

GENERAL NOTES

THE FOLLOWING GENERAL NOTES ARE A SUMMARY OF THE SPECIFICATIONS FOR THE CONVENIENCE OF THE CONTRACTOR. REFER TO THE SPECIFICATIONS.

GENERAL

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES FOUND.
2. SPECIFIC CODES AND DETAILS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES AND THE TYPICAL DETAILS ON THIS SHEET IN CASE OF CONFLICT.
3. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK, THE DETAILS USED SHALL BE THE SAME AS FOR OTHER SIMILAR WORK, PROVIDED THAT PRIOR APPROVAL IS OBTAINED FROM THE ARCHITECT OR ENGINEER.
4. THE DESIGN IS BASED ON THE 2022 CALIFORNIA BUILDING CODE, TITLE 24, CALIFORNIA CODE OF REGULATIONS (C.C.R.).
5. NEITHER THE OWNER NOR THE ARCHITECT WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.

FOUNDATION:

1. CHARACTER OF FOUNDATION SOIL: REFER TO SOILS REPORT PREPARED BY: WILLDAN ENGINEERING GEOTECHNICAL GROUP, ANAHEIM, CA, PROJECT NO. 11153-2010, DATED JULY 01, 2022 TEL. NO. (714) 634-3318
2. MAXIMUM SOIL PRESSURE: 2,000 PSF. FOOTINGS SHALL EXTEND A MINIMUM DEPTH OF 18" BELOW LOWEST ADJACENT FINISH GRADE. ALL FOOTINGS MUST BEAR ENTIRELY IN ENGINEERED FILL MATERIAL.
3. FOR EXCAVATIONS, BACKFILL & COMPACTION, COMPLY WITH CBC. REFER TO SOILS REPORT FOR EARTHWORK & SITE GRADING RECOMMENDATION.

DESIGN CRITERIA

1. "CALIFORNIA BUILDING CODE", 2022 EDITION, AND STANDARDS REFERENCED THEREIN.
2. "RECOMMENDED LATERAL FORCE REQUIREMENTS AND COMMENTARY" BY THE STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA, LATEST EDITION.
3. DESIGN LOADS:
- A. LIVE LOADS
- ROOF..... 20 PSF (REDUCIBLE)
- B. DEAD LOADS
- FLAT ROOF..... 15 PSF (PLUS 5 PSF FOR FUTURE SOLAR AT HIGH ROOF)
- C. WIND (PER CBC) SPEED 110 M.P.H. EXP. C
- Pnet = 0.00256 (V² Kz Cnet Kzt
- LESS THAN 15 FEET ABOVE GROUND..... Pnet= 14.8 PSF (ON MWFRS)
- 15.1 TO 20 FEET ABOVE GROUND..... Pnet= 15.1 PSF (ON MWFRS)
- PARAPET..... Pnet= 35.0 PSF (ON MWFRS)
- LESS THAN 15 FEET ABOVE GROUND..... Pnet= 23.3 PSF (COMPONENTS ZONE 5)
- (10 SQ. FEET OR LESS)
- LESS THAN 15 FEET ABOVE GROUND..... Pnet= 19.0 PSF (COMPONENTS ZONE 4)
- (10 SQ. FEET OR LESS)
- Kz = 0.85..... (0-15')
- Kz = 0.98..... (UP TO 30')
- Kzt = 1.0
- Cnet = 0.94 (0.51 & 0.43)..... (ON MWFRS)
- Cnet = 1.09 & 1.34..... COMPONENTS & CLADDING ZONE 4 & 5)
- D. SEISMIC (SITE CLASS "D", SEISMIC DESIGN CATEGORY "D")
- BASE SHEAR: V = Cs W = 0.083 W (ASD) (LIGHT FRAME PLYWOOD PANELS)
- WHERE: R = 6.5 (LIGHT FRAME PLYWOOD PANELS)
- Sp6 = 1.163 (PER SOILS REPORT)
- Sp1 = 0.109 (PER SOILS REPORT)
- Ss = 1.145 (PER SOILS REPORT)
- S1 = 0.625 (PER SOILS REPORT)
- Ie = 1.00
- Cs = 1 Sp6 / R

CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE "REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301) LATEST APPROVED EDITIONS, WITH MODIFICATIONS AS NOTED IN THESE DRAWINGS AND SPECIFICATIONS.
2. CONTINUOUS INSPECTION BY A CITY APPROVED INSPECTOR IS REQUIRED FOR ALL STRUCTURAL REINFORCED CONCRETE WORK.
3. THE CONTRACTOR SHALL SUBMIT THE CONCRETE DESIGN MIXES FOR REVIEW BY THE ARCHITECT. ALL CONCRETE DESIGN MIXES MUST BE SIGNED BY A CALIFORNIA REGISTERED CIVIL ENGINEER.
4. THE ARCHITECT/ENGINEER SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF ALL CONCRETE PLACEMENT.
5. SLABS ON-GRADE SHALL BE CAST IN SQUARE OR RECTANGULAR PORTIONS NOT EXCEEDING APPROXIMATELY 250 SQUARE FEET IN AREA WITH A MAXIMUM DISTANCE OF 15 FEET BETWEEN CONSTRUCTION OR CONTROL JOINTS AS SHOWN ON THE PLAN. THE CONTRACTOR SHALL SUBMIT A POUR SEQUENCE SCHEDULE FOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO CASTING ANY SLABS.
6. ALL BELOW GRADE TRENCHES SHALL COMPLY WITH DETAIL (2/9.1) & (6/9.1)

CONCRETE (CONT'D)

1. CONCRETE STRENGTHS: THE CONCRETE STRENGTHS SHOWN IN THE FOLLOWING TABLE ARE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, THE AGGREGATES SHOWN ARE THE MAXIMUM SIZE (INCHES) AND THE SLUMP SHOWN IS THE MAXIMUM (INCHES). THE CONCRETE MIXES SHALL BE PROPORTIONAL AS REQUIRED IN CBC AND ACI 318.

ITEM OF CONSTRUCTION	STRENGTH	AGGREGATE	SLUMP	W/C RATIO
1) HARDBLOCK CONCRETE (145 P.C.F. AVERAGE, TYPE II PORTLAND CEMENT)				
A. FOOTINGS & GRADE BEAMS	3,000 PSI	1 1/2	4	0.50
B. SLAB ON GRADE	4,000 PSI	1	4	0.45

8. (NOT USED)
9. THE EVALUATION AND ACCEPTANCE OF CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF CBC.
10. MINIMUM PROTECTIVE COVER FOR REINFORCING STEEL:
- A. ON EARTH SIDE WHEN PLACED AGAINST EARTH..... 3 IN.
- B. ON EARTH SIDE WHEN FORMED..... 2 IN.
- C. EXTERIOR WALL ABOVE GRADE..... 1 IN.
- D. INTERIOR WALL AND SUPPORTED SLABS..... 3/4 IN.
- E. TIED COLUMNS (STIRRUPS) ABOVE GRADE..... 1 1/2 IN.
- F. BEAMS (STIRRUPS) ABOVE GRADE..... 1 1/2 IN.
11. WHERE A CONSTRUCTION JOINT IS TO BE MADE, THEIR LOCATION AND DETAILS SHALL BE SUBJECT TO THE REVIEW OF THE ARCHITECT AND EOR.
12. ALL CONSTRUCTION JOINTS SHALL BE CLEANED BY WATER-BLAST OR ABRASIVE-BLAST METHODS BEFORE PLACING NEW CONCRETE.
13. CONCRETE PLACEMENTS SHALL BE CONTINUOUS BETWEEN CONSTRUCTION JOINTS.
14. ALL VERTICAL SURFACES OF CONCRETE ABOVE FINISH GRADE SHALL BE FORMED.
15. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE COLUMNS, WALLS, SLABS OR FOOTINGS UNLESS SPECIFICALLY DETAILED OR UNLESS SLEEVES ARE PROVIDED IN ACCORDANCE WITH THE TYPICAL DETAIL (2/9.1)
16. PROVIDE SLEEVES FOR ALL PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE POURING. DO NOT CUT ANY REINFORCING. CORING OF CONCRETE IS NOT PERMITTED EXCEPT AS SHOWN.
17. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS OF PIPES, DUCTS, VENTS AND SIMILAR OPENINGS.

REINFORCING STEEL

1. DETAILS OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH CHAPTER 25 OF "AMERICAN CONCRETE INSTITUTE 318" UNLESS OTHERWISE NOTED. REINFORCING STEEL DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
2. WELDING OF REINFORCING STEEL, IF PERMITTED BY THE STRUCTURAL ENGINEER, SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE - REINFORCING STEEL" OF THE AMERICAN WELDING SOCIETY, AWS D1-4, AND SHALL BE PERFORMED BY WELDERS QUALIFIED UNDER THE PROCEDURES CONTAINED THEREIN.
3. (NOT USED)
4. ALL REINFORCING STEEL SHOP DRAWINGS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER AND THE ARCHITECT PRIOR TO FABRICATION.
5. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60 FOR NO. 5 AND LARGER, OTHERWISE GRADE 40. WELDED REINFORCING SHALL CONFORM TO ASTM 106.
6. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185, FLAT SHEETS.
7. WALLS AND COLUMNS SHALL BE DOWELED FROM SUPPORTS WITH BARS OF THE SAME SIZE AND SPACING.
8. SPACER TIES: PROVIDE A MINIMUM OF 3 TIES AT 24 INCHES IN ALL BEAMS AND FOOTINGS.
9. SPLICE MINIMUM REINFORCING IN ACCORDANCE WITH THE TYPICAL DETAIL (9/9.1) STAGGER ALL HORIZONTAL REINFORCING SPLICES.
10. PROVIDE MINIMUM EMBEDMENT OF REINFORCING IN CONFORMANCE WITH THE TYPICAL DETAIL (9/9.1) U.N.O.
11. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATION" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
12. ALL REINFORCING STEEL, ANCHOR BOLTS AND OTHER EMBEDDED ITEMS SHALL BE SECURELY HELD IN POSITION AND SHALL BE INSPECTED PRIOR TO PLACING CONCRETE.

STRUCTURAL STEEL:

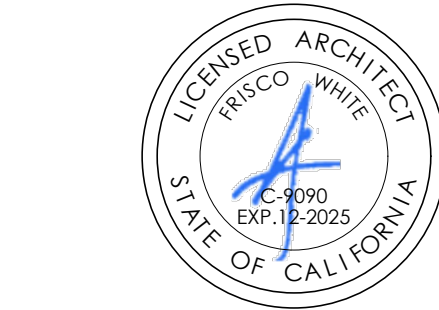
1. STRUCTURAL STEEL SHALL COMPLY WITH ASTM A-992 (FY=50 KSI), EXCEPT FOR PLATES & MISCELLANEOUS STEEL USE ASTM A-36 (FY=36 KSI) UNLESS NOTED OTHERWISE.
2. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH A.I.S.C. "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
3. ALL WELDING SHALL BE BY THE ARC WELDING PROCESS USING E-70 ELECTRODES AND CERTIFIED WELDERS.
4. CONNECTED MEMBERS SHALL BEAR ONLY UPON THE UNTHREADED PORTION OF THE BOLTS FOR A325-X TYPE CONN. ONLY. ALL OTHER BOLTS MAY BEAR ON THE THREADED PORTION OF THE BOLTS.
5. PIPE COLUMNS SHALL COMPLY WITH ASTM A-53, GRADE B (FY=35 KSI).
6. RECTANGULAR / SQUARE TUBE COLUMNS & BEAMS SHALL COMPLY WITH ASTM A-500, GRADE B (FY=46 KSI).
7. MACHINE BOLTS SHALL COMPLY WITH ASTM A-307 GRADE A, UNLESS OTHERWISE NOTED.
8. ALL HIGH STRENGTH BOLTS SHALL BE TIGHTENED TO THE SNUG TIGHT CONDITION, UNLESS IDENTIFIED AS SLIP-CRITICAL CONNECTIONS. ALL BOLTED CONNECTION OF THE SLRS SYSTEM SHALL BE MADE WITH PRE-TENSIONED BOLTS WITH CLASS A FAYING SURFACES.
9. ALL FIELD WELDING AND SHOP WELDING SHALL BE INSPECTED BY AWS CERTIFIED WELDING INSPECTOR.
10. ALL FULL PENETRATION GROOVE WELDS IN MATERIAL 5/16" OR GREATER ARE REQUIRED TO HAVE ULTRASONIC TESTING (UT) PERFORMED BY A CERTIFIED TESTING INSPECTION LABORATORY.
11. ALL EXPOSED EXTERIOR STRUCTURAL STEEL MUST BE HOT DIPPED GALVANIZED.

COLD FORMED LIGHT GAUGE METAL FRAMING

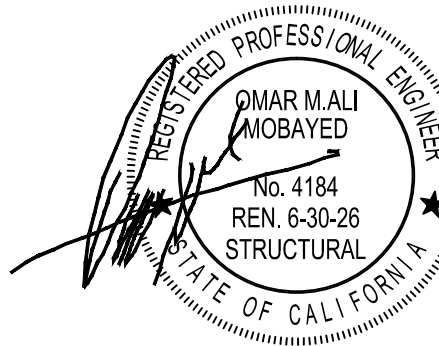
1. ALL STUDS SHALL BE BY DIETRICH INDUSTRIES, INC. (SFIA CERTIFIED) (DIETRICH) LIGHT GAUGE STRUCTURAL FRAMING PRODUCTS, ICC-ESR No. 1166P. ALL STUDS, TRACK AND MISC. SECTIONS SHALL BE AS FOLLOWS:
- STUDS - 18 GA. (43 mil) OR LIGHTER..... ASTM A1003, GRADE 33 KSI
- STUDS - 16 GA. (54 mil) OR HEAVIER..... ASTM A1003, GRADE 50 KSI
- TRACKS & PLATES - 18 GA. (43 mil) OR LIGHTER..... ASTM A1003, GRADE 33 KSI
- TRACKS & PLATES - 16 GA. (54 mil) OR HEAVIER..... ASTM A1003, GRADE 50 KSI
- ANGLES AND PLATE - (ALL GAUGES)..... GRADE 33 KSI
- SIZES AND GAUGES OF EXTERIOR STUD FRAMING SHALL BE PER ATTACHED DETAILS
- ALL TOP AND BOTTOM TRACKS SHALL BE THE SAME GAUGE AS THE WALL STUDS, U.N.O.
- PROVIDE BRACING OF ALL STUD FLANGES AS REQUIRED PER BRIDGING DETAIL (3/9.2)
2. ALL STUD TO STUD AND STUD TO TRACK CONNECTION SHALL BE #10 SELF-DRILLING, SELF-TAPPING, GALVANIZED SHEET METAL SCREWS WITH MINIMUM 3 EXPOSED THREADS PENETRATION, U.N.O.
- MINIMUM SPACING..... 3/4"
- MINIMUM EDGE DISTANCE..... 5/8"
3. CONNECTORS TO CONCRETE (FOR INTERIOR NON-SHEAR & NON-BEARING WALLS) SHALL BE:
- MIN. 0.151" X-U POWDER-ACTUATED FASTENERS (PAF) MANUFACTURED BY: HILTI ESR-2269, WITH 1/2" MIN. CONCRETE PENETRATION.
- MINIMUM SPACING..... 4"
- MINIMUM EDGE DISTANCE..... 3"
- NOTE: PROVIDE 3 PAF'S PER SEGMENT OF TRACK.
4. CONNECTORS TO STRUCTURAL STEEL (FOR UP TO 1/2" THICK STEEL) SHALL BE MIN. 0.151" X-U POWDER-ACTUATED FASTENERS (PAF) U.N.O., MANUFACTURED BY: HILTI ESR-2269, WITH KNURLED SHANK, WITH FASTENER POINT DRIVEN COMPLETELY THROUGH BACK SIDE OF HOT-ROLLED STEEL MEMBERS.
- MINIMUM SPACING..... 1 1/2"
- MINIMUM EDGE DISTANCE..... 1 1/2"
- NOTE: PROVIDE 3 PAF'S PER SEGMENT OF TRACK.
5. ALL CLIP ANGLE CONNECTIONS SHALL BE 1/2"x1/2"x1/8" GA. WITH 1- #10 SHEET METAL SCREWS EACH LEG, EA. STUD TYP. U.N.O.
6. METAL STUDS SHALL BE INSTALLED WITH THEIR BEARING ENDS POSITIONED FLUSH AGAINST THE INSIDE TRACK WEB, TYP. UNO.
7. FLOOR, ROOF OR CEILING JOISTS SHALL HAVE THE SAME ON-CENTER SPACING AS THE WALL STUDS, AND JOISTS SHALL BE ALIGNED DIRECTLY OVER STUDS AS TO AVOID BENDING IN THE WALL TOP TRACK.
8. BLOCK METAL STUDS AT MIDNIGHT OF WALL.
9. ALL PLYWOOD SHALL BE DOUGLAS FIR CONFORMING TO PS-1-19, EXPOSURE 1, STRUC. I EXCEPT WHERE PERMANENTLY EXPOSED USE EXTERIOR GRADE.
10. PLACE METAL BLOCKING BETWEEN ALL ROOF JOISTS AND RAFTERS AT SUPPORTS.
11. CROSS BRIDGE WITH SIMPSON "TB" CONTINUOUS BETWEEN ALL ROOF JOISTS AT 8'-0" MAX. O.C.
12. BOLTS SHALL HAVE 3" MINIMUM & 8" MAXIMUM END DISTANCE AND MUST BE LOCATED AT MIDDLE OF SILL TRACK. TWO ANCHORS ARE REQUIRED FOR A PIECE FF SILL TRACK.
13. FOR TOP OF WALL TRACKS AT CORNERS & INTERSECTIONS, CLIP ONE OF THE TRACKS FLANGES AND LAP IT WITH THE OTHER WITH 4-#10 SWS.
14. ALL BOLTS SHALL BE FITTED WITH WASHERS. HOLES IN STEEL SHALL BE DRILLED WITH A BIT 1/16" LARGER THAN THE BOLT.
15. STEEL FRAMING CONNECTORS SHALL BE MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY UNLESS ALTERNATE CONNECTORS HAVE BEEN APPROVED BY THE ENGINEER & DSA PRIOR TO CONSTRUCTION. CONNECTORS SUBJECT TO CONDITIONS OF EXT. EXPOSURE, CONTACT WITH PRESERVATIVE TREATED WOOD, OR MOISTURE SHALL BE HOT-DIPPED GALVANIZED.
16. ALL BOLTS SHALL BE RE-TIGHTENED PRIOR TO COVERING WITH WALL SHEATHING.



