

# KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL LODI UNIFIED SCHOOL DISTRICT 4600 ACAMPO RD, ACAMPO, CA 95220

## ABBREVIATIONS

& L @ Ø ⊥ # R	And Angle At Centerline Diameter or Round Perpendicular Pound or Number Plate
A.C. A.D. ADJ. AGGR. ALUM./AL. ARCH. ASPH. AUTO. A.V.	Asphalt Concrete Acoustical Area Drain Adjustable Aggregate Aluminum Architectural Asphalt Automatic Auto Visual
B BD. BLDG. BLK. BLKG. BM. BOT. B.S.	Bolt Board Building Block Blocking Beam Bottom Both Sides
CAB. C.B. CB. CEM. CER. C.G.S. C.I. C.J. C.L. CLG. CLKG. CLR. C.M.P. C.M.U. CNTR. COL. CONC. CONN. CONSTR. CONT. CORR.	Cabinet Catch Basin Chalkboard Cement Ceramic Corner Gaurd Cast Iron Construction Joint/Control Joint Ceiling Calking Clear Corrugated Metal Pipe Concrete Masonry Unit Counter Column Concrete Connection Construction Continuous Corridor
d DBL. DET. D.F. D.I. D.SA. DIM. DIM.PT. DN. DP. D.P. DR. D.S. DWG.	Pennyweight (Nails) Double Detail Drinking Fountain Drain Inlet Diameter Dimension Dimension Point Down Deep Damp Proofing Door Downspout Drawing
E. (E)EXST. EA. E.J. EL. ELEC. EMER. ENCL. EQ. EQPT. E.W.C. EXP. EXT.	East Existing Each Expansion Joint Elevation Electrical Emergency Enclosure Equip Equipment Electric Water Cooler Expansion Exterior
F.A. F.B. F.D. FDN. F.F.E. F.H.M.B. F.H.M.S. FIN. FL. F.L. FLASH'G F.O.C. F.O.F. F.O.S. F.R.P. F.S. FT. FTG. FURR. FURT.	Fire Alarm Fiberboard Floor Drain Foundation Finish Flat Head Machine Bolt Flat Head Machine Screw Finish Floor Fusible Link Flashing Face of Concrete/Curb Face of Finish Face of Studs Fiberglass Reinforced Plastic Full Size Foot/Feet Footing Furring Future
GA. GALV. G.B. CLG. GL. GR. GYP. G.I. G.S.M. GYP. GYP.BD.	Gauge Galvanized Grab Bar Glass/Glazing Ground Grade Gypsum Galvanized Iron Galvanized Sheet Metal Gypsum Board
HDR. HDWD. HOR. H.B. HR. HOT.	Header Hardwood Horizontal Hose Bib Hour (Fire Rating) Height
I.D. IN. INFO. INSUL. INT.	Inside Diameter Inch Information Insulation Interior
JAN. JST. JT.	Janitor Joist Joint
K.P. KIT. LAM. LAV. LKR. LT.WT. L.V.	Kickplate Kitchen Laminate Lavatory Locker Light Weight Louver Vent
MAX. M.B. MAT'L. MECH. MEMB. MEZZ. MFR. MH. MIN. MIR. MISC. MTD. MET.	Maximum Machine Bolt Material Mechanical Membrane Mezzanine Manufacturer Manhole Minimum Mirror Miscellaneous Mounted Metal
(N) N. N.I.C. NO./# NOM. N.T.S.	New North Not in Contract Number Nominal Not to Scale
O/ O.A. OBS. O.C. O.D. OFF.	Over Overall Obscure On Center Outside Diameter Office
PRGST. PERF. P.LAM. PLAS. PLYWD. P.M. P.M.F. PR. PRE-FAB PROJ. P.T.D. P.T.D.R. PTN. P.T.R.	Precast Perforated Plastic Laminate Plaster Plywood Pressed Metal Pressed Metal Frame Pair Prefabricated Project Paper Towel Dispenser Paper Towel Dispenser Receptacle Partition Paper Towel Receptacle
R. RAD. R.B. R.D. R.E. REFR. RGTR. REINF. REQ. RET. RM. R.O. RWD. R.W.L. R.H.W.S.	Riser Radius Rubber Base Roof Drain Rim Elevation Refrigerator Register Reinforced Required Return Room Rough Opening Redwood Rain Water Leader Round Head Wood Screw
S. S.D. SECT. SHR. SHT. SHTG. SIM. S.M. S.M.S. S.N.D. S.N.R. SPEC. SQ. S.R.V. S.SK. SST ST STD. STL. STOR. STR.L. SUSP. SYM. SHT.VN.L.	South Soap Dispenser Section Shower Sheet Sheeting Similar Sheet Metal Sheet Metal Screw Sanitary Napkin Dispenser Sanitary Napkin Receptacle Specification Square Semi Rigid Vinyl Service Sink Stainless Steel Street Standard Steel Storage Structural Suspended Symmetrical Sheet Vinyl
T. TB. T.B. T.A.G. TEL. THK. THRES. THRU. T.O.C. T.O.P. T.O.W. T.P.D. TYP.	Toilet Taskboard Towel Bar Tongue & Groove Telephone Thick Threshold Through Top of Curb Top of Pavement Top of Wall Toilet Paper Dispenser Typical
U.O.N. UR.	Unless Otherwise Noted Urinal
V.C.T. VERT. V.F.	Vinyl Composition Tile Vertical Vinyl Fabric
W. W. W.C. WD. W.H. WID. WSC. W.W.M. WDW. WT. YD.	West With Water Closet Wood Water Heater Without Wainscot Welded Wire Mesh Window Weight Yard

## SYMBOL LEGEND

<b>SHEET NUMBERING SYSTEM</b> 	<b>STRUCTURAL GRID INDICATOR</b> (Center of Framing) 
<b>ROOM NAME AND NUMBER REFERENCE</b> 	<b>STRUCTURAL GRID INDICATOR</b> (Face of Framing) 
<b>KEYNOTE REFERENCE</b> 	<b>MATCH LINE</b> 
<b>SHEET NOTE REFERENCE</b> 	<b>CENTERLINE</b> 
<b>DETAIL REFERENCE</b> 	<b>PROPERTY LINE</b> 
<b>BUILDING SECTION REFERENCE</b> 	<b>WORK POINT, CONTROL POINT OR DATUM</b> 
<b>STOREFRONT, WINDOW OR LOUVER REFERENCE</b> 	<b>WINDOW (PLAN VIEW)</b> 
<b>DOOR REFERENCE</b> 	<b>REVISION</b> 
<b>CEILING TYPE REFERENCE</b> 	<b>RADIUS</b> 
<b>WALL TYPE REFERENCE</b> 	<b>CASEWORK REFERENCE</b> 
<b>EXTERIOR FINISH REFERENCE</b> 	<b>METAL SHELVING REFERENCE</b> 
	<b>LABORATORY CASEWORK REFERENCE</b> 
	<b>MUSIC CASEWORK REFERENCE</b> 
	<b>ACOUSTICAL PANEL REFERENCE</b> 
	<b>SIGN REFERENCE</b> 

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A2.2	ENLARGED FLOOR PLAN, REFLECTED CEILING PLAN
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DRAWING SET CONTAINS 71 SHEETS

CONTRACTOR SHALL KEEP A COPY OF TITLE 24, PARTS 1-5 ON THE SITE AT ALL TIMES.  
TITLE 24, PART 1, SECTION 4.317(c):

"THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS A CONSTRUCTION CHANGE DOCUMENT, OR SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH REPAIR WORK."

NOTES:

- ALL NEW WORK SHALL CONFORM TO THE 2016 EDITION, TITLE 24, CALIFORNIA CODE OF REGULATIONS.
- CHANGES TO THE STRUCTURAL, ACCESSIBILITY OR FIRE AND LIFE-SAFETY PORTIONS OF THE APPROVED PLANS AND SPECIFICATIONS AFTER THE WORK HAS BEEN APPROVED SHALL BE MADE BY A CONSTRUCTION CHANGE DOCUMENT AS REQUIRED IN SECTION 4-338, PART 1, CAC, AND SHALL BE SUBMITTED TO AND APPROVED BY DSA PRIOR TO COMMENCEMENT OF THE WORK. ALL CONSTRUCTION CHANGE DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO DSA IN COMPLIANCE WITH DSA INTERPRETATION OF REGULATIONS IA A-6. CONSTRUCTION CHANGE DOCUMENTS ARE NOT VALID UNTIL APPROVED BY DSA PER SECTION 4-338, PART 1, TITLE 24, AND NO WORK SHALL COMMENCE UNTIL APPROVED BY DSA.
- A DSA "CERTIFIED PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-343, CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR)
- A DSA CERTIFIED INSPECTOR WITH CLASS 3 IS REQUIRED FOR THIS PROJECT (IR A-7)
- AN LEA TESTING LABORATORY DIRECTLY EMPLOYED BY THE OWNER SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- GRADING PLANS, DRAINAGE IMPROVEMENT, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- ADDENDA SHALL BE APPROVED BY DSA.
- PROJECT DEMOLITION AND CONSTRUCTION SHALL BE IN COMPLIANCE WITH CFC CHAPTER 33.

## PROJECT TEAM

### OWNER

LODI UNIFIED SCHOOL DISTRICT  
1305 E. VINE STREET  
LODI, CA 95240  
CONTACT: JOE PATTY  
PHONE: (209) 712-6363  
EMAIL: jpatty@lodiusd.net

### ARCHITECTURAL

HENRY + ASSOCIATES ARCHITECTS  
730 HOWE AVE, SUITE 450  
SACRAMENTO, CA 95825  
CONTACT: STEPHEN HENRY  
PHONE: (916) 921-2112  
EMAIL: stephen@henry-architects.com

### ELECTRICAL

M. NEILS ENGINEERING, INC.  
100 HOWE AVENUE, SUITE 235N  
SACRAMENTO, CA 95825  
CONTACT: SINISHA GLISIC  
PHONE: (916) 923-4400  
EMAIL: SGlisic@mneilsengineering.com

### FOOD SERVICE

AMD FOOD SERVICE DESIGN  
P.O. BOX 163  
GARDEN VALLEY, CA 95633  
CONTACT: ART DAVIS  
PHONE: (530) 333-4606  
EMAIL: art@amdfoodservicedesign.com

### MECHANICAL

CAPITAL ENGINEERING CONSULTANTS INC  
11020 SUN CENTER DRIVE, SUITE 100  
RANCHO CORDOVA, CA 95670  
CONTACT: MICHAEL MINGE  
PHONE: (916) 851-3500  
EMAIL: mminge@capital-engineering.com

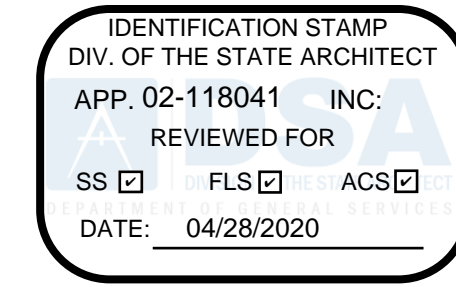
### STRUCTURAL

BARRISH PELHAM, a DEGENKOLB Company  
428 J STREET, SUITE 500  
SACRAMENTO, CA 95814  
CONTACT: GREG RICHARDS  
PHONE: (916) 418-9100  
EMAIL: GRichards@degenkolb.com

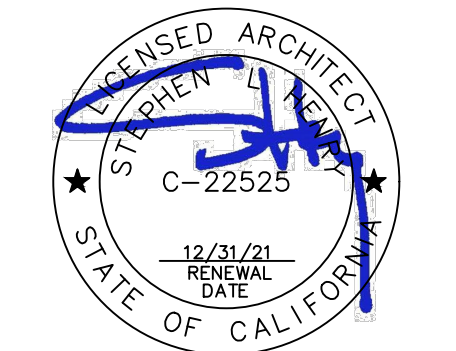
## PROJECT DESCRIPTION

### BUILDING A

- Modernization and renovate existing kitchen
- modernization staff restroom



730 Howe Avenue, Suite 450  
Sacramento, CA 95825  
Phone: 916.921.2112  
Fax: 916.921.2212



KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

COVER SHEET

CONSULTANT

## MATERIAL LEGEND

	EARTH		WOOD TRIM
	GRAVEL/AGGREGATE BASE		STEEL
	SAND OR PLASTER		TILE
	CONCRETE		BATT INSULATION
	BLOCKING		BRICK
	FRAMING (CONTINUOUS)		GYPSUM BOARD
	PLYWOOD		FIRTEX

## APPLICABLE CODES

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS  
TITLE 24 CCR, PART 1 - 2016 BUILDING STANDARDS ADMINISTRATIVE CODE  
TITLE 24 CCR, PART 2 - 2016 CALIFORNIA BUILDING CODE, VOL. 1 & 2 (CBC)  
(based on 2015 IBC as amended by CA)  
TITLE 24 CCR, PART 3 - 2016 CALIFORNIA ELECTRICAL CODE (CEC) (2014 NEC, AS AMENDED BY CA)  
TITLE 24 CCR, PART 4 - 2016 CALIFORNIA MECHANICAL CODE (CMC) (2015 IAPMO UMC, AS AMENDED BY CA)  
TITLE 24 CCR, PART 5 - 2016 CALIFORNIA PLUMBING CODE (CPC) (2015 IAPMO UPC, AS AMENDED BY CA)  
TITLE 24 CCR, PART 6 - 2016 CALIFORNIA ENERGY CODE  
TITLE 24 CCR, PART 9 - 2016 CALIFORNIA FIRE CODE (CFC) (2015 IFC, AS AMENDED BY CA)  
TITLE 24 CCR, PART 11 - 2016 CALIFORNIA GREEN BUILDING STDS CODE  
TITLE 24 CCR, PART 12 - CALIFORNIA REFERENCED STANDARDS  
(partial list - see CBC Ch. 35 and CFC Ch. 80)  
2016 NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED)  
2013 NFPA 17, DRY CHEMICAL EXTINGUISHING SYSTEMS  
2013 NFPA 17A, WET CHEMICAL EXTINGUISHING SYSTEMS  
2016 NFPA 20, INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION  
2013 NFPA 22, WATER TANKS FOR PRIVATE FIRE PROTECTION  
2016 NFPA 24, INSTALLATION OF PRIVATE FIRE SERVICE MAINS  
2016 NFPA 72, NATIONAL FIRE ALARM CODE (CA AMENDED); See UL Std 1971 for "Visual Devices"  
2016 NFPA 80, FIRE DOOR AND OTHER OPENING PROTECTIVE  
2015 NFPA 2001, CLEAN AGENT FIRE EXTINGUISHING SYSTEMS  
2005 UL 300, GLASS HOOD FIRE SUPPRESSION SYSTEMS  
2003 UL 464, AUDIBLE SIGNAL APPLIANCES  
1999 UL 521, HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS  
2012 ICC 300, BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS (ICC300-2012)

CS

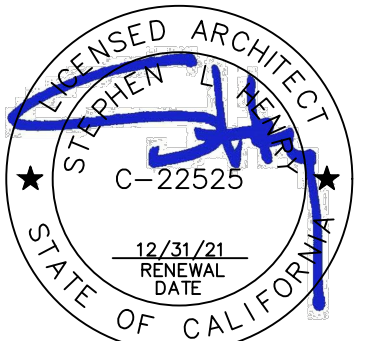






IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP. 02-118041 INC.  
REVIEWED FOR  
SS ☐ FLS ☐ ACS ☐  
DATE: 04/28/2020

730 Howe Avenue, Suite 450  
Sacramento, CA 95825  
Phone: 916.921.2112  
Fax: 916.921.2212



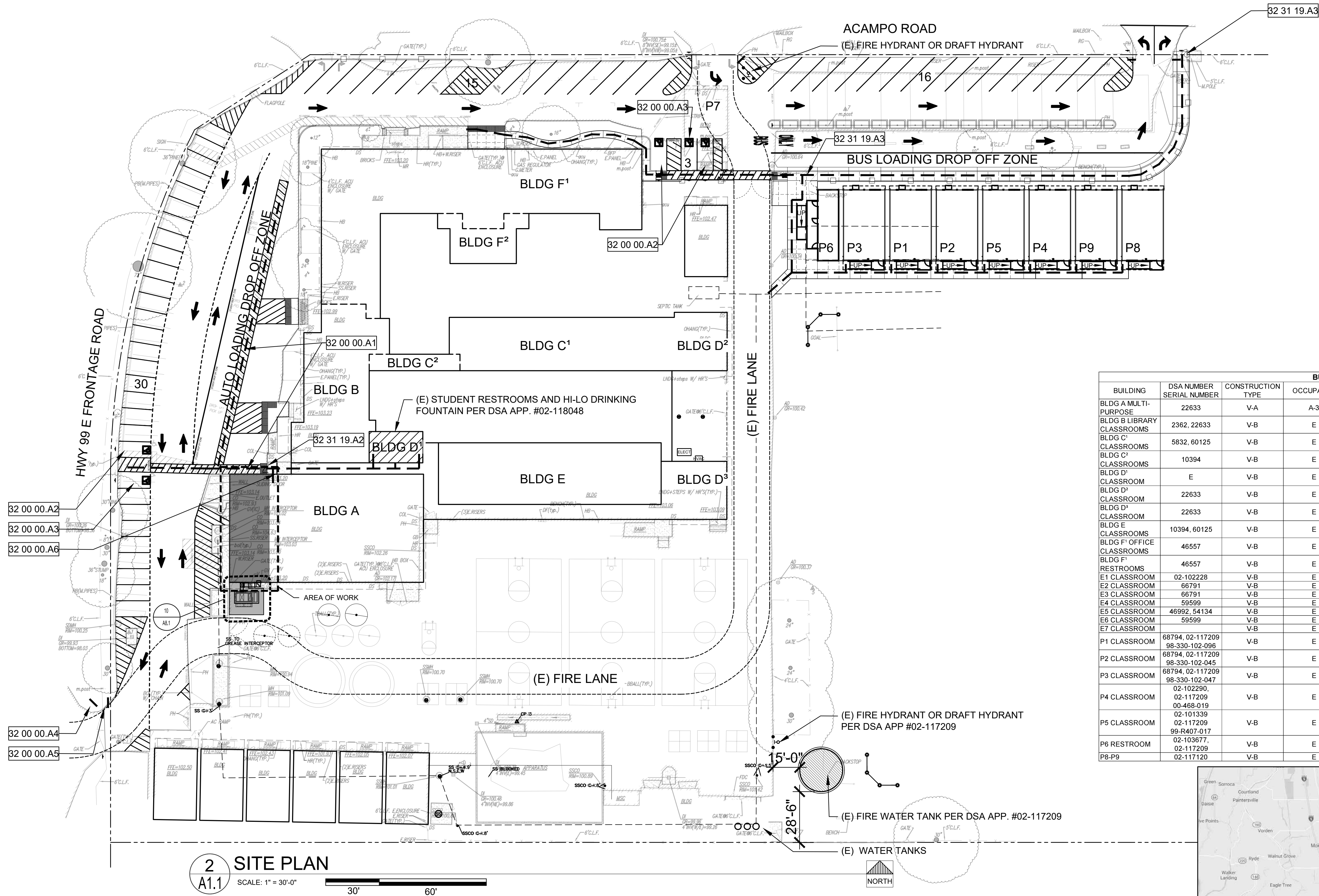
KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

VICINITY MAP  
BUILDING DATA  
SITE PLAN

CONSULTANT

PROJECT NO.	REVISIONS	BY
19-32-050		
DATE		
04/10/2020		
DRAWN		
SLH		
CHECKED		
SLH		
SCALE		
CADFILE		
UPDATED		
SHEET NO.		

A1.1



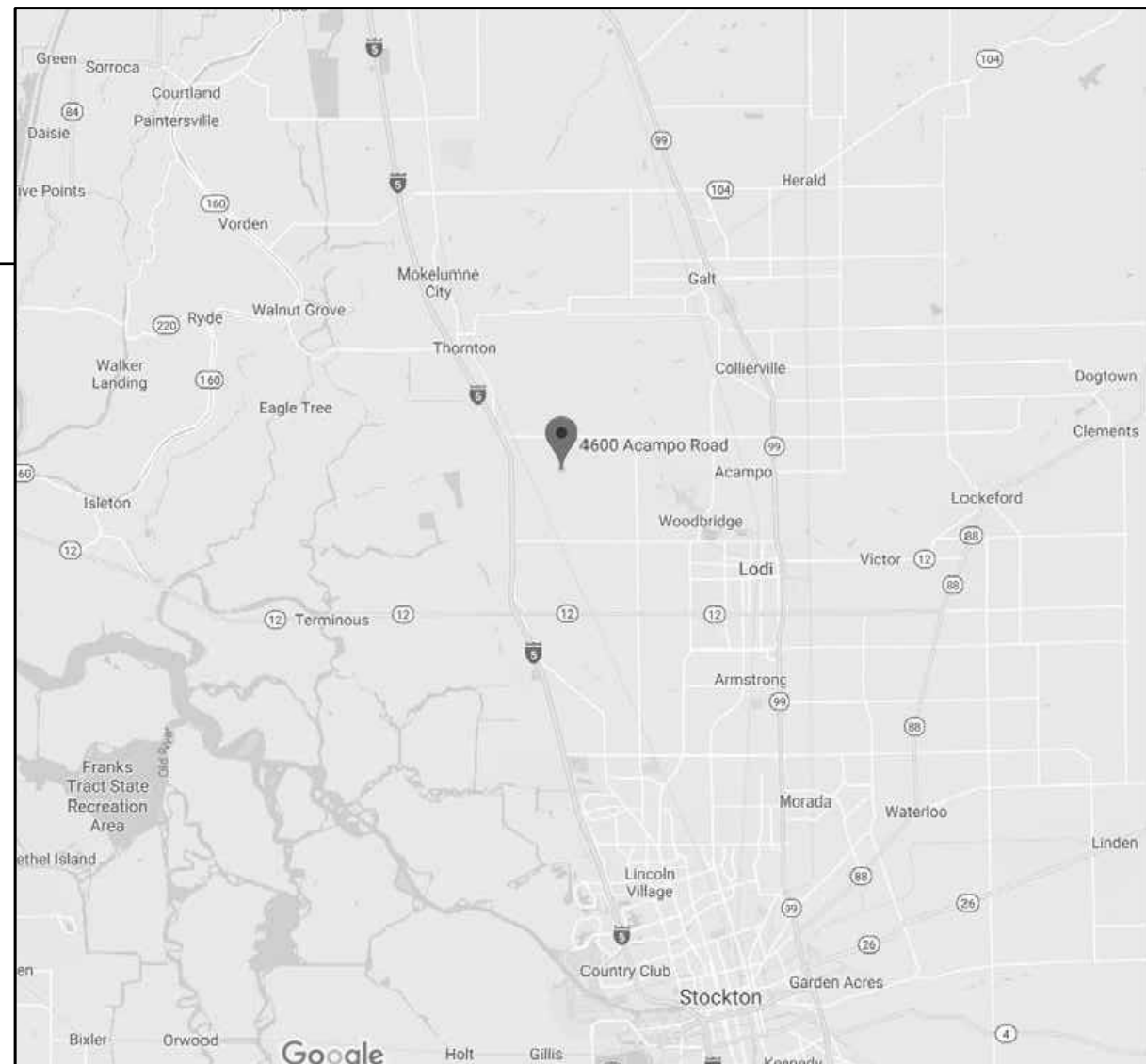
2 SITE PLAN  
A1.1 SCALE: 1" = 30'-0"  
KEYNOTES

- 32 00 00 EXTERIOR IMPROVEMENTS  
32 00 00.A1 Existing accessible path of travel shown dashed. There are no ramps existing or required along the designated P.O.T.  
32 00 00.A2 Existing accessible parking stall per 02-117209  
32 00 00.A3 Existing accessible van parking stall per 02-117209  
32 00 00.A4 Existing tow away sign per 02-117209  
32 00 00.A5 Existing stop sign per 02-117209  
32 00 00.A6 Existing end of accessible path of travel this project
- 32 31 19 ORNAMENTAL METAL FENCE  
32 31 19.A2 Existing ornamental metal gate and fence - see 11/A8.1

### EXISTING P.O.T AFFIDAVIT

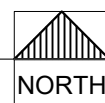
- Path of travel (P.O.T.) as indicated is a barrier free access without any abrupt vertical changes exceeding 1/2" at 1:2 Maximum slope, except that level changes do not exceed 1/4" vertical (11B-303 & 11B-403.4).
- P.O.T. is a minimum of 48" wide (11B-403.5.1Ex3), slip resistant surface with 5% max. slope in direction of travel and 1:48 max. cross slope (11B-403.3).
- Passing spaces (11B-403.5.3) of 60"x60" min. are located not more than 200' apart.
- Walks with continuous gradients have level areas 60" in length (11B-403.7) and spaced not more than 400' apart.
- P.O.T. is free of overhanging obstructions to 80" min above walking surface (11B-307.4) and protruding objects (11B-307) greater than 4" projection from wall above 27".
- There are no changes in elevation over 4" at the edge of walk or landing unless identified by a guardrail, a handrail, or a warning curb of at least 6" in height above the walk (11B-303.5).
- There are no gratings that occur along the P.O.T. If gratings are installed along the P.O.T. then they require to have 1/2" max. grid openings in the direction of the P.O.T. (11B-302.3).
- All gates along the P.O.T. comply with 11B-404 and shall have 24" min. strike side clearance on the pull side, 10" tall smooth surface at the gate bottom and be equipped with lever hardware.

BUILDING DATA							
BUILDING	DSA NUMBER	CONSTRUCTION	OCCUPANCY	SQUARE	FIRE	CERTIFIED	RELO MFR
PURPOSE	SERIAL NUMBER	TYPE		FOOTAGE	SPRINKLERED		
BLDG A MULTI-PURPOSE	22633	V-A	A-3	6360	No	Y	
BLDG B LIBRARY	2362, 22633	V-B	E	3600	No	Y	
CLASSROOMS							
BLDG C' CLASSROOMS	5832, 60125	V-B	E	3864	No	Y	
BLDG C' CLASSROOMS	10394	V-B	E	469	No	Y	
BLDG D' CLASSROOM	E	V-B	E	522	No	Y	
BLDG D' CLASSROOM	22633	V-B	E	960	No	Y	
BLDG D' CLASSROOM	22633	V-B	E	960	No	Y	
BLDG E CLASSROOMS	10394, 60125	V-B	E	6020	No	Y	
BLDG F' OFFICE CLASSROOMS	46557	V-B	E	8533	No	Y	
BLDG F' RESTROOMS	46557	V-B	E	964	No	Y	
E1 CLASSROOM	02-102228	V-B	E	960	No	Y	
E2 CLASSROOM	66791	V-B	E	960	No	Y	
E3 CLASSROOM	66791	V-B	E	960	No	Y	
E4 CLASSROOM	66791	V-B	E	960	No	Y	
E5 CLASSROOM	46992, 54134	V-B	E	960	No	Y	
E6 CLASSROOM	59599	V-B	E	960	No	Y	
E7 CLASSROOM	59599	V-B	E	960	No	Y	
P1 CLASSROOM	68794, 02-117209	V-B	E	960	No	Y	PACESETTER INDUSTRIES
P2 CLASSROOM	98-330-102-096	V-B	E	960	No	Y	PACESETTER INDUSTRIES
P3 CLASSROOM	68794, 02-117209	V-B	E	960	No	Y	PACESETTER INDUSTRIES
P4 CLASSROOM	98-330-102-045	V-B	E	960	No	Y	PACESETTER INDUSTRIES
P5 CLASSROOM	68794, 02-117209	V-B	E	960	No	Y	PACESETTER INDUSTRIES
P6 RESTROOM	02-102290, 02-117209	V-B	E	960	No	Y	American Modular PC 02-101837
P8-P9	00-468-019	V-B	E	960	No	Y	American Modular PC 02-101837
	02-101339	V-B	E	960	No	Y	American Modular PC 02-101837
	02-117209	V-B	E	960	No	Y	American Modular PC 02-101741
	99-R407-017	V-B	E	960	No	Y	American Modular PC 02-101741
	02-103677, 02-117209	V-B	E	960	No	Y	American Modular PC 02-101741
	02-117210	V-B	E	960 x 2 = 1920	No	Y	American Modular PC 02-101741



HOUSTON MIDDLE SCHOOL  
4600 ACAMPO ROAD, ACAMPO, CA 95220

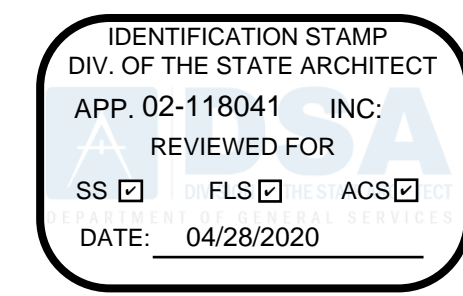
1 VICINITY MAP  
A1.1 NO SCALE



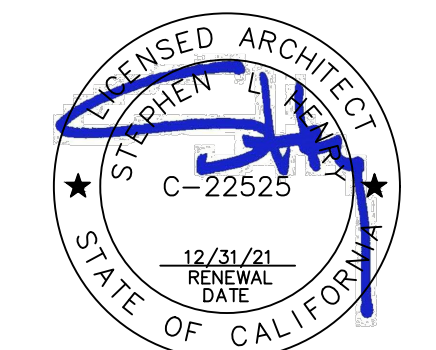








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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

ENLARGED FLOOR PLAN  
REFLECTED CEILING PLAN

CONSULTANT

PROJECT NO.	REVISIONS	BY
19-32-050		
DATE		
04/10/2020		
DRAWN		
SLH		
CHECKED		
SLH		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

A2.2

## KEYNOTES

(NOT ALL KEYNOTES ARE USED ON SHEET)

0300	CONCRETE		
0300.A1	concrete slab on grade - replace where removed		
0300.A2	concrete footing		
0300.A4	expansion joint		
0300.A5	splash block		
0300.A6	Concrete curb		
0400	MASONRY	2100.A5	toilet partition
0400.A1	concrete masonry wall	2100.A6	urinal partition
0500	METALS	2100.A7	toilet accessories:
0500.A2	corrugated structural metal roof deck		.01 paper towel dispenser
0500.A3	metal pipe bollard concrete fill		.02 toilet paper dispenser
0500.A4	metal pipe bollard removable		.03 sanitary napkin dispenser
0500.A5	metal pipe hand rail - 1.5" diameter		.04 soap dispenser
0500.A6	metal roof access ladder with security door		.05 mirror
0500.A7	metal louver		.09 trash receptacle
0500.B1	rolled channel (structural support grid)		.10 grab bar
0500.B2	metal furring channel		.11 toilet seat cover, toilet tissue dispenser
0600	WOOD, PLASTICS AND COMPOSITES	2100.A8	.12 toilet seat cover, sanitary napkin disposal, & toilet tissue dispenser
0600.A1	wood framing - see structural	2100.B1	.13 sanitary napkin disposal
0600.A2	frame opening for new door, window, or HVAC		.14 paper towel dispenser/ waste receptacle
0600.A3	in-fill frame door/window/duct opening		folding panel partition
0600.A4	in-fill frame roof opening where equipment was removed		fire extinguisher
0600.A5	wood post	2100.B2	.01 Provide UL Rated Class K 2A:K per spec.
0600.A6	wood joist	2100.B3	.02 Provide UL Rated Class K 10B:C per spec.
0600.A7	wood trusses	2100.B4	metal shelving
0600.A8	2 x 4 furred wall		metal lockers
0600.A9	blocking		knox box
0600.B1	exterior wood wall sheathing	2110	EQUIPMENT
0600.B2	exterior wood roof sheathing	2110.A1	projection screen
0600.B3	wood framed and sheathed cricket - use fire retardant treated wood	2110.A2	refrigerator
0600.C1	wood trim	2110.A3	microwave (owner furnished, contractor installed)
0600.C2	wood hand rail	2110.A4	Type I kitchen Exhaust hood - w/ Fire System Remote Pull Station - see FS Sheets
0700	THERMAL AND MOISTURE PROTECTION	2100.A5	Hand Sink - See Detail E/FS8.2
0700.A1	insulation	2100.A6	Food Service Equipment shown w/ light line - sheet FS Sheets.
0700.B1	.01 R-13 batt/blanket (3.5" thick)	2120	FURNISHINGS
0700.B2	.02 R-21 batt/blanket (6.5" thick)	2120.A1	window coverings & track
0700.B3	.03 R-30 batt/blanket (10" thick)	2120.A2	plastic laminate casework
0700.B4	.04 R-38 batt/blanket (12" thick)	2120.A3	.01 ada accessible sink base cabinet
0700.B5	.05 board insulation (2" thick)		.02 plastic laminate countertop with 4" backsplash casework
0700.B6	.06 board insulation tapered cricket	2120.A3	PLUMBING
0700.B7	Standing seam roofing system	2200	plumbing equipment
0700.B8	single ply membrane roofing system	2200.A1	.01 sink
0700.B9	.01 extend roofing up and over parapet wall		.02 lavatory
0700.C1	.02 walk pad		.03 toilet
0700.C2	.03 Parapet Wall Flashing		.04 urinal
0700.C3	built up roofing		.05 drinking fountain
0700.C4	modified bitumen roofing		.06 mop sink
0700.C5	composition shingle roofing		.07 water heater
0700.C6	galvanized sheet metal		.08 Roof drain/Overflow Combo Unit
0700.C7	.01 two piece Fry Springlok flashing system		.09 Floor drain - slope floor to drain 2% max. slope
0700.C8	.02 parapet cap flashing		
0700.C9	.03 valley flashing		
0700.D1	.04 duct penetration		
0800	OPENINGS	2300	HVAC
0800.A1	door and frame	2300.A1	mechanical equipment - see mechanical drawings
0800.A2	door frame	2300.A2	ceiling register
0800.A3	roll up door	2300.A3	mechanical duct
0800.A4	window	2300.A4	Condensate Line
0800.A5	storefront window system	2300.A5	kitchen exhaust fan
0800.A6	access door		
0800.A7	extruded alum. corner	2600	ELECTRICAL
0800.A8	Roof hatch	2600.A1	electrical equipment
0900	FINISHES	2600.A2	light fixture
0900.A1	vinyl composition tile flooring and base	3200	SITEWORK
0900.A2	resilient sheet flooring and base	3200.A1	gas meter assembly
0900.A3	carpet and base	3200.A2	water meter box
0900.A4	base	3200.A3	backflow assembly
0900.A5	ceramic tile	3200.A4	fire hydrant
0900.A6	gypsum board	3200.A5	trench drain
0900.A7	wainscot	3200.A6	area drain
0900.A8	vinyl wall covering	3200.A7	drain inlet
0900.A9	vinyl wall covering wrapped tackboard panels	3200.B1	decomposed granite
0900.B1	fiberglass reinforced plastic panels (FRP)	3200.B2	aggregate base rock
0900.B2	SS wall panels per food service	3200.B3	concrete paving
0900.B3	suspended acoustical ceiling system	3200.B4	asphalt paving
0900.B4	glued or stapled on acoustical tile	3200.B5	concrete curb
0900.B5	cement plaster wall finish	3200.B6	concrete mow strip
0900.B6	Expansion Screed	3200.B7	trash enclosure
0900.B7	4" soffit vent screed	3200.C1	line paint striping
0900.B8	exterior panel wall system	3200.C2	fire lane striping
0900.B9	Metal Siding/Soffits	3200.C3	game line striping
2100	SPECIALTIES	3200.D1	ada accessible car parking stall
2100.A1	display case	3200.D2	ada accessible van parking stall
2100.A2	marker board	3200.D3	ada accessible ramp per civil
2100.A3	TV/monitor bracket	3200.D4	truncated domes
2100.A4	signs:	3200.D5	ada accessible path of travel
.01	parking lot entrance sign "towaway" per Civil	3200.D6	ada accessible restrooms (men's and women's)
.02	ADA accessible parking stall sign per Civil	3200.D7	ada accessible restrooms (girl's and boy's)
		3200.D8	ada accessible drinking fountain
		3200.E1	chain link fence
		3200.E2	.01 single 3'-0" wide swing gate
		3200.E3	.02 pair 6'-0" wide swing gate
		3200.E4	.01 single 3'-0" wide swing gate
		3200.E5	.02 pair 6'-0" wide swing gate
		3200.F1	reconfigure (e) irrigation and sprinklers
		3200.F2	sod turf landscaping planting area - patch & repair
		3200.F3	remove (e) trees
		3200.F4	remove (e) ada parking symbol

## REFLECTED CEILING PLAN LEGEND

	SUSPENDED ACOUSTICAL PANEL CEILING (SEE DETAILS ON SHEETS A8.3 THROUGH A8.8)
	APPLIED ACOUSTICAL TILE GLUED ON GYPSUM WALLBOARD, ATTACHED TO 2X4 @ 24" O.C. STRIPPING @ UNDERSIDE OF ROOF FRAMING
	LATH and PLASTER, GYPSUM WALLBOARD OR SPRAY ON ACOUSTICAL TREATMENT (SEE PLAN)
	EXPOSED ROOF JOISTS AND INSULATION PAINT
	RECESSED LIGHT FIXTURE
	RECESSED LIGHT FIXTURE
	RECESSED LIGHT FIXTURE
	SURFACE MOUNTED LIGHT FIXTURE
	SURFACE MOUNTED LIGHT FIXTURE
	SUSPENDED LIGHT FIXTURE
	SUPPLY AIR REGISTER
	RETURN AIR REGISTER
	EXHAUST AIR REGISTER
	CEILING OR WALL MOUNTED EXIT SIGN. SEE ELECTRICAL DRAWINGS & SPECIFICATIONS
	ACCESS DOOR - NOT ALL ACCESS DOORS MAY BE SHOWN ON ARCHITECTURAL DRAWINGS, COORDINATE LOCATIONS WITH MECHANICAL AND ELECTRICAL REQUIREMENTS - SEE DETAIL 11/A8.3.1 FOR ATTACHMENT
	FINISHED CEILING HT. ABOVE FINISH FLOOR

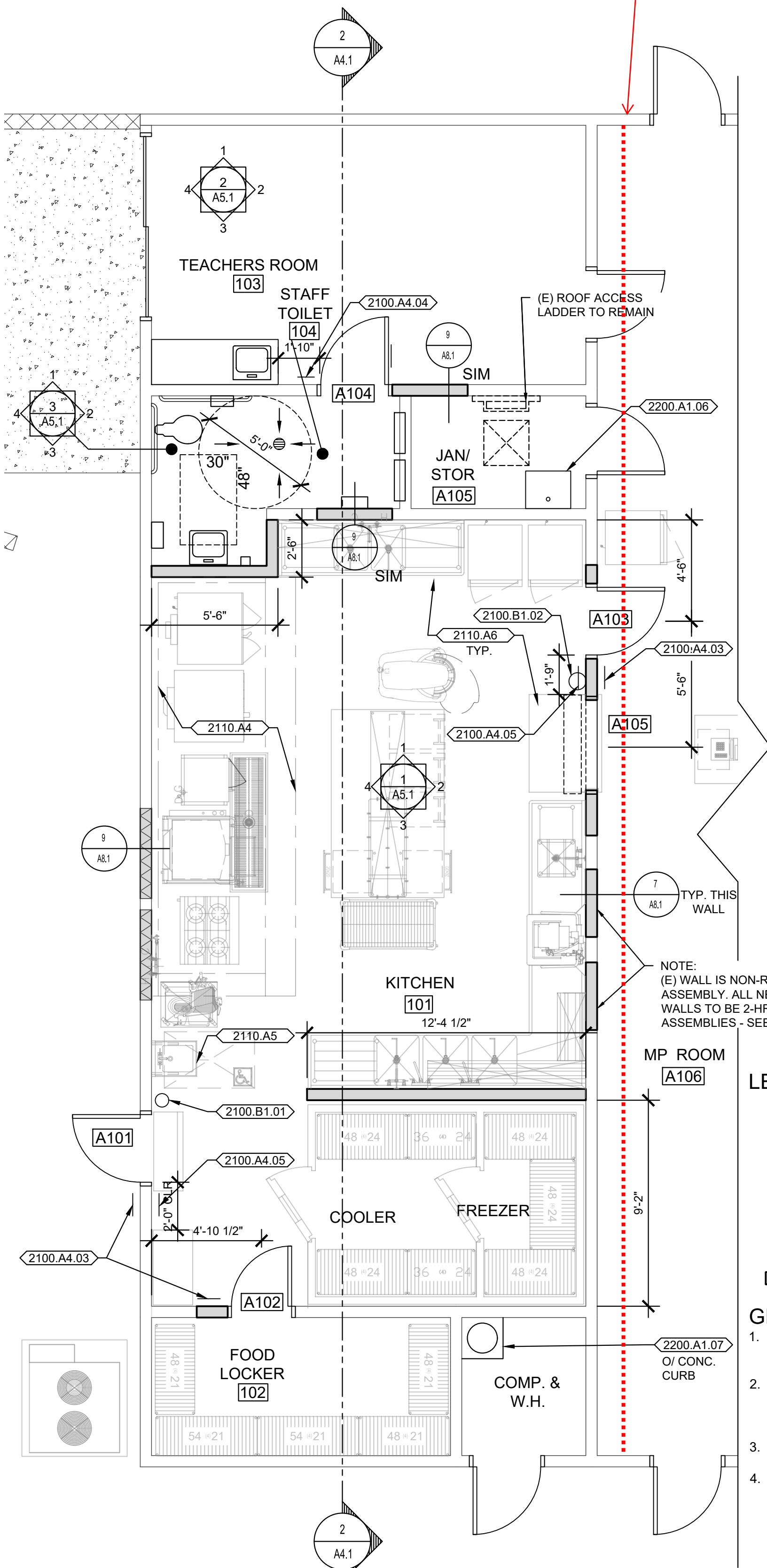
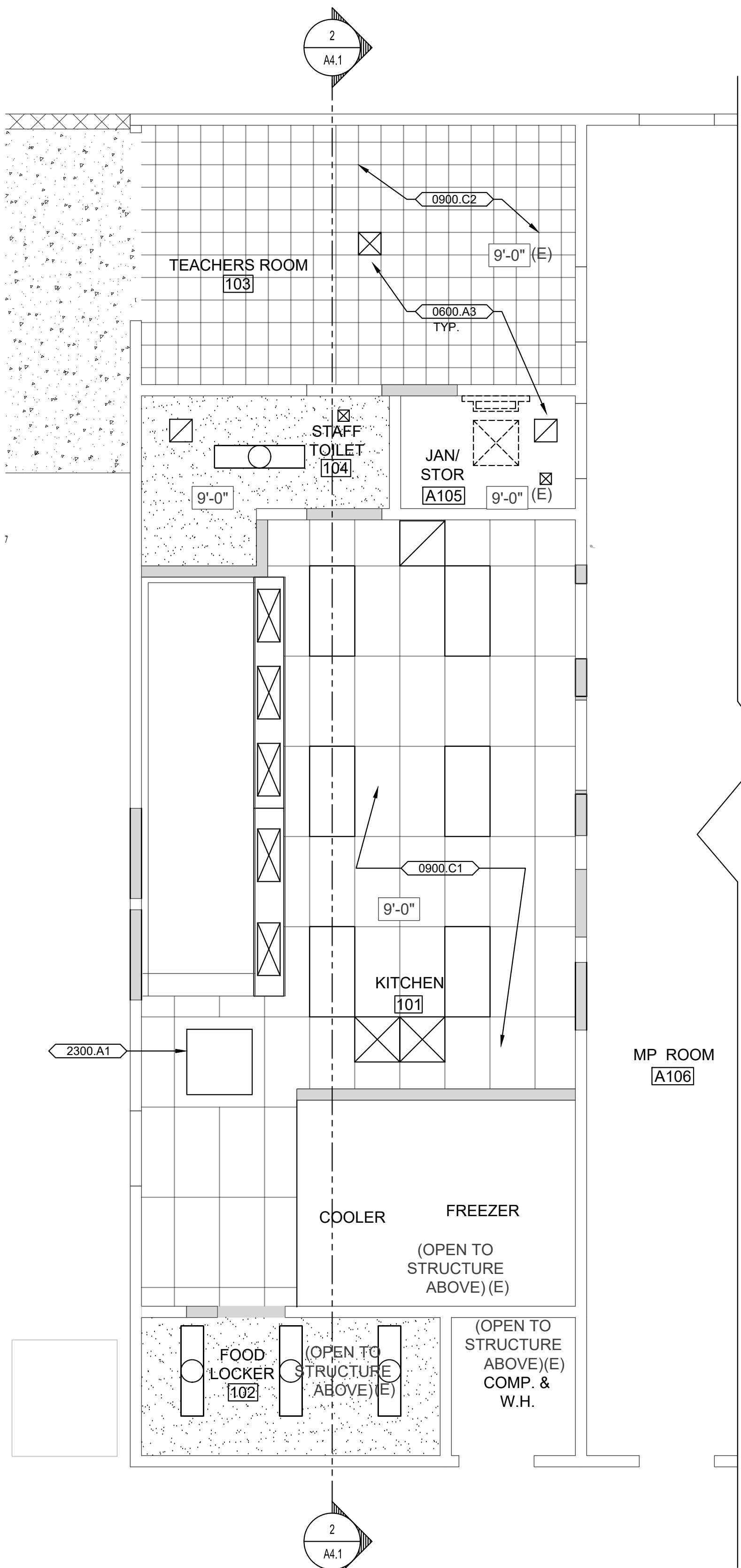
## LEGEND

	SEE STRUCTURAL DRAWINGS FOR STUD SIZE AND SPACING. WHERE SIZE AND SPACING NOT INDICATED, PROVIDE WOOD STUD WALL: 2X6 WOOD STUDS @ 16" O.C. INTERIOR HATCH INDICATES FULL DEPTH AND FULL HEIGHT INSULATION AT INTERIOR WALLS AND THERMAL BATT INSULATION AT EXTERIOR WALLS
	CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ROOM ELEVATIONS
	WINDOW (PLAN VIEW)

## GENERAL NOTES

- ALL EXTERIOR WALLS, JANITOR ROOM, KITCHEN, AND TOILET ROOM WALLS TO HAVE 6" HIGH CONCRETE CURB. SEE STRUCTURAL FOUNDATION PLAN.
- FIRE BLOCKING SHALL BE PROVIDED IN CONTINUOUS CONCEALED SPACES OF PLUMBING WALLS, STUD WALLS, PARTITIONS, ETC. AT CEILING AND FLOOR LEVELS AND AT 10'-0" INTERVALS ALONG THE LENGTH AND HEIGHT OF THE WALL.
- CONNECT RAINWATER LEADERS & DOWNSPOUTS PER CIVIL AND PLUMBING.
- SLOPE FLOOR IN WET AREAS TO FLOOR DRAINS. MINIMUM SLOPE SHALL BE ONE PERCENT (1%). ARROWS INDICATE SLOPE DIRECTION, RECESS SLABS AS REQUIRED TO ACCOMMODATE FINISHES AND SLOPE.

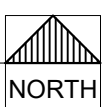
Construct a temporary wood framed partition wall from floor to ceiling approximately 12 inches inside MP Room to separate work of Kitchen from MP room. Maintain access to exits from MP Room side. The MP room will be occupied by students and teachers during lunch and periodically beginning in July 12, 2021. Contractor will be required to accommodate partial owner occupancy of MP room from that time."



(SEE SHEET A0.1 FOR DISABLED ACCESSIBLE FIXTURES AND ACCESSORIES MOUNTING HEIGHTS, LOCATIONS AND REQUIREMENTS)

## 2 REFLECTED CEILING PLAN

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

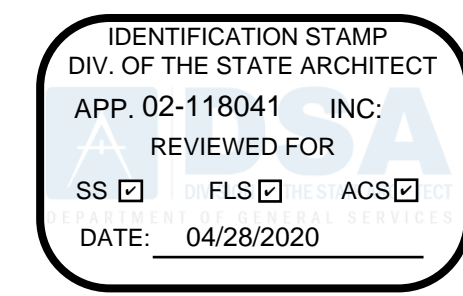


## 1 ENLARGED FLOOR PLAN

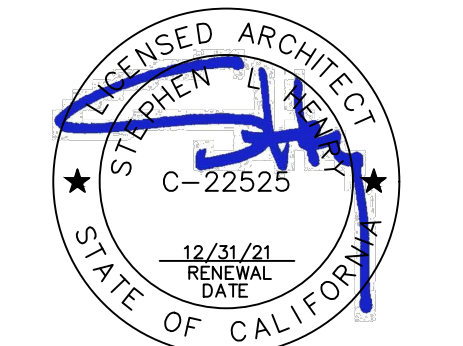
SCALE: 1/4" = 1'-0"







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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

ROOF PLAN  
ROOF WELL PLAN

CONSULTANT		
PROJECT NO.	REVISIONS	BY
19-32-050		
DATE		
04/10/2020		
DRAWN		
SLH		
CHECKED		
SLH		
SCALE		
CADFILE		
UPDATED		
SHEET NO.		
A2.3		
06 OF 71 SHEETS		

## KEYNOTES

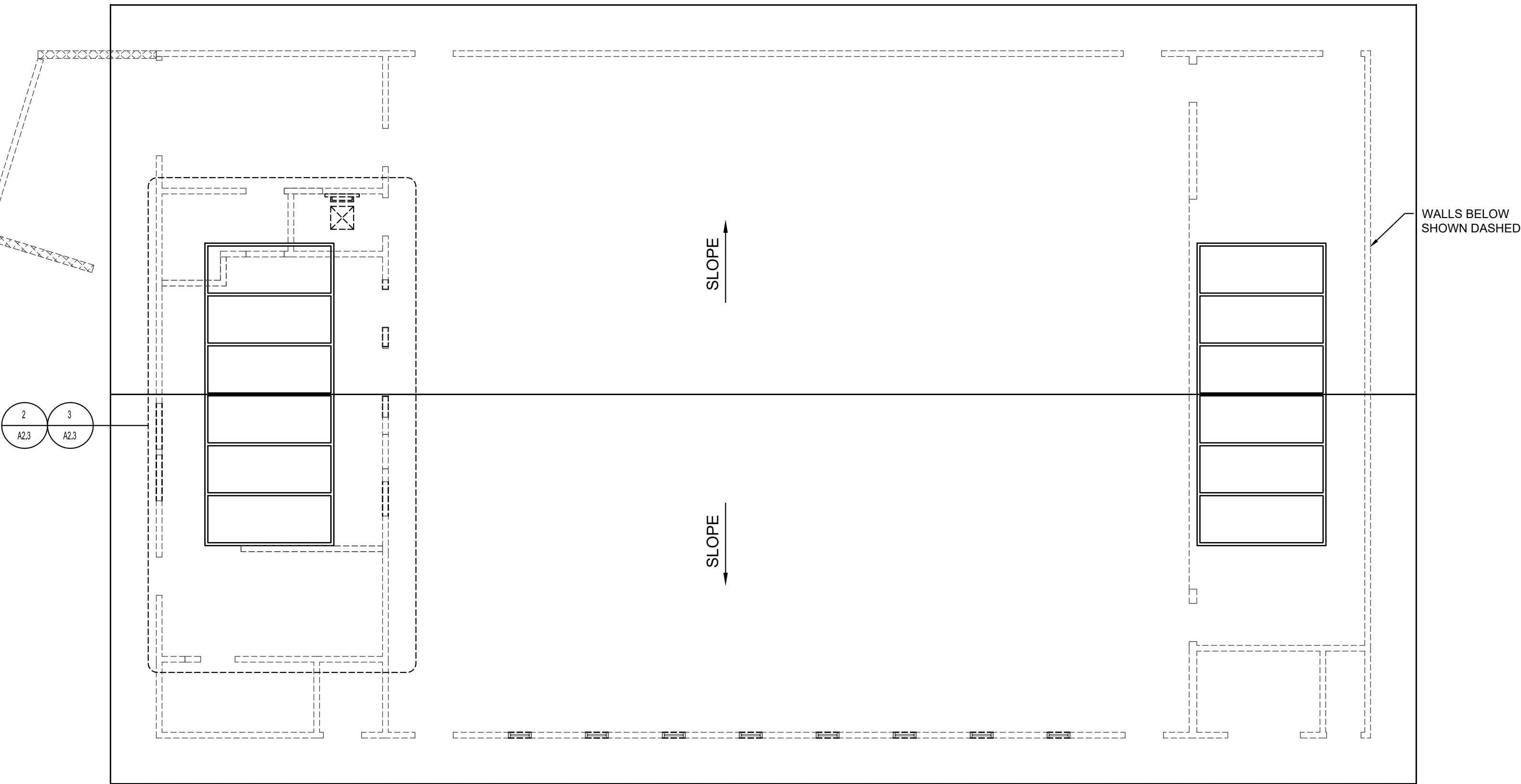
(NOT ALL KEYNOTES ARE USED ON SHEET)

0300	CONCRETE	0300	room identification sign per dtt. 2/A0.1
0300.A1	concrete slab on grade - replace where removed	04	restroom identification sign per dtt. 2/A0.1
0300.A2	concrete footing	05	ADA Tactile exit sign per dtt. 3/A0.1
0300.A4	expansion joint	06	self-illuminating exit
0300.A5	splash block	07	assistive listening system per detail 7/A0.1
0300.A6	Concrete curb	08	Monument sign
0400	MASONRY	09	Building sign
0400.A1	concrete masonry wall	10	Dedication plaque
0500	METALS	2100.A5	toilet partition
0500.A2	corrugated structural metal roof deck	2100.A6	urinal partition
0500.A3	metal pipe bollard concrete fill	2100.A7	toilet accessories:
0500.A4	metal pipe bollard removable	01	paper towel dispenser
0500.A5	metal pipe hand rail - 1.5" diameter	02	toilet paper dispenser
0500.A6	metal roof access ladder with security door	03	sanitary napkin dispenser
0500.A7	metal louver	04	soap dispenser
0500.B1	rolled channel (structural support grid)	05	mirror
0500.B2	metal furring channel	09	trash receptacle
0600	WOOD, PLASTICS AND COMPOSITES	10	grab bar
0600.A1	wood framing - see structural	11	toilet seat cover, toilet tissue dispenser
0600.A2	frame opening for new door, window, or HVAC	12	toilet seat cover, sanitary napkin disposal, & toilet tissue dispenser
0600.A3	in-fill frame door/window/duct opening	13	sanitary napkin disposal
0600.A4	in-fill frame roof opening where equipment was removed	14	paper towel dispenser/ waste receptacle
0600.A5	wood post	2100.B8	folding panel partition
0600.A6	wood joist	2100.B1	fire extinguisher
0600.A7	wood trusses	01	Provide UL Rated Class K 2A-K per spec.
0600.A8	2 x 4 furred wall	02	Provide UL Rated Class K 10B:C per spec.
0600.A9	blocking	2100.B2	metal shelving
0600.B1	exterior wood wall sheathing	2100.B3	metal lockers
0600.B2	wood framed and sheathed cricket - use fire retardant treated wood	2100.B4	knox box
0600.B3	wood trim	2110	EQUIPMENT
0600.C1	wood hand rail	2110.A1	projection screen
0700	THERMAL AND MOISTURE PROTECTION	2110.A2	refrigerator
0700.A1	insulation	2110.A3	microwave (owner furnished, contractor installed)
01	R-13 batt/blanket (3.5" thick)	2110.A4	Type I Kitchen Exhaust hood - w/ Fire System
02	R-21 batt/blanket (6.5" thick)	2100.A5	Remote Pull Station - see FS Sheets
03	R-30 batt/blanket (10" thick)	2100.A6	Hand Sink - See Detail E/FS8.2
04	R-38 batt/blanket (12" thick)	2100.A6	Food Service Equipment shown w/ light line - sheet FS Sheets.
05	board insulation (2" thick)	2120	FURNISHINGS
06	board insulation tapered cricket	2120.A1	window coverings & track
0700.B1	Standing seam roofing system	2120.A2	plastic laminate casework
0700.B2	single ply membrane roofing system	01	ada accessible sink base cabinet
01	extend roofing up and over parapet wall	02	plastic laminate countertop with 4" backsplash
02	walk pad	2120.A3	casework
03	Parapet Wall Flashing	2200	PLUMBING
0700.B3	built up roofing	2200.A1	plumbing equipment
0700.B4	modified bitumen roofing	01	sink
0700.B5	composition shingle roofing	02	lavatory
0700.C1	galvanized sheet metal	03	toilet
01	two piece Fry Springlok flashing system	04	urinal
02	parapet cap flashing	05	drinking fountain
03	valley flashing	06	mop sink
04	splash pan	07	water heater
05	scupper	08	Roof drain/Overflow Combo Unit
06	gutter	09	Floor drain - slope floor to drain 2% max. slope
07	downspout	2300	HVAC
08	22 GA GSM Siding/Soffit	2300.A1	mechanical equipment - see mechanical drawings
09	22 GA GSM Corner Guard	2300.A2	ceiling register
0700.C2	vent	2300.A3	mechanical duct
01	roof vent - typ. of 4	2300.A4	Condensate Line
02	pipe vent	2300.A5	kitchen exhaust fan
03	hot vent	2600	ELECTRICAL
04	duct penetration	2600.A1	electrical equipment
0700.D1	sealant	2600.A2	light fixture
01	remove (e) sealant from (e) doors and (e) windows, install (n) sealant - typical	3200	SITEWORK
02	remove (e) sealant and backer pod from (e) concrete wall panel joint - install (n) backer rod and sealant - typical	3200.A1	gas meter assembly
0800	OPENINGS	3200.A2	water meter box
0800.A1	door and frame	3200.A3	backflow assembly
0800.A3	door frame	3200.A4	fire hydrant
0800.A4	roll up door	3200.A5	trench drain
0800.A5	window	3200.A6	area drain
0800.A6	storefront window system	3200.A7	drain inlet
0800.A7	access door	3200.B1	decomposed granite
0800.A8	extruded alum. corner	3200.B2	aggregate base rock
0800.A9	Roof hatch	3200.B3	concrete paving
0900	FINISHES	3200.B4	asphalt paving
0900.A1	vinyl composition tile flooring and base	3200.B5	concrete curb
0900.A2	resilient sheet flooring and base	3200.B6	concrete mow strip
0900.A3	carpet and base	3200.B7	trash enclosure
0900.A4	base	3200.C1	line paint striping
0900.A5	ceramic tile	3200.C2	fire lane striping
0900.B1	gypsum board	3200.C3	game line striping
0900.B2	wainscot	3200.D1	ada accessible car parking stall
0900.B3	vinyl wall covering	3200.D2	ada accessible van parking stall
0900.B4	vinyl wall covering wrapped tackboard panels	3200.D3	ada accessible ramp per civil
0900.B5	fiberglass reinforced plastic panels (FRP)	3200.D4	truncated domes
0900.B6	SS wall panels per food service	3200.D5	ada accessible path of travel
0900.C1	suspended acoustical ceiling system	3200.D6	ada accessible restrooms (men's and women's)
0900.C2	glued or stapled on acoustical tile	3200.D7	ada accessible restrooms (girl's and boy's)
0900.D1	cement plaster wall finish	3200.D8	ada accessible drinking fountain
01	Expansion Screed	3200.E1	chain link fence
02	4" soffit vent screed	01	single 3'-0" wide swing gate
0900.D2	exterior panel wall system	02	pair 6'-0" wide swing gate
0900.D3	Metal Siding/Soffits	01	single 3'-0" wide swing gate
2100	SPECIALTIES	02	pair 6'-0" wide swing gate
2100.A1	display case	3200.E3	ornamental metal fence
2100.A2	marker board	3200.F1	reconfigure (e) irrigation and sprinklers
2100.A3	TV/monitor bracket	3200.F2	sod turf landscaping planting area - patch & repair
2100.A4	signs:	3200.F3	remove (e) trees
01	parking lot entrance sign "towaway" per Civil	3200.F4	remove (e) ada parking symbol
02	ADA accessible parking stall sign per Civil		

## DEMOLITION NOTES

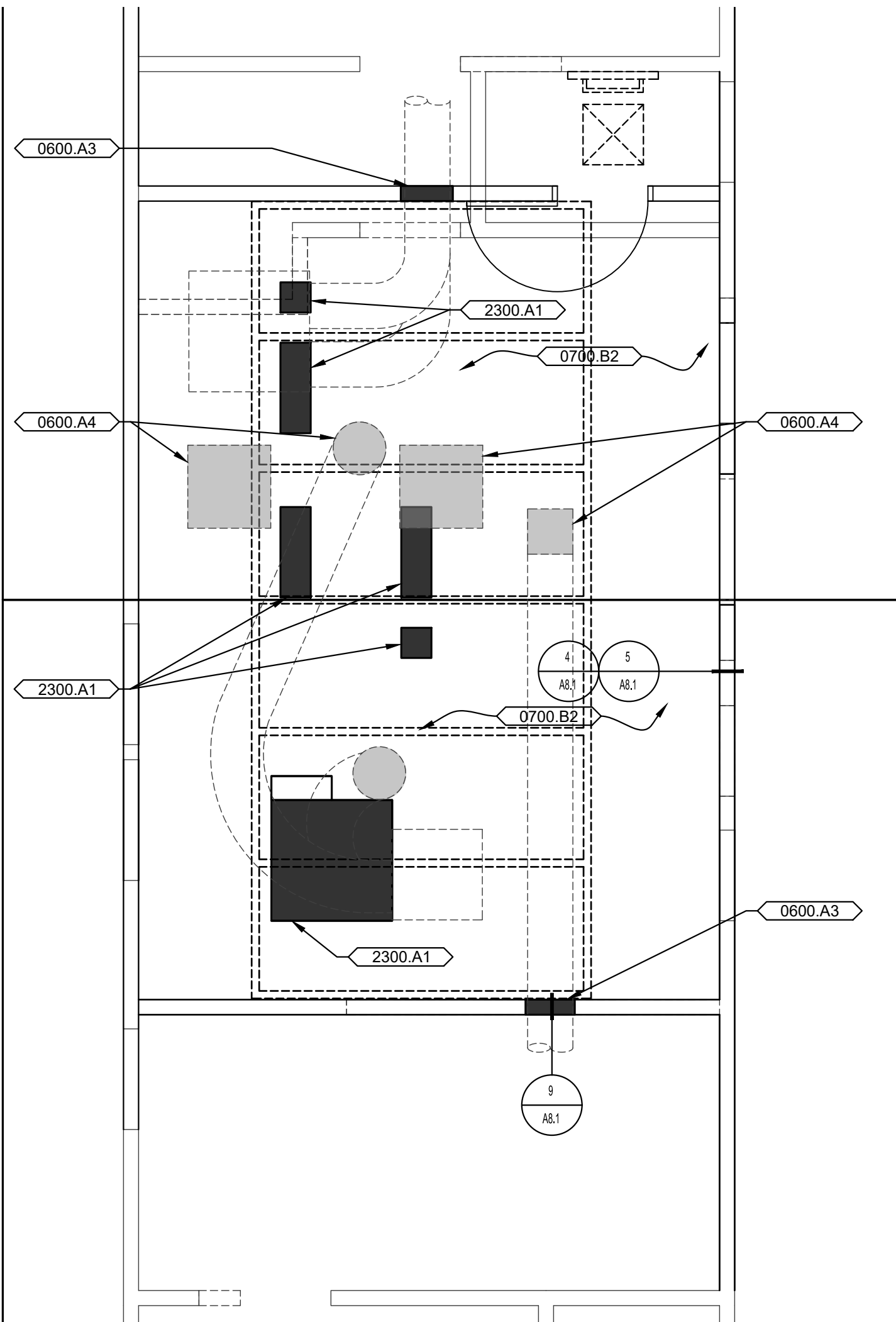
(NOT ALL DEMOLITION NOTES ARE USED ON SHEET)

- REMOVE RESTROOM ACCESSORIES
- REMOVE TOILET PARTITIONS
- REMOVE PLUMBING FIXTURES
- REMOVE ELECTRICAL
- REMOVE DOOR & FRAME
- REMOVE WINDOW
- REMOVE WALL FINISHES TO STUDS
- REMOVE CEILING FINISHES TO JOISTS
- REMOVE INSULATION
- REMOVE WALLS INCLUDING CONCRETE CURB
- SAWCUT AND REMOVE CONCRETE SLAB
- REMOVE HVAC EQUIPMENT
- REMOVE HVAC DUCT / SHEET METAL / PANELS
- REMOVE CHAIN LINK FENCE & GATES
- SAWCUT AND REMOVE CONCRETE CURB
- BEAD BLAST (E) SLAB, IN PREPARATION FOR EPOXY FLOOR FINISH PATCH & REPAIR SLAB
- REMOVE (E) FLOOR & BASE FINISHES
- REMOVE (E) ROOFING MATERIAL
- REMOVE (E) ROLL-UP DOOR & FRAME
- REMOVE (E) POCKET DOOR & FRAME
- REMOVE (E) FOOD SERVICE EQUIPMENT
- REMOVE (E) HOOD
- REMOVE (E) WALK-IN REF/FREEZER
- REMOVE (E) CASEWORK



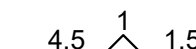
## 1 ROOF PLAN - BUILDING A

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



(E) ROOF SCREEN WILL REQUIRE PARTIAL REMOVAL IN ORDER TO REMOVE EXISTING EQUIPMENT AND INSTALL NEW ROOF TOP EQUIPMENT. REINSTALL SCREEN AT JOB COMPLETION - SEE SHEET A8.2.1 FOR ORIGINAL CONSTRUCTION, DETAILS AND ATTACHMENT OF SCREEN.

## LEGEND



SEE STRUCTURAL DRAWINGS FOR STUD SIZE AND SPACING. WHERE SIZE AND SPACING NOT INDICATED, PROVIDE WOOD STUD WALL: 2X8 WOOD STUDS @ 16" O.C. INTERIOR HATCH INDICATES FULL DEPTH AND FULL HEIGHT INSULATION AT INTERIOR WALLS AND THERMAL BATT INSULATION AT EXTERIOR WALLS

CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ROOM ELEVATIONS

WINDOW (PLAN VIEW)

## GENERAL NOTES

- ALL EXTERIOR WALLS, JANITOR ROOM, KITCHEN, AND TOILET ROOM WALLS TO HAVE 6" HIGH CONCRETE CURB. SEE STRUCTURAL FOUNDATION PLAN.
- FIRE BLOCKING SHALL BE PROVIDED IN CONTINUOUS CONCEALED SPACES OF PLUMBING WALLS, STUD WALLS, PARTITIONS, ETC. AT CEILING AND FLOOR LEVELS AND AT 10'-0" INTERVALS ALONG THE LENGTH AND HEIGHT OF THE WALL.
- CONNECT RAINWATER LEADERS & DOWNSPOUTS PER CIVIL AND PLUMBING.
- SLOPE FLOOR IN WET AREAS TO FLOOR DRAINS. MINIMUM SLOPE SHALL BE ONE PERCENT (1%). ARROWS INDICATE SLOPE DIRECTION, RECESS SLABS AS REQUIRED TO ACCOMMODATE FINISHES AND SLOPE.

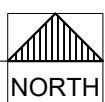
## 3 ROOF WELL PLAN - BUILDING A

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

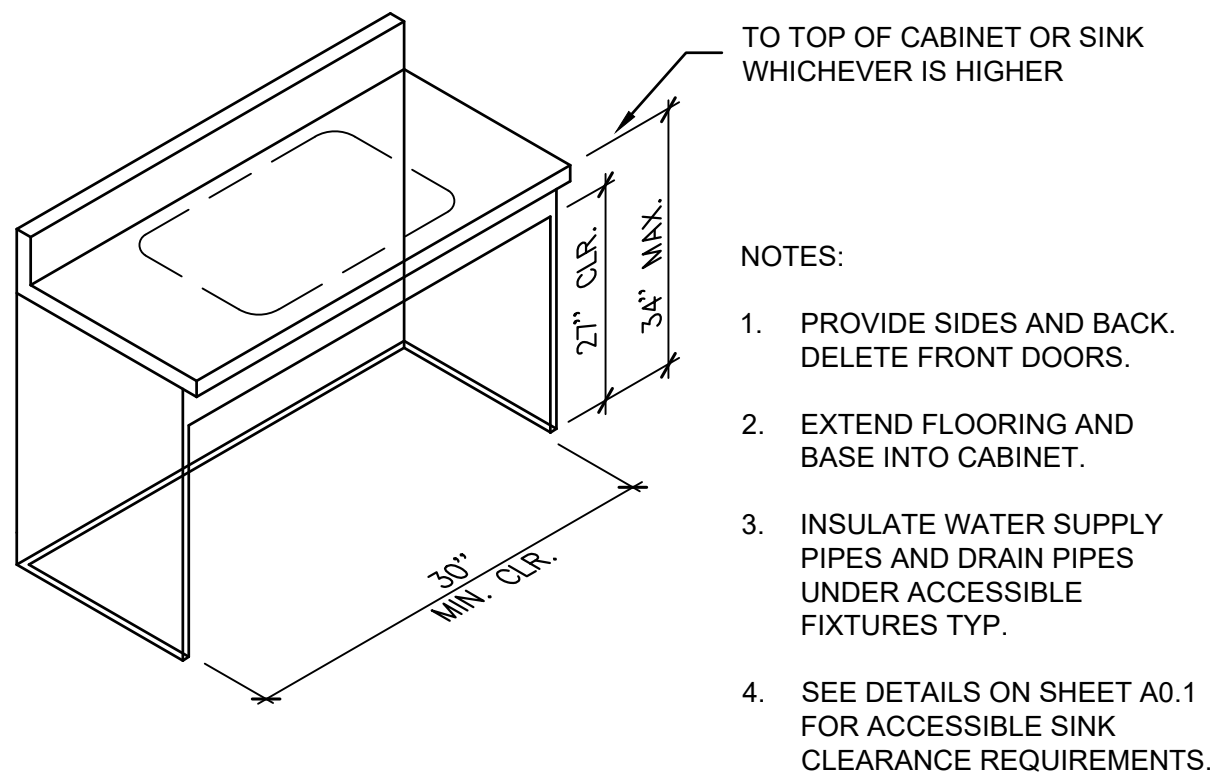


## 2 ROOF WELL DEMOLITION PLAN - BUILDING A

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

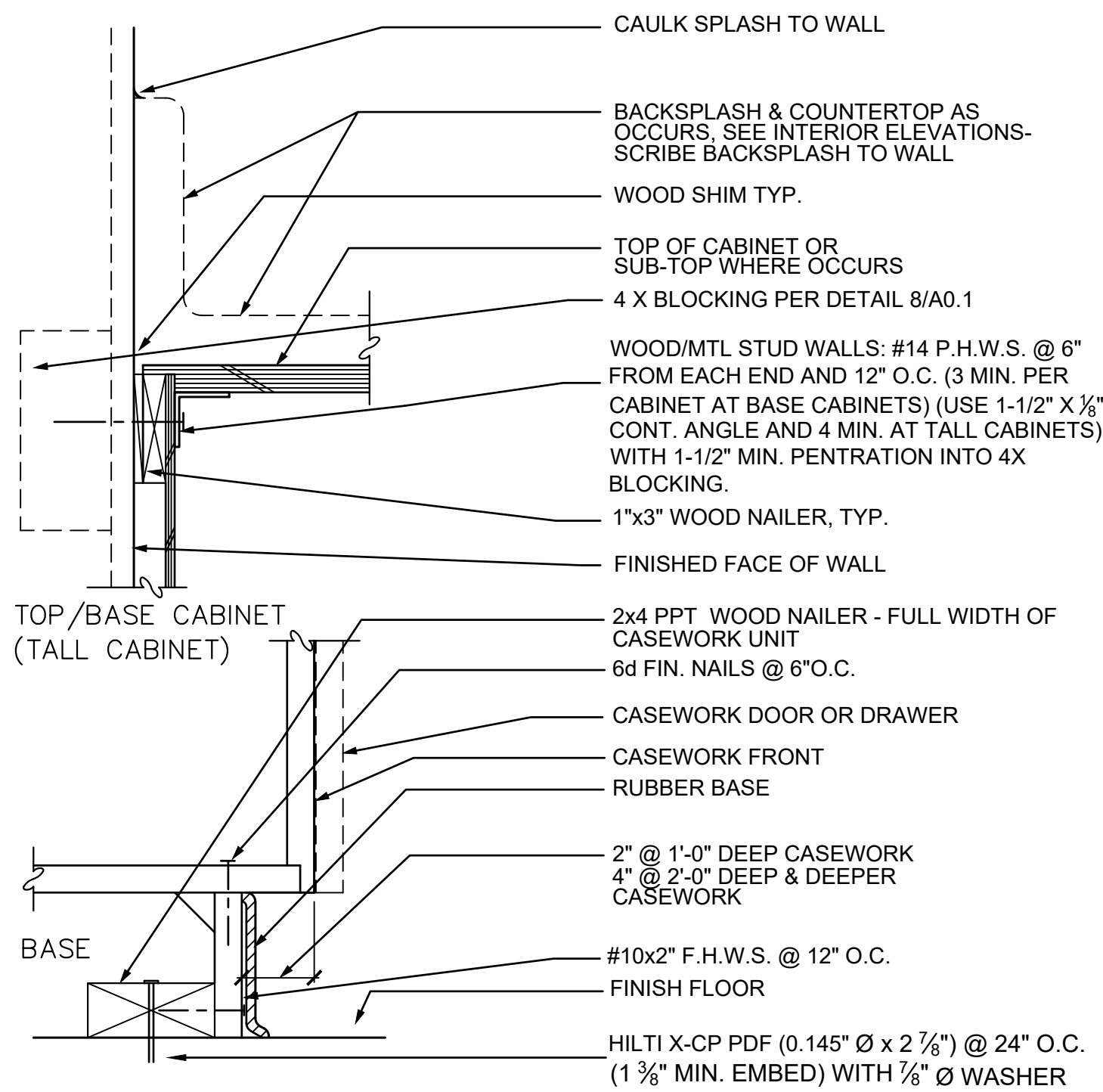




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## ① ACCESSIBLE CASEWORK

SCALE: 1/2"=1'-0"



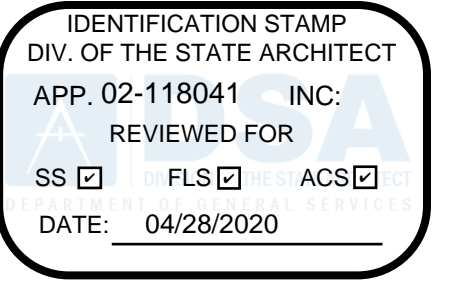
## ② CABINET ANCHORAGE

SCALE: 3"=1'-0"

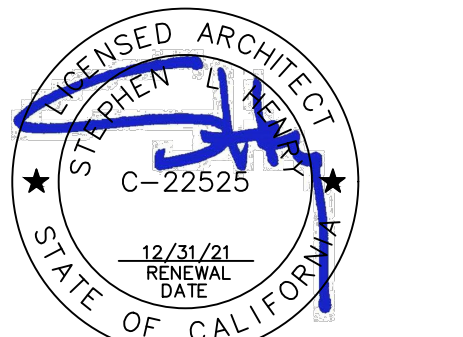
CASEWARE SCHEDULE															
KEY	CABINET NUMBER	W.I. NUMBER*	SIZE (INCHES)				FINISH								NOTES
			WIDTH	HEIGHT	DEPTH	CASEWORK				COUNTERTOP FINISH					
						PLASTIC LAMINATE				PLASTIC LAMINATE					
	154A	154	36	34	24	●					●				1, 2, 3
	222A	222	30	34	24	●					●				1, 3
NOTES															
1. HEIGHT PROVIDED FOR BASE CABINETS IF FROM FINISHED FLOOR TO TOP OF COUNTER TOP. ACTUAL HEIGHT OF BASE CABINET IS LESS.															
2. SEE DETAIL 1 THIS SHEET FOR ADA SINK BASE DETAIL.															
3. SEE DETAIL 2 THIS SHEET FOR CABINET ANCHORAGE.															

MATERIAL & FINISH SCHEDULE																		NOTES	
ROOM NUMBER	ROOM NAME	FLOOR		BASE		WAINSCOT		WALLS								CEILING			
		MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	HEIGHT	N		E		S		W		MATERIAL	FINISH	HEIGHT	
								MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH				
A101	KITCHEN	RE	-	6B	-	FRP1	9'-0"	G1	P	G1	P	G1	P	G1	P	A3	F	9'-0"	1, 2, 3, 4, 5, 6
A102	FOOD LOCKER	RE	-	6B	-	FRP1	9'-0"	G1	P	G1	P	G1	P	G1	P	G1	P	VARIES	2, 3, 4, 5, 6
A103	TEACHER ROOM	RT	-	4B	-	-	-	E	P	E	P	E	P	E	P	E	P	9'-0"	7
A104	STAFF TOILET	RE	-	6B	-	FRP1	9'-0"	G1	-	G1	-	G1	-	G1	-	G1	P	9'-0"	1, 2, 5, 6
A105	JAN/STOR	RE	-	6B	-	FRP1	8'-0"	E	-	E	-	E	-	E	-	E	P	9'-0"	10
A106	MP	-	-	4B	-	-	-	-	-	-	-	-	-	G1	P	-	-	-	10
MATERIAL/FINISH LEGEND																		NOTES	

MATERIAL/FINISH LEGEND	NOTES
4B 4" RUBBER BASE	
6B 6" INTEGRAL COVE BASE (RESINOUS)	
C1 CARPET TILE	1. USE WATER RESISTANT GYPSUM BOARD AT KITCHEN, BATHROOMS AND WET AREAS - TYPICAL.
C2 WALK-OFF CARPET TILE	
RT RESILIENT TILE FLOORING	2. INTEGRAL COVE BASE MUST HAVE $\frac{3}{8}$ " MINIMUM RADIUS COVING AND SHALL EXTEND AT LEAST 6" UP WALL.
RS RESILIENT SHEET VINYL FLOORING	
RE RESINOUS FLOORING	3. PROVIDE R-19 BATT INSULATION AT EXTERIOR WOOD STUD WALLS; PROVIDE R-38 BATT INSULATION AT ROOF JOISTS
G1 5/8" GYPSUM BOARD	
G2 5/8" 11" TS 1/2" GYPSUM BOARD	
GE GYPSUM BOARD EXISTING	4. EXTERIOR WALL INSULATION SHALL EXTEND TO THE ROOF STRUCTURE AND SHALL CREATE AN ENVELOPE WITH THE ROOF INSULATION.
CON CONCRETE	
CS CONCRETE SEAL	
P PAINT	
N NO FINISH	5. BATT INSULATION INSTALLED AT THE ROOF SHALL BE INSTALLED BETWEEN JOISTS. WHERE BATT ROOF INSULATION IS EXPOSED TO OCCUPIED SPACE BELOW, THE INSULATION SHALL BE PAPER FACE AND INSTALLED NEATLY, READY FOR PAINT.
E EXISTING	
F FACTORY	
FRP1 FIBER REINFORCED PLASTIC PANEL	6. PROVIDE SOUND INSULATION AT INTERIOR WALLS AND CEILING.
FRP2 FIBER REINFORCED PLASTIC PANEL	
VWT VINYL WRAPPED TACKBOARD	7. PATCH AND REPAIR WALLS & CEILING (12x12 ACOUSTICAL TILE OVER GYPSUM BOARD AT CEILING AND GYPSUM BOARD AT WALLS) PRIOR TO PAINTING
A1 2' x 4' SUSPENDED ACOUSTICAL CEILING SYSTEM TYPE A1	
A2 2' x 2' SUSPENDED ACOUSTICAL CEILING SYSTEM TYPE A1	8. ALL FLOOR FINISH MATERIALS SHALL CONFORM TO CBC SECTION 804 FOR MINIMUM CRITICAL RADIANT FLUX AND OPTICAL DENSITY SMOKE RATING.
A3 2' x 4' SUSPENDED ACOUSTICAL CEILING SYSTEM TYPE A2	9. A WALL AND CEILING FINISHES SHALL CONFORM TO CBC SECTION 803 FOR FIRE PERFORMANCE AND SMOKE DEVELOPMENT.
	10. PATCH AND REPAIR (E) WALLS PRIOR TO PAINTING.



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## KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL

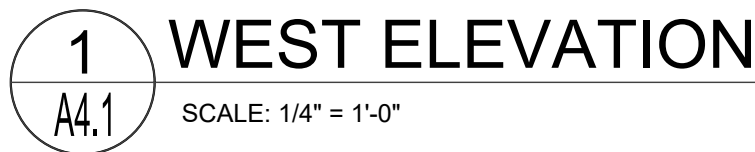
DOOR SCHEDULE  
FINISH SCHEDULE

CONSULTANT

PROJECT NO. 19-32-050	REVISIONS	BY
DATE 04/10/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		
SHEET NO.		

### A3.1





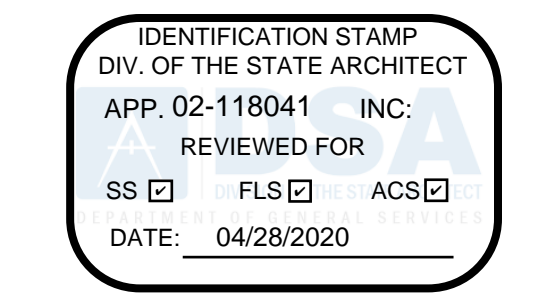
(NOT ALL KEYNOTES ARE USED ON SHEET)

08 OF 71 SHEETS

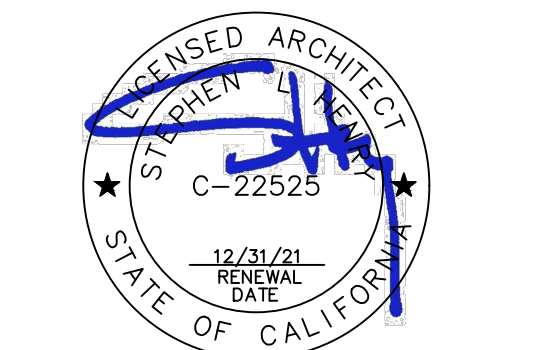








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## KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL

## DETAILS

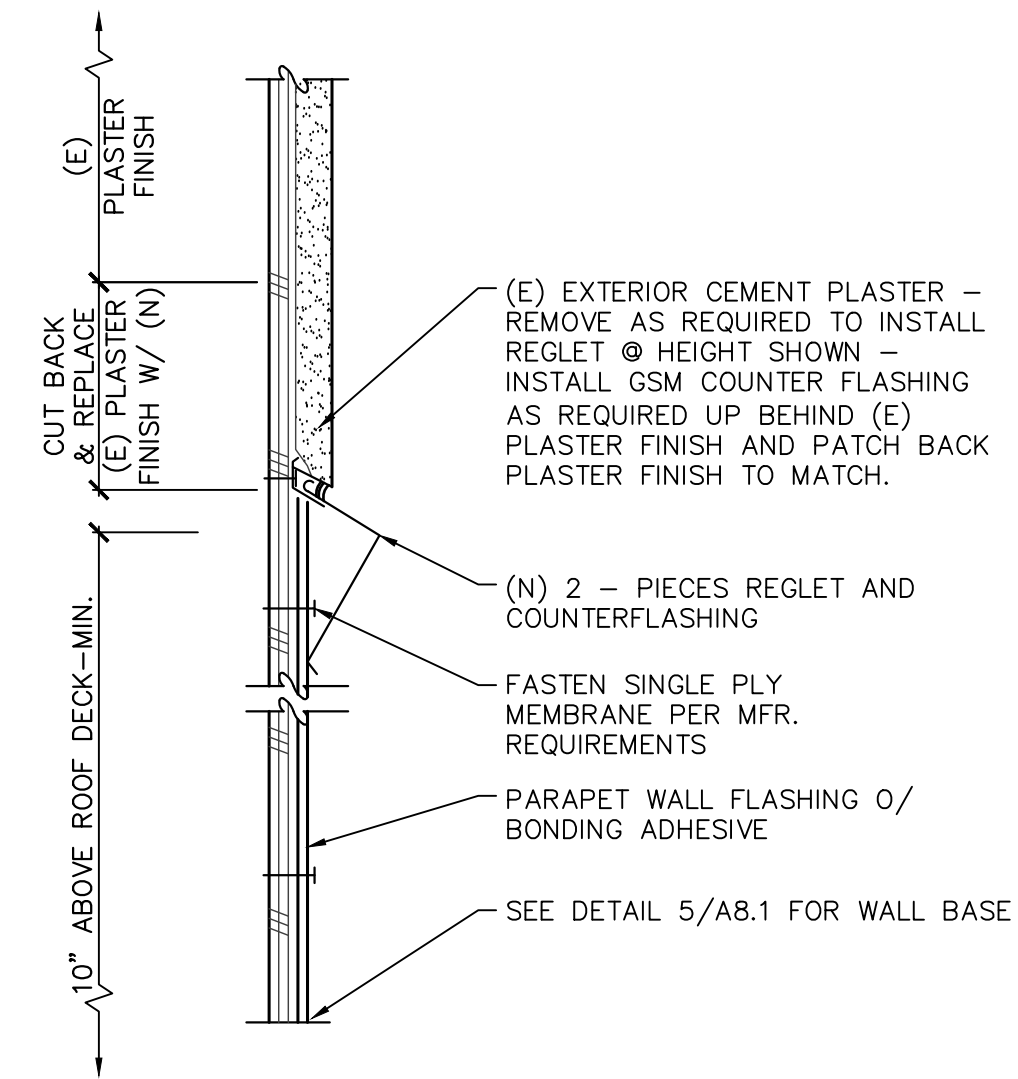
CONSULTANT

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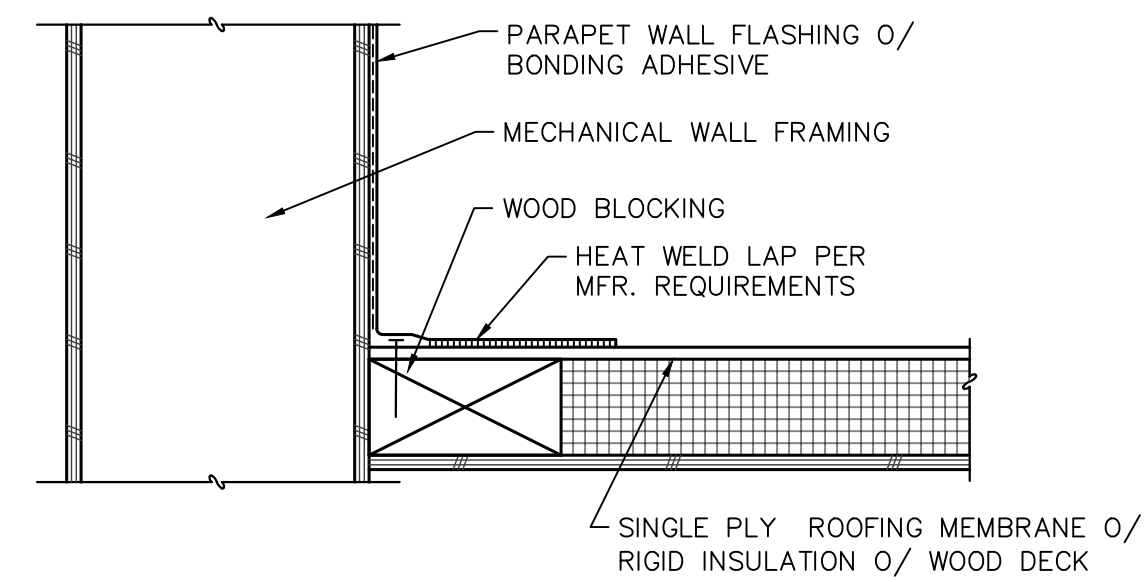
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## A8.1

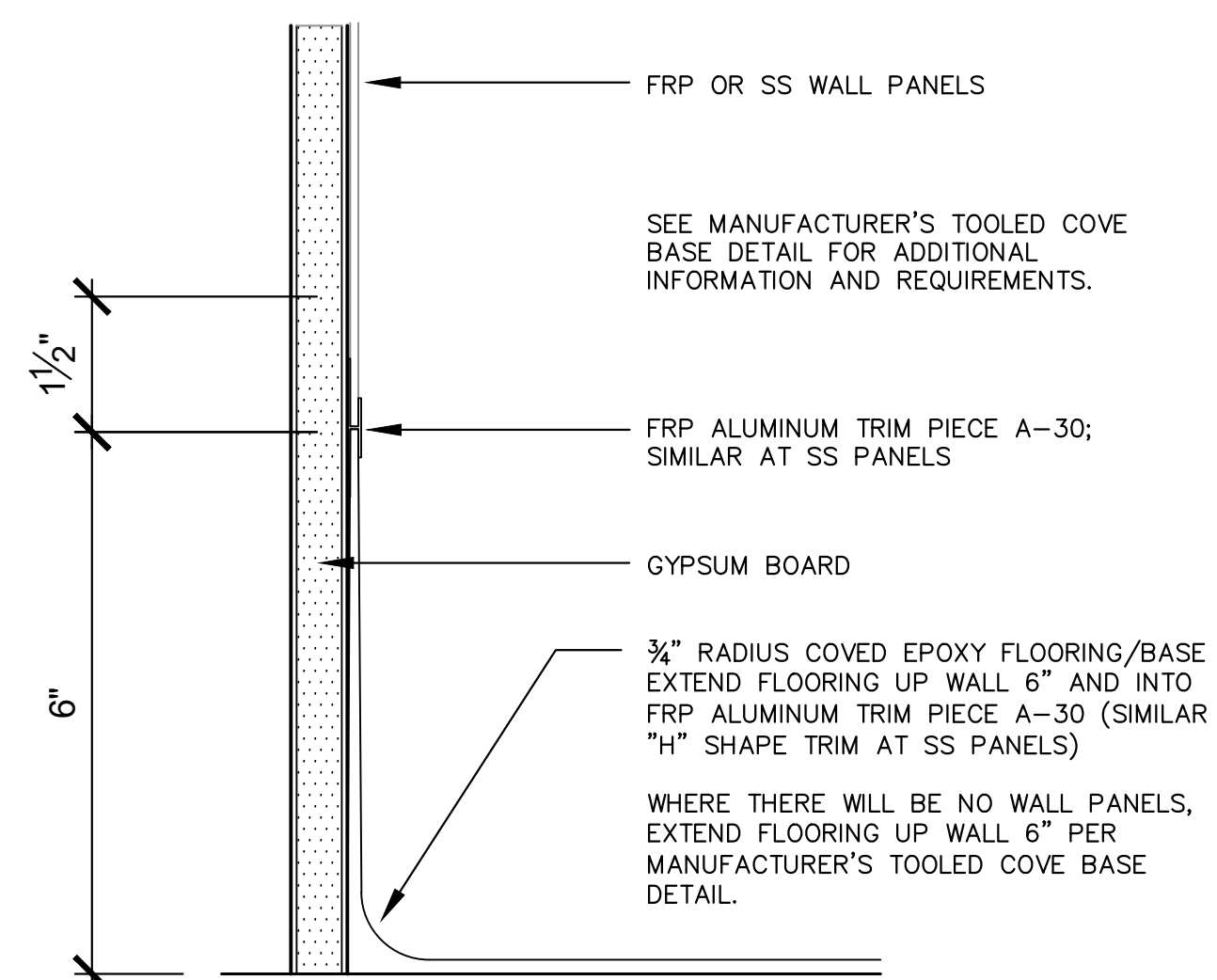
10 OF 71 SHEETS



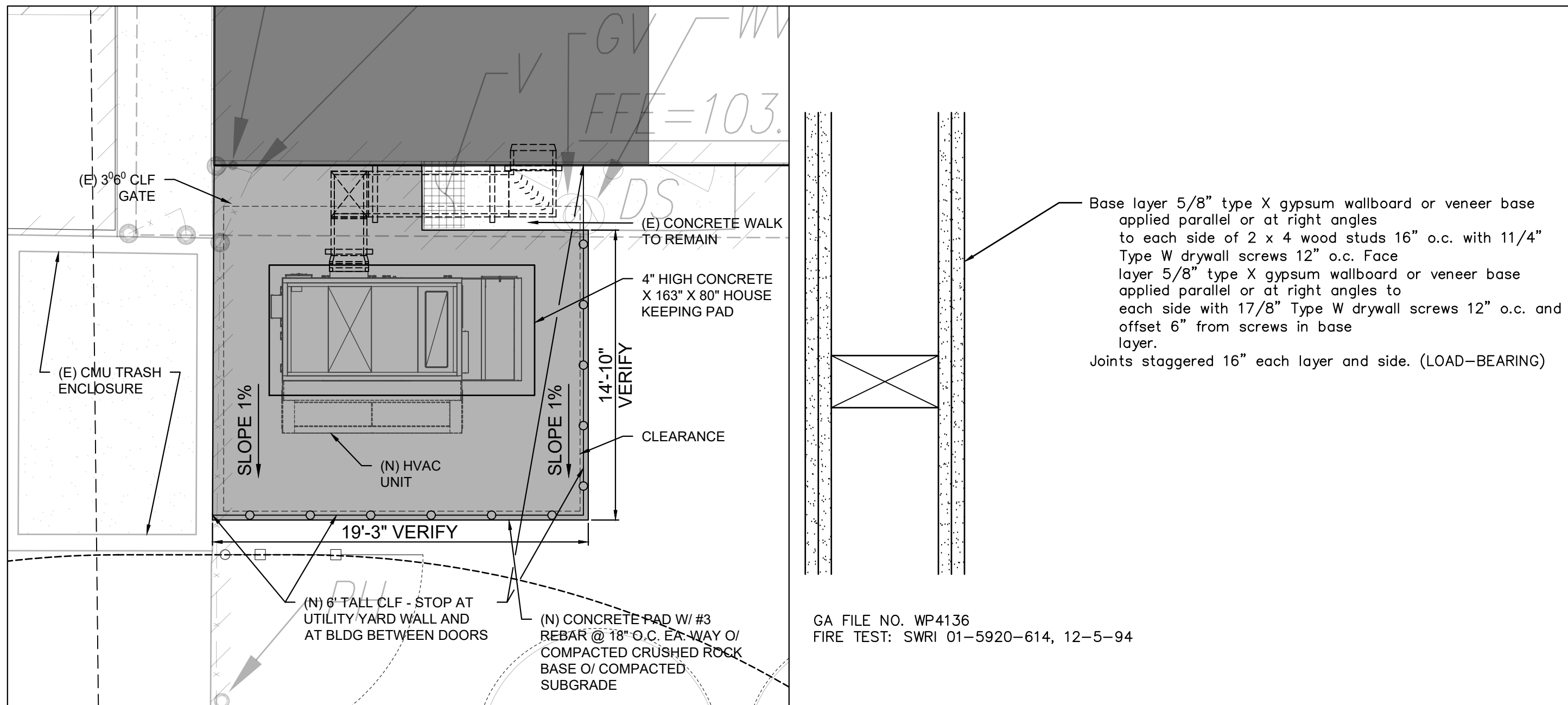
4 CEM. PLASTER TO PARAPET WALL FLASHING  
SCALE: N.T.S.



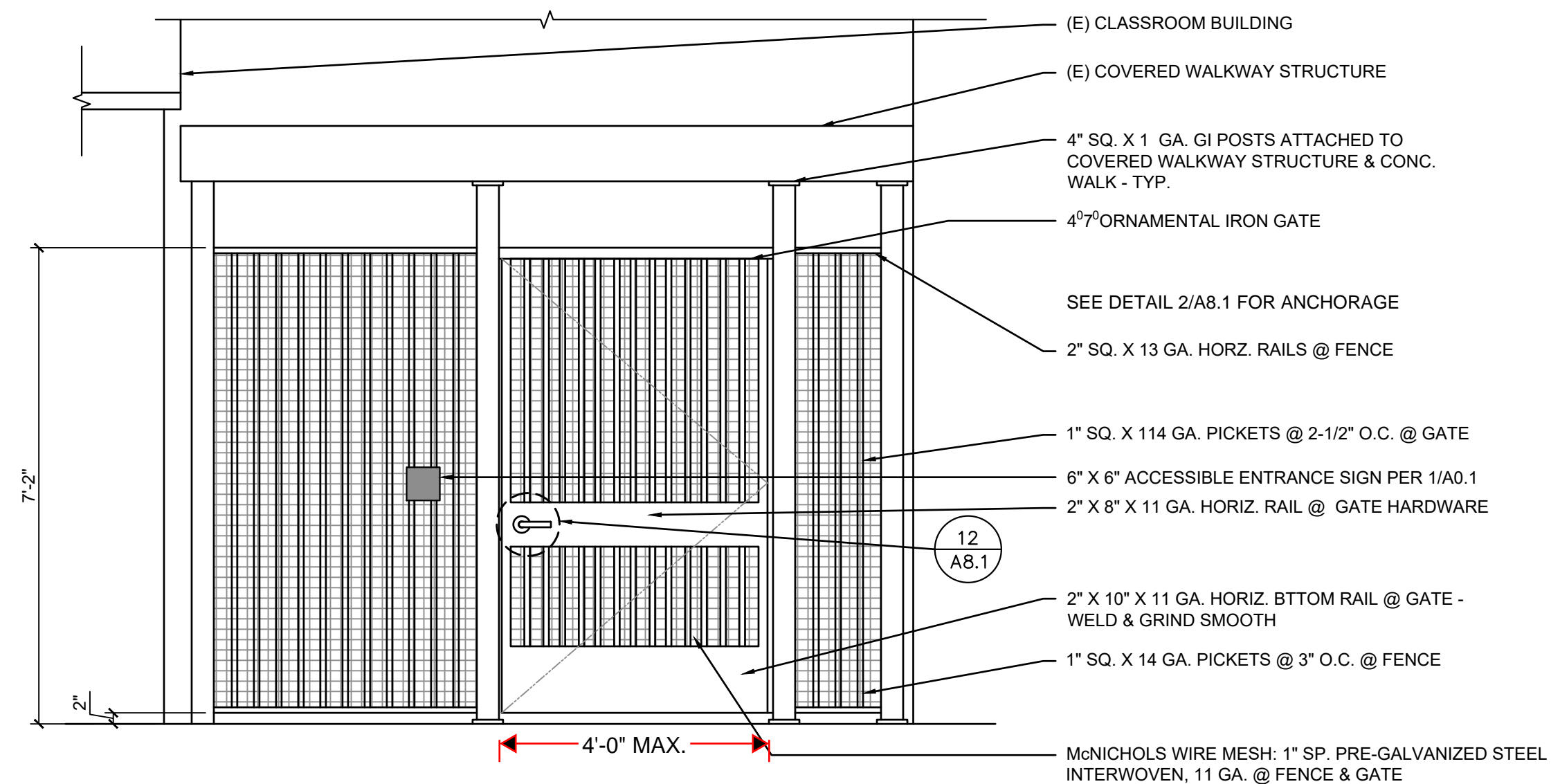
5 ROOF DECK @ PARAPET  
SCALE: 3" = 1'-0"



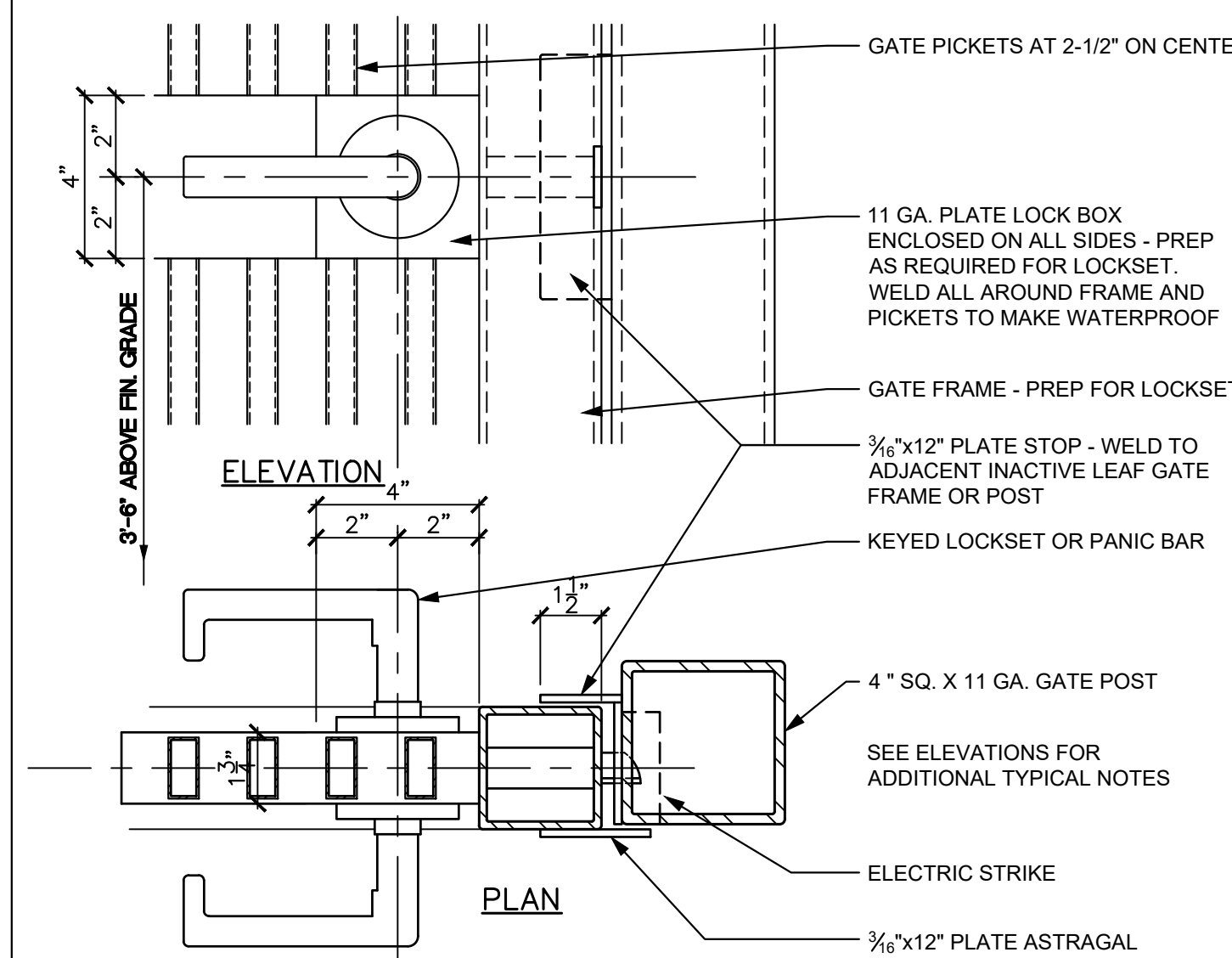
⑥ FIBERGLASS REINFORCED PANEL/STAINLESS STEEL PANEL  
SCALE: 3" = 1'-0"



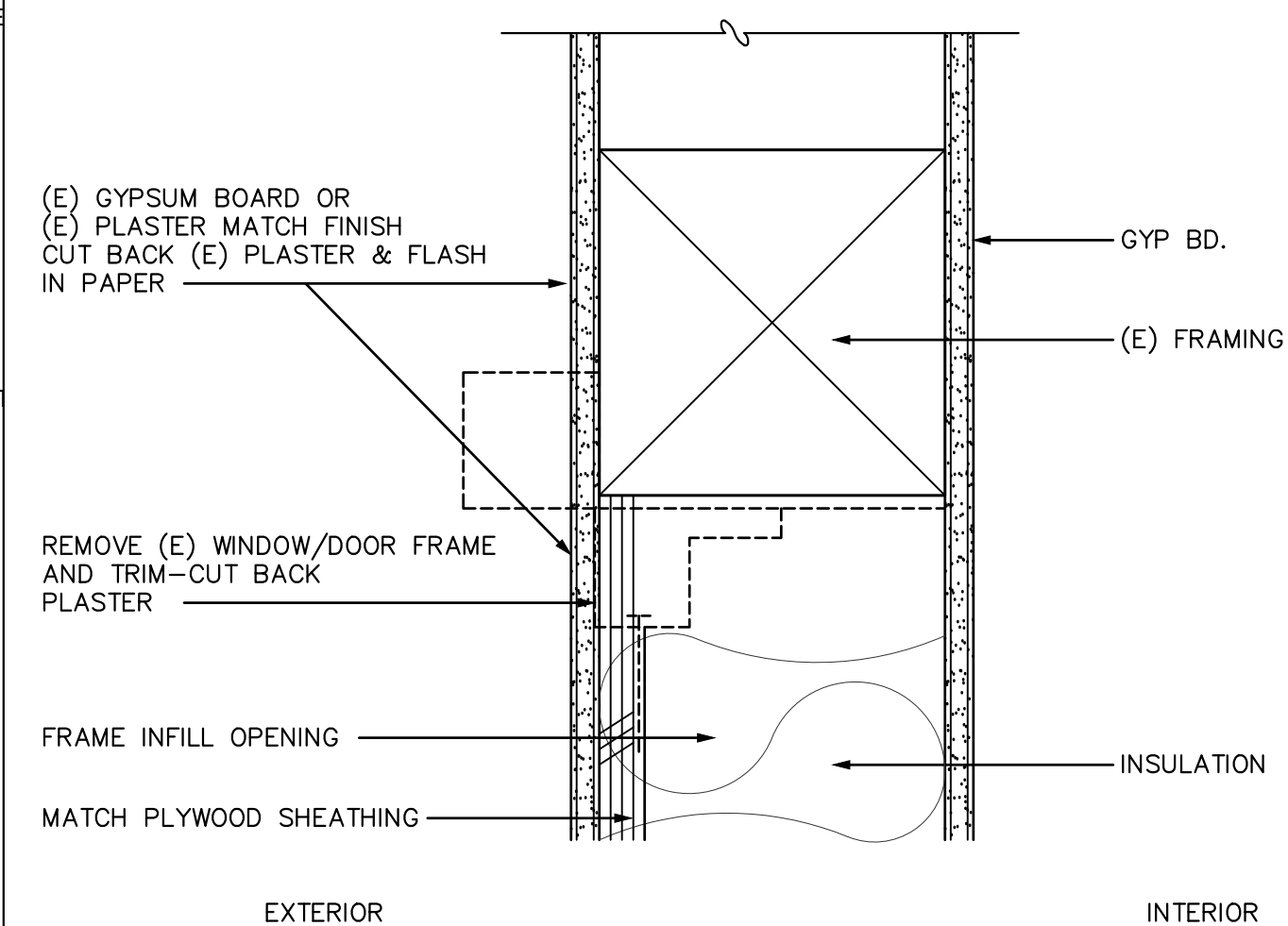
## 10 HVAC UNIT ENCLOSURE



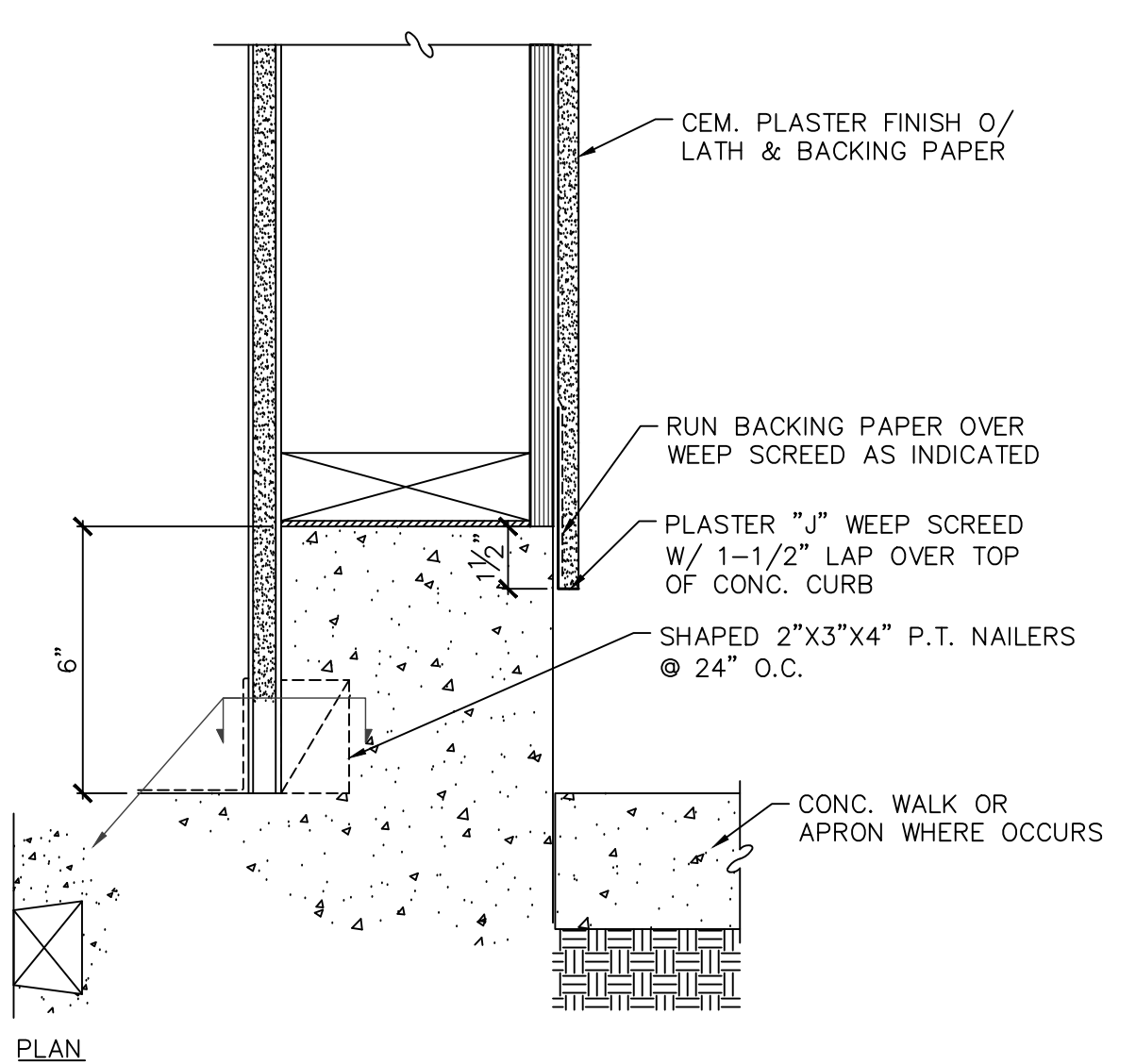
## 11 ORNAMENTAL FENCE & GATE



**12 GATE LOCK BOX @ SINGLE GATES**  
SCALE: 3" = 1'-0"

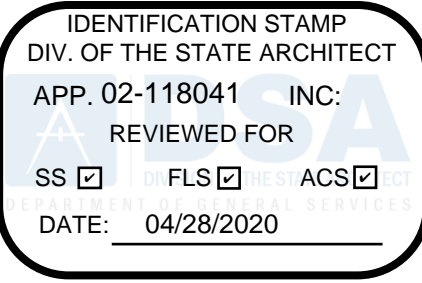


9 WALL INFILL  
SCALE: 3" = 1'-0"

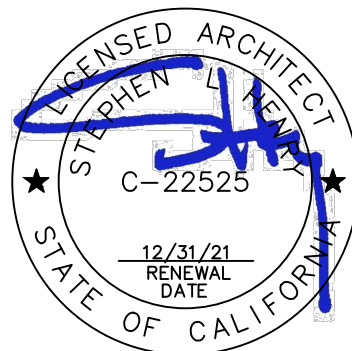


③ CURB @ EXTERIOR WALL  
SCALE: 3"=1'-0"





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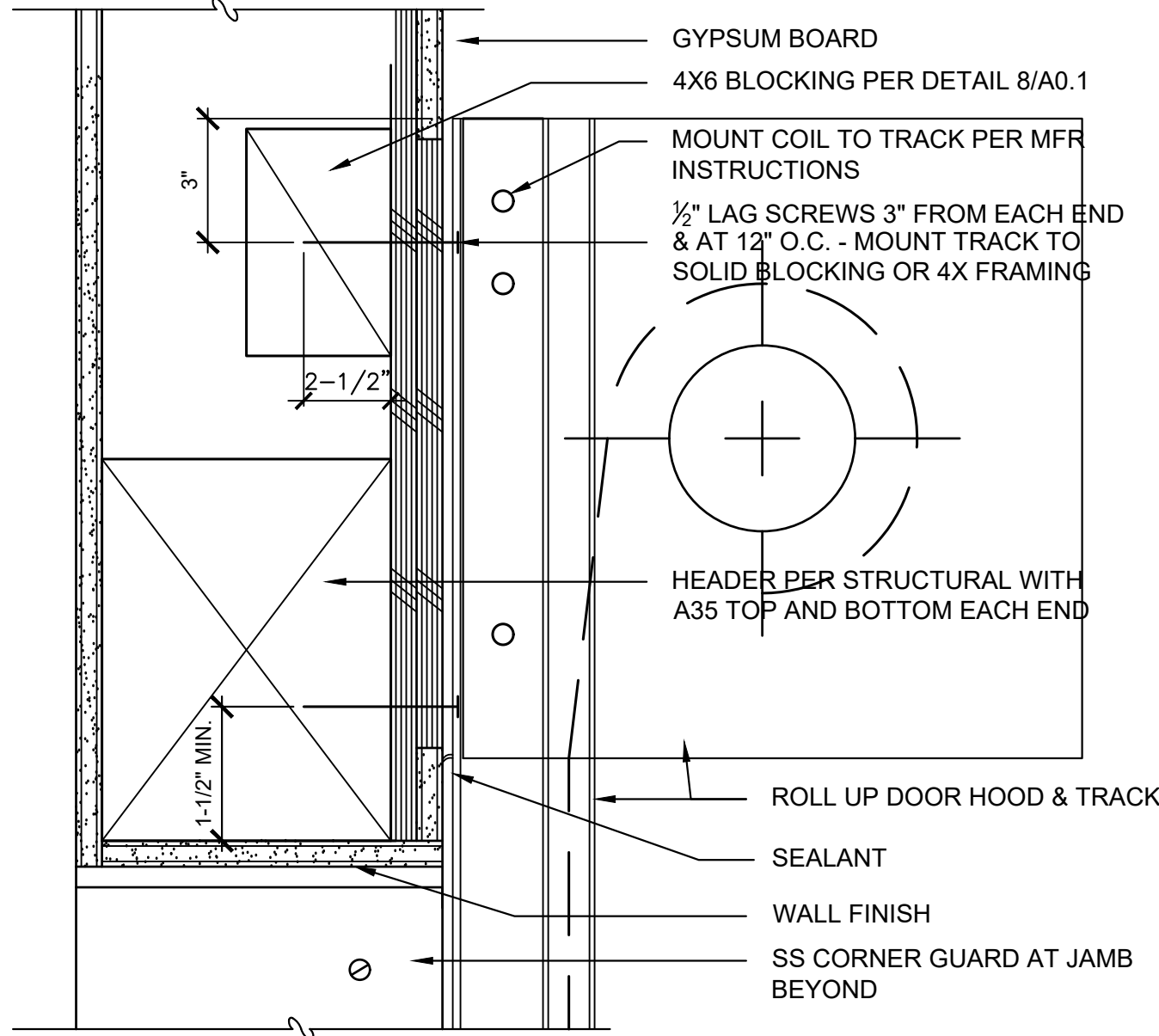
KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

DETAILS

CONSULTANT

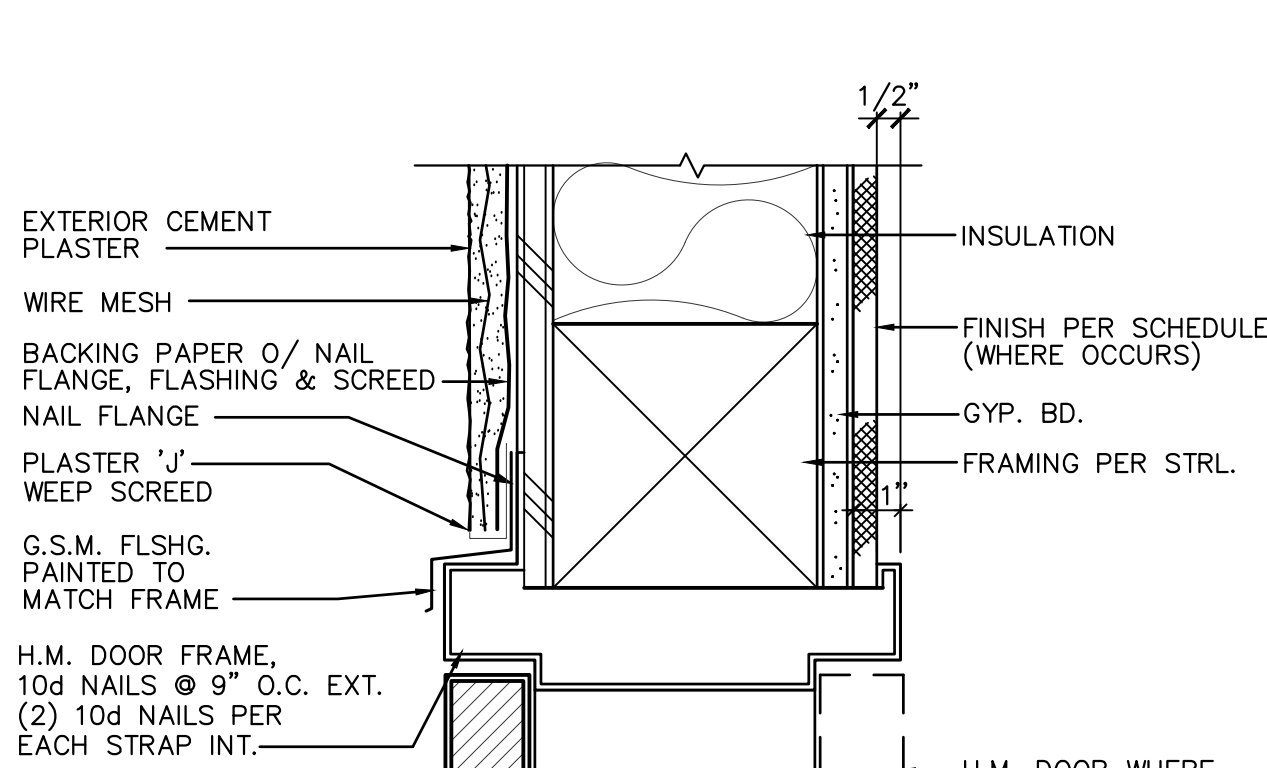
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A8.2



7 OVERHEAD COILING DOOR HEAD

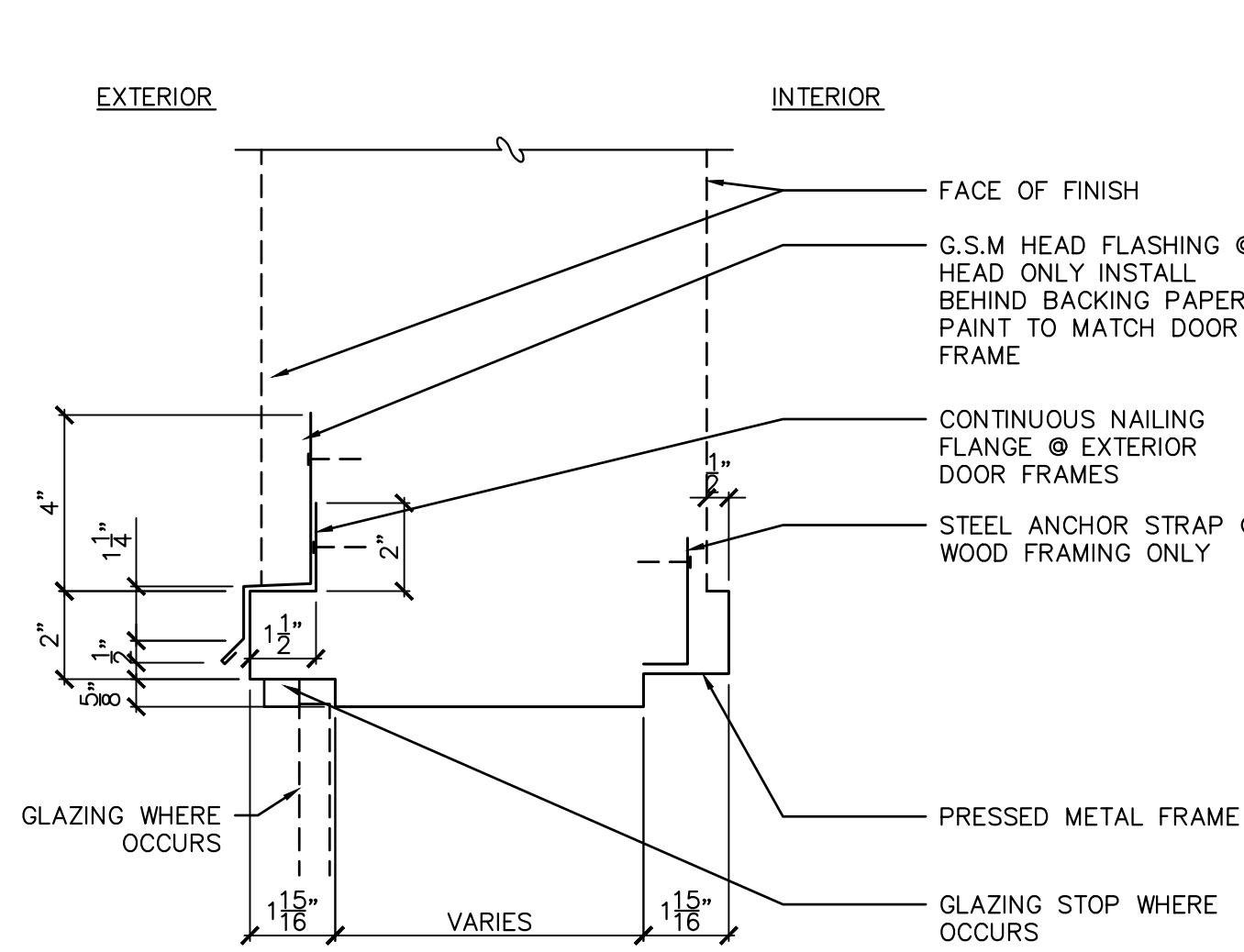
SCALE: 3" = 1'-0"



NOTES:  
1. WRAP INTERIOR WALL FINISHES BEHIND DOOR FRAME WHERE OCCURS  
2. SEE DETAIL 1/A8.2 FOR FRAME

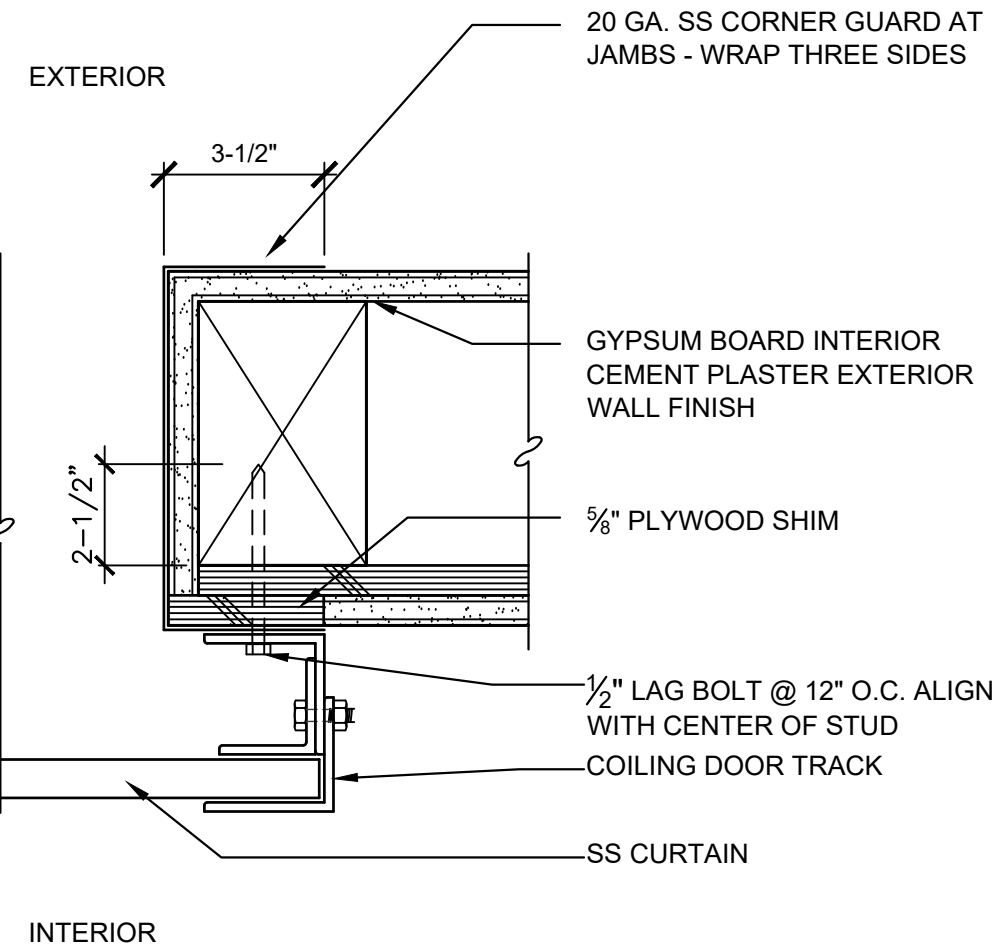
4 EXTERIOR DOOR HEAD

SCALE: 3" = 1'-0"



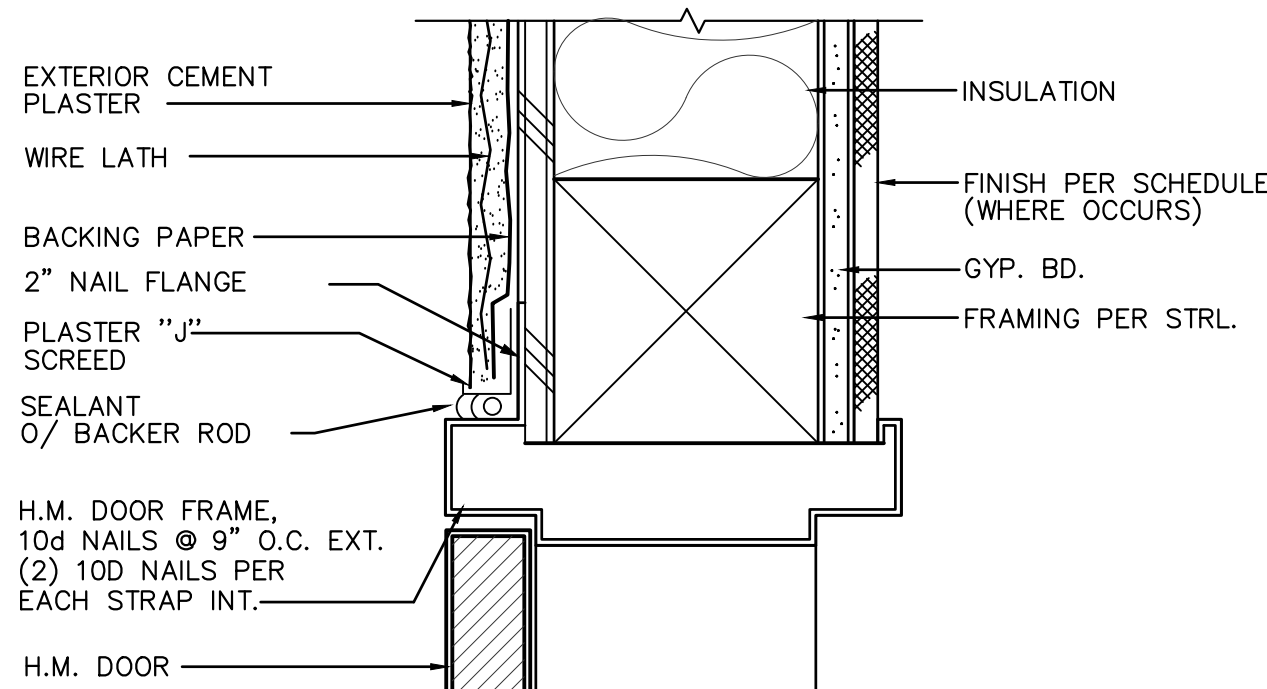
1 TYP. DR./TRANSOM FRAME HEAD/JAMB AT EXTERIOR STUD WALL

SCALE: 3" = 1'-0"



8 COILING DOOR JAMB

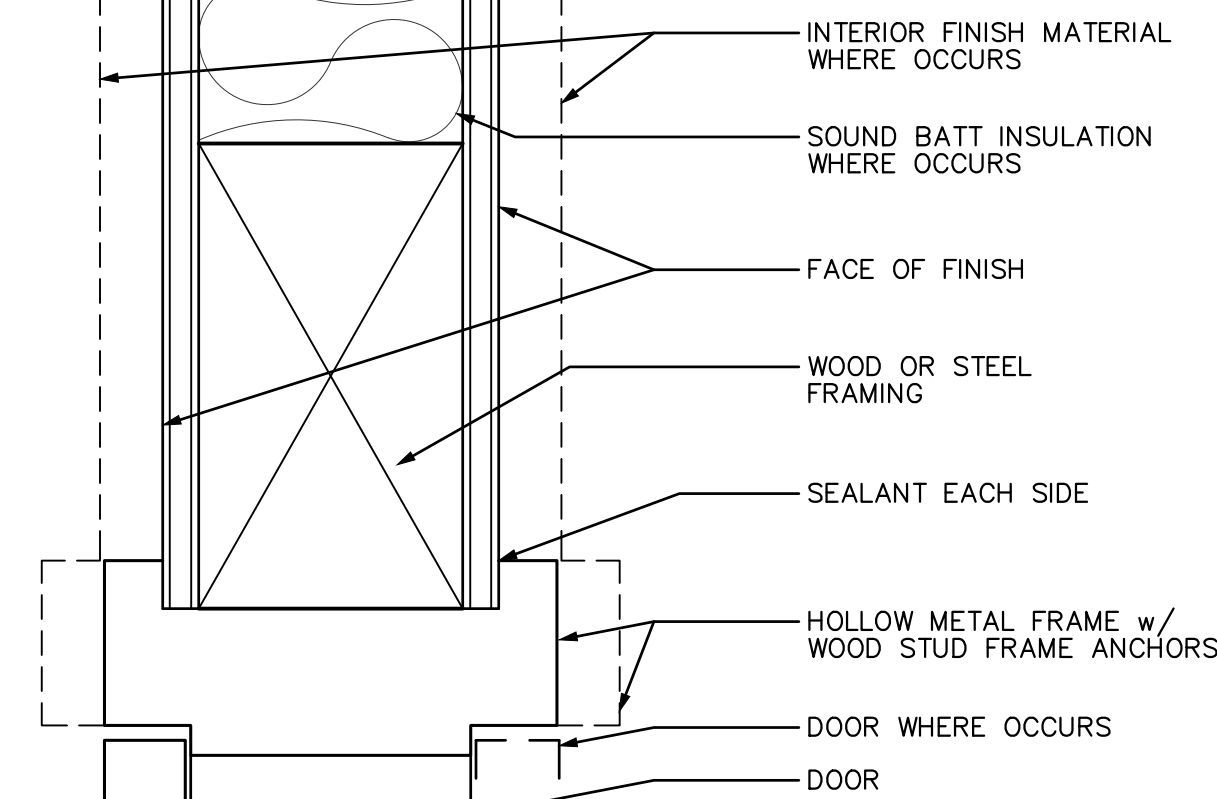
SCALE: 3" = 1'-0"



NOTES:  
1. WRAP INTERIOR WALL FINISHES BEHIND DOOR FRAME  
2. SEE DETAIL 1/A8.2 FOR FRAME

5 EXTERIOR DOOR JAMB

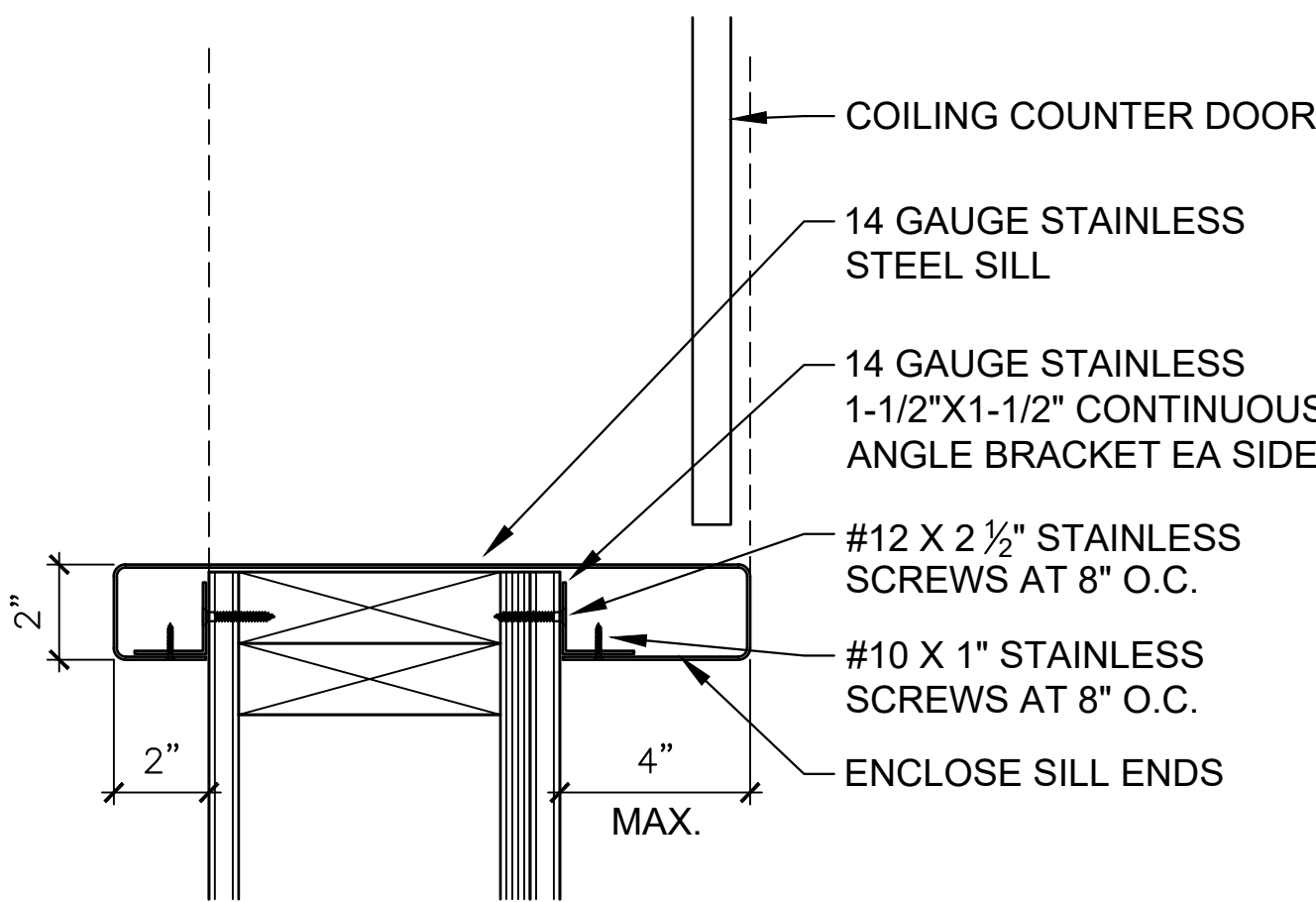
SCALE: 3" = 1'-0"



NOTE: SEE DETAIL 1/A8.2 FOR SIMILAR FRAME DIMENSIONS

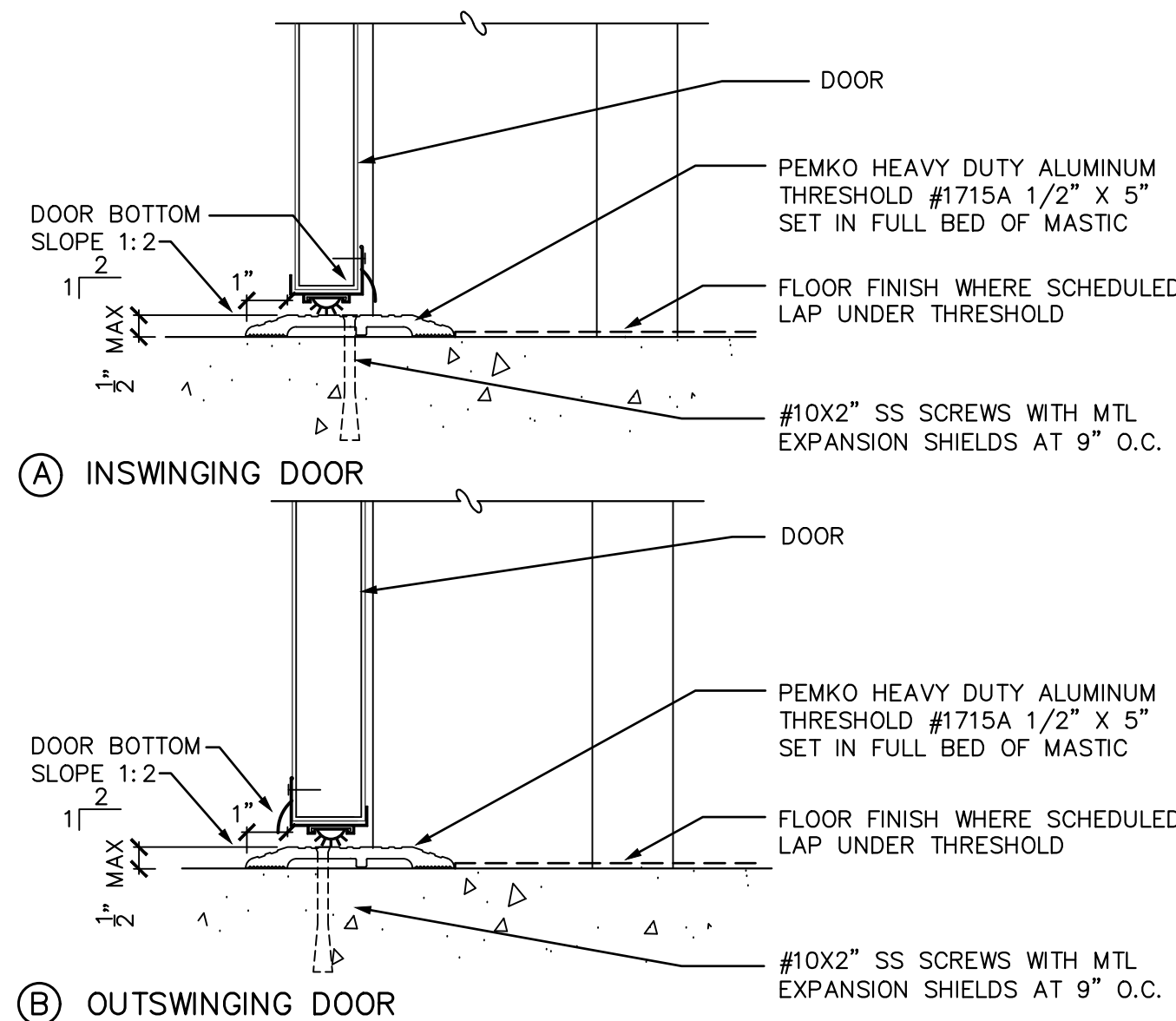
2 INTERIOR DOOR HEAD/JAMB

SCALE: 3" = 1'-0"



9 COILING DOOR SILL

SCALE: 3" = 1'-0"



NOTE: MAX. SLOPE OF THRESHOLD SHALL NOT EXCEED 2:1

6 DOOR THRESHOLD

SCALE: 3" = 1'-0"



IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP. 02-118041 INC.  
REVIEWED FOR  
SS ☐ FLS ☐ ACS ☐  
DATE: 04/28/2020

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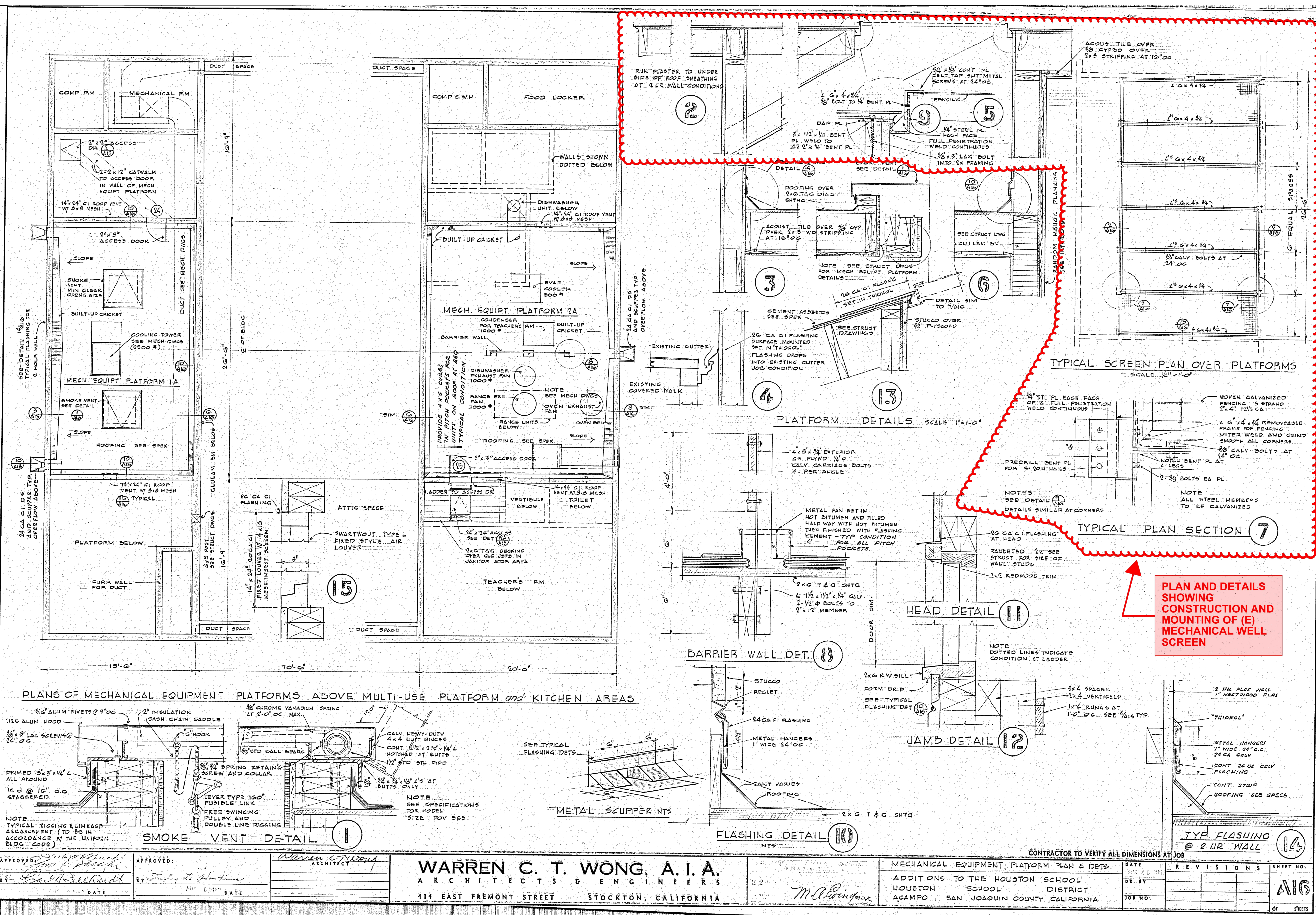
KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

ARCHIVE DRAWING -  
EXISTING MECHANICAL  
WELL SCREEN

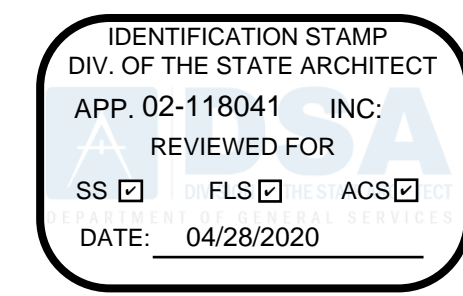
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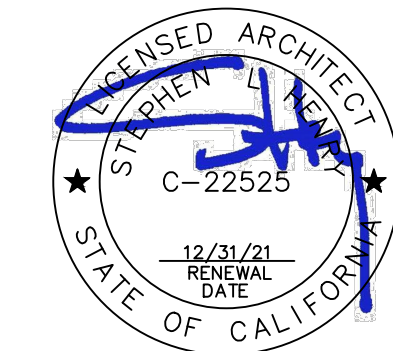
A8.2.1







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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

INTERIOR DETAILS

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SHEET NO.		

