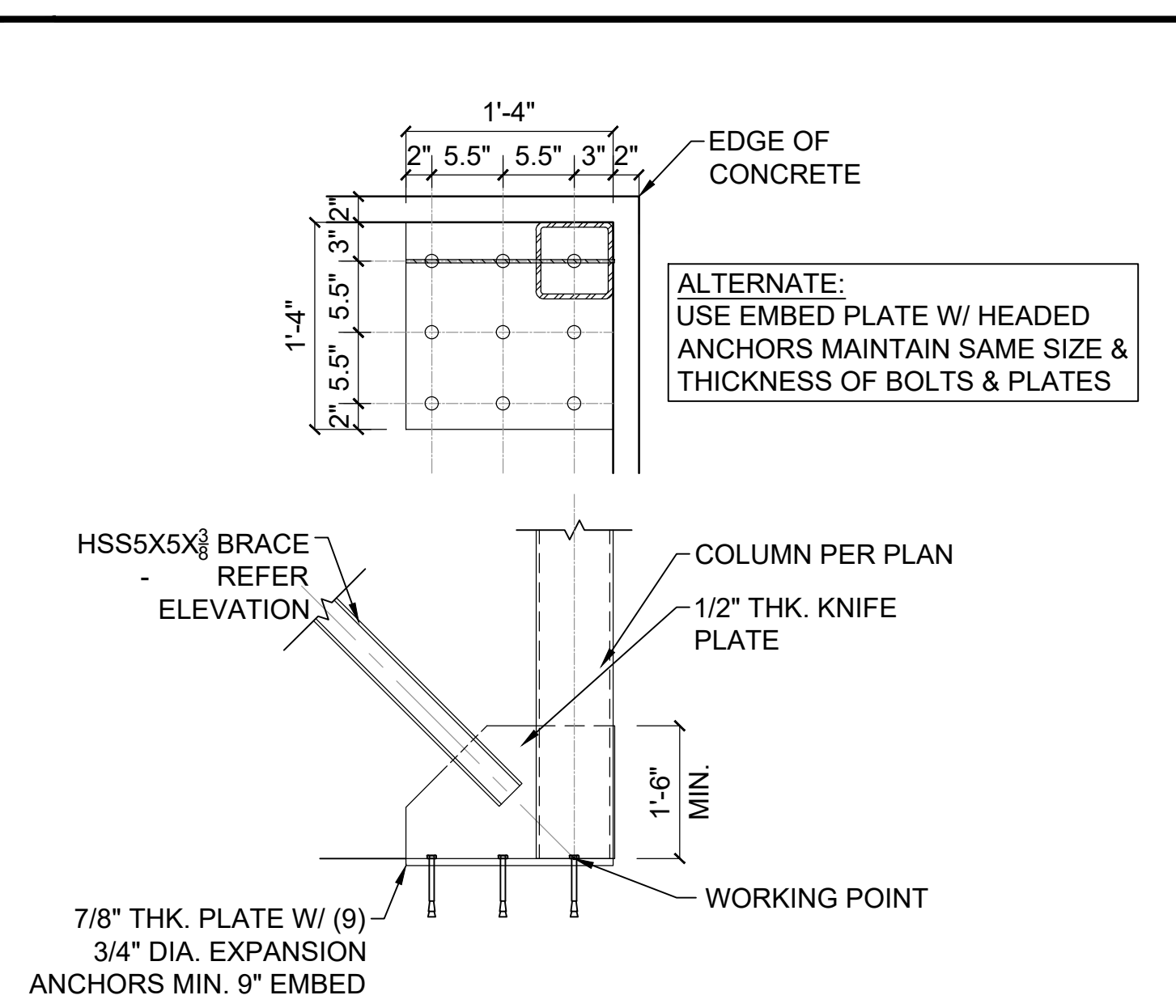
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Project No.
170-101.00

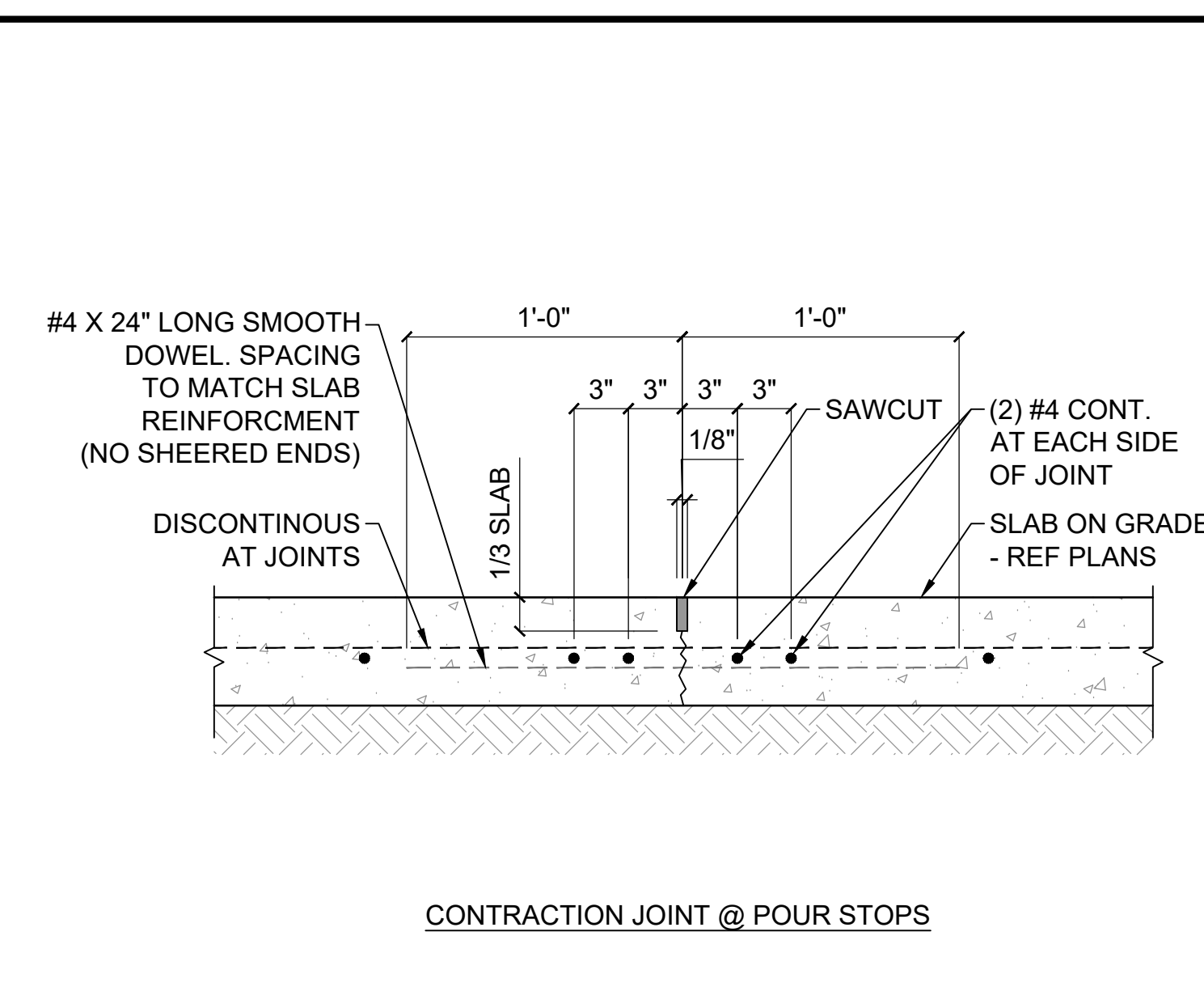
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Drawn By
LR

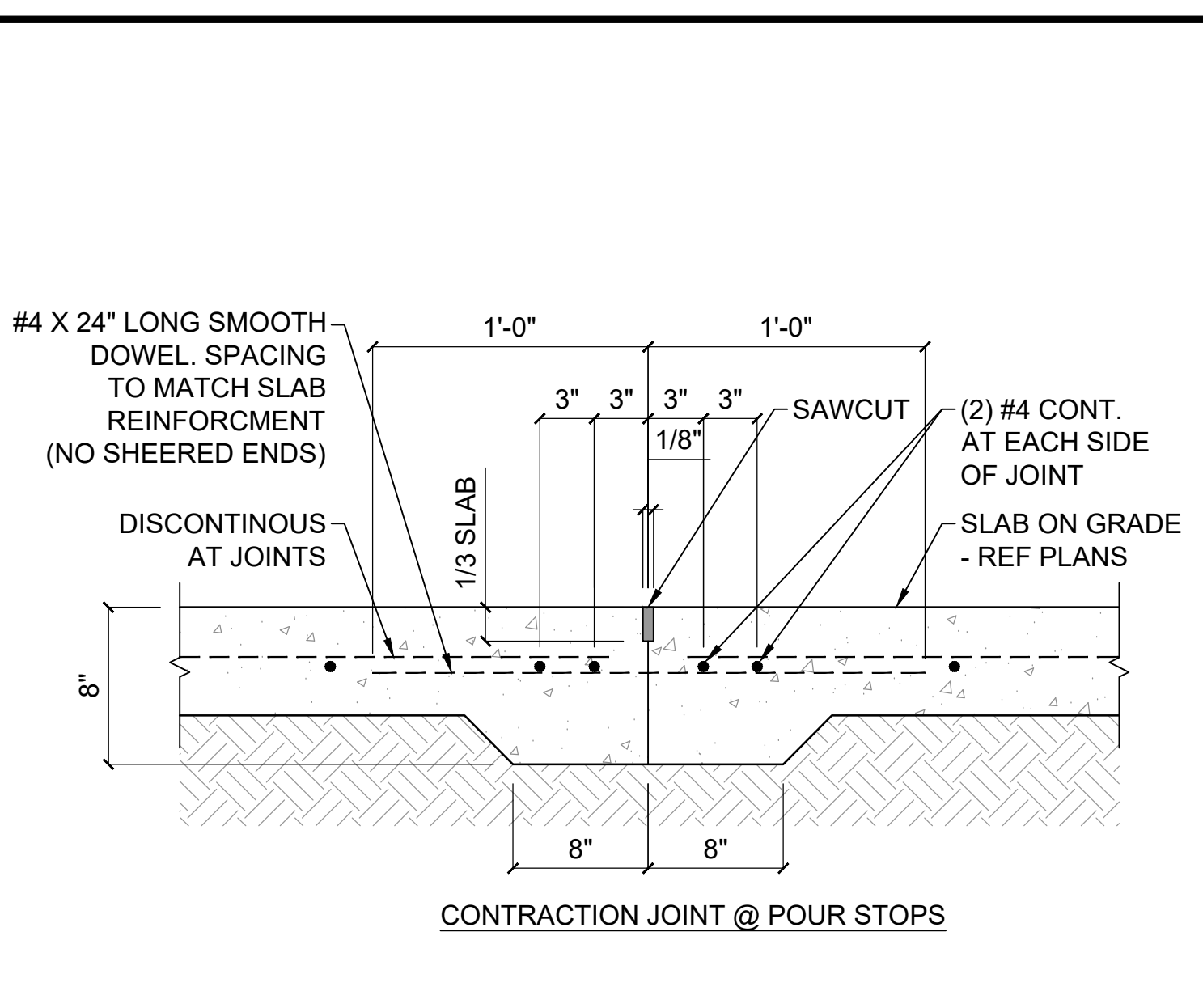
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RP



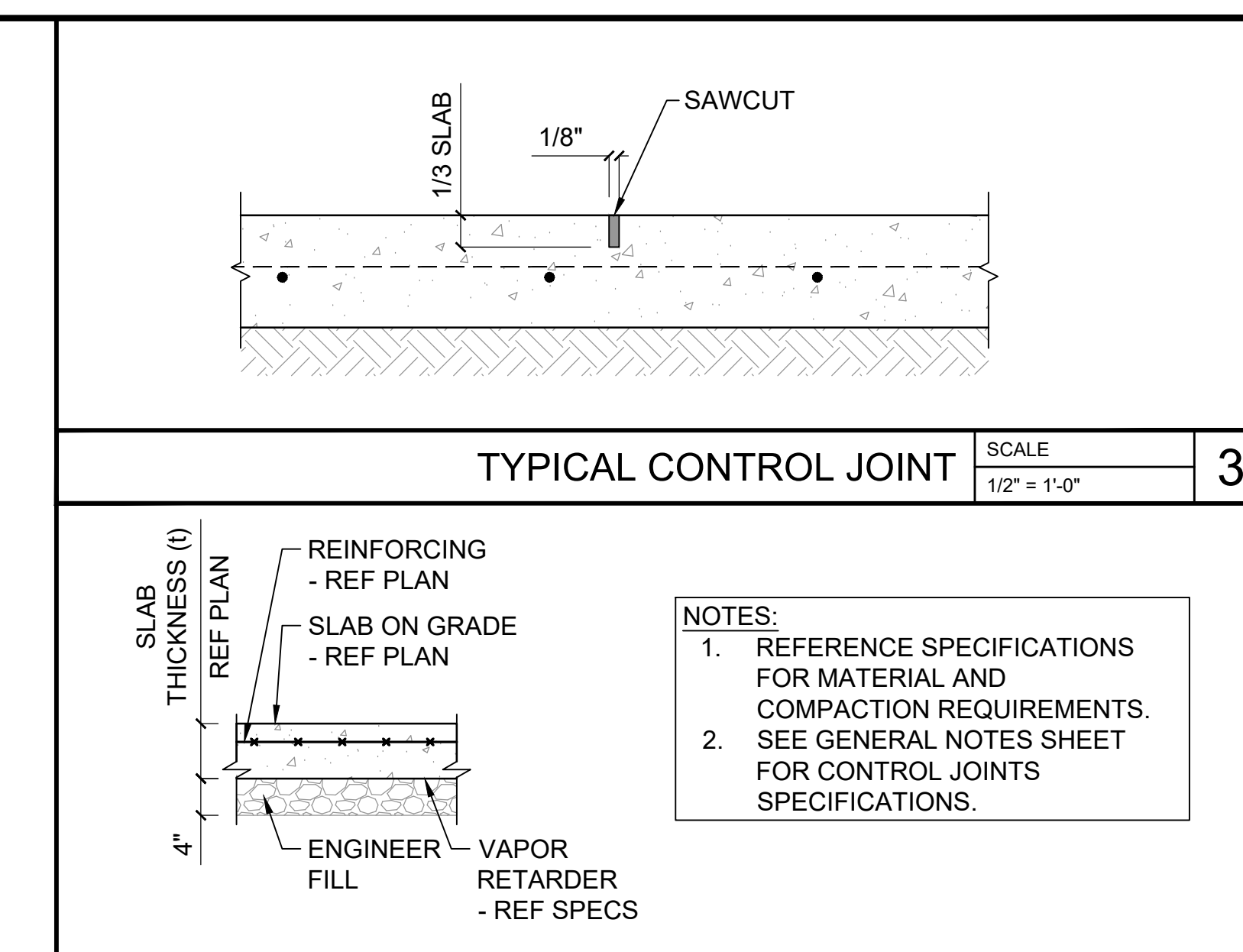
CORNER BASE PLATE SCALE 1/2" = 1'-0" 1



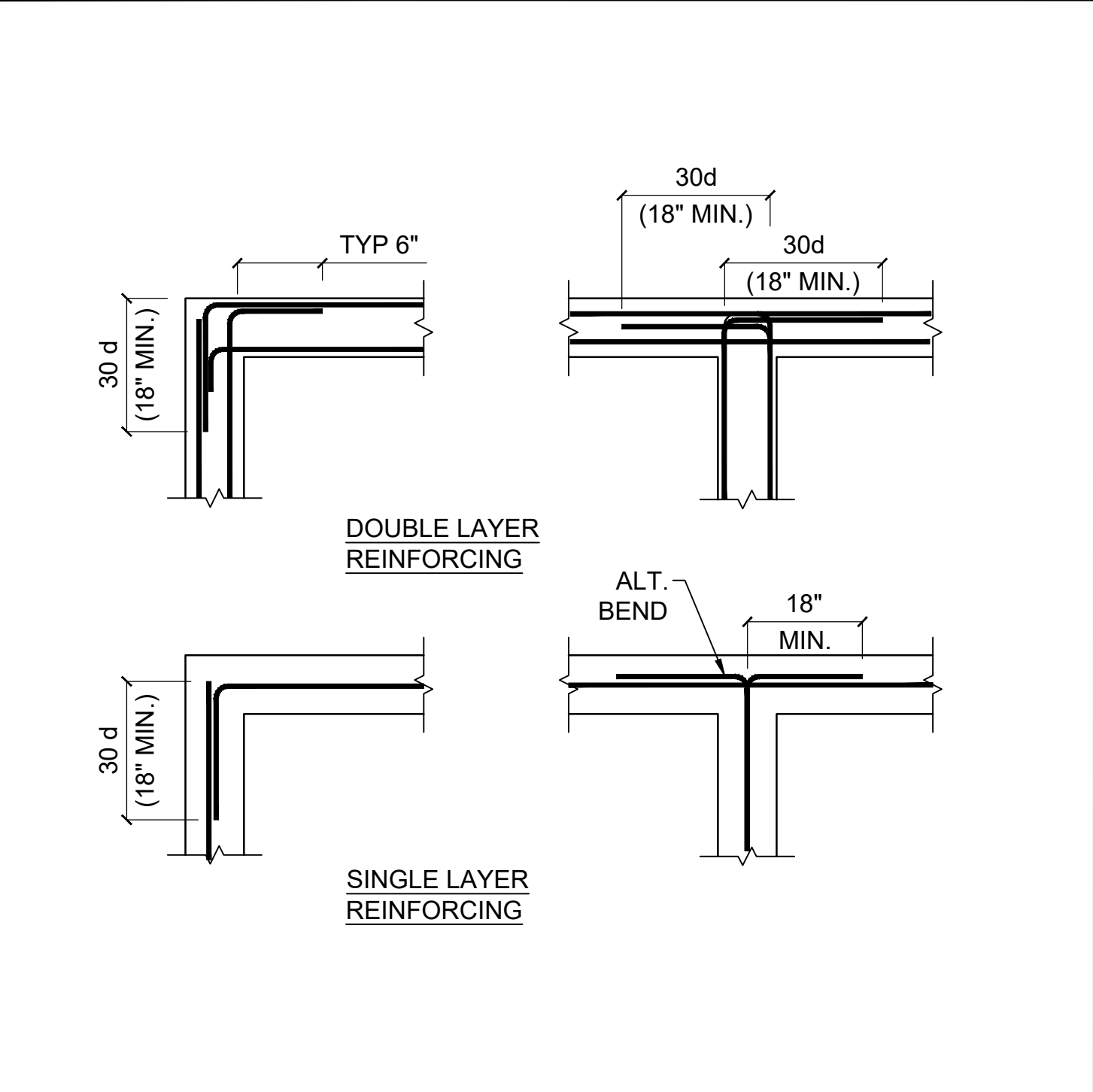
CONTRACTION JOINT @ POUR STOPS



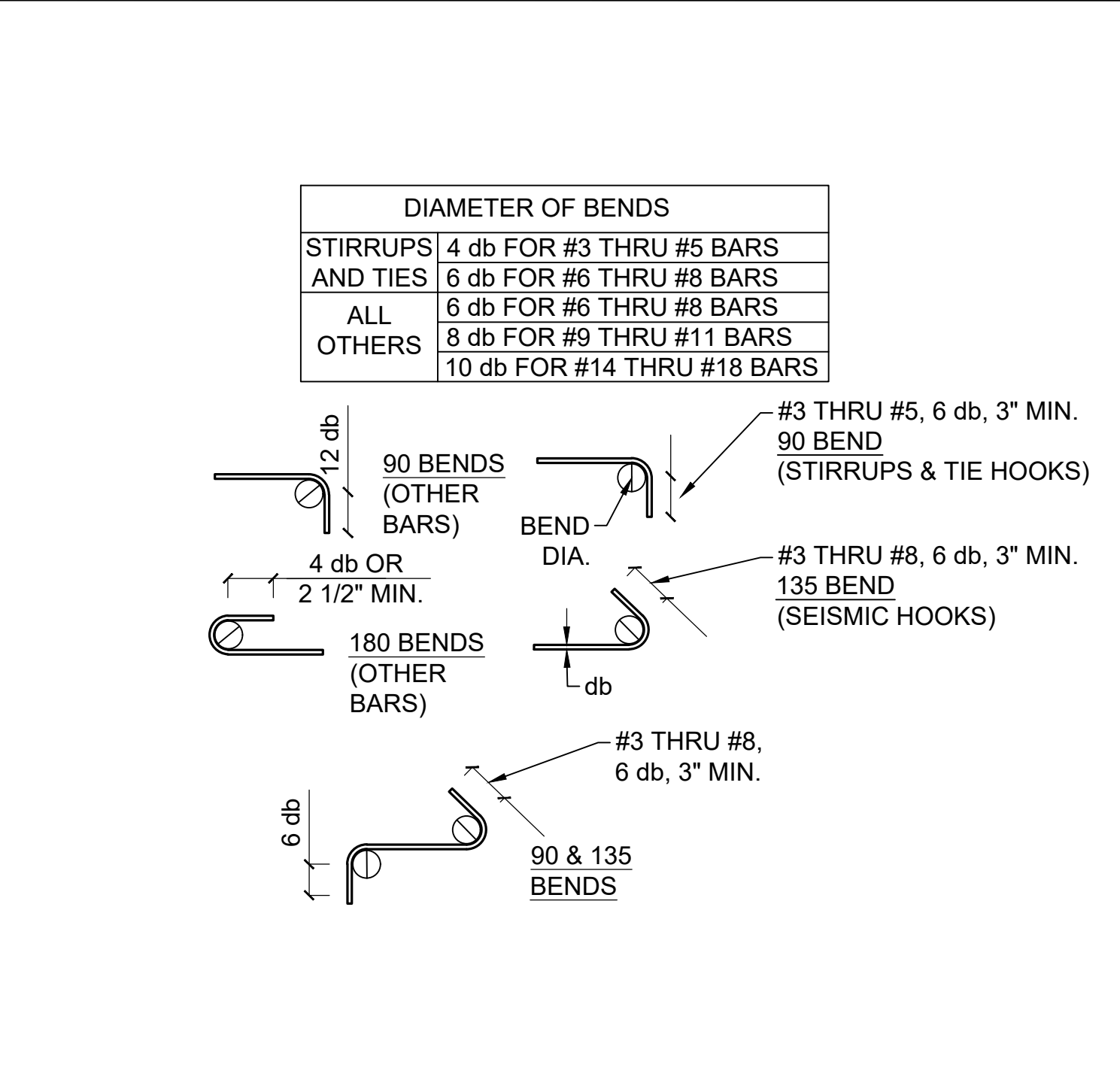
CONTRACTION JOINT @ POUR STOPS



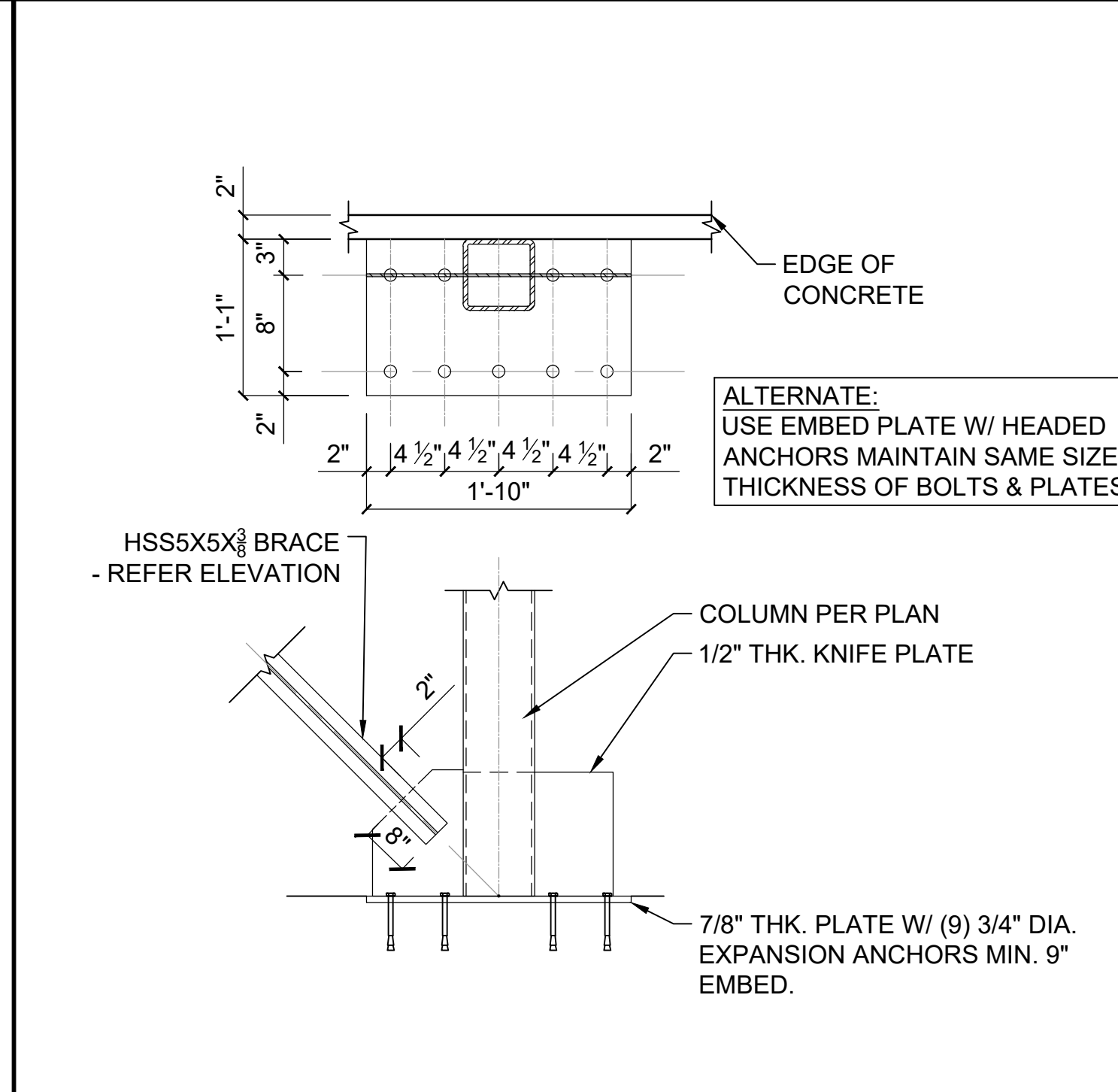
TYP. SLAB ON GRADE SCALE 1/2" = 1'-0" 4



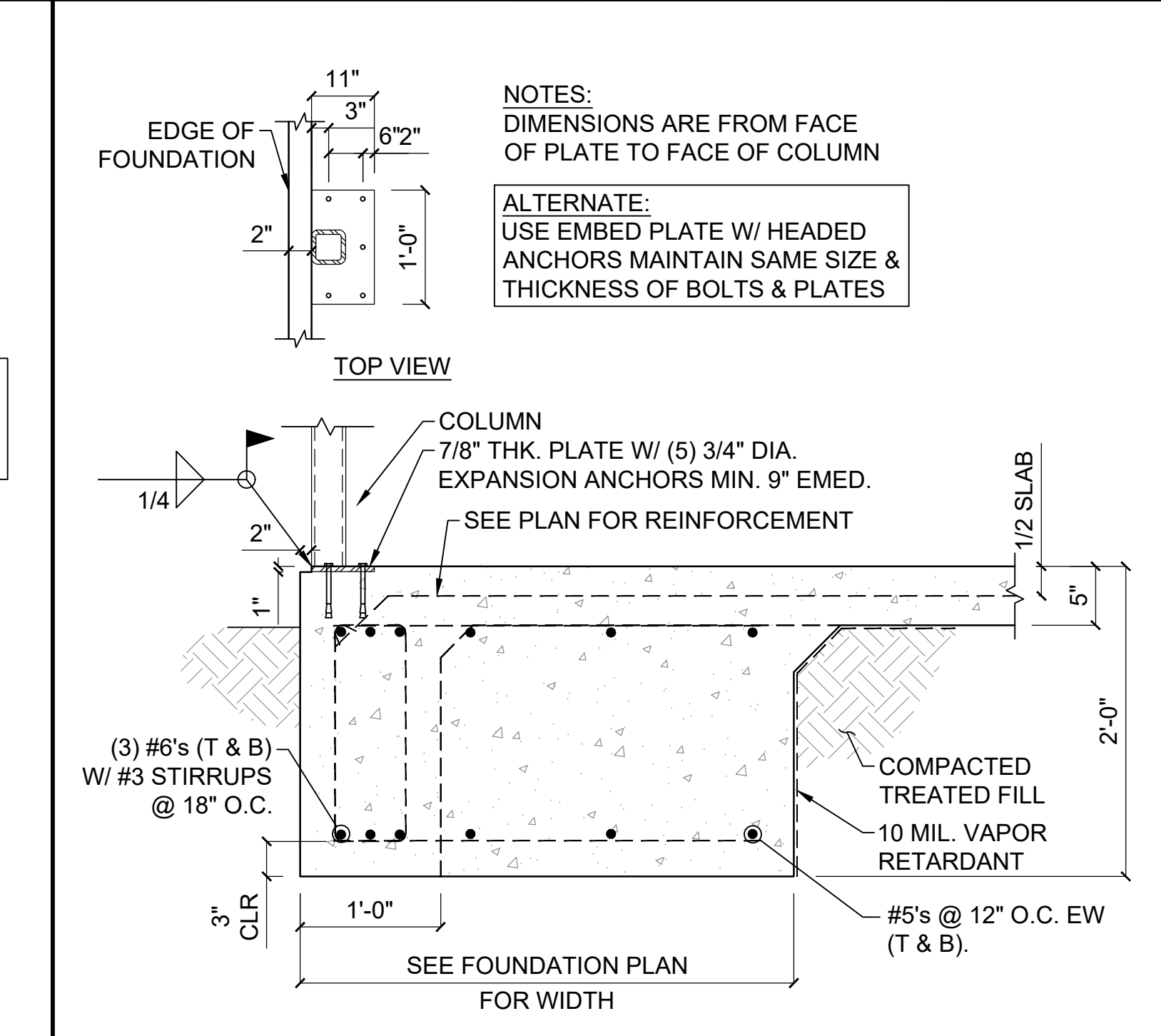
TYP. REINF. @ INT. CONC. GRADE BEAMS SCALE 1/2" = 1'-0" 5



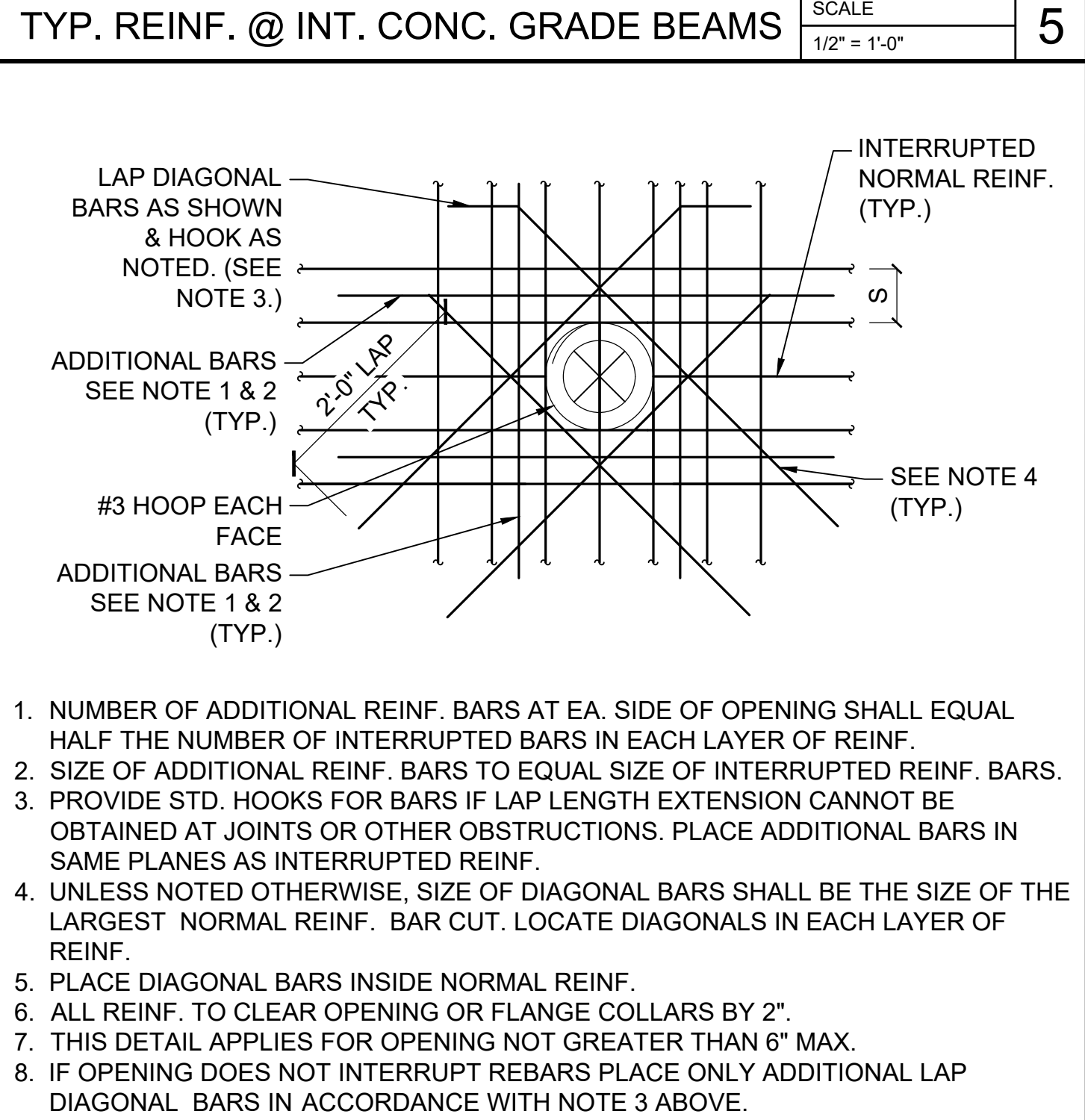
STANDARD BAR BENDING DETAILS SCALE 1/2" = 1'-0" 6



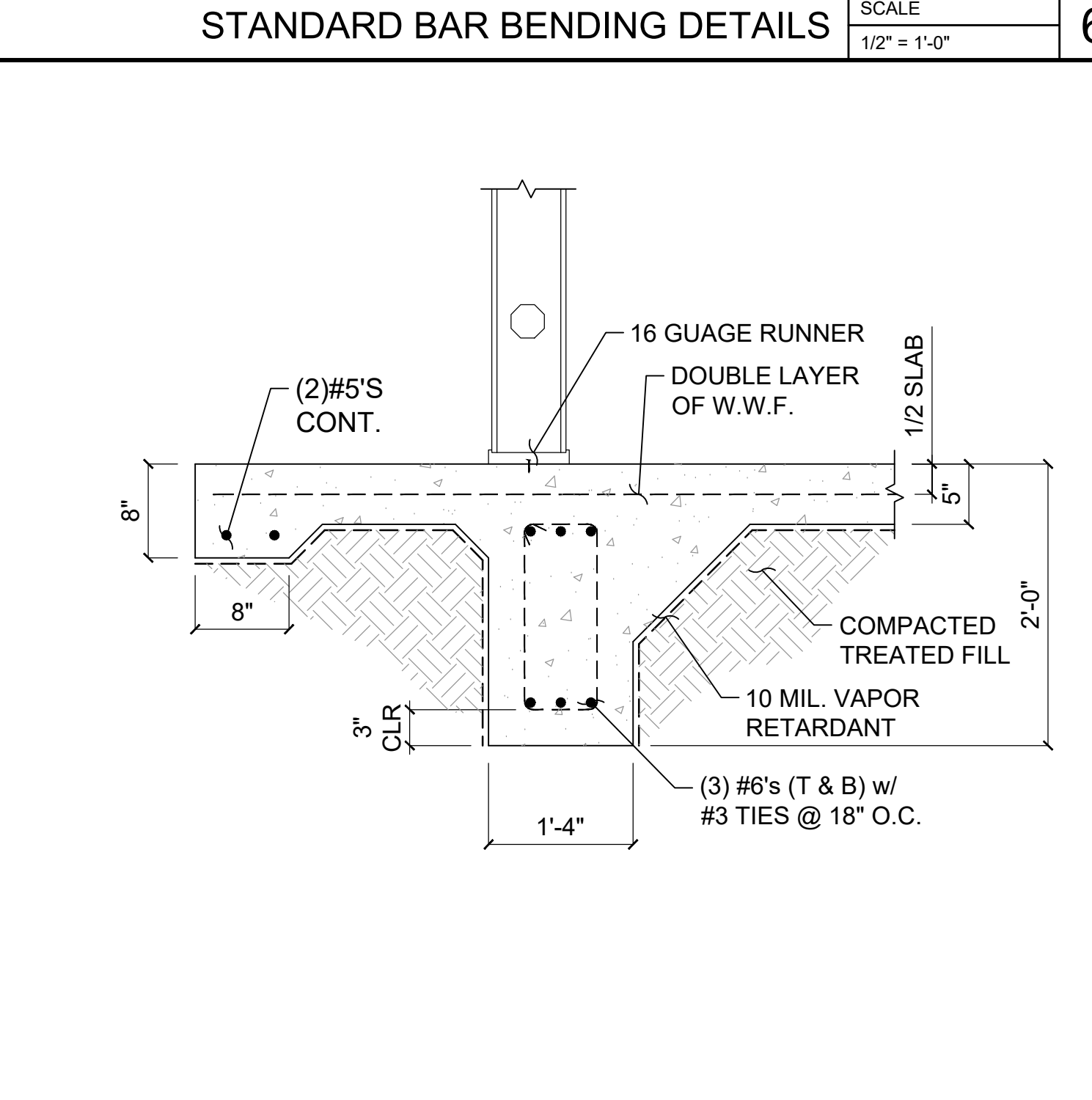
TYP. BASE PLATE DETAIL SCALE 1/2" = 1'-0" 7