ARCHITECT



CONSULTANT



City of La Puente

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GENERAL NOTES

La Puente
ACTIVITY CENTER

501 GLENDORA AVE. LA PUENTE, CA. 91744

PROJECT NO.: 22008	R.S.	A.P.
FILE NAME	DATE: 12/05/2025	DRAWN SM CHECKED OM
REVISIONS	SHEET NO.	S1.0
MCG# 23007-B	OF	SHEETS

CITY APPROVAL

NOTE:

1. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN A 12" DEPTH OF FRESH CONCRETE CAST BELOW THE REINFORCEMENT. MULTIPLE HORIZONTAL BARS IN A SINGLE VERTICAL PLANE SUCH AS COLUMN TIES OR HORIZONTAL BARS IN WALLS, ARE NOT TOP BARS.
2. LENGTH IS IN INCHES.
3. BARS SPACED BY NON-CONTACT LAP SPICES IN FLEXURAL MEMBERS SHALL NOT BE SPACED TRANSVERSELY FARTHER APART THAN THE 1/5 REQUIRED LAP SPICE LENGTH, NOR 9x6 INCHES.
4. DIMENSION "E" WITH STANDARD HOOK SHALL HAVE A MIN. OF 2 1/2" SIDE COVER AND 2" MIN. END COVER.
5. LAP SPICE BETWEEN DIFFERENT BAR SIZES SHALL BE THAT OF THE LARGER SIZE BAR.
6. BAR SPACING SHALL BE LARGER THAN 3 x BAR DIAMETER.
7. THE ABOVE SCHEDULE IS BASED ON CONCRETE STRENGTH OF 3000 psi

Diagram illustrating a staggered splice for reinforcement bars. The diagram shows two horizontal lines representing reinforcement bars. A diagonal line indicates the staggered splice. Labels include: "LARGER SIZE BAR." pointing to the top bar, "STAGGERED SPLICES" pointing to the diagonal line, "REINF. TYP." pointing to the bottom bar, and "PLAN" at the bottom center.

TYP. STEPPED WALL FTG.

Diagram illustrating three types of steel reinforcement details:

- ALTERNATE CORNER:** Shows a corner reinforcement detail with a dimension of 2'-6" MIN.
- INTERSECTION:** Shows a reinforcement detail at an intersection with a dimension of 2'-6" MIN.
- TYPICAL CORNER:** Shows a corner reinforcement detail with a dimension of 2'-6" MIN. and a note indicating "FOR 90° BEND SEE" with a circular symbol containing the number 8.

REINF. @ INTERSECTIONS OF BEAMS, FOOTINGS, CONCRETE & MASONRY WALLS

MIN. FIG. DEPTH INDICATED ON TYP. FIG. DET'S

1'-6" MIN.

BACKFILL TRENCH PER SPEC'S

LOCATE PIPE TRENCH SO THAT FOOTING WILL NOT BE UNDERMINED

ADD'L DEPTH OF FTG. ACHIEVED BY STEP'G

FIG. PER 5

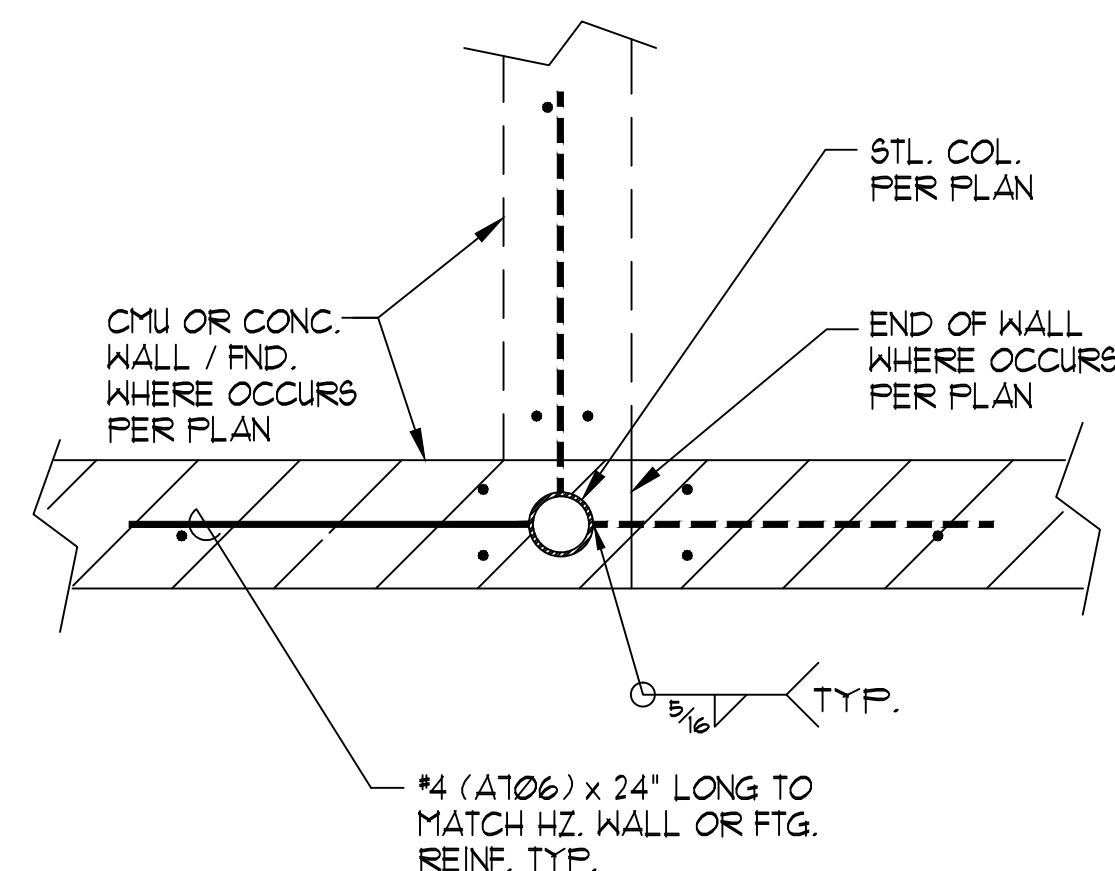
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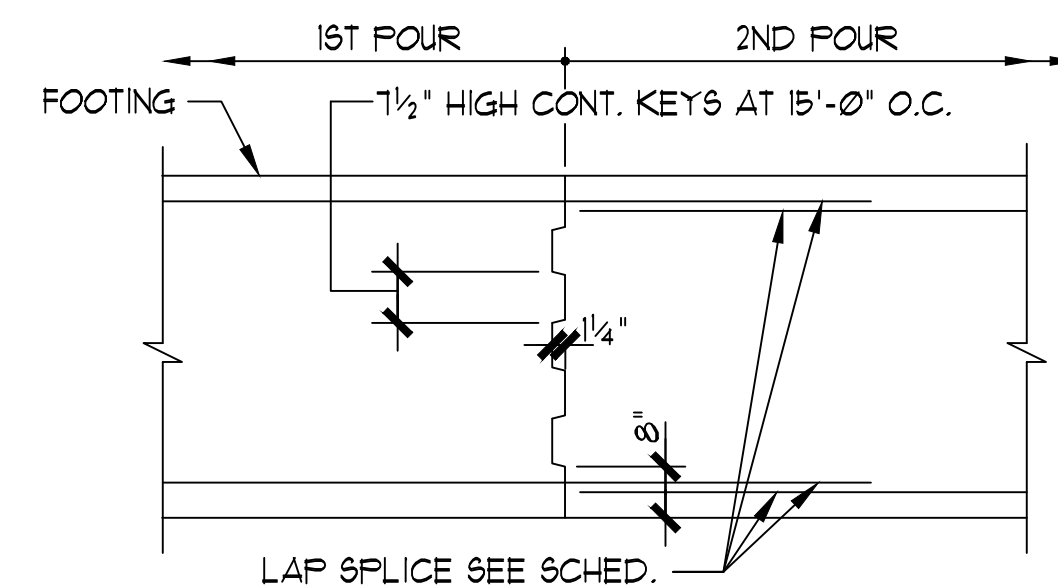
NO EXCAVATION BELOW THIS LINE UNLESS APPROVED BY GEO. TECHNICAL ENGR

PIPING DETAIL ADJACENT TO CONTINUOUS FOOTING

DET. OF PIPING THROUGH CONTINUOUS FTG.



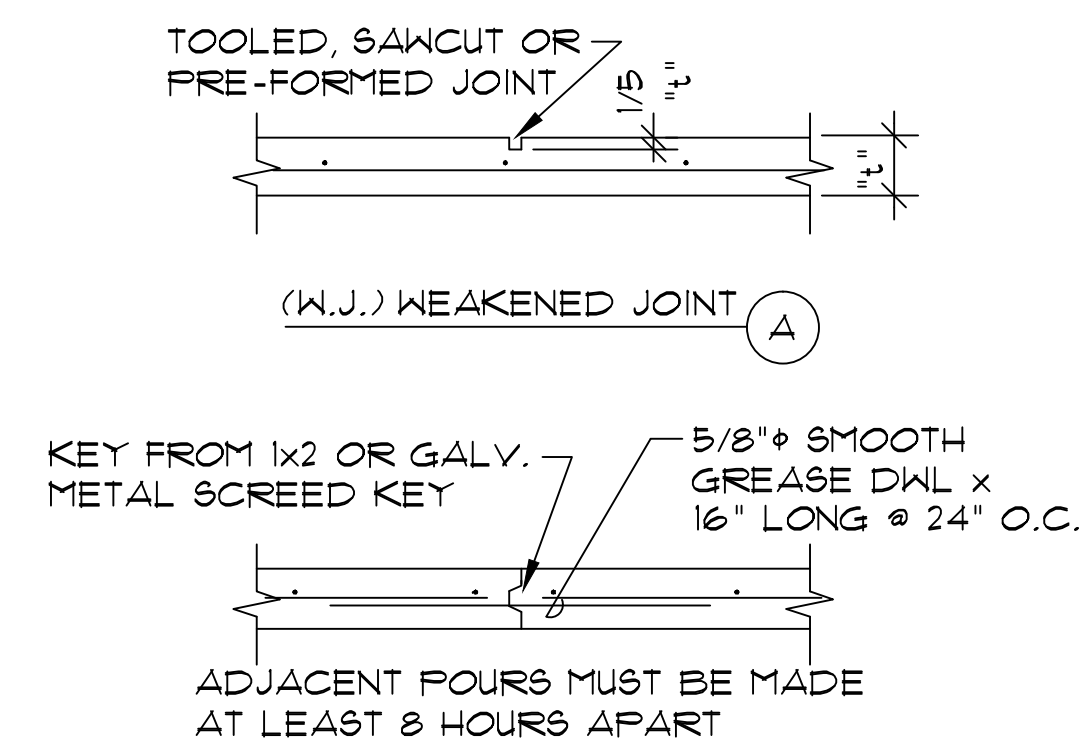
TYP. STL. COL. IN CMU OR CONC. WALL / FND.



SECTION

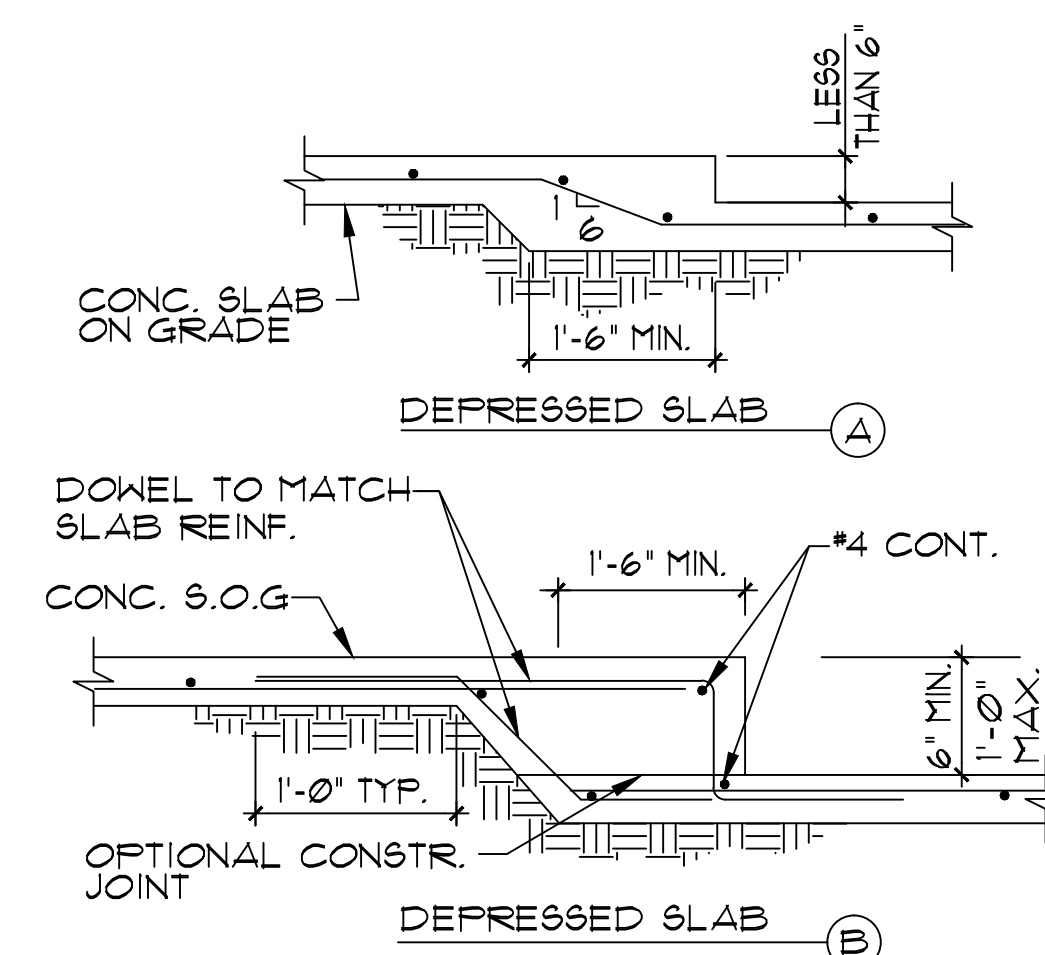
NOTE: WELDED SPLICES REQ'D FOR #14 & LARGER BARS.
WHERE CONT. FOOTING IS UNDER A WALL, LOCATE
CONSTRUCTION JOINT AT 1/4 OF THE CLEAR OPENING
WIDTH ABOVE FROM FACE OF OPENING, OR IN
MIDDLE 1/2 OF THE DISTANCE BETWEEN COLUMNS.

11

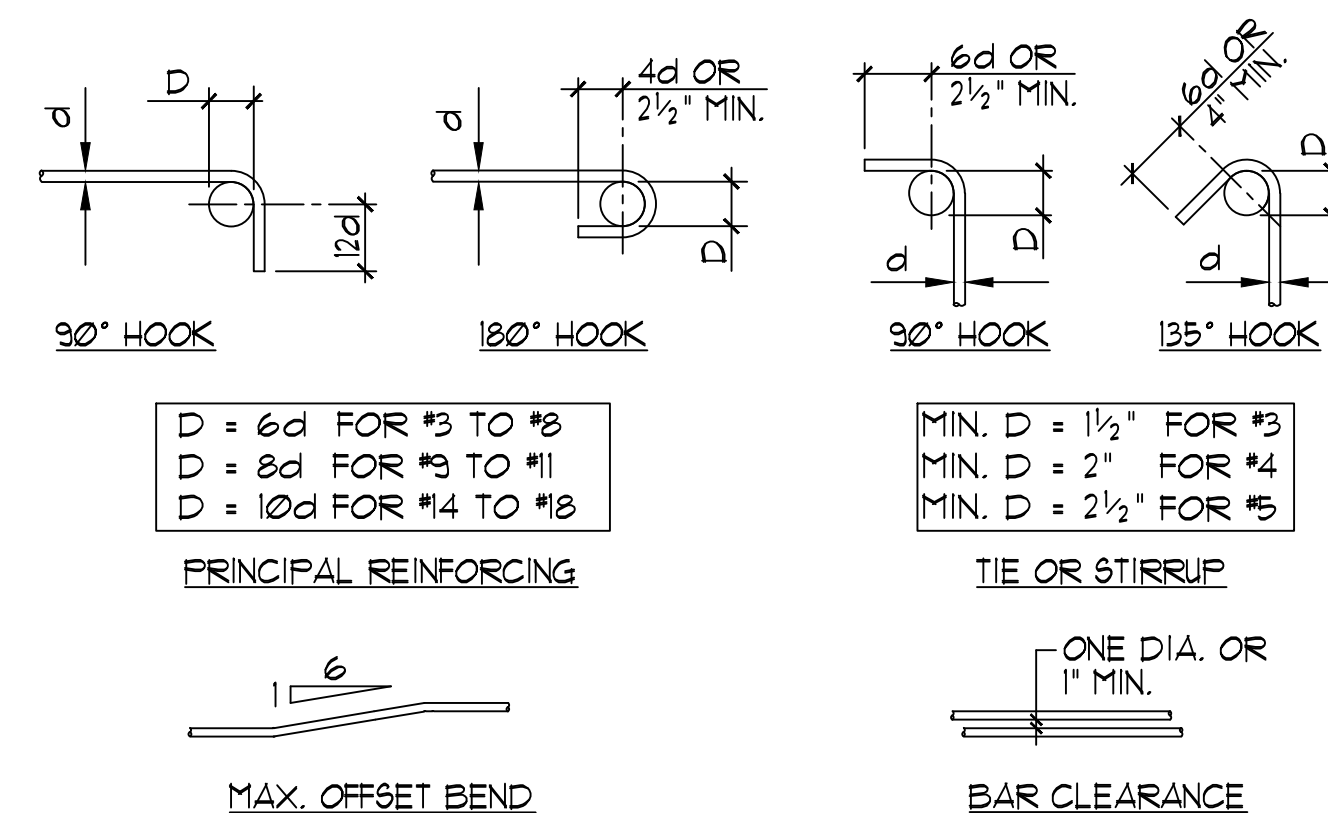


TYP. SLAB ON GRADE JOINTS

7



12



NOTE: ALL BENDS SHALL BE MADE COLD

BAR BENDS

8



TYPICAL DETAILS

**La Puente
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PROJECT NO.: 22008 R.S.
FILE NAME DATE: 12/05/2025
REVISIONS
MCG# 23007 B

S1.1
OF SHEETS

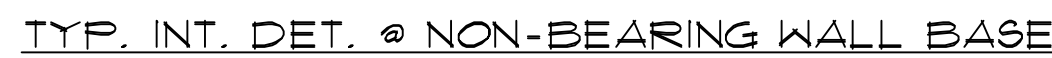
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CITY APPROVAL



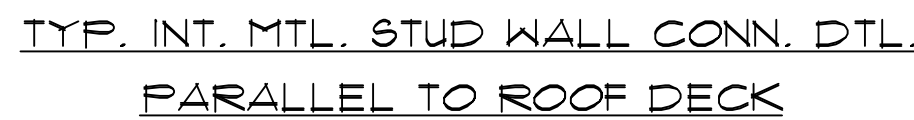
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2



11



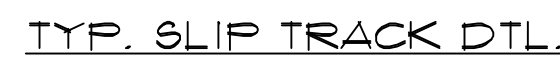
1. INSTALL BRIDGING ROWS SPACED AT 4'-0" MAX. FROM POINT OF LATERAL SUPPORT. (EQUALLY SPACED BETWEEN POINTS OF LATERAL SUPPORT).
2. CLIP ANGLE LENGTH SHALL NOT BE MORE THAN $\frac{1}{2}$ " LESS THAN STUD DEPTH.