A8.3

1. CEILING SYSTEM GENERAL NOTES:

1.01 Ceiling system components shall comply with ASTM C635-07 and Section 5.1 of ASTM E580-10a.

1.02 The ceiling grid system must be rated heavy duty as defined by ASTM C635-08.

1.03 Ceiling systems. The following ceiling system(s) is/are part of the scope of this project:

Manufacturer's Name: Certainteed Ceilings.

Product Evaluation Report Type and Number: ICC-ES Evaluation Report ESR-3336.

Manufacturer's Model Number - Main Runners: 9/16" Elite Narrow Stab System

-ES 12-12-19

15/16" Classic Stab System

-CS 12-12-20

Manufacturer's catalog number - Cross Runners: 9/16" Elite Narrow Stab System

-ES 2-12-19

-ES 4-12-19

15/16" Classic Stab System

-CS 2-12-20

-CS 4-12-20

1.04 Seismic Wall Clip: Manufacturer's Model Number Certainteed CTSPC-2

1.05 Ceiling panels shall not support any light fixtures, air terminals or devices.

1.06 For ceiling installations utilizing acoustical tile panels of mineral or glass fiber, it is not mandatory to provide 3/4" clearance between the acoustical tile panels and the wall on the sides of the ceiling which are free to slip. For all other ceiling panel types, provide 3/4" clearance between the ceiling panel and the wall on the sides of the ceiling free to slip.

• MATERIALS:

2.01 Ceiling wire shall be Class 1 zinc coated (galvanized) carbon steel conforming to ASTM A641-09a. Wire shall be #12 gage (0.106" diameter) with soft temper and minimum tensile strength = 70 ksi.

2.02 Galvanized sheet steel (including that used for metal stud and track compression struts/post) shall conform to ASTM A653-11, or other equivalent sheet steel listed in Section A2.1 of the North American Specification for the Design of Cold-Formed Steel Structural Members 2012, including supplement, dated 2014 (AISI S100-12). Material 43 mil (18 gage) and lighter shall have minimum yield strength of 33 ksi. Material 54 mil (16 gage) and heavier shall have a minimum yield strength of 50 ksi.

2.03 Electrical metallic tube (EMT) shall be ANSI C80.3/UL 797 carbon steel with G90 galvanizing. EMT shall have minimum yield strength (Fy) of 30 ksi and minimum ultimate strength (Fu) of 48 ksi.

• ATTACHMENT OF HANGER AND BRACING WIRES:

3.01 Separate all ceiling hanger and bracing wires at least six (6) inches from all unbraced ducts, pipes, conduit, etc.

3.02 Hanger and bracing wires shall not attach to or bend around obstructions including but not limited to: piping, ductwork, conduit and equipment.

3.03 Hanger wires that are more than one (horizontal) in six (vertical) out of plumb shall have counter-sloping wires.

3.04 Slack safety wires shall be considered hanger wires for installation and testing requirements.

3.05 Hanger and bracing wire anchorage to the structure shall be installed in such a manner that the direction of the anchorage aligns closely with the direction of the wire. (e.g. bracing wire ceiling clips must be bent as shown in the details and rotated as required to align closely with the direction of the wire, screw eyes in wood must be installed so they align closely with the direction of the wire, etc.)

• FASTENERS AND WELDING:

4.01 Sheet metal screws shall comply with ASTM C1513-10, ASME B18.6.4-98 (R2005). Penetration of screws through joined material shall not be less than three exposed threads.

4.02 Expansion anchors shall be: **[Not applicable to project]**

4.03 Power-Actuated Fasteners shall be: **[Not applicable to project]**

4.04 If not otherwise specified in the evaluation report, power-actuated fasteners installed in steel shall be installed so the entire pointed end of the fastener is driven through the steel member.

4.05 Power-actuated fasteners in concrete are not permitted for bracing wires.

4.06 Concrete reinforcement and prestressing tendons shall be located by non-destructive means prior to installing post - installed anchor.

4.07 Welding shall be in accordance with AWS D1.3 using E60XX series electrodes.

• TESTING: All field testing must be performed in the presence of the project inspector.

5.01 Post-installed anchors in concrete used to support hanger wires shall be tested at a frequency of 10 percent. Power actuated fasteners in concrete shall be field tested for 200 lbs. in tension. All other post-installed anchors in concrete shall be tested in accordance with CBC Section 1910A.5.

5.02 Post-installed anchors in concrete used to attach bracing wires shall be tested at a frequency of 50 percent in accordance with CBC Section 1910A.5.

• LIGHT FIXTURES:

6.01 All light fixtures shall be positively attached to the ceiling suspension systems by mechanical means to resist a horizontal force equal to the weight of the fixture. A minimum of two screws or approved fasteners are required at each light fixture, per ASTM E580, Section 5.3.1.

6.02 Surface-mounted light fixtures shall be attached to the main runner with at least two positive clamping devices. The clamping device shall completely surround the supporting ceiling runner and be made of steel with a minimum thickness of #14 gage. Rotational spring catches do not comply. A #12 gage slack safety wire shall be connected from each clamping device to the structure above. Provide additional supports when light fixtures are eight (8) feet or longer or exceed 56 lb. Maximum spacing between supports shall not exceed eight (8) feet.

6.03 Not used.

6.04 Light fixtures weighing less than or equal to 10 lb. shall have a minimum of one (1) #12 gage slack safety wire connected from the fixture housing to the structure above.

6.05 Light fixtures weighing greater than 10 lb. but less than or equal to 56 lbs. may be supported directly on the ceiling runners, but they shall have a minimum of two (2) #12 gage slack safety wires connected from the fixture housing at diagonal corners to the structure above.

Exception: All light fixtures greater than two by four feet weighing less than 56 lbs. shall have a #12 gage slack safety wire at each corner.

6.06 All Light fixtures weighing greater than 56 lb. shall be independently supported by not less than four (4) taut #12 gage hanger wires (one at each corner) attached from the fixture housing to the structure above or other approved hangers. The four (4) taut #12 gage wires or other approved hangers, including their attachment to the structure above, shall be capable of supporting four (4) times the weight of the fixture.

• SERVICES WITHIN THE CEILING:

7.01 All flexible sprinkler hose fitting mounting brackets, ceiling-mounted air terminals or other services shall be positively attached to the ceiling suspension systems by mechanical means. Screws or approved fasteners are required. A minimum of two attachments are required at each component.

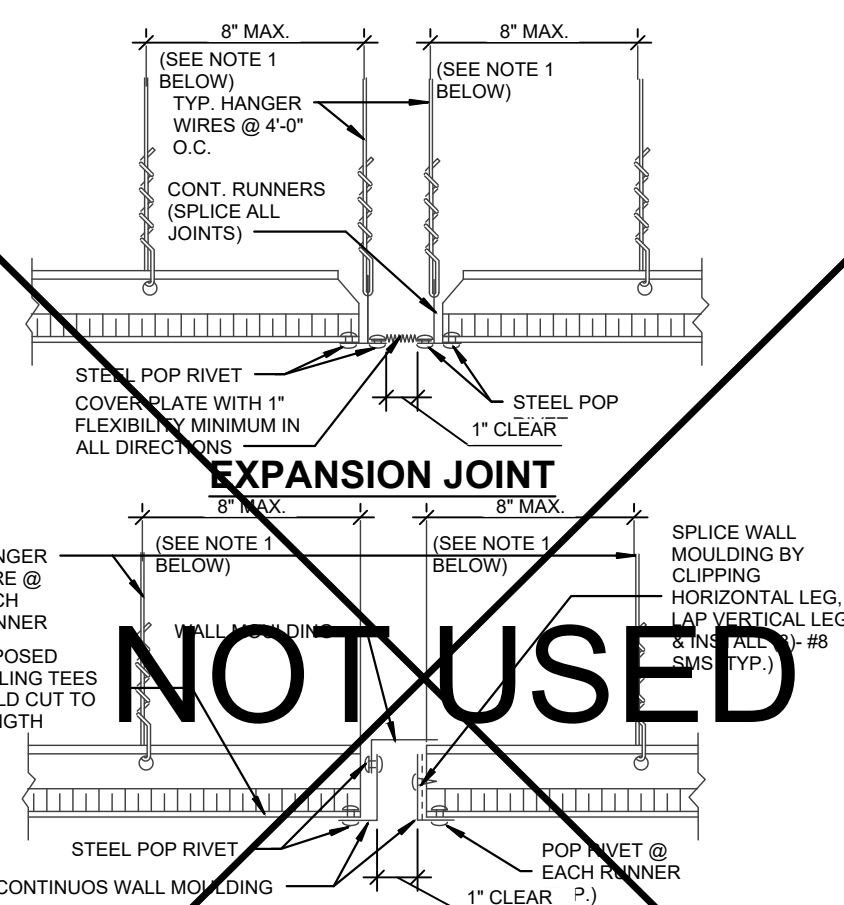
7.02 Ceiling-mounted air terminals or other services weighing less than or equal to 20 lb. shall have one (1) #12 gage slack safety wire attached from the terminal or service to the structure above.

7.03 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 20 lb. but less than or equal to 56 lb. shall have two (2) #12 gage slack safety wires (at diagonal corners) connected from the terminal or service to the structure above.

7.04 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 56 lb. shall be supported directly from the structure above by not less than four (4) taut #12 gage hanger wires attached from the terminal or service to the structure above or other approved hangers.

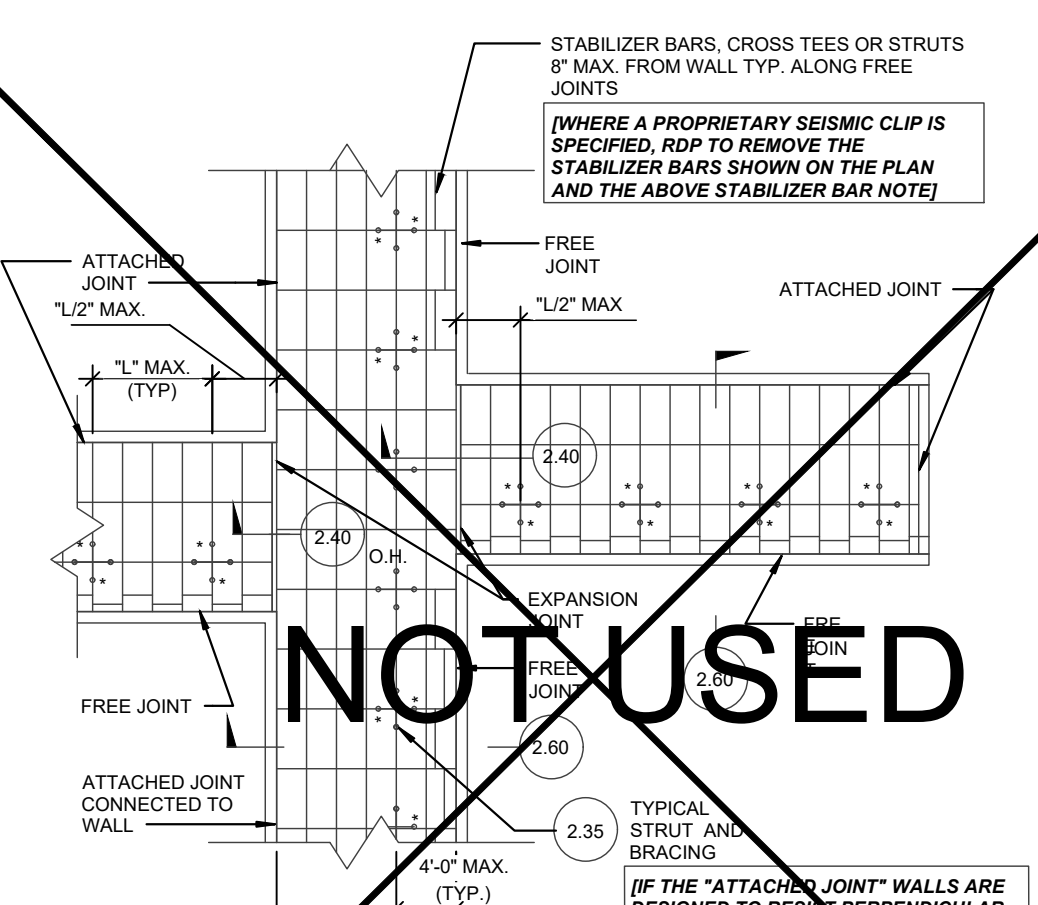
• OTHER DEVICES WITHIN THE CEILING:

8.01 All lightweight miscellaneous devices, such as strobe lights, occupancy sensors, speakers, exit signs, etc., shall be attached to the ceiling grid. In addition, devices weighing more than 10 lbs. shall have a #12 gage slack safety wire anchored to the structure above. Devices weighing more than 20 lb. shall be supported independently from the structure above.



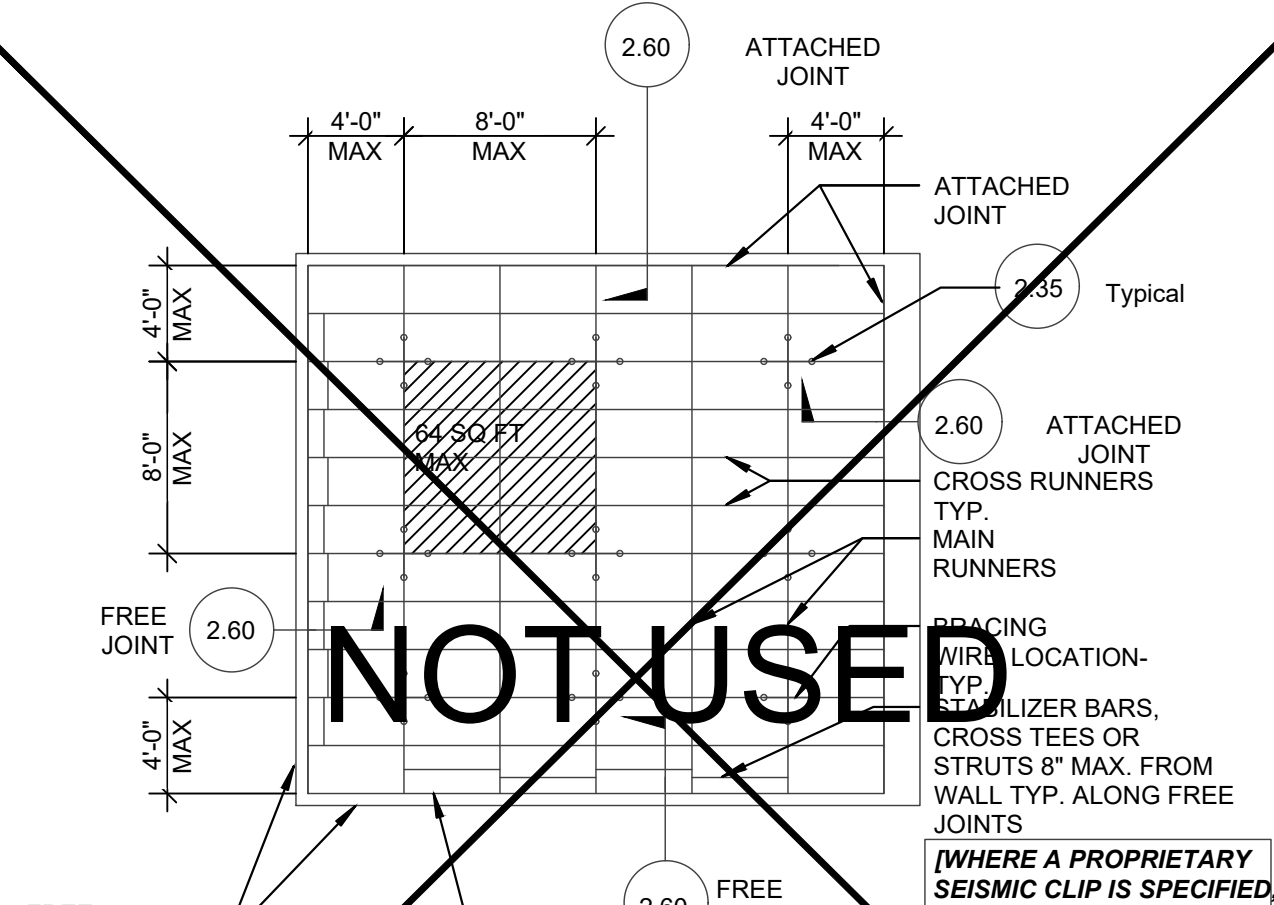
EXPANSION JOINT ALTERNATE  
EXPANSION JOINTS AT THE INTERSECTION OF  
CORRIDORS AND AT JUNCTIONS OF CORRIDORS AND  
LOBBIES OR OTHER SIMILAR AREAS

NOTES:  
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS. FOR THE PERIMETER OF THE CEILING AREA, PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.

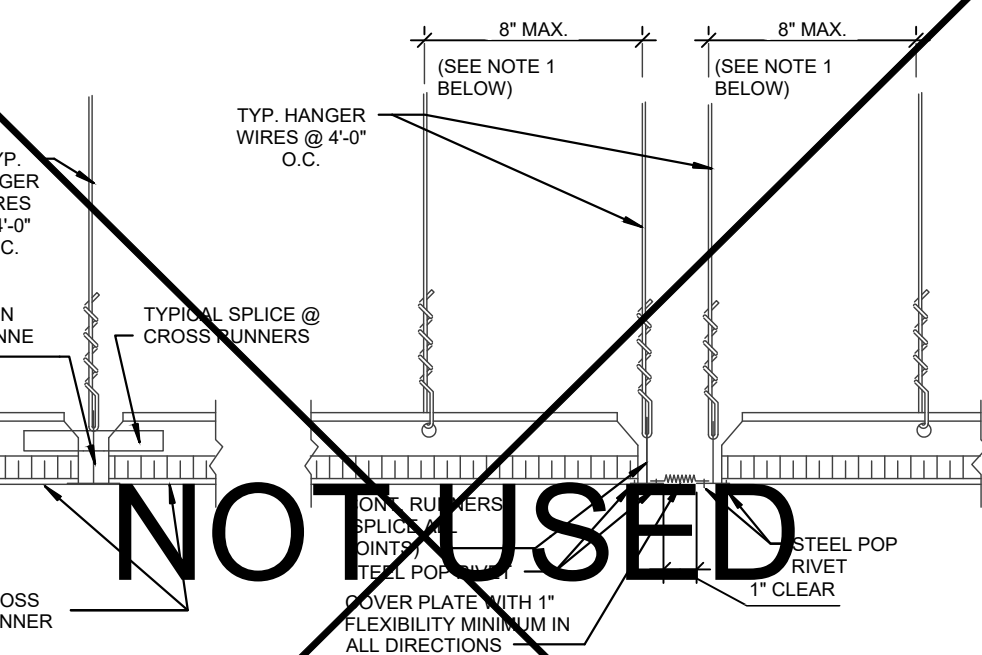


LOCATION OF EXPANSION/SLIP JOINTS IN  
CORRIDORS

NOTES:  
1. "L" MAX. BRACE ASSEMBLY SPACING PER CEILING PLAN DETAIL, FOR EXAMPLE, WHERE 8' X 12' SPACING IS SPECIFIED, USE "L" = 8'.



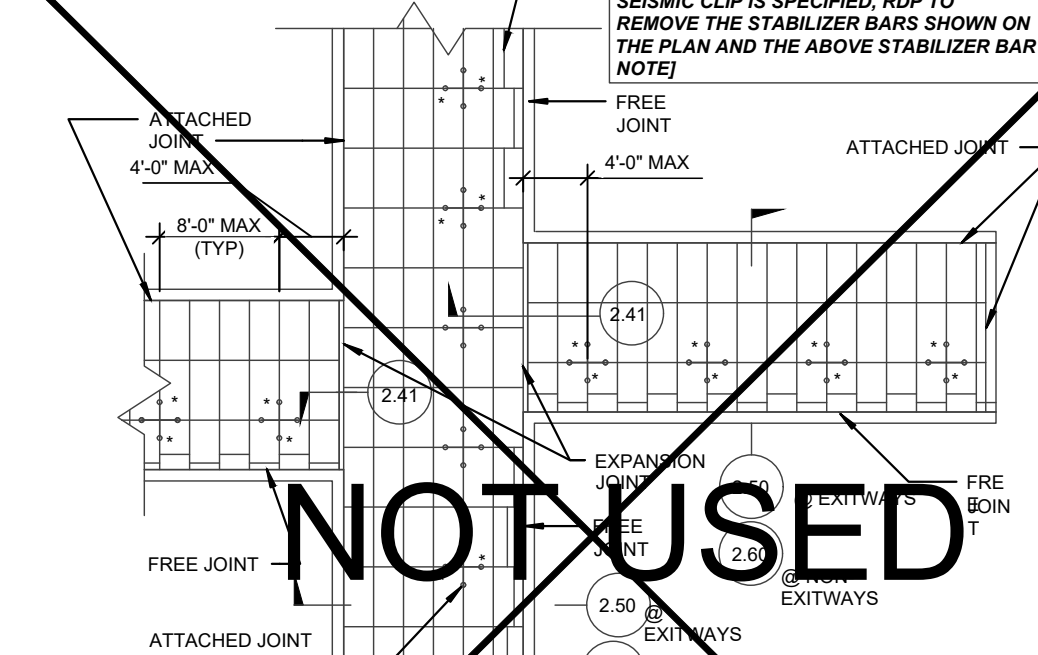
NOTE  
BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 64 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.



RUNNER SPLICE EXPANSION JOINT

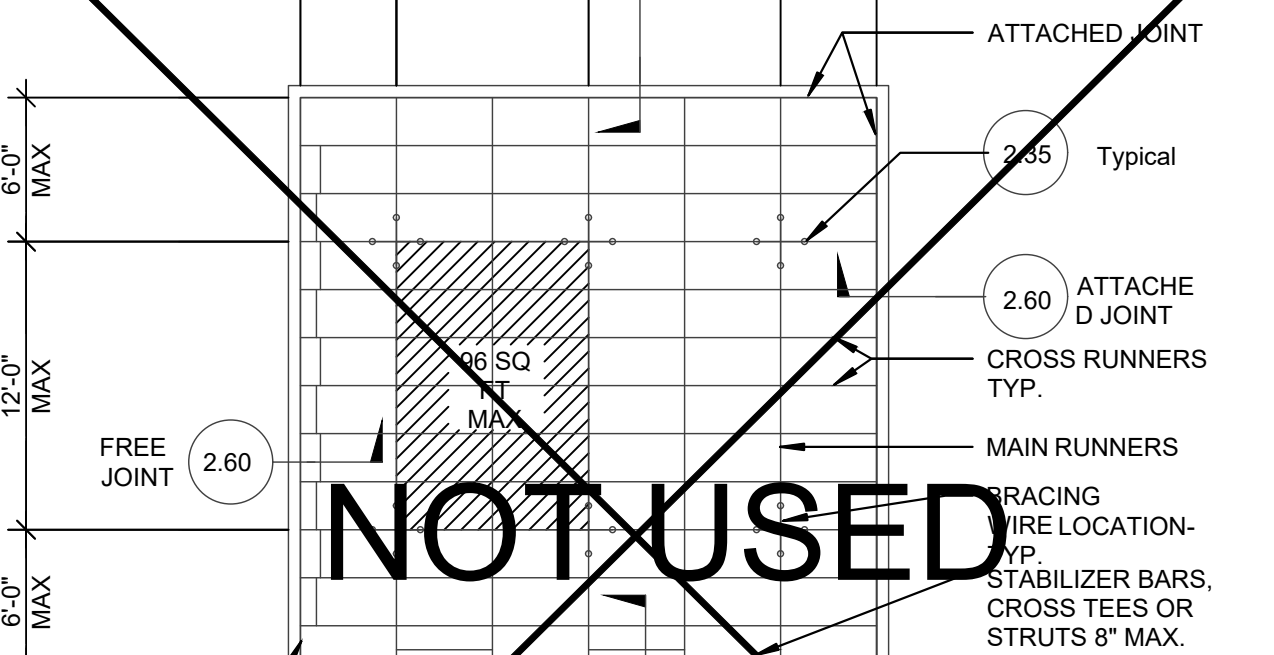
EXPANSION JOINTS AT THE INTERSECTION OF  
CORRIDORS AND AT JUNCTIONS OF CORRIDORS AND  
LOBBIES OR OTHER SIMILAR AREAS

NOTES:  
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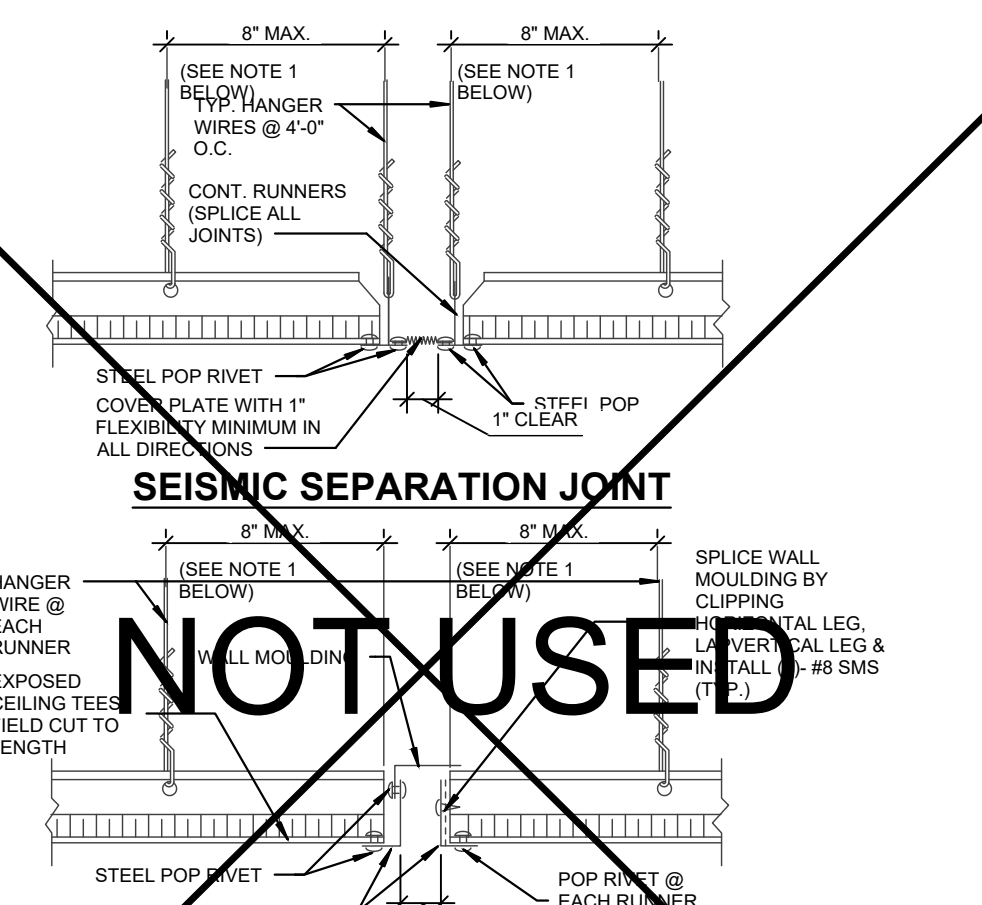


LOCATION OF  
EXPANSION/SLIP JOINTS  
IN CORRIDORS

NOTES:  
1. "L" MAX. BRACE ASSEMBLY SPACING PER CEILING PLAN DETAIL, FOR EXAMPLE, WHERE 8' X 12' SPACING IS SPECIFIED, USE "L" = 8'.

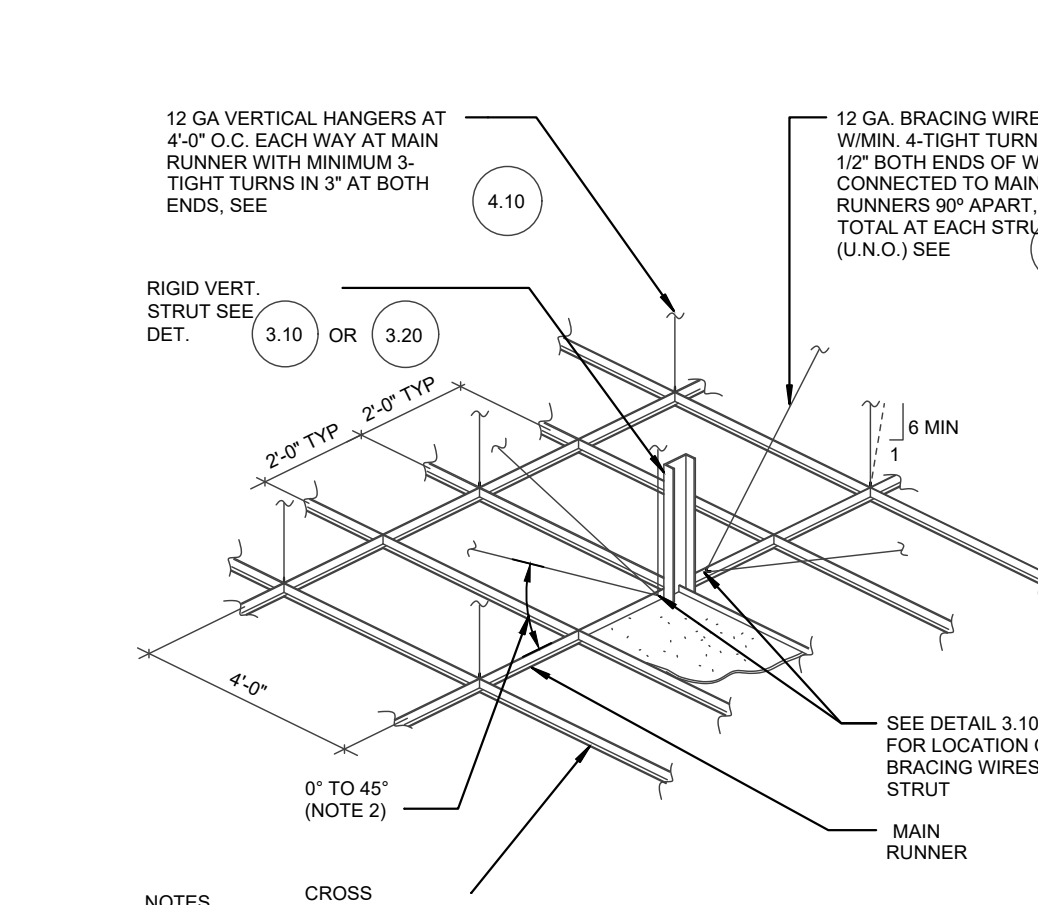


NOTE  
BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 96 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.



ALTERNATE SEISMIC SEPARATION JOINT  
SEISMIC SEPARATION JOINT AT CONTINUOUS CEILING AREAS  
EXCEEDING 2500 SQ. FT. SEE CEILING PLANS FOR LOCATION

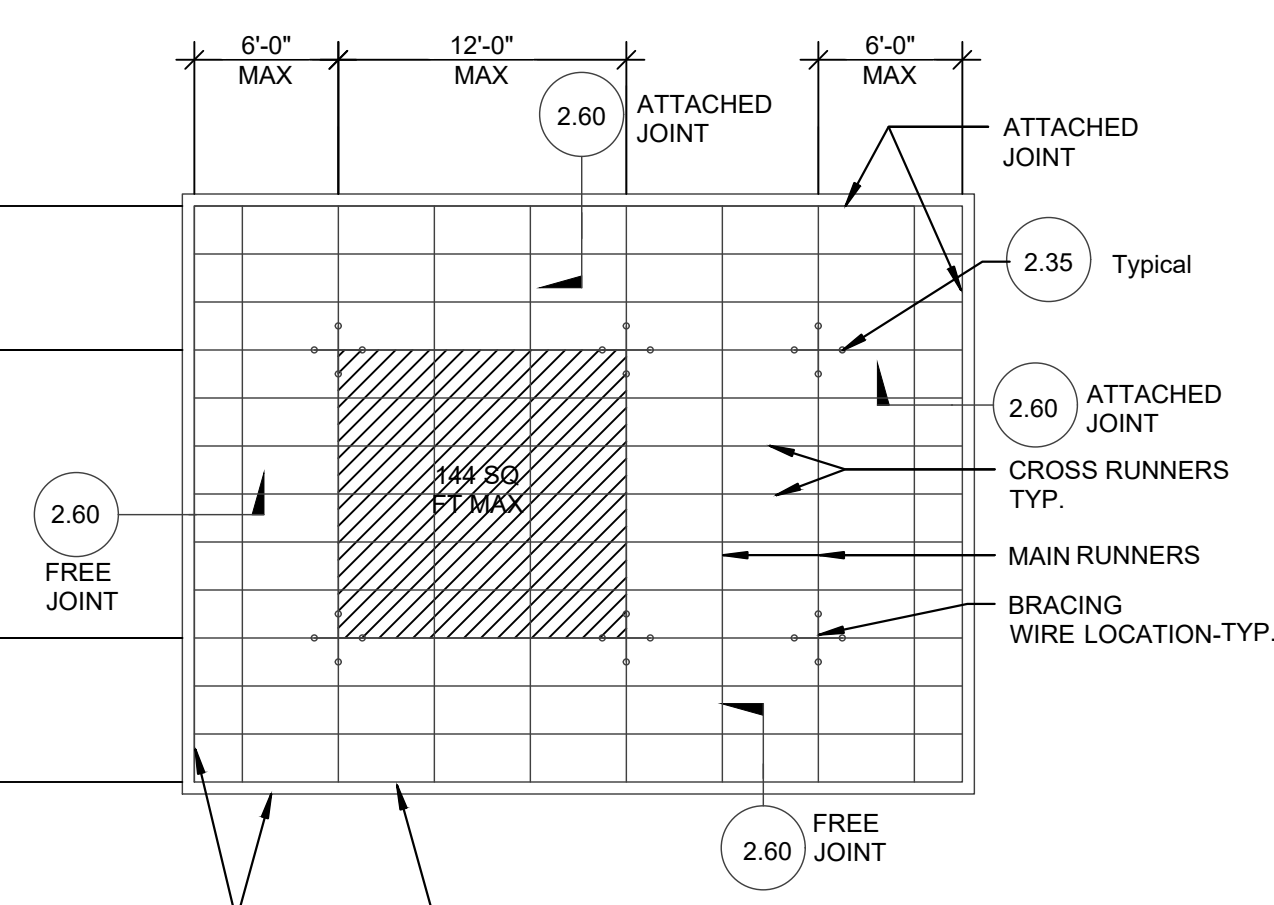
NOTES:  
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS. FOR THE PERIMETER OF THE CEILING AREA, PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.



NOTES

1. STRUTS SHALL NOT REPLACE HANGER WIRES.

2. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFERE WITH THE RUNNERS, LIGHT FIXTURES, ETC. AND REMAIN STRAIGHT AND UNOBSTRUCTED.



NOTE  
BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 144 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.

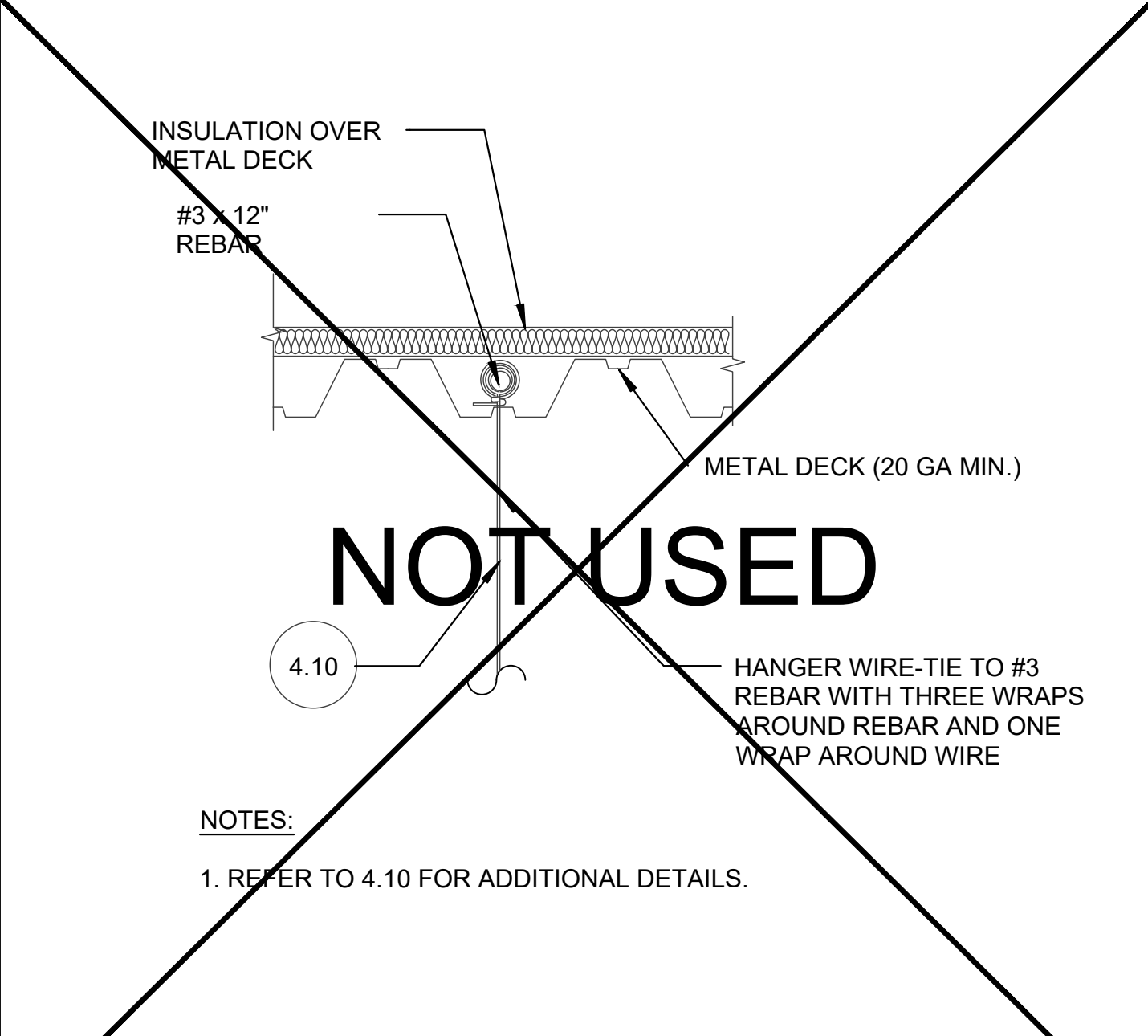
SEE SHEETS A8.3, A8.4, A8.5, A8.6, A8.8 & A8.8 FOR SUSPENDED ACOUSTICAL CEILING DETAILS



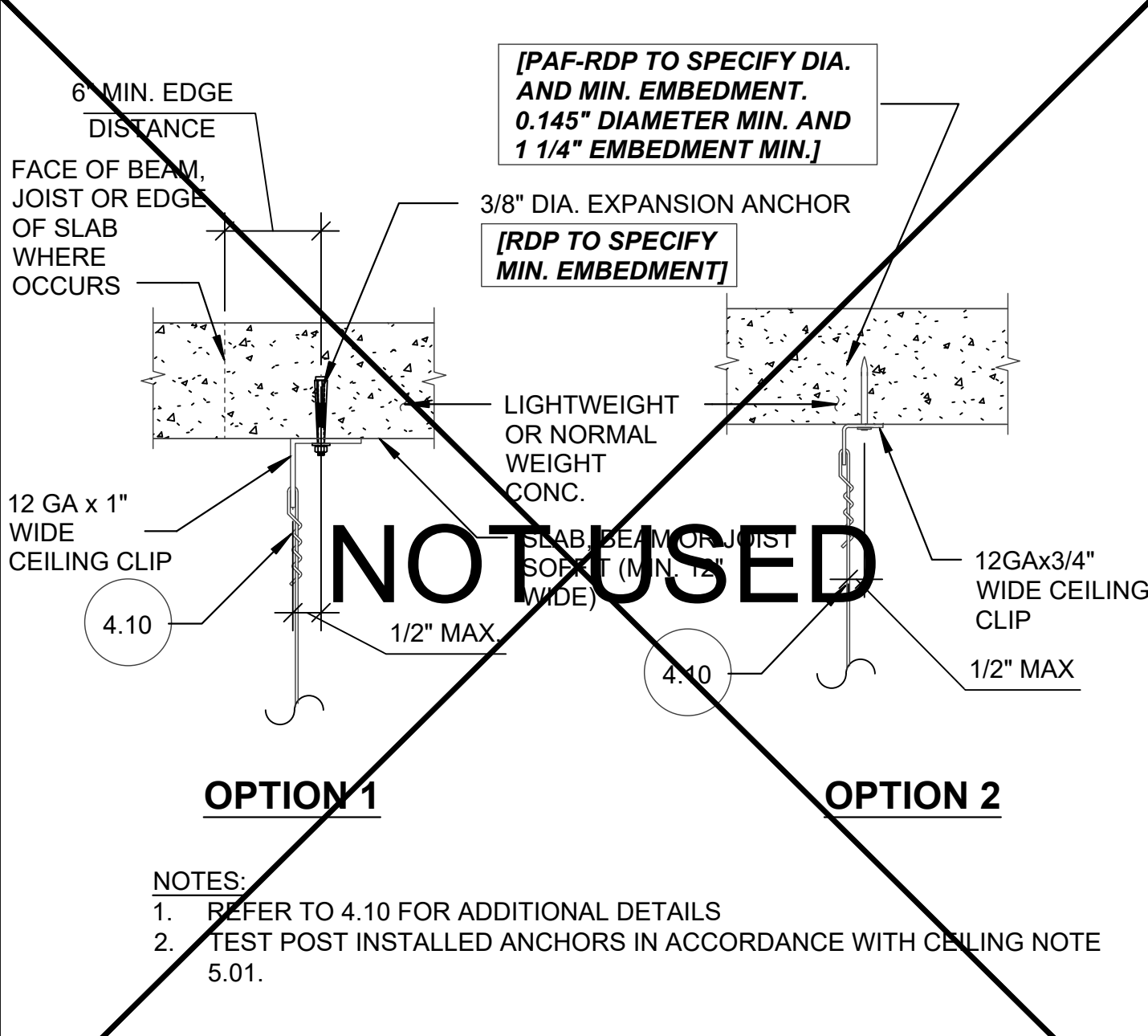
STRUCTURAL CONDITION OF FLOOR/ ROOF ABOVE	APPLICABLE HANGER WIRE DETAIL	APPLICABLE BRACING WIRE DETAIL
METAL DECK	4.20	4.30
CONCRETE OVER	4.21	4.31
CONCRETE SLAB, BEAM, OR JOIST	4.22	4.32
STRUCTURAL	4.23	4.33
METAL STUD	4.24	4.34
SAWN	4.25, 4.29	4.35
WOOD I	4.26	4.36, 4.37
WOOD CHORD	4.27, 4.29	4.38, 4.29
OPEN WEB STEEL	4.28, 4.29	4.39, 4.29

SEE SHEETS A8.3, A8.4, A8.5, A8.6, A8.8 & A8.8 FOR SUSPENDED ACOUSTICAL CEILING DETAILS

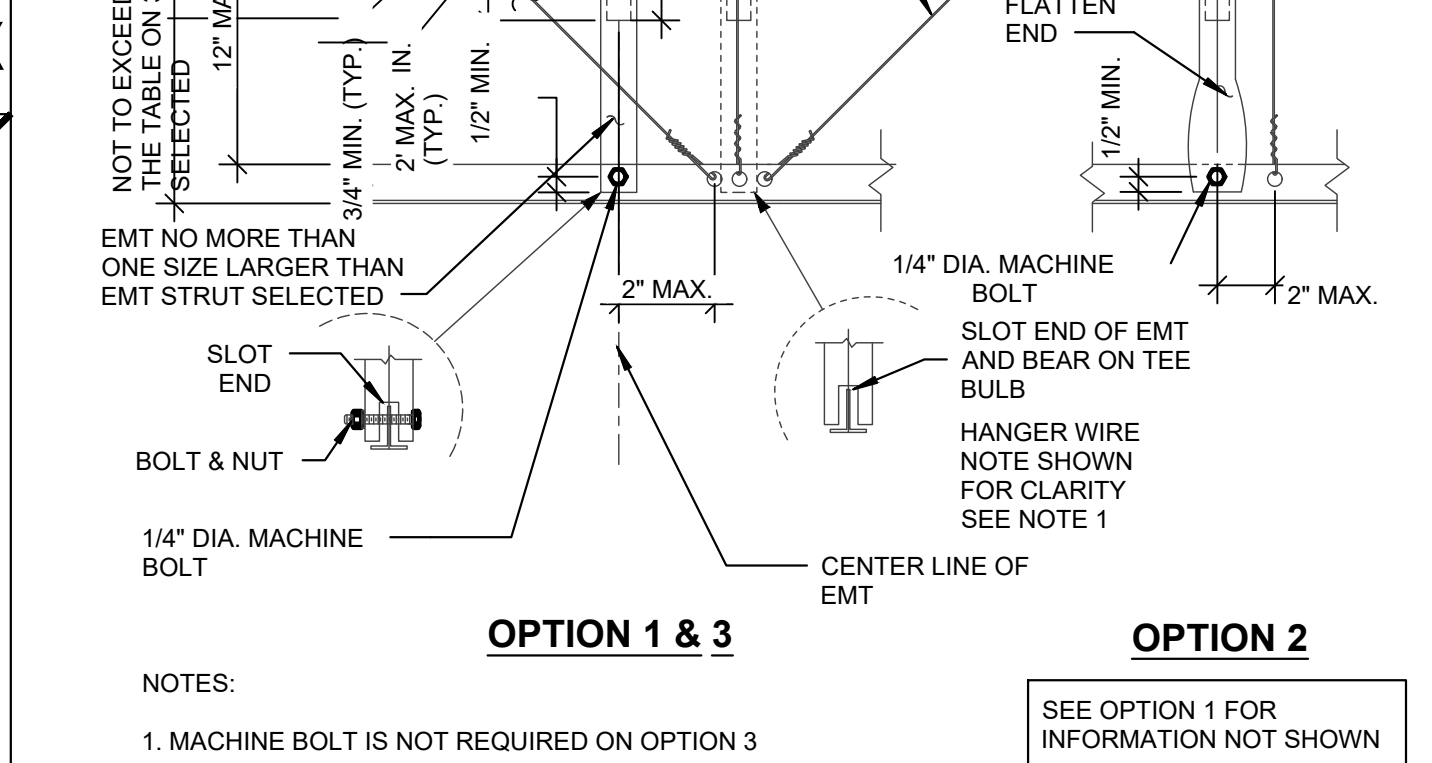
4.11 HANGER AND BRACING WIRE CONNECTION MATRIX  
SCALE: N.T.S.



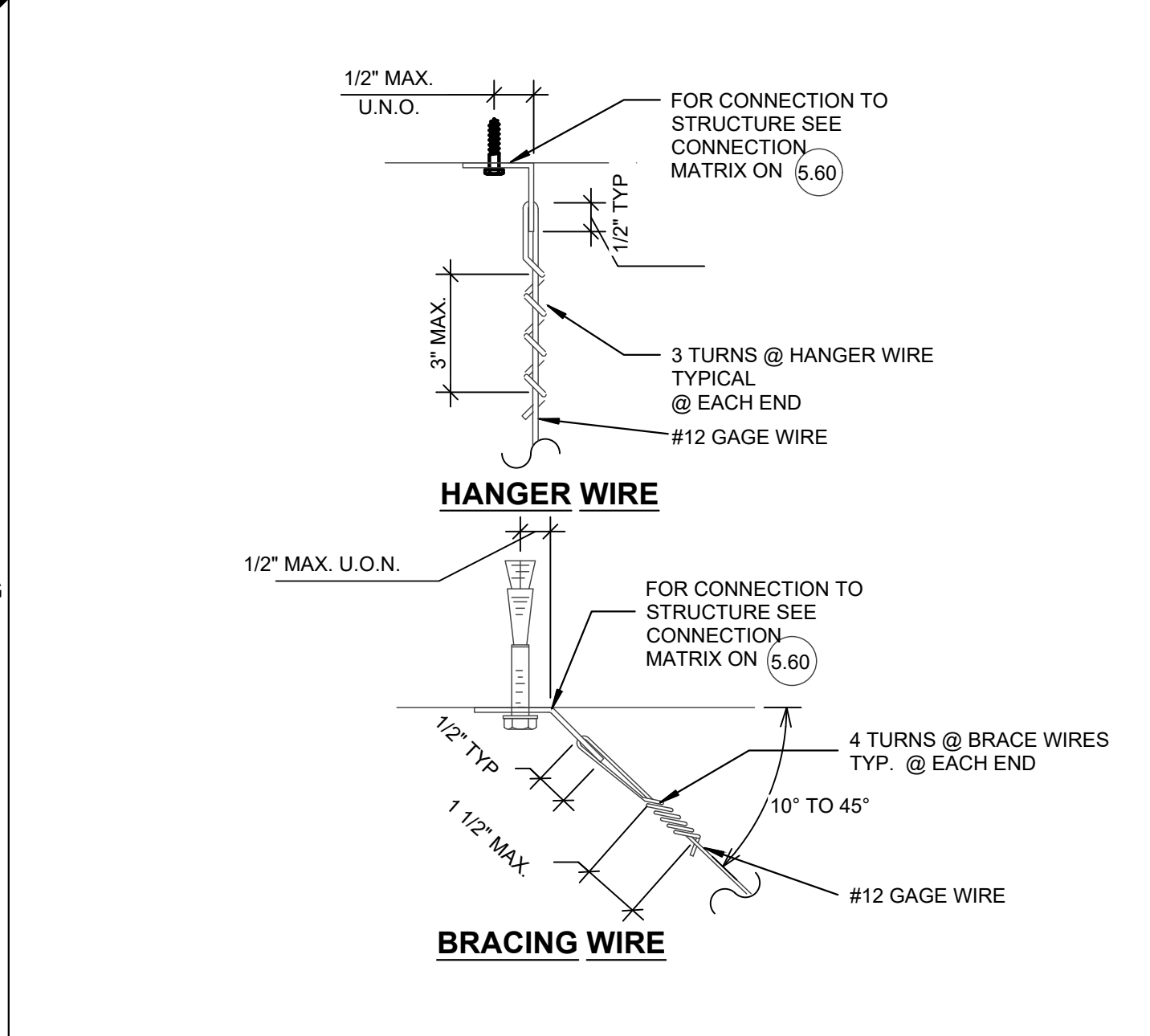
4.20 HANGER WIRE CONNECTION TO METAL DECK  
SCALE: N.T.S.



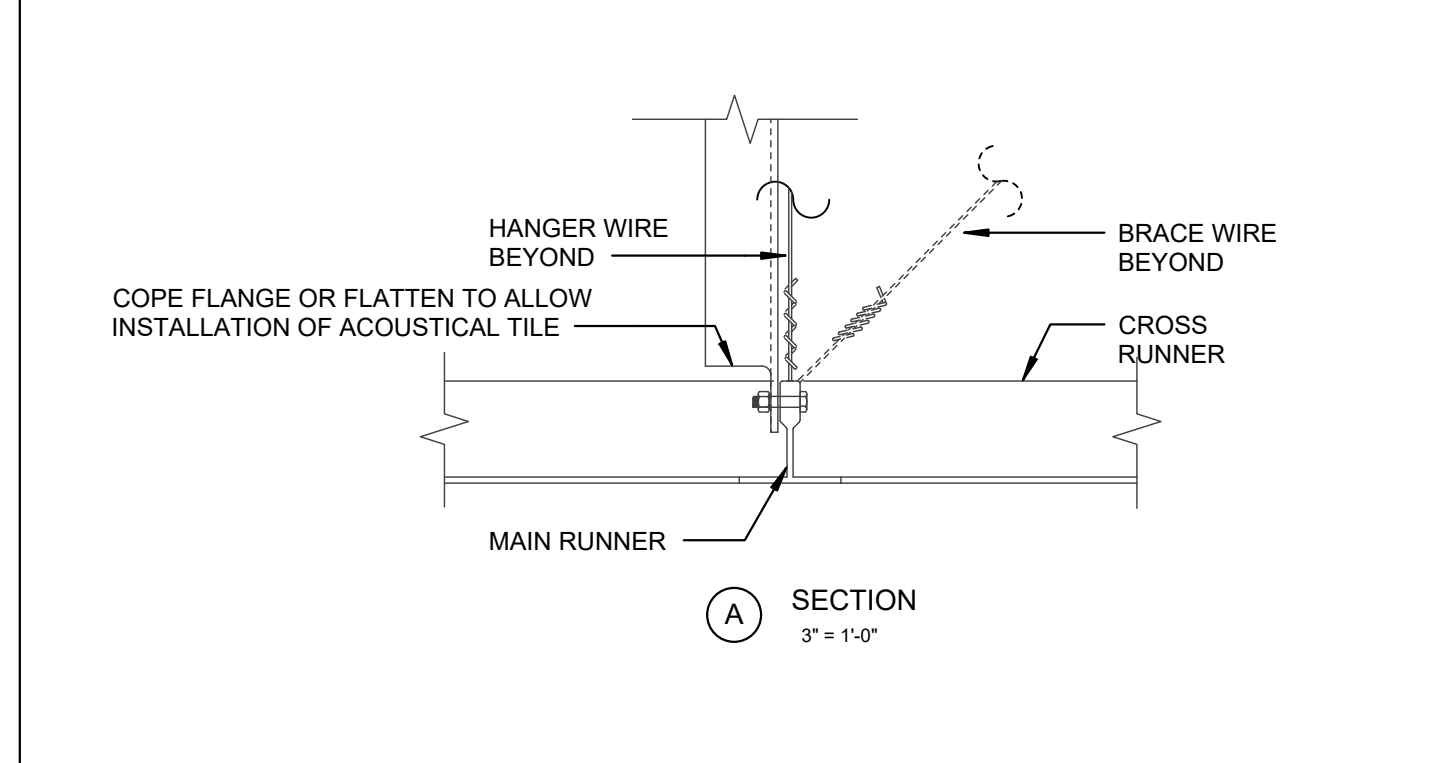
4.22 HANGER WIRE CONNECTION TO CONCRETE SLAB, BEAM, OR JOIST  
SCALE: N.T.S.



3.20 SUSPENDED ACOUSTICAL CEILING - EMT TYPE STRUT  
SCALE: N.T.S.



4.10 HANGER AND BRACING WIRE CONNECTION - TYP. WIRE TURNS  
SCALE: N.T.S.

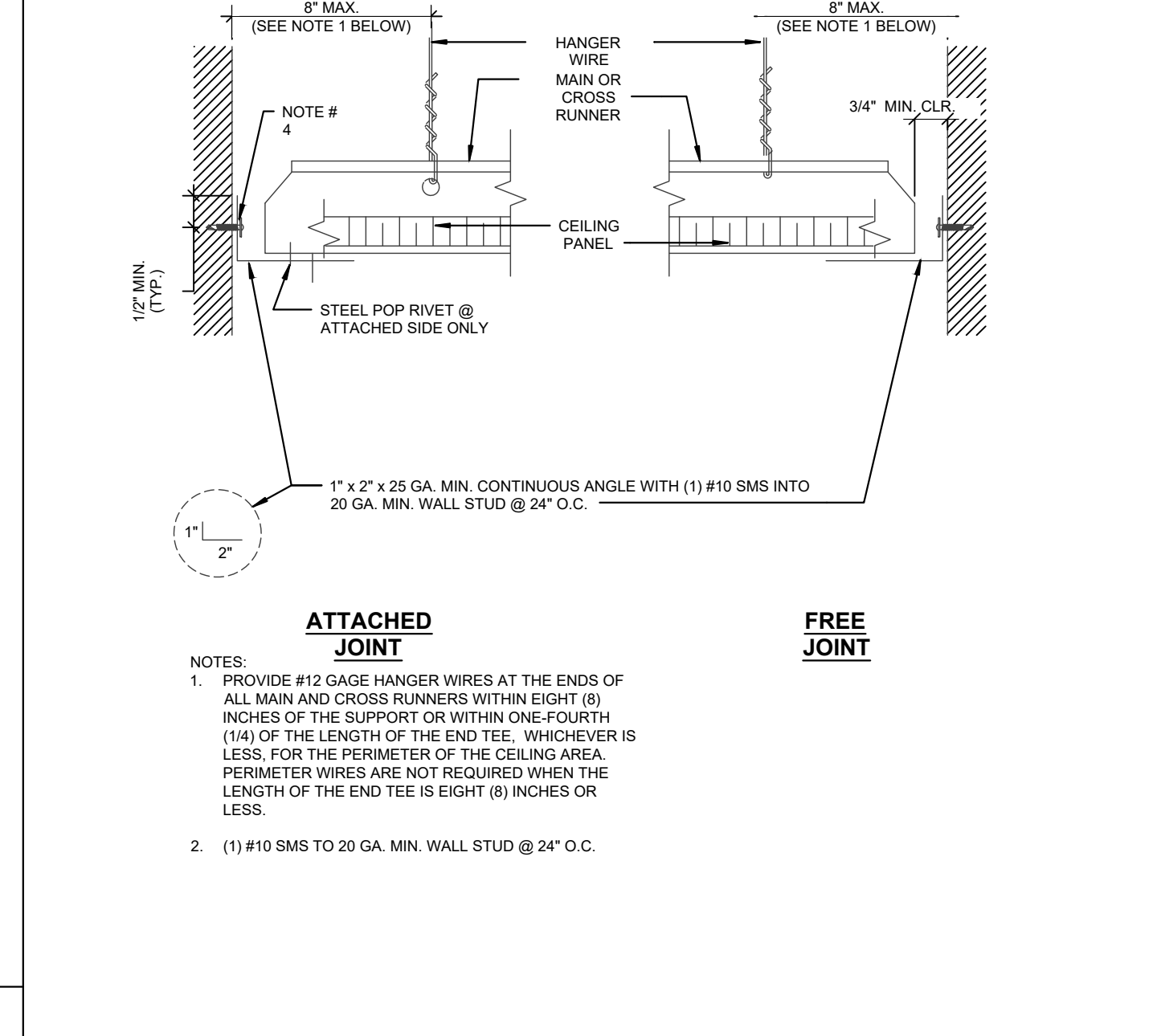


SUSPENDED ACOUSTICAL CEILING - CHANNEL TYPE STRUT  
SCALE: N.T.S.

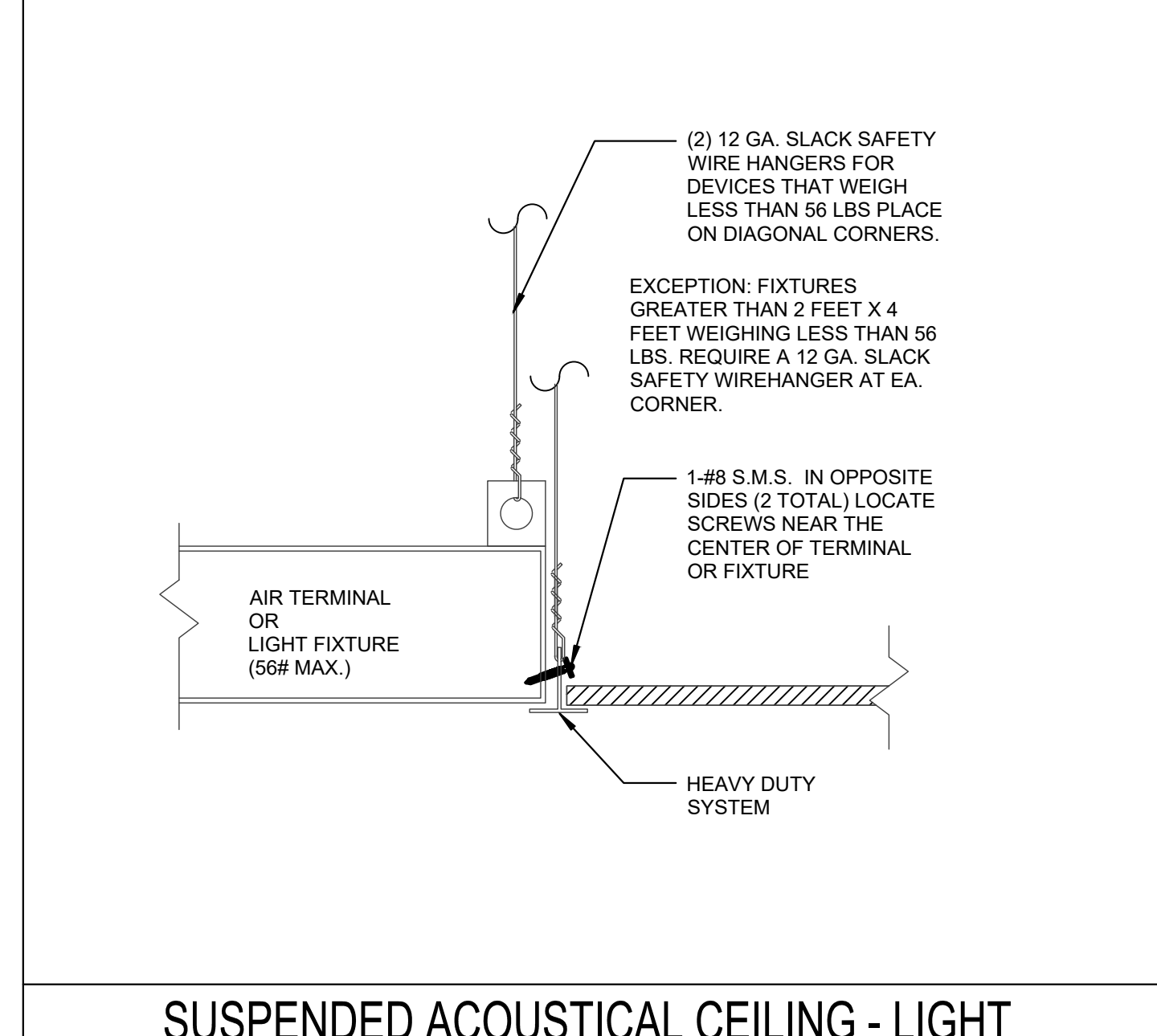
COMPRESSION STRUT TABLE	
EMT COMPRESSION STRUT	MAXIMUM LENGTH
1/2" DIAMETER EMT (0.042" WALL THICKNESS)	4'-7"
3/4" DIAMETER EMT (0.049" WALL THICKNESS)	7'-5"
1" DIAMETER EMT (0.057" WALL THICKNESS)	9'-9"
1 1/4" DIAMETER EMT (0.065" WALL THICKNESS)	12'-9"
1 1/2" DIAMETER EMT (0.065" WALL THICKNESS)	14'-9"
2" DIAMETER EMT (0.065" WALL THICKNESS)	18'-10"
CHANNEL COMPRESSION STRUT	MAXIMUM LENGTH
250S125-33	5'-0"
250S137-33	6'-10"
362S137-33	8'-0"
250137-43	8'-10"
400S137-43	10'-10"

3.21 COMPRESSION STRUT TABLE  
SCALE: N.T.S.

2.50 TYPICAL CEILING SECTION AT EXITWAY CORRIDORS  
(ESSENTIAL SERVICE BUILDINGS)  
SCALE: N.T.S.



2.60 CEILING PERIMETER  
SCALE: N.T.S.



2.80 SUSPENDED ACOUSTICAL CEILING - LIGHT FIXTURES/AIR TERMINAL SUPPORT DETAIL  
SCALE: N.T.S.

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HENRY+ ASSOCIATES  
ARCHITECTS

REGISTERED ARCHITECT  
STEPHEN J. HENRY  
C-22525  
12/31/21  
RENEWAL  
DATE  
STATE OF CALIFORNIA

KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

INTERIOR DETAILS

CONSULTANT

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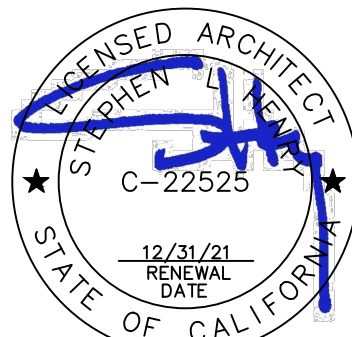
A8.4

14 OF 71 SHEETS



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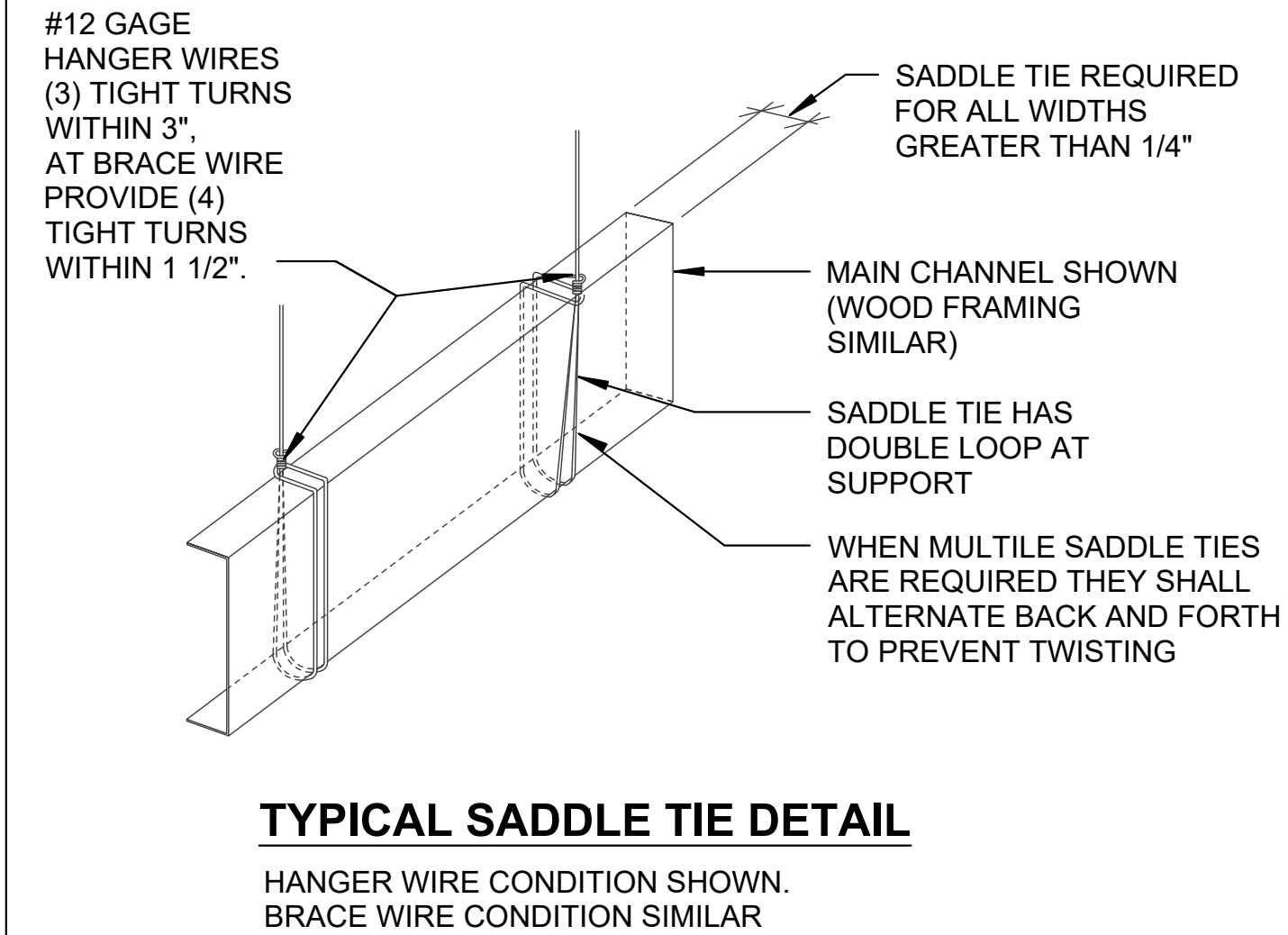
KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

INTERIOR DETAILS

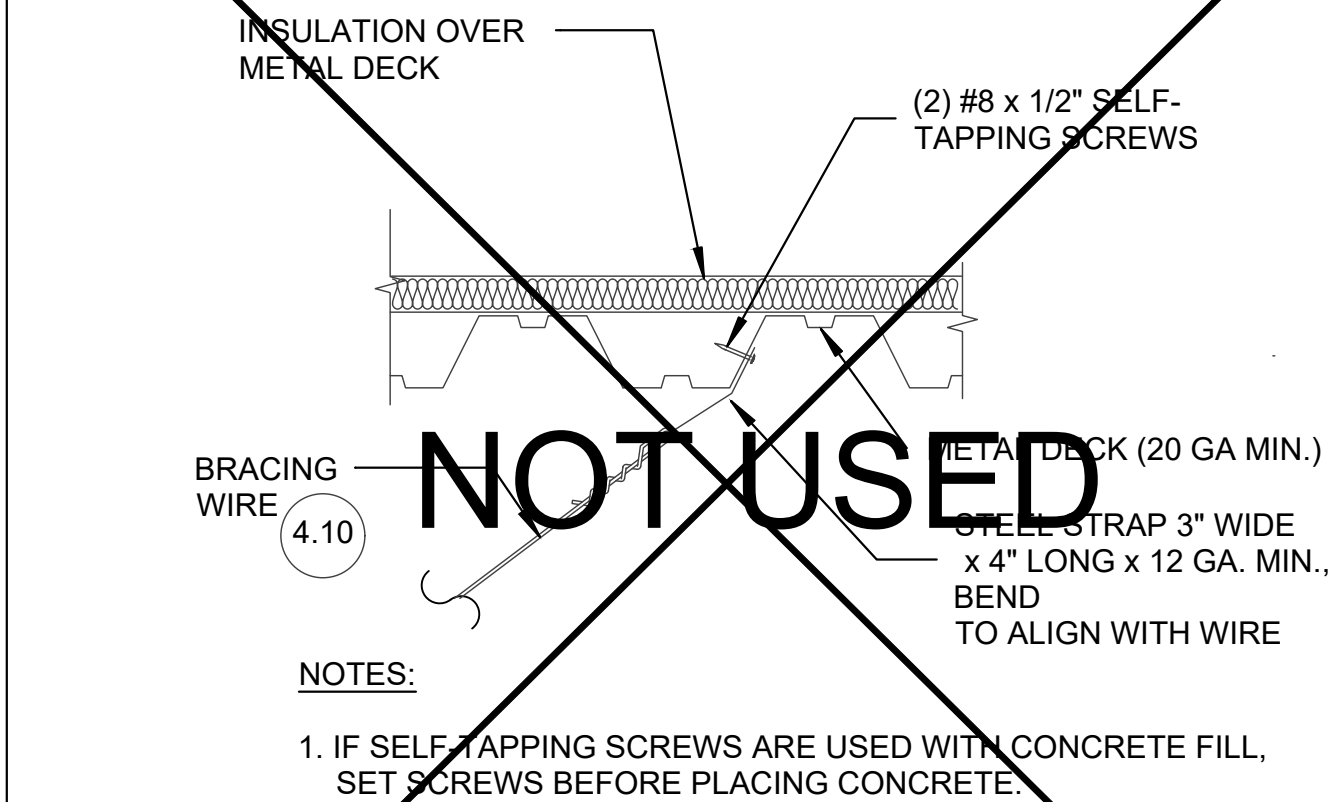
CONSULTANT

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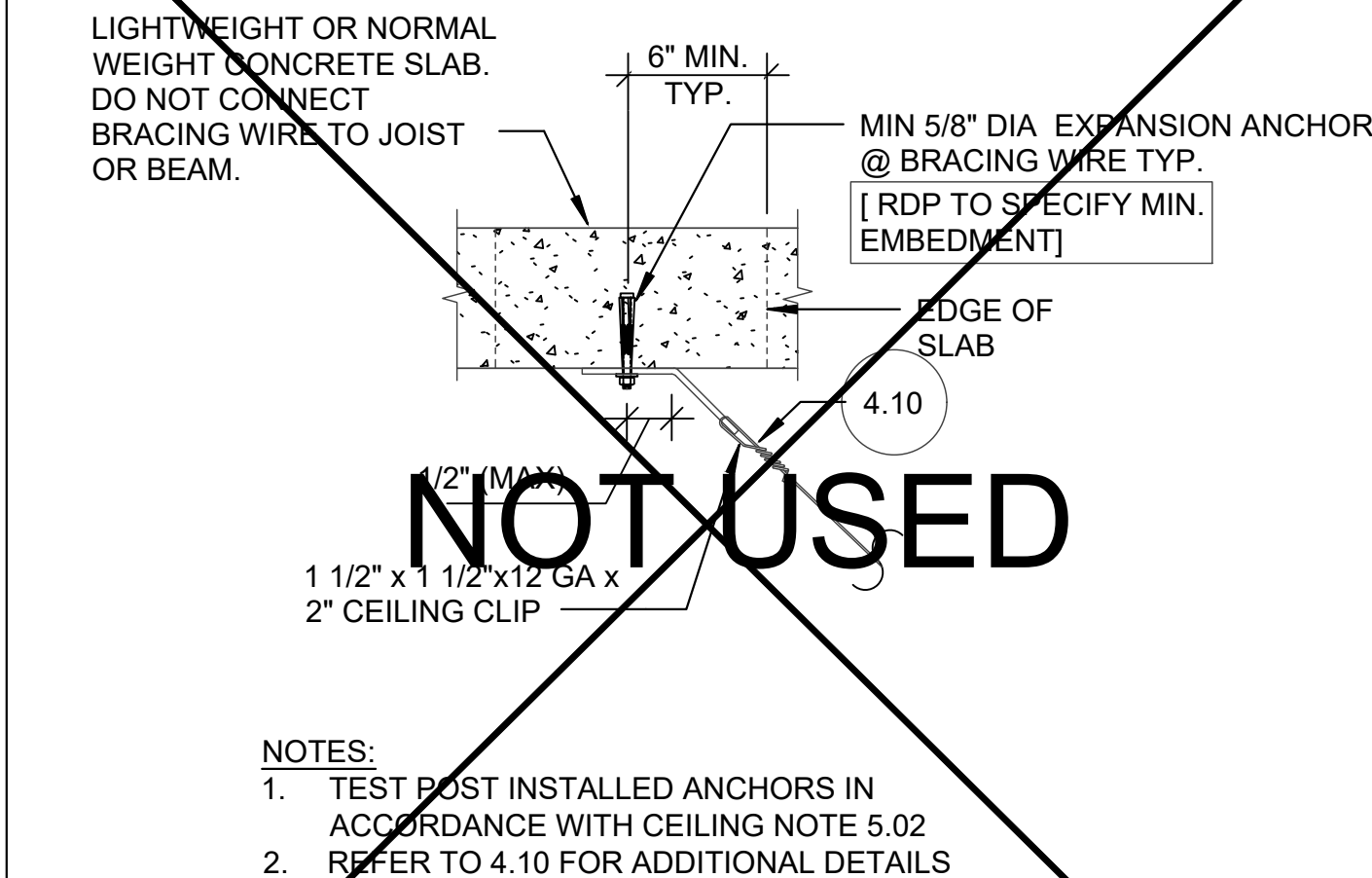
A8.5



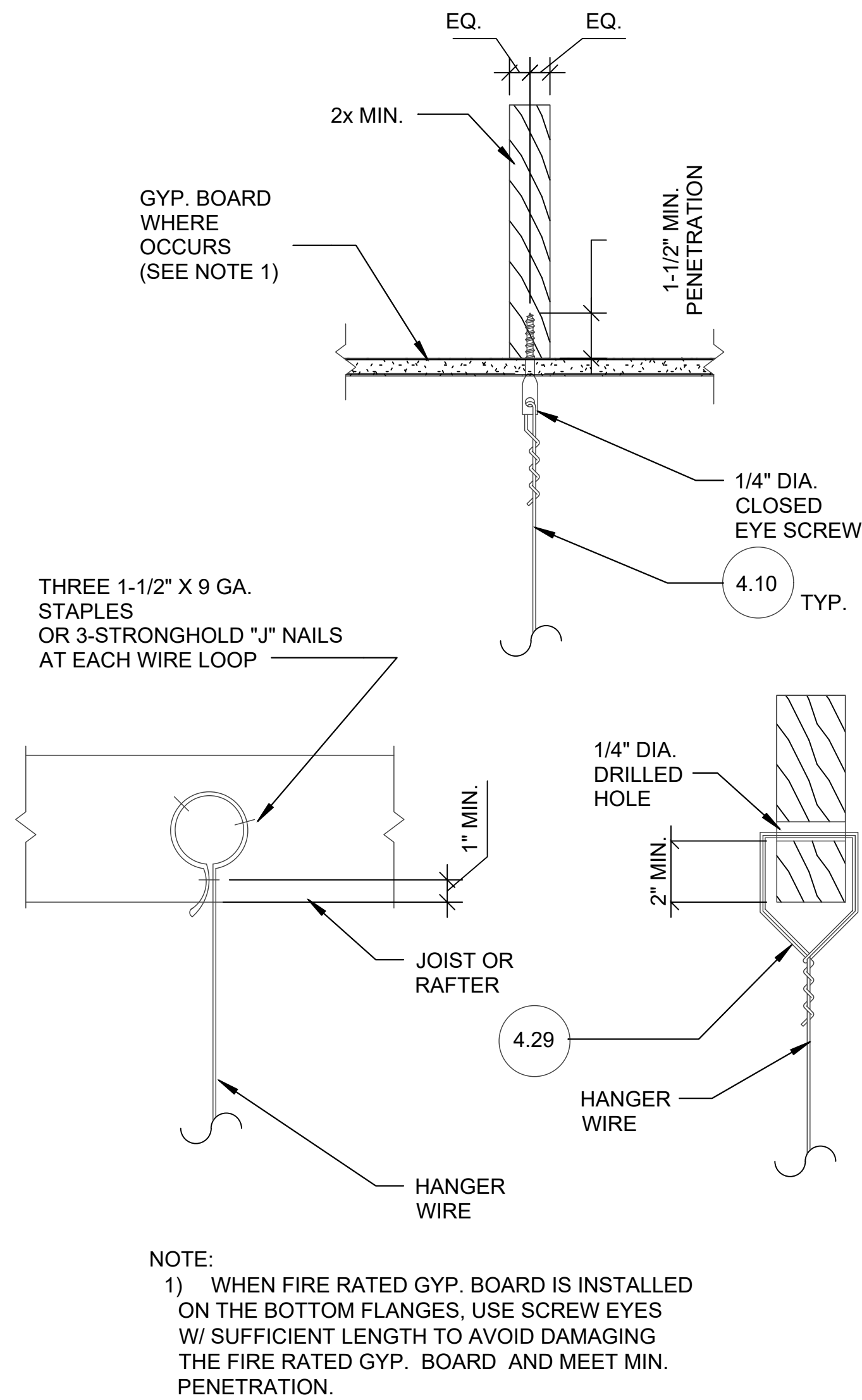
4.29 TYPICAL SADDLE TIE DETAIL  
SCALE: N.T.S.



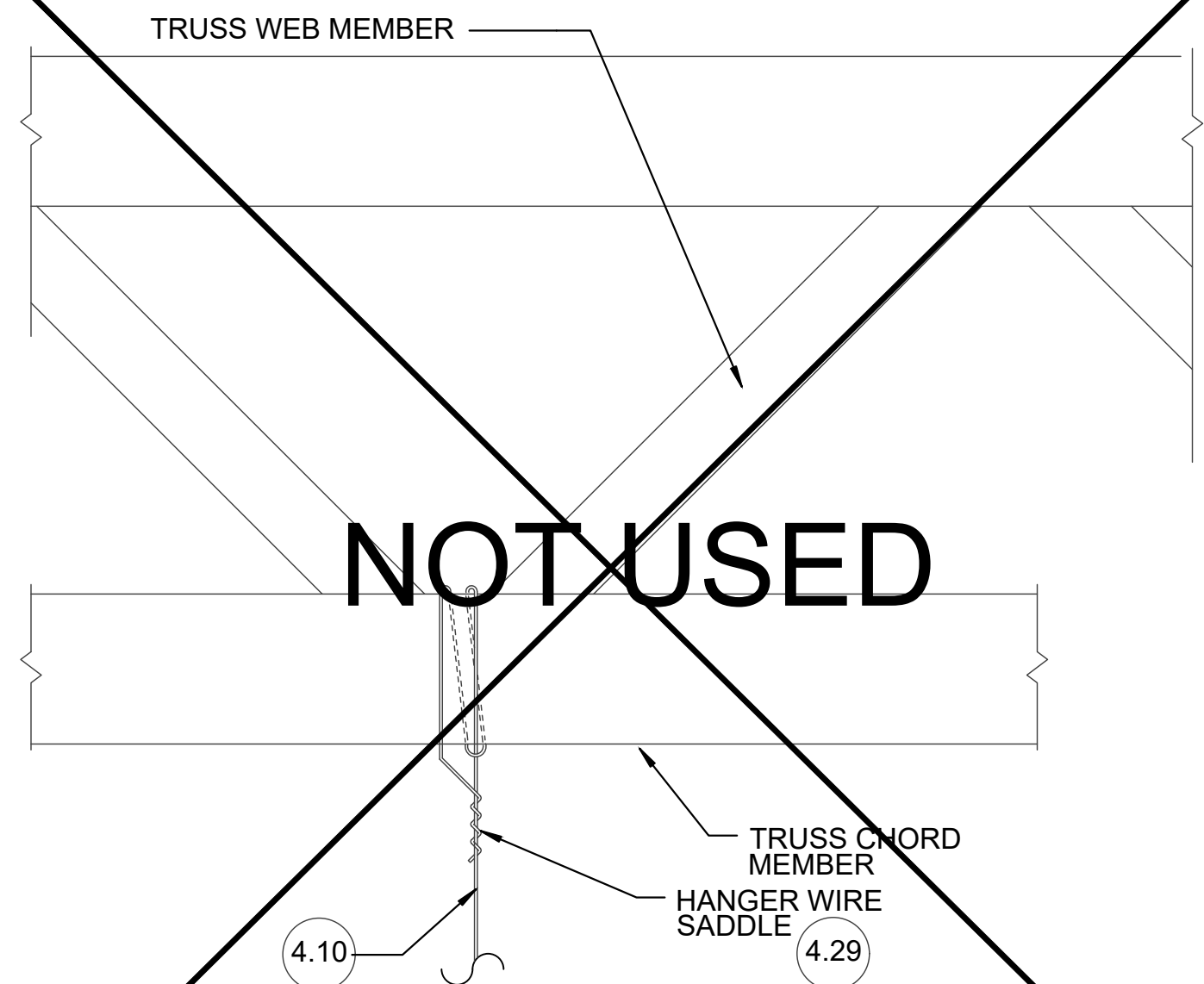
4.30 BRACING WIRE CONNECTION AT METAL DECK  
SCALE: N.T.S.



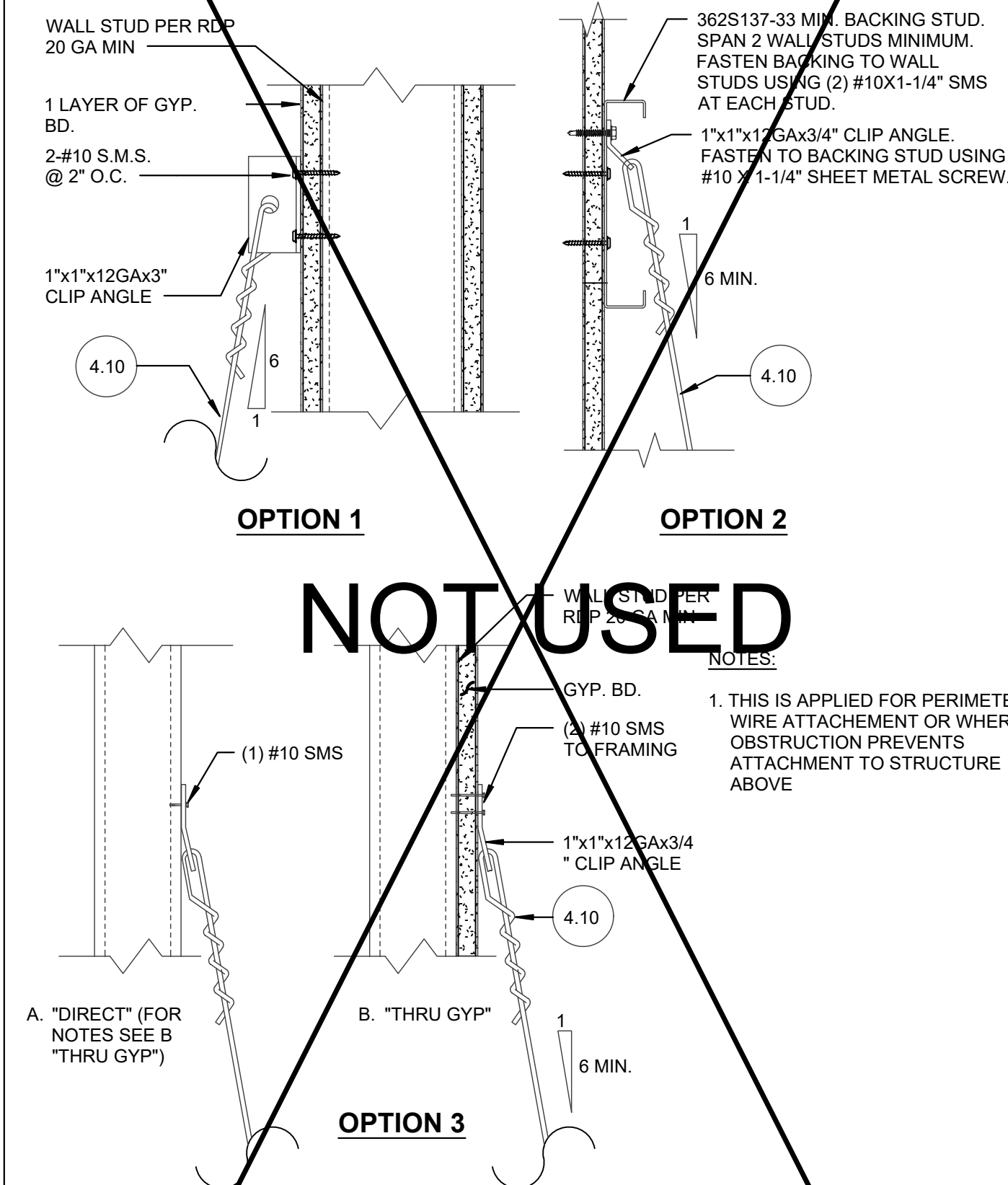
4.32 BRACING WIRE CONNECTION TO CONCRETE SLAB, BEAM, OR JOIST  
SCALE: N.T.S.



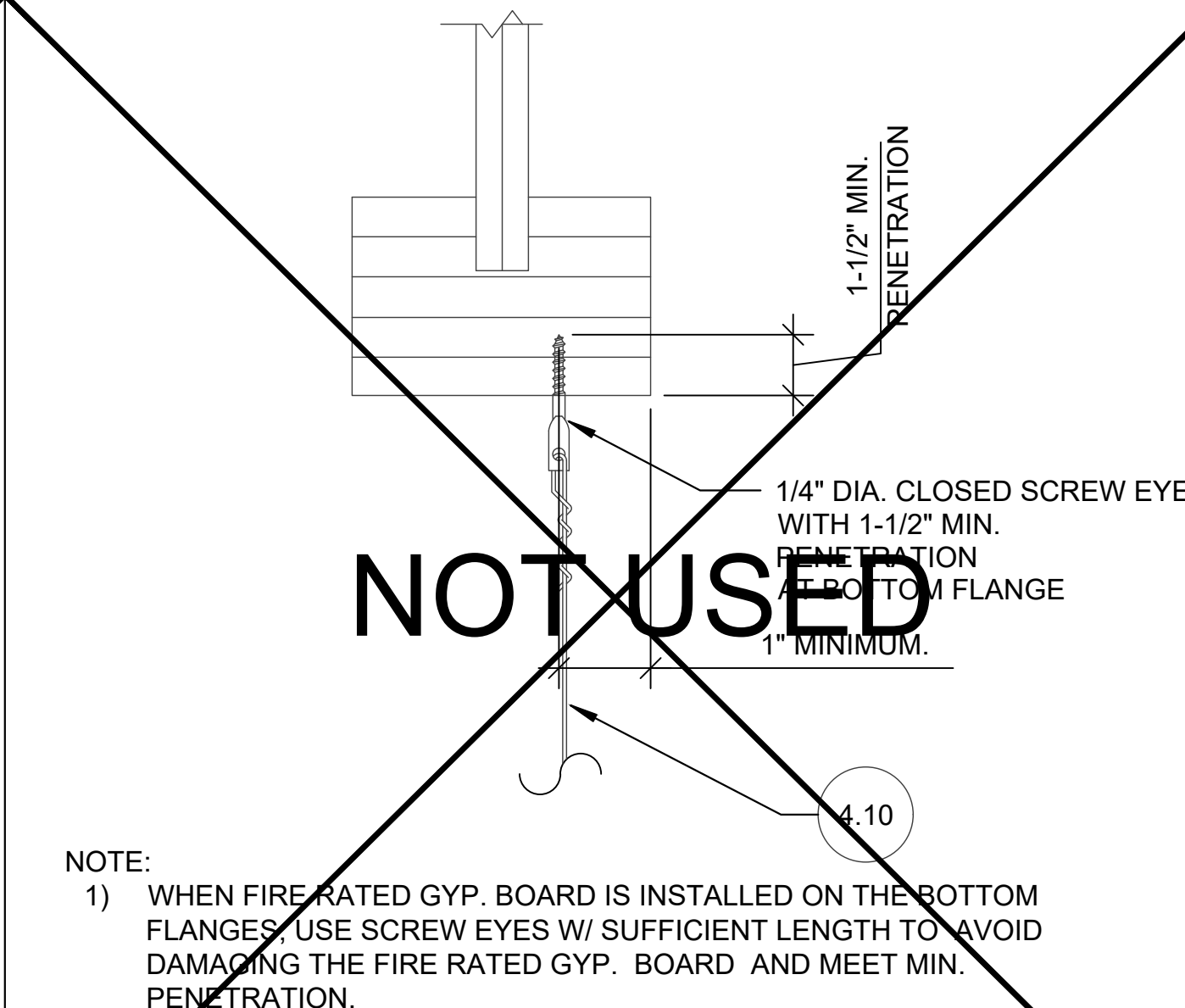
4.25 HANGER WIRE CONNECTION TO SAWN TIMBER  
SCALE: N.T.S.



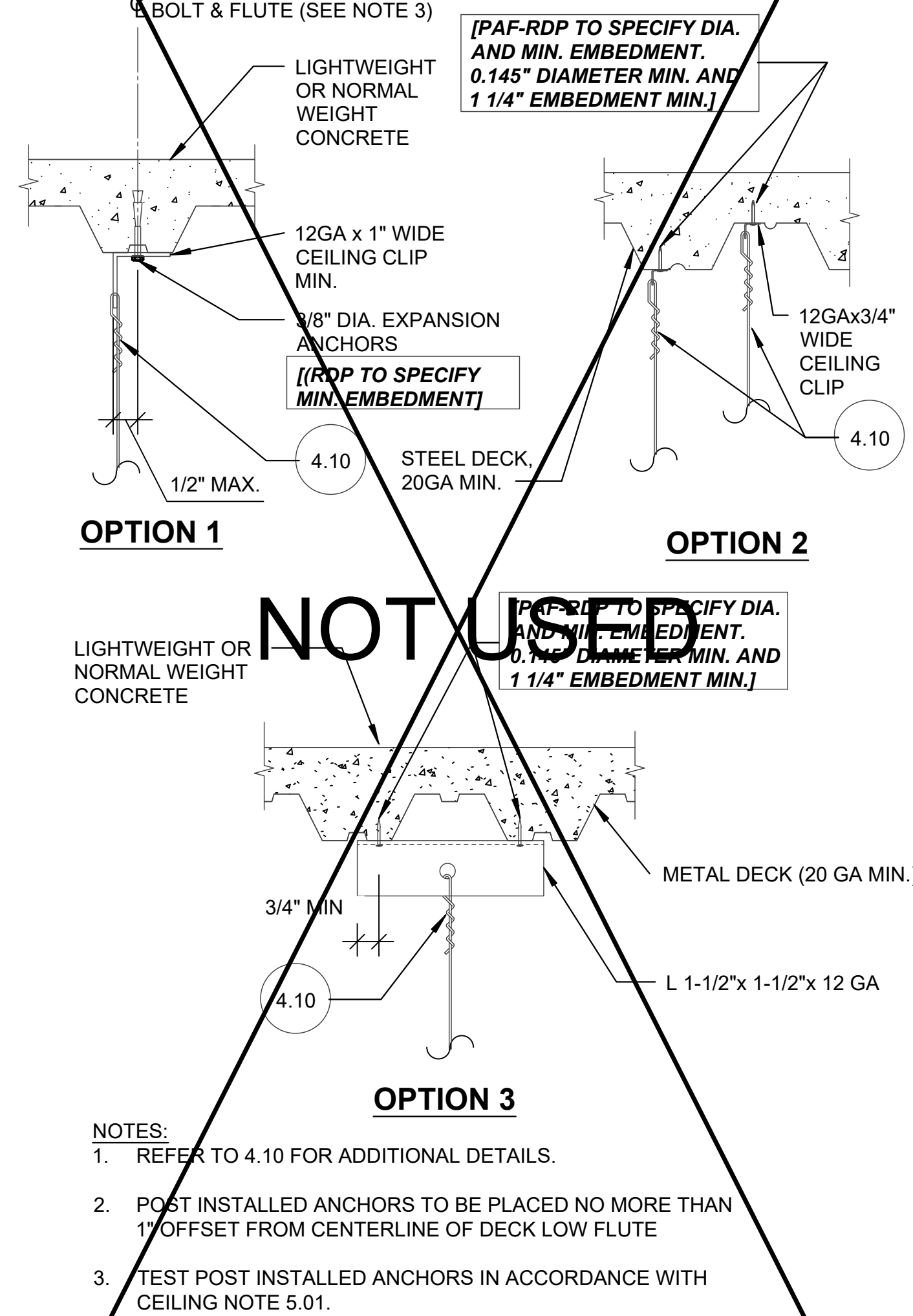
4.27 HANGER WIRE CONNECTION TO WOOD CHORD TRUSS  
SCALE: N.T.S.



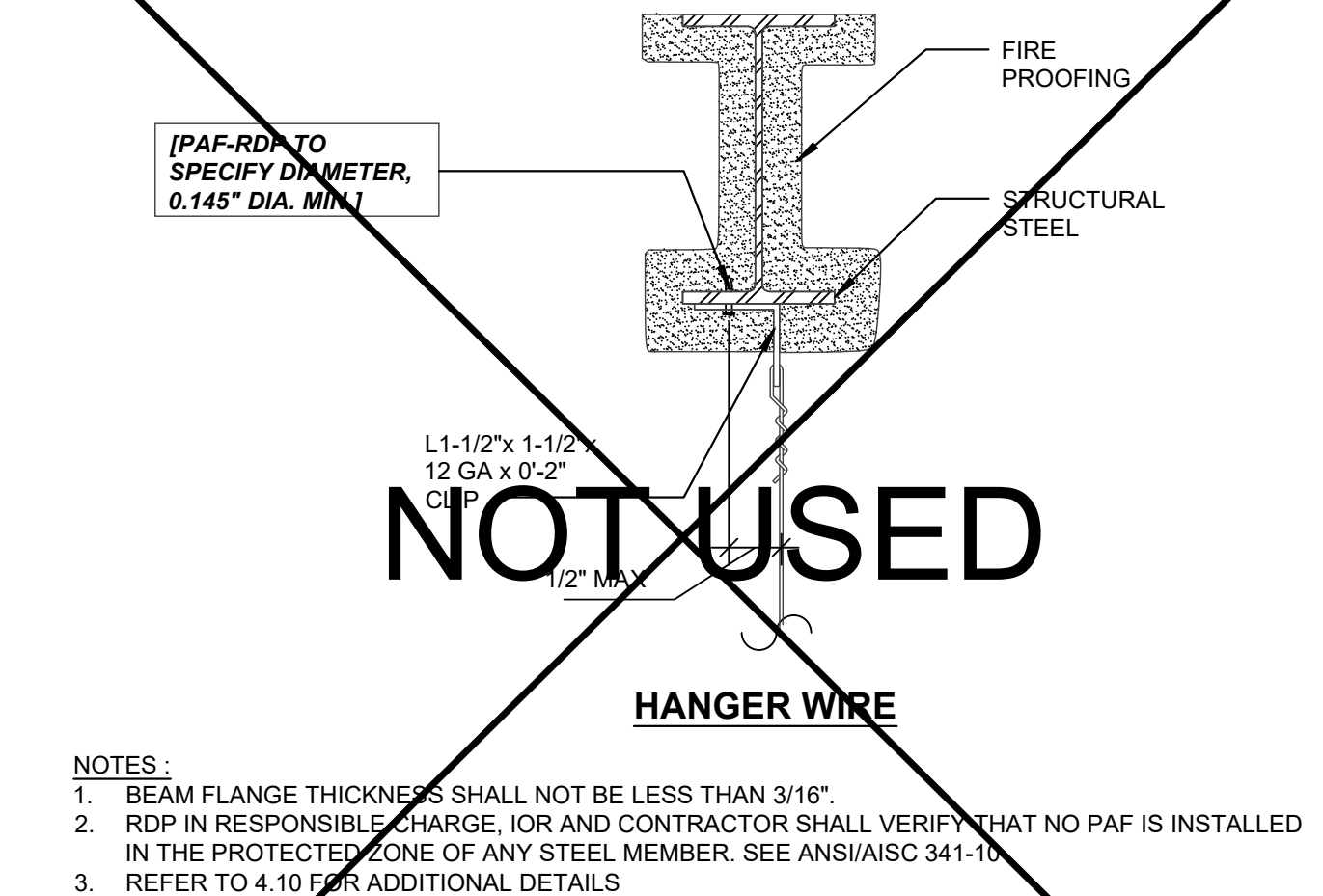
4.24 HANGER WIRE CONNECTION TO METAL STUD  
SCALE: N.T.S.



4.26 HANGER WIRE CONNECTION TO WOOD I-JOIST  
SCALE: N.T.S.



4.21 HANGER WIRE CONNECTION TO CONCRETE OVER METAL DECK  
SCALE: N.T.S.

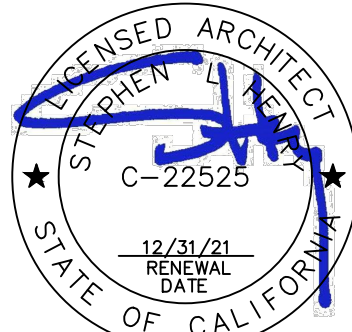


4.23 HANGER WIRE CONNECTION TO STRUCTURAL STEEL  
SCALE: N.T.S.



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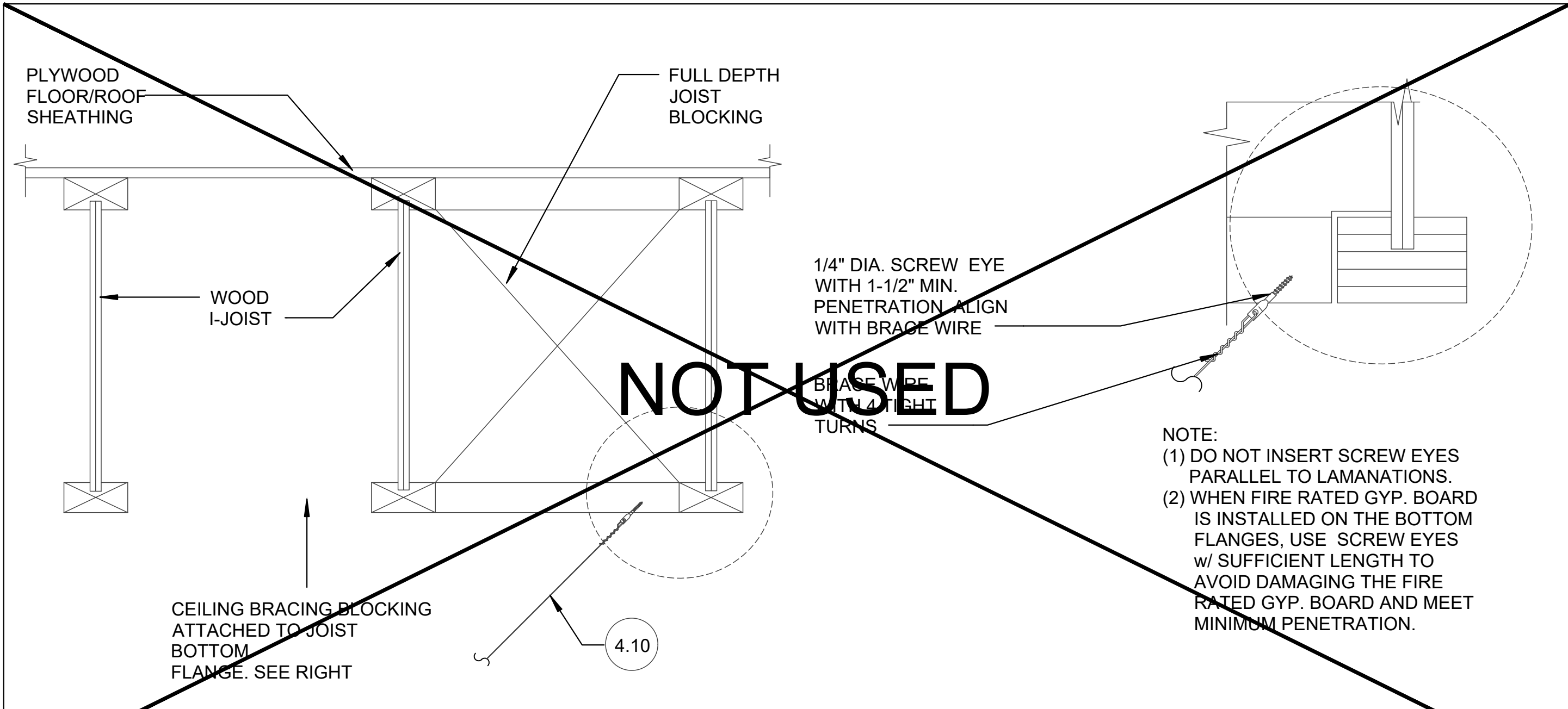
KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

INTERIOR DETAILS

CONSULTANT

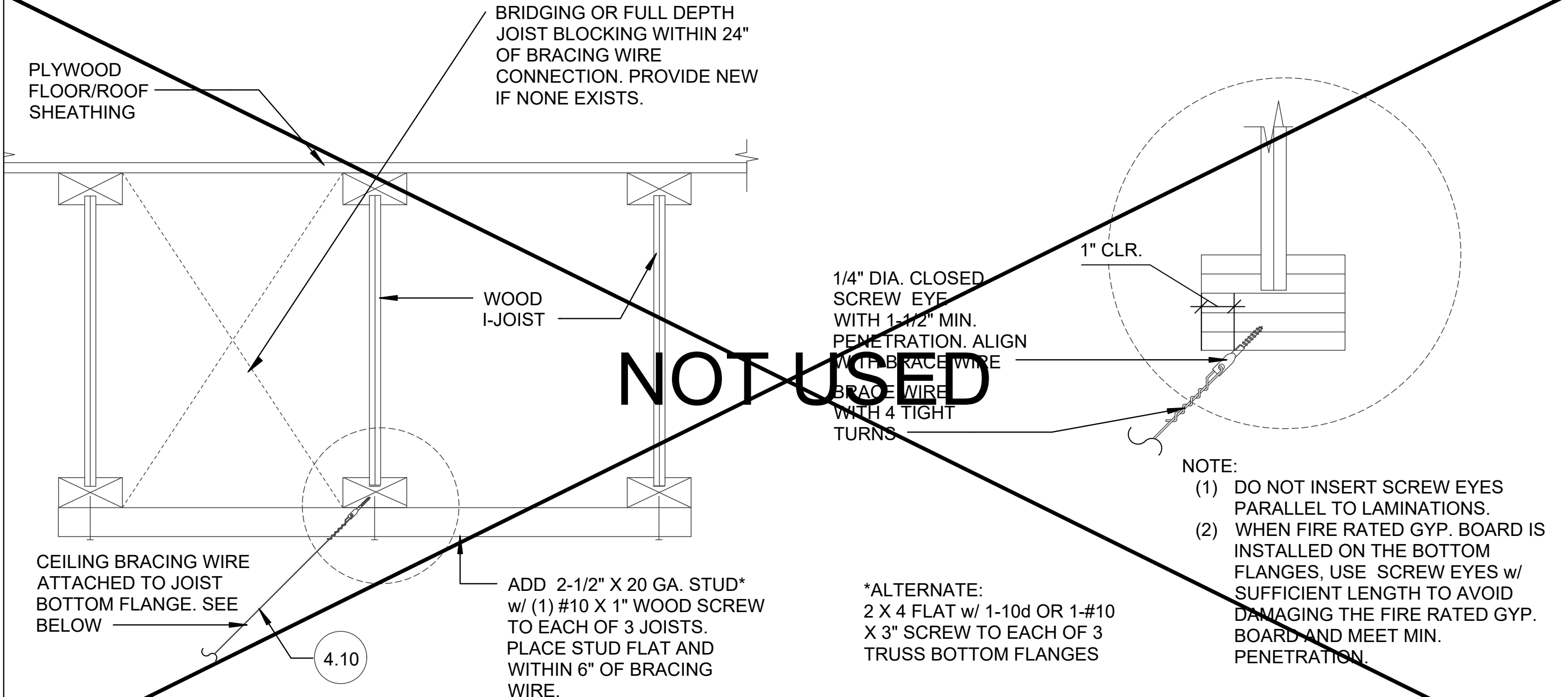
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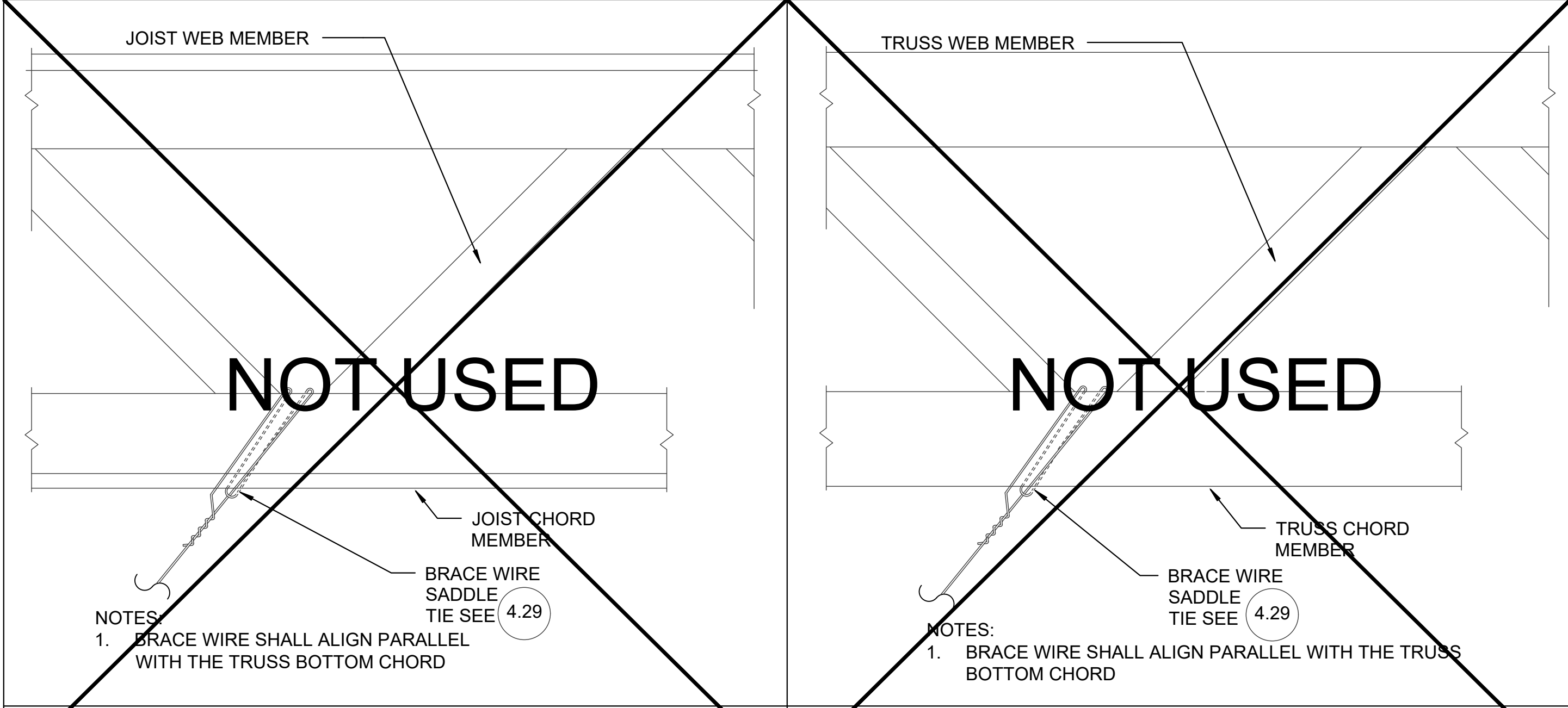
4.36 BRACING WIRE CONNECTION TO WOOD I-JOIST

SCALE: N.T.S.



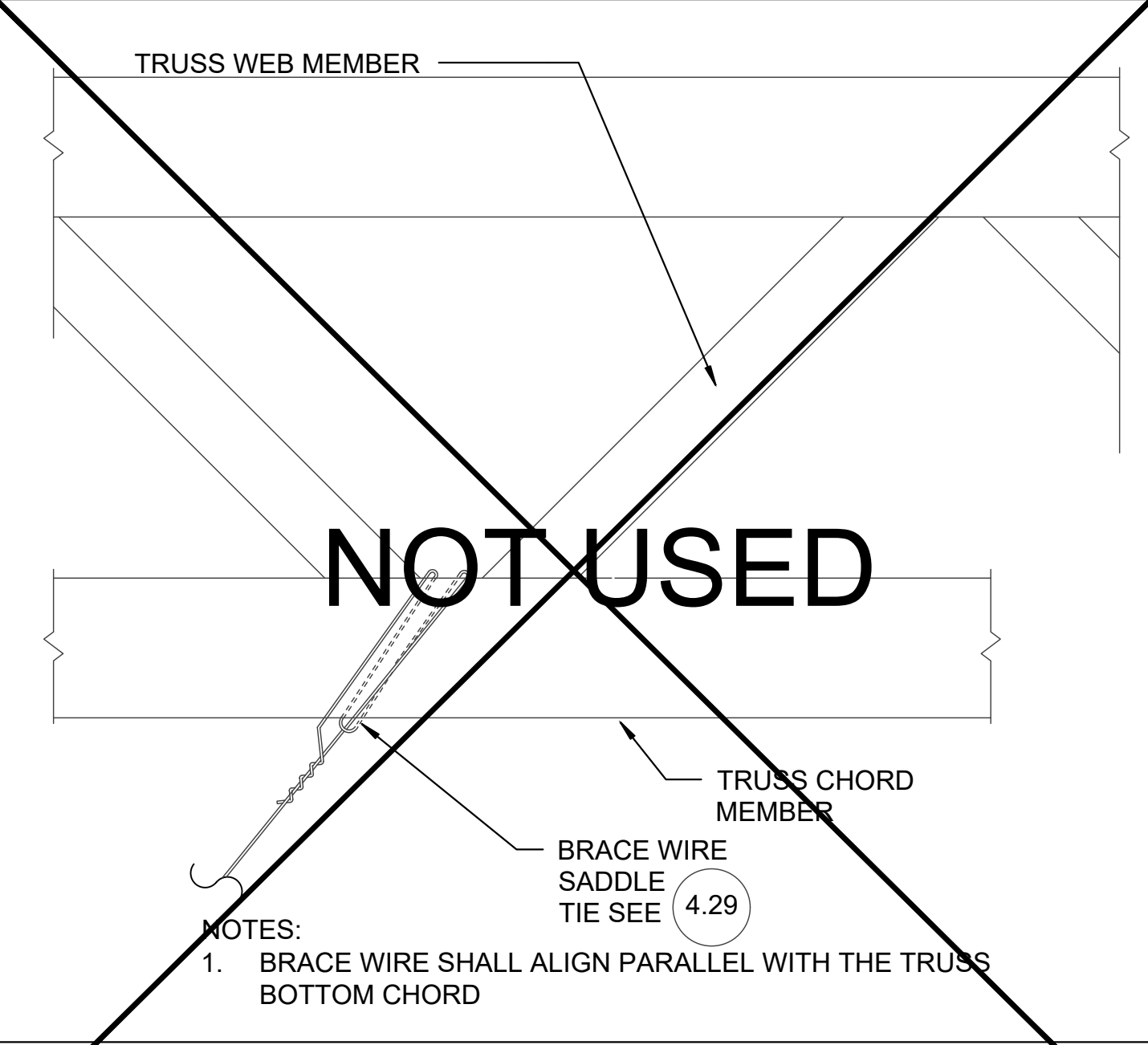
4.37 BRACING WIRE CONNECTION TO WOOD I-JOIST

SCALE: N.T.S.



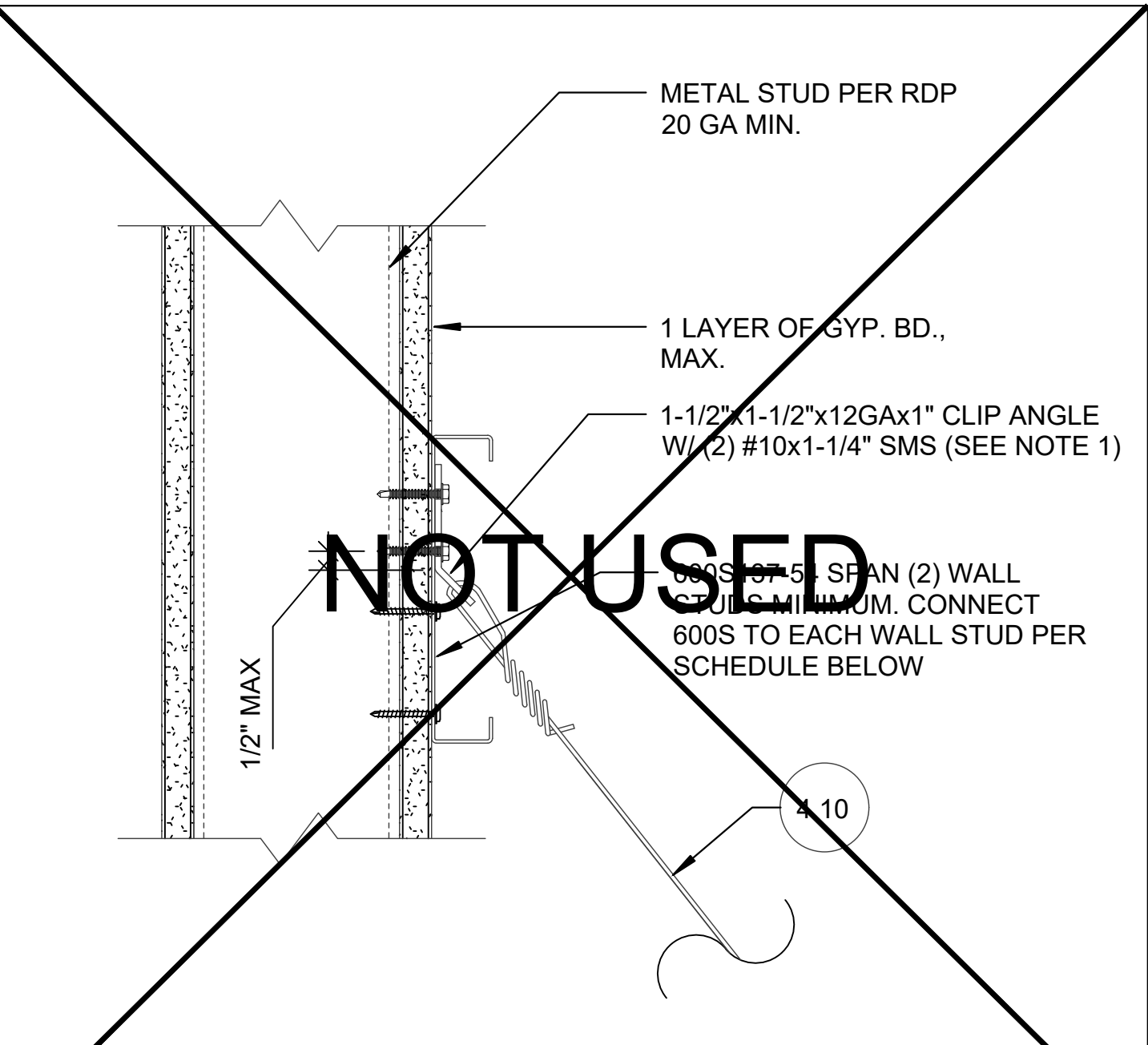
4.39 BRACING WIRE CONNECTION TO OPEN-WEB STEEL JOIST

SCALE: N.T.S.



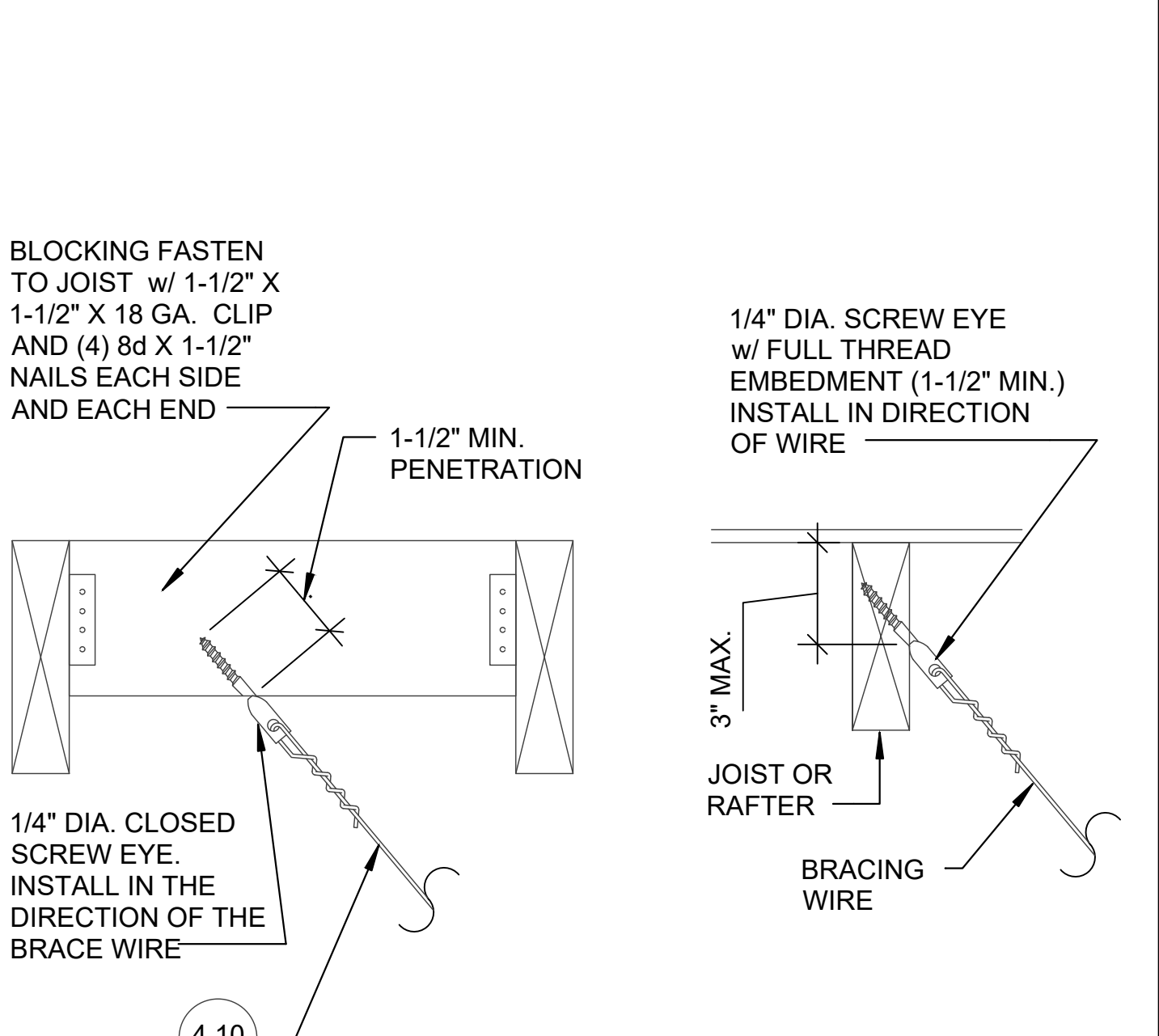
4.38 BRACE WIRE CONNECTION TO WOOD CHORD TRUSS

SCALE: N.T.S.



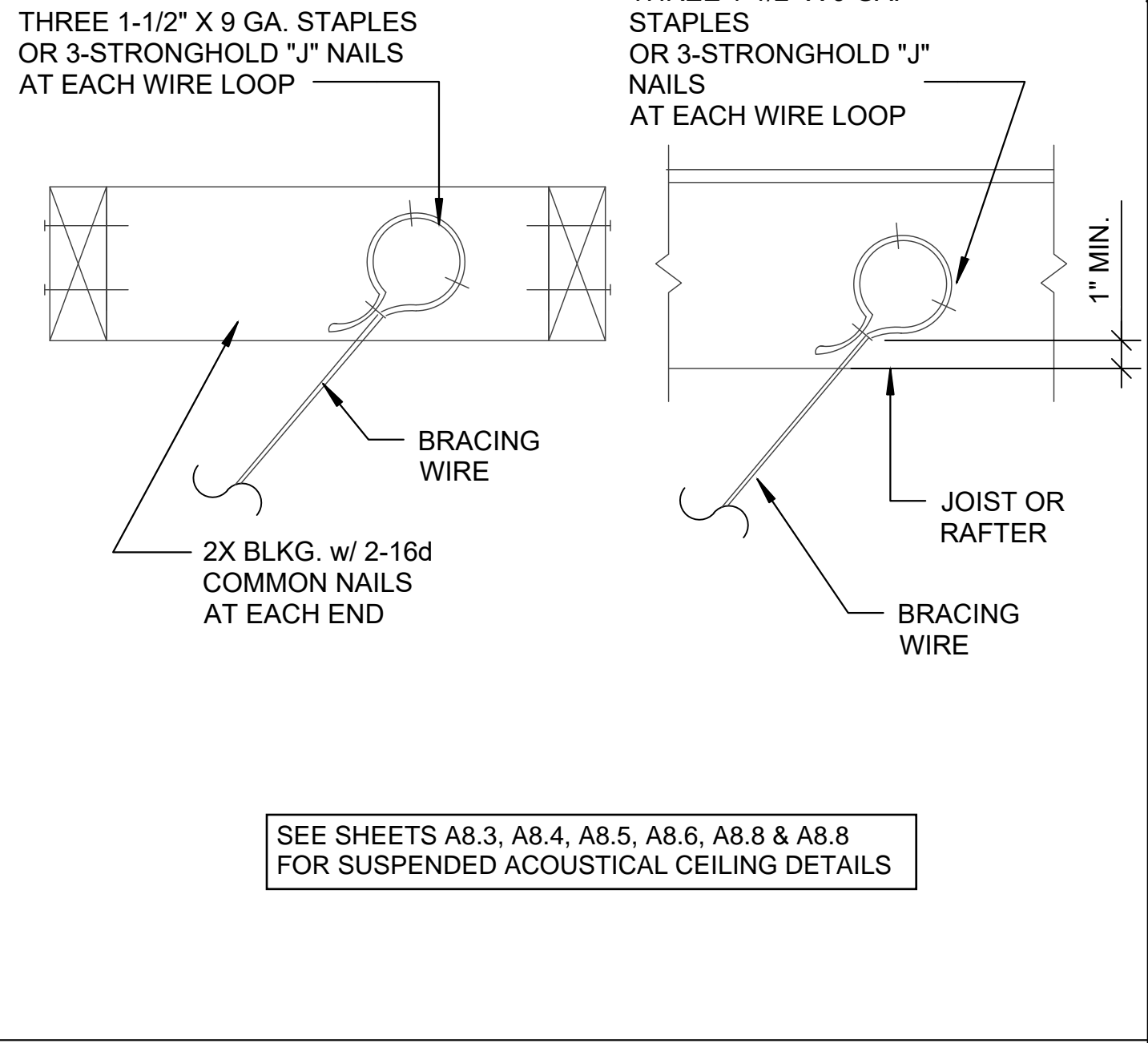
4.34 BRACING WIRE CONNECTION TO METAL STUD WALL

SCALE: N.T.S.



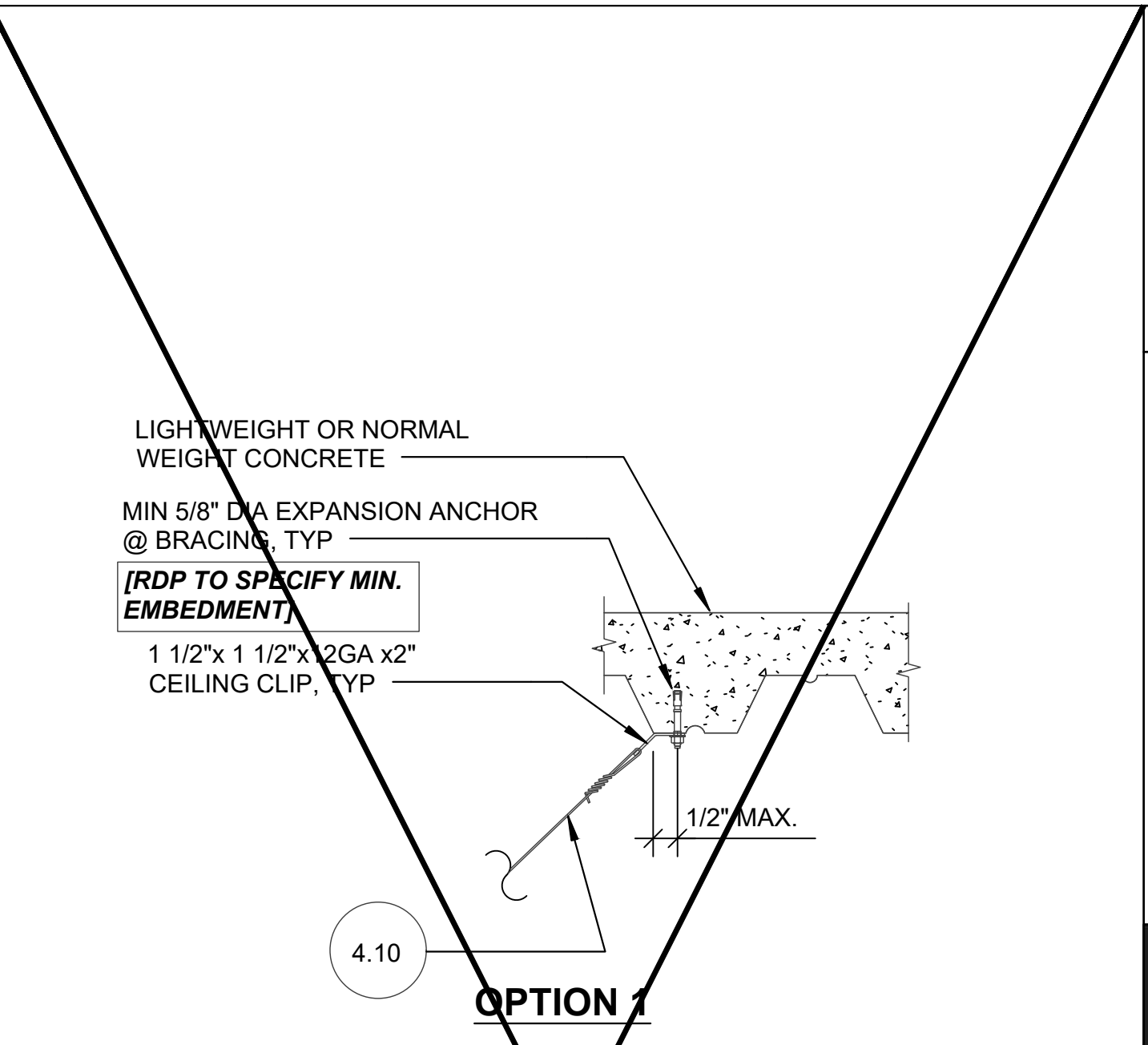
4.35 BRACING WIRE CONNECTION TO STUD WALL

SCALE: N.T.S.



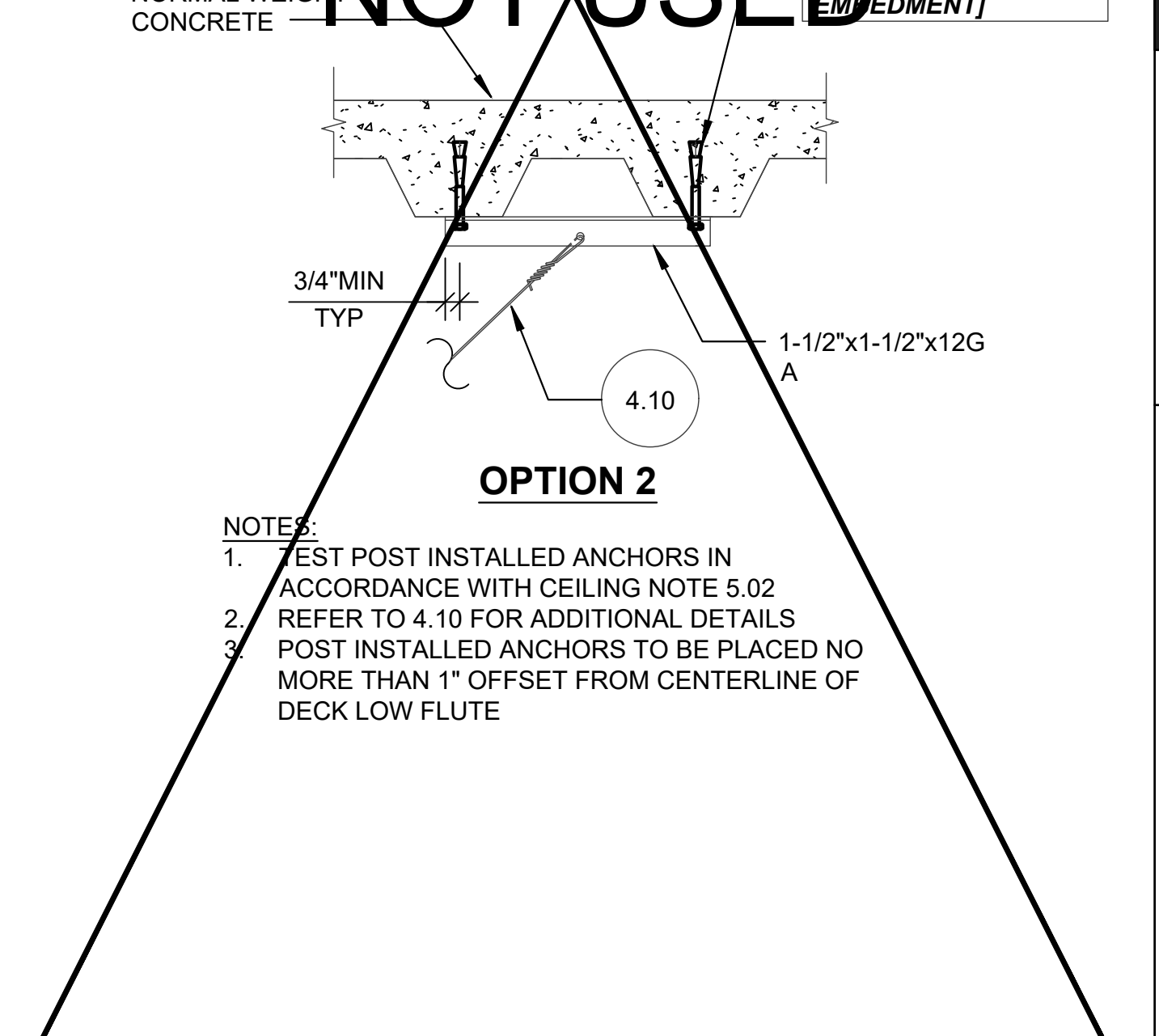
4.33 BRACING WIRE CONNECTION TO STRUCTURAL STEEL

SCALE: N.T.S.



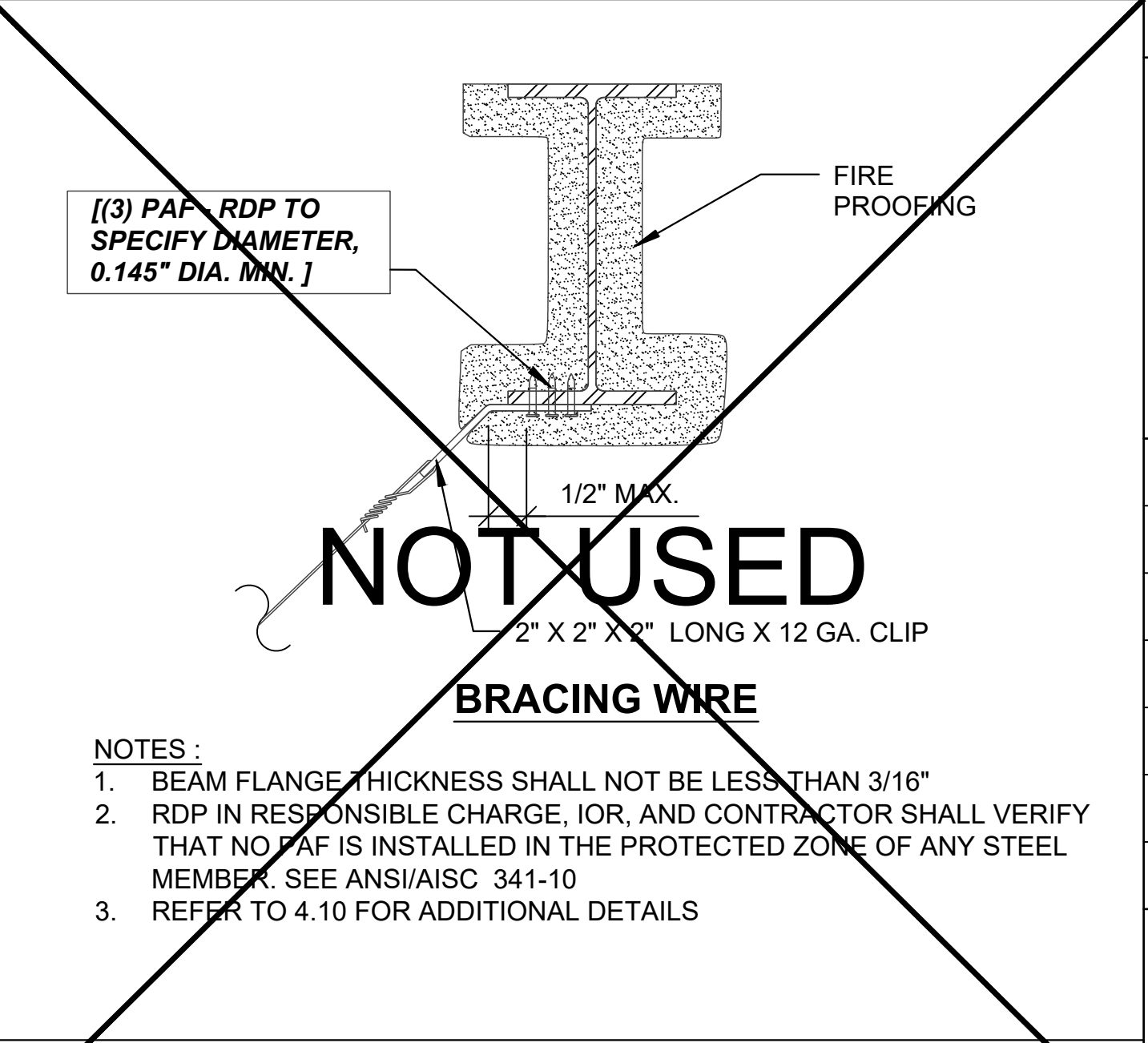
4.31 BRACING WIRE CONNECTION TO CONCRETE AT METAL DECK

SCALE: N.T.S.



4.33 BRACING WIRE CONNECTION TO STRUCTURAL STEEL

SCALE: N.T.S.



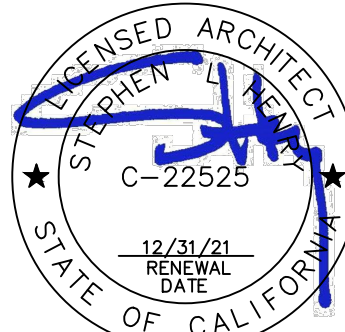
4.33 BRACING WIRE CONNECTION TO STRUCTURAL STEEL

SCALE: N.T.S.