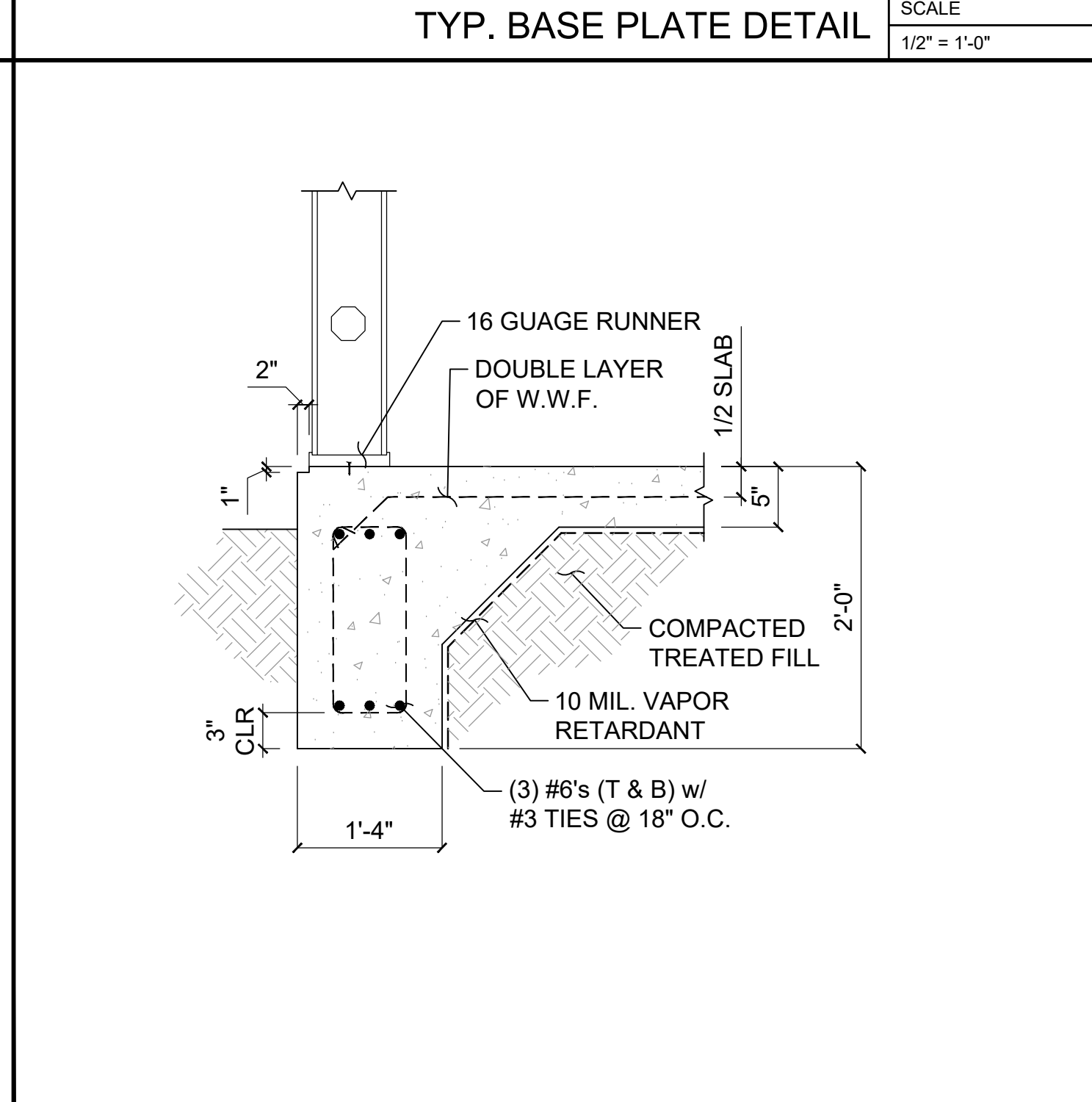
FOOTING AT COLUMN SCALE 1/2" = 1'-0" 8



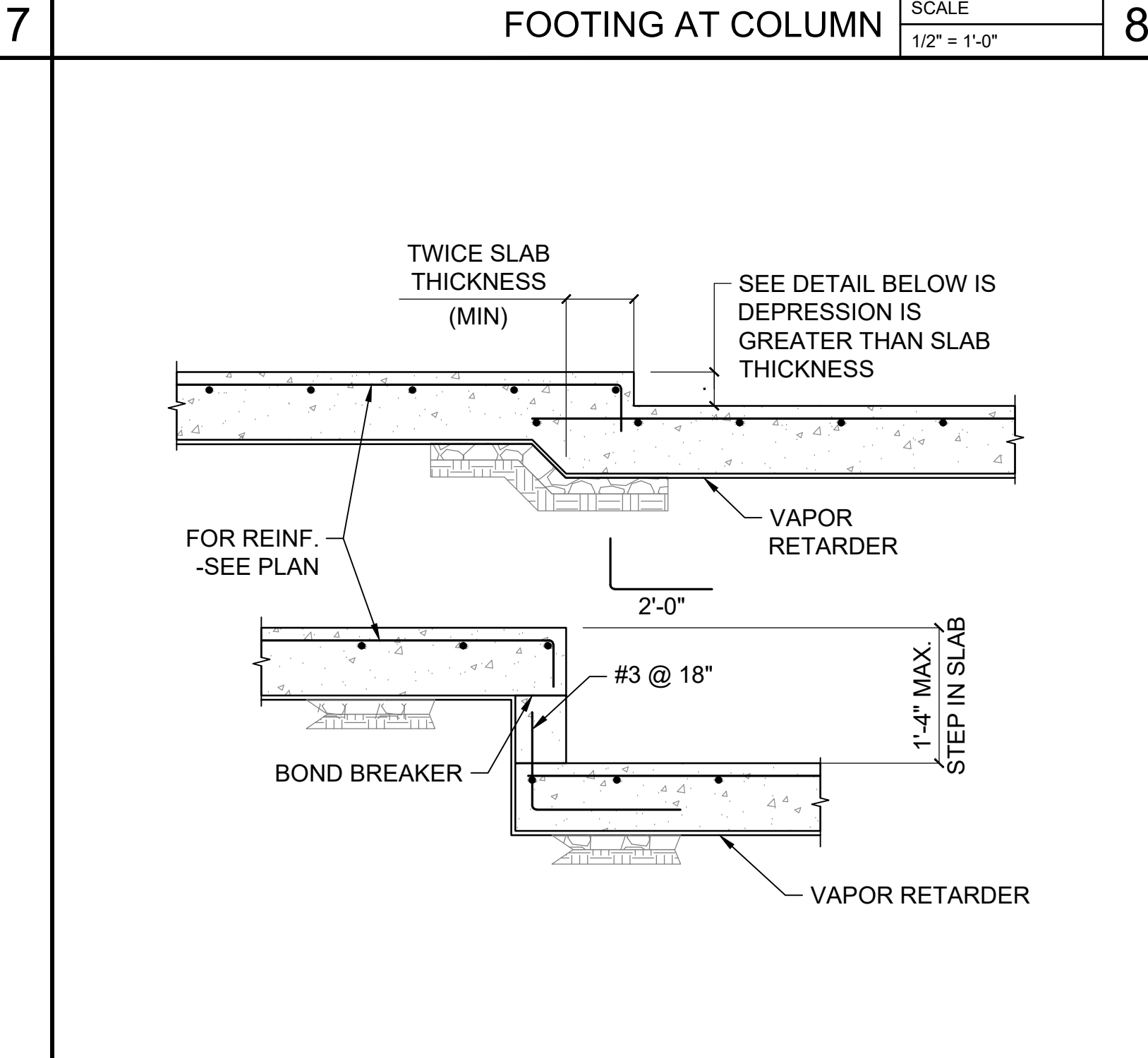
ADDIT. REBAR AT SLAB/ WALL OPENING SCALE 3/4" = 1'-0" 9



EXTRIOR GRADE BEAM @ BUMP OUT SCALE 1/2" = 1'-0" 10



EXTRIOR GRADE BEAM SCALE 1/2" = 1'-0" 11



DEPRESSION & STEP IN SLAB ON GRADE SCALE 3/4" = 1'-0" 12

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NISIT SAPPARKHAO, P.E.
FL REG. NO. 64085

Professional Engineer Seal: NISIT SAPPARKHAO, LICENSE No. 64085, STATE OF FLORIDA, PROFESSIONAL ENGINEER

Date

Project Name and Address: **CEFCO #437 - BETHEL**
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

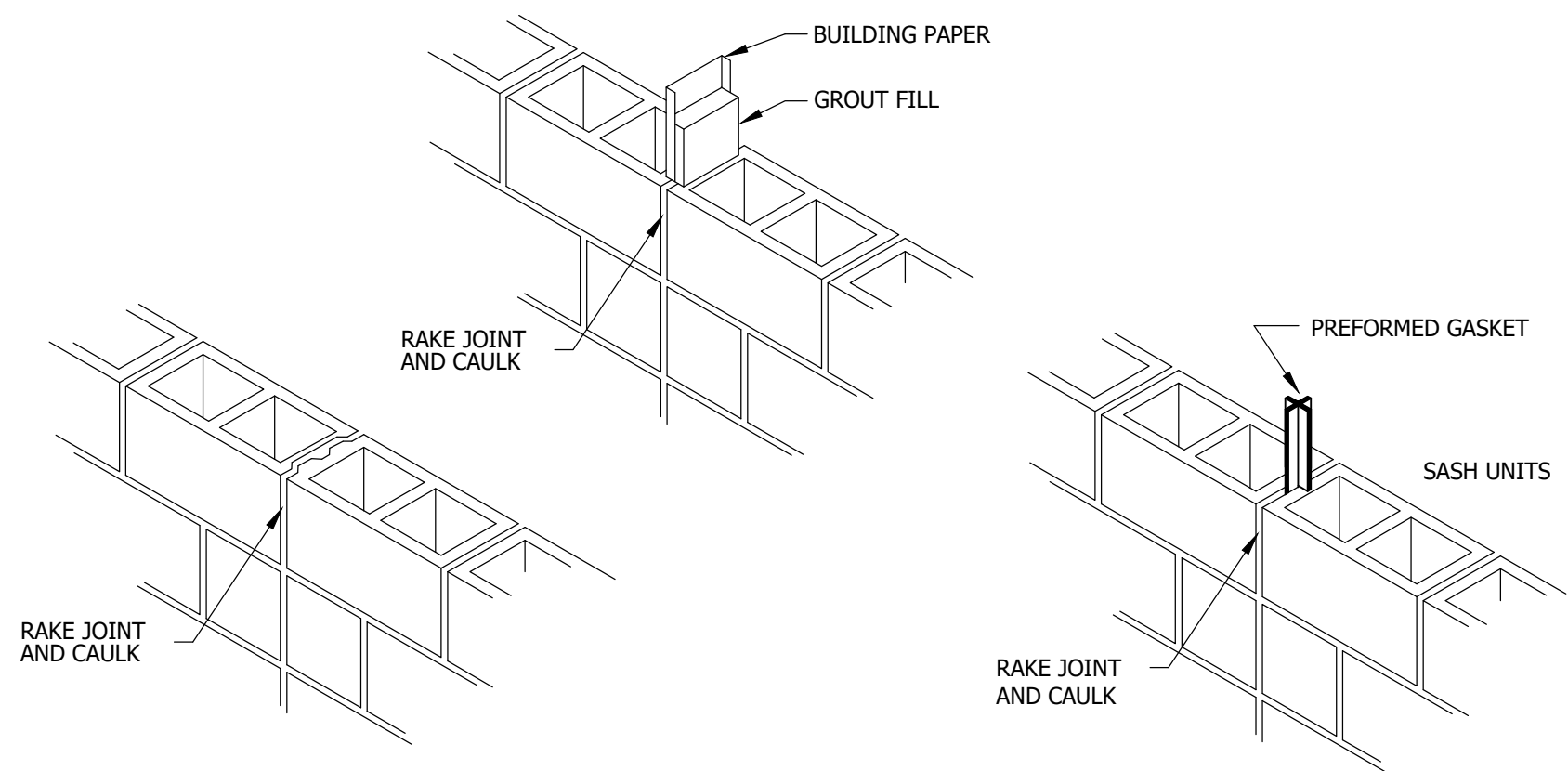
Project No: 170-101.00

Drawn By: LR

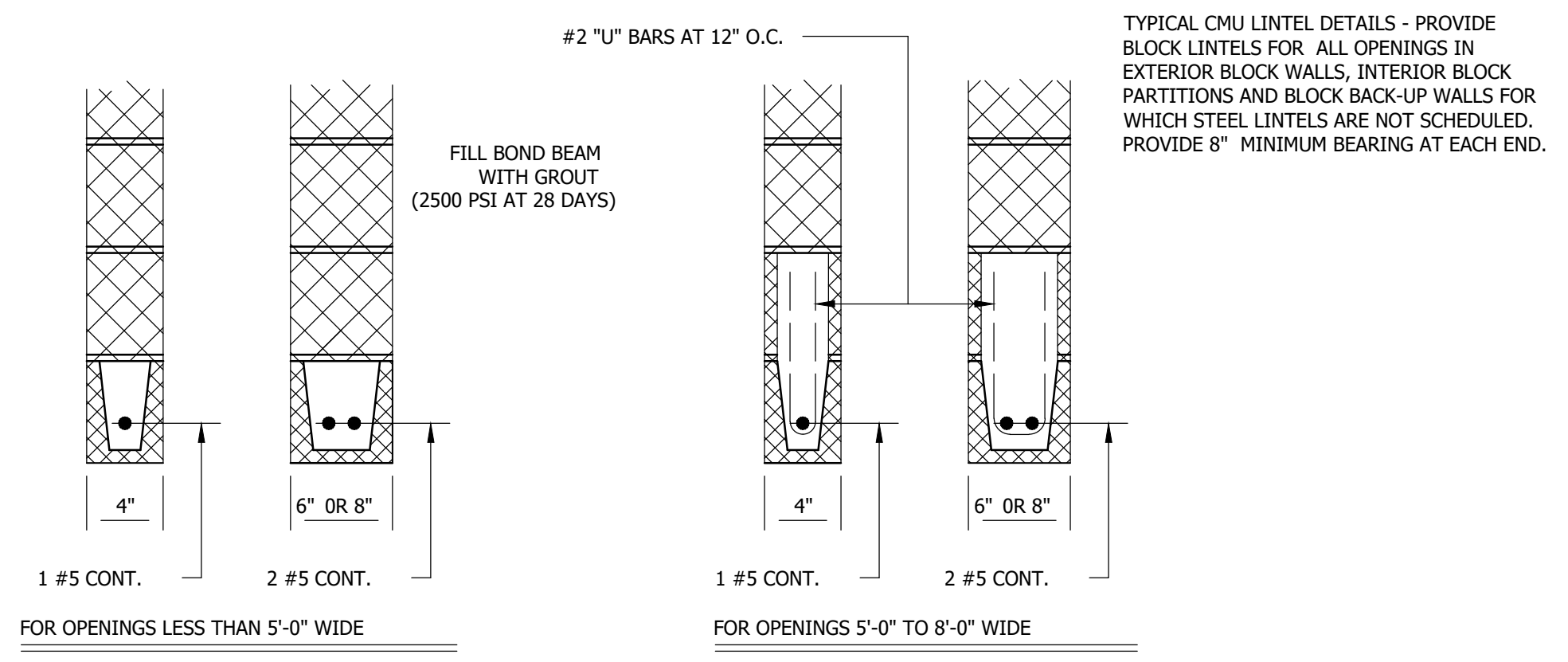
Reviewed By: RP

Sheet Title: **FOUNDATION DETAILS**

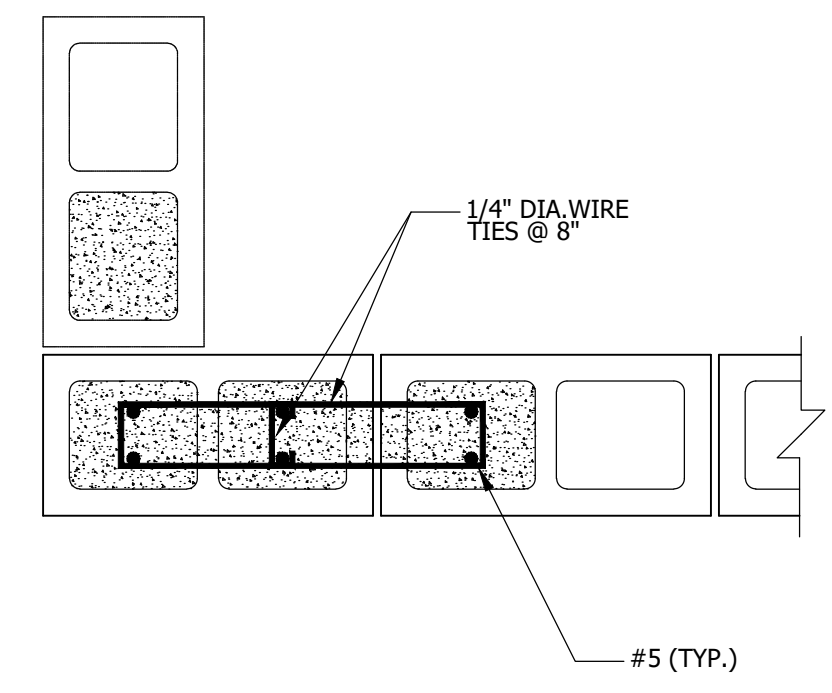
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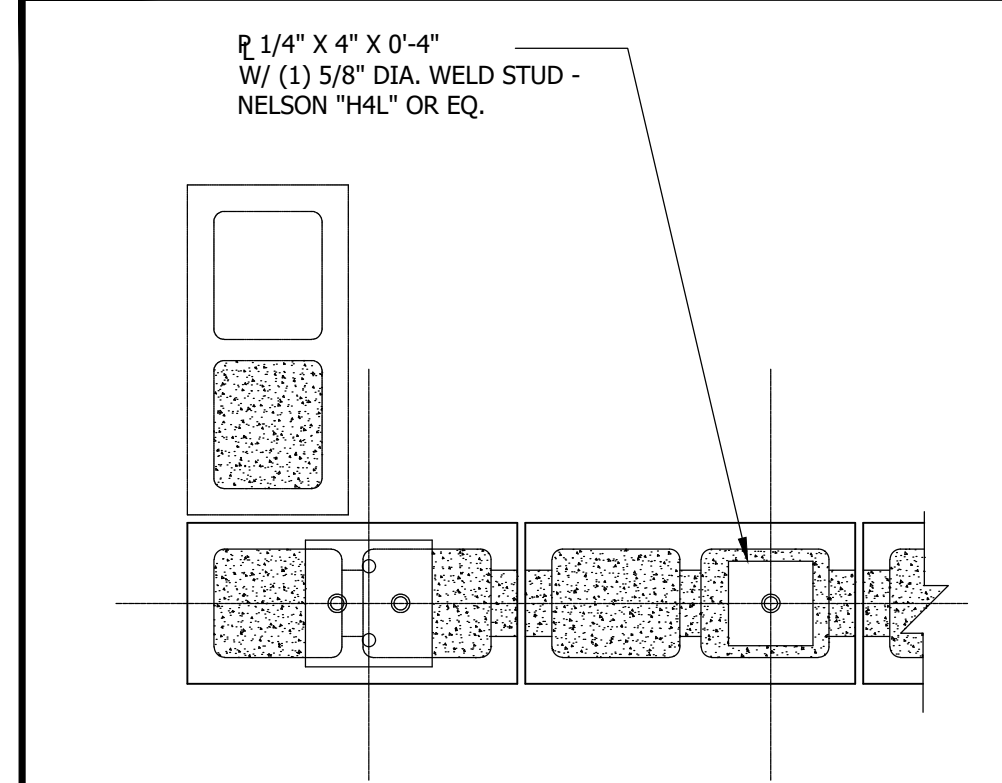
CMU CONTROL JOINT OPTIONS SCALE N.T.S. 6



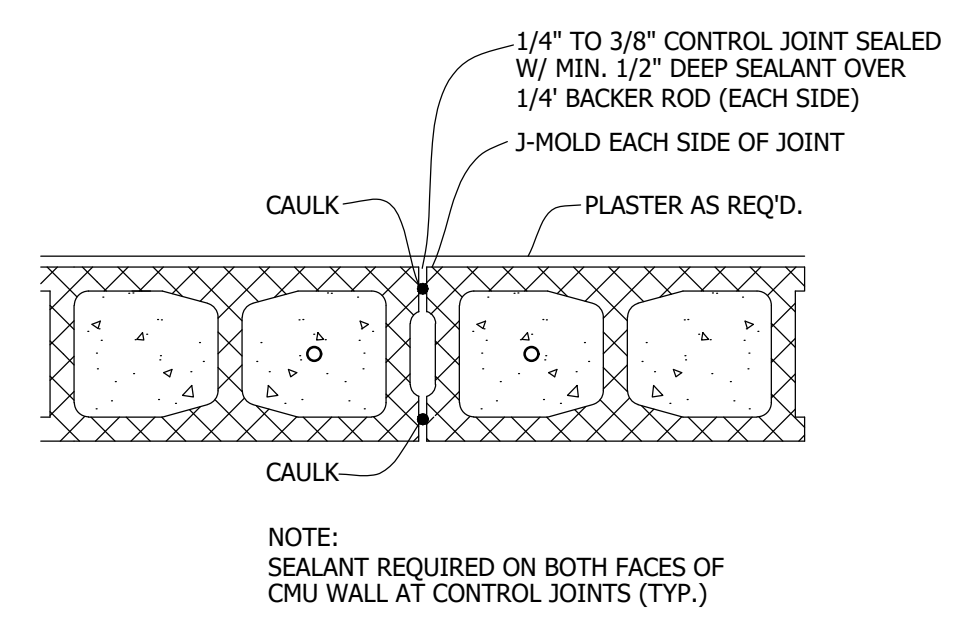
TYPICAL CMU LINTEL DETAILS SCALE N.T.S. 5



WALL PILASTER SCALE N.T.S. 4



SECTION AT WALL CORNER SCALE N.T.S. 3



DETAIL OF CONTROL JOINT FINISH SCALE N.T.S. 2

EXTERIOR ELEVATION FINISH SCHEDULE

- SW-1 CREATIVE FAUX STONE AS PER OWNER'S SPECIFICATIONS
- PT-1 CONCRETE BLOCK WALL - SHERWIN WILLIAM SW 6364
- PT-2 SHERWIN WILLIAM 6115 (TOTALLY TAN)
- MT-1 STANDING SEAM METAL ROOF - STANDARD SILVER

NOTE: BOLLARD COLORS REFER TO DETAIL 5/SD1.3.

GENERAL NOTES:

1. ALL WORK SHALL BE IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES, REGULATIONS, ORDINANCES AND STANDARDS INCLUDING ADA AND OR OTHER HANDICAP ACCESSIBILITY CODES.
2. GENERAL CONTRACTOR SHALL COORDINATE WITH THE OWNER'S VENDORS REGARDING SCHEDULING AND SEQUENCING OF THE WORK.
3. THE CONSTRUCTION NOTES AND DRAWINGS ARE SUPPLIED TO ILLUSTRATE THE DESIGN AND GENERAL TYPE OF CONSTRUCTION DESIRED AND ARE INTENDED TO IMPLY THE FINEST QUALITY OF CONSTRUCTION, MATERIAL AND WORKMANSHIP THROUGHOUT.
4. THE DRAWINGS ARE NOT TO BE SCALED. FOR INFORMATION CONCERNING EXISTING CONDITIONS, ETC., VERIFICATION MUST BE DONE IN THE FIELD. LARGE SCALE DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE DRAWINGS.
5. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTENCE AND LOCATION OF ALL EXISTING ABOVE AND BELOW GRADE, UTILITIES, INCLUDING SANITARY SEWER, STORM SEWER, WATER, GAS, ELECTRICAL, TELEPHONE, ETC. ANY DISCREPANCIES IN UTILITY LOCATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT.
6. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL BUILDING DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY VARIANCE OR DISCREPANCY AFFECTING NEW CONSTRUCTION PRIOR TO PROCEEDING WITH WORK.
7. CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING IN WALLS FOR SUPPORT OF ALL EQUIPMENT, SHELVING, ACCESSORIES, SIGNAGE, AND OTHER DEVICES REQUIRED.
8. ALL PENETRATIONS SHALL RECEIVE CAULKING TO SEAL ANY TYPE OF ENERGY LOSS.
9. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL APPLICABLE DIMENSIONS OF FIXTURES AND EQUIPMENT SUPPLIED AND/OR INSTALLED BY OTHERS.
10. UPON COMPLETION OF PROJECT, OBTAIN ALL FINAL INSPECTIONS AS REQUIRED BY LOCAL JURISDICTIONS AND FURNISH OWNER WITH EVIDENCE OF ALL SUCH INSPECTIONS AND CERTIFICATES OF OCCUPANCY.
11. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE OWNER'S VENDORS ON SITE DURING CONSTRUCTION.
19. ALL EXTERIOR FLOOR PLAN DIMENSIONS ARE TO EXTERIOR FACE OF MASONRY UNLESS OTHERWISE NOTED. ALL INTERIOR FLOOR PLAN DIMENSIONS ARE TO FACE OF FINISH UNLESS OTHERWISE NOTED.

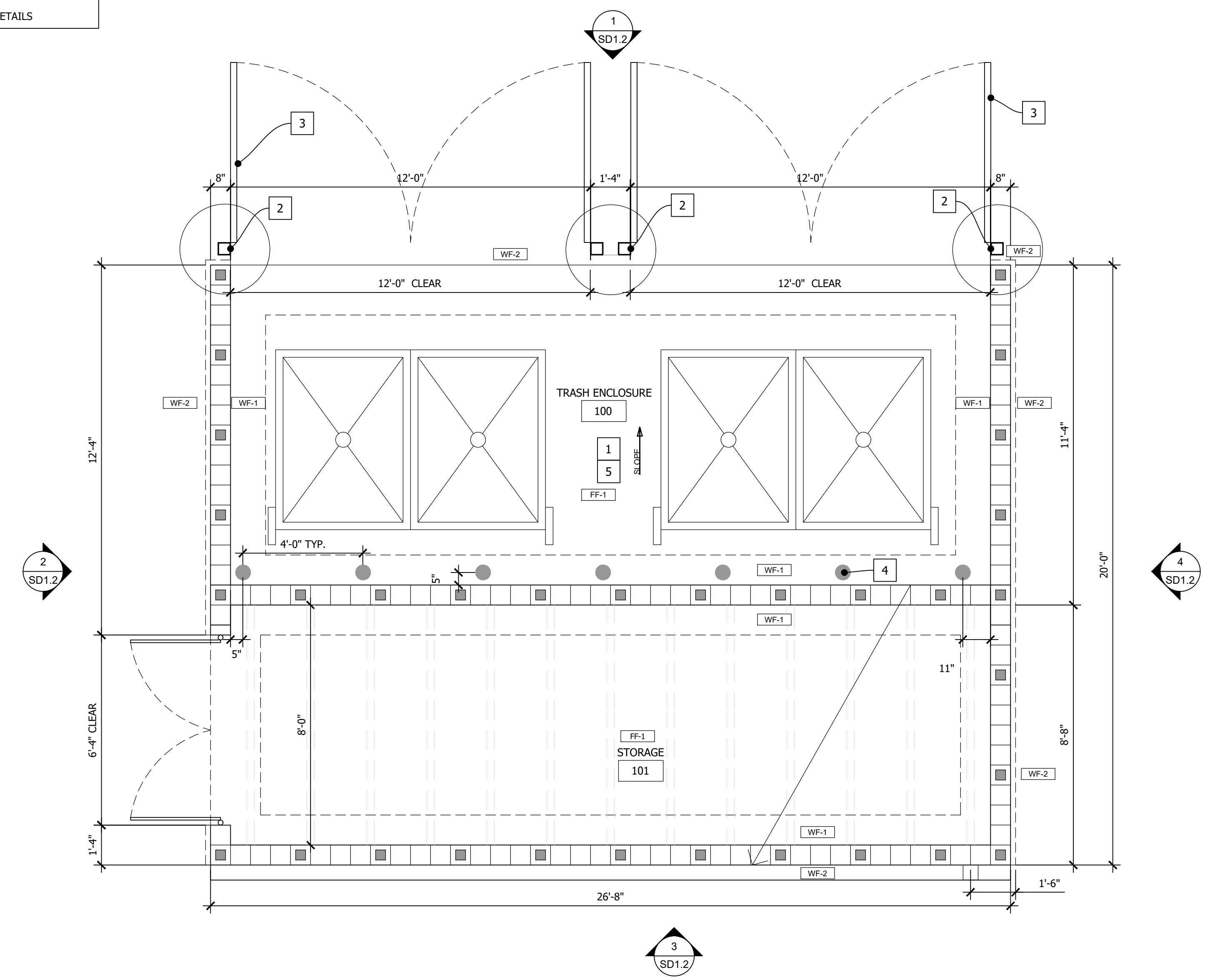
PLAN NOTES: X

- 1 FLOOR SLOPE = 1/2"
- 2 5"x5"x.25 THICK STEEL POST FILLED WITH CONCRETE AND STEEL WELDED CAP. SLOPE. PAINTED TO MATCH ADJACENT SURFACES
- 3 GATE REFER TO EXTERIOR ELEVATIONS AND DETAILS GATE AND HINGE BY JIMCO MANUFACTURING
- 4 BOLLARD TYPE "B", REFER TO DETAIL ON SHEET SD1.3
- 5 INTERIOR TO BE PAINTED PT-2, TOTALLY TAN.

FINISH NOTES:

- FF-1 CONCRETE FLOOR
- WF-1 INTERIOR FINISH - CMU BLOCK WALL TO BE PAINTED
- WF-2 EXTERIOR FINISH - STONE (MATCH MAIN STORE)

NOTE: REFER TO CIVIL DRAWINGS FOR SLAB DETAILS



TRASH ENCLOSURE FLOOR PLAN SCALE 3/8" = 1'-0" 1

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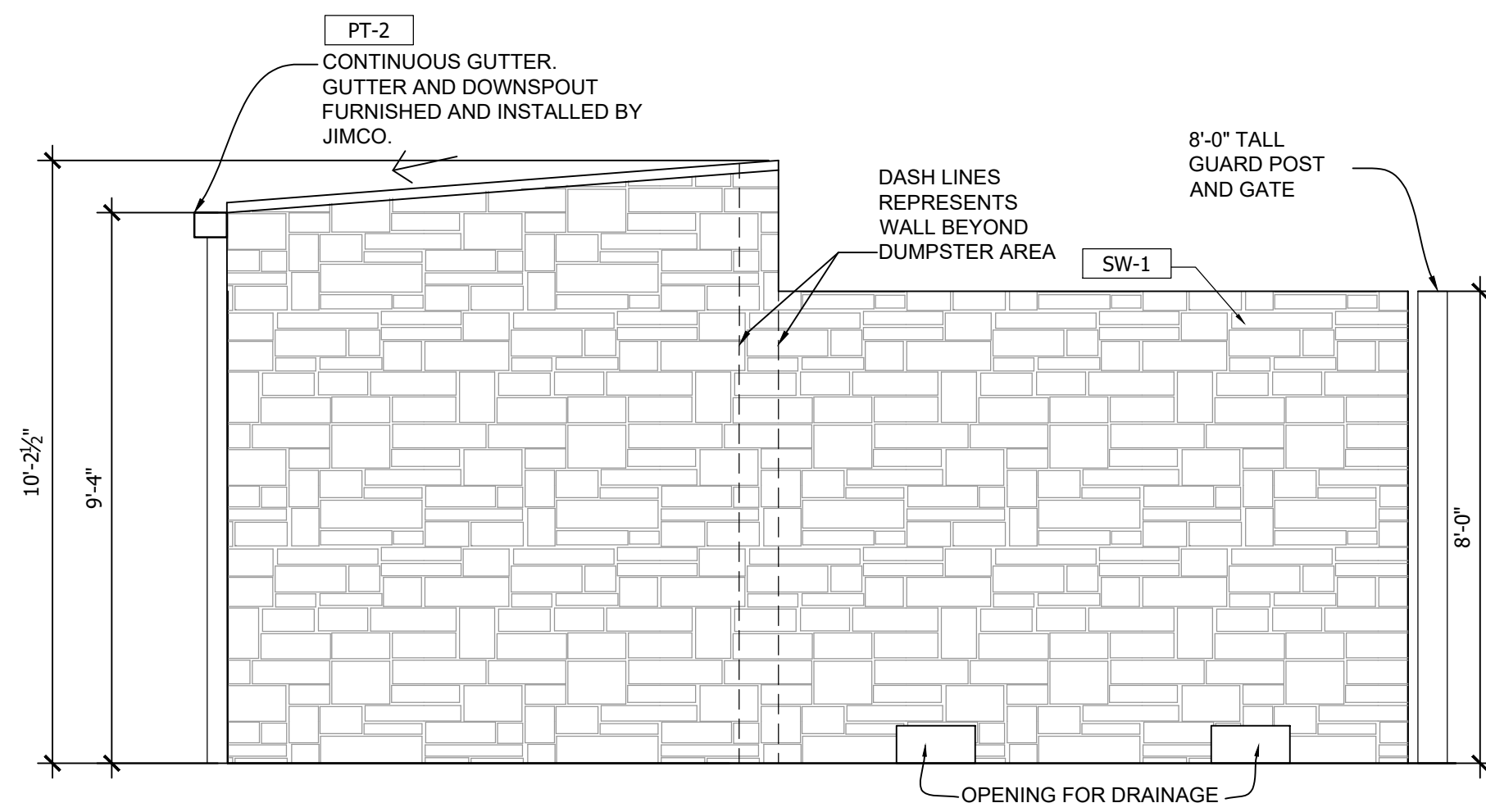
Date

Project Name and Address
CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title
TRASH ENCLOSURE FLOOR PLAN AND DETAILS

Project No. 170-101.00
 Drawn By: LR
 Reviewed By: RP

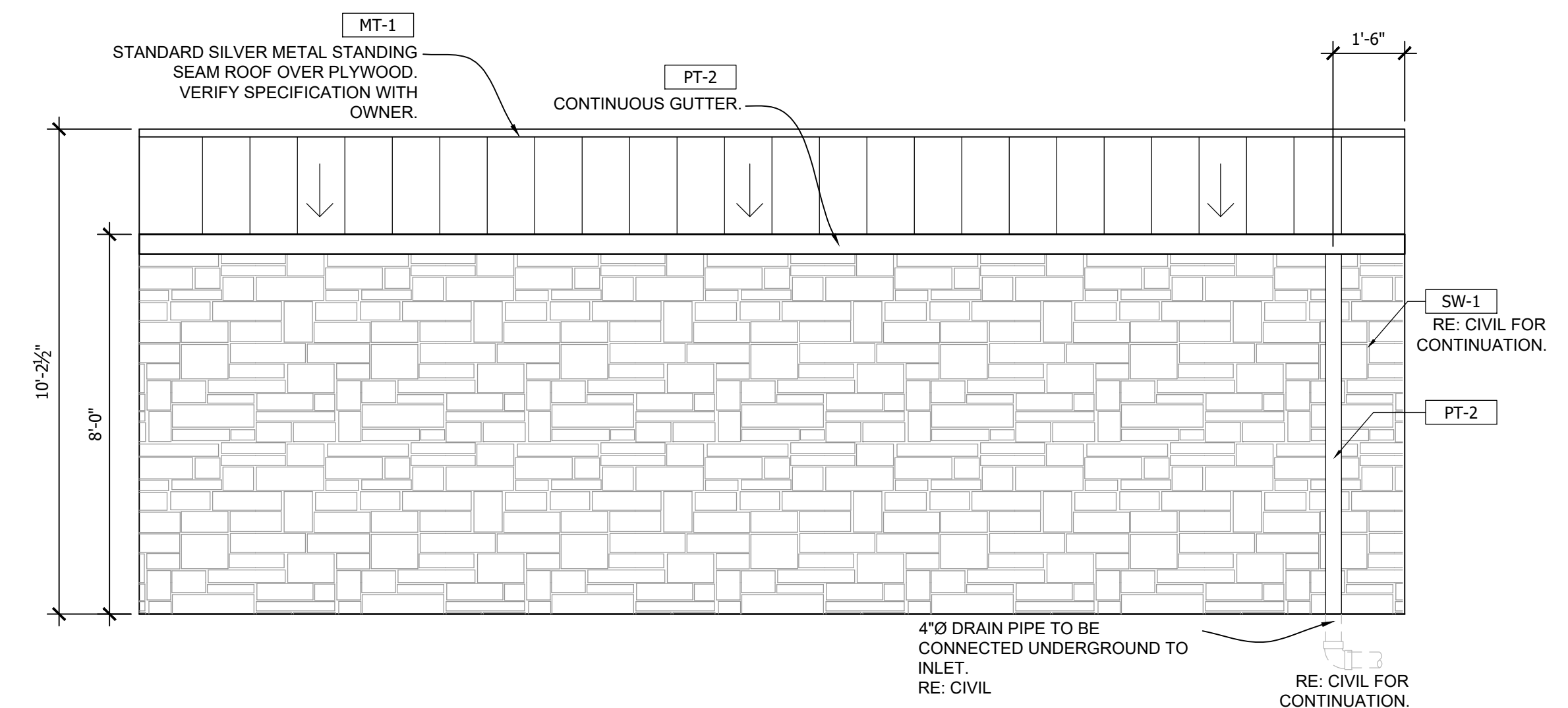
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SD1.1



TRASH ENCLOSURE SIDE ELEVATION

SCALE
3/8" = 1'-0"

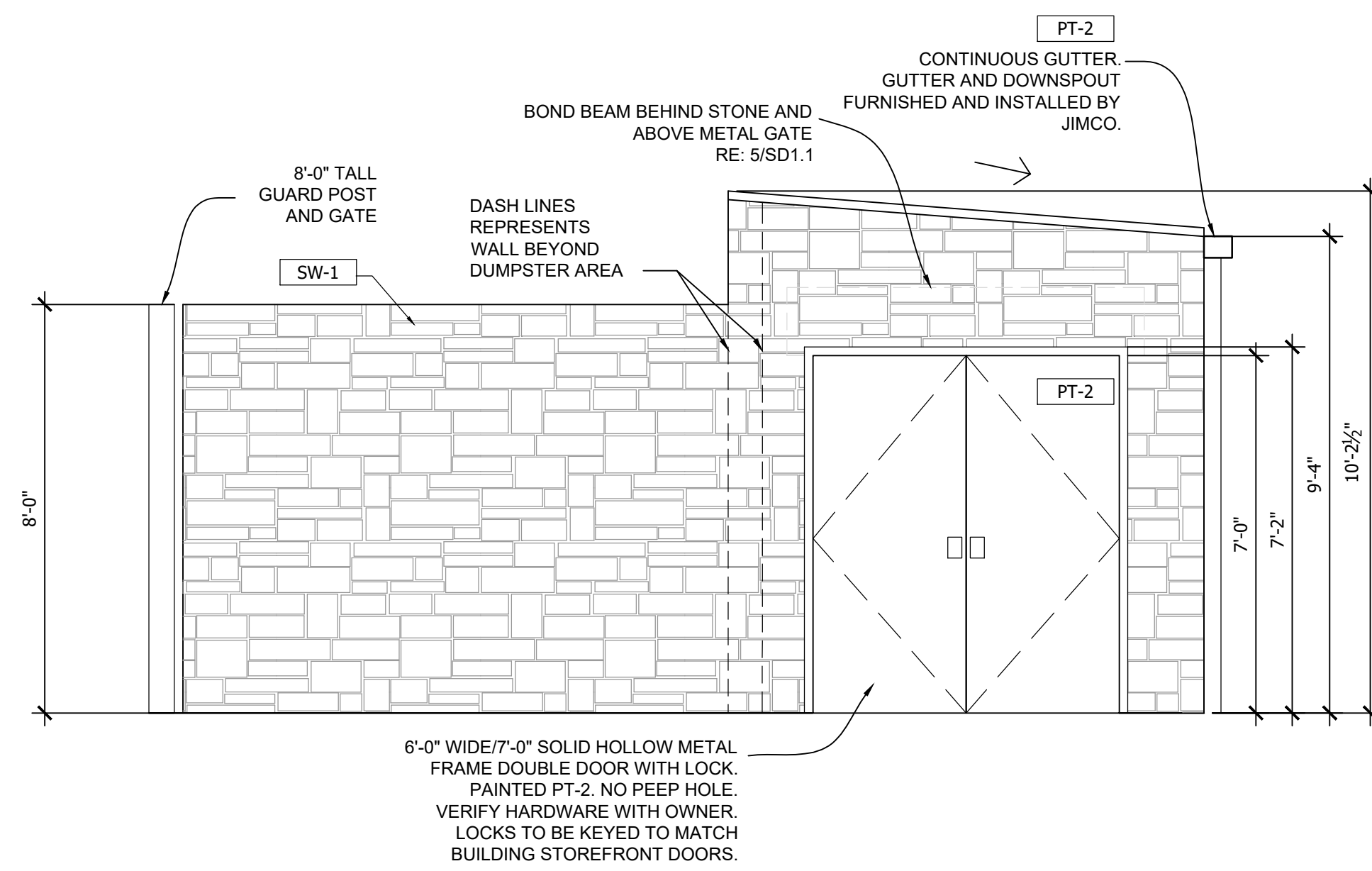
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TRASH ENCLOSURE REAR ELEVATION

SCALE
3/8" = 1'-0"

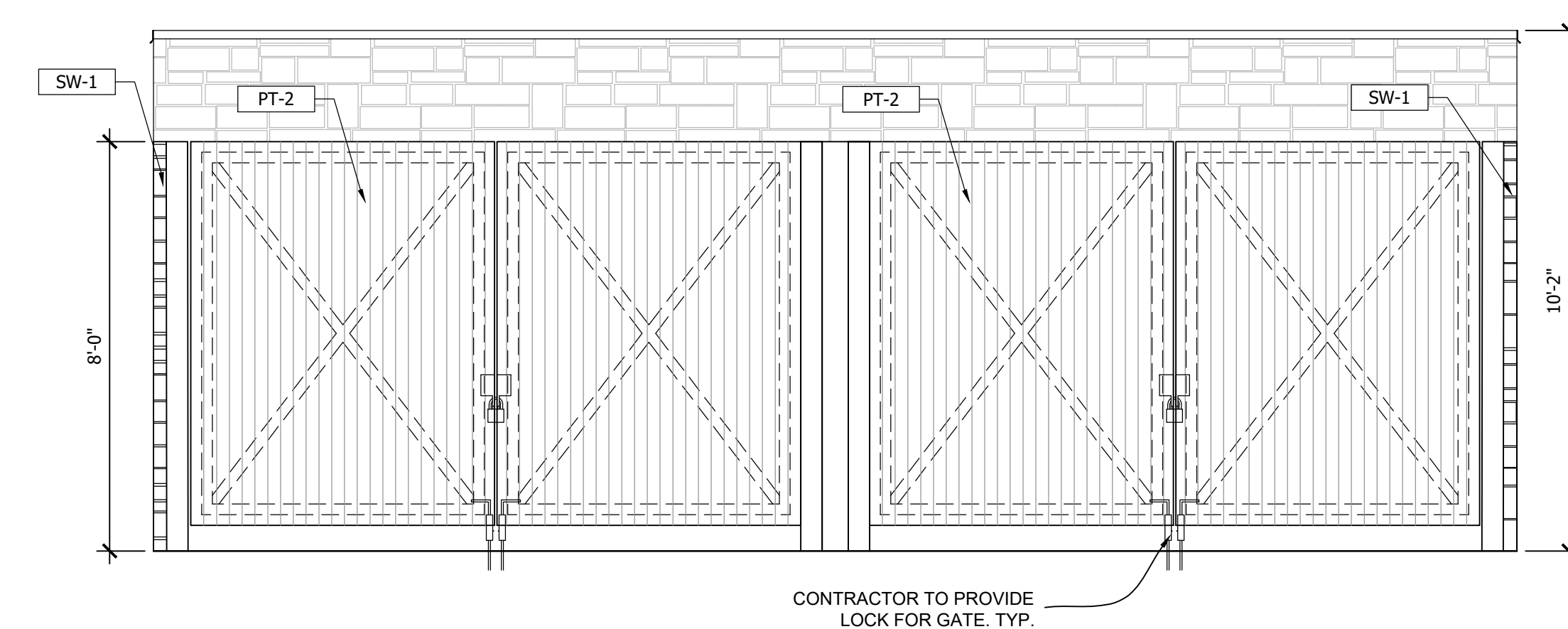
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TRASH ENCLOSURE SIDE ELEVATION