TYP. STUD LATERAL BRIDGING DTL.

3



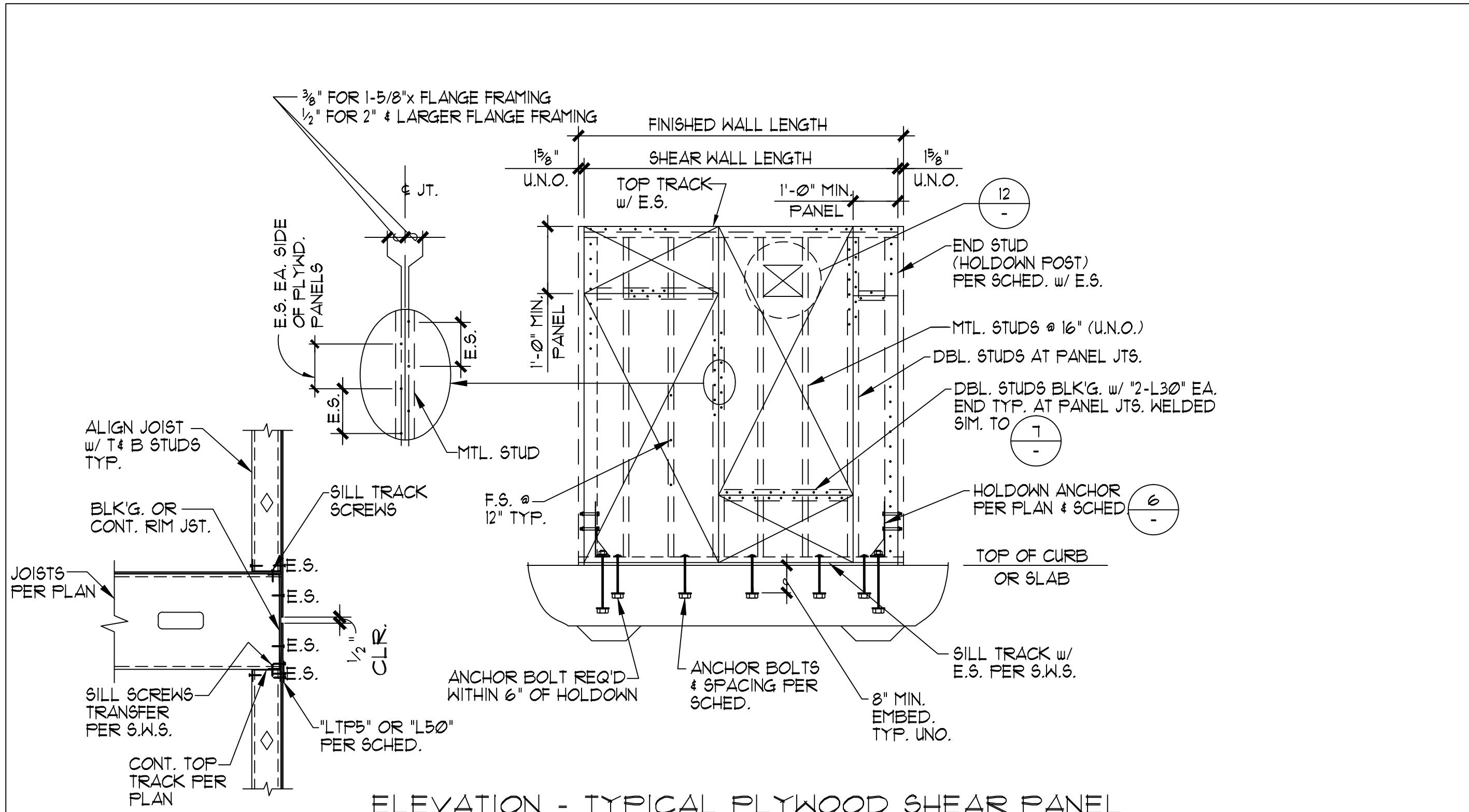
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(4)



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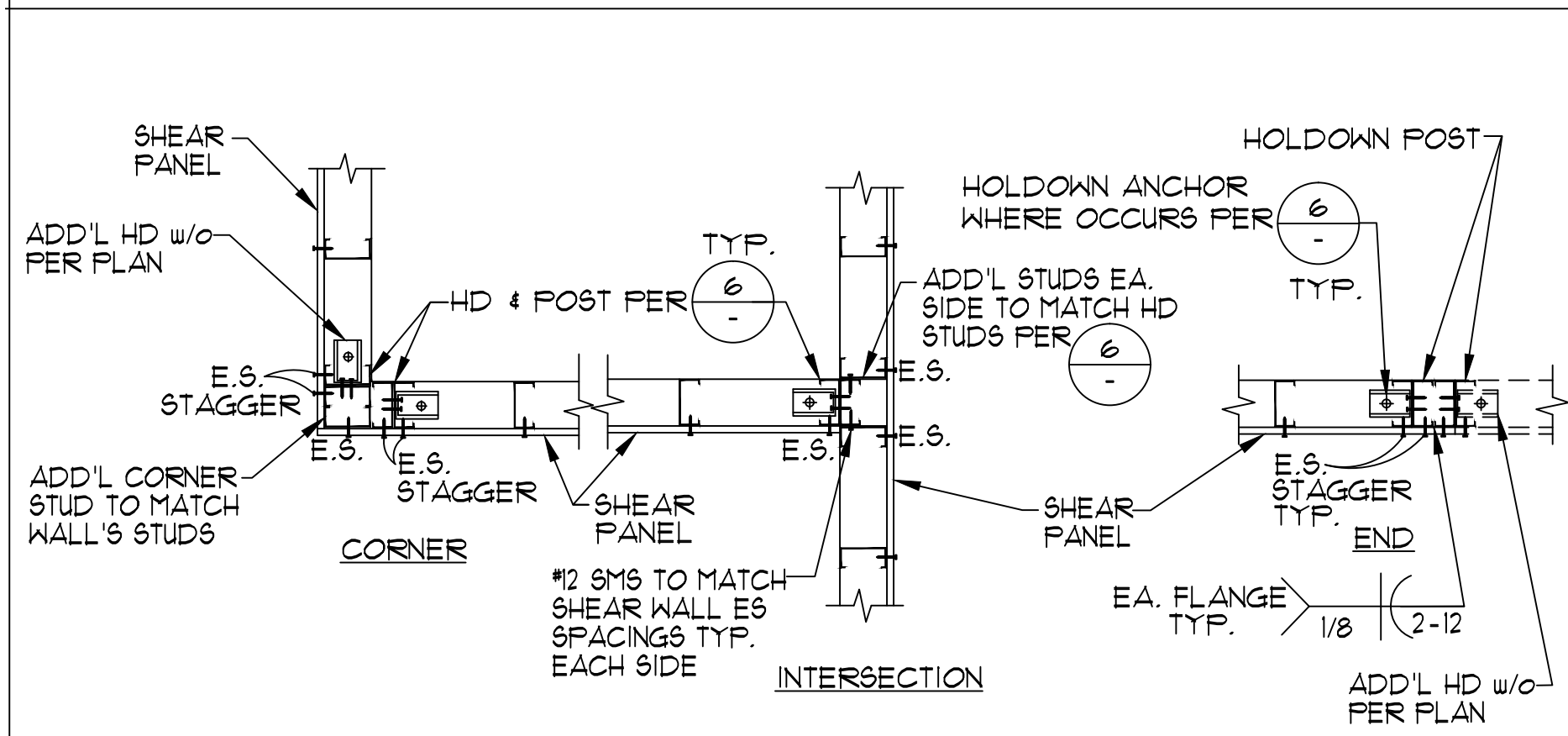
ELEVATION - TYPICAL PLYWOOD SHEAR PANEL

- NOTES:
1. FIELD METAL SCREWS @ 12" O.C. MIN.
 2. ALL EDGE SCREWS TO BE WITH #10 S.M.S. (0.333" DIA. FLAT HEAD)
 3. 3 ANCHOR BOLTS MIN. PER SHEAR WALL SILL PLATES.
 4. USE 3/8"x18" LONG ANCHOR BOLTS WHERE 6" CONCRETE CURB OCCURS.
 5. PROVIDE DBL. STUDS AT PANEL JOINTS TYP.
 6. IF "LTP5" CLIPS ARE USED OVER PLYWOOD, THE CONTRACTOR MUST USE #10 S.M.S.
 7. ALL ANCHOR BOLTS SHALL BE ACCURATELY AND SECURELY SET PRIOR TO PLACEMENT OF CONCRETE.
 8. PROVIDE SIMPSON "BPS 3/8"-6" WASHER PLATE ON ALL ANCHOR BOLTS IN SHEAR WALLS. MAINTAIN 1/2" MAX. EDGE OF WASHER IE TO EDGE OF SILL TRACK w/ PLYWD. SHEATHING.
 9. FOR 14 GA. STUDS AND THICKER REPLACE #8 SCREWS WITH #10 SCREWS.

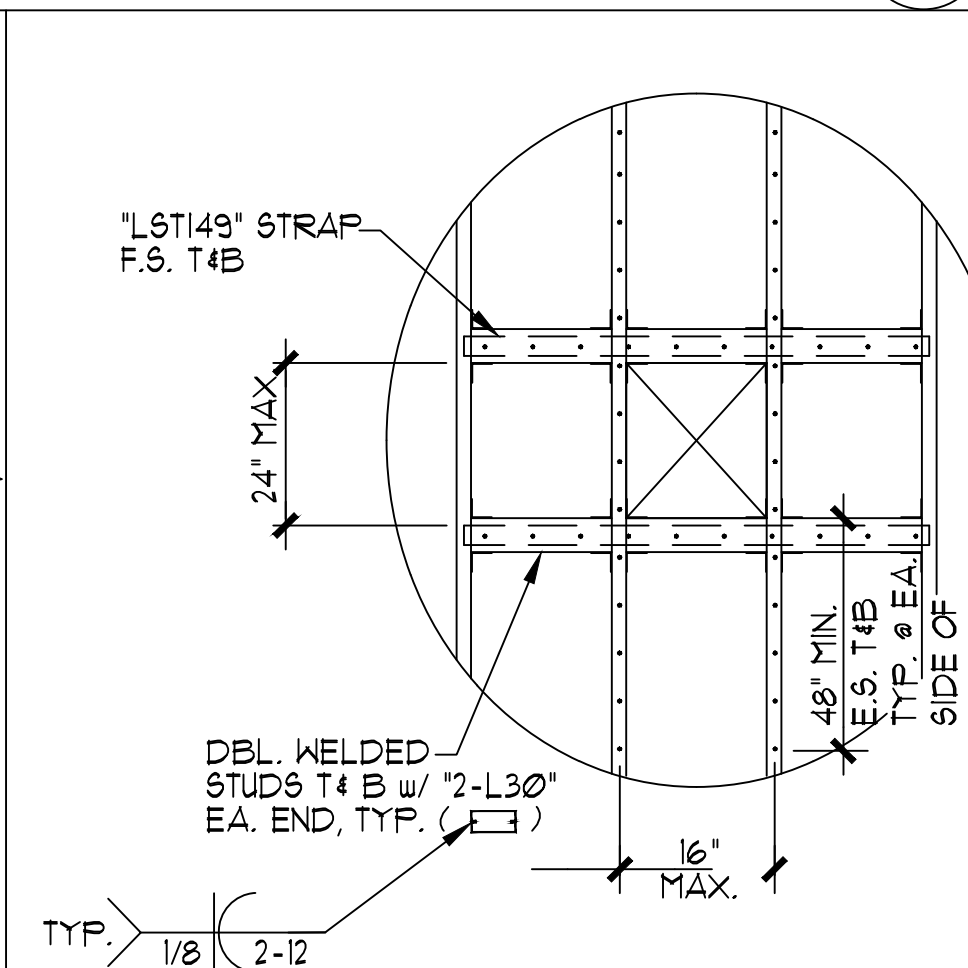
SHEAR WALL SCHEDULE						
MARK	PLYWOOD	EDGE SCREWS TYP. UNO.	ANCHOR BOLT AT FDN. w/ IE WASHER	SHEAR TRANSFER NAILING		
				TRACK SILL SCREWS	BLOCKING CONNECTORS	ALLOWABLE SHEAR (PLF)
6	15/32" STR. I (4-PLY)	#10 SCREWS @ 6" O.C.	3/8" x 12" HEADED A.B. @ 48" O.C.	#10 SCREWS @ 6" O.C.	"L50 OR LTP5" CLIP @ 16" O.C.	356 (Vn=830)
4	15/32" STR. I (4-PLY)	#10 SCREWS @ 4" O.C.	3/8" x 12" HEADED A.B. @ 32" O.C.	#10 SCREWS @ 4" O.C.	"L50 OR LTP5" @ 8" O.C.	532 (Vn=1330)
3	15/32" STR. I (4-PLY)	#10 SCREWS @ 3" O.C.	3/8" x 12" HEADED A.B. @ 24" O.C.	#10 SCREWS @ 3" O.C.	"L50 OR LTP5" @ 8" O.C.	710 (Vn=1715)
2	15/32" STR. I (4-PLY)	#10 SCREWS @ 2" O.C.	3/8" x 12" HEADED A.B. @ 16" O.C.	#10 SCREWS @ 4" O.C. (2 ROWS STAG'G.)	2-"L50 OR LTP5" @ 12" O.C.	876 (Vn=2190)

- VALUES ARE BASED ON AISI S400-20, SECTION E, TABLE E1.3-1
- FOR ADDITIONAL PLYWOOD & METAL SCREWS NOTES / SPECIFICATIONS, SEE NOTE #3 UNDER COLD FORMED LIGHT GAUGE METAL FRAMING NOTES, SHEET S1.0.