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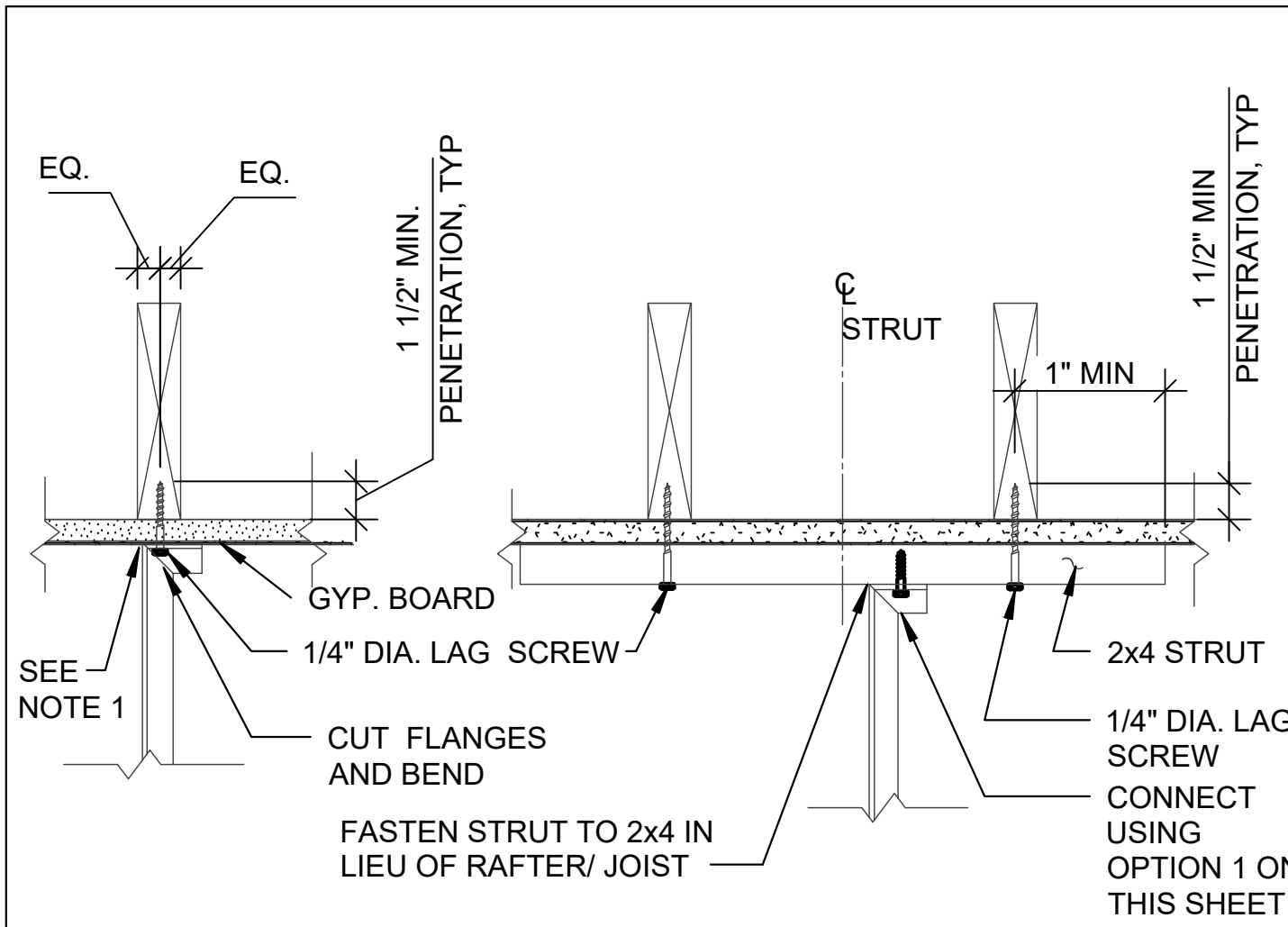
KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

INTERIOR DETAILS

CONSULTANT

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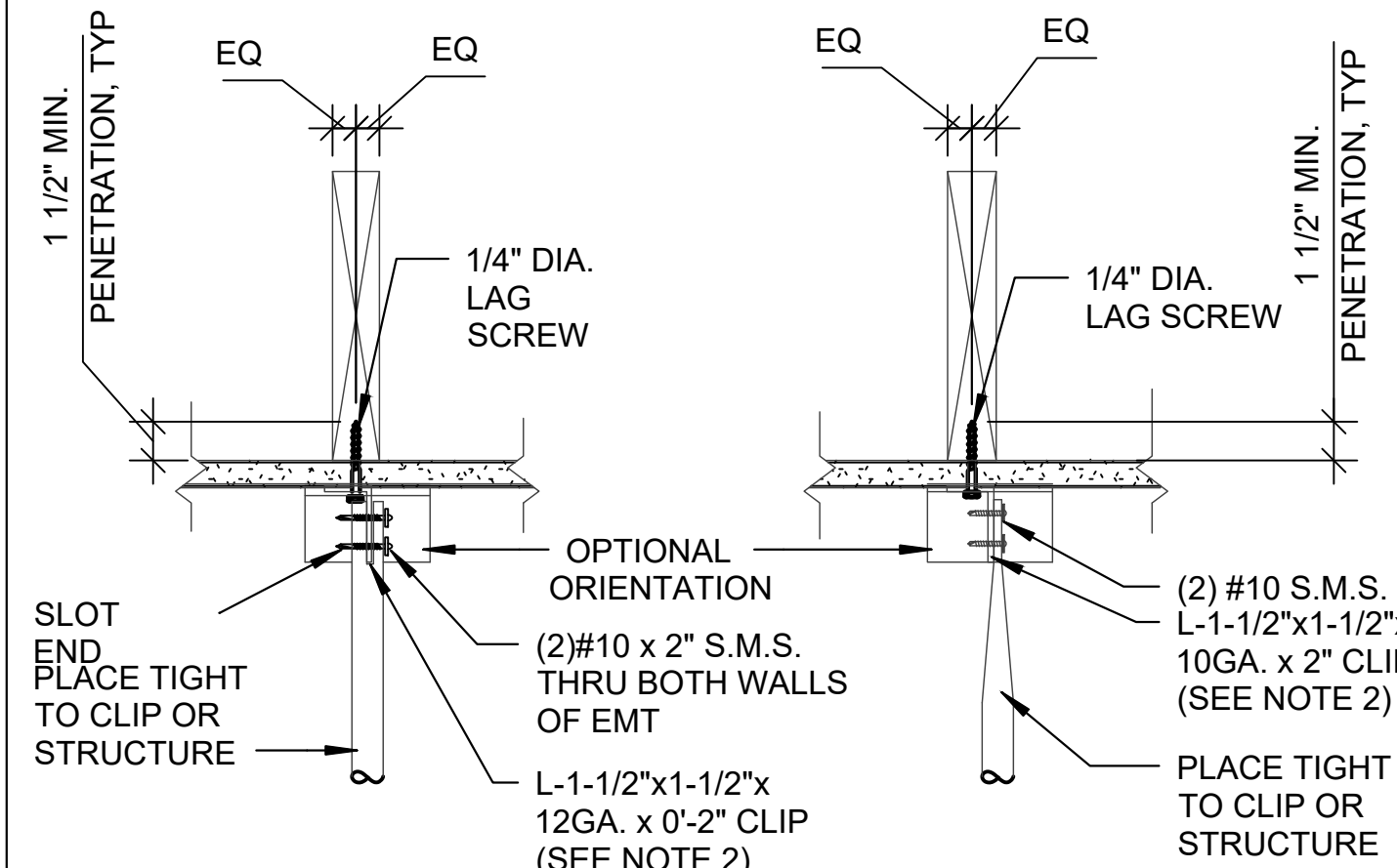
A8.7



OPTION 1

OPTION 2

CHANNEL STRUT



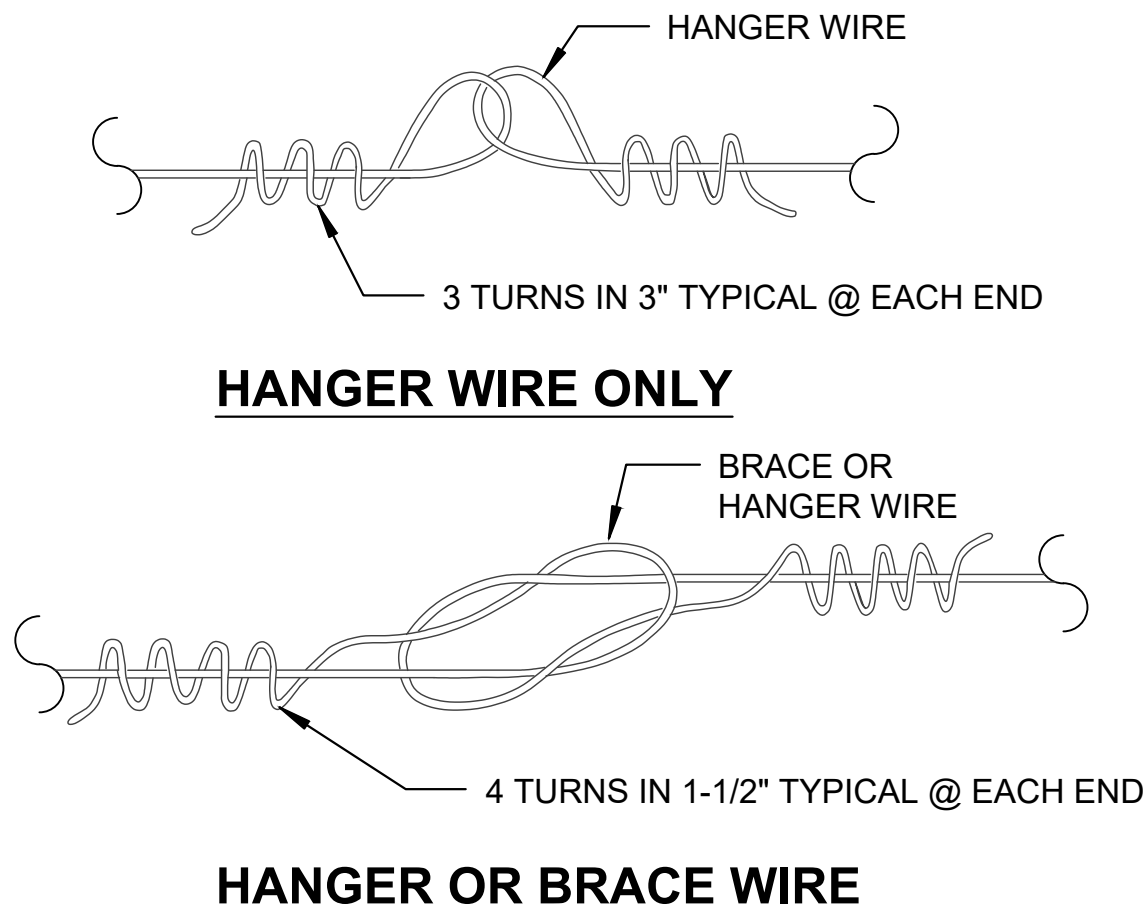
OPTION 1

OPTION 2

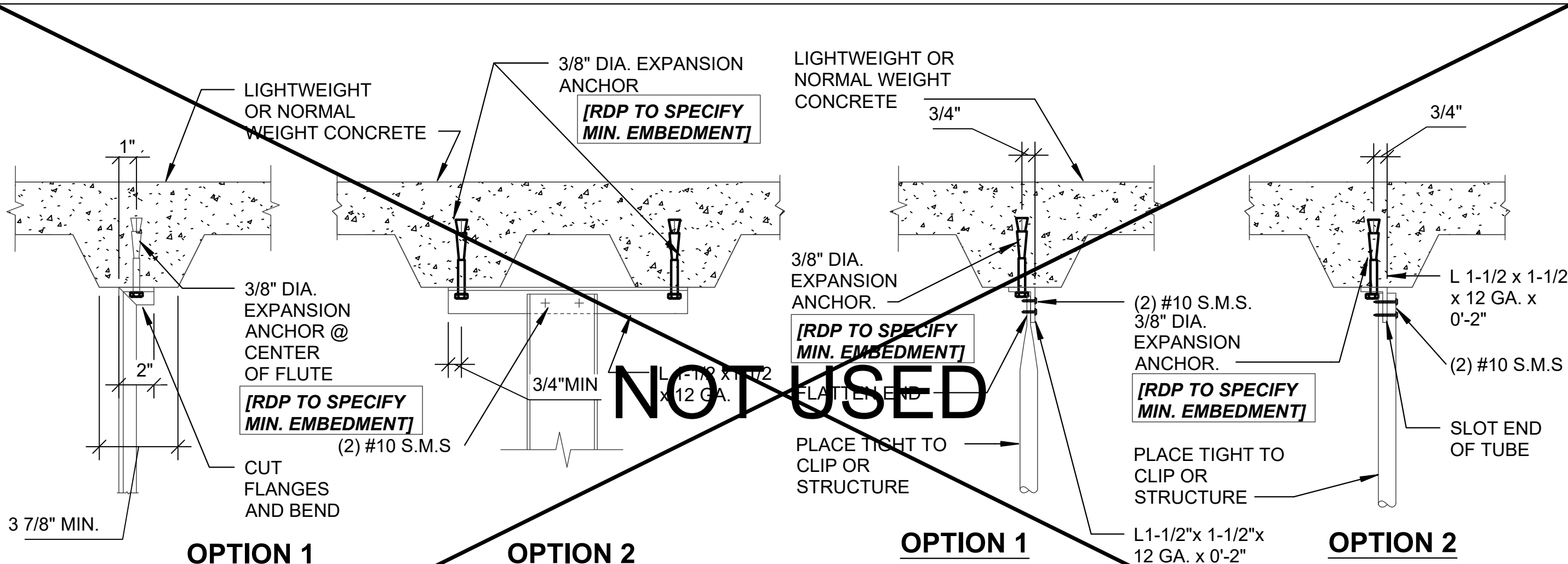
TUBE STRUT

- NOTES:
1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF THE WOOD MEMBER.
  2. FOR ANGLE ORIENTED IN THE STANDARD POSITION, VERTICAL LEG TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER.

5.50 STRUT CONNECTION TO SAWN TIMBER WITH GYPSUM BOARD  
SCALE: N.T.S.



6.10 CEILING WIRE SPLICES  
SCALE: N.T.S.



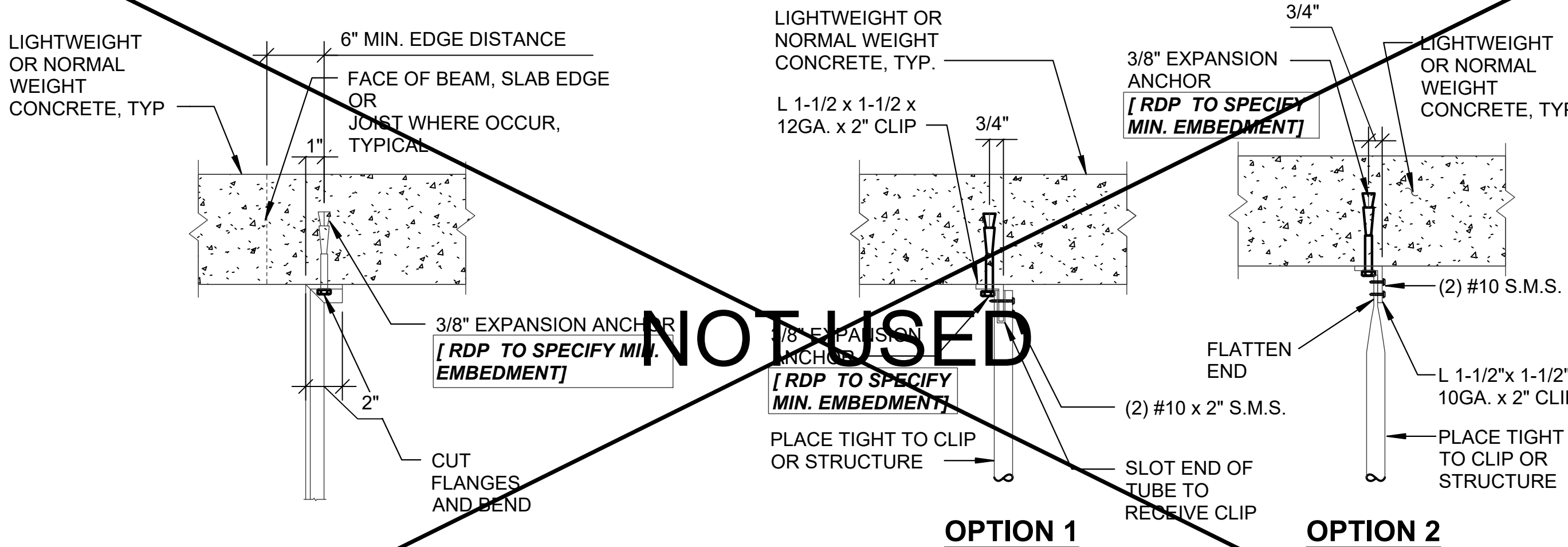
OPTION 1

OPTION 2

CHANNEL STRUT

- NOTES:
1. POST INSTALLED ANCHORS TO BE PLACED NO MORE THAN 1" OFFSET FROM CENTERLINE OF DECK LOW FLUTE
  2. TEST POST INSTALLED ANCHORS IN ACCORDANCE WITH CEILING NOTE 5.01

5.21 STRUT CONNECTION TO CONCRETE OVER METAL DECK  
SCALE: N.T.S.



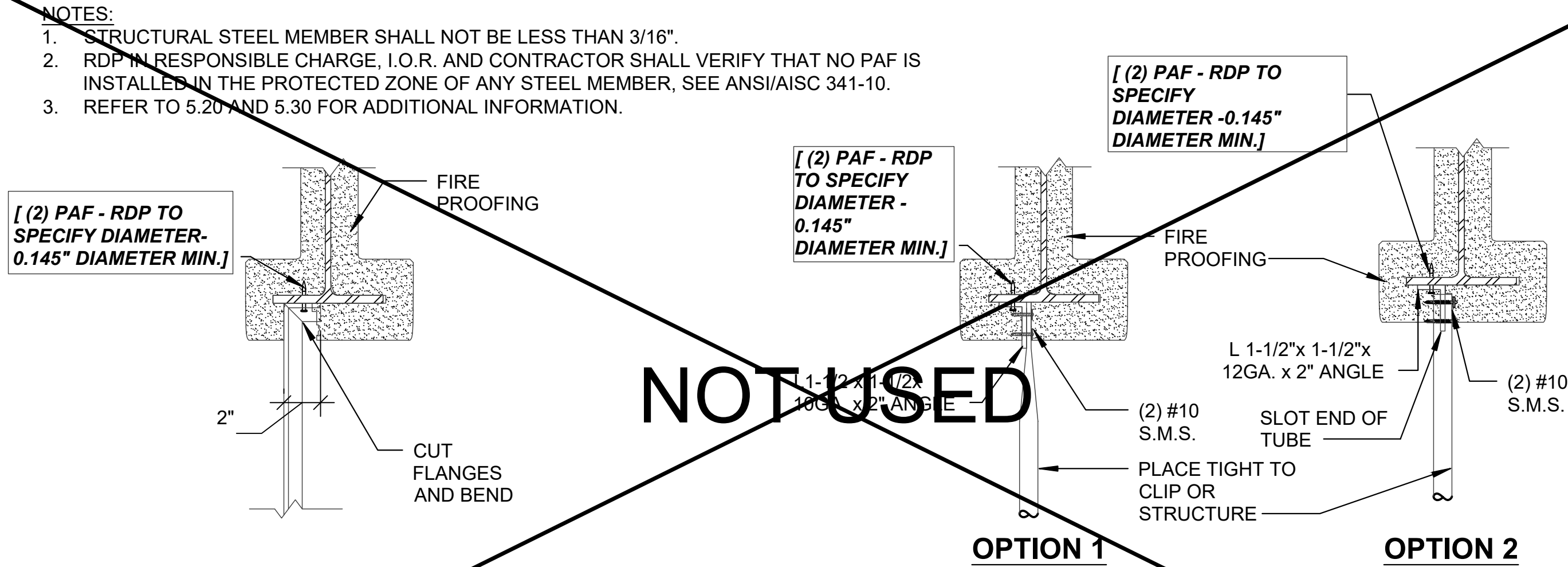
OPTION 1

OPTION 2

CHANNEL STRUT

TUBE STRUT

5.30 STRUT CONNECTION TO CONCRETE SLAB, BEAM, JOIST SOFFIT  
SCALE: N.T.S.



OPTION 1

OPTION 2

CHANNEL STRUT

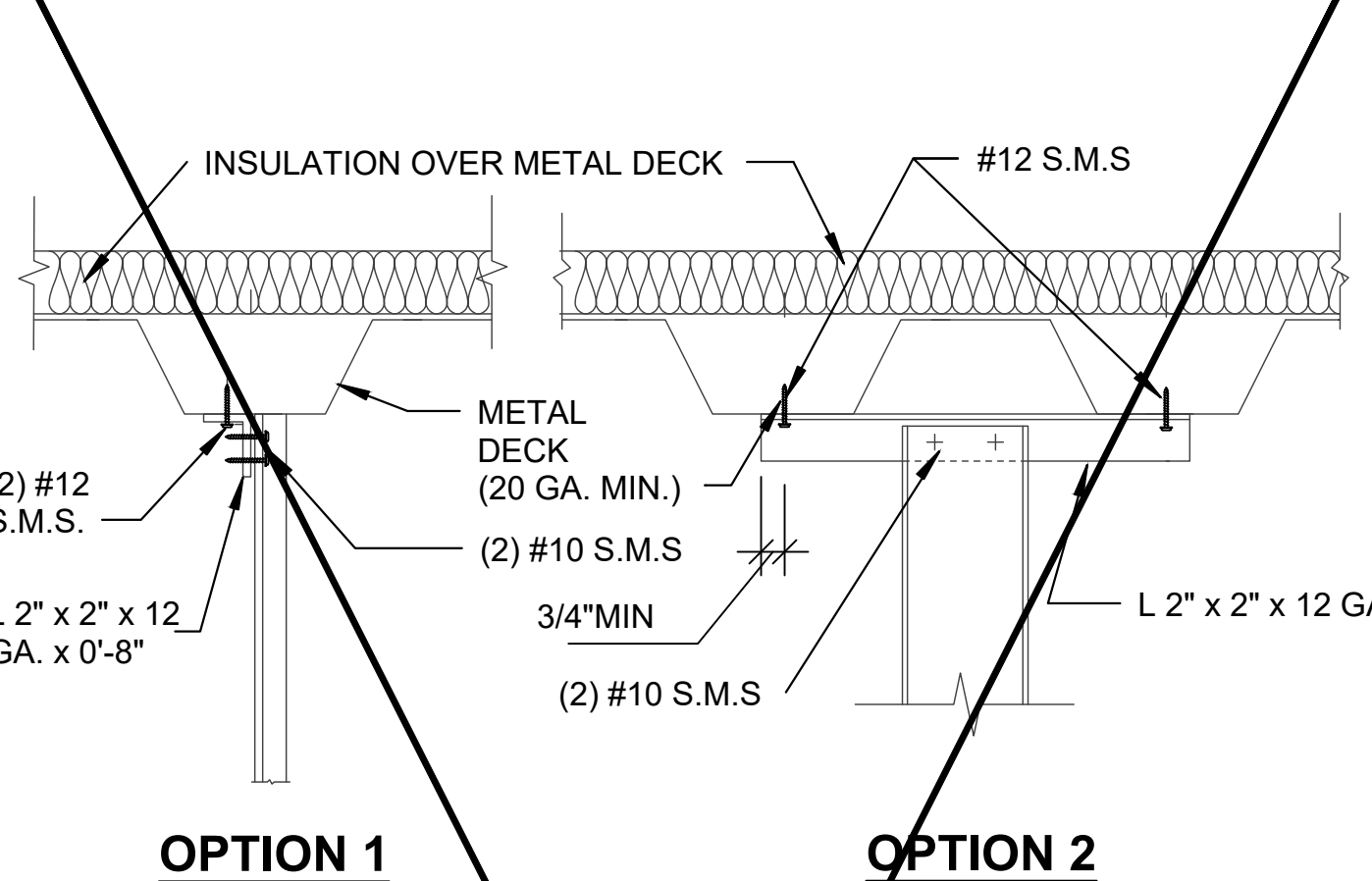
TUBE STRUT

5.40 STRUT CONNECTION TO STRUCTURAL STEEL  
SCALE: N.T.S.

STRUCTURAL OF FLOOR / ROOF CONDITION ABOVE COMPRESSION STRUT	APPLICABLE DETAIL
METAL DECK	5.20
CONCRETE OVER METAL DECK	5.21
CONCRETE SLAB, BEAM OR JOIST	5.30
STRUCTURAL STEEL	5.40
SAWN TIMBER WITH GYPSUM BOARD	5.50
SAWN TIMBER WITHOUT GYPSUM BOARD	5.60

SEE SHEETS A8.3, A8.4, A8.5, A8.6, A8.8 & A8.8  
FOR SUSPENDED ACOUSTICAL CEILING DETAILS

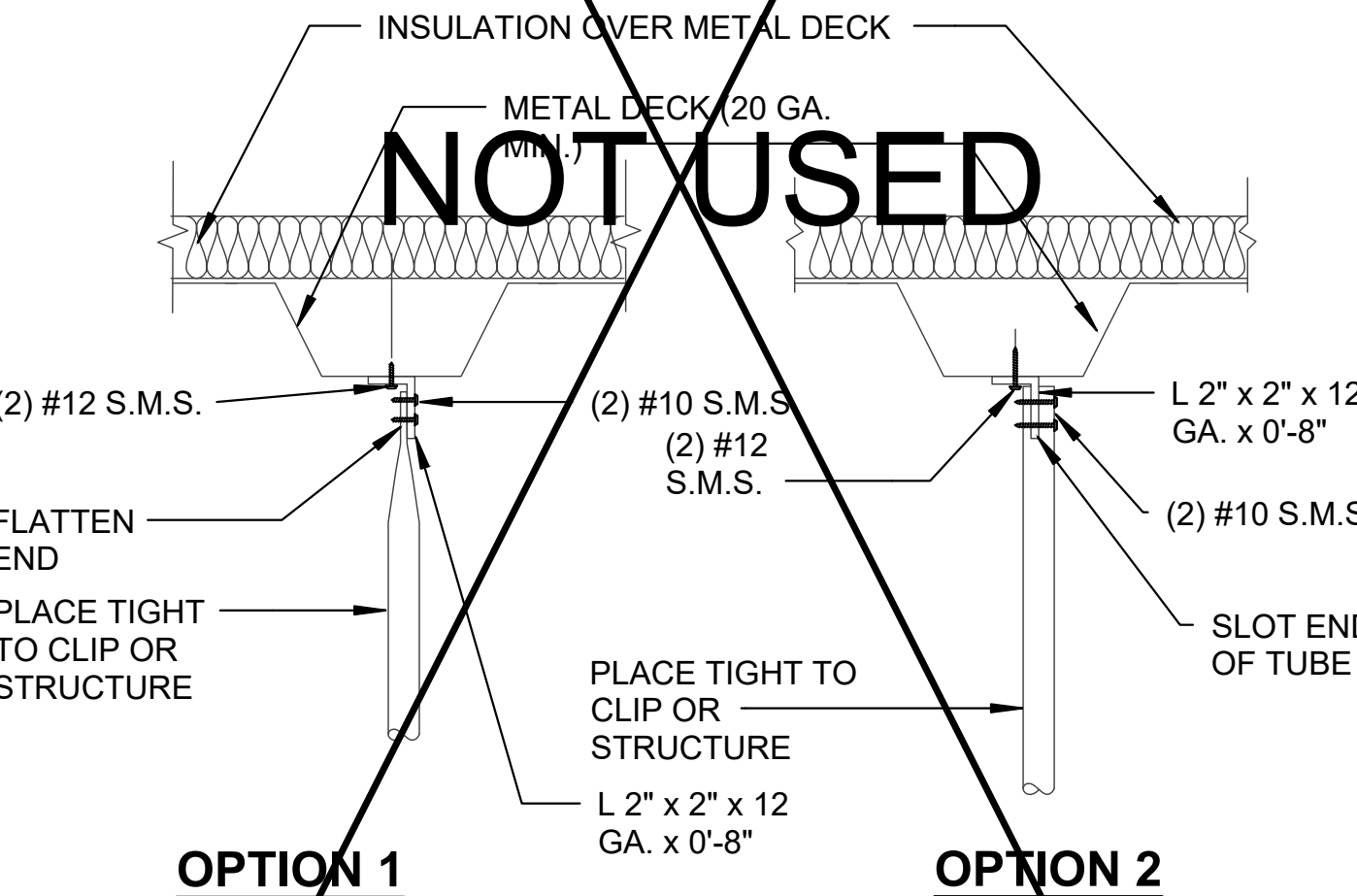
5.10 COMPRESSION STRUT CONNECTION TO STRUCTURE-CONNECTION MATRIX  
SCALE: N.T.S.



OPTION 1

OPTION 2

CHANNEL STRUT



OPTION 1

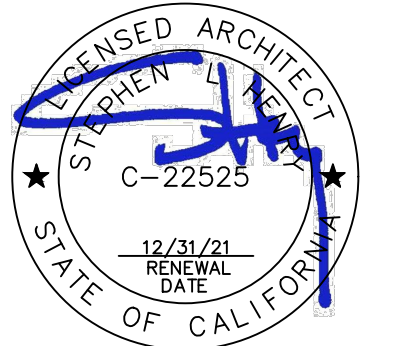
OPTION 2

TUBE STRUT

5.20 STRUT CONNECTION TO METAL DECK  
SCALE: N.T.S.



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# KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL

## INTERIOR DETAILS

CONSULTANT

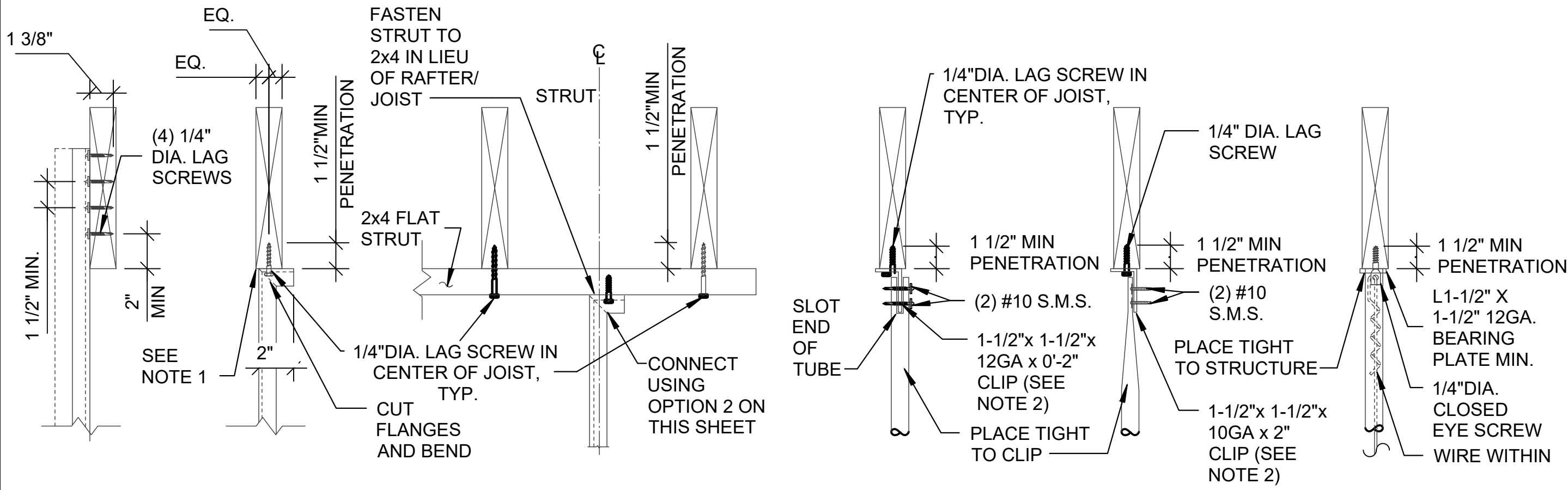
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## A8.8

**NOTES:**

1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF WOOD MEMBER.
2. VERTICAL LEG OF MEMBER TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER.
3. SEE PAGE 5.50 FOR ADDITIONAL INFORMATION.

SEE SHEETS A8.3, A8.4, A8.5, A8.6, A8.8 & A8.8  
FOR SUSPENDED ACOUSTICAL CEILING DETAILS



<u>OPTION 1</u>	<u>OPTION 2</u>	<u>OPTION 3</u>	<u>OPTION 1</u>	<u>OPTION 2</u>	<u>OPTION 3</u>
<u>CHANNEL STRUT</u>			<u>TUBE STRUT</u>		

## 5.60 STRUT CONNECTION TO SAWN TIMBER WITHOUT GYPSUM BOARD



1. Paint washers under heads and nuts of all bolts and logs bearing against wood.
2. Installation of bolts, logs, screws and washers shall be in accordance with Title 24 Section 2304.10.
3. Washers shall be square plate steel of round malleable iron:
 

A. 3/4" Ø bolt -----	2" x 2" x 1/4"
B. 5/8" Ø bolt -----	2 1/2" x 2 1/2" x 1/4"
C. 3/4" Ø bolt -----	2 1/2" x 2 1/2" x 3/8"
D. 1/2" Ø bolt -----	3/4" x 3/4" x 3/8"
E. 1" Ø bolt -----	3" x 3" x 3/4"
F. Sill E ABs -----	3" x 3" x 1/4", UNO.
4. All exposed washers shall be malleable iron, UNPO. Upset (rolled) threads are not permitted.
5. Refer to Shear Wall Diagram & Legend for plate washer requirements at and shear wall to plate anchor bolts.
6. All bolts, nuts and washers in contact with pressure treated wood shall be hot dipped galvanized.

1. Anchors shall be installed in accordance with the recommendations given in the ICC Reports listed below and the manufacturer's instructions.
  - Expansion Anchors:
    - A. To Concrete ..... Hilti Kwik Bolt-TZ (KB-TZ), ESR-1917
    - B. To CMU ..... Hilti Kwik Bolt 3 (KB-3), ESR-1385
  - Epoxy Anchors:
    - A. To Concrete ..... Hilti HIT-HY 200, ESR-3187
    - B. To CMU ..... Hilti HIT-HY 70, ESR-2682
2. Anchors shall be tested per all applicable requirements of the 2016 CBC & Evaluation Report (ICC-ES, ESR, IAPMO UES, etc.).
3. The following criteria apply for the acceptance of installed anchors.
  - A. Hydraulic Ram Method: The anchor should have no observable movement after the test load is applied at the applicable test load. For wedge type anchors, a practical way to determine observable movement is that the washer under the nut becomes loose.
  - B. Torque Wrench Method: The applicable test for torque must be reached within 1/2-turn of the nut.
4. All anchors used in structural applications shall be tested. 50% of all anchors used in non-structural applications shall be tested per CBC Section 1910A.5. If any anchor fails the test, all anchors of the same type not previously tested shall be tested until 20 consecutive anchors pass, then resume initial testing frequency.
5. When installing drilled-in anchors in concrete or masonry, do not cut or damage existing reinforcing bars.
6. The testing of the anchors shall be done by the testing laboratory and a report of the test results shall be submitted to DSA and the Architect / Structural Engineer.
7. Submission of a statement of test results is subject to the approval of the Structural Engineer of Record and DSA.
8. Test expansion anchors to values listed below. Contact Structural Engineer for epoxy anchor test values and procedures.
9. Test equipment (including torque wrenches) is to be calibrated by an approved testing laboratory in accordance with standard recognized procedures.
10. Testing shall occur at a minimum of 24 hours after the installation of the anchors.
11. All tests shall be performed in the presence of a Special Inspector per CBC Section 1910A.5.
12. Test proof loads for repair conditions are not part of these documents and will require a separate approval by the Structural Engineer of Record and DSA.

\* - UNO on plans

1. **General:** In addition to the inspections required by the current CBC the owner shall employ a Special Inspector during construction of the following types of work. All special inspections shall be performed in accordance to Chapter 17A of the current CBC. Submit the name of all Special Inspectors to the Division of the State Architect for approval prior to starting work requiring special inspection.
2. Refer to Chapter 17A for additional requirements of the Special Inspector.
3. **Special Inspector:** All Special Inspectors shall have a minimum of 3 years experience in the specific material / trade being inspected.
4. **Earthwork:** A representative of the Geotechnical Engineer of Record shall be present during the grading, excavation and foundation construction.
5. **Specific materials / trades requiring special inspection:**  
See "Structural Tests and Inspections" sheet and all applicable sections of the project specifications.
  - A. Concrete
    - During the placing of reinforcing steel and inserts, during the taking of test specimens, and during the placing of all reinforced concrete including batch plant inspection.

1. Use DF No. 1 at 4x and smaller UNO. Use DF Select Structural at 6x and larger, UNO. Maximum moisture content = 19%, typical. All SP used for wall, roof and flooring is to be Structural 1, UNO.
2. Center ABS on 2x sill & equal to or less than 2x6. Place ABS @ 24" from exterior face of 2x8 sills. Provide 2 rows of ABS at 24" from ea edge @ sills > 2x8. For "shot" sills see details.
3. All wood sills to be pressure treated Douglas fir. Sill plate anchor bolts are to be F1554 Gr 36, cut threads. Use  $\frac{1}{2}$ "  $\phi$  x 12" long bolts (18" at curbs) w/4" max projection & 8' min embed below 1/0 slab. Bolts to be spaced no more than 12" o.c. at ends of sill pieces & not over 4'-0" o.c between bolts. Holes over  $\frac{1}{2}$  the E width and notches in sills are considered ends. Use 2-anchor bolts minimum per sill E.
4. All studs shall be 2x6 @ 16" o.c UNO.
5. Provide continuous 2" stud width blocking between studs at mid-height of stud or so spaced that the unbraced length of studs does not exceed 10'-0". Provide blocking in all walls at ceiling lines.
6. Where wood studs or nailer abut steel, concrete or masonry, fasten to same with  $\frac{1}{2}$ " bolts at 4'-0" o.c. Use 8" long bolts in concrete or masonry. If heads of bolts will not fit, use 1" o.c. studs in place of bolts for wood to steel connections. Provide 1" maximum on 3x and larger as required (no gap allowed on 2x's). Develop SPIN min at all nailers, typ UNO.
7. Lap wall plates at corners and intersections.
8. Provide 2x stud blocking between joists or rafters over supports.
9. For roof joists or rafters, 8'4" deep or deeper, provide 2x3 cross-bridging at not over 10'-0" o.c (8'-0" o.c for 2x12). For floor joists 4'4" deep or deeper, provide X-bridging at not over 8'-0" o.c.
10. Where metal X-bridging is used, provide 2x4's.
11. Bolt holes in wood or steel shall be  $\frac{1}{8}$ " larger than bolt diameter.
12. All bolts, expansion anchors and lag screws shall be provided with metal washers under the heads and nuts which bear on wood. Lag screws and wood screws shall be screwed and not driven into place. All bolts and lag screws shall be tightened on installation and retightened before closing in or completion of the job.
13. Provide shaped and dapped pieces as shown on drawings. Do 1" max on 3x and larger members (no gap allowed on 3x members).
14. Window and door frames shall be firmly secured in place to blocking between jambs and rough opening. Top, bottom and at a maximum interval of 24" between. Nail blocking to rough frame with 16d finish nails at 8" o.c staggered, set  $\frac{1}{2}$ ".
15. All cabinets, lockers, etc. shall be firmly secured in place by 4-8d minimum nails per stud thru plywood back except if cabinets are wall hung. 14" wood screws shall be used in place of nails penetrating the studs 2" minimum. See Architectural drawings for additional anchorage details.
16. All joint hangers are to be face-mounted typical, UNO on plans or details. See 2002.
17. Installation of bolts, lags, screws and washers shall be in accordance with Ch. 10 of the AF&PA National Design Specifications.
18. Nails, trimmer rivets, wood screws, lag screws, nuts, and washers in contact with pressure treated or fire retardant treated wood shall be hot dipped galvanized minimum.
19. All other fasteners in contact with pressure treated or fire retardant treated wood are permitted to have mechanically deposited zinc coating, Class 55 min.
20. Connectors in contact with pressure treated or fire retardant treated wood shall comply with manufacturer's recommendations. In absence of manufacturer recommendations, use Class 55 zinc coated galvanized steel min.
21. All bolted connections, including sill plate AB's & holdup AB's shall be retightened immediately prior to installation of finishes.

1. All nails for structural work shall be common wire nails unless noted otherwise.
2. Nails shall be spaced not less than 11 diameters on center. Edge or end distances shall not be less than 6 diameters. Nail holes shall be sub- drilled where necessary to prevent splitting of wood. Sub-drill not to exceed  $\frac{3}{4}$  of the shank diameter.
3. Where plaster or gyp. bd. ceilings occur, ceiling stripping nails shall be annular grooved shanks, "stronghold" or approved equal. Use 2-16d min at each contact.
4. Nailing not noted on this sheet or on details elsewhere, shall be a minimum of 2 nails at each contact using 8d nails thru 1"x's and 16d thru 2"x's.
5. Minimum nailing shall be:
 

A. Studs and posts @ top and bottom to bearing:	
2x6 & smaller .....	2-8d TN, ea side or 3-16d end nails
2x8 .....	3-8d TN, ea side or 4-16d end nails
2x10 & larger .....	4-8d TN, ea side or 5-16d end nails
3x6 (sub-drill) .....	3-8d TN, ea side or 4-20d end nails
3x8 & larger (sub-drill) .....	4-8d TN, ea side or 5-20d end nails
- B. Joists or rafters:
 

to side of stud up to 6" .....	3-16d
each additional 4" .....	1-16d additional
to bearing .....	2-10d TN, ea side
at laps (12" minimum) .....	4-16d
- C. Blocking:
 

to joists, rafters or blkq .....	2-10d TN, ea side, ea end
to bearings .....	2-10d TN, ea side, ea end, staggered
to studs .....	2-10d TN or 2-16d ea end
- D. Sheathing:
 

floor - $\frac{3}{4}$ " plywood .....	10d at 6"cc at edges of sheets and over oil walls (SPPN), 10d at 10"cc at all interior contacts (SPIN)
wall - $\frac{1}{2}$ " plywood .....	10d at 6"cc at edges of sheets and holdown studs (SPPN), 10d at 12"cc at all interior contacts (SPIN)
roster - $\frac{1}{2}$ or $\frac{3}{8}$ " plywood .....	10d at 6"cc at edges of sheets and over oil walls (SPPN), 10d at 12"cc at all interior contacts (SPIN)

1. Concrete construction shall conform to ACI 318-14.
2. Concrete shall be as follows:
  - Class A: Use in foundations and other concrete of the like nature where the minimum thickness equals or exceeds 8".  
f'c = 3500 psi @ 28 days  
max agg size = 1½"  
max w/c ratio = 0.55  
entrained air = 3-5%  
slump = 3½"±1"
  - Class B: Use in structural concrete where minimum thickness is less than 8", excluding slab on grade.  
f'c = 3500 psi @ 28 days  
max agg size = 1"  
max w/c ratio = 0.55  
entrained air = 3-5%  
slump = 4"±1"
  - Class C: Use in interior slab on grade.  
f'c = 4000 psi @ 28 days  
max agg size \_\_\_\_\_  
max w/c ratio = 0.45  
slump = 4"±1"  
include specified water-repellent admixture
3. Cement shall conform to ASTM C-150, type I or II.
4. Concrete Aggregate: Natural sand and aggregate shall conform to ASTM C-33.
5. Reinforcing shall conform to ASTM A615 Grade 60, UNO.
6. Welding of reinforcing steel shall conform to AWS D1.4 using proper low hydrogen electrodes. Tack welding to rebar is strictly prohibited.
7. Reinforcing steel shall be fabricated and installed according to Manual of Standard Practice of Reinforced Concrete Construction by the Concrete Reinforcing Steel Institute.
8. Wire fabric shall conform to ASTM A-185.
9. Dimensions shown below for location of reinforcing are to the face of reinforcing and denote clear coverage. Concrete coverage shall be as follows UNO on drawings.
  - A. Concrete deposited directly against ground  
except slabs \_\_\_\_\_ 3"
  - B. Concrete exposed to ground but placed in \_\_\_\_\_ 2"
  - C. Slabs on the ground \_\_\_\_\_ position in center of slab
  - D. Not exposed to weather nor in contact with earth:  
elevated slabs, walls and joists \_\_\_\_\_ ¾"  
beams, girders and columns \_\_\_\_\_ 1½"  
(main bars, ties and spirals) \_\_\_\_\_ 1½"
10. Lap splices in concrete: 74 bar dia, 36" min, unless otherwise shown for #6 bars and smaller. 93 bar dia min for #7 and larger bars. Splices in adjacent bars shall be at least 5'-0" apart. Bars may be wired together at splices or laps.
11. General:
  - A: No pipes or ducts shall be placed in concrete slabs or walls unless specifically detailed on the Structural drawings.
  - B: Refer to Architectural, Structural, Civil, Electrical and Mechanical drawings for all molds, grooves, ornaments clips, and grounds to be cast in concrete.
12. The exposed concrete face at a horizontal construction joint shall be kept continuously moist from time of initial set until placing of concrete. Thoroughly clean contact surface by chipping entire surface not earlier than 5 days after initial pour to expose clean, hard aggregate solidly embedded, or by an approved method that will ensure equal bond, such as green cutting. If contact surface becomes coated with earth, sand, dust, etc. after being cleaned, rechip entire surface.
13. Remove all debris from the forms before placing any concrete.
14. Reinforcing dowels, bolts, anchors sleeves etc. to be embedded in concrete shall be securely positioned before placing concrete. Obtain approval of all affected trades prior to placing concrete.
15. Maximum free fall on concrete should be 4'-0". If necessary, provide openings in forms to reduce fall.
16. Walls shall be placed in horizontal layers of 2'-0".
17. No wood spreaders or wood stakes allowed in areas to be concreted.
18. Drill through steel columns and beams to pass continuous reinforcing (1"Ø max).
19. Concrete mix design shall be prepared by an independent laboratory approved by the school district.
20. Welded wire mesh shall be lap spliced two squares minimum in each direction.
21. Notify the Structural Engineer 48 hours prior to placing concrete.
22. Reinforcing steel not specifically detailed shall be per ACI 315-17 Detailing Manual.
23. All rebar to be welded shall be provided with mill certificates showing chemical analysis and shall be continuously inspected by a qualified special welding inspector. All preheating and welding shall be done by welders certified to weld reinforcing bars in accordance with ANSI/AWS D1.4-11 standards. Use only A706 grade rebar for applications involving welded rebar.

◆Remodeling and Addition Notes

1. It shall be the Contractor's responsibility to make himself familiar with all existing conditions, any existing building plans, and all site conditions which may affect his work. He shall ascertain the extent of demolition work required to complete the structure per new plans and be responsible for its safe completion.
2. When existing building plans are available, the Contractor shall keep a full set of such plans at the job site during construction. If any existing conditions are discovered which deviate from these plans or from the new plans, the Contractor shall notify the Architect and Structural Engineer for instruction prior to proceeding with work in the affected area.
3. The Contractor shall match existing heights, lines, materials, and conditions unless noted otherwise on new plans.
4. The intent of these drawings and specifications is that the work of the alteration, rehabilitation or reconstruction is to be in accordance with Title 24, California Code of Regulations. Should any existing conditions be discovered which is not covered by the contract documents wherein the finished work will not comply with Title 24, California Code of Regulations, a change order, or a separate set of plans and specifications, detailing and specifying the required repair work shall be submitted to and approved by DSA before proceeding with the repair work.

### Sheet Numbering System:

Discipline designation

Drawing type designation

**S2.2.1**

Sheet number beyond zero

Building unit designation

### Detail and Elevation Callout:

Indicates that detail 2 will be found on sheet S4.1

Indicates that detail 2 will be found on the same sheet

Section or elevation indicating that Detail 2 will be found on Sheet S3.1. Arrow indicates viewing direction

### Structural Grid Identifier:

Grid at face of framing

The diagram illustrates various material patterns used in building sections and wall framing elevations. It includes a legend and two example drawings.

**Legend:**

- Indicates a continuous wood member in section
- Indicates solid wood blocking in section
- Indicates earth
- Indicates gravel/aggregate base
- Indicates plywood
- Indicates metal
- Indicates sand
- Indicates concrete

**Building Sections and Wall Framing Elevations:**

The diagram shows two drawings. The left drawing is a section of a building showing various materials like wood, earth, gravel, and concrete. The right drawing is a wall framing elevation showing the layout of studs and joists, with labels D, A, E, B, F, and C indicating specific framing members.

1. Building Code ..... 2016 California Building Code

2. VERTICAL LOADS:

Roof Dead Load	= 20 psf
Roof Live Load	= 20 psf (Reducible)

1. The Contractor shall give the Division of the State Architect and the Structural Engineer a minimum of 48 hours notice before the reinforcing or any forms are placed in excavated footings.
2. Footings shall bear on firm, dry undisturbed soil, depths indicated on plans shall be the minimum depth of footing.
3. Excavations shall be cleared of all debris. Standing water shall be removed.
4. All foundations are shown and dimensioned as being formed. Foundations may be placed in neat excavations provided footings are increased 1" in width at each vertical face, for a total increase of 2" in width overall.
5. At the discretion of the Contractor, foundations can be over-excavated in order to place lean mix concrete to facilitate debris and standing water removal.
6. Contractor has the option to use threaded rod ( $f_y=36ksi$ ) min w/dbl nuts @ holdowns and sill bolts. Embedment of holdown bolt is considered as the length projection below the lowest construction joint.
7. Construction joints in foundation shall not occur, except as approved in writing by the Structural Engineer and DSA.

Sols Report by: **Terracon**                      Dated: December 14, 2018  
File No.: NA 185174

9. Bearing soil is classified as **dense silt sand** with an estimated allowable soil pressure of **2000 psf** for total load (including wind and seismic).

1. It shall be the Contractor's responsibility to make himself familiar with all existing conditions, any existing building plans, and all site conditions which may affect his work. He shall ascertain the extent of demolition work required to complete the structure per new plans and be responsible for its safe completion.
2. When existing building plans are available, the Contractor shall keep a full set of such plans at the job site during construction. If any existing conditions are discovered which deviate from these plans or from the new plans, the Contractor shall notify the Architect and Structural Engineer for instruction prior to proceeding with work on the affected area.
3. The Contractor shall match existing heights, lines, materials, and conditions unless noted otherwise on new plans.
4. The intent of these drawings and specifications is that the work of alteration, rehabilitation or repair is to be in accordance with Title 24, California Code of Regulations. Should any existing conditions be discovered which is not covered by the contract documents wherein the finished work will not comply with Title 24, California Code of Regulations, a change order, or a separate set of plans and specifications shall be required. Any required repair work shall be submitted to and approved by DSA before proceeding with the repair work.

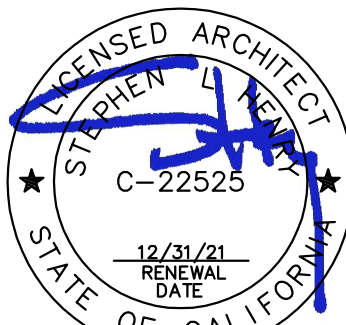
1. All construction shall conform to 2016, Title 24 of the California Code of Regulations and all other applicable codes and regulations.
2. General Notes, Plan Notes and Typical Details shown are typical and shall apply unless noted otherwise in the contract documents.
3. If conflicting information is shown on construction documents, the most restrictive requirement shall apply.
4. Overall wall dimensions are typically from  $\frac{1}{2}$ " of wall to  $\frac{1}{2}$ " of wall at steel connections, buildings and from face of wall to face of wall at wood framed, concrete tilt-up and CMU buildings.
5. Contractor shall verify all dimensions and elevations on the job including existing construction.
6. Prior to fabrication, shop drawings shall be submitted to the Structural Engineer for review.
7. Shop drawings: Contractor agrees that shop drawing submittals processed by the Engineer are not change orders and that the purpose of shop drawing submittals is to demonstrate to the Engineer that the Contractor understands the design intent by indicating which material he intends to furnish and install and by detailing the fabrication and installation method he intends to use.
8. Contractor shall verify all dimensions, elevations and property lines etc., on the job.
9. Contractor shall notify the Architect and Structural Engineer where a conflict occurs on any of the contract drawings or documents. Contractor is not to remove any material or any portion of the building that is in conflict, until conflict is resolved with the affected parties.
10. Contractor shall be responsible for the design and construction of all foundation forms.
11. Contractor shall be responsible for the design and construction of all shoring and temporary bracing.

abv	above	jt	joint
Abb	Above Finish Floor	jst	joist
addl	additional	JH	Joist Hanger
agg	aggregate		
alt	alternate	ksi	Kips per Square Inch
AB	Anchor Bolt	LS	Lag Screw
L	and	lwt	light weight
Arch	Architect/ural	long	longitudinal
@	at	LLH	Long Leg Horizontal
		LLV	Long Leg Vertical
brn	beam	MB	Machine Bolt
blw	below	mfrg	manufacture/d/r
btwn	between	max	maximum
bik	block	Mech	Mechanical
bkgg	blocking	mtl	metal
bot	bottom	min	minimum
B.O.	Bottom Of (Conc, Ftg, etc)		
BF	Braced Frame	NA	Neutral Axis
brdg	bracing	(N)	new
brdg	building	NC	No Camber
		nwt	nominal
CBC	California Building Code	nom	normal weight
C	Camber	NTS	Not To Scale
Cl	Cl in Place	#	number/pounds
clg	ceiling		
t	center line	opng	opening
cc	center to center	OH	Opposite Hand
ctrd	centered	OD	Outside Diameter
C	channel	ov/	over
clr	clear		
col	column	PJP	Partial Joint Penetration
CJP	Complete Joint Penetration	pen	penetration
conc	concrete	perp	perpendicular
CMU	Concrete Masonry Unit	pc	piece
CTUP	Concrete Tilt-up Panel	R	plate
conn	connection	plumb	Plumbing
CJ	Construction/Cold Joint	plywd	plywood
cont	continuous	psf	Pounds per Square Foot
contractr	contractor	lbs	pounds
ctsk	countersink	PDF	Powder Drive Fastener
		PCC	Precast Concrete
diag	diagonal	PT	Pressure Treated
DS	Diagonal Sheathing	proj	projection
g	diameter	R	radius
dim	dimension	RWL	Rein Water Leader
dbl	double	reinf	reinforce/ing/ment/d
DF	Douglas Fir	reqd	required
DN	down	rf	roof
dwgs	drawings	R	Rough Opening
ea	each	sect	section
EW	Each Face	shtg	sheathing
EW	Each Way	SMS	Sheet Metal Screws
E.O.	Edge Of (Conc, Ftg, etc)	sim	similar
Elec	Electric/al	SJ	Shab Joint
elev	elevation	spcg	spacing
embed	embedment	sq	square
EN	End Nail	stagr	stagger/ed
eq	equal	std	standard
equip	equipment	stl	steel
(E)	existing	stiff	stiffener
Ext	Expansion Joint	strct	structure/al
ex	exterior	SP	Structural Plywood
		SPIN	Structural Plywood
			Inter Nail
F.O.	Face Of (Conc, Ftg, etc)	SPPN	Structural Plywood
FF	Finish Floor		Perimeter Nailing
flr	floor		
ftg	foot/feet		
ftg	fastening		
fdn	foundation		
frmg	framing		

IDENTIFICATION STAMP  
Y. OF THE STATE ARCHITECT  
PP. 02-118041 INC:  
REVIEWED FOR  
S ☒ FLS ☒ ACS ☒  
DATE: 04/28/2020


FILE NO. 39-50 APP NO. 02-118041

730 Howe Avenue, Suite 450  
Sacramento, CA 95825  
Phone: 916.921.2112  
Fax: 916.921.2212



## KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL

## GENERAL NOTES

CONSULTANT			
			
4/10/2020			
PROJECT NO.	REVISIONS	BY	
19-32-050			
DATE			
04/10/2020			
DRAWN			
GG			
CHECKED			
GIR			
SCALE			
AS NOTED			
CADFILE			
UPDATED			

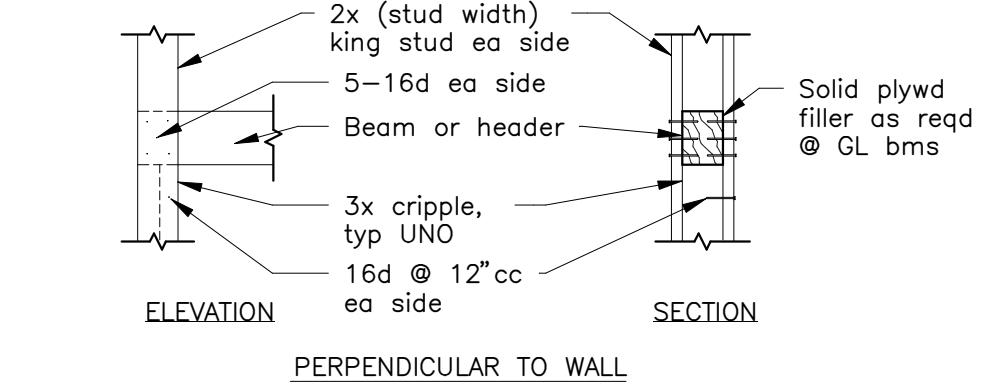
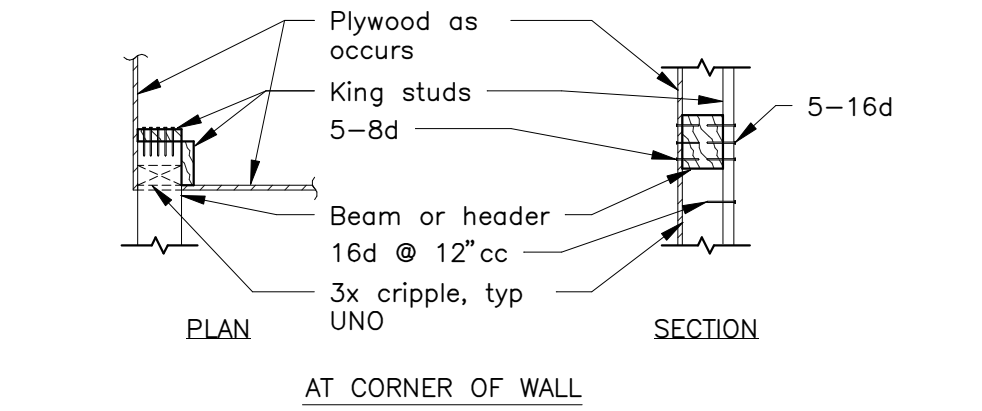


4/10/2020

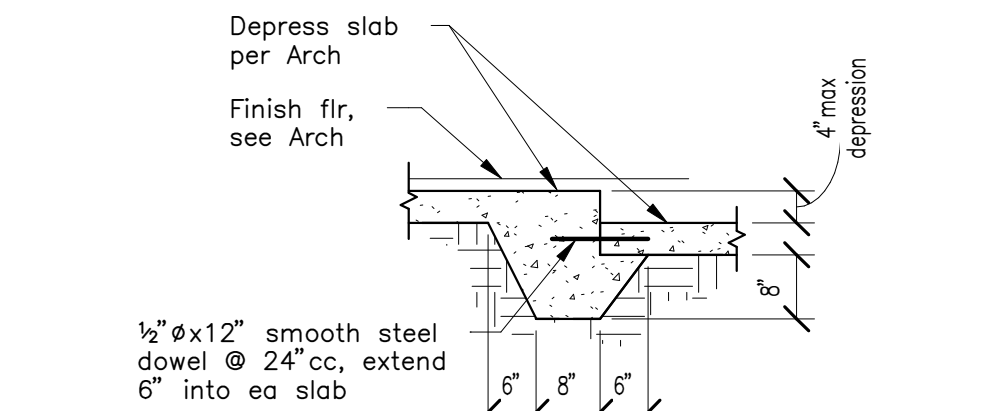
PROJECT NO. 19-32-050	REVISIONS	BY
DATE 04/10/2020		
DRAWN GG		
CHECKED GIR		
SCALE AS NOTED		
CADFILE		
UPDATED		

# S0.1

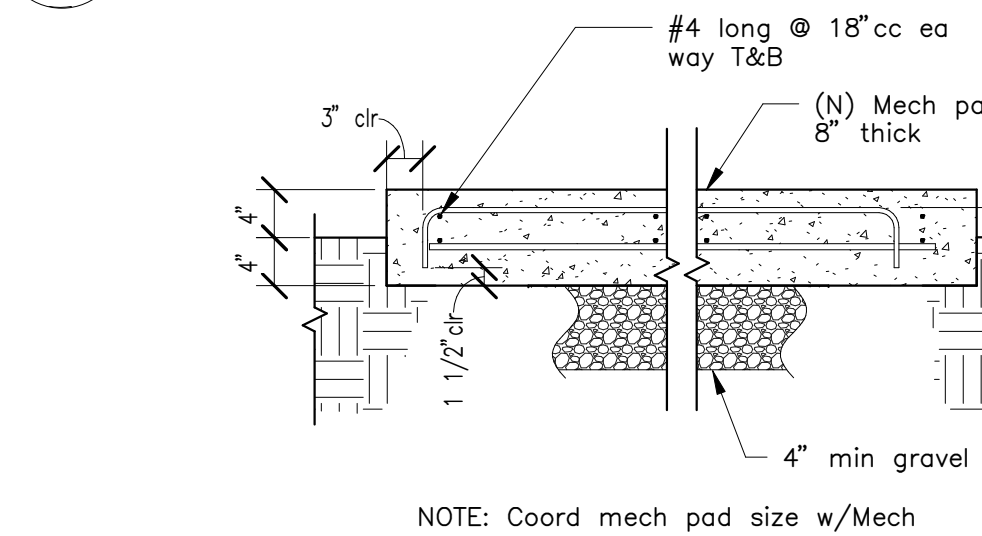




13  
S0.2 Beam or Header to Wall



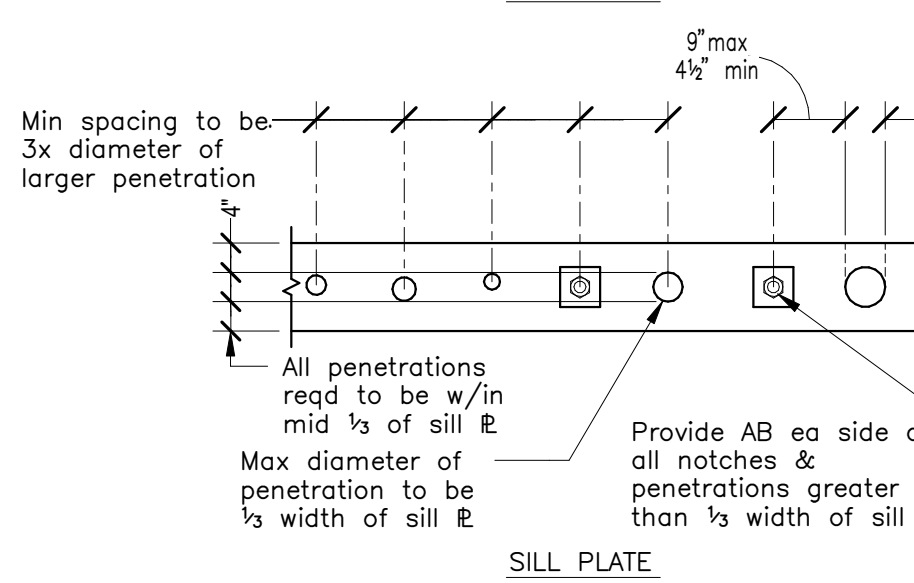
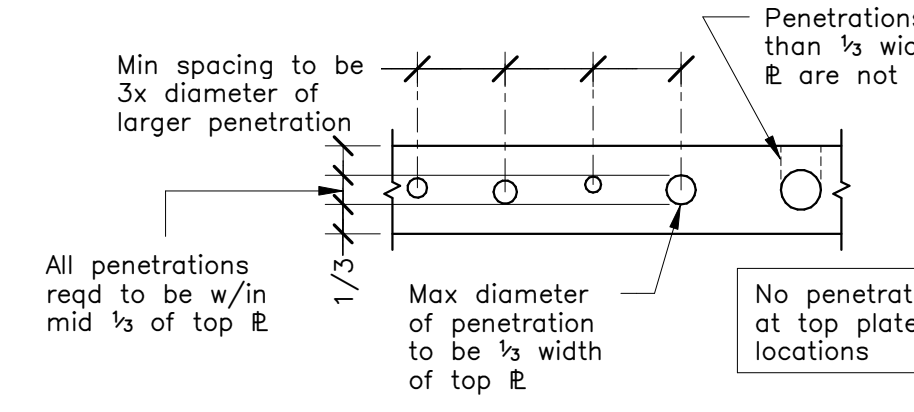
14  
S0.2 Depressed Slab



15  
S0.2 Mechanical Unit Pad

Joist Size	Hanger
2x4	LUS24
2x6, 8	LUS26
2x10, 12, 14	LUS210
3x8	HU38
3x10	HU310
3x12	HU312
4x6	HUS46
4x8	HUS48
4x10	HUS410
4x12	HUS412
6x8	HU68 MAX
6x10	HU610 MAX
6x12	HU612 MAX

9  
S0.2 Joist Hanger Schedule

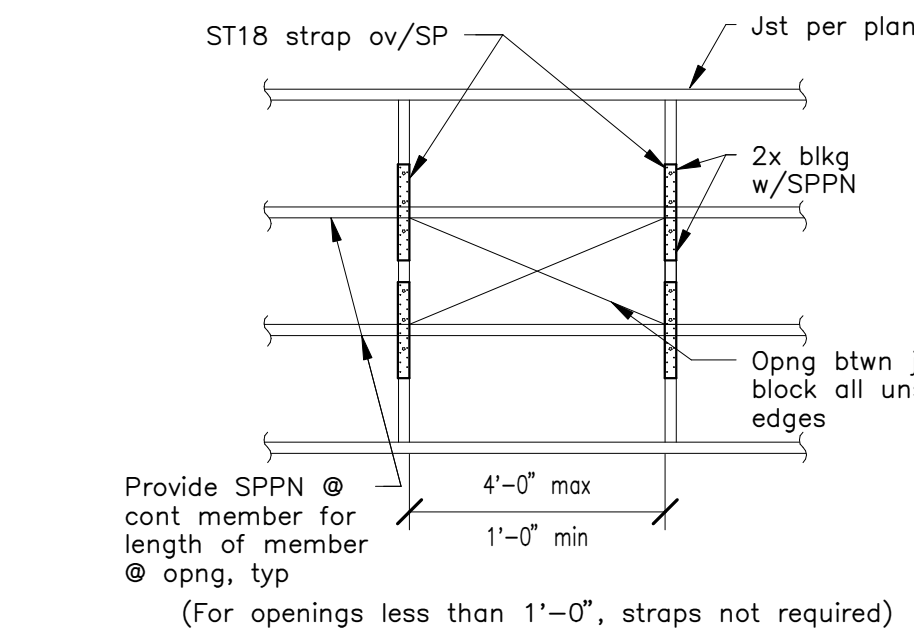


Bored holes in studs & wall fls not exceeding one third of the stud or fl width shall be located on the center-line of the member being penetrated & at a minimum spacing of 12" & 12" from end of stud or wall fl. Bored holes at studs to occur @ 3 max consecutive studs.

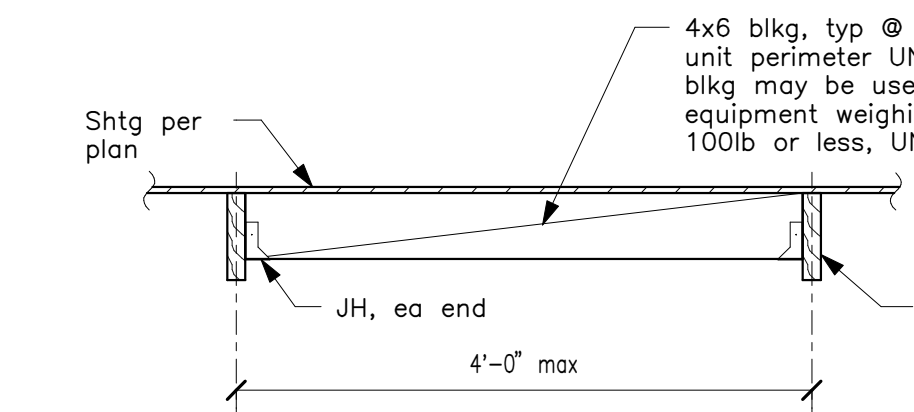
Any other conditions requiring holes must be specifically detailed on the contract documents. Contact the S.E.O.R. if detail is required & provide sketch of proposed penetration indicating size and location of hole.

NOTCHES IN STRUCTURAL MEMBERS ARE NOT ALLOWED

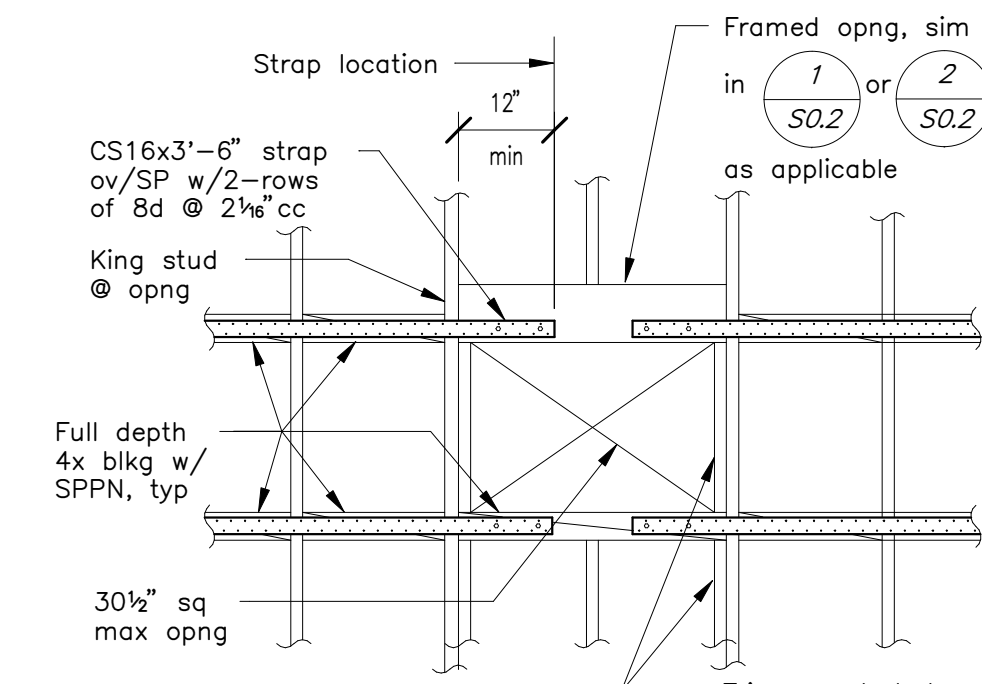
10  
S0.2 Holes Thru Structural Members



11  
S0.2 Roof Opening



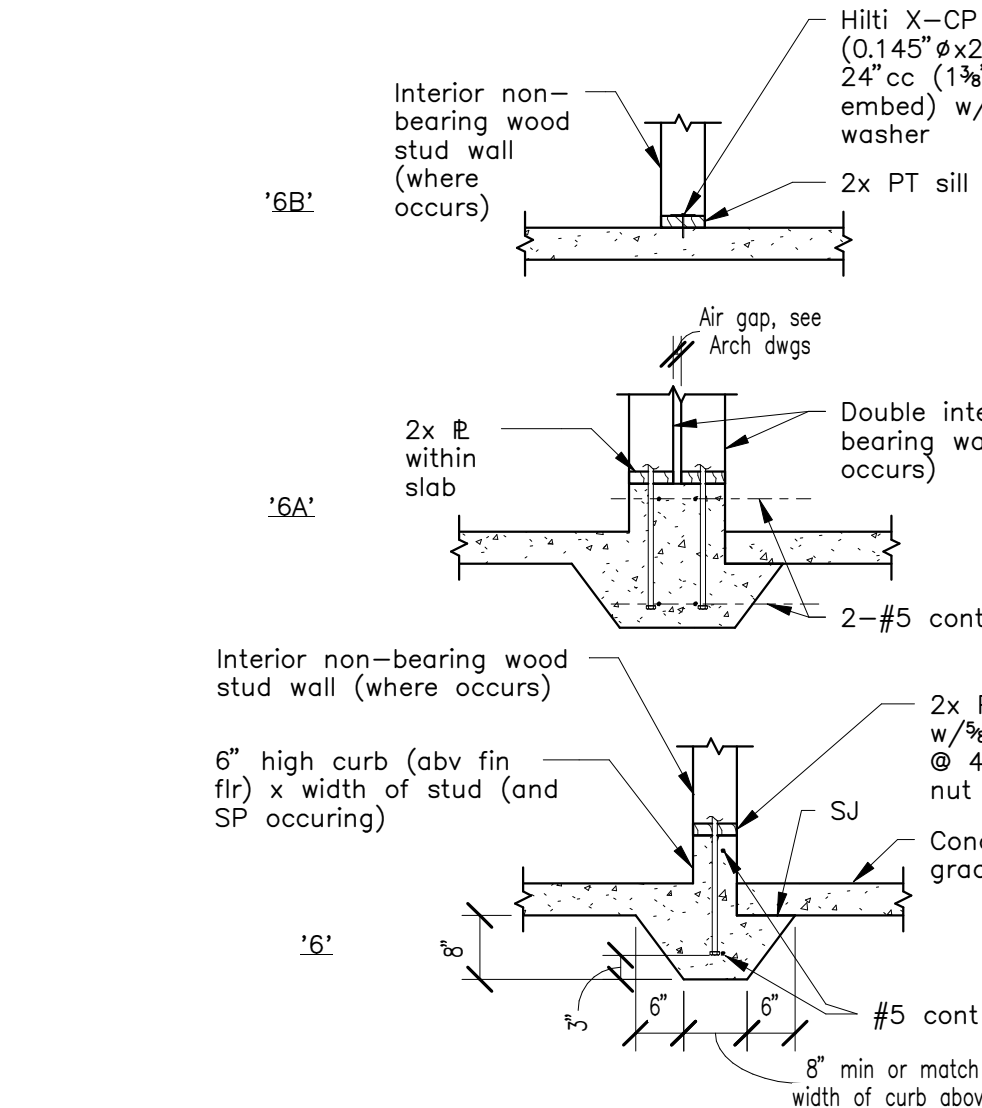
12  
S0.2 Blocking at MEP



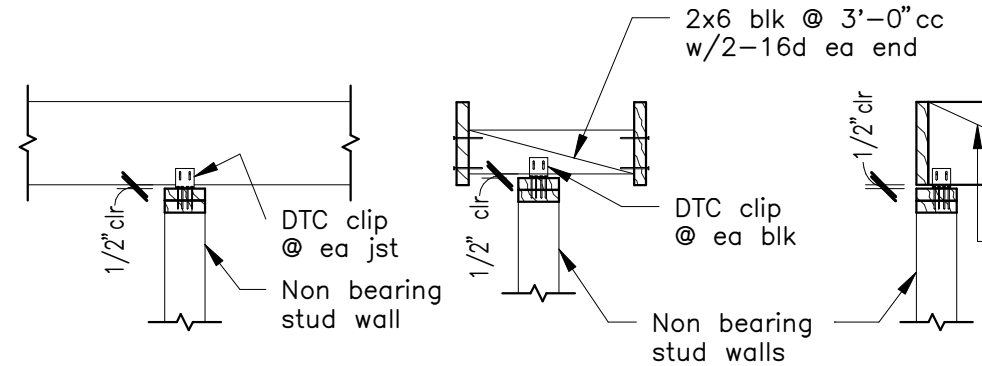
Notes:

- All ducts through shear walls will be framed as shown, typ.
- Provide SPPN around entire opng & w/SPPN @ cont king stud.
- Blocking & strapping not required @ holes that are contained w/in one stud bay, no bigger than 36 in., & only on shear wall w/SPPN @ 6" cc. For opngs greater than those noted or openings on shear walls w/SPPN less than 6" cc, blocking & straps required

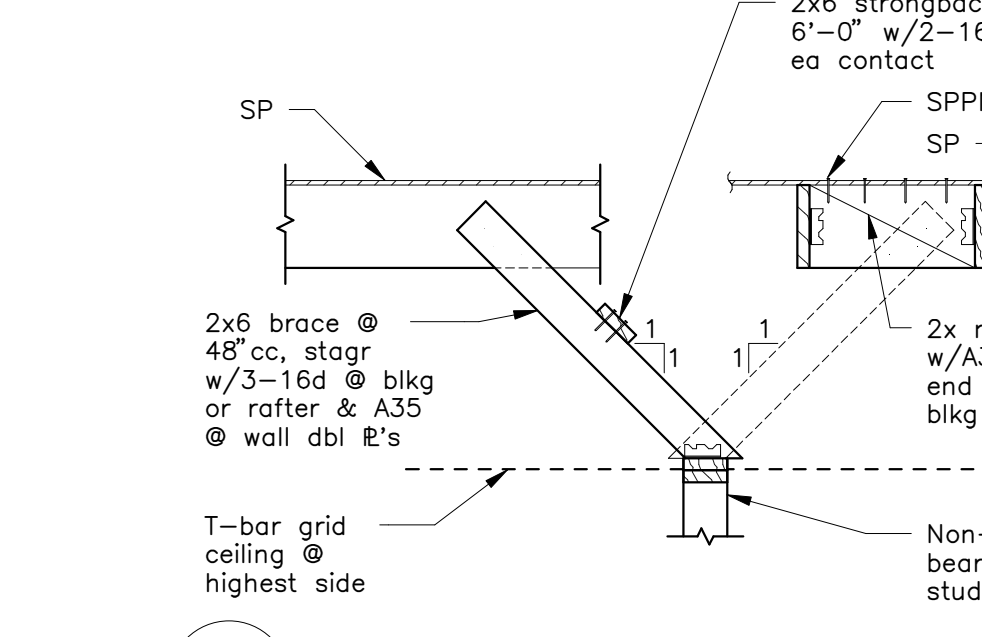
5  
S0.2 Shear Wall Opening



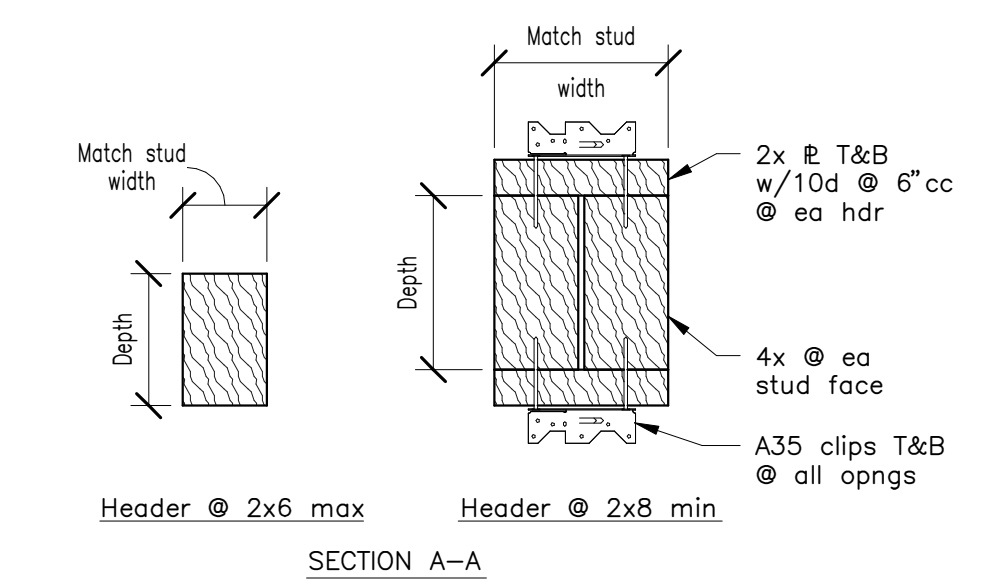
6  
S0.2 Non-Structural Sill Plate



7  
S0.2 Non-Bearing Wall to Joists



8  
S0.2 Partial Height Stud Wall @ T-Bar Ceiling



Headers are solid, one piece, same width as studs up to 2x6. Header depth is 6" up to 4'-0" span & 10" up to 8'-0" span, UNO

2x stud, typ UNO

Double 2x sub-sill @ opng above floor

2-16d TN, T&B

Nail as a multiple stud

See typ holdown detail

Note: See plans & details for opngs > 8'-0" UNO

Use A35 @ opng ov/6'-0" wide

4-16d @ 2x king stud, 4-20d @ 3x king stud & use A35 @ hdrs ov/6'-0" long or where specified nails cannot be used

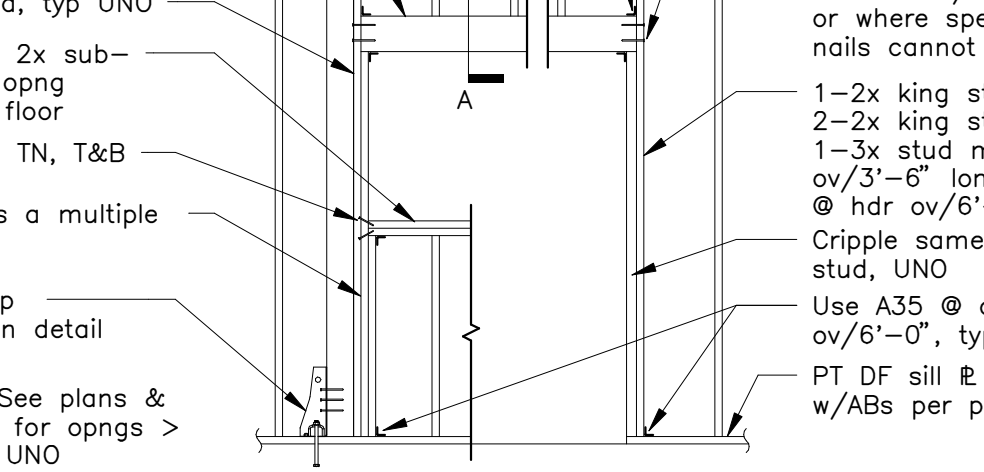
1-2x king stud, typ

2-2x king studs or 1-3x stud min at hdr ov/3'-6" long & 3-2x @ hdr ov/6'-0"

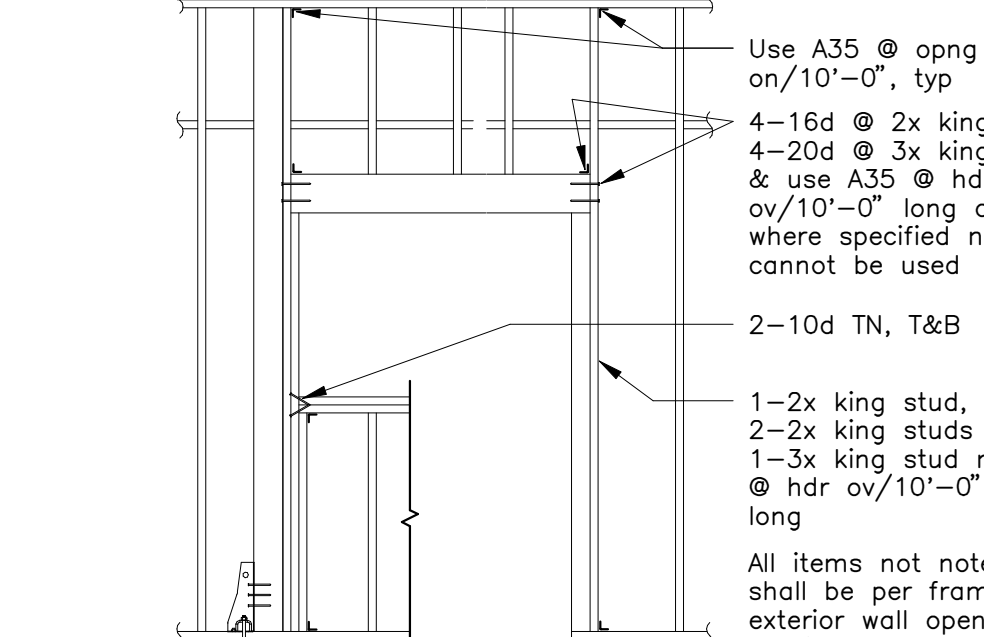
Cripple same as stud, UNO

Use A35 @ opng ov/6'-0", typ

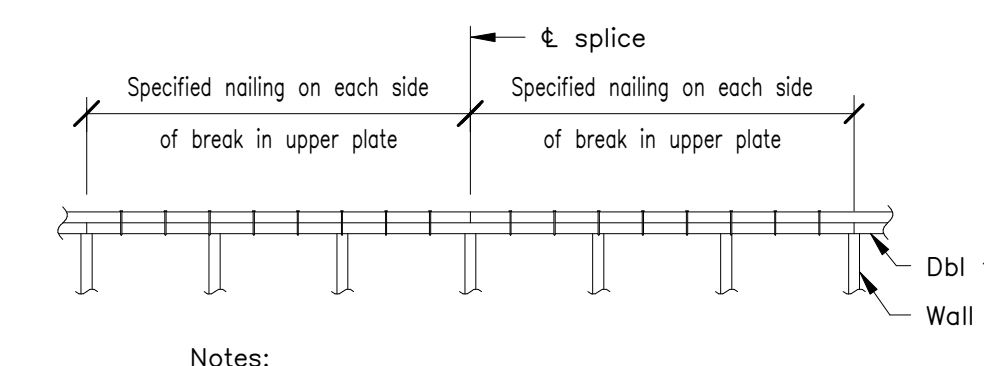
PT DF sill fl w/ABs per plans



1  
S0.2 Framed Exterior Wall Openings



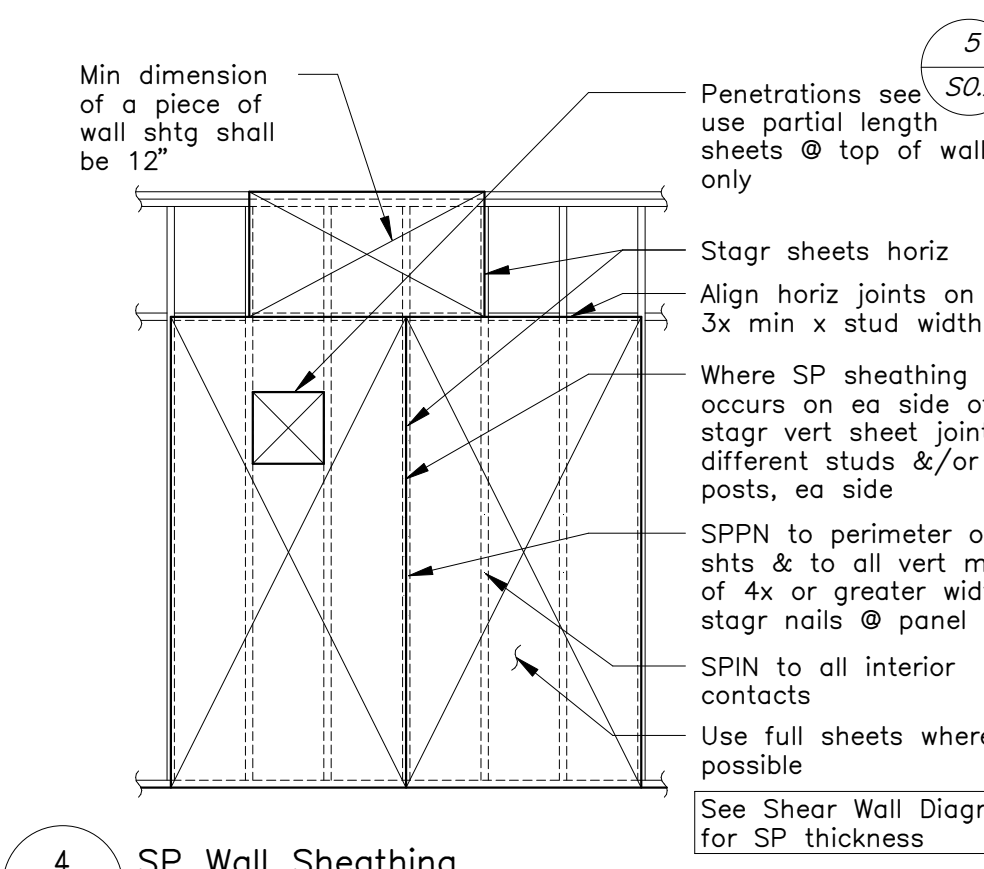
2  
S0.2 Framed Interior Wall Openings



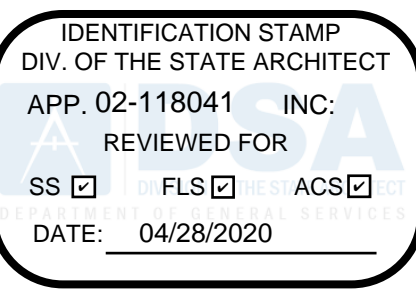
Notes:

- Splices to occur only over center line of stud.
- When upper fl is a 3x or greater, nail upward thru 2x bot fl.

3  
S0.2 Wall Plate Splice

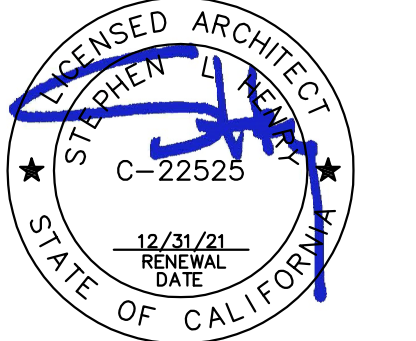


4  
S0.2 SP Wall Sheathing



FILE NO. 39-50 APP NO. 02-118041

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Sacramento, CA 95825  
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Fax: 916.921.2212



KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

TYPICAL WOOD  
FRAMING DETAILS

CONSULTANT



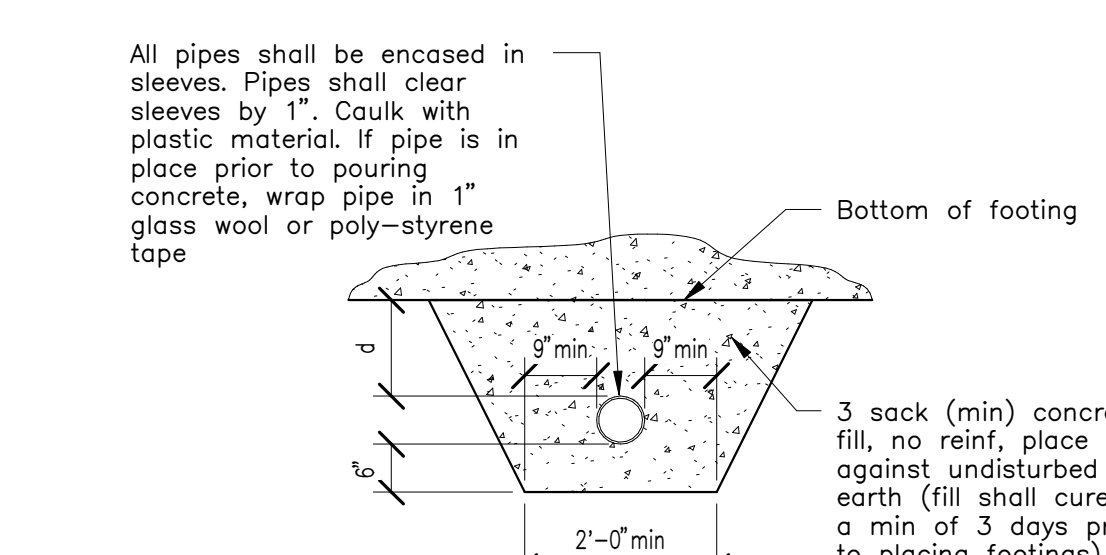
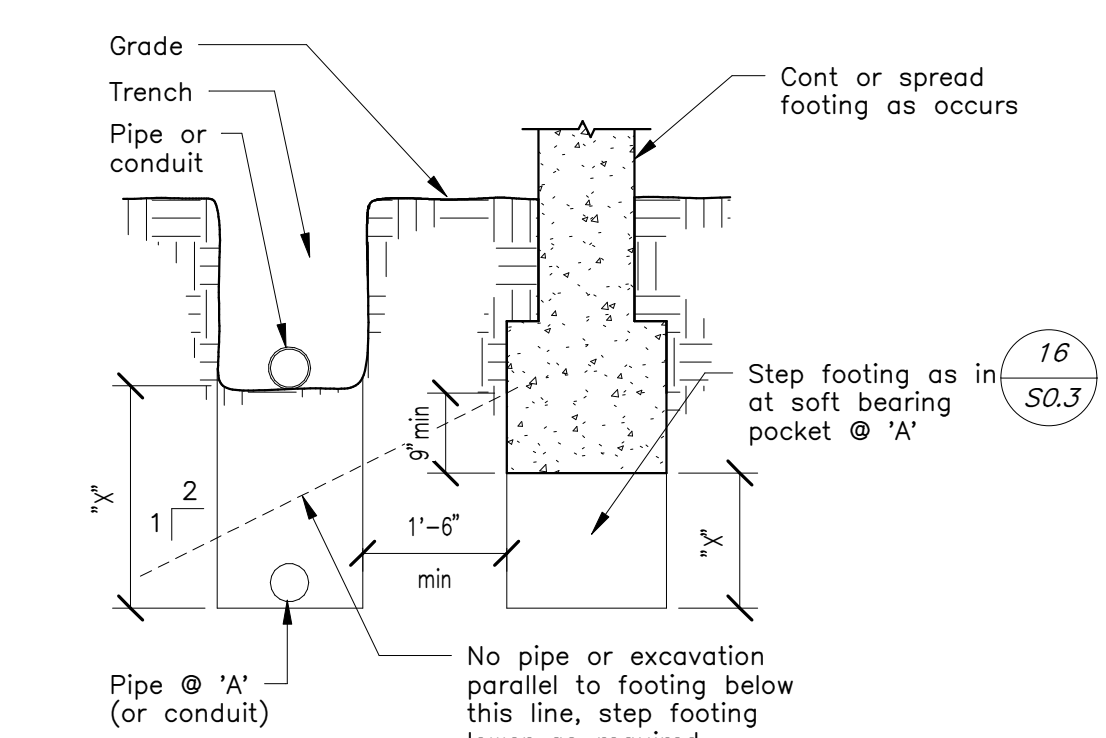
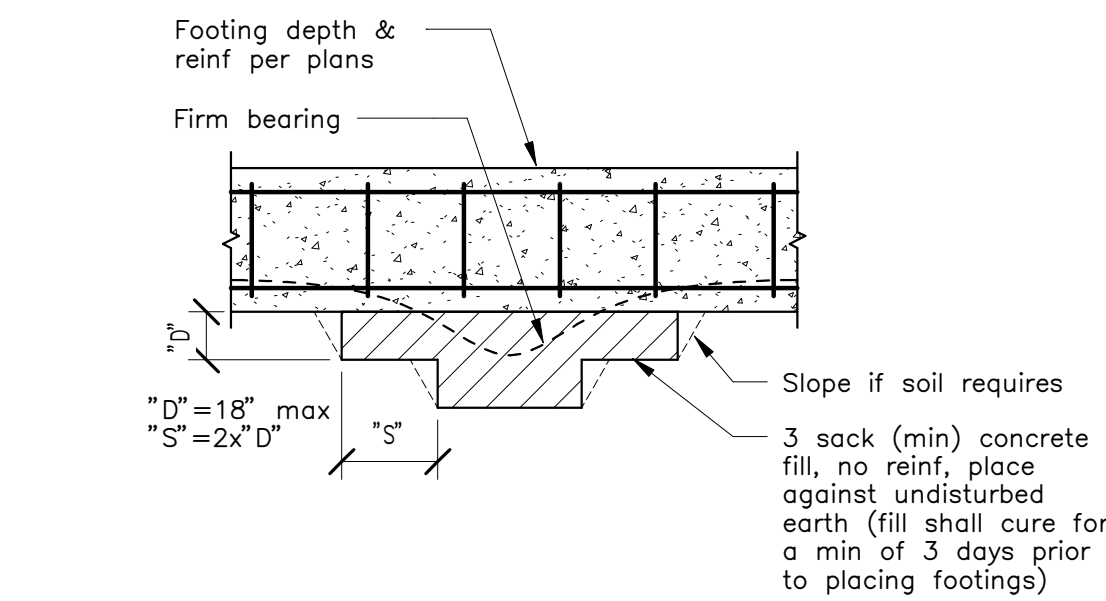
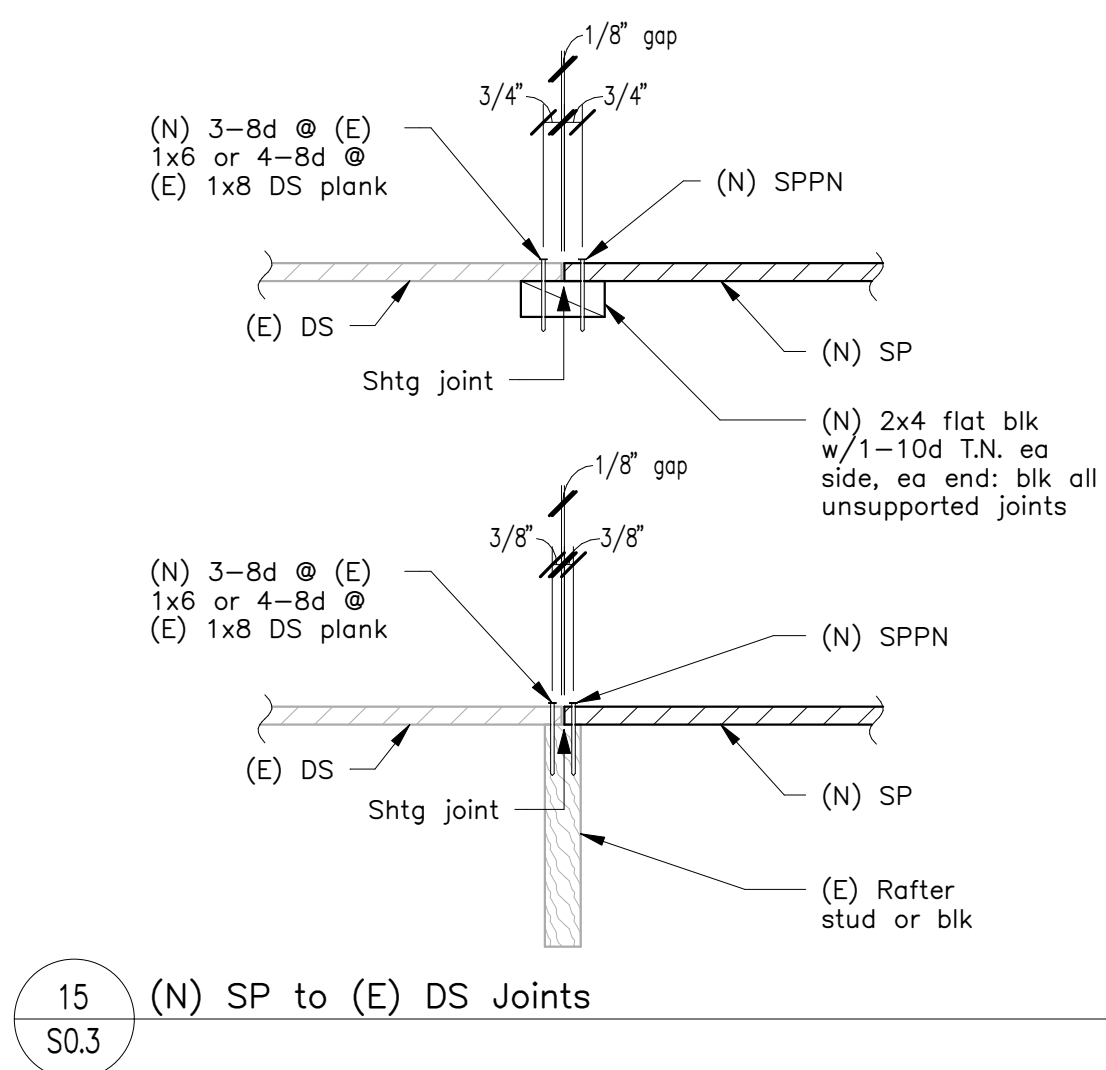
PROJECT NO.	REVISIONS	BY
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SHEET NO.

S0.2

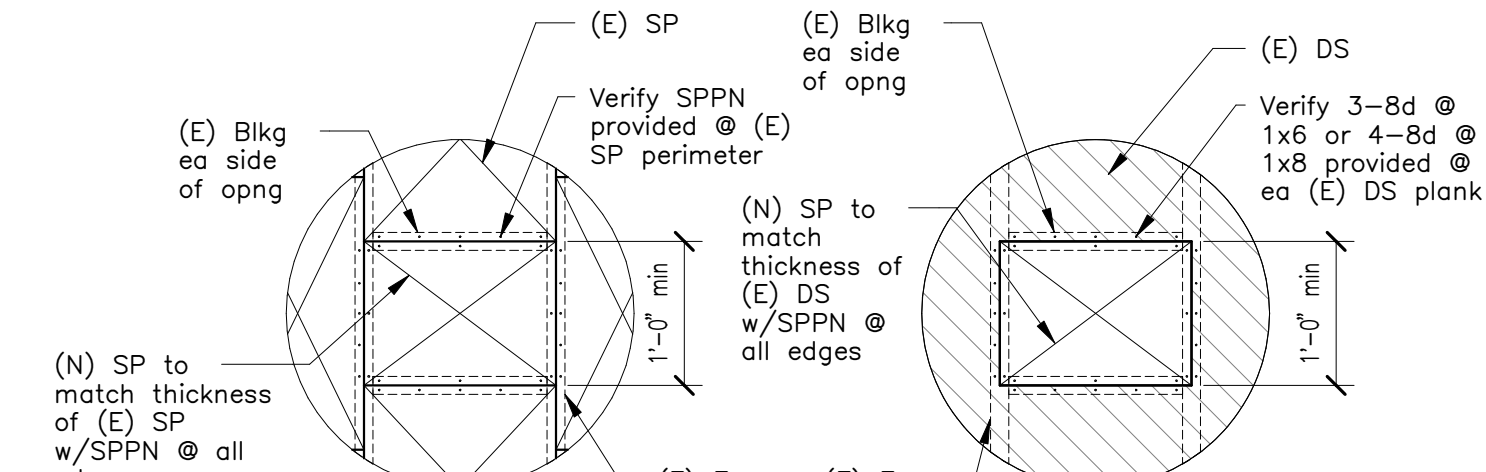
OF 7 SHEETS



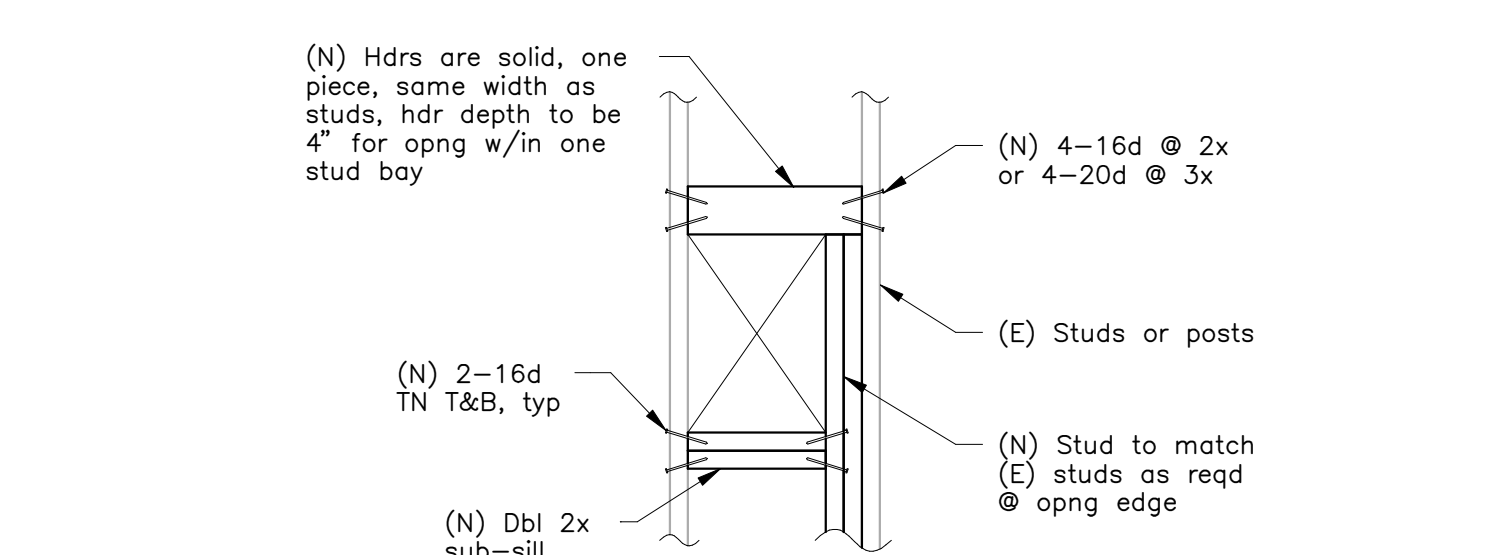


Notes:  
 1. Sleeve @ pipe only, conduit may be cast directly into concrete  
 2. Pipes and conduit must be aligned perpendicular to footings  
 3. No pipes or conduit allowed thru or under spread footings  
 4. 4" < d < 3'-0", if d > 3'-0", steel pipe/conduit okay in trench w/compacted backfill under typ footing. If plastic, provide 10'-0" steel pipe sleeve centered under footing

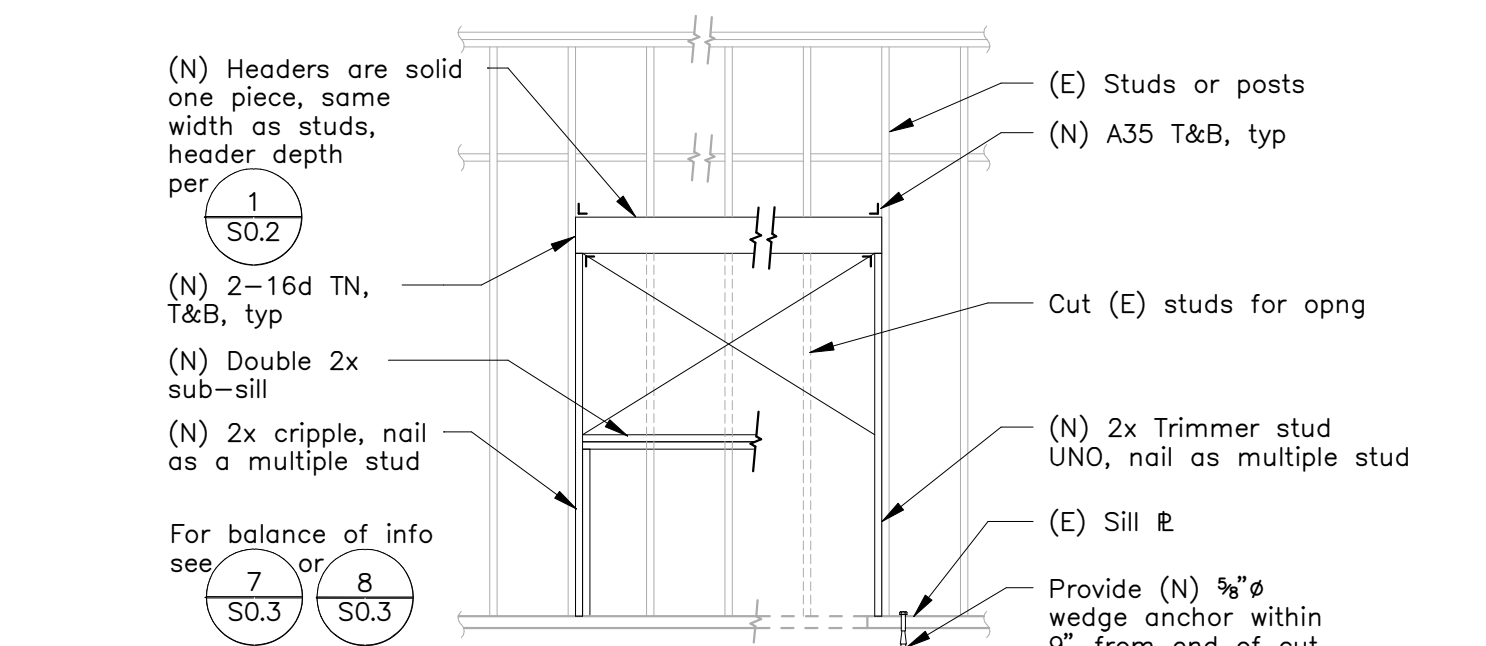
18 Pipe Below Footing  
S0.3



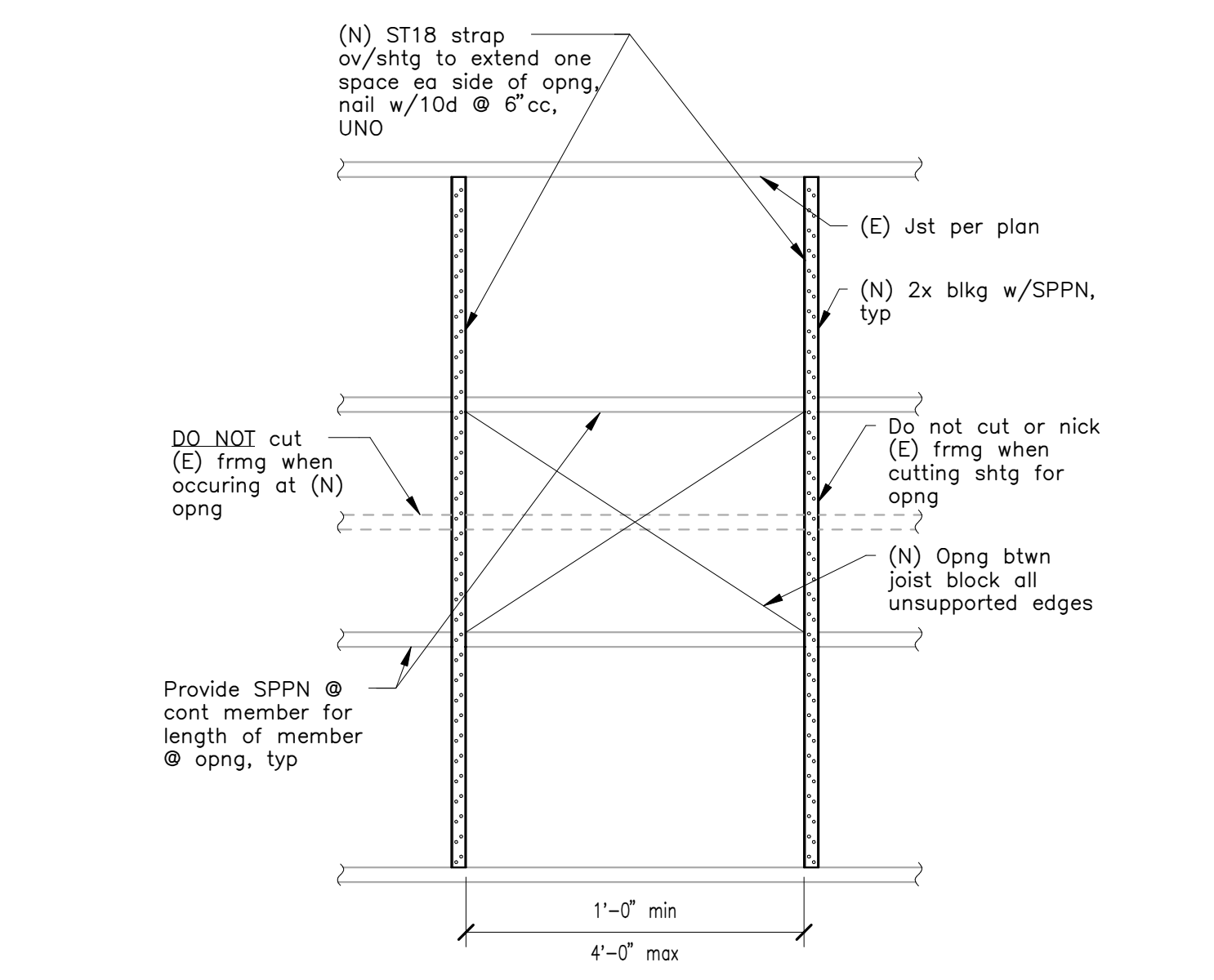
11 (N) SP Infill @ (E) Opng  
S0.3



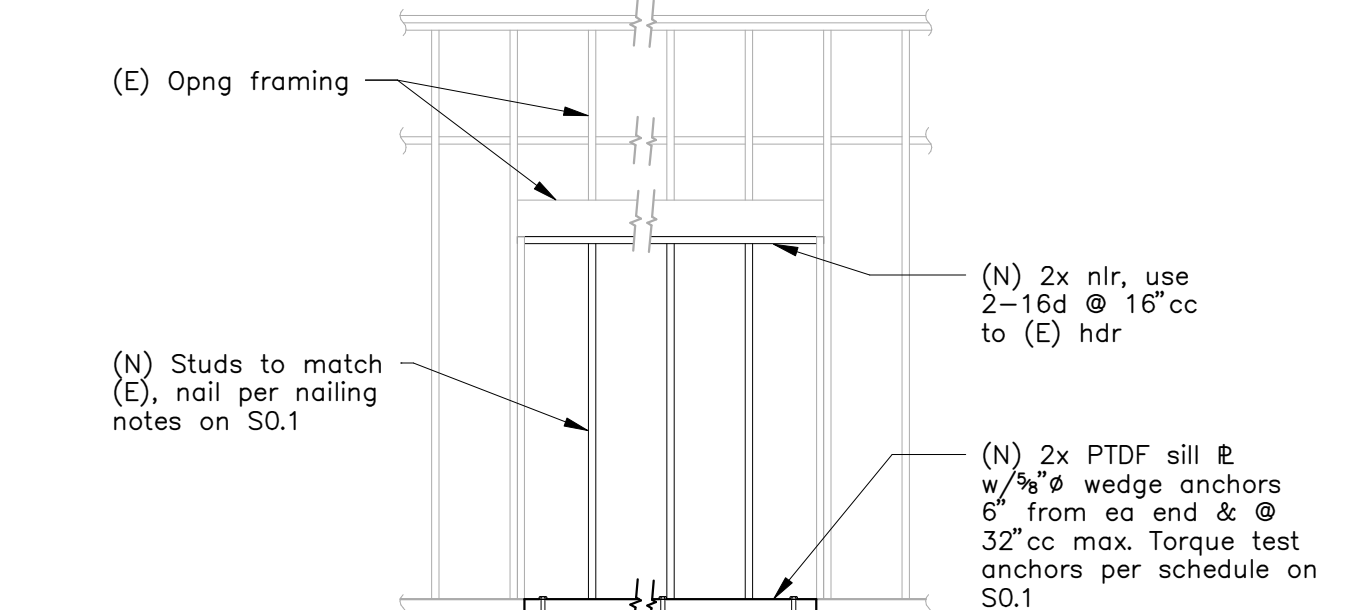
12 (N) Framed Wall Opng w/in One (E) Stud Bay  
S0.3



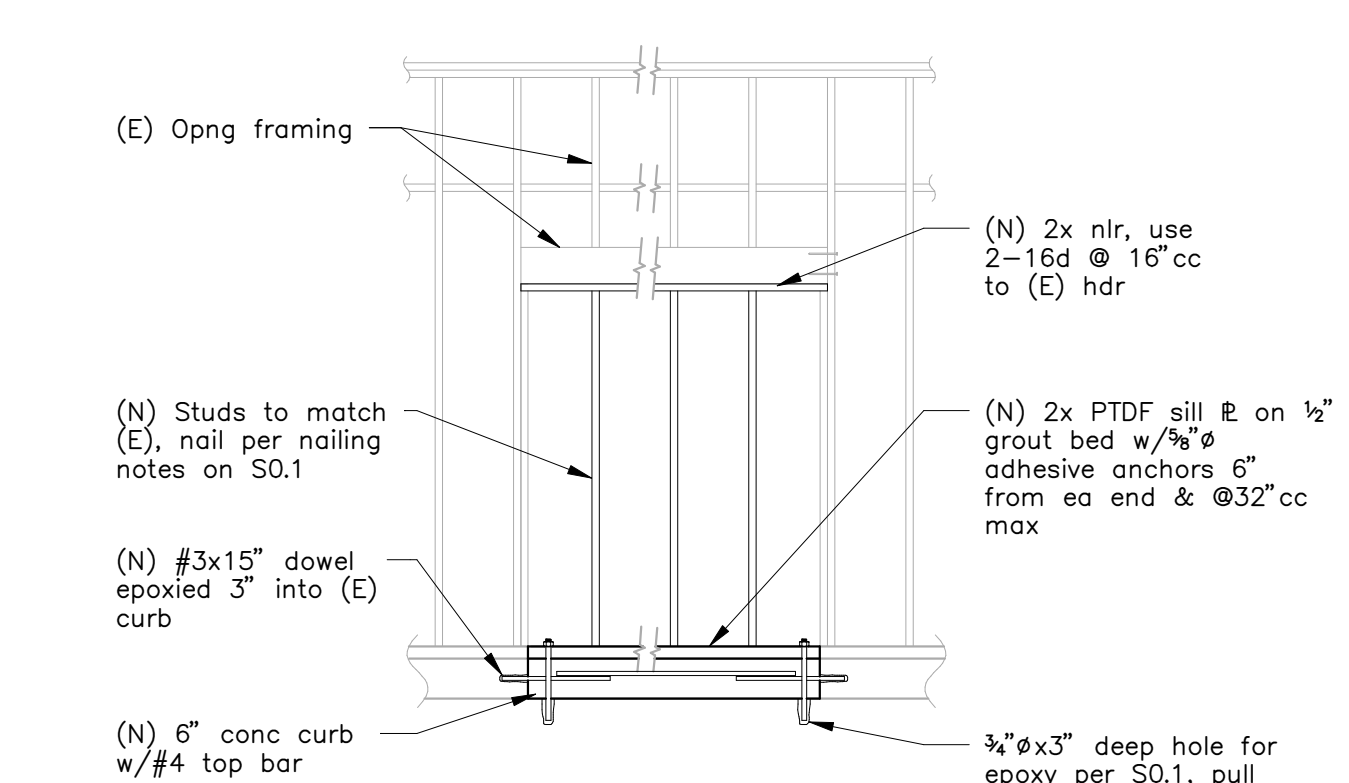
13 (N) Framed Wall Openings @ (E) Wall  
S0.3



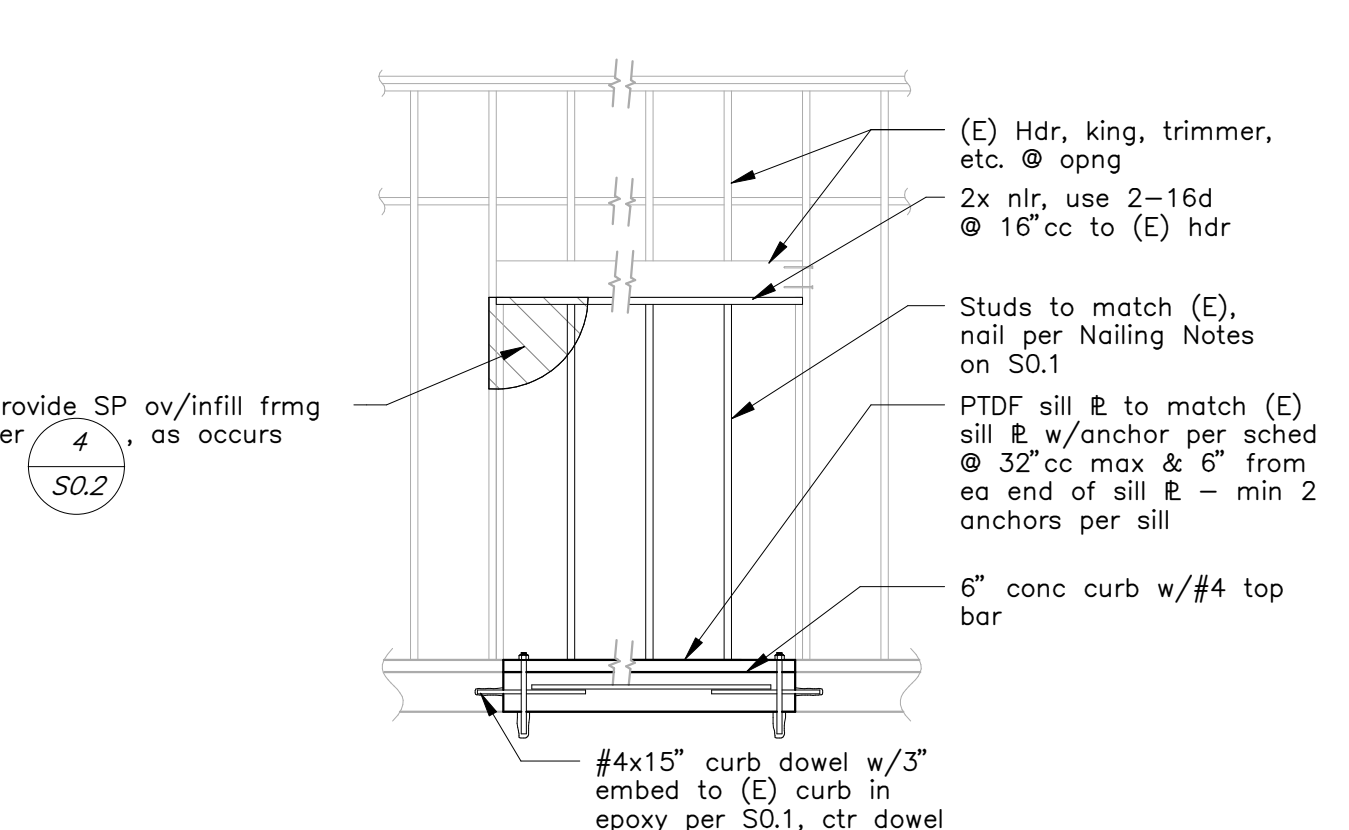
14 (N) Roof Opening in (E) Roof  
S0.3



7 Infill Framing without Curb  
S0.3

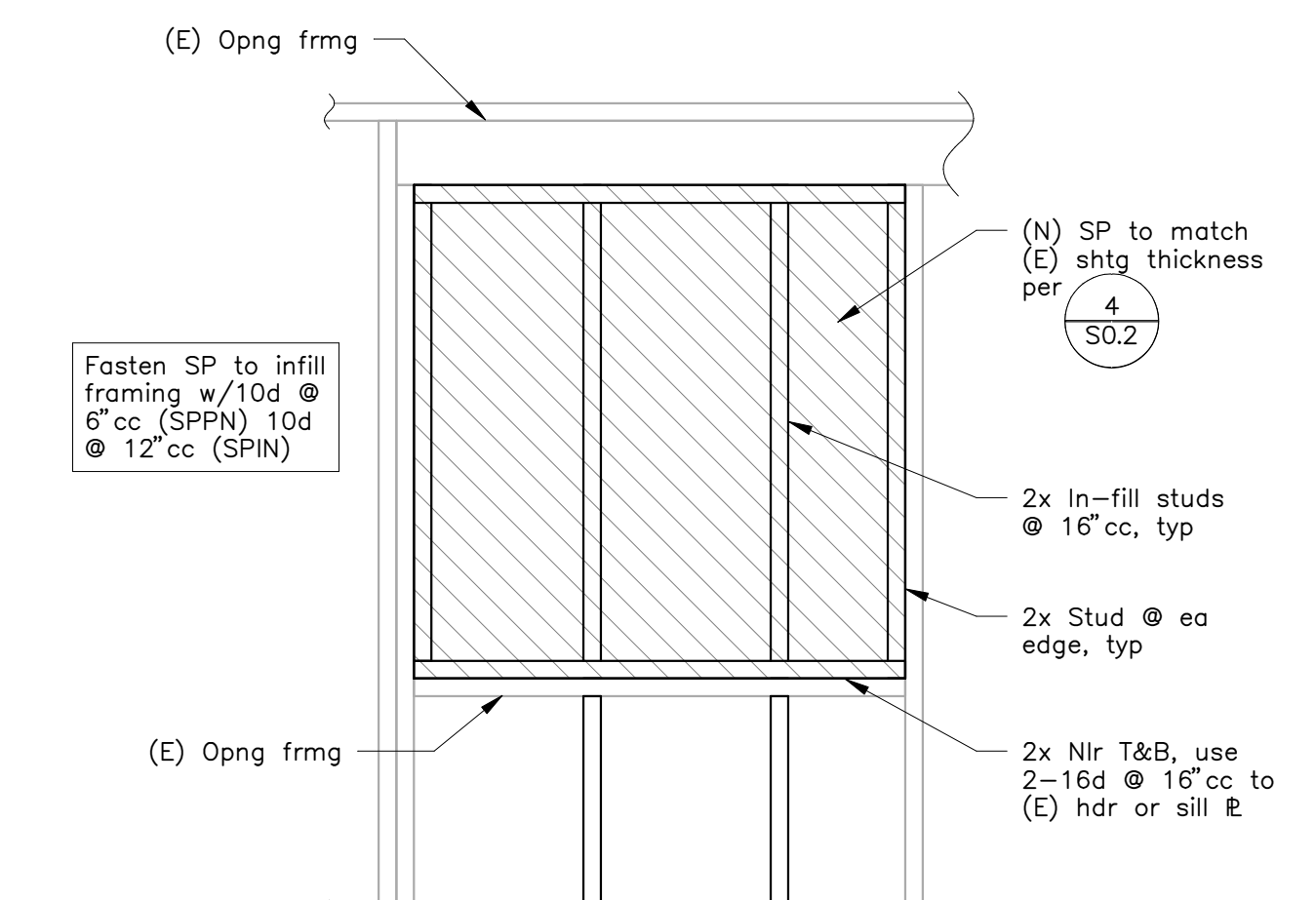


8 Infill Framing with Curb  
S0.3

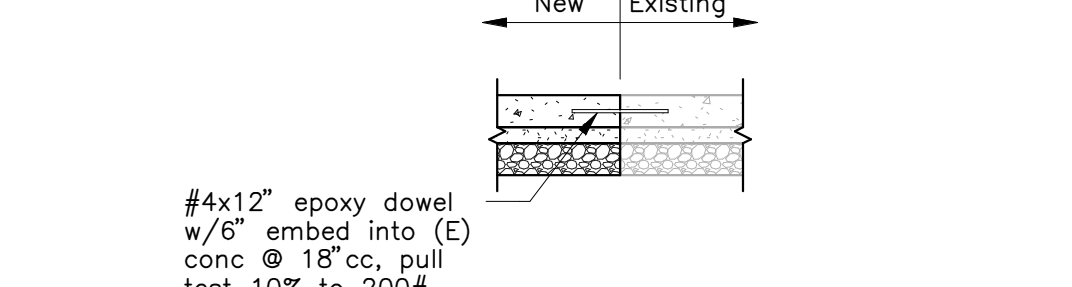


Location	Anchor	Notes
Ext wall or int struct wall	3/8" expansion anchor per S0.1	Torque test per sched on S0.1
Int non-struct wall	see 6 S0.2 @ "B"	-

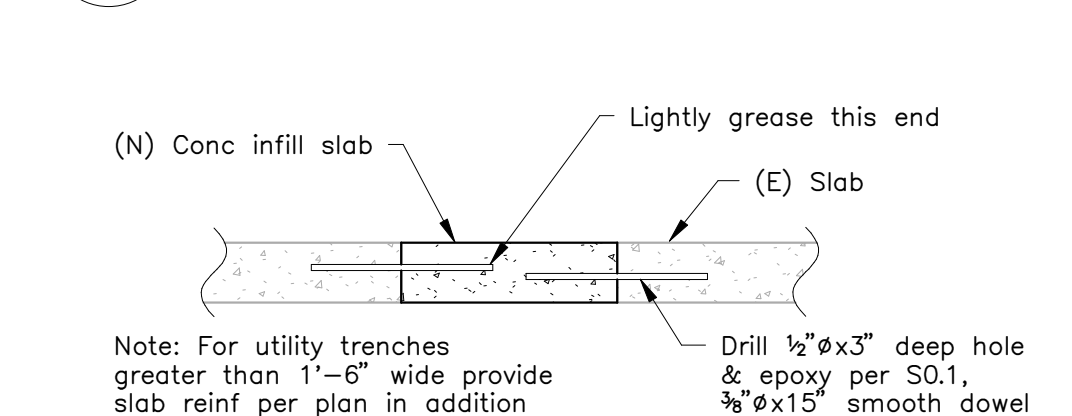
9 Infill Framing with Curb - Sheathed Wall  
S0.3



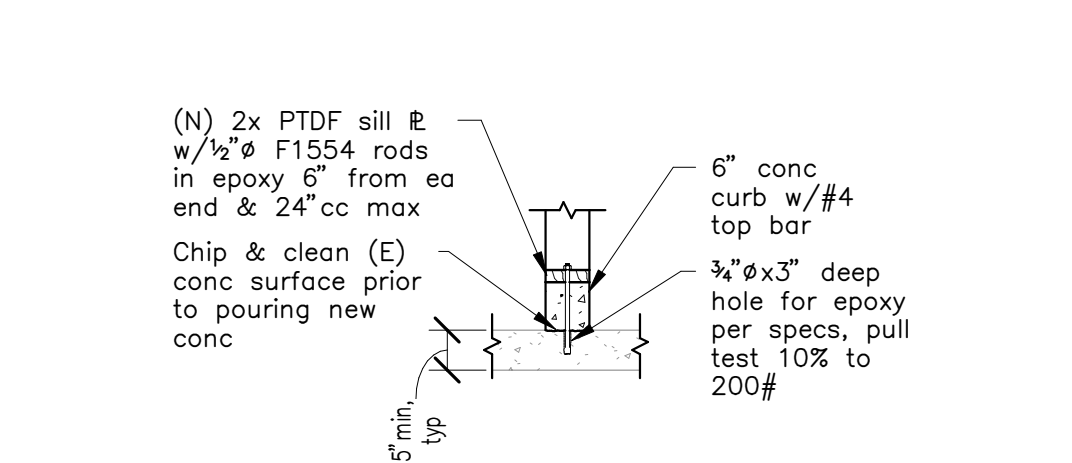
10 Infill Framing at (E) Window  
S0.3



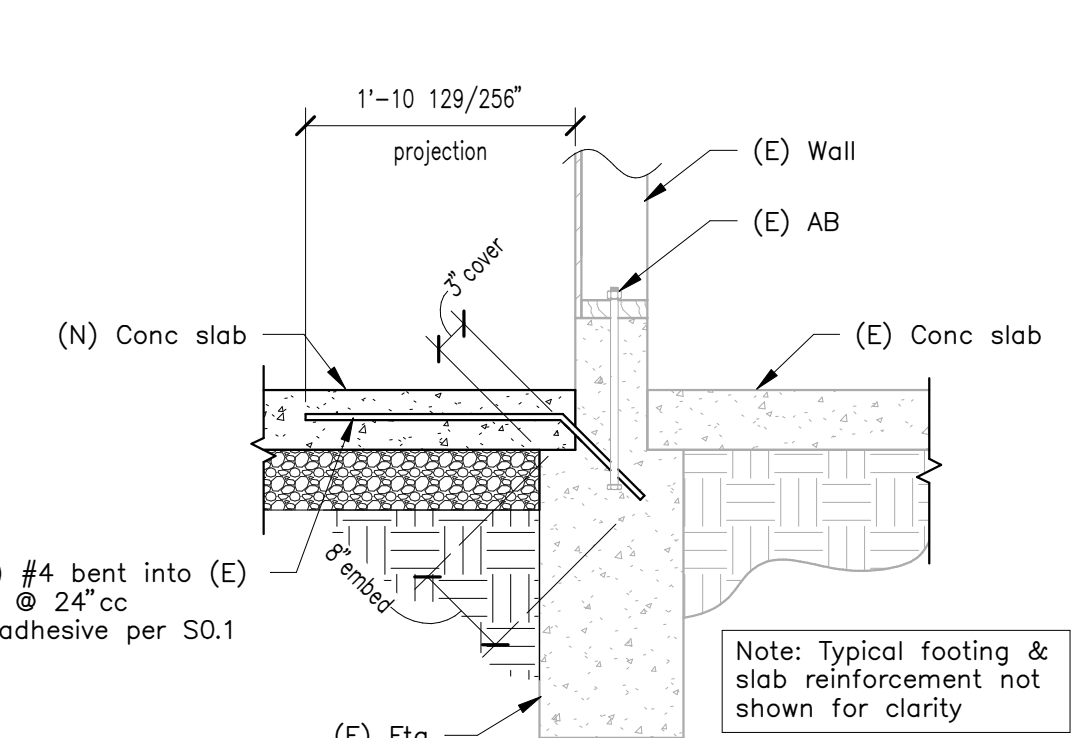
1 (N) Slab to (E) Slab on Grade  
S0.3



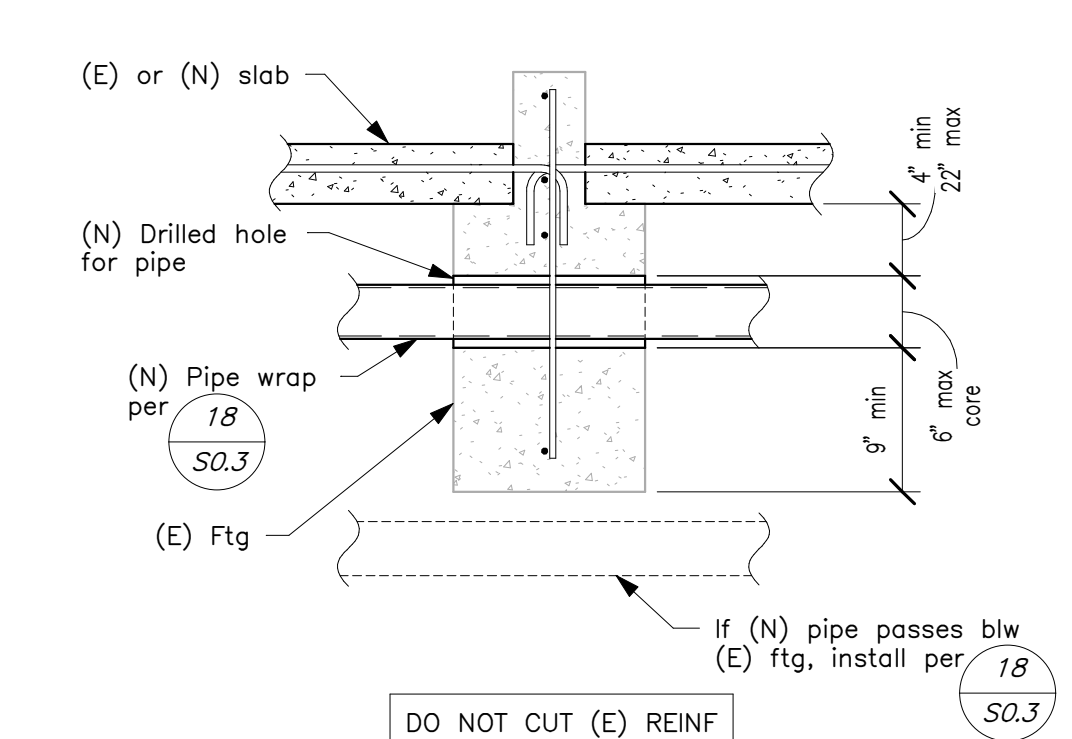
2 (N) Slab to (E) Slab @ Utility Trench  
S0.3



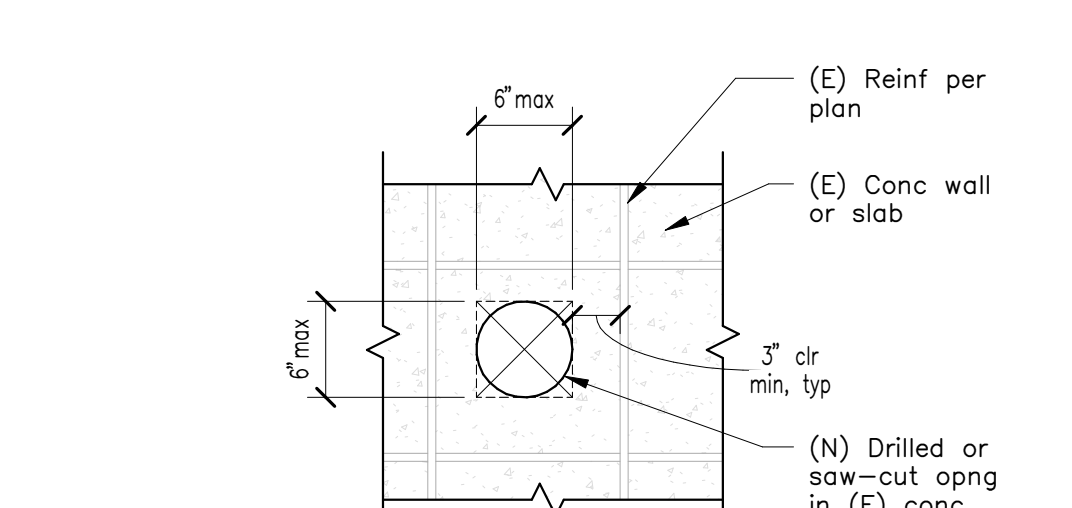
3 (N) Curb to (E) Slab  
S0.3



4 (N) Slab to (E) Footing  
S0.3



5 (N) Utility thru (E) Footing  
S0.3



6 (N) Opng in (E) Conc Wall or Slab  
S0.3

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP. 02-118041 INC.  
 REVIEWED FOR:  
 SS ☐ FLS ☐ ACS ☐  
 DATE: 04/28/2020

FILE NO. 39-50 APP NO. 02-118041

730 Howe Avenue, Suite 450  
 Sacramento, CA 95825  
 Phone: 916.921.2112  
 Fax: 916.921.2212

KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

TYPICAL FOUNDATION  
& RENOVATION DETAILS

CONSULTANT

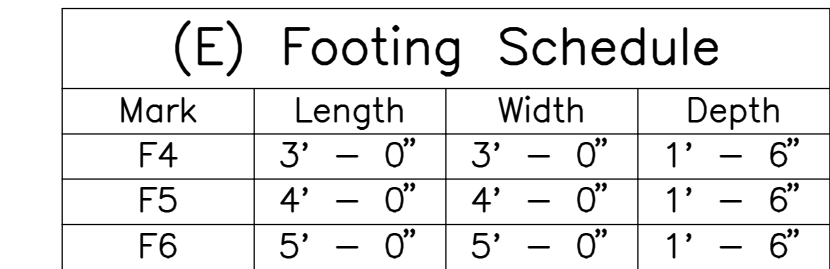
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S0.3



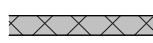
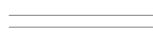



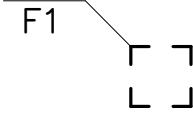

OF 7 SHEETS





Mark	Length	Width	Depth
F4	3' - 0"	3' - 0"	1' - 6"
F5	4' - 0"	4' - 0"	1' - 6"
F6	5' - 0"	5' - 0"	1' - 6"

## Foundation Plan Legend and Notes

- |   |   |
|---|---|
|  | (E) Structural stud wall on 6" high curb on line footing  |
|  | (E) Structural stud wall on line footing  |
|  | (N) Non-structural stud wall on 6" high curb  |
|  | Non-structural wall per plan  |
|  | (N) Wall infill w/2x6 @ 16"cc per   |
|  | Extent of slab removal and installation of new depressed slab                                     |
|  | Slab joint per 1/S0.2   |
|  | (E) Spread footing w/size per footing schedule  |
|  | Extent of (E) slab removal. Provide 6" clearance for edge of (E) line footing and spread footings |

Notes:

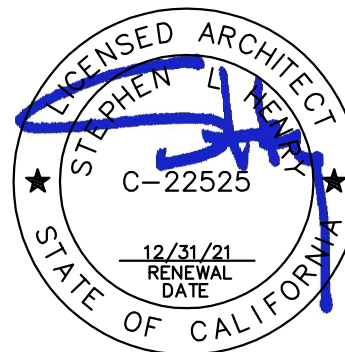
1. All interior replaced slabs will be to 5" thick w/#4 ea way @ 18" cc ov/15 mil vapor barrier ov/5" gravel.
2. Verify & coordinate all dimensions & elevations w/Arch. Stud walls are 2x6 @ 16" cc unless noted otherwise (UNO).
3. All exterior stud walls are fully sheathed w/1/2" Structural Plywd (SP). Interior structural stud walls are sheathed w/1/2" SP as shown on plan.
4. Non-bearing interior stud walls without curbs have "shot" sills per 6/S0.2 & are not shown on these plans, see Arch dws.
5. See Arch for special details @ thresholds, metal frames, depressed slabs, sloped slabs, floor drains, etc.. Depress slabs @ ceramic tile floors per Arch.
6. Exterior slabs are not shown on these plans, see Arch & Civil drawings.
7. No excavations shall be started until struc tests & inspections on prior site work contract have been accepted by DSA.
8. All utilities that impact foundations must conform to the stepped footing details on Sheet S0.3.