SCALE
3/8" = 1'-0"

2



TRASH ENCLOSURE FRONT ELEVATION

SCALE
3/8" = 1'-0"

1

TRASH ENCLOSURE HARDWARE GROUP

Quantity	Description	Model Number	Finish	Mfr.
6 EA	HINGE	TA2413 4.5 X 4.5	32D	MCKINNEY
1 EA	LOCKSET	AU4705LN	32D	YALE
2 EA	FLUSH BOLTS	555	32D	ROCKWOOD
2 EA	SURFACE CLOSER	2701	689	YALE
1 EA	THRESHOLD	2005AT-72	32	PEMKO
2 EA	SWEEPS	307AV-36	-	PEMKO

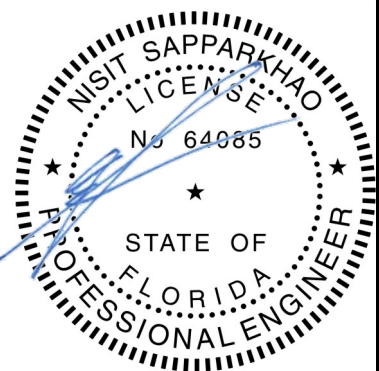
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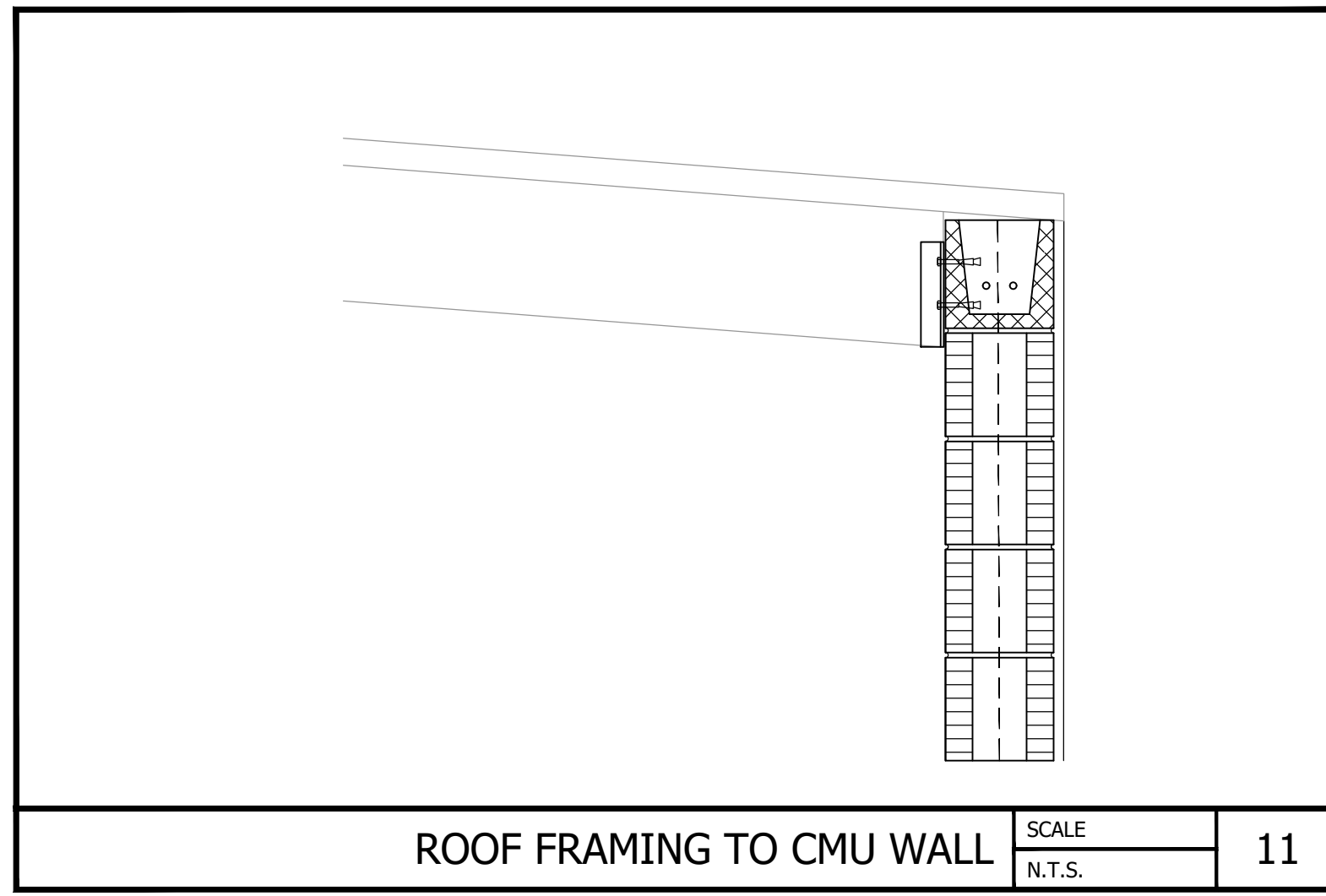
Sheet Title
**TRASH ENCLOSURE
EXTERIOR ELEVATIONS**

Project No.
170-101.00

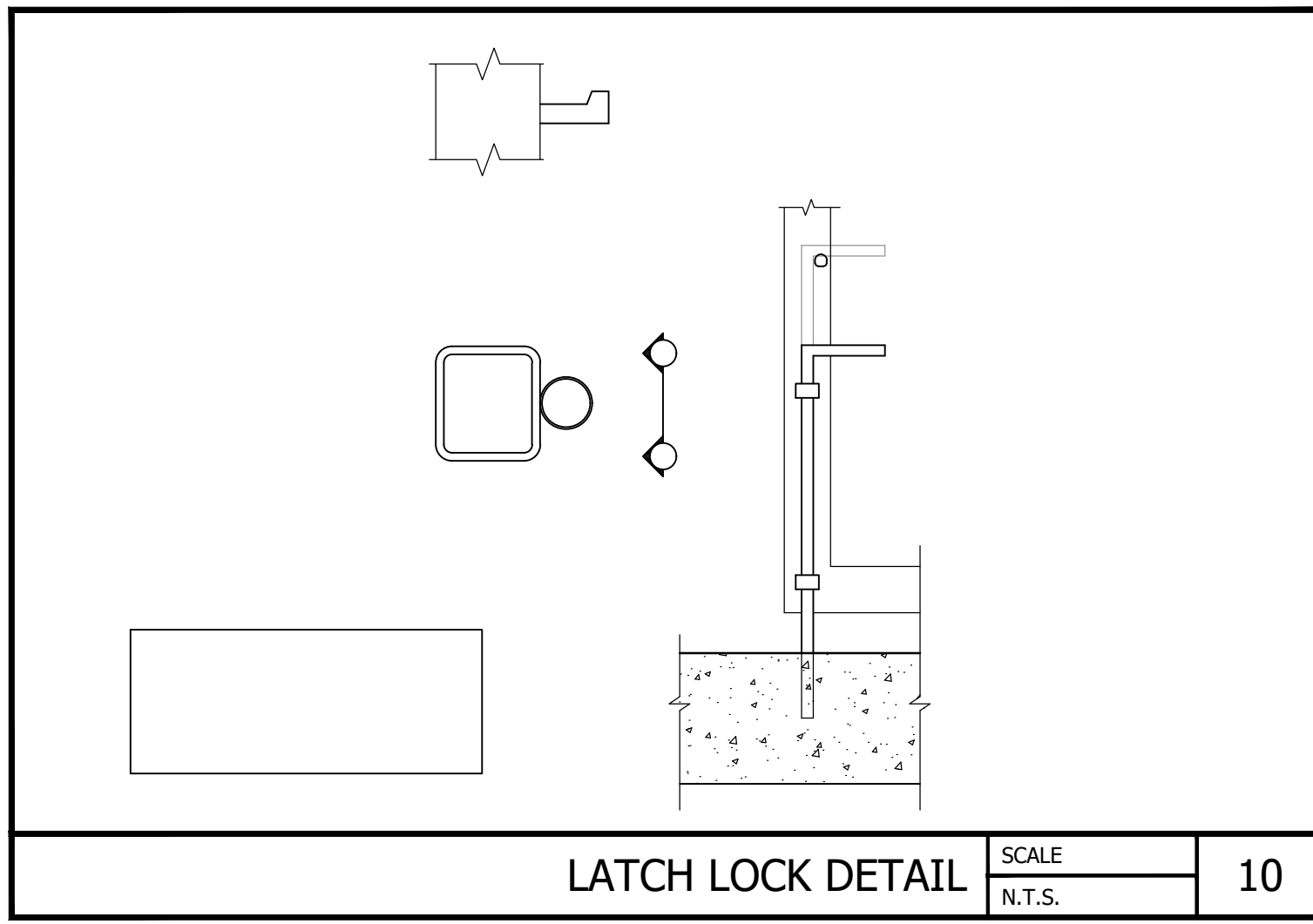
Drawn By
LR

Reviewed By
RP

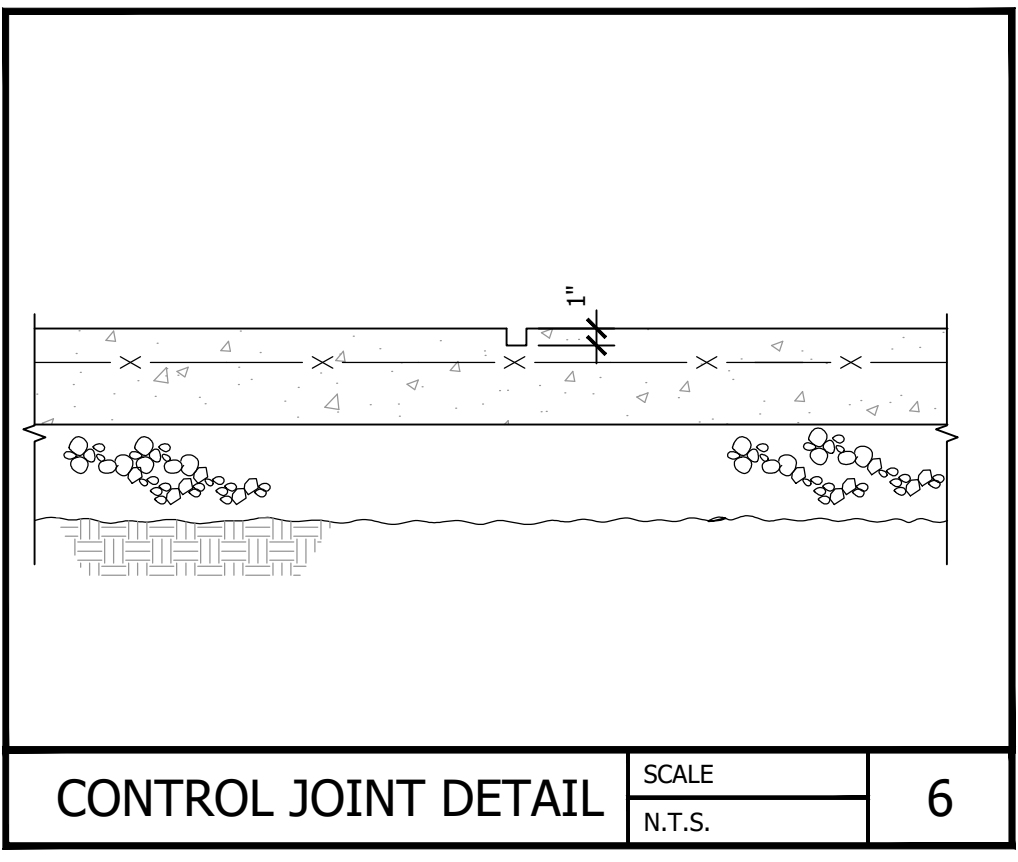
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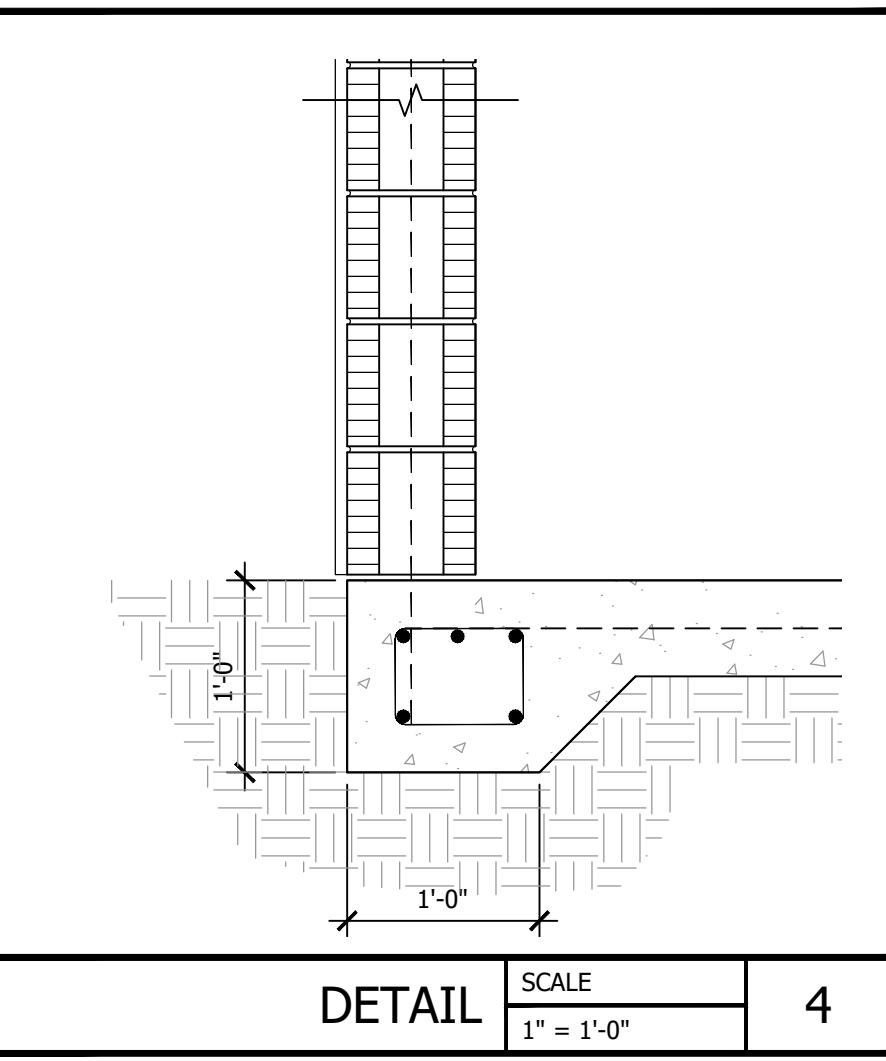
ROOF FRAMING TO CMU WALL SCALE N.T.S. 11



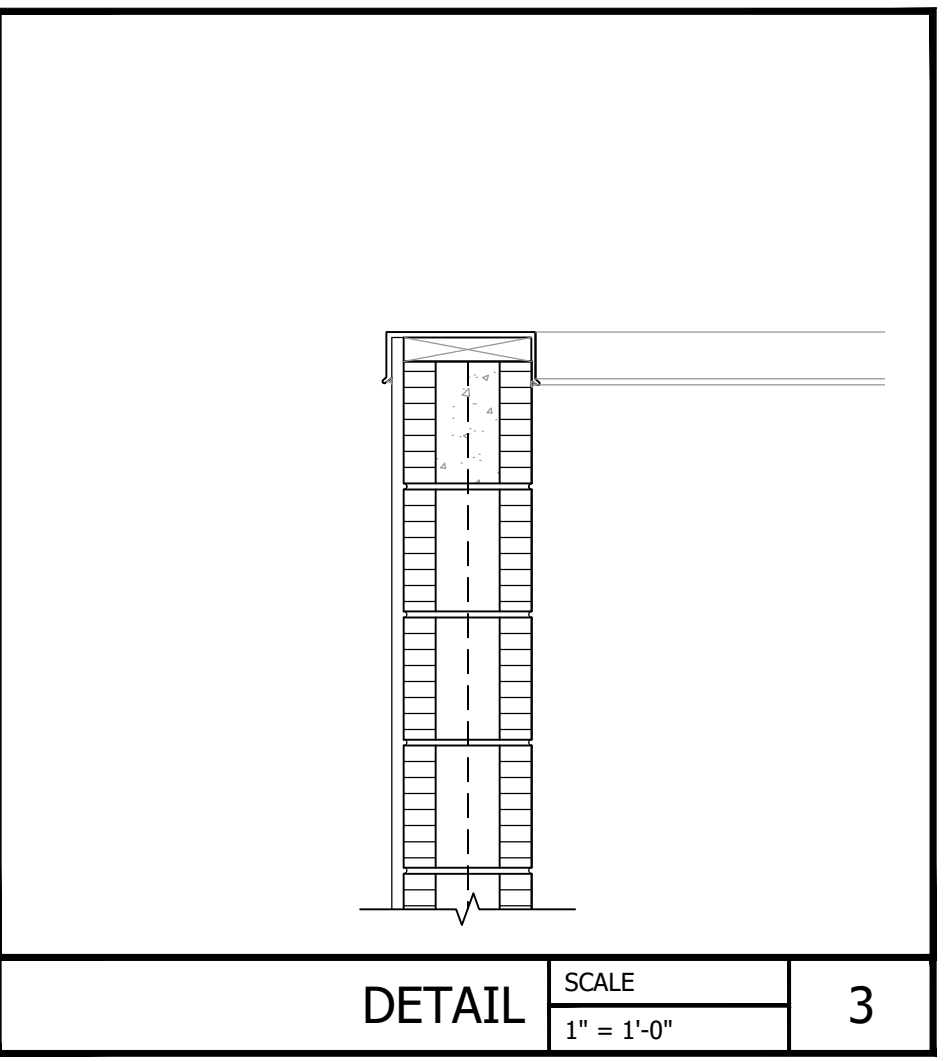
LATCH LOCK DETAIL SCALE N.T.S. 10



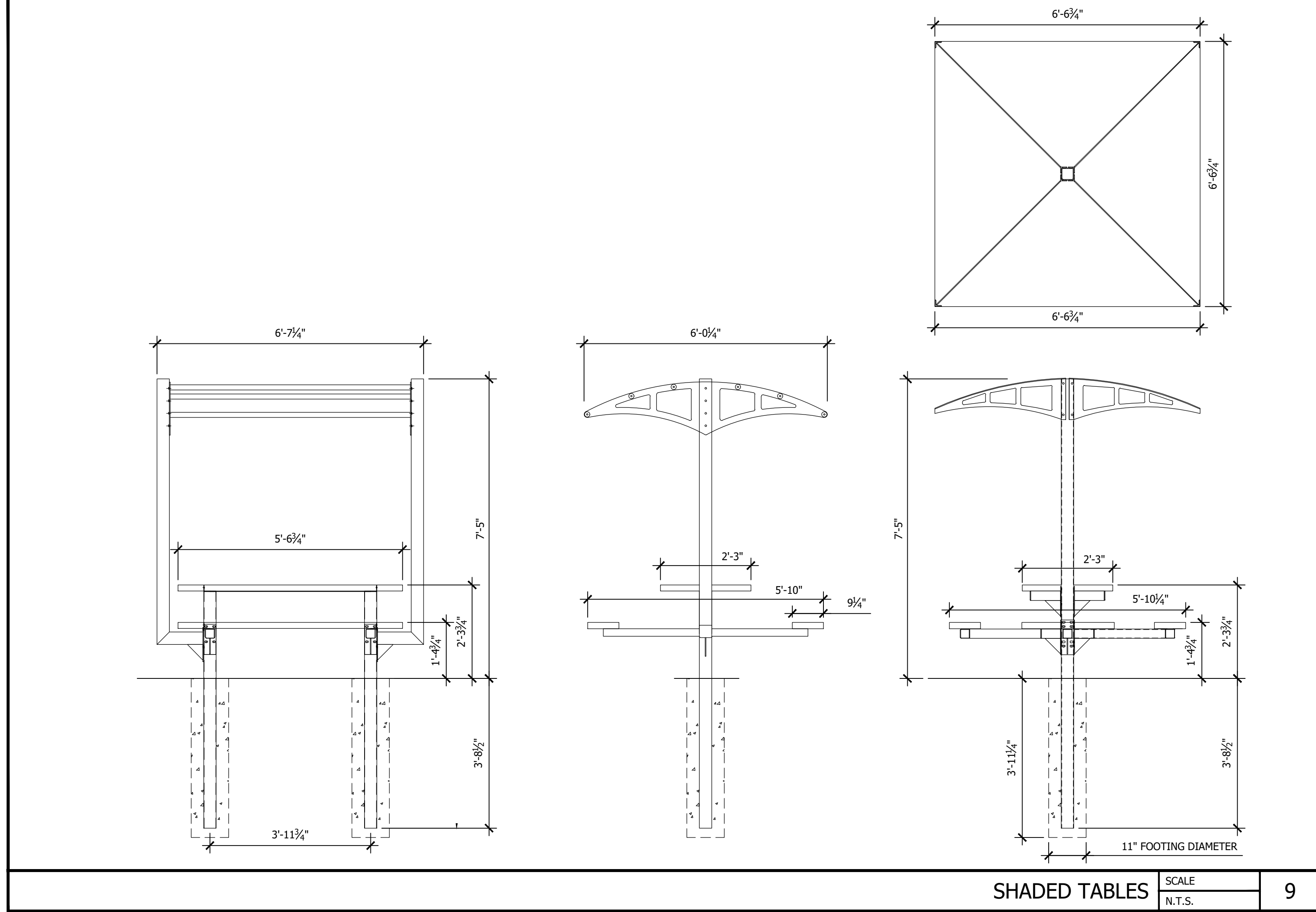
CONTROL JOINT DETAIL SCALE N.T.S. 6



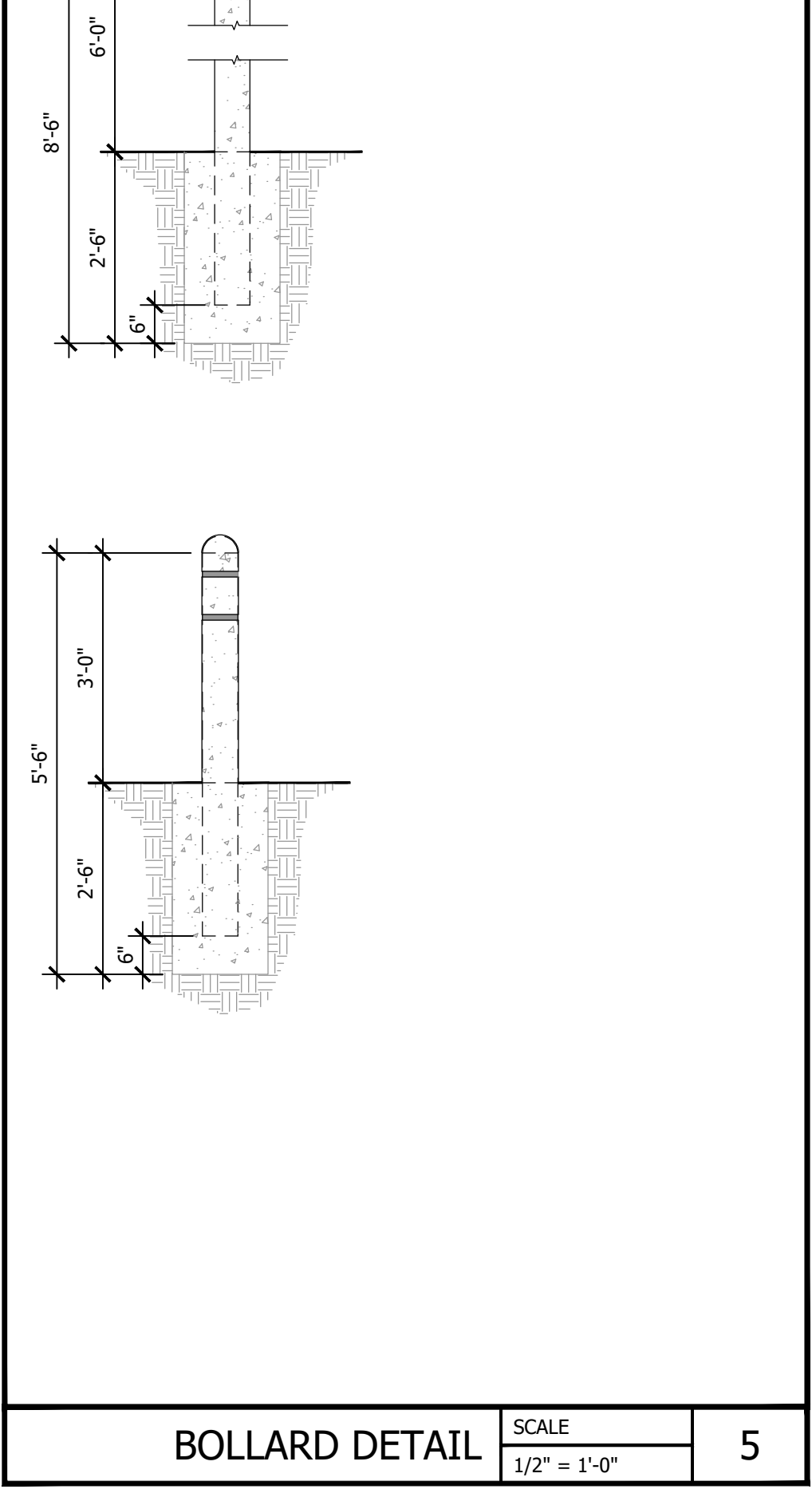
DETAIL SCALE 1" = 1'-0" 4



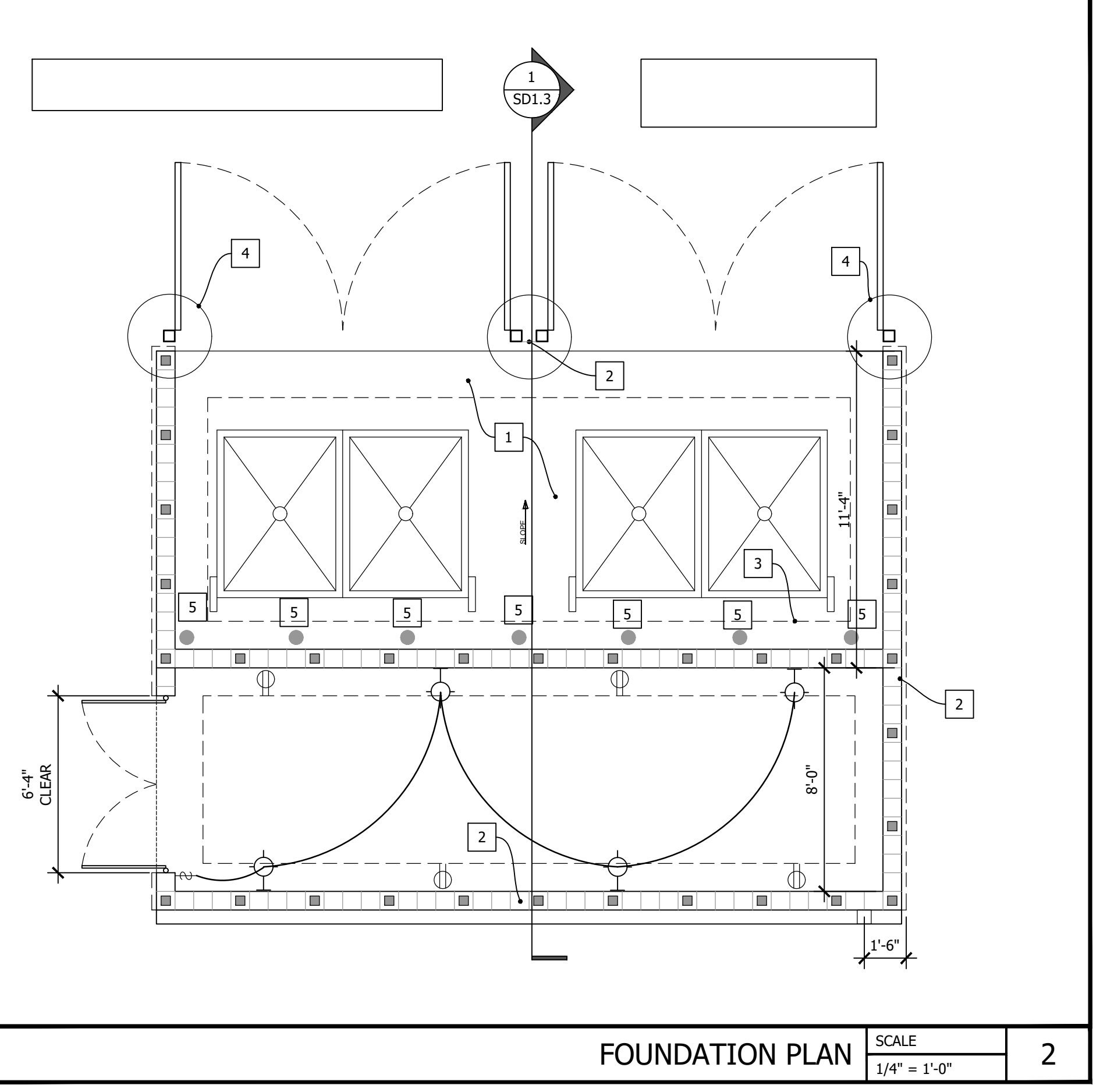
DETAIL SCALE 1" = 1'-0" 3



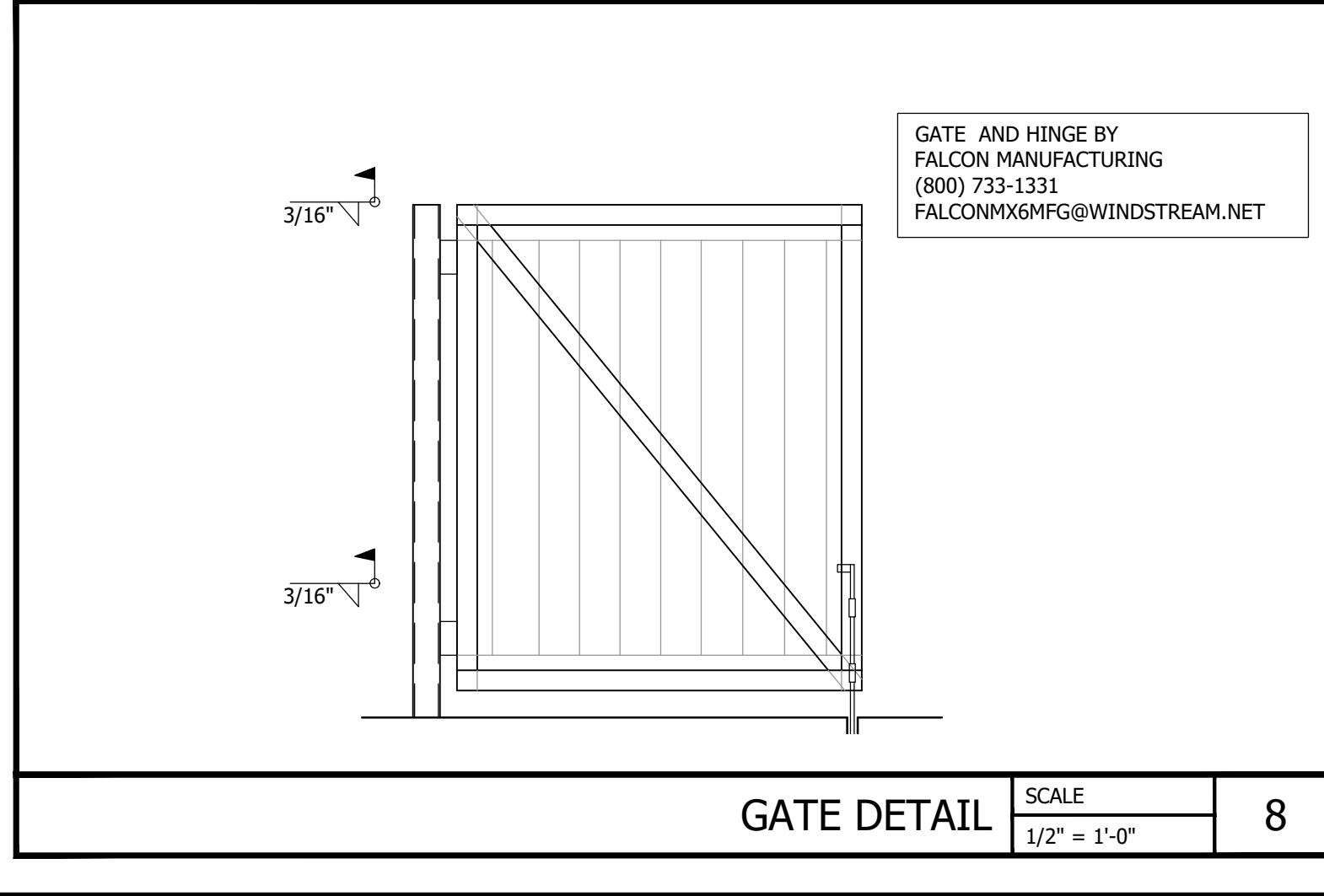
SHADED TABLES SCALE N.T.S. 9



BOLLARD DETAIL SCALE 1/2" = 1'-0" 5

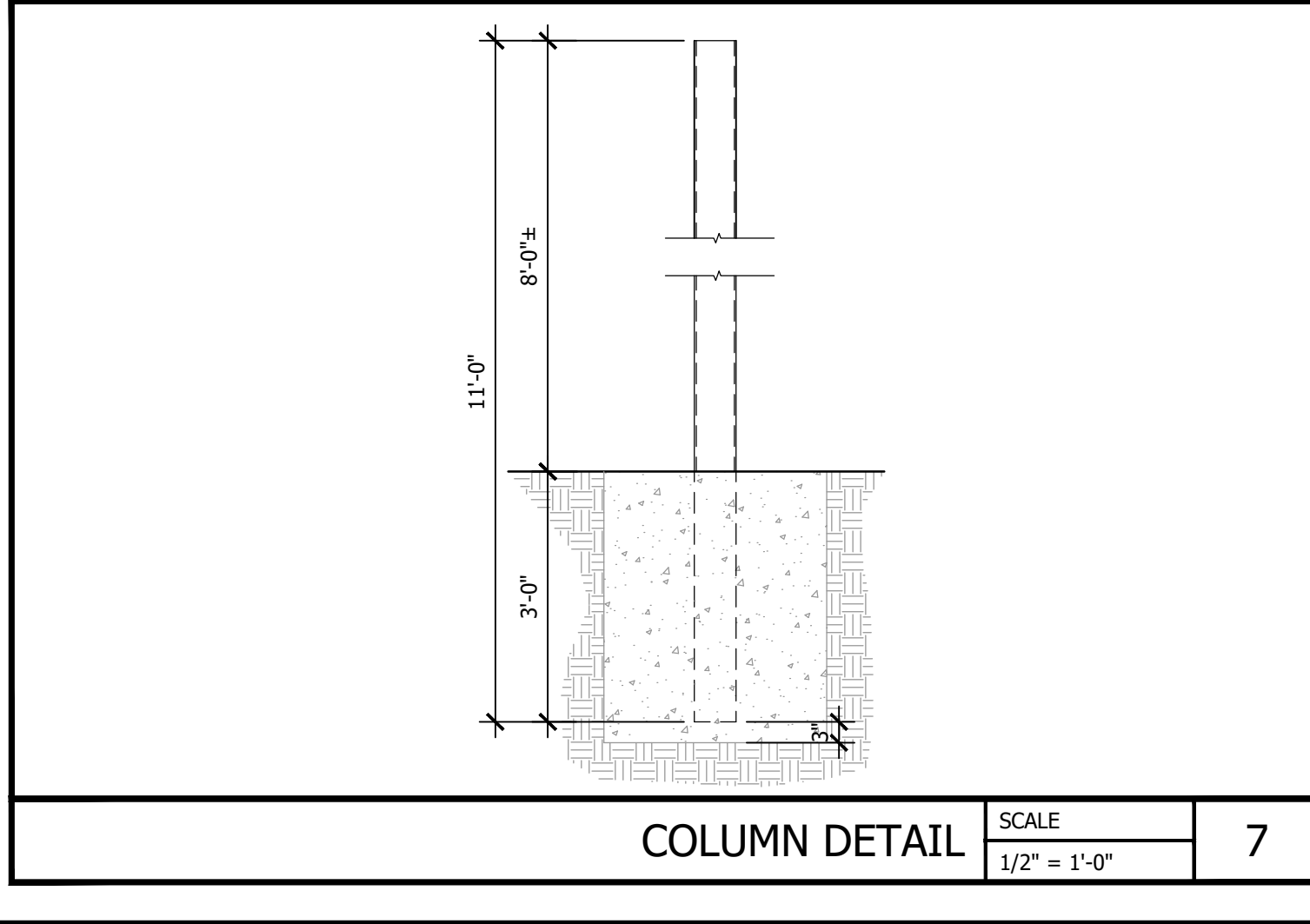


FOUNDATION PLAN SCALE 1/4" = 1'-0" 2

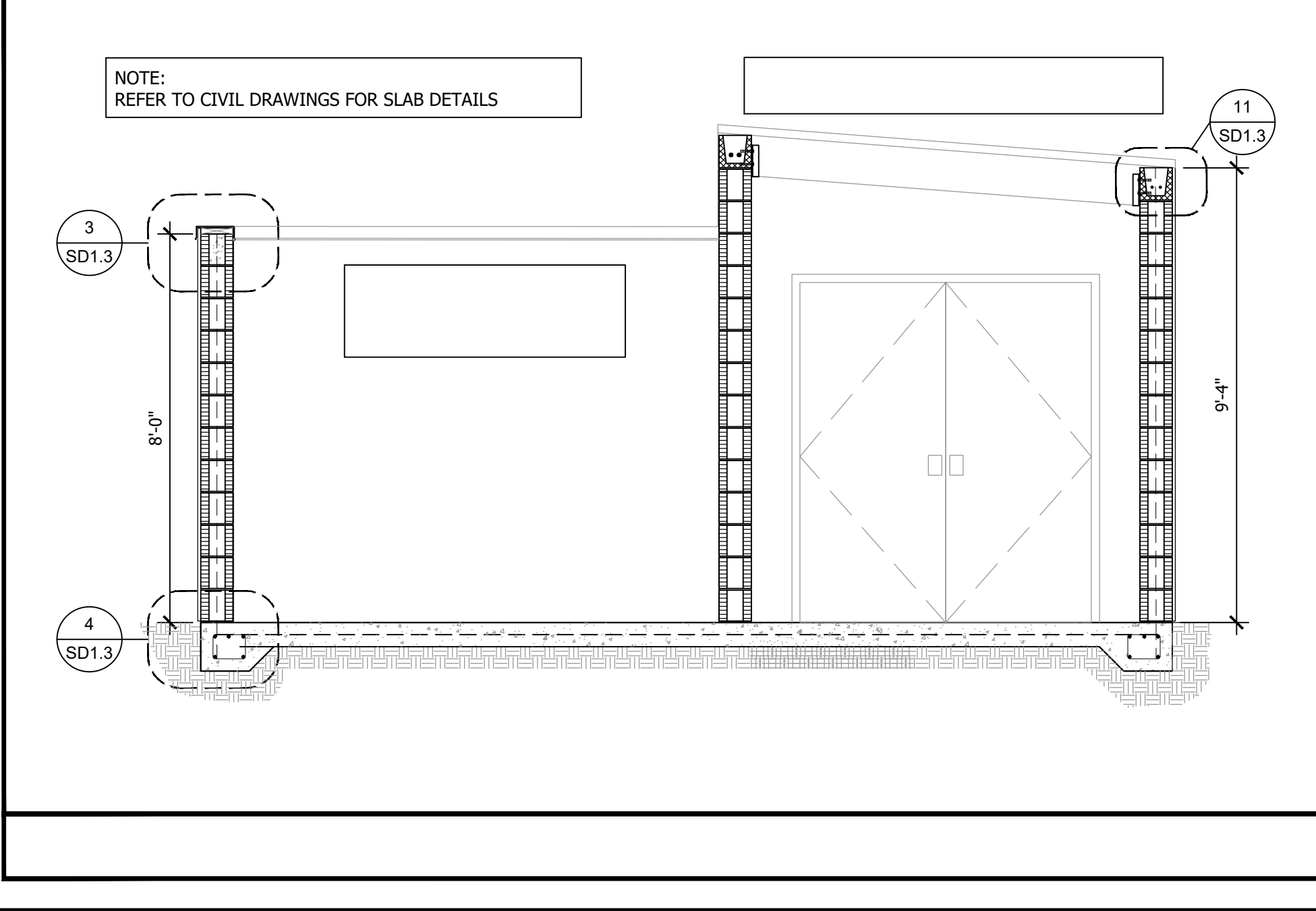


GATE DETAIL SCALE 1/2" = 1'-0" 8

GATE AND HINGE BY FALCON MANUFACTURING (800) 733-1331 FALCONMX6MFG@WINDSTREAM.NET



COLUMN DETAIL SCALE 1/2" = 1'-0" 7



BUILDING SECTION SCALE 3/8" = 1'-0" 1

- TRASH ENCLOSURE FOUNDATION NOTES:**
- 6" SLAB ON GRADE WITH W/6"x6" W2.9xW2.9 W.W.F
 - MASONRY FAUX STONE VENEER TO MATCH MAIN BUILDING ON 8" CONCRETE FILLED BLOCK WALL.
 - TYPICAL WALL FOOTING 12"x12" CONT. WITH 2#5 BOTTOM REINF.
 - REFER TO DETAIL 7 FOR STEEL COLUMN AND FOOTER DETAIL
 - BOLLARD TYPE "B", REFER TO DETAIL 5 THIS SHEET