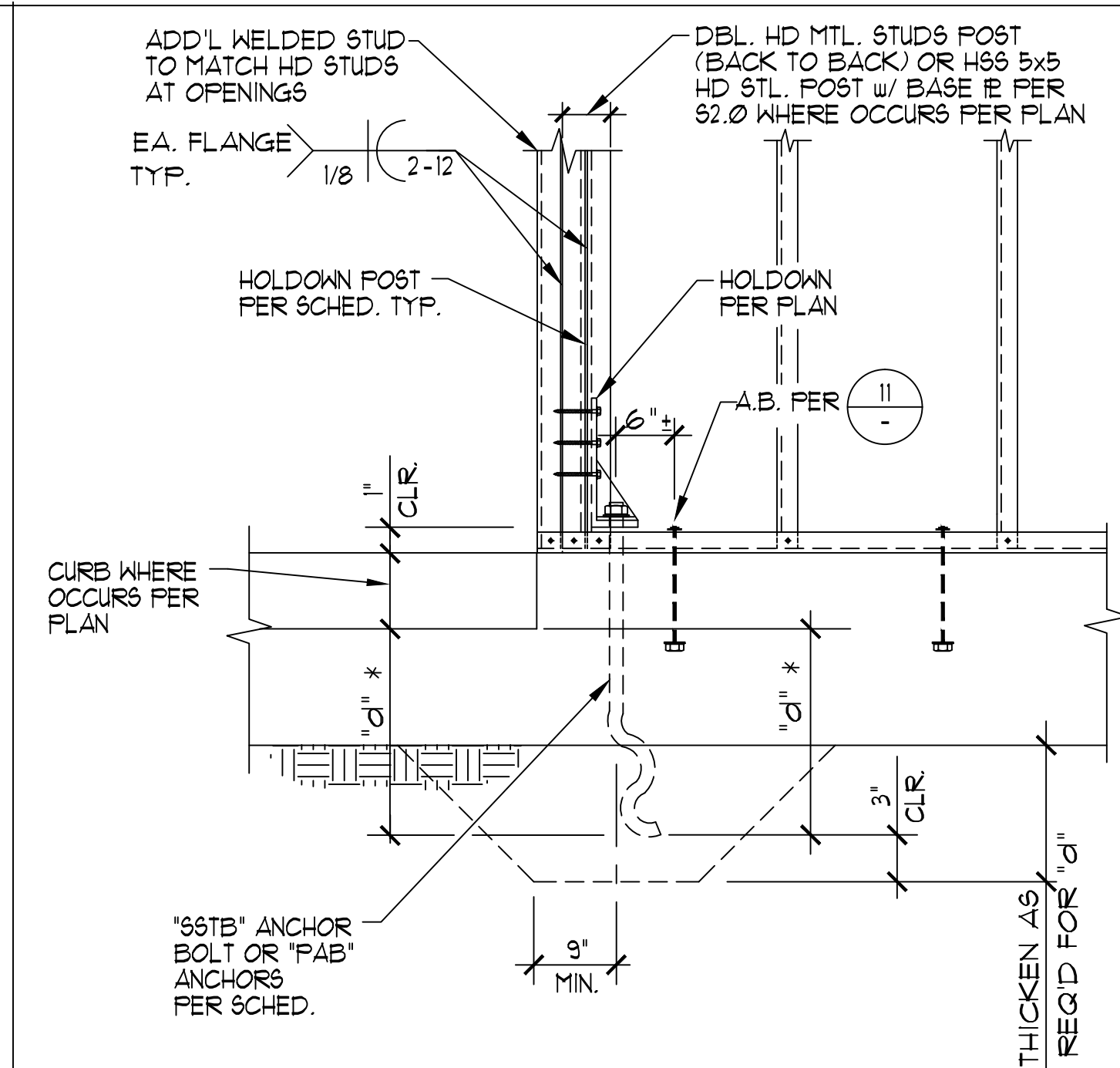
TYP. PLYWOOD SHEAR SCHEDULE



TYP. STUD INTERSECTIONS AT SHEAR WALLS- PLAN VIEW



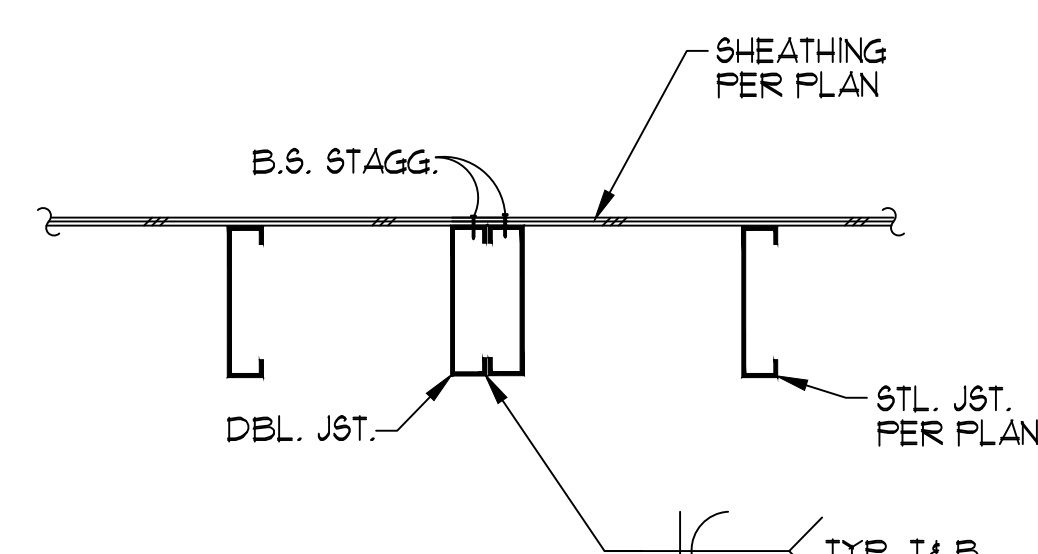
TYP. DETAIL AT SHEAR WALL PENETRATION



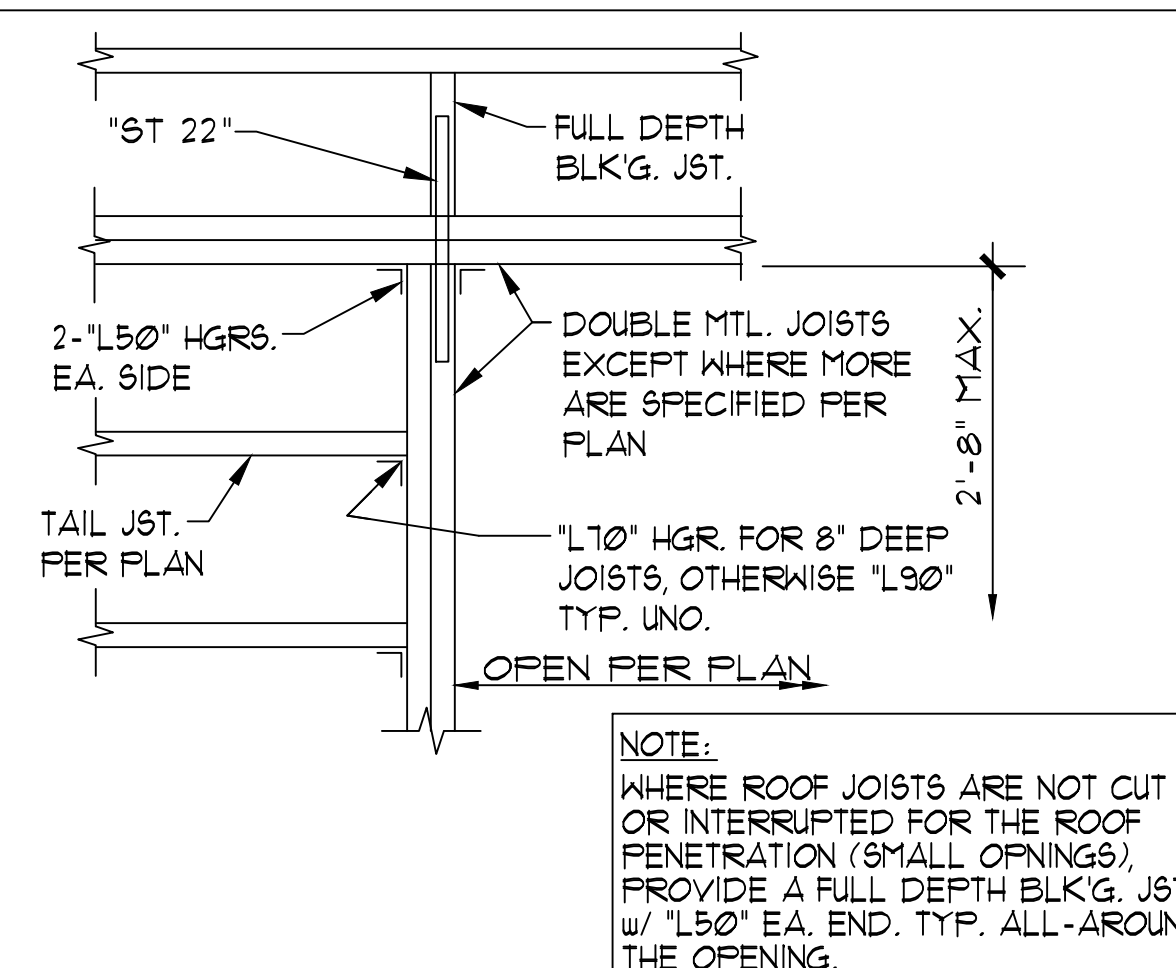
MARK	ANCH. BOLT SIZE	HOLDOWN POST (MIN) TYP. UNO. PER S.I.6	CAPACITY (Lbs) (0.8 x 122) FOR S.I.6	CAPACITY (Lbs)
5/HDU4 w/ 6-#14 S.M.S.	5/8" x 16.625"	2-5600 250-54 (16 GA.)	3,176	3,919
5/HDU6 w/ 12-#14 S.M.S.	5/8" x 20.625"	2-5600 250-68 (14 GA.)	4,900	6,125
5/HDU8 w/ 18-#14 S.M.S.	7/8" x 24.875"	2-5600 250-68 (14 GA.)	7,982	10,000
5/HDU11 w/ 21-#14 S.M.S.	7/8" x 24.875"	2-5600 300-68 (14 GA.)	9,740	12,175

- PRE-DRILL HOLES IN STUDS IF NEEDED AT THICKER MATERIALS
- NOTES:
1. CONC. COMPRESSING STRENGTH f'c = 3,000 P.S.I. MIN.

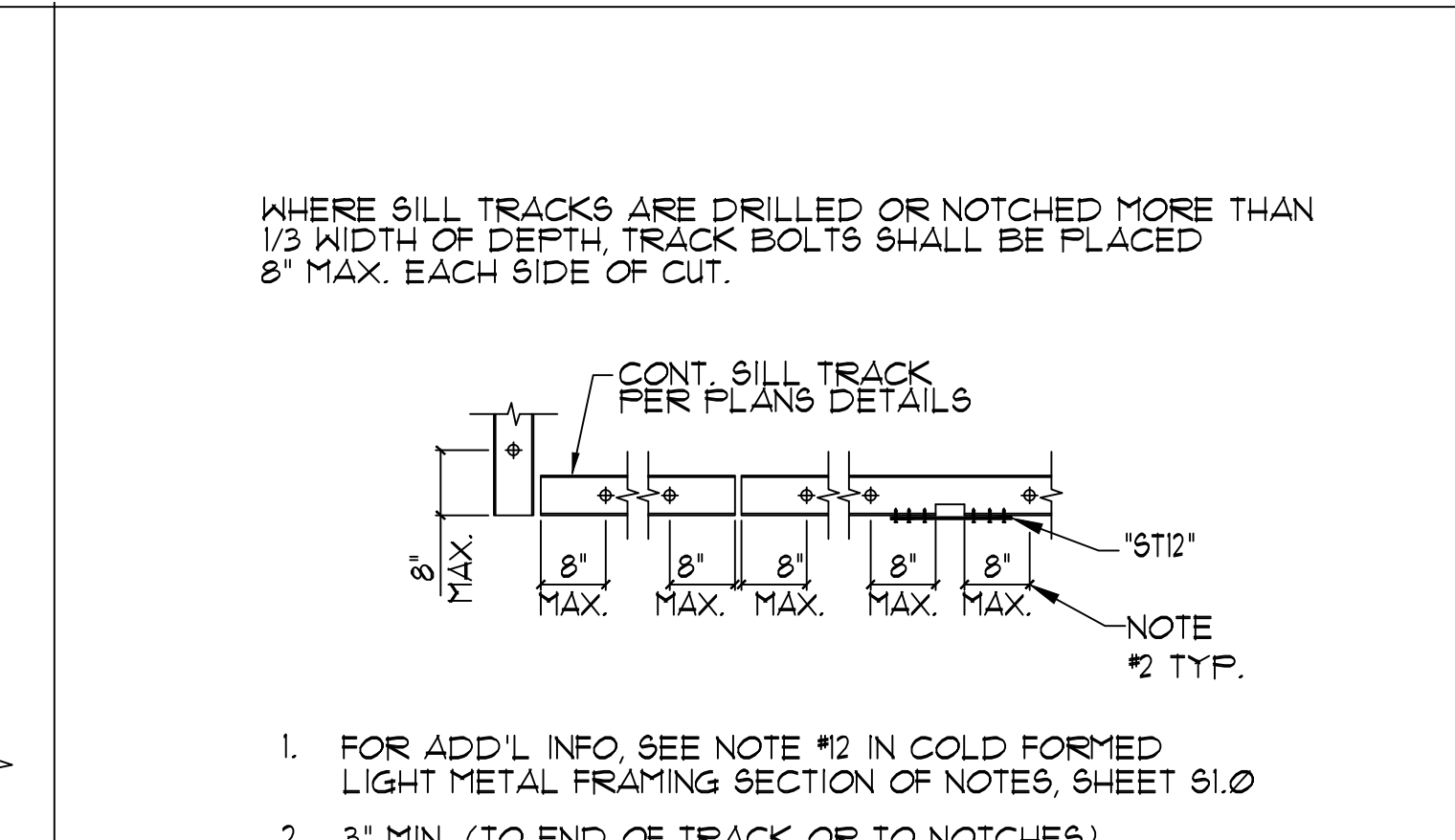
TYP. HOLDOWN SCHEDULE



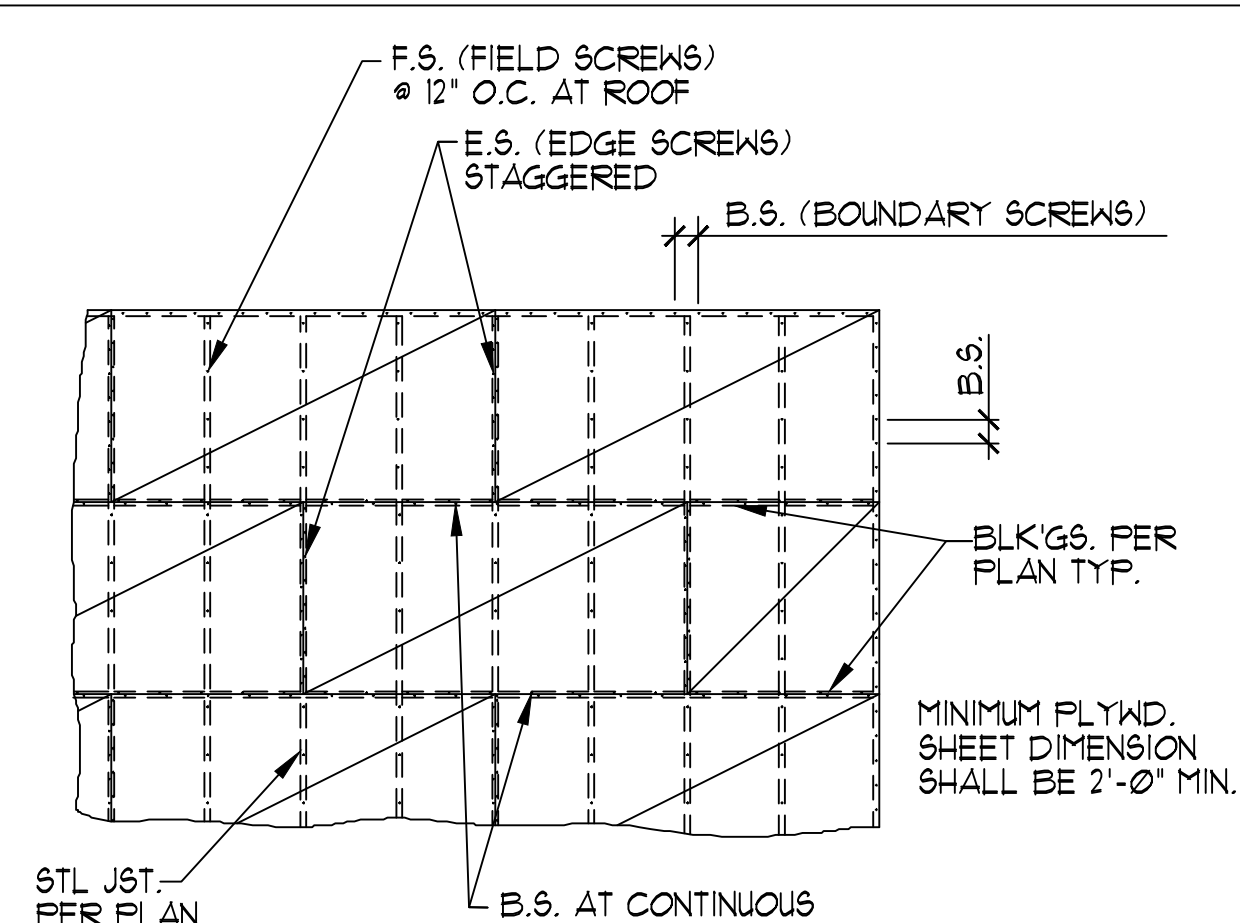
TYP. DOUBLE JOISTS ATTACHMENT / T.B.