# Foundation Plan Sheet Notes

- 1 (N) 6" high concrete curb
- 2 (E)  $\frac{3}{8}$ " SP @ exterior face of wall
- 3 (E)  $\frac{3}{8}$ " SP each side of wall
- 4 (N) Wall infill. See detail 7-10/S0.3
- 5 Provide opening in wall to pass HVAC duct. See detail 5/S0.2
- 6 Fasten (N) post to (E) sill PL w/LTP4 on each side. Provide 3-16d T.N. @ each 2x stud attached to post
- 7 (N) Approx. 7'-0"x14'-0"x8" thick mechanical pad. See detail 15/S0.2, coord specific location relative to (E) building w/Mech dwgs

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# KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL

# PARTIAL FOUNDATION PLAN

CONSULTANT



PROJECT NO. 19-32-050	REVISIONS	BY
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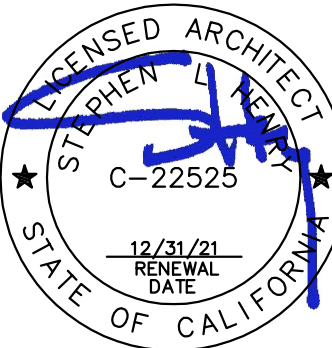
## S2.1

OF 7 SHEETS





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# KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL

# PARTIAL ROOF FRAMING PLAN

CONSULTANT



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## S2.2

OF 7 SHEETS

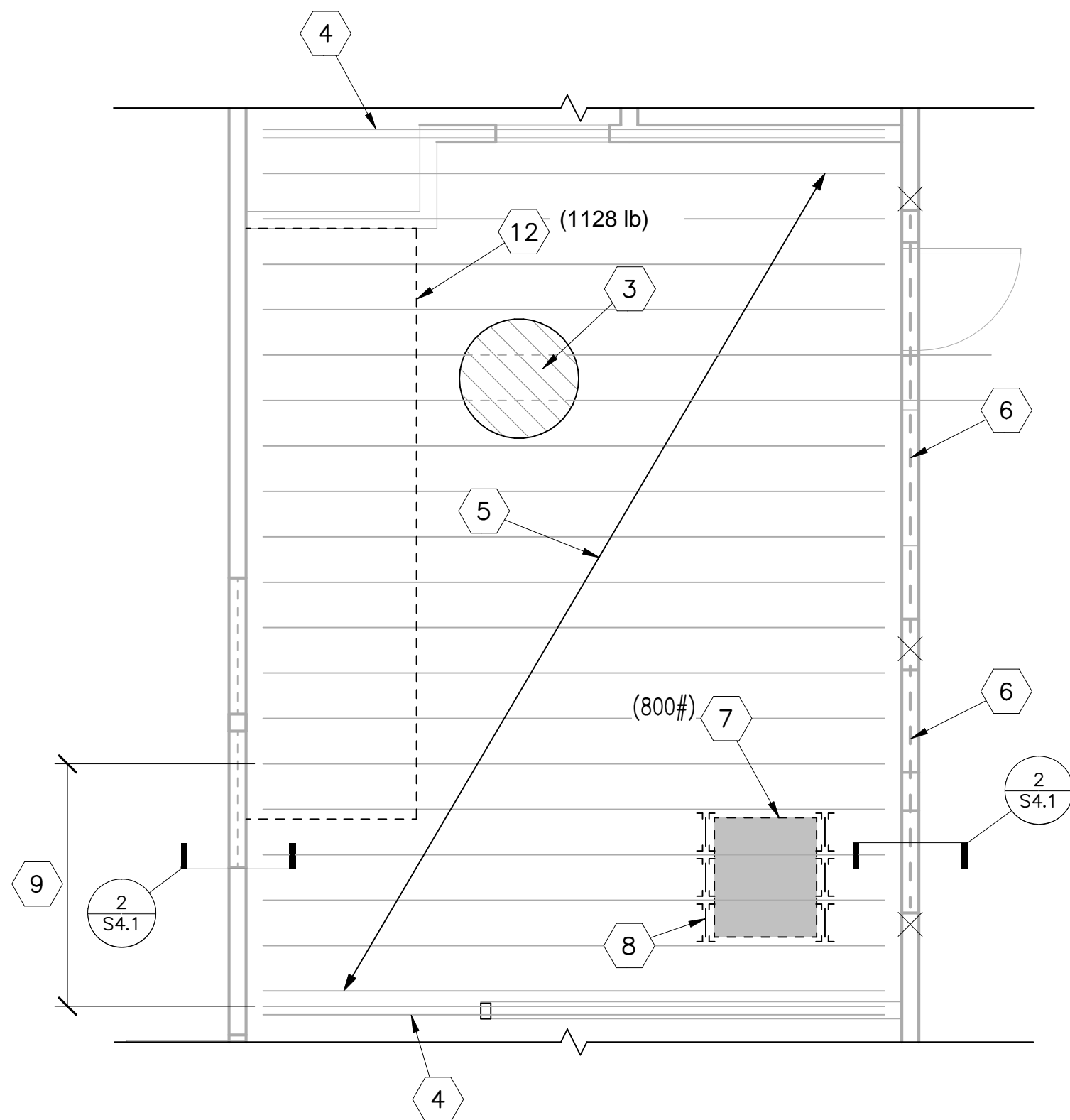
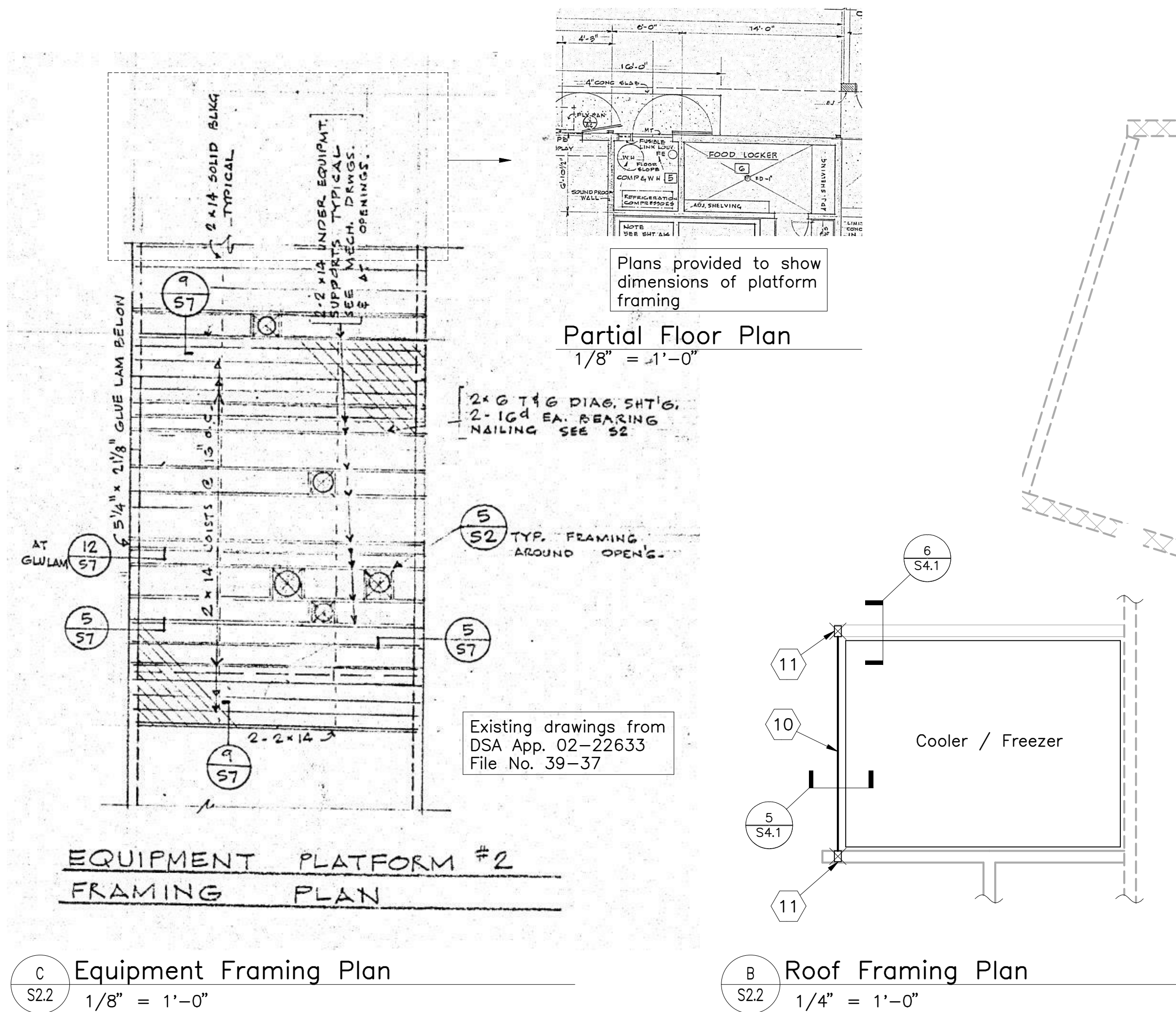
- (E) Bearing stud wall extending beyond platform
- (E) Bearing stud wall extending to bottom of roof
- (E) Non-bearing or parapet wall extending beyond roof
- (E) Non-bearing wall extending to bottom of roof
- (E) Beam or header @ roof level
- (E) Beam or header below roof level

Notes:

1. All roof openings are not shown. See Arch, Mech, Elec & 14/SO.3 for roof framing. Place Mech & Elec units as to avoid cutting frame for openings.
2. Openings in stud walls to be framed per 13/SO.3.
3. Framing hardware is from Simpson Catalog C2019
4. All joists, beams, etc... are to have full bearing @ R's, beams & all hardware.
5. Framing for Mech Units: 4x beams shown are in addition to the typical joist framing. Provide 4x6 min blk between joists and beams under the ends of units and attach blk with a joist hanger to each end.

# Roof Framing Plan Sheet Notes

- 1 (E) Roof framing to remain, unaltered
- 2 (E) Platform framing
- 3 (E) 2x6 T&G diagonal sheathing
- 4 (E) 2-2x14
- 5 (E) 2x14 roof joists @ 16"cc
- 6 (E) GL5¼x21½, blw
- 7 (N) Mechanical unit, max weight shown in parentheses
- 8 Provide 4x6 blk g @ unit perimeter. Provide JH @ ea end to (E) roof joist. Provide anchorage per 3/S4.1
- 9 Reinforce joist connection at bearing wall per S4.1
- 10 (N) 4x12 to restrain front freezer wall, T.O. bm @ T.O. freezer (+8'-4")
- 11 (N) 4x6 Post
- 12 (N) Kitchen hood max weight in parentheses

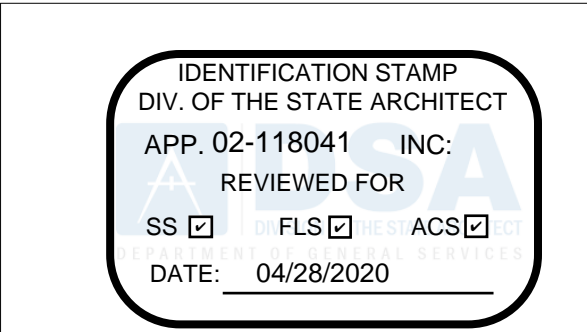
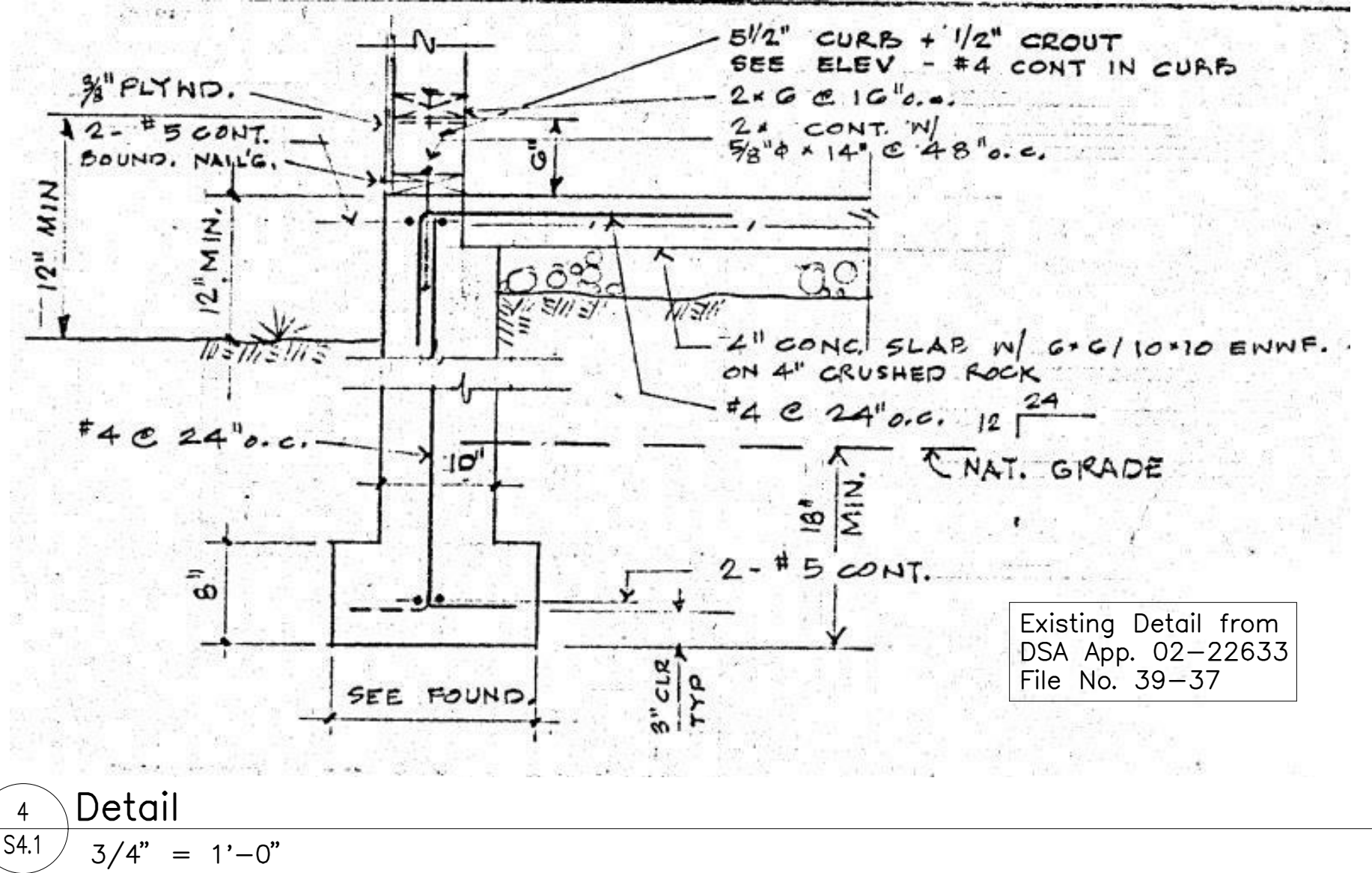
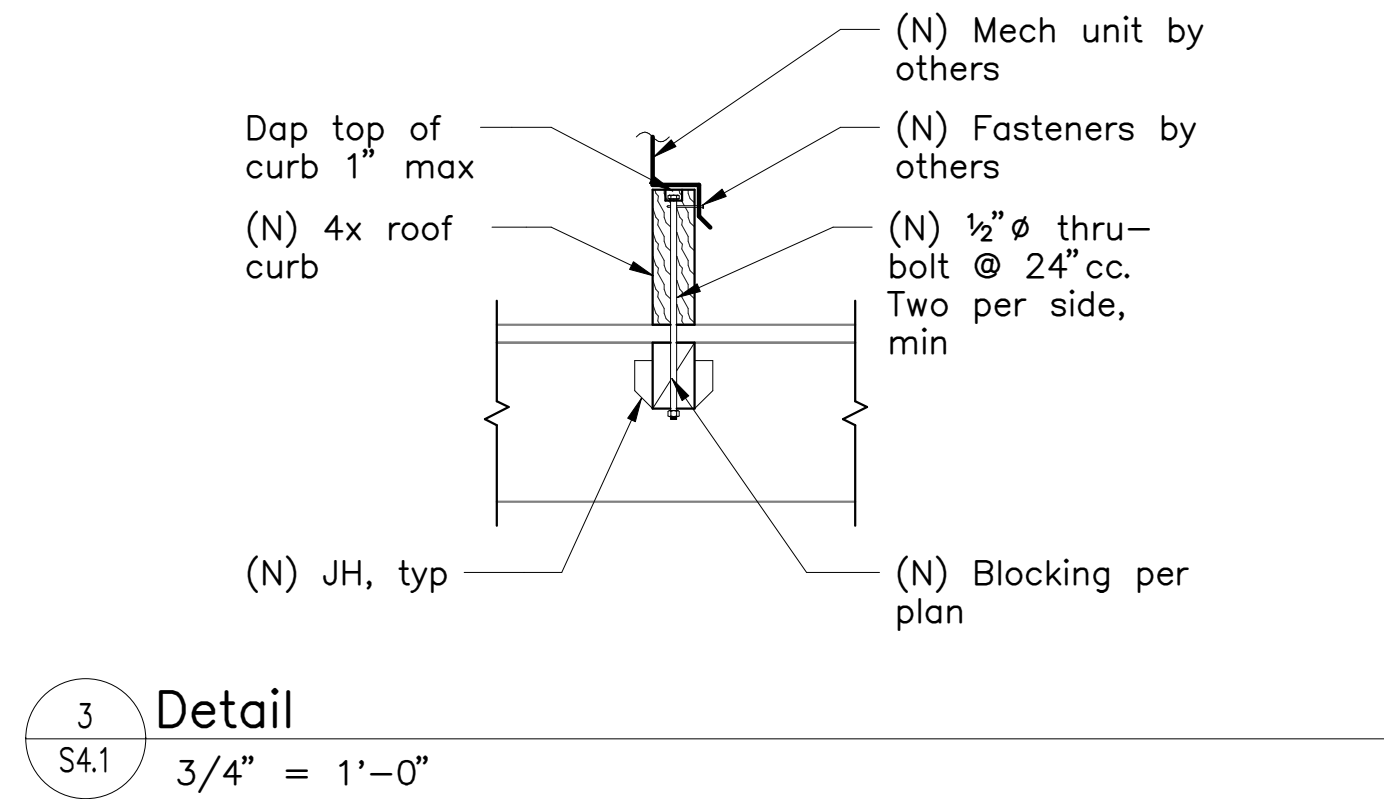
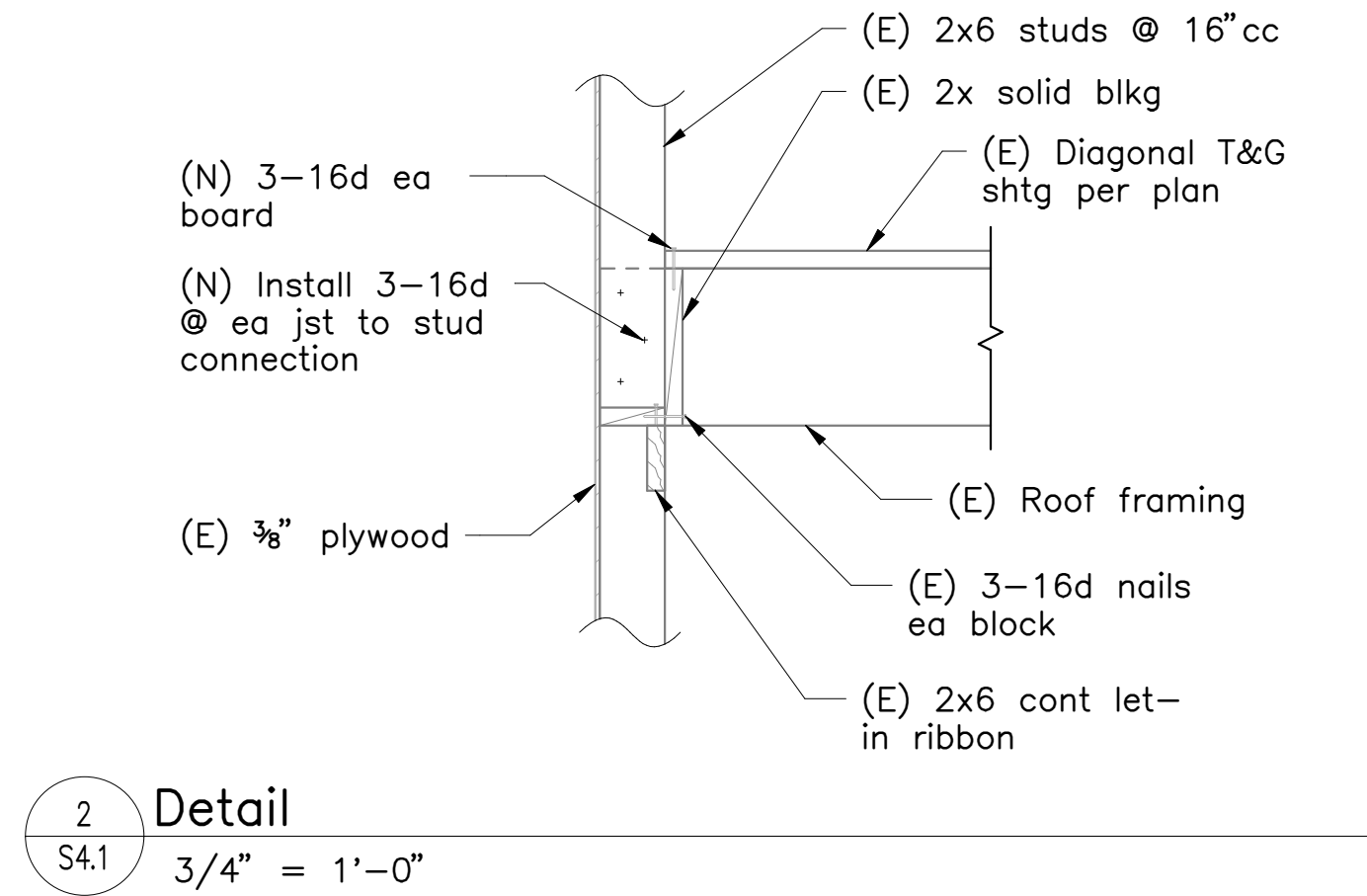
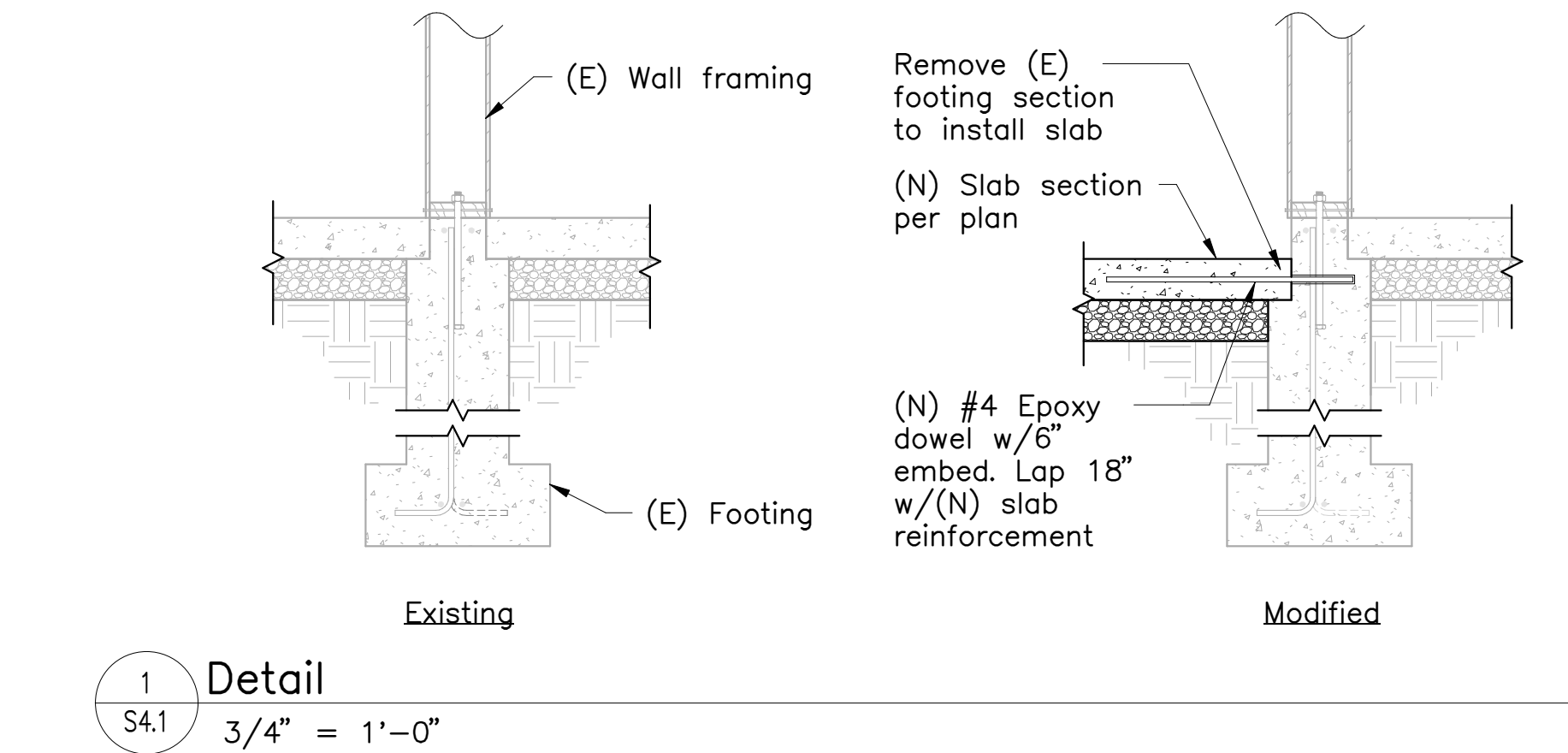
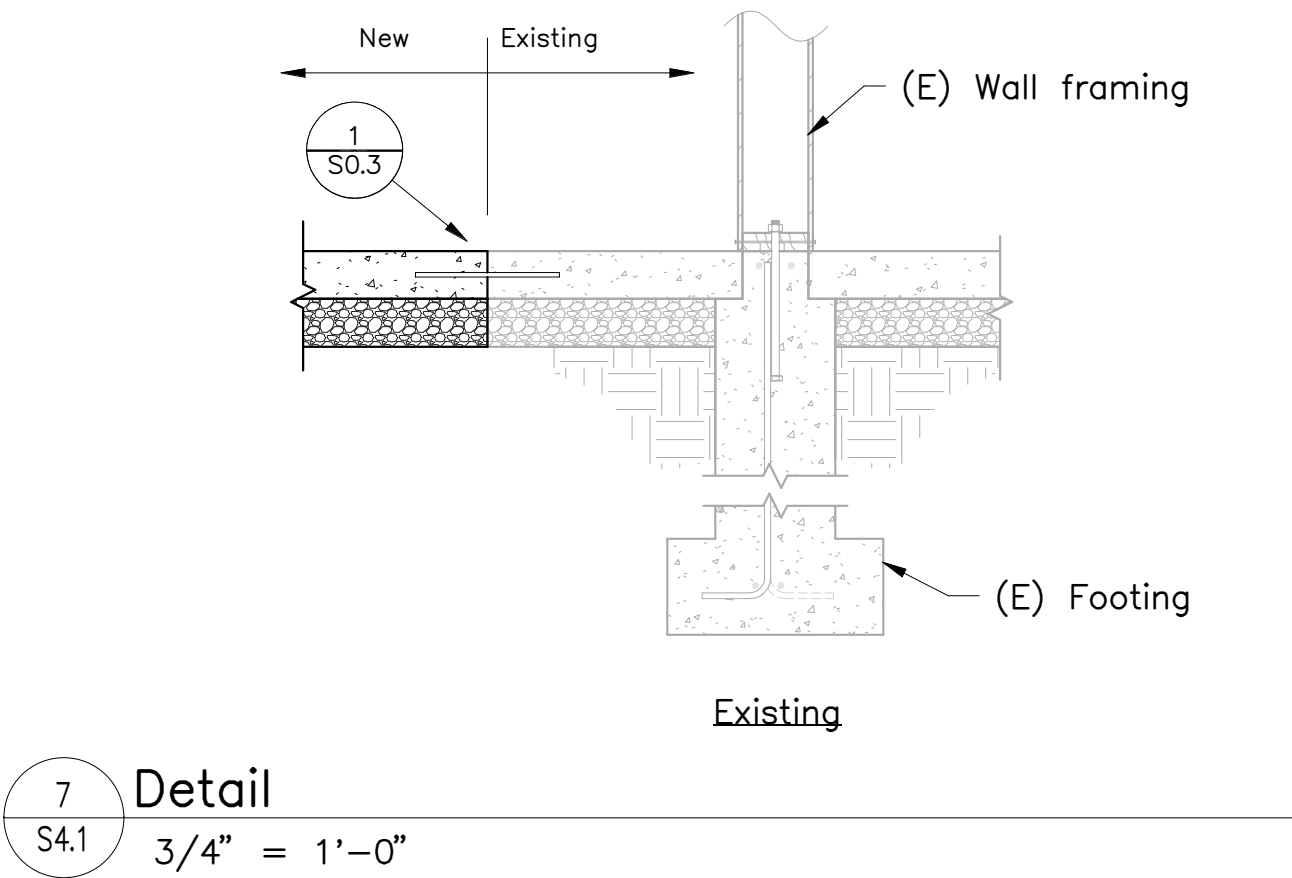
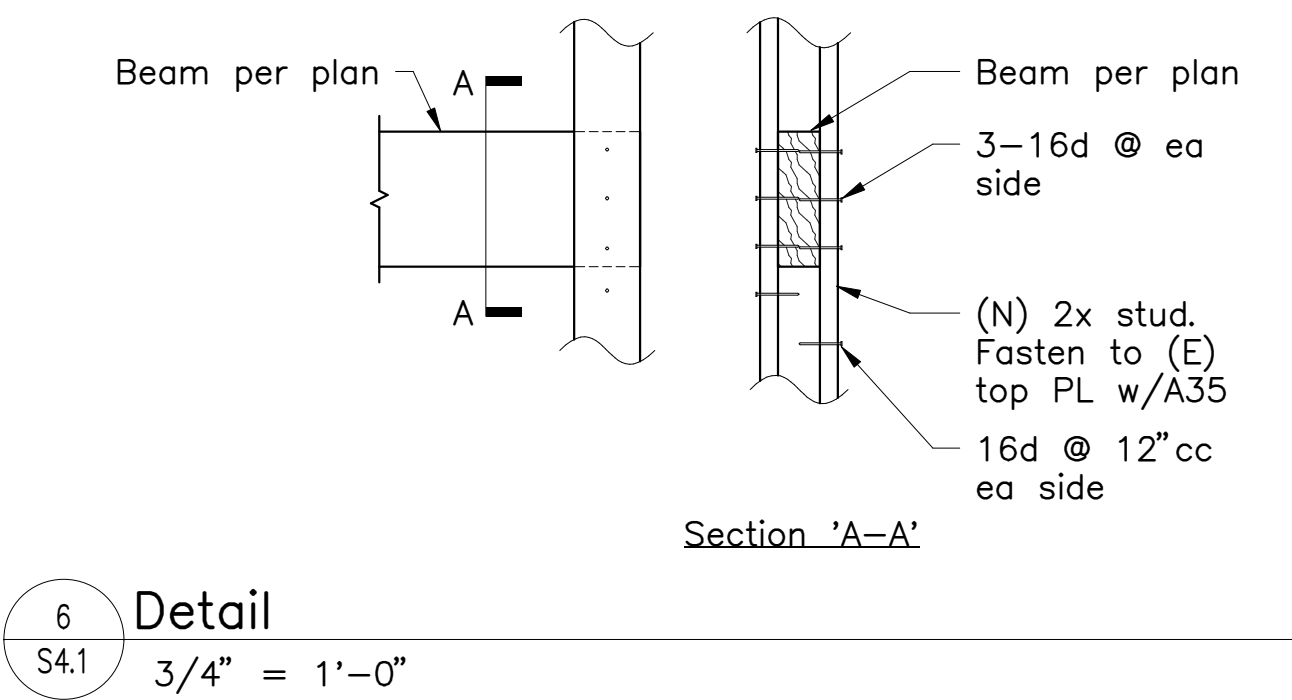
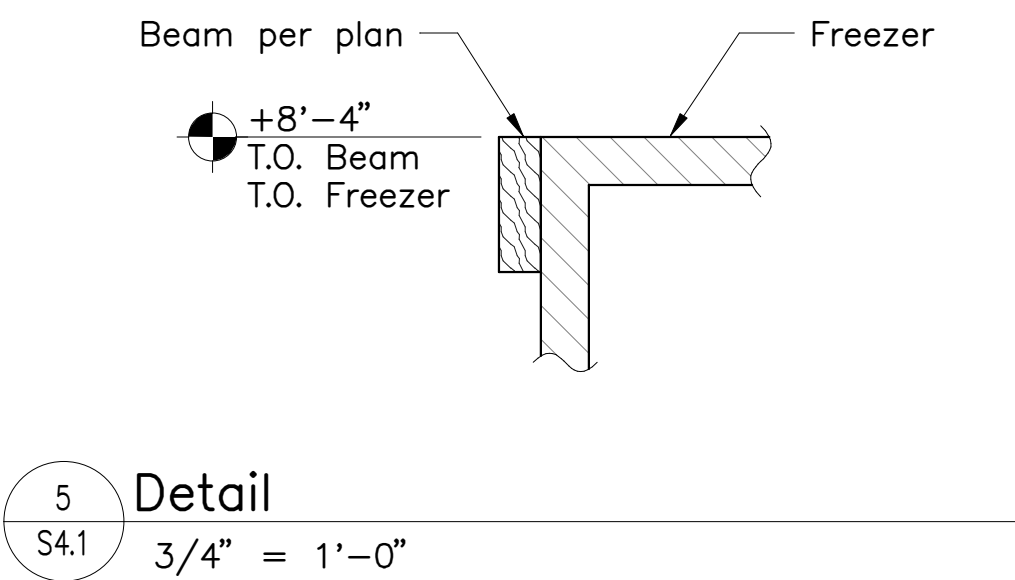


Platform Framing Plan

Roof Framing Plan  
1/4" = 1'-0"

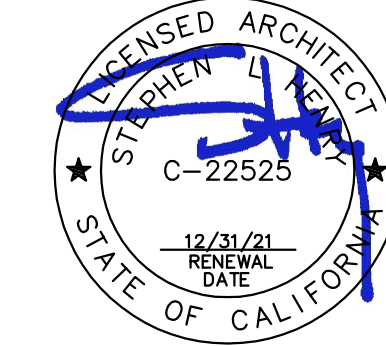






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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

DETAILS

CONSULTANT



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SHEET NO.

S4.1

OF 7 SHEETS



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DIFFUSER, REGISTER & GRILLE SCHEDULE						
SYMBOL	DESCRIPTION	KRUEGER	METALAIRE	NAIOLR	TITUS	TUTTLE & BAILEY
CD 	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER BEVEL FRAME 2" DROP	1240 FRAME 21 - 1"	9000-2	7500-S	MCD BORDER TYPE 6	SQD-SB
CD-2 	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER FLAT FRAME	1240 FRAME 22	9000-1	7500-B	MCD BORDER TYPE 1	SQD-SF
CR 	CEILING RETURN WITH " EGG CRATE CORE SURFACE MOUNT	EGC-5	CC5D	61 EC-S	MODEL 50 F BORDER TYPE 1	CRE500-SF
CRL 	CEILING RETURN WITH " EGG CRATE CORE IN 24x24 PANEL FOR T-BAR CEILING	EGC-5TB	CC5D-TBD	61 EC-L	MODEL 50 F BORDER TYPE 3	CRE500-LT
S * 	DOUBLE DEFLECTION SUPPLY GRILLE WITH VERTICAL FRONT BARS, 2" SPACING	880 V	V 4004 S	61 DV	300 RS	T54
<b>NOTES:</b> <div>1. ALL SYMBOLS NOTED MAY NOT BE USED. REFER TO PLANS FOR SIZE AND QUANTITY.</div> <div>2. ALL SUPPLY AIR DIFFUSERS ARE 4 WAY BLOW UNLESS SHOWN OTHERWISE.</div> <div>3. FURNISH ALL PRODUCTS OF A SINGLE MANUFACTURER.</div> <div>ALUMINUM REGISTERS FOR SHOWERS AND DAMP AREAS</div> <div>4. COORDINATE DIFFUSER TYPE WITH REFLECTED CEILING PLAN.</div> <div>5. OPPOSED BLADE DAMPERS ARE NOT REQUIRED AT DIFFUSERS, REGISTERS OR GRILLES.</div> <div>6. PROVIDE MANUAL AIR DAMPERS AT EACH BRANCH DUCT TO A SINGLE DIFFUSER, REGISTER OR GRILLE.</div>						

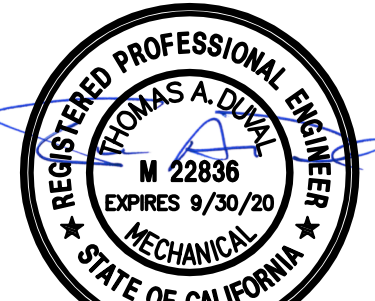
MECHANICAL GENERAL NOTES	
1.	ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES AND INDUSTRY STANDARDS.
2.	VERIFY EXACT LOCATION OF ALL (E) EQUIPMENT, DUCTWORK, DIFFUSERS, REGISTERS AND GRILLES. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN (E) SYSTEMS AND DRAWINGS.
3.	COORDINATE EXACT LOCATION OF EQUIPMENT AND ALL PENETRATIONS THROUGH ROOF, FLOORS AND WALLS WITH ARCHITECTURAL STRUCTURAL SYSTEMS PRIOR TO COMMENCING WORK.
4.	COORDINATE EXACT SIZE AND ROUTING OF DUCTWORK WITH ARCHITECTURAL PLANS, STRUCTURE AND EQUIPMENT PRIOR TO COMMENCING WORK.
5.	SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLES.
6.	FURNISH AND INSTALL MANUAL AIR DAMPERS AT ALL DUCT BRANCH TAKEOFFS TO A SINGLE SUPPLY DUFFUSER.
7.	FLEXIBLE DUCTWORK CONNECTIONS TO CEILING DIFFUSERS ARE LIMITED TO 5' MAXIMUM LENGTH.
8.	ALL DUCTWORK, CEILING DIFFUSERS/REGISTERS/GRILLES, EQUIPMENT, PIPING ETC., ARE NEW U.O.N. (SHOWN HEAVY). (E) DUCTWORK, PIPING ETC. IS SHOWN LIGHT. SEE LEGEND.
9.	(E) DUCTWORK AND ITEMS TO BE REMOVED ARE SHOWN CROSSED ("X") OUT, SEE LEGEND, COORDINATE CLOSELY WITH (N) DUCTWORK AND P.O.C.'S SHOWN. ALL OTHER (E) DUCTWORK, ETC. TO REMAIN.
10.	WHERE INLET DUCT DIAMETER AND DIFFUSER NECK SIZE ARE THE SAME (I.E. 9"Ø & 9x9) CONTRACTOR SHALL OVERSIZE THE SHEET METAL PLENUM TO ACCOMMODATE THE ROUND DUCT CONNECTION.
11.	THERMOSTATS AND ROOM TEMPERATURE SENSORS SHALL BE INSTALLED AT 48" ABOVE FINISHED FLOOR (TO TOP OF DEVICE). DO NOT INSTALL THERMOSTATS AND ROOM TEMPERATURE SENSORS ABOVE CASEWORK, SHELVING OR OTHER OBSTRUCTIONS OVER 24" IN DEPTH AND 34" IN HEIGHT.

SYMBOL	ABBREVIATION	DESCRIPTION
	ABV	ABOVE
	ABC	ABOVE CEILING
	AF	ABOVE FLOOR
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	AD , AP	ACCESS DOOR , ACCESS PANEL
	AC	AIR CONDITIONING
	APD	AIR PRESSURE DROP, INCHES WATER COLUMN
	AB	ANCHOR BOLT
	BDD	BACK DRAFT DAMPER
	BF	BELOW FLOOR
	BHP	BRAKE HORSE POWER
	BTU(H)	BRITISH THERMAL UNITS (PER HOUR)
	CC	CENTER TO CENTER
	CLG	CEILING
	CEF	CEILING EXHAUST FAN
	CLR	CLEAR
	CONC	CONCRETE
	CD	CONDENSATE DRAIN
	CONN	CONNECT OR CONNECTION
	CONT	CONTINUATION
	CONTR	CONTRACTOR
	CFM	CUBIC FEET OF AIR FLOW PER MINUTE
	DPR	DAMPER
	"F	DEGREES FAHRENHEIT
	-	DIAMETER , PHASE
	DL	DOOR LOUVER
	DN	DOWN
	DB	DRY BULB (DEGREES FAHRENHEIT)
	EP	ELECTRICAL PANEL
	EL	ELEVATION
	ENT	ENTERING
	EDB	ENTERING DRY BULB
	EW	ENTERING WATER
	EWT	ENTERING WATER TEMPERATURE
	EWB	ENTERING WET BULB
	EVAP	EVAPORATOR
	EC	EVAPORATIVE COOLER
	EA	EXHAUST AIR
	EAD	EXHAUST AIR DAMPER
	EF	EXHAUST FAN
	(E), EXIST	EXISTING
	(E)	EXISTING TO BE REMOVED
	ESP	EXTERNAL STATIC PRESSURE
	FPM	FEET PER MINUTE
	FD	FIRE DAMPER
	FS	FIRE/SMOKE DAMPER
	FC	FLEXIBLE CONNECTION
	FLR	FLOOR
		FLOW IN DIRECTION OF ARROW
	FLV	FLOW LIMITING VALVE
	FA	FROM ABOVE
	FB	FROM BELOW
	FLA	FULL LOAD AMPS
	GALV	GALVANIZED
	GI	GALVANIZED IRON
	GA	GAUGE
	HTG	HEATING

PIPING, DUCTWORK & ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE	
PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26.	
THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON PREAPPROVED INSTALLATION GUIDE (e.g., SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.	
MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):	
MP MD PP E	OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS
MP MD PP E	OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM #) #0052-13
MP MD PP E	OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL ____ AND CONNECTION LEVEL ____ FOR THE PROJECT AND CONDITIONS.

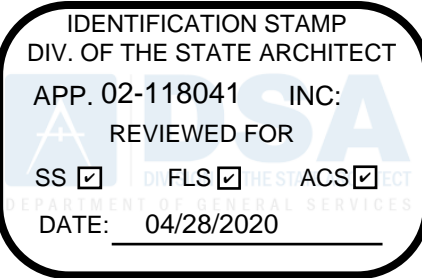
SYMBOL	ABBREVIATION	DESCRIPTION
	KW	KILOWATTS
	KWH	KILOWATT HOUR
	LDB	LEAVING DRY BULB IN DEGREES FAHRENHEIT
	LWB	LEAVING WET BULB IN DEGREES FAHRENHEIT
	LRA	LOCKED ROTOR AMPERES
	LVR	LOUVER
	MAD, MD	MANUAL AIR DAMPER
	MAV	MANUAL AIR VENT
	MFR	MANUFACTURER
	MAX	MAXIMUM
	MIN	MINIMUM
	MCC	MOTOR CONTROL CENTER
	(N)	NEW
	OA	OUTSIDE AIR
	OAD	OUTSIDE AIR DAMPER
	OD	OUTSIDE DIAMETER
	OV	OUTLET VELOCITY
	OH	OVERHEAD
	POC	POINT OF CONNECTION
	LBS	POUNDS
	RG	REFRIGERANT GAS PIPING
	RS	REFRIGERANT SUCTION PIPING
	RL	REFRIGERANT LIQUID PIPING
	RA	RETURN AIR
	RAD	RETURN AIR DAMPER
	RPM	REVOLUTIONS PER MINUTE
	RLA	RUNNING LOAD AMPERES
	SM	SHEET METAL
	SD	SMOKE DAMPER
	SKD	SMOKE DETECTOR
	SQFT	SQUARE FEET
	SQIN	SQUARE INCHES
	SP	STATIC PRESSURE
	SPD	STATIC PRESSURE DROP
	SA	SUPPLY AIR
	SF	SUPPLY FAN
	TCP	TEMPERATURE CONTROL PANEL
	TCV	TEMPERATURE CONTROL VALVE
	T	THERMOSTAT, "X" INDICATES DEVICE CONTROLLED. 48" AFF (TO TOP OF STAT)
	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
	TA	TO ABOVE
	TB	TO BELOW
	TP	TOTAL PRESSURE
	TSP	TOTAL STATIC PRESSURE
	TYP	TYPICAL
	UG	UNDERGROUND
	UCD	UNDER CUT DOOR
	UON	UNLESS OTHERWISE NOTED
	WPD	WATER PRESSURE DROP
	W	WATTS
	WT	WEIGHT
	WB	WET BULB
	WMS	WIRE MESH SCREEN
	WP	WORKING PRESSURE

MEP COMPONENT ANCHORAGE NOTE	
ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.	
1. ALL PERMANENT EQUIPMENT AND COMPONENTS. 2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. 3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.	
THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.  A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT. B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTION SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.	
FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.	

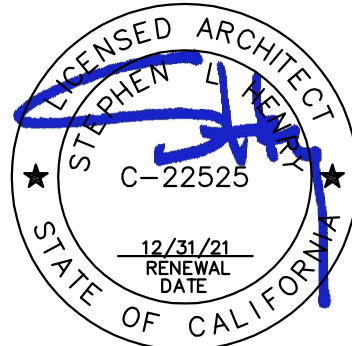


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FILE NO. 39-50 APP NO. 02-118041



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KITCHEN RENOVATION  
JOE SERNA SCHOOL

MECHANICAL LEGENDS,  
SCHEDULE AND NOTES

CONSULTANT






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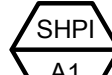
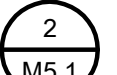

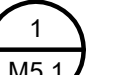
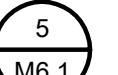
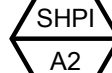
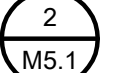
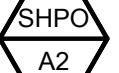
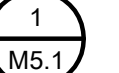
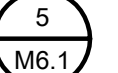



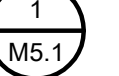
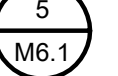
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AIR CONDITIONING (MAKE-UP AIR) UNIT SCHEDULE																																		
UNIT	SERVES	"TRANE" MODEL NO. U.N.O.	NOM. TONS	CFM	MIN. O.A. (CFM)	ESP (IN. W.G.)	DX COOLING				GAS HEATING			AC UNIT ELECTRICAL DATA										EFFICIENCY		OPERATING WEIGHT (LBS.)				MOUNTING DETAIL	CONTROL DIAGRAM	NOTES		
							LOW CFM (66%)	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	EVAP.		INPUT (MBH)	OUTPUT (MBH)	HX EDB (°F)	VOLT/PH	SUPPLY FAN		COMPRESSOR		COND. FAN		COMB. FAN	MCA	MOCP	SEER (EER)	AFUE (TE)	AC UNIT	ROOF CURB	PWR. EXH. ECON.				TOTAL	
										EDB (°F)	EWB (°F)					BHP	FLA	QTY	RLA	LRA	QTY	FLA												FLA
AC A2	KITCHEN A101	OADG010B1-DAB10AF00	10	3210	3210	1.0	NA	143.1	143.1	101	72	200.0	160.0	28	208/3	1.5	-	2	19.6 16.1	136 110	2	4.2 EA.	-	58.2	70	(12.4)	80	2961	600	NA	2561			
<div>NOTES:</div> <div><div><div>①</div><div>UNITS SELECTED AT 101 F DB / 72 F WB SUMMER AMBIENT, 28 F DB WINTER AMBIENT AIR TEMPERATURES. COOLING CAPACITIES SCHEDULED ARE NET SENSIBLE &amp; NET TOTAL CAPACITIES.</div></div><div><div>②</div><div>PROVIDE UNIT WITH EXPANDED METAL CONDENSER COIL GUARDS, HINGED ACCESS DOORS, AND 2" THICK MERV 8 DISPOSABLE PLEATED MEDIA FILTER(S). THE ESP SCHEDULED ABOVE INCLUDES AIR PRESSURE DROP THRU FILTER(S), DIGITAL SCROLL COMPRESSOR, 10:1 TURNDOWN MODULATING GAS HEAT, MODULATING HOT GAS REHEAT, 2-POSITION CLASS 1A OUTSIDE AIR DAMPER, DIRECT-DRIVE PLENUM SUPPLY FAN, AND 2" DOUBLE WALL CONSTRUCTION.</div></div><div><div>③</div><div>PROVIDE "MICROMETL" STRUCTURALLY CALCD 14" TALL STANDARD CURB.</div></div><div><div>④</div><div>UNIT SHALL OPERATE IN 100% OSA MODE. FACTORY CONTROLS SHALL MODULATE MECHANICAL HEATING AND COOLING CAPACITY AS REQUIRED TO MAINTAIN THE FOLLOWING DISCHARGE AIR TEMPERATURE SETPOINTS: HEATING MODE = 70 degF, COOLING MODE = 76 degF. INTERLOCK AC-A2 TO RUN ONLY WHEN KITCHEN HOOD EXHAUST FAN KEF-A1 IS SWITCHED ON.</div></div></div>																																		

SPLIT SYSTEM AC UNIT SCHEDULE																							
UNIT	LOCATION	"JCI" MODEL NO. (INDOOR UNIT)	CFM	FAN FLA	MCA	VOLT/PH	OPER. WT. (LBS.)	MOUNTING DETAIL	UNIT	"PCI" MODEL NO. (OUTDOOR UNIT)	TOTAL COOLING CAPACITY (MBH)	COMPRESSOR		MCA	MOCP	FAN FLA	VOLT/PH	SEER	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES	
												RLA	LRA										
 SHPI A1	TEACHERS ROOM A103	DHX18NWB21S	335 TO 559	0.38	-	208/ 1 PH	35	 2 M5.1	 SHPO A1	DHX18CSB21S	18.0	7.2	14.0	16.0	25.0	0.36	208/ 1 PH	20.0	125	 1 M5.1	 5 M6.1	1, 2, 3, 4, 5, 7	
 SHPI A2	KITCHEN A101	DHR36NKB21S	826 TO 1180	0.38	1.5	208/ 1 PH	97	 2 M5.1	 SHPO A2	DHR36CSB21S	39.0	-	-	29.0	45.0	-	208/ 1 PH	16.0	225	 1 M5.1	 5 M6.1	1, 2, 3, 4, 5, 6	
 SHPI A3	FOOD LOCKER A102	DHX18NWB21S	335 TO 559	0.38	-	208/ 1 PH	35	 2 M5.1	 SHPO A3	DHX18CSB21S	18.0	7.2	14.0	16.0	25.0	0.36	208/ 1 PH	20.0	125	 1 M5.1	 5 M6.1	1, 2, 3, 4, 5	
<b>NOTES:</b> 1. PROVIDE WITH FACTORY FILTERS. 2. PROVIDE WITH FACTORY HARD WIRED STAT. 3. PROVIDE WITH WASHABLE FILTER. 4. INDOOR FAN COIL POWERED BY CONDENSING UNIT, REFER TO MRF'S INSTALLATION DATA. 5. PROVIDE "REFCO" MODEL GOBI CONDENSATE PUMP, 120V/3PH/60HZ, 16 WATT POWER CONSUMPTION, 5.0 AMPS ALARM RELAY, 3.17 GAL/HR CAPACITY, 65FT MAX. VERTICAL HEAD. INSTALL PUMP ON WALL BRACKET BELOW INDOOR UNIT. 6. PROVIDE INDOOR UNIT WITH "S&P" INLINE CENTRIFUGAL DUCT FAN (IOAF-A2) MODEL PV-125X AT 60 CFM, 115V. PROVIDE WITH VARIABLE SPEED CONTROLLER LOCATED ADJACENT TO FAN. PROVIDE WITH "S&P" FILTER BOX MODEL FB6 AT 60 CFM. SEE OUTSIDE AIR FAN SCHEDULE BELOW. 7. PROVIDE INDOOR UNIT WITH "S&P" INLINE CENTRIFUGAL DUCT FAN (IOAF-A1) MODEL PV-125X AT 125 CFM, 115V. PROVIDE WITH VARIABLE SPEED CONTROLLER LOCATED ADJACENT TO FAN. PROVIDE WITH "S&P" FILTER BOX MODEL FB6 AT 125 CFM. SEE OUTSIDE AIR FAN SCHEDULE BELOW.																							

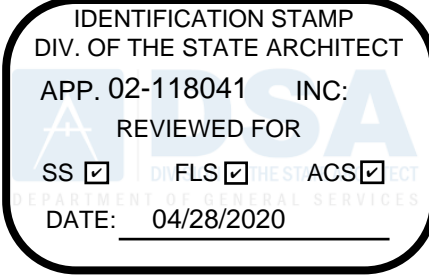
EXHAUST FAN SCHEDULE															
UNIT	LOCATION	"GREENHECK" MODEL NO.	CFM	SP (IN. W.G.)	DUTY	STYLE	RPM	HP (WATTS)	VOLT/PH	FLA	SONES	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
<div>CEF A1</div>	STAFF TOILET A104	S-A190	125	0.38	E	CE	1400	(46)	120/1	1.3	1.5	20	<div>2 M5.2</div>	<div>6 M6.1</div>	<div>1</div> <div>8</div> <div>9</div>
<div>CEF A2</div>	JAN STOR A105	SP-B150	75	0.45	E	CE	724	(128)	120/1	1.7	1.5	15	<div>2 M5.2</div>	<div>6 M6.1</div>	<div>1</div> <div>7</div> <div>9</div>
<div>KEF A1</div>	KITCHEN A101	CUBE-220HP-20	4010	1.30	E	WE	999	2.0	208/3	7.5	17.3	150	<div>1 M5.2</div>	<div>3 M6.1</div>	<div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div>
<div>NOTES:</div> <div><div><div>1. PROVIDE WITH BACKDRAFT DAMPER.</div><div>2. PROVIDE WITH INVERTER DUTY MOTOR.</div><div>3. CONTROL FAN WITH WALL SWITCH.</div></div><div><div>4. (E) AC-1 TO TURN ON WHEN KEF-A1 TURNS ON.</div><div>5. SIDE WALL MOUNTED EXHAUST FAN.</div><div>6. PROVIDE WITH MOTOR STARTER.</div></div><div><div>7. INTERLOCK TO RUN WITH LIGHTS</div><div>8. INTERLOCK TO RUN WITH SHPI/SHPO-A1.</div><div>9. PROVIDE WITH SPEED CONTROLLER.</div></div></div> <div>LEGEND:</div> <div>DUTY: S-SUPPLY, R-RETURN, E-EXHAUST, C-CIRCULATION</div> <div>STYLE: RE-ROOF EXHAUST, WE-WALL EXHAUST, CE-CEILING</div>															

EXISTING AC-UNIT SCHEDULE (FOR INFORMATION ONLY)											
UNIT	LOCATION	"TRANE" MODEL NO.	CFM	MIN. O.A. (CFM)	VOLT/PH	CONDENSER		EVAP. STANDARD		CONTROL DIAGRAM	
						QUANTITY	HP	QUANTITY	HP		
EXISTING AC/1	GRADE MOUNTED, SERVES MP ROOM A106	YCH301C3LOBA	9,000	800	208/3	2	1.0	1	7.5	<div><div>3</div><div>M6.1</div></div>	INTERLOCK WITH KEF-A1. WHEN KEF-A1 IS SWITCHED ON, (E) AC-1 SHALL BE INTERLOCKED TO RUN, IF NOT ALREADY RUNNING, TO PROVIDE KITCHEN HOOD EXHAUST MAKE-UP TRANSFER AIR. TCC SHALL RE-BALANCE (E) AC-1 OSA DAMPER MIN. POSITION FOR 800 CFM.

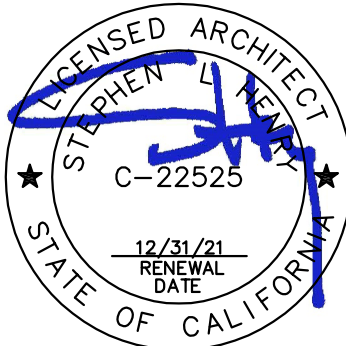
OUTSIDE AIR FAN SCHEDULE											
UNIT	LOCATION	"S&P" MODEL NO.	CFM	SP (IN. W.G.)	DUTY	STYLE	VOLT/PH	WATTS	OPER. WT. (LBS.)	CONTROL DIAGRAM	NOTES
IOAF A1	TEACHERS ROOM A103	PV-125X	125	0.01	OUTSIDE AIR	INLINE	120/1	58	7	5 M6.1	1
IOAF A2	KITCHEN A105	PV-125	60	0.01	OUTSIDE AIR	INLINE	120/1	58	7	5 M6.1	1
<b>NOTES:</b> 1. INTERLOCK TO RUN WITH ASSOCIATED SPLIT SYSTEM UNIT. SEE SPLIT SYSTEM AC UNIT SCHEDULE ABOVE.											



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KITCHEN RENOVATION  
JOE SERNA SCHOOL

MECHANICAL  
SCHEDULES

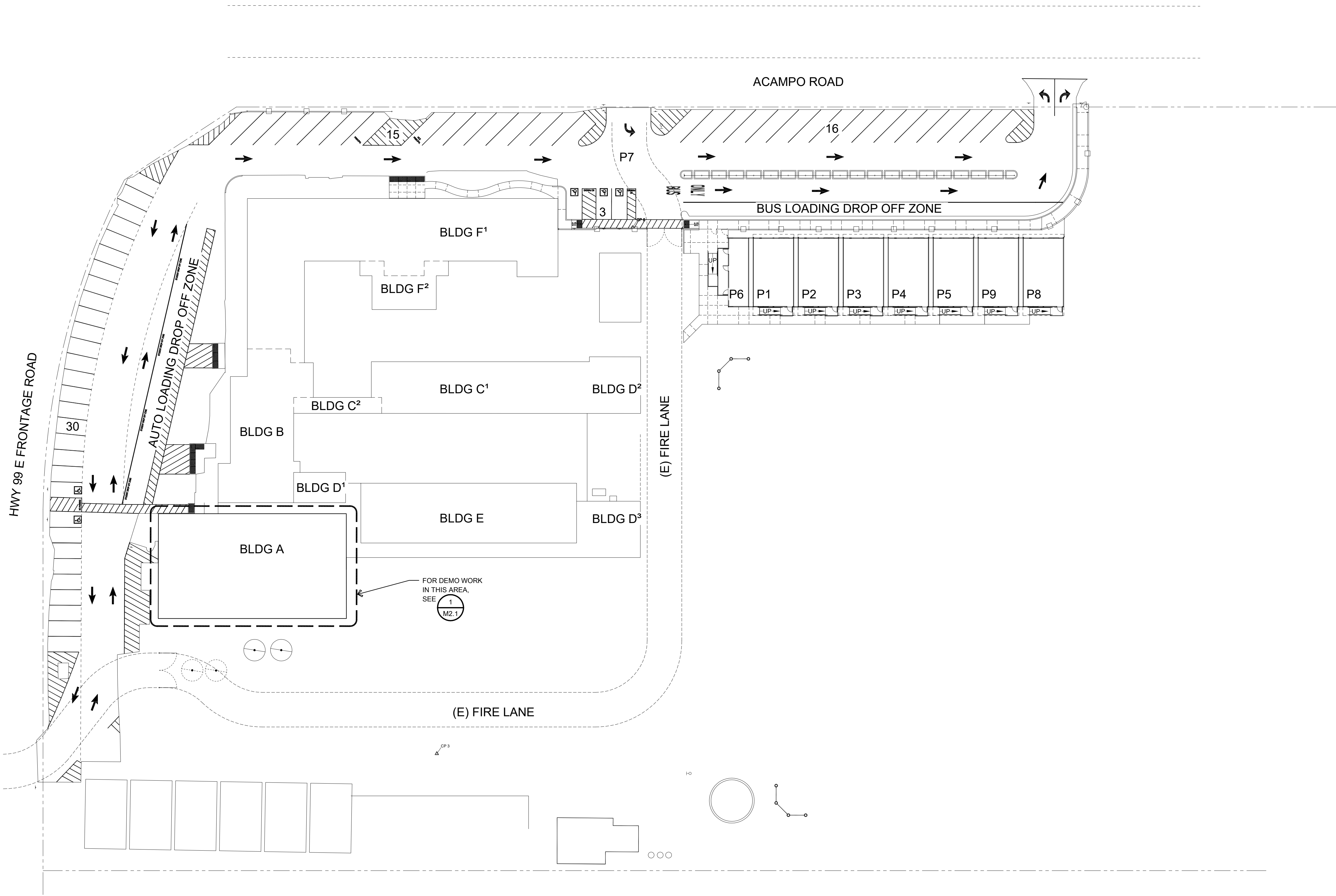


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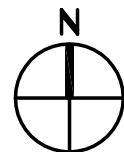


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**MECHANICAL DEMOLITION SITE PLAN**  
SCALE : 1" = 30'-0"

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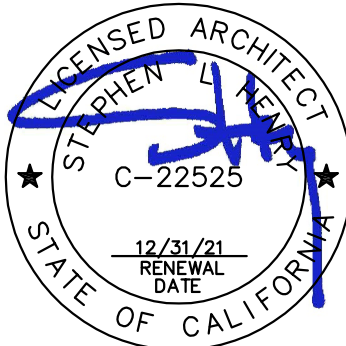


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KITCHEN RENOVATION  
JOE SERNA SCHOOL  
  
MECHANICAL  
DEMOLITION SITE PLAN

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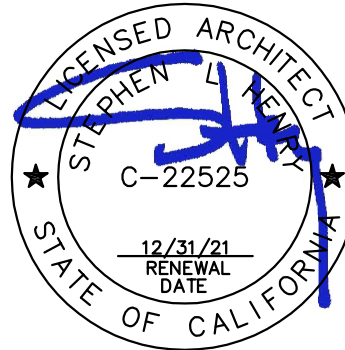


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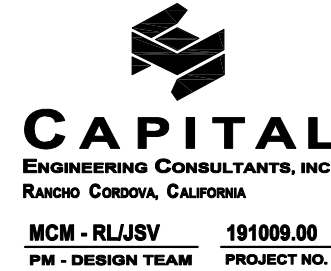
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KITCHEN RENOVATION  
JOE SERNA SCHOOL

MECHANICAL  
SITE PLAN

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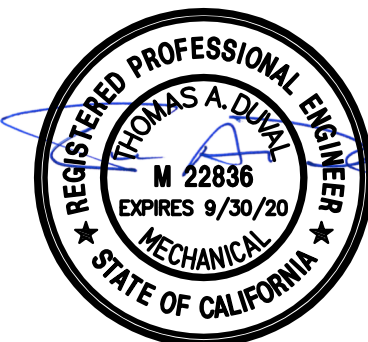


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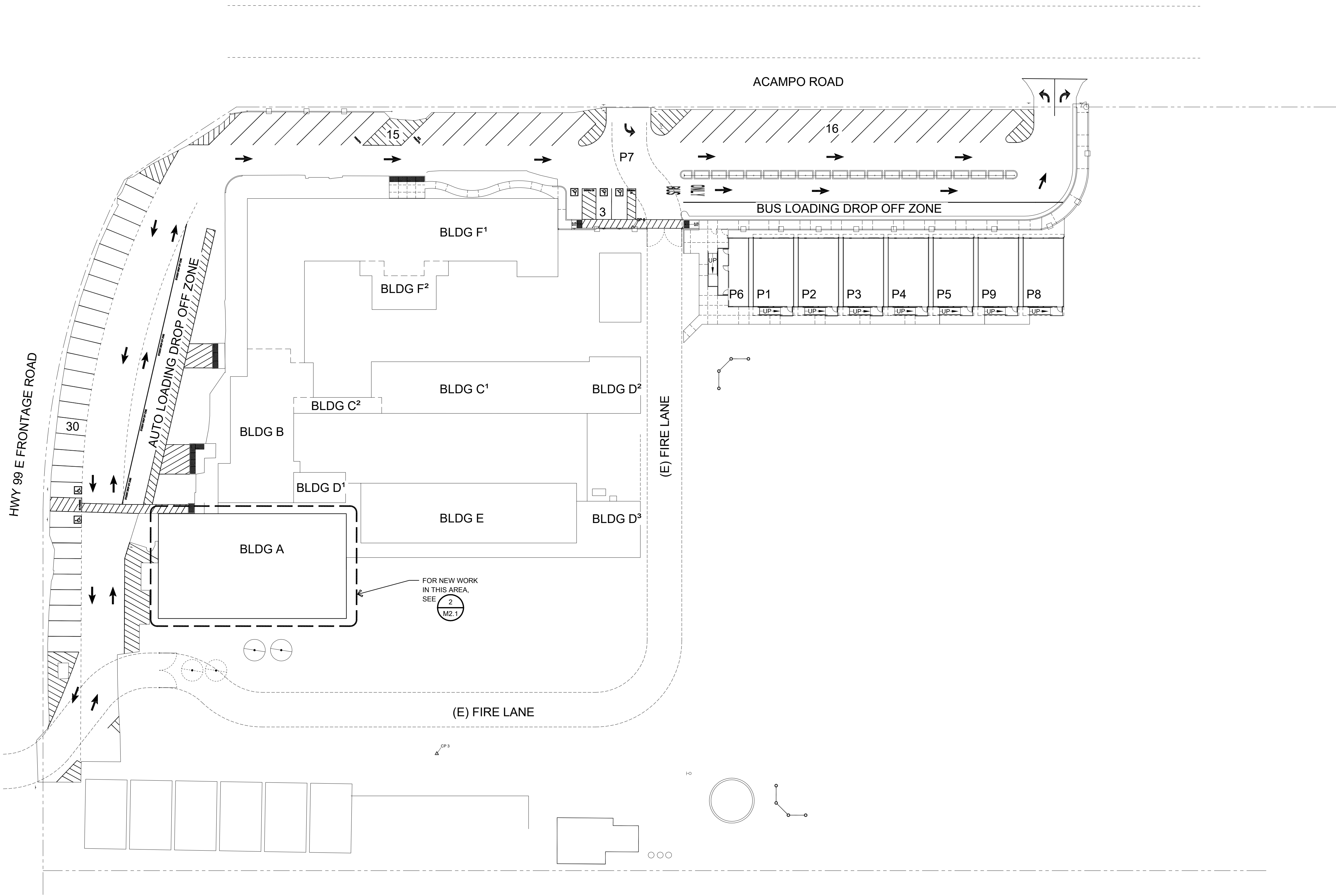
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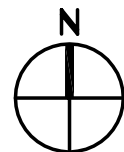
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MECHANICAL SITE PLAN

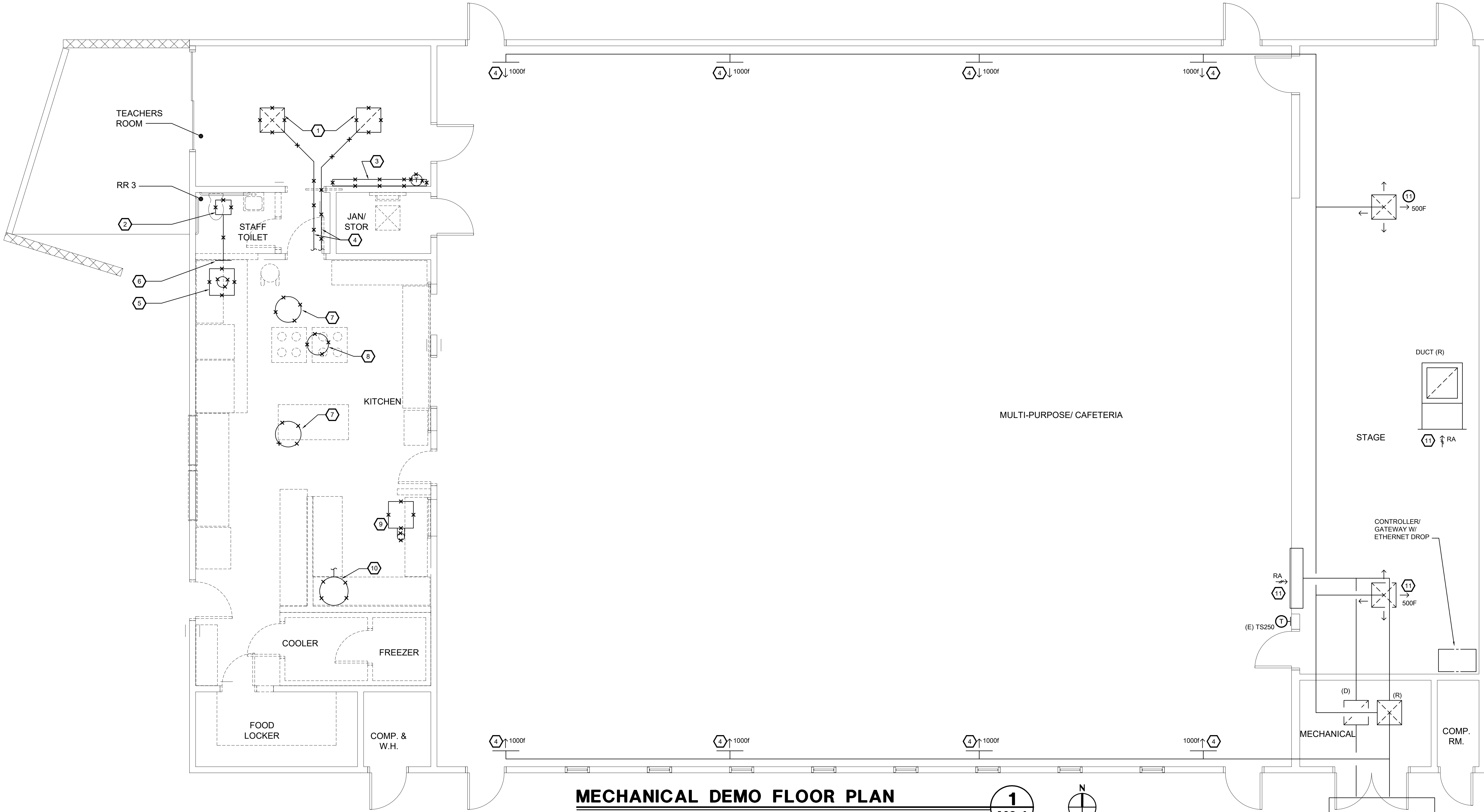
SCALE : 1" = 30'-0"

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MECHANICAL DEMO FLOOR PLAN

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

DEMOLITION GENERAL NOTES

1. -

DEMOLITION SHEET NOTES

1. REMOVE GRILLE, DUCTWORK, ASSOCIATED EQUIPMENT, STAT AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.

2. REMOVE CEILING EXHAUST FAN, DUCTWORK AND SUPPORTS. PREPARE FOR NEW EXHAUST FAN AND DUCTWORK.

3. REMOVE RADIANT HEATER AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.

4. TAKE PRE-DEMOLITION AIR FLOW READINGS IN MULTI-PURPOSE/ CAFETERIA. PROVIDE AIRFLOW READINGS TO ARCHITECT.

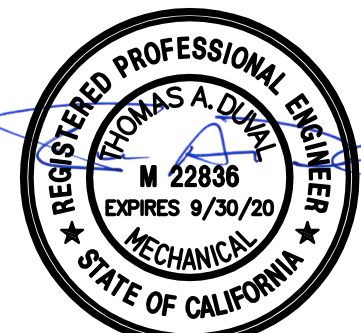
5. REMOVE HOOD, DUCTWORK AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.

6. REMOVE EF EYEBROW, DUCTWORK, EXHAUST FAN AND SUPPORTS. PREPARE FOR NEW EYEBROW OPENING FOR NEW LARGER SIZED EXHAUST FAN. EYEBROW LOCATED IN PLATFORM ABOVE.

7. REMOVE GRILLE(S), DUCTWORK AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.
8. REMOVE HOOD, DUCTWORK AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.

9. REMOVE "CARRIER" UNIT HEATER, FLUE AND SUPPORT. PATCH OPENINGS TO MATCH EXISTING SURFACES.

10. REMOVE DISHWASHER HOOD, EXHAUST DUCT AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.

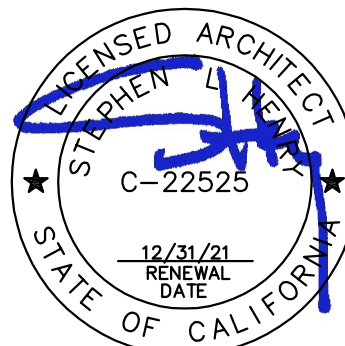


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KITCHEN RENOVATION  
JOE SERNA SCHOOL  
MECHANICAL DEMO FLOOR  
PLAN

CONSULTANT



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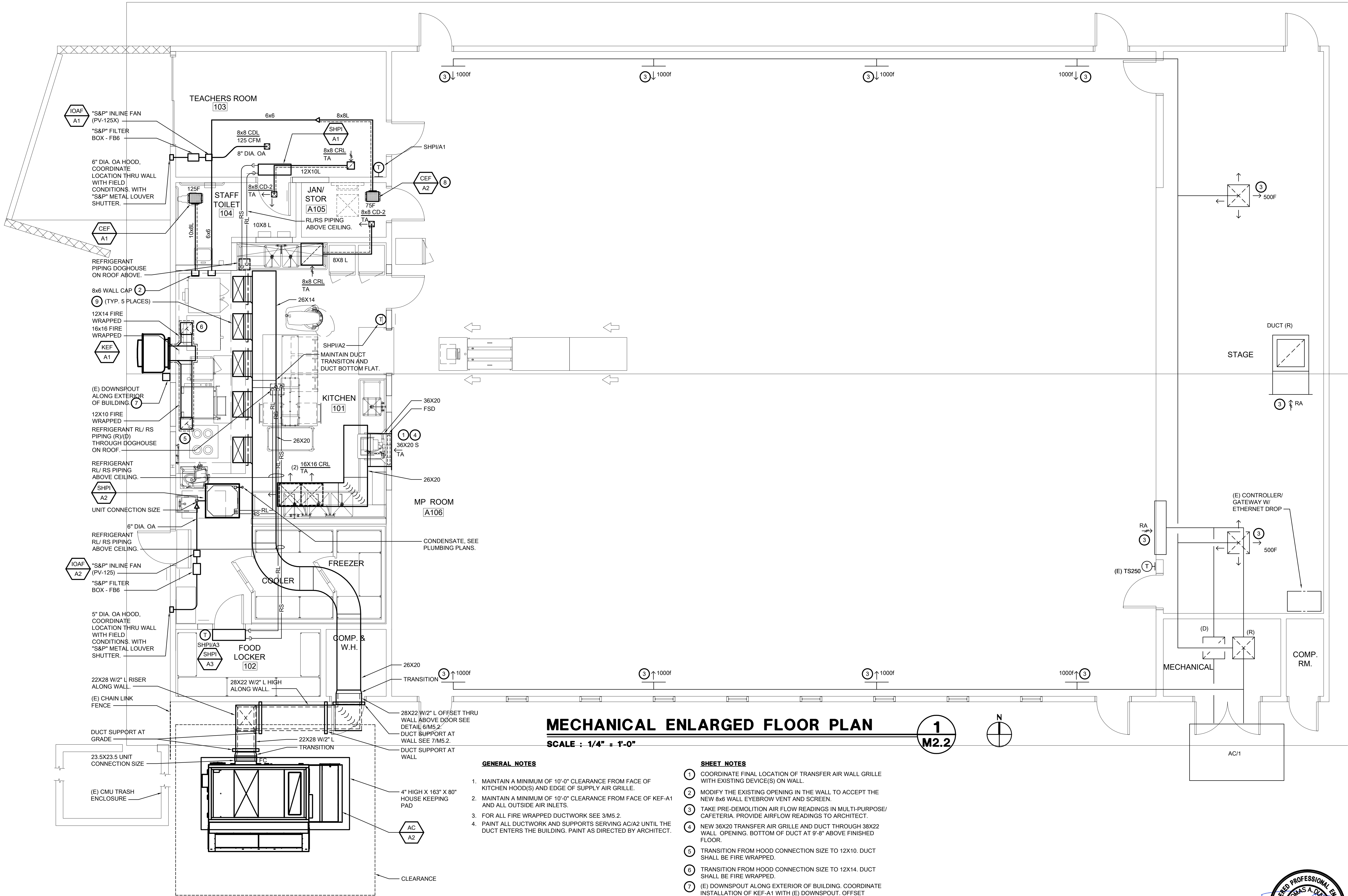
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## MECHANICAL ENLARGED FLOOR PLAN

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

### GENERAL NOTES

1. MAINTAIN A MINIMUM OF 10'-0" CLEARANCE FROM FACE OF KITCHEN HOOD(S) AND EDGE OF SUPPLY AIR GRILLE.
2. MAINTAIN A MINIMUM OF 10'-0" CLEARANCE FROM FACE OF KEF-A1 AND ALL OUTSIDE AIR INLETS.
3. FOR ALL FIRE WRAPPED DUCTWORK SEE 3/M5.2.
4. PAINT ALL DUCTWORK AND SUPPORTS SERVING AC/A2 UNTIL THE DUCT ENTERS THE BUILDING. PAINT AS DIRECTED BY ARCHITECT.

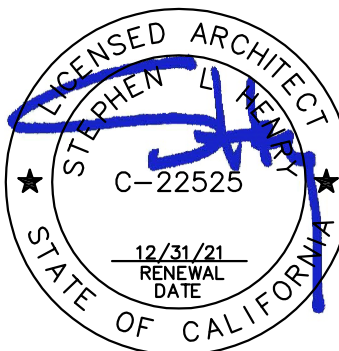
### SHEET NOTES

1. COORDINATE FINAL LOCATION OF TRANSFER AIR WALL GRILLE WITH EXISTING DEVICE(S) ON WALL.
2. MODIFY THE EXISTING OPENING IN THE WALL TO ACCEPT THE NEW 8x6 WALL EYEBROW VENT AND SCREEN.
3. TAKE PRE-DEMOLITION AIR FLOW READINGS IN MULTI-PURPOSE/CAFETERIA. PROVIDE AIRFLOW READINGS TO ARCHITECT.
4. NEW 36X20 TRANSFER AIR GRILLE AND DUCT THROUGH 38X22 WALL OPENING. BOTTOM OF DUCT AT 9'-8" ABOVE FINISHED FLOOR.
5. TRANSITION FROM HOOD CONNECTION SIZE TO 12X10. DUCT SHALL BE FIRE WRAPPED.
6. TRANSITION FROM HOOD CONNECTION SIZE TO 12X14. DUCT SHALL BE FIRE WRAPPED.
7. (E) DOWNSPOUT ALONG EXTERIOR OF BUILDING. COORDINATE INSTALLATION OF KEF-A1 WITH (E) DOWNSPOUT. OFFSET DOWNSPOUT TO THE OTHER SIDE OF THE WINDOW IF SITE CONDITIONS DO NOT PERMIT INSTALLATION AS NOTED.
8. COORDINATE FINAL LOCATION IN THE CEILING WITH ALL OTHER DEVICES AND ATTIC ACCESS.
9. OFFSET AND CONNECT 28X12 SA DUCT TO KITCHEN HOOD CONNECTION WITH MANUAL VOLUME DAMPER, TYPICAL OF 5 PLACES.

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## KITCHEN RENOVATION JOE SERNA SCHOOL MECHANICAL ENLARGED FLOOR PLAN

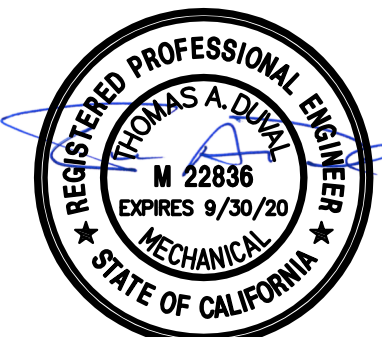
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M2.2

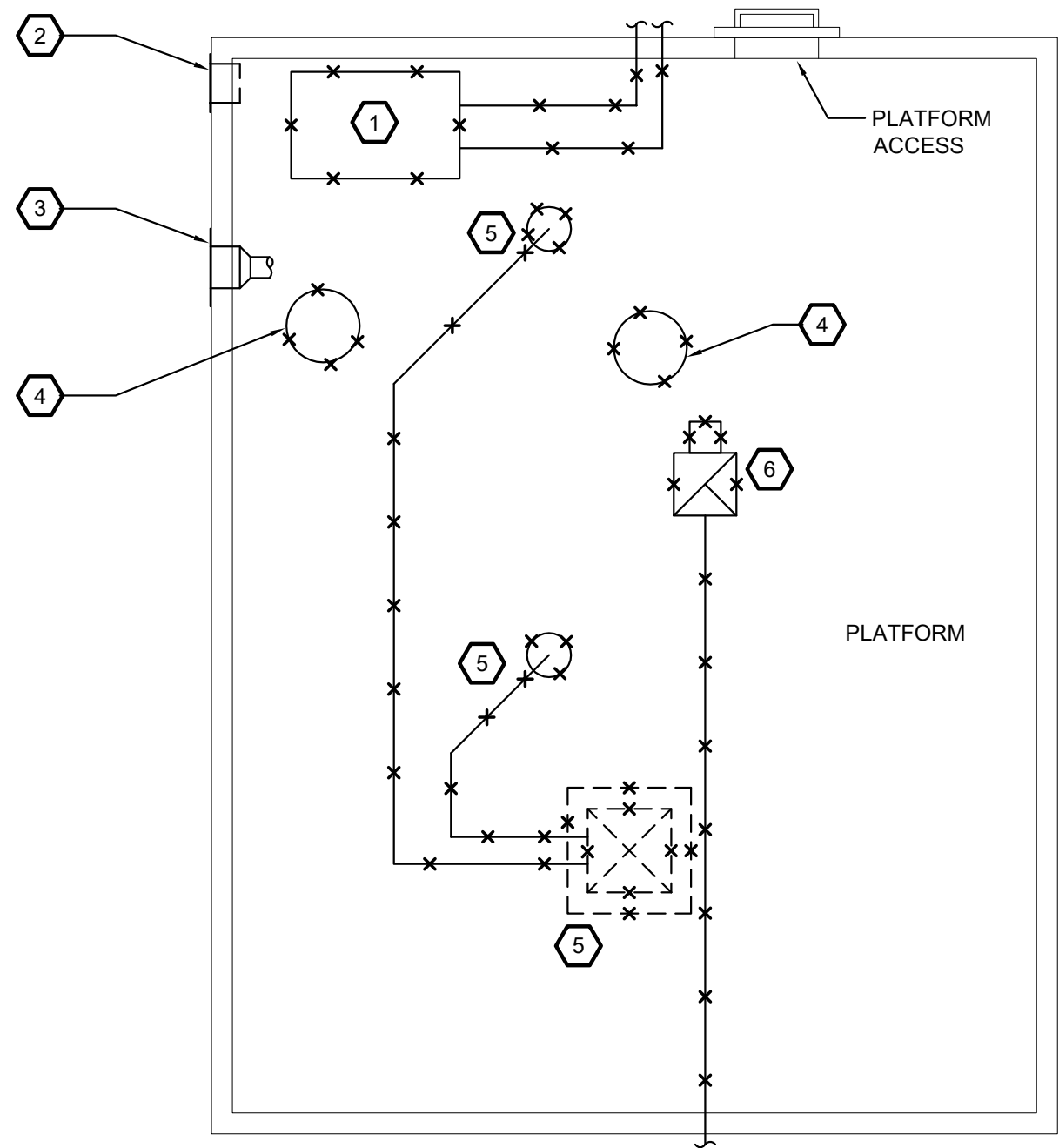
OF SHEETS



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#### DEMOLITION GENERAL NOTES

1. NOT ALL DEMOLITION GENERAL NOTES OR DEMOLITION SHEET NOTES MAY APPLY TO EVERY DRAWING.

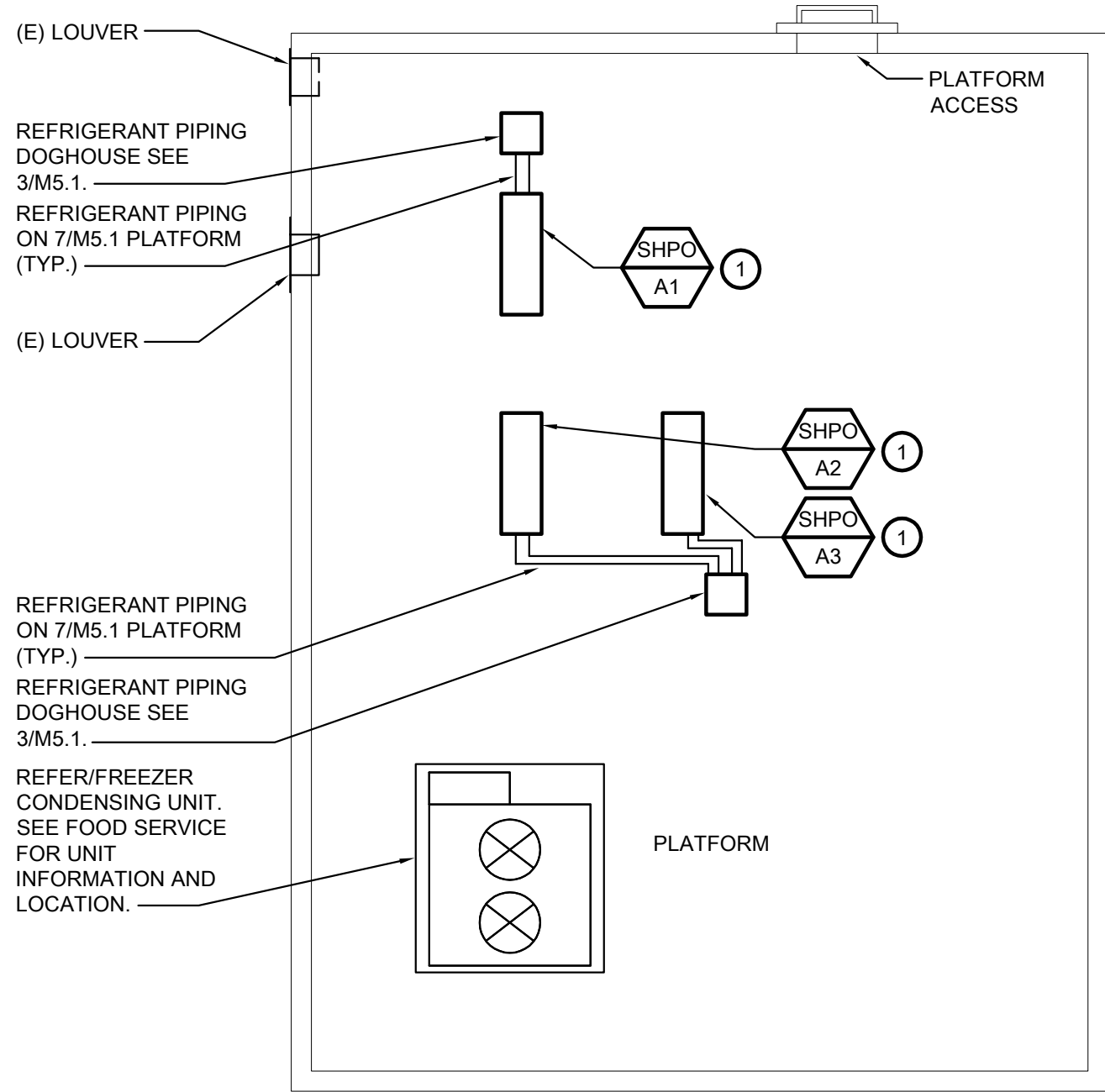
#### DEMOLITION SHEET NOTES

- 1 REMOVE CAF/02, CURB AND DUCTWORK. PATCH OPENINGS TO MATCH EXISTING SURFACES.
- 2 REMOVE LOUVER, DUCTWORK, ASSOCIATED EQUIPMENT AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.
- 3 LOUVER AND ASSOCIATED DUCTWORK TO REMAIN.
- 4 REMOVE EXHAUST FAN, CURB, DUCTWORK IN SPACE AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.
- 5 REMOVE GRILLE(S), DUCTWORK AND SUPPORTS. REMOVE ASSOCIATED EVAP. COOLER EQUIPMENT AND CURB ON ROOF. PATCH OPENINGS TO MATCH EXISTING SURFACES.
- 6 REMOVE UTILITY EXHAUST FAN, CURB, DUCTWORK IN SPACE AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.

## MECHANICAL DEMO PLATFORM PLAN

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

1  
M2.3



#### GENERAL NOTES

1. FOR PIPING CONNECTIONS TO NEW AC-UNITS SEE PLUMBING PLANS, TYPICAL.
2. NOT ALL GENERAL NOTES OR SHEET NOTES MAY APPLY TO EVERY DRAWING.

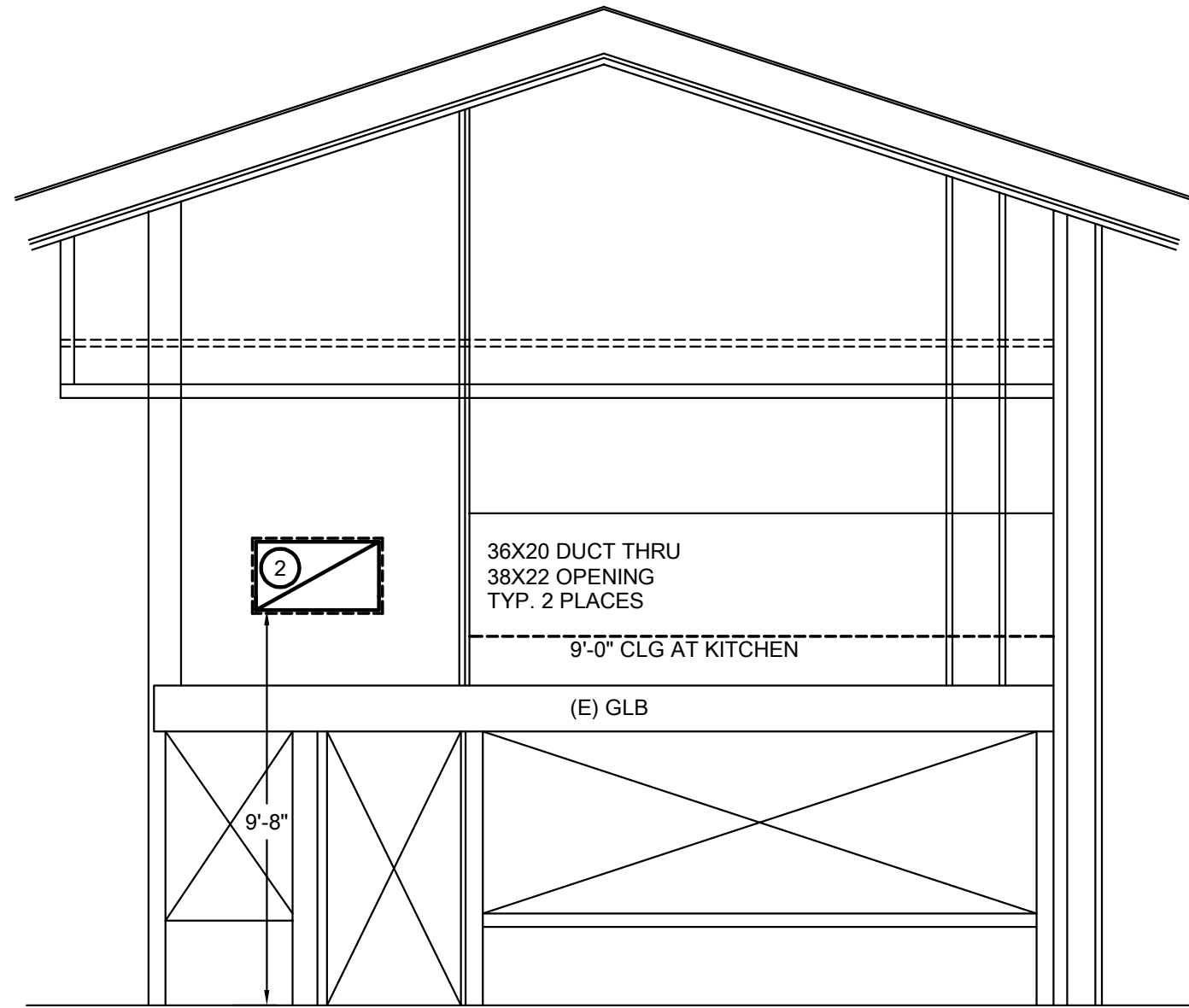
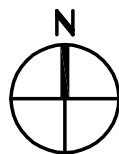
#### SHEET NOTES

- 1 SHPI/A1, SHPI/A2, AND SHPI/A3 LOCATED ON PLATFORM ROOF
- 2 NEW 36X20 TRANSFER AIR GRILLE W/ FSD AND DUCT THROUGH 38X22 WALL. OPENING. BOTTOM OF DUCT AT 9'-8" ABOVE FINISHED FLOOR.

## MECHANICAL PLATFORM PLAN

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

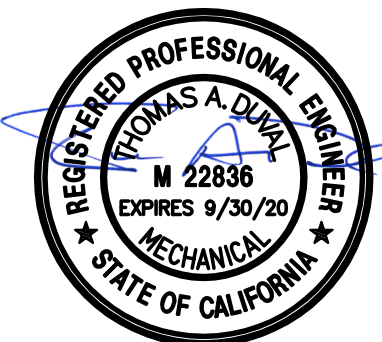
2  
M2.3



## MECHANICAL SECTION AT KITHEN MU WALL

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

3  
M2.3

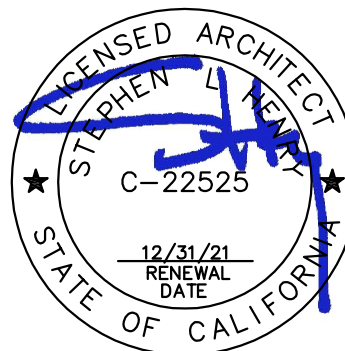


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KITCHEN RENOVATION  
JOE SERNA SCHOOL

MECHANICAL ENLARGED  
PLATFORM PLANS

CONSULTANT



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PM - DESIGN TEAM PROJECT NO.

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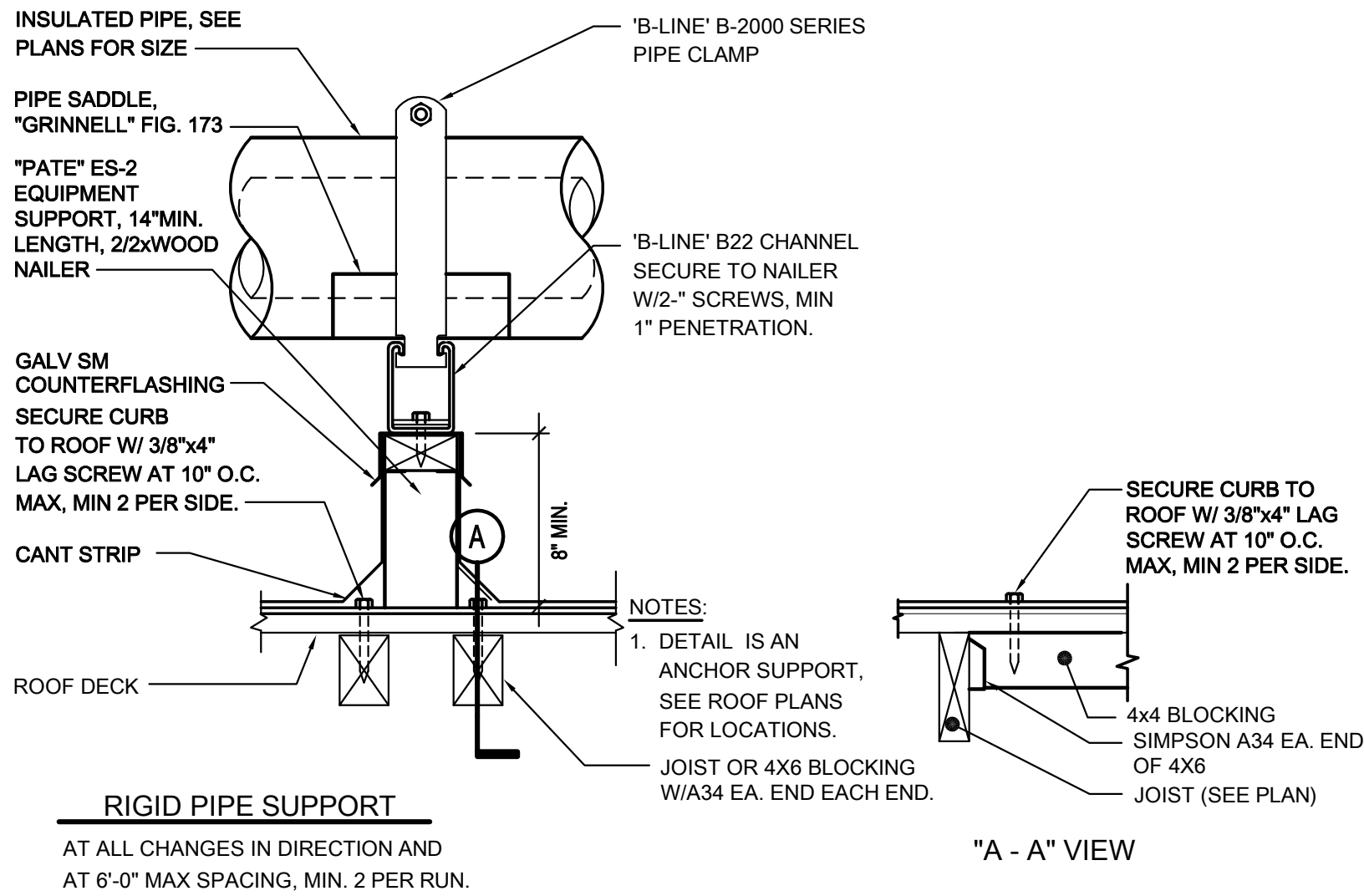
M2.3

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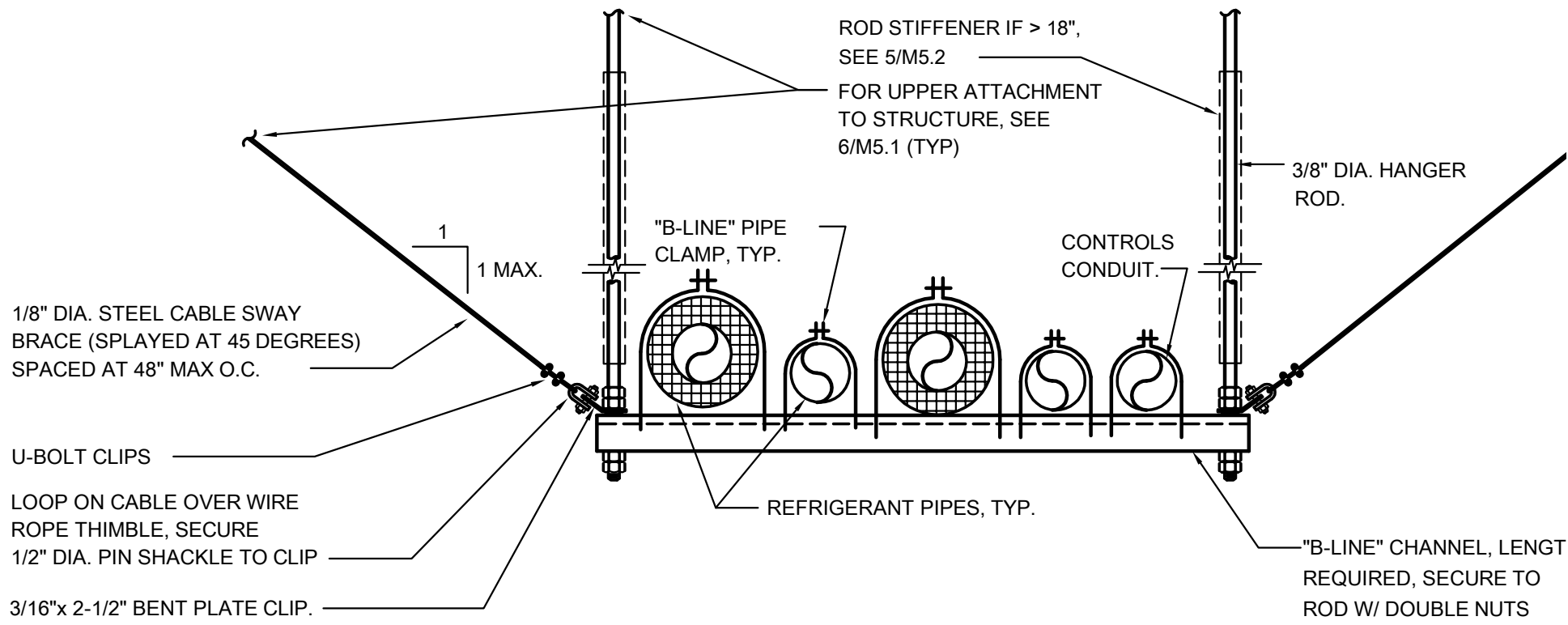
STEEL PIPE, NOMINAL SIZE OF PIPE (IN.)	SPACING OF SUPPORTS (FT.)	NOMINAL SIZE OF TUBING SMOOTH-WALL (IN. O.D.)	SPACING OF SUPPORTS (FT.)
1/2	6	1/2	4
3/4 OR 1	8	5/8 OR 3/4	6
1 1/4 OR LARGER (HORZ.)	10	7/8 OR 1 (HORZ.)	8
1 1/4 OR LARGER (VERT.)	EVERY FLOOR LEVEL	1 OR LAGER (VERT.)	EVERY FLOOR LEVEL



## REFRIGERANT PIPE AT PLATFORM DETAIL

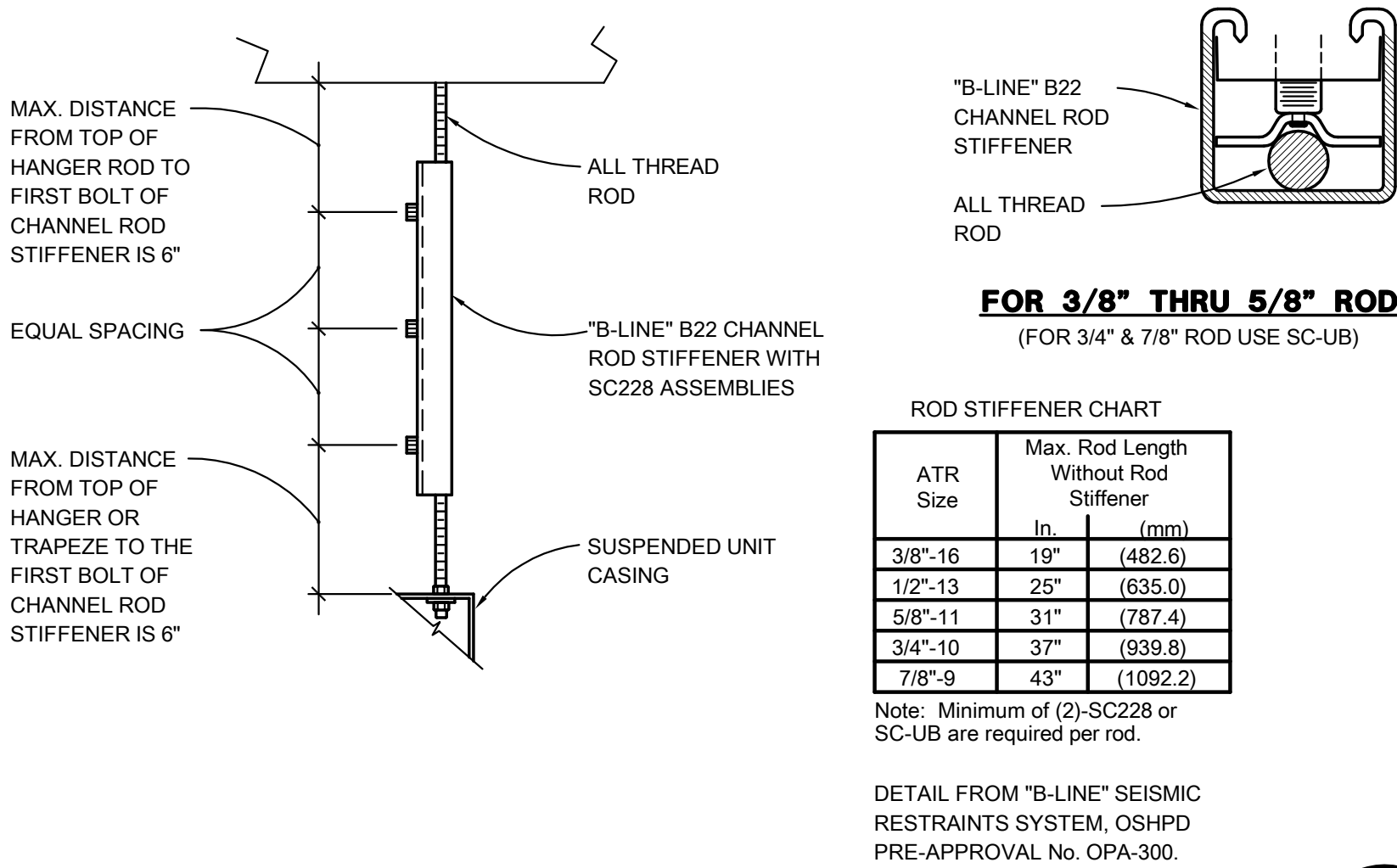
SCALE : NONE

COORDINATE ROUTING OF ROOF MOUNTED PIPING AND CONDUITS TO ROUTE ON SAME SUPPORT.



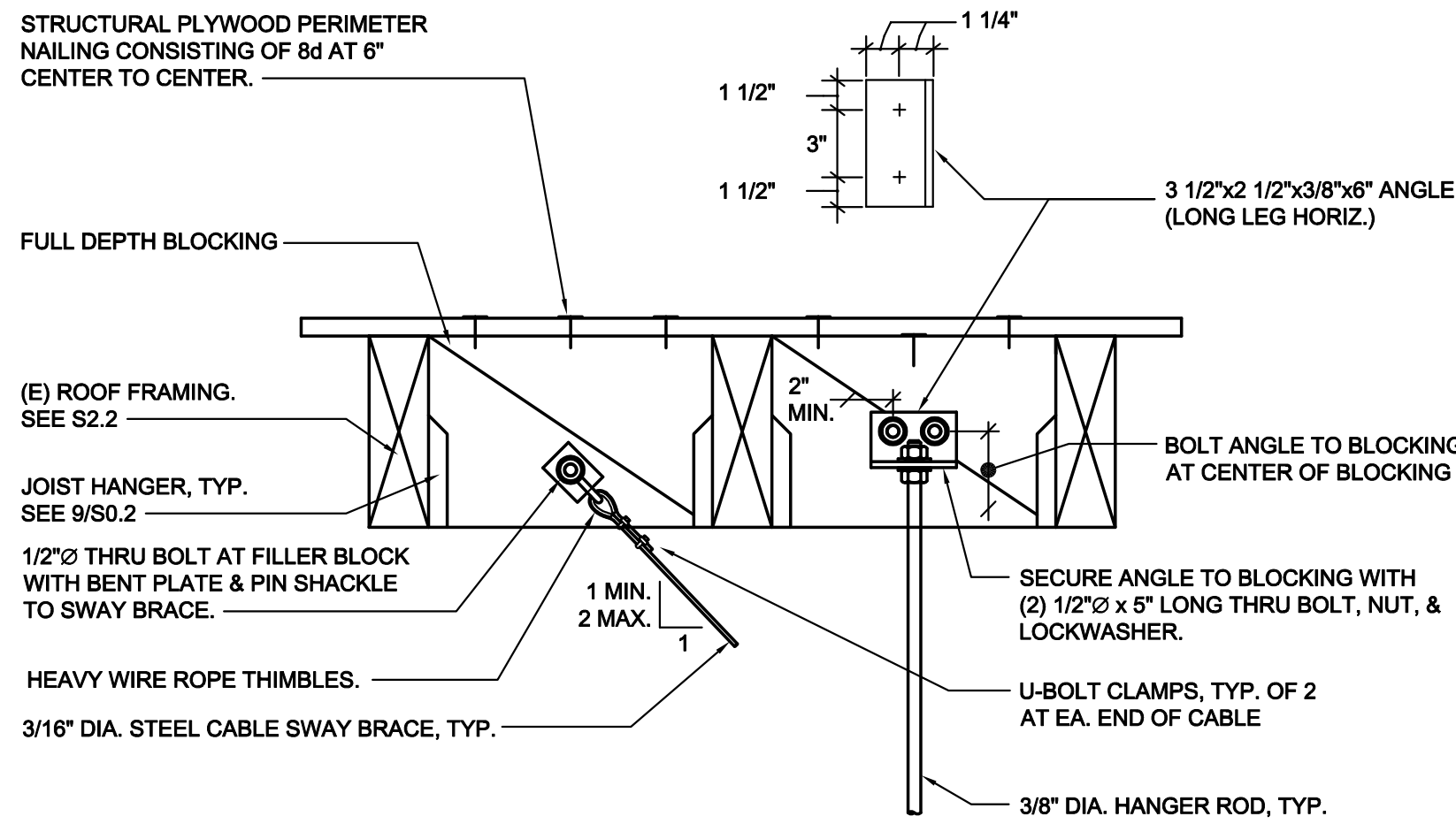
## REFRIGERANT PIPING SUPPORT

SCALE : NONE



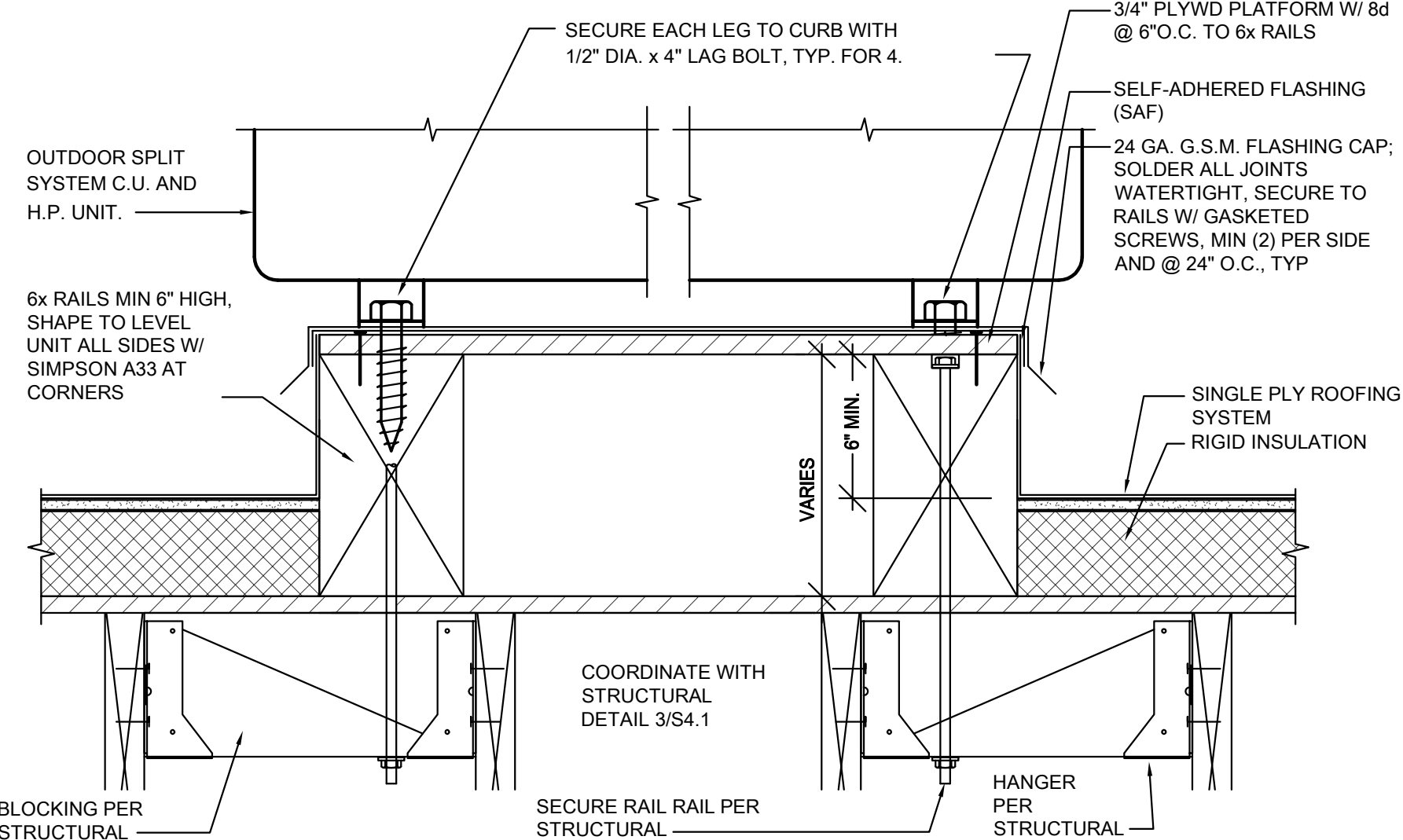
## ROD STIFFENER DETAIL

SCALE : NONE



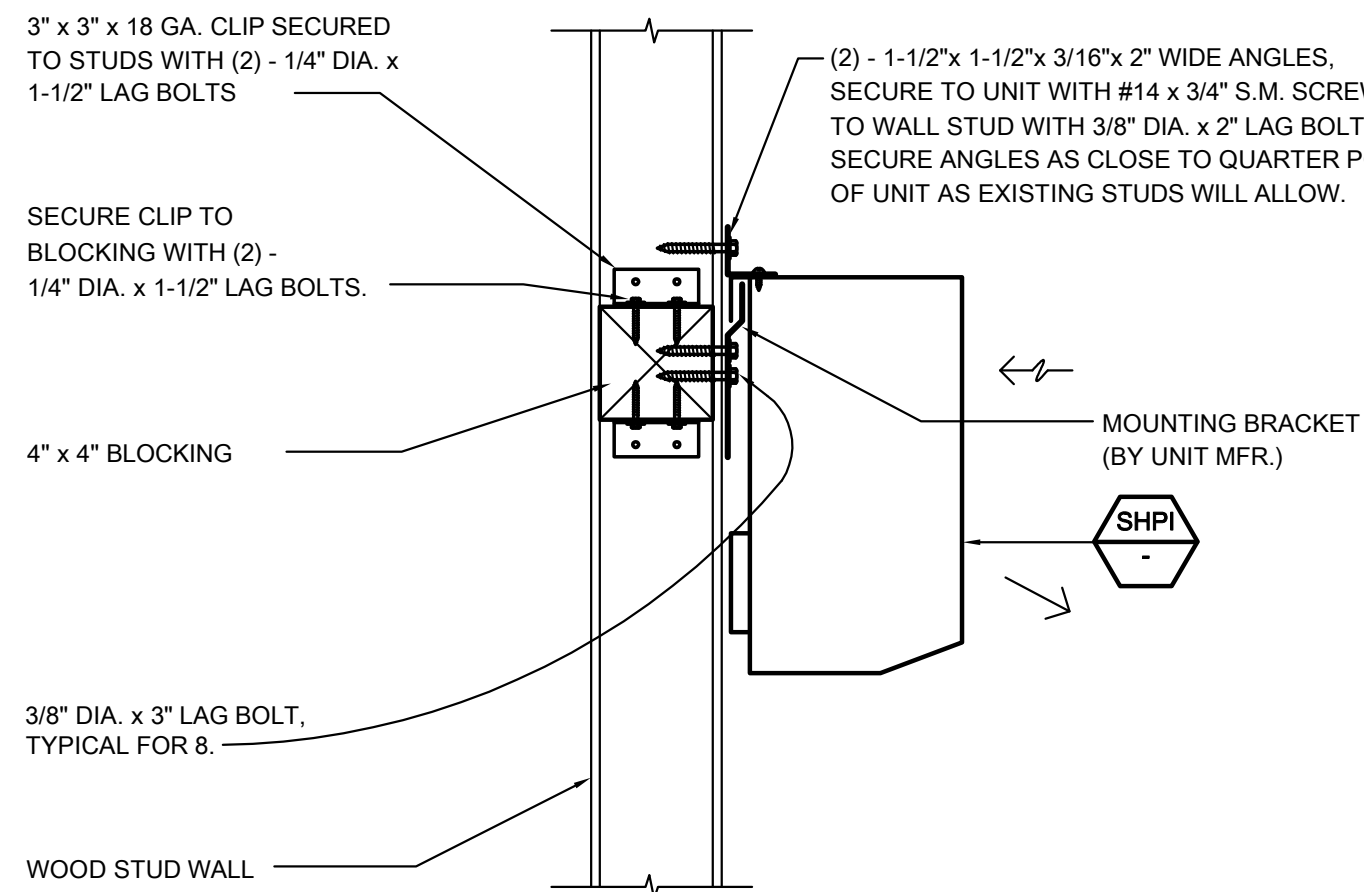
## HANGER ROD/CABLE UPPER ATTACHMENT

SCALE : NONE



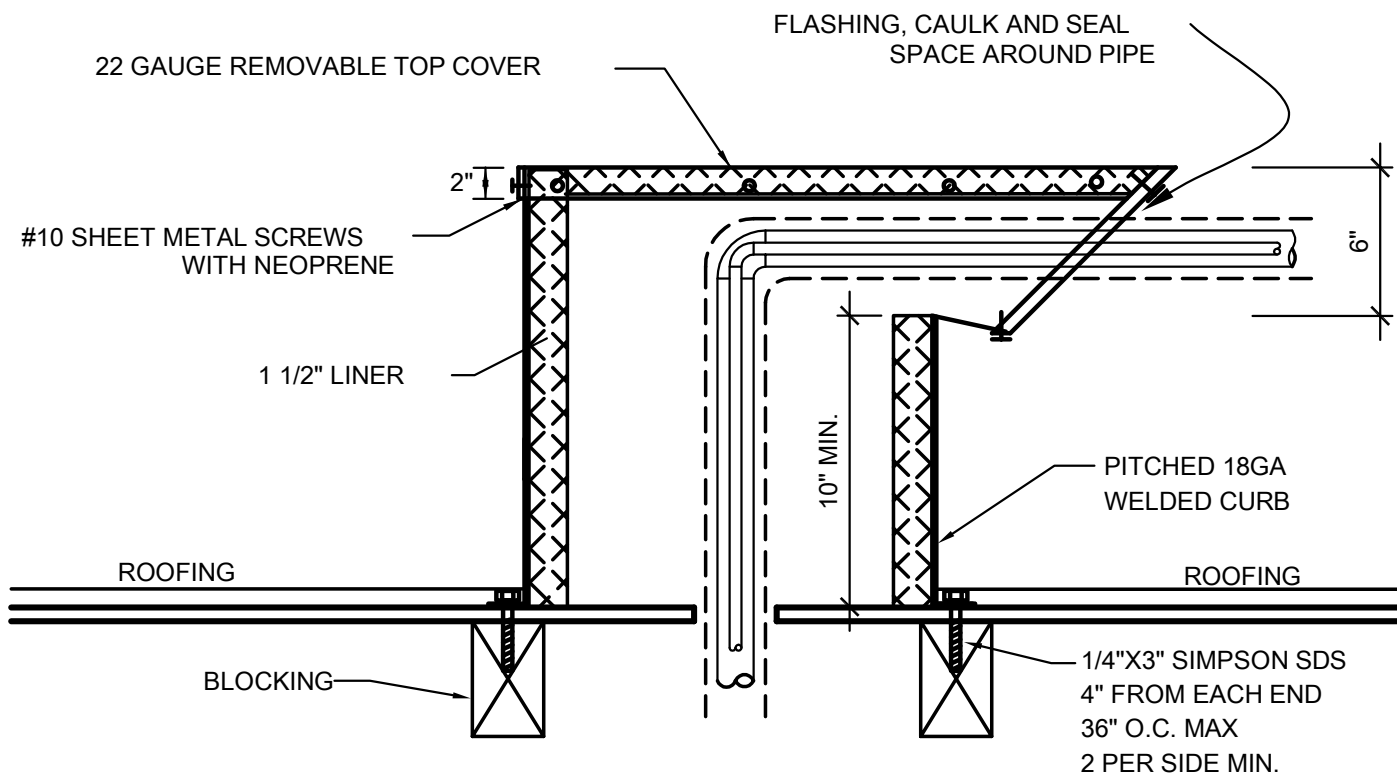
## SPLIT HEAT PUMP OUTDOOR UNIT MTG.

SCALE : NONE



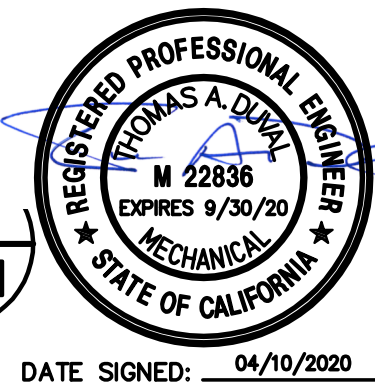
## INDOOR SPLIT SHPI UNIT MOUNTING

SCALE : NONE



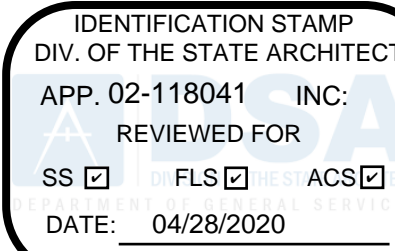
## PIPE THRU ROOF SAFE DETAIL - WOOD

SCALE : NONE

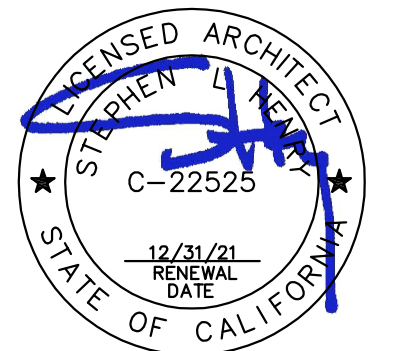


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KITCHEN RENOVATION  
JOE SERNA SCHOOL

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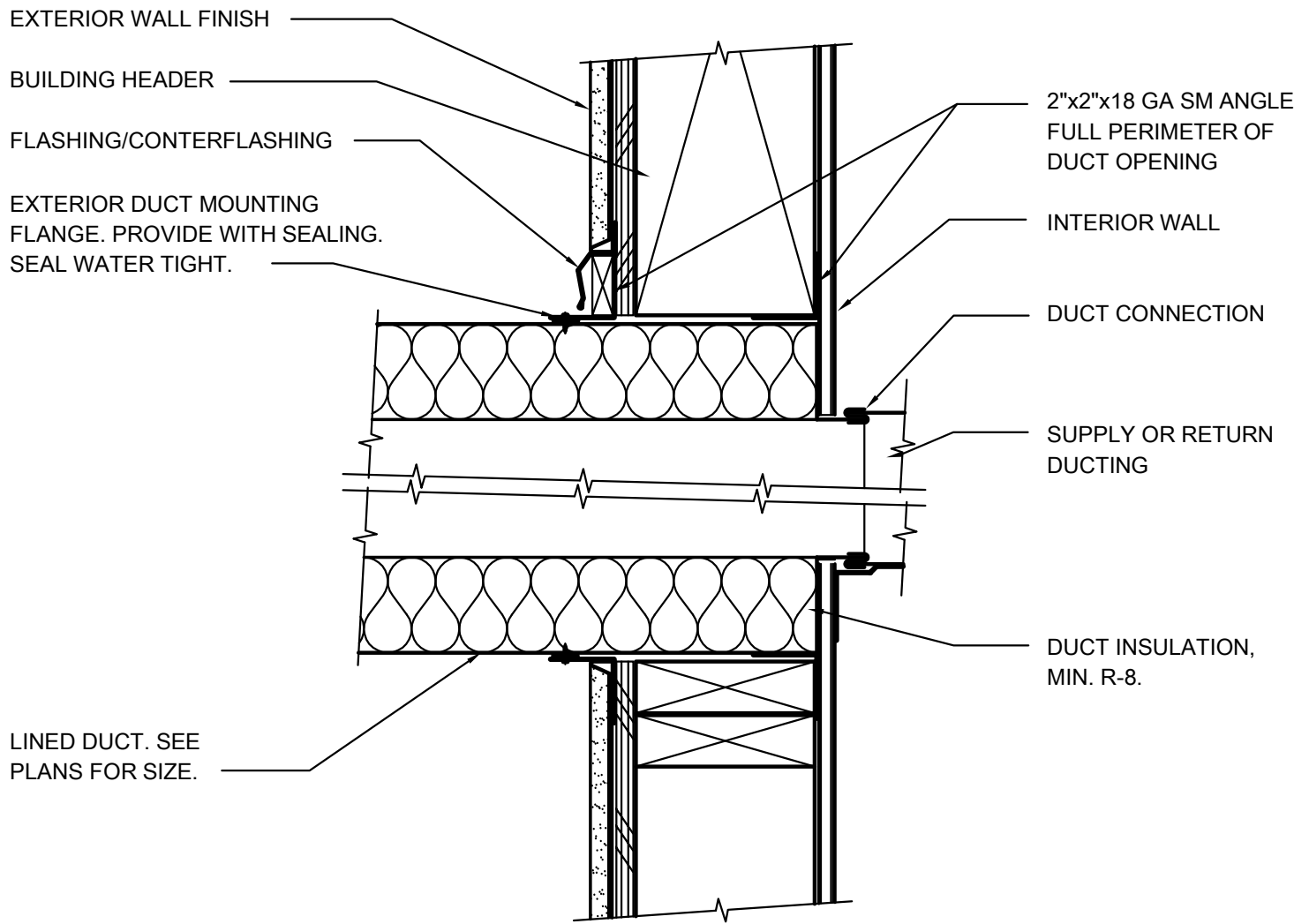
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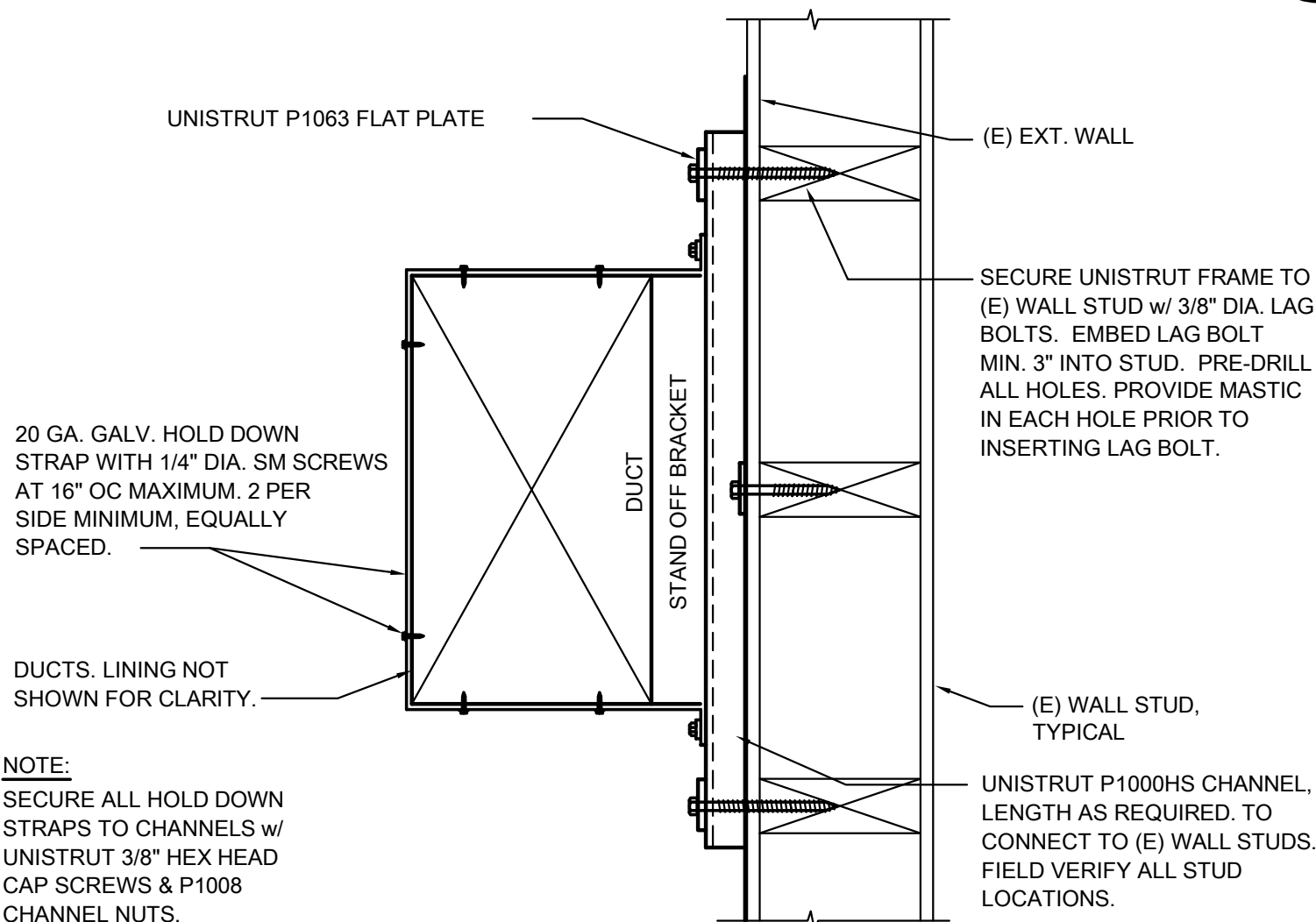


LINED DUCT WALL PENETRATION

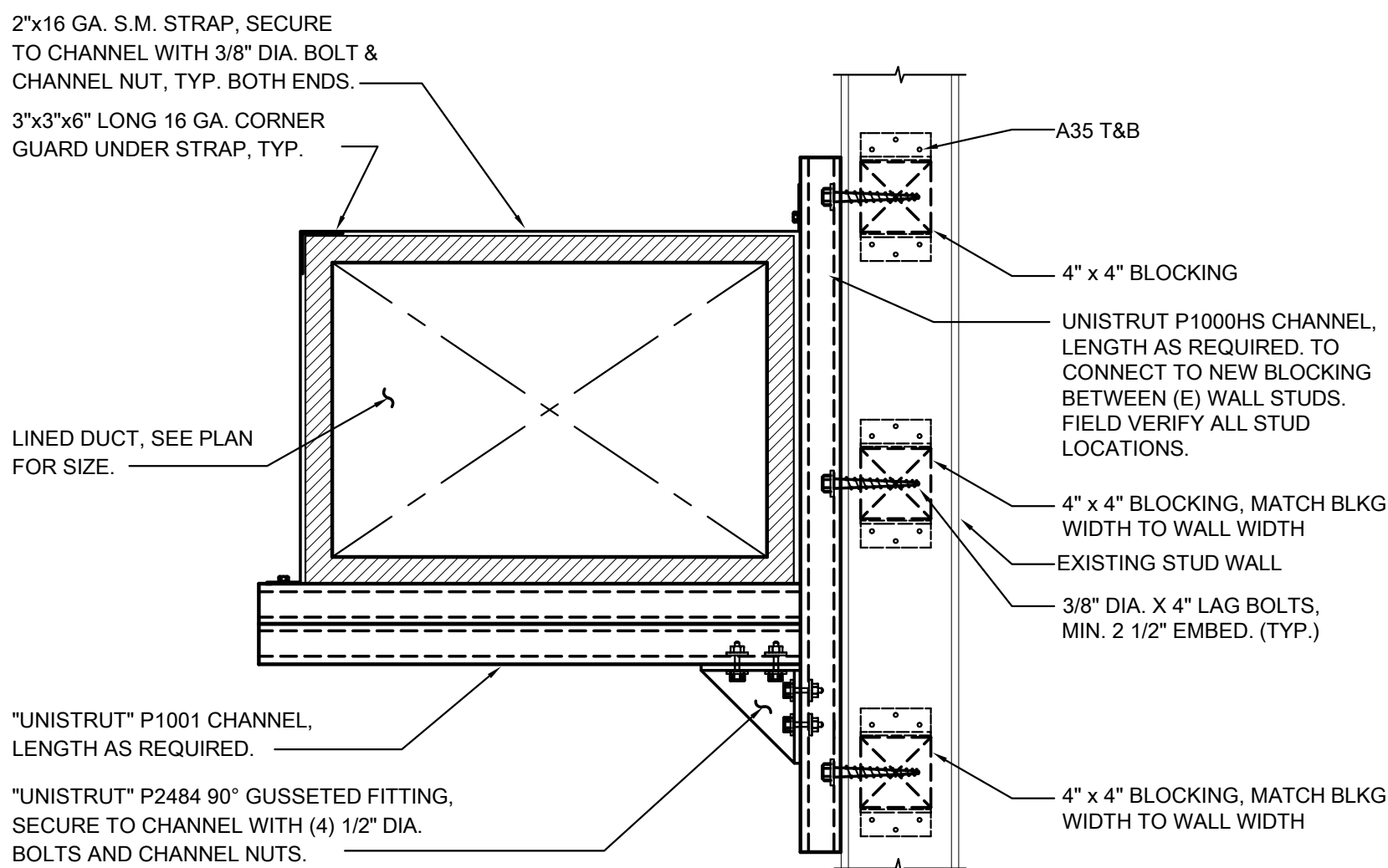
SCALE : NONE

6

M5.2



VERTICAL RUN DUCTWORK



HORIZONTAL RUN DUCTWORK

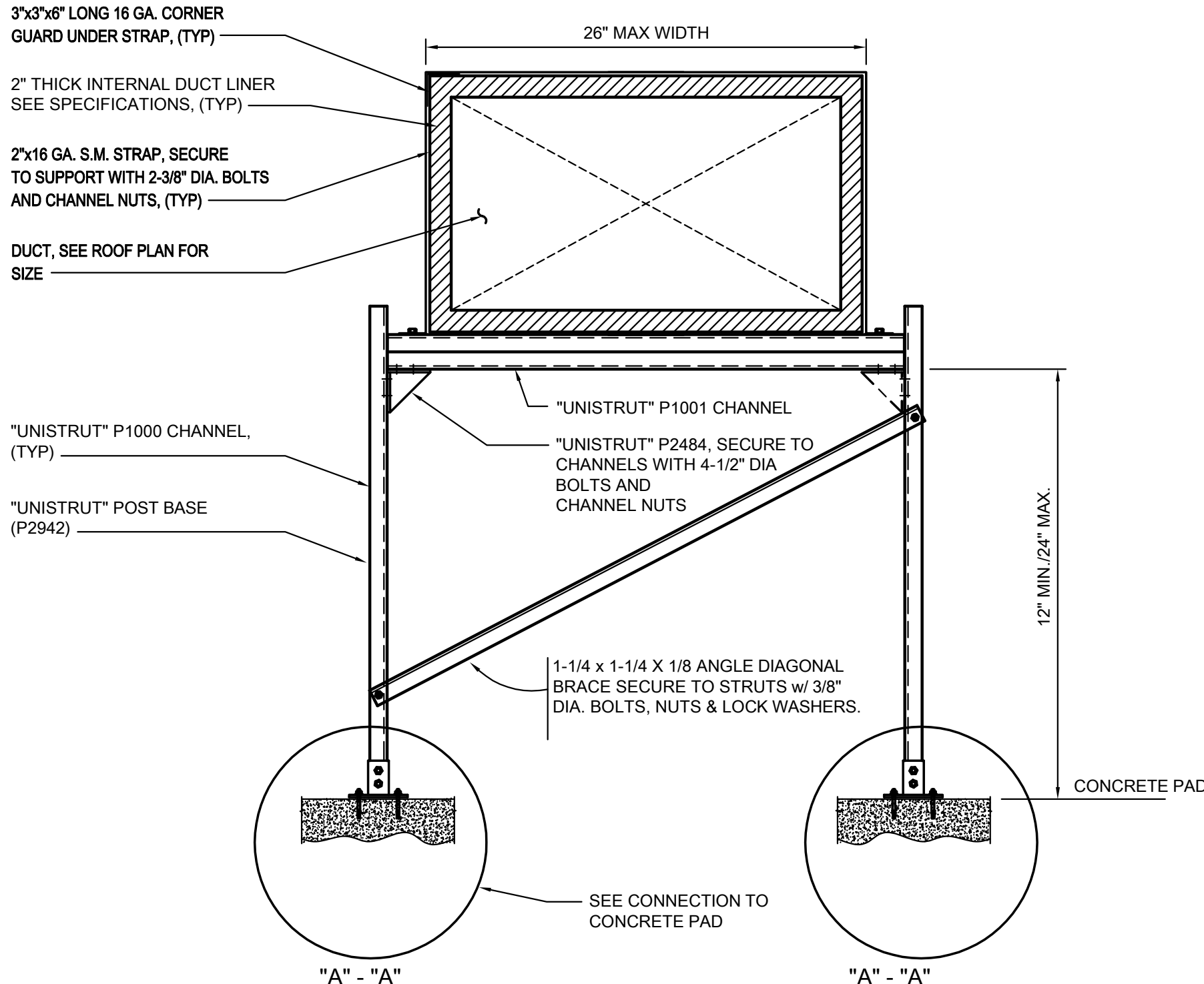
NOTE: PAINT ALL COMPONENTS AS DIRECTED BY ARCHITECT. PROVIDE SUPPORT AT 10'-0" INTERVALS MAX.