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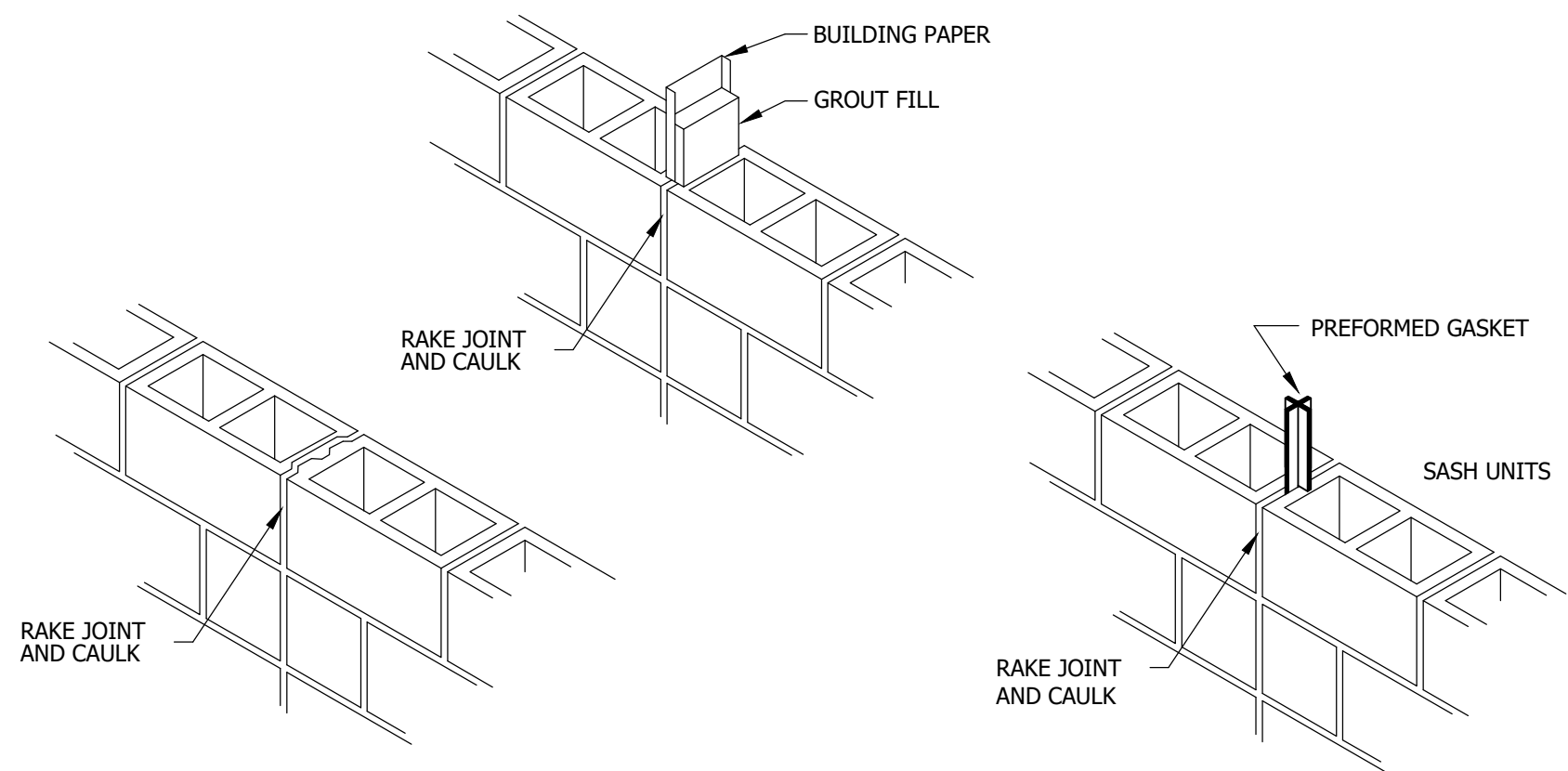
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Project Name and Address: **CEFCO #437 - BETHEL**
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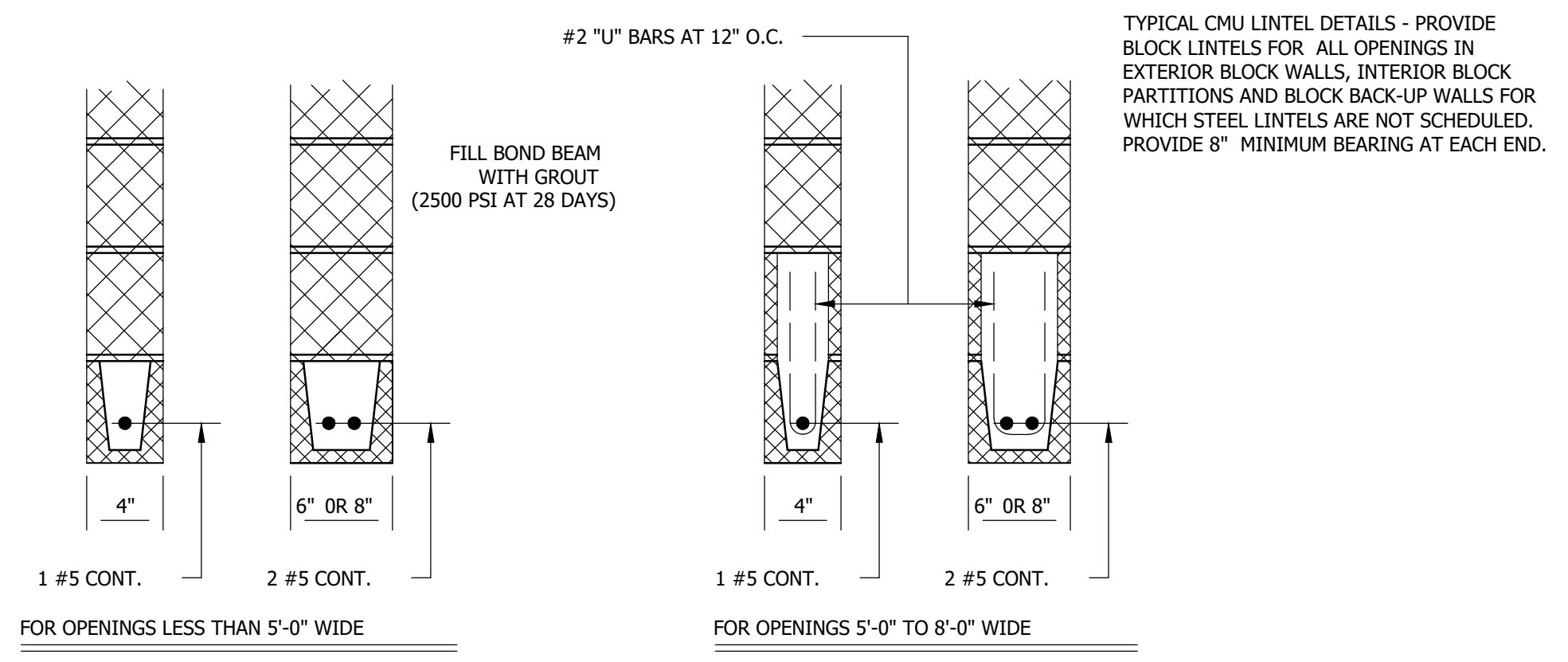
Project No: 170-101.00
 Drawn By: LR
 Reviewed By: RP

Sheet Title: **TRASH ENCLOSURE SECTION AND DETAILS**

Sheet: **SD1.3**



CMU CONTROL JOINT OPTIONS SCALE N.T.S. 6



TYPICAL CMU LINTEL DETAILS SCALE N.T.S. 5

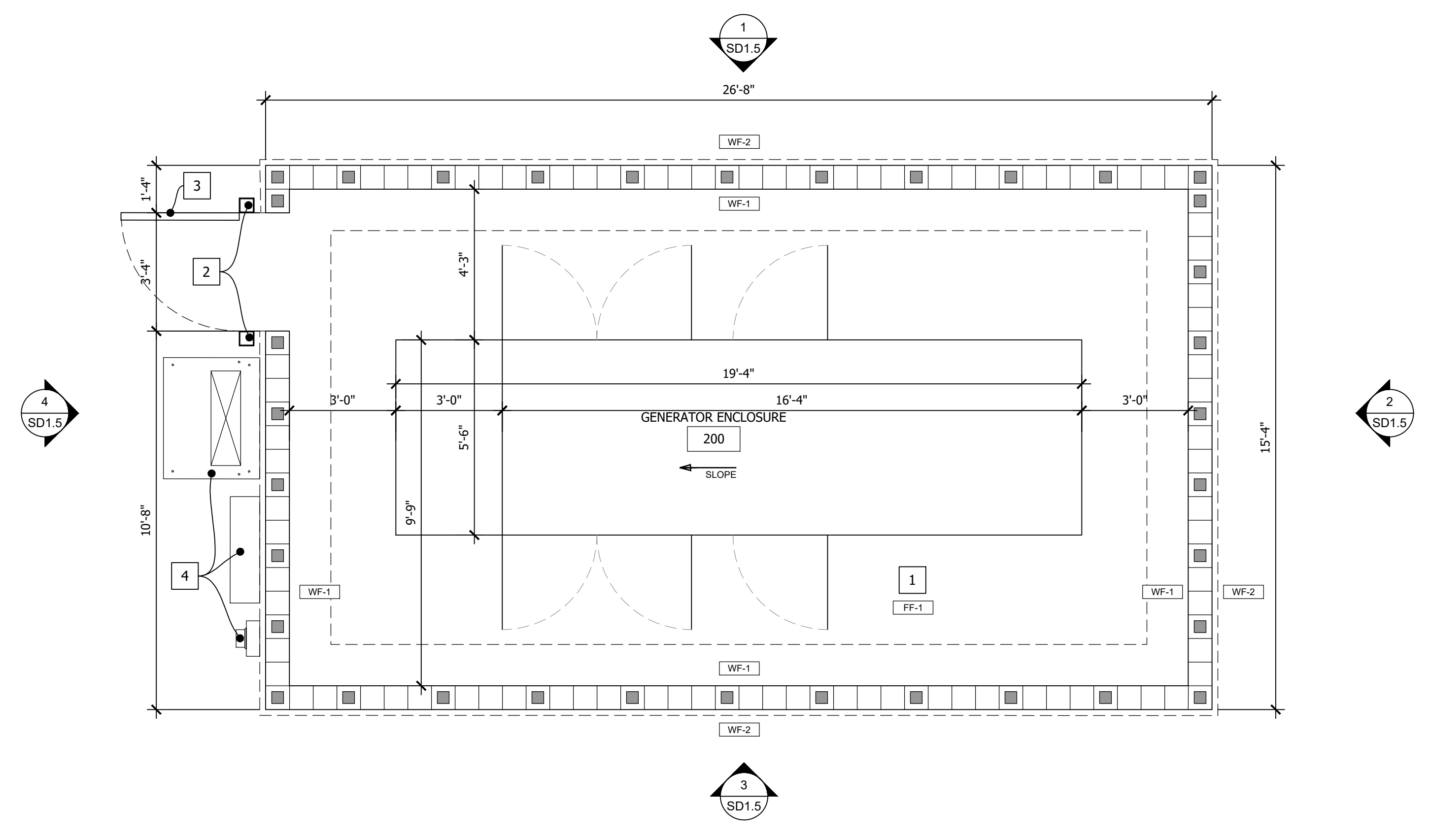
FINISH SCHEDULE

FF-1	CONCRETE FLOOR
WF-1	INTERIOR FINISH - CMU BLOCK WALL TO BE PAINTED SHERWIN WILLIAM 6364: EGGWHITE
WF-2	CREATIVE FAUX STONE AS PER OWNER'S SPECIFICATIONS
PT-1	SHERWIN WILLIAM 6115 (TOTALLY TAN)

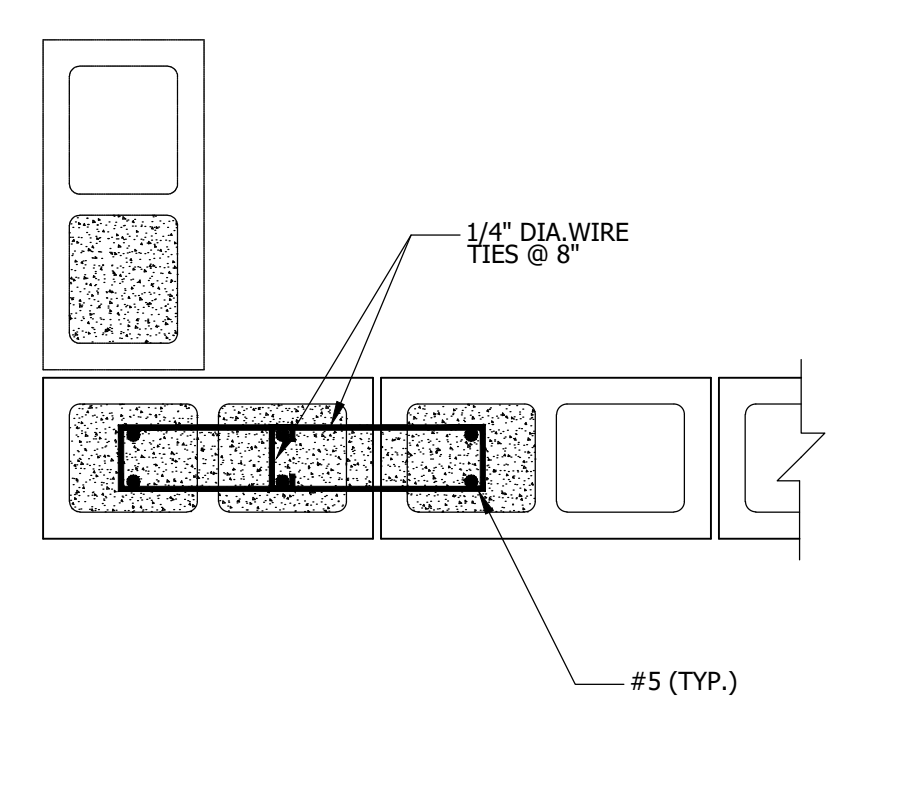
- GENERAL NOTES:**
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 - GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE OWNER'S VENDORS ON SITE DURING CONSTRUCTION.
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- PLAN NOTES:** X
- FLOOR SLOPE = 1/2"
 - 5"x5"x.25 THICK STEEL POST FILLED WITH CONCRETE AND STEEL WELDED CAP. SLOPE. PAINTED TO MATCH ADJACENT SURFACES
 - GATE REFER TO EXTERIOR ELEVATIONS AND DETAILS GATE AND HINGE BY JIMCO MANUFACTURING
 - ELECTRICAL AUTOMATIC TRANSFER SWITCH, CURRENT TRANSFORMER CABINET, AND METER BOX.

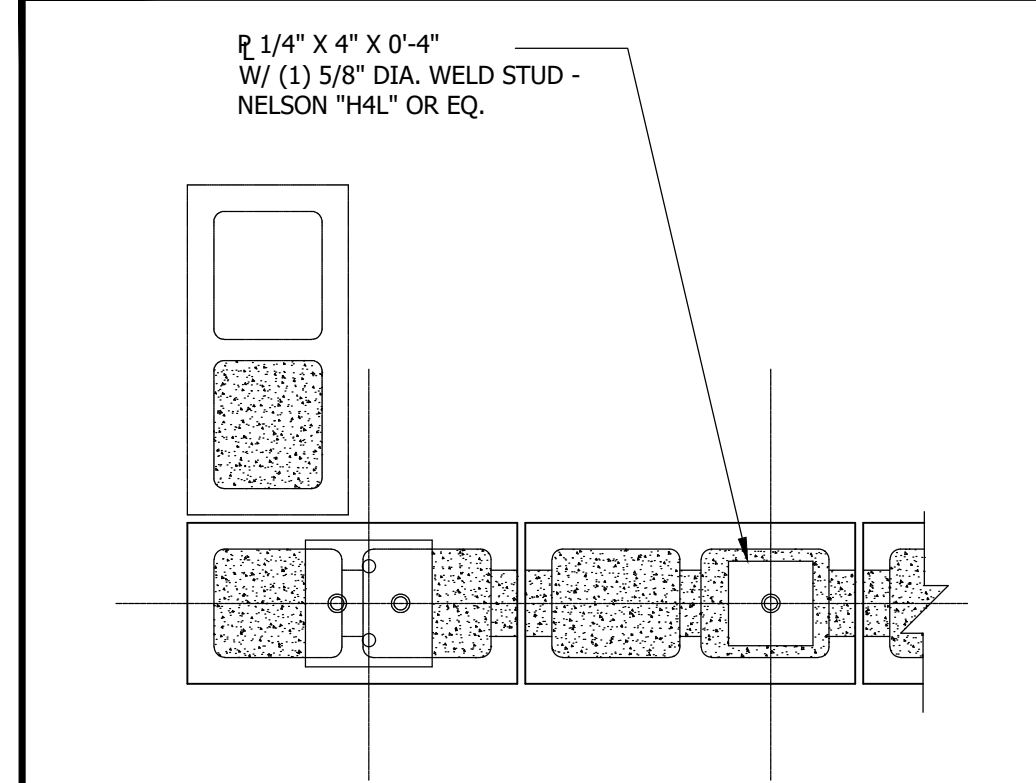
NOTE: REFER TO CIVIL DRAWINGS FOR SLAB DETAILS



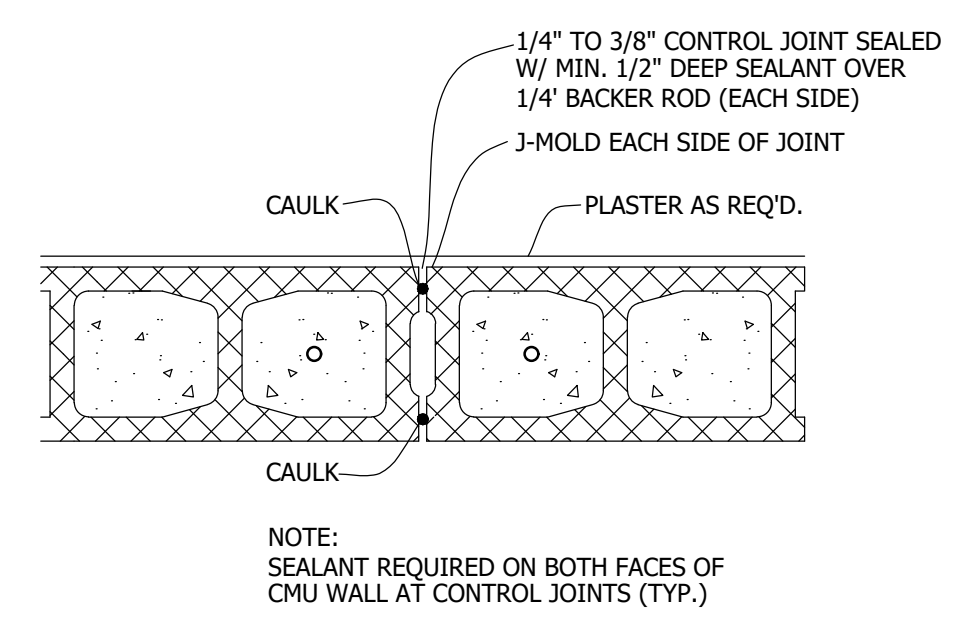
GENERATOR ENCLOSURE FLOOR PLAN SCALE 3/8" = 1'-0" 1



WALL PILASTER SCALE N.T.S. 4



SECTION AT WALL CORNER SCALE N.T.S. 3



DETAIL OF CONTROL JOINT FINISH SCALE N.T.S. 2

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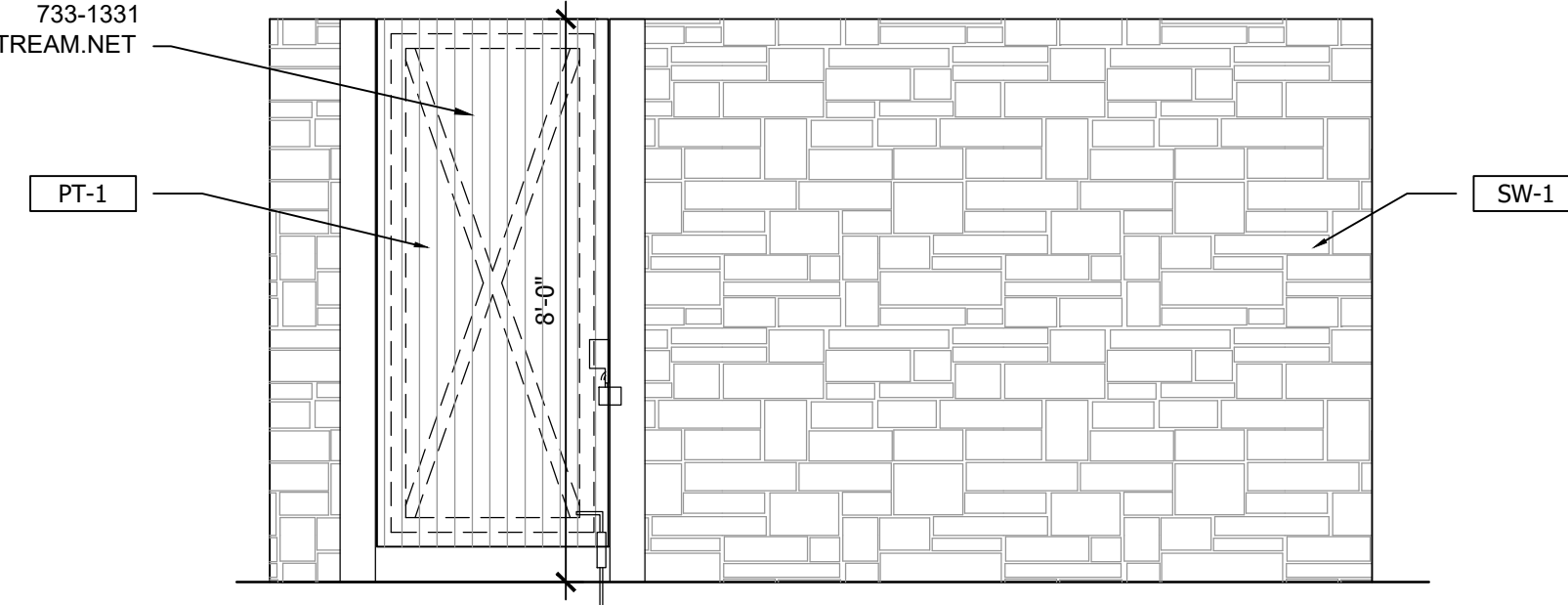
Project Name and Address
CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title
GENERATOR ENCLOSURE FLOOR PLAN AND DETAILS

Project No. 170-101.00
 Drawn By: LR
 Reviewed By: RP

Sheet SD1.4

GATE AND HINGE BY
FALCON MANUFACTURING
733-1331
FALCONMX6MFG@WINDSTREAM.NET

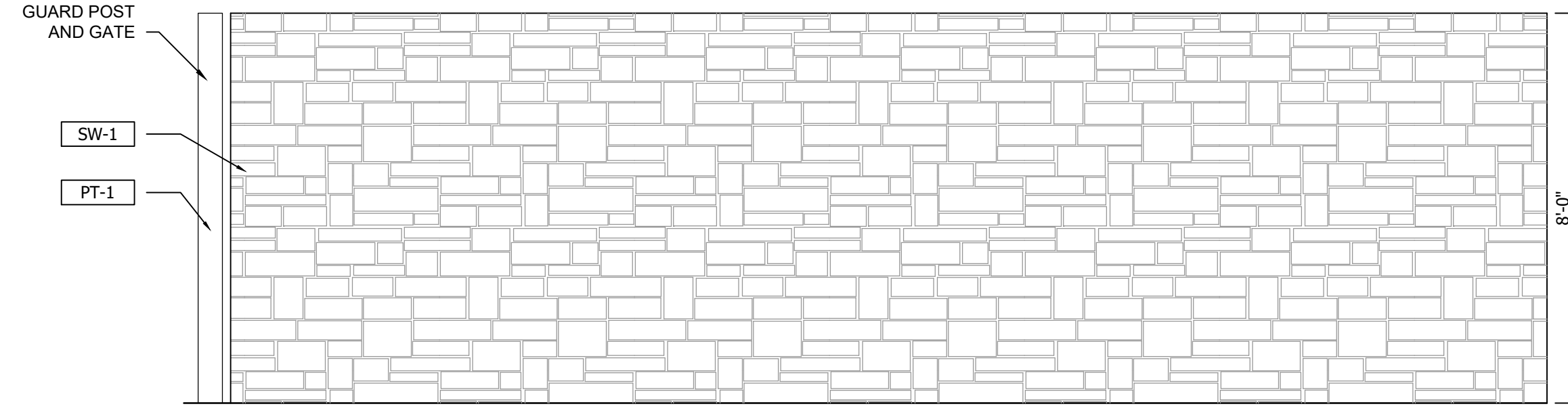


GENERATOR ENCLOSURE SIDE ELEVATION

SCALE
3/8" = 1'-0"

4

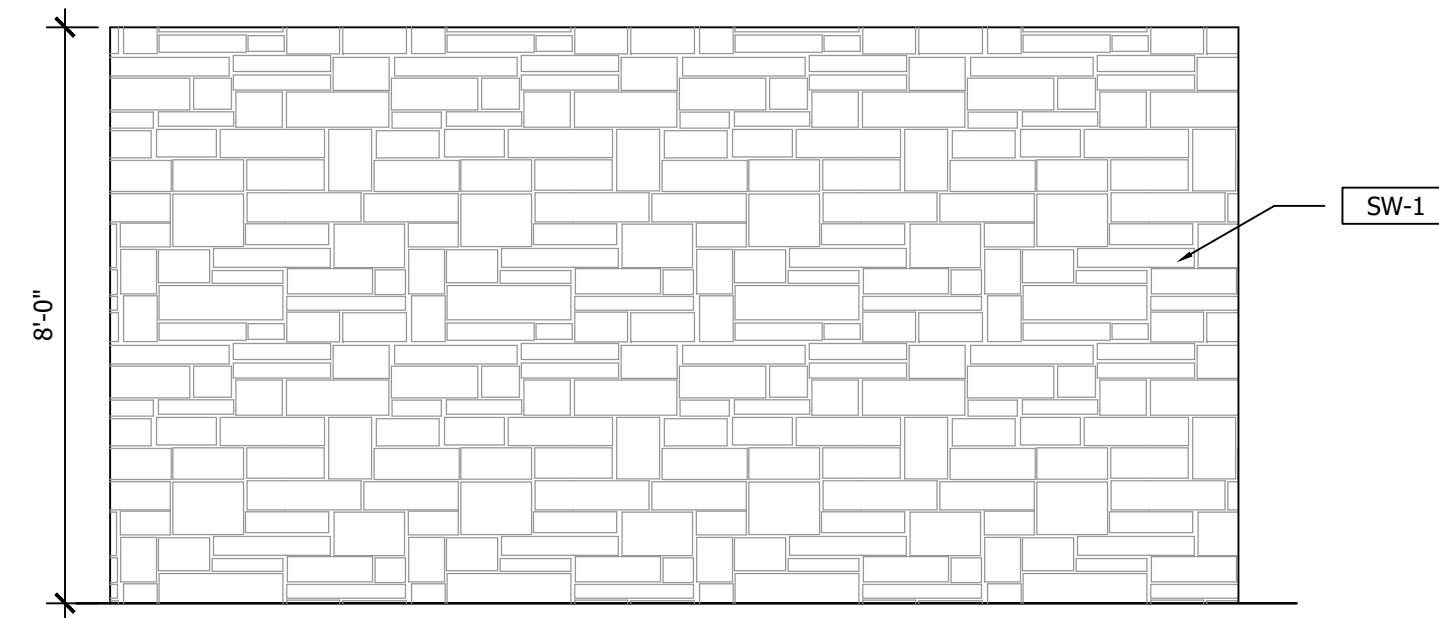
8'-0" TALL
GUARD POST
AND GATE



GENERATOR ENCLOSURE REAR ELEVATION

SCALE
3/8" = 1'-0"

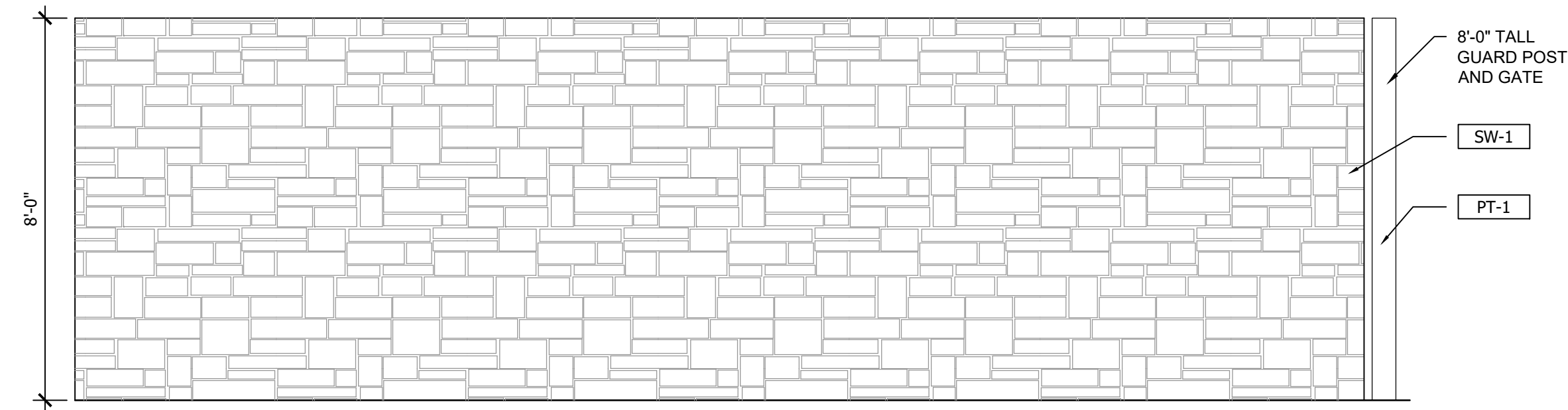
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GENERATOR ENCLOSURE SIDE ELEVATION

SCALE
3/8" = 1'-0"

2

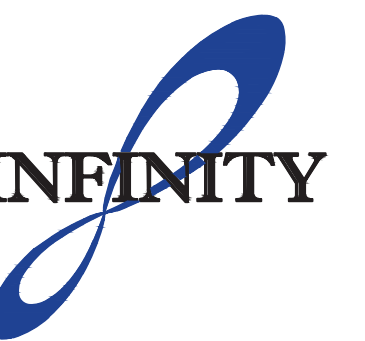


GENERATOR ENCLOSURE FRONT ELEVATION

SCALE
3/8" = 1'-0"

1

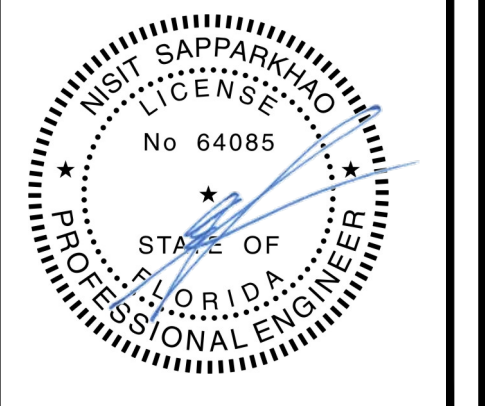
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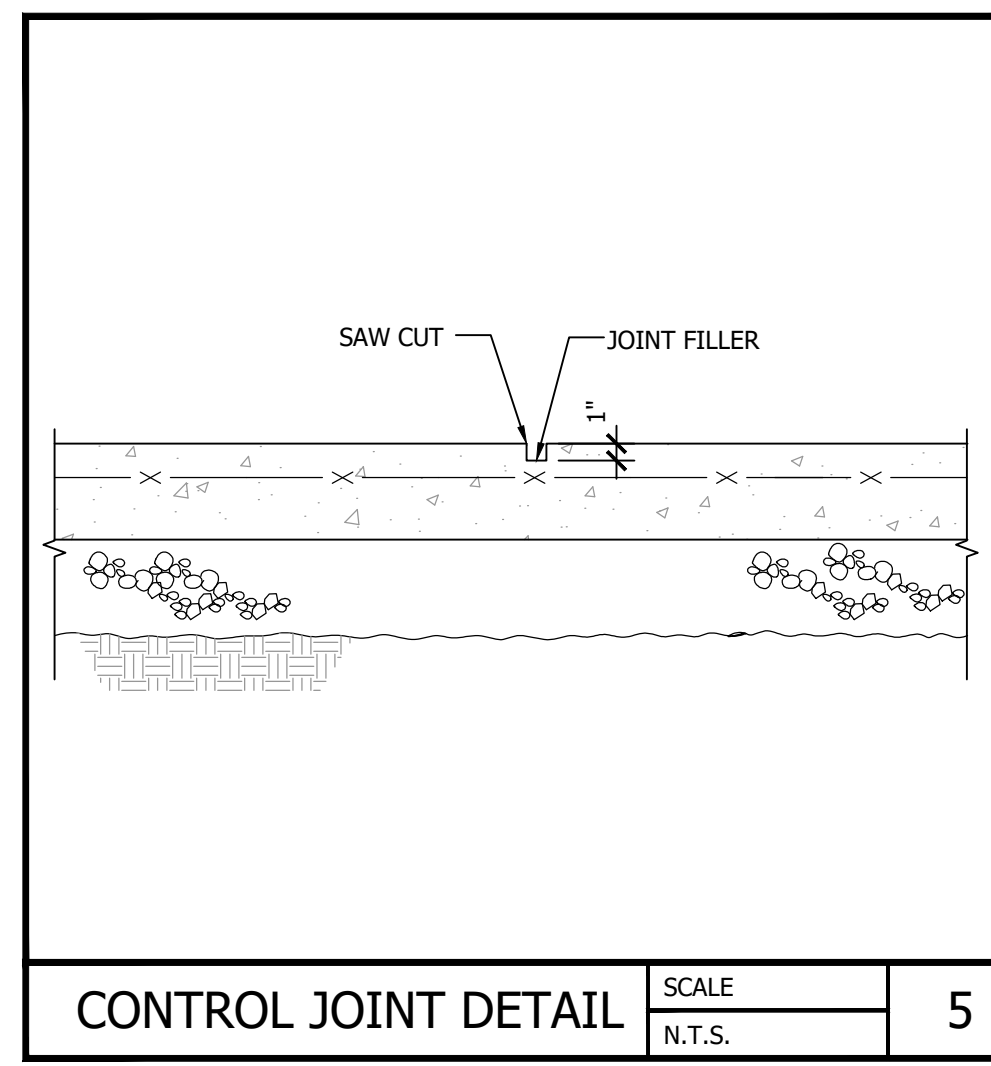
Date

Project Name and Address
CEFCO #437 - BETHEL
HIGHWAY 90 AND OLD BETHEL ROAD
CRESTVIEW, FLORIDA

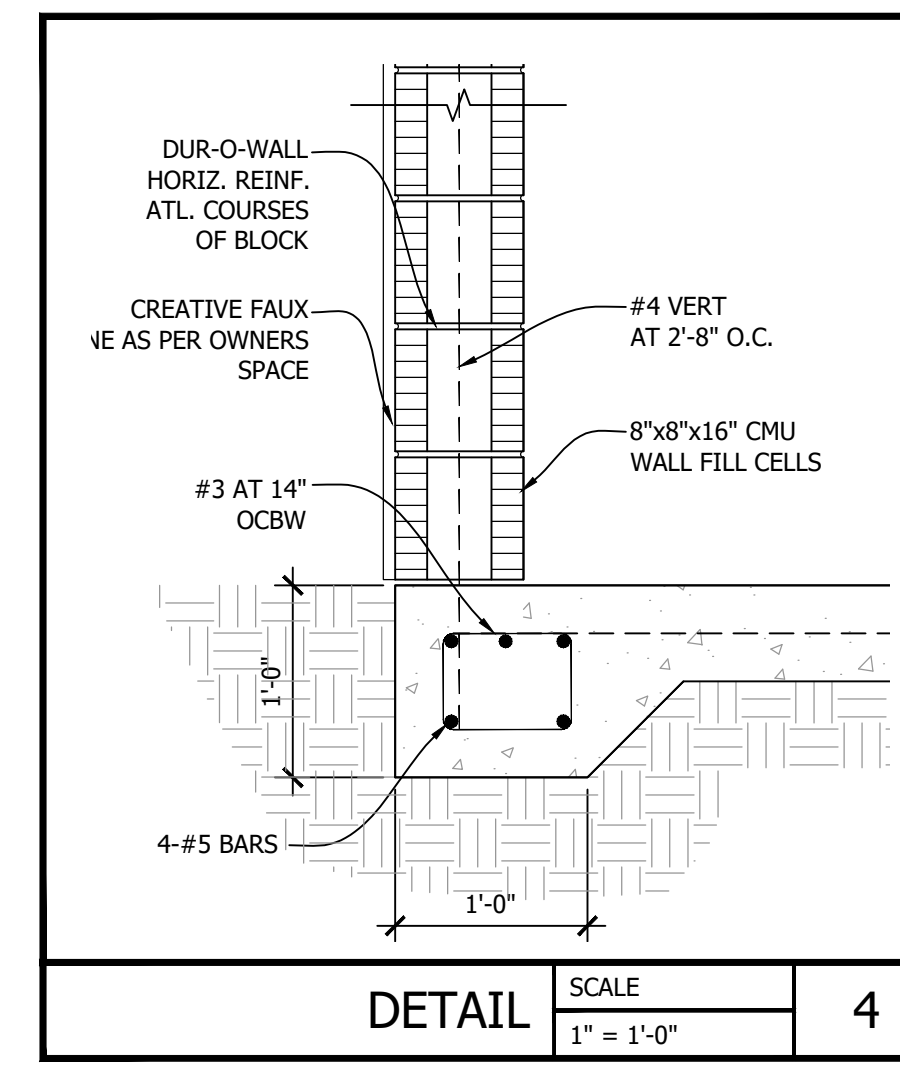
Sheet Title
GENERATOR ENCLOSURE
EXTERIOR ELEVATIONS