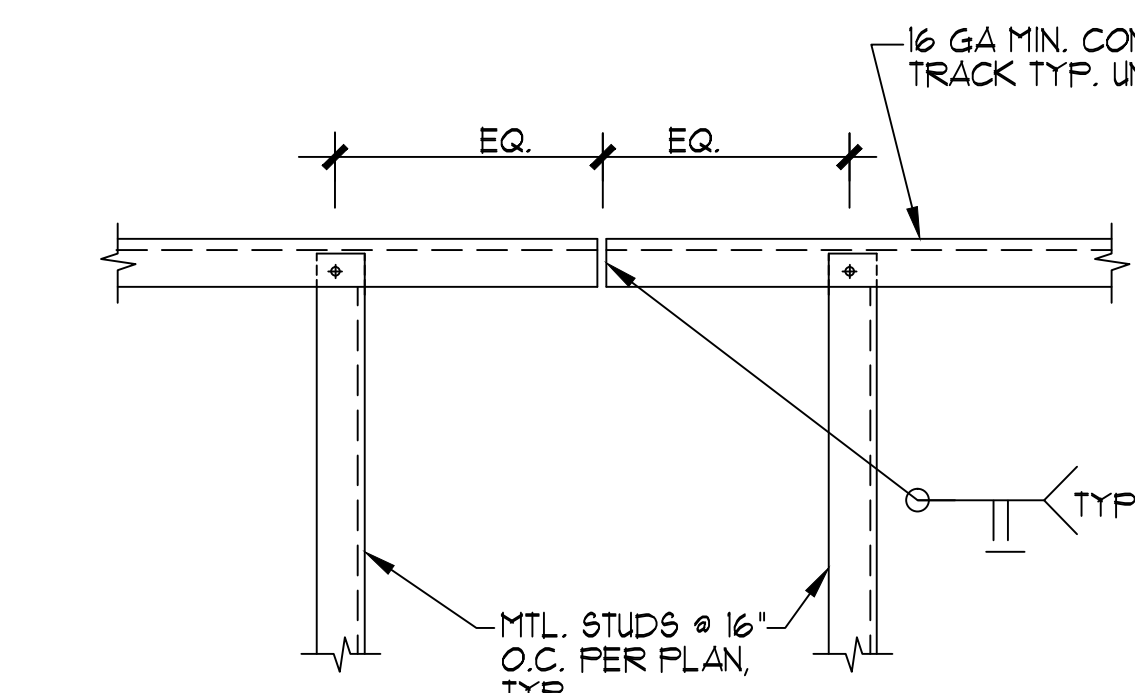
TYP. MTL JOIST SUPPORT AT ROOF OPENING (PLAN)



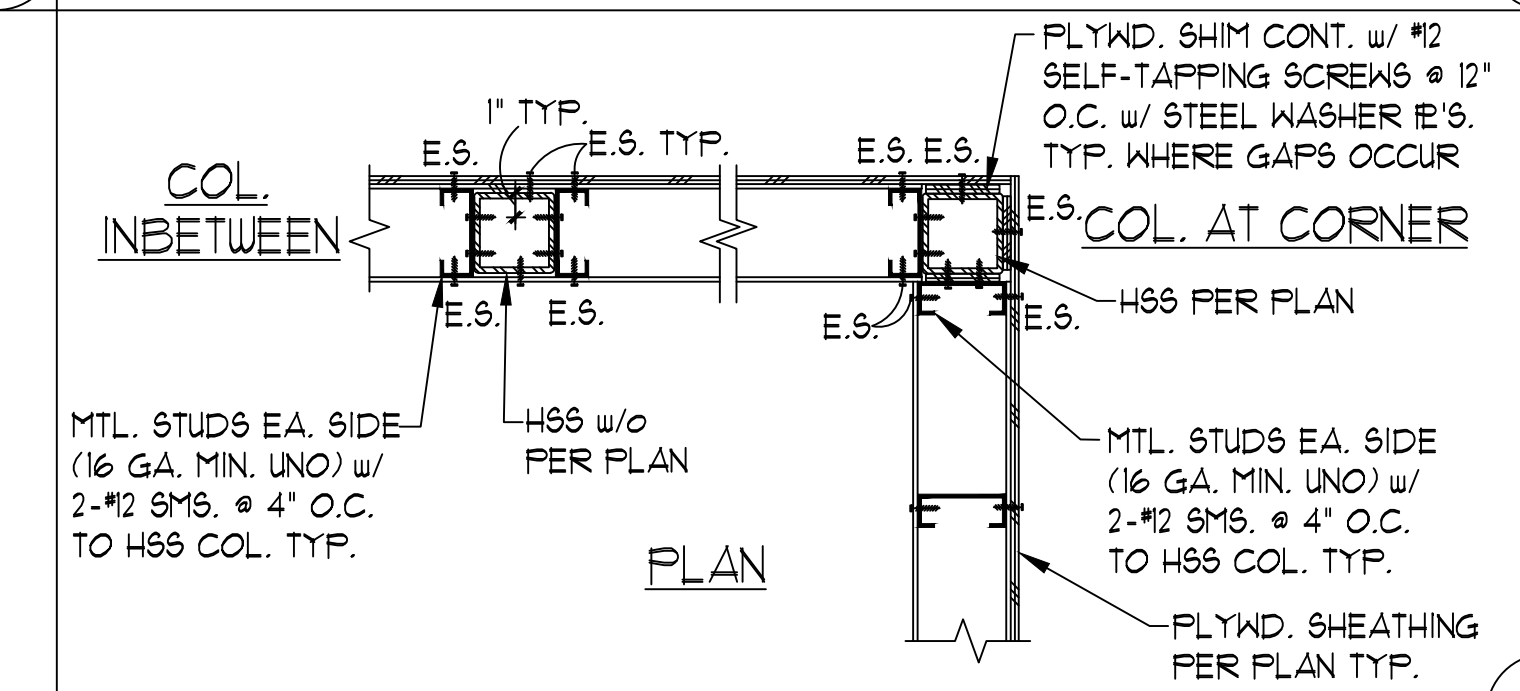
TYP. TRACK BOLTING LAYOUT



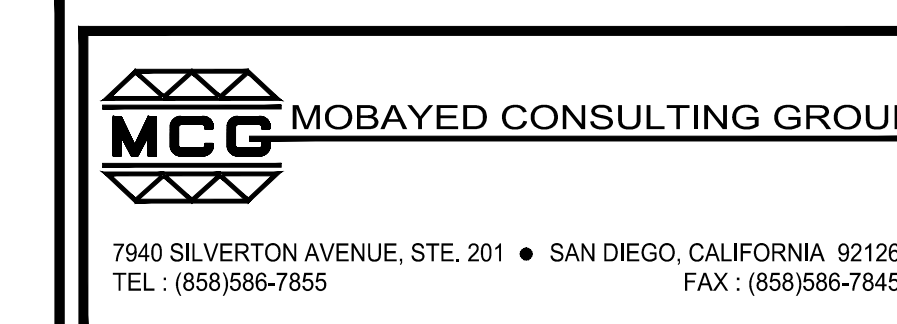
TYP. ROOF DIAPHRAGM NAILING



TYP. TOP TRACK SPLICE AT BEARING WALLS



TYP. HSS COL. TO METAL STUDS CONN. IN SHEAR WALLS

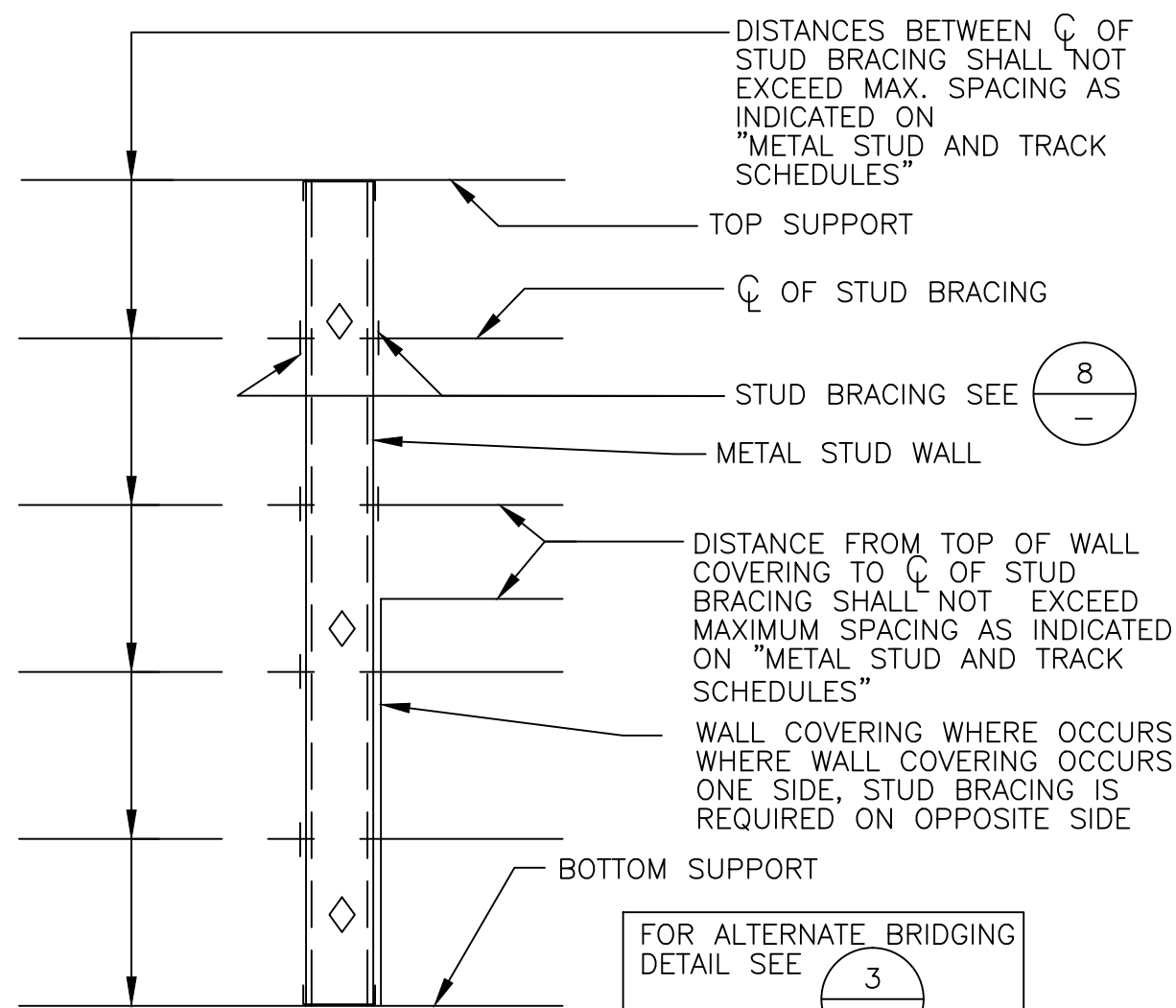


STUD SCHEDULE								
	DEPTH	GAUGE	B	C	AREA (IN. ²)	I (IN. ⁴)	S (IN. ³)	MAX. SPACING OF STUD BRACING
2 1/2"	20 (33 Mil)	1 5/8"	.500"	.223	.235	.188	4'-0"	
	18 (43 Mil)	1 5/8"	.500"	.289	.302	.242	4'-0"	
	16 (54 Mil)	1 5/8"	.500"	.358	.370	.296	4'-0"	
4"	20 (33 Mil)	1 5/8"	.500"	.275	.692	.346	4'-0"	
	18 (43 Mil)	1 5/8"	.500"	.357	.892	.446	4'-0"	
	16 (54 Mil)	1 5/8"	.500"	.443	1.098	.549	4'-0"	
6"	20 (33 Mil)	1 5/8"	.500"	.275	.692	.346	4'-0"	
	18 (43 Mil)	1 5/8"	.500"	.357	.892	.446	4'-0"	
	16 (54 Mil)	1 5/8"	.500"	.443	1.098	.549	4'-0"	
8"	20 (33 Mil)	1 5/8"	.500"	.275	.692	.346	4'-0"	
	18 (43 Mil)	1 5/8"	.500"	.357	.892	.446	4'-0"	
	16 (54 Mil)	1 5/8"	.500"	.443	1.098	.549	4'-0"	
10"	20 (33 Mil)	1 5/8"	.500"	.275	.692	.346	4'-0"	
	18 (43 Mil)	1 5/8"	.500"	.357	.892	.446	4'-0"	
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	18 (43 Mil)	1 5/8"	.500"	.357	.892	.446	4'-0"	
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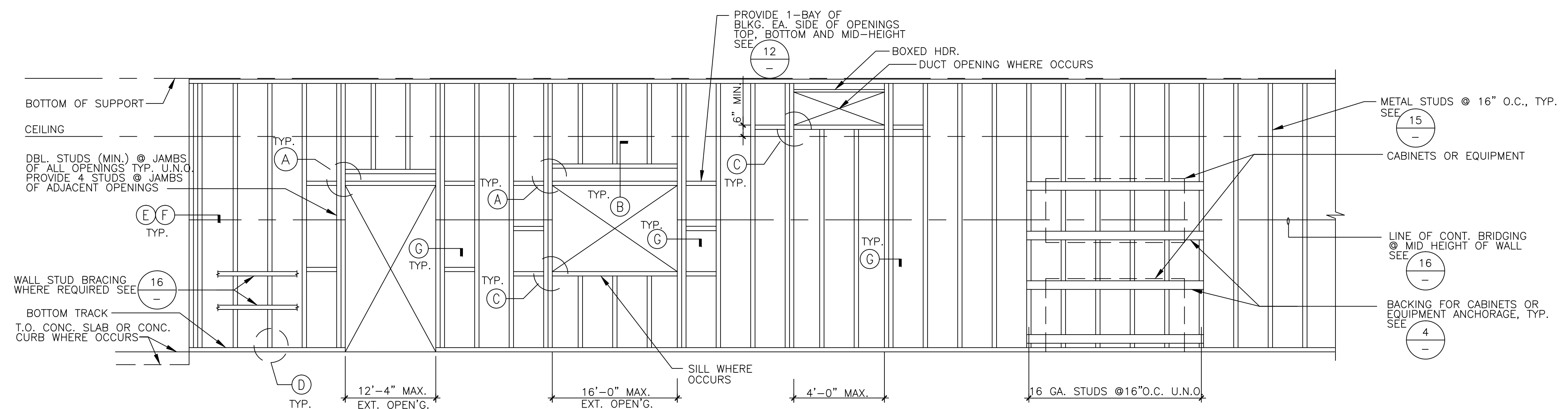
TRACK SCHEDULE								
	DEPTH	GAUGE	B	C	AREA (IN. ²)	I (IN. ⁴)	S (IN. ³)	REMARKS
4"	20	1 1/4"	.225	.549	.265			
	18	1 1/4"	.293	.716	.344			
	16	1 1/4"	.367	.904	.431			
6"	20	1 1/4"	.294	1.428	.465			
	18	1 1/4"	.383	1.861	.604			
	16	1 1/4"	.480	2.344	.757			
8"	20	1 1/4"	.363	2.895	.711			
	18	1 1/4"	.473	3.773	.924			
	16	1 1/4"	.594	4.745	1.158			
10"	20	1 1/4"	.748	5.998	1.454			
	18	1 1/4"	.679	6.152	1.501			
	16	1 1/4"	.563	6.630	1.305			
12"	20	1 1/4"	.707	8.333	1.634			
	18	1 1/4"	.792	10.516	2.062			
	14	1 1/4"	1.033	16.826	2.747			

- NOTES:
- SEE ARCHITECTURAL AND STRUCTURAL DWGS. FOR SIZE AND GAUGE OF STUDS.
 - SEE ARCHITECTURAL AND STRUCTURAL DWGS. FOR THE LOCATION OF DEEP LEG TRACKS (2" MIN. LEGS). SEE DETAIL 3C ON THIS SHEET FOR THE LOCATION OF SPECIAL TRACK
 - DIMENSIONS, PROPERTIES AND TYPES NOTED ARE BASED ON METAL STUDS AND TRACKS BY SFA - ESR# 1166P
 - ALL PAINTED MEMBERS SHALL CONFORM TO ASTM A-1003, GRADE 33, WITH A MINIMUM YIELD STRENGTH OF 33 KSI.
 - ALL GALVANIZED 16 GAGE AND HEAVIER MEMBERS SHALL CONFORM TO ASTM A-1003, GRADE 50, WITH A MINIMUM YIELD STRENGTH OF 50 KSI.
 - ALL GALVANIZED 18 GAGE AND LIGHTER MEMBERS SHALL CONFORM TO ASTM A-1003, GRADE 33, WITH MINIMUM YIELD STRENGTH OF 33 KSI.

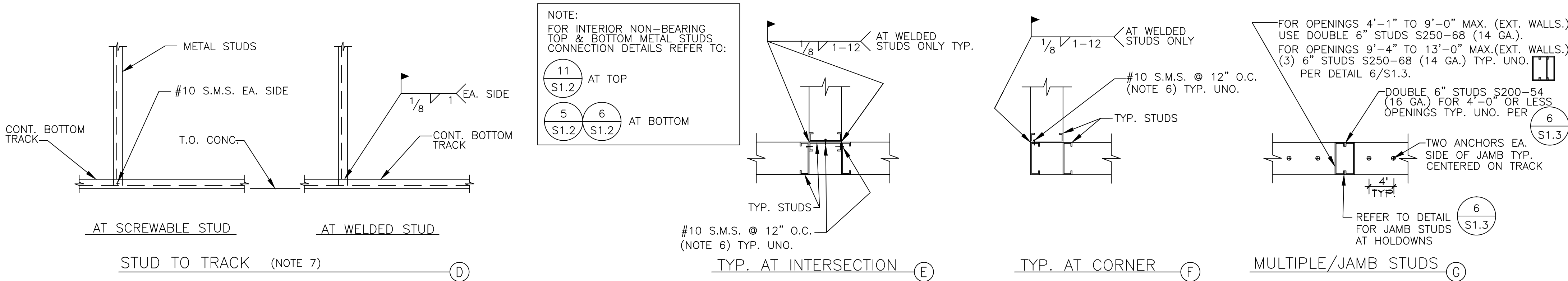
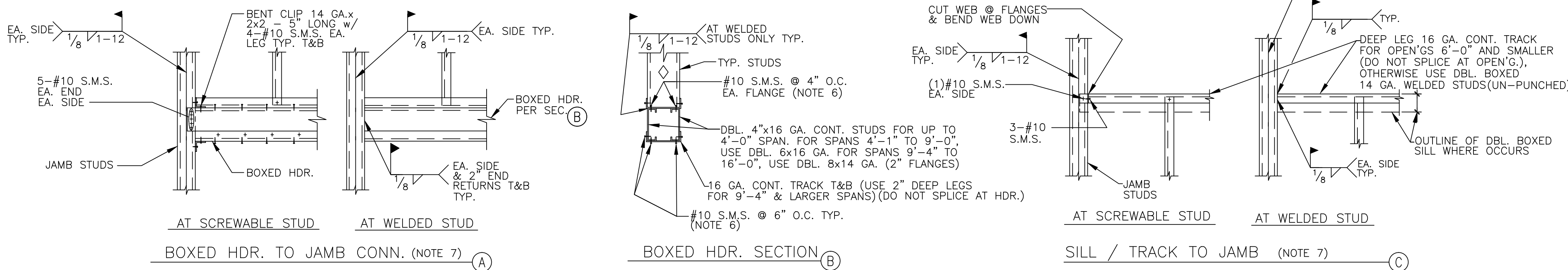
MTL. STUD AND TRACK SCHEDULES



WALL BRACING / BRIDGING DTL.