DUCT SUPPORT AT WALL

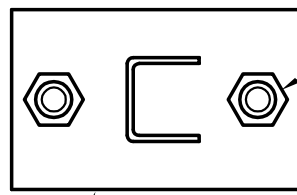
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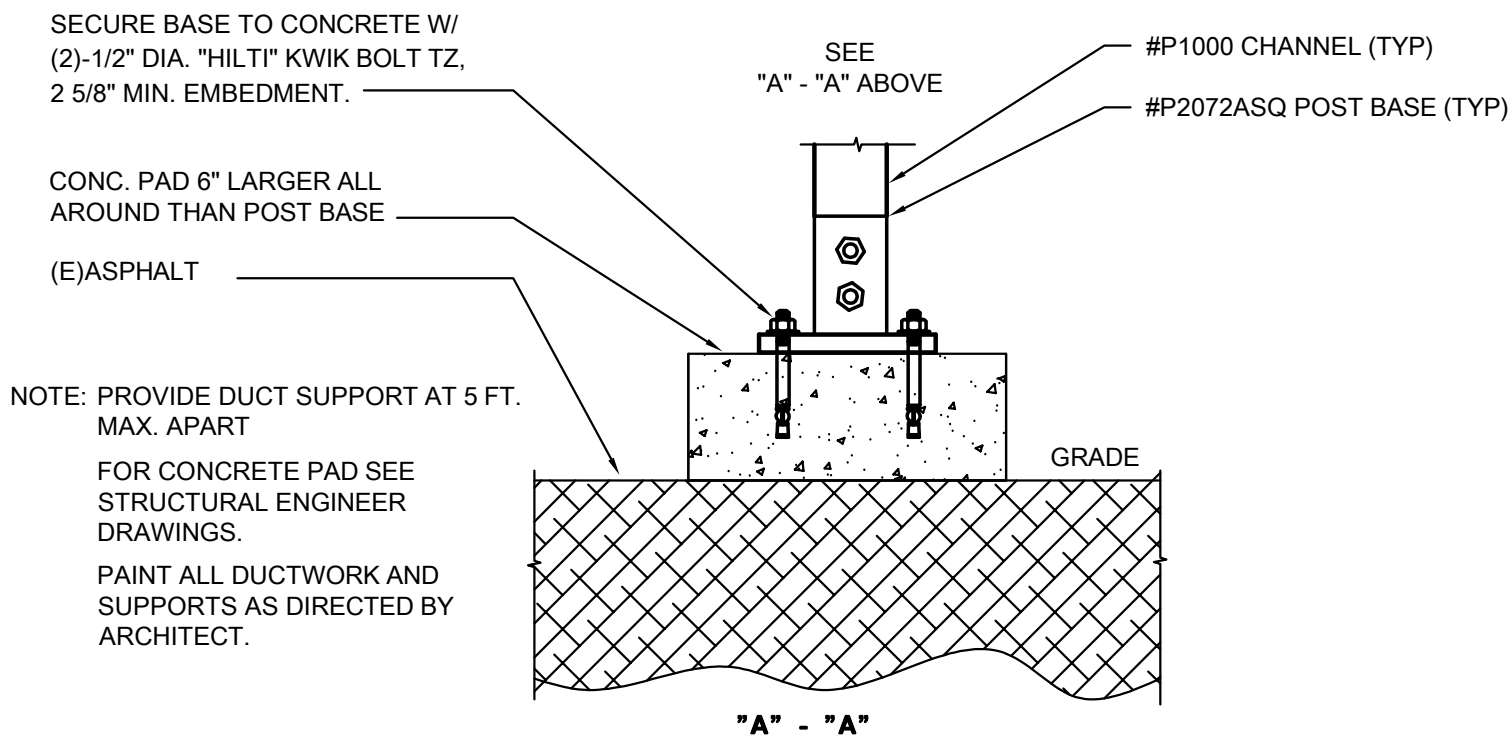
M5.2



SECTION ABOVE AND DUCT BRACE



PLAN AT MOUNTING RAIL

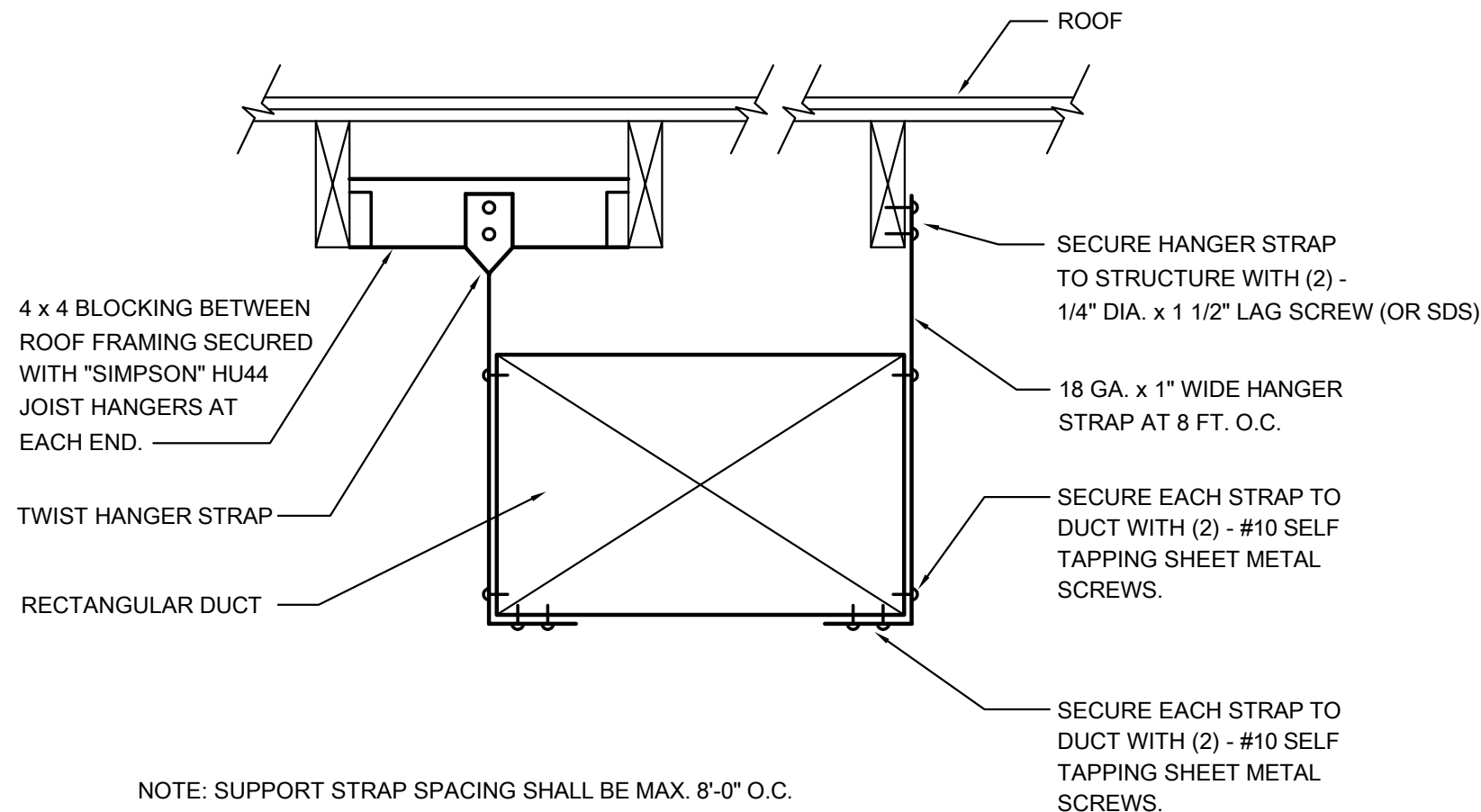


DUCT SUPPORT ON GRADE

SCALE : NONE

4

M5.2

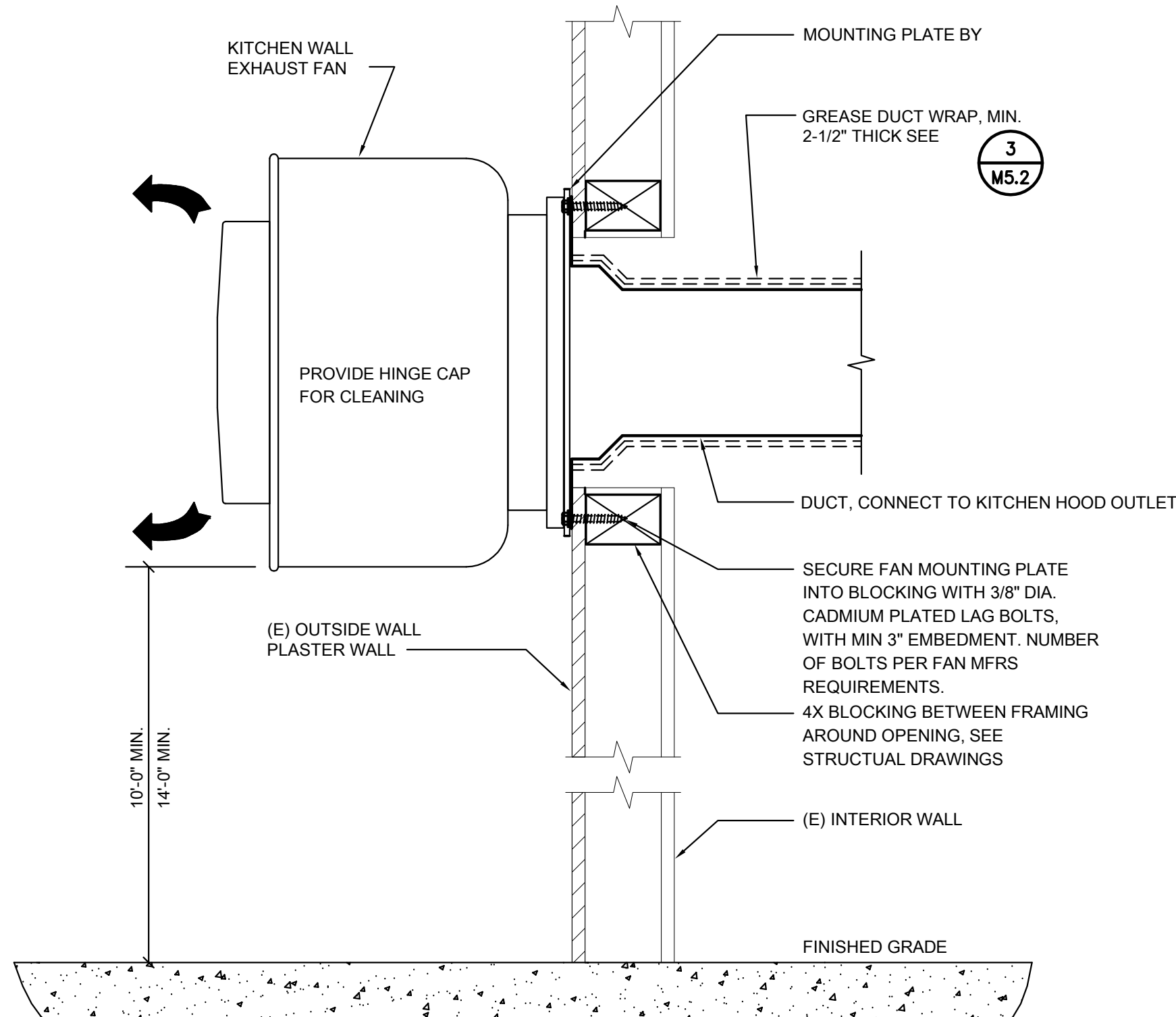


TYPICAL CONCEALED DUCT SUPPORT

SCALE : NONE

5

M5.2

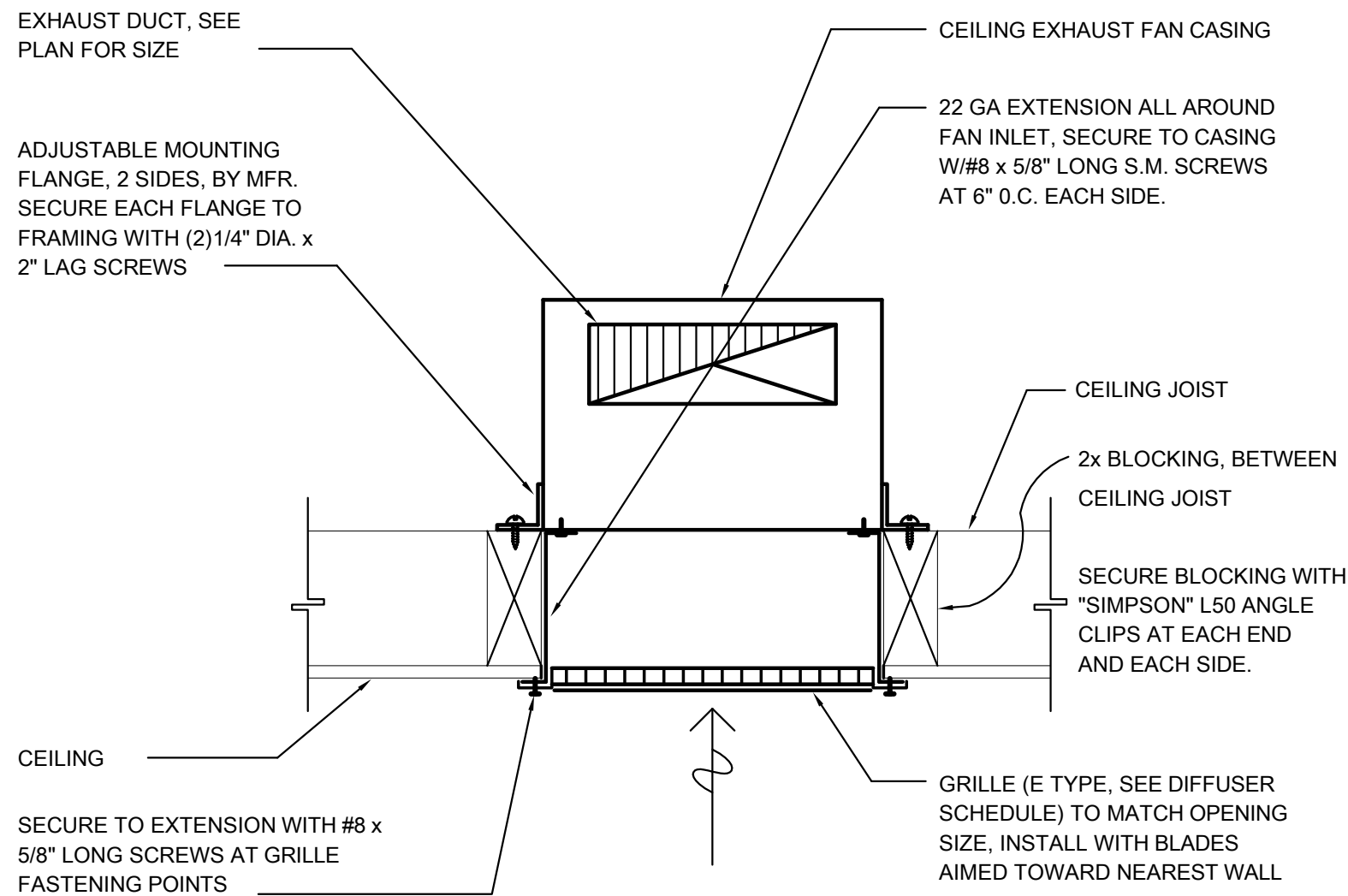


KITCHEN EXHAUST FAN MOUNTING

SCALE : NONE

1

M5.2

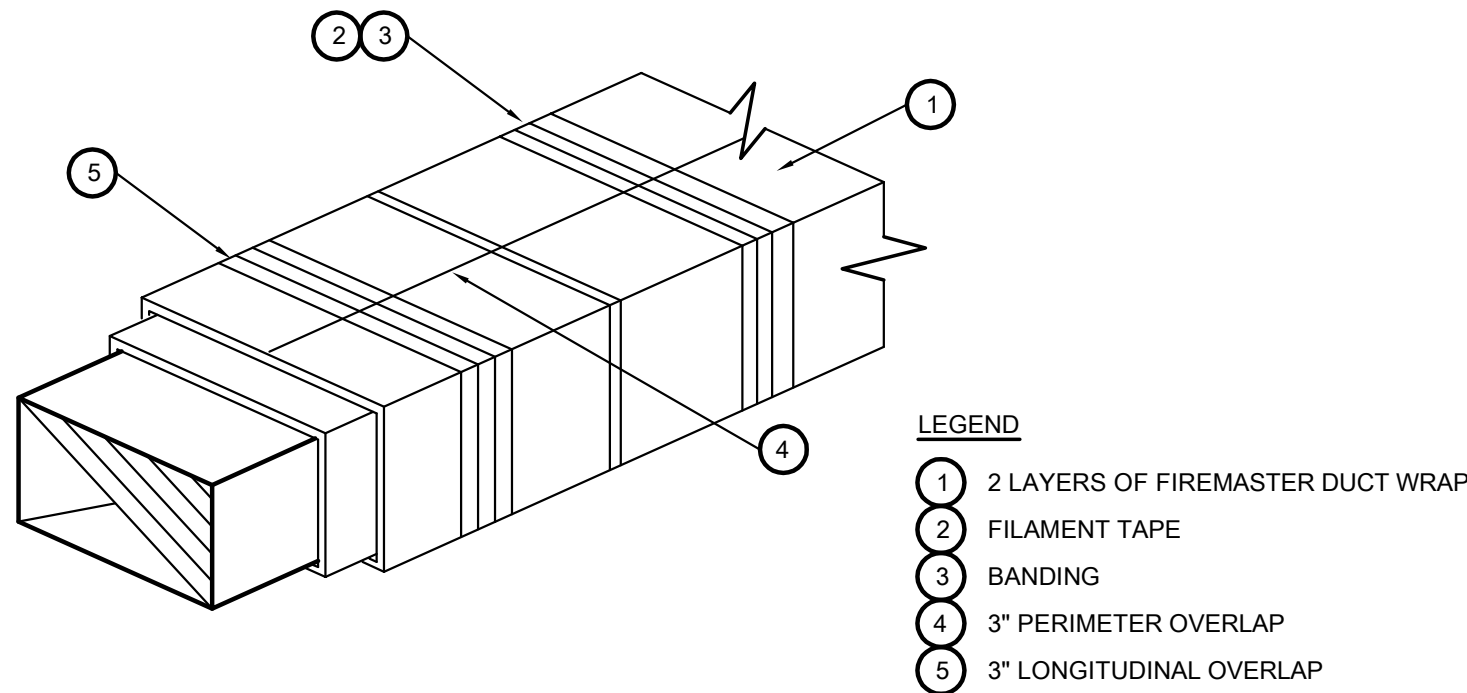


CEILING EXHAUST FAN DETAIL

SCALE : NONE

2

M5.2



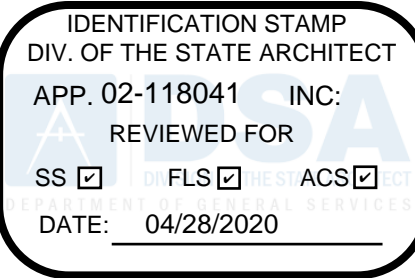
GREASE DUCT WRAP

SCALE : NONE

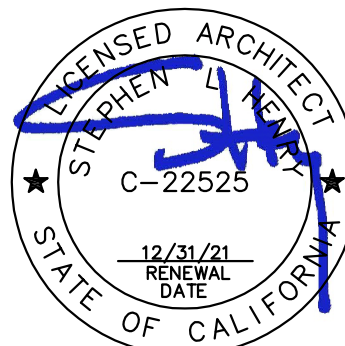
3

M5.2

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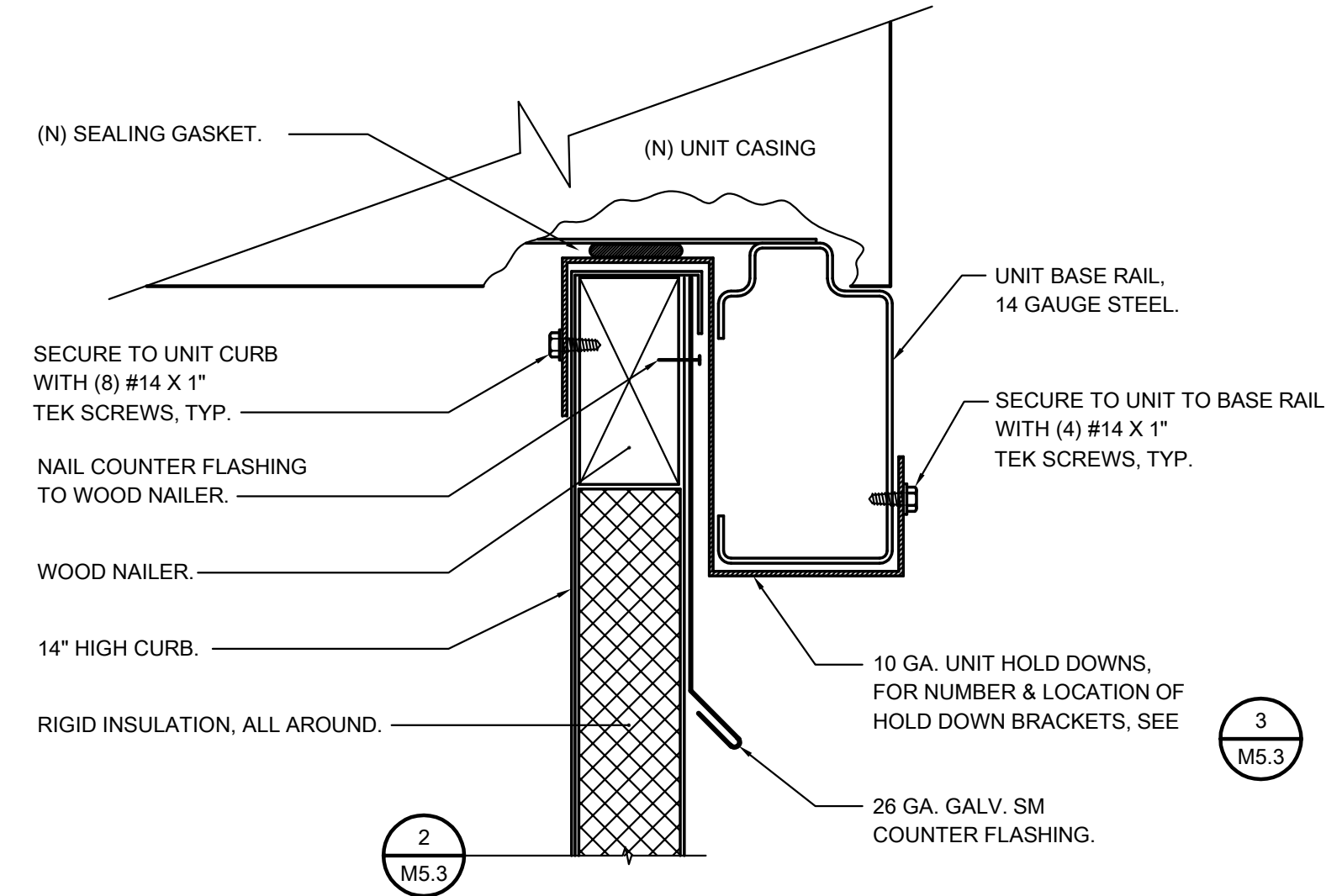
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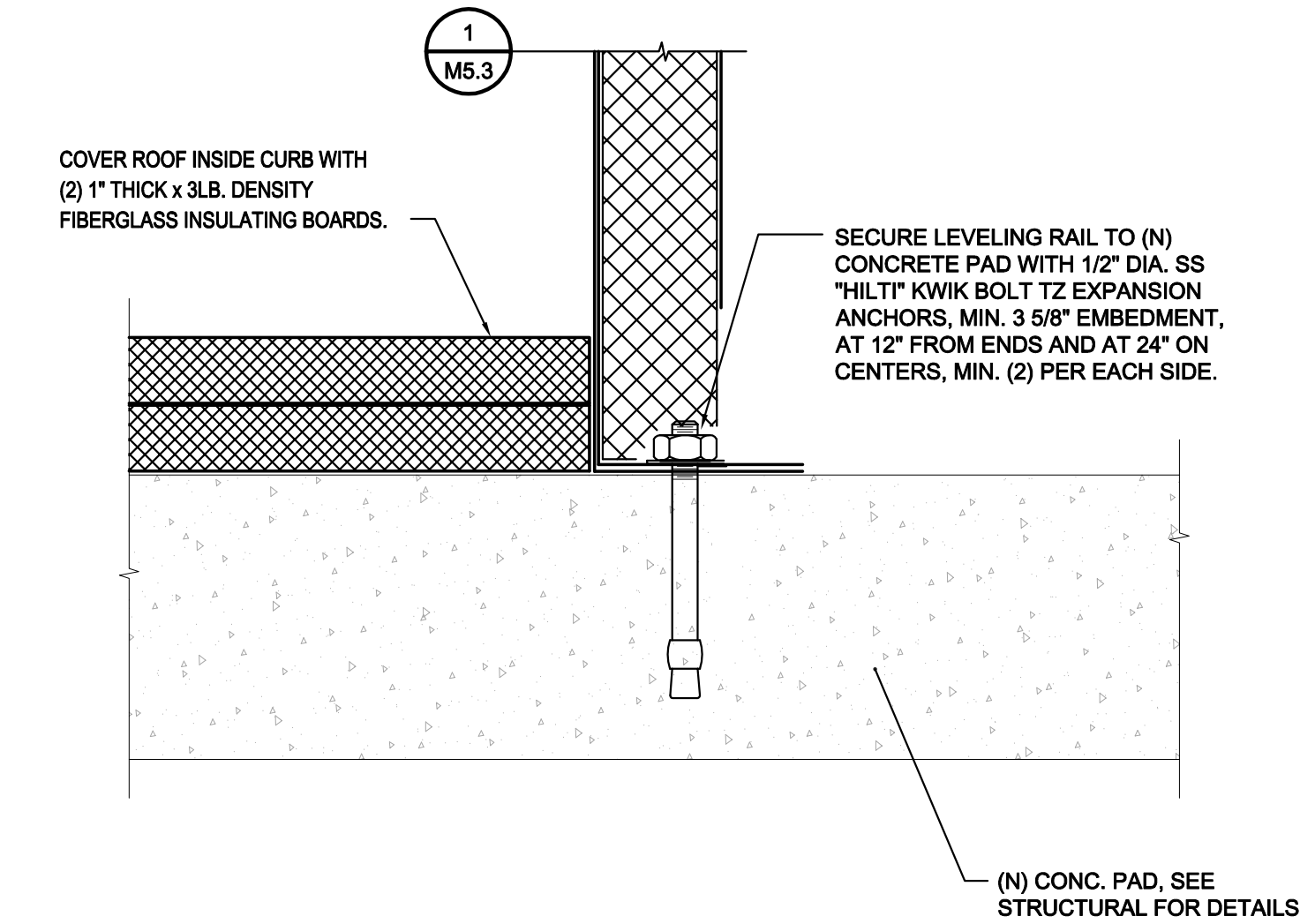
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## AC UNIT TO CURB MOUNTING

SCALE : NONE

1 M5.3

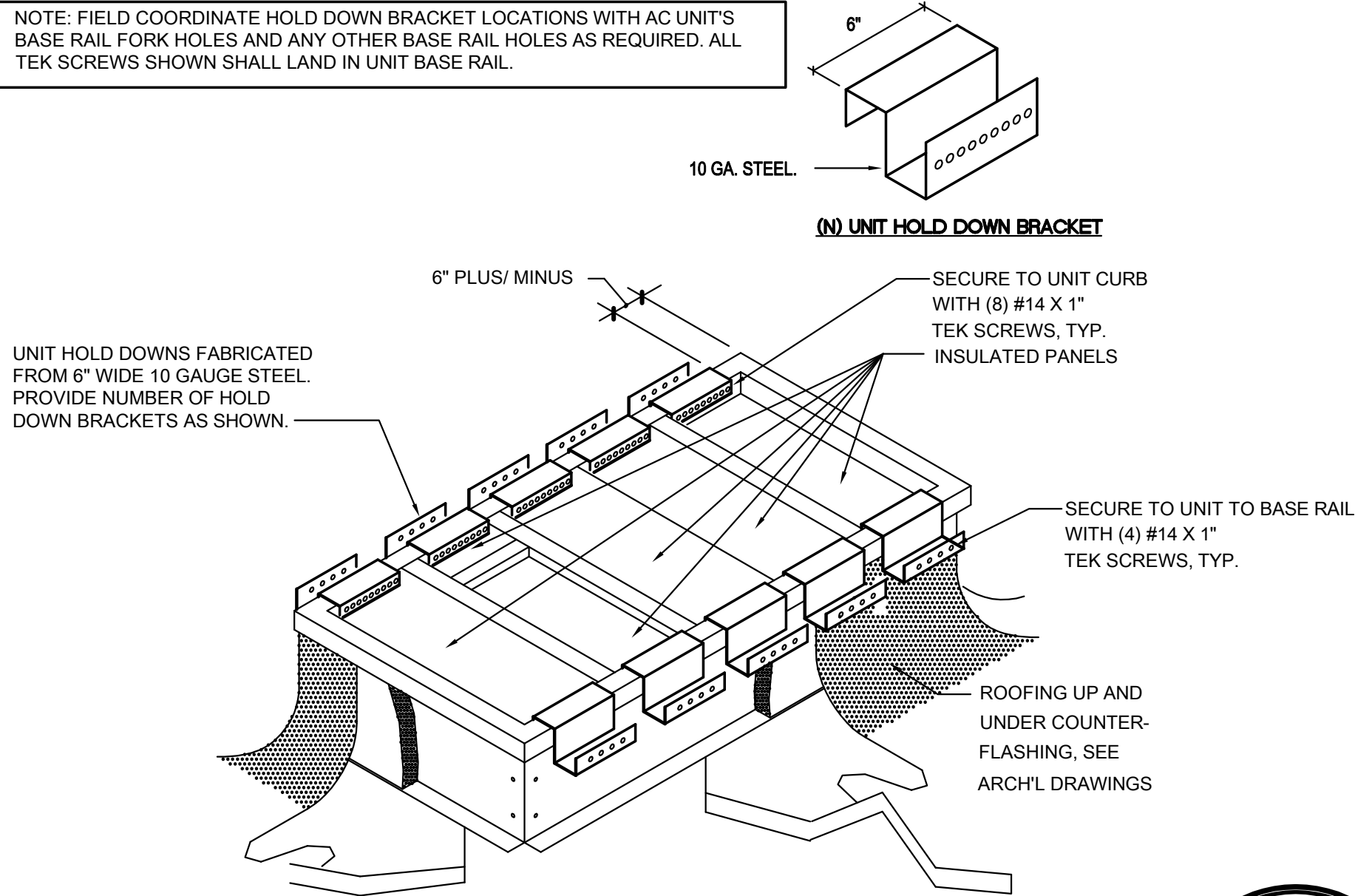


## CURB TO CONCRETE PAD MOUNTING

SCALE : NONE

2 M5.3

NOTE: FIELD COORDINATE HOLD DOWN BRACKET LOCATIONS WITH AC UNIT'S BASE RAIL FORK HOLES AND ANY OTHER BASE RAIL HOLES AS REQUIRED. ALL TEK SCREWS SHOWN SHALL LAND IN UNIT BASE RAIL.



NOTES:

FOR MOUNTING OF CURB TO CONCRETE PAD SEE DETAIL

INSTALL CLIPS PRIOR TO SETTING UNIT ON CURB.

## TYP. AC "HOLD DOWN"

SCALE : NONE

3 M5.3

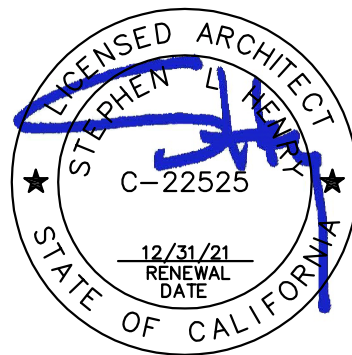


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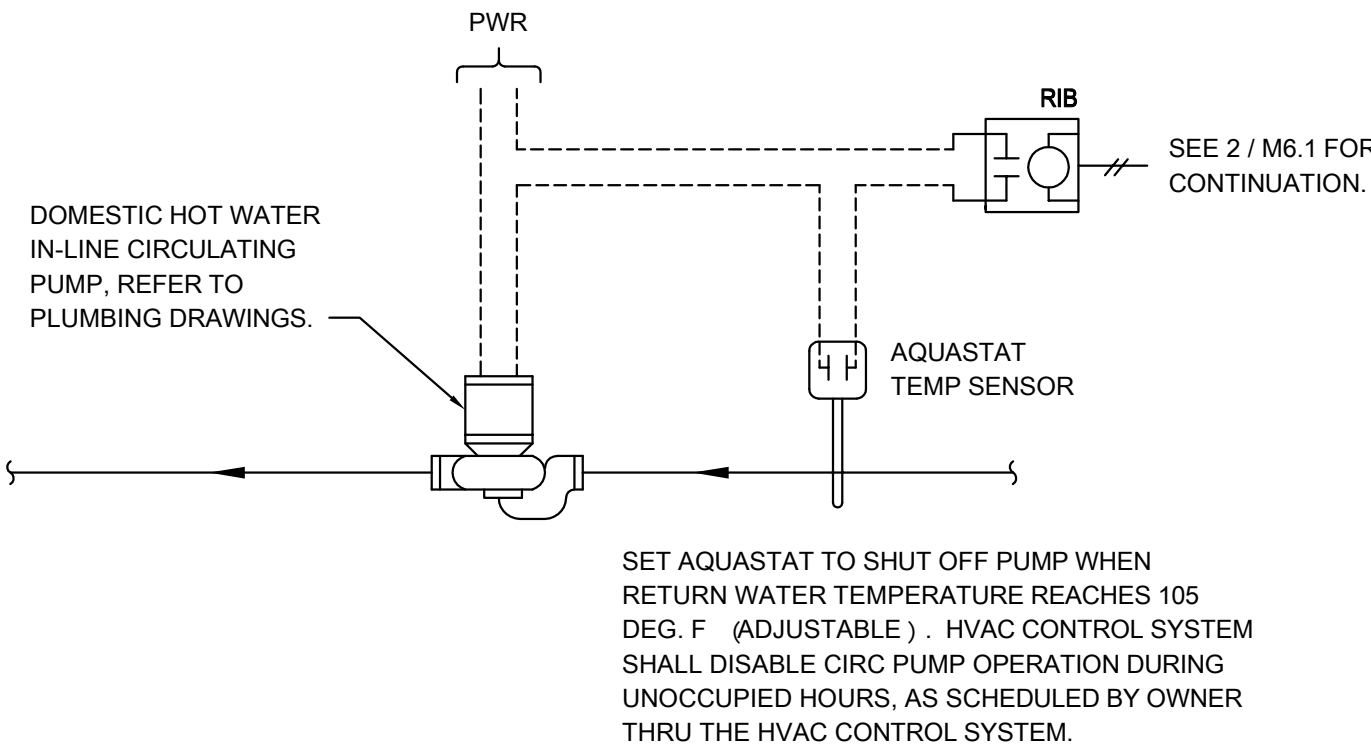
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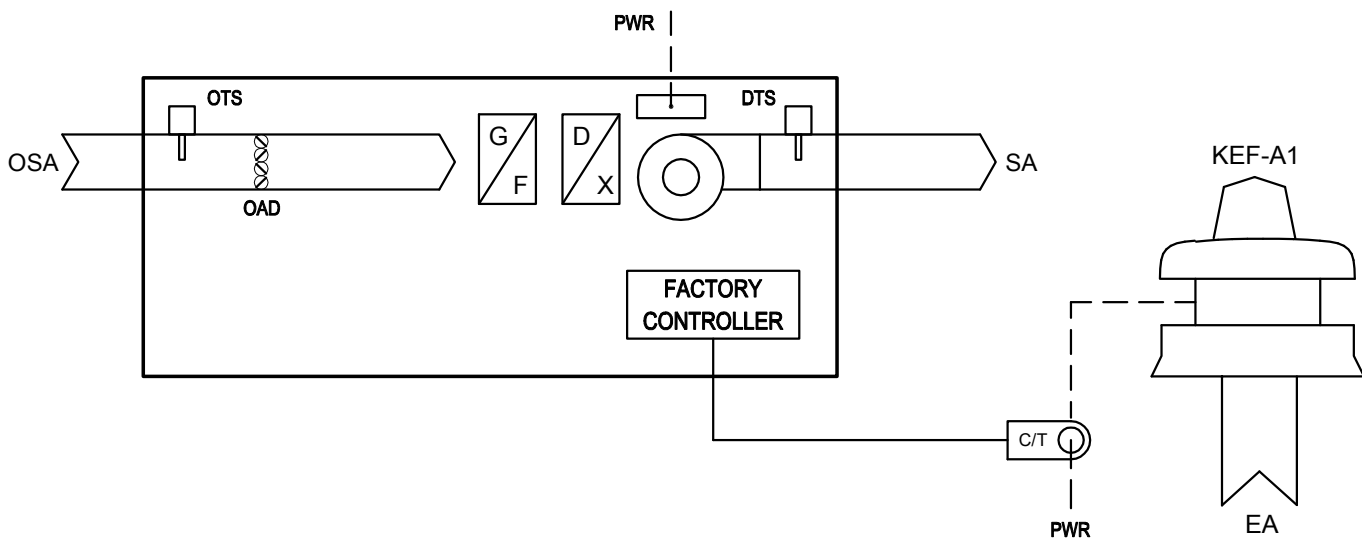
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## DHW CIRC PUMP CONTROL DIAGRAM

SCALE : NONE

7  
M6.1



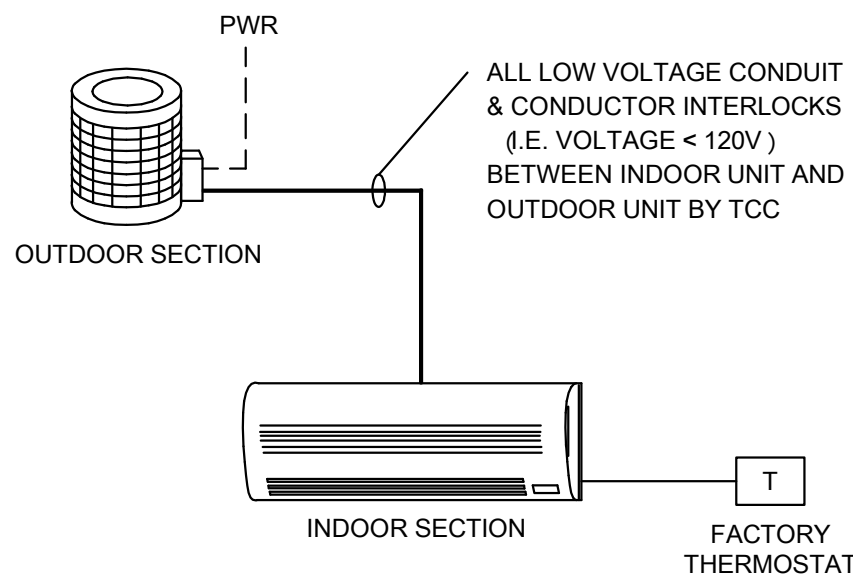
GENERAL:  
WHEN KITCHEN HOOD EXHAUST FAN KEF-A1 IS SWITCHED ON, THEN AC-A2 SHALL BE ENABLED BY IT'S OWN INTERNAL CONTROLS TO PROVIDE TEMPERED MAKE-UP AIR. INTERNAL CONTROLS SHALL OPEN THE OUTSIDE AIR DAMPER TO 100% AND STAGE MECHANICAL HEATING OR COOLING AS REQUIRED TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT (70 degF IN HEATING, 76 degF IN COOLING). WHEN KEF-A1 IS SWITCHED OFF, THEN AC-A2 SHALL BE DISABLED BY IT'S OWN INTERNAL CONTROLS. THE OUTSIDE AIR DAMPER SHALL MODULATE FULLY CLOSED WHENEVER AC-A2 IS DISABLED.

## AC-A2 CONTROL DIAGRAM

SCALE : NONE

(100% OSA MAKE-UP AIR UNIT)

4  
M6.1



### SEQUENCE OF OPERATION

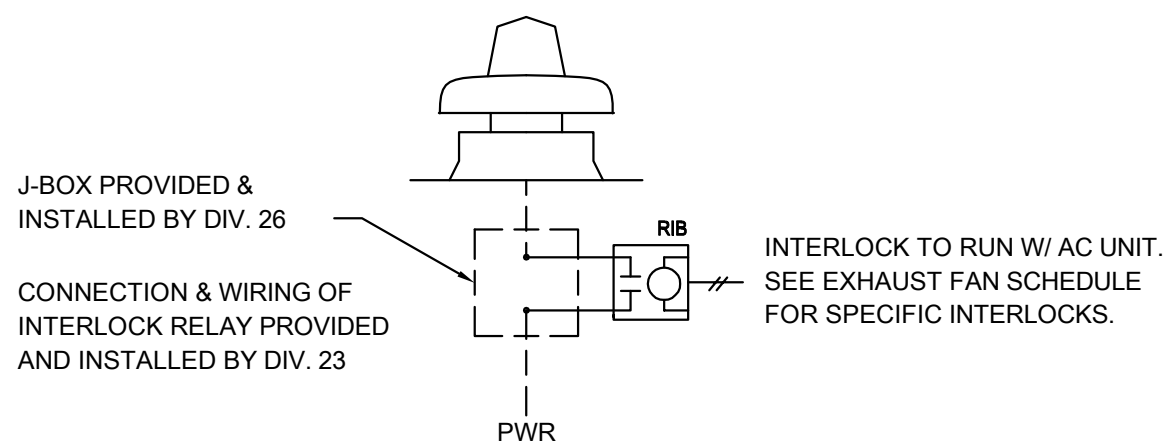
CONTROL HARDWARE AND LOGIC FOR THE SPLIT SYSTEM SHALL BE THE RESPONSIBILITY OF THE UNIT MANUFACTURER. TCC SHALL INSTALL THE FACTORY PROVIDED CONTROL PACKAGE AS REQUIRED FOR PROPER UNIT OPERATION.

RESPECTIVE OUTSIDE AIR FAN SHALL BE INTERLOCKED TO RUN WITH SPLIT SYSTEM. SEE SPLIT SYSTEM AC UNIT SCHEDULE FOR SPECIFIC INTERLOCKS.

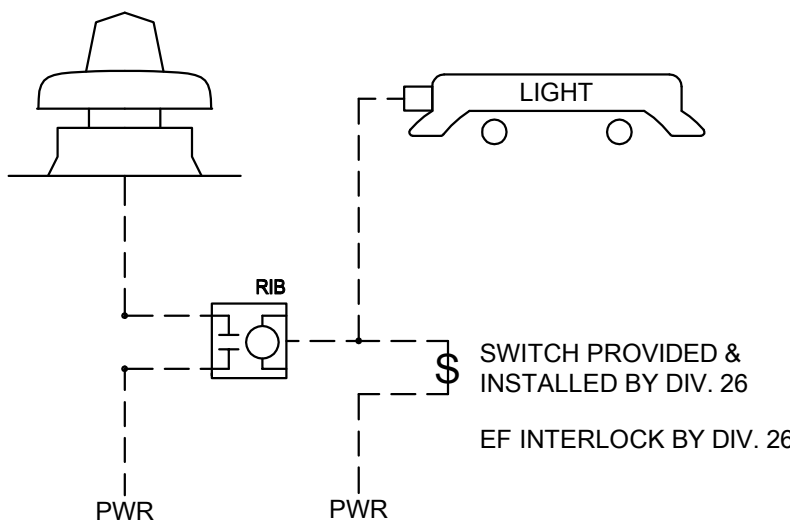
## SHPI/SHPO CONTROL DIAGRAM

SCALE : NONE

5  
M6.1



### EF INTERLOCK W/ AC UNIT

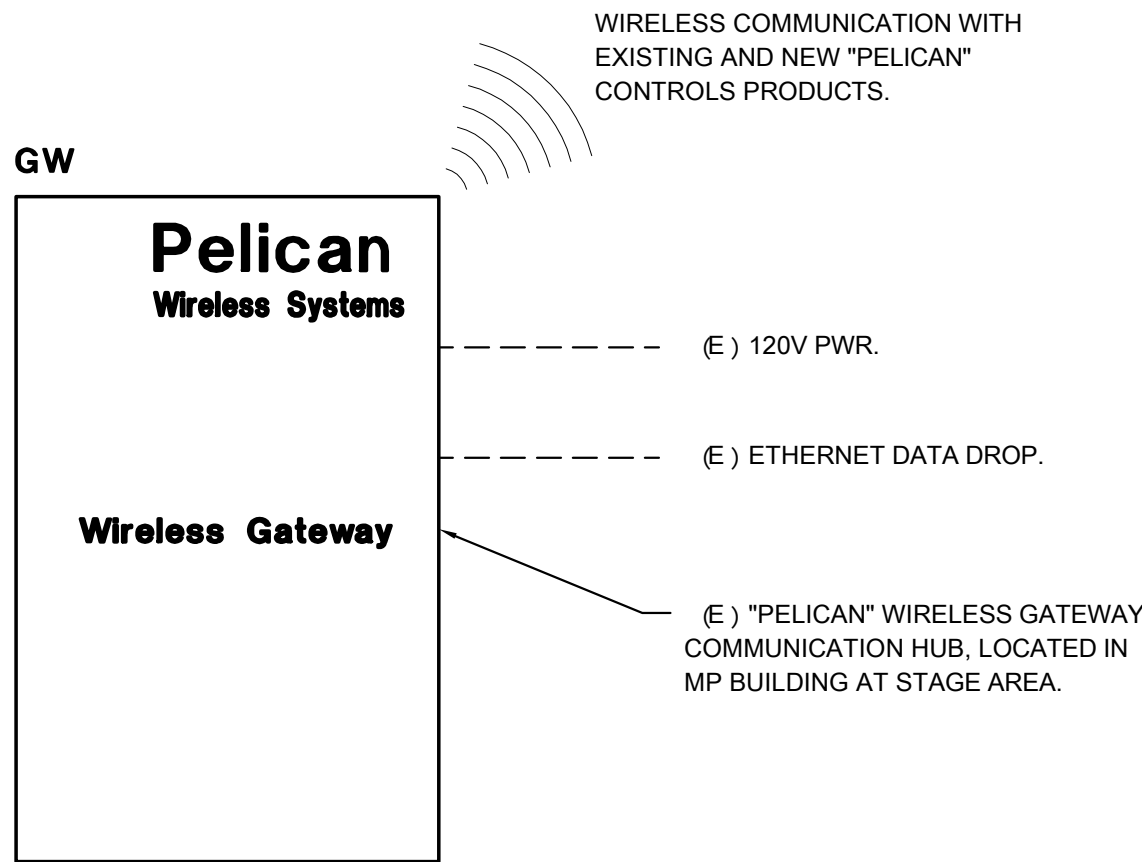


### EF CONTROL W/ LIGHTS

## CEF CONTROL DIAGRAMS

SCALE : NONE

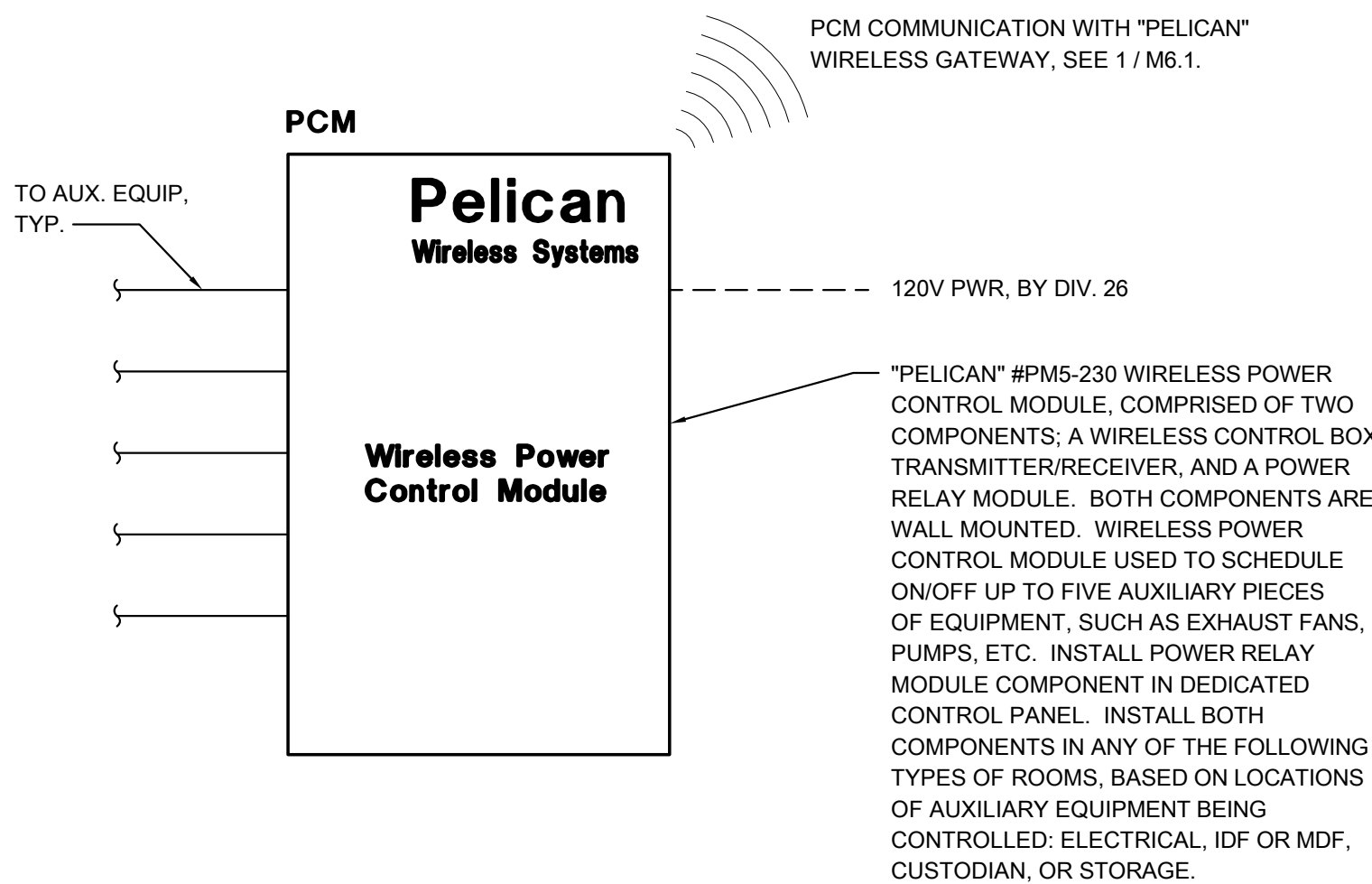
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## (E) WIRELESS GATEWAY

SCALE : NONE

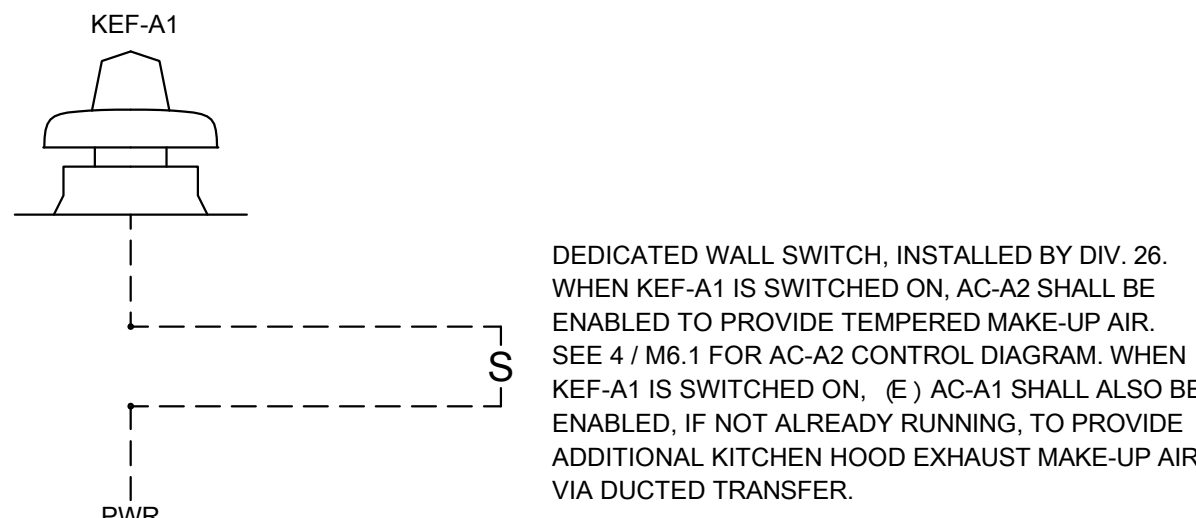
1  
M6.1



## WIRELESS POWER CONTROL MODULE

SCALE : NONE

2  
M6.1



## KEF-A1 CONTROL DIAGRAM

SCALE : NONE

3  
M6.1

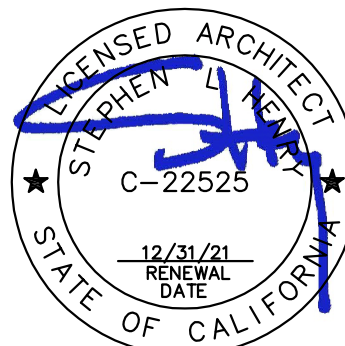


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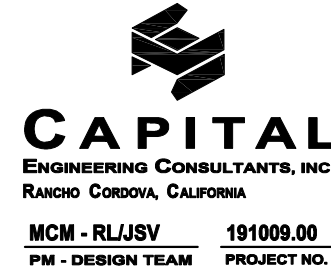
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KITCHEN RENOVATION  
JOE SERNA SCHOOL

MECHANICAL  
CONTROLS

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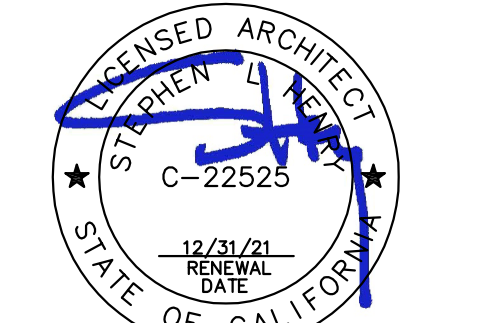
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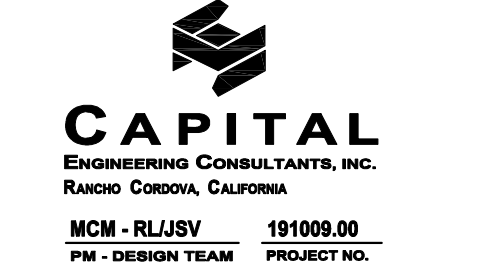
## 5.1 MECHANICAL CONTROLS

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KITCHEN RENOVATION  
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DOCUMENTATION



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CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

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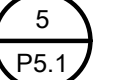






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GREASE INTERCEPTER SCHEDULE

UNIT	LOCATION	"JENSEN" MODEL NO.	GALLONS	DETAIL	NOTES
	MP BLDG	JP1000EPE-G	1000		COORDINATE ELEVATIONS AT SITE. PROVIDE GRADE RINGS NECESSARY. H=20 FRAME AND MANHOLE COVER TO BE FLUSH WITH GRADE.

GREASE INTERCEPTER SIZING CALCULATION

ITEM #	PLUMBING FIXTURE	FIXTURE QTY	DFU/FIXTURE	DFU TOTAL
1	3 COMP SINK (TO FS)	1	4	4
2	2 COMP SINK (TO FS)	0	3	0
3	PRE-RINSE SINK	1	2	2
4	PREP SINK	1	2	2
5	HAND SINK	1	2	2
6	SERVICE SINK	1	3	3
7	2" FLOOR SINK	1	2	2
8	3" FLOOR SINK	0	3	0
9	4" FLOOR SINK	0	4	0
10	FLOOR DRAIN	4	2	8
11	FLOOR TROUGH	1	4	4
12	DISHWASHERS - TO SANITARY SEWER	0	-	-
13	GLASSWASHERS*	0	-	-
			TOTAL	27



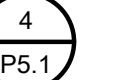
CPC 2016 TABLE 1014.3.6 GRAVITY GREASE INTERCEPTER SIZING

DFU	8	21		90	172	216	307	342	428	576
INTERCEPTOR VOLUME [GALLONS]	500	750		1250	1500	2000	2500	3000	4000	5000


NOTES:

1. IT IS RECOMMENDED NOT TO CONNECT DISHWASHERS & GLASSWASHERS TO THE GREASE INTERCEPTOR. LARGE QUANTITIES OF HOT SOAPY WATER FROM DISHWASHERS & GLASSWASHERS MAY MELT AND EMULSIFY OILS INSIDE THE GREASE INTERCEPTOR REDUCING EFFECTIVENESS OF THE INTERCEPTOR.


GAS WATER HEATER SCHEDULE

UNIT	LOCATION	"AO SMITH" MODEL NO.	STORAGE CAPACITY GALLONS	BTUH INPUT	RECOVERY GALLONS □ 100°F RISE	MAX. TEMP SETTING	GAS CONN	ELECTRICAL REQ'S	WEIGHT [BULL] □	PIPING DETAIL	MOUNTING DETAIL	NOTES
	BLDG A KITCHEN	BTH-199	100	199,900	235	140	3/4"	120VAC 1PH 15AMP	1200			PROVIDE INTAKE AND EXHAUST VENT TO OUTSIDE. DRAIN PAN AND PLATFORM TO RAISE WATER HEATER TO SLOPE DRAIN FROM PAN TOWARDS DRAIN. WATER HEATER MUST BE WIRED TO A 120VAC 60HZ ON A SEPARATE CIRCUIT AND BREAKER. PROVIDE ACID NEUTRALIZING KIT ON CD.

TEMPERATURE MIXING VALVE

UNIT	LOCATION	"POWERS" MODEL NO.	OUTLET SIZE	PSI DROP □ GIVEN GPM	MIN. GPM	NOTES
	BLDG A KITCHEN	LFMM434HL	1½"OUTLET	5 PSI □ 56GPM	.5	KITCHEN OUTPUT TEMP SET FOR 120°F

HEAT TRACE CABLE SCHEDULE

UNIT	LOCATION	MANUF □ MODEL NO.	REGULATED TEMPERATURE	VOLTAGE	AMP/FT.	AMP CB	mA-GFPE RATING
	FREEZER	RAYCHEM XL-TRACE	40°F	120V/1Ø	.119	15	30

BASIS OF DESIGN: RAYCHEM - HEAT TRACE SYSTEM HTC-J1 AT -20F MIN AMBIENT TEMP. CONTROLLER: RAYCHEM ECW-GF ELECTRONIC ADJUSTABLE SETPOINT THERMOSTAT WITH BUILT IN GFEP. MUST HAVE SETPOINT CAPABILITY OF AT LEAST 40°F. LOCATE CONTROLLER CLOSE TO HEAT TRACE. COORDINATE EXACT LOCATION AT SITE.

NOTES:

1. SEE INSTALLATION INSTRUCTIONS FOR MORE INFORMATION.  
2. PROVIDE DIAGRAM & LAYOUT FOR APPROVAL. SEE SPECIFICATIONS FOR MORE INFORMATION.



ProSet FIRESTOP WALL PENETRATOR GUIDE  
Penetrators through Masonry & Gypsum Walls


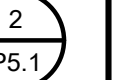
Recommended drawing numbers are shown below  
Other options may be available

Pressure Pipe and PVC/ABS Pipe - All sleeves are 8" long— Consult factory for other options

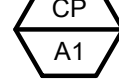

Size	Type of Wall	Copper	Steel	PVC	PVC Pressure	PVC/ABS DWV	Other
1/2"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	Multiple Pipes
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	A-1003-ax
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	Chilled Water
3/4"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	A-1000-a
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	Glass Pipe
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1015-a
1"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	Waterproof
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	Thru-pipe
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1017-g
1 1/4"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	Optional Wall
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	Sleeve Fasteners
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	For Gypsum Walls
1 1/2"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	A-1012-f and
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	A-1013-f or
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1014-f and
2"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	C-9049-a	A-1015-f
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	C-9049-g	polypropylene
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	C-9049-f	Acid waste pipe
2 1/2"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	C-9049-a	C-9049-f
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	C-9049-g	C-9049-g
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	C-9049-f	Polyethylene
3"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	C-9049-a	A-1011-a
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	C-9049-g	A-1011-g
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	C-9049-f	A-1012-f or
4"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	C-9049-a	A-1013-f
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	C-9049-g	Insulated pipe
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	C-9049-f	A-1004-a
5"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	N.A	A-1010-ai
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	N.A	Refrigeration
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	N.A	A-1003-a
6"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	N.A	
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	N.A	
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	N.A	

Plumbing Fixture Wall Openings: 1-1/2" Lavatory and Sink Sub Outs: Use ProSet P-90 PVC Pipe. See drawing No. C-8112-f  
Wall Outlet 3" or 4" Water Closets: See ProSet Drawing No. C-4492-a and C-4492-bhc  
ProSet Systems, Inc., 1355 Capital Circle Lawrenceville, GA 30043-5866 1-800-262-5355 FAX (770) 339-1784

EXPANSION TANK SCHEDULE

UNIT	LOCATION	"AMTROL" MODEL NO.	TANK VOLUME GALLONS	MAX. ACCEPT. VOLUME	DETAIL	NOTES
	BLDG A KITCHEN	THERM-X-TROL ST-12	4.4	3.21		3/4"NPTM CONNECTION. 11"DIA. OPERATING WEIGHT 40LBS

CIRCULATING PUMP SCHEDULE

UNIT	LOCATION	"BLG" MODEL NO.	GPM	FT OF HEAD	WATTS	VOLTAGE	CONTROLS	NOTES
	BLDG A KITCHEN	NBF-12U	5	8.0	55	115V/1Ø		9.5 LBS. 0.48FLA. CONNECT TO BMS

GWH-A1 WATER HEATER SIZING  
GAS TANK TYPE- KITCHEN

SYMBOL	FIXTURE NAME	QTY	USER HW TEMP	GPH EACH □ USER TEMP	GPH EACH □ WH TEMP	GPH TOTAL PER ITEM
LAV	COMMERCIAL - LAVATORY	1.00	120.00	6.00	4.59	4.59
S-3	STAFF SINK	1.00	105.00	10.00	5.88	5.88
P4	HAND SINK	2.00	105.00	6.00	3.53	7.06
SS-1	SERVICE SINK	1.00	110.00	20.00	12.94	12.94
P7	POT FILLER/TILT SKILLET	1.00	120.00	6.00	4.59	4.59
DIPPER WELL	HOT FOOD STATION	0.00	120.00	6.00	4.59	0.00
P11	PREP SINK	1.00	120.00	45.00	34.41	34.41
SINGLE POT SINK	SINGLE POT SINK	0.00	120.00	30.00	22.94	0.00
DOUBLE POT SINK	DOUBLE POT SINK	0.00	120.00	60.00	45.88	0.00
P13/P14	TRIPLE POT SINK	1.00	120.00	90.00	68.82	68.82
P14	PRE-RINSE UNIT	1.00	120.00	45.00	34.41	34.41
CAN WASH UNIT	CAN WASH UNIT	0.00	120.00	45.00	34.41	0.00
P12	WAREWASHER - HOBART AM15VLT	1.00	140.00	29.60	29.60	29.60
HOSE REEL	HOSE REEL	0.00	120.00	20.00	15.29	0.00
					TOTAL GPH	202.31

INLET TEMP	55.00	TANK VOL	100	GALLONS
WH TEMP	140.00	±1ST HR RECOV	343.99	GALLONS
TEMP DIFF	85.00	1MBH □	1000	BTUH
WATER HEATER EFFICIENCY	0.970			
GPH USAGE DIVERSITY FACTOR	1.00			
GPH WITH DIV FACTOR □TOTAL GPH X FACTOR	202.31			
GAS INPUT □	GPH X TEMP DIFF X 8.33LBS/GAL X 1BTU/LB°F / WATER HEATER EFF			
□	147,672.87	BTUH		
□	147.67	MBH		
USE □	200.00	MBH		
	273.99	GPH RECOVERY EQUIV □ CONSTANT EFF □ TEMP DIFF ABV		

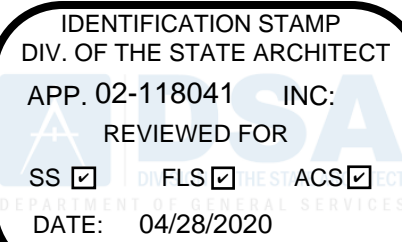
NOTES:□

1. USER TEMP ABV IS ASSUMED WARMEST BEARABLE BY USER OR BY FUNCTION.  
2. WARNING: PER ASHRAE CHAPTER 50 FIGURE 9, IT TAKES ABT 10 MINS TO CAUSE 3RD DEGREE BURNS USING 120F HOT WATER. FOR 140F HOTWATER, IT ONLY TAKES ABOUT 5 SECONDS TO DO SAME DAMAGE. PLEASE LIMIT HOT WATER TEMP THRU USE OF THERMOSTATIC MIXING VALVES OR USE OF INTEGRAL LIMITING DEVICE IF AVAILABLE.  
3. 1ST HR RECOVERY BASED FROM 0.7DWH TANK VOLUME [PERFORMANCE GPH

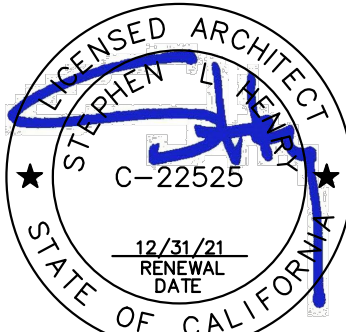


DATE SIGNED: 04/10/2020

FILE NO. 39-50 APP NO. 02-118041



730 Howe Avenue, Suite 450  
Sacramento, CA 95825  
Phone: 916.921.2112  
Fax: 916.921.2212



KITCHEN RENOVATION  
JOE SERNA SCHOOL

PLUMBING EQUIPMENT  
SCHEDULES

CONSULTANT




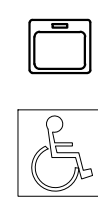
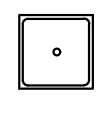
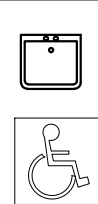


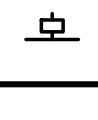

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PLUMBING FIXTURE SPECIFICATION □ CONNECTION SCHEDULE													
ADA	SYMBOL	FIXTURE	FIXTURE MANUFACTURER AND MODEL No.	FAUCET OR VALVE MANUFACTURER AND MODEL No.	TRIM MANUFACTURER AND MODEL No.	REMARKS	VENT	WASTE		COLD WATER		HOT WATER	
								BRANCH	OUTLET	BRANCH	OUTLET	BRANCH	OUTLET
	WC-1	WATER CLOSET FLOOR MOUNTED FLUSH VALVE ACCESSIBLE	"AMERICAN STANDARD" MADERA EL NO. 3461.001, 1.28 GPF FLOOR MOUNTED, ELONGATED, SIPHON JET ACTION 1-1/2" TOP SPUD, 16-1/2" RIM HEIGHT.	"SLOAN" ROYAL 111 HET 1.28, ADA COMPLIANT, 1.28 GPF □MANUAL□	SEAT: "CHURCH" MODEL 295SSCT OR "BEMIS" MODEL 1955SSCT. PROVIDE WITH SELF- SUSTAINING CONCEALED CHECK HINGES, ONE PIECE STAINLESS STEEL POST HINGES, WHITE COLOR.	MOUNT AT HEIGHT INDICATED ON ARCHITECTURAL DRAWINGS. WHERE USED FOR CBC ACCESSIBLE WATER CLOSETS, THE FLUSH VALVE HANDLE SHALL BE MOUNTED ON THE WIDE SIDE OF THE WATER CLOSET ENCLOSURE.	2"	4"	4"	1-1/2"	1"	--	--
	L-1	LAVATORY WALL MOUNTED HOT AND COLD WATER STD/ACCESSIBLE	"AMERICAN STANDARD" LUCERNE NO. 0355.012, WALL HUNG, VITREOUS CHINA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, FRONT OVERFLOW, CONCEALED ARM RECESS, 4" CENTERS. 20" □18" D SHAPED BOWL.	"MOEN" 8886 NEWER VERSION FAUCET, TWO-HANDLE ADA METERING FAUCET, CHROME PLATED SOLID BRASS CONSTRUCTION, 4" CENTERSET, VANDAL RESISTANT, 0.5GPM MAX. PROVIDE AASE 1070 TMV. ADJUST OUTLET WATER TEMPERATURE TO COMFORTABLE TEMPERATURE OR NO MORE THAN 110° F.	ADA COMPLIANT. LAVATORY GRID DRAIN WITH 1-1/4" OFFSET TAILPIECE, INTEGRAL PERFORATED GRID NO. 7723.018, CHROME FINISH. MOUNT P-TRAP FLUSH TO WALL. CARRIER: "J R SMITH" 0700 OR ZURN Z1231	MOUNT AT HEIGHT INDICATED ON ARCHITECTURAL DRAWINGS. PROVIDE CONCEALED ARMS AND FLOOR SUPPORT, WITH FEET OF SUPPORT SECURELY ANCHORED TO FLOOR. IN ADDITION ANCHOR TOP OF SUPPORT TO WALL CONSTRUCTION.	1-1/2"	2"	1-1/2"	3/4"	1/2"	3/4"	1/2"
	MS-1	SERVICE SINK WALL MOUNTED HOT AND COLD WATER JANITORS	"AMERICAN STANDARD" 7695.00, ENAMELED INSIDE CAST IRON.	"CHICAGO" MODEL 897-CP WALL MOUNTED POLISHED CHROME FAUCET WITH VACUUM BREAKER, ADJUSTABLE TOP BRACE AND 3/4" MALE THREADED HOSE OUTLET.	PROVIDE CONNECTION TO CLEANING EQUIPMENT	AS PART OF ROUGH-IN FOR FAUCET, PROVIDE SUITABLE BLOCKING FOR TOP BRACE.  PROVIDE CAP WITH FLANGE ON SIDES ADJACENT TO WALLS.	2"	3"	3"	3/4"	3/4"	3/4"	3/4"
	S-1	SINK COUNTER MOUNTED HOT AND COLD WATER ADMIN/CONF./NURSE	"ELKAY" MODEL LRAD191965, 19" FRONT TO BACK, 19" WIDE □ 6-1/2" DEPTH OVERALL. 18 GAUGE STAINLESS STEEL, LEDGE BACK WITH SELF- RIM. PROVIDE SINGLE FAUCET HOLE. PROVIDE REAR DRAIN LOCATION. PROVIDE SLOT AT FAUCET FOR VANDAL RESISTANT PINS.	"CHICAGO" ECAST MODEL 50-E35ABCP□VAV/VP□ GOOSENECK FAUCET, 1.5 GPM VANDAL RESISTANT LAMINAR FLOW AERATOR AND RIGID/SWING FAUCET. PROVIDE VANDAL RESISTANT PIN IN FAUCET, ARRANGED TO MATE WITH SLOT IN SINK.	"ELKAY" MODEL LKAD35, OFFSET CRUMB CUP STRAINER WITH REMOVABLE BASKET AND P-TRAP. INSTALL P-TRAP FLUSH TO WALL.		1-1/2"	2"	1-1/2"	3/4"	1/2"	3/4"	1/2"
	FD	FLOOR DRAIN	GENERAL SERVICE FD - ZURN MODEL Z-415, OR EQUAL, WITH TYPE "B" STRAINER FOR EXPOSED CONCRETE AND TYPE "S" STRAINER FOR TILE FLOOR. PROVIDE BRONZE TRIM. FD IN COMPOSITION TYPE FLOORS - ZURN MODEL Z-415, OR EQUAL, WITH TYPE SL STRAINER. FD IN RESINOUS/EPOXY TYPE FLOORS - ZURN MODEL Z-415BL, OR EQUAL, NICKEL BRONZE WITH ADJUSTABLE STRAINER.				2"	2"	2"	-	-	-	-
	TP	TRAP PRIMER	MIFAB "M-500" SERIES, REQUIRES 3PSI DROP TO ACTIVATE.				-	-	-	1/2"	1/2"	-	-
	TP-2	TRAP PRIMER	SIOUX CHIEF 695-ES01 ELECTRONIC TRAP PRIMER. 120VAC 9.2WATTS.			SEE DETAIL 1/P5.2	-	-	-	1/2"	1/2"	-	-
	WHA	WATER HAMMER ARRESTOR	SEE SPECIFICATIONS										
	HB	HOSE BIBB	INTERIOR WALL MOUNTED - ACORN MODEL 8121CP-LF WOODFORD MODEL 24PC, OR EQUAL. ROOF MOUNTED - WOODFORD MODEL RHMC-MS, OR EQUAL.	WITH INTEGRAL VACUUM BREAKER PROTECTED, CARTRIDGE OPERATED HOSE VALVE WITH LOCK SHIELD BONNET AND REMOVABLE KEY HANDLE.		SET HEIGHT AT 18" ABOVE FINISHED FLOOR	-	-	-	3/4"	3/4"	-	-
	WH	WALL HYDRANT	EXTERIOR WALL MOUNTED RECESSED WOODFORD MODEL B75 SWIVEL INLET OR EQUAL.	WITH INTEGRAL VACUUM BREAKER PROTECTED, CARTRIDGE OPERATED HOSE VALVE WITH LOCK SHIELD BONNET AND LOOSE KEY OPERATION.		SET HEIGHT AT 18" ABOVE FINISHED FLOOR	-	-	-	3/4"	3/4"	-	-
	FS	FLOOR SINK	KITCHEN - ZURN MODEL Z-1751, OR EQUAL, 12 INCH □12 INCH □B INCH DEEP, 14 GA. TYPE 304 STAINLESS STEEL GRATE, SEDIMENT BUCKET. PROVIDE FUSION JOINT P-TRAP TO MATCH PIPING SYSTEM. SEE FOOD SERVICE PLANS FOR MORE FS GRATE INFORMATION. KITCHEN COOLER/FREEZER LOCATIONS - ZURN MODEL Z-1940KC-23, OR EQUAL, 6 INCH □12 INCH □7-3/4 INCH DEEP, CAST IRON BODY WITH WHITE ACID RESISTING INTERIOR, NICKEL BRONZE FRAME AND GRATE, SEDIMENT BUCKET. PROVIDE FUSION JOINT P-TRAP TO MATCH PIPING SYSTEM.  MECHANICAL SPACES - ZURN MODEL ZN-1901-KC-2, OR EQUAL, 12 INCH □12 INCH □B INCH DEEP, A.R.E. INTERIOR WITH NICKEL BRONZE RIM, HALF GRATE AND DOME STRAINER.  OTHER APPROVED EQUAL MANUFACTURERS INCLUDE: JAY R. SMITH, WATTS □MIFAB.	PROVIDE SEEPAGE PAN AND CLAMPING COLLAR.		COORDINATE □PROVIDE GRATES AS REQUIRED PER KITCHEN DRAWINGS				-	-	-	-
GENERAL NOTES: 1. WATER SUPPLIES AND STOPS: A. PROVIDE 85 PERCENT IPS RED BRASS PIPE, SECURELY ANCHORED TO BUILDING CONSTRUCTION, FOR EACH CONNECTION TO FAUCETS, STOPS, HOSE BIBBS, ETC. EACH FIXTURE, EXCEPT HOSE BIBBS, SHALL HAVE A STOP VALVE INSTALLED ON WATER SUPPLY LINES TO PERMIT REPAIRS WITHOUT SHUTTING OFF WATER MAINS. B. PROVIDE ALL WATER SUPPLIES TO FIXTURES WITH COMPRESSION SHUT-OFF STOPS WITH THREADED BRASS NIPPLES AT PIPE CONNECTION AND LOCK SHIELD LOOSE KEY. PROVIDE COMBINATION FIXTURES WITH COMPRESSION STOP AND IPS INLET ON EACH WATER SUPPLY FITTING. PROVIDE LOOSE KEY HANDLE FOR EACH STOP. C. PROVIDE 1/2 INCH RISER TUBES WITH REDUCING COUPLING FOR ALL FIXTURES, UNLESS OTHERWISE NOTED. REFER TO SPECIFICATION SECTION 22 40 00.  2. PIPE, PLUMBING FITTINGS, FIXTURES, SOLDER AND FLUX SHALL COMPLY WITH LEAD FREE REQUIREMENTS OF THE CALIFORNIA HEALTH AND SAFETY CODE SECTION 116875. PROVIDE PRODUCTS LISTED AND LABELED AS COMPLYING WITH NSF 61, ANNEX G, OR PROVIDE OTHER EVIDENCE OF COMPLIANCE WITH THE CALIFORNIA HEALTH AND SAFETY CODE SECTION 116875. PROVIDE PRODUCT SUBMITTAL INFORMATION PROVING COMPLIANCE WITH LEAD FREE REQUIREMENTS. ALSO SEE GENERAL NOTE 22 ON SHEET P0.1 AND SPECIFICATION SECTIONS, 22 00 50, 22 10 00 AND 22 40 00.													

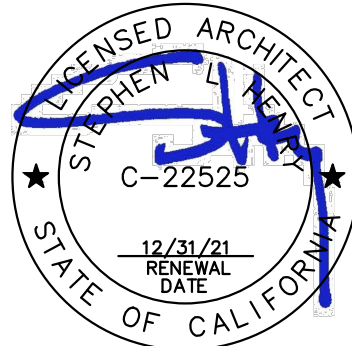
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REGISTERED PROFESSIONAL ENGINEER  
THOMAS A. CUDY  
M 22836  
EXPIRES 9/30/20  
MECHANICAL  
STATE OF CALIFORNIA  
DATE SIGNED: 04/10/2020

FILE NO. 39-50 APP NO. 02-118041

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP. 02-118041 INC.  
REVIEWED FOR:  
SS □ FLS □ ACS □  
DATE: 04/28/2020

730 Howe Avenue, Suite 450  
Sacramento, CA 95825  
Phone: 916.921.2112  
Fax: 916.921.2212



KITCHEN RENOVATION  
JOE SERNA SCHOOL

PLUMBING FIXTURE  
SCHEDULE

CONSULTANT



PROJECT NO.	REVISIONS	BY
19-32-050		
DATE		
04/10/2020		
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SHEET NO.

P0.3

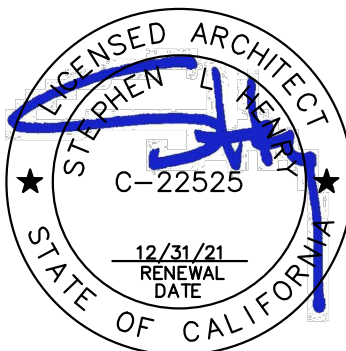
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APP. 02-118041 INC:  
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DATE: 04/28/2020

730 Howe Avenue, Suite 450  
Sacramento, CA 95825  
Phone: 916.921.2112  
Fax: 916.921.2212



# KITCHEN RENOVATION JOE SERNA SCHOOL PLUMBING SITE PLAN

CONSULTANT

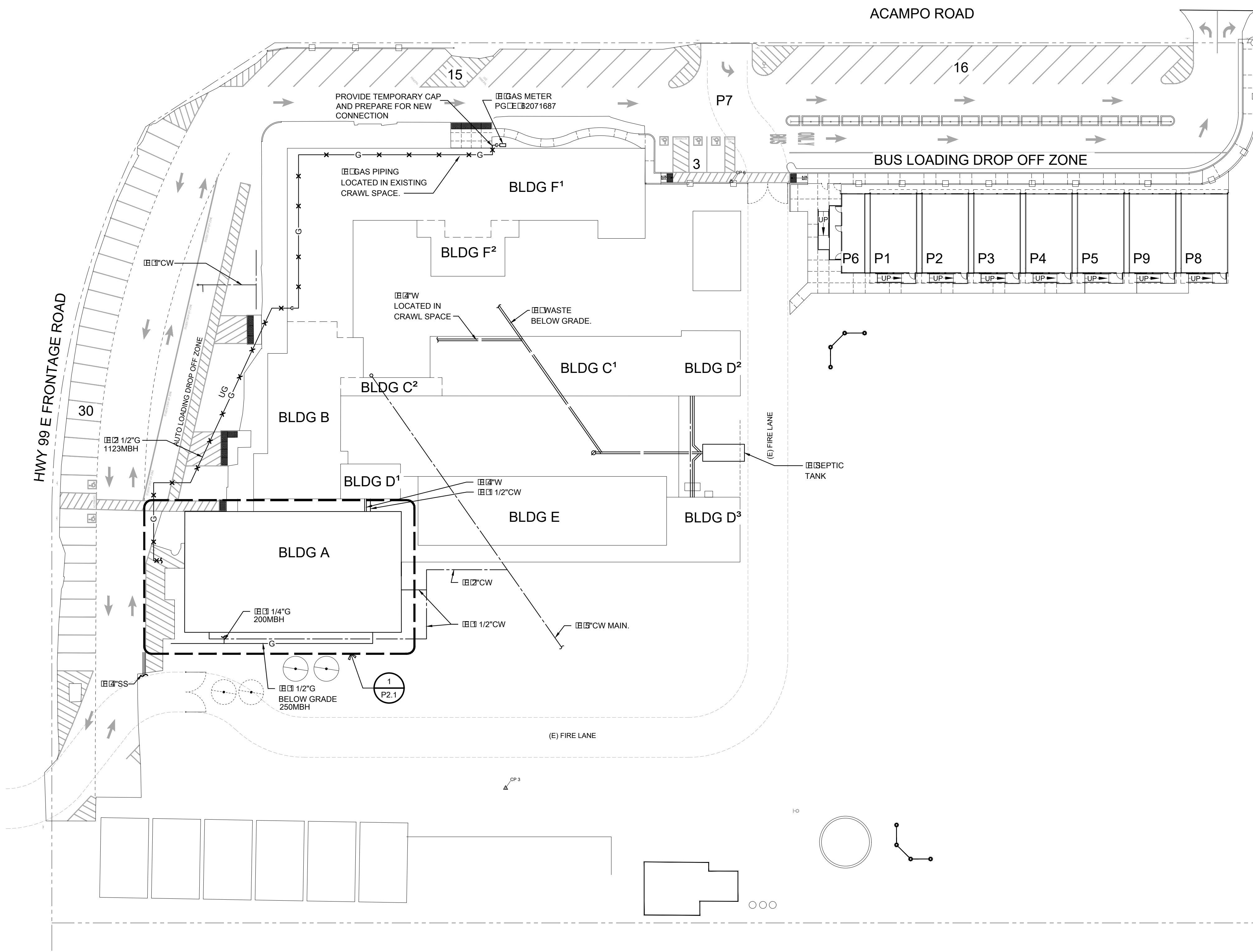


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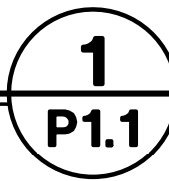
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## PLUMBING SITE PLAN

**SCALE : 1" = 30'-0"**



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KITCHEN RENOVATION  
JOE SERNA SCHOOL

PLUMBING SITE PLAN

CONSULTANT



**CAPITAL**  
ENGINEERING CONSULTANTS INC.  
RANCHO CORDOVA, CALIFORNIA

MCM RLJSV 1:100:00  
PM DESIGN TEAM PROJECT NO.

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P1.2

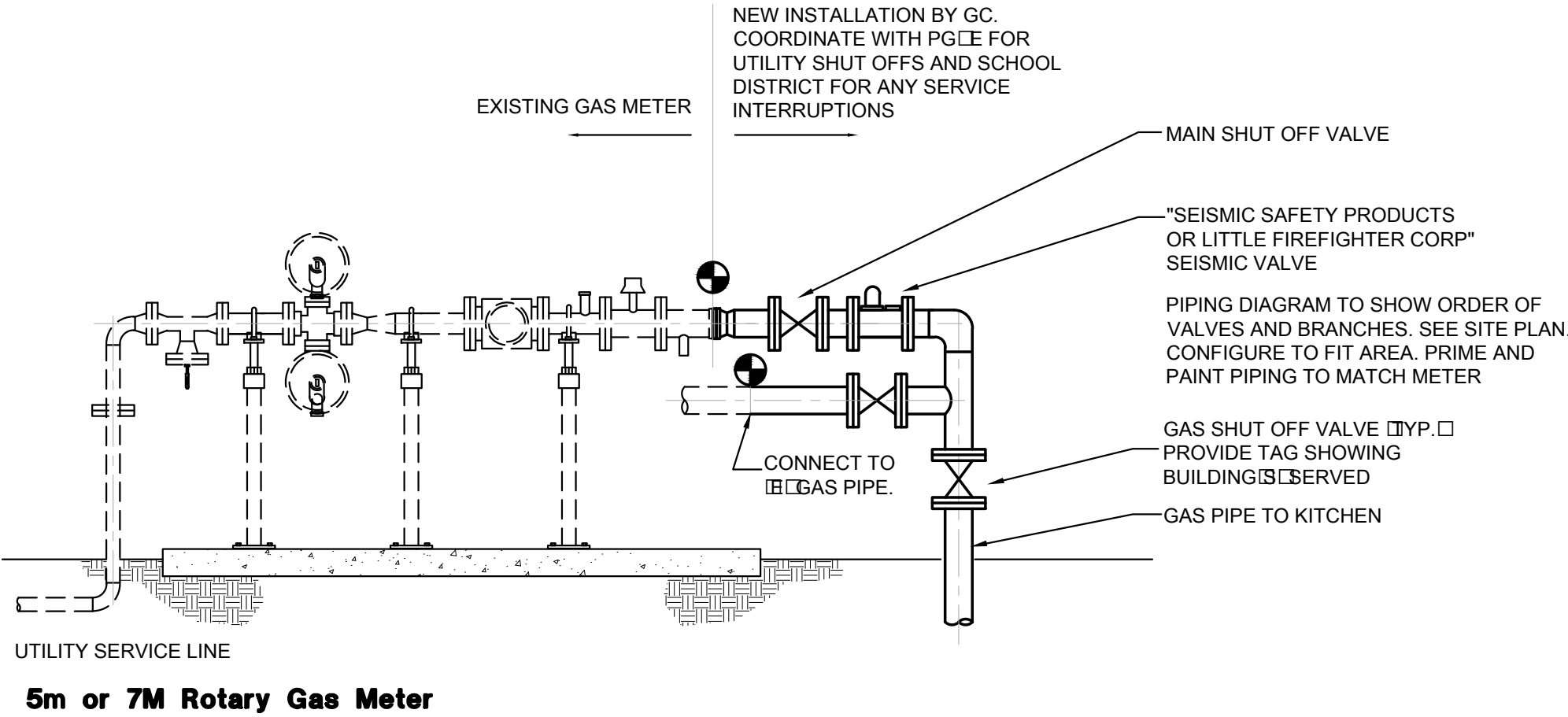
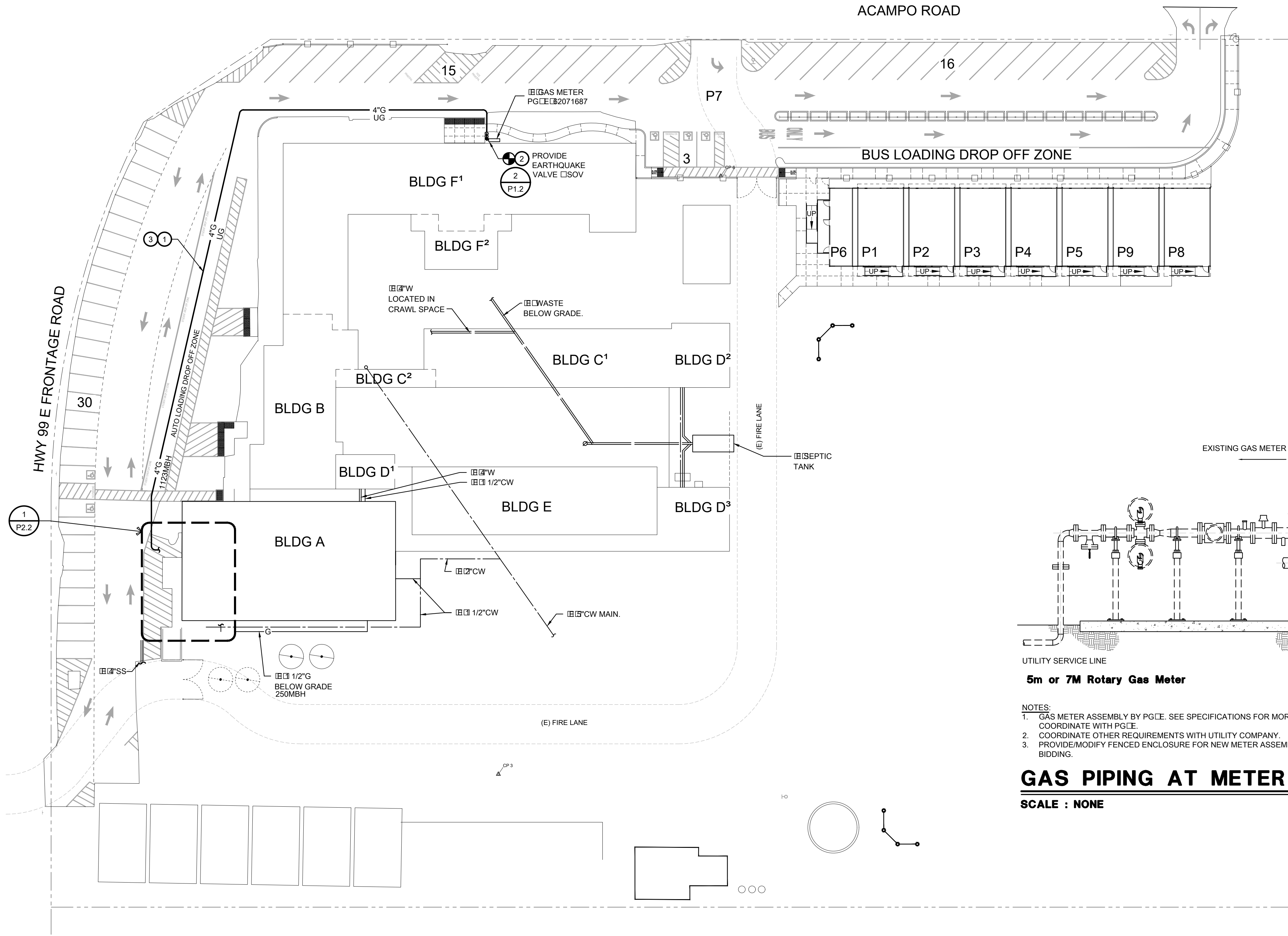
OF SHEETS

#### CONSTRUCTION SHEET NOTES:

1. SITE PLAN INTENDED TO SHOW SITE GAS SYSTEM ONLY. REFER TO CIVIL, LANDSCAPE ARCHITECTURAL DRAWINGS FOR INFORMATION REGARDING GRADING, PAVING, LANDSCAPE AND OTHER UTILITIES AT SITE. COORDINATE ALL LOCATIONS AMONGST TRADES.
2. FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AT SITE. REROUTE ANY PIPING THAT MAY CONFLICT WITH NEW CONSTRUCTION. COORDINATE AMONGST TRADES.
3. PROVIDE TEMPORARY UTILITIES TO FIXTURES TO REMAIN IN SERVICE DURING CONSTRUCTION. COORDINATE PHASING WITH SCHOOL DISTRICT.
4. SEE GEOTECH REPORT FOR TRENCHING REQUIREMENTS, GROUND WATER ELEVATION, PIPE CORROSION, OTHER SOILS INFORMATION AND OTHER INSTALLATION REQUIREMENTS.

#### CONSTRUCTION KEYNOTES:

1. INSTALL TRACER WIRE WITH WARNING TAPE OR DETECTABLE WARNING TAPE BURIED ABOVE ALL GAS LINES INSTALLED UNDERGROUND. SEE SPECIFICATIONS FOR OTHER INSTALLATION REQUIREMENTS.
2. VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPE. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REFLECT ON AS-BUILT DRAWING IF DIFFERENT FROM HEREWITH.
3. VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES, BUILDING COMPONENTS OR ANY OBJECT IN GENERAL THAT MAY OBSTRUCT PATH OF NEW PIPING. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REROUTE NEW OR EXISTING PIPING IF REQUIRED, REFLECT ON AS-BUILT DRAWINGS IF DIFFERENT FROM HEREWITH.



- NOTES:
1. GAS METER ASSEMBLY BY PG&E. SEE SPECIFICATIONS FOR MORE INFORMATION. EXACT ASSEMBLY CONFIGURATION MAY VARY. COORDINATE WITH PG&E.
  2. COORDINATE OTHER REQUIREMENTS WITH UTILITY COMPANY.
  3. PROVIDE/MODIFY FENCED ENCLOSURE FOR NEW METER ASSEMBLY. PROVIDE SHOP DRAWINGS. FIELD VERIFY DIMENSIONS PRIOR TO BIDDING.

#### GAS PIPING AT METER

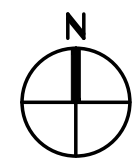
SCALE : NONE

2  
P1.2

#### PLUMBING SITE PLAN

SCALE : 1" = 30'-0"

1  
P1.2



DATE SIGNED: 04/10/2020

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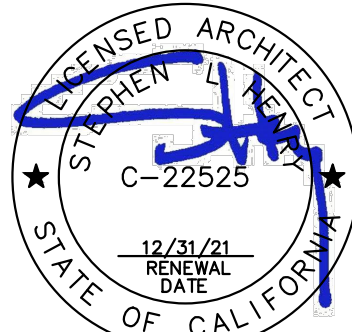


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KITCHEN RENOVATION  
JOE SERNA SCHOOL

PLUMBING FLOOR PLAN &  
DEMO FLOOR PLAN

CONSULTANT

CAPITAL  
ENGINEERING CONSULTANTS INC.  
RANCHO CORDOVA, CALIFORNIA  
MCM: RLJSV 1:100:00  
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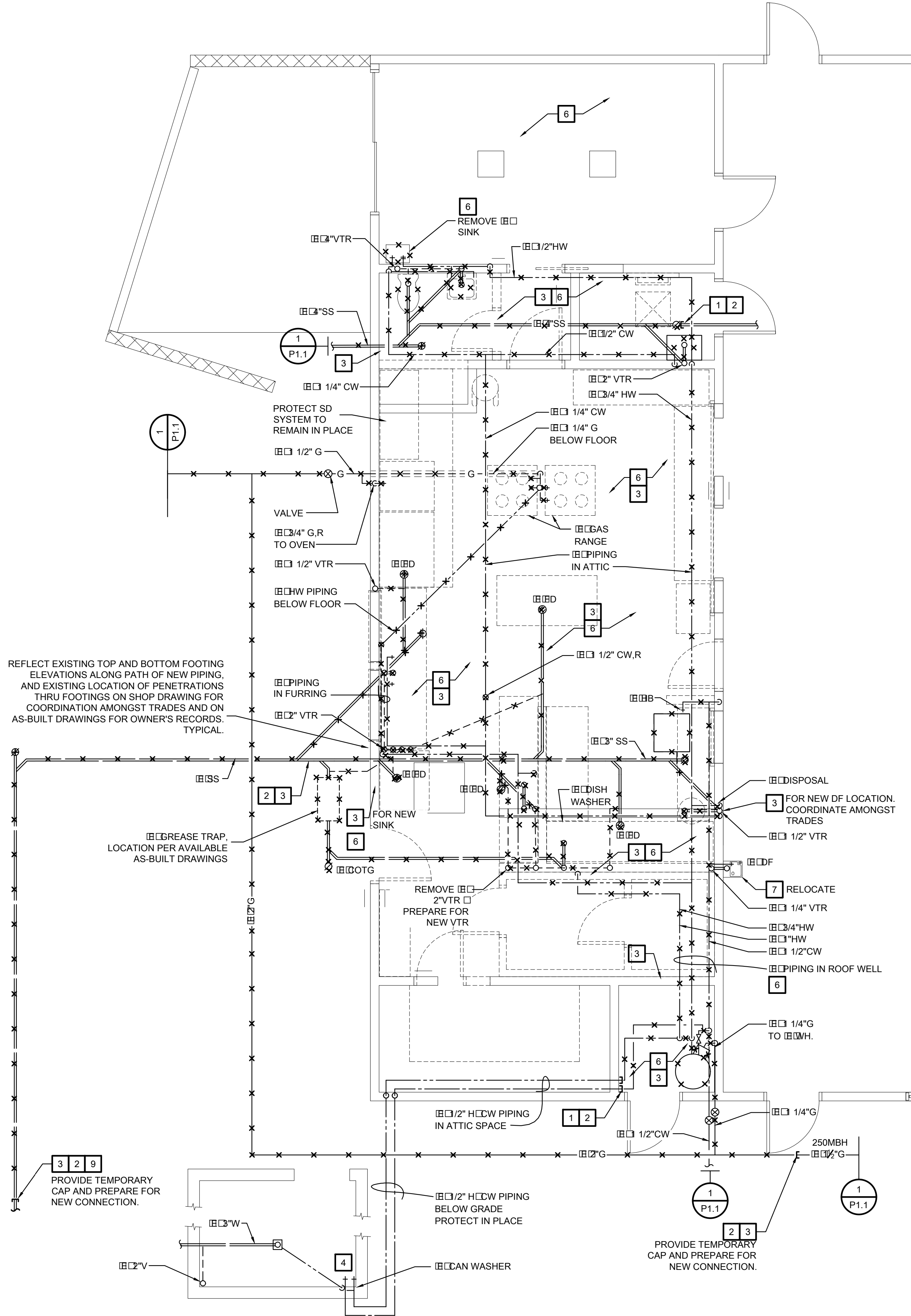
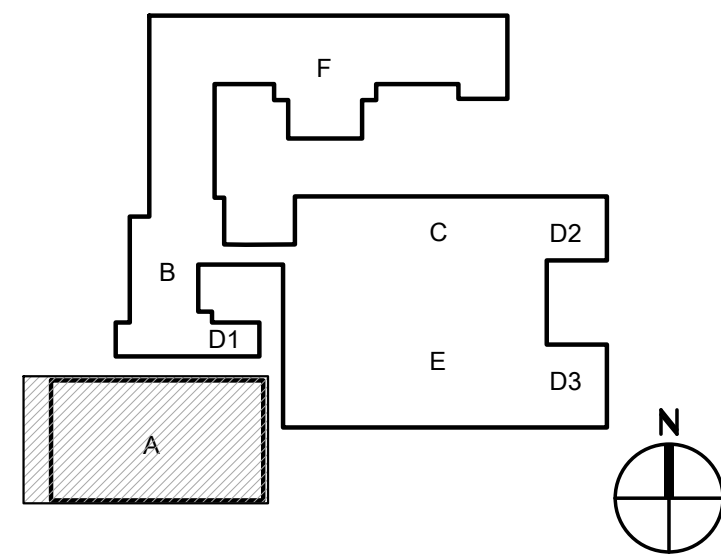
DEMO KEYNOTES:

- 1 PROVIDE TEMPORARY CAP ON ☒ PIPING. PREPARE FOR RECONNECTION TO NEW PIPE
- 2 VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPE. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REFLECT ON AS-BUILT DRAWING IF DIFFERENT FROM HEREWITH.
- 3 VERIFY EXACT LOCATION OF ALL BUILDING COMPONENTS THAT MAY OBSTRUCT PATH OF NEW PIPING. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. PREPARE AREA FOR NEW WORK. REROUTE PIPING IF REQUIRED. REFLECT ON AS-BUILT DRAWINGS IF DIFFERENT FROM HEREWITH. SEE PLUMBING SHEET P2.2 FOR NEW PIPING.
- 4 PROTECT FIXTURE TO REMAIN IN PLACE DURING DEMO/CONSTRUCTION WORK. PROVIDE TEMPORARY UTILITIES WHEN NEEDED. COORDINATE SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.
- 5 REMOVE EXISTING PLUMBING FIXTURE/EQUIPMENT. UNLESS SHOWN OTHERWISE, CAP UNUSED PIPING ABOVE, BELOW OR BEHIND ARCHITECTURAL FINISHES. SEE ARCHITECTURAL SHEETS FOR MORE INFORMATION
- 6 REMOVE ALL UNUSED EXISTING WASTE, VENT, WATER, CONDENSATE DRAIN ☒ GAS PIPING ABOVE GROUND WITHIN WORK AREA. CAP BEHIND ARCHITECTURAL FINISH. FIELD VERIFY LOCATION.
- 7 CAREFULLY REMOVE AND SALVAGE EXISTING DRINKING FOUNTAIN WITH BOTTLE FILLER FOR REINSTALLATION AT A DIFFERENT LOCATION.
- 8 REMOVE ☒ VTR. PATCH ROOF TO MATCH EXISTING.
- 9 CLEAN AND FLUSH EXISTING SEWER SYSTEM TO REMAIN.

DEMO SHEET NOTES:

1. EXISTING PLUMBING LAYOUT BASED FROM AVAILABLE RECORD DRAWINGS OF UNKNOWN ACCURACY. EXISTING PIPING ESPECIALLY THOSE CONCEALED AND/OR UNDERGROUND MAY HAVE BEEN INSTALLED DIFFERENTLY THAN SHOWN HEREWITH. CONTRACTOR SHALL INVESTIGATE EXISTING PIPE ROUTE, ELEVATION, SIZE AND CONDITION, THRU VISUAL OBSERVATIONS, POT-HOLING, RADAR INSPECTION OR OTHER MEANS NECESSARY. PRIOR TO ANY NEW PIPE INSTALLATION. REFLECT ALL FINDINGS ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES. REFLECT EXISTING ROUTE, ELEVATION AND OTHER OBSERVATIONS ON AS-BUILT DRAWING IF DIFFERENT FROM SHOWN HEREWITH.
2. CONTRACTOR TO REMOVE ALL PIPING NOT CONNECTED TO PLUMBING FIXTURES. REFLECT ON AS-BUILT DRAWINGS.
3. CONTRACTOR SHALL REFLECT EXISTING AND/OR ABANDONED PIPING ON THE AS-BUILT DRAWINGS IF FOUND DIFFERENTLY FROM DESIGN PLANS FOR OWNER'S REFERENCE AND RECORD KEEPING.
4. PATCH ALL UNUSED ROOF PENETRATIONS TO MATCH EXISTING. SEE ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.
5. PROVIDE SLAB DEMOLITION WORK AS NECESSARY TO REMOVE, REPLACE, REROUTE OR ADD UNDERGROUND PIPING. PATCH BACK TO MATCH SURROUNDING FLOOR/PAVEMENT.

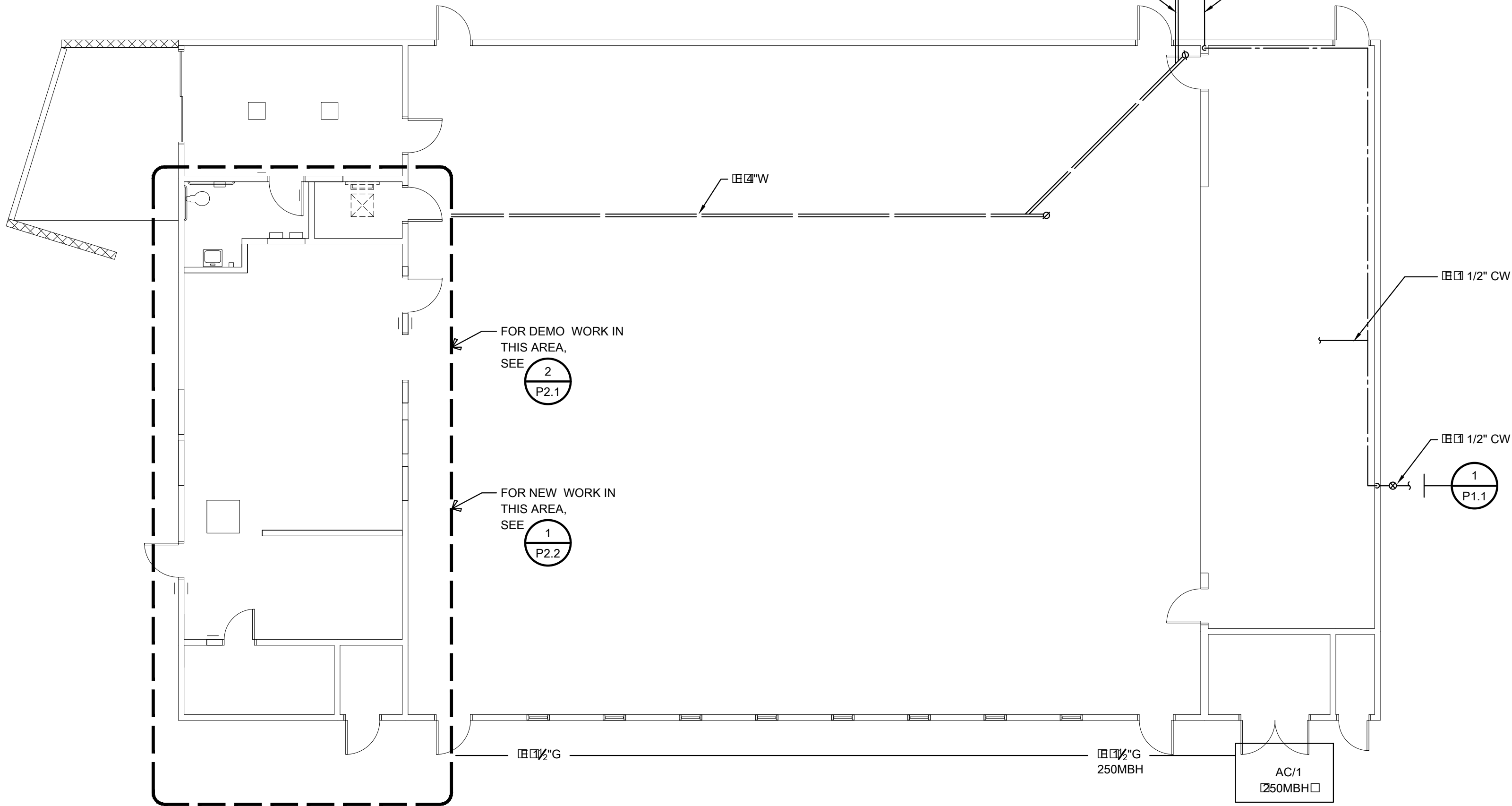
KEYPLAN:



PLUMBING DEMO FLOOR PLAN

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

2  
P2.1



PLUMBING FLOOR PLAN

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

1  
P2.1

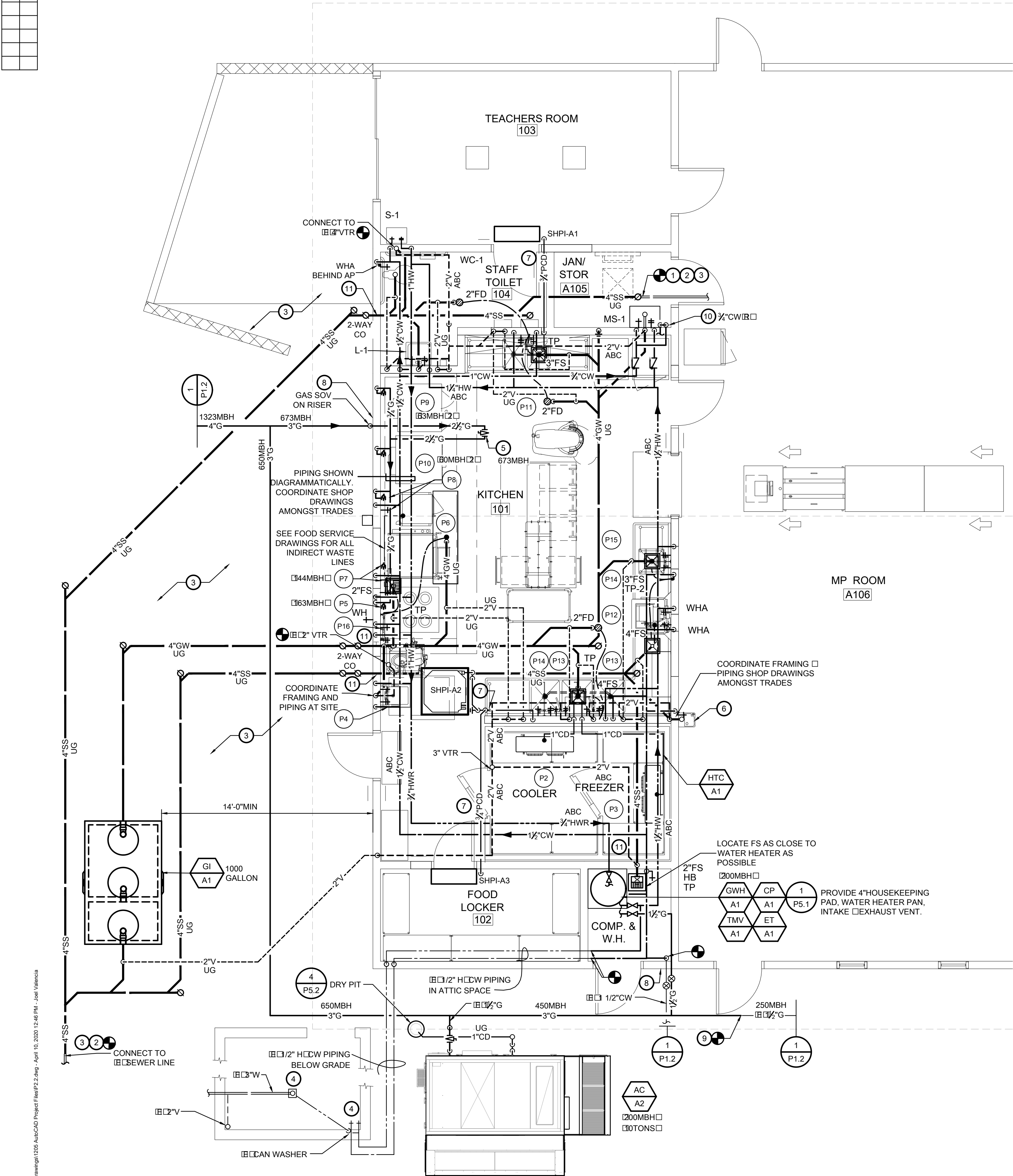


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## ENLARGED PLUMBING FLOOR PLAN

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

1  
P2.2



PLUMBING SCHEDULE								
PLUM. NO.	ITEM. NO.	DESCRIPTION	QTY.	WATER		WASTE		GAS
				CONN. SIZE		CONN. SIZE		
				C.W.	H.W.	DIR.	INDIR.	BTU/HR (x1,000)
P2	2	WALK-IN REFRIGERATOR CONN. DRAIN FROM COIL CONN. + 70"	1EA.	-	-	-	1"	-
P3	3	WALK-IN FREEZER CONN. DRAIN FROM COIL CONN. + 70"	1EA.	-	-	-	1"	-
P4	4	WALL MOUNTED HAND SINK FAUCET W/ 1/2" INLET 4" CENTER	1EA.	1/2"	1/2"	1 1/2"	-	-
P5	6	OPEN BURNER RANGE W/ OVEN	1EA.	-	-	-	-	163
P6	7	FLOOR TROUGH	1EA.	-	-	4"	-	-
P7	8	TILT SKILLET W/ FILLER	1EA.	1/2"	1/2"	-	-	144
P8	9	STEAMER, CONVECTION (2) COMPARTMENT	2EA.	3/4"	-	-	3/4"	60 EA.
P9	10	DOUBLE STACK CONVECTION OVEN GAS	2EA.	-	-	-	-	63 EA.
P10	10.1	DOUBLE STACK CONVECTION OVEN GAS	2EA.	-	-	-	-	60 EA.
P11	12	PREP SINK FAUCET W/ 1/2" INLET 8" CENTER	1EA.	1/2"	1/2"	-	2"	-
P12	23	WARE WASHER, HIGH TEMP	1EA.	1/2"	1/2"	-	1 1/2"	-
P13	26	POTWASH SINK FAUCET W/ 3/4" INLET 8" CENTER	2EA.	3/4"	3/4"	-	2"	-
P14	27	PRE-RINSE FAUCET W/ 1/2" INLET 8" CENTER	2EA.	1/2"	1/2"	-	2"	-
P15	34	SCRAP SINK	1EA.	-	-	-	2"	-

- NOTES:
- SEE FOOD SERVICE DRAWINGS FOR EXACT UTILITY STUB LOCATION AND FOR OTHER PLUMBING REQUIREMENTS.
  - SEE FLOOR PLAN, PLUMBING FIXTURE SCHEDULE OR PIPE SIZE SCHEDULE BELOW FOR MINIMUM PIPE SIZING REQUIREMENT.

WATER SUPPLY FIXTURE UNITS 3.4 PSI/100FT COPPER L			
PIPE SIZE	HW	CW F TANK	CW F VALVE
1/2"	1	1	0
3/4"	6	6	0
1"	13	13	0
1 1/4"	26	26	0
1 1/2"	46	51	12
2"	119	175	76
2 1/2"	245	406	270
3"	406	719	666
4"	840	1668	1668

- NOTES:
- PIPING SIZES SHALL BE PER ABOVE TABLE, PER AS SHOWN ON PLUMBING FLOOR PLANS OR PLUMBING FIXTURE SCHEDULE. SHOULD DISCREPANCIES ARISE, THE LARGEST OF WHICH SHALL PREVAIL.

GAS PIPE TABLE 1216.2(1) INLET PRESSURE 2PSI 0.5WATER COLUMN DROP, SPGR 0.6	
PIPE SIZE	LL<800FT (MBH)
1/2"	19
3/4"	39
1"	74
1 1/4"	152
1 1/2"	228
2"	438
2 1/2"	699
3"	1240
4"	2520

## CONSTRUCTION SHEET NOTES

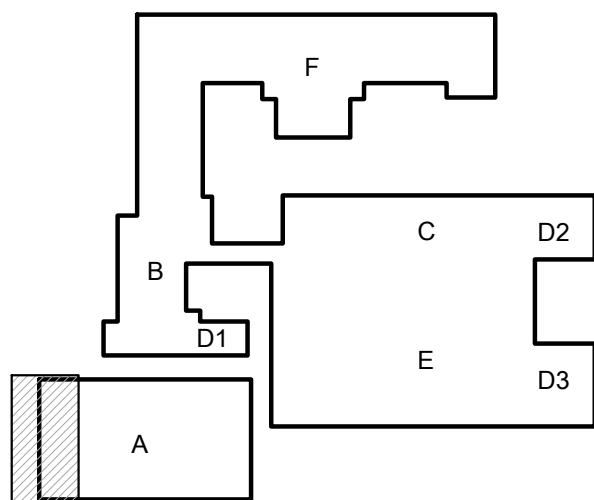
- ALL FINISH FLOOR ELEVATIONS BE BASED FROM CIVIL GRADING DRAWINGS. PLEASE REFER TO CIVIL DRAWINGS FOR MORE INFORMATION. BFF VALUES ARE ALL BASED FROM FINISH FLOOR ELEVATION INSIDE BUILDING. COORDINATE EXACT ELEVATIONS THRU SHOP DRAWINGS AND AT SITE.
- CONNECT WASTE, VENT COLD WATER LINES TO ALL NEW FIXTURES. SEE FIXTURE SCHEDULE FOR BRANCH AND FIXTURE OUTLET/INLET CONNECTION SIZES.
- HORIZONTAL DRAINAGE PIPING SHALL BE RUN IN PRACTICAL ALIGNMENT AND A UNIFORM SLOPE OF NOT LESS THAN 2' TOWARD THE POINT OF DISPOSAL UNLESS IMPRACTICAL DUE TO BUILDING'S STRUCTURAL FEATURES, OR EXISTING UPSTREAM/DOWNSTREAM PIPE DEPTH. IN SUCH CONDITIONS, PIPE CAN BE SLOPED AT NO LESS THAN 1'. REFLECT ALL CHANGES ON THE AS-BUILT DRAWINGS.
- EXISTING PLUMBING LAYOUT BASED FROM AVAILABLE RECORD DRAWINGS OF UNKNOWN ACCURACY. EXISTING PIPING ESPECIALLY THOSE CONCEALED AND/OR UNDERGROUND MAY HAVE BEEN INSTALLED DIFFERENTLY THAN SHOWN HEREWITH. CONTRACTOR SHALL INVESTIGATE EXISTING PIPE ROUTE, ELEVATION, SIZE AND CONDITION, THRU VISUAL OBSERVATIONS, POT-HOLING, RADAR INSPECTION OR OTHER MEANS NECESSARY. PRIOR TO ANY NEW PIPE INSTALLATION. REFLECT ALL FINDINGS ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES. REFLECT EXISTING ROUTE, ELEVATION AND OTHER OBSERVATIONS ON AS-BUILT DRAWING IF DIFFERENT FROM SHOWN HEREWITH.
- ADJUST ALL PIPE ELEVATIONS IF NECESSARY. COORDINATE BETWEEN TRADES AT SITE THROUGH SHOP DRAWINGS.
- CONTRACTOR SHALL PROVIDE OWNER WITH AS-BUILT DRAWINGS OF ALL PLUMBING SYSTEMS AS INSTALLED IN THE JOB SITE. AS-BUILT DRAWINGS SHALL INCLUDE BUT NOT LIMITED TO: UNDERGROUND PIPE ELEVATIONS, PIPE SIZES, AND ANY INFORMATION THAT MAY CLARIFY HOW THE SYSTEMS HAVE BEEN INSTALLED. AS-BUILT DRAWINGS SHALL BE IN HARD COPY AND DIGITAL BDF FORMAT.
- SEE PREVIOUS AS-BUILT DRAWINGS FOR CONTINUATION OF EXISTING PLUMBING UTILITIES OUTSIDE OF THIS PROJECT'S SCOPE.
- SEE GEOTECH REPORT FOR TRENCHING REQUIREMENTS, GROUND WATER ELEVATION, PIPE CORROSION AND OTHER SOILS INFORMATION.
- SLOPE ALL PUMPED CONDENSATE DRAIN LINES STAGE TOWARDS GRAVITY CD.
- PROVIDE TEMPORARY UTILITIES TO ALL FIXTURES TO REMAIN IN SERVICE DURING CONSTRUCTION PERIOD. COORDINATE ALL SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.
- INSTALL ALL TRAP PRIMERS UPSTREAM OF ACTIVATING FIXTURE WATER SOURCE. SEE TP INSTALLATION INSTRUCTIONS FOR MORE INFORMATION. LOCATE ACCESS PANELS ON THE SAME SIDE OF WALL WHERE ACTIVATING FIXTURE IS LOCATED.

## CONSTRUCTION KEYNOTES:

- CONNECT TO EXISTING PIPE. COORDINATE AMONGST TRADES.
- VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPE. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REFLECT ON AS-BUILT DRAWING IF DIFFERENT FROM HEREWITH.
- VERIFY EXACT LOCATION OF ALL BUILDING COMPONENTS THAT MAY OBSTRUCT PATH OF NEW PIPING. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REROUTE PIPING IF REQUIRED, REFLECT ON AS-BUILT DRAWINGS IF DIFFERENT FROM HEREWITH.
- PROTECT FIXTURE TO REMAIN IN PLACE DURING DEMO/CONSTRUCTION WORK. PROVIDE TEMPORARY UTILITIES WHEN NEEDED. COORDINATE SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.
- GAS SOLENOID VALVE ABV ACCESS PANEL. SEE FOOD SERVICE DRAWINGS.
- REINSTALL SALVAGED DRINKING FOUNTAIN. COORDINATE FRAMING AND ELECTRICAL REQUIREMENTS AT SITE.
- SLOPE PUMPED CD TO GRAVITY CD. SPILL CD DN TO APPROVED RECEPTOR. TYPICAL.
- PROVIDE GAS SOV SIGN ON WALL.
- MATCH EXISTING PIPE SIZE
- PROVIDE NEW 3/4" WALL HYDRANT FOR ROOF WELL. PROVIDE 3/4" CW RISER FROM CEILING SPACE TO WALL HYDRANT AT ROOF WELL. PROVIDE SOV ON RISER ABOVE WALL HYDRANT.
- IF REQUIRED, REUSE EXISTING PENETRATIONS THRU STRUCTURAL COMPONENTS IF AVAILABLE WHEN POSSIBLE OR ROUTE PIPE AROUND/ABOVE/BELOW STRUCTURAL COMPONENTS WHEN POSSIBLE. SEE STRUCTURAL DRAWINGS FOR DETAILS FOR MORE INFORMATION ON PENETRATIONS THRU OR ADJACENT TO STRUCTURAL COMPONENTS. TYPICAL.

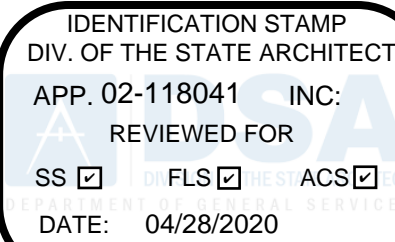
GAS  
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## KEYPLAN:



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KITCHEN RENOVATION  
JOE SERNA SCHOOL

PLUMBING  
ENLARGED FLOOR PLAN

CONSULTANT



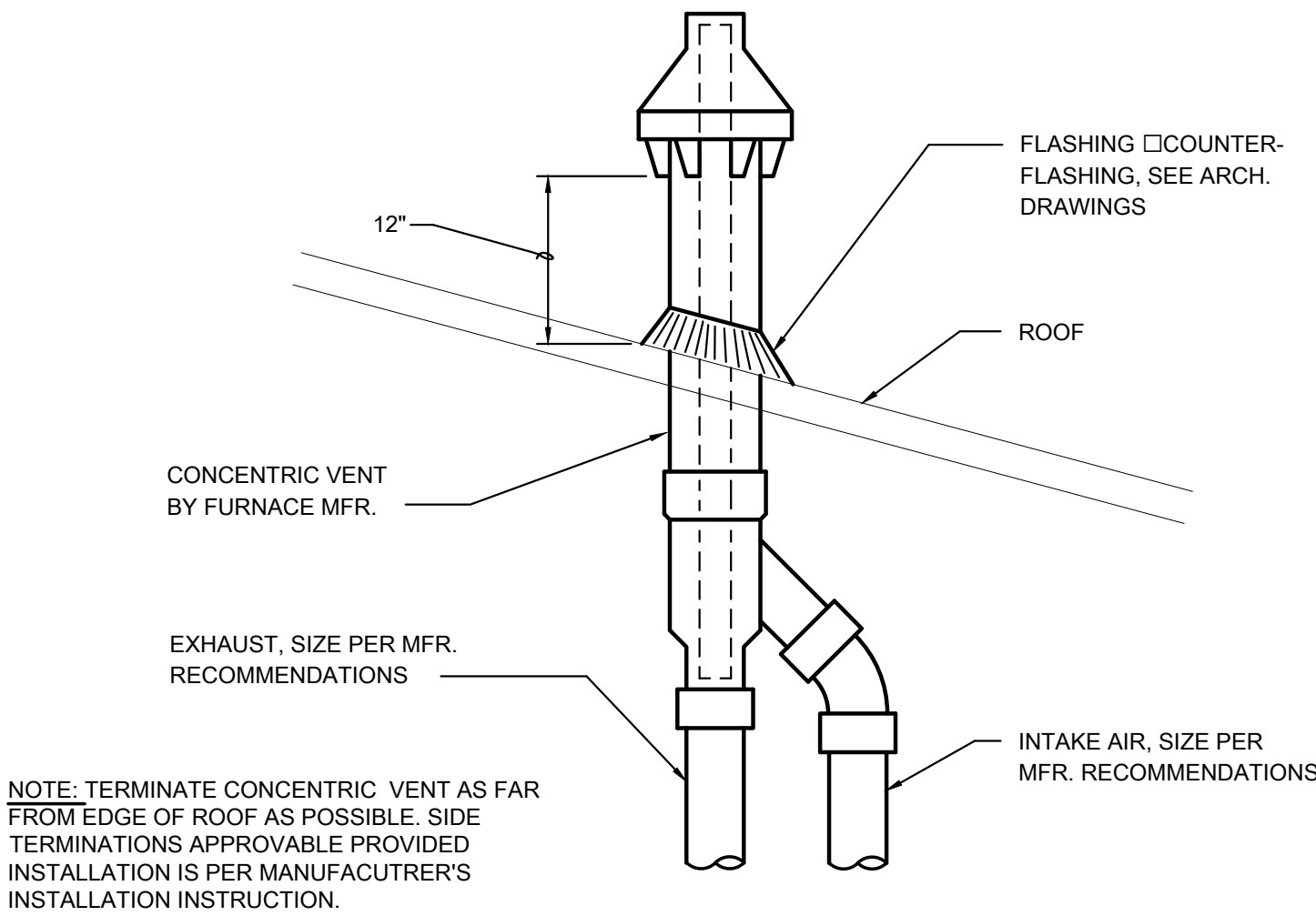
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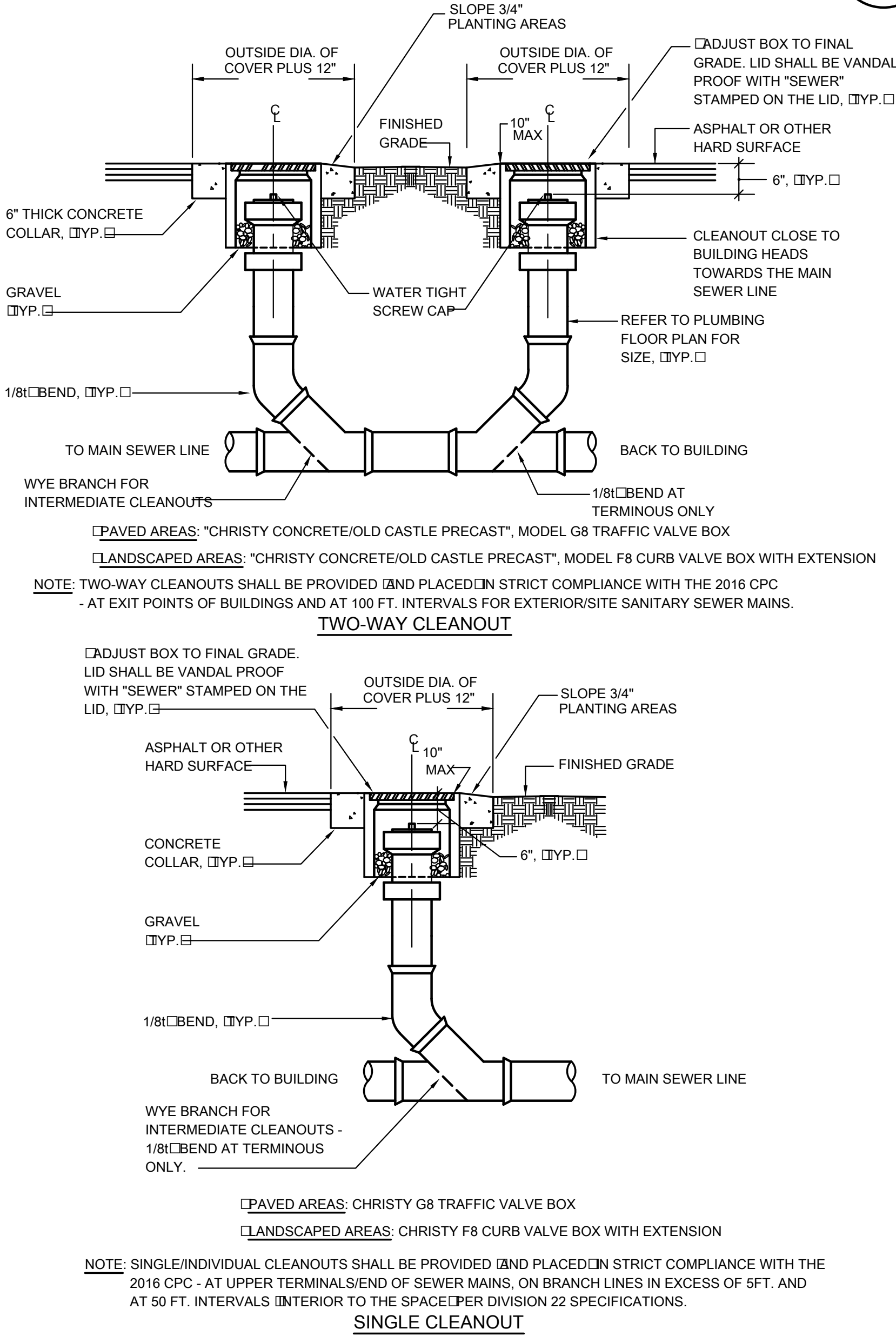


### GWH INTAKE & EXHAUST PIPING

SCALE : NONE

3

P5.1



### CLEANOUT INSTALLATION

SCALE : NONE

6

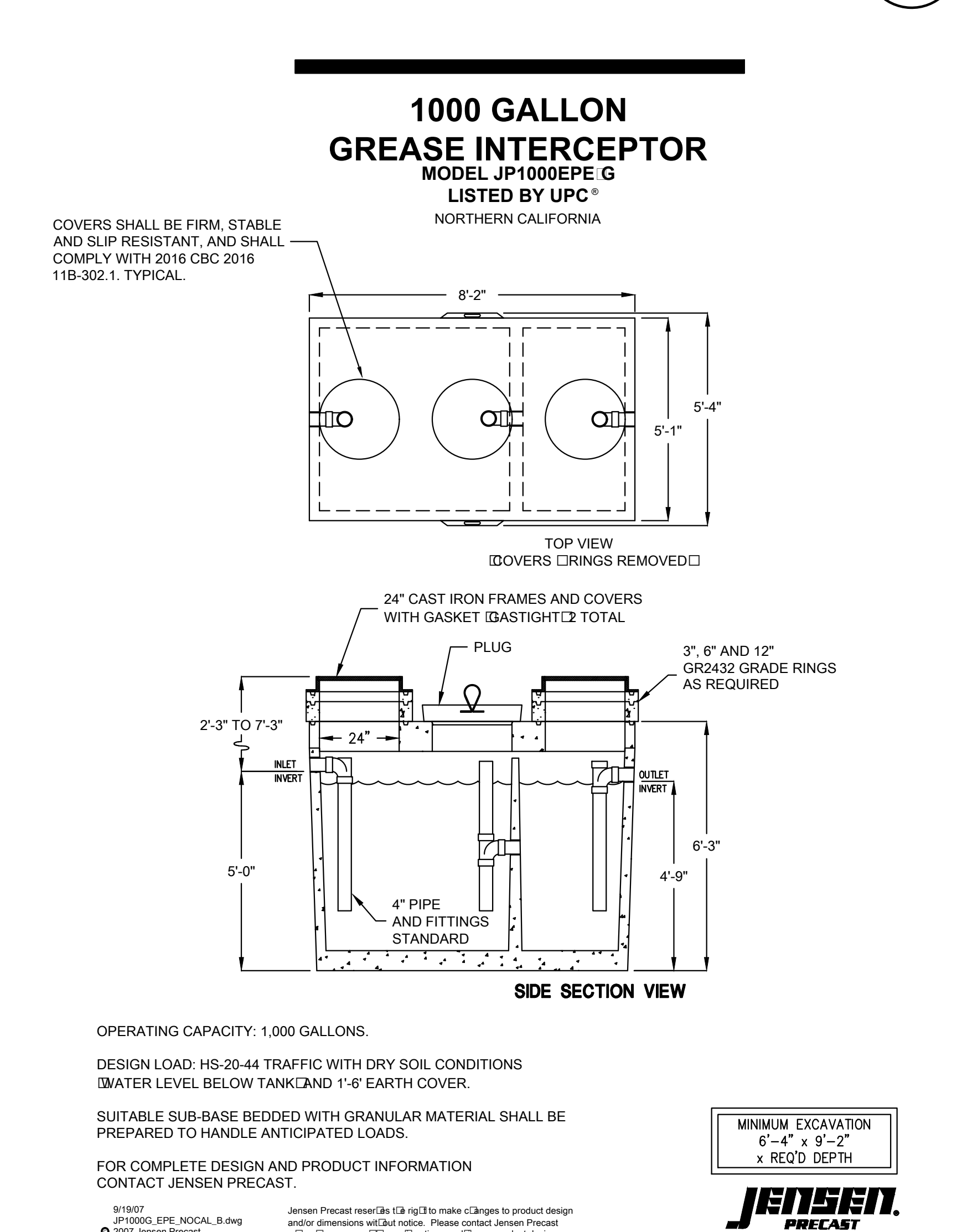
P5.1

### EXPANSION TANK MOUNTING

SCALE : NONE

2

P5.1



### GREASE INTERCEPTOR

SCALE : NONE

5

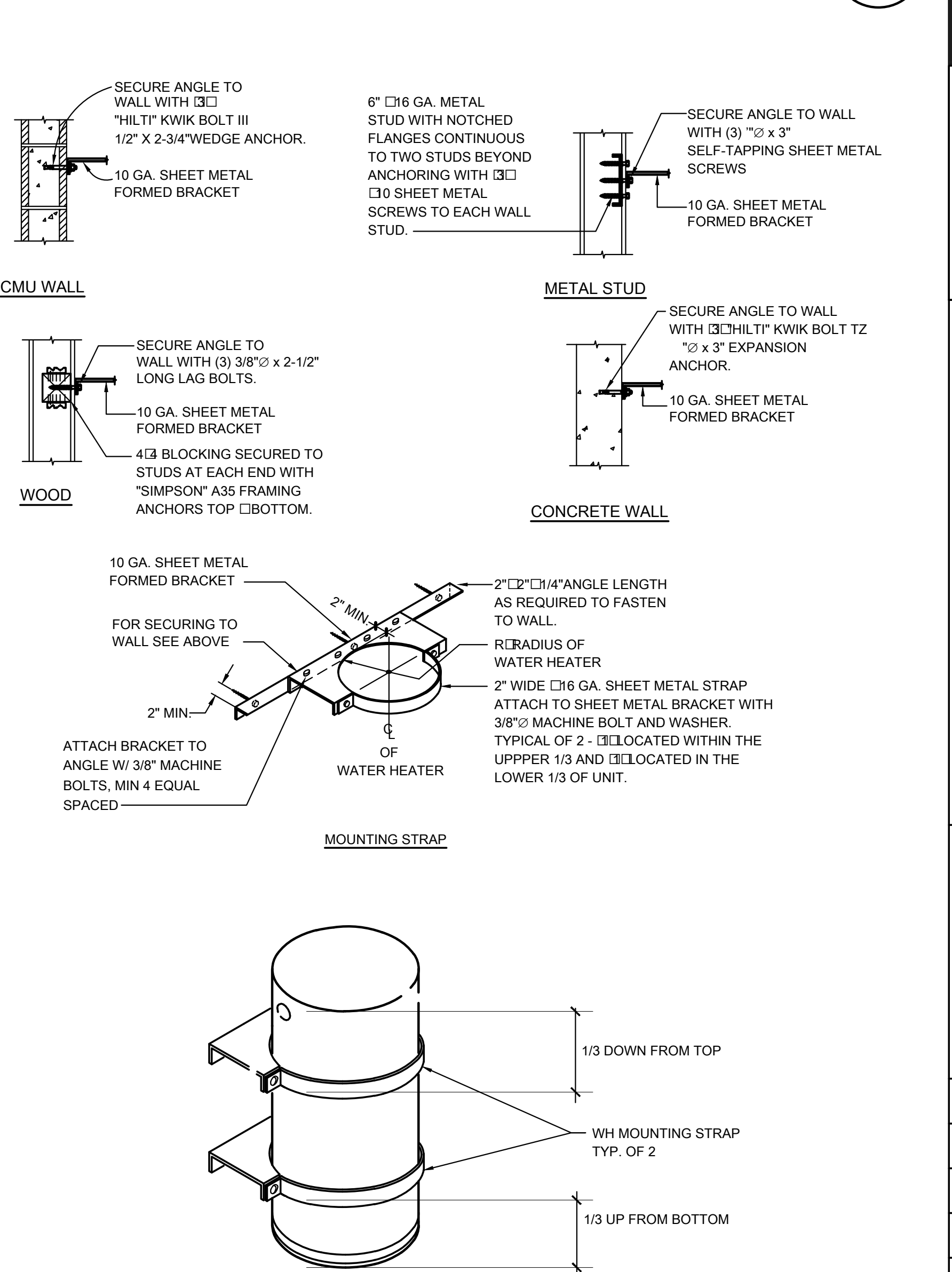
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### GAS WATER HEATER PIPING

SCALE : NONE

1

P5.1



### WATER HEATER SUPPORT

SCALE : NONE

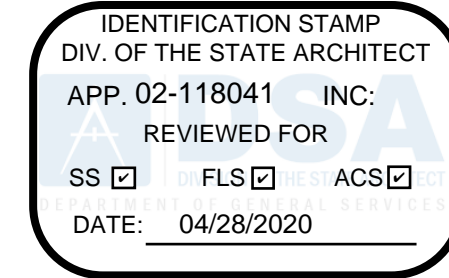
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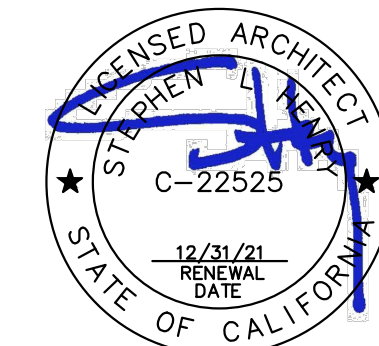


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KITCHEN RENOVATION  
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PLUMBING  
DETAILS

CONSULTANT



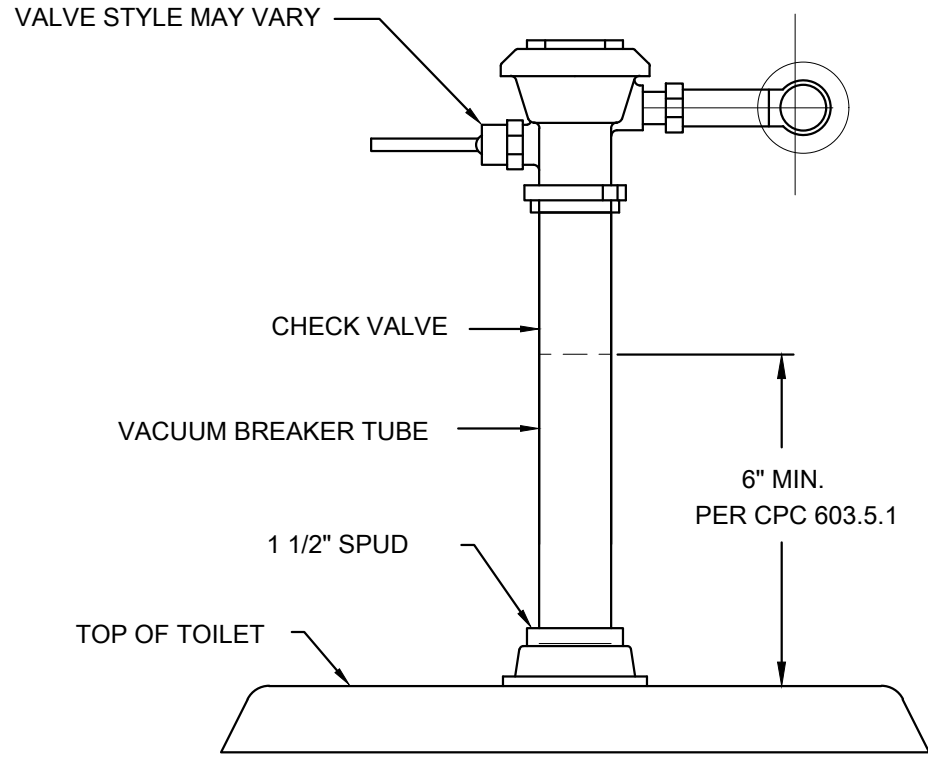
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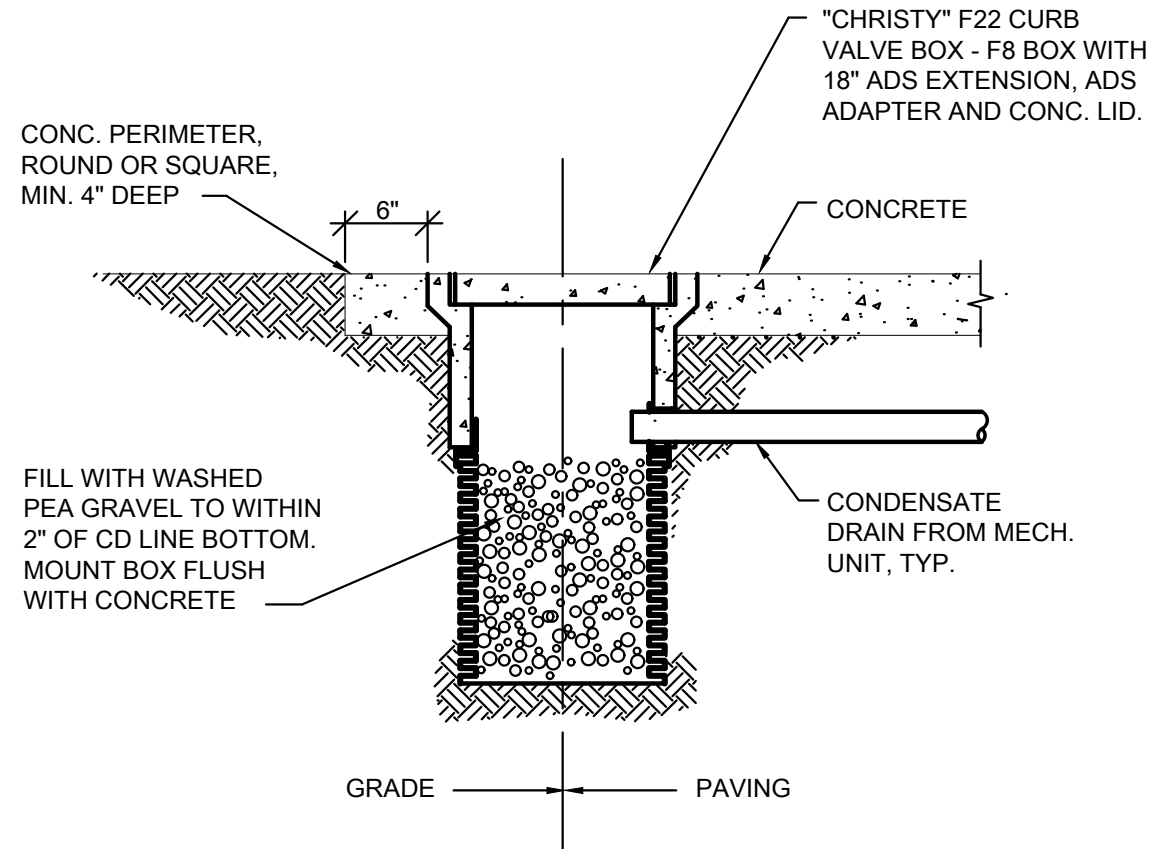


NOTES:  
INSTALL FLUSH VALVE PER MANUFACTURER'S INSTRUCTIONS.  
VERIFY ROUGH IN OF WATER SUPPLY TO ALLOW FOR PROPER VALVE INSTALLATION.

FLUSH VALVE INSTALLATION

SCALE : NONE

2  
P5.2

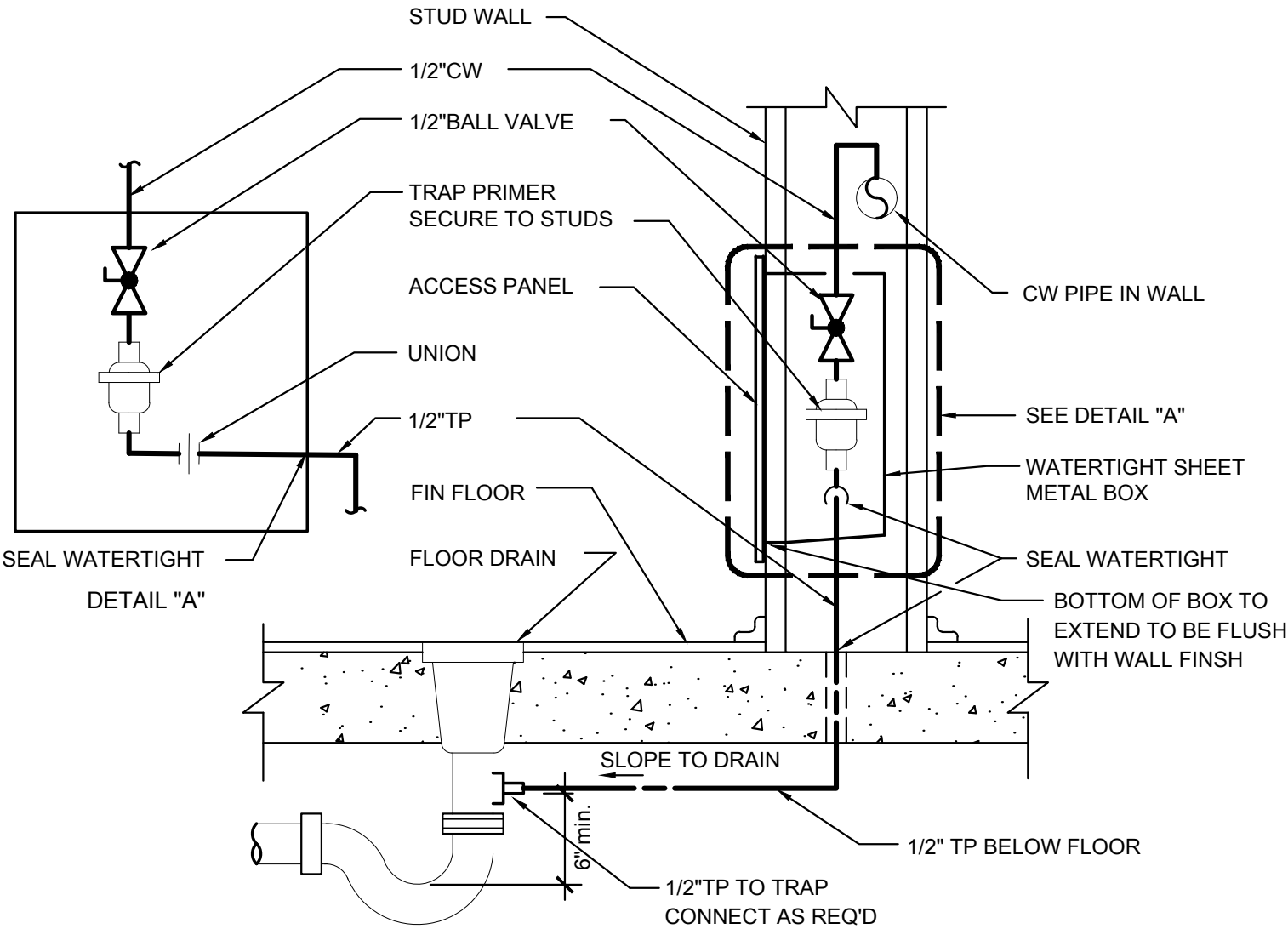


NOTE:  
ROUTE CONDENSATE DRAIN THRU WALL  
AS LOW AS POSSIBLE AND BELOW  
GRADE AS SOON AS POSSIBLE.

DRY PIT

SCALE : NONE

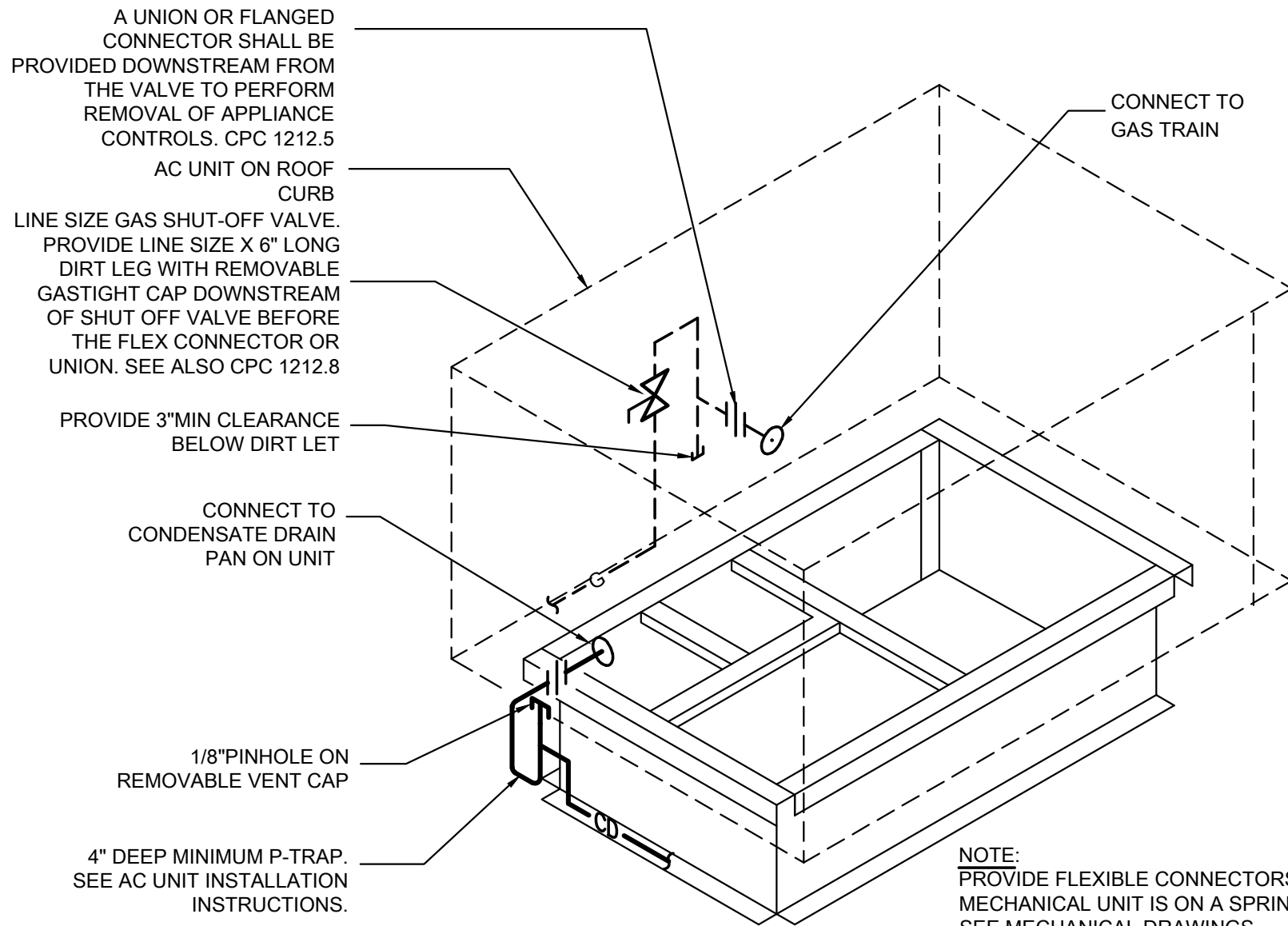
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TRAP PRIMER TO FLOOR DRAIN

SCALE : NONE

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P5.2



AC UNIT PIPING

SCALE : NONE

3  
P5.2

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HENRY+  
ASSOCIATES  
ARCHITECTS

REGISTERED ARCHITECT  
STEPHEN J. ALLEN  
C-22525  
12/31/21  
RENEWAL  
DATE  
STATE OF CALIFORNIA

KITCHEN RENOVATION  
JOE SERNA SCHOOL

PLUMBING  
DETAILS

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ENGINEERING CONSULTANTS INC.  
RANCHO CORDOVA, CALIFORNIA  
MCM RLJSV 1:100:00  
PM DESIGN TEAM PROJECT NO.