Project No.
170-101.00
Drawn By
LR
Reviewed By
RP

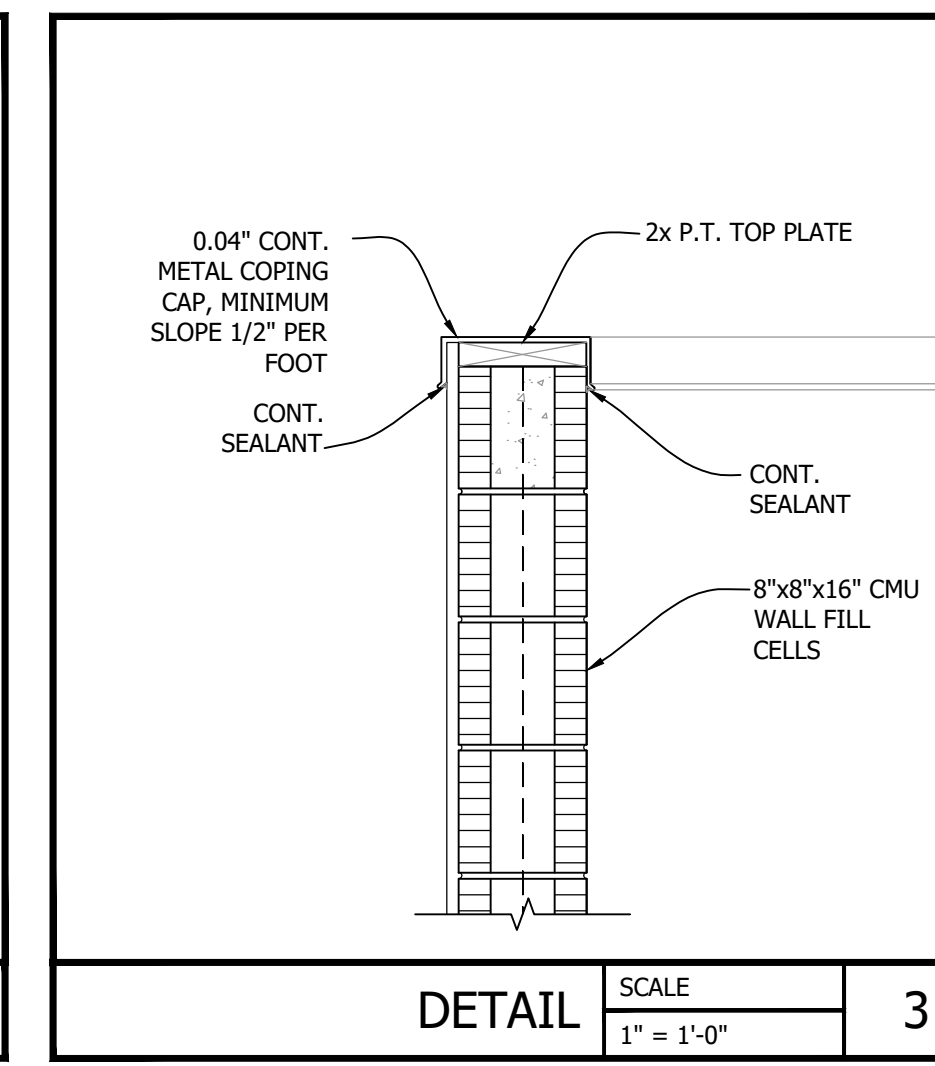
Sheet
SD1.5



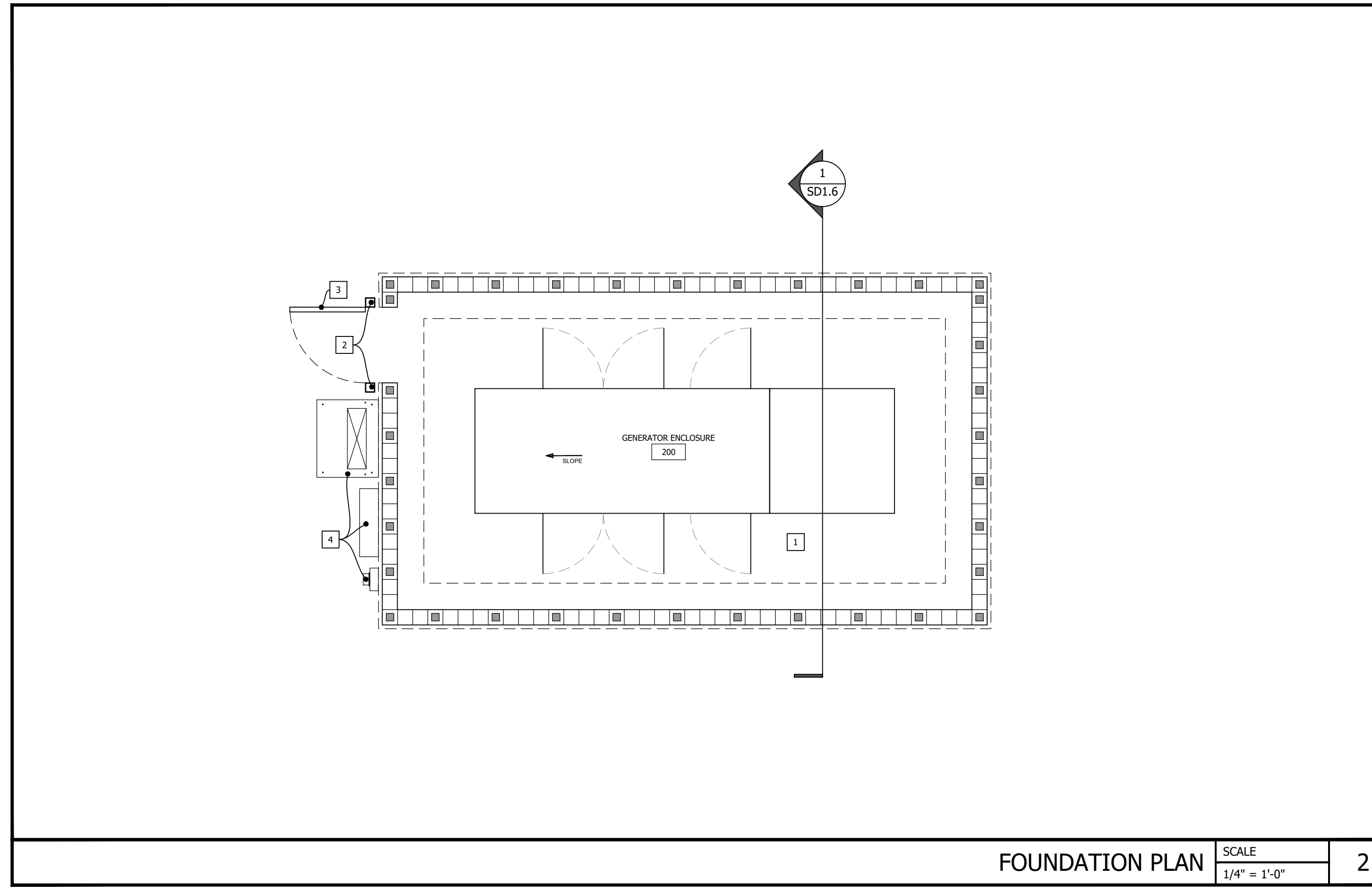
CONTROL JOINT DETAIL SCALE N.T.S. 5



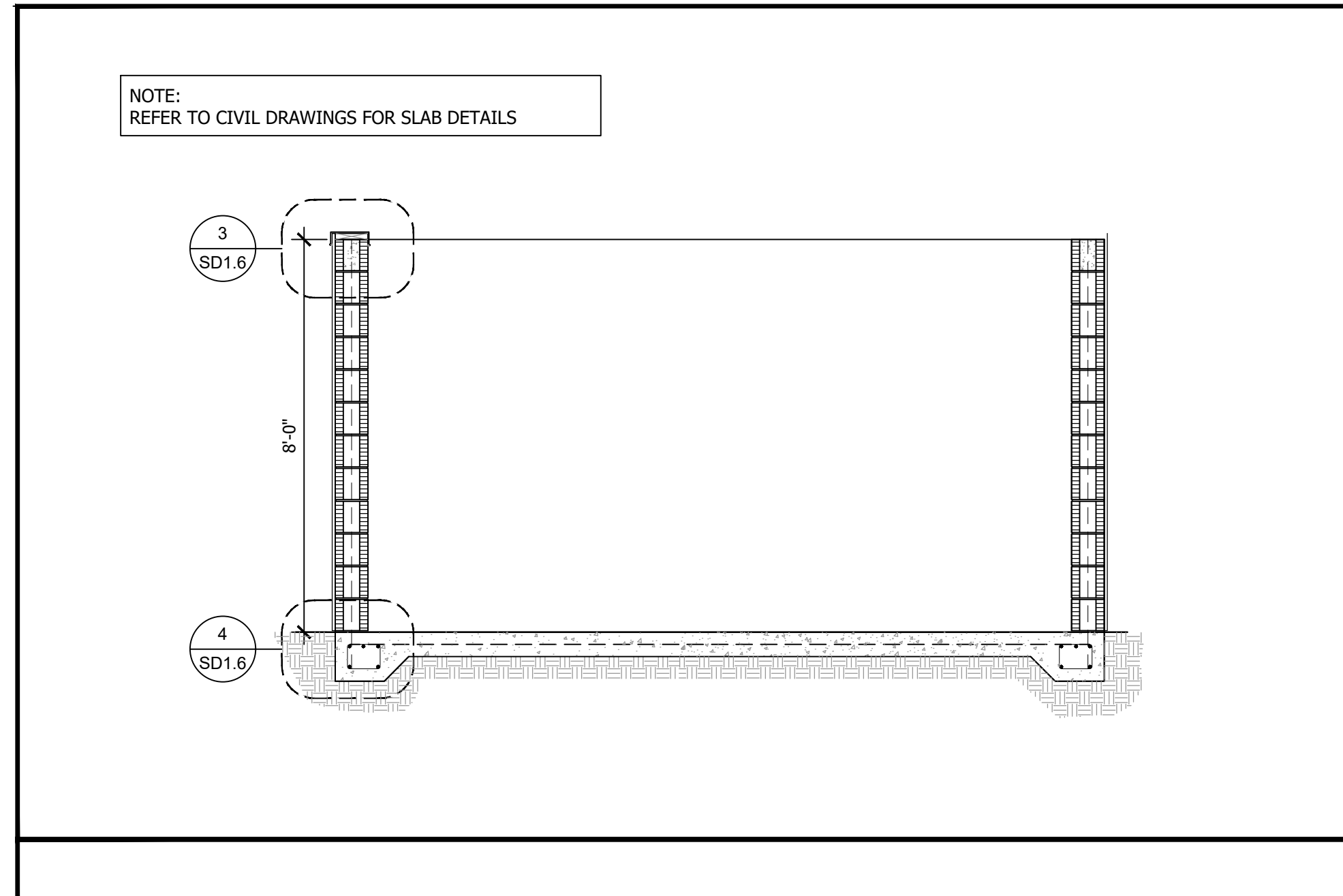
DETAIL SCALE 1" = 1'-0" 4



DETAIL SCALE 1" = 1'-0" 3



FOUNDATION PLAN SCALE 1/4" = 1'-0" 2



BUILDING SECTION SCALE 3/8" = 1'-0" 1

- GENERATOR ENCLOSURE FOUNDATION NOTES:**
- 1 6" SLAB ON GRADE WITH W/6"x6" W2.9xW2.9 W.W.F
 - 2 MASONRY FAUX STONE VENEER TO MATCH MAIN BUILDING ON 8" CONCRETE FILLED BLOCK WALL.
 - 3 TYPICAL WALL FOOTING 12"x12" CONT. WITH 2#5 BOTTOM REINF.
 - 4 REFER TO DETAIL 5 FOR STEEL COLUMN AND FOOTER DETAIL
 - 5 BOLLARD TYPE "B", REFER TO DETAIL THIS SHEET

NOTE:
REFER TO CIVIL DRAWINGS FOR SLAB DETAILS

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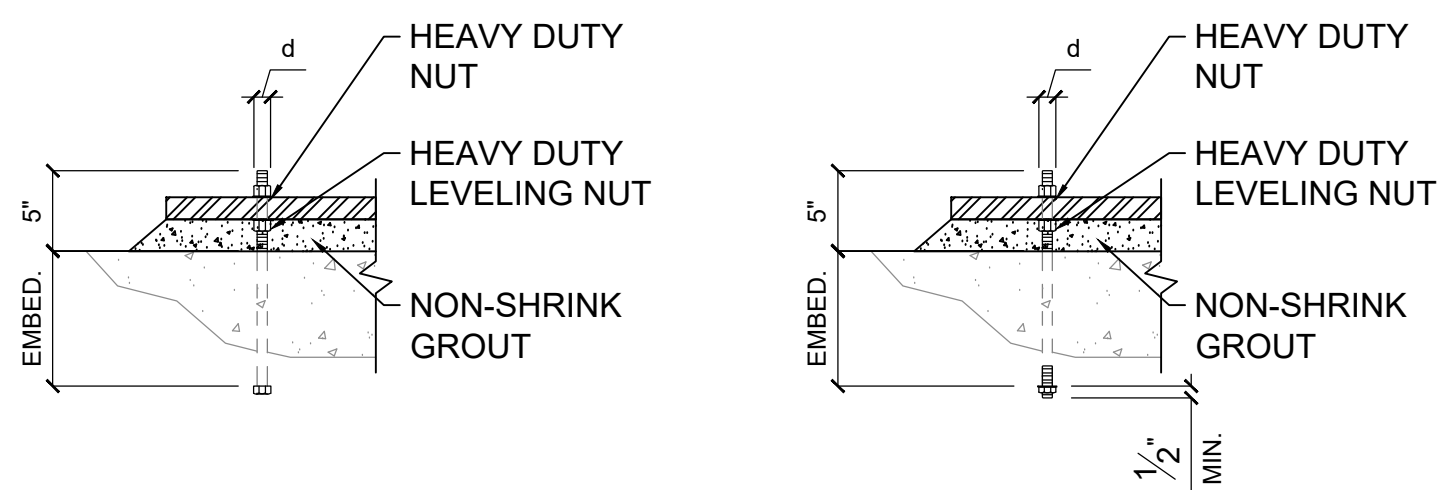
Date

Project Name and Address
CEFCO #437 - BETHEL
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Sheet Title
GENERATOR ENCLOSURE SECTION AND DETAILS

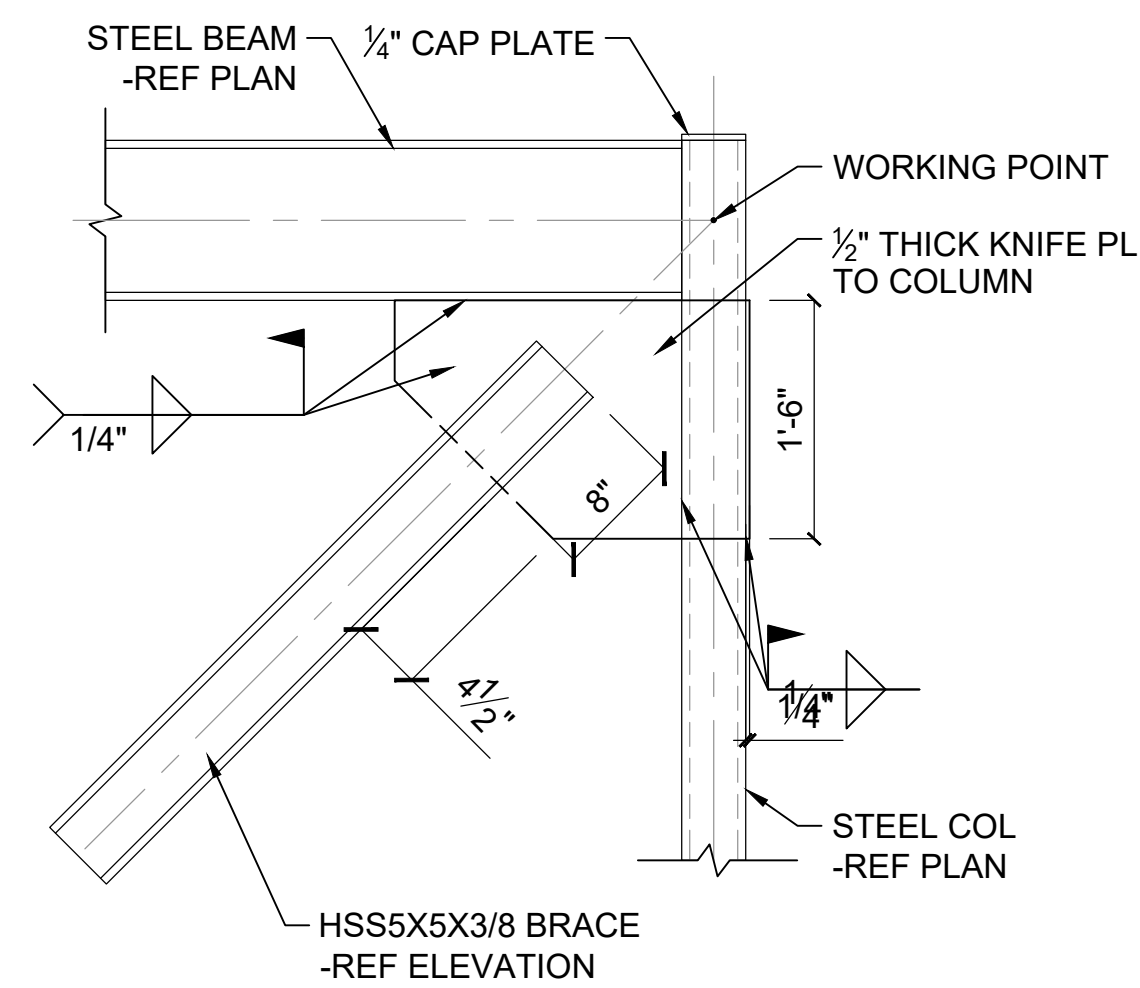
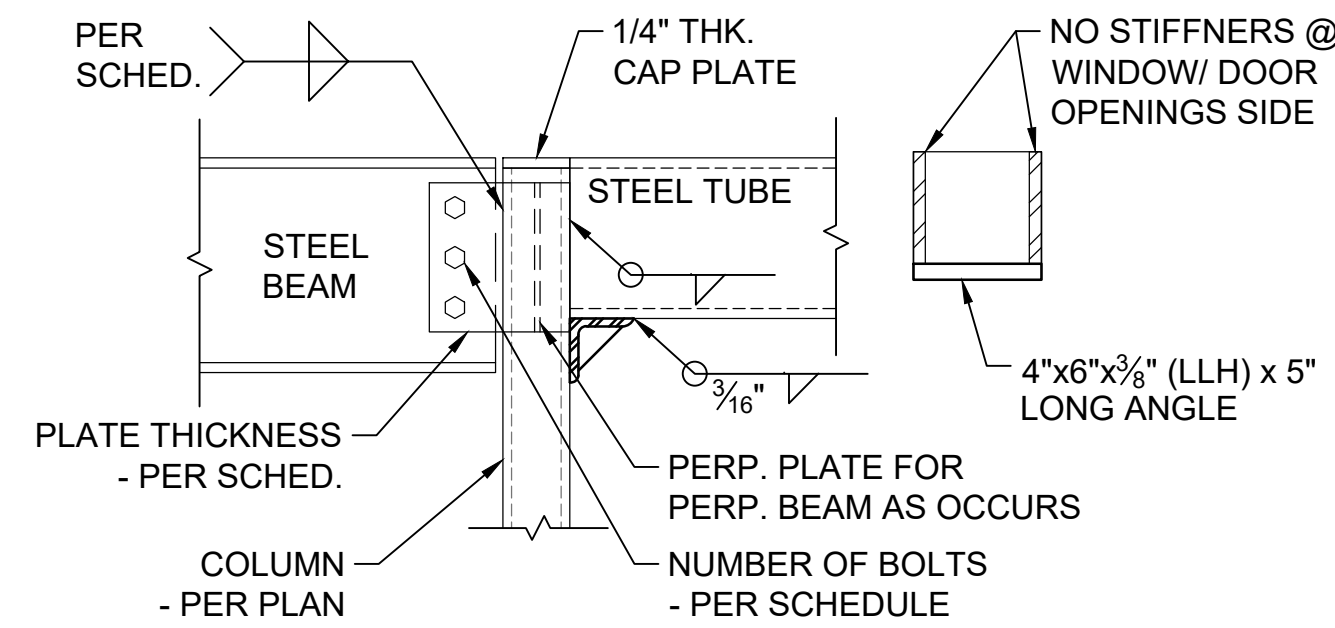
Project No. 170-101.00
Drawn By: LR
Reviewed By: RF

Sheet No. **SD1.6**

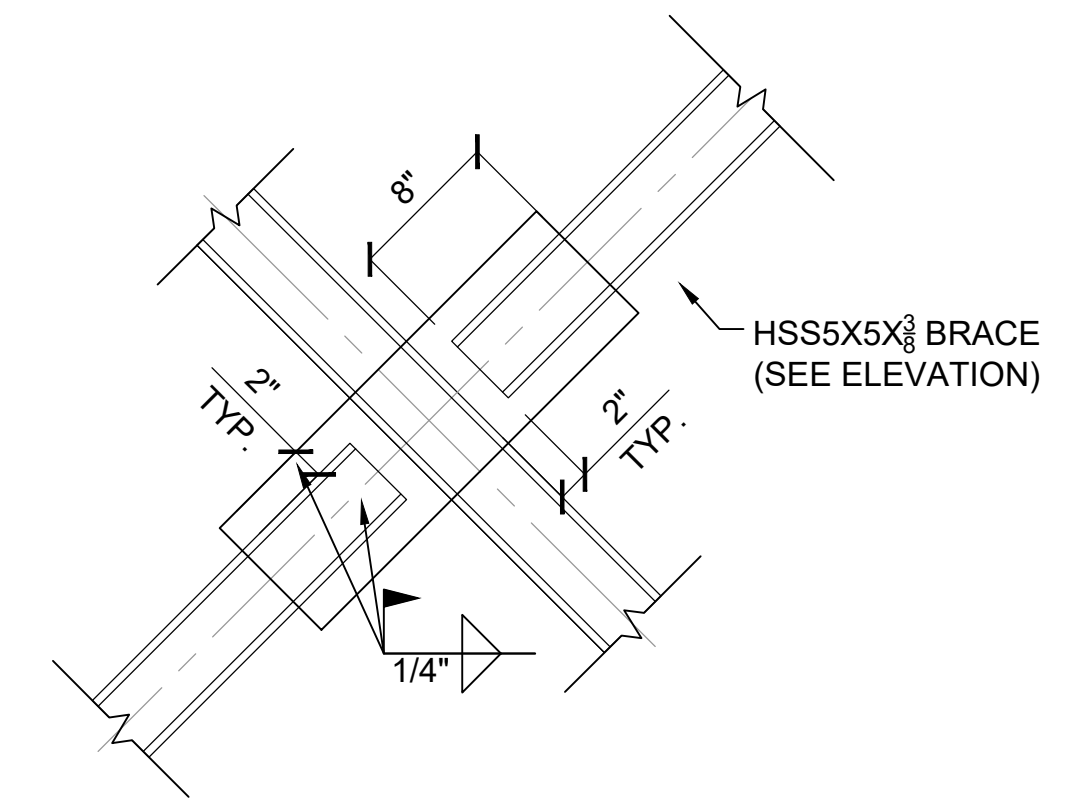


NOTES:

1. REFERENCE BASE PLATE DETAILS FOR DIAMETER AND EMBEDMENT.
2. REFERENCE GENERAL NOTES FOR MATERIAL REQUIREMENTS.
3. ANCHOR RODS SHALL BE SET PRIOR TO PLACEMENT OF CONCRETE.
4. PROTECT ANCHOR RODS FROM DAMAGE.
5. ANCHOR SHALL BE SET SO AS NOT TO VARY FROM THE DIMENSIONS SHOWN ON THE ERECTION DRAWINGS BY MORE THAN THE FOLLOWING:
 - A. 1/8" CENTER TO CENTER OF ANY TWO RODS WITHIN AN ANCHOR ROD GROUP.
 - B. 1/4" CENTER TO CENTER OF ADJACENT ANCHOR RODS GROUPS.
 - C. ELEVATION OF THE TOP OF ANCHOR RODS ± 1/2"
 - D. MAXIMUM ACCUMULATION OF 1/4" PER HUNDRED FEET ALONG THE ESTABLISHED COLUMN LINE.
 - E. 1/4" FROM THE CENTER OF ANY ANCHOR ROD GROUP TO THE ESTABLISHED COLUMN LINE THROUGH THAT GROUP.
 - F. REFERENCE AISC CODE FOR STANDARD PRACTICE FOR ADDITIONAL INFORMATION.
6. SET ANCHOR RODS PERPENDICULAR TO BEARING SURFACE UNLESS NOTED OTHERWISE.
7. PROVIDE MINIMUM 1" NON-SHRINK GROUT AT ALL BASE PLATES.



- NOTES:**
1. SEE PLAN AND SCHEDULE FOR MEMBER SIZES.
 2. SLOT TUBE AROUND GUSSET PLATE.



TYP. ANCHOR ROD DETAIL

SCALE
NOT TO SCALE

1

TYP. BEAM TO COLUMN CONNECTION

SCALE
NOT TO SCALE

2

ROOF CONNECTION X-BRACED FRAME

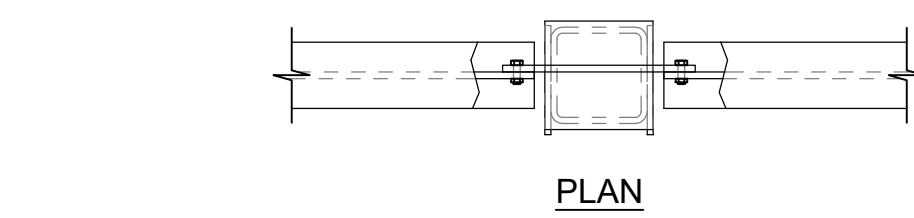
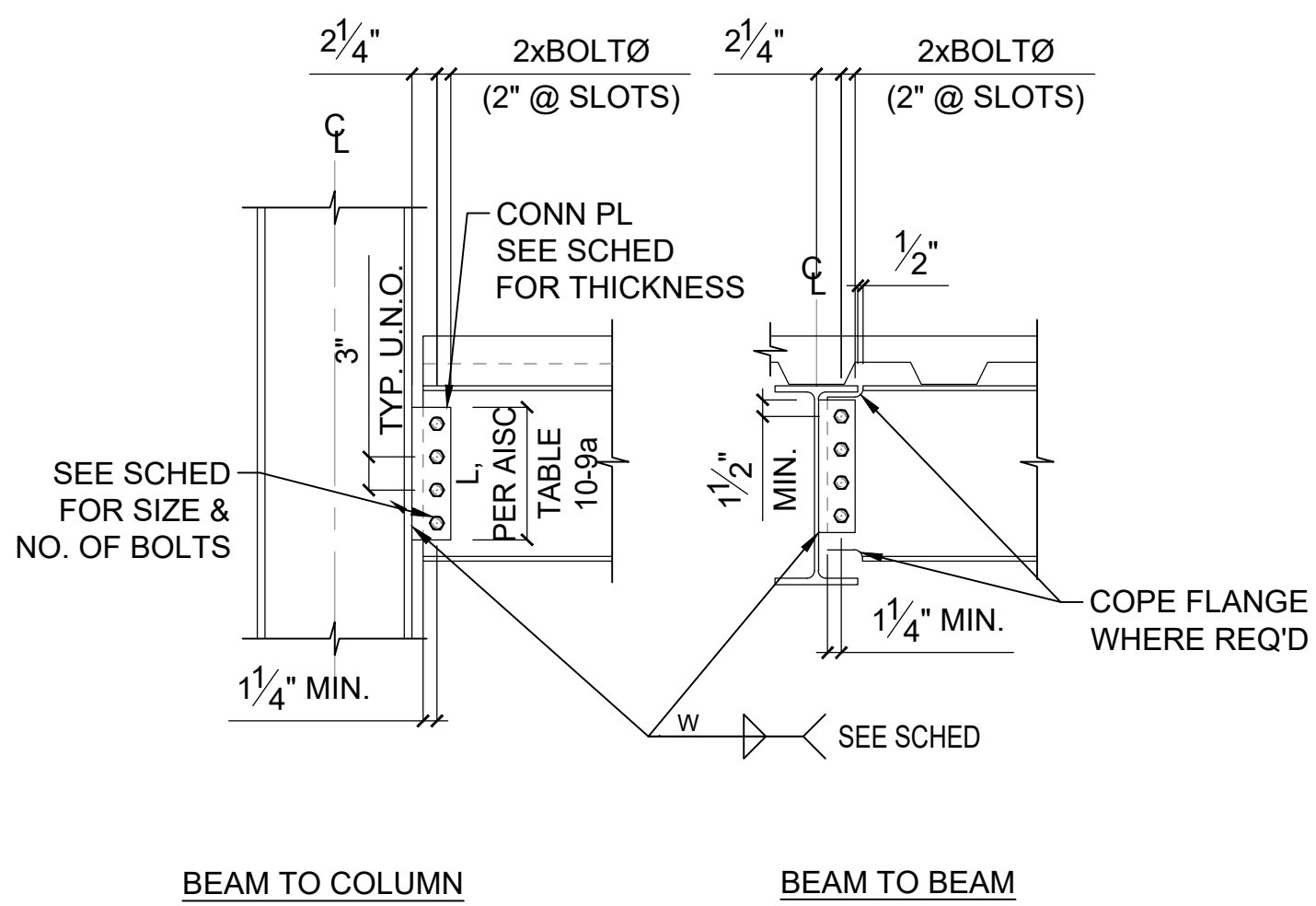
SCALE
NOT TO SCALE

3

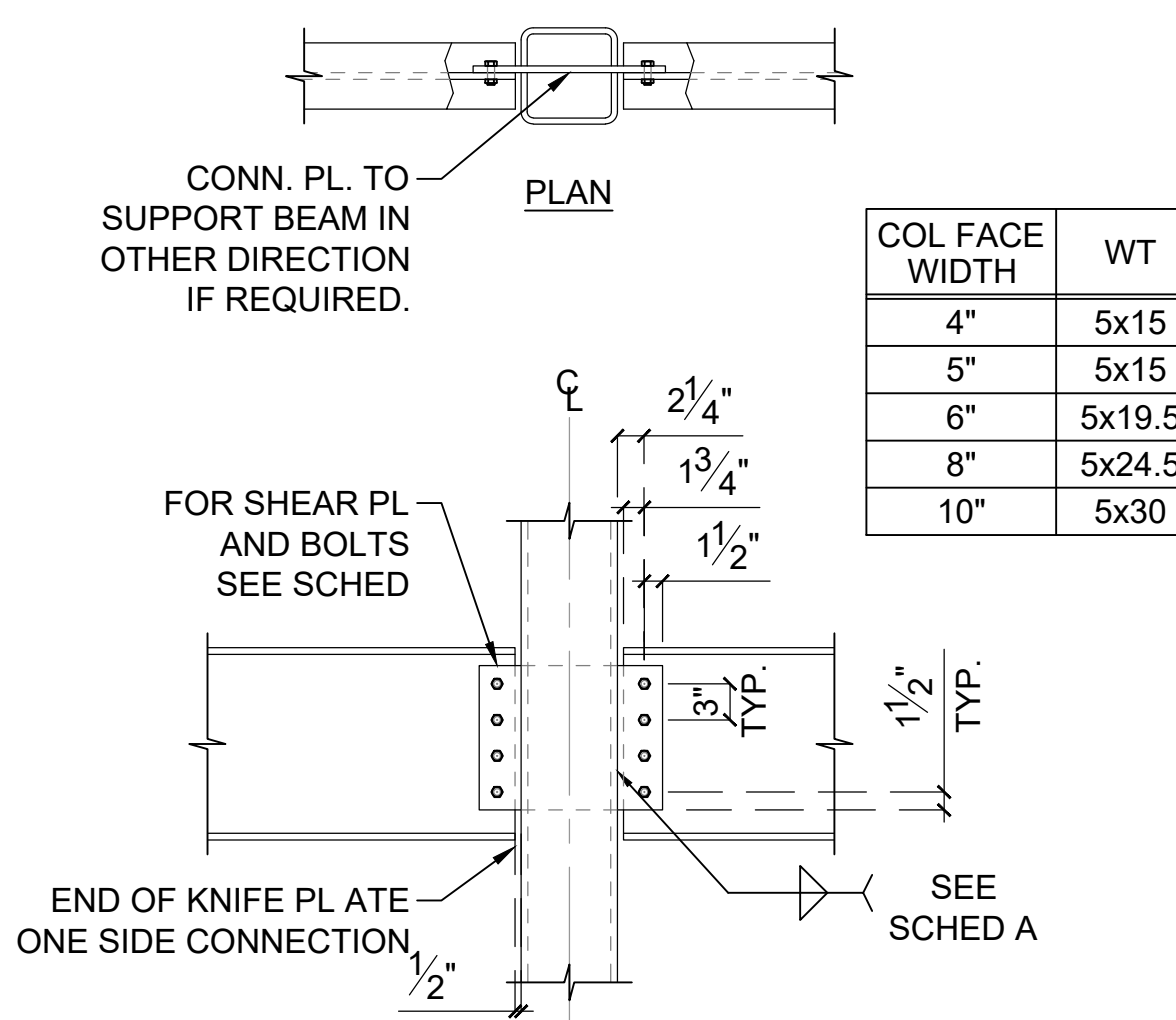
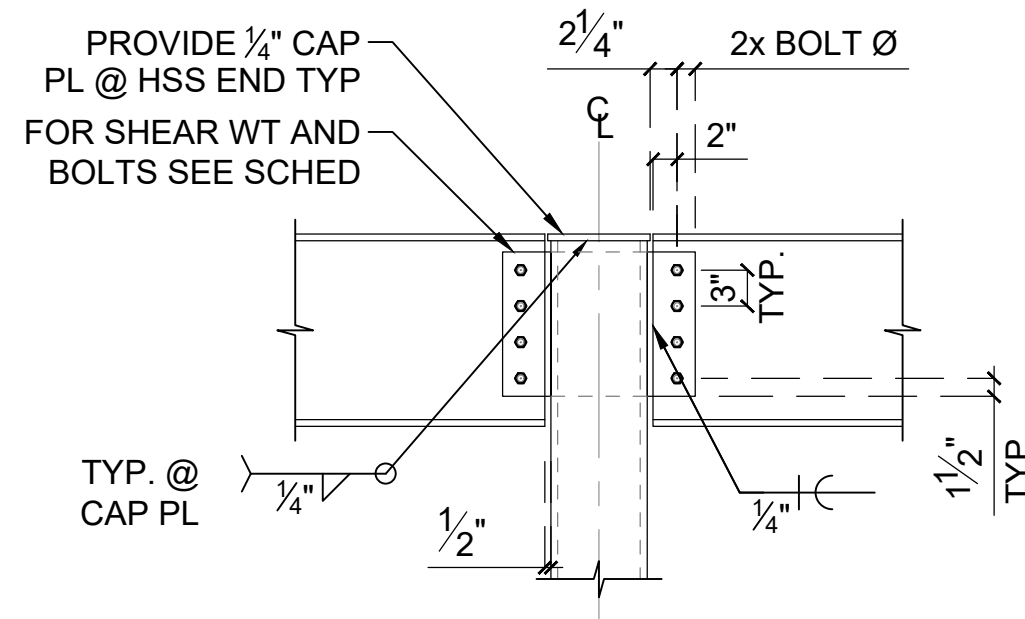
X-BRACING INTERSECTION

SCALE
NOT TO SCALE

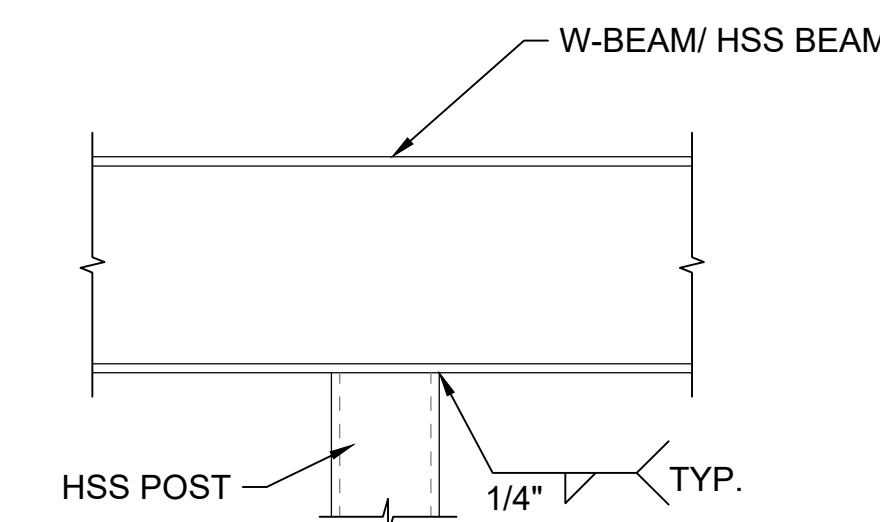
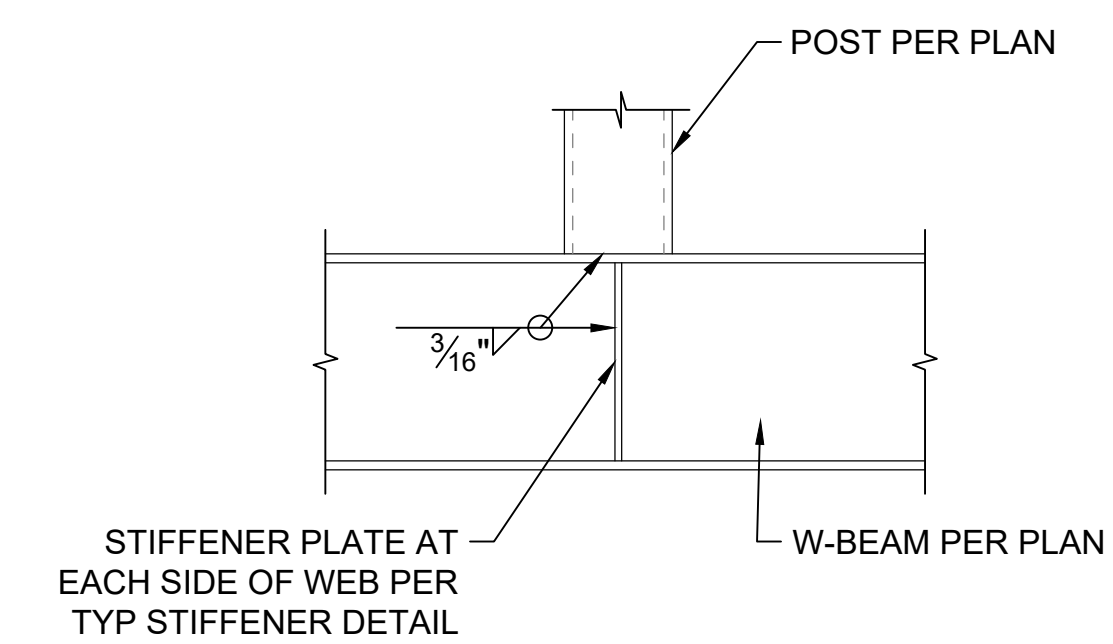
4



COL FACE WIDTH	WT
4"	5x15
5"	5x15
6"	5x19.5
8"	5x24.5
10"	5x30



COL FACE WIDTH	WT
4"	5x15
5"	5x15
6"	5x19.5
8"	5x24.5
10"	5x30



STANDARD BOLTED CONNECTION SCHEDULE "A"

BEAM SIZE	NUMBER & SIZE OF BOLTS REQ'D	PLATE THICKNESS	WELD SIZE (W)
W6, C6, C7	(2) 3/4"Ø @ 2" GA	1/4"	3/16"
W8, C8, C9	(2) 3/4"Ø	1/4"	3/16"
W10, C10	(2) 3/4"Ø	3/8"	1/4"
W12, C12	(3) 3/4"Ø	3/8"	1/4"
W14, C15	(3) 3/4"Ø	3/8"	1/4"
W16	(4) 3/4"Ø	3/8"	1/4"
W18	(4) 3/4"Ø	3/8"	1/4"
W21	(5) 3/4"Ø	3/8"	1/4"
W24	(6) 3/4"Ø	3/8"	1/4"

NOTES:

1. SHORT SLOTTED HOLES MAY BE USED AT ALL COLUMN CONNECTIONS AS AN OPTION. FOR 10, 11 & 12 BOLT GROUPS, USE SHORT SLOTTED HOLES AT CONNECTIONS TO COLUMNS.
2. FOR BEAM TO COLUMN WEB CONNECTION AT W14 & SMALLER COLUMNS, SEE EXTENDED PLATE DETAIL.