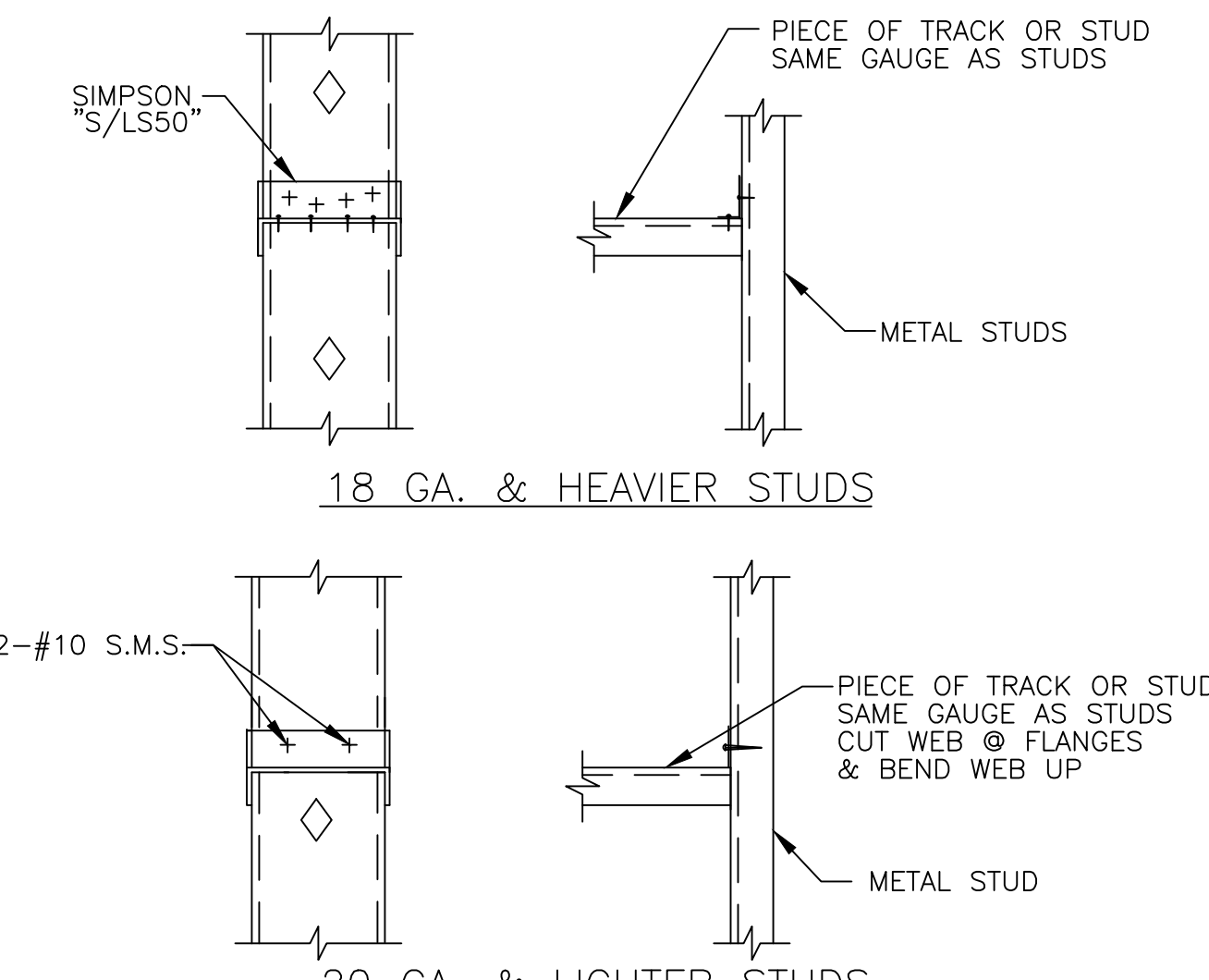
METAL STUD WALL ELEVATION - FULL HEIGHT



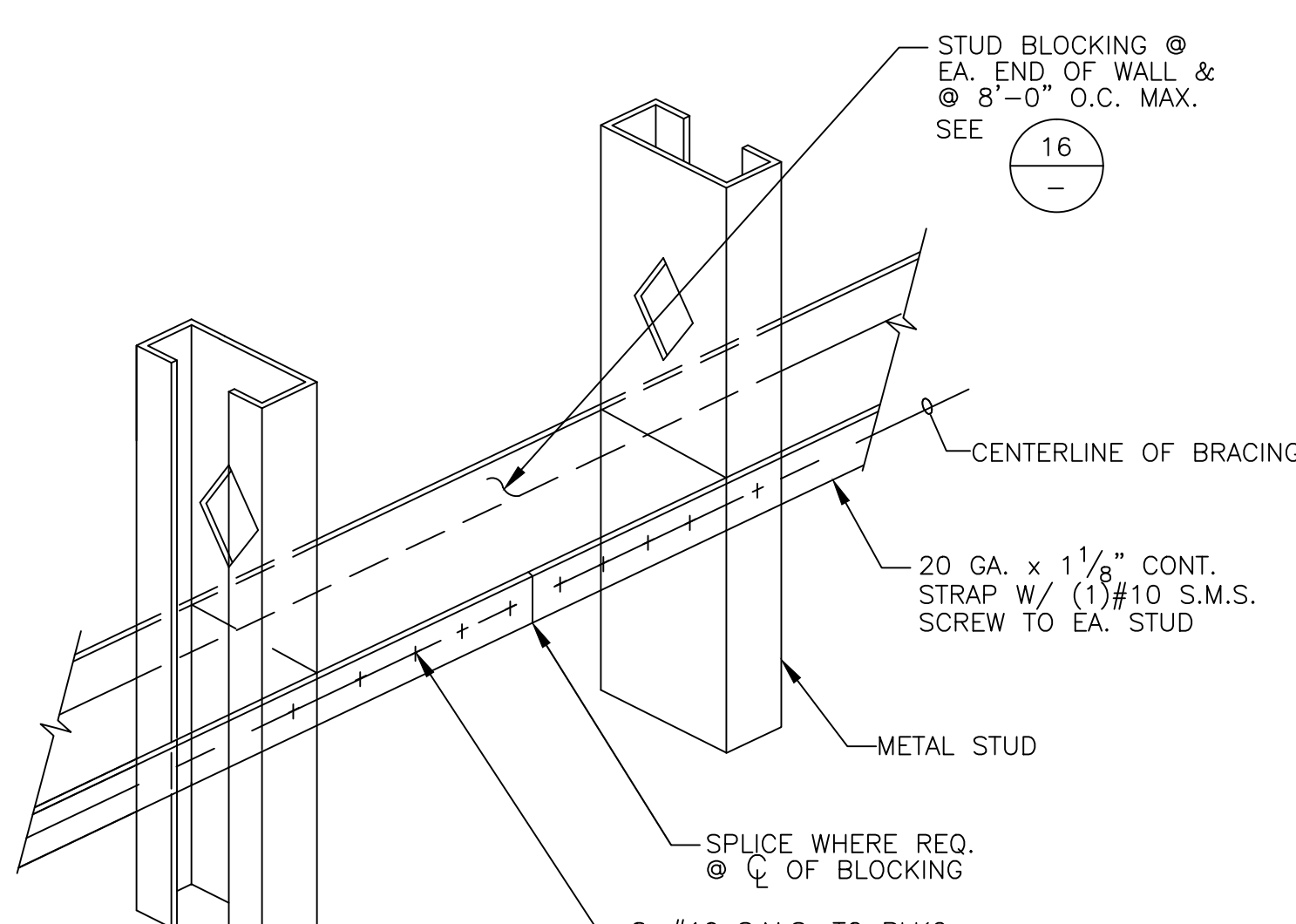
- NOTES:
- SEE "METAL STUD AND TRACK SCHEDULES" ON THIS SHEET FOR ADDITIONAL INFORMATION.
 - SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SIZE OF STUDS.
 - ALL TOP AND BOTTOM TRACKS SHALL BE SAME GAUGE AS STUDS, U.N.O.
 - ALL STUDS AT JAMBS OF DOOR AND WINDOW OPENINGS SHALL BE 14 GAUGE, U.N.O.
 - WELDING SHALL BE IN ACCORDANCE WITH STRUCTURAL CODE SHEET STEEL, AWS D1.3, THE AMERICAN WELDING SOCIETY
 - OMIT SHEET METAL SCREWS (S.M.S.) AT WELDED STUD CONDITIONS.
 - STRUCTURALLY IT IS ACCEPTABLE TO USE EITHER METHOD FOR ATTACHING STUDS / HEADERS, UNLESS NOTED OTHERWISE IN SPECIFIC DETAILS.

TYP. MTL. STUDS WALL FRAMING

3

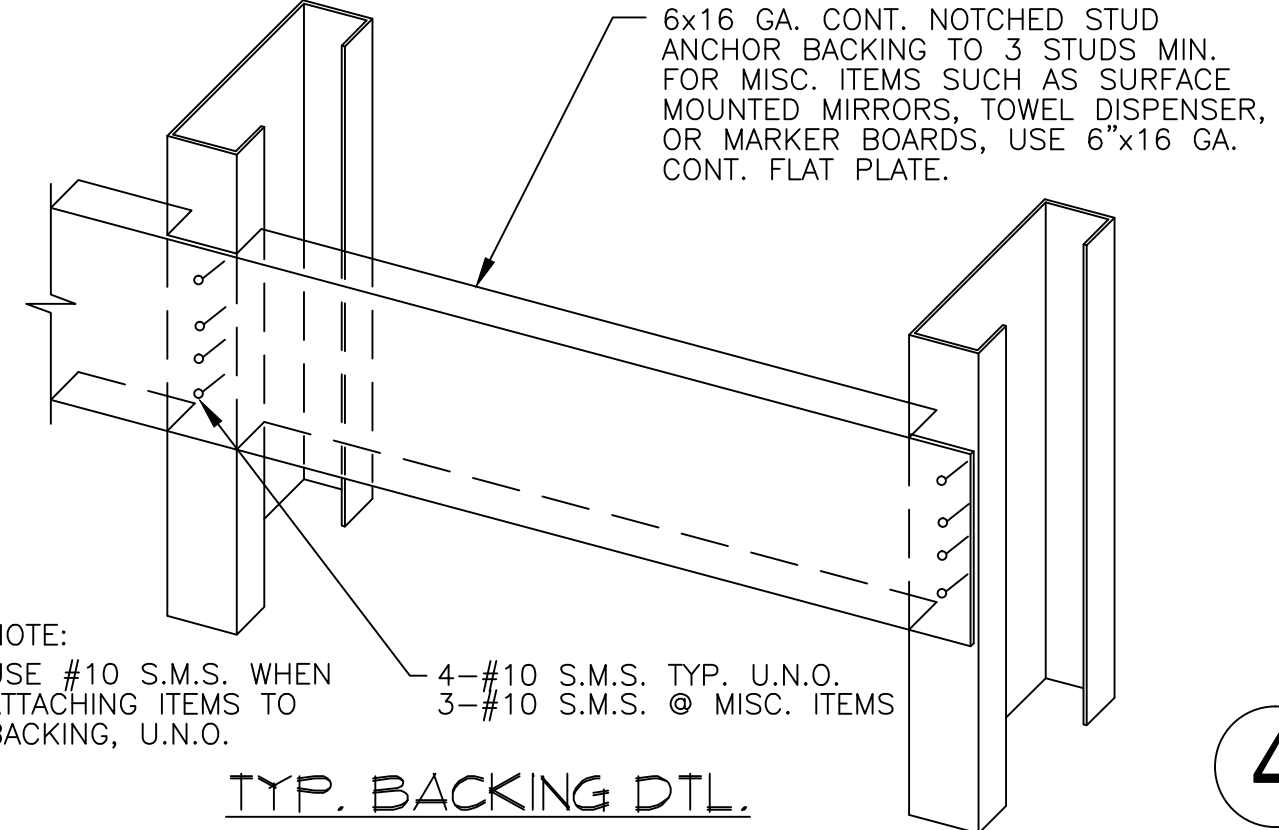


MTL. STUDS BLOCKING



MTL. STUDS BRACING / BRIDGING

8



TYP. BACKING DTL.