PROJECT NO. 19-32-050	REVISIONS	BY
DATE 04/10/2020		
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SCALE AS NOTED		
CADFILE		
UPDATED		

SHEET NO.  
  
P5.2  
  
OF SHEETS

REGISTERED PROFESSIONAL ENGINEER  
THOMAS A. CUDY  
M 22836  
EXPIRES 9/30/20  
MECHANICAL  
STATE OF CALIFORNIA  
DATE SIGNED: 04/10/2020



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ABBREVIATIONS			
A	AMPERES	MAX.	MAXIMUM
AC	ALTERNATING CURRENT	MDF	MAIN DISTRIBUTION FRAME
A.F.F.	ABOVE FINISHED FLOOR	MIN.	MINIMUM
AWG	AMERICAN WIRE GAUGE	N	NEUTRAL
BKR	BREAKER	(N)	NEW
C	CONDUIT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CKT.BKR	CIRCUIT BREAKER	N.I.C.	NOT IN CONTRACT
CD	CANDELA	PFB	PROVISIONS FOR FUTURE CIRCUIT BREAKER
CKT	CIRCUIT	(R)	REMOVE
C.O.	CONDUIT ONLY, WITH PULL WIRE	(RE)	RELOCATE EXISTING
(E)	EXISTING	RCPT.	RECEPTACLE
EM	EMERGENCY	S.M.S	SHEET METAL SCREW
(ER)	EXISTING RELOCATED	SWBD	SWITCHBOARD
EMT	ELECTRICAL METALLIC CONDUIT	SYS	SYSTEM
(F)	FUTURE	TYP.	TYPICAL
FACP	FIRE ALARM CONTROL PANEL	UG	UNDERGROUND
FAPS	FIRE ALARM POWER SUPPLY	UL	UNDERWRITERS LABORATORY
GA.	GAUGE	V	VOLT
GND	GROUND	VA	VOLT-AMPERES
GFI	GROUND FAULT CIRCUIT INTERRUPTER	W	WATT
HP	HORSEPOWER	WP	WEATHER PROTECTED
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	XFMR	TRANSFORMER
LTG.	LIGHT		

LUMINAIRE SCHEDULE					
TYPE	MANUFACTURER	VOLTAGE	LAMP	MOUNTING	REMARK NOTE No.
	CATALOG NO.	DESCRIPTION	DESCRIPTION		
A	VISIONEERING-VISCOR	120 VOLT	LED, 52 WATTS,	T-BAR	①
	LRT-A-C29-2X4-LED-8-40K-063L-P04-X5	TROFFER - KITCHEN	4000K, 80 CRI		
B	CERTOLUX	120 VOLT	LED, 22 WATTS,	SURFACE	
	VRSE-3556-24-LED-8-40K-24L	SURFACE, VANDAL	4000K, 80 CRI		
LUMINAIRE SCHEDULE REMARK NOTES:					
① REFER TO PLANS FOR BATTERY OPERATED EMERGENCY DRIVER.					

September 13, 2016

**MEP Component Anchorage Note**  
All mechanical, plumbing, and electrical components shall be anchored and installed per the details on the DSA approved construction documents. Where no detail is indicated, the following components shall be anchored or braced to meet the force and displacement requirements prescribed in the 2016 CBC, Sections 1616A.1.18 through 1616A.1.26 and ASCE 7-10 Chapter 13, 26 and 30.

- All permanent equipment and components.
- Temporary or movable equipment that is permanently attached (e.g. hard wired) to the building utility services such as electricity, gas or water.
- Movable equipment which is stationed in one place for more than 8 hours and heavier than 400 pounds or has a center of mass located 4 feet or more above the adjacent floor or roof level that directly support the component are required to be anchored with temporary attachments.

The following mechanical and electrical components shall be positively attached to the structure, but the attachment need not be detailed on the plans. These components shall have flexible connections provided between the component and associated ductwork, piping, and conduit.



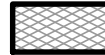



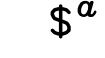
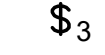




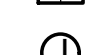





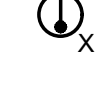


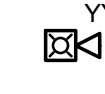










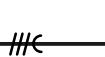




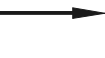
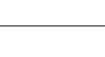
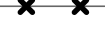


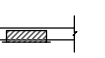



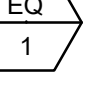
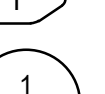
- Components weighing less than 400 pounds and have a center of mass located 4 feet or less above the adjacent floor or roof level that directly support the component.
- Components weighing less than 20 pounds, or in the case of distributed systems, less than 5 pounds per foot, which are suspended from a roof or floor or hung from a wall.

For those elements that do not require details on the approved drawings, the installation shall be subject to the approval of the design professional in general responsible charge or structural engineer delegated responsibility and the DSA District Structural Engineer. The project inspector will verify that all components and equipment have been anchored in accordance with above requirements

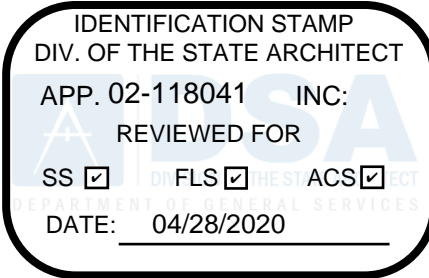
**Piping, Ductwork, and Electrical Distribution System Bracing Note**  
Piping, ductwork, and electrical distribution systems shall be braced to comply with the forces and displacements prescribed in ASCE 7-10 Section 13.3 as defined in ASCE 7-10 Section 13.6.5.6, 13.6.7, 13.6.8, and 2016 CBC, Sections 1616A.1.24, 1616A.1.25 and 1616A.1.26.

The method of showing bracing and attachments to the structure for the identified distribution system are as noted below. When bracing and attachments are based on a preapproved installation guide (e.g., SMACNA or OSHPD OPM), copies of the bracing system installation guide or manual shall be available on the jobsite prior to the start and during the hanging and bracing of the distribution systems. The Structural Engineer of Record shall verify the adequacy of the structure to support the hanger and brace loads.

Mechanical Piping (MP), Mechanical Ducts (MD), Plumbing Piping (PP), Electrical Distribution Systems (E):  
MP ☐ MD ☐ PP ☐ E ☒ Option 1: Detailed on the approved drawings with project specific notes and details.

ELECTRICAL SYMBOL LIST	
	ENCLOSED LUMINAIRE - SURFACE MOUNTED (LETTER "a" DENOTES SWITCH FUNCTION, NUMBER "2" DENOTES CIRCUIT NUMBER - TYPICAL FOR ALL LUMINAIRES UNLESS NOTED OTHERWISE).
	ENCLOSED LUMINAIRE - CEILING LAY-IN
	EMERGENCY ENCLOSED LUMINAIRE
	EXISTING LUMINAIRE TO REMAIN
	EXISTING LUMINAIRE TO BE REMOVED
	LUMINAIRE DESIGNATION WITH LAMP QUANTITY AND WATTAGE. SEE LUMINAIRE SCHEDULE.
	SINGLE POLE TOGGLE SWITCH, +45" A.F.F. - "a" LETTER DENOTES SWITCH FUNCTION, TYPICAL FOR ALL SWITCHES UNLESS NOTED OTHERWISE
	THREE-WAY TOGGLE SWITCH
	DIMMER SWITCH
	OCCUPANCY SENSOR SWITCH WITH MANUAL OVERRIDE - WALL MOUNTED AT +45" A.F.F. UNLESS NOTED OTHERWISE
	DIMMER SWITCH WITH INTEGRAL OCCUPANCY SENSOR - WALL MOUNTED AT +45" A.F.F. UNLESS NOTED OTHERWISE
	OCCUPANCY AREA SENSOR SWITCH
	LIGHTING ROOM CONTROLLER - MOUNTED IN ACCESSIBLE CEILING AREA, UNLESS NOTED OTHERWISE
	JUNCTION BOX - SIZE AS REQUIRED BY CODE
	DUPLEX CONVENIENCE OUTLET - NEMA 5-20R +18" A.F.F. TYPICAL FOR ALL CONVENIENCE OUTLETS, UNLESS NOTED OTHERWISE (LETTER "A" SHOWN ADJACENT TO OUTLET DESIGNATES MOUNTED HORIZONTALLY ABOVE COUNTER).
	QUADPLEX CONVENIENCE OUTLET - NEMA 5-20R
	SPECIAL RECEPTACLE AS SHOWN ON PLANS
	DATA OUTLET - FLUSH IN WALL +18" A.F.F. NUMBER IN PARENTHESIS INDICATES NUMBER OF DATA JACKS.
	FIRE ALARM HEAT DETECTOR - CEILING MOUNTED. "AC" INDICATE THAT DETECTOR IS MOUNTED IN ACCESSIBLE ABOVE CEILING / ATTIC SPACE. "194" INDICATE HIGH TEMPERATURE HEAT DETECTOR.
	FIRE ALARM SMOKE DETECTOR - CEILING MOUNTED. THE DEFAULT TYPE IS PHOTOELECTRIC
	FIRE ALARM AUDIBLE DEVICE, +90" A.F.F. UNLESS OTHERWISE NOTED. DEFAULT DEVICE IS A SPEAKER.
	FIRE ALARM AUDIO / VISUAL DEVICE, +80" A.F.F. DEFAULT AUDIO DEVICE IS A SPEAKER. "YY" INDICATES STROBE CANDELA RATING.
	VISUAL FIRE ALARM DEVICE +80" A.F.F. - WALL MOUNTED (LAMP, SIGNAL LIGHT, INDICATOR LAMP, STROBE), "YY" = CANDELA RATING
	FIRE ALARM MONITOR MODULE
	END OF LINE RESISTOR
	MASTER FIRE ALARM CONTROL PANEL
	REMOTE FIRE ALARM POWER SUPPLY
	FIRE ALARM REMOTE ANNUNCIATOR PANEL - FLUSH MOUNTED
	SPEAKER - WALL MOUNTED, REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION AND MOUNTING HEIGHT.
	CLOCK OUTLET - WALL MOUNTED REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION AND MOUNTING HEIGHT.
	SECURITY SYSTEM KEYPAD AND OUTLET BOX +45" A.F.F. UNLESS NOTED. PROVIDE 3/4" CONDUIT STUB. SEE NOTE 4.
	SECURITY SYSTEM DOOR OR WINDOW CONTACT. PROVIDE 1/2" CONDUIT STUB.
	CONDUIT RUN CONCEALED IN CEILINGS OR WALLS. NUMBER OF HASH MARKS DENOTES QUANTITY OF WIRES. CURVED HASH MARK DENOTES QUANTITY OF #12 GREEN GROUND WIRES. CONDUCTORS OTHER THAN #12 ARE INDICATED ON PLANS. NO HASH MARKS DENOTES 2 #12 AWG AND 1 #12 GREEN GROUND IN 1/2" CONDUIT. TYPICAL FOR ALL CONDUITS.
	FLEXIBLE CONDUIT CONCEALED. NUMBER OF HASH MARKS DENOTES QUANTITY OF WIRES. CURVED HASH MARK DENOTES QUANTITY OF #12 GREEN GROUND WIRES. CONDUCTORS OTHER THAN #12 ARE INDICATED ON PLANS. NO HASH MARKS DENOTES 2 #12 AWG AND 1 #12 GREEN GROUND IN 1/2" MINIMUM DIAMETER CONDUIT.
	CONDUIT HOMERUN TO PANELBOARD, SWITCHBOARD OR TERMINAL CABINET
	EXISTING CONDUIT AND WIRING
	EXISTING CONDUIT TO BE REMOVED OR ABANDONED, REMOVE WIRES. COORDINATE WITH OWNER.
	PANELBOARD - SURFACE MOUNTED
	PANELBOARD - FLUSH MOUNTED
	EXISTING PANELBOARD - SURFACE MOUNTED
	EXISTING PANELBOARD - FLUSH MOUNTED
	TERMINAL CABINET
	SWITCHBOARD, DISTRIBUTION PANEL, OR MOTOR CONTROL CENTER
	EQUIPMENT DISCONNECT SWITCH - EXTERNALLY OPERATED, FUSED WITH FUSE SIZE TO MATCH EQUIPMENT NAMEPLATE
	EQUIPMENT DISCONNECT SWITCH - EXTERNALLY OPERATED, NON-FUSIBLE
	MECHANICAL EQUIPMENT DESIGNATION - SEE MECHANICAL PLANS
	DRAWING SHEET NUMBERED NOTE DESIGNATION - APPLIES TO NUMBERED NOTE ON SAME SHEET
	DRAWING PLAN OR DETAIL DESIGNATION - "1" OR "A" DENOTES PLAN OR DETAIL NUMBER, "E-1" DENOTES SHEET NUMBER
SYMBOL LIST NOTES:	
1. EXISTING ELECTRICAL EQUIPMENT, OUTLETS, AND DEVICES ARE SHOWN THE SAME AS NEW, EXCEPT LIGHTLY AND ACCOMPANIED BY (E). SUCH ELECTRICAL EQUIPMENT, OUTLETS, AND DEVICES ARE TO REMAIN AS IS, UNLESS OTHERWISE NOTED ON PLAN OR SPECIFICATION.	
2. ELECTRICAL OUTLET BOXES MOUNTED ON OPPOSITE SIDES OF FIRE-RATED WALLS OR PARTITIONS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES PER CBC 2016, WHETHER SHOWN ON THE PLANS OR NOT.	
3. VERIFY ON SITE THAT ALL PANELBOARDS HAVE MINIMUM WORKING SPACES PER CODE AND THAT THE DEDICATED PANELBOARD SPACES ARE CLEAR OF ALL DUCTS, PIPING AND EQUIPMENT FOREIGN TO THE PANEL BOARDS. NOTIFY THE ENGINEER FOR CORRECTIVE ACTION IN THE EVENT THAT FOREIGN OBJECTS IMPEDE THE DEDICATED PANELBOARD AREAS.	

PROJECT DESCRIPTION		
THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS TO PROVIDE POWER FOR NEW KITCHEN EQUIPMENT, NEW HVAC EQUIPMENT, NEW LIGHTING, IN RENEWED KITCHEN. EXISTING FIRE ALARM, DATA, INTRUSION AND VOICE SYSTEMS WILL BE REVISED AND ADJUSTED TO CONFIRM TO RENEWED KITCHEN.		
SHOULD ANY CONDITIONS DEVELOP, NOT COVERED BY THE CONTRACT DOCUMENTS, WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH ALL REQUIRED CODES, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO, AND APPROVED BY, THE AGENCY BEFORE PROCEEDING WITH THE WORK.		



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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

SYMBOLS, NOTES,  
ABBREVIATIONS,  
SCHEDULES

CONSULTANT



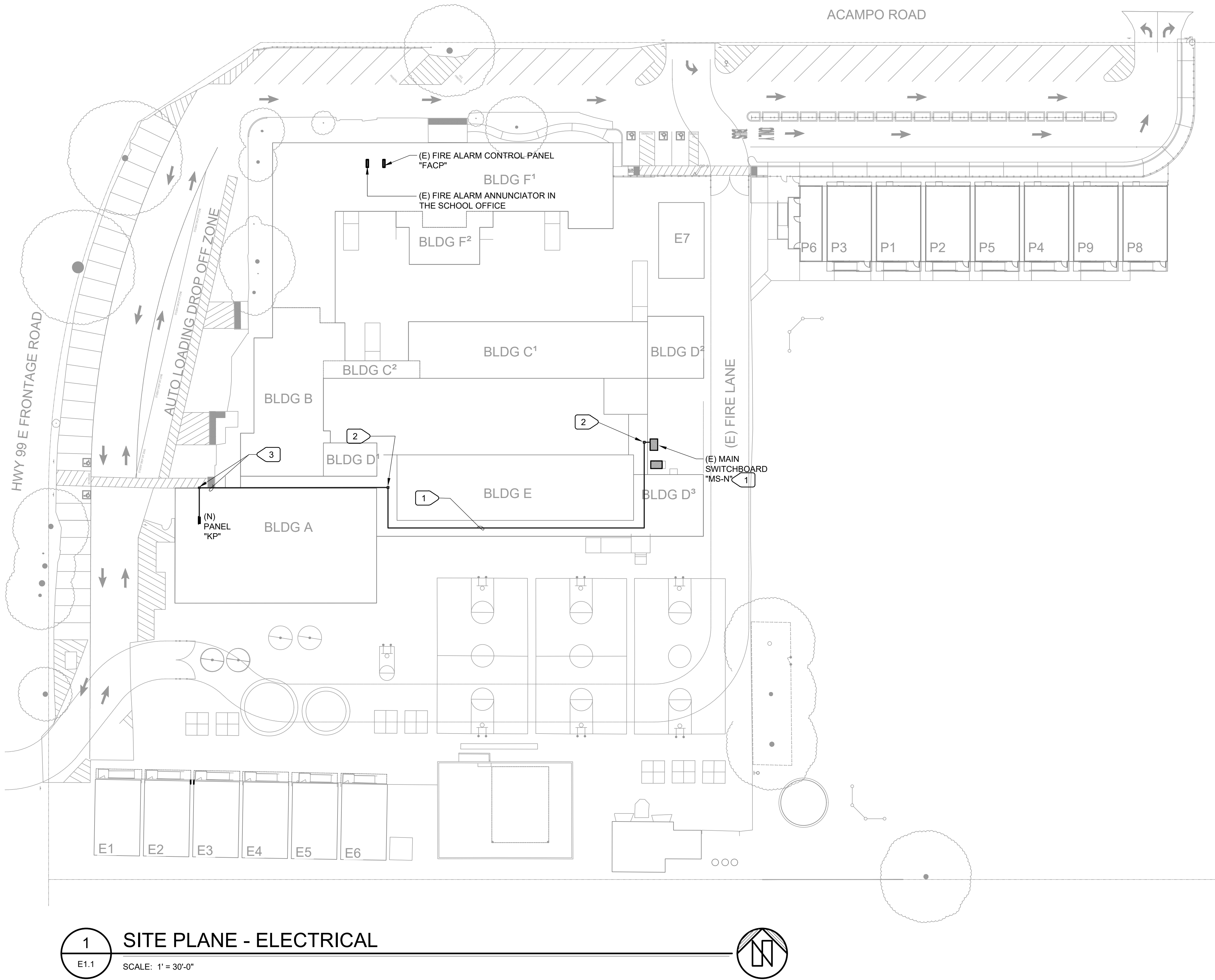
04/09/2020

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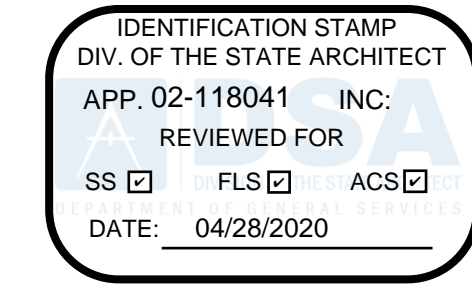
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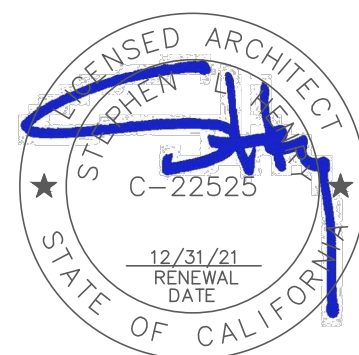


1 SITE PLANE - ELECTRICAL  
E1.1 SCALE: 1" = 30'-0"

- NUMBERED NOTES:
- 1 REFER TO ONE LINE DIAGRAM - POWER 1/E3.0 FOR CONDUIT AND CONDUCTOR SIZES, AND NEW CIRCUIT BREAKER. RUN CONDUITS ON ROOF / EXTERIOR WALLS. PROVIDE CONDUIT SUPPORT PER 1/E5.0. INSTALL BREAKER IN (E) SPACE. PROVIDE ALL HARDWARE AND TRIM PIECES FOR COMPLETE INSTALLATION. COORDINATE EXACT CONDUIT ROUTE WITH ARCHITECT BEFORE ROUGH IN.
  - 2 PROVIDE NEMA 4X ENCLOSURE WITH SCREW COVER 18"x18"x6". ENCLOSURE TO BE USED AS PULLBOX. MOUNT ENCLOSURE ON ROOF PER 1/E5.0.
  - 3 PROVIDE NEMA 3R ENCLOSURE 18"x18"x6" WITH SCREW COVER. MOUNT ON WALL SUCH THAT MIDDLE OF BOX IS LEVELED WITH TOP OF COVERED WALKWAY. CONTINUE CONDUIT FROM COVERED WALKWAY STRAIGHT TO NEW BOX. CONTINUE CONDUIT FROM BACK OF THE BOX, THROUGH WALL IN ATTIC SPACE ABOVE TEACHER LOUNGE TO (N) PANEL "KP". COORDINATE EXACT ROUTE BEFORE ROUGH IN.



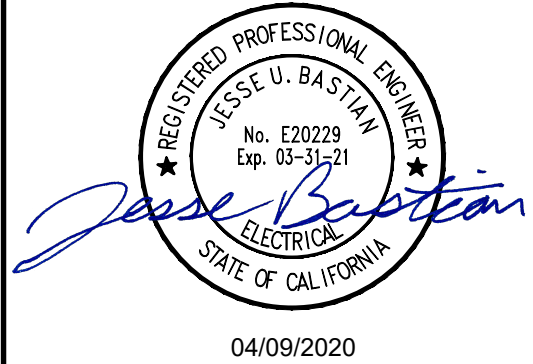
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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

SITE PLAN  
ELECTRICAL

CONSULTANT



04/09/2020

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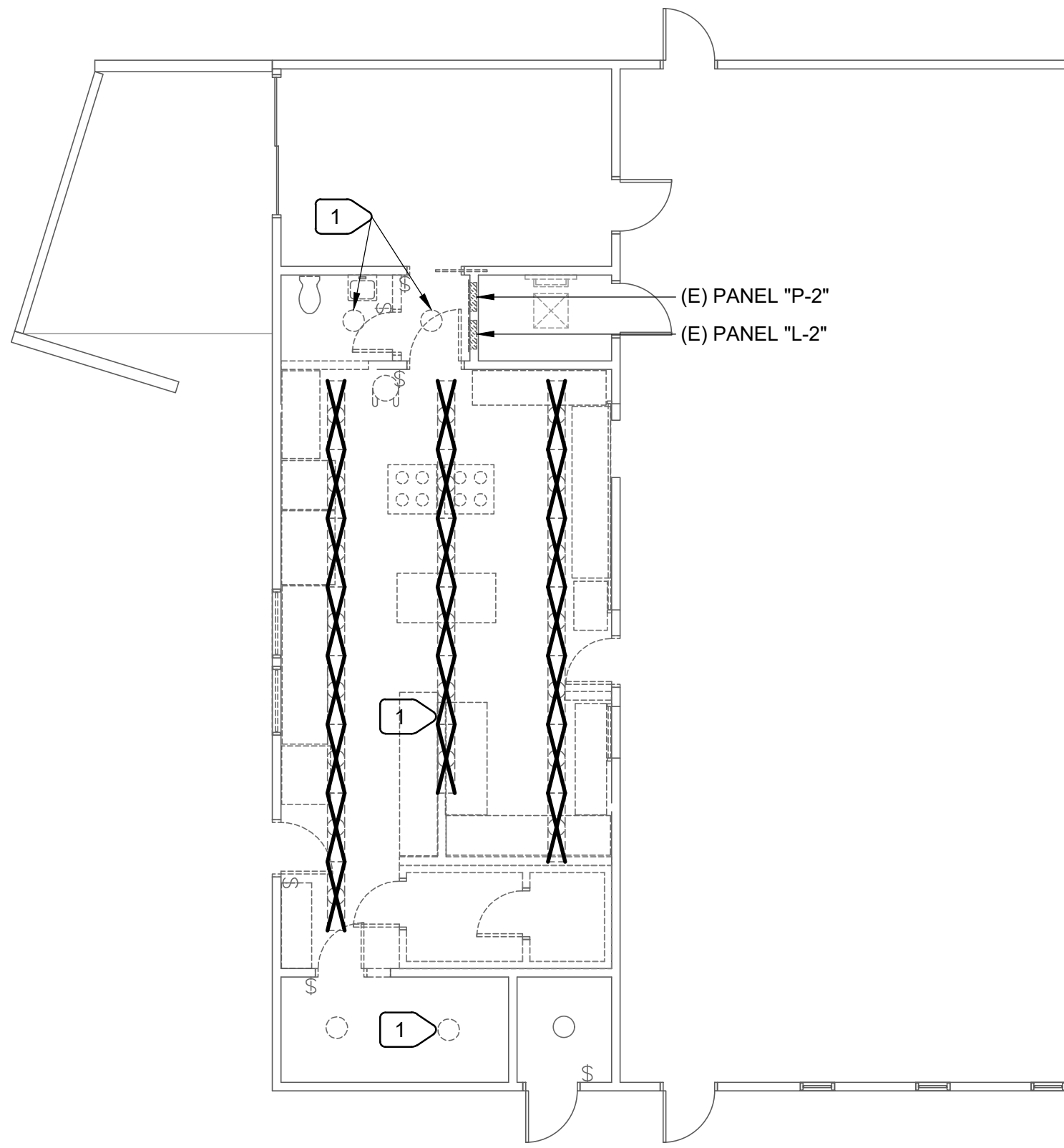
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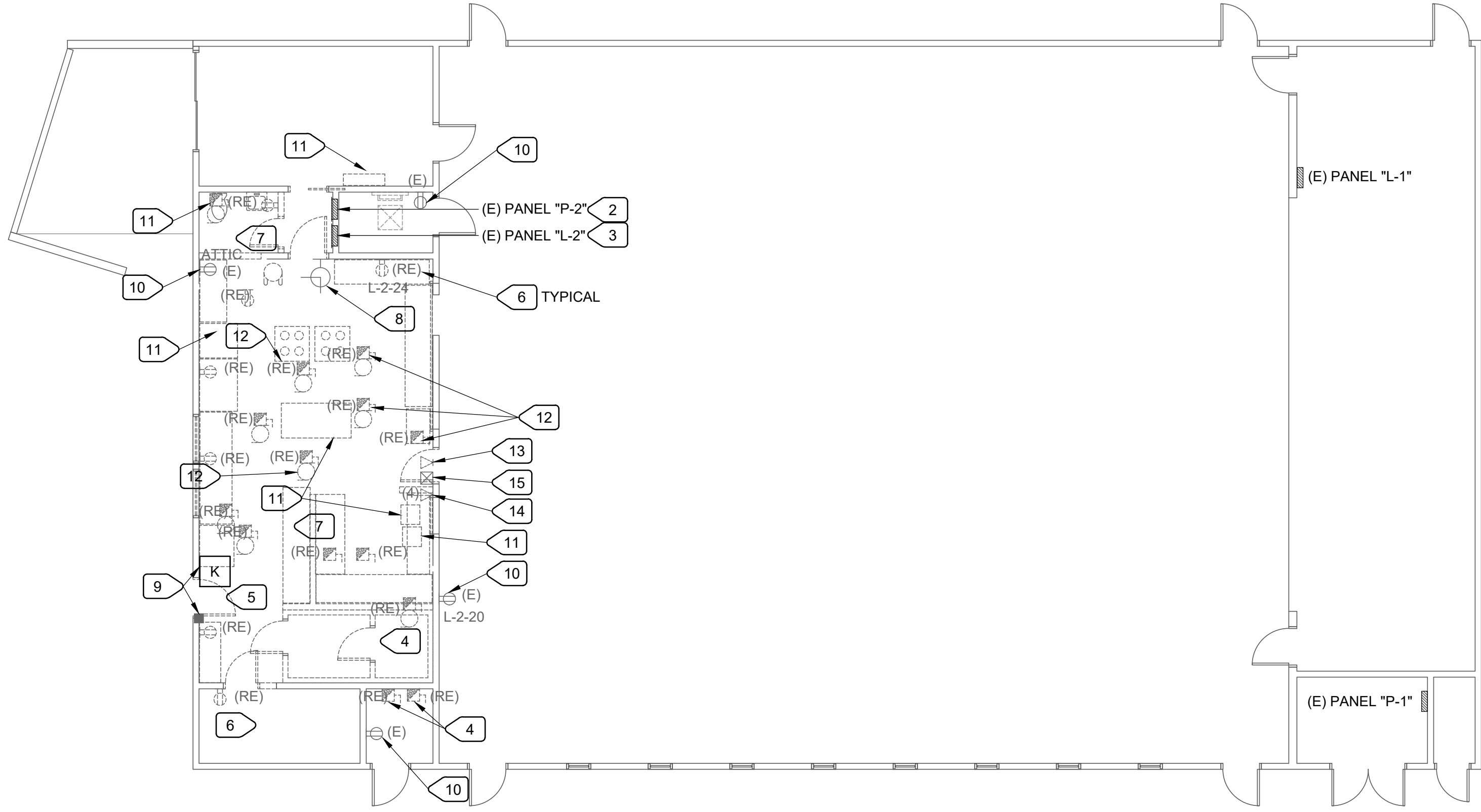
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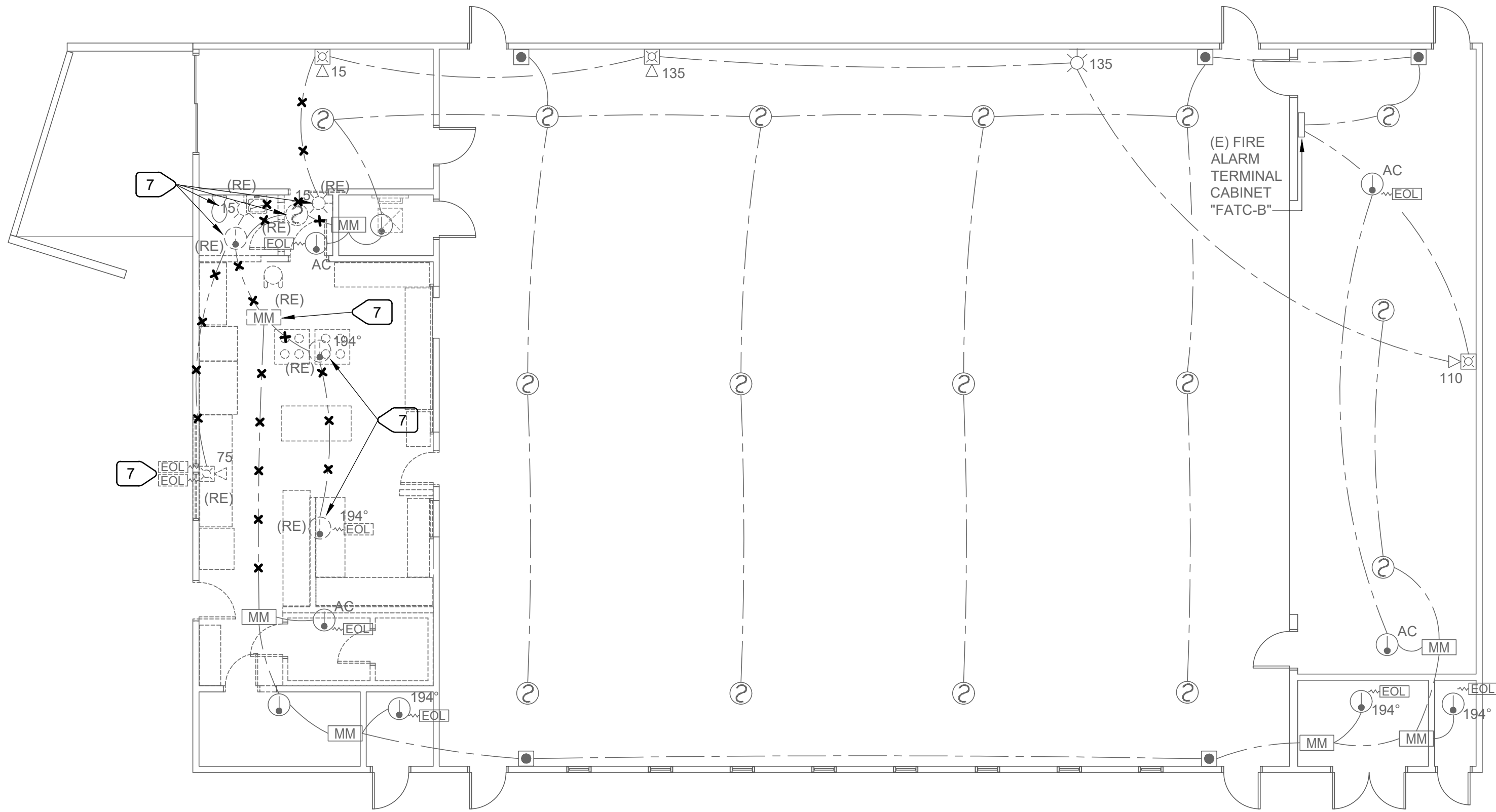
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1 PARTIAL FLOOR PLAN - LIGHTING DEMOLITION  
E2.0 SCALE : 1/8" = 1'-0"



2 FLOOR PLAN - ELECTRICAL DEMOLITION  
E2.0 SCALE : 1/8" = 1'-0"



3 FLOOR PLAN - FIRE ALARM DEMOLITION  
E2.0 SCALE : 1/8" = 1'-0"

#### NUMBERED NOTES:

- 1 REMOVE LIGHTS IN THIS SPACE. REMOVE ASSOCIATED SWITCHES. REMOVE WIRING BACK TO PANEL "L-2". INSURE THAT REMAINING LIGHTS CIRCUIT CONTINUITY.
- 2 DISCONNECT PANEL "P-2" AND REMOVE. REMOVE PANEL FEEDER BACK TO PANEL "P-1". PROTECT CIRCUITS NOT SCHEDULED FOR DEMOLITION, FOR RECONNECTION TO (N) PANEL.
- 3 DISCONNECT PANEL "L-2" AND REMOVE. REMOVE PANEL FEEDER BACK TO PANEL "L-1". PROTECT CIRCUITS NOT SCHEDULED FOR DEMOLITION, FOR RECONNECTION TO (N) PANEL.
- 4 DISCONNECT FREEZER AND REFRIGERATOR. REMOVE WIRING BACK TO SOURCE. DISCONNECT AND REMOVE ASSOCIATED CONTROLS.
- 5 DISCONNECT FLY FAN, REMOVE WIRING BACK TO SOURCE.
- 6 REMOVE ALL RECEPTACLES IN KITCHEN, STAFF TOILET, RESTROOM AND FOOD LOCKER, TYPICAL.
- 7 REMOVE FIRE ALARM DEVICES. REMOVE FIRE ALARM WIRING BACK TO REMAINING DEVICE.
- 8 DISCONNECT CLOCK AND PROTECT FOR REINSTALLATION. PROTECT CLOCK WIRING.
- 9 INTRUSION ALARM KEYPAD AND DOOR CONTACT. DISCONNECT AND PROTECT FOR REINSTALLATION. INTRUSION ALARM WIRING IS RUN IN SURFACE MOUNTED RACEWAY. REMOVE RACEWAY, BUT PROTECT WIRING FOR REINSTALLATION.
- 10 PROTECT RECEPTACLE. INSURE THAT POWER CKT. IS RECONNECTED TO (N) PANEL "KP1". ADJUST AS REQUIRED.
- 11 DISCONNECT EXHAUST FAN, RADIANT HEATER, HOOD, AND REMOVE WIRING BACK TO SOURCE. REFER TO MECHANICAL PLANS FOR ADDITIONAL INFORMATION. COORDINATE.
- 12 DISCONNECT HVAC UNITS AT MECHANICAL PLATFORM. REMOVE WIRING BACK TO SOURCE. REFER TO MECHANICAL PLANS FOR ADDITIONAL INFORMATION. COORDINATE.
- 13 SPEAKER CONNECTED TO LAN, DISCONNECT AND PROTECT FOR REUSE. PROTECT DATA CABLE FOR REUSE. COORDINATE WITH THE OWNER IT DEPARTMENT BEFORE DEMOLITION.
- 14 (4) DATA OUTLET, REMOVE OUTLET BUT PROTECT DATA CABLES FOR REUSE. COORDINATE WITH THE OWNER IT DEPARTMENT BEFORE DEMOLITION.
- 15 WIRELESS GATEWAY, INTELLIGATE. DISCONNECT AND PROTECT FOR REUSE. PROTECT SENSORS ASSOCIATED WITH THE GATEWAY FOR REUSE. COORDINATE WITH THE OWNER IT DEPARTMENT BEFORE DEMOLITION.

**M. NEILS**  
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PROJECT #: 19276.21

FILE NO. 39-50 APP NO. 02-118041

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP. 02-118041 INC.  
REVIEWED FOR  
SS ☐ FLS ☐ ACS ☐  
DATE: 04/28/2020

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**HENRY+**  
**ASSOCIATES**  
**ARCHITECTS**

REGISTERED ARCHITECT  
STEPHEN J. BASTIAN  
C-22525  
12/31/21  
RENEWAL  
DATE  
STATE OF CALIFORNIA

KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

ELECTRICAL DEMOLITION

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER  
JESSE U. BASTIAN  
No. E20229  
Exp. 03-31-21  
ELECTRICAL  
STATE OF CALIFORNIA

04/09/2020

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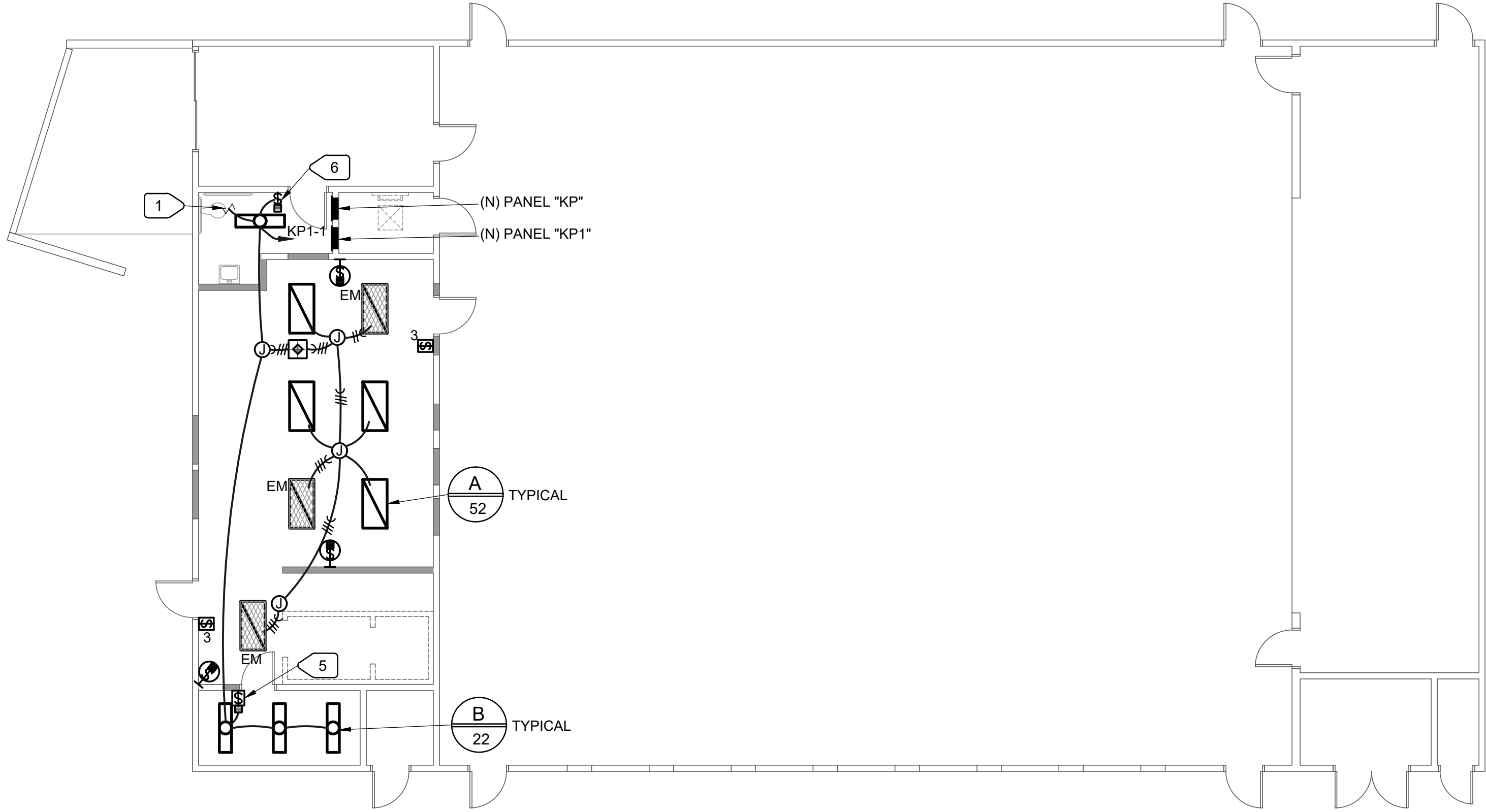
SHEET NO.

E2.0

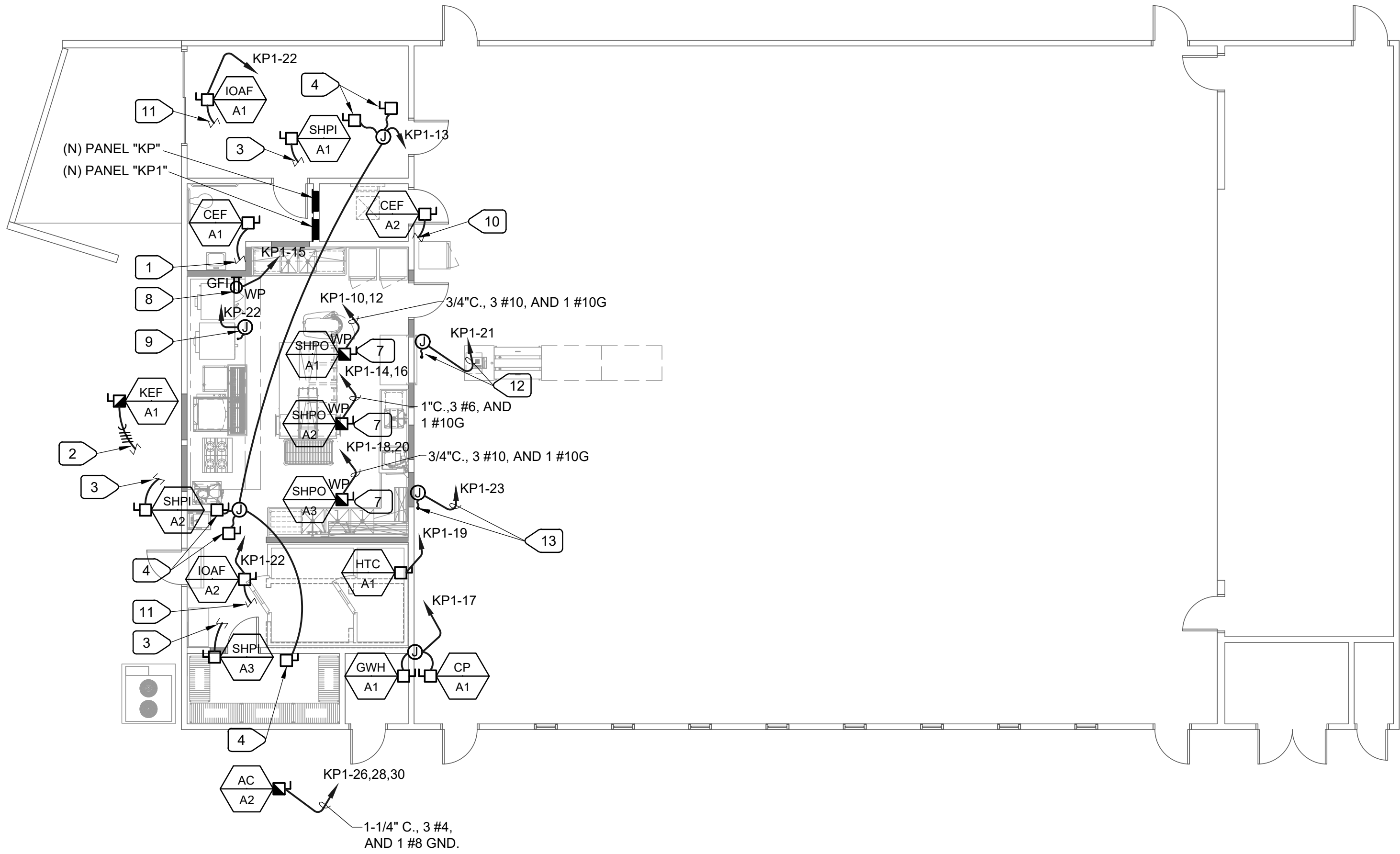
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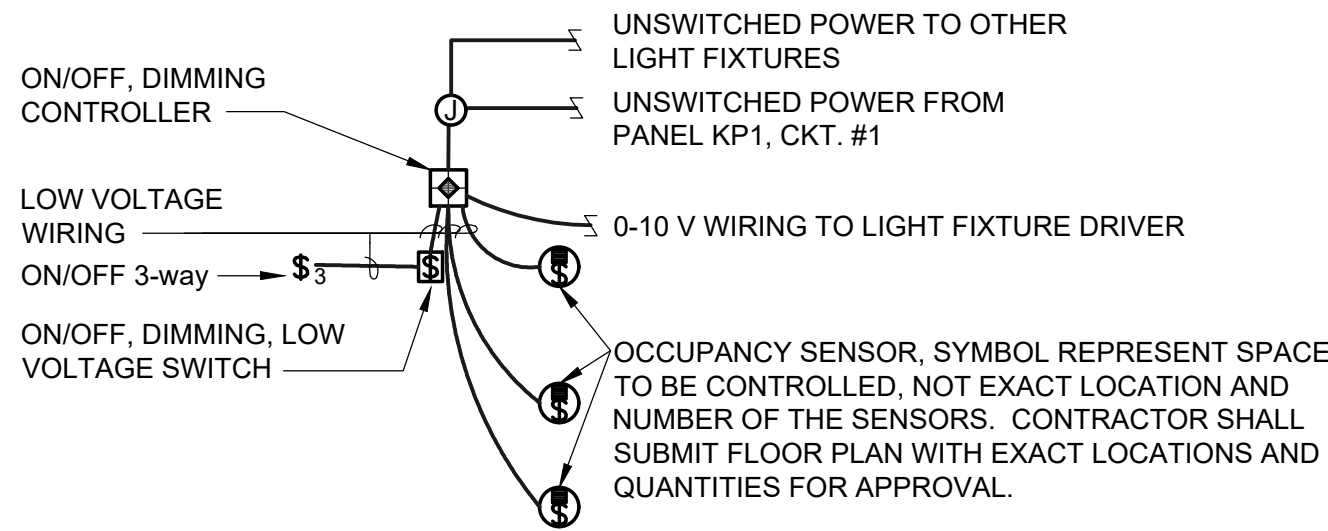
1 FLOOR PLAN - LIGHTING  
E2.1 SCALE : 1/8" = 1'-0"



2 FLOOR PLAN - POWER  
E2.1 SCALE : 1/8" = 1'-0"

NUMBERED NOTES:

- 1 CONNECT EXHAUST FAN INTO LIGHTING CKT. SUCH THAT FAN SWITCHES WITH LIGHT IN R.R.
- 2 CONNECT VIA EXHAUST HOOD (FANS CONTROLLER SUPPLY) EH3; REFER TO 1/E2.3 AND FOOD SERVICE PLANS.
- 3 INDOOR SPLIT SYSTEM UNIT POWERED FROM ASSOCIATED OUTDOOR SPLIT SYSTEM UNIT. PROVIDE CONDUIT, CONDUCTORS, AND CONNECT PER MANUFACTURER REQUIREMENTS.
- 4 PROVIDE FOR AND CONNECT CONDENSATE PUMP AND CENTRIFUGAL DUCT FAN. COORDINATE WITH MECHANICAL BEFORE ROUGH IN.
- 5 PROVIDE LINE VOLTAGE DIMMER / ON-OFF SWITCH WITH OCCUPANCY SENSOR.
- 6 PROVIDE LINE VOLTAGE ON-OFF SWITCH WITH OCCUPANCY SENSOR.
- 7 MOUNTED ON ROOF. REFER TO MECHANICAL PLANS.
- 8 ROOF MOUNTED FOR MAINTENANCE. PROVIDE IN WP ENCLOSURE WITH WHILE-IN-USE COVER.
- 9 PROVIDE FOR AND CONNECT AUTOMATIC GAS SHUTDOWN. RUN THROUGH FIRE ALARM RELAY MODULE; REFER TO 2/E3.0. COORDINATE WITH PLUMBING CONTRACTOR BEFORE ROUGH IN.
- 10 CONNECT FAN INTO (E) LIGHTING CKT. SUCH THAT FAN SWITCHES WITH LIGHT.
- 11 PROVIDE CONDUIT/CONDUCTORS FROM FAN TO ASSOCIATED SPLIT SYSTEM. COORDINATE WITH MECHANICAL BEFORE ROUGH IN.
- 12 PROVIDE FOR AND CONNECT OVERHEAD MOTORIZED ROLL UP DOOR. INSTALL SWITCH PROVIDED WITH THE DOOR. COORDINATE EXACT LOCATION WITH THE ARCHITECT PRIOR TO ROUGH IN. DOOR SHALL BE CONNECTED SUCH THAT IT ROLLS DOWN IN CASE OF FIRE ALARM. REFER TO MANUFACTURER INSTRUCTIONS AND FIRE ALARM PLAN FOR ADDITIONAL REQUIREMENTS.
- 13 PROVIDE FOR AND CONNECT FIRE/SMOKE DAMPER. REFER TO 3/E4.0 DIAGRAM FOR CONNECTION.



PROVIDE UNSWITCHED "HOT" TO "EM" FIXTURES

3 LIGHTING SWITCHING DIAGRAMS  
E2.1 N.T.S.

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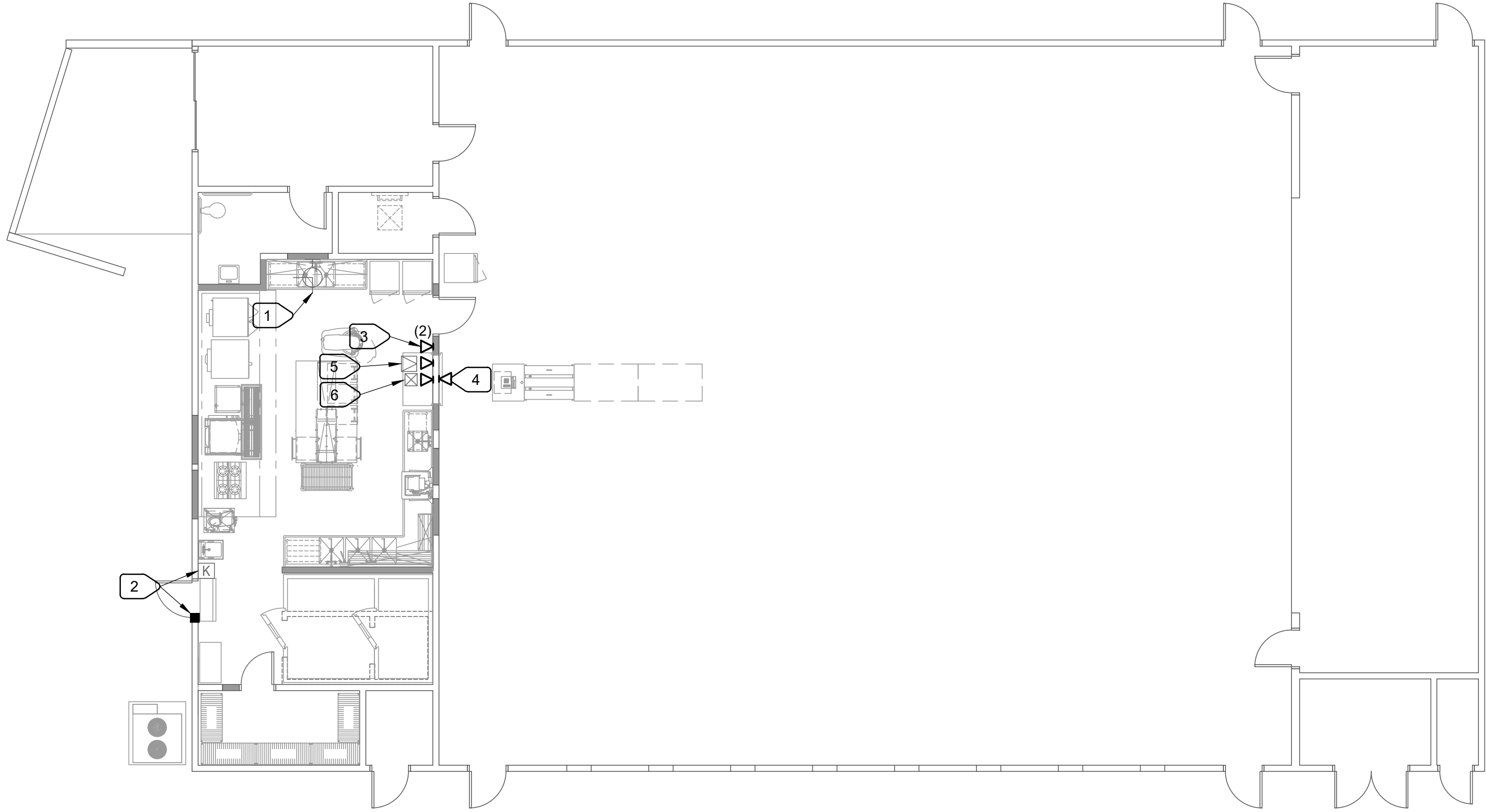
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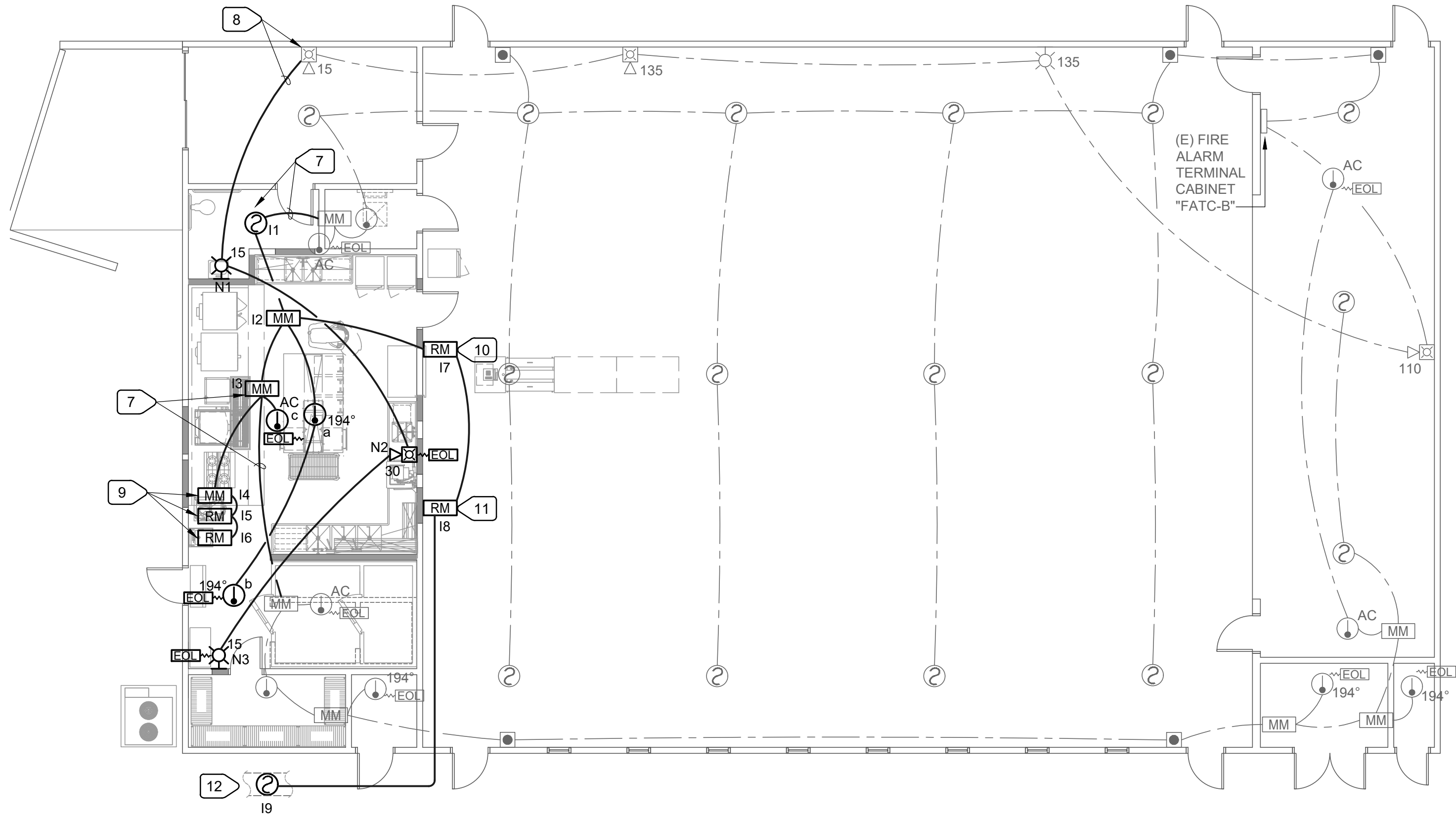
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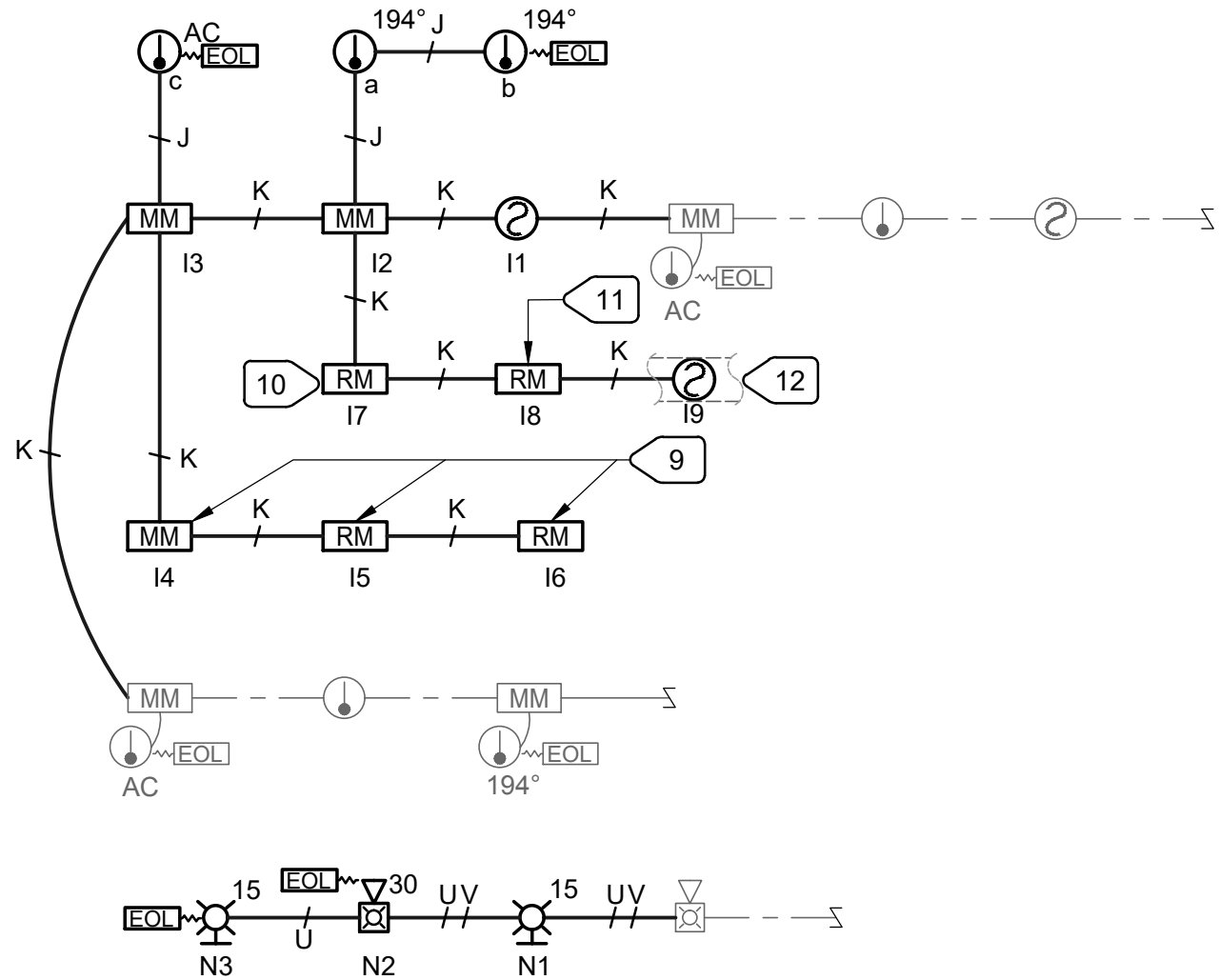
1 FLOOR PLAN - SIGNAL  
E2.2 SCALE : 1/8" = 1'-0"



2 FLOOR PLAN - FIRE ALARM  
E2.2 SCALE : 1/8" = 1'-0"

NUMBERED NOTES:

- REINSTALL (E) SALVAGED CLOCK. REUSE (E) CLOCK CABLE. ADJUST AS REQUIRED. LOCATE CLOCK SUCH THAT IT IS VISIBLE FROM ENTIRE KITCHEN AREA.
- REINSTALL (E) INTRUSION ALARM KEY PAD. PROVIDE (N) INTRUSION ALARM DOOR CONTACTS (CONTACTS TO MATCH EXISTING ON SITE). REUSE (E) SALVAGED CABLES TO CONNECT INTO (E) INTRUSION ALARM CIRCUIT IN THE BUILDING. PULL (E) CABLES BACK TO POINT WHERE THEY ENTER KITCHEN, PROVIDE 3/4" CONDUIT, AND PULL IN (E) CABLES THROUGH (N) CONDUITS.
- PROVIDE DATA/VOICE OUTLET WITH (1) DATA JACK AND (1) VOICE JACK. JACKS SHALL BE PANDUIT CJ6X88TG, BEIGE FOR DATA AND BLUE FOR VOICE. COORDINATE WITH OWNER'S IT DEPARTMENT LABELING SCHEME. REUSE (E) SALVAGED DATA CABLES TO CONNECT (N) JACKS. PULL (E) CABLES BACK TO POINT WHERE THEY ENTER KITCHEN, PROVIDE 3/4" CONDUIT, AND PULL IN (E) CABLES THROUGH (N) CONDUITS. MOUNT OUTLET AT 48"A.F.F.
- PROVIDE DATA OUTLET WITH (1) DATA JACK. JACK SHALL BE PANDUIT CJ6X88TG, BEIGE COLOR. COORDINATE WITH OWNER'S IT DEPARTMENT LABELING SCHEME. REUSE (E) SALVAGED DATA CABLES TO CONNECT (N) JACK. PULL (E) CABLES BACK TO POINT WHERE THEY ENTER KITCHEN, PROVIDE 3/4" CONDUIT, AND PULL IN (E) CABLES THROUGH (N) CONDUITS. MOUNT OUTLET AT 18"A.F.F.
- PROVIDE DATA OUTLET WITH (1) DATA JACK FOR SALVAGED SPEAKER. JACK SHALL BE PANDUIT CJ6X88TG, GREEN COLOR. COORDINATE WITH OWNER'S IT DEPARTMENT LABELING SCHEME. REUSE (E) SALVAGED DATA CABLES TO CONNECT (N) JACK. PULL (E) CABLES BACK TO POINT WHERE THEY ENTER KITCHEN, PROVIDE 3/4" CONDUIT, AND PULL IN (E) CABLES THROUGH (N) CONDUITS. MOUNT OUTLET AND SPEAKER AT 84"A.F.F.
- PROVIDE DATA OUTLET WITH (1) DATA JACK FOR SALVAGED WIRELESS GATEWAY. JACK SHALL BE PANDUIT CJ6X88TG, WHITE COLOR. COORDINATE WITH OWNER'S IT DEPARTMENT LABELING SCHEME. REUSE (E) SALVAGED DATA CABLES TO CONNECT (N) JACK. PULL (E) CABLES BACK TO POINT WHERE THEY ENTER KITCHEN, PROVIDE 3/4" CONDUIT, AND PULL IN (E) CABLES THROUGH (N) CONDUITS. MOUNT OUTLET AND GATEWAY AT 84"A.F.F.
- CONNECT (N) DEVICES INTO (E) INITIATION CKT.; REFER TO DEMOLITION PLAN.
- CONNECT (N) DEVICES INTO (E) NOTIFICATION CKT.; REFER TO DEMOLITION PLAN.
- PROVIDE FOR HOOD FIRE SUPPRESSION SYSTEM (MONITORING, MECHANICAL CONTROLS, AND GAS SHUTDOWN); REFER TO DIAGRAM 2/E3.0.
- PROVIDE SET OF CONTACTS FOR CLOSING OVERHEAD MOTORIZED ROLL UP DOOR UPON FIRE ALARM CONDITION AT THE FIRE ALARM SYSTEM.
- FOR FIRE/SMOKE DAMPER, REFER TO 3/E4.0.
- PROVIDE FOR (N) AC UNIT. PROVIDE TEST SWITCH AND INSTALL AS INSTRUCTED IN FIELD. COORDINATE WITH MECHANICAL BEFORE ROUGH IN.



- NOTE: 1. REMOVED IS ONE SPEAKER  
2. ADDED IS ONE SPEAKER OF SAME WATTAGE AS REMOVED SPEAKER  
3. REMOVED ARE (2) 15cd STROBES AND (1) 75cd STROBE.  
4. ADDED ARE (2) 15cd STROBES AND (1) 30cd STROBE.  
5. LOAD ON (E) VISUAL NOTIFICATION CIRCUIT IS LESSER, AND ON AUDIO NOTIFICATION CIRCUIT IS NOT CHANGED; THEREFORE (E) BATTERIES ARE ADEQUATE FOR REQUIRED POWER BACKUP.  
6. NOTIFICATION CIRCUITS REMOVED WIRING IS EQUAL TO ADDED WIRING; THEREFORE NO CHANGES IN VOLTAGE DROP.

3 FIRE ALARM RISER DIAGRAM

N.T.S.

FIRE ALARM CABLE SCHEDULE

J	NON-ADDRESABLE INITIATION	2#14 THWN
K	DATA	2 CONDUCTORS, 18AWG, - WEST PENN D980
U	NOTIFICATION - VISUAL (STROBE)	2#12 THWN
V	NOTIFICATION - AUDIBLE (SPEAKER)	1 PAIR, 12AWG, SHIELDED, WEST PENN 60994B

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E2.2





ITEM	DESCRIPTION	QTY.	VOLT.	PH	DIRECT	PLUG	LOAD		OUTLET HEIGHT	REMARKS	NOTE(S)	
							AMPS DRAW	HP				
E1	AIR CURTAIN	1EA.	120	1	X	-	-	9	-	+86	PROVIDE J-BOX IN WALL. INSTALL DOOR LIMIT SWITCH FOR INSTANT ON/OFF SWITCH	
E2	WALK-IN REFRIGERATOR (BOX)	1EA.	120	1	X	-	-	2.0	-	+88"	(2) 39W LED CLG. MTD. LIGHT FIXTURES (1) 11.5W LED LIGHT FIXTURE AT DOOR. CONTRACTOR TO PROVIDE ALL INTERCONNECTIONS.	①
E3	WALK-IN REFRIGERATOR (COIL)	1EA.	115	1	X	-	-	1.8	-	+74"	CONNECT TO UNIT ELECTRICAL CONNECTION AT COIL INSIDE WALK-IN REFRIGERATOR. SEE DETAIL H/FS7.1	
E4	WALK-IN FREEZER (COIL)	1EA.	208	1	X	-	-	12.8	-	+74"	CONNECT TO UNIT ELECTRICAL CONNECTION AT COIL INSIDE WALK-IN FREEZER. SEE DETAIL H/FS7.1	②
E5	WALK-IN FREEZER (BOX)	1EA.	120	1	X	-	-	5.0	-	+88"	(1) 39W LED CLG. MTD. LIGHT FIXTURES (1) 11.5W LED LIGHT FIXTURE AT DOOR. 250W DOOR HEATER, 20W P.R.P., 100W WINDOW HEATER EC. TO PROVIDE ALL INTERCONNECTIONS.	①
E6	FIRE SYSTEM AT ANSUL CONTROL AUTOMAN PANEL	1EA.	120	1	X	-	-	20	-	+104"	PROVIDE J-BOX IN WALL. CONNECT TO UNIT ELECTRICAL CONNECTION 120V/1-20AMP @ ANSUL CONTROL	④
E7	FIRE SYSTEM (REMOTE PULL STATION)	1EA.	-	-	X	-	-	-	-	+48"	PROVIDE EMPTY FLUSH MTD. OCTAGONAL BOX (REMOTE PULL) SEE MANUAL PULL DETAIL 2/FS5.3	⑤
E8	TILT SKILLET	1EA.	120	1	X	-	-	9.0	-	+25"	PROVIDE J-BOX IN WALL. CONNECT TO UNIT ELECTRICAL CONNECTION	④
E9	STEAMER, CONVECTION (2) COMPARTMENT	2EA.	120	1	-	X	5-15P	1.0	-	+30" +12"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH 6' CORD (NEMA 5-15P)	④
E10	CONVECTION OVEN DOUBLE STACK	2EA.	120	1	-	X	5-15P	6.0	-	+24" +66"	PROVIDE DUPLEX RECEPTACLE FLUSH WITH STAINLESS STEEL WALL LINING UNIT PROVIDED WITH CORD (NEMA 5-15P)	④
E11	CONVECTION OVEN DOUBLE STACK	2EA.	120	1	-	X	5-15P	7.2	-	+24" +66"	PROVIDE DUPLEX RECEPTACLE FLUSH WITH STAINLESS STEEL WALL LINING UNIT PROVIDED WITH CORD (NEMA 5-15P)	④
E12	MOBILE WARMING CABINET	3EA.	120	1	-	X	5-20P	16.7	-	+68"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH 10' CORD (NEMA 5-15P)	
E13	MIXER	1EA.	208	3	X	-	-	10.0	-	53"	PROVIDE J-BOX OUT OF FLOOR CONNECT TO UNIT ELECTRICAL CONNECTION	
E14	CHEFS COUNTER	2EA.	120	1	X	-	-	15EA	-	+34"	PROVIDE DOUBLE FACED PEDISTAL DUPLEX RECEPTACLE MTD. ON COUNTER TOP (COMPONENT HARDWARE NO. R58-1020)(R71-0721) (TOTAL OF 6 DCO	
E15	SLICER	1EA.	120	1	-	X	5-15P	4.0	-	+30"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH 6' CORD (NEMA 5-15P)	
E16	HIGH TEMP WAREWASHER (TANK HEAT/MOTORS)	1EA.	208	3	X	-	-	24.9	-	+18"	PROVIDE J-BOX IN WALL. CONNECT TO UNIT ELECTRICAL CONNECTION	
E17	HIGH TEMP WAREWASHER (BOOSTER HEATER)	1EA.	208	3	X	-	-	20.4	-	+18"	PROVIDE J-BOX IN WALL. CONNECT TO UNIT ELECTRICAL CONNECTION	
E18	CASHER STATION (DATA) AND (POWER) VERIFY W/ DISTRICT FURNISHED POS UNIT	2EA.	120	1	-	X	-	20	-	+0"	PROVIDE (2) FLUSH IN WALL MTD DATA PLUGS (2) FLUSH IN WALL ELECTRICAL OUTLETS (VERIFY W/ DISTRICT POS REQ.)	
E19	MILK COOLER	2EA.	120	1	-	X	5-15P	8.2	-	+18"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH CORD AND PLUG SET (NEMA 5-15P)	
E20	REMOTE REFRIGERATION	1EA.	208	3	X	-	-	17.9	-	+18"	PROVIDE J-BOX CONNECT TO UNIT ELECTRICAL CONNECTION UNIT TO BE LOCATED ON ROOF.	

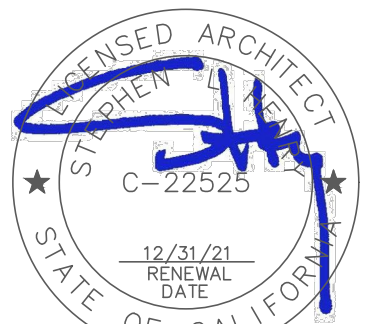
**ELECTRICAL KEYNOTES:**

- 1 INTERCONNECT TEMP ALARM WITH MECHANICAL ALARM SYSTEM
- 2 DRAIN LINE HEATER CONNECTED TO COIL. F.S.ELECTRICAL CONTRACTOR TO PROVIDE AND CONNECT TO COIL
- 3 120V/1 PHASE FOR LIGHTS TO ONE PRE-WIRED CONN. POINT ON HOOD FOR LIGHTS PRE-WIRED BY FACTORY. ELECTRICAL CONTRACTOR TO CONNECT HOOD LIGHTS AT (2) HOODS
- 4 ELECTRICAL CONTRACTOR TO PROVIDE INTERLOCK WIRING FROM FIRE ALARM SYSTEMS TO ELEC. SHUNT TRIP BREAKERS.
- 5 ELECTRICAL CONTRACTOR TO PROVIDE EMPTY FLUSH MTD. OCTAGONAL BOX @ "+48" AFF. W/ EMPTY CONDUIT TO "+2" ABOVE CEILING.
- 6 ELECTRICAL CONTRACTOR TO INSTALL WALL MOUNTED ENERGY MANAGEMENT CONTROL PANEL PROVIDED BY HOOD MANUFACTURE FOR HOOD LIGHTS AND FAN CONTROLS
- 7 ELECTRICAL CONTRACTOR TO INTERCONNECT POWER FROM HOOD CONTROL PANEL LOCATED ON WALL WITH EXHAUST DVC-111 DEMAND CONTROL.

ITEM	DESCRIPTION	QTY.	VOLT.	PH	DIRECT PLUG	LOAD				OUTLET HEIGHT	REMARKS	NOTE(S)
						NEMA	WATT	AMPS. DRAW	HP			
EH1	EXHAUST HOOD (ENERGY MANAGEMENT SYSTEM LIGHTS)	1EA.	120	1	X	-	-	15	-	+86	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION (REFER TO FSS.2 FOR ELECTRICAL CONNECTION)	③
EH2	EXHAUST HOOD (FANS CONTROLLER EXHAUST)	1EA.	208	3	X	-	-	10.2	3	+86	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION (REFER TO FSS.2 FOR ELECTRICAL CONNECTION)	
EH3	EXHAUST HOOD (FANS CONTROLLER SUPPLY)	1EA.	208	3	X	-	-	6.1	2	+86	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION (REFER TO FSS.14 FOR ELECTRICAL CONNECTION)	④
EH4	TOUCH SCREEN USER INTERFACE MOUNT +48" AFF. RECESSED IN WALL	1EA.									CONNECT TO ENERGY MANAGEMENT SYSTEM IN UTILITY CABINET AT END OF HOOD ITEM 5 WITH CAT5 CABLE (NO POWER REQUIRED AT THIS LOCATION)	⑦

- 1 CONNECT VIA MICRO SWITCH FURNISHED BY OTHERS, INSTALLED BY ELECTRICAL CONTRACTOR.
- 2 MOUNT ON THE COUNTER. REFER TO KITCHEN EQUIPMENT ELECTRICAL SCHEDULE.
- 3 OCTAGONAL BOX FOR MANUAL PULL STATION FOR ANSUL SYSTEM. PROVIDE 3/4" C.O. FROM BOX TO ANSUL SYSTEM. REFER TO KITCHEN EQUIPMENT ELECTRICAL SCHEDULE. COORDINATE WITH KITCHEN CONTRACTOR BEFORE ROUGH IN.
- 4 CONNECTED TO SHUNT TRIP CKT. BRKR. REFER TO 2/E3.0.
- 5 PROVIDE FOR AND CONNECT ROLL UP DOOR. PROVIDE ALL APPURTENANCES AS REQUIRED BY DOOR MANUFACTURER. LOCATE DOOR CONTROLS AS DIRECTED IN FIELD.
- 6 LOCATED ON THE ROOF.
- 7 REFER TO FLOOR PLAN - SIGNAL.

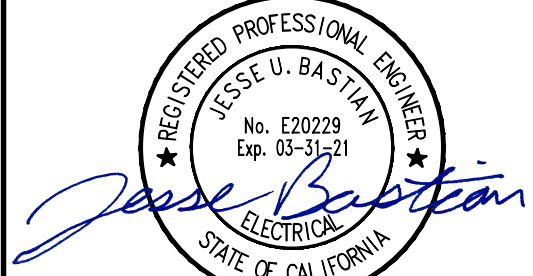
730 Howe Avenue, Suite 450  
Sacramento, CA 95825  
Phone: 916.921.2112  
Fax: 916.921.2212



KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

PARTIAL FLOOR PLAN -  
KITCHEN EQUIPMENT  
POWER

CONSULTANT



04/09/2020

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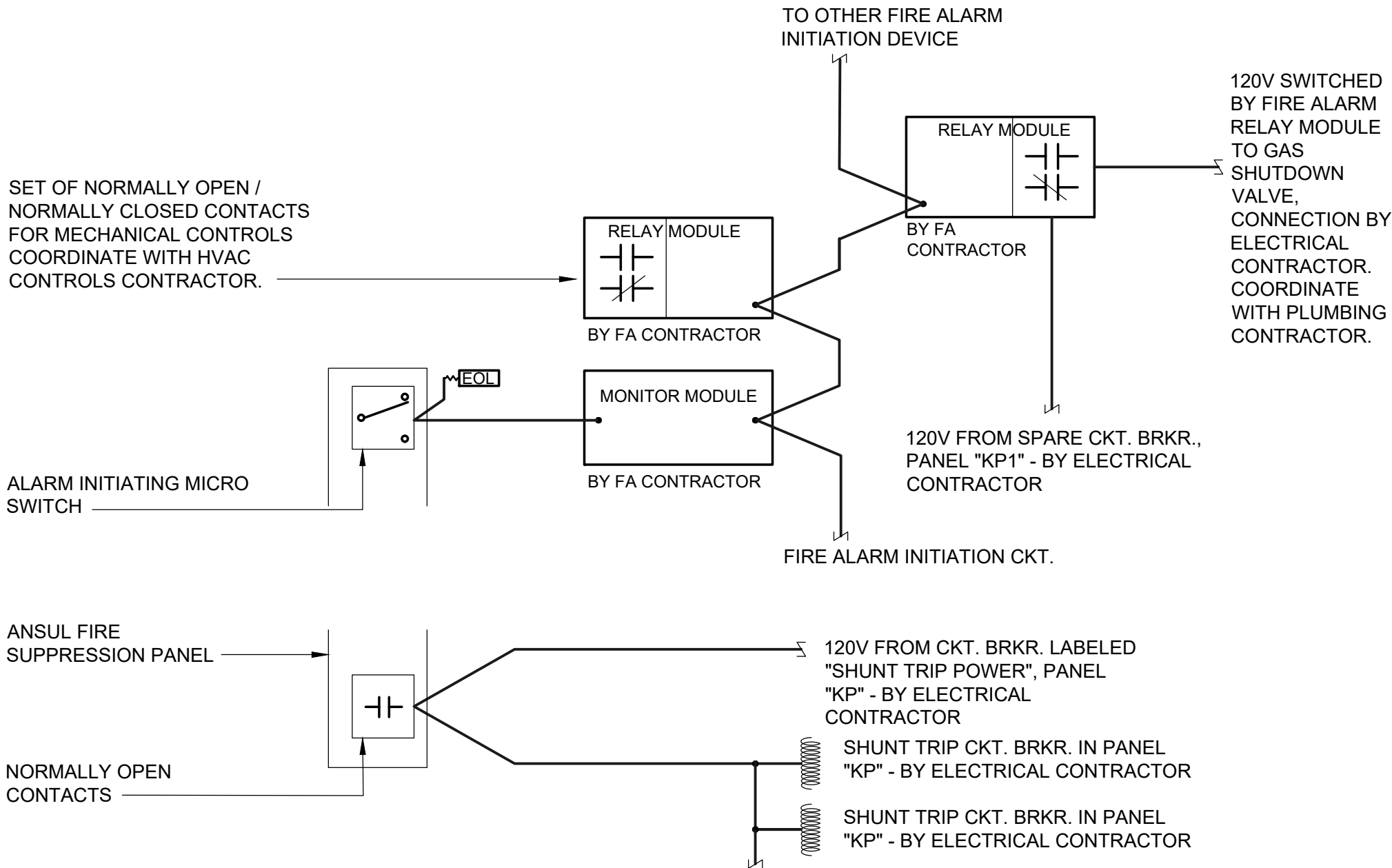
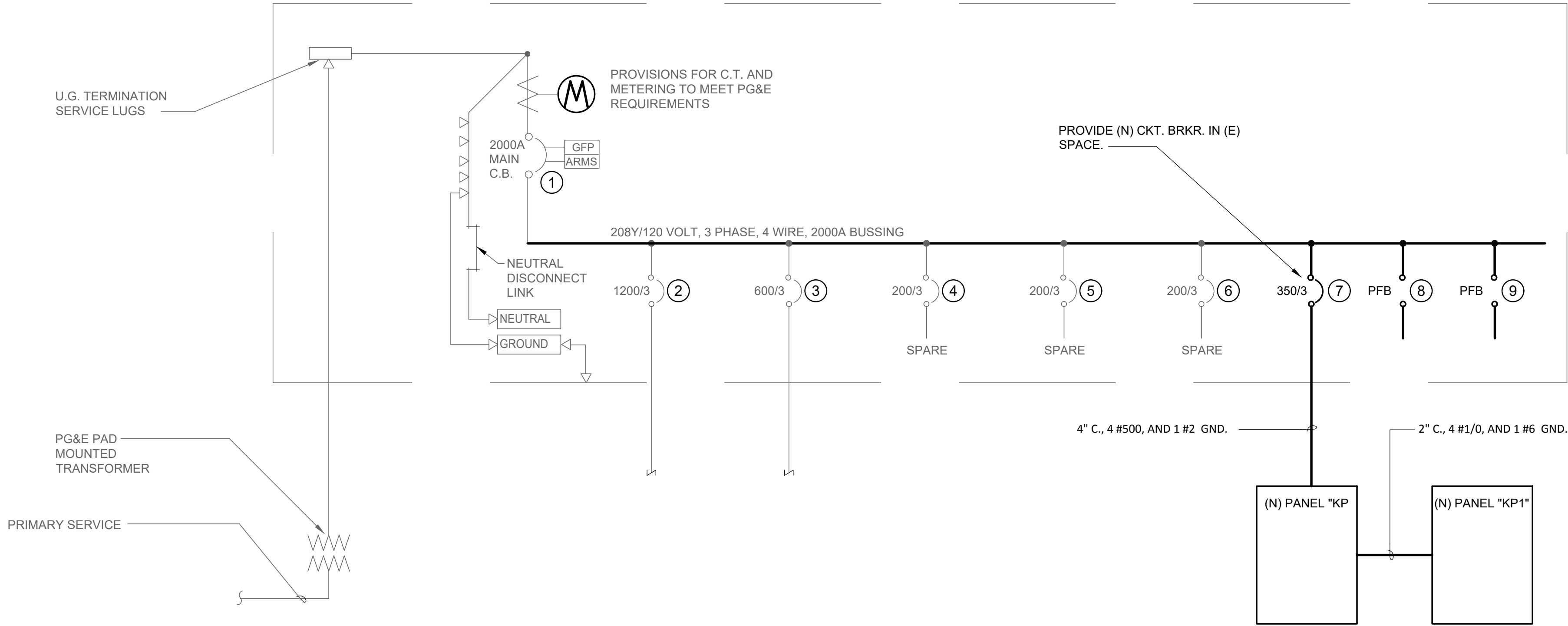
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## E2.3



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(E) MAIN SWITCHBOARD "MS-N"



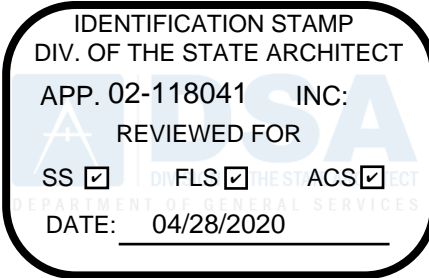
FIRE SUPPRESSION SYSTEM -  
EQUIPMENT SHUTDOWN DIAGRAM

1 ONE LINE DIAGRAM - POWER

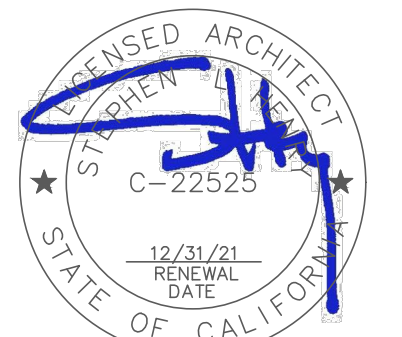
E3.0 N.T.S.

NEW PANEL "KP " SCHEDULE									
POWER SOURCE: MAIN SWITCHBOARD "MS-N"					LOCATION: SEE PLANS				
TYPE:	BUS: 400	MAIN BKR: 350A SUB FD: 150A	VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRES			MOUNTING: FLUSH		REMARKS: _k AIC MIN. SYMM.	
LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED	
AIR CURTAIN	1.1	20/1	1	A	2	20/1 (1.)	1.1	TILT SKILET	
WALK-IN REFRIGERATOR	0.3	20/1	3	B	4	20/1 (1.)	0.5	STEAMER CONVECTION	
WALK-IN FREEZER	1.3	20/2	5	C	6	20/1 (1.)	1.7	CONVECTION OVEN	
	1.3		7	A	8	20/1 (1.)	1.7	CONVECTION OVEN	
WALK-IN FREEZER	0.6	20/1	9	B	10	20/1	0.5	SHUNT TRIP POWER	
ANSUL SYSTEM	0.6	20/1	11	C	12	20/1	1.0	CONV. RECEPTACLES	
MIXER	1.2	20/3	13	A	14	20/1	2.0	MOBILE WARMING CAB.	
	1.2		15	B	16	20/1	2.0	MOBILE WARMING CAB.	
	1.2		17	C	18	20/1	2.0	MOBILE WARMING CAB.	
CHEFS COUNTER RECEPT	1.0	20/1	19	A	20	20/1	0.5	SLICER	
CHEFS COUNTER RECEPT	1.0	20/1	21	B	22	20/1	0.5	GAS SHUTDOWN	
HIGH TEMP. WASHER	3.0	45/3	23	C	24	20/1		SPARE	
	3.0		25	A	26		2.2		
	3.0		27	B	28	30/3	2.2	REMOTE REFRIGERATION	
HIGH TEMP. WASHER	2.5	30/3	29	C	30		2.2		
	2.5		31	A	32		1.3		
	2.5		33	B	34	20/3	1.3	EXHAUST HOOD	
EXHAUST HOOD	1.8	20/1	35	C	36		1.3		
EXHAUST HOOD	1.2	20/3 (1.)	37	A	38		19.3		
	1.2		39	B	40	150/3	18.6	PANEL "KP1"	
	1.2		41	C	42		15.2		
NOTE(S): 1. PROVIDE SHUNT TRIP CKT. BRKR.  2.  3.							PHASE A= 39.4 kVA PHASE B= 35.4 kVA PHASE C= 35.0 kVA  TOTAL = 109.8 kVA TOTAL = 304.6 Amperes		

NEW PANEL "KP1" SCHEDULE									
POWER SOURCE: PANEL "KP"					LOCATION: SEE PLANS				
TYPE:	BUS: 250	MAIN BKR 150A SUB FD: NA	VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRES			MOUNTING: FLUSH		REMARKS: _k AIC MIN. SYMM.	
LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED	
LIGHTING	0.8	20/1	1	A	2	20/1	0.5	ROLL UP DOOR	
EXISTING LOAD	1.1	20/1	3	B	4	20/1	0.6	P.O.S. RECEPTACLE	
EXISTING LOAD	1.1	20/1	5	C	6	20/1	1.2	MILK COOLER	
EXISTING LOAD	1.1	20/1	7	A	8	20/1	1.2	MILK COOLER	
EXISTING LOAD	1.1	20/1	9	B	10	25/2	2.1	SHPO-A1	
EXISTING LOAD	1.1	20/1	11	C	12		2.1		
COND. PUMPS/DUCT FANS	1.9	20/1	13	A	14	45/2	3.7	SHPO-A2	
ROOF RECEPTACLE	0.8	20/1	15	B	16		3.7		
GW/H / CP - A1	0.8	20/1	17	C	18	25/2	2.1	SHPO-A3	
HTC-A1 (1.)	1.2	20/1	19	A	20		2.1		
OVREHED DOOR	0.5	20/1	21	B	22	20/1	1.9	IOAF	
FIRE SMOKE DAMPER	0.1	20/1	23	C	24	20/1		SPARE	
SPARE		20/1	25	A	26	70/3	6.8		
SPARE		20/1	27	B	28		6.8	AC A-2	
SPARE		20/1	29	C	30		6.8		
SPARE		20/1	31	A	32	20/1		SPARE	
SPARE		20/1	33	B	34	20/1		SPARE	
SPARE		20/1	35	C	36	20/1		SPARE	
SPACE		PFB	37	A	38	PFB		SPACE	
SPACE		PFB	39	B	40	PFB		SPACE	
SPACE		PFB	41	C	42	PFB		SPACE	
NOTE(S):  1. 30mA GFI BREAKER  2.  3.							PHASE A =	19.3	kVA
							PHASE B =	18.6	kVA
							PHASE C =	15.3	kVA
							TOTAL =	53.2	kVA
							TOTAL =	147.8	Amperes



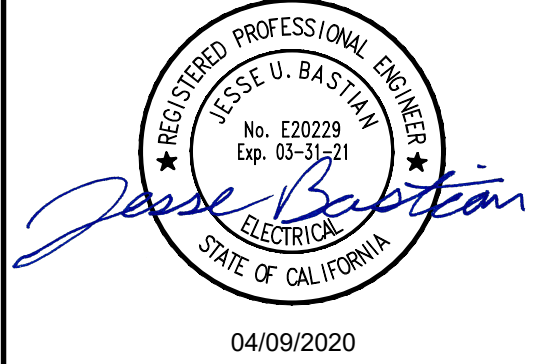
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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

PANEL SCHEDULES  
ONE LINE DIAGRAMS

CONSULTANT



04/09/2020

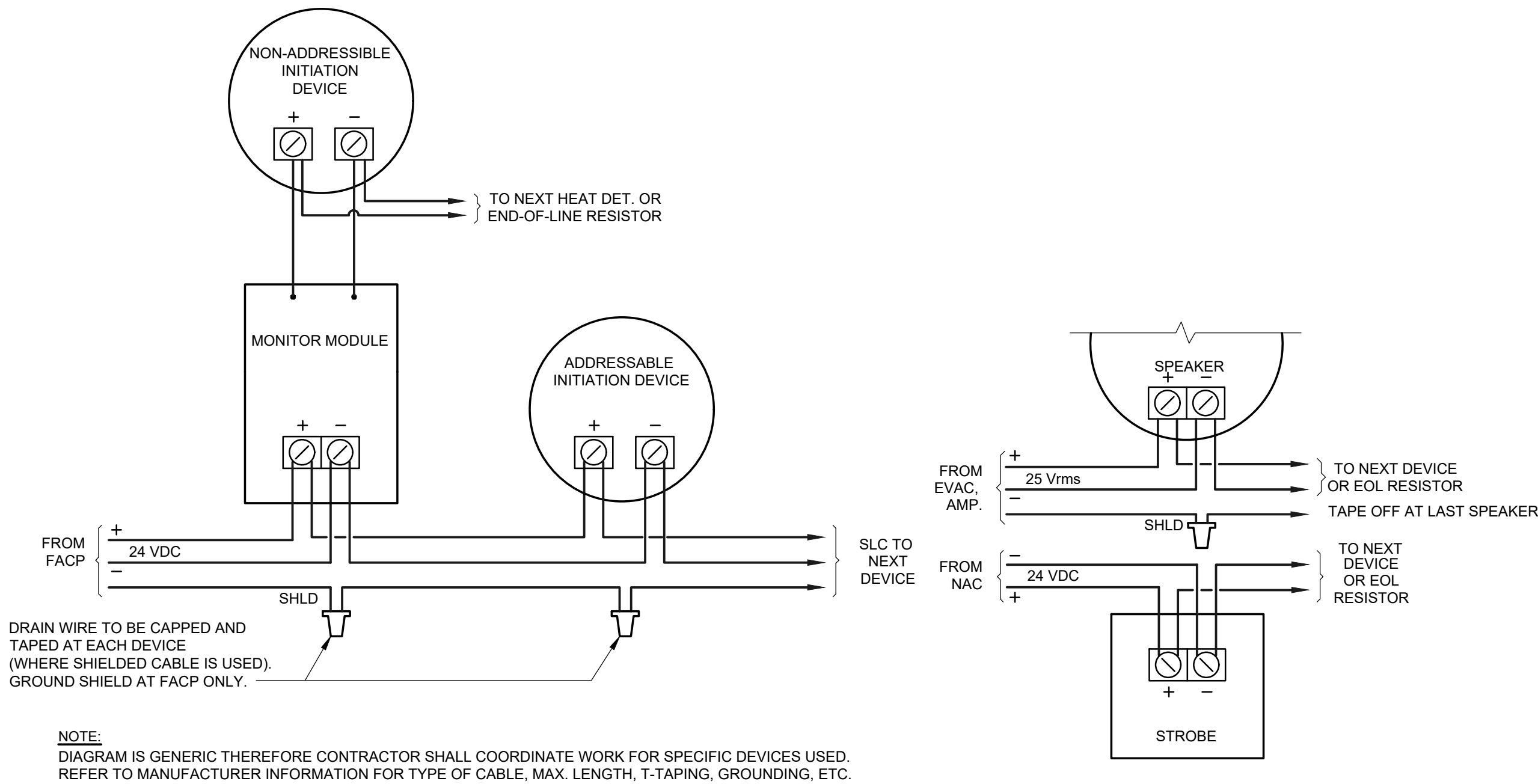
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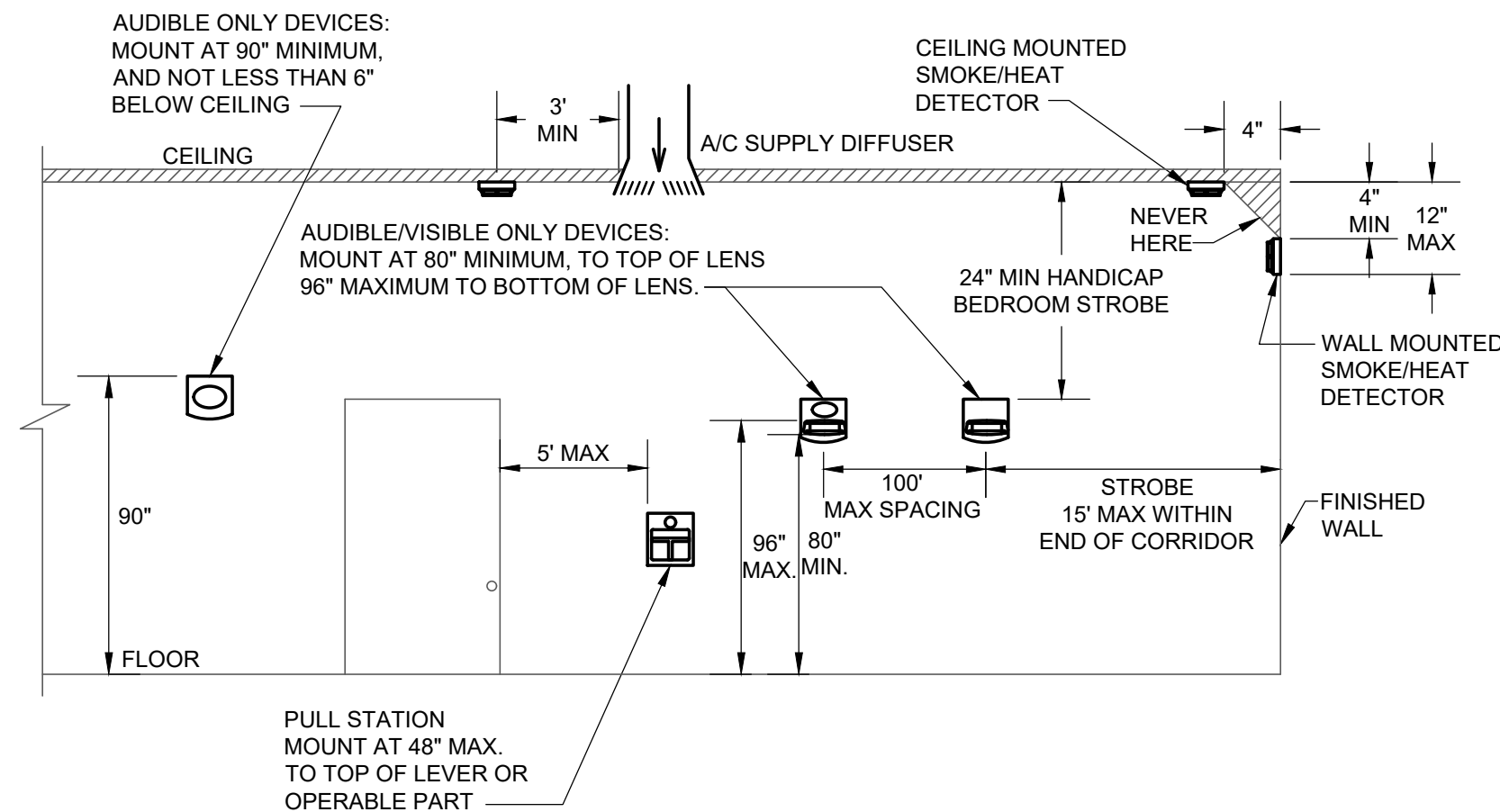


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## 1 FIRE ALARM DEVICES DIAGRAM

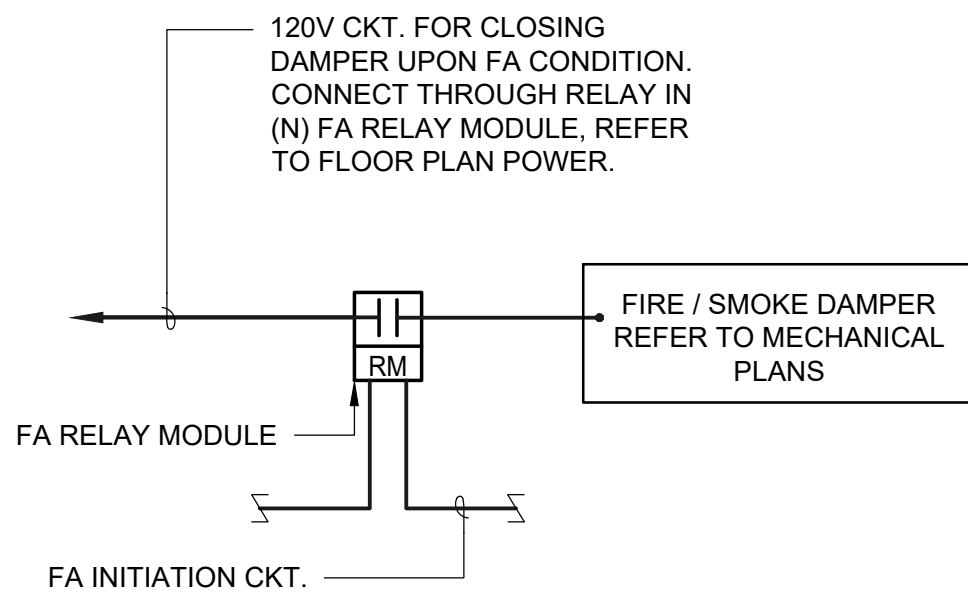
N.T.S.



## TYPICAL INITIATION AND NOTIFICATION

## 2 APPLIANCE ELEVATION DETAIL

NO SCALE



## (E) FIRE / SMOKE DAMPER DIAGRAM

NO SCALE

FIRE ALARM SEQUENCE OF OPERATION MATRIX											
	FACP ALARM	FACP TROUBLE	ALARM SIGNAL OFF-SITE	TROUBLE SIGNAL OFF-SITE	ACTIVATE AUDIO/VISUAL THROUGHOUT	ALARM RECEIPT CAPABILITY DURING ABNORMAL CONDITIONS	SHUT OFF GAS SUPPLY TO KITCHEN	SHUT OFF POWER TO DEVICES UNDER KITCHEN HOOD	SEND SIGNAL TO MECHANICAL CONTROLS TO INITIATE REQUIRED ACTIONS BY MECHANICAL CONTROLS	ANNUNCIATE ALARM AT REMOTE ANNUNCIATOR	
AREA SMOKE DETECTOR	X		X		X						X
HEAT DETECTORS	X		X		X						X
DUCT DETECTOR	X		X		X						X
KITCHEN HOOD FIRE SUPPRESSION SYSTEM	X		X		X		X	X	X		X
POWER FAILURE		X			X						X
NOTIFICATION CIRCUIT CLASS B											
OPEN WIRE		X			X						
GROUNDING WIRE		X			X		R				
SHORTED WIRES		X			X						
SIGNALING LINE CIRCUIT CLASS B											
OPEN WIRE		X			X						
GROUNDING WIRE		X			X		R				
WIRE TO WIRE (SHORT & OPEN)		X			X						
WIRE TO WIRE (SHORT & GROUND)		X			X						
OPEN & GROUND		X			X						
LOSS OF CARRIER		X			X						
NOTE: BLANK MEANS NOT APPLICABLE R = REQUIRED ACTION											

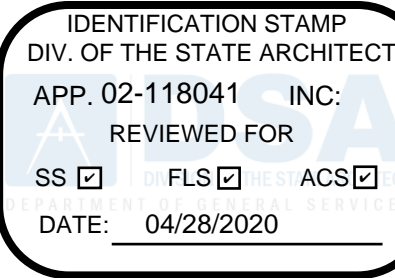
## FIRE ALARM GENERAL NOTES

- REVISE EXISTING FIRE ALARM IN MODERNIZED PORTION OF THE BUILDING.
- (E) FIRE ALARM CONTROL PANEL IS CAPABLE OF AUTOMATICALLY TESTING SMOKE DETECTORS AND PRINTING A REPORT OF THE TEST.
- (E) FIRE ALARM CONTROL PANEL INCLUDES AUTOMATIC DIALING CAPABILITY FOR SENDING A SUPERVISORY SIGNAL, A TROUBLE SIGNAL, AND AN ALARM SIGNAL TO AN APPROVED SUPERVISING OFF-SITE MONITORING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATIONS SHALL BE LISTED AS EITHER UUF (CENTRAL STATION) OR UUS (REMOTE AND PROPRIETARY) BY UL, OR SHALL COMPLY WITH THE REQUIREMENTS OF STANDARD FM 3011. DIALER SHALL BE CAPABLE OF "GRABBING" A PHONE LINE FOR AN ALARM SIGNAL IF PHONE LINE IS ALREADY IN USE.
- UPON COMPLETION OF FIRE ALARM SYSTEM REVISION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE WITH THE LOCAL FIRE MARSHALL AND THE PROJECT INSPECTOR OF RECORD AS WITNESSES.
- THE FIRE ALARM SYSTEM SHALL CONFORM TO THE CALIFORNIA BUILDING CODE, CALIFORNIA ELECTRICAL CODE, ARTICLE 760, AND THE CALIFORNIA FIRE CODE.
- REVISION TO THE FIRE ALARM SYSTEM SHALL HAVE AUTOMATIC INITIATION DEVICES, AND FULL COVERAGE.
- PROVIDE "FIRE WATCH" DURING CONSTRUCTION WHEN EXISTING FIRE ALARM SYSTEM IF TURNED OFF, OR OFF LINE.
- THE FIRE ALARM WIRING SHALL BE RUN IN CONDUITS.
- DO NOT START INSTALLATION OF THE FIRE ALARM SYSTEM UNTIL DETAILED PLANS, SPECIFICATIONS AND CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY THE DEPARTMENT OF STATE ARCHITECTS.
- PER NFPA 72 2016, SECTIONS 10.6.5.2.2 AND 10.6.5.2.3, CIRCUITS FOR FIRE ALARM SYSTEMS SHALL BE IDENTIFIED AS "FIRE ALARM / ECS CIRCUIT", AND THE DISCONNECTING MEANS FOR THE CIRCUIT SHALL HAVE A RED MARKING, BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL AND SHALL BE MECHANICALLY PROTECTED. LOCATION OF THE DISCONNECT SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT. THE CIRCUITS FOR FIRE ALARM SYSTEMS SHALL BE DEDICATED TO FIRE ALARM EQUIPMENT.
- A STAMPED SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION. ANY DEVIATION FROM THE APPROVED PLANS, INCLUDING THE SUBSTITUTION OF DEVICES, SHALL BE APPROVED BY THE DEPARTMENT OF STATE ARCHITECTS.
- A FIRE ALARM ACCEPTANCE TEST OF ALL DEVICES AND APPLIANCES, INCLUDING THE BACKUP BATTERY(IES), SHALL BE PERFORMED. ALL MANUFACTURER OPERATING RANGES SHALL BE MET. TESTING OF THE SUPERVISING STATION SIGNALS, AS WELL AS RELAY TO THE APPROPRIATE RESPONDING AGENCY, SHALL BE INCLUDED IN THE ACCEPTANCE TESTING. THE PROJECT INSPECTOR SHALL WITNESS THE ACCEPTANCE INSPECTION AND SHALL SIGN AS THE AHJ REPRESENTATIVE ON THE "SYSTEM RECORD OF COMPLETION" AT SECTION 12.3 (NFPA 72, FIGURE 7.8.2(a)). ALL SUPPLEMENTARY RECORDS SHALL BE ATTACHED AS APPLICABLE. THE PROJECT INSPECTOR SHALL VERIFY THAT THE FIRE ALARM SYSTEM IS IN SERVICE PRIOR TO COMPLETION OF THE "SYSTEM RECORD OF COMPLETION" FORM. ALL ORIGINAL DECONTAMINATION SHALL BE RETAINED IN THE REQUIRED DOCUMENTATION CABINET (NFPA 72, 7.7.2).
- A CERTIFICATE OF COMPLIANCE SHALL BE PREPARED BY THE INSTALLER AND GIVEN TO THE CALIFORNIA STATE FIRE MARSHAL UPON COMPLETION OF THE INSTALLATION.

## FIRE ALARM EQUIPMENT SCHEDULE

SYMBOL	CATALOG NO.	DESCRIPTION	CSFM LISTING No.
	WHEELLOCK LSPSTR	SPEAKER/STROBE, WALL MOUNTED	7125-0785:0175
	WHEELLOCK LST	STROBE, WALL MOUNTED	7125-0785:0169
	EST SIGA-PS	SMOKE PHOTOELECTRIC DETECTOR	7272-1657:0126
	EST-HRS	HEAT DETECTOR - FIXED TEMP 135° AND RATE-OF RISE	7270-1657:0125
	EDWARDS SIGNALING 282B-PL	HEAT DETECTOR - FIXED TEMP 194° AND RATE-OF RISE	7270-1657:0109
	EDWARDS SIGA-SD	DUCT DETECTOR	3242-1657:0223
	EST SIGA-MM1	MONITOR MODULE	7300-1657:0121
	EST SIGA-CR	RELAY MODULE	7300-1657:0121
	EST3X	(E) FIRE ALARM CONTROL PANEL W/ VOICE EVACUATION CAPABILITIES	
	EST E-RLED-C	(E) REMOTE ANNUNCIATOR	
	FIRE LITE FCPS-24FS6	(E) FIRE ALARM POWER SUPPLY	

FILE NO. 39-50 APP NO. 02-118041



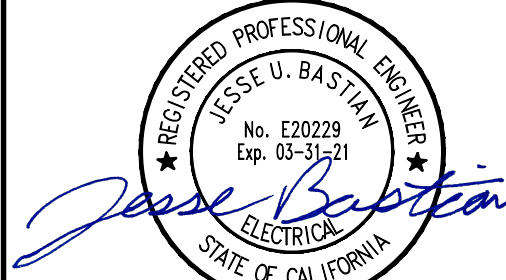
730 Howe Avenue, Suite 450  
Sacramento, CA 95825  
Phone: 916.921.2112  
Fax: 916.921.2212



KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

FIRE ALARM DETAILS,  
DIAGRAMS, MATRIX

CONSULTANT



04/09/2020

PROJECT NO.	REVISIONS	BY
19-32-050		
DATE		
04/10/2020		
DRAWN		
SLH		
CHECKED		
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SCALE		
CADFILE		
UPDATED		

SHEET NO.

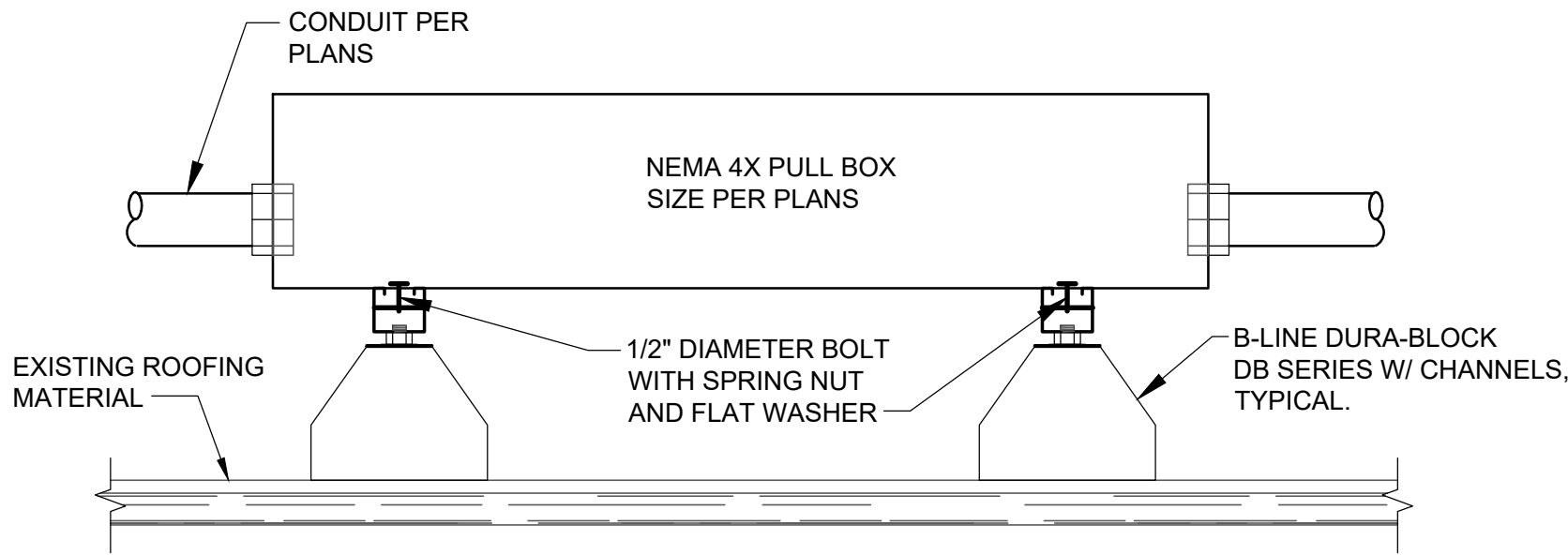
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OF 68 SHEETS

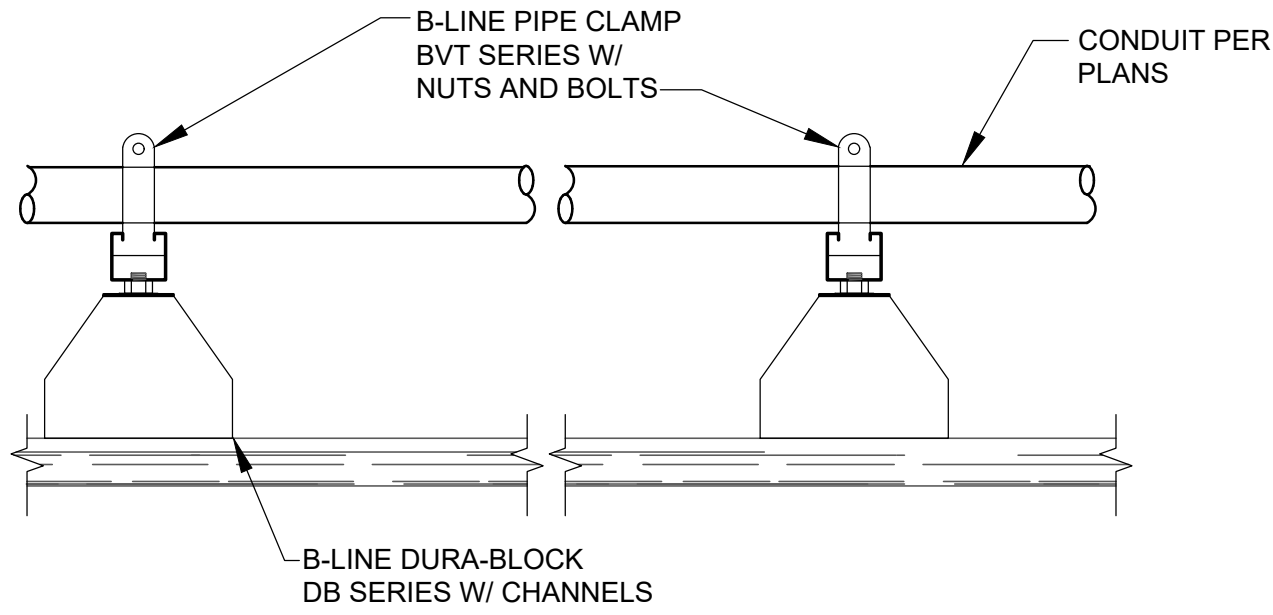
**M. NEILS ENGINEERING, INC.**  
Electrical Engineers | Lighting Designers  
100 Howe Ave., Suite 235N  
Sacramento, CA 95825-4217  
www.mneilsengineering.com  
Tel: (916) 923-4400 Fax: (916) 923-4410  
PROJECT #: 19276.21



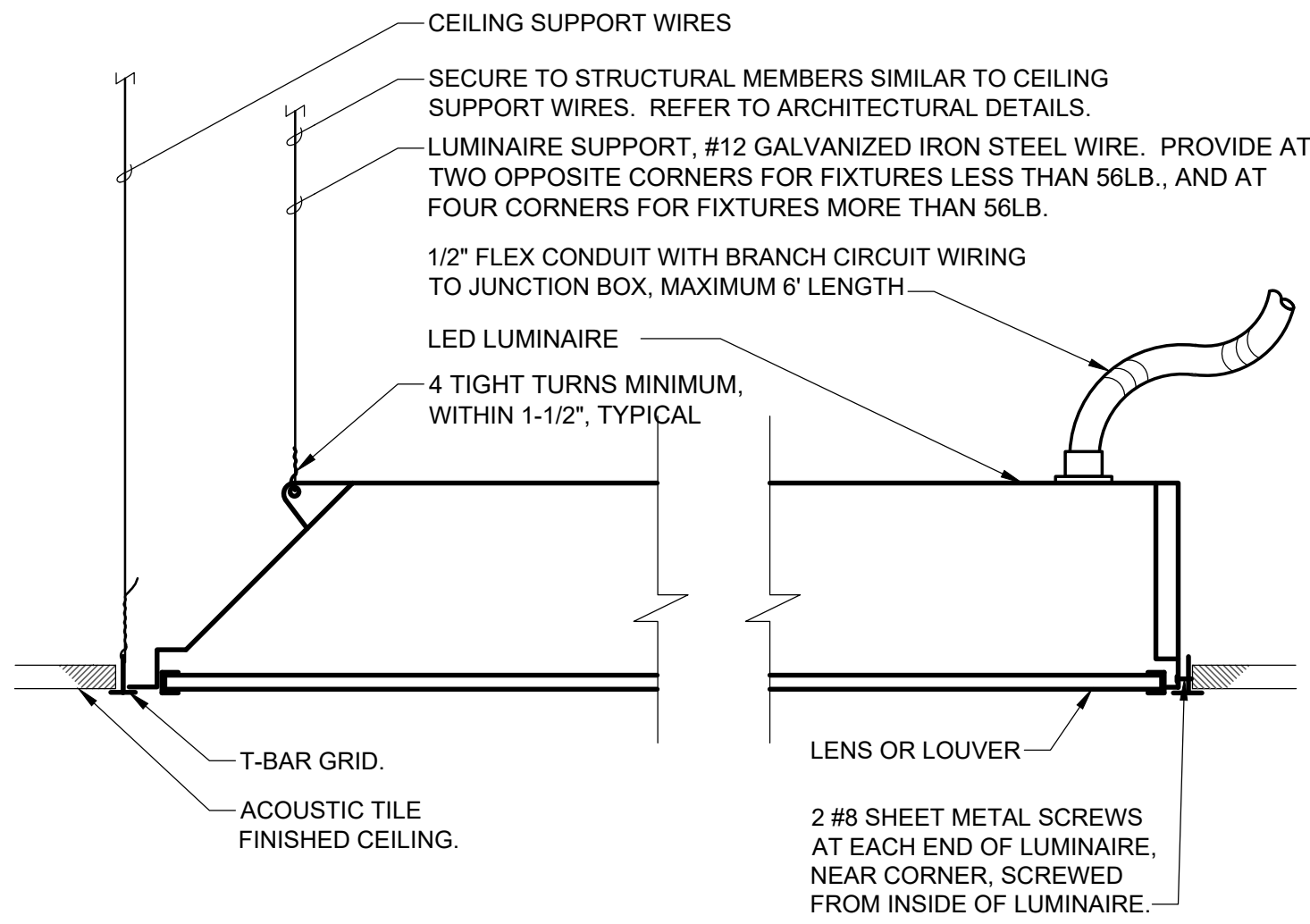
UNAUTHORIZED CHANGES & USES: M. Neils Engineering, Inc. preparing these plans will not be responsible for, or liable for unauthorized changes to or uses to these plans. All changes to these plans must be in writing and must be approved by M. Neils Engineering, Inc.



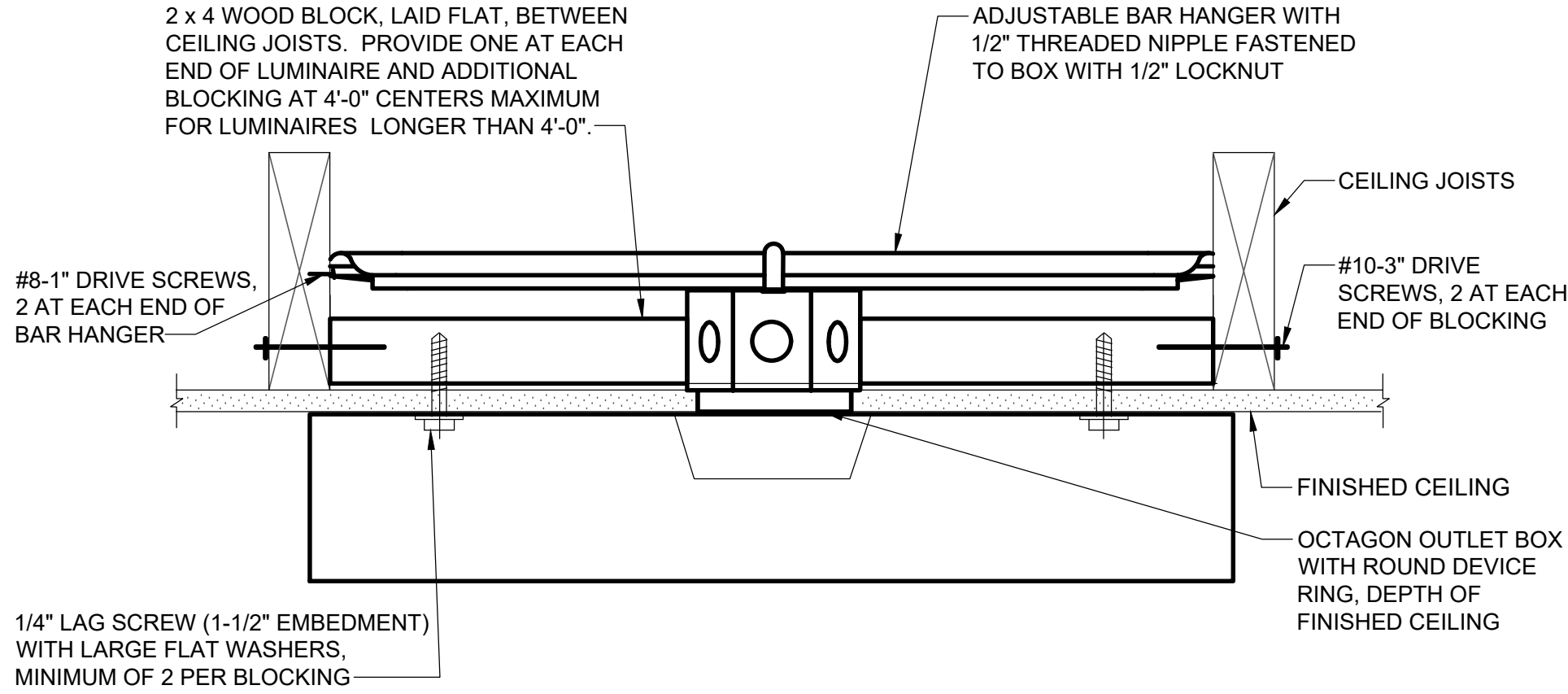
1 CONDUIT & PULLBOX ON ROOF  
E5.0 NO SCALE



2 PANELBOARD MOUNTING DETAIL  
E5.0 NO SCALE



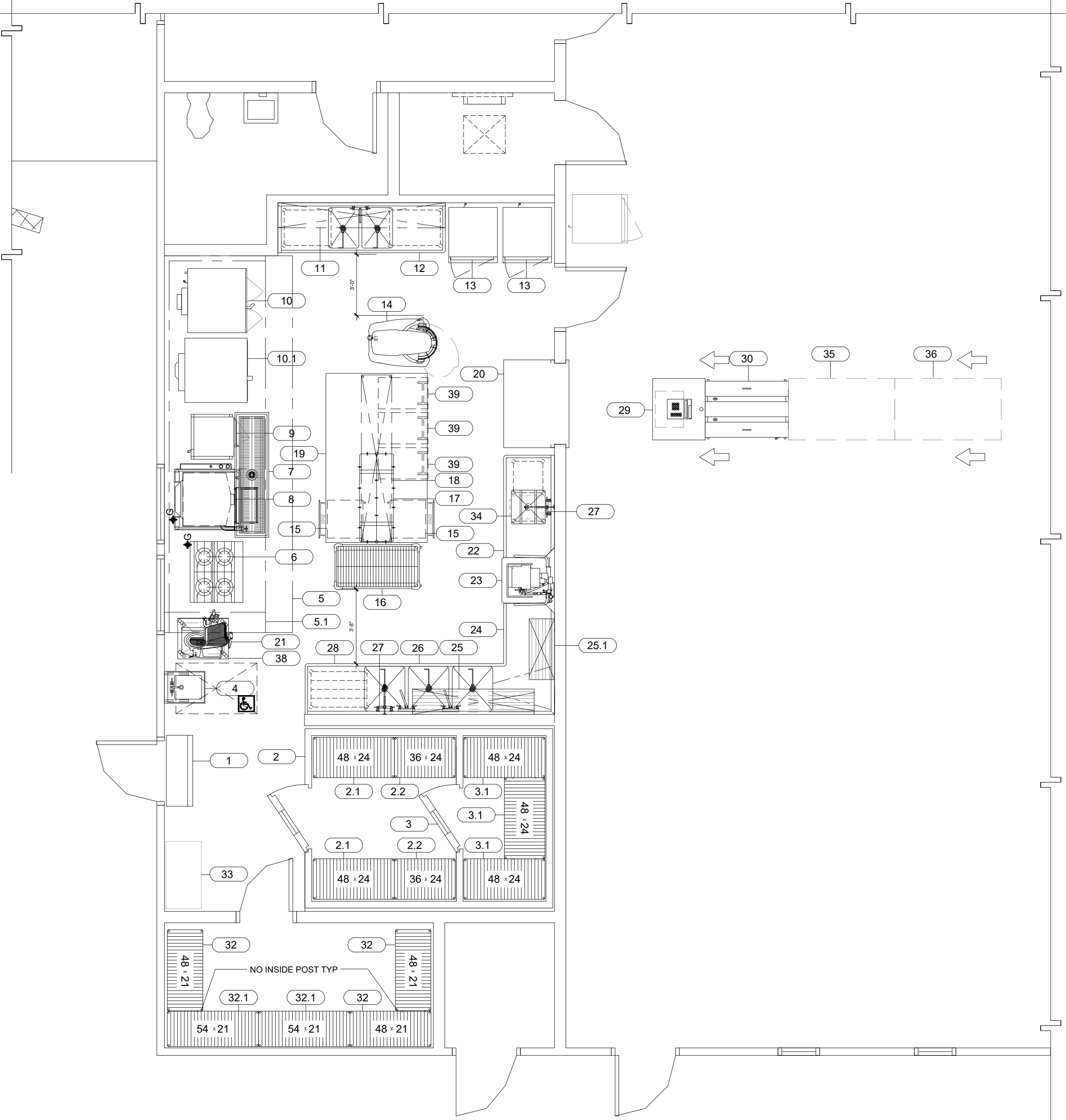
3 LAY-IN LUMINAIRE MOUNTING DETAIL  
E5.0 NO SCALE



4 SURFACE LUMINAIRE MOUNTING DETAIL  
E5.0 NO SCALE

PROJECT NO.	REVISIONS	BY
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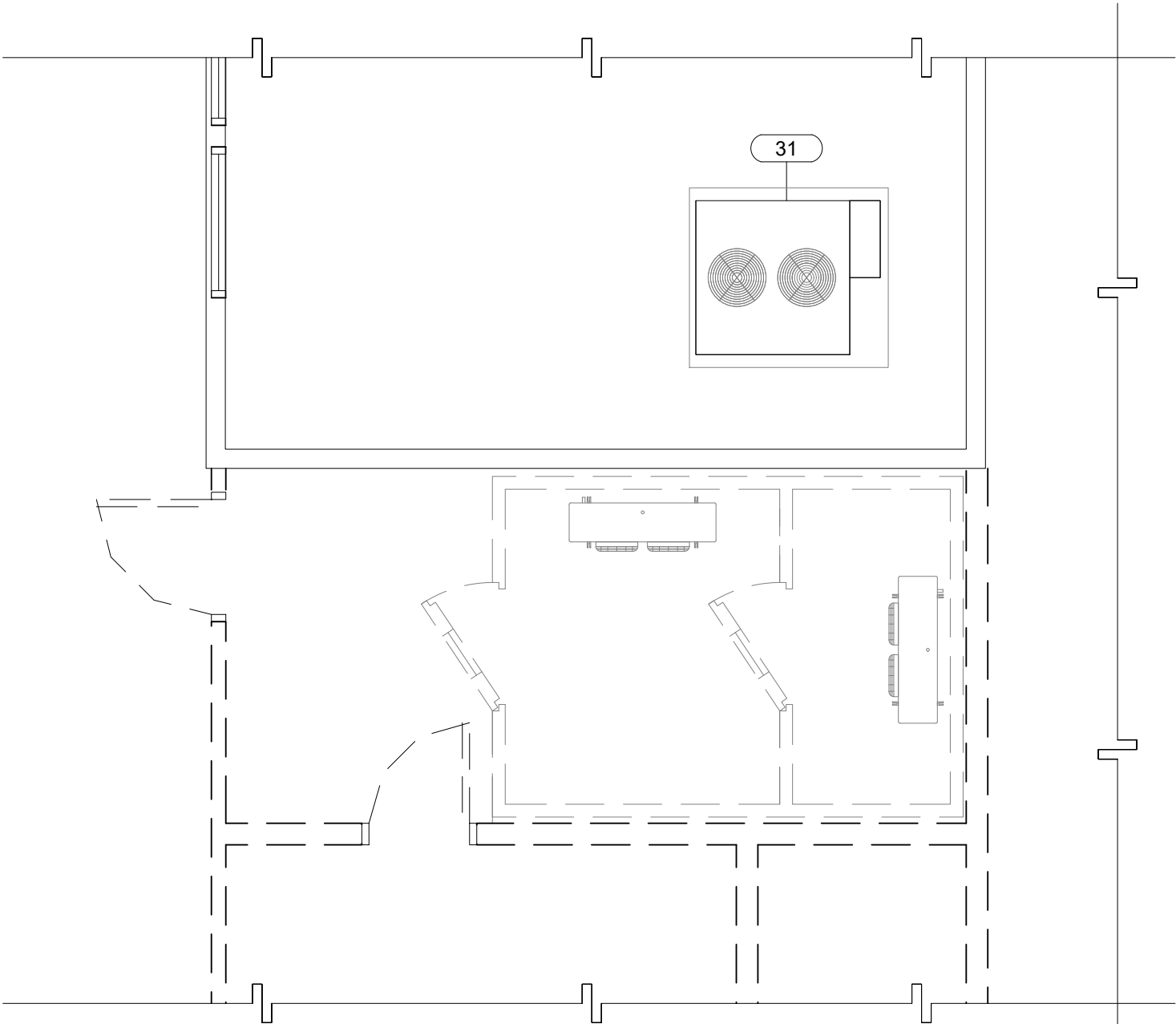




FOODSERVICE EQUIPMENT FLOOR PLAN

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

1  
FS1.1



FOODSERVICE EQUIPMENT PARTIAL ROOF PLAN

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

2  
FS1.1

EQUIPMENT SCHEDULE						
ITEM NO	STAT	QTY	EQUIPMENT CATEGORY	MANUFACTURER	MODEL NUMBER	WEIGHTS (LBS.)
1	CFCI	1	AIR CURTAIN, UNHEATED	MARS AIR SYSTEMS	HV242-1U*	120
2	CFCI	1	WALK-IN REFRIGERATOR	DURACOLD	FABRICATED ITEM	8.5 LBS PER SQ.FT. OF 4" PANEL
2.1	CFCI	2	COLD STORAGE SHELVING	METRO	A2448NK3	31
2.2	CFCI	2	COLD STORAGE SHELVING	METRO	A2436NK3	28
3	CFCI	1	WALK-IN FREEZER	DURACOLD	FABRICATED ITEM	8.5 LBS PER SQ.FT. OF 4" PANEL
3.1	CFCI	3	COLD STORAGE SHELVING	METRO	A2448NK3	31
4	CFCI	1	HAND SINK W/ WRIST HANDLES FAUCET W/SPLASH GUARDS	EAGLE GROUP	YAMD-HSAP-14-0001-00	85
5	CFCI	2	EXHAUST HOOD ( TYPE 1) AND S/S WALL LINING	CAPTIVE AIRE	ND-2-PSP-F	564
5.1	CFCI	1	FIRE SYSTEM (UL300)	ANSUL	R-102	
6	OFCI	1	OPEN BURNER RANGE W/ OVEN	IMPERIAL	IR-4-S18	600
7	CFCI	1	FLOOR TROUGH W/ADA GRATE	EAGLE	FT-1872-SG	55
8	CFCI	1	TILT SKILLET W/ELEC TILT, W/LEFT HAND BRACKET FAUCET	VULCAN	VG30-BPDOV-1	645
9	OFCI	1	STEAMER, CONVECTION (2) COMPARTMENT	ACCUTEMP	N61201E DBL	560
10	OFCI	1	CONVECTION OVEN DOUBLE STACK	MONTAGUE	HX2-63A	1205
10.1	CFCI	1	CONVECTION OVEN DOUBLE STACK	BLODGETT	DFG200 DOUBLE	1130
11	CFCI	1	WALL SHELF	CUSTOM	FABRICATED ITEM	47
12	CFCI	1	PREP SINK	CUSTOM	FABRICATED ITEM	225
13	OFCI	2	MOBILE WARMING & HOLDING CABINET	CRESCOR	H138S1834C2K	326
14	OFCI	1	MIXER	HOBART	HL600	916
15	CFCI	2	THREE STACK UTENSIL DRAWER UNIT	CUSTOM	FABRICATED ITEM	36
16	CFCI	1	MOBILE POT AND PAN STORAGE SHELVING	METRO	N556MC	118
17	CFCI	1	TABLE MOUNTED POT RACK	EAGLE GROUP	TM60PR	64
18	CFCI	1	DOUBLE TABLE MOUNTED OVERSHELF	CUSTOM	FABRICATED ITEM	55
19	CFCI	1	CHEFS COUNTER	CUSTOM	FABRICATED ITEM	475
20	CFCI	1	SERVING COUNTER	CUSTOM	FABRICATED ITEM	35
21	OFCI	1	SLICER	HOBART	EDGE 12	85
22	CFCI	1	SOILED DISHTABLE	CUSTOM	FABRICATED ITEM	47
23	OFCI	1	WAREWASHER, DOOR TYPE, HIGH TEMP VENTLESS	HOBART	AM15VLT-2	494
24	CFCI	1	CLEAN DISHTABLE	CUSTOM	FABRICATED ITEM	42
25	CFCI	1	TUBULAR WALL MTD. DRAINAGE SHELVF	ADVANCE TABCO	DT-6R-72	46
25.1	CFCI	1	TUBULAR WALL MTD. DRAINAGE SHELVF	ADVANCE TABCO	DT-6R-36	23
26	CFCI	1	THREE COMP. SINK W/ DRAIN STRAINER FPS-610A	CUSTOM	FABRICATED ITEM	225
27	CFCI	2	PRE-RINSE FAUCET, BACKSPLASH MOUNT	FISHER	13390	12
28	CFCI	1	SOILED DISHTABLE	CUSTOM	FABRICATED ITEM	47
29	OFCI	1	CASHIER STATION VERIFY UTILITY REQUIREMENTS			
30	OFOI	1	MILK COOLER	BEVERAGE AIR	SMF58	458
31	CFCI	1	REMOTE REFRIGERATION	COOLTEC	CRS-4	800
32	CFCI	3	DRY STORAGE SHELVING	METRO	A2148NC	28
32.1	CFCI	2	DRY STORAGE SHELVING	METRO	A2154NC	16
33	OFOI	1	DESK			
34	CFCI	1	SCRAP SINK W/ DRAIN STRAINER FPS-610A	CUSTOM / DRAIN STRAINER	FABRICATED ITEM	51
35	OFOI	1	SERVING LINE	AMBIENT		
36	OFOI	1	SERVING LINE	AMBIENT		
37			SPARE			
38	CFCI	1	MOBILE SLICER CART	CADDY CORPORATION	T-243-A	95
39	OFOI	3	INGREDIENT BIN	CAMBRO	IB44148	30

FOODSERVICE DRAWING SHEET LIST

FS1.1- FOODSERVICE EQUIPMENT FLOOR AND PARTIAL ROOF PLAN  
FS2.1- FOODSERVICE EQUIPMENT PLUMBING PLAN  
FS3.1- FOODSERVICE EQUIPMENT ELECTRICAL AND PARTIAL ROOF PLAN  
FS4.1- FOODSERVICE EQUIPMENT MECHANICAL AND BLOCKING PLAN  
FS4.2- FOODSERVICE EQUIPMENT MECHANICAL SCHEDULE  
FS5.1- FOODSERVICE EQUIPMENT EXHAUST HOOD PLAN  
FS5.2- FOODSERVICE EQUIPMENT EXHAUST HOOD PLAN  
FS5.3- FOODSERVICE EQUIPMENT EXHAUST HOOD FIRE SYSTEM  
FS6.1- FOODSERVICE EQUIPMENT WALK-IN REFRIG. DETAILS  
FS6.2- FOODSERVICE EQUIPMENT WALK-IN REFRIG. DETAILS  
FS7.1- FOODSERVICE EQUIPMENT REMOTE REFRIGERATION  
FS7.2- FOODSERVICE EQUIPMENT REMOTE REFRIGERATION  
FS8.1- FOODSERVICE EQUIPMENT DETAILS  
FS8.2- FOODSERVICE EQUIPMENT DETAILS  
FS9.1- FOODSERVICE EQUIPMENT ELEVATIONS

NOTES:

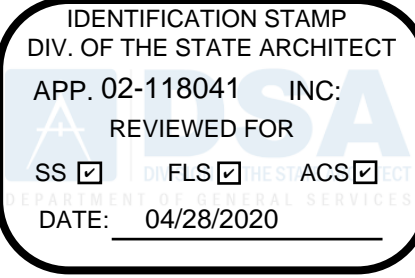
- THE KITCHEN HOOD FIRE SUPPRESSION SYSTEM SHALL CONFORM TO THE REQUIREMENTS OF THE 2016 EDITION OF THE NFPA 17A. (UL 300 SYSTEM)
- INSTALLATION OF THE FIRE SUPPRESSION SYSTEM SHALL NOT BE STARTED UNTIL COMPLETE PLANS AND SPECIFICATIONS HAVE BEEN APPROVED BY DEPT. OF STATE ARCHITECT.
- UPON COMPLETION OF THE SYSTEM IT SHALL BE TESTED IN THE PRESENCE OF THE STATE FIRE MARSHAL.