STANDARD BOLTED BEAM CONNECTION

SCALE
NOT TO SCALE

5

BEAM TO HSS COLUMN (TOP)

SCALE
NOT TO SCALE

6

BEAM TO HSS COLUMN SECTION

SCALE
NOT TO SCALE

7

TYP. POST ON BEAM

SCALE
NOT TO SCALE

8

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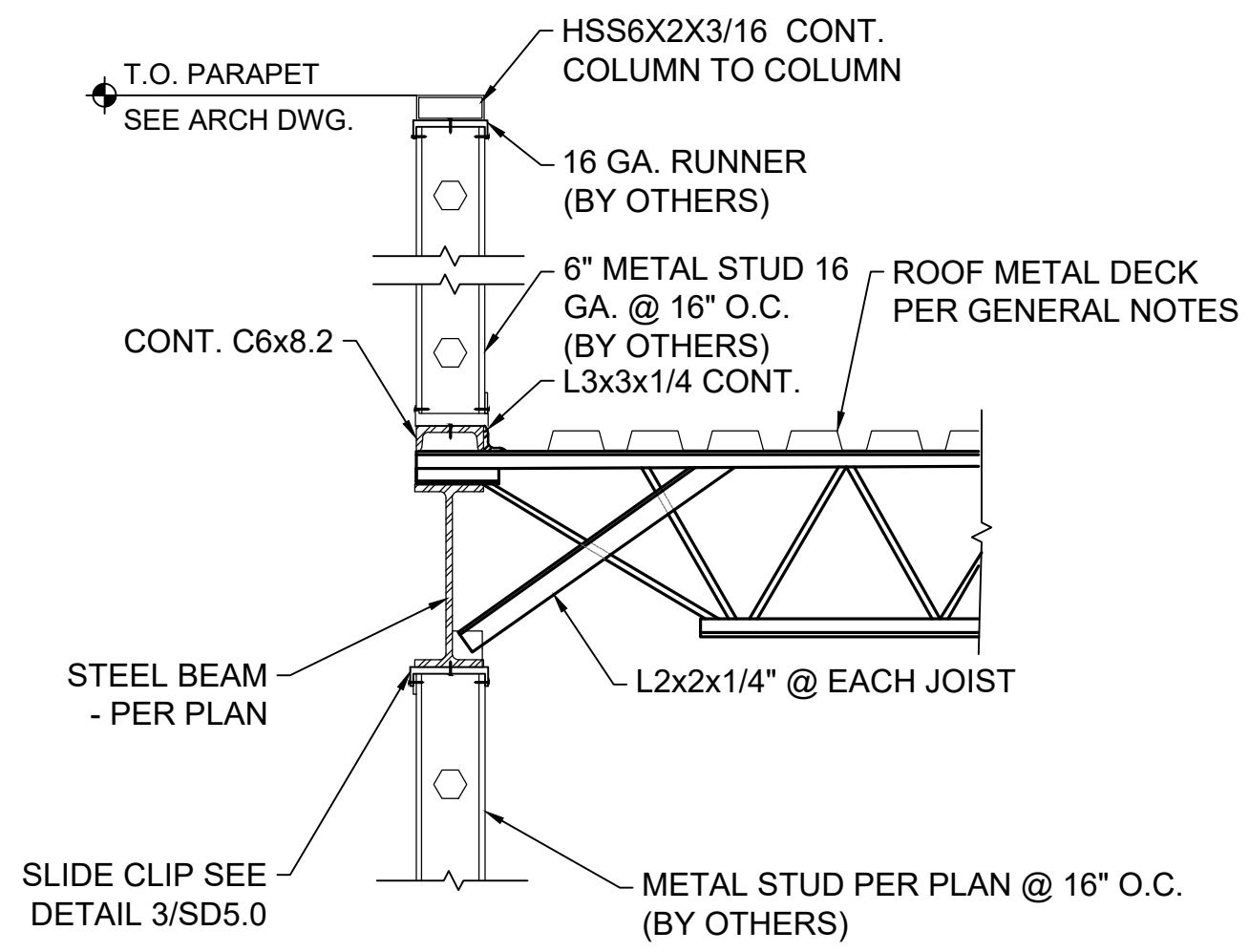
Sheet Title
STEEL FRAMING DETAILS

Project No.
170-101.00

Drawn By
LR

Reviewed By
RP

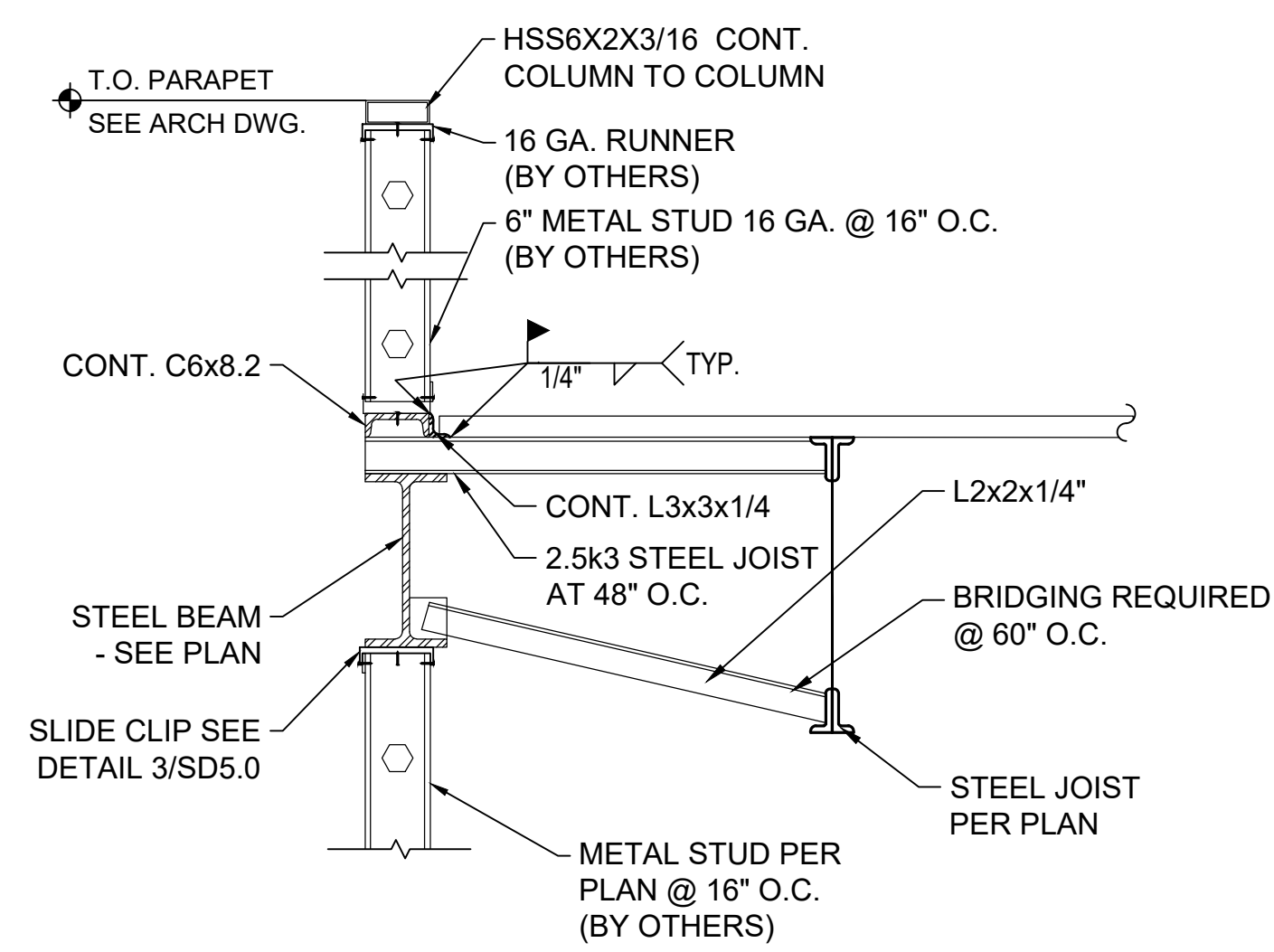
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SD2.0



STEEL JOIST TO STEEL BEAM

SCALE
NOT TO SCALE

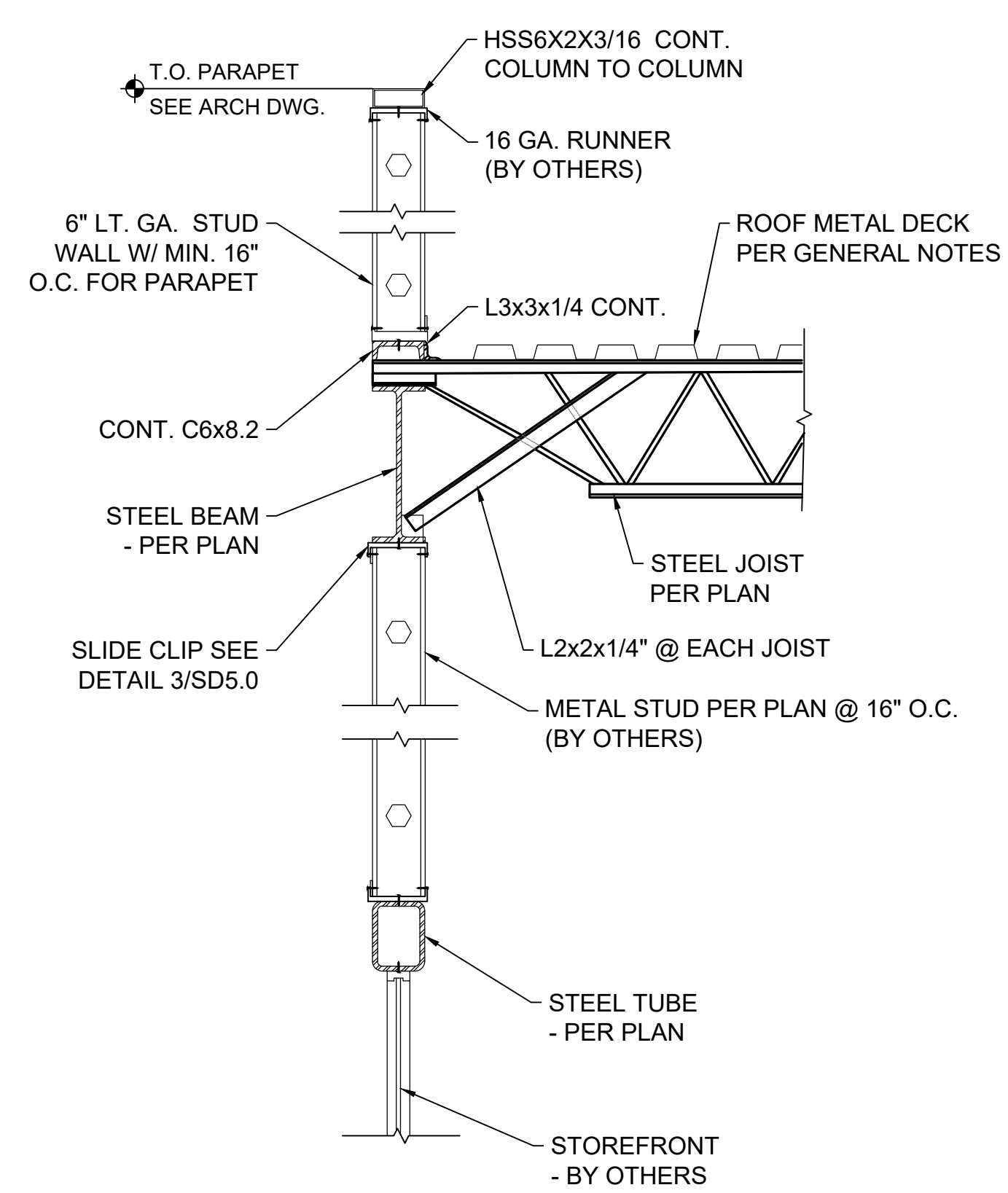
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STEEL JOIST TO STEEL BEAM

SCALE
NOT TO SCALE

2

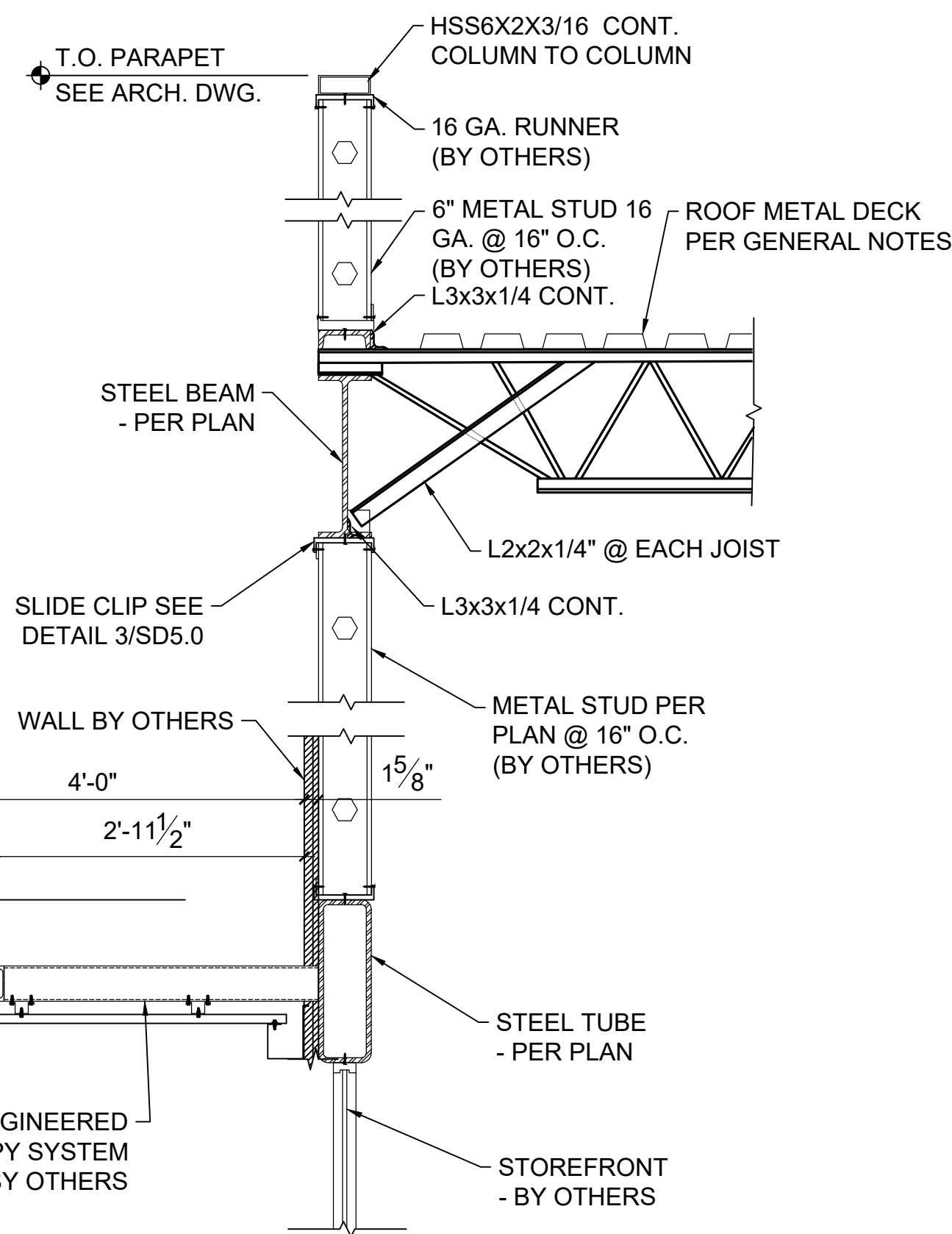


STEEL JOIST TO STEEL BEAM

SCALE
NOT TO SCALE

3

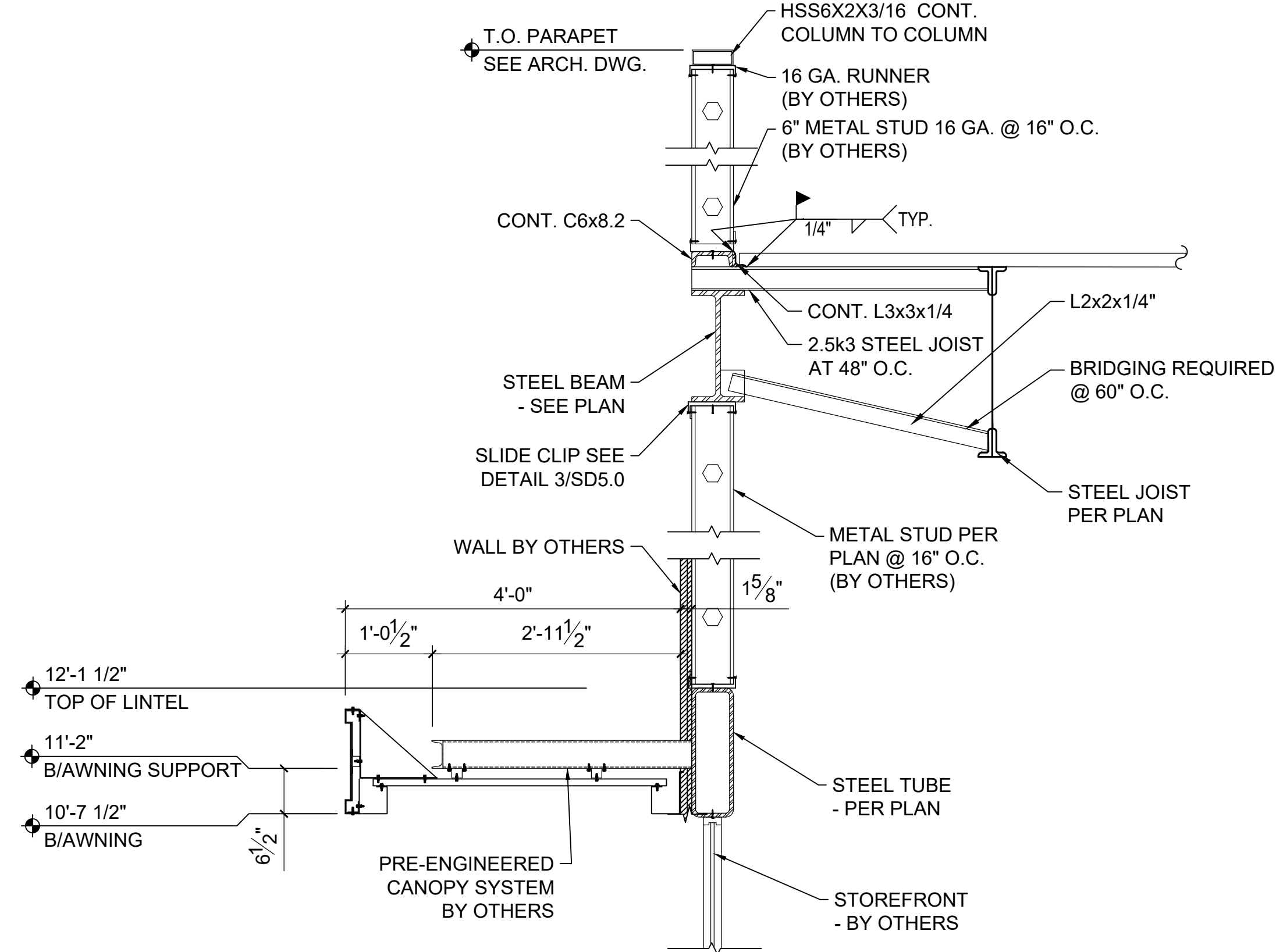
NOTE: ALTERNATE DESIGN:
 USE WOOD ROOF TRUSSES IN LIEU OF STEEL JOISTS @ 2'-0" O.C. AND CONNECTIONS/HANGERS SHALL BE REVISITED UPON ROOF TRUSS SHOP DRAWINGS RECEIVAL.
 USE (2)2X6 ON TOP OF STEEL BEAM AND CONNECT WITH 3/4" DIA. ANCHOR BOLTS AT EA. SIDE OF THE WEB AND @16" O.C.
 DO NOT USE CONT. C6 IN CASE OF WOOD JOISTS/TRUSSES USED.



STEEL JOIST TO STEEL TUBE

SCALE
NOT TO SCALE

4



STEEL JOIST TO STEEL TUBE

SCALE
NOT TO SCALE

5

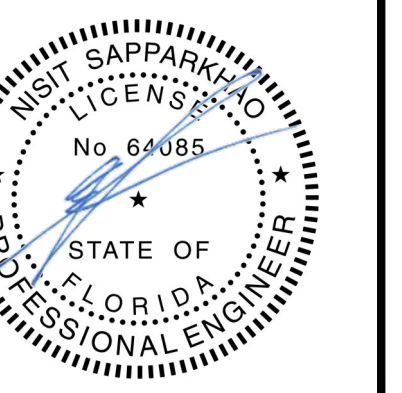
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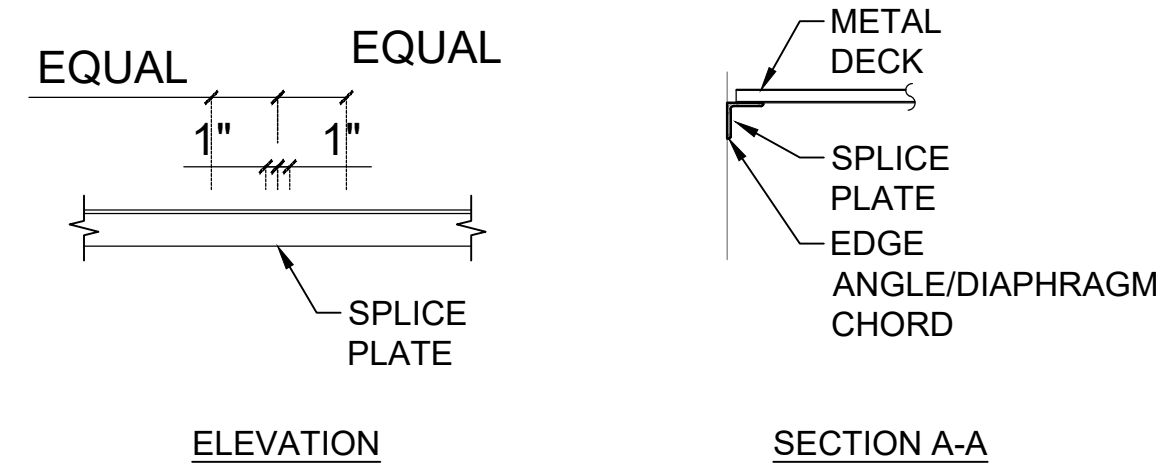
Sheet Title
STEEL FRAMING DETAILS

Project No.
 170-101.00

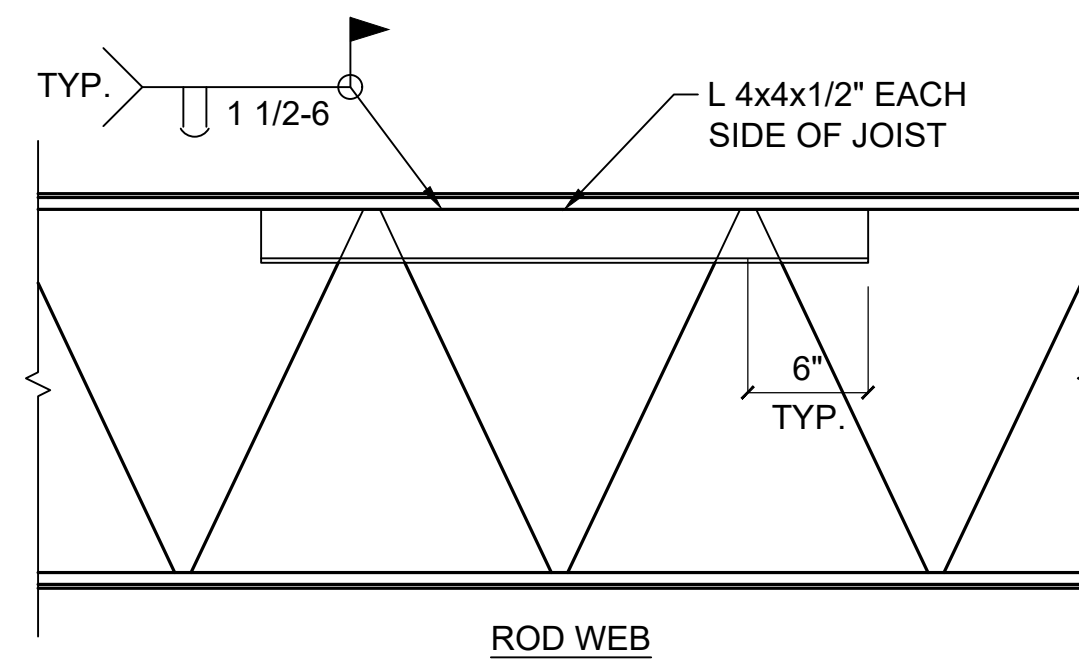
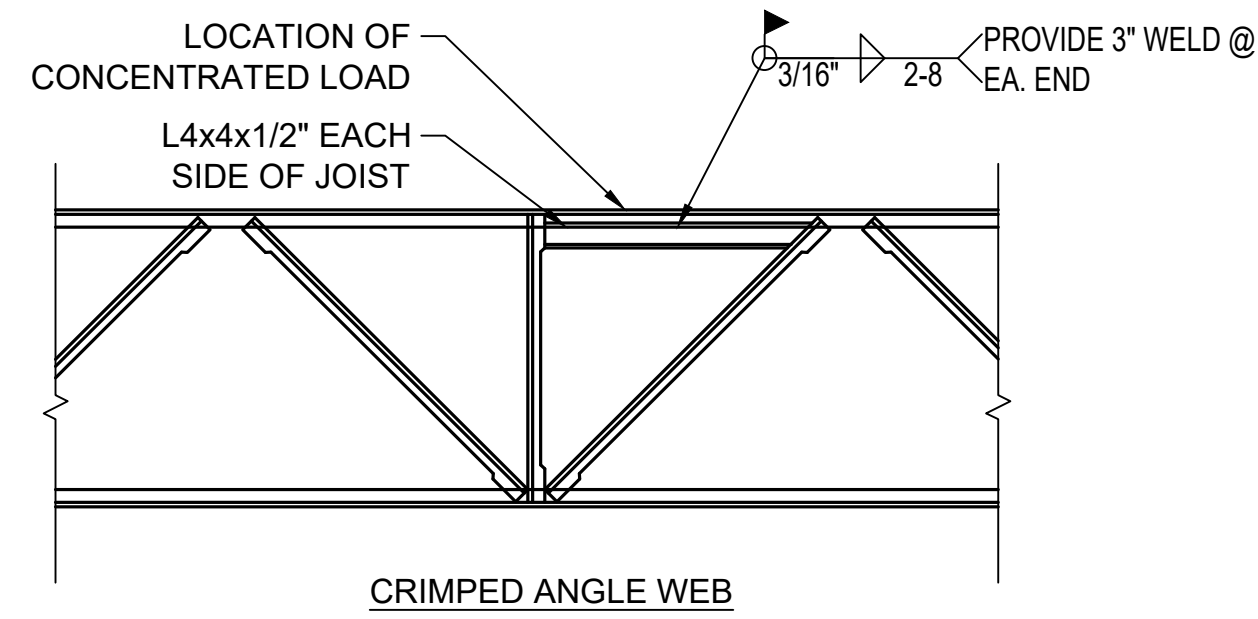
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Drawn By
 LR

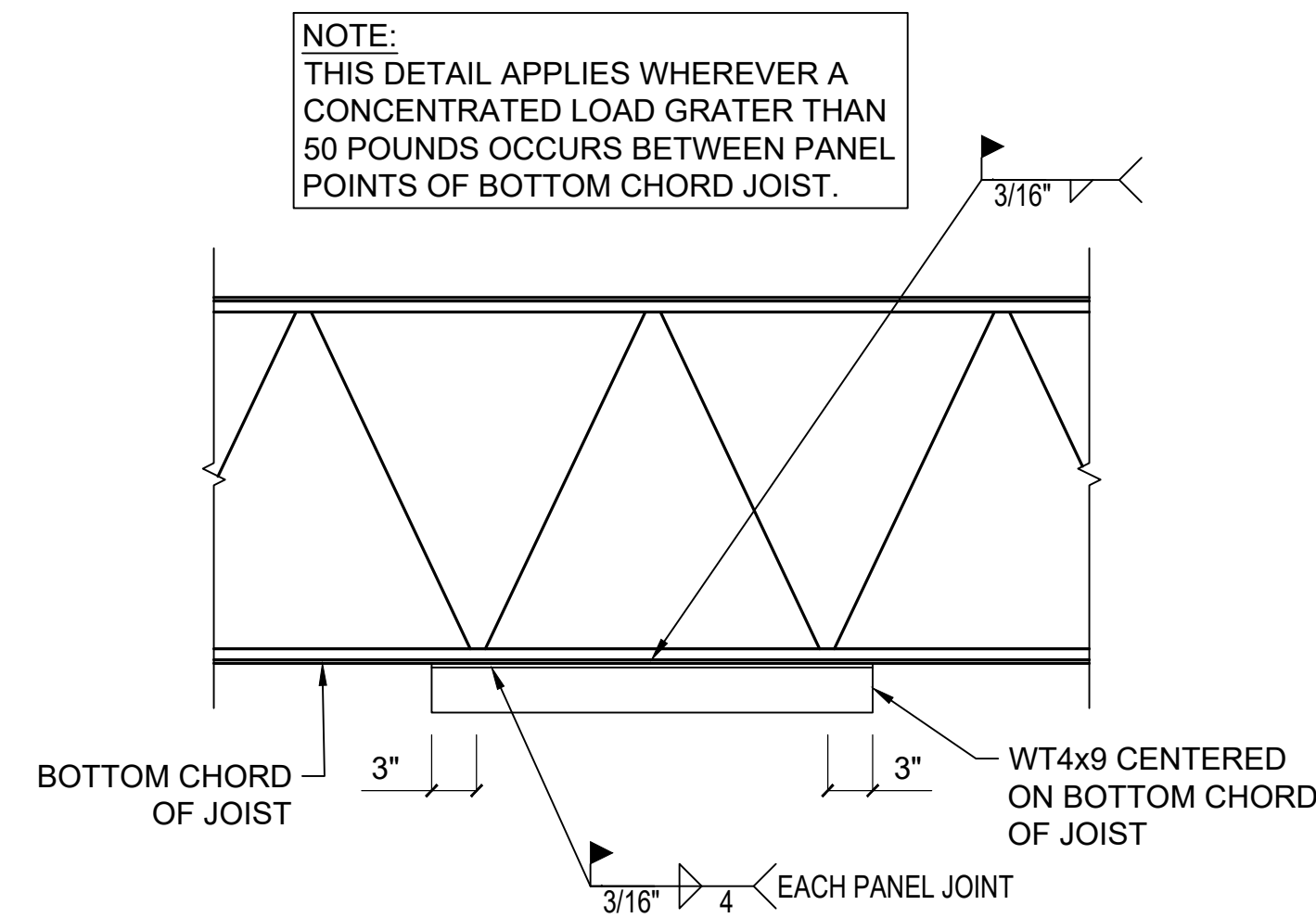
Reviewed By
 RP



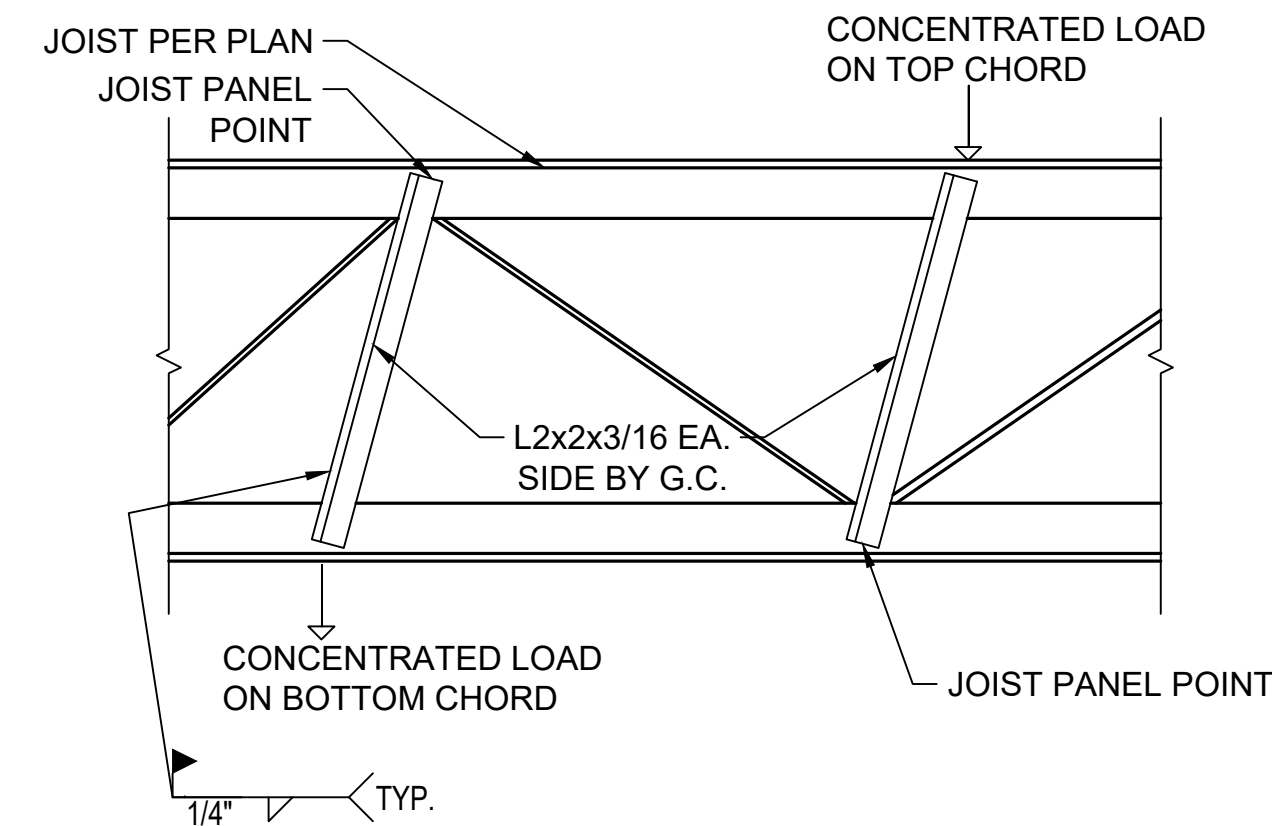
EDGE ANGLE/DIAPHRAGM CHORD SPLICES	
ANGLE SIZE	SPLICE PLATE
L3x3x1/4"	1/2"x2 1/2"x9"
L4x4x1/4"	1/2"x4 1/2"x1'-0"
L5x3x1/4" (L.L.H.)	3/4"x2 1/2"x1'-2"
L6x4x5/16" (L.L.V.)	1/2"x5 1/2"x1'-2"



NOTE:
TOP CHORD SHALL BE REINFORCED WHEREVER A CONCENTRADE LOAD IN EXCESS OF 50 LBS. OCCURS BETWEEN PANEL POINTS OF THE JOIST.



NOTES:
THIS DETAIL IS APPLIED FOR ALL CONCENTRATED LOAD THAT ARE ATTACHED TO JOIST (S) BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS. EXAMPLES OF THESE LOADS ARE:
1) HANGING LOAD, PARTITION, THAT EXCEEDS 100 lb.
2) HANGING PLUMBING, MECH'L STEEL PIPE WITH DIA. > 5"
3) HANGING BASKETBALL GOALS
4) MECHANICAL UNITS.



EDGE SPLICE DETAIL

SCALE
NOT TO SCALE

1

TYP. CHORD REIN. FOR KCS OR K-SERIES

SCALE
NOT TO SCALE

2

TYP. JOIST BOTTOM CHORD REIN.