4



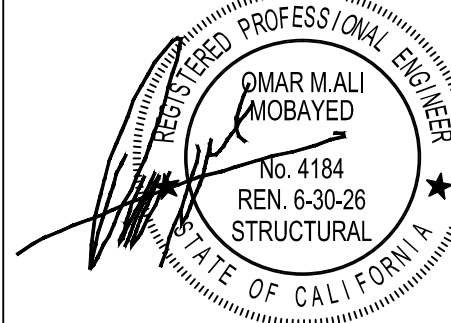
ARCHITECT

westbergwhite
architecture

1775 HANCOCK ST, SUITE 120
SAN DIEGO, CA 92110
619.542.1188 619.542.1663 FAX



CONSULTANT



City of La Puente

15900 E. MAIN ST. LA PUENTE, CA. 91744

TYP. EXT. / INTERIOR BEARING METAL STUDS FRAMING DETAILS

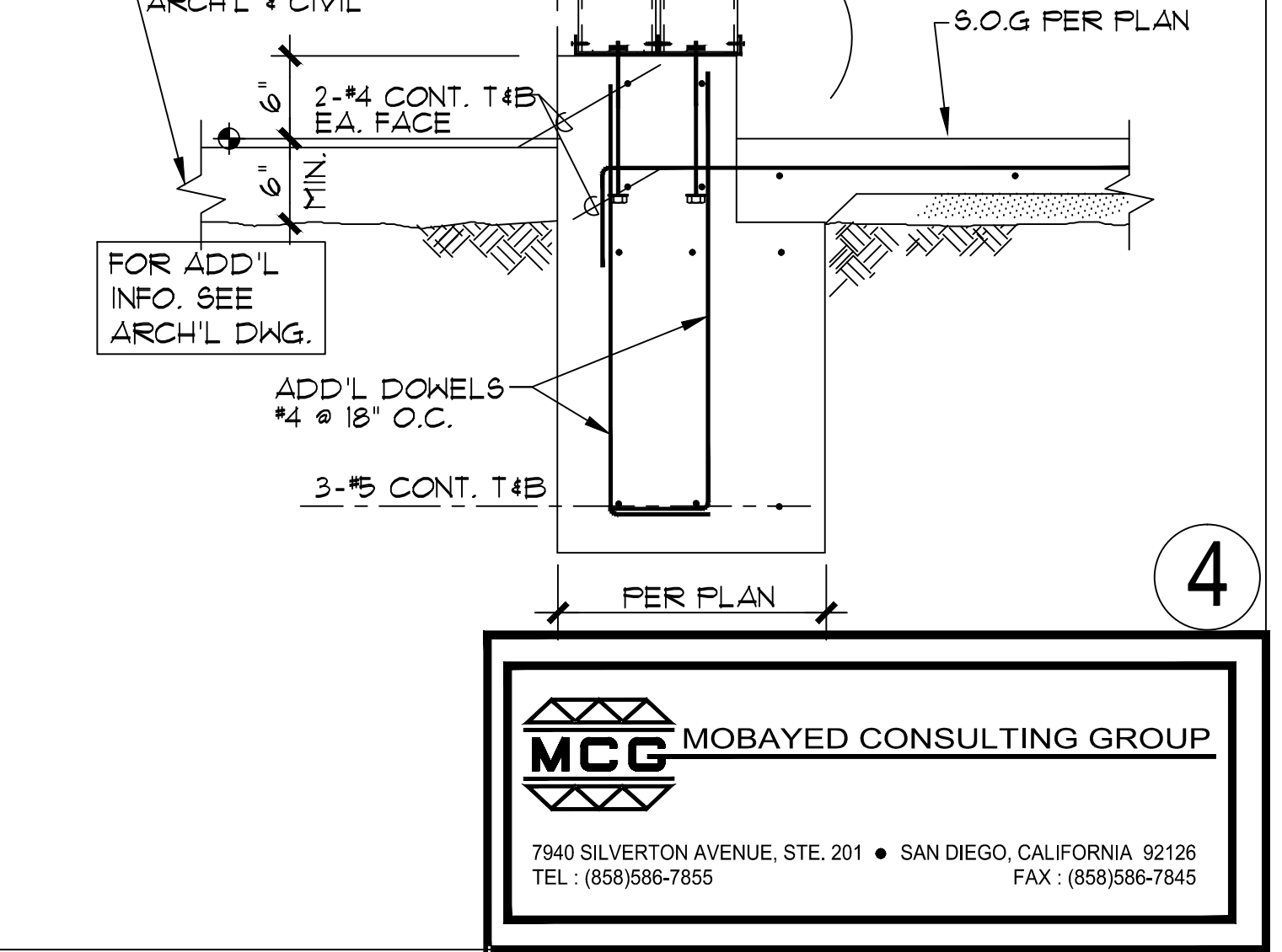
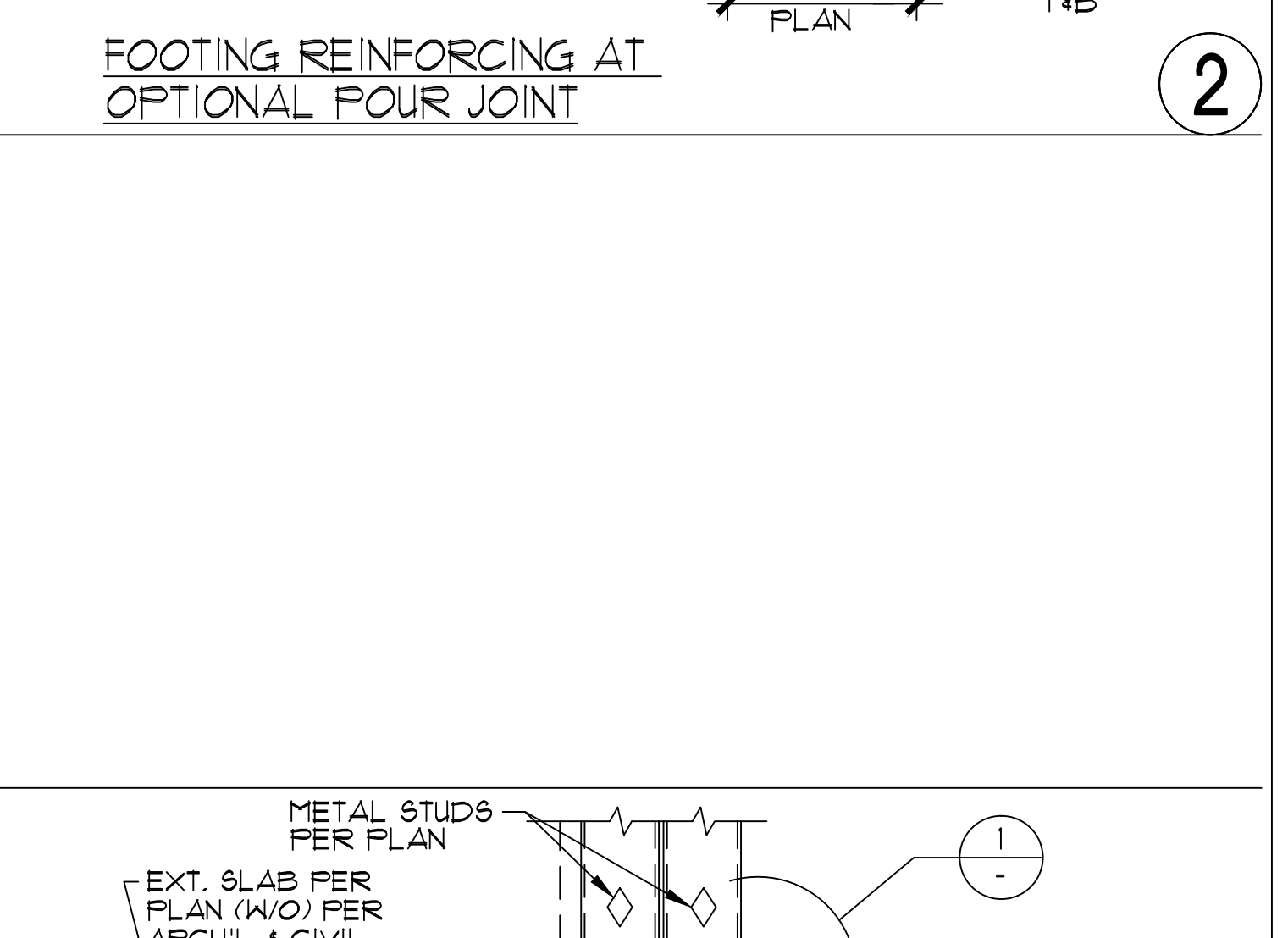