NOTES:

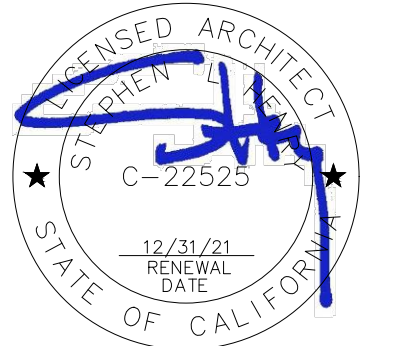
- REFER TO ARCH. DRAWINGS FOR FIRE EXTINGUISHER LOCATIONS
- \*All work shall conform to the California Building Code, California Electrical Code, California Mechanical and Plumbing Codes, California Health and Safety Code. ALL FOOD SERVICES EQUIPMENT SHALL MEET AND BE INSTALLED PER THE REQUIREMENTS OF THE CALIFORNIA HEALTH AND SAFETY CODE DIVISION 22 AND ALL LOCAL CODES AND ORDINANCES.\*

FOODSERVICE EQUIPMENT LEGEND

SYMBOL/ABBREVIATION	DESCRIPTION	SYMBOL	DESCRIPTION
OFCI	OWNER FURNISH / CONTRACTOR INSTALLED		ACCESSIBLE CLEARANCES AND SYMBOL 30"x48" MIN CLEARANCE
OFOI	OWNER FURNISH / OWNER INSTALLED		OUTLINE OF (N) FOODSERVICE EQUIPMENT
CFCI	CONTRACTOR FURNISH CONTRACTOR INSTALLED		OUTLINE OF (E) FOODSERVICE EQUIPMENT
(E), EXIST	EXISTING FOODSERVICE EQUIPMENT		FOODSERVICE EQUIPMENT BELOW EQUIPMENT TOP
(N), NEW	NEW FOODSERVICE EQUIPMENT		FOODSERVICE EQUIPMENT ABOVE EQUIPMENT TOP
(F)	FUTURE FOODSERVICE EQUIPMENT		MOBILE FOODSERVICE EQUIPMENT
	BUILDING WALLS (SEE ARCH. DWGS.)		F.E.C. (PROVIDE TYPE "K" AND 2A:10BC (MINIMUM)) FIRE EXTINGUISHER & CABINET REFER TO ARCH. DRAWINGS FOR FIRE EXTINGUISHER LOCATIONS
	WALK-IN COOLER/ FREEZER INSULATED WALLS	FS.01	SHEET NUMBER
	KEY / SHEET NOTE		WATER HEATER (SEE PLUMBING ENG. DWG.)
	ITEM NUMBER SYMBOL (SEE EQUIPMENT SCHEDULE FOR DESCRIPTION)		ELEVATION INDICATOR SYMBOL
	ROOM/ AREA NAME AND ROOM NUMBER		
	COLUMN GRIDS WITH COLUMN INDICATORS		
	STORAGE SHELVING SIZES (Width x Length)		



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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT  
FLOOR PLAN

CONSULTANT

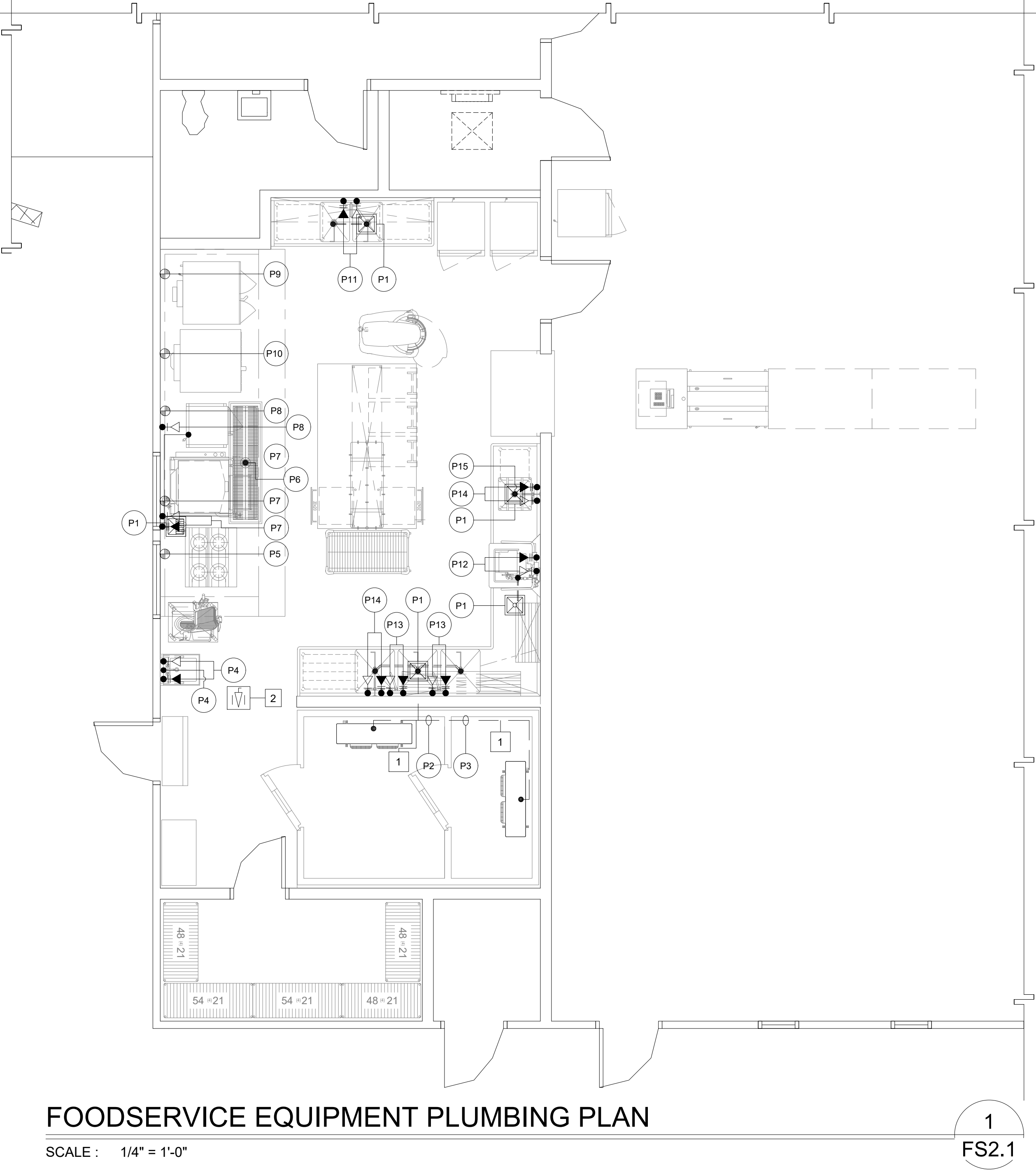


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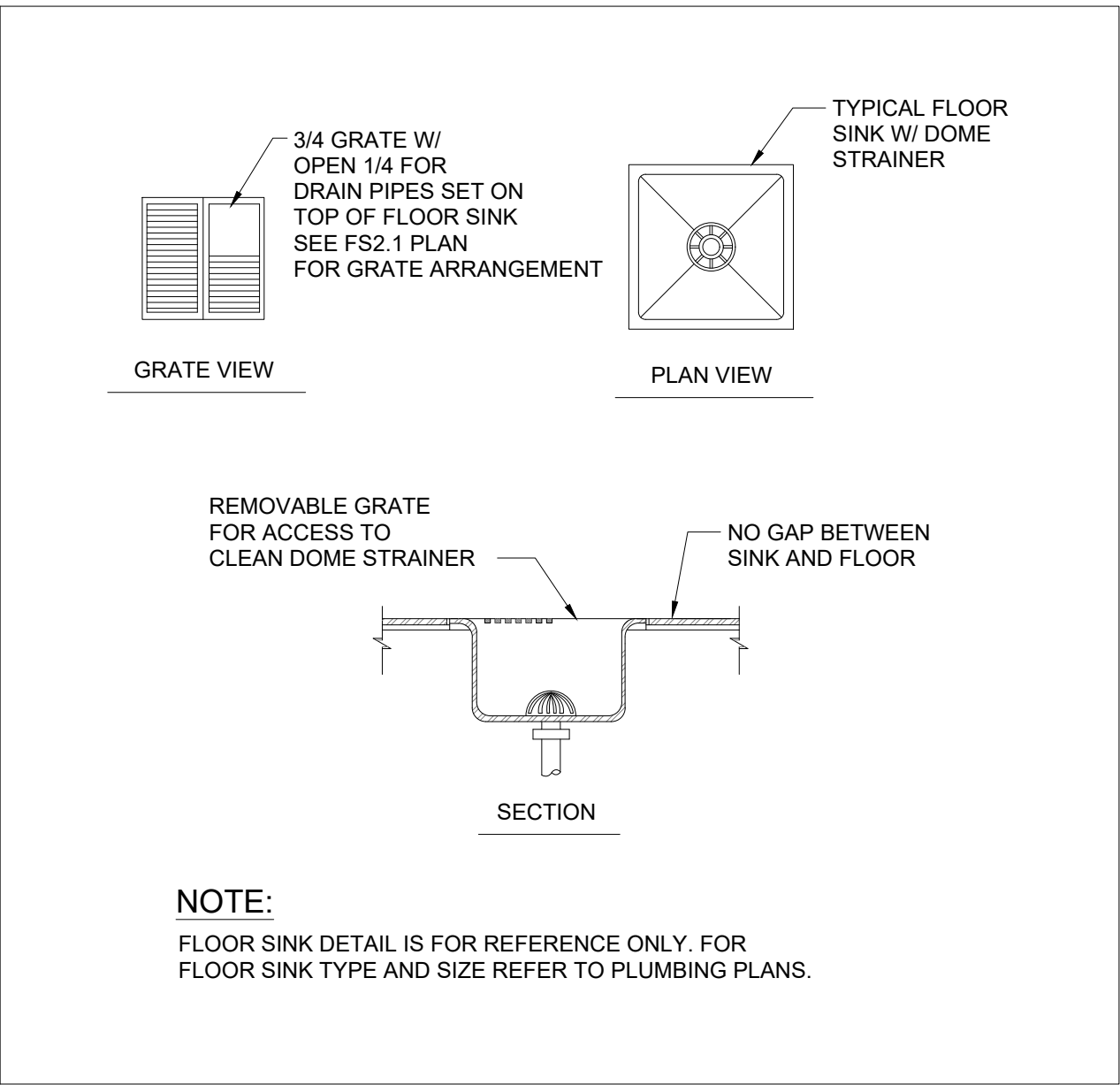
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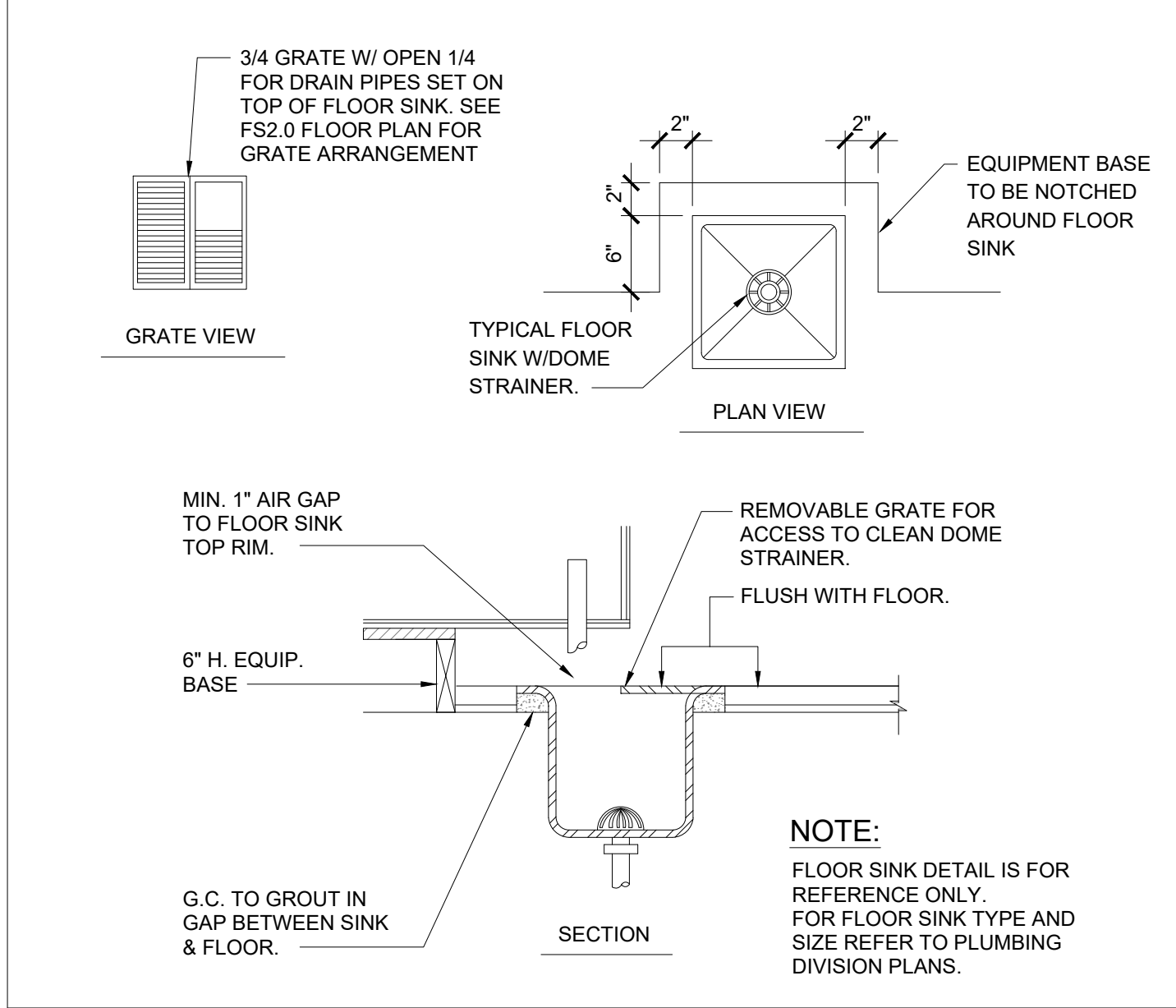
PLUMBING SCHEDULE															
PLUM. NO.	ITEM. NO.	DESCRIPTION	QTY.	WATER		WASTE			GAS			REMARKS	NOTE(S)		
				CONN. C.W.	SIZE H.W.	HGT.@ WALL	CONN. DIR.	SIZE INDIR.	HGT.@ WALL	BTU/HR (x1,000)	CONN. SIZE			HGT. @ WALL	
P1	-	FLOOR SINK	5EA.	-	-	-	-	-	+0"	-	-	-	INSTALL FLUSH WITH FINISH FLOOR, PROVIDE GRATE COVER W/ DOME STRAINER, SIZE 12" x 12" x 8"		
P2	2	WALK-IN REFRIGERATOR CONN. DRAIN FROM COIL CONN. + 70"	1EA.	-	-	-	-	1"	-	-	-	-	1" INDIRECT DRAIN TO F.S. P1. SLOPE 1/2" PER FOOT. PROVIDE 1" MIN AIR GAP AT F.S. WITH 'P' TRAP.		
P3	3	WALK-IN FREEZER CONN. DRAIN FROM COIL CONN. + 70"	1EA.	-	-	-	-	1"	-	-	-	-	1" INDIRECT DRAIN TO F.S. P1. SLOPE 1/2" PER FOOT. PROVIDE 1" MIN AIR GAP AT F.S. WITH 'P' TRAP.		
P4	4	WALL MOUNTED HAND SINK FAUCET W/ 1/2" INLET 4" CENTER	1EA.	1/2"	1/2"	18"	1 1/2"	-	24"	-	-	-	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. RUN DIRECT WASTE WITH P-TRAP.		
P5	6	OPEN BURNER RANGE W/ OVEN	1EA.	-	-	-	-	-	-	163	3/4"	28"	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. NATURAL GAS PRESSURE REGULATOR PROVIDED BY MFG.	4	
P6	7	FLOOR TROUGH	1EA.	-	-	-	4"	-	-10.25"	-	-	-	DRAIN TO FLOOR TROUGH REFER TO		
P7	8	TILT SKILLET W/ FILLER	1EA.	1/2"	1/2"	24"	-	-	-	144	1/2"	24"	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. GAS PRESSURE REGULATOR PROVIDED BY MFG.		
P8	9	STEAMER, CONVECTION (2) COMPARTMENT	2EA.	3/4"	-	46" 16"	-	3/4"	-	60 EA.	1/2"	44" 14"	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. 3/4" INDIRECT DRAIN TO F.S. GAS PRESSURE REGULATOR PROVIDED BY MFG.		
P9	10	DOUBLE STACK CONVECTION OVEN GAS	2EA.	-	-	-	-	-	-	63 EA.	1/2"	49 18"	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. GAS PRESSURE REGULATOR PROVIDED BY MFG.	4	
P10	10.1	DOUBLE STACK CONVECTION OVEN GAS	2EA.	-	-	-	-	-	-	60 EA.	3/4"	42" 12"	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. GAS PRESSURE REGULATOR PROVIDED BY MFG.		
P11	12	PREP SINK FAUCET W/ 1/2" INLET 8" CENTER	1EA.	1/2"	1/2"	16"	-	2"	-	-	-	-	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. PROVIDE 2" INDIRECT DRAIN TO F.S. P1. (CHROME OR PAINT SILVER)		
P12	23	WARE WASHER, HIGH TEMP	1EA.	1/2"	1/2"	42"	-	1 1/2"	-	-	-	-	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. PROVIDE 1-1/2" INDIRECT DRAIN TO F.S. P1. (CHROME OR PAINT SILVER)	1 2 3 4	
P13	26	POTWASH SINK FAUCET W/ 3/4" INLET 8" CENTER	2EA.	3/4"	3/4"	16"	-	2"	-	-	-	-	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. PROVIDE 2" INDIRECT DRAIN TO F.S. P1. (CHROME OR PAINT SILVER)		
P14	27	PRE-RINSE FAUCET W/ 1/2" INLET 8" CENTER	2EA.	1/2"	1/2"	16"	-	2"	-	-	-	-	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. PROVIDE 2" INDIRECT DRAIN TO F.S. P1. (CHROME OR PAINT SILVER)		
P15	34	SCRAP SINK	1EA.	-	-	-	-	2"	-	-	-	-	PROVIDE 2" INDIRECT DRAIN TO F.S. P1. (CHROME OR PAINT SILVER)		
PLUMBING KEY NOTE(S):										FIRE SYSTEM NOTE:					
1 110 DEGREE (F) MIN. WATER INLET HOT WATER SANITIZING 126 GPH.										1. FURNISH AUTOMATIC GAS SHUT-OFF VALVE INCLUDING ANY NECESSARY ACCESS PANEL. CONTRACTOR SHALL INSTALL THE AUTOMATIC SHUT-OFF VALVE IN AN ACCESSIBLE LOCATION. REFER TO PLUMBING DRAWINGS FOR GAS VALVE LOCATION.					
2 WATER HAMMER ARRESTOR (MEETING ASSE-1010 STANDARD) BY PLUMBER IN SUPPLY LINE.															
3 WATER PRESSURE 15-25 PSI- IF HIGHER, FURNISH PRESSURE REGULATOR VALVE WITH INTERNAL THERMAL EXPANSION BYPASS BY PLUMBER.															
4 VERIFY UTILITY REQUIREMENTS															



FLUSH FLOOR SINK DETAIL

SCALE : NONE

FS2.1



FLUSH FLOOR SINK DETAIL

SCALE : NONE LOCATED UNDER WORK CABINETS

FS2.1

FOODSERVICE EQUIPMENT PLUMING LEGEND	
1	CONDENSATE DRAINS FROM COILS TO BE FURNISHED AND INSTALLED BY PLUMBING CONTRACTOR PROVIDE HEAT TRACE WITH INSULATION FROM COIL TO DRAIN (FREEZER)
2	GAS SHUT-OFF VALVE FOR ANSUL SYSTEM WITH ACCESS DOOR. REFER TO PLUMBING PLANS FOR LOCATIONS.

FOODSERVICE EQUIPMENT PLUMING LEGEND			
ABREV./SYMB	DESCRIPTION	SYMBOL	DESCRIPTION
C.W.	COLD WATER	P1	PLUMBING SCHEDULE REFERENCE, REFER TO FS2.1 FOR SCHEDULE
H.W.	HOT WATER	1	SHEET AND/OR KEY NOTE
DIR.	WASTE (DIRECT CONNECTION)	1	COLD WATER INLET
INDIR.	INDIRECT WASTE (AIR GAP)	1	HOT WATER INLET
LAV.	LAVATORY	1	SHUT OFF VALVE (S.O.V.)
W.C.	WATER CLOSET	1	COLD WATER SHUT OFF VALVE
F.S.	FLOOR SINK	1	GAS SHUT-OFF VALVE
P.C.	PLUMBING CONTRACTOR	1	FLOOR SINK
G.C.	GENERAL CONTRACTOR	1	FLOOR DRAIN
K.E.C.	KITCHEN EQUIPMENT CONTRACTOR	1	WASTE DOWN
S.O.V.	SHUT OFF VALVE	1	GAS INLET
GPH	GALLONS PER HOUR	1	WALK-IN DRAIN LINE
PSI	POUNDS PER SQUARE INCH	1	I.D. DRAIN LINE
(F)	DEGREES FAHRENHEIT	1	
CONN.	CONNECT	1	
LOC.	LOCATE	1	

FILE NO. 39-50 APP NO. 02-118041

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ARCHITECTS

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DATE  
STATE OF CALIFORNIA

KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT  
PLUMBING PLAN

CONSULTANT

AMD  
FOODSERVICE DESIGN

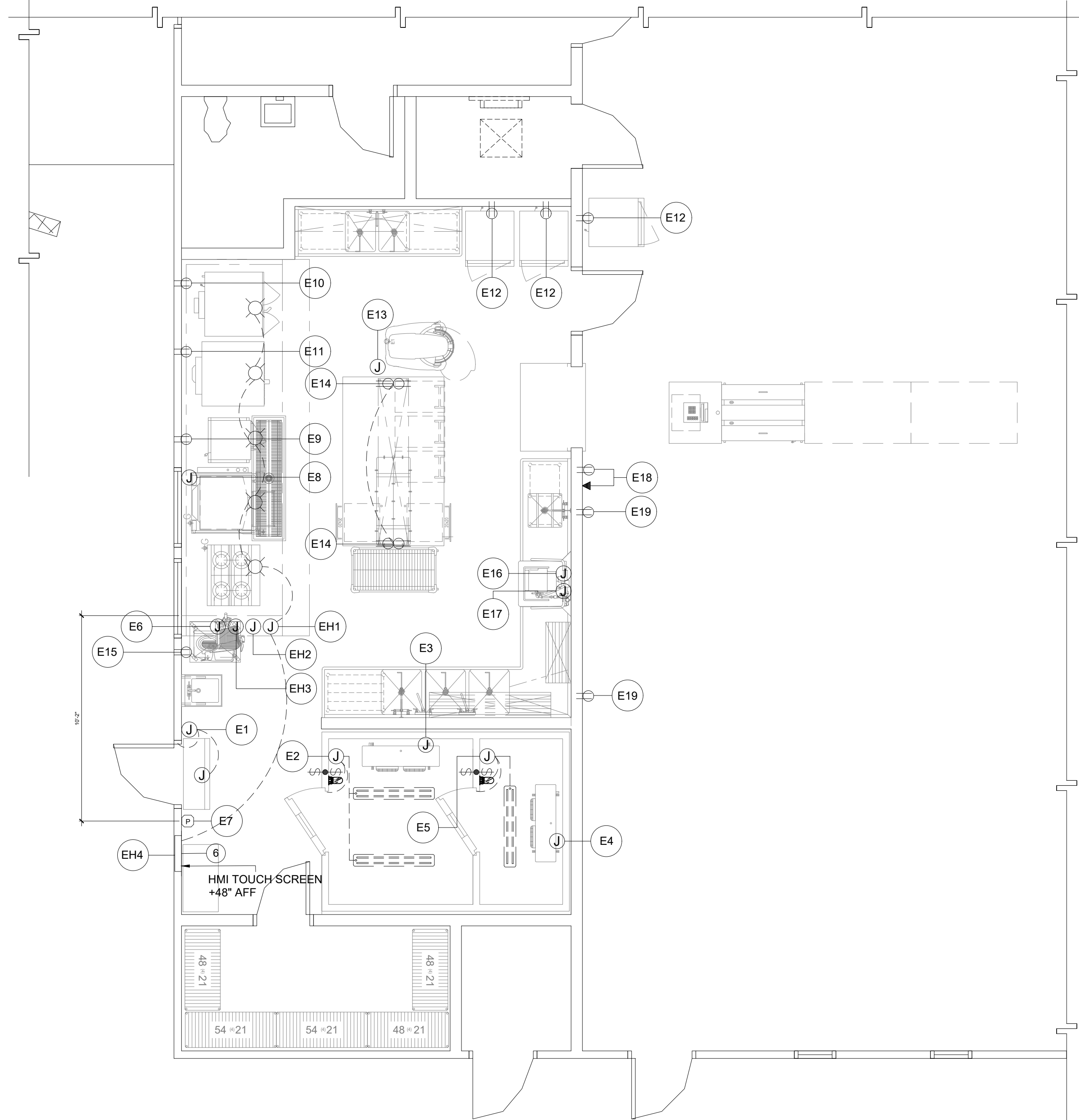
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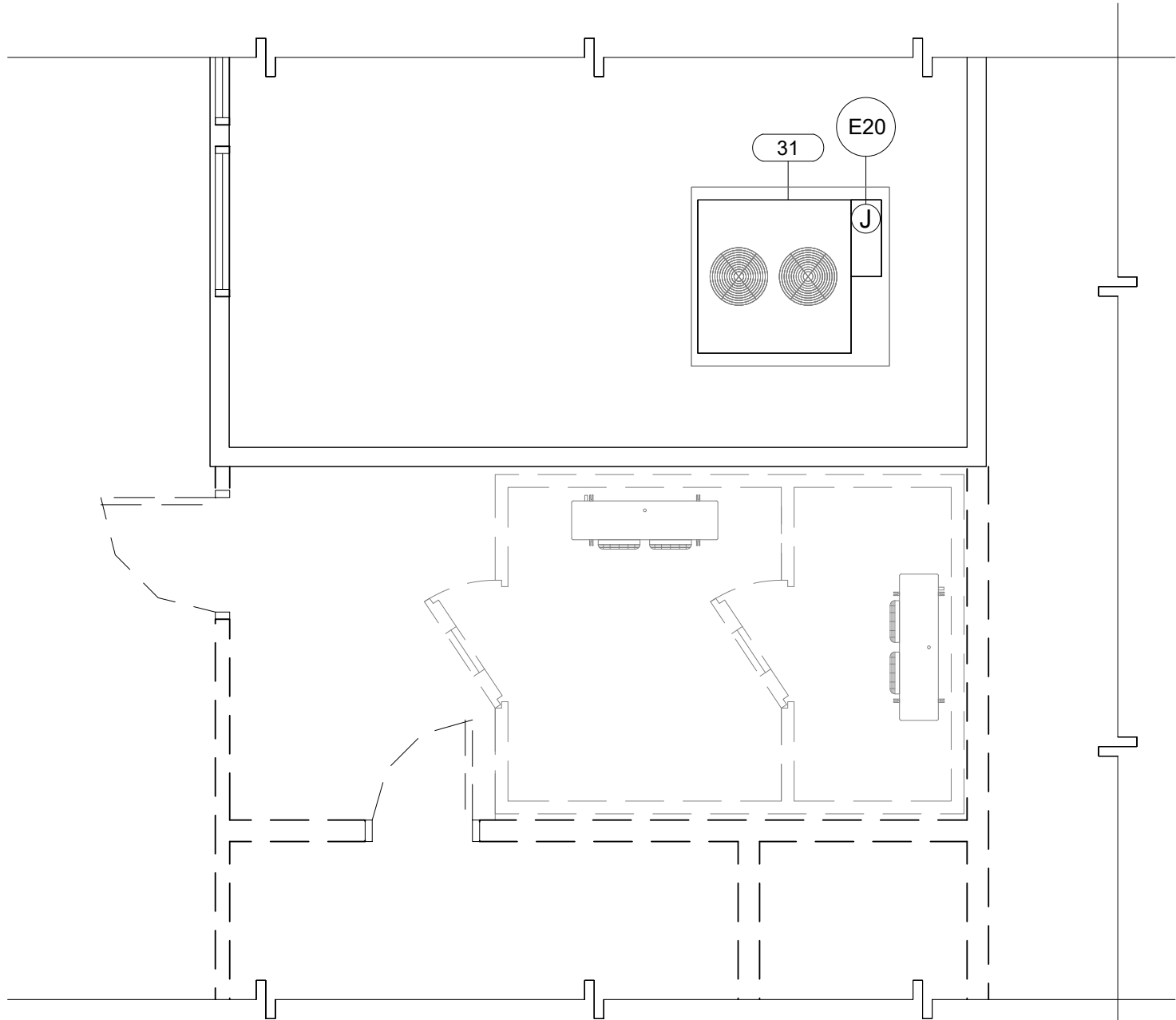
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## FOODSERVICE EQUIPMENT ELECTRICAL PLAN

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

1  
FS3.1



## FOODSERVICE EQUIPMENT ELECTRICAL PARTIAL ROOF PLAN

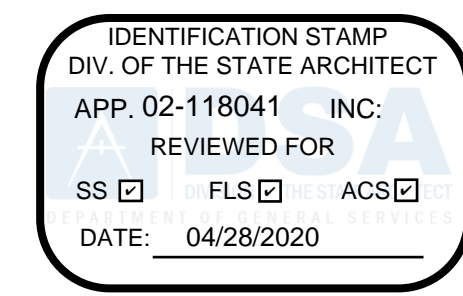
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FS3.1

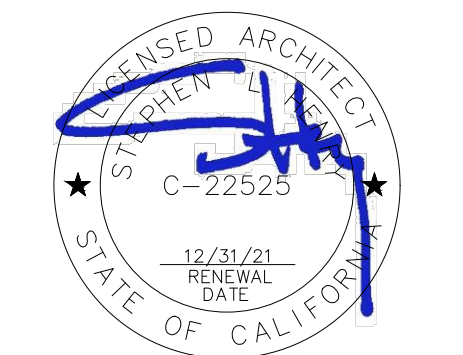
ELECTRICAL SCHEDULE																
ELEC. NO.	ITEM NO.	DESCRIPTION	QTY.	VOLT.	PH	DIRECT PLUG	NEMA	LOAD			OUTLET HEIGHT	REMARKS	NOTE(S)			
								WATT	AMPS. DRAW	HP						
E1	1	AIR CURTAIN	1EA.	120	1	X	-	-	-	9	-	+86	PROVIDE J-BOX IN WALL INSTALL DOOR LIMIT SWITCH FOR INSTANT ON/OFF SWITCH BY F.S.E.C SEE DETAIL B/ FS8.2			
E2	2	WALK-IN REFRIGERATOR (BOX)	1EA.	120	1	X	-	-	-	2.0	-	+88"	(2) 39W LED CLG. MTD. LIGHT FIXTURES (1) 11.5W LED LIGHT FIXTURE AT DOOR. CONTRACTOR TO PROVIDE ALL INTERCONNECTIONS.	①		
E3	2	WALK-IN REFRIGERATOR (COIL)	1EA.	115	1	X	-	-	-	1.8	-	+74"	CONNECT TO UNIT ELECTRICAL CONNECTION AT COIL INSIDE WALK-IN REFRIGERATOR. SEE DETAIL I/FS7.1			
E4	3	WALK-IN FREEZER (COIL)	1EA.	208	1	X	-	-	-	12.8	-	+74"	CONNECT TO UNIT ELECTRICAL CONNECTION AT COIL INSIDE WALK-IN FREEZER. SEE DETAIL I/FS7.1	②		
E5	3	WALK-IN FREEZER (BOX)	1EA.	120	1	X	-	-	-	5.0	-	+88"	(1) 39W LED CLG. MTD. LIGHT FIXTURES (1) 11.5W LED LIGHT FIXTURE AT DOOR. 250W DOOR HEATER, 20W P.R.P. 100W WINDOW HEATER EC. TO PROVIDE ALL INTERCONNECTIONS.	①		
E6	5.1	FIRE SYSTEM AT ANSUL CONTROL AUTOMAN PANEL	1EA.	120	1	X	-	-	-	20	-	+104"	PROVIDE J-BOX IN WALL. CONNECT TO UNIT ELECTRICAL CONNECTION 120V/1-20AMP @ ANSUL CONTROL	④		
E7	5.1	FIRE SYSTEM (REMOTE PULL STATION)	1EA.	-	-	X	-	-	-	-	-	+48"	PROVIDE EMPTY FLUSH MTD. OCTAGONAL BOX (REMOTE PULL) SEE MANUAL PULL DETAIL 2/FS5.3	⑤		
E8	8	TILT SKILLET	1EA.	120	1	X	-	-	-	9.0	-	+25"	PROVIDE J-BOX IN WALL. CONNECT TO UNIT ELECTRICAL CONNECTION	④		
E9	9	STEAMER, CONVECTION (2) COMPARTMENT	2EA.	120	1	-	X	5-15P	1.0	-	+30" +12"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH 6' CORD (NEMA 5-15P)	④			
E10	10	CONVECTION OVEN DOUBLE STACK	2EA.	120	1	-	X	5-15P	-	6.0	-	+24" +66"	PROVIDE DUPLEX RECEPTACLE FLUSH WITH STAINLESS STEEL WALL LINING UNIT PROVIDED WITH CORD (NEMA 5-15P)	④		
E11	10.1	CONVECTION OVEN DOUBLE STACK	2EA.	120	1	-	X	5-15P	-	7.2	-	+24" +66"	PROVIDE DUPLEX RECEPTACLE FLUSH WITH STAINLESS STEEL WALL LINING UNIT PROVIDED WITH CORD (NEMA 5-15P)	④		
E12	13	MOBILE WARMING CABINET	3EA.	120	1	-	X	5-20P	16.7	-	+68"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH 10' CORD (NEMA 5-15P)				
E13	14	MIXER	1EA.	208	3	X	-	-	-	10.0	-	+6"	PROVIDE J-BOX OUT OF FLOOR CONNECT TO UNIT ELECTRICAL CONNECTION			
E14	19	CHEFS COUNTER	2EA.	120	1	X	-	-	-	15EA	-	+34"	PROVIDE DOUBLE FACED PEDISTAL DUPLEX RECEPTACLE MTD. ON COUNTER TOP (COMPONENT HARDWARE NO. R58-1020)(R71-0721) (TOTAL OF 6 DCO OUTLETS)			
E15	21	SLICER	1EA.	120	1	-	X	5-15P	4.0	-	+30"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH 6' CORD (NEMA 5-15P)				
E16	23	HIGH TEMP WAREWASHER (TANK HEAT/MOTORS)	1EA.	208	3	X	-	-	-	24.9	-	+18"	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION			
E17	23	HIGH TEMP WAREWASHER (BOOSTER HEATER)	1EA.	208	3	X	-	-	-	20.4	-	+18"	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION			
E18	29	CASHIER STATION (DATA) AND (POWER) VERIFY W/ DISTRICT FURNISHED POS UNIT	2EA.	120	1	-	X	-	-	20	-	+0"	PROVIDE (2) FLUSH IN WALL. MTD DATA PLUGS (2) FLUSH IN WALL. ELECTRICAL OUTLETS (VERIFY W/ DISTRICT POS REQ.)			
E19	30	MILK COOLER	2EA.	120	1	-	X	5-15P	-	8.2	-	+18"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH CORD AND PLUG SET (NEMA 5-15P)			
E20	31	REMOTE REFRIGERATION	1EA.	208	3	X	-	-	-	17.9	-	+18"	PROVIDE J-BOX CONNECT TO UNIT ELECTRICAL CONNECTION UNIT TO BE LOCATED ON ROOF.			
WALK-IN REFRIGERATION ELECTRICAL (MINIMUM REQUIREMENTS UNLESS NOTED OTHERWISE)												ELECTRICAL KEYNOTES:				
<div>1. - THE ELECTRICAL CONTRACTOR SHALL INSTALL AND INTER WIRE LIGHT SWITCHES AND FIXTURES REQUIRED FOR THE FOOD SERVICE EQUIPMENT AND MAKE FINAL CONNECTIONS.</div> <div>2. - THE FOOD SERVICE EQUIPMENT CONTRACTOR SHALL INSTALL THE PRESSURE RELIEF PORT, DOOR HEATERS, DRAIN LINE HEATERS AND TEMPERATURE ALARM SYSTEM. INTER WIRING AND FINAL CONNECTIONS BY THE ELECTRICAL CONTRACTOR.</div> <div>3. - THE ELECTRICAL CONTRACTOR SHALL INTER WIRE THE TIME CLOCK ON THE CONDENSING UNIT TO THE DEFROST RELAY ON THE UNIT EVAPORATOR LOCATED IN THE FREEZER COMPARTMENT.</div> <div>4. - THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT AND WIRING NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM WITH ALL CONDUIT IN SO FAR AS POSSIBLE MOUNTED ON THE EXTERIOR CEILING OF THE WALK-IN ASSEMBLY. PENETRATIONS AND ESCUTCHEON PLATES SHALL BE FURNISHED AND INSTALLED BY THE FOOD SERVICE CONTRACTOR. FOOD SERVICE EQUIPMENT CONTRACTOR IS RESPONSIBLE FOR SEALING THE INSIDE OF CONDUITS WHICH PENETRATE THE CEILING OR WALL.</div>												① INTERCONNECT TEMP ALARM WITH MECHANICAL ALARM. SYSTEM VERIFY WITH ELECTRICAL				
												② DRAIN LINE HEATER CONNECTED TO COIL. F.S.E.C TO PROVIDE AND CONNECT TO COIL				
												③ 120V/1 PHASE FOR LIGHTS TO ONE PRE-WIRED CONN. POINT ON HOOD FOR LIGHTS PRE-WIRED BY FACTORY. E.C TO CONNECT HOOD LIGHTS AT (2) HOODS				
												④ ELECTRICAL CONTRACTOR TO PROVIDE INTERLOCK WIRING FROM FIRE PROTECTION SYSTEMS TO ELEC. SHUNT TRIP BREAKERS.				
												⑤ ELECTRICAL CONTRACTOR TO PROVIDE EMPTY FLUSH MTD. OCTAGONAL BOX @ +48" AFF. W/ EMPTY CONDUIT TO +2" ABOVE CEILING.				
												⑥ E.C TO INSTALL WALL MOUNTED ENERGY MANAGEMENT CONTROL PANEL PROVIDED BY HOOD MANUFACTURE FOR HOOD LIGHTS AND FAN CONTROLS				
												⑦ E.C. TO INTERCONNECT POWER FROM HOOD CONTROL PANEL LOCATED ON WALL WITH EXHAUST DVC-1111 DEMAND CONTROL				

EXHAUST HOOD ELECTRICAL SCHEDULE															
ELEC. NO.	ITEM NO.	DESCRIPTION	QTY.	VOLT.	PH	DIRECT PLUG	NEMA	LOAD			OUTLET HEIGHT	REMARKS	NOTE(S)		
								WATT	AMPS. DRAW	HP					
EH1	5	EXHAUST HOOD (ENERGY MANAGEMENT SYSTEM LIGHTS)	1EA.	120	1	X	-	-	15	-	+86	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION (REFER TO FS5.2 FOR ELECTRICAL CONNECTION)	③		
EH2	5	EXHAUST HOOD (FANS CONTROLLER EXHAUST)	1EA.	208	3	X	-	-	10.2	3	+86	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION (REFER TO FS5.2 FOR ELECTRICAL CONNECTION)			
EH3	5	EXHAUST HOOD (FANS CONTROLLER SUPPLY)	1EA.	208	3	X	-	-	6.1	2	+86	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION (REFER TO FS5.2 FOR ELECTRICAL CONNECTION)	④		
EH4		TOUCH SCREEN USER INTERFACE MOUNT +48" AFF. RECESSED IN WALL	1EA.	-	-	-	-	-	-	-	-	CONNECT TO ENERGY MANAGEMENT SYSTEM IN UTILITY CABINET AT END OF HOOD ITEM 5 WITH CAT-5 CABLE (NO POWER REQUIRED AT THIS LOCATION)	⑦		

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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT  
ELECTRICAL PLAN

CONSULTANT



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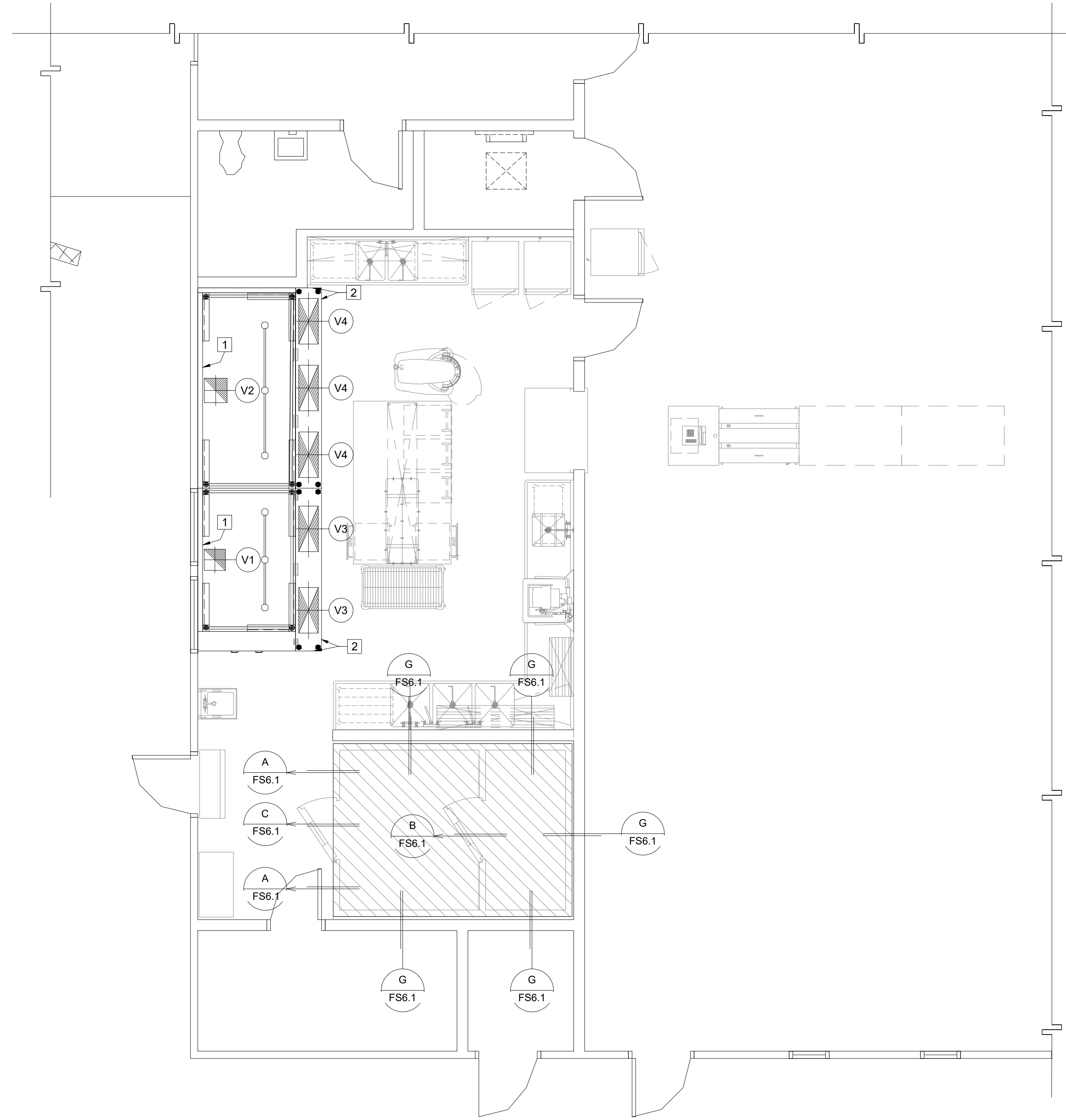
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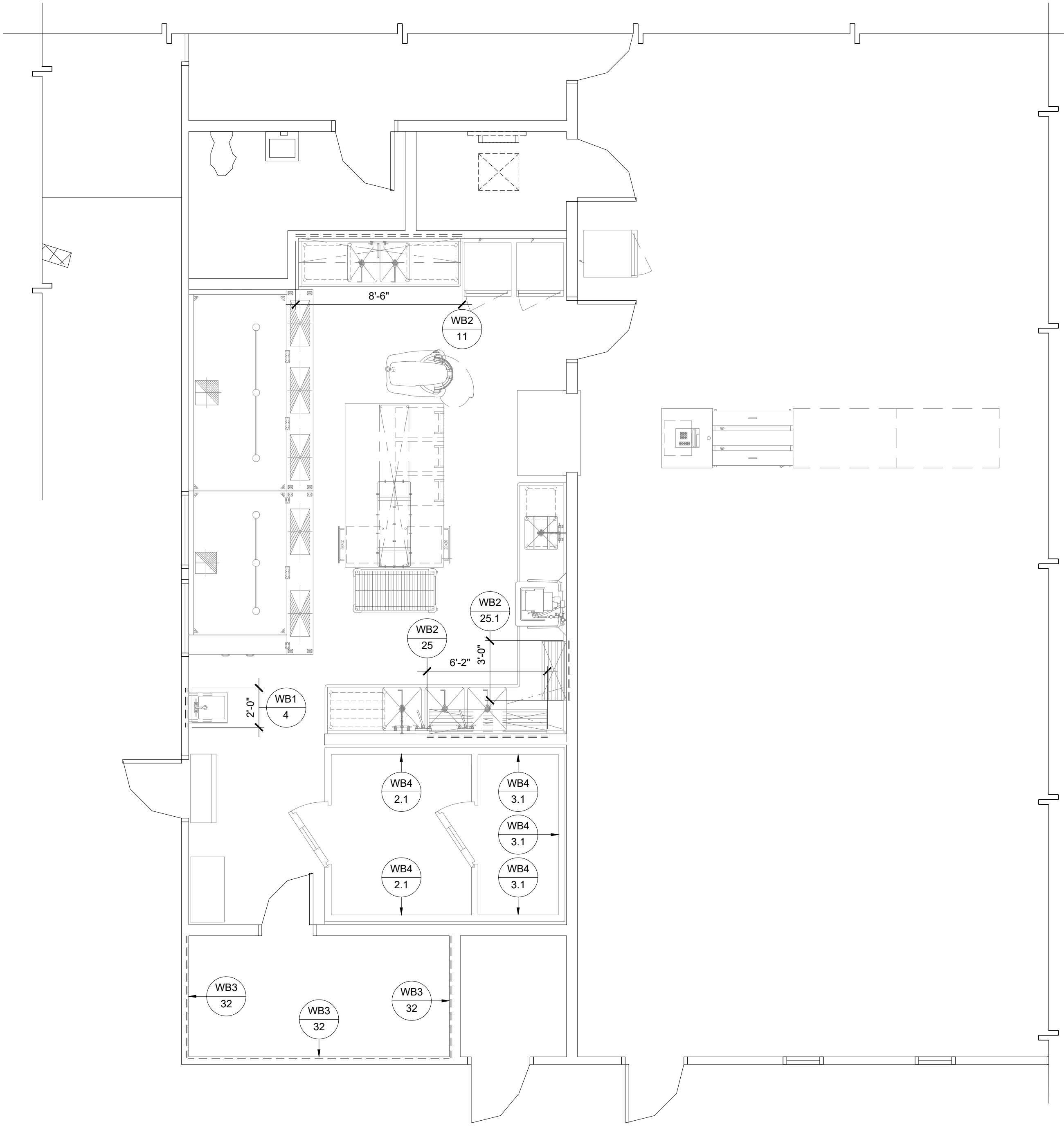
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FOODSERVICE EQUIPMENT MECHANICAL PLAN

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

1  
FS4.1



FOODSERVICE EQUIPMENT BLOCKING PLAN

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

2  
FS4.1

MECHANICAL & REFRIGERATION SHEET NOTES	
1	18 GA. STAINLESS STEEL WALL LINING PANELS (MINIMUM WIDTH TO BE 36") WITH 1" MINERAL WOOL BLANKET AND WIRE MESH BACKING OR CERAMIC FIBER BLANKET AND WIRE MESH BACKING SPACED OUT 1" ON NON-COMBUSTIBLE SPACERS WALL LINING TO MEET THE REQUIREMENTS OF NFPA-96 AND LOCAL CODES. WALL LINING SHALL BE FABRICATED WITH VERTICAL FLUTES EVERY 6" AS SHOWN G/FS8.1
2	CLOSURE SKIRTING REFER 5/FS5.1

MECHANICAL LEGEND			
ABREV/SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
F.S.E.C	FOODSERVICE EQUIPMENT CONTRACTOR		ROUND DUCT CONNECTION
M.C.	MECHANICAL CONTRACTOR		CONCRETE CURB
S.F.	STAINLESS STEEL FABRICATOR		CONCRETE DEPRESSION
G.C.	GENERAL CONTRACTOR		WALL BACKING NO. / EQUIPMENT ITEM NO. REFER TO 2/FS4.2
E.C.	ELECTRICAL CONTRACTOR		WALL BACKING
CFM	CUBIC FEET PER MINUTE		REMOTE COMPRESSOR (ON REFRIGERATION RACK)
SP	STATIC PRESSURE		REFRIGERATION SYSTEM (SEE SCHEDULE ON SHEETS FS7.1 & FS7.2)
1	SHEET NOTE SYMBOL (SEE SHEET NOTES FS4.1)		REFRIGERATION LINE (RUN FROM REFRIGERATION RACK)
	EXHAUST DUCT CONNECTION		REMOTE REFRIGERATED BASE AND/OR EQUIPMENT
	SUPPLY DUCT CONNECTION		
	VENTILATING SCHEDULE REFERENCE REFER TO FS4.2 FOR SCHEDULE		
	VENT TO ROOF		

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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT  
MECHANICAL PLAN

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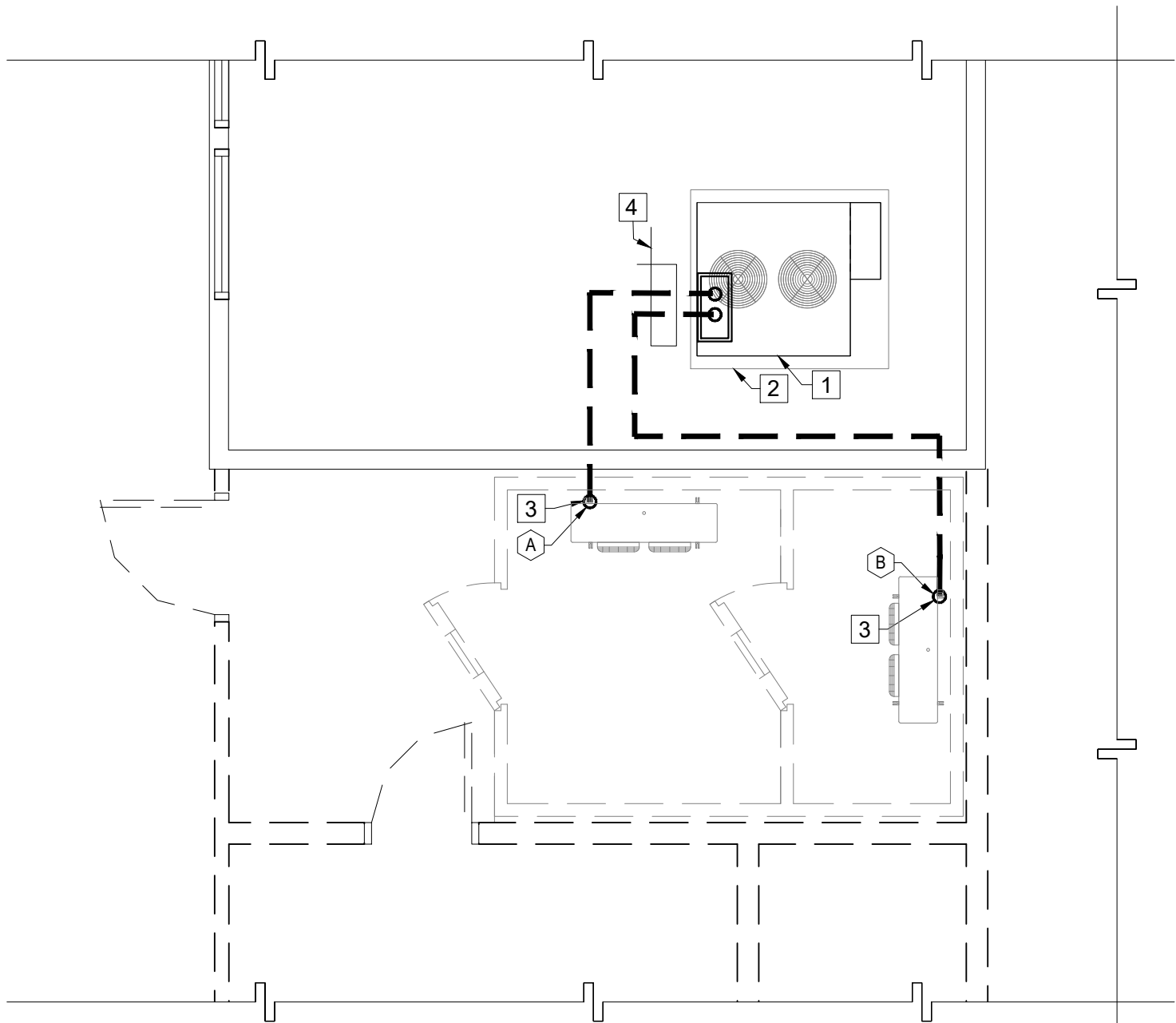
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MECHANICAL ROOF PLAN

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

1  
FS4.2

VENTILATING REQUIREMENTS										
DUCT NO.	ITEM NO.	DESCRIPTION	ITEM QTY.	RISER SIZE					OUTLET HEIGHT	REMARKS
				ROUND	WIDTH	LENG.	CFM	S.P.-WC"		
V1	5	EXHAUST DUCT EXHAUST HOOD #1	1EA.		13"	13"	1760	-0.642"	+108"	MAKE DUCT CONNECTION AT HOOD COLLAR REFER TO 1/FS5.1 FOR EXHAUST HOOD DETAILS
V2	5	EXHAUST DUCT EXHAUST HOOD #2	1EA.		14"	15"	2250	-0.716"	+108"	
V3	5	SUPPLY DUCT EXHAUST HOOD #1	2EA.		12"	28"	704	0.187"	+108"	
					12"	28"	704	0.187"	+108"	
V4	5	SUPPLY DUCT EXHAUST HOOD #2	3EA.		12"	28"	600	0.139"	+108"	
					12"	28"	600	0.139"	+108"	

COOKING EXHAUST HOOD NOTES

1. - EACH AREA CONTAINING COOKING EXHAUST HOOD(S) WILL HAVE 80% MECHANICAL MAKE-UP AIR PROVIDED IN THE VOLUME OF THE AIR BEING EXHAUSTED.
2. - MAKE-UP AIR SHALL BE DELIVERED IN THE PROXIMITY OF THE EXHAUST HOOD(S) IN A MANNER NOT TO CREATE UNDUE AIR TURBULENCE IN THE WORKING AREAS.
3. - COOKING HOOD(S) EXHAUST AND MAKE-UP AIR SYSTEM(S) WILL BE CONNECTED BY AN ELECTRICAL INTER-LOCKING SWITCH.
4. - MAKE-UP AIR INTAKE MUST CLEAR AIR EXHAUST DISCHARGE BY A MINIMUM OF TEN (10) FEET, OR AS REQUIRED BY CODE(S).
5. - LOCATION OF COOKING HOOD EXHAUST DUCT(S) AND MAKE-UP AIR SYSTEM DUCT(S) ARE TO BE VERIFIED AT THE JOB SITE.
6. - IF REQUIRED BY LOCAL CODE(S), MAKE-UP AIR SYSTEM(S) SHALL BE CAPABLE OF DELIVERING TEMPERED AIR AT 70 DEGREES F...
7. - CONNECTING DUCTS FROM THE EXHAUST VENTILATORS TO THE EXHAUST AND/OR MAKE-UP AIR FANS SHALL BE SUPPLIED AND INSTALLED WITH ALL FINAL CONNECTIONS.
8. - PERFORMANCE TESTING FOR THE OPERATION OF THE TYPE 1 EXHAUST HOOD PER U.M.C. IS REQUIRED
9. - EXTRACTOR HOODS SHALL COMPLY TO THE C.M.C 2013, NFPA-96, U.L., N.S.F., AND ALL LOCAL CODES AN ORDINANCES.

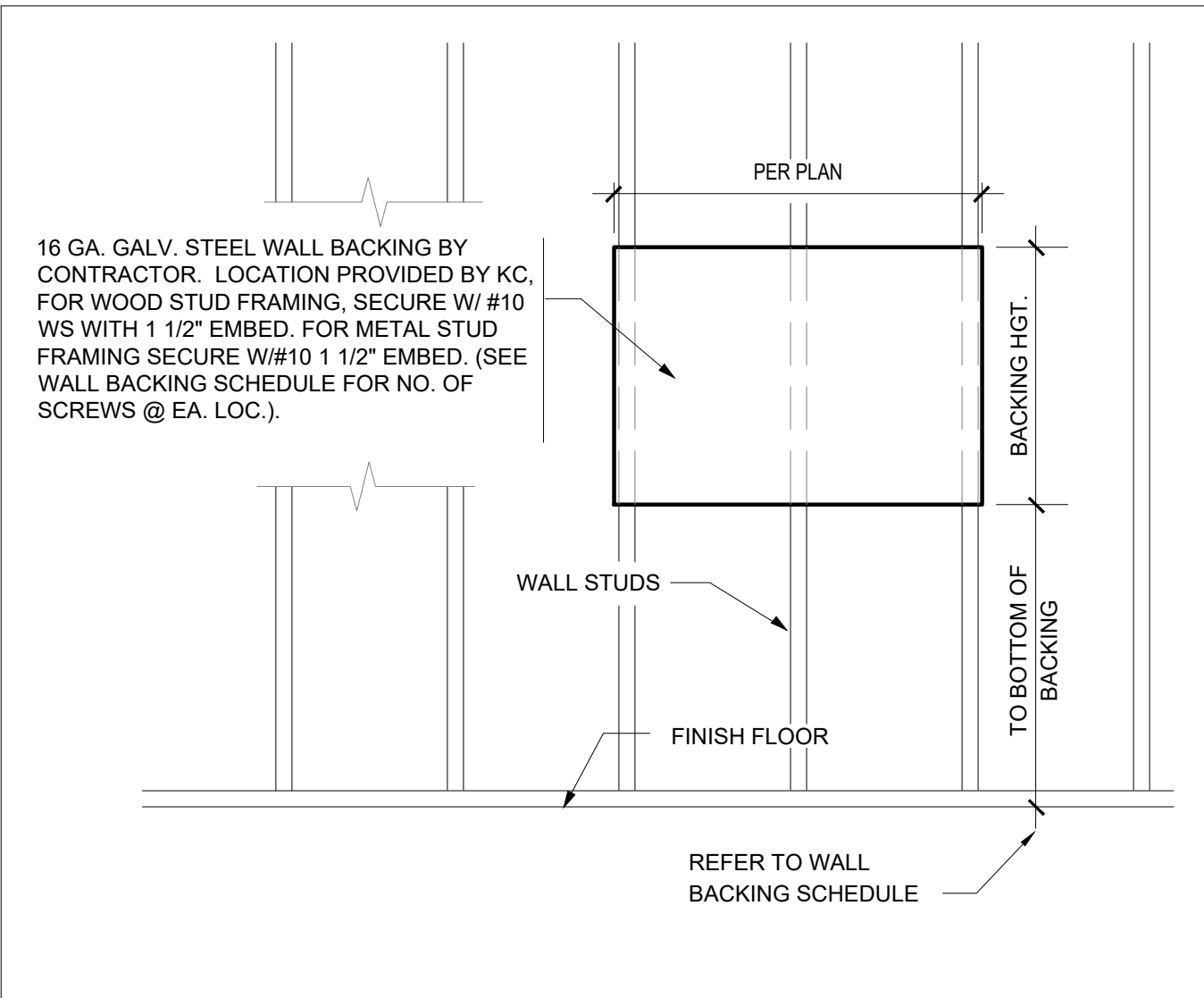
WALL BACKING NOTES

1. - WALL BACKING TO BE 16 GAUGE GALV. STEEL IN LENGTH AND HEIGHT AS SHOWN ON DRAWINGS.
2. - ALL WALL BACKING TO BE IN FURNISHED AND INSTALLED BY CONTRACTOR
3. - FOOD SERVICE EQUIPMENT CONTRACTOR IS TO FURNISH CONTRACTOR WITH DETAILED DRAWINGS SHOWING ALL WALL BACKING LOCATION AND SIZE.
4. - WALL BACKING AS SHOWN IS MINIMUM, EXTEND BACKING TO NEXT STUD EACH DIRECTION AS NECESSARY

WALL BACKING SCHEDULE

	APPLICATION	BOTTOM OF BACKING	BACKING HGT.	FASTENERS PER STUD	ANCHORAGE DETAIL
WB1 ITEM	HAND SINK	+12" AFF	24" HIGH	4	E/FS8.2
WB2 ITEM	WALL SHELF	+48" AFF	12" HIGH	4	H/FS8.1
WB3 ITEM	DRY STO. SHELVING	+57"AFF	12" HIGH	2	F/FS8.2
WB4 ITEM	COLD STO. SHELVING	+16"AFF +57"AFF	12" HIGH	2 PER POST BRACKET	G/FS8.2

- NOTES:
1. BACKING TO BE 16 GA. G.I. or C.R.S.
2. REFER TO 2/FS4.1 FOR WALL BACKING LOCATIONS
3. DRY STO. SHELVING, FASTEN SHELVING TO BACKING WITH #14 SMS.
4. COLD STO. SHELVING, 18GA G.I. STRAP FOAMED IN WALL BY MANUFACTURER. FASTEN SHELVING TO STRAP WITH #14 SMS.



WALL BACKING DETAIL

SCALE : NONE

2  
FS4.2

MECHANICAL & REFRIGERATION SHEET NOTES

- 1 REMOTE REFRIGERATION SYSTEM REFER TO FS7.1 EQUIPMENT LOCATED ON BUILDING ROOF
- 2 REMOTE REFRIGERATION EQUIPMENT PLATFORM REFER TO E/FS7.1
- 3 REFRIGERATION LINES STUB-DOWN FROM ABOVE, PENETRATE CEILING OF WALK-IN TO EVAP COIL SEE DETAIL D/FS7.2
- 4 REFRIGERATION LINES RUN ABOVE CEILING LINE FROM REFRIGERATION RACK TO DROP-DOWN POINT ABOVE WALK-IN REFRIGERATOR / FREEZER COIL (REFRIG. LINE RUN ROUTES SHOWN ARE SCHEMATIC ONLY) REFRIGERATION LINE ROUTES WILL BE FIELD VERIFIED WITH STRUCTURE

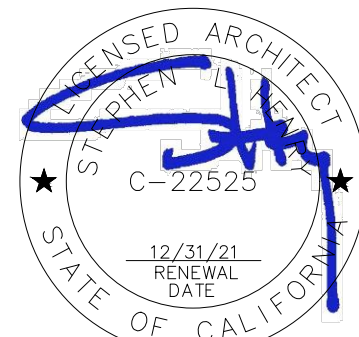
FOODSERVICE REFRIGERATION LEGEND

ABREV./SYMB.	DESCRIPTION
	CONDUIT FOR REFRIGERATION LINES (RUN UNDER FLOOR)
	REMOTE COMPRESSOR (ON REFRIGERATION RACK)
	REFRIGERATION SYSTEM (SEE SCHEDULE ON SHEETS FS7.01 & FS7.02)
	REFRIGERATION LINE (RUN FROM REFRIGERATION RACK)
	REMOTE REFRIGERATED BASE AND/OR EQUIPMENT
	SELF-CONTAINED REFRIGERATED BASE AND/OR EQUIPMENT
	ACCESS PULL-BOX FOR REFRIG. LINES (IN THE WALL)
	KEYNOTE SYMBOL (SEE SHEET NOTES FS4.02)

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FOODSERVICE EQUIPMENT  
MECHANICAL SCHEDULE

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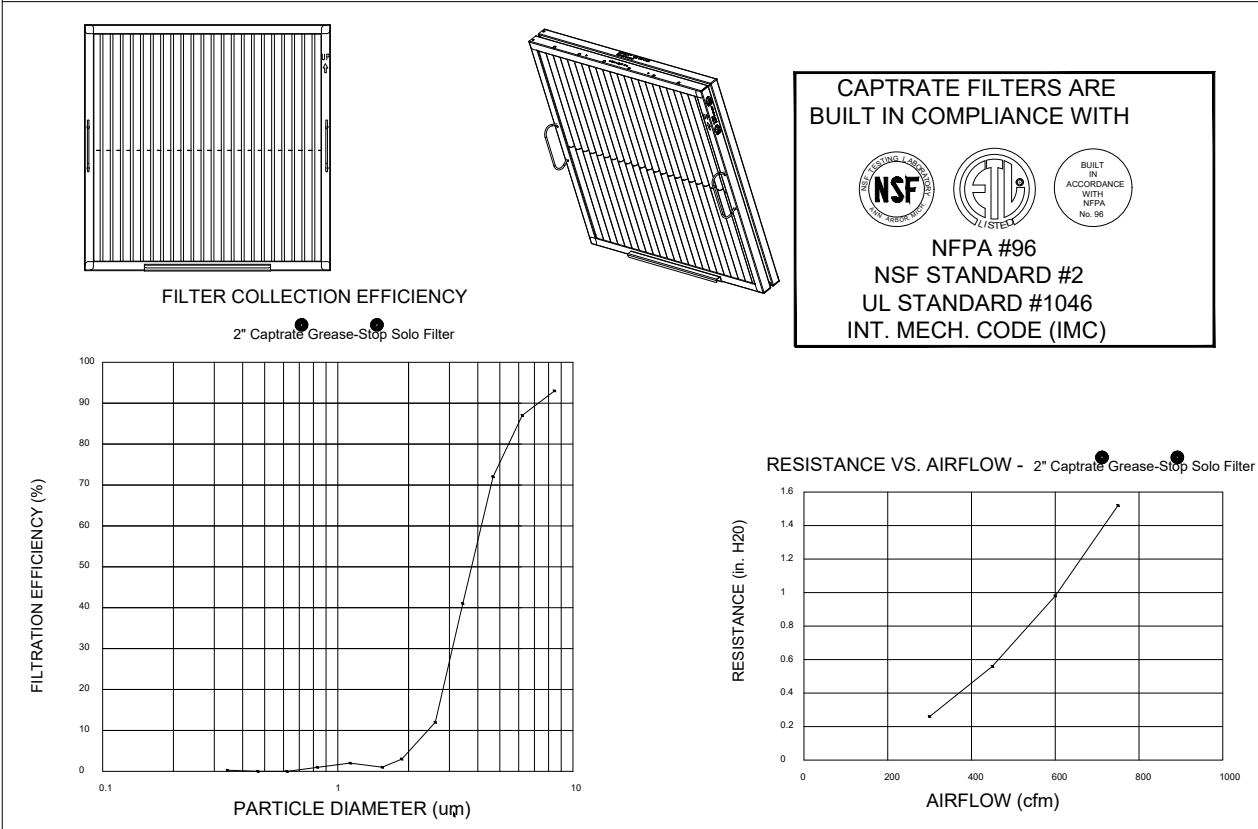
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CAPTRATE SOLO FILTERS



SPECIFICATION: CAPTRATE GREASE-STOP SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO 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 CONSTRUCTED OF 430 STAINLESS STEEL, 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 90% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

FILTER INFORMATION - CAPTRATE GREASE-STOP SOLO

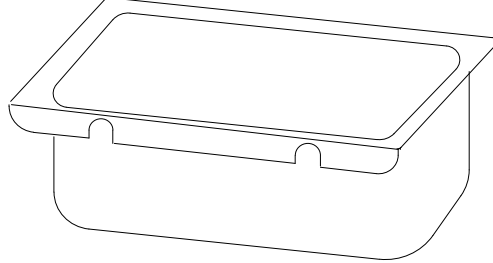
NOMINAL SIZE (H x W)	ACTUAL DIMENSIONS (H x W x D)	FREE AREA (SQ. FEET)	WEIGHT (POUNDS)	VELOCITY (FEET PER MINUTE)	STATIC PRESSURE (WATER GAUGE)
20 x 20	19-5/8" x 19-5/8" x 1-7/8"	2.28	11	100	0.25
20 x 16	19-5/8" x 15-5/8" x 1-7/8"	1.78	8.9	125	0.35
16 x 20	15-5/8" x 19-5/8" x 1-7/8"	1.78	9.1	150	0.45
16 x 16	15-5/8" x 15-5/8" x 1-7/8"	1.38	7.4	175	0.75
12 x 20	11-5/8" x 19-5/8" x 1-7/8"	1.23	6.8	200	0.90
12 x 16	11-5/8" x 15-5/8" x 1-7/8"	0.96	5.6	225	1.00
10 x 20	9-5/8" x 19-5/8" x 1-7/8"	1.00	5.6	250	1.30
10 x 16	9-5/8" x 15-5/8" x 1-7/8"	0.78	4.6	275	1.50

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:

- NFPA 96B
- NSF
- ETL Listed
- CALIFORNIA MECHANICAL CODE
- INTERNATIONAL MECHANICAL CODE

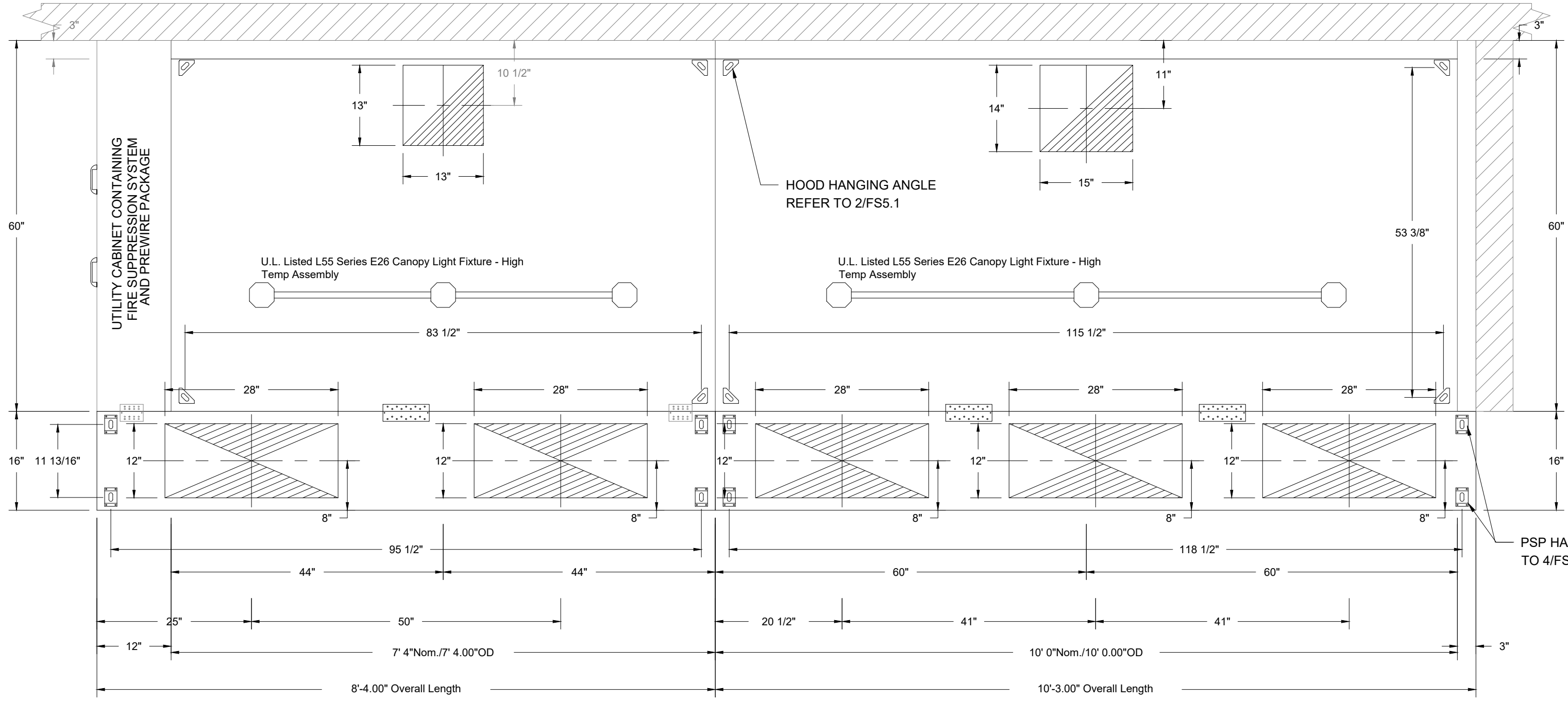


BUILDING CODES



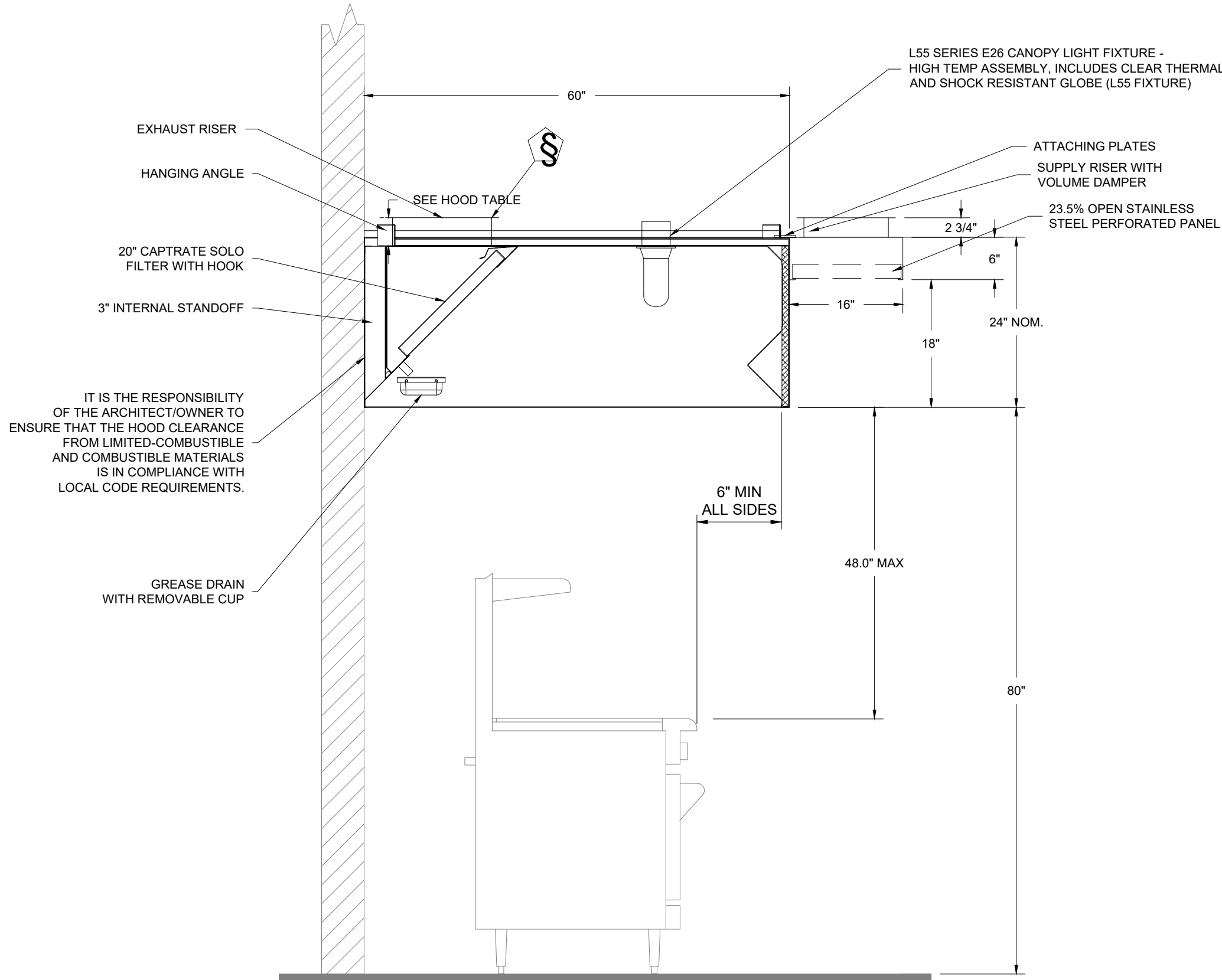
Grease cup will be supported by 2 studs on the inside wall of the hood. The grease will drain through a concealed grease trough and into this removable cup.

1/2 Pint Grease Cup Detail



EXHAUST HOOD - PLAN VIEW

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



SECTION VIEW - MODEL 6024ND-2-PSP-F  
HOOD - #1

EXHAUST HOOD No.10 - SECTION

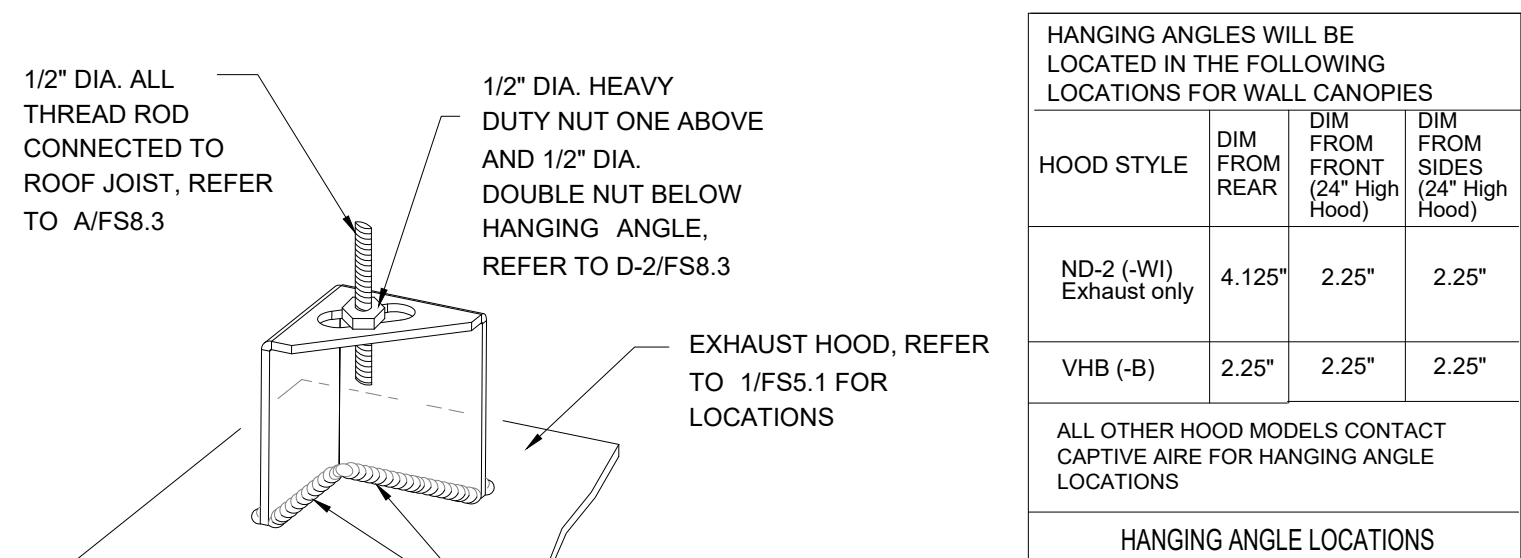
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HOOD INFORMATION - Job#4025056

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	APPLIANCE DUTY	DESIGN CFM/R	TOTAL EXH. CFM	EXHAUST PLENUM RISER(S)						TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG.		
								WIDTH	LENG.	HEIGHT	DIA.	CFM	VEL.			S. P.	END TO END	ROW
1		6024 ND-2-PSP-F	7' 4"	600 Deg.	Heavy	240	1760	13"	13"	4"		1760	1500	-0.642"	1408	304 SS 100%	LEFT	ALONE
2		6024 ND-2-PSP-F	10' 0"	600 Deg.	Heavy	225	2250	14"	15"	4"		2250	1543	-0.716"	1800	304 SS 100%	RIGHT	ALONE

HOOD INFORMATION

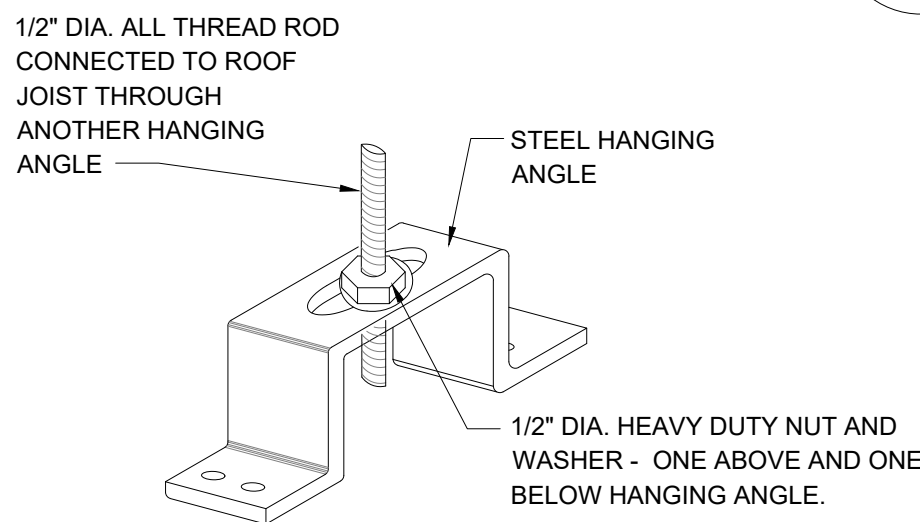
HOOD NO.	TAG	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WGHT
		TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY.	TYPE	WIRE GUARD	LOCATION	SIZE	TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY
1		Captrate Solo Filter	5	20"	16"	85% See Filter Spec.	3	L55 Series E26	NO	Left	12"x60"x24"	Ansul R102	3.0/3.0		YES 564 LBS
2		Captrate Solo Filter	7	20"	16"	85% See Filter Spec.	3	L55 Series E26	NO						YES 564 LBS



ND-2 HANGING ANGLE DETAIL

SCALE : NONE

2  
FS5.1

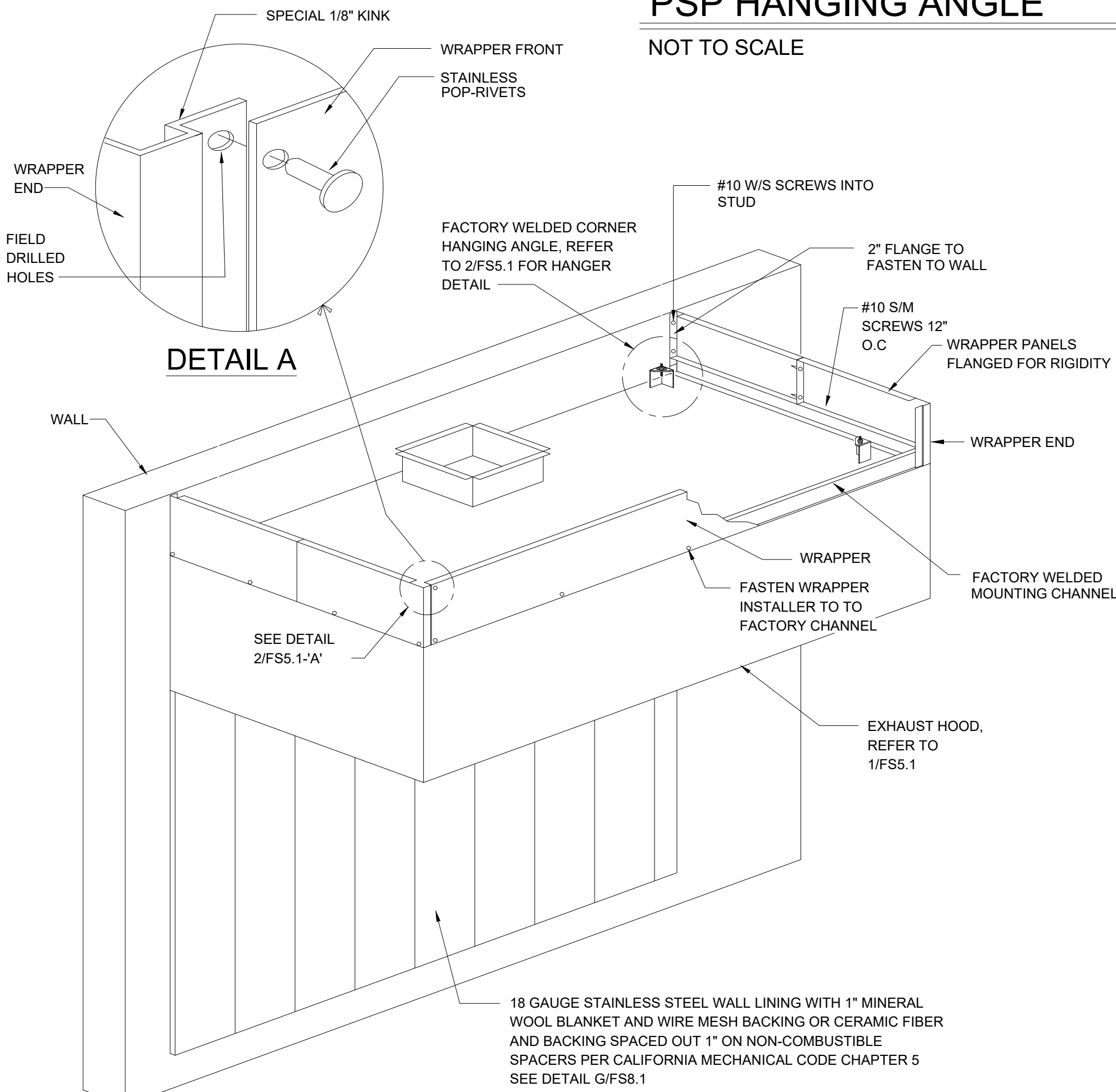


NOTE: ROD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR. HANGING ANGLE IS PRE-PUNCHED AT FACTORY

PSP HANGING ANGLE

NOT TO SCALE

4  
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WALL LINING & FIELD WRAPPER DETAIL

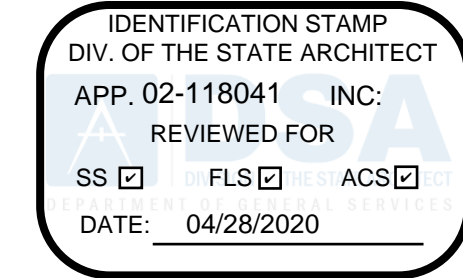
SCALE : NONE

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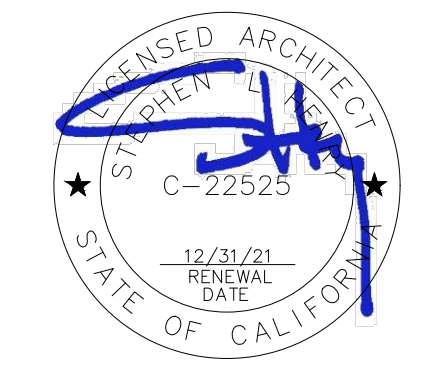
NOTES

- PROVIDE 22 GA. S/S WRAPPER AT ALL OPEN SIDES
- S/S WRAPPER TO BE INSTALLED FROM TOP OF VAPOR HOOD TO FINISHED CEILING AT ALL OPEN SIDES
- SEAL ALL GAP WITH SILVER OR GRAY SEALANT

FILE NO. 39-50 APP NO. 02-118041



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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT  
EXHAUST HOOD PLAN

CONSULTANT



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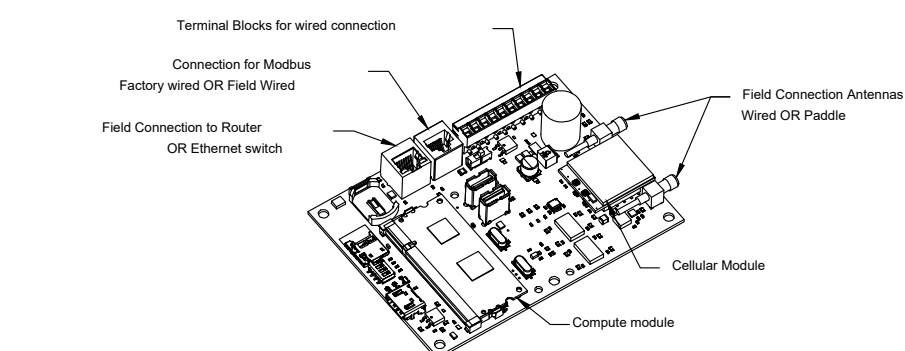
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OF XX SHEETS



NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	Ø	H.P.	VOLT	FLA
1		DCV-1111	Utility Cabinet Left	08 - Ship Loose w/ Prewire	1 Light 1 Fan	Smart Controls DCV	Exhaust	3	3,000	208	10.2
							Supply	3	2,000	208	6.1

All fans must have inverter duty motors, and all conduits from the load side of the VFDs must be separate and dedicated.

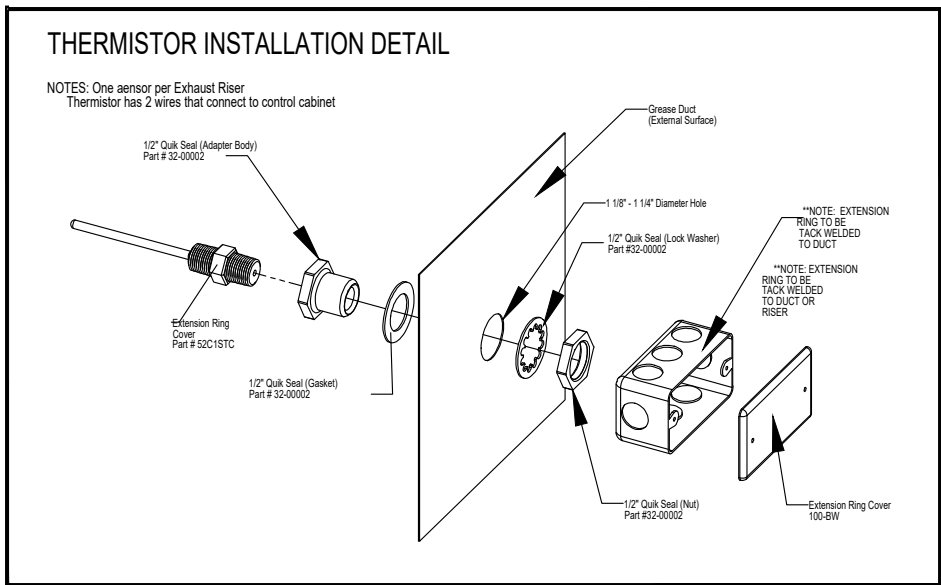
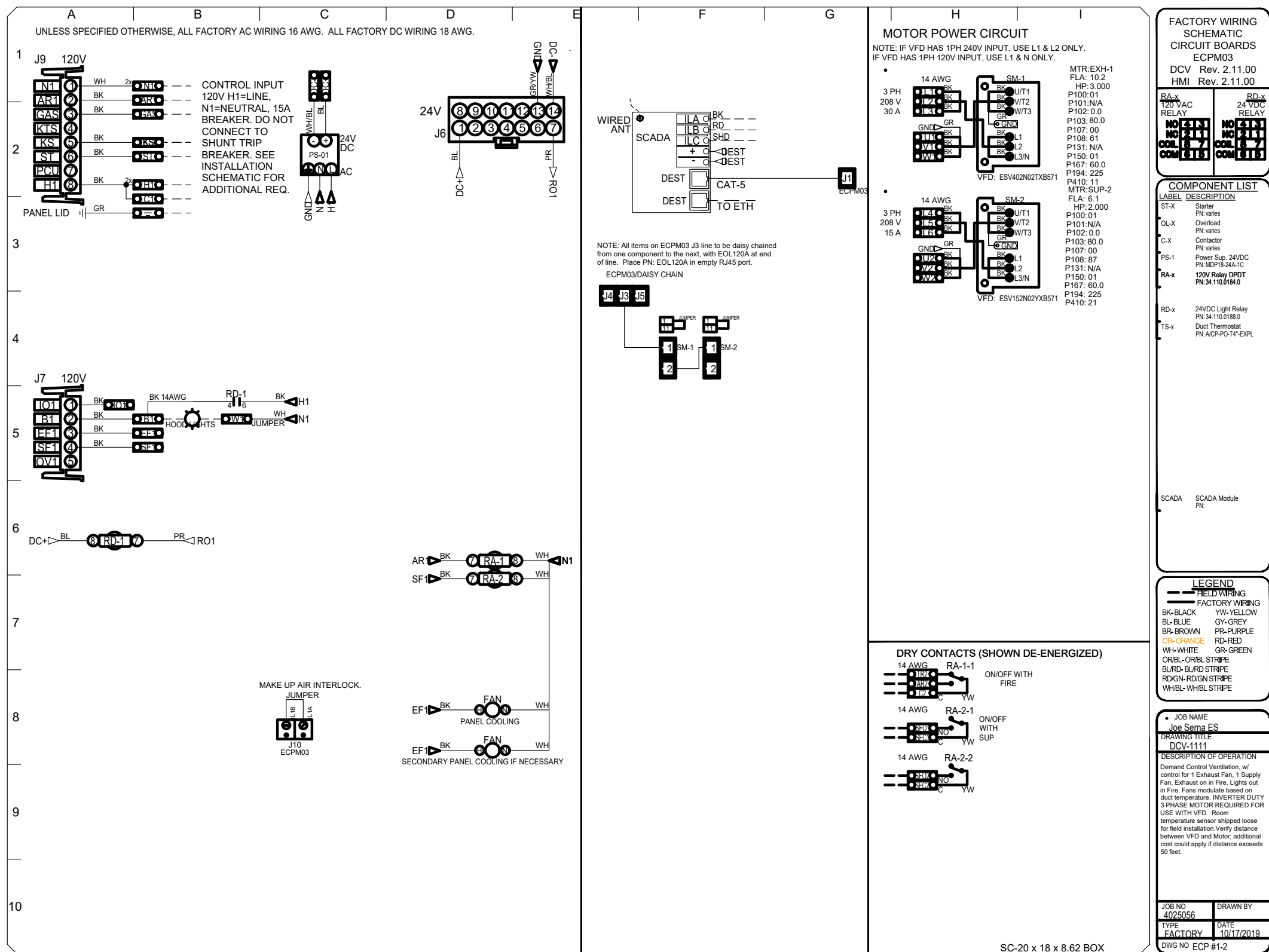
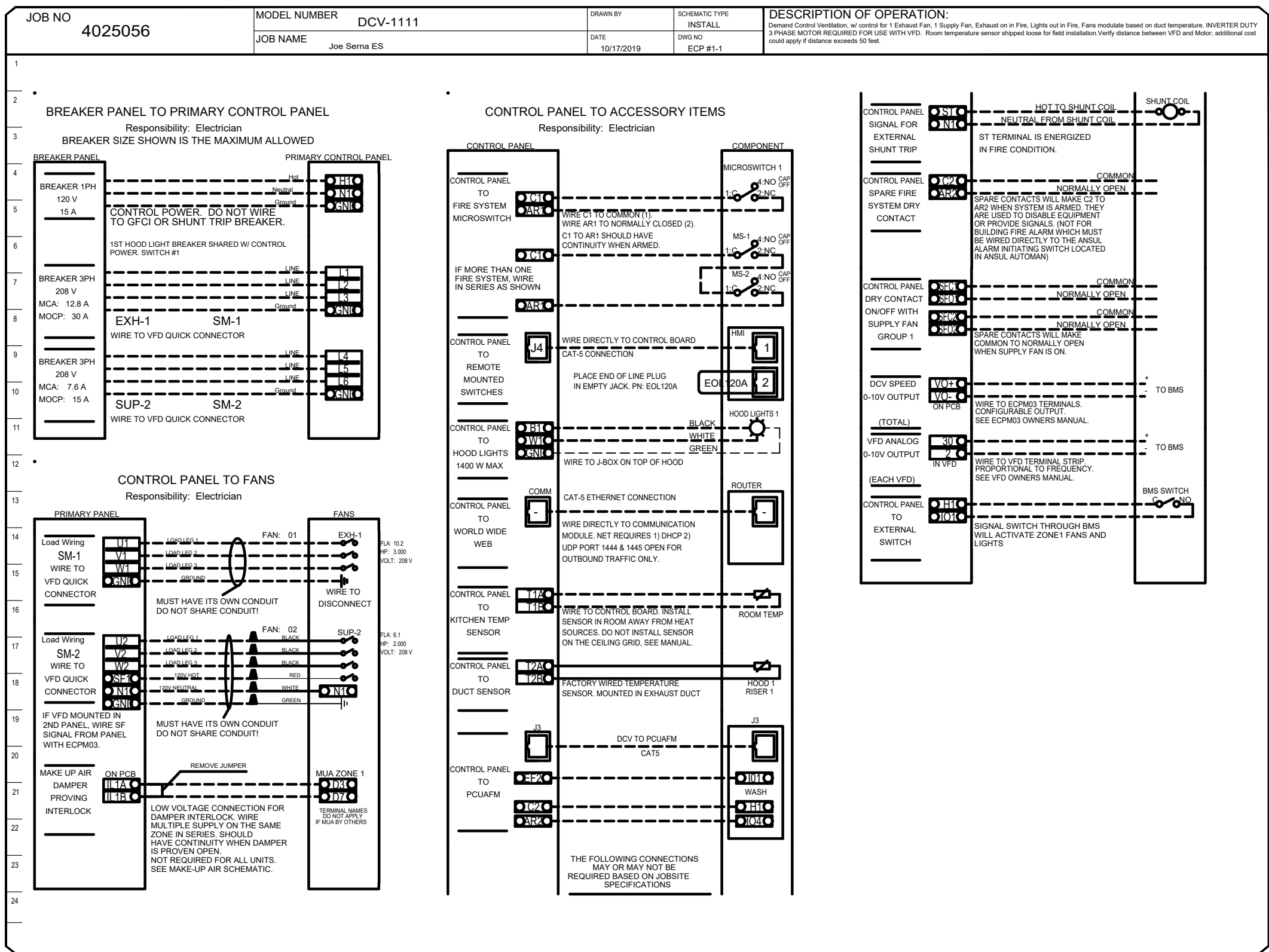


## CASlink Monitor and Control

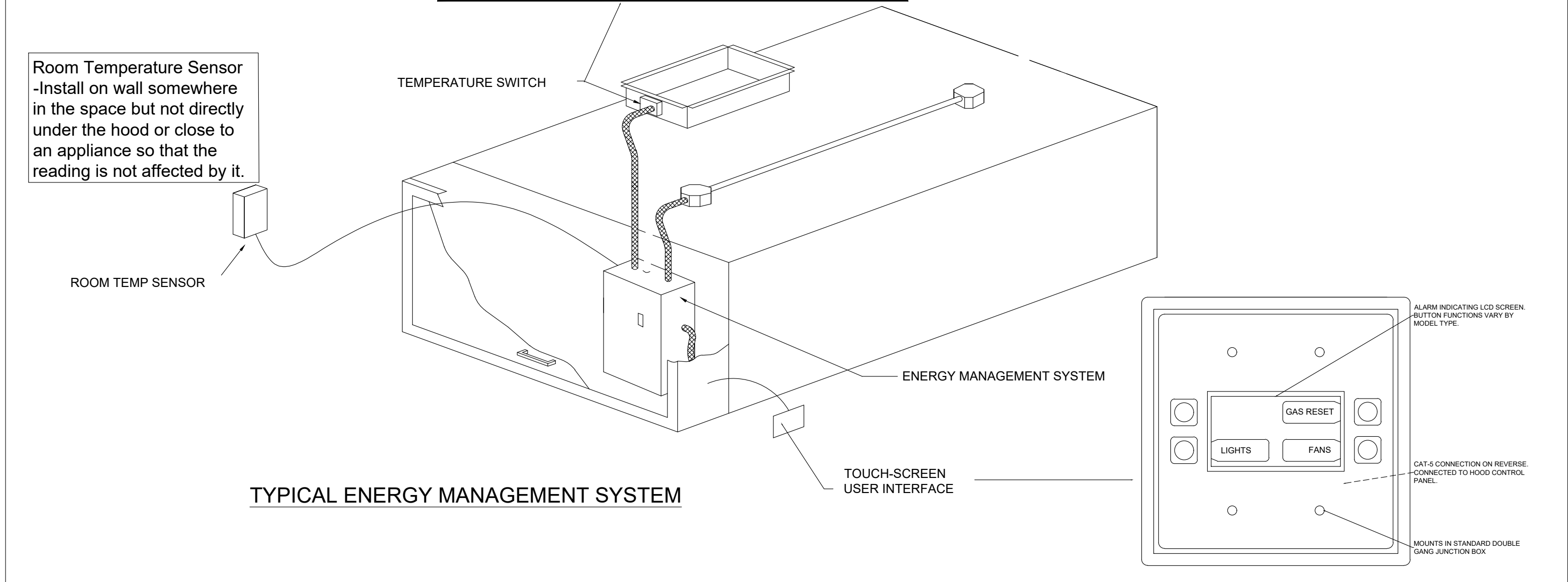
- Hood control panel to support communications to cloud-based Building Management System.
- Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
- Hood Control Panel to allow cloud-based Building Management System to 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

OCV Packages	Function	SC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Dust Temperature(s)	MONITOR	Dust Temperature(s)	MONITOR
MMA Discharge Temperature	MONITOR	MMA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR	Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controler Faults	MONITOR
Fan Amperage	MONITOR	Fan Faults	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
VFD Faults	MONITOR	PCU Faults	MONITOR
Controler Faults	MONITOR	PCU Filter Clog Percentages	MONITOR
Fan Faults	MONITOR	Fine Condition	MONITOR
Fan Status	MONITOR	CORE Fire System	MONITOR
PCU Faults	MONITOR	Building Pressures	MONITOR
PCU Filter Clog Percentages	MONITOR	Fans Button(s)	MONITOR & CONTROL
Fine Condition	MONITOR	Lights Button(s)	MONITOR & CONTROL
CORE Fire System	MONITOR	Wash Button	MONITOR & CONTROL
Building Pressures	MONITOR		
Prep Time Button	MONITOR & CONTROL		
Fans Button	MONITOR		
Lights Button	MONITOR & CONTROL		
Wash Button	MONITOR & CONTROL		



## CABINET MOUNTED DCV



These products and others are available for demonstration at the Northern CA display center

--For more information or questions Contact--  
Captive Aire Systems  
1110 Burnett Ave, Suite G, Concord, CA 94520  
Phone: (925)962-1999, Fax (925)566-8565  
Email [reg92@captiveaire.com](mailto:reg92@captiveaire.com)

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# KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL

# FOODSERVICE EQUIPMENT EXHAUST HOOD PLAN

CONSULTANT



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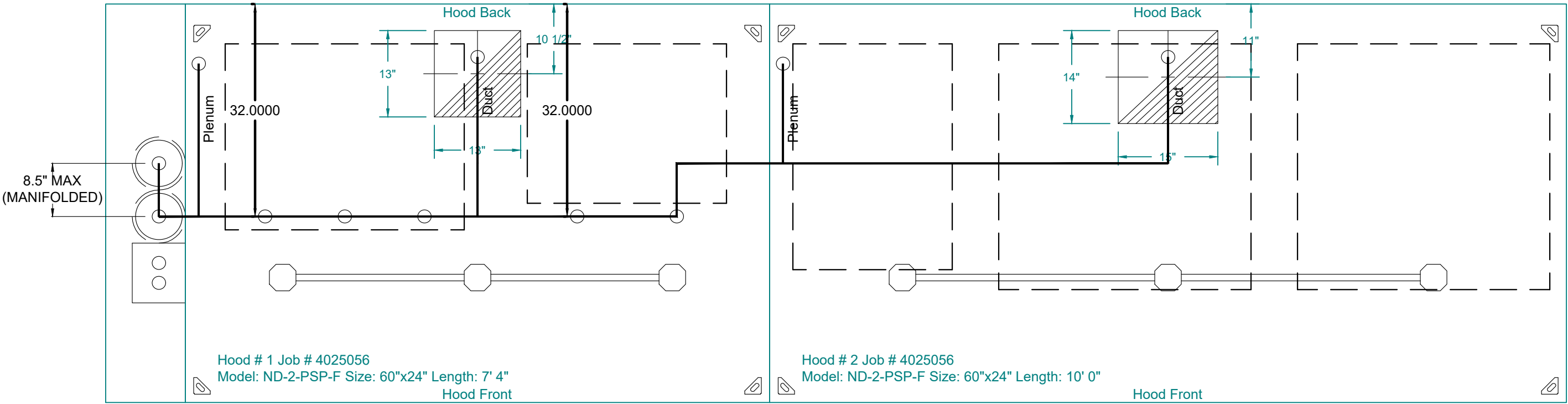


Fire System Information - Job#4025056

FIRE SYSTEM NO.	Tag	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		Ansul R102	3.0/3.0	15	Fire Cabinet Left	Left

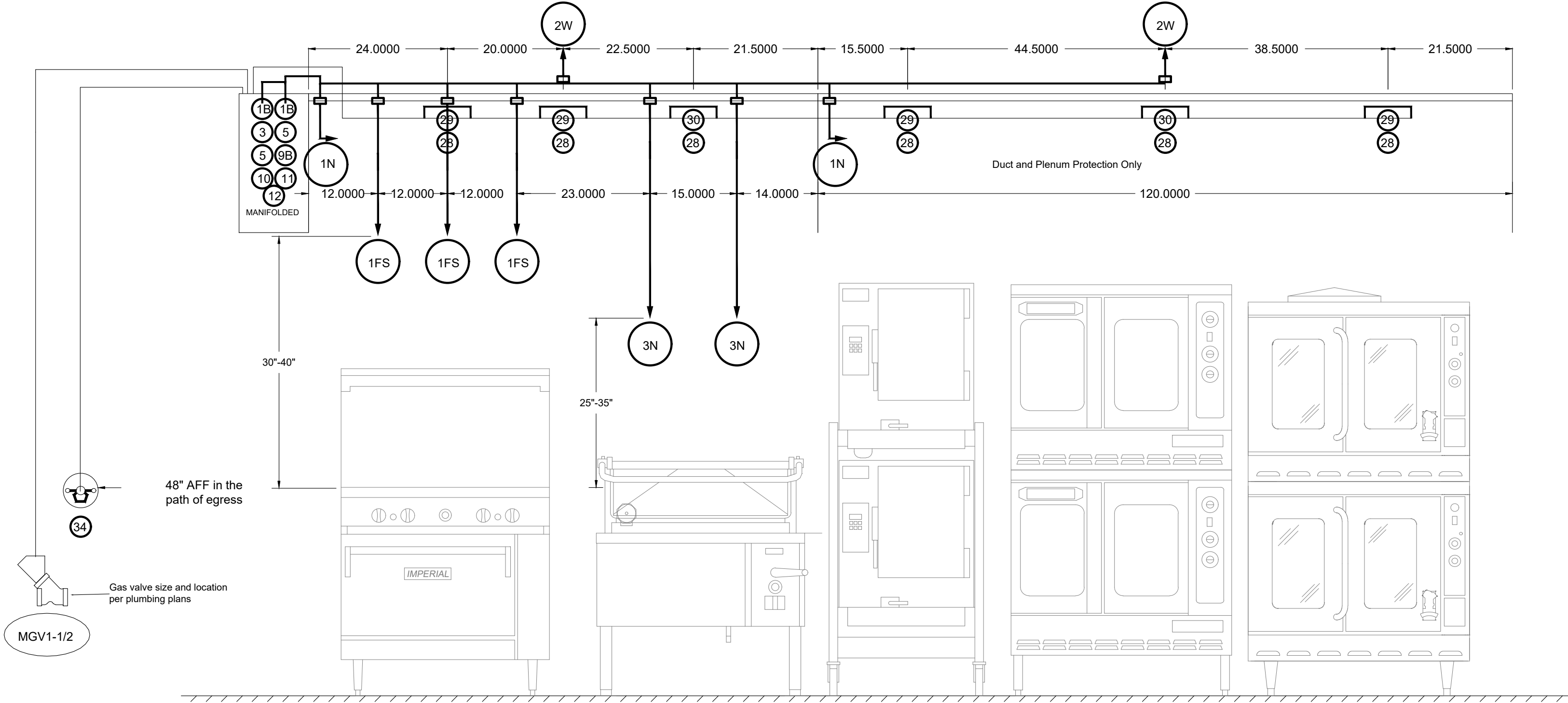
Fire System Parts List Key

FIRE SYSTEM NO.	TAG	KEY NUMBER - PART DESCRIPTION	QTY. BY FACTORY	QTY. BY DIST.
1		0 - 0 - DISC UNION Bursting Disc Union Assembly for Manifold System.	1	0
		0 - 0 - Tank Strap Tank Strap - used for ANSUL Tanks	2	0
		0 - 0 - UCTANKBRACKET Tank Bracket for fire system tank installation in utility cabinets	2	0
		1 - 1 - AT - 3.0 TANK(#1B) - 3.0 Gallon SS Tank (for use with Automan Release, Actuator, or SS Enclosure (UL/ULC)) Macola # 01-429862	2	0
		3 - 3 - ANS-OEM REGULATED RELEASE - Ansul Regulated Mechanical Release/Bracket Assembly, OEM, R-102. Cartridge Detection Included, Ansul Part # 79493	1	0
		5 - 5 - LIQ-3.0 AGENT - Ansulex Low PH Wet Chemical Agent, 3 Gallon (UL) 79372	0	2
		9 - 9 - DT-CART Double Tank Nitrogen Cartridge	0	1
		10 - 10 - TLINK LINK - Test Link (1 test link) Ansul Part # 24916, Macola # 20-24916	0	1
		11 - 11 - MICRO-SDA MICROSWITCH KIT- Includes 2 switches and Mounting Hardware, Single Dual Electric Switch, One Standard Switch, One Alarm Duty Switch Ansul Part # 437155, Macola # 08-437155	1	0
		12 - 12 - HOSE HOSE - Rubber Hose	1	0
		27 - 27 - OPSA-1/2 PULLEY SEAL - 1/2" Hood Seal (UL) Ansul Part # 423253, Macola # 32-79768	5	0
		34 - 34 - RPS-A REMOTE PULL STATION - Red composite (without wire rope) 434618 (Old Macola #06-4835)	1	0
		35 - 35 - PE-LT PULLEY ELBOW - Low Temp. Pulley Elbow, Set Screw Type Ansul Part # 415670, Macola # 11-415671	5	0
		36 - 36 - PE-HT PULLEY ELBOW - High Temp Pulley Elbow, Compression Type, Ansul Part # 423251, Macola # 10-45771	4	0



FIRE SYSTEM - PLAN VIEW

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



FIRE SYSTEM - ELEVATION VIEW

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

FIRE SYSTEM NOTES

**GENERAL**  
CUSTOMER RESPONSIBLE FOR ADDITIONAL LABOR AND PARTS CHANGES AS A RESULT OF COOKING EQUIPMENT LAYOUT CHANGES OR MISINFORMATION AFTER RELEASE OF ORDER.  
CUSTOMER RESPONSIBLE FOR ADDITIONAL TRIPS BY FIRE SYSTEM DISTRIBUTOR DUE TO JOB SITE DELAYS.  
UNION LABOR CHARGES, IF REQUIRED, ARE EXTRA.

**GAS VALVE**  
MECHANICAL OR ELECTRICAL GAS VALVE IS TO BE INSTALLED BY PLUMBING CONTRACTOR. PLUMBING PERMIT REQUIRED FOR GAS VALVE INSTALLATION.

**ELECTRIC SHUT OFF**  
ELECTRICAL COOKING EQUIPMENT MUST BE SHUT OFF WHEN FIRE SYSTEM IS ACTIVATED. ELECTRICAL CONTRACTOR IS TO PROVIDE SHUT OFF CONTACTS OR SHUNT TRIP BREAKERS. THE DESIGN OF THE FIRE SYSTEM SHALL COMPLY WITH S.M.A.C.N.A. GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS. O.S.H.P.D. APPROVED ANCHORAGE R-0010 SUPPORTS AND BRACING OF PIPE & CONDUIT.

**IF APPLICABLE TO LOCAL CODE**  
EXISTING FIRE ALARM SYSTEM MUST BE INTERCONNECTED TO THE ANSUL SYSTEM.

**FIRE SUPPRESSION SYSTEM TEST**  
THE TEST WILL BE CONDUCTED IN FRONT OF A SYSTEM INSPECTOR WITH A NITROGEN CARTRIDGE WITH BALLOONS COVERING THE SYSTEM NOZZLES. THE TEST WILL BE CONDUCTED SIMULATING THE REMOTE AND AUTOMATIC ACTUATION.

**REMOTE PULL STATION**  
4-0 BOX WITH 1/2" KO'S POSITIONED AS SHOWN WITH TABS IN THE UPPER RIGHT AND LOWER LEFT OF BOX. TO BE 48" ABOVE FINISHED FLOOR 10' EMT. TO BE 12" ABOVE FINISHED DROP CEILING LINE WITHOUT BENDS OR OFFSETS. ONE 4-0 BOX TO BE PROVIDED FOR EACH REMOTE PULL STATION WHEN TWO REMOTE PULLS ARE MOUNTED SIDE BY SIDE. THE DISTANCE BETWEEN CENTERS SHALL BE NO LESS THAN 7".

**INSTALLATION/PIPING NOTES**  
REGULATED RELEASE ASSEMBLY, REGULATED ACTUATOR ASSEMBLY, AND TANK ENCLOSURE MUST BE LOCATED IN AREAS WHERE AIR TEMPERATURE WILL NOT FALL BELOW 32 DEGREES F OR EXCEED 130 DEGREES F.

1. MOUNT THE REGULATED RELEASE ASSEMBLY AND EACH REGULATED ACTUATOR ASSEMBLY REQUIRED BY COMPLETING THE FOLLOWING STEPS:  
A. SELECT A RIGID SURFACE FOR MOUNTING THE ENCLOSURE. THE MOUNTING LOCATIONS MUST ALLOW THE REGULATED RELEASE ASSEMBLY AND THE REGULATED ACTUATOR ASSEMBLY TO BE WITHIN THE LIMITATION OF THE ACTUATION AND EXPELLANT GAS LINE LENGTHS AND MUST BE ABLE TO SUPPORT THE WEIGHT OF THE ASSEMBLY. NOTE: WALL MOUNTED SYSTEMS ONLY.  
B. DETACH THE COVER FROM THE ENCLOSURE. REMOVE AGENT TANK FROM ENCLOSURE AND THE EXPELLANT GAS LINE HOSE FROM THE TANK/ADAPTOR ASSEMBLY.  
C. SECURE ENCLOSURE BOX TO SELECTED MOUNTING LOCATION USING THE FOUR MOUNTING HOLES. USE APPROPRIATE TYPE OF FASTENERS DEPENDING ON THE MOUNTING SURFACE. WALL MOUNTED SYSTEMS.

SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY C.A.S. OR FIRE DISTRIBUTOR.  
ALL PIPE FOR 1.5/2.4 GALLON SYSTEM IS 1/4".  
ALL PIPE FOR 3.0/3.5 GALLON SYSTEM IS 3/8".  
ALL PIPE SHALL BE BLACK IRON SCHEDULE-40.  
ALL EXPOSED PIPE SHALL BE CHROME SLEEVED.  
NOZZLES SHALL BE A MAXIMUM OF 50" ABOVE SURFACE OF COOKING EQUIPMENT.

NOTES

- FIELD PIPE DROPS AS SHOWN
- SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVEING, SALAMANDERS, ETC.
- MAXIMUM 9 ELBOWS IN SUPPLY LINE.

- IF APPLICABLE, PRE-PIPED CHARBROILER 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 U.L. 300 REQUIREMENTS

Job #: 4025056

Job Name: Joe Serna ES

System Size: ANSUL-3.0/3.0-MANIFOLD Total FP required: 15

Hood # 1 7' 4.00" Long x 60" Wide x 24" High

Riser # 1 Size: 13" x 13"

Hood # 1 Metal Blow-Off Caps included.

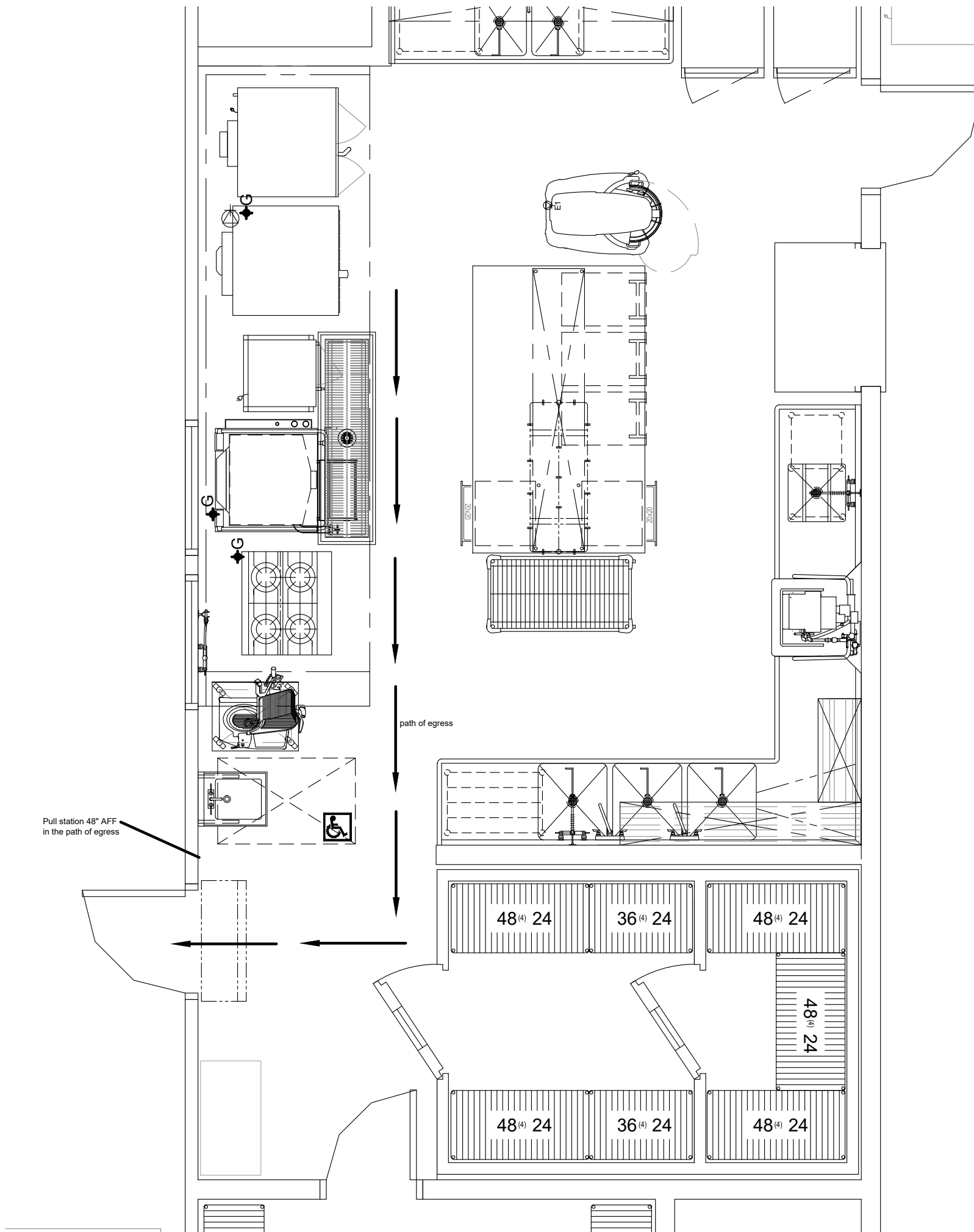
Hood # 2 10' 0.00" Long x 60" Wide x 24" High

Riser # 1 Size: 14" x 15"

Hood # 2 Metal Blow-Off Caps included.

LEGEND - FIRE CABINET ANSUL SYSTEM

- 1A 1.5 GALLON TANK
- 1B 3 GALLON TANK
- 2 OEM AUTOMAN RELEASE
- 3 OEM REGULATED RELEASE
- 4 OEM REGULATED ACTUATOR
- 5 ANSULEX LIQUID AGENT (3 GAL.)
- 6 ANSULEX LIQUID AGENT (1.5 GAL.)
- 7 CARTRIDGE (101-20)
- 8 CARTRIDGE (101-10)
- 9 CARTRIDGE (101-30)
- 9A CARTRIDGE (LT-A-101-30)
- 9B DOUBLE TANK CARTRIDGE
- 10 TEST LINK
- 11 DOUBLE MICROSWITCH
- 12 HOSE ASSEMBLY
- 1100 DUCT NOZZLE (430913)
- 2W DUCT NOZZLE (419337)
- 1W NOZZLE ASSEMBLY (419336)
- 1F NOZZLE ASSEMBLY (419333)
- 1N NOZZLE ASSEMBLY (419335)
- 1/2N NOZZLE ASSEMBLY (419334)
- 3N NOZZLE ASSEMBLY (419338)
- 245 NOZZLE ASSEMBLY (419340)
- 230 NOZZLE ASSEMBLY (419339)
- 2120 NOZZLE ASSEMBLY (419343)
- 290 NOZZLE ASSEMBLY (419342)
- 260 NOZZLE ASSEMBLY (419341)
- 28 DETECTOR BRACKET
- 29 LOW TEMP FUSIBLE LINK
- 30 HIGH TEMP FUSIBLE LINK
- MGV MECHANICAL GAS VALVE
- EGV ELECTRICAL GAS VALVE
- 34 REMOTE MANUAL PULL STATION
- S SWIVEL ADAPTOR



PATH OF EGRESS

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

3  
FS5.3

15 FLOWPOINTS USED ON AN 22 FP  
UL300 ANSUL R102 6.0 GALLON  
SYSTEM

Flowpoint Chart				
Nozzle	FP	QTY	TTL FP	
2W	2	2	4	
1N	1	2	2	
1FS	1	3	3	
3N	3	2	6	
Total			15FP	

System Designed by  
Matt Eidson  
Ansul Certified Designer  
Certificate valid until  
9/04/2019

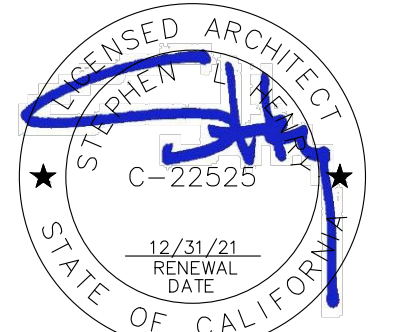


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1110 Burnett Ave, Suite G, Concord, CA 94520  
Phone: (925)962-1999, Fax (925)566-8565  
Email reg92@captiveaire.com

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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

FOODSERVICE EXHAUST  
HOOD FIRE SYSTEM

CONSULTANT

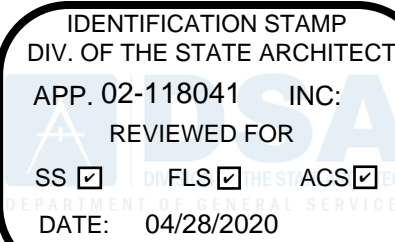


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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT  
WALK-IN REFRIG. DETAILS

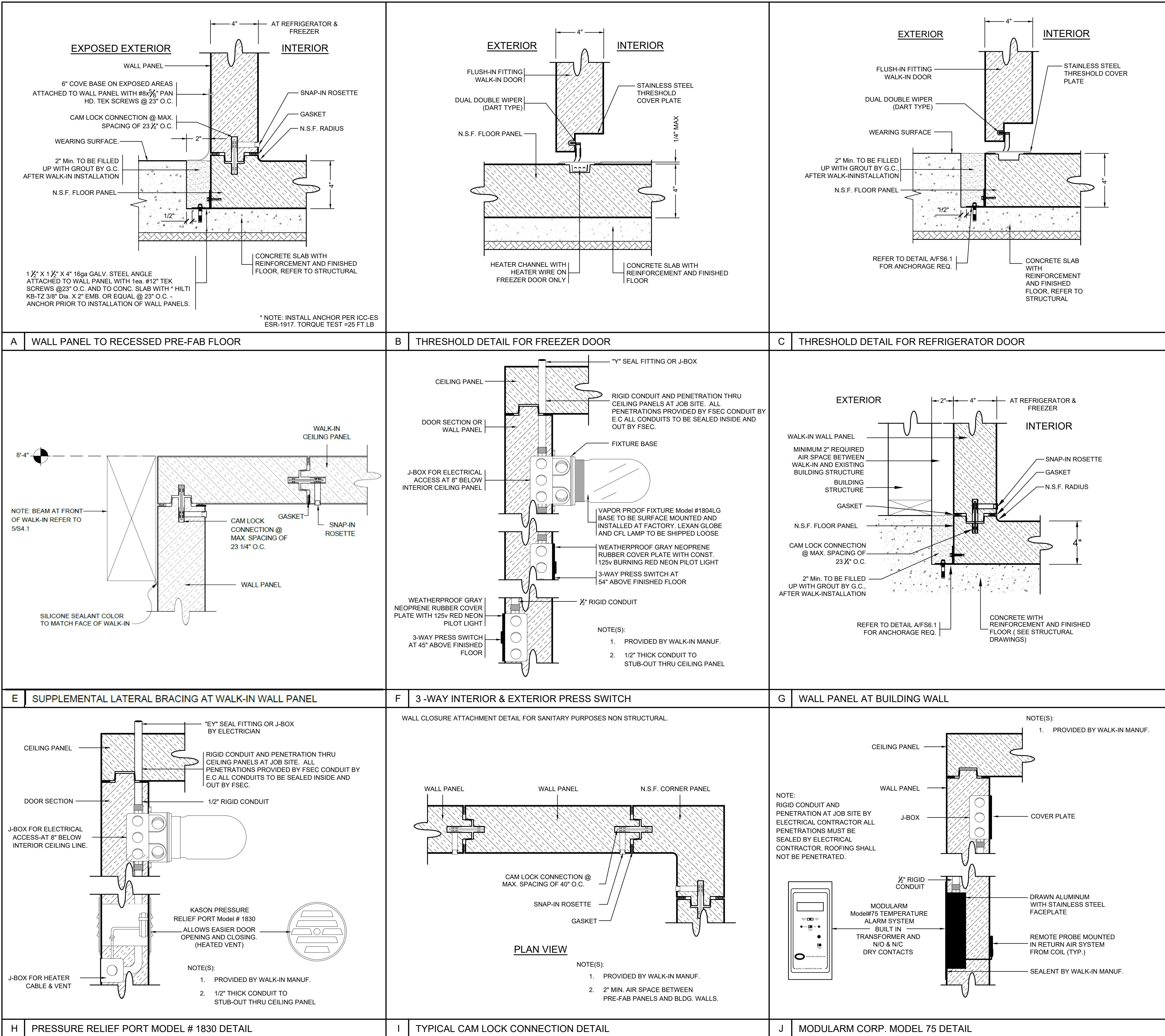
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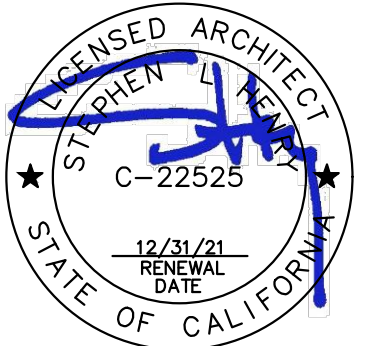




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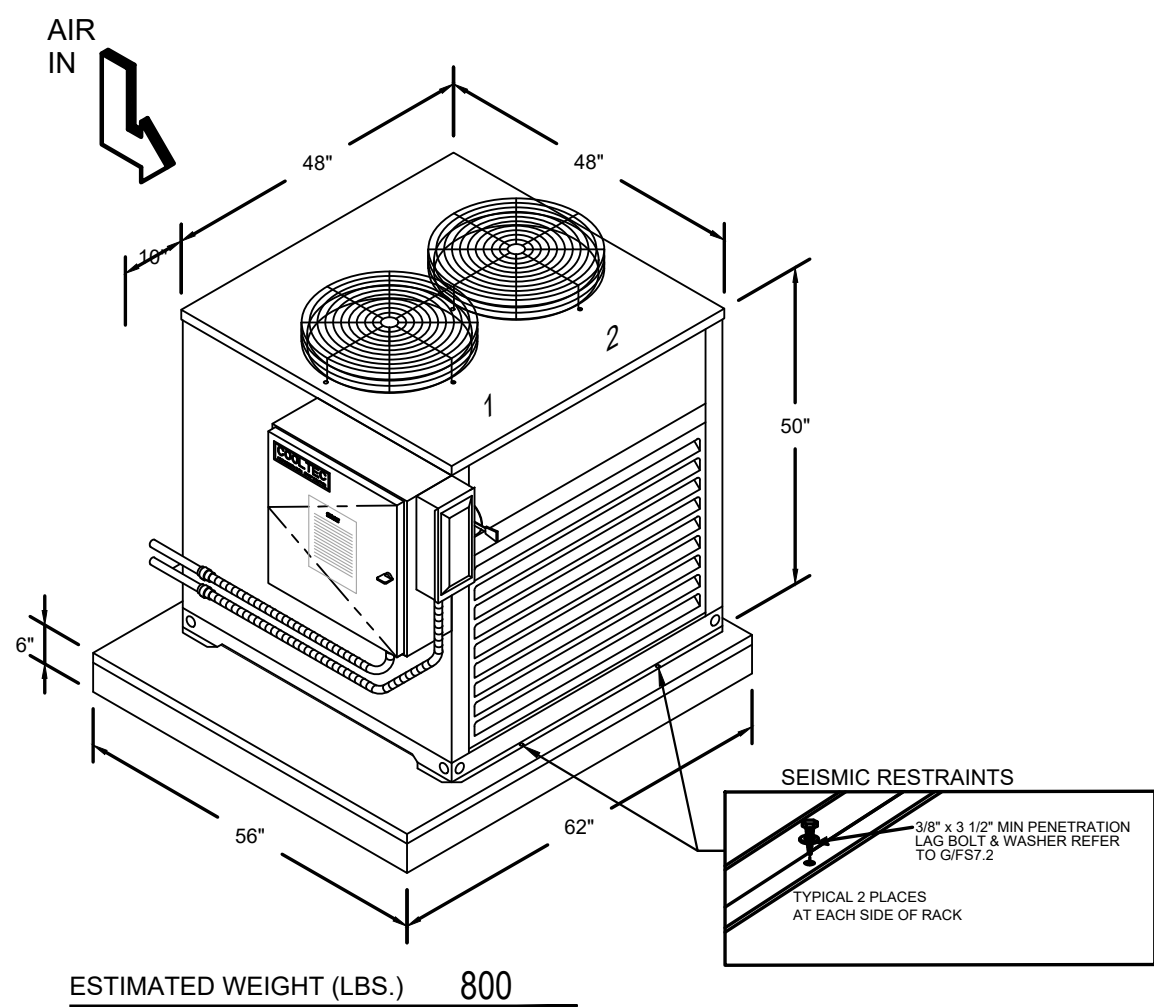
OF XX SHEETS

				<p>WALK-IN COOLER/FREEZER ANCHORAGE NOTE:</p> <p>WALK-IN COOLER/FREEZER TYPICAL NOTES:</p> <p>APPLICATION -    WALK-IN COOLER/FREEZER COMBO</p> <p>4" HARD NOSE TONGUE &amp; GROOVE HIGH DENSITY URETHANE PERIMETER (CFC FREE) W/ SHT. MTL. FACING FLANGED 1/2" TO 3/4" PERIMETER OF EACH SHEET. CORNERS &amp; T-PANELS ONE-PIECE CONSTRUCTION W/ 1/2" RADIUS AT ALL INSIDE VERTICAL CORNERS. JOINTS SEALED W/ PVC GASKET AT INT. &amp; EXT. PERIMETER OF PANELS. PANELS RIGID CONNECTION W/ CAM-LOCK FASTENERS (WALL TO WALL: 48" O.C MAX; WALL TO CEILING: 24" O.C. MAX; WALL TO FLOOR: 24" O.C. MAX., IF APPLY)</p> <p>INSULATION -    4" THICK FOAMED IN PLACE HIGH DENSITY URETHANE (CFC FREE) FILLED, OVER 90 PERCENT CLOSED CELL CONTENT. LESS THAN 25 FLAME SPREAD IN ACCORD W/ UBC STD. 42-1 (BASED ON UL 723 WHICH IS    SIMILAR TO ASTM E84 THE STEINER TUNNEL TEST) AND CLASS 'A' INTERIOR FINISH IN ACCORDANCE W/ NFPA 101,    SECTION 6-2, AND NFPA 255. K-FACTOR NOT TO EXCEED 0.14 BTU/HOUR/SQ. FT./F PER INCH THICKNESS IN ACCORDANCE W/ ASTM C177 AT 75 F MEAN TEMPERATURE. UL REPORT (BLBT.R13780) FOR: SURFACE BURNING CHARACTERISTICS</p> <p>FLOOR -    4" THICK FOAMED IN PLACE HIGH DENSITY URETHANE (CFC FREE) FILLED, OVER 90 PERCENT CLOSED CELL CONTENT. LESS THAN 25 FLAME SPREAD IN ACCORD W/ UBC STD. 42-1 (BASED ON UL 723 WHICH IS INTERIOR FINISH IN ACCORDANCE W/ NFPA 101, 0.14 BTU/HOUR/SQ. FT./ F PER INCH THICKNESS IN ACCORDANCE W/ ASTM C177 AT 75 F MEAN TEMPERATURE, RESULTS: FLAME SPREAD INDEX 25, SMOKE DEVELOPED INDEX: 400. FLOOR TO BE HEAVY DUTY FOR CARTS AND PALLET JACKS.</p> <p>FINISH -    WALL INTERIOR -    .040 STUCCO EMBOSSED ALUMINUM WHITE FINISH WALL EXTERIOR (EXPOSED TO KITCHEN) -    22GA. STAINLESS STEEL - TYPE 304, #4 FINISH WALL EXTERIOR (UNEXPOSED) -    26GA. STUCCO EMBOSSED GALVANIZED STEEL CEILING INTERIOR -    .040 STUCCO EMBOSSED ALUMINUM WHITE FINISH FLOOR INTERIOR -    WEARING SURFACE TO BE .1875 ALUM. TREAD PLATE W/ MIN. 1/2" RADIUS COVED UP ALL INTERIOR WALLS TO A HT. OF 6" COOLER, FLUSH IN-FITTING DOOR W/ MAGNETIC GASKET</p> <p>DOOR(S) -    1EA.    42" X 80" INTERIOR -    22GA. STAINLESS STEEL - TYPE 304, #4 FINISH EXTERIOR -    22GA. STAINLESS STEEL - TYPE 304, #4 FINISH DEAD BOLT -    NONE HANDLE -    K27    W/ INSIDE SAFETY RELEASE &amp; DEAD BOLT LATCH HINGES -    (2) K1245    (1) K1248 -SPRING LOADED CLOSER -    RACK &amp; PINION HEATER CABLE -    NONE VISION PANEL -    14" x 24" (NON-HEATED) INT KICKPLATES -    42" HIGH, DIAMOND TREAD PLATE ALUMINUM EXT KICKPLATES -    42" HIGH, DIAMOND TREAD PLATE ALUMINUM JAMB GUARDS -    INT., 48" HIGH, DIAMOND TREAD PLATE ALUMINUM</p> <p>1EA.    42" x 80" FREEZER, FLUSH IN-FITTING DOOR W/ MAGNETIC GASKET INTERIOR -    22GA. STAINLESS STEEL - TYPE 304, #4 FINISH EXTERIOR -    22GA. STAINLESS STEEL - TYPE 304, #4 FINISH DEAD BOLT -    NONE HANDLE -    K27    W/ INSIDE SAFETY RELEASE &amp; DEAD BOLT LATCH HINGES -    (2) K1245    (1) K1248 -SPRING LOADED CLOSER -    RACK &amp; PINION HEATER CABLE -    (4) SIDES OF DOOR OPENING VISION PANEL -    14" x 24" (HEATED) INT KICKPLATES -    42" HIGH, DIAMOND TREAD PLATE ALUMINUM EXT KICKPLATES -    42" HIGH, DIAMOND TREAD PLATE ALUMINUM JAMB GUARDS -    INT., 48" HIGH, DIAMOND TREAD PLATE ALUMINUM THRESHOLD -    THRESHOLD COVER OVER HEATER WIRE</p> <p>ACCESSORIES -    4 EA.    INT, EXT 3-WAY PRESS SWITCH MOTION SENSOR LIGHT SWITCH, WITH EXT. INDICATING RED LIGHT-FLUSH MTD 2 EA.    MULTI-MONITOR &amp; AUTOMATIC MODULARM #75LC HI/LO DIGITAL TEMP ALARM W/BATTERY LIGHT CONTROL BACK-UP, REMOTE NOTIFICATION DRY CONTACTS, AUTO LIGHT CONTROL INCLUDING INSIDE ILLUMINATED SWITCH W/PANIC ALARM FEATURE &amp; SENOR LINE (120V, 30MA) ON WALL FACING KITCHEN, PROVIDE SIGN AT EACH FOR COOLER AND FREEZER VAPOR PROOF LIGHT FIXTURE - SHIPPED LOOSE 2 EA.    LED LIGHT FIXTURE KASON #1810L 48" LONG VAPORPROOF LED FIXTURE WITH TWO 5000K COLOR TEMP. 18W LED LAMPS (120V, 36W) 1 EA.    HEATED AIR VENT (FREEZER ONLY) -    KASON #1832 HI-FLOW 2-WAY HEATED VALVE (120VAC) 2 EA.    VINYL STRIP CURTAINS 1EA.    ROW OF ALUMINUM HAT STYLE BUMPER RAILS ON EXPOSED EXTERIOR (SHIPPED LOOSE)</p> <p>CLOSURES -    1 LOT    INT. COVED BASE -    (TO MATCH INT. WALL PANEL FINISH) 1 LOT    EXPOSED EXT. COVED BASE -    (TO MATCH EXT. WALL PANEL FINISH) 1 LOT    WALL CLOSURES -    (TO MATCH EXT. WALL PANEL FINISH) 1 LOT    CEILING ENCLOSURES -    (TO MATCH EXT. WALL PANEL FINISH)</p> <p>WALK-IN REFRIG/FREEZER WT=8.5LBS PER SQ.FT. FOR 4" PANELS</p>	
A	DOOR DETAIL	B	FLOOR SECTION AT EXT. AND INT. OF REF/FREEZER	C	TYPICAL SPECIFICATIONS
D	VERT. OVERTURN BRACE	E	VERT. OVERTURN BRACE		
F	2" DIA. DIAL THERMOMETER	G		H	



## REFRIG-O-PAK SYSTEM

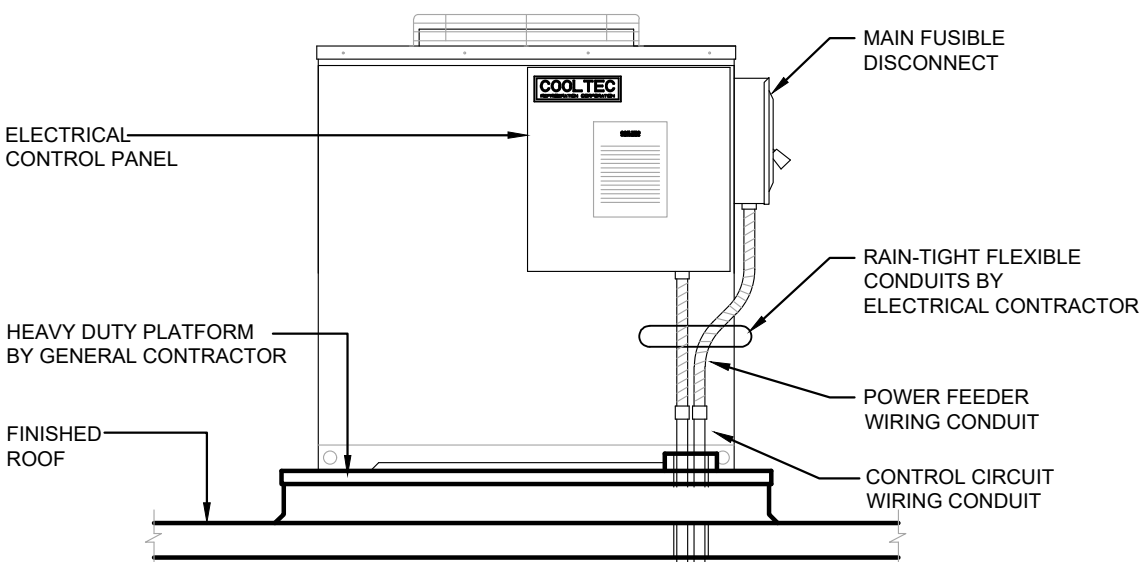
### ALLOW 36" CLEAR AROUND UNIT



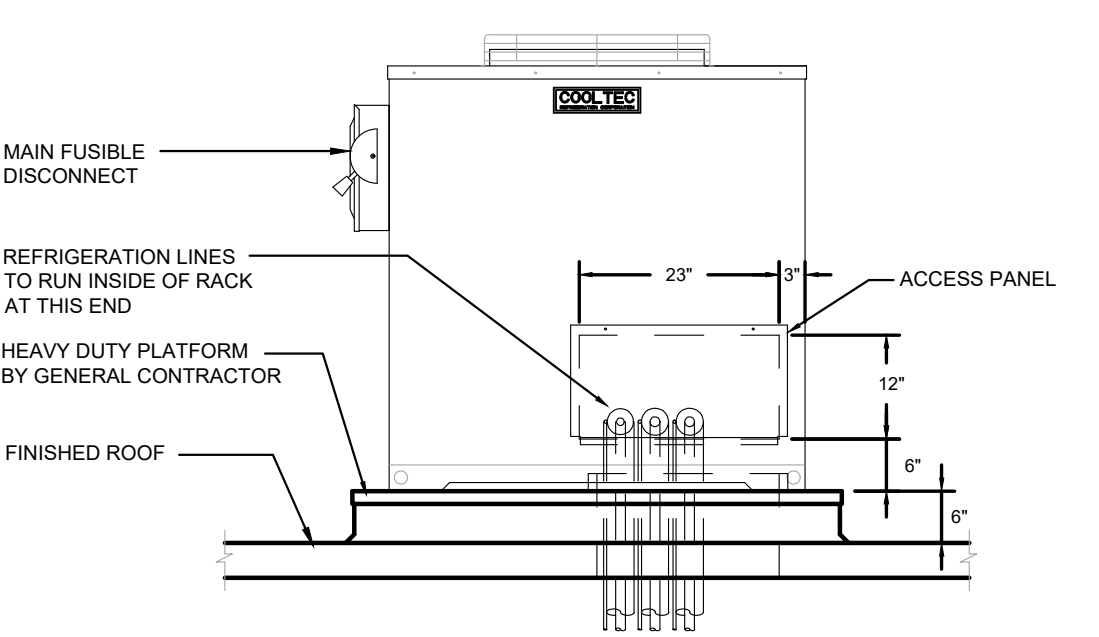
ESTIMATED WEIGHT (LBS.) 800

A  
FS7.1

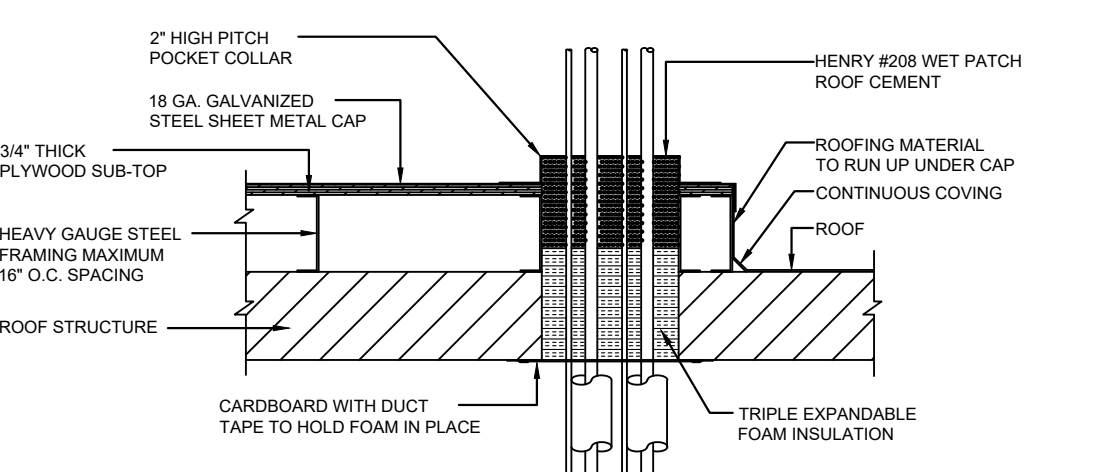
#### "REFRIG-O-PAK" SYSTEM # CRS-4

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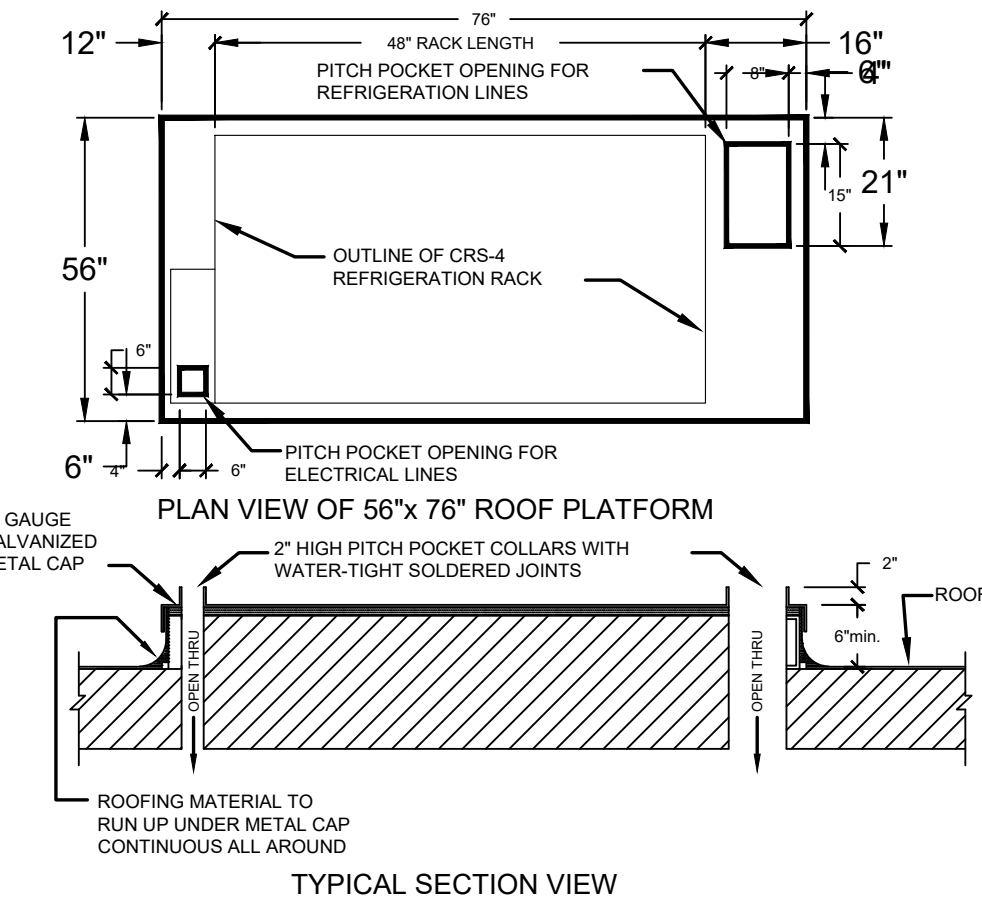
#### ELECTRICAL CONTROL PANEL

C  
FS7.1

#### REFRIGERATION PIPING CONNECTION SEQUENCE

D  
FS7.1

#### RAIN TIGHT PITCH POCKET



REFER TO G/FS7.2 FOR PLATFORM ANCHORAGE

#### GENERAL CONTRACTOR

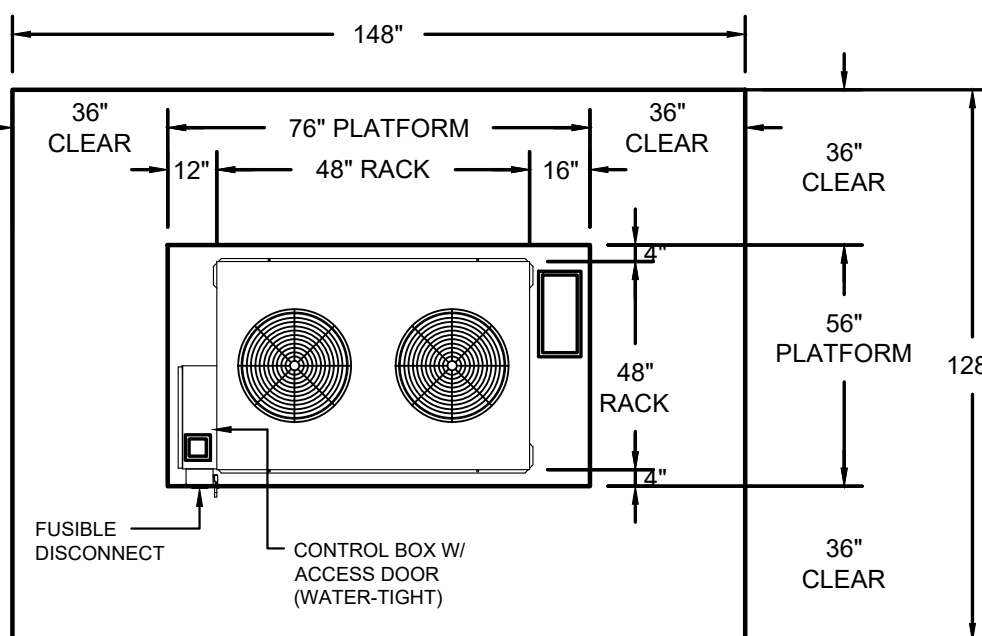
- GENERAL CONTRACTOR TO PROVIDE LEVEL PLATFORM AT CODE HEIGHT.
- PROVIDE TWO PITCH POCKETS IN THE PLATFORM AS LOCATED.
- PROVIDE SHEET METAL CAP WITH 2" PITCH POCKET COLLAR AND WITH WATER TIGHT SOLDERED JOINTS.