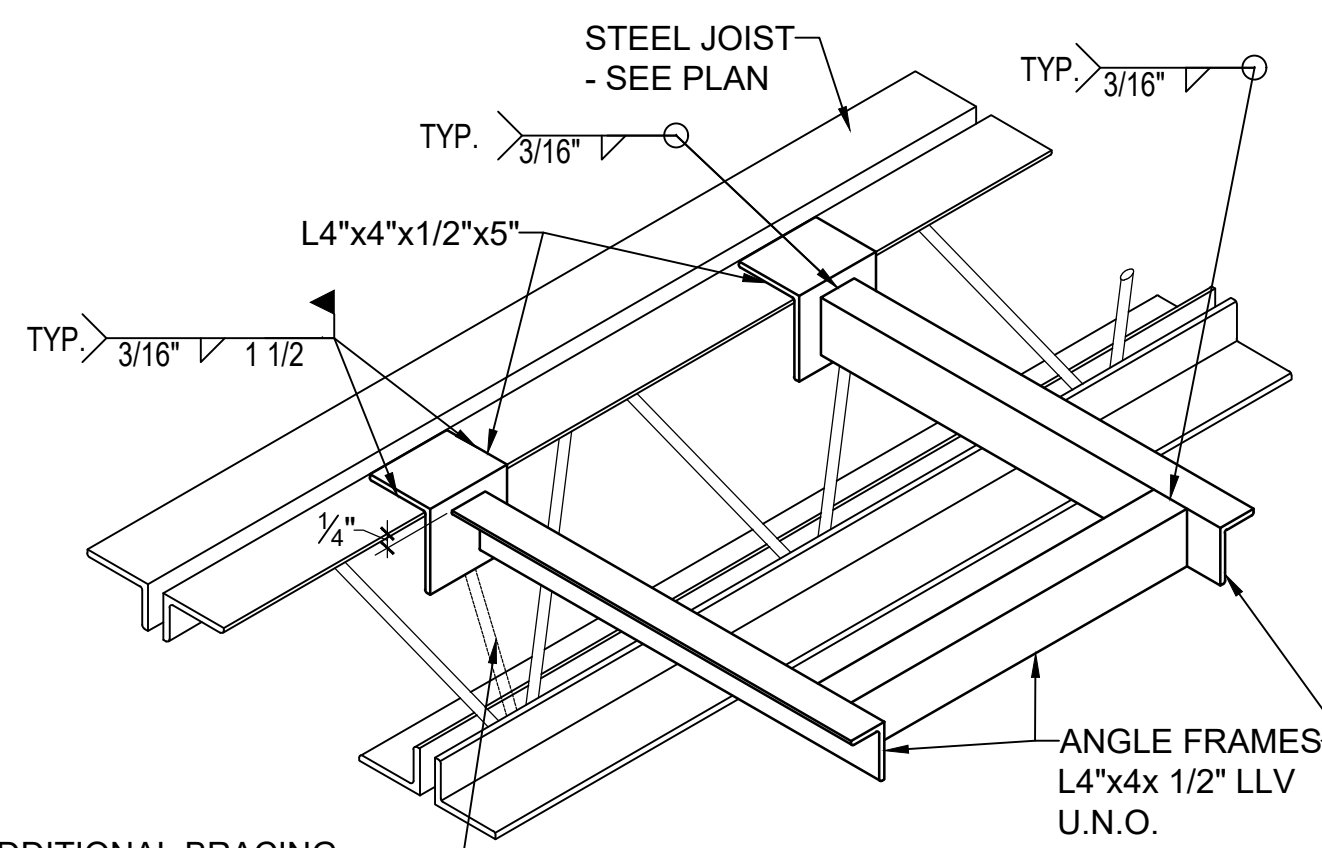
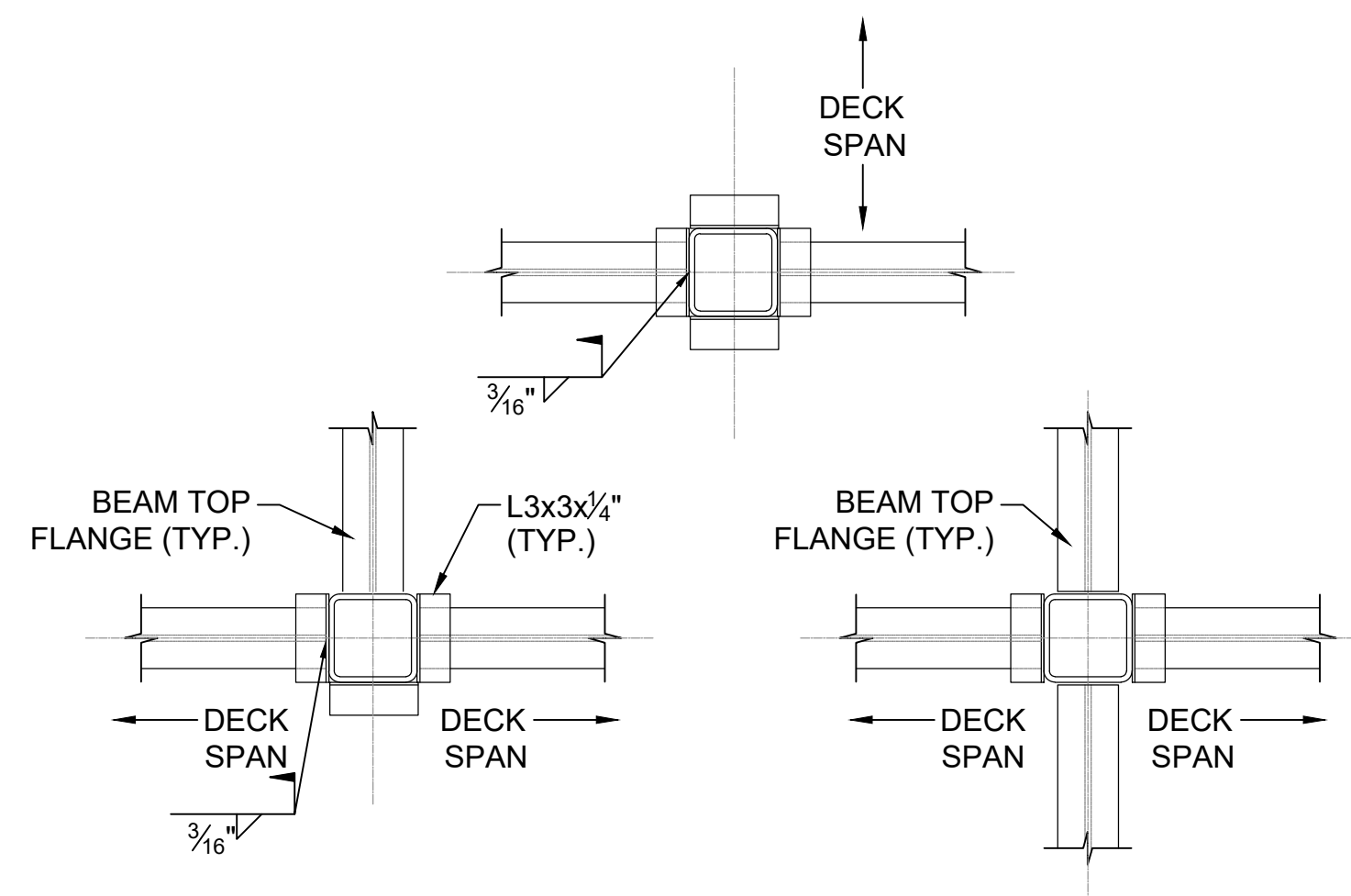
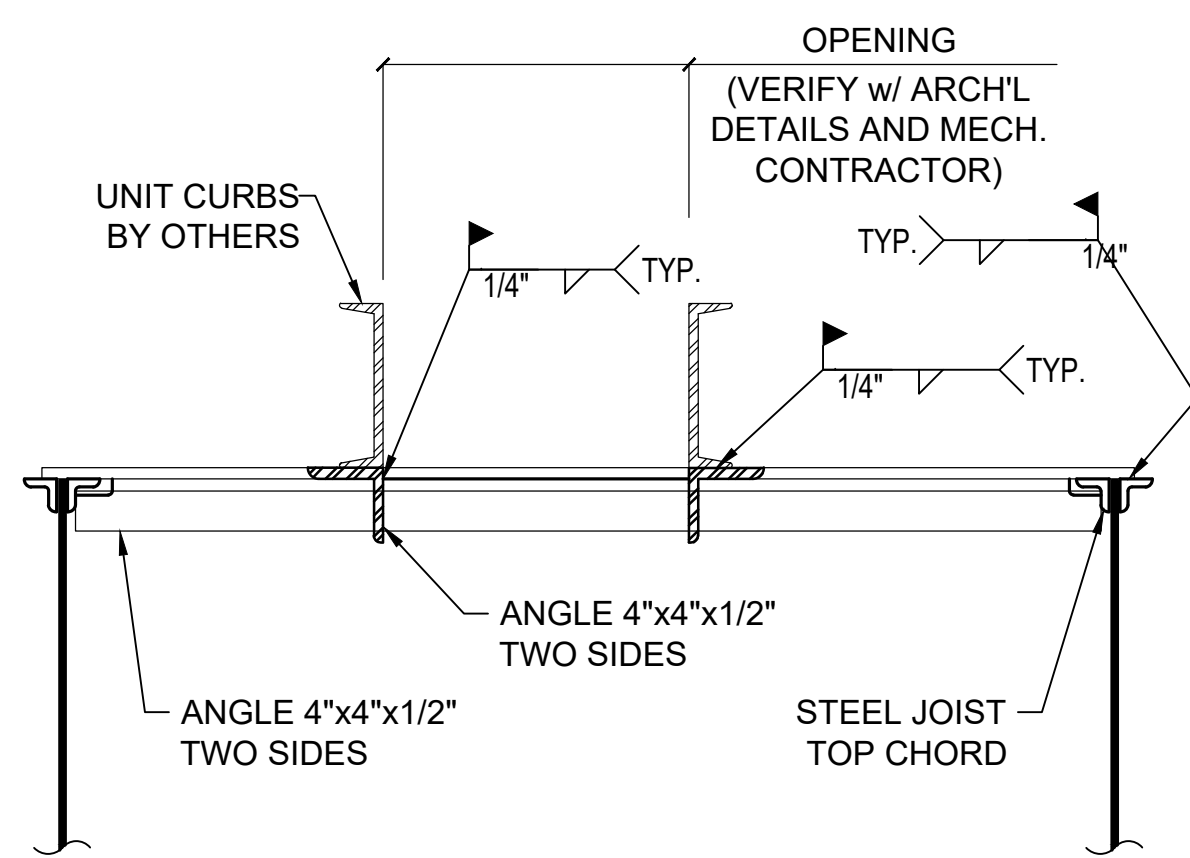
SCALE
NOT TO SCALE

3

TYP. JOIST BRACING

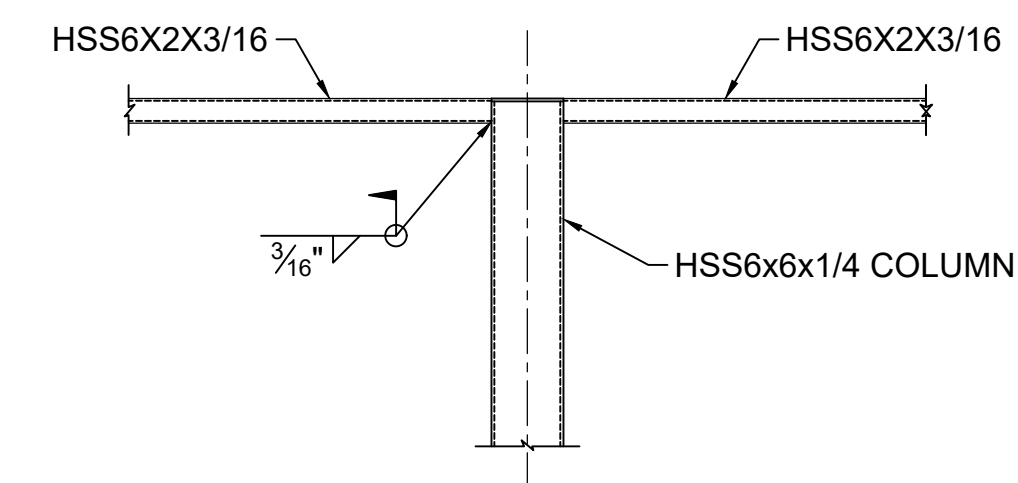
SCALE
NOT TO SCALE

4



ADDITIONAL BRACING REQUIRED IF FRAME DOES NOT FALL ON JOIST PANEL POINT (SEE SUPPLEMENTAL BRACING DETAIL)

NOTE:
USE THIS DETAIL FOR ANY OPENING LARGER THAN 10" IN ANY DIRECTION OR EQUIPMENT WEIGHING IN EXCESS OF 50 POUNDS.



TYP. DETAIL AT ROOF CURB

SCALE
NOT TO SCALE

5

METAL DECK SUPPORT @ STEEL COLUMN

SCALE
NOT TO SCALE

6

TYP. STEEL JOIST OPENING SUPPORT

SCALE
NOT TO SCALE

7

PARAPET CONNECTION

SCALE
NOT TO SCALE

8

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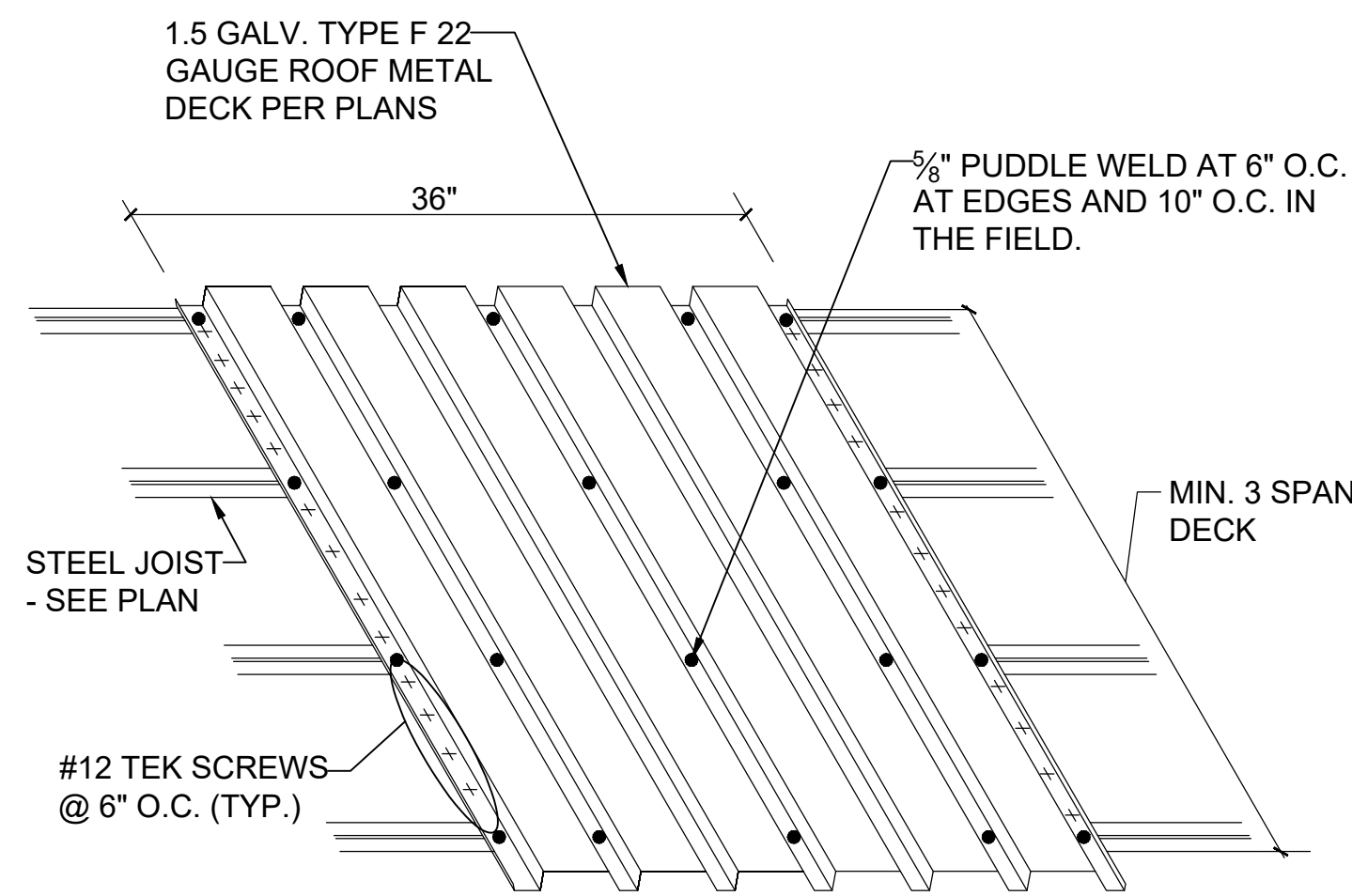
Sheet Title
ROOF FRAMING DETAILS

Project No.
170-101.00

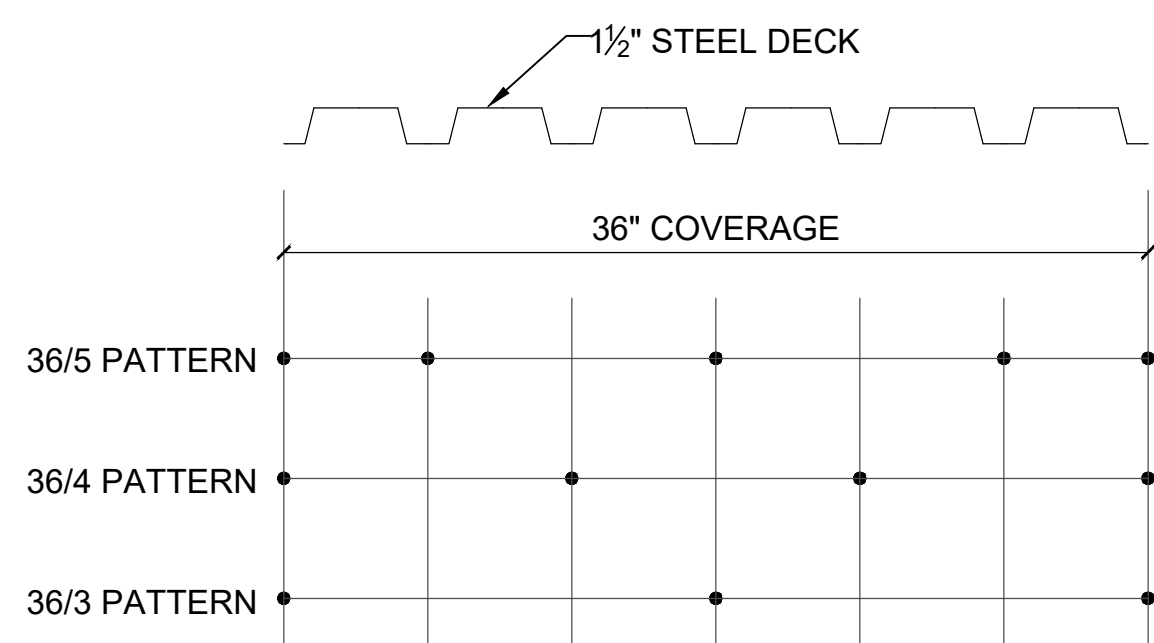
Sheet
SD4.0

Drawn By
LFR

Reviewed By
RP

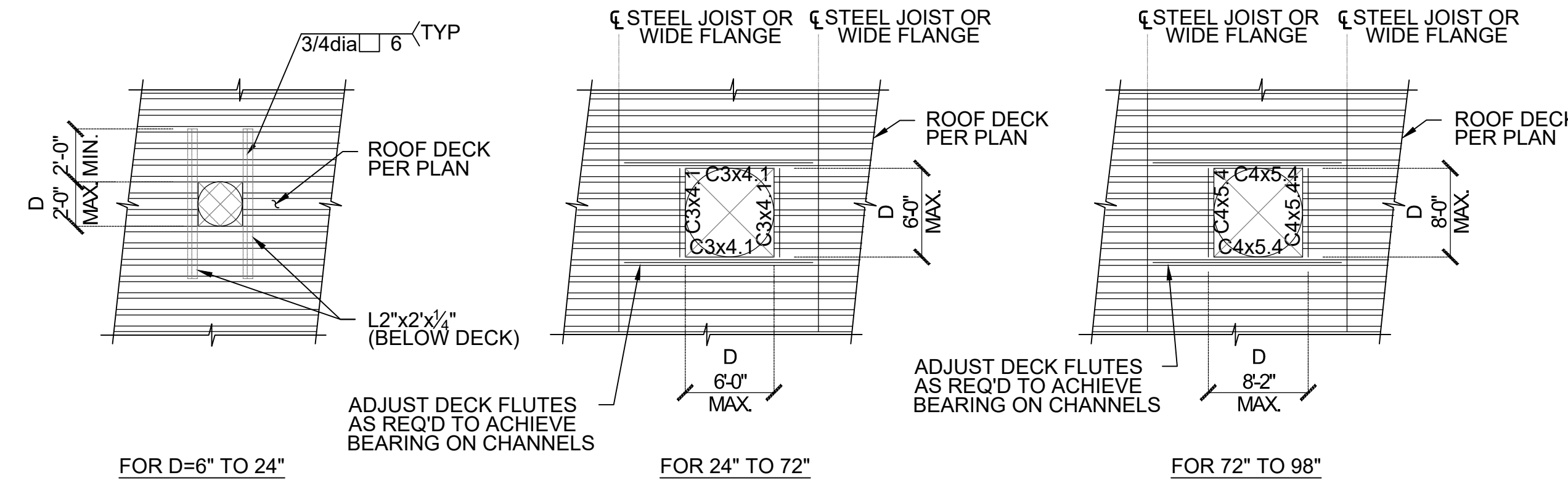


- NOTES:
1. WELDING METAL DECK TO ROOF JOISTS OR TO OTHER METAL DECK PANELS IS NOT PERMITTED
 2. USE #12 TEK SCREWS FOR CONN. TO ALL PERIMETER ANGLES @ 6" O.C.



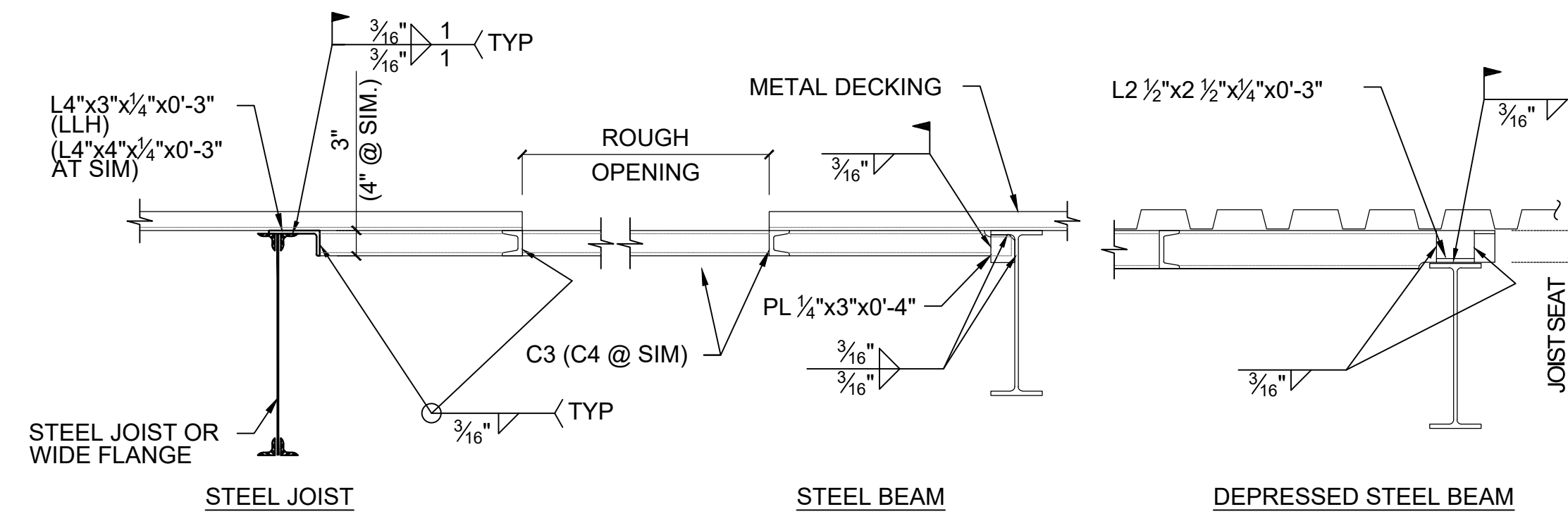
NOTES:
REFER TO GENERAL NOTES FOR FASTENER TYPES.

- 36/5 (6)
 NUMBER OF SIDELAP SCREWS PER SPAN
 NUMBER OF FASTENERS AT EACH SUPPORT PER SHEET
 NOMINAL SHEET WIDTH (INCHES)



- NOTES:
1. HOLES LESS THAN 6"Ø AND CUTTING NO MORE THAN 1 WEB REQUIRE NO REINFORCEMENT.
 2. ALL METAL DECK OPENINGS SHOWN ABOVE APPLY ONLY TO DUCTWORK, PIPING, ROOF HATCHES AND SMALL AIR SHAFTS.
 3. THESE REINFORCED OPENINGS ARE NOT INTENDED TO SUPPORT MECHANICAL EQUIPMENT.

PLAN



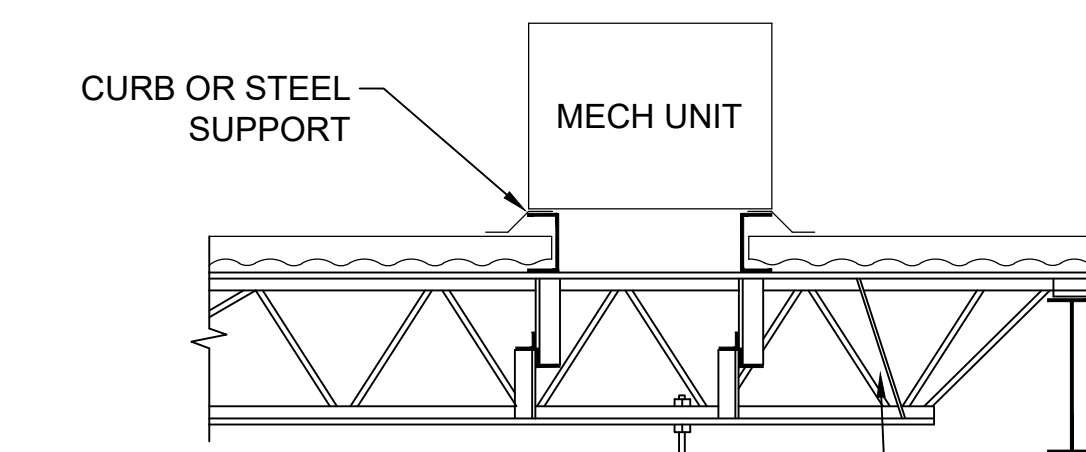
ROOF DECK ATTACHMENT W/ DECK FASTENER

SCALE
NOT TO SCALE 1

TYP. ROOF OPENING SECTION FOR AIR VENTS

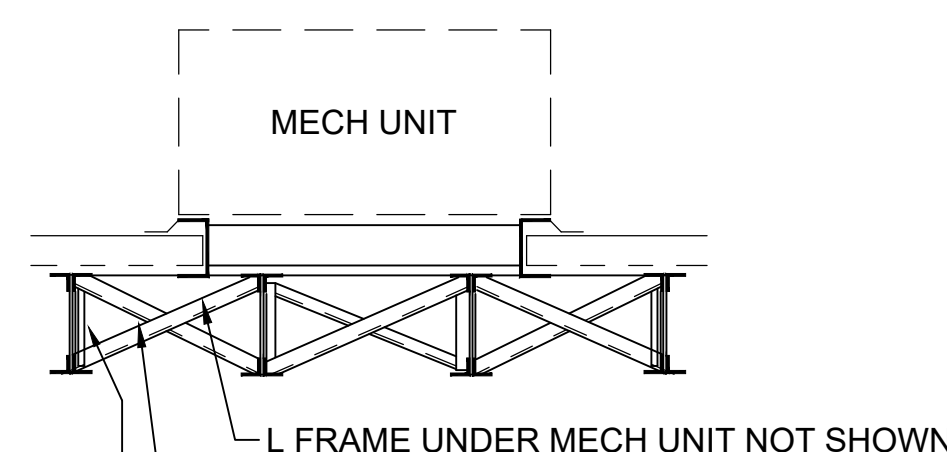
SCALE
NOT TO SCALE 2

NOTE:
MECHANICAL UNIT MUST BEAR DIRECTLY ON ROOF MEMBER

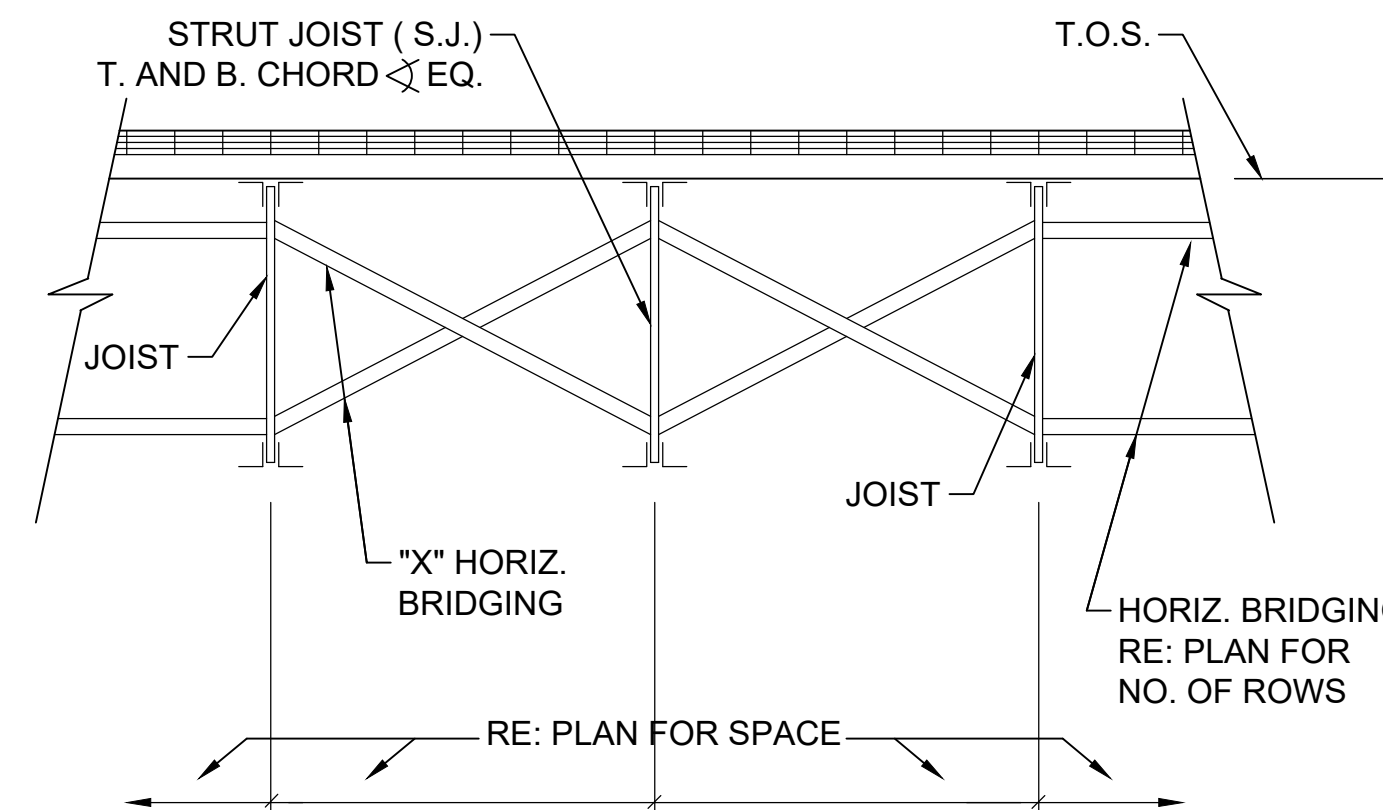


PLACE ALL MECH PIPING HANGERS AT BOT CHORD PANEL POINT OF JSTS AND TRUSSES
 L2 1/2 x 2 1/2 x 1/4 BRACE FROM TOP CHORD OF JST (AT MECH UNIT CURB) DOWN TO NEAREST BOT CHORD PANEL POINT OF JST

L FRAME UNDER MECH UNIT NOT SHOWN FOR CLARITY



L FRAME UNDER MECH UNIT NOT SHOWN FOR CLARITY
 L2 1/2 x 2 1/2 x 1/4 BRACING AT OTHER END OF MECH UNIT NOT SUPPORT BY ROOF BM OR GIRDER
 L BRACE AS NOTED IN SECTION - "ADDN BRACING AT MECHANICAL UNITS"



BRACING AT MECHANICAL UNIT

SCALE
NOT TO SCALE 3

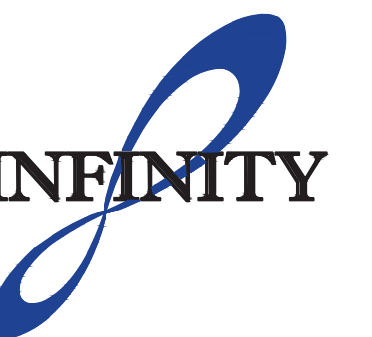
BRACING AT MECHANICAL UNIT

SCALE
NOT TO SCALE 4

BRIDGING AT STRUT JOIST

SCALE
NOT TO SCALE 5

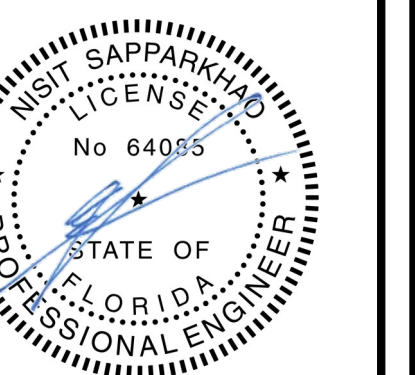
05/31/2024	Date
ISSUE FOR PERMIT	Revision/Issue
1	No.



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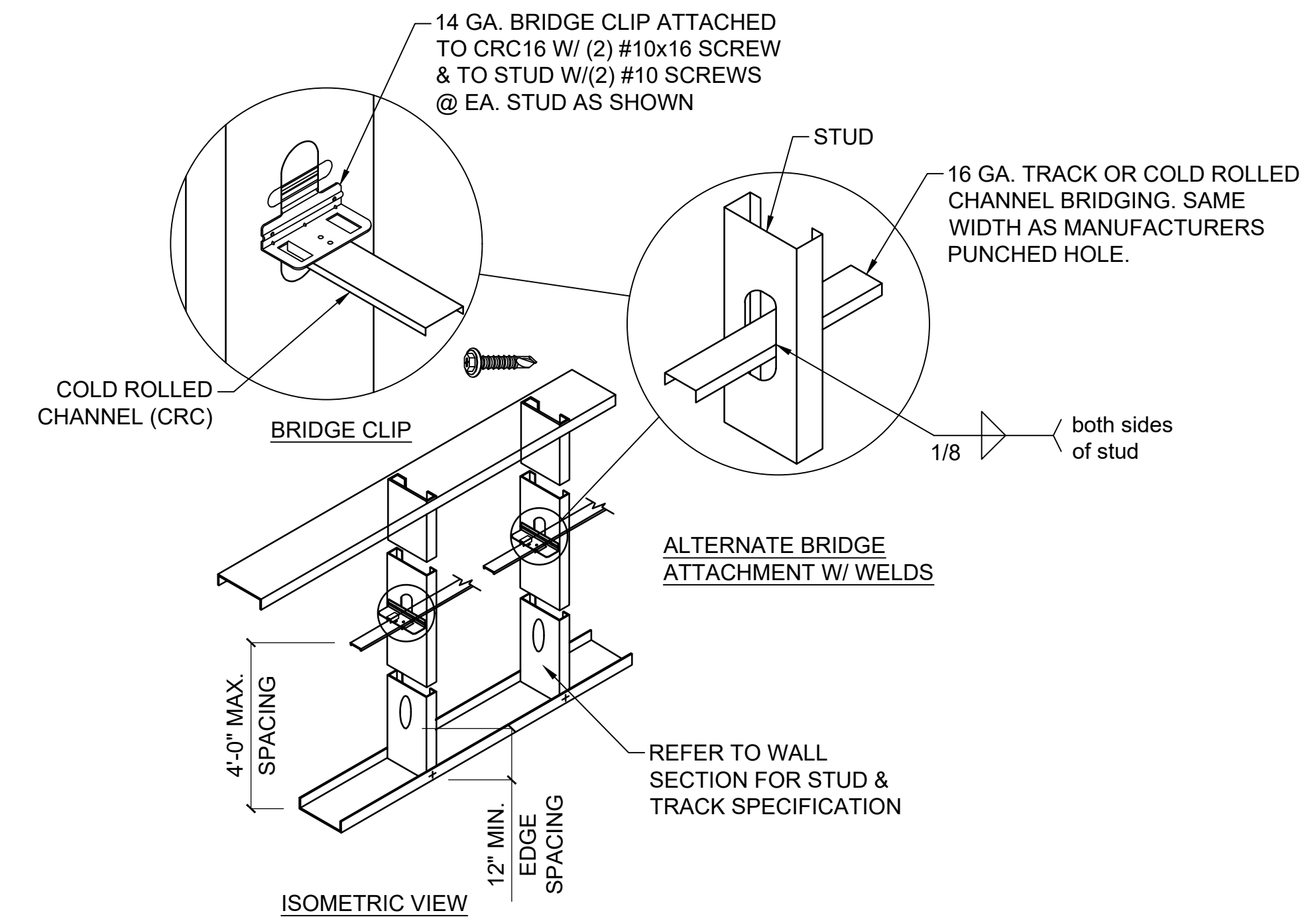
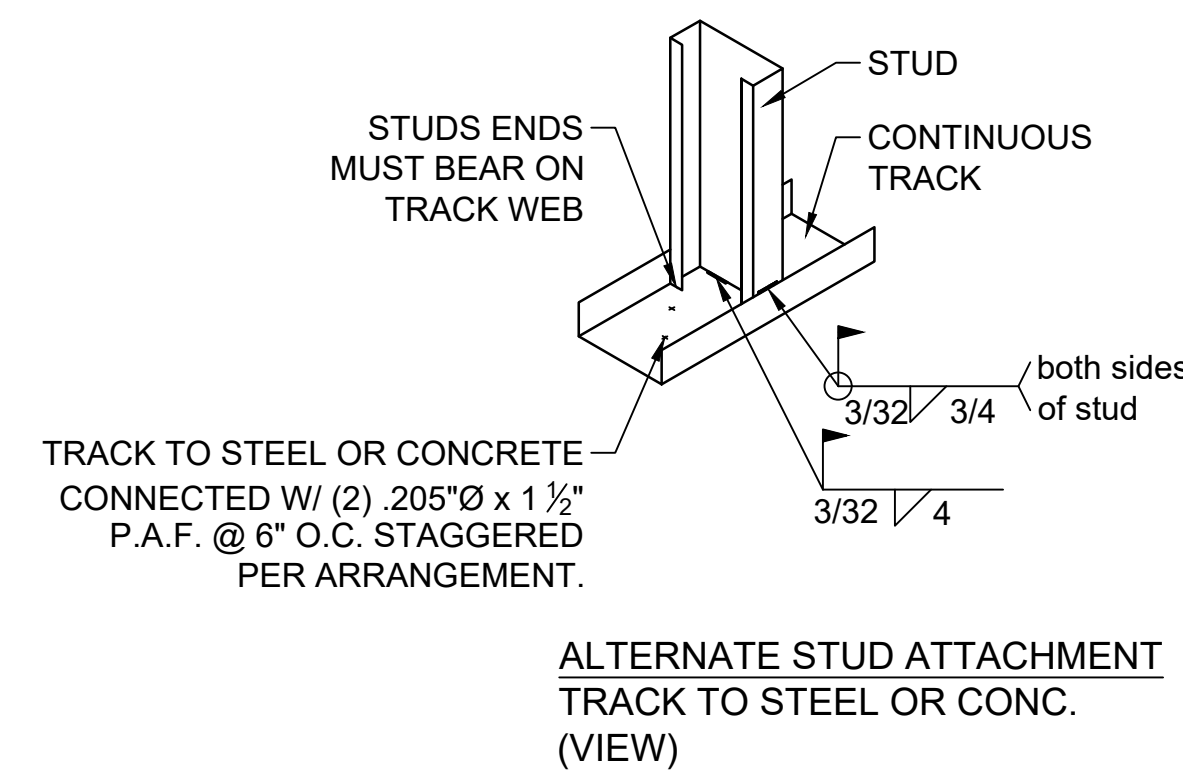
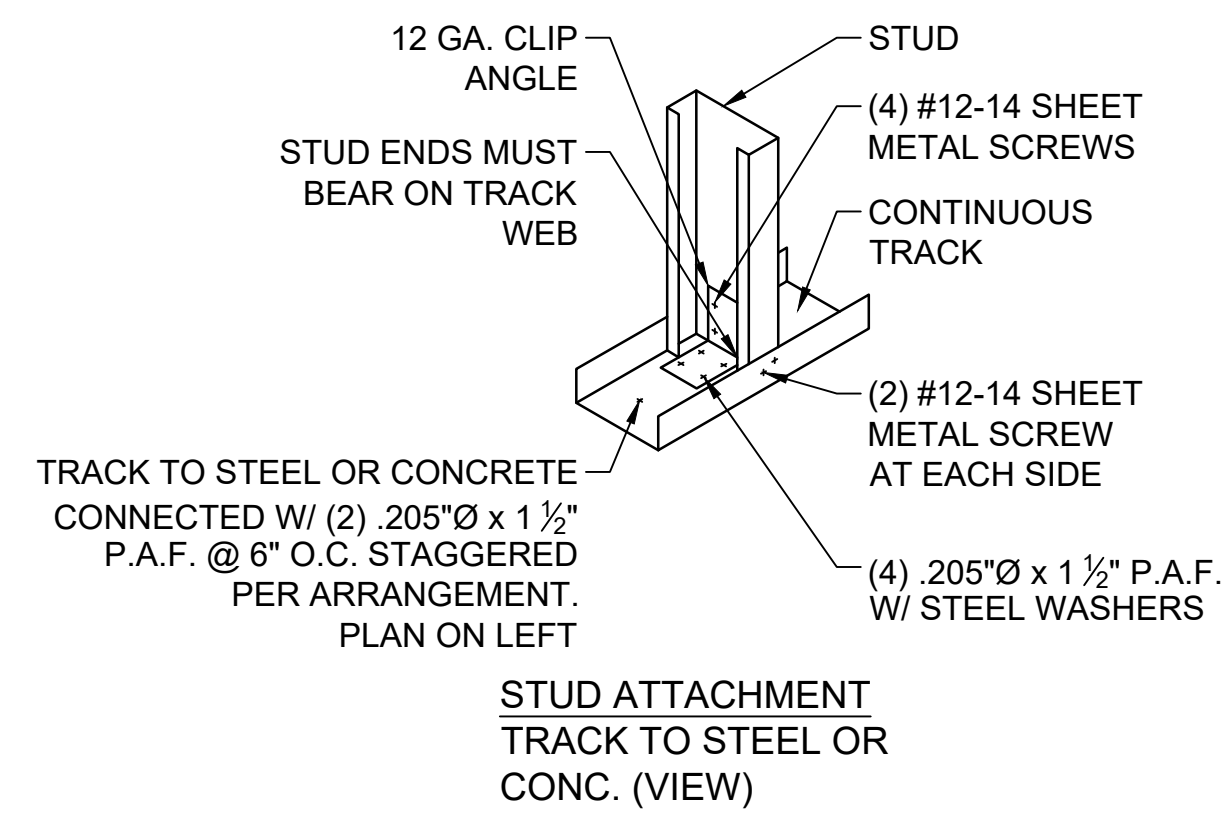
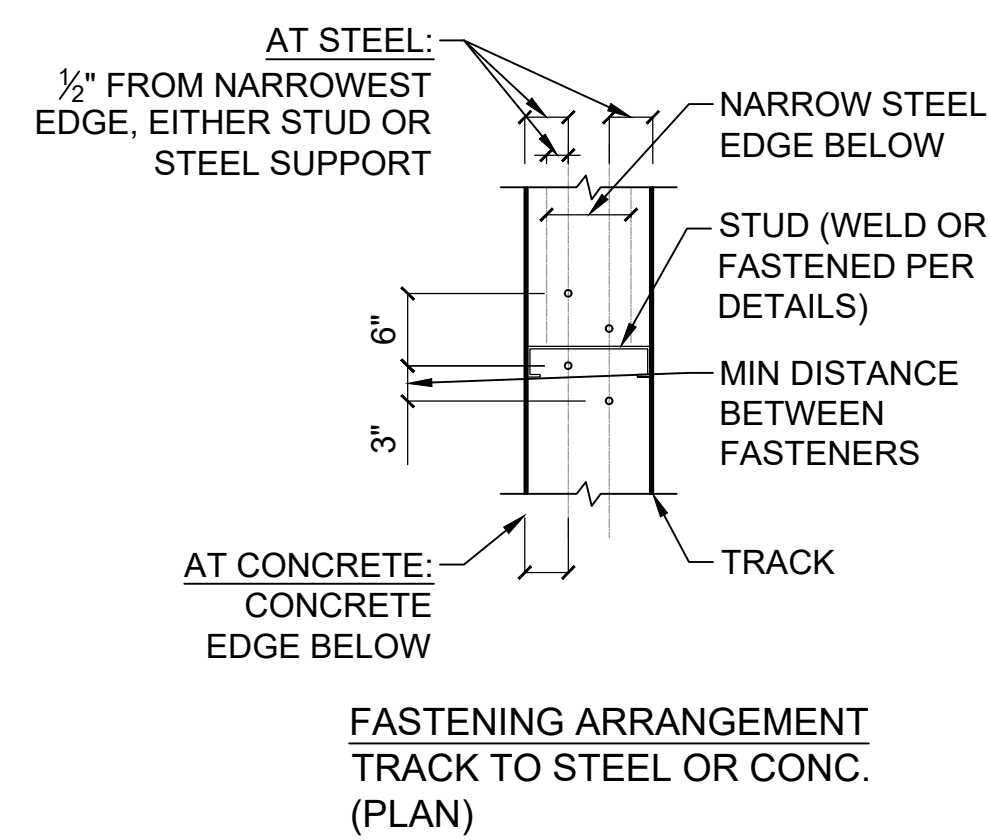
Date