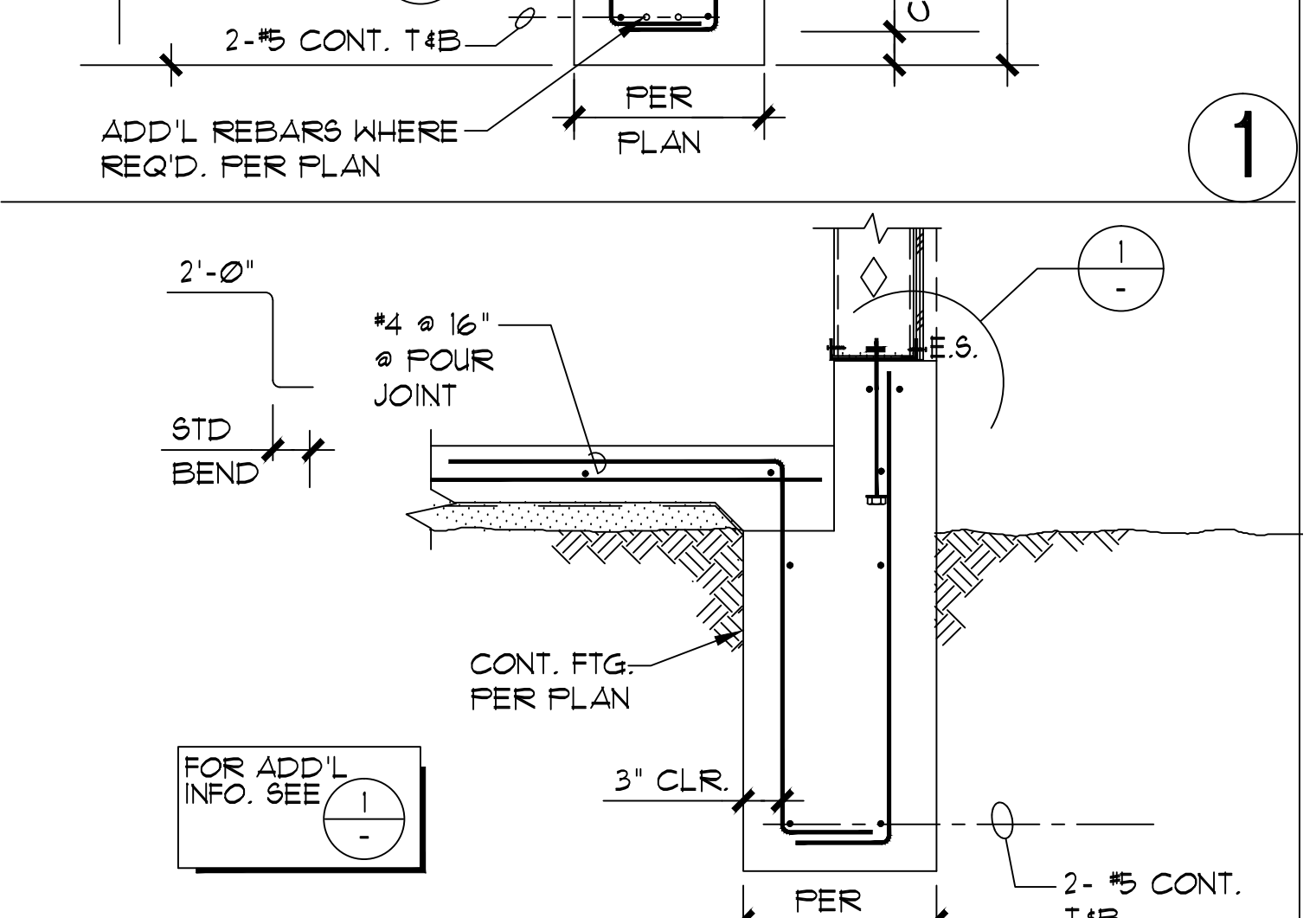
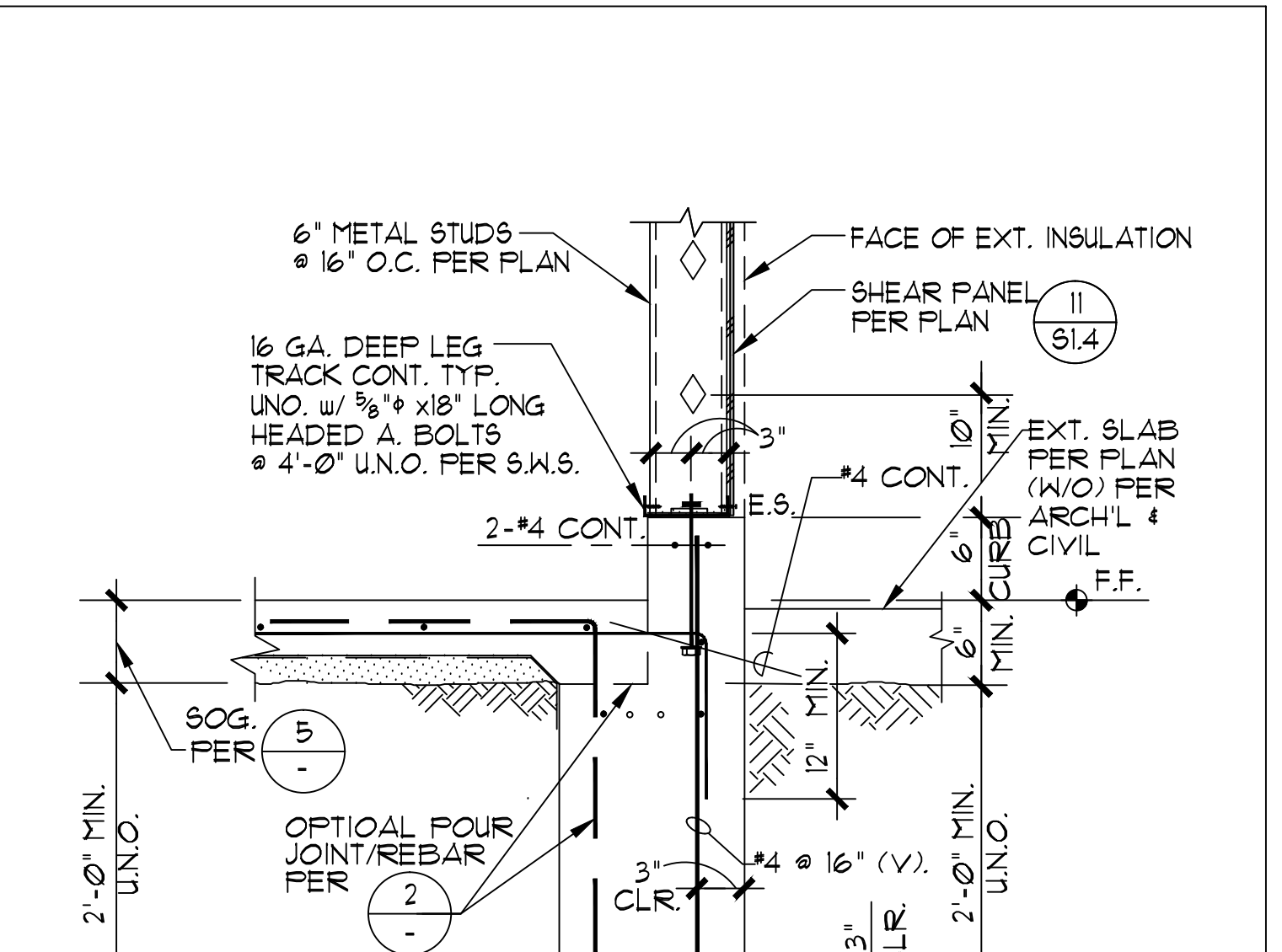
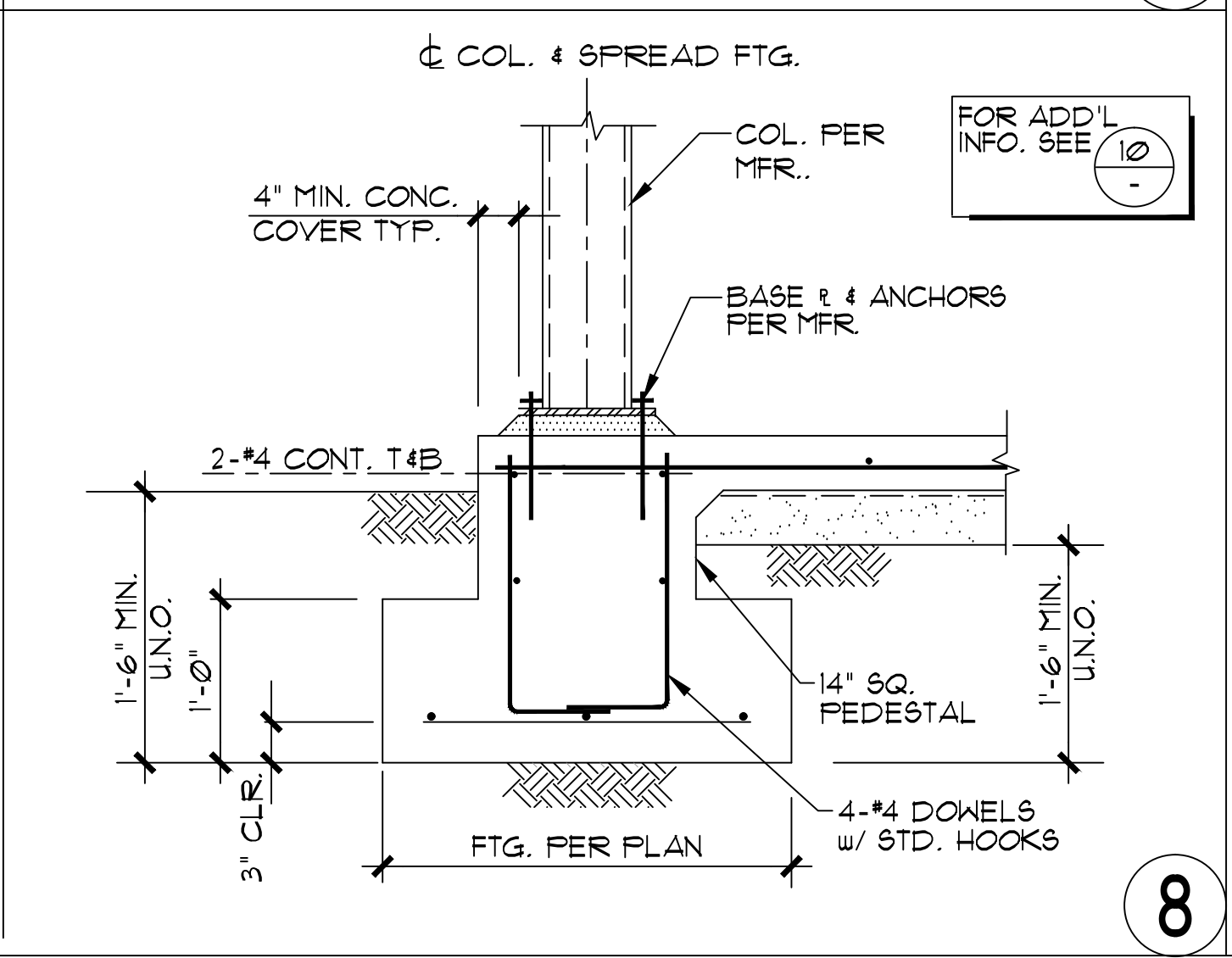
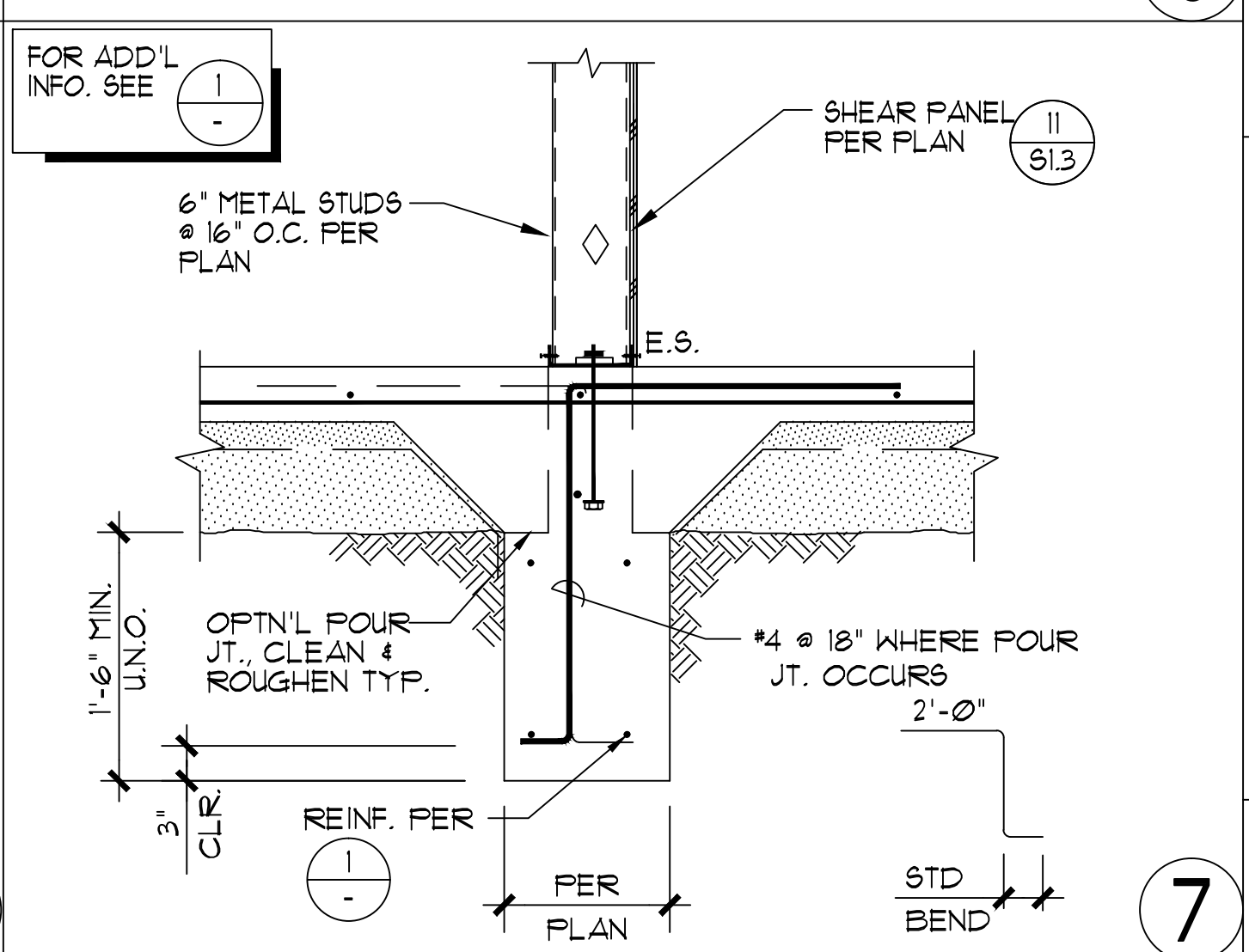
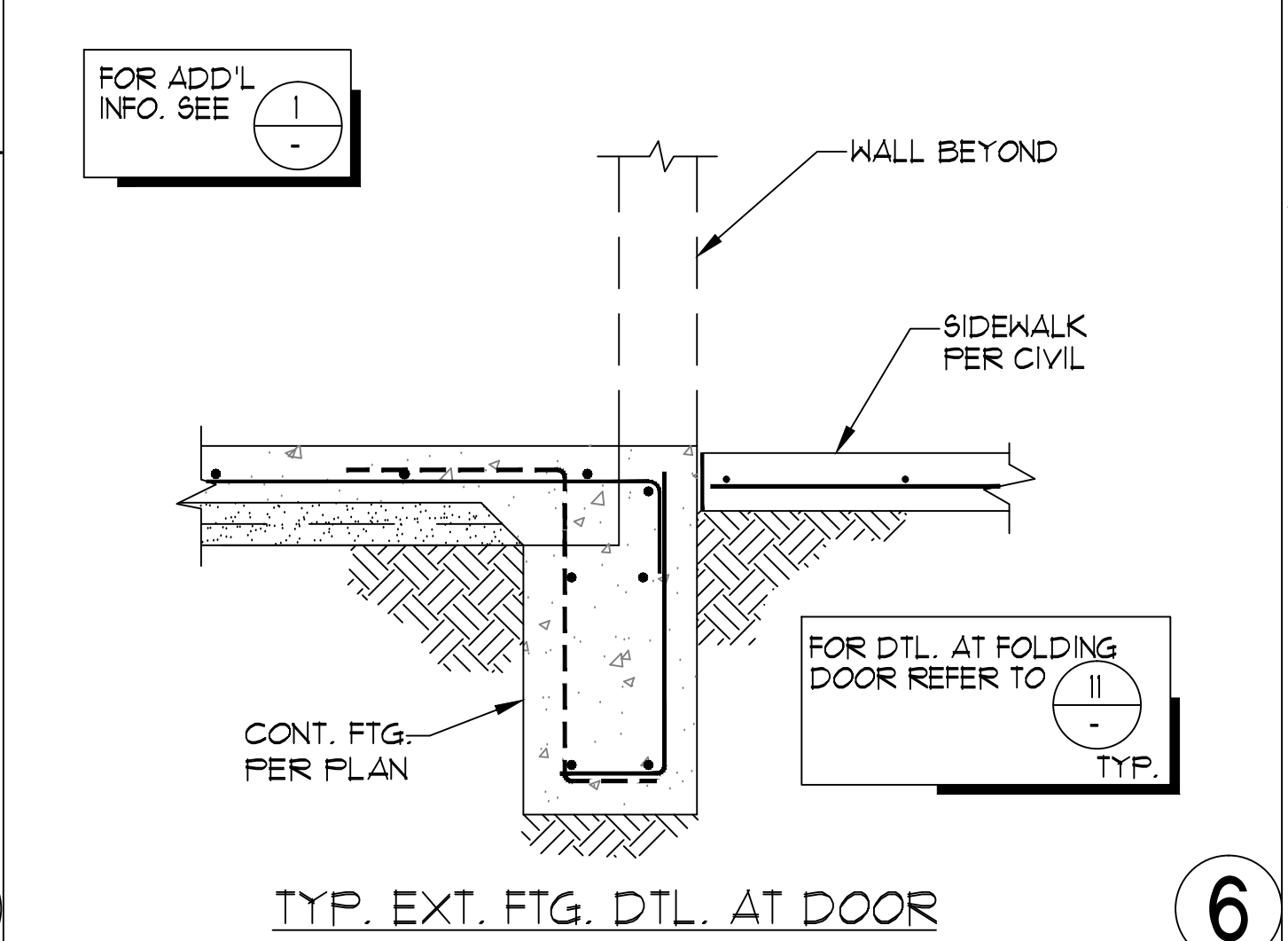
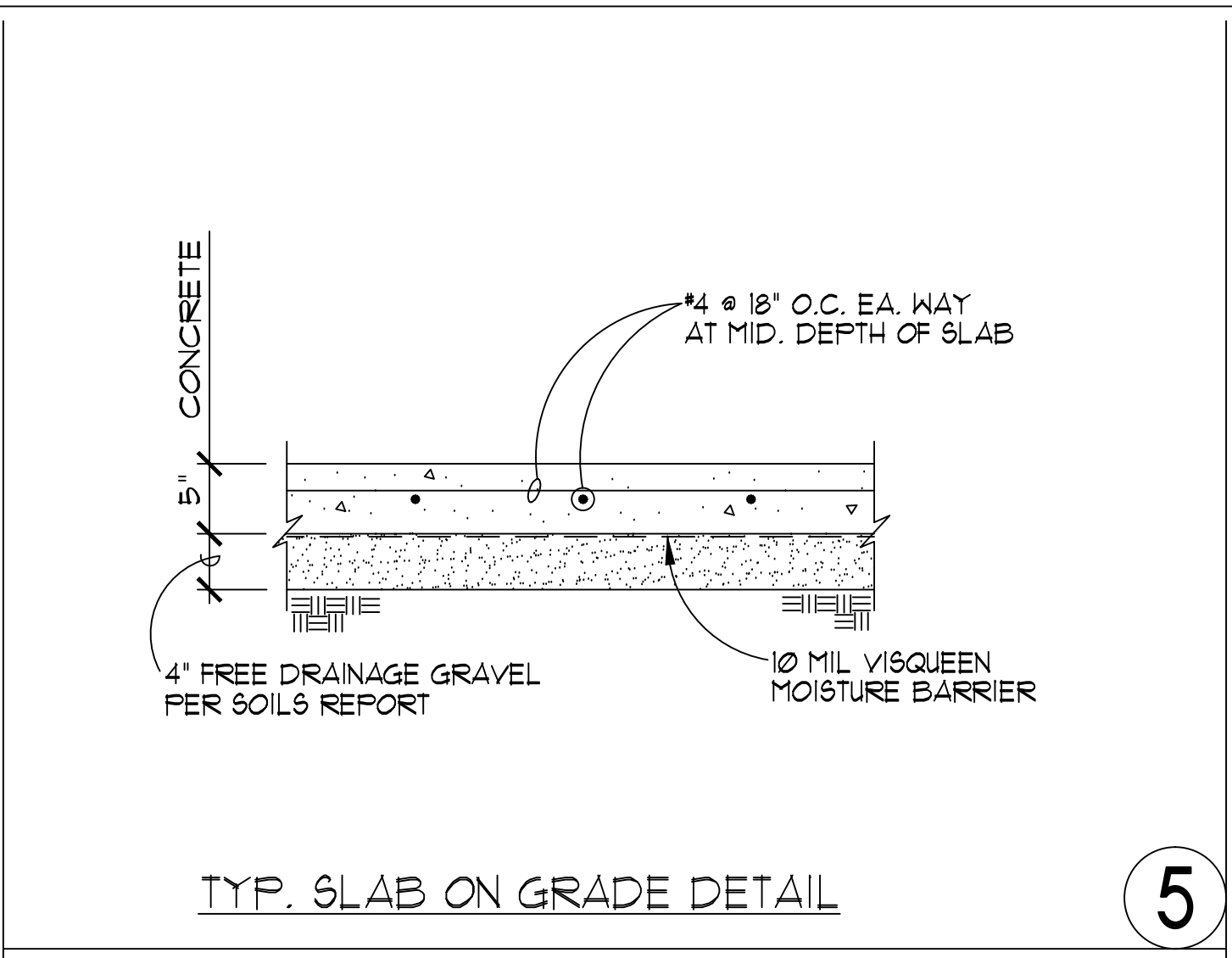
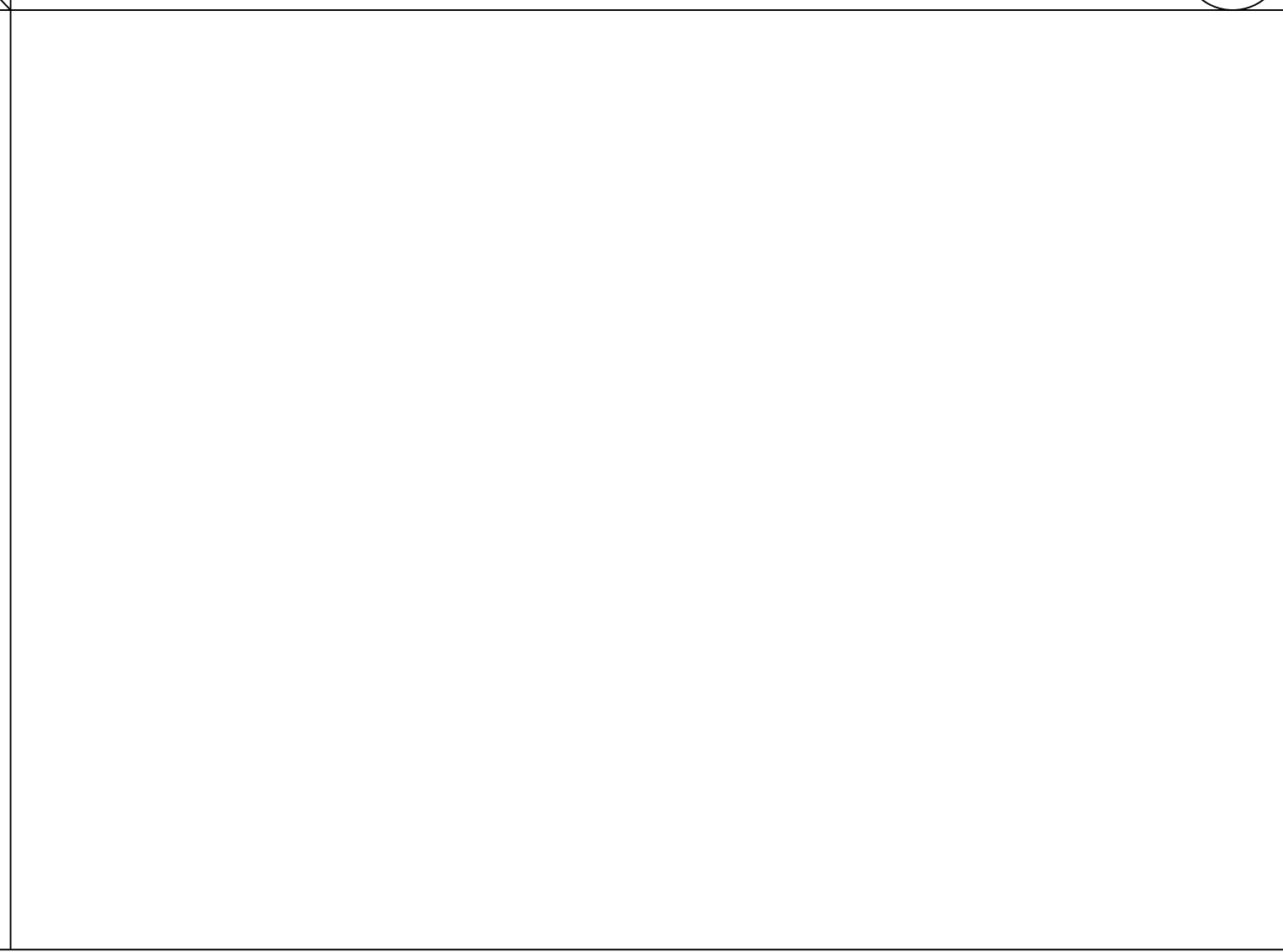
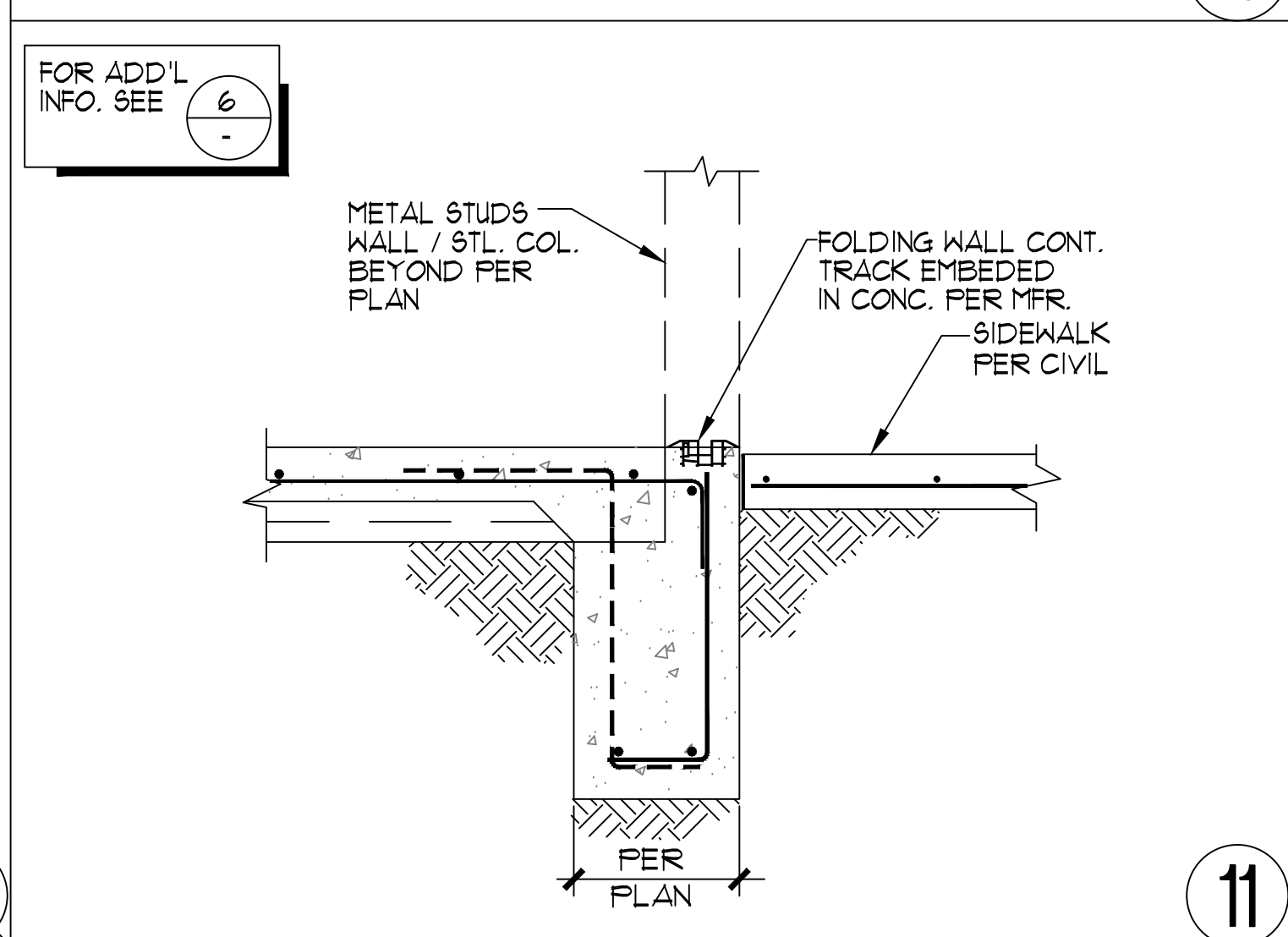
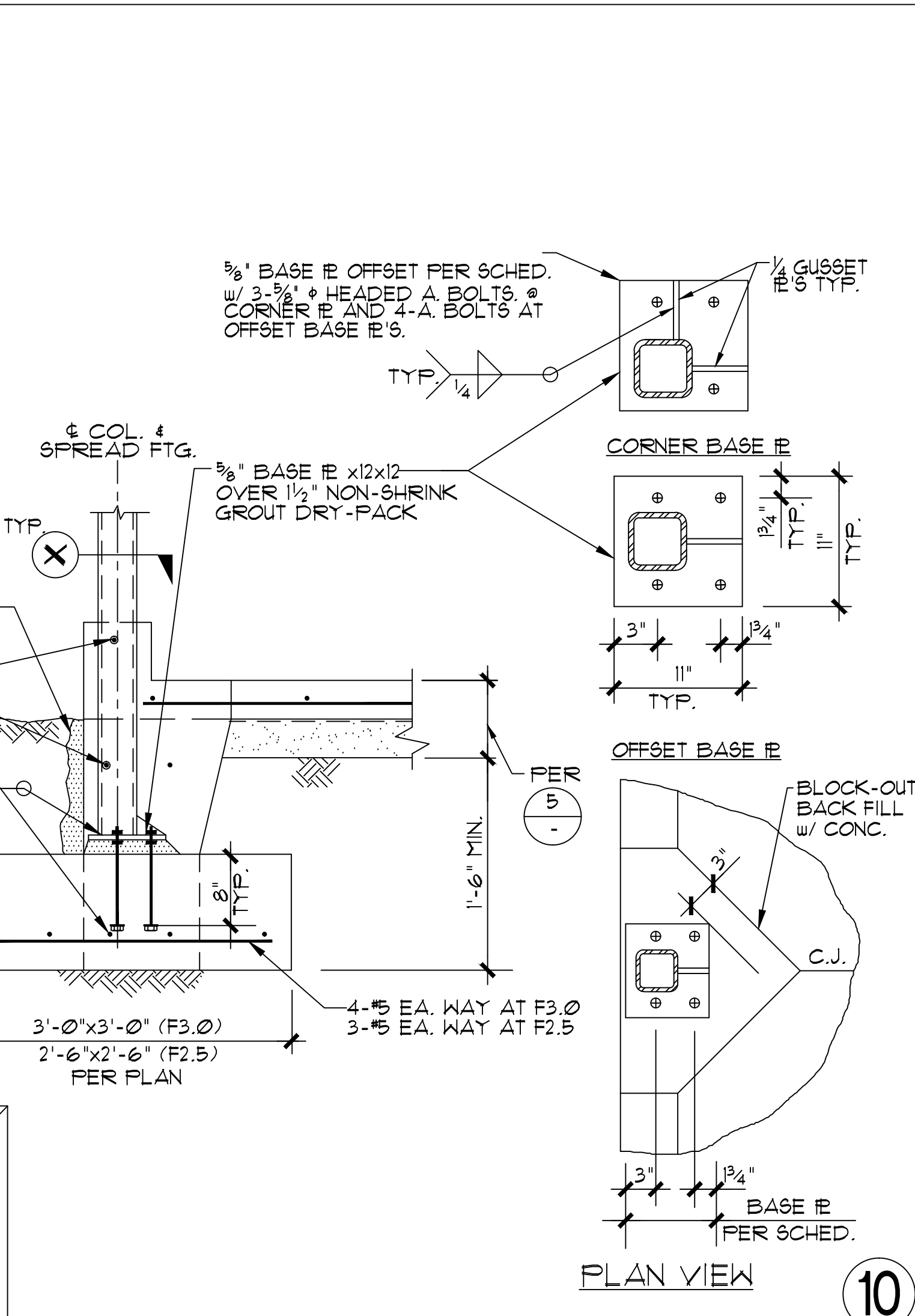