#### REFRIGERATION CONTRACTOR

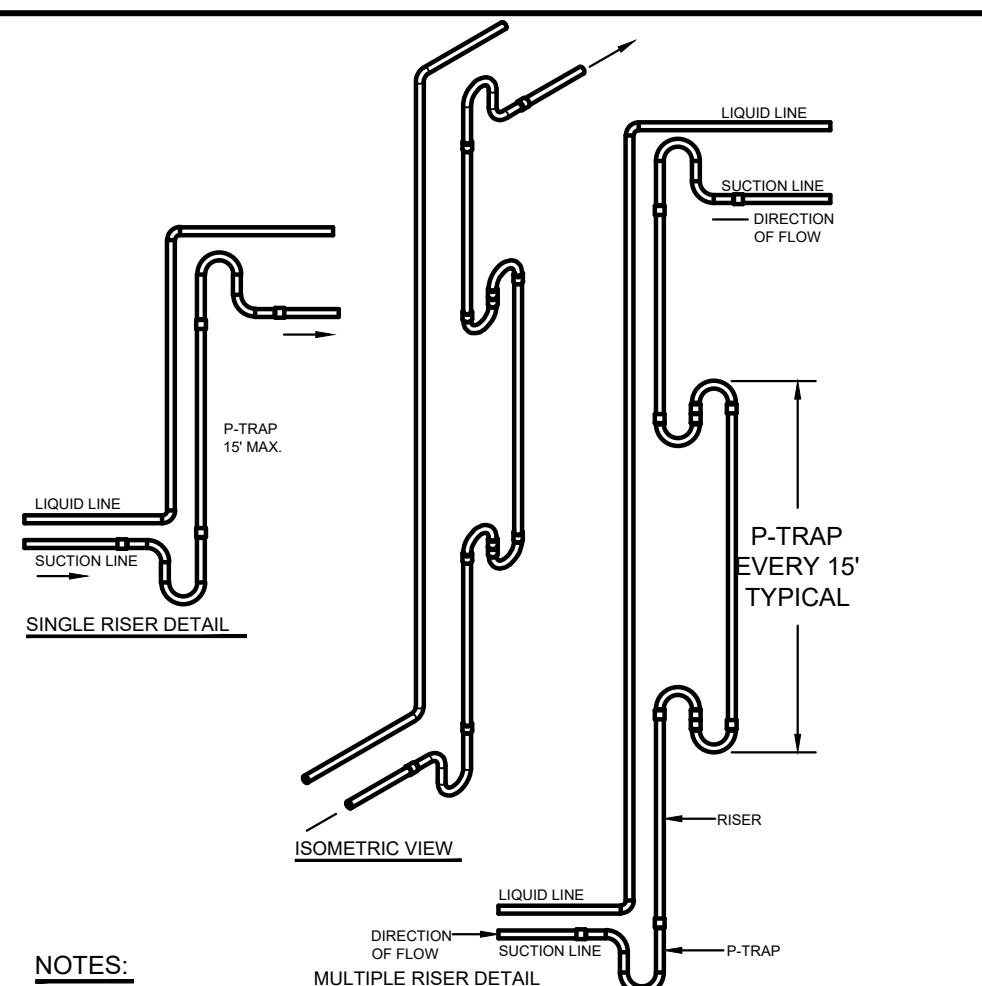
- BACK FILL PITCH POCKET OPENING WITH EXPANDED FOAM AND ROOF SEALANT AFTER COMPLETION OF ELECTRICAL AND REFRIGERATION PIPING.

E  
FS7.1

#### PLATFORM DETAIL

F  
FS7.1

#### CLEARANCE REQUIREMENT AROUND RACK'S PLATFORM



#### NOTES:

- INSULATE SUCTION LINES WITH ARMAFLEX.
- 3/4\"/>

G  
FS7.1

#### P-TRAP DETAILS AND SUCTION LINE RISER

## COOLTEC ENGINEERING SUMMARY

SYSTEM	ITEM #	FIXTURES				REFRIGERANT R	REFRIGERANT LBS/SYSTEM	COMPRESSORS					DEFROST	UNIT COOLER					SYSTEM		LINE SIZE (O.D.) AND RUN										ACCESSORIES (SEE SUPPLY CODE *)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		DESCRIPTION	TEMP (F)		MODEL			H.P.	RATING @ 60 Hz			MBH (95°F)		ITEM #	QUANTITY	MODEL	RATING @ 60 Hz		TOTAL POWER		ROUTE	SUCTION	LIQUID	LINE RUN LENGTH (FEET)	DISCH.	DRAIN	HEAD PRESSURE CONTROL	CRANK CASE HEATER	FAN CYCLE SWITCH	SUCTION ACCUMULATOR	THERMOSTAT	SOLENOID VALVE	THERMOSTATIC EXPANSION VALVE	TIME CLOCK																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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CONDENSING UNIT  
335Z FILE SA3207

### MODEL NO. CRS-4

#### NOTE:

- ALL SYSTEMS ENGINEERED WITH R-448A REFRIGERANT. ANY BASES/COILS NOT SUPPLIED BY COOLTEC MUST BE EQUIPPED WITH R-448A EXPANSION VALVES.
- REFRIGERATION PIPE SIZES ARE BASED ON A MAXIMUM LINE RUN UP TO 100 EQUIVALENT FEET FOR LIQUID AND SUCTION LINES. VERIFY LINE LENGTHS WITH JOB SITE CONDITIONS AND LINE ROUTING AT INDIVIDUAL INSTALLATIONS. IF LINE RUNS ARE GREATER THAN 100 FEET, PLEASE CONTACT COOLTEC FACTORY.
- \*COMPRESSOR MOTOR PROTECTED UNDER PRIMARY SINGLE PHASE PROTECTION\*
- EFFECTIVE JANUARY 1, 2009, ALL WALK-IN COOLER AND FREEZER EVAPORATIVE COILS INSTALLED IN THE U.S.A. SHALL BE SUPPLIED WITH ENERGY EFFICIENT (EC) MOTORS BASED ON THE FEDERAL ENERGY INDEPENDENCE AND SECURITY ACT (HR-6).
- ELECTRO-FIN COATED CONDENSERS AGAINST SALT AIR CONTAMINATION AND CORROSION FOR ALL CONDENSERS.
- ELECTRICAL CONTRACTOR TO SUPPLY POWER FROM BUILDING AND CONNECT POWER TO WALK-IN EVAPORATOR COILS, DEMAND DEFROST CONTROLS AND DRAIN HEATERS.

POWER REQUIRED FOR WALK-IN EVAPORATOR COIL'S DEMAND CONTROL AND TO DRAIN HEATERS.  
POWER FROM BUILDING; SUPPLIED BY ELECTRICAL CONTRACTOR

SYSTEM	DEFROST	ITEM #	DESCRIPTION	QUANTITY	MODEL	POWER FROM BUILDING BY ELEC. CONTRACTOR			
						EVAP. COIL	DRAIN HEATER	TOTAL LOAD	
A	D	2	WALK-IN COOLER	1	ADT090AEK	1.8	115/1	--	1.8 115/1
B	D	3	WALK-IN FREEZER	1	LET065BEK	7.8	208/1	5.0	208/1 12.8 208/1

NOTE: PROVIDE SEPARATE POWER SOURCE FOR EACH EVAPORATOR.  
POWER FROM BUILDING.H  
FS7.1

#### COIL INFORMATION

## SPECIFICATION

ITEM NO. 32 REMOTE REFRIGERATION PACKAGE  
THE REFRIGERATION PACKAGE SHALL BE PRE-ENGINEERED AND FACTORY ASSEMBLED UNIT, TRADE NAME "REFRIG-O-PAK", AS MANUFACTURED BY COOLTEC REFRIGERATION CORP., 1250 E. FRANKLIN AVE., POMONA, CA 91766. PHONE: (909) 865-2229, FAX: (909) 868-0777. E-MAIL ADDRESS: sales@cooltecrefrigeration.com

CONTRACTOR SHALL FURNISH AND INSTALL, WHERE SHOWN ON PLANS, (1) COOLTEC U.L. APPROVED "REFRIG-O-PAK" AIR COOLED REMOTE REFRIGERATION PACKAGE, MODEL CRS-4 WITH CONTROL PANEL. 208 VOL. REFRIGERATION SYSTEM SHALL BE HOUSED IN A WEATHER PROTECTED ENCLOSURE. THE FRAME, ENCLOSURE, AND PANELS SHALL BE FABRICATED OF GALVANIZED STEEL. THE ENTIRE FRAME SHALL BE PRE-ASSEMBLED, WELDED, CLEANED, AND PRIMED AND POWDER COATED EPOXY ENAMEL AND BAKED. CONDENSER FAN MOTORS SHALL BE MOUNTED ON THE TOP OF THE ENCLOSURE FOR BETTER HEAT DISCHARGE.

#### 1. REFRIGERATION UNITS

- AIR-COOLED CONDENSING UNITS SHALL BE HERMETIC/GLACIER SCROLL TYPE (COPELAND). EACH UNIT SHALL BE EQUIPPED WITH HIGH-LOW PRESSURE CONTROL, LIQUID LINE DRIER, SIGHT GLASS, HEAD PRESSURE CONTROL, TIME CLOCKS AND PUMP DOWN SOLENOIDS.
- ALL COMPRESSOR UNITS SHALL BE NEW FACTORY ASSEMBLED TO OPERATE WITH THE REFRIGERANT SPECIFIED IN THE ENGINEERING SUMMARY SHEET. REFRIGERANT R-448A SHALL BE USED ON ALL COMMERCIAL TEMPERATURE UNITS AND LOW TEMPERATURE UNITS.
- THE CONDENSER SHALL BE SECTIONAL, REMOVABLE, WITH RIFLED TUBE SLOTTED FINED, AND SHALL BE DESIGNED FOR 20°F/D. THE CONDENSER SHALL BE ELECTRO-FIN COATED AGAINST SALT AIR CONTAMINATION AND CORROSION.

#### 2. PRE-PIPING

- ALL REFRIGERATION LINES SHALL BE EXTENDED TO ONE SIDE OF THE PACKAGE IN A NEAT AND ORDERLY MANNER. SUCTION LINES MUST BE INSULATED WITH ARMAFLEX (1" THICK FOR LOW TEMP, 3/4" THICK FOR MEDIUM TEMP).
- ALL TUBING SHALL BE SECURELY SUPPORTED AND ANCHORED WITH CLAMPS.
- SILVER SOLDER AND/OR SIL-FOS SHALL BE USED FOR ALL REFRIGERANT PIPING. SOFT SOLDER IS NOT ACCEPTABLE.
- ALL PIPING TO BE PRESSURE TESTED WITH NITROGEN AT 200 PSI. AFTER THE CONDENSING UNIT AND COIL HAVE BEEN CONNECTED, THE BALANCE OF THE SYSTEM SHALL BE LEAKED TESTED WITH ALL VALVES OPENED.

#### 3. CONTROL PANEL

- THE PACKAGE SHALL HAVE A FACTORY MOUNTED AND PRE-WIRED CONTROL PANEL COMPLETE WITH MAIN FUSED DISCONNECT, COMPRESSOR CIRCUIT BREAKERS, FUSES, CONTACTORS AND THE TIME CLOCKS WIRED FOR SINGLE POINT CONNECTION.
- ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL MAIN POWER LINES, ALL IN ACCORDANCE WITH THE WIRING DIAGRAM AND PER LOCAL CODES.

#### 4. SAFETY CAUTION

- EACH SYSTEM AND EVAPORATOR IS SHIPPED UNDER NITROGEN PRESSURE. USE CAUTION AND EXERCISE SAFETY AT ALL TIMES WHEN PREPARING FOR FINAL HOOK-UP.

#### 5. EVAPORATIVE COIL

- EVAPORATIVE COILS SHALL BE DIRECT EXPANSION TYPE, FABRICATED OF COPPER TUBES WITH ALUMINUM FINS. ALL EVAPORATIVE COILS SHALL BE PROVIDED WITH SOLENOID VALVE, THERMOSTATIC EXPANSION VALVE, AND ELECTRONIC THERMOSTAT, PIPED AND WIRED TO THE JUNCTION BOX FOR POSITIVE PUMP DOWN.
- EVAPORATIVE COILS SHALL BE EQUIPPED WITH ENERGY SAVING "EC" MOTORS.

DRAWING TITLE:

REFRIGERATION PLAN

PROJECT NAME:

JOE SERNA SCHOOL

LODI, CA

# COOLTEC

## REFRIGERATION CORP

1250 E. FRANKLIN AVENUE, POMONA, CA 91766

PHONE: (909) 865-2229 FAX: (909) 868-0777

E-MAIL: gshare@cooltecrefrigeration.com

AMBIENT TEMPERATURE 95°F

POWER SUPPLY: 208V/3PH/60HZ

CONNECTED LOAD= 17.9 AMP

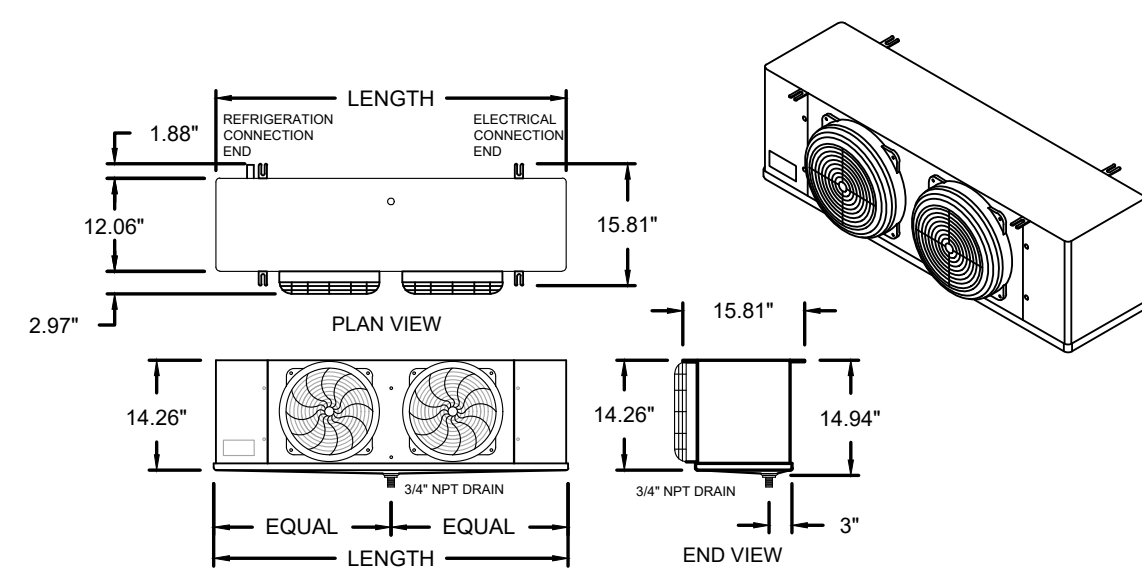
FUSE SIZE: 30 AMP

MINIMUM AMPACITY= 20.1 AMP

SYSTEM			LINE SIZE (O.D.) AND RUN										ACCESSORIES (SEE SUPPLY CODE *)									
TOTAL POWER			ROUTE	SUCTION	LIQUID	LINE RUN LENGTH (FEET)	DISCH.	DRAIN	HEAD PRESSURE CONTROL	CRANK CASE HEATER	FAN CYCLE SWITCH	SUCTION ACCUMULATOR	THERMOSTAT	SOLENOID VALVE	THERMOSTATIC EXPANSION VALVE	TIME CLOCK						
PH	AMPS	PH																				
	8.0	1																				
	5.6	3	S	7/8	3/8	100			F	F			F	F	F	KE2MED						
1	8.3	3	S	7/8	3/8	100			F	F		F	F	F	F	KE2LOW						
			B	* SUPPLY CODES:																		
			M	F - FACTORY INSTALLED																		
			S	L - LOOSE (FIELD INSTALLED)																		
				M - MANUFACTURER EQUIPPED																		
				R - REFRIGERATION CONTRACTOR																		

#### \* SUPPLY CODES:

- F - FACTORY INSTALLED
- L - LOOSE (FIELD INSTALLED)
- M - MANUFACTURER EQUIPPED
- R - REFRIGERATION CONTRACTOR



#### MODELS: ADT / LET

SYSTEM	UNIT MODEL No.	CAPACITY BTU	LENGTH	QTY.	FANS			ELEC. DEFROST	CONNECTIONS (in.)				APPROX. SHIP WT. (Lbs.)
					CFM	EC MOTOR	EC MOTOR		COIL INLET OD	SUCTION ID	DRAIN MPT		
A	ADT090AEK	9000	45-1/2"	2	1400	1.8	1.8	1.0	1 1/2"	7/8"	3/4"		48
B	LET065BEK	6500	45-1/2"	2	1400	1.8	1.8	1.0	1 1/2"	5/8"	3/4"		43

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#### UNIT COOLER DETAIL

## CONSTRUCTION NOTES FOR TRADES

#### 1. GENERAL CONTRACTOR

- CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND COORDINATE WITH OTHER TRADES.
- GENERAL CONTRACTOR TO VERIFY AND CO-ORDINATE LOCATION OF REFRIGERATION RACK WITH REFRIGERATION CONTRACTOR TO SATISFY LOCAL CODE REQUIREMENTS AND MAINTENANCE OF THE RACK.
- GENERAL CONTRACTOR TO VERIFY REFRIGERATION LINE RUNS THRU TO ROOF OR MULTI-STORY BUILDING PRIOR TO CONSTRUCTION WITH REFRIGERATION CONTRACTOR FOR ACCESSIBILITY.
- GENERAL CONTRACTOR TO VERIFY ACCESS OF CRANE OR MECHANICAL LIFT WITH REFRIGERATION CONTRACTOR PRIOR TO CONSTRUCTION (IF REQUIRED).
- GENERAL CONTRACTOR SHALL PREPARE AND WEATHER PROOF THE PLATFORM AND CURBED OPENINGS FOR REFRIGERATION PIPING AND ELECTRICAL CONDUIT. ROOF PAD TO BE CONSTRUCTED OF HEAVY DUTY STEEL FRAMING, AND THE FINISHED HEIGHT DICTATED PER LOCAL CODES.
- PROVIDE SHEET METAL CAP WITH 2" HIGH PITCH POCKET COLLAR AND WATER TIGHT SOLDERED JOINTS.
- GENERAL CONTRACTOR TO ALLOW 3'-0" (96") OF CLEAR SPACE AROUND ROOF PAD FOR MAINTENANCE.
- ALL CORE DRILLING AND REFRIGERATION PIPING WORK FOR THE REFRIGERATION CONTRACTOR, IS IN THE GENERAL CONTRACTOR'S SCOPE OF WORK, COORDINATE EXACT LOCATION AND NUMBER OF PENETRATIONS WITH THE REFRIGERATION CONTRACTOR AND COMPLY WITH ALL LANDLORD REQUIREMENTS FOR X-RAY OF SLAB PRIOR TO WORK.
- ANY ATTACHMENT TO BUILDING STRUCTURE FOR LOAD BEARING, WEIGHT TO BE PROVIDED AND CO-ORDINATED BY GENERAL CONTRACTOR.
- GENERAL CONTRACTOR TO BACKFILL ALL PITCH POCKETS TO TOP WITH TAR OR PITCH AFTER REFRIGERATION AND ELECTRICAL LINES HAVE BEEN RUN.

#### 2. REFRIGERATION CONTRACTOR

- REFRIGERATION CONTRACTOR SHALL RUN ALL REFRIGERATION LINES WHICH EXTEND DOWN THRU WALL(S) BEFORE WALL(S) ARE CLOSED UP WHEN CONDUIT IS NOT PROVIDED.
- REFRIGERATION CONTRACTOR TO SEAL BOTH ENDS OF CONDUIT WITH FOMOFIL AFTER ALL LINES HAVE BEEN RUN.
- IF PULL BOXES ARE SPECIFIED, THEY MUST BE A MINIMUM 12"x12".
- REFRIGERATION CONTRACTOR SHALL INSULATE ALL REFRIGERATION SUCTION LINES.
- REFRIGERATION CONTRACTOR SHALL VERIFY LOCATION OF BLOWER COIL(S) AND COMPRESSOR(S) FOR ALL REFRIGERATED AREAS.
- REFRIGERATION CONTRACTOR SHALL VERIFY LOCATION OF PITCH POCKET(S) FOR REFRIGERATION LINE PENETRATION THRU ROOF WITH GENERAL CONTRACTOR. GENERAL CONTRACTOR TO INSTALL ALL PITCH POCKETS.
- CONTRACTOR SHALL USE ONLY CLEAN DEHYDRATED, SEALED REFRIGERATION GRADE A.C.R. COPPER TUBING.
- USE ONLY 1/2" LONG RADIUS ELBOWS TO REDUCE FLOW RESISTANCE AND LINE BREAKAGE.
- SILVER SOLDER AND/OR SIL-FOS SHALL BE USED ON ALL REFRIGERANT PIPING. SOFT SOLDER IS NOT ACCEPTABLE.
- USE MINIMUM 35% SILVER SOLDER FOR DISSIMILAR METALS.
- ALL PIPING MUST BE SUPPORTED WITH HANGERS THAT CAN WITHSTAND THE COMBINED WEIGHT OF TUBING, INSULATION, VALVES, AND FLUID IN THE TUBING.
- USE NITROGEN IN THE COPPER TUBING DURING BRAZING TO PREVENT FORMATION OF COPPER OXIDES. LIQUID AND SUCTION LINES MUST BE FREE TO EXPAND INDEPENDENTLY OF EACH OTHER. DO NOT EXCEED 100 FEET WITHOUT A CHANGE IN DIRECTION OR AN OFFSET. PLAN PROPER PITCHING, EXPANSION ALLOWANCE, AND P-TRAPS AT THE BASE OF ALL SUCTION RISERS AND AT EVERY 15 FEET OF EVERY VERTICAL RISE. INSTALL SERVICE VALVES AT SEVERAL LOCATIONS FOR EASE OF MAINTENANCE. THESE VALVES MUST BE APPROVED FOR 450 PSI WORKING PRESSURE.
- ALL PIPING TO BE PRESSURE TESTED WITH NITROGEN AT 200 PSI WITH ALL VALVES OPEN AND HELD FOR 12 HOURS.
- ELECTRONIC LEAK DETECTORS SHALL BE USED TO LOCATE ALL LEAKS.
- COMPLETE SYSTEM SHALL BE EVALUATED TO 500 MICRONS WITH VACUUM PUMP BEFORE CHARGING THE SYSTEM.
- ONCE SYSTEM IS CHARGED AND RUNNING, ADJUST ALL CONTROLS INCLUDING PRESSURE CONTROLS, EXPANSION VALVES, THERMOSTATS, AND TIME CLOCKS. RETURN AFTER 24 HOURS TO VERIFY PROPER OPERATION OF SYSTEMS.
- REFRIGERATION CONTRACTOR TO PROVIDE AND INSTALL DRAIN LINE HEATER WITH INSULATION IN FREEZER TO BE CONNECTED BY ELECTRICAL CONTRACTOR.
- REFRIGERANT SUCTION LINES OUTSIDE OF REFRIGERATED COMPARTMENTS, NOT RUN IN CONDUIT, SHALL BE INSULATED BACK TO COMPRESSOR WITH ARMAFLEX OR ARMA-FLEX AP-2550 FOAMED PLASTIC INSULATION OR EQUAL IN ACCORD WITH DIRECTION OF THE MANUFACTURER. MINIMUM THICKNESS SHALL BE 3/4 INCH FOR COMMERCIAL TEMPERATURE AND 1.0 INCH FOR LOW TEMPERATURE.
- FILL ROOF REFRIGERATION AND ELECTRICAL PITCH POCKETS WITH FOAM AND SEALANT.
- REFRIGERATION CONTRACTOR TO SEAL ALL REFRIGERATION LINE PENETRATIONS MADE THRU WALK-IN COOLERS/FREEZERS, AND REFRIGERATED BASE SECTIONS OF COUNTERS.

#### 3. ELECTRICAL CONTRACTOR

- ELECTRICAL CONTRACTOR TO PROVIDE MAIN POWER FOR THE REFRIGERATION PACKAGE AND CONNECT CONTROL AND DEFROST SYSTEMS AT THE COIL.
- ELECTRICAL CONTRACTOR TO PROVIDE POWER FOR MEDIUM AND LOW TEMPERATURE EVAPORATOR COILS. POWER FROM BUILDING. PROVIDE SEPARATE POWER SOURCE FOR EACH EVAPORATOR.
- ELECTRICAL CONTRACTOR TO CONNECT DRAIN LINE HEATER IN THE FREEZER.
- ALL ELECTRICAL WIRING AND INSTALLATION SHALL BE ACCORDANCE WITH THE WIRING DIAGRAM AND PER LOCAL CODES.
- IF CONTRACTED, ELECTRICAL CONTRACTOR TO INSTALL ALL CONDUITS FOR REFRIGERATION LINES IN WALLS, PRIOR TO WALLS ARE CLOSED UP. ALL PULL BOXES MUST BE A MINIMUM OF 12"x12".

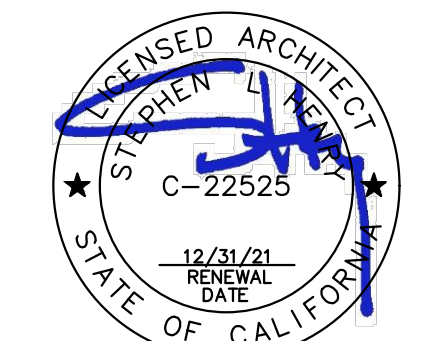
#### 4. PLUMBING CONTRACTOR

- PLUMBING CONTRACTOR TO PROVIDE TYPE "M" COPPER DRAIN LINES FOR WALK-IN REFRIGERATOR AND FREEZER, PITCHED 1/2 INCH PER FOOT OF RUN. IN FREEZER, HEATED DRAIN LINE MUST BE INSULATED TO PREVENT FREEZING. TRAP DRAIN LINES OUTSIDE OF REFRIGERATED SPACE TO AVOID ENTRANCE OF WARM AND MOIST AIR.
- CONTRACTOR TO PROVIDE INDIVIDUAL DRAIN LINES FOR EACH EVAPORATOR UNLESS OTHERWISE CALLED FOR IN THE PLANS.
- ALL PLUMBING INSTALLATION SHALL BE IN ACCORDANCE WITH LOCAL CODES.

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730 Howe Avenue, Suite 450  
Sacramento, CA 95825  
Phone: 916.921.2112  
Fax: 916.921.2212

HENRY+  
ASSOCIATES  
ARCHITECTS



KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT  
REMOTE REFRIGERATION

CONSULTANT



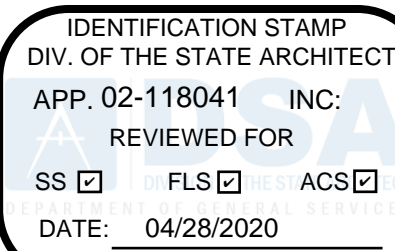
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FS7.1

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ROOF MOUNT





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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT  
REMOTE REFRIGERATION

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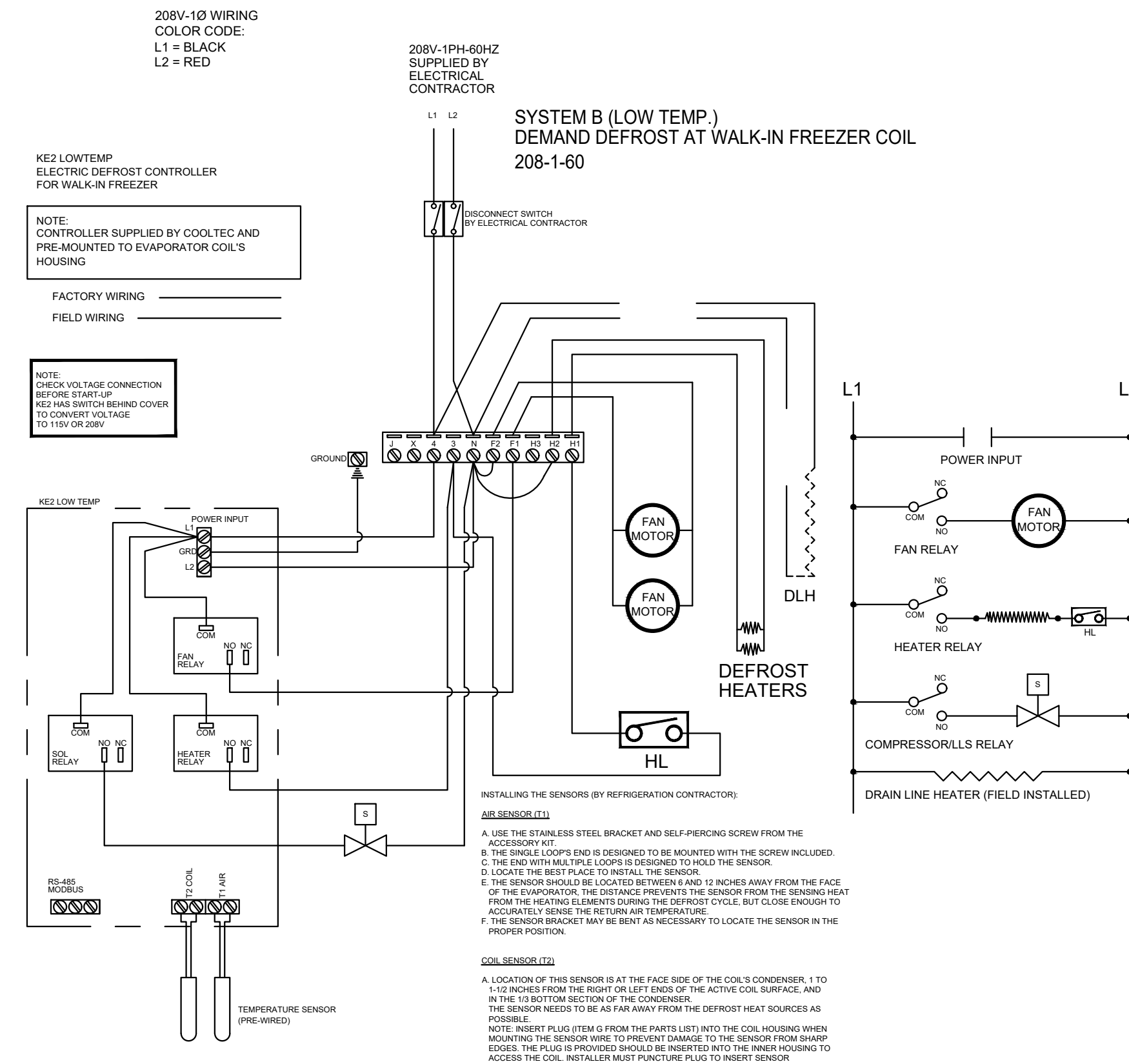
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FS7.2

OF XX SHEETS

POWER REQUIRED FOR LOW TEMPERATURE EVAPORATOR COILS.  
POWER FROM BUILDING; SUPPLIED BY ELECTRICAL CONTRACTOR

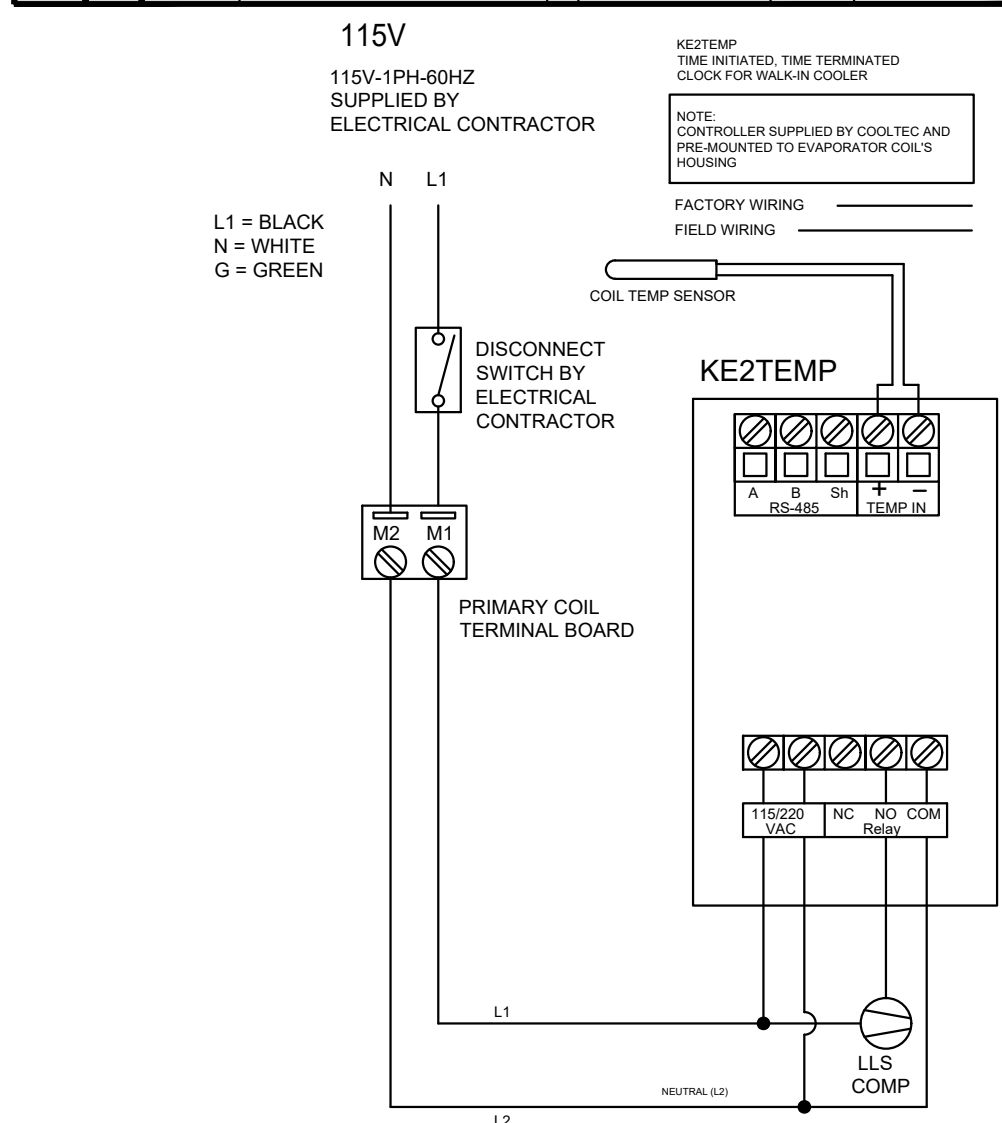
SYSTEM	DEFROST	ITEM #	DESCRIPTION	QUANTITY	MODEL	UNIT COOLER			
						POWER FROM BUILDING			
						EVAP COIL	DRAIN HEATER		
B	D	3	WALK-IN FREEZER	1	LET065BEK	RLA	VOLTAGE	RLA	VOLTAGE
						7.8	208/1	5.0	208/1



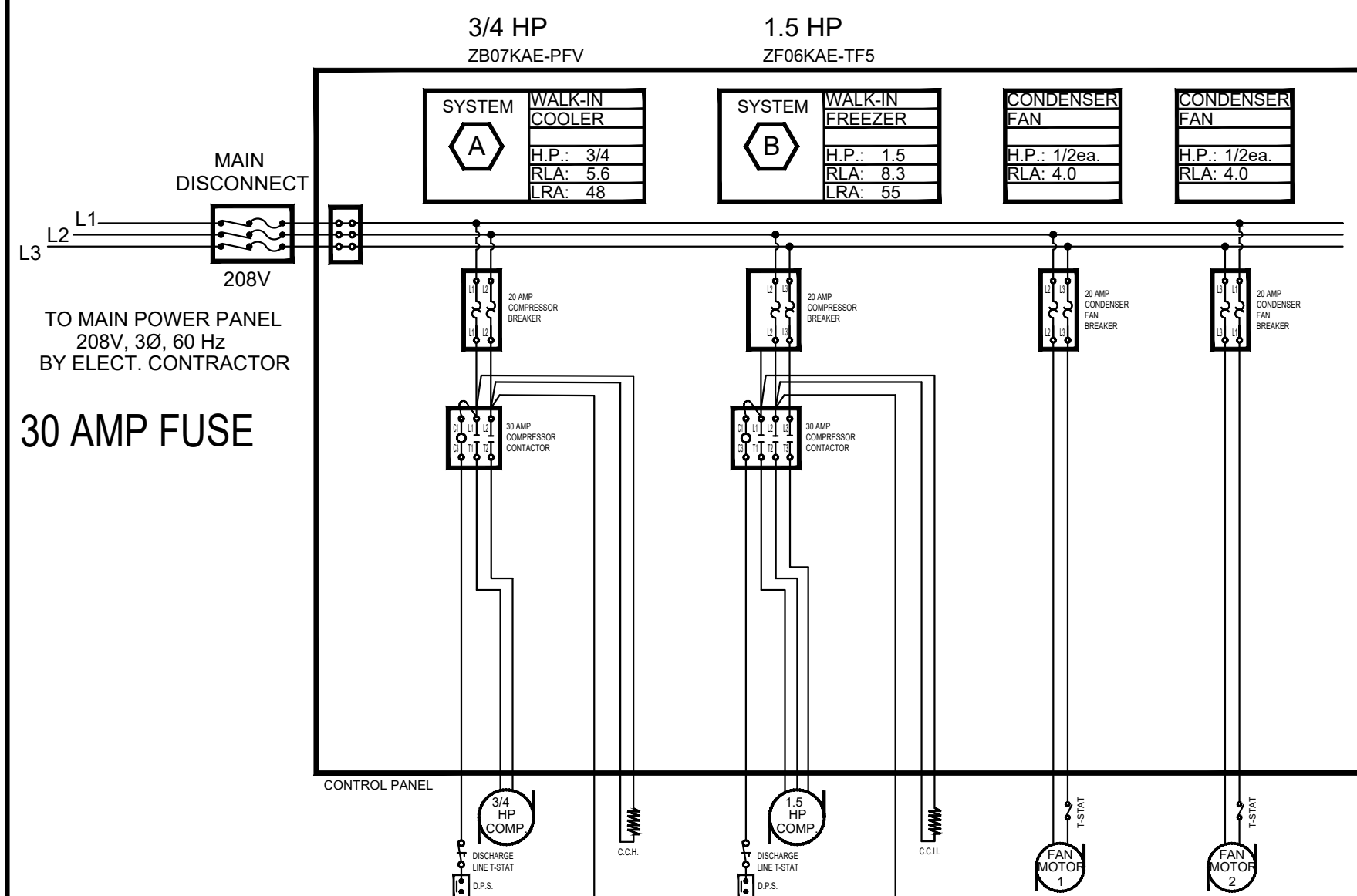
B DEMAND DEFROST- KE2 LOW TEMP  
FS7.2 WIRING DIAGRAM FOR FREEZER COIL

POWER REQUIRED FOR MEDIUM TEMPERATURE EVAPORATOR COILS.  
POWER FROM BUILDING; SUPPLIED BY ELECTRICAL CONTRACTOR

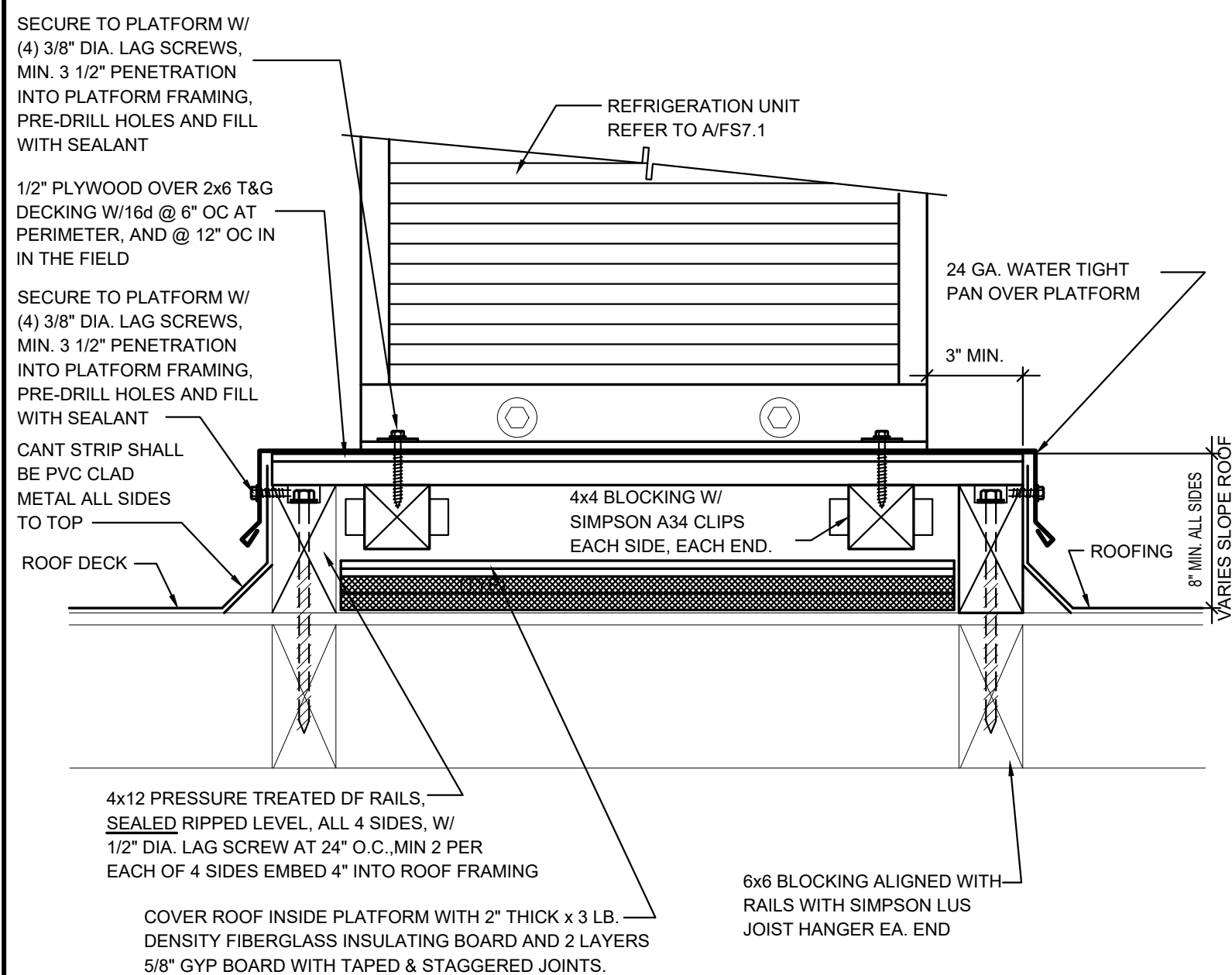
SYSTEM	DEFROST	ITEM #	DESCRIPTION	QUANTITY	MODEL	UNIT COOLER	
						POWER FROM BUILDING	
						RLA	VOLTAGE
A	D	2	WALK-IN COOLER	1	ADT090AEK	1.8	115/1



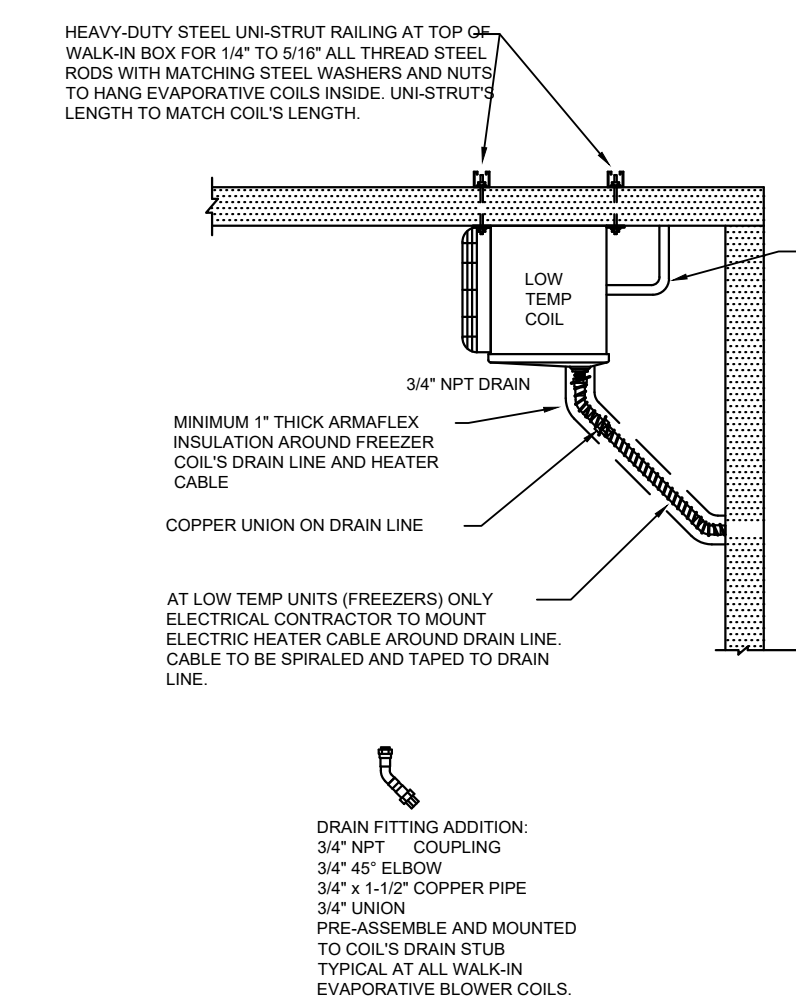
F DEMAND DEFROST- KE2 MED TEMP  
FS7.2 WIRING DIAGRAM FOR COOLER COIL



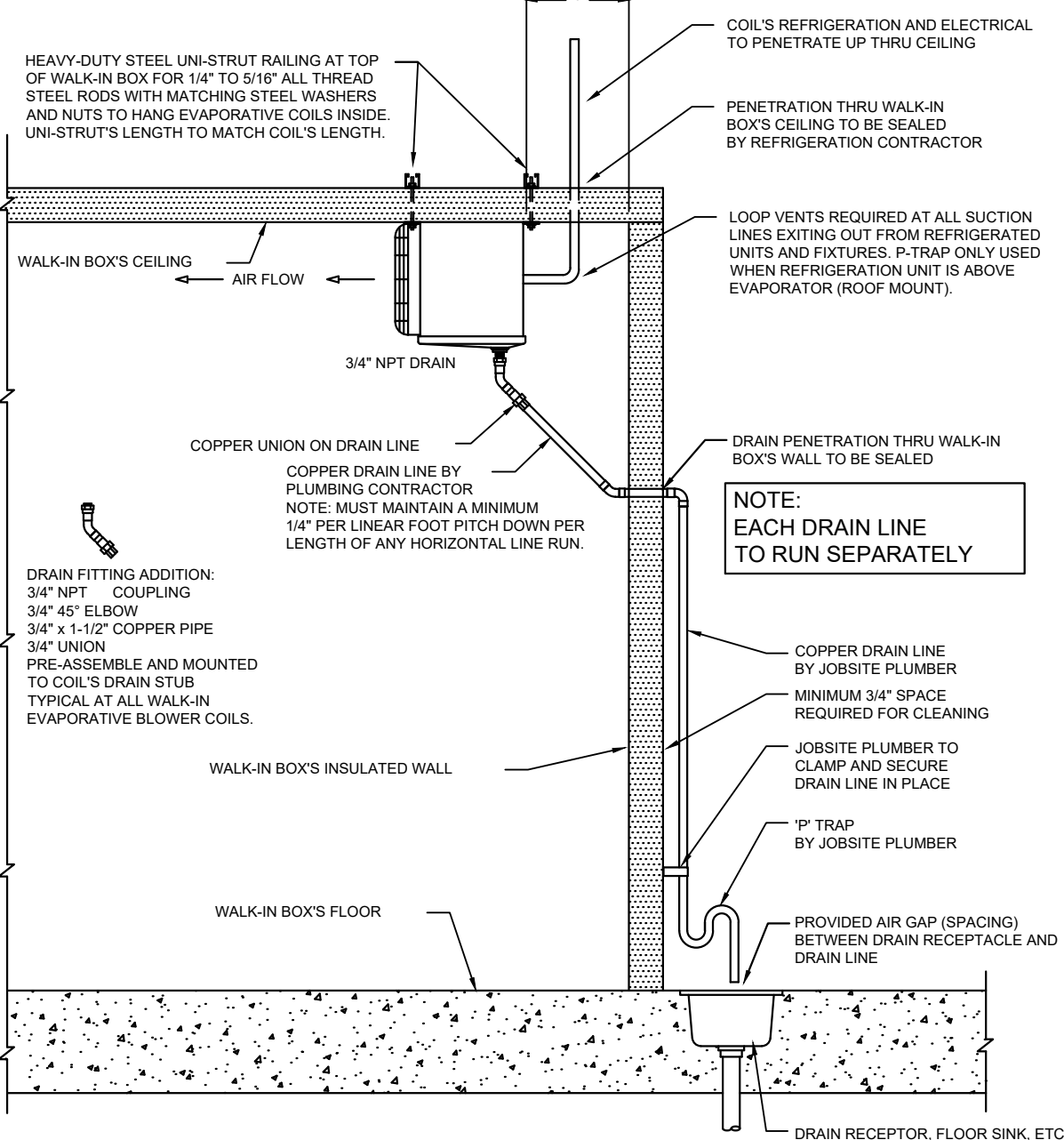
A WIRING DIAGRAM  
FS7.2



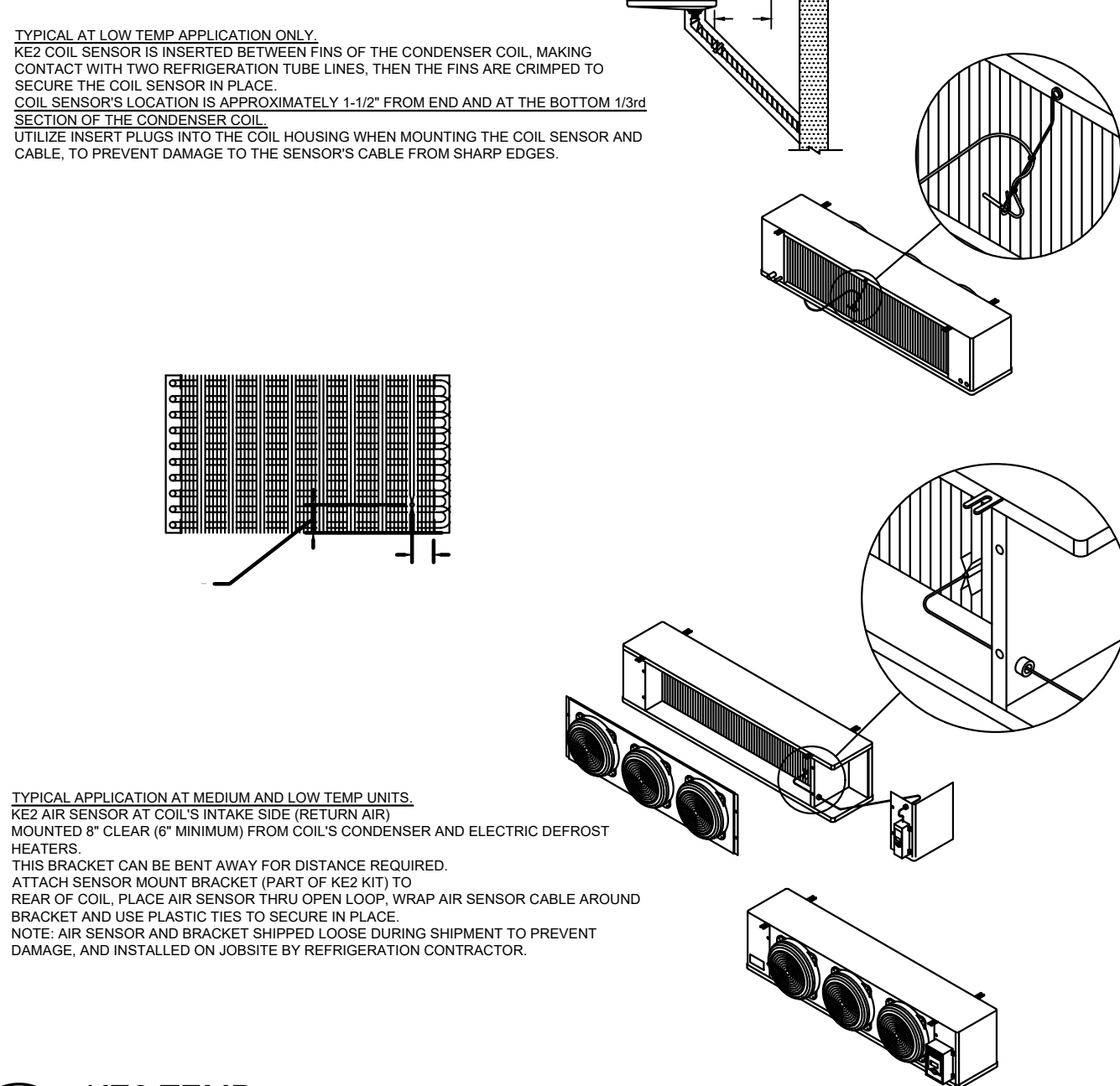
G PLATFORM DETAIL  
FS7.2



C WALK-IN'S FREEZER  
FS7.2 CONDENSATE DRAIN LINE



D WALK-IN'S COIL MOUNT AND  
FS7.2 CONDENSATE DRAIN LINE



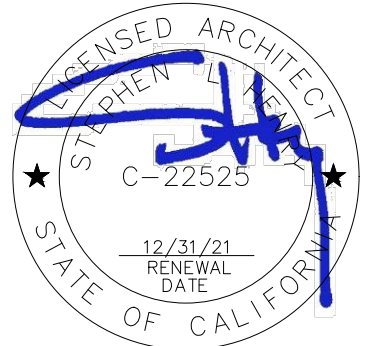
E KE2 TEMP  
FS7.2 SENSOR MOUNT DETAILS



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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

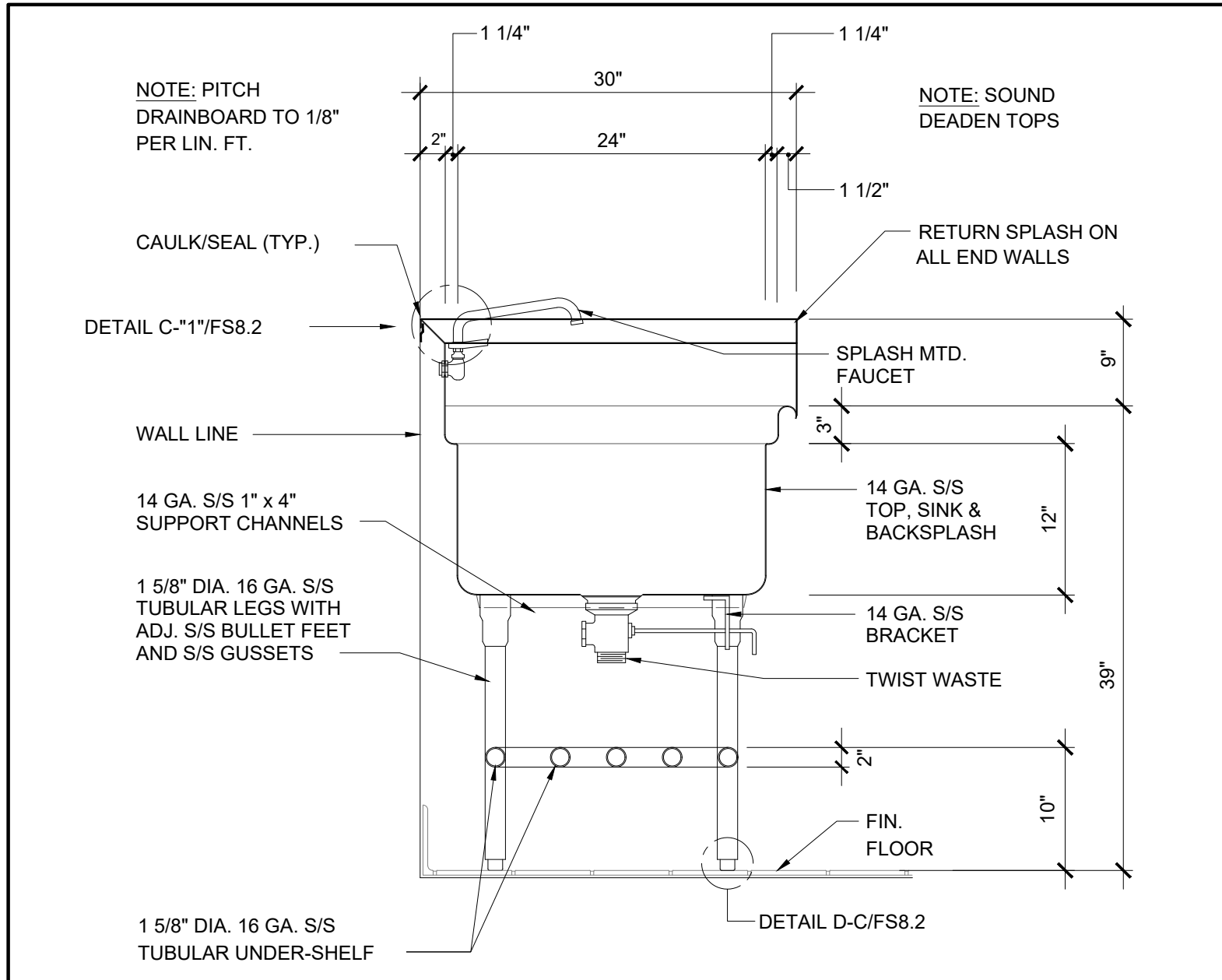
FOODSERVICE EQUIPMENT  
DETAILS

CONSULTANT

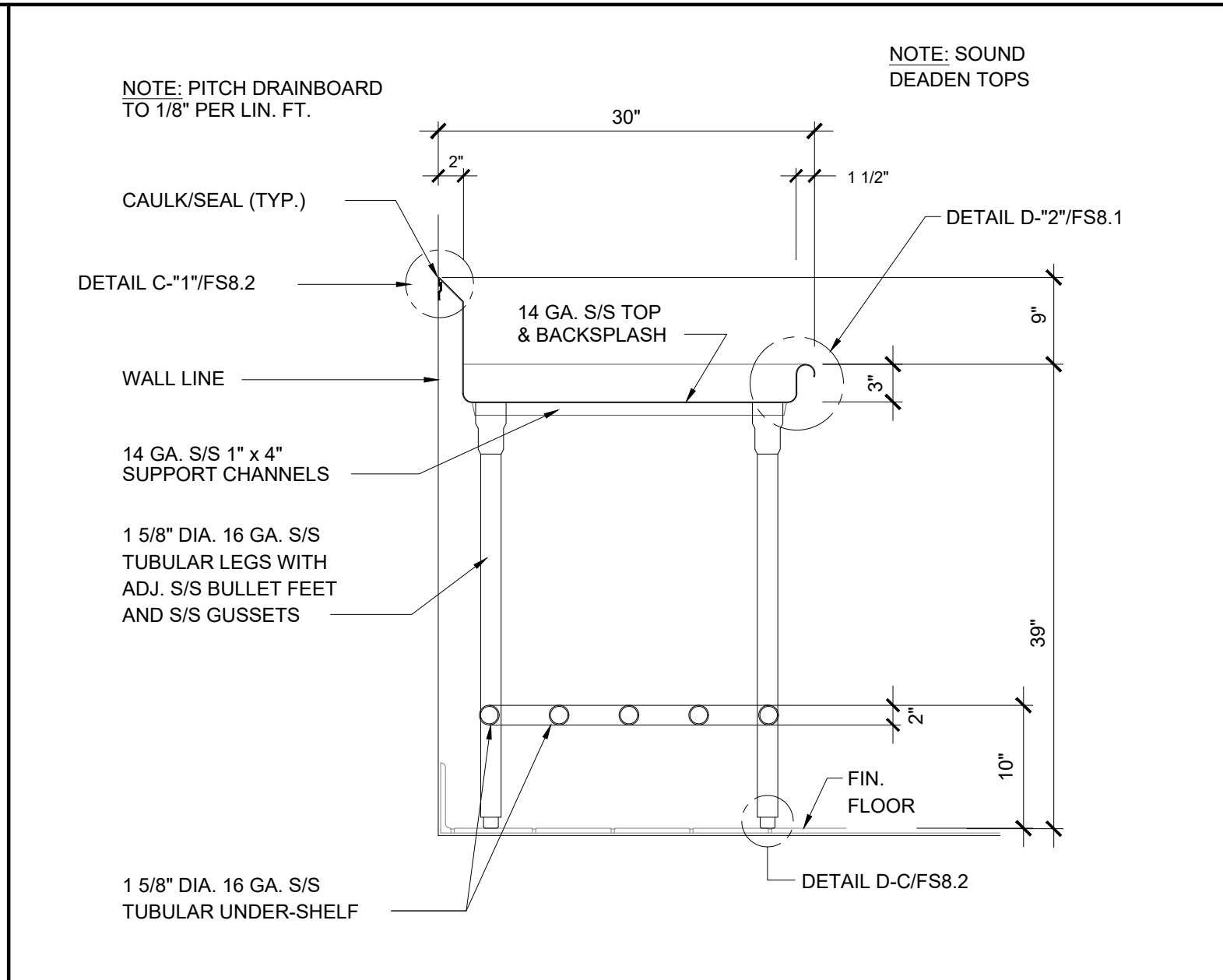


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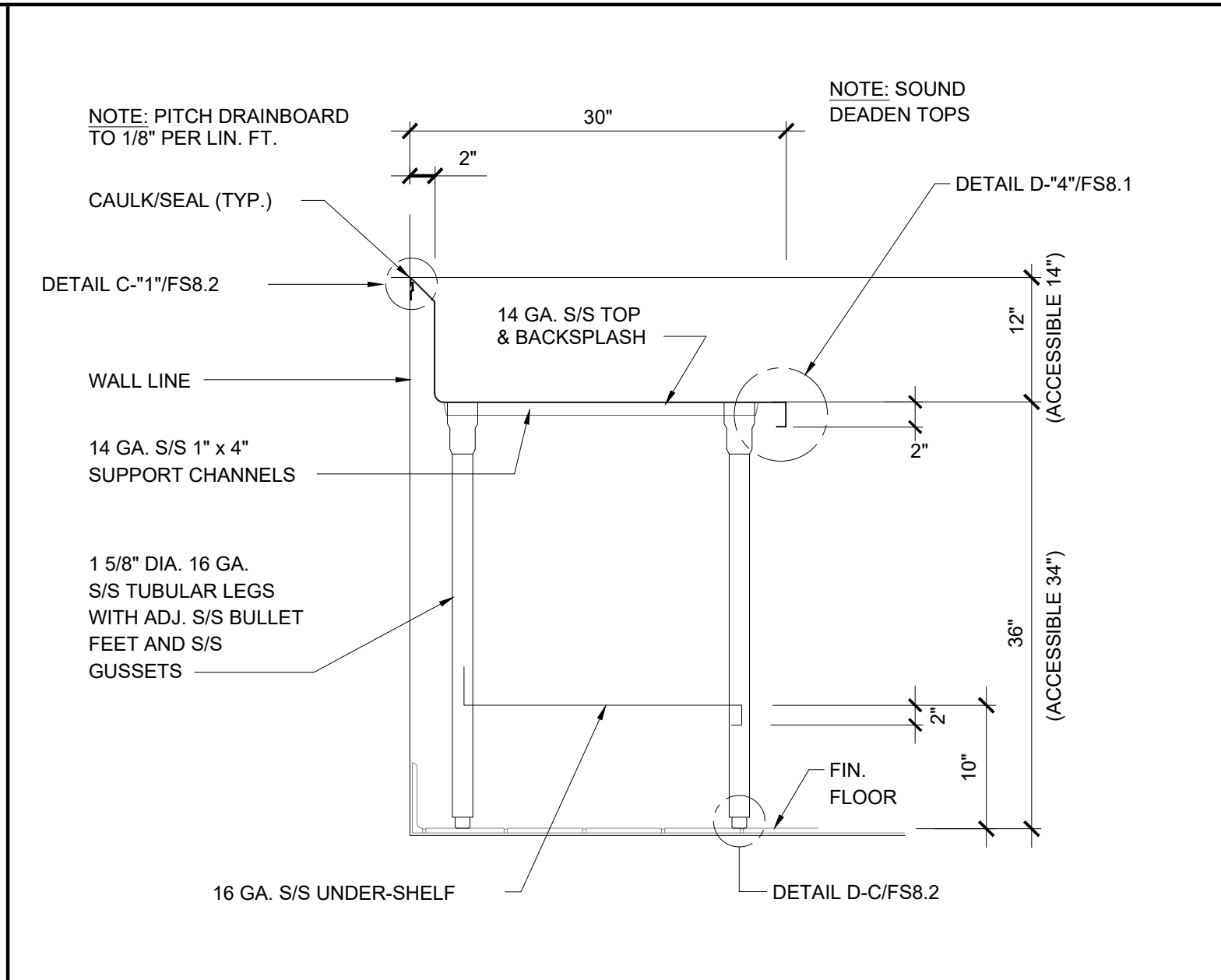
FS8.1



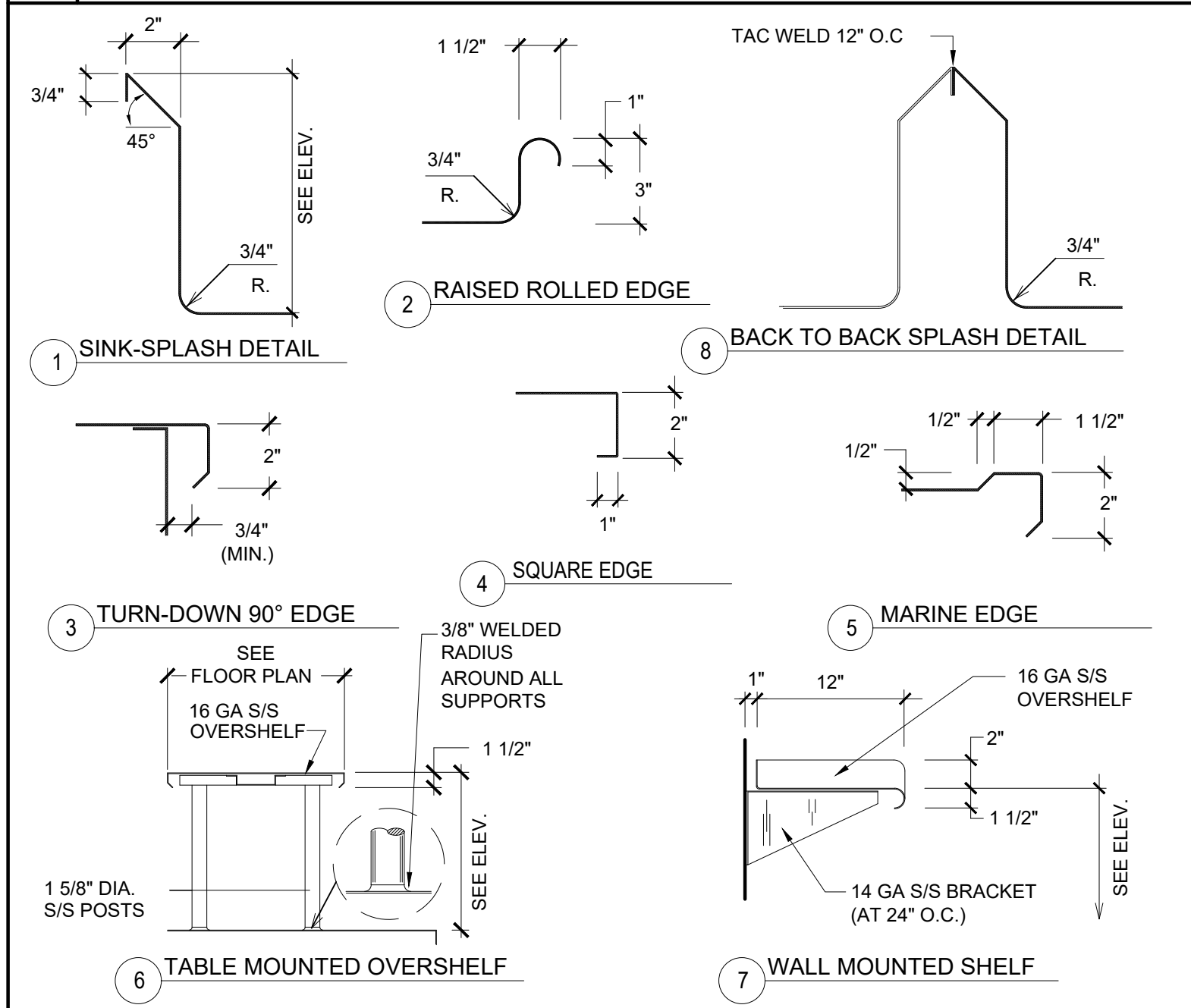
A SECTION AT SINK NTS



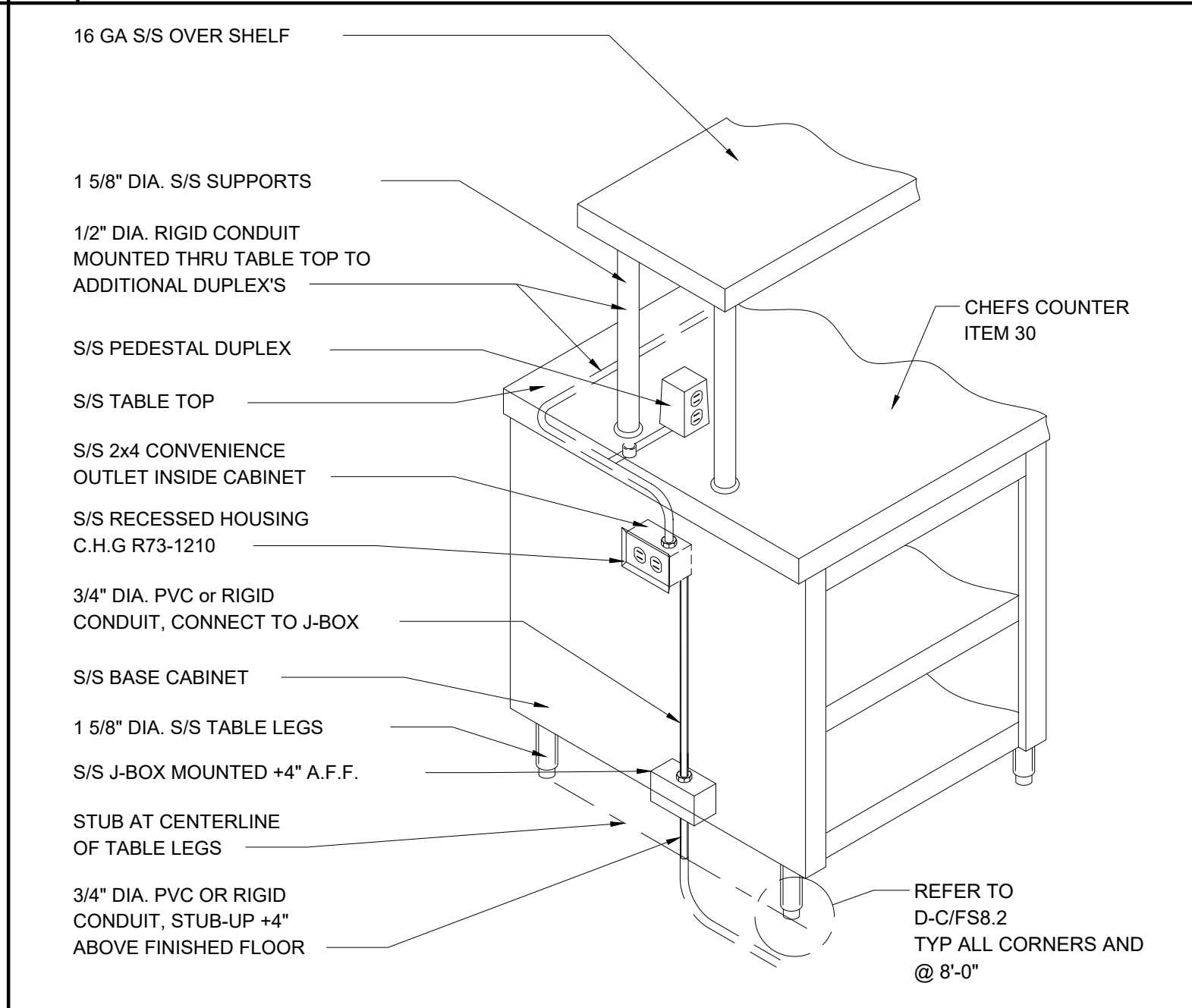
B SECTION AT DISHTABLE NTS



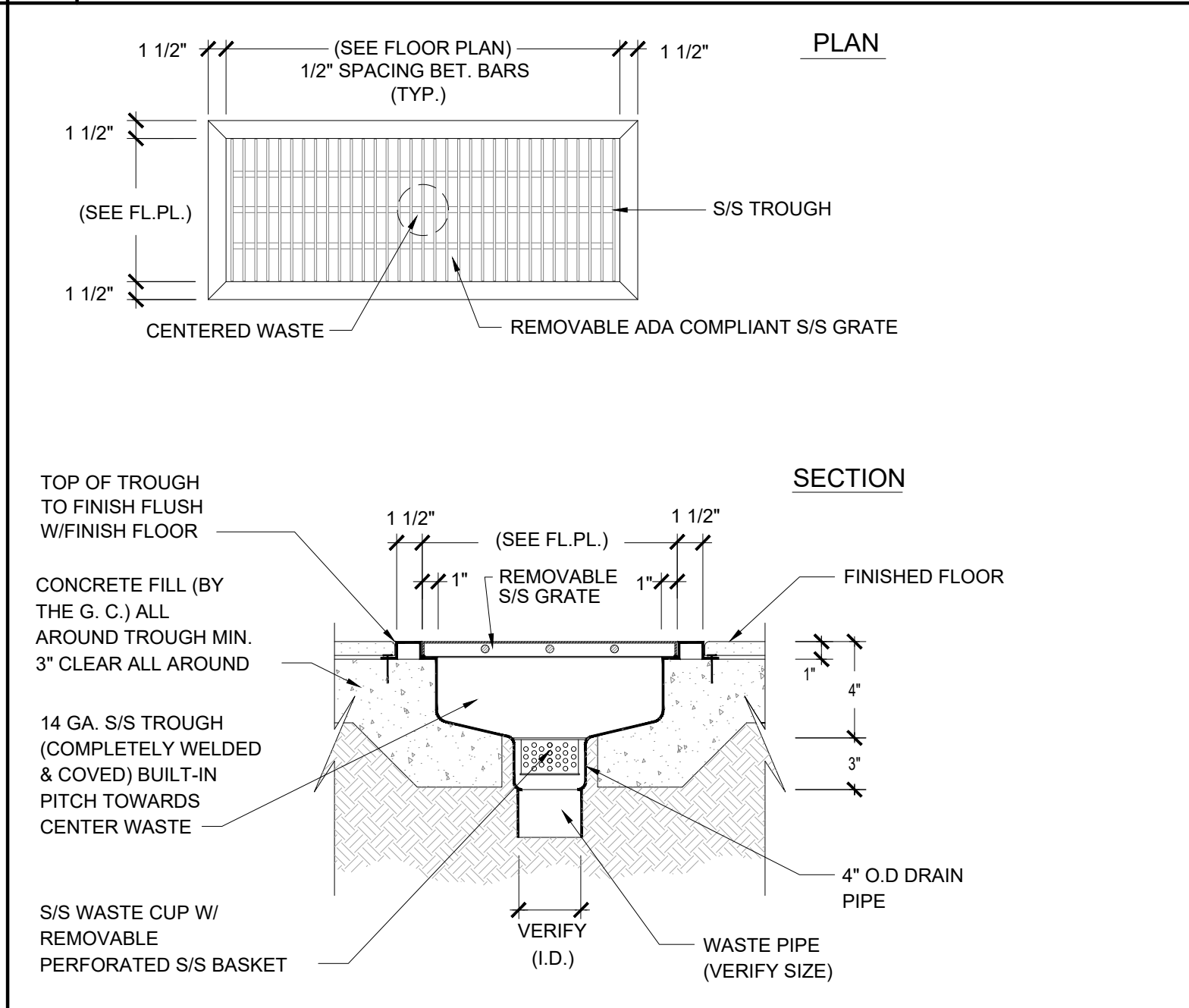
C SECTION AT WORKCOUNTER NTS



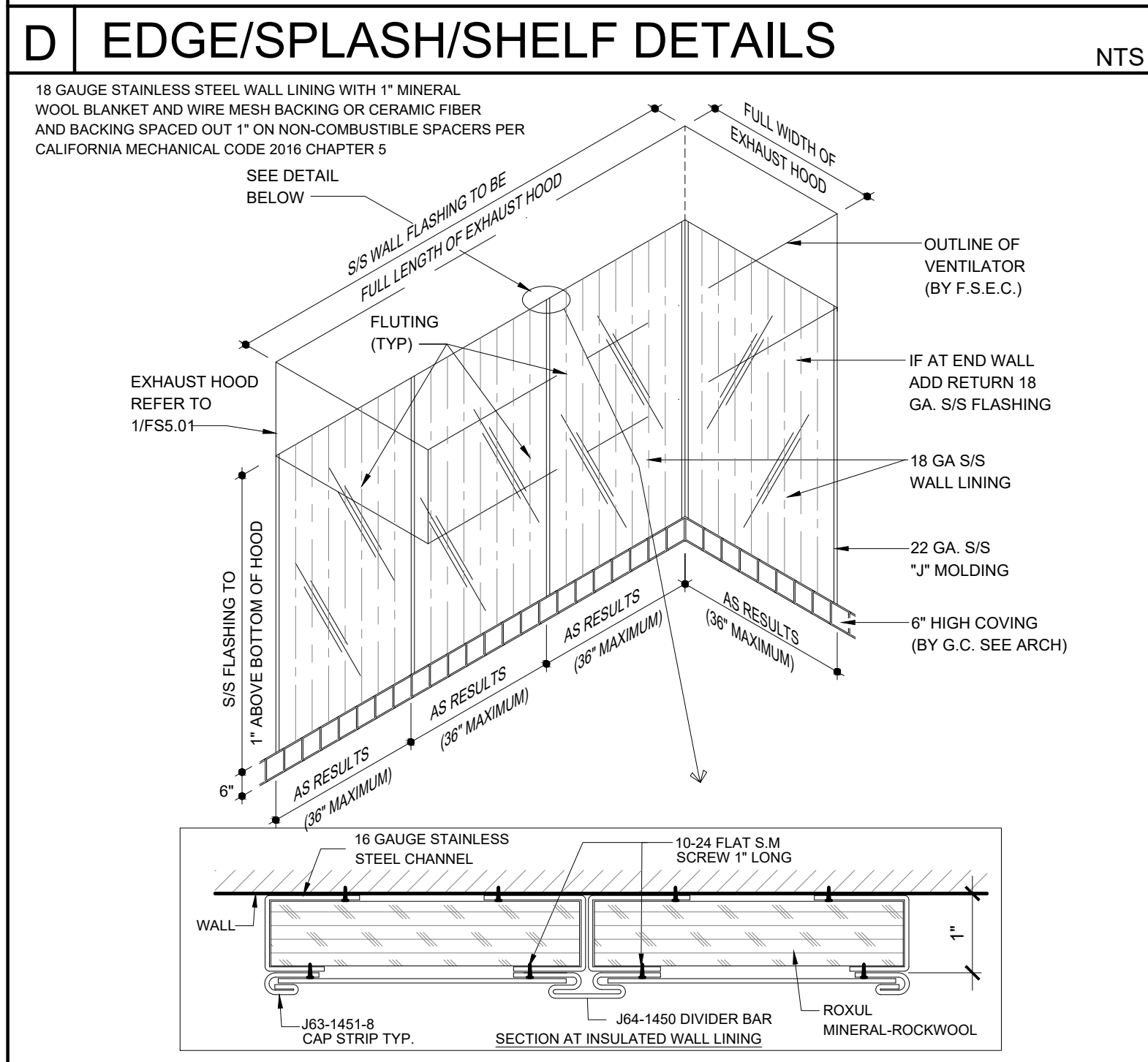
D EDGE/SPLASH/SHELF DETAILS NTS



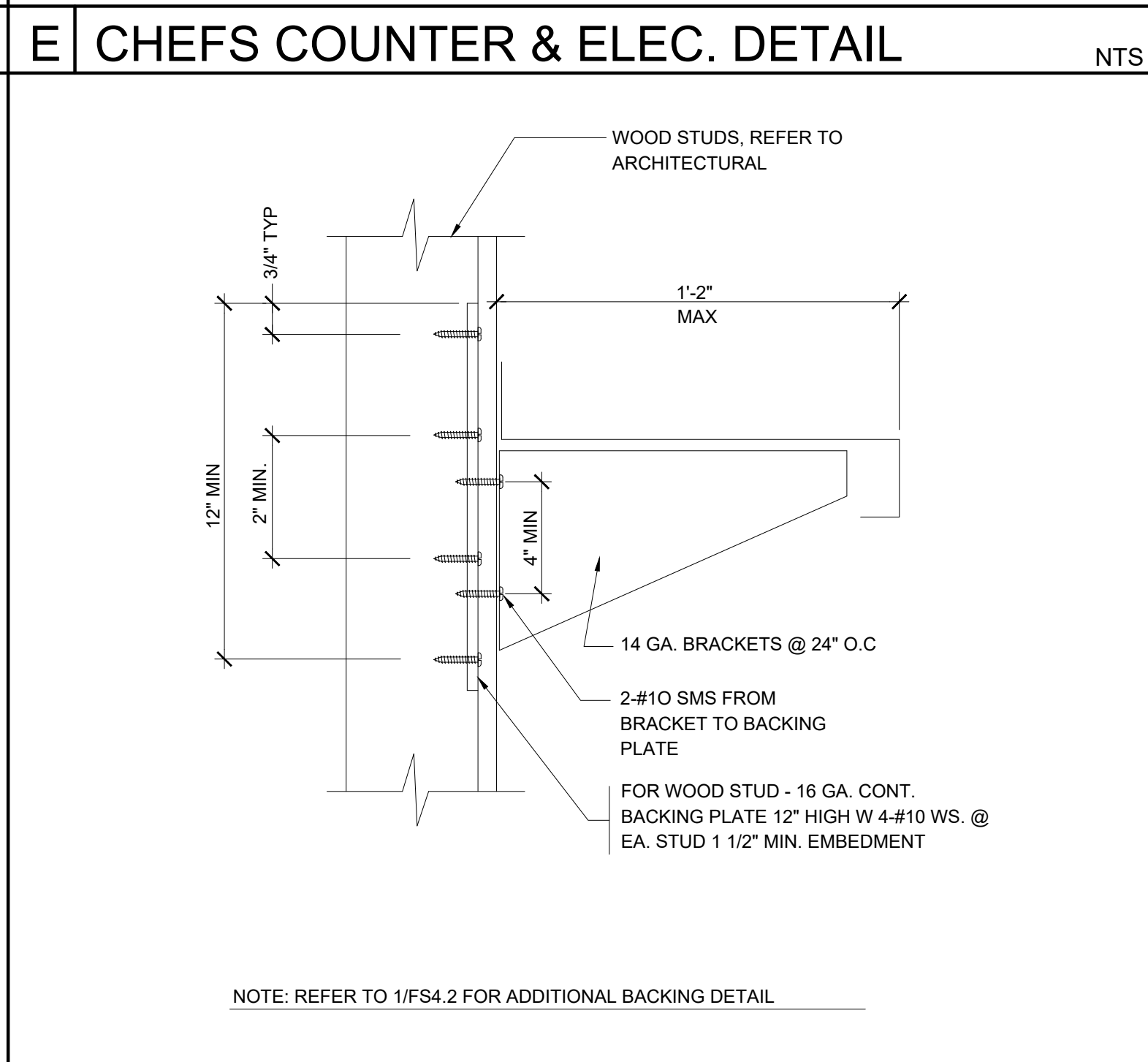
E CHEFS COUNTER & ELEC. DETAIL NTS



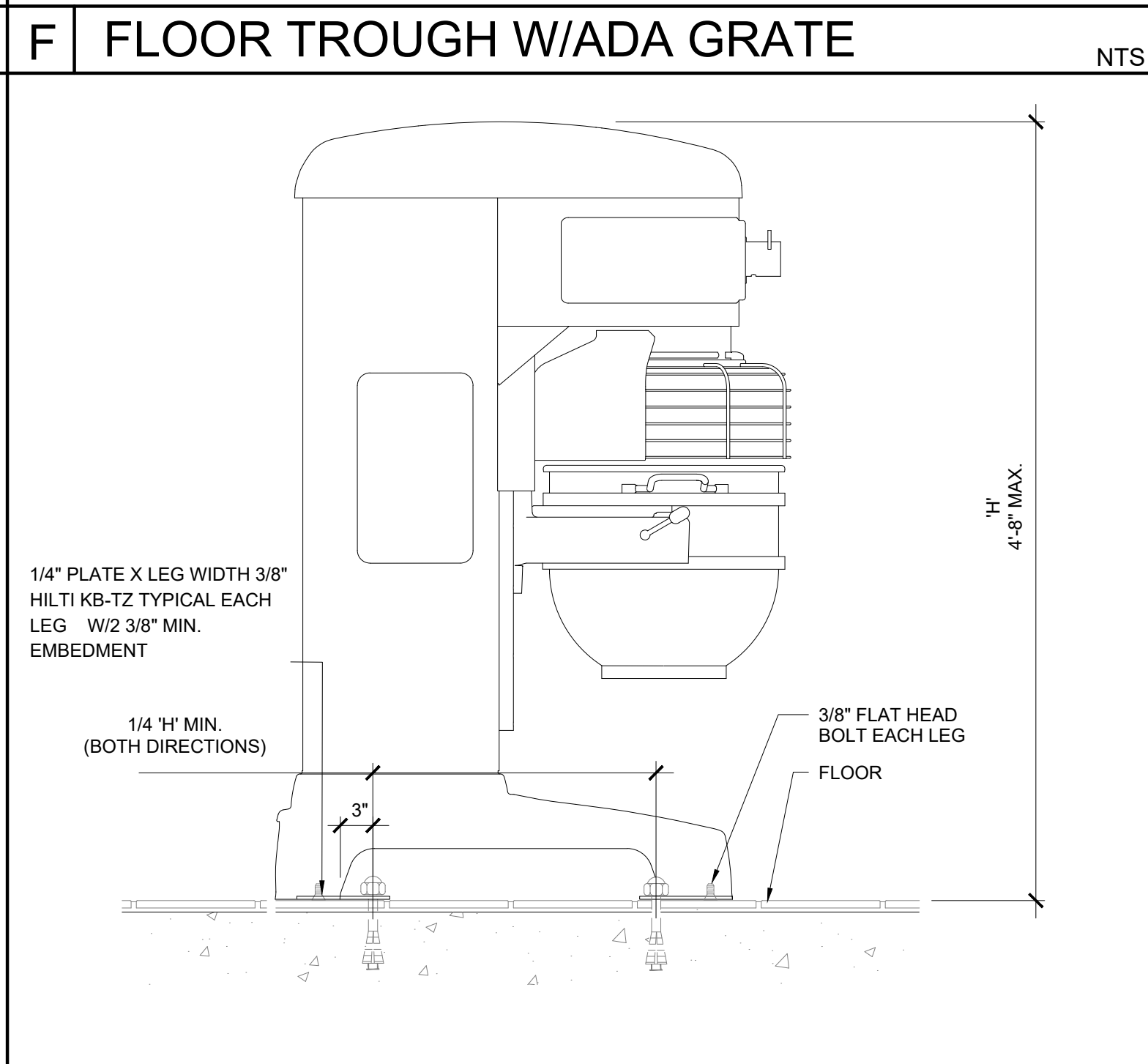
F FLOOR TROUGH W/ADA GRATE NTS



G S/S WALL FLASHING DETAIL NTS



H WALL MOUNTED SHELF NTS



I FLOOR MOUNTED MIXER NTS



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KITCHEN RENOVATION  
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT  
DETAILS

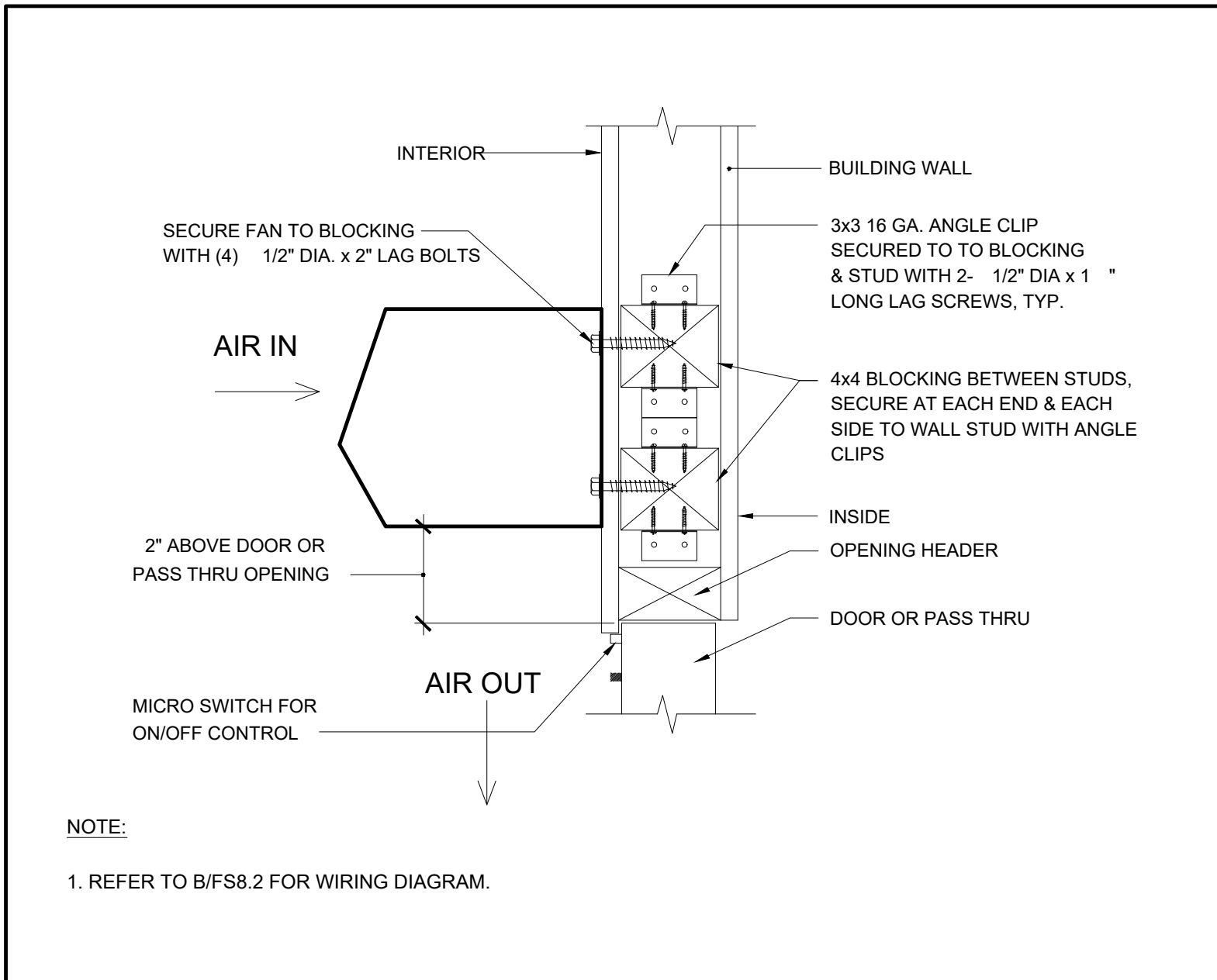
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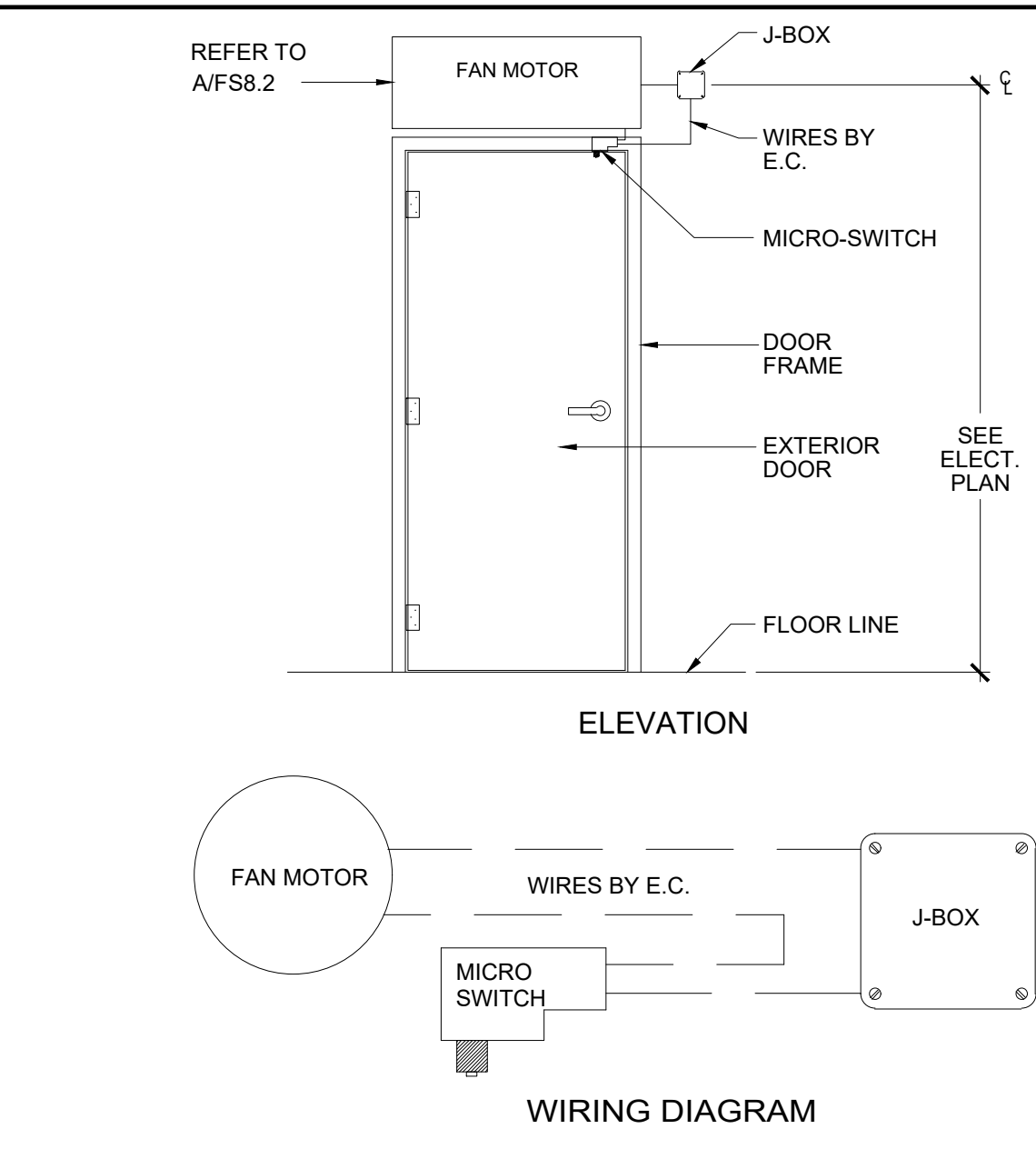
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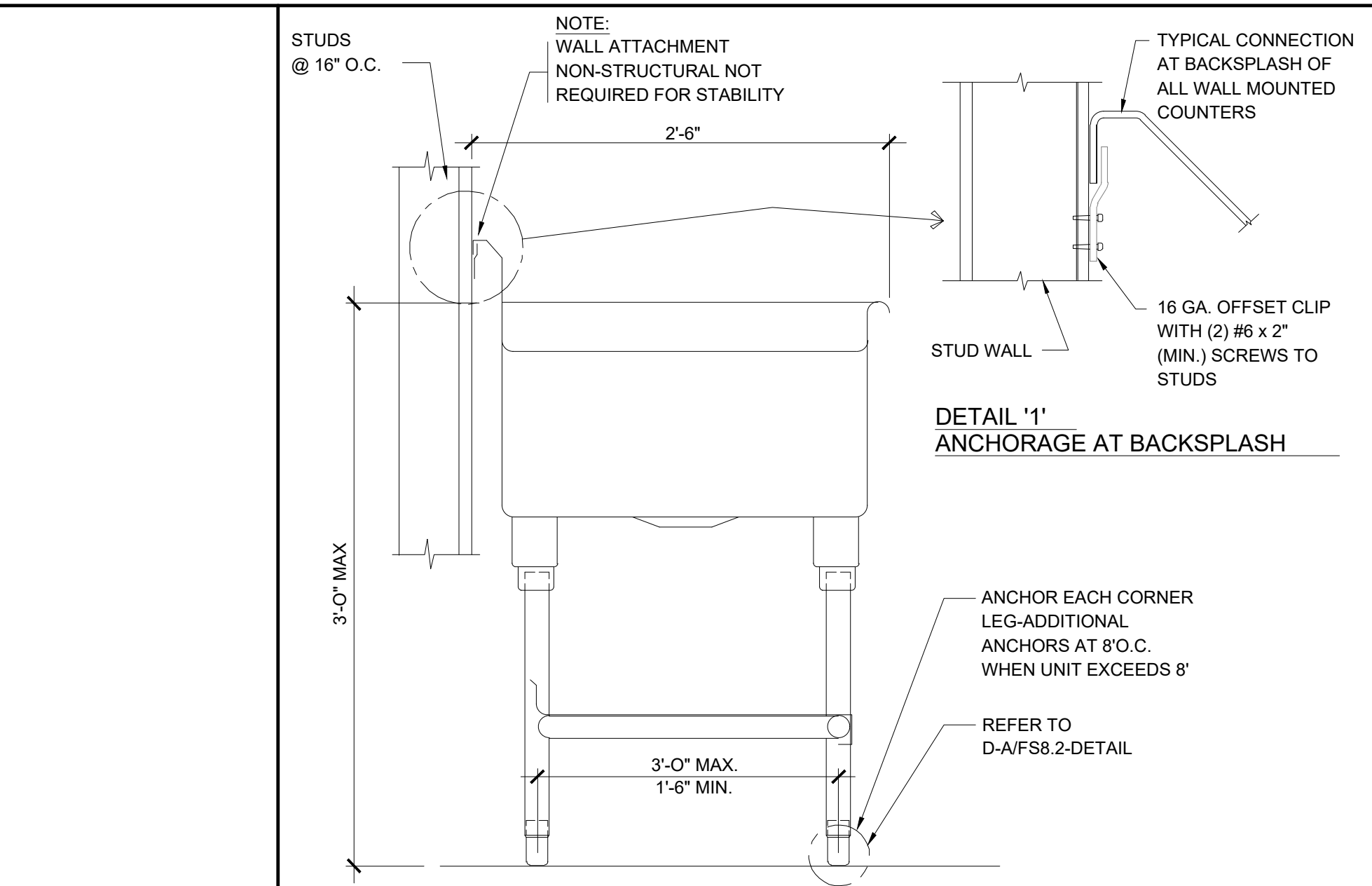
OF XX SHEETS



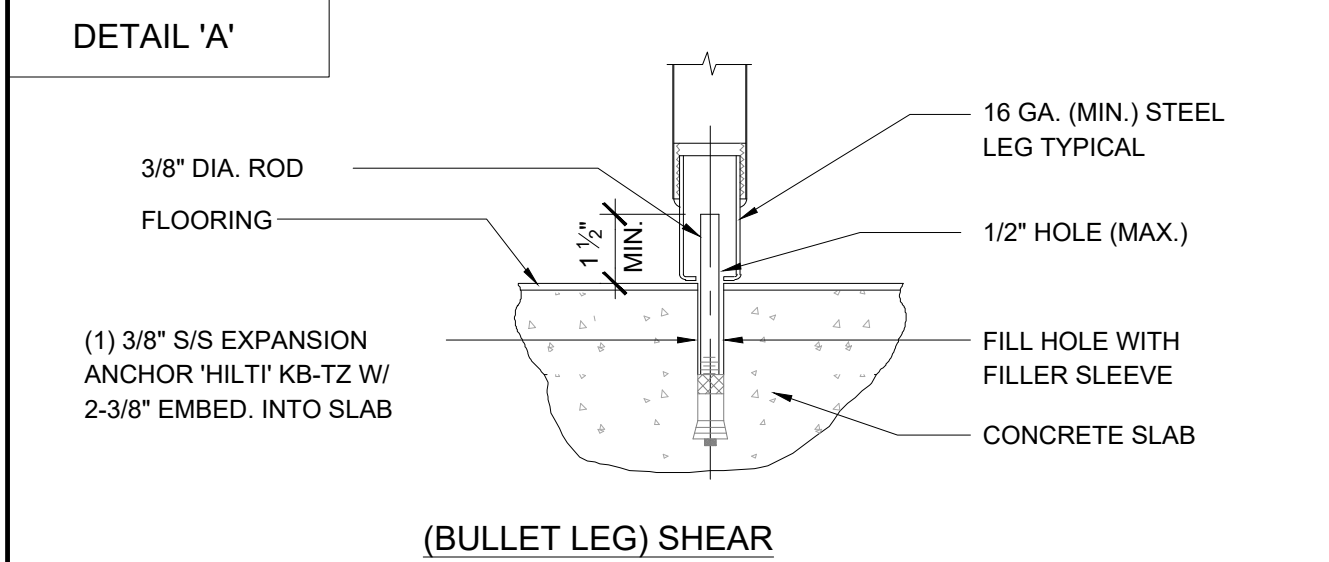
A AIR CURTAIN MOUNTING DETAIL



B WALL MTD. AIR CURTAIN MICRO SW.

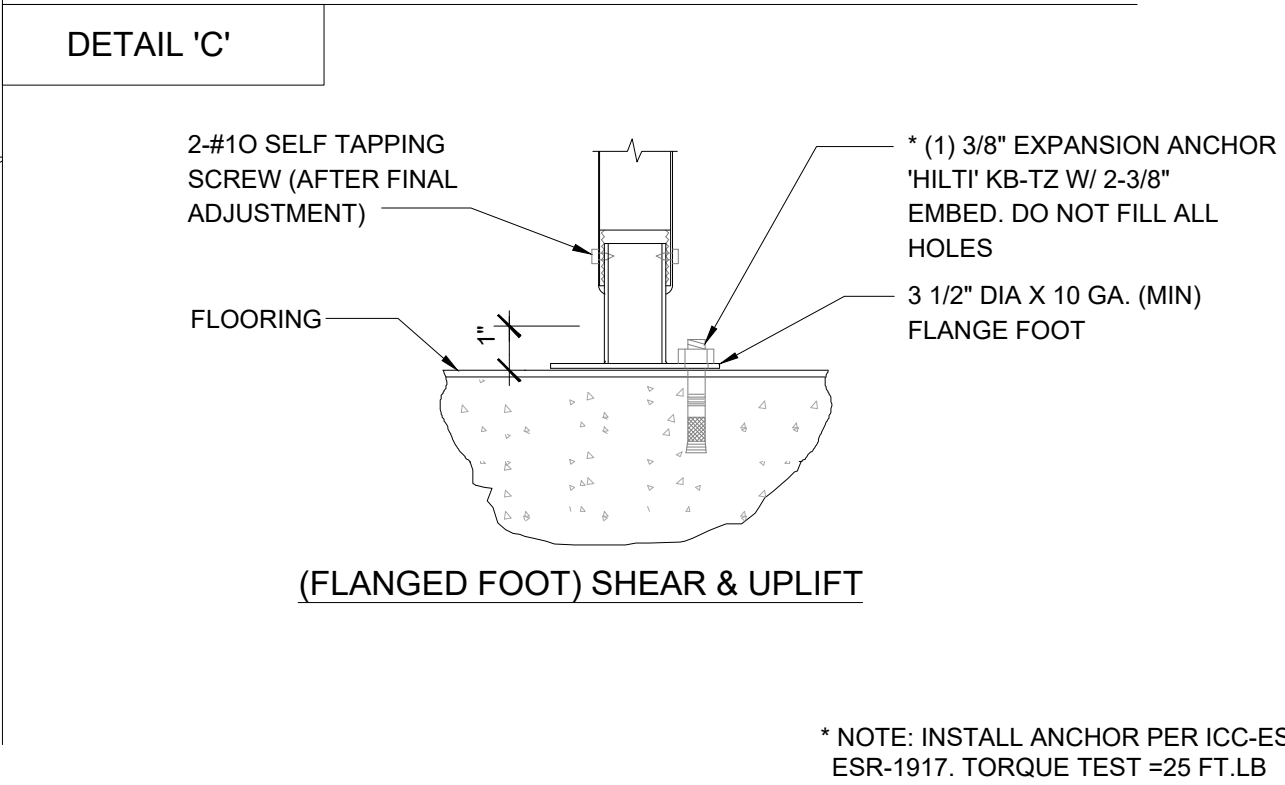


C FLOOR MOUNTED SINK @ WALL

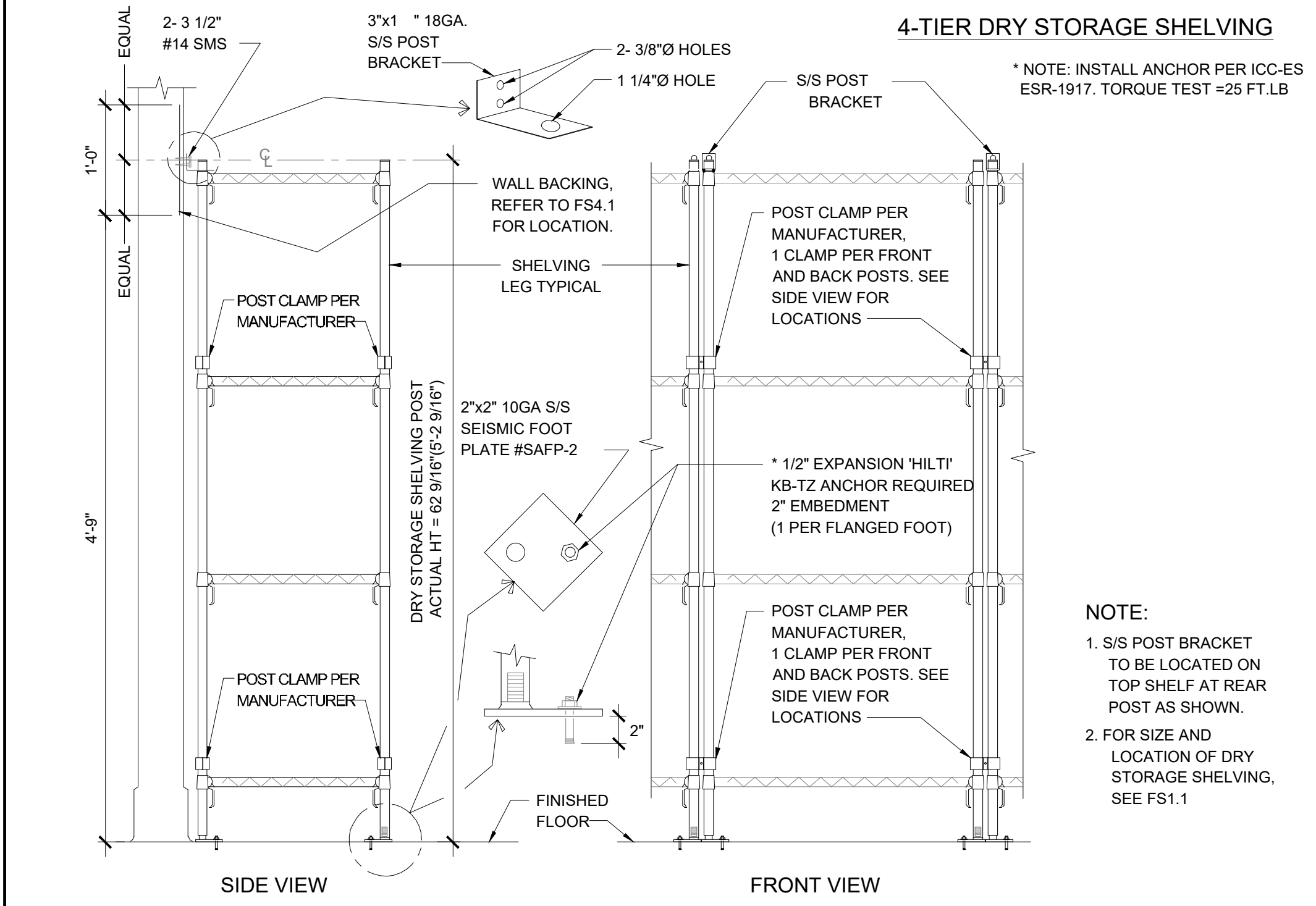


DETAIL 'B'

NOTUSED

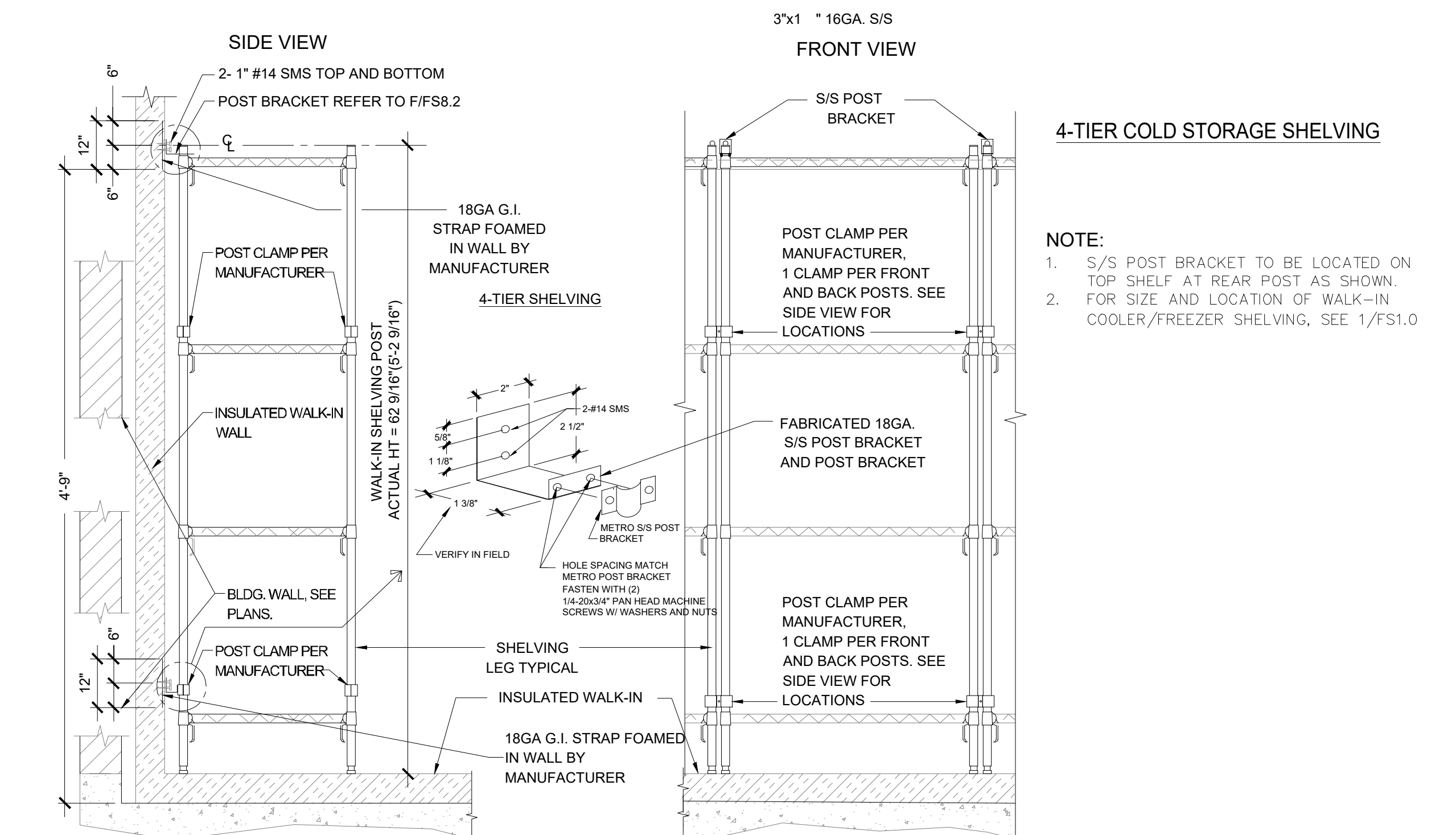


D FOOT ANCHORAGE DETAIL



F DRY STORAGE SHELVING ATTACHMENT

E ACCESSIBLE HAND SINK DETAILS



G COLD STORAGE SHELVING ATTACHMENT





**HENRY+**  
**ASSOCIATES**

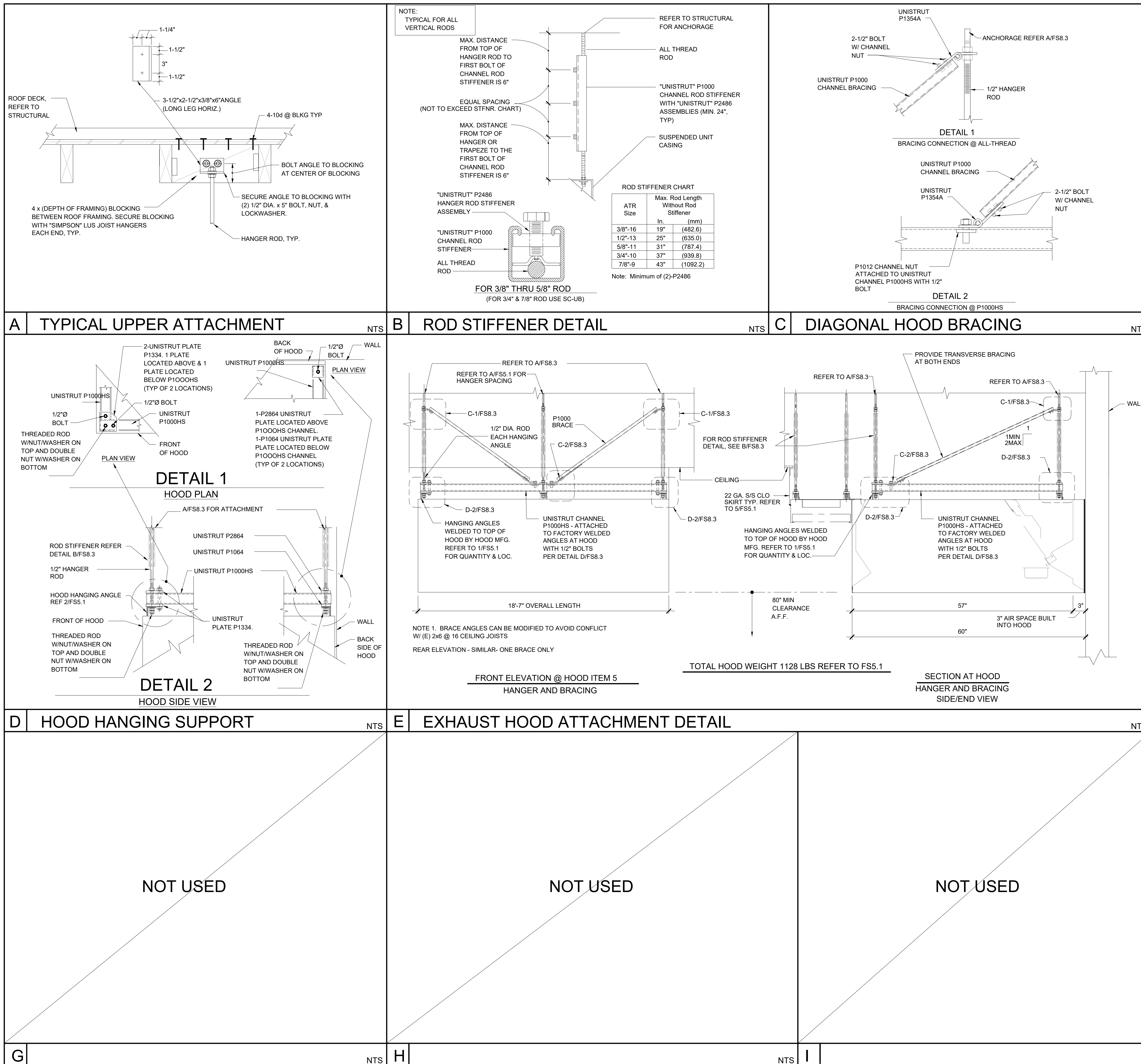


## FOODSERVICE EQUIPMENT DETAILS



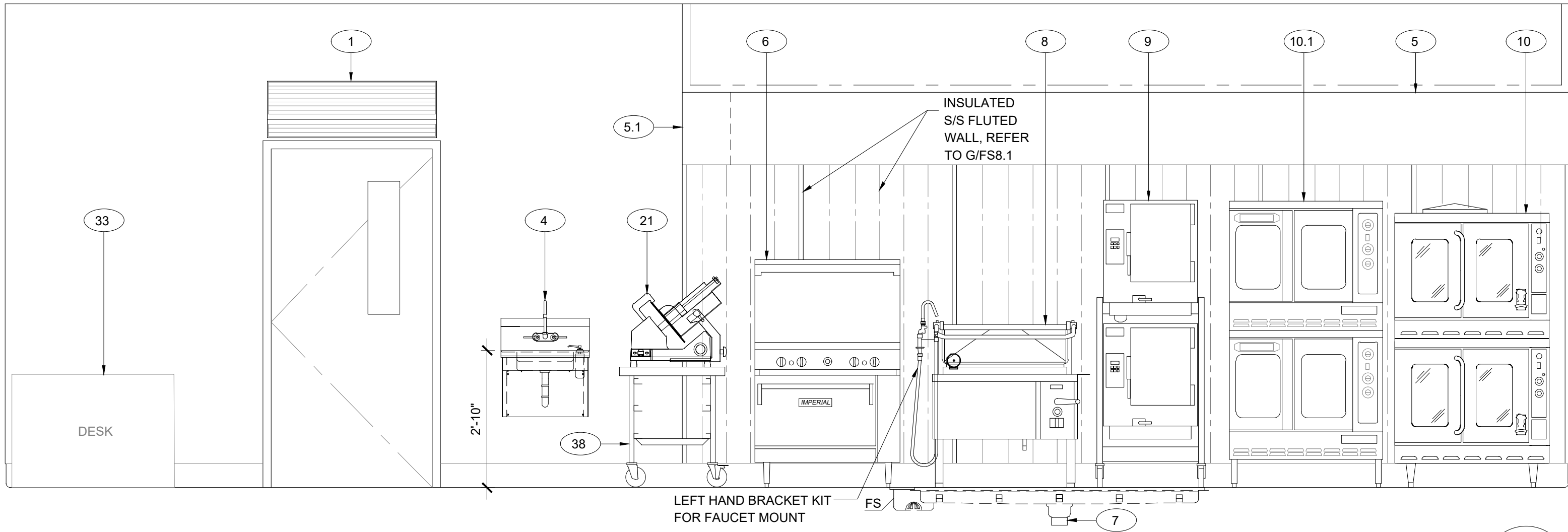
**AMD**  
FOODSERVICE DESIGN

## FS8.3





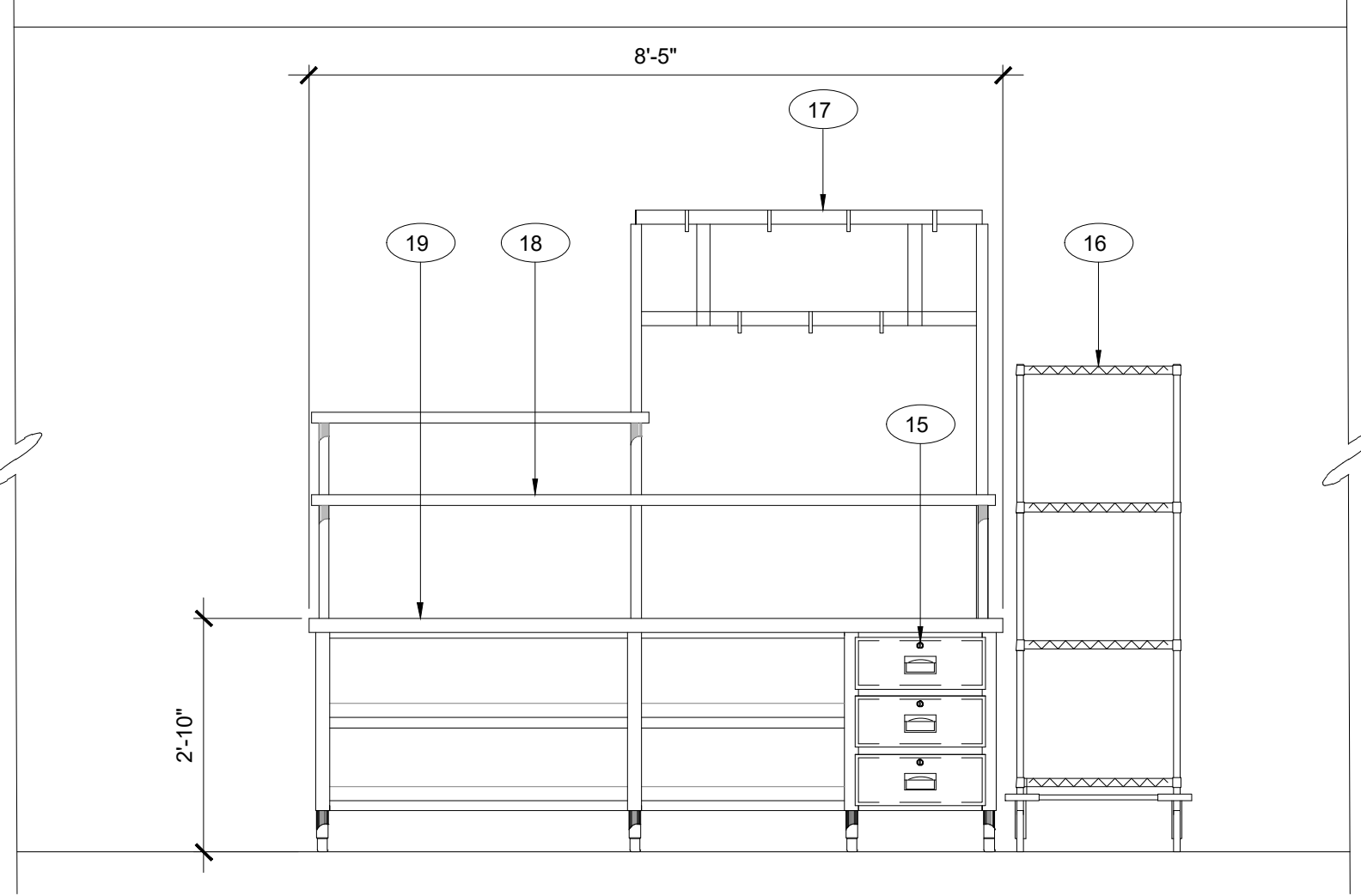
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ELEVATIONS

SCALE : 1/2" = 1'-0"

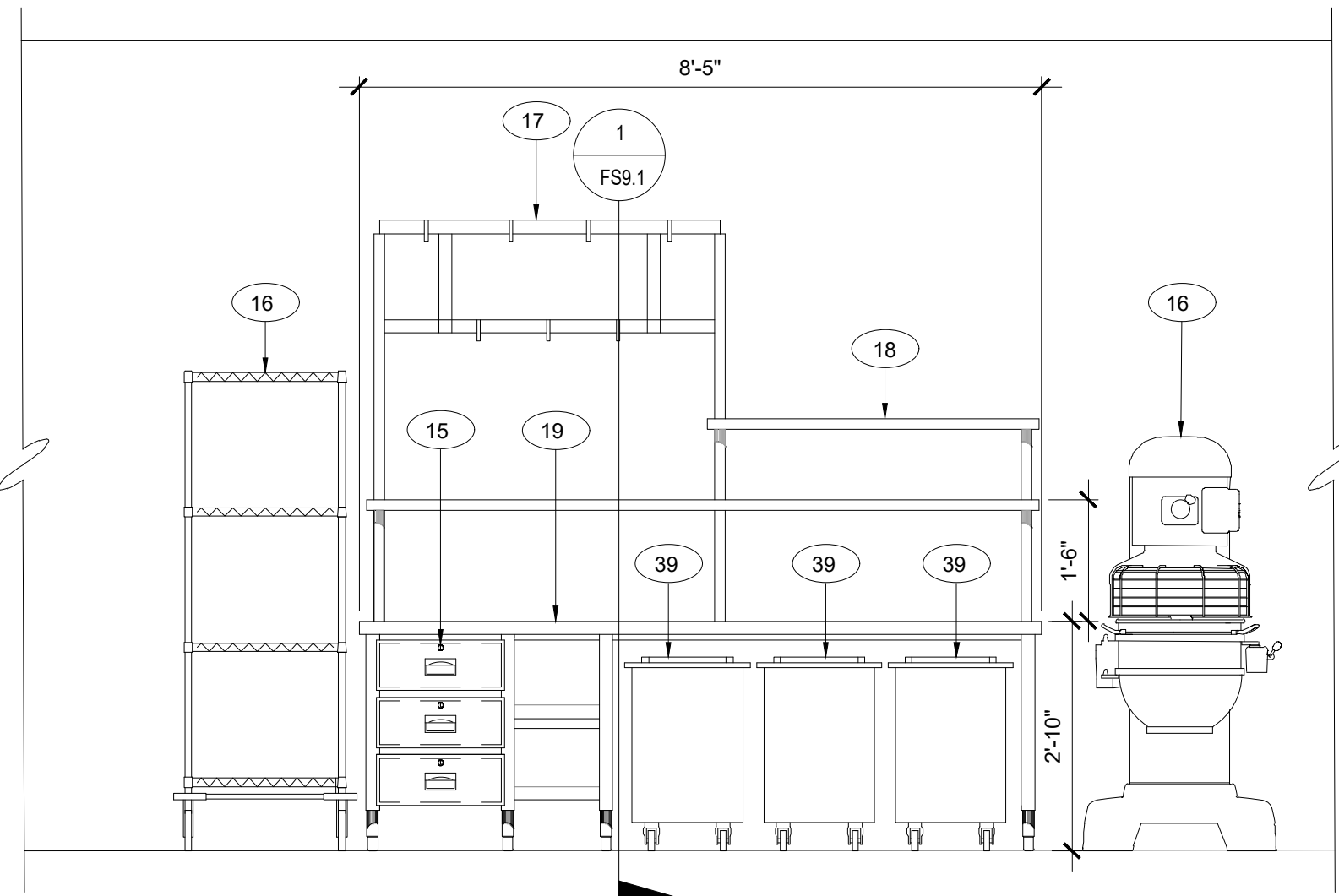
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FS9.1



ELEVATION

SCALE : 1/2" = 1'-0"

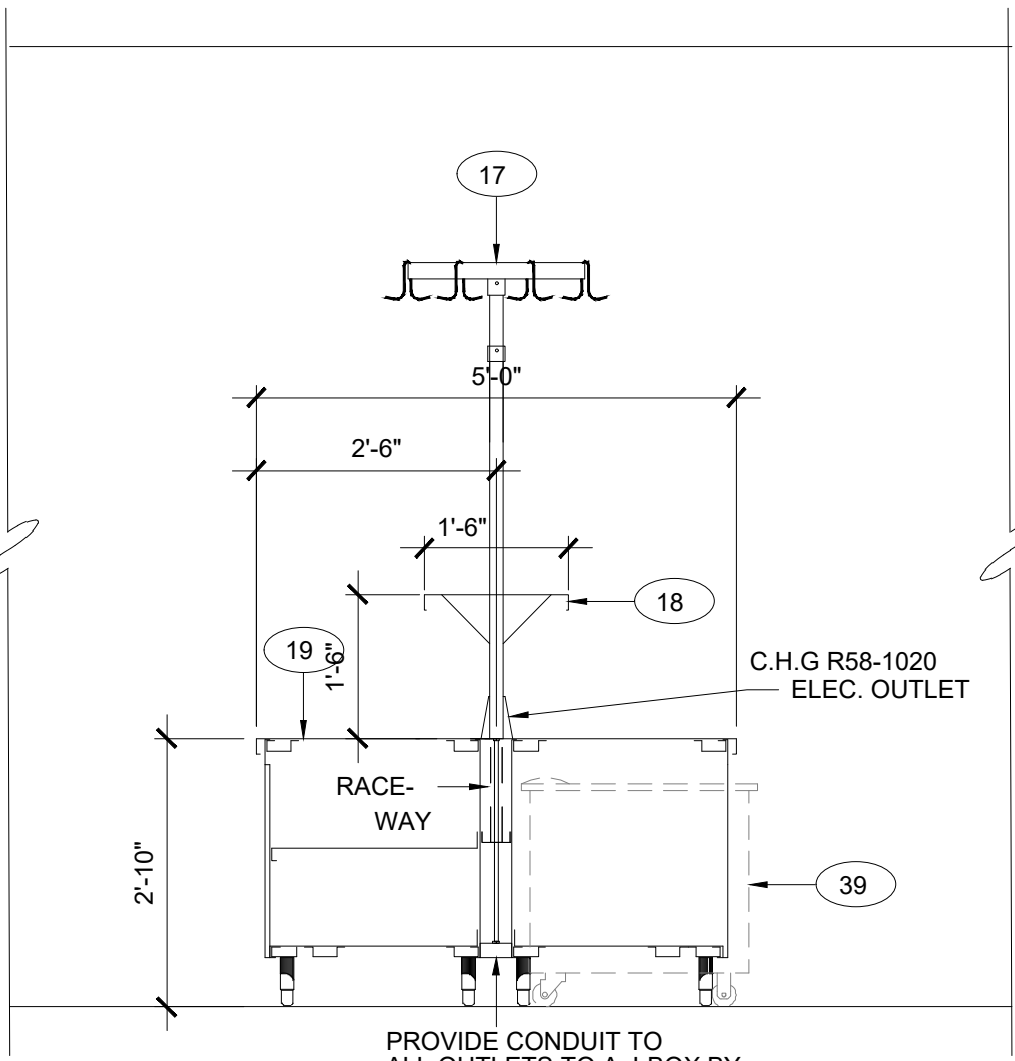
B  
FS9.1



ELEVATION

SCALE : 1/2" = 1'-0"

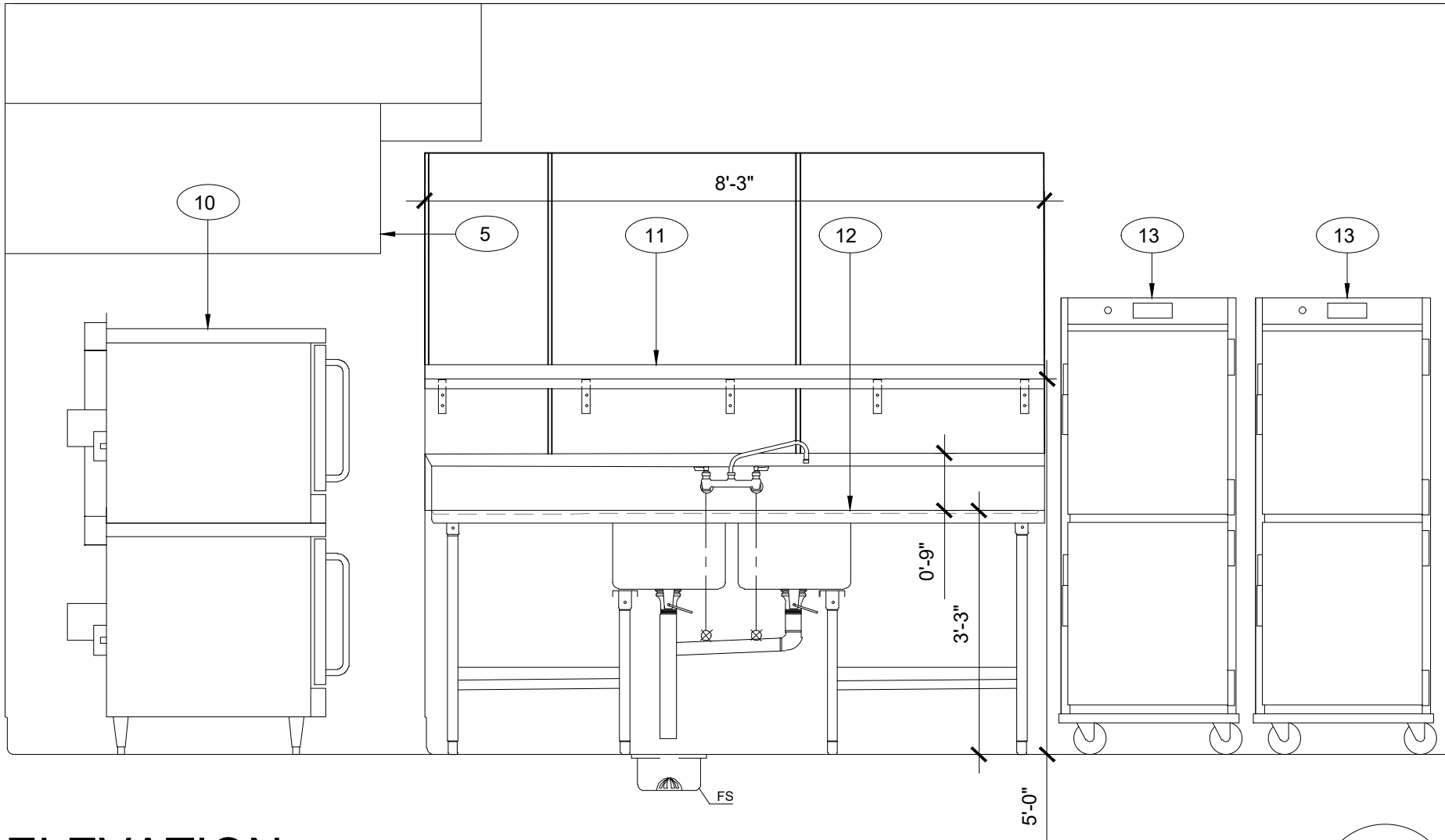
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FS9.1



SECTION

SCALE : 1/2" = 1'-0"

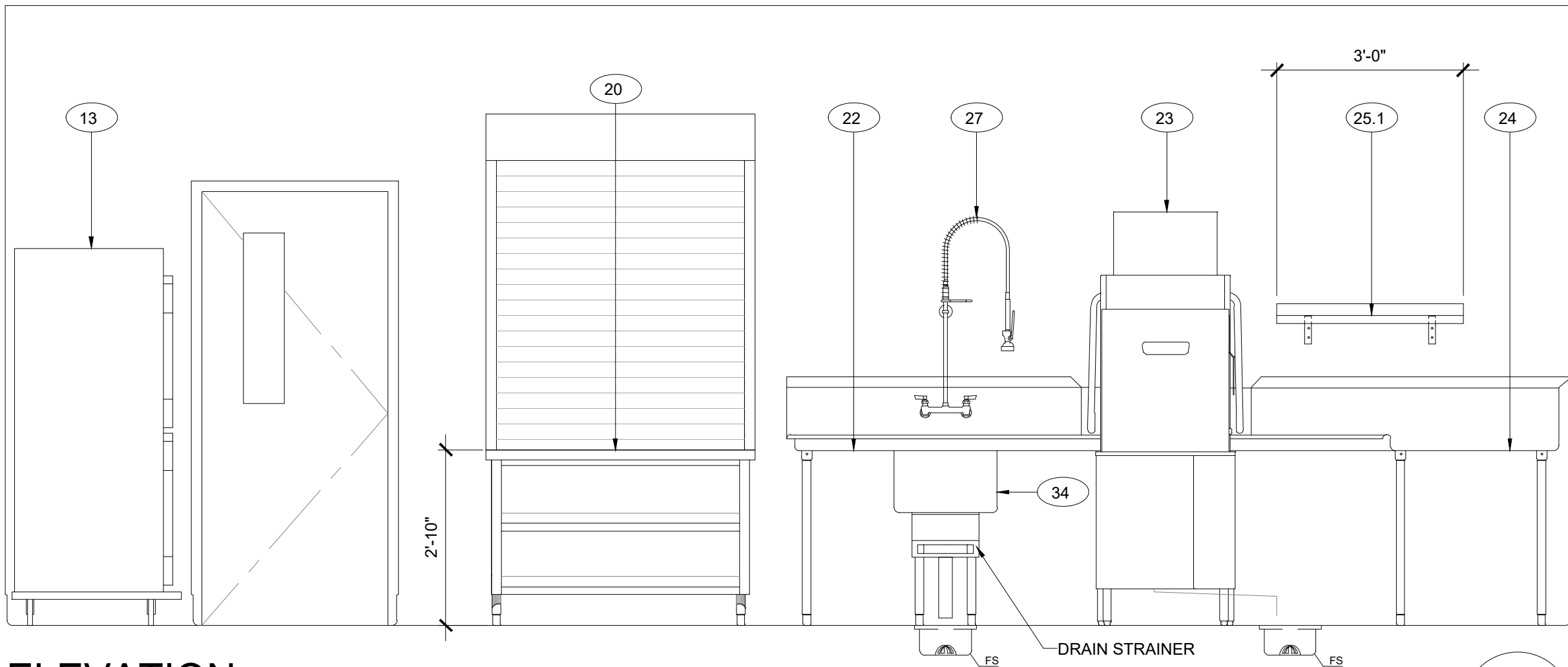
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FS9.1



ELEVATION

SCALE : 1/2" = 1'-0"

D  
FS9.1



ELEVATION

SCALE : 1/2" = 1'-0"

E  
FS9.1

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FOODSERVICE EQUIPMENT  
ELEVATIONS

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