Project Name and Address
CEFCO #437 - BETHEL
 HIGHWAY 90 AND OLD BETHEL ROAD
 CRESTVIEW, FLORIDA

Sheet Title
ROOF FRAMING DETAILS

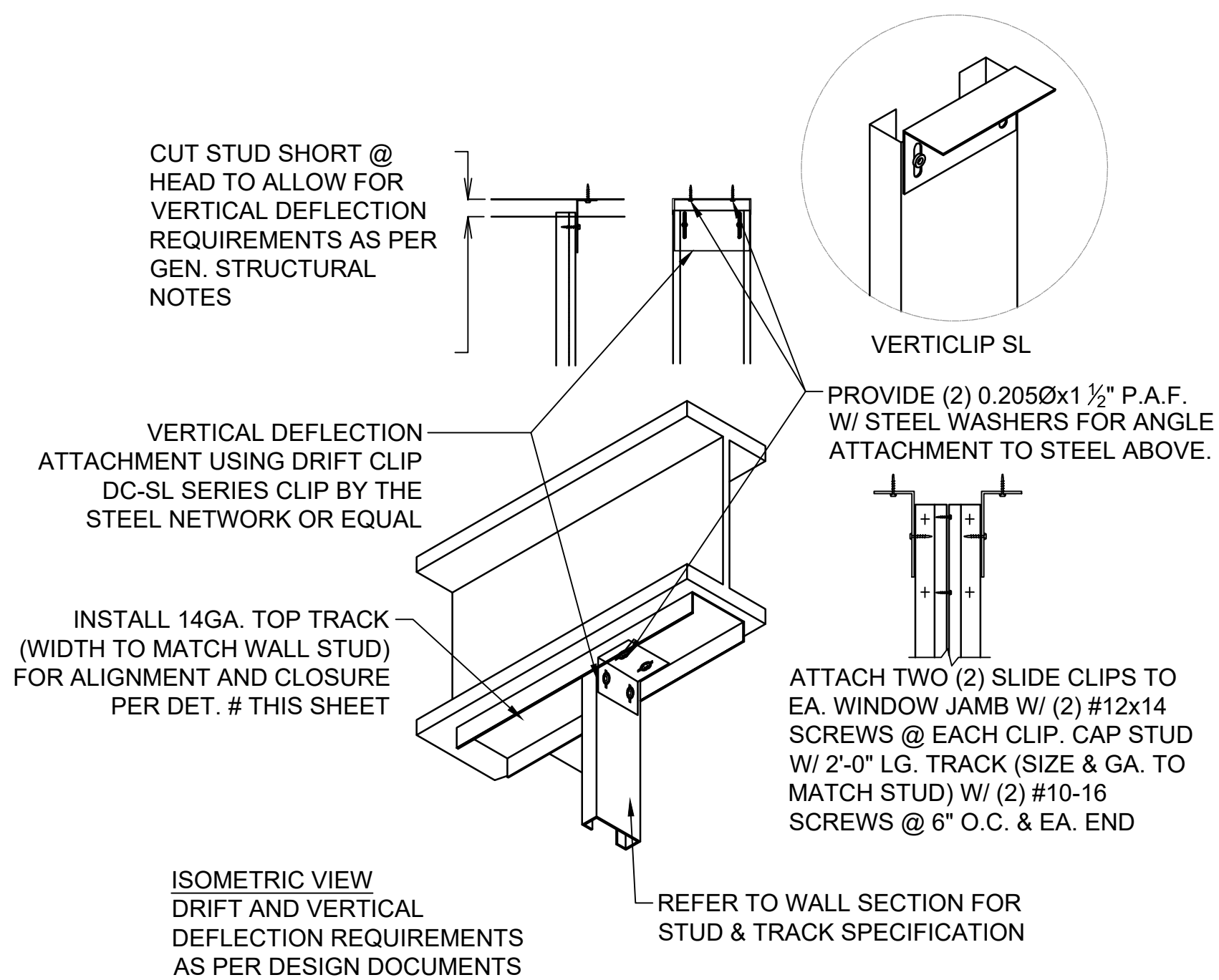
Project No.
170-101.00
 Drawn By
LFR
 Reviewed By
RP

Sheet
SD4.1

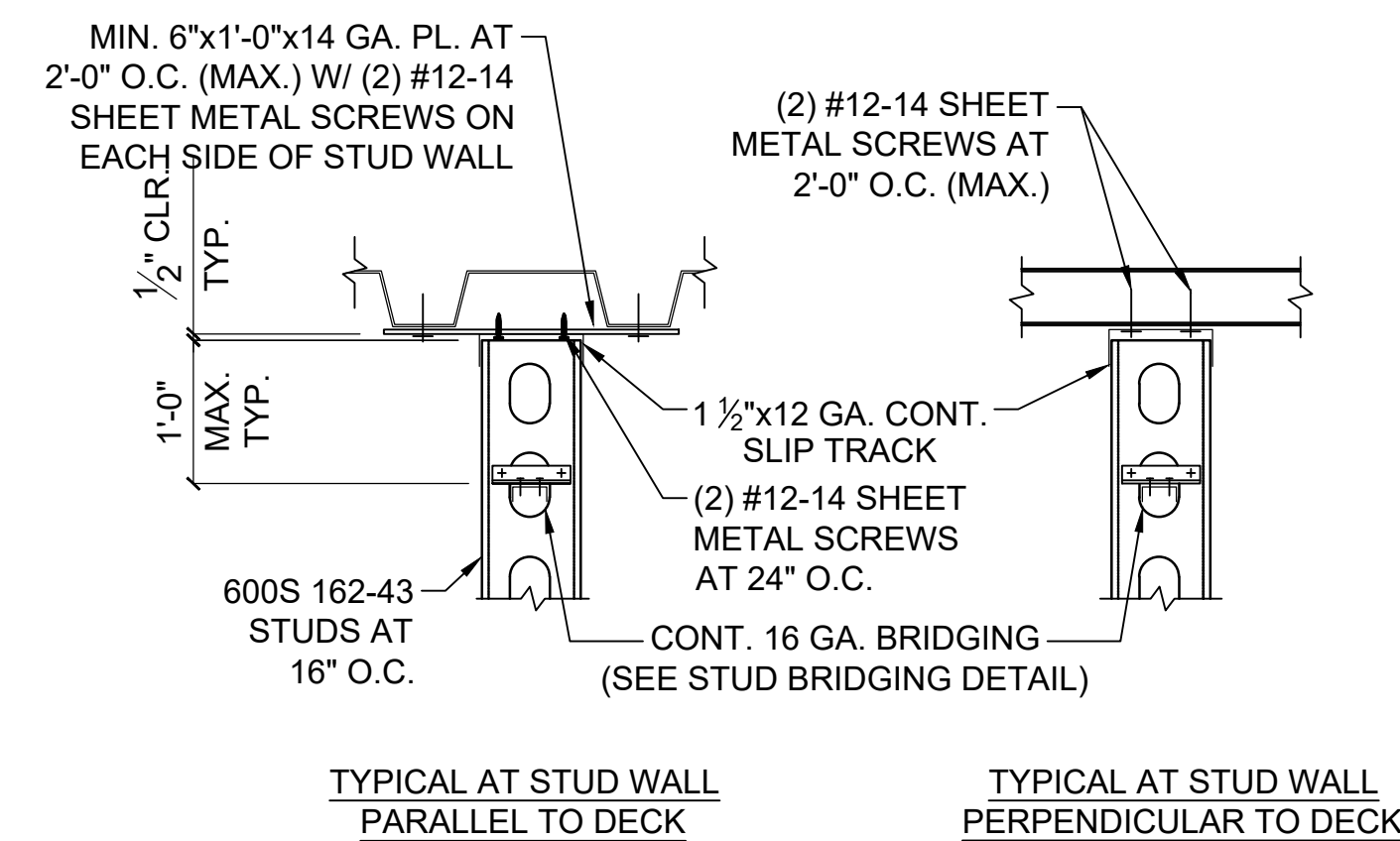


STUD TO TRACK CONNECTION SCALE NOT TO SCALE 1

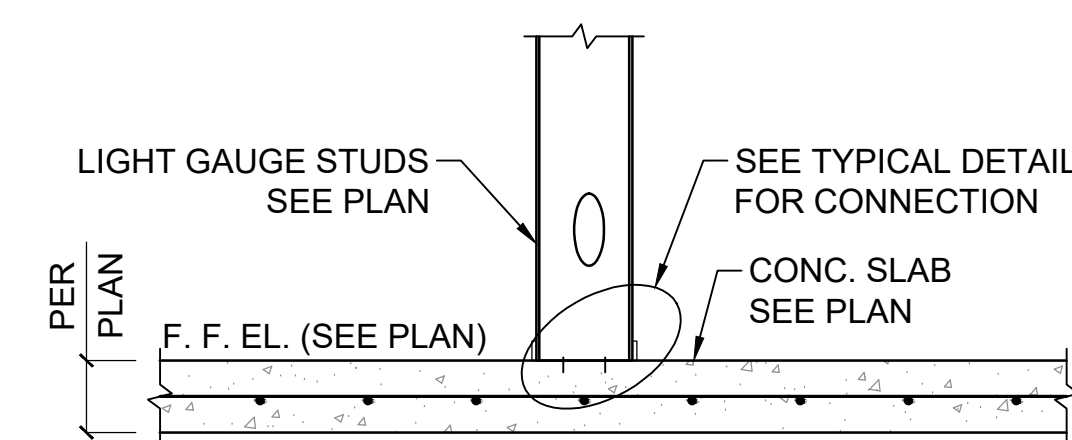
LT. GA. STUD BRIDGING DETAIL SCALE NOT TO SCALE 2



L.G. STUD CONN. TO STEEL BEAM SCALE NOT TO SCALE 3

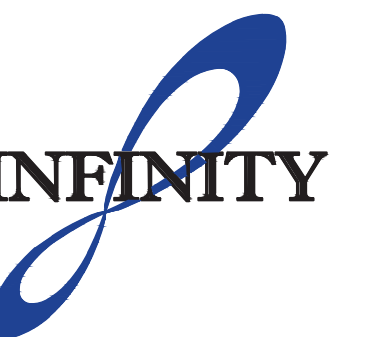


TYP. STUD CONN. TO DECK SCALE NOT TO SCALE 4



TYP. STUD CONN. TO CON. SLAB SCALE NOT TO SCALE 5

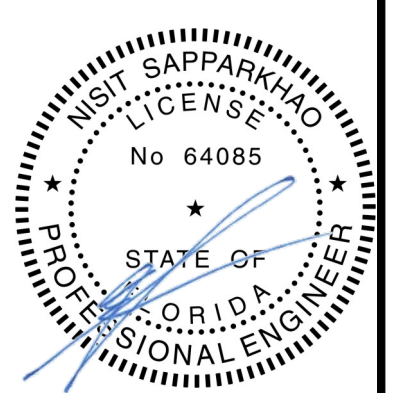
Date	05/31/2024
Revision/Issue	1
Issue For Permit	1



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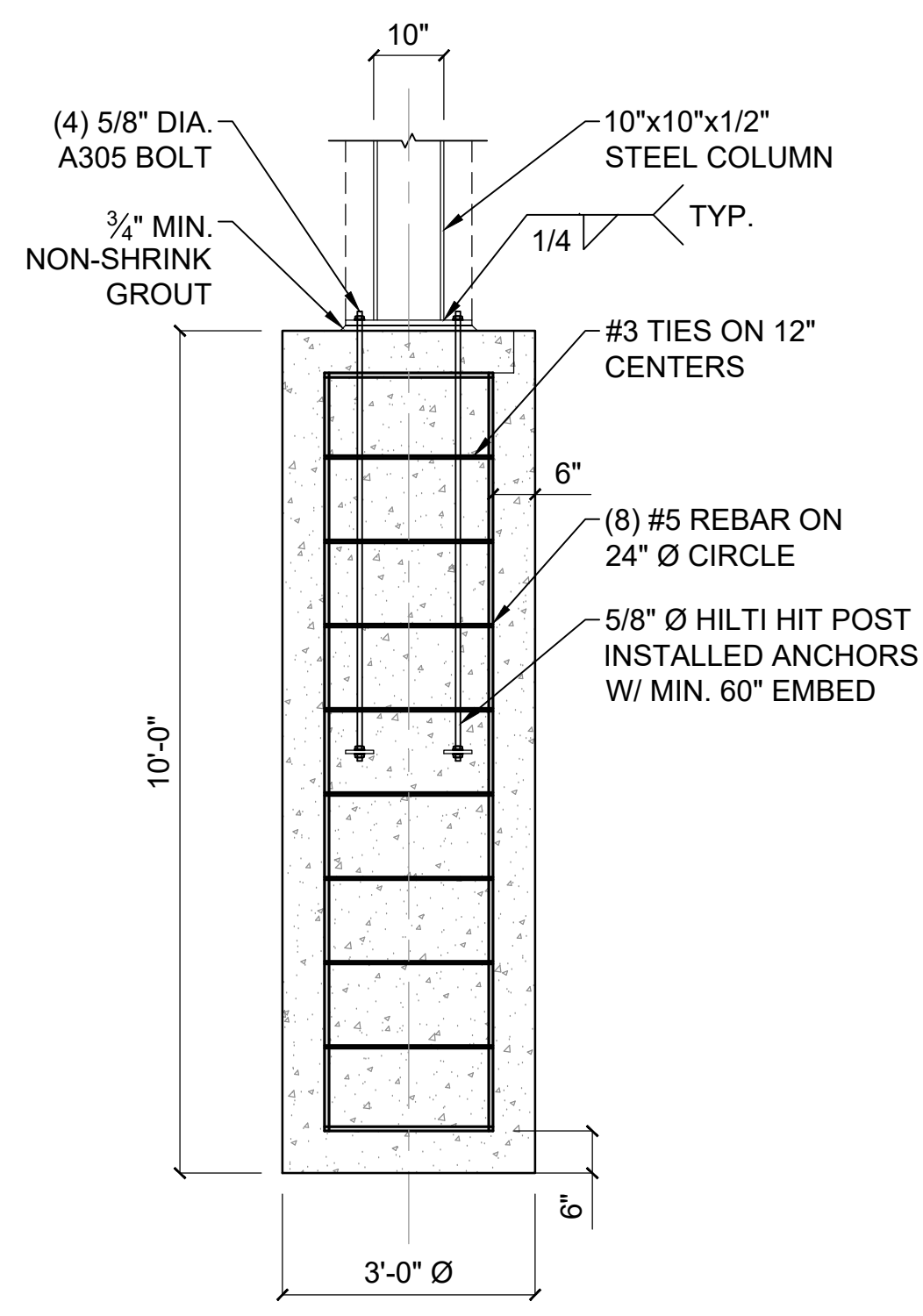
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Project Name and Address
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Sheet Title
LIGHT GAUGE DETAILS

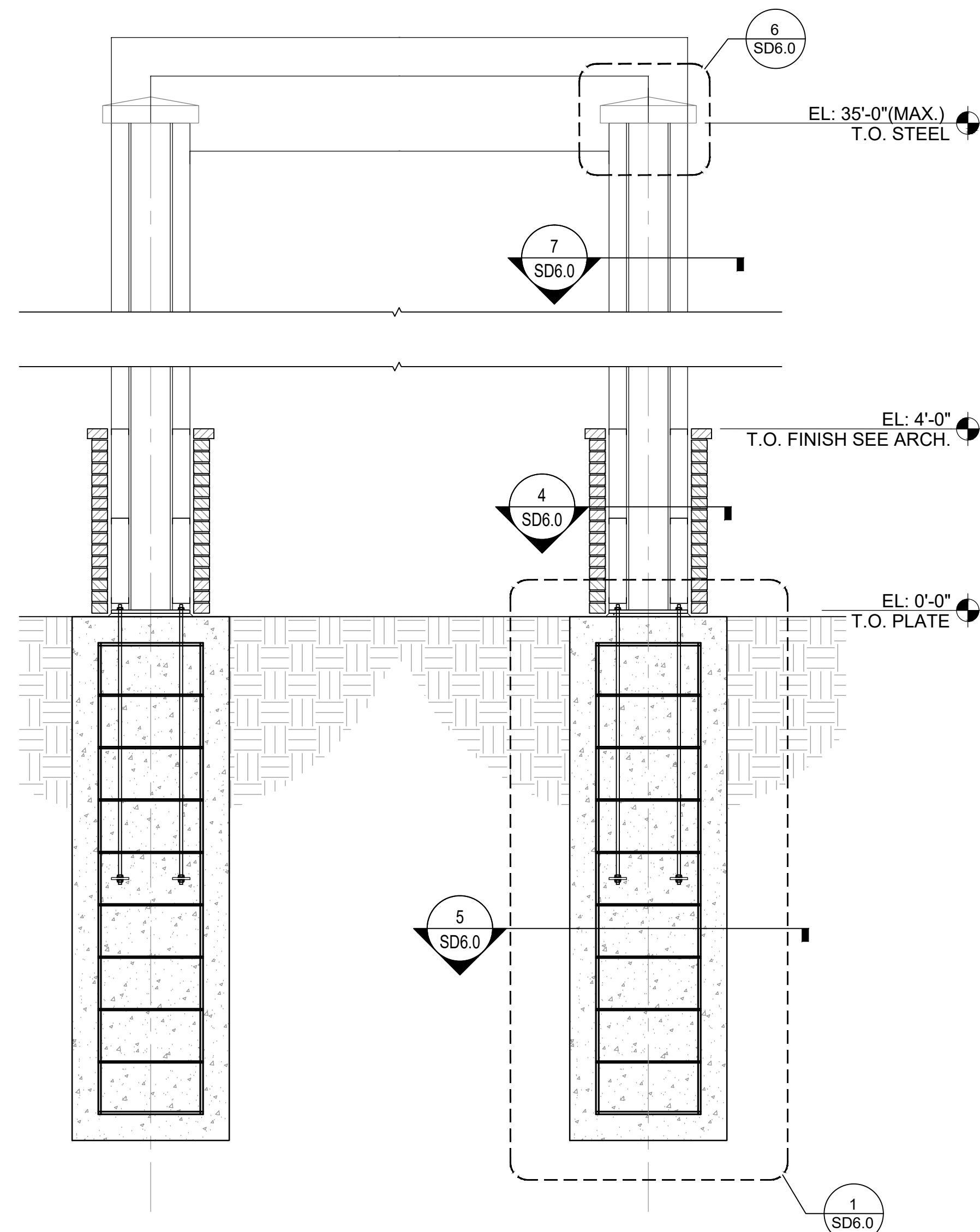
Project No. 170-101.00
 Drawn By: LR
 Reviewed By: RP

Sheet SD5.0



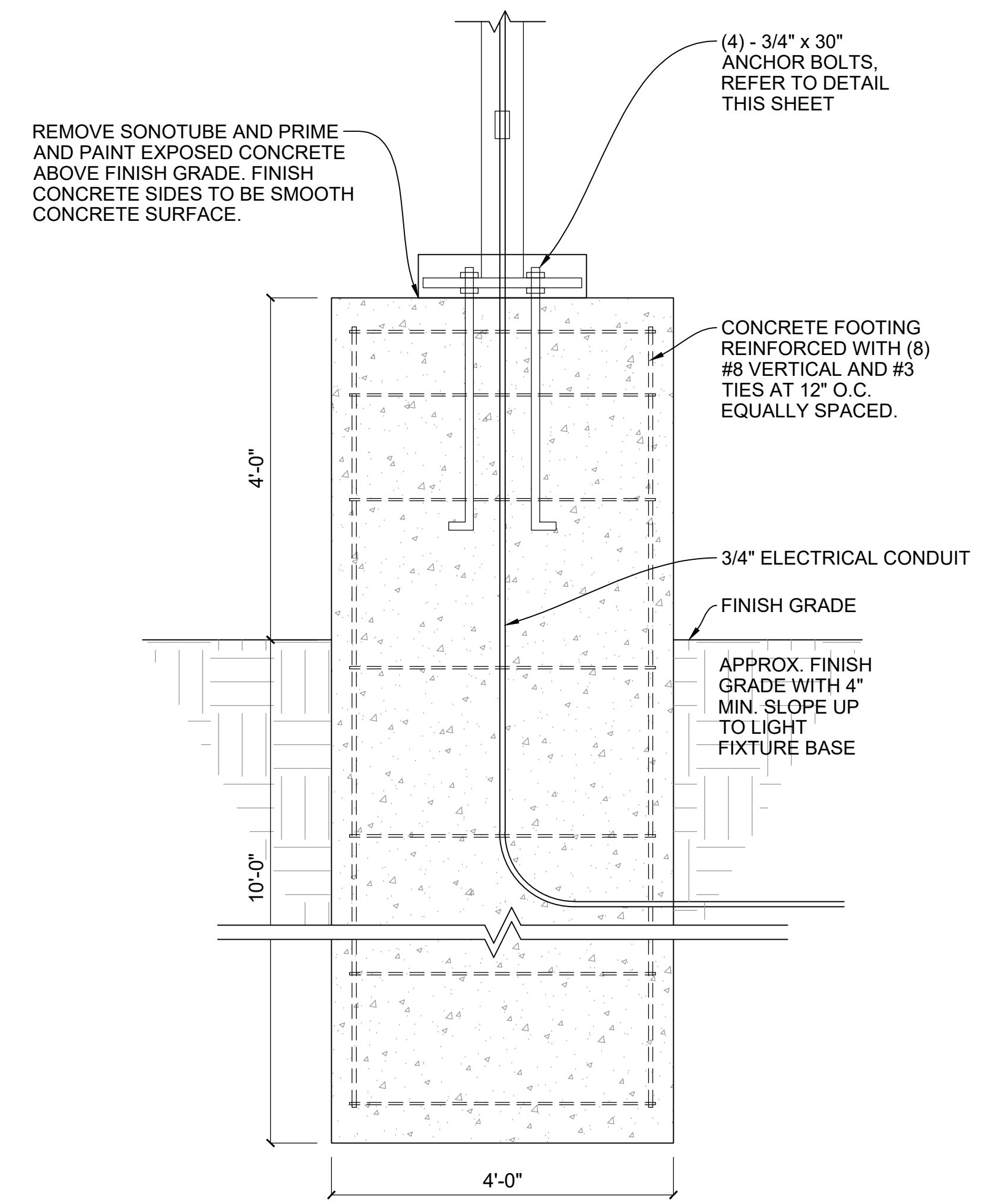
FOOTER DETAIL

SCALE NOT TO SCALE 1



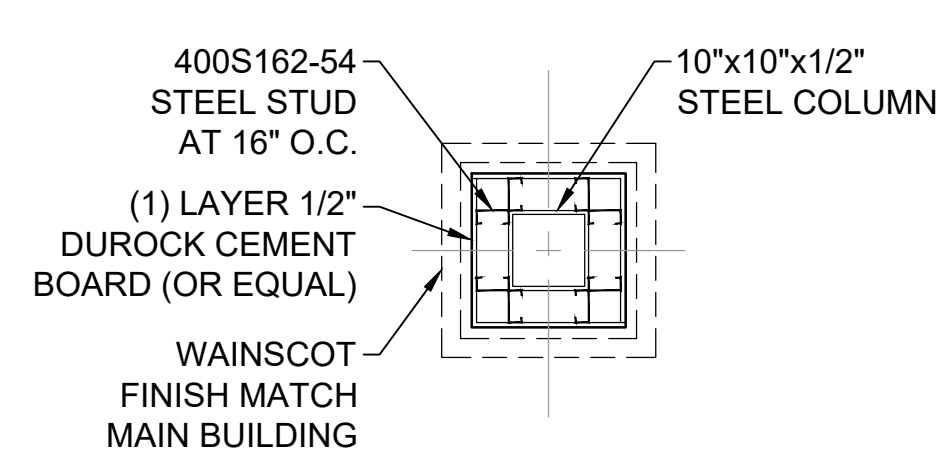
EXTERIOR SIGN SECTION

SCALE NOT TO SCALE 2



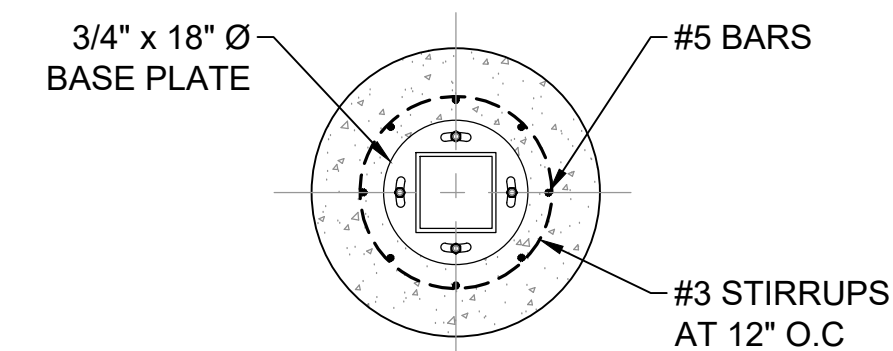
LIGHT POLE BASE (HEAVY DUTY)

SCALE NOT TO SCALE 3



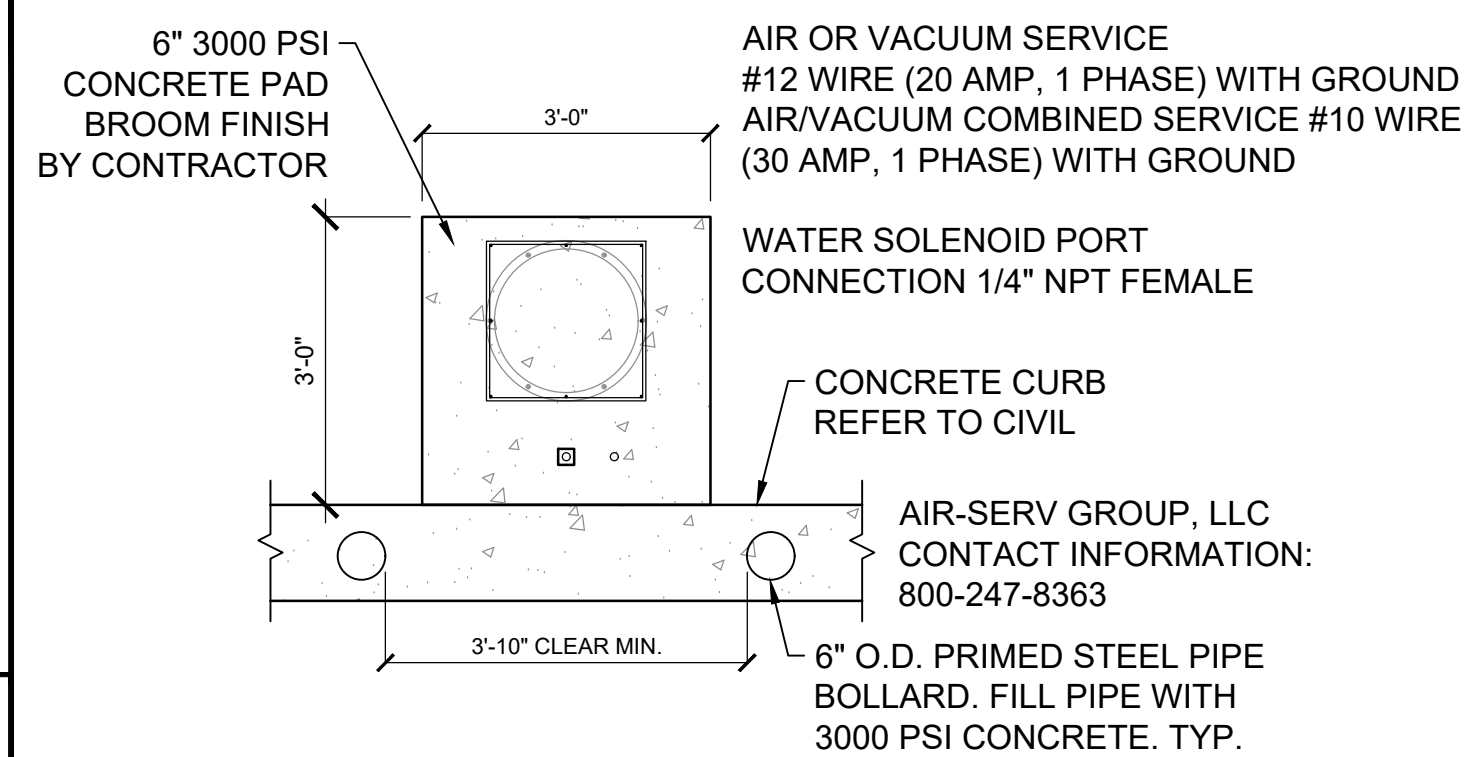
COLUMN DETAIL

SCALE NOT TO SCALE 4



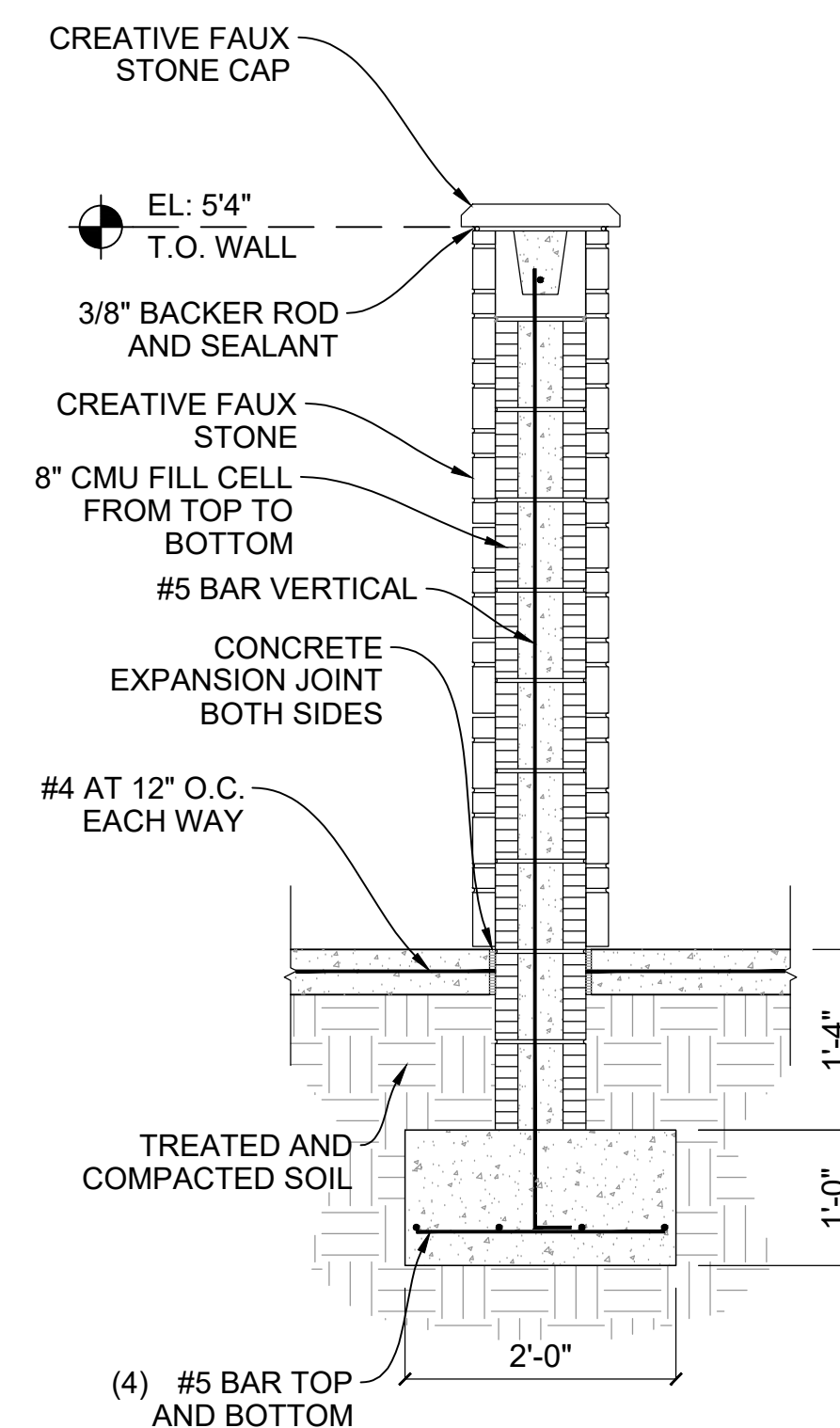
COLUMN DETAIL

SCALE NOT TO SCALE 5



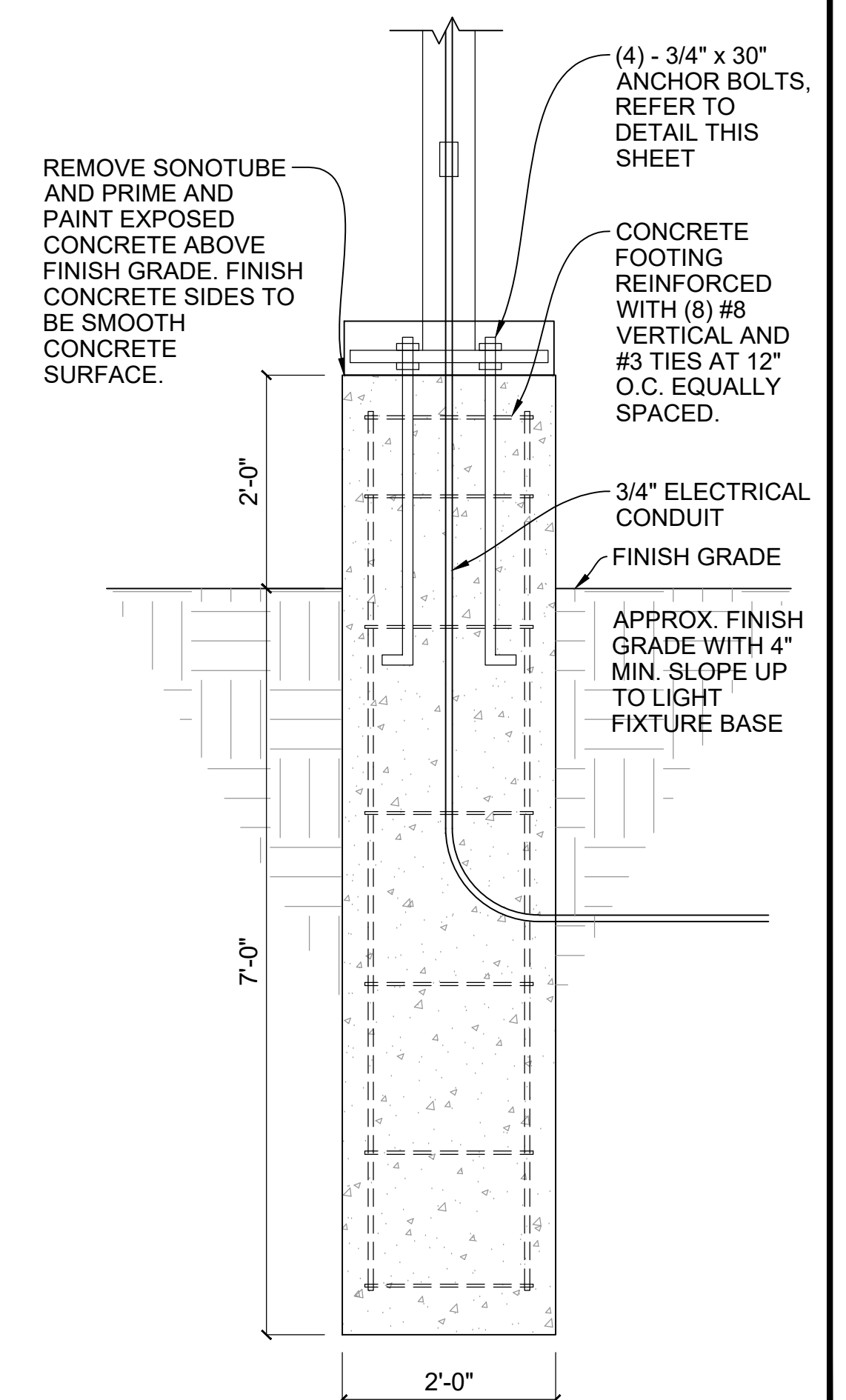
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SCALE NOT TO SCALE 8



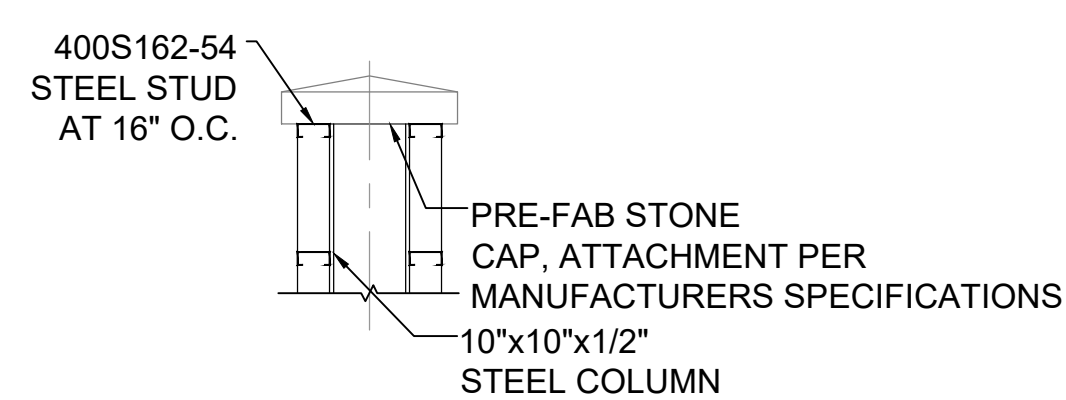
CMU WALL DETAIL

SCALE NOT TO SCALE 9



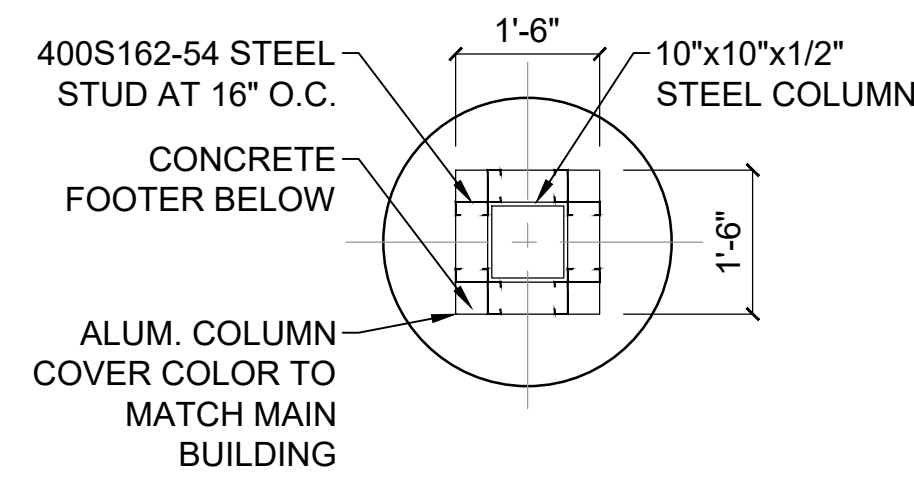
LIGHT POLE BASE (LIGHT DUTY)

SCALE NOT TO SCALE 10



COLUMN CAP DETAIL

SCALE NOT TO SCALE 6



COLUMN DETAIL

SCALE NOT TO SCALE 7

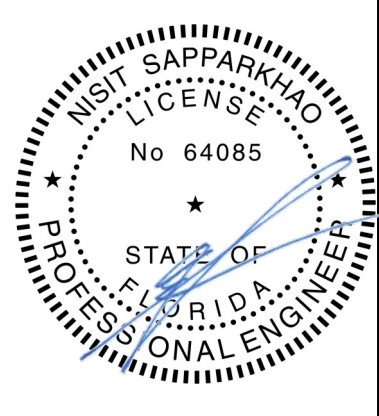
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Sheet Title
MISC. DETAILS

Project No. 170-101.00	Sheet SD6.0
Drawn By LR	
Reviewed By RP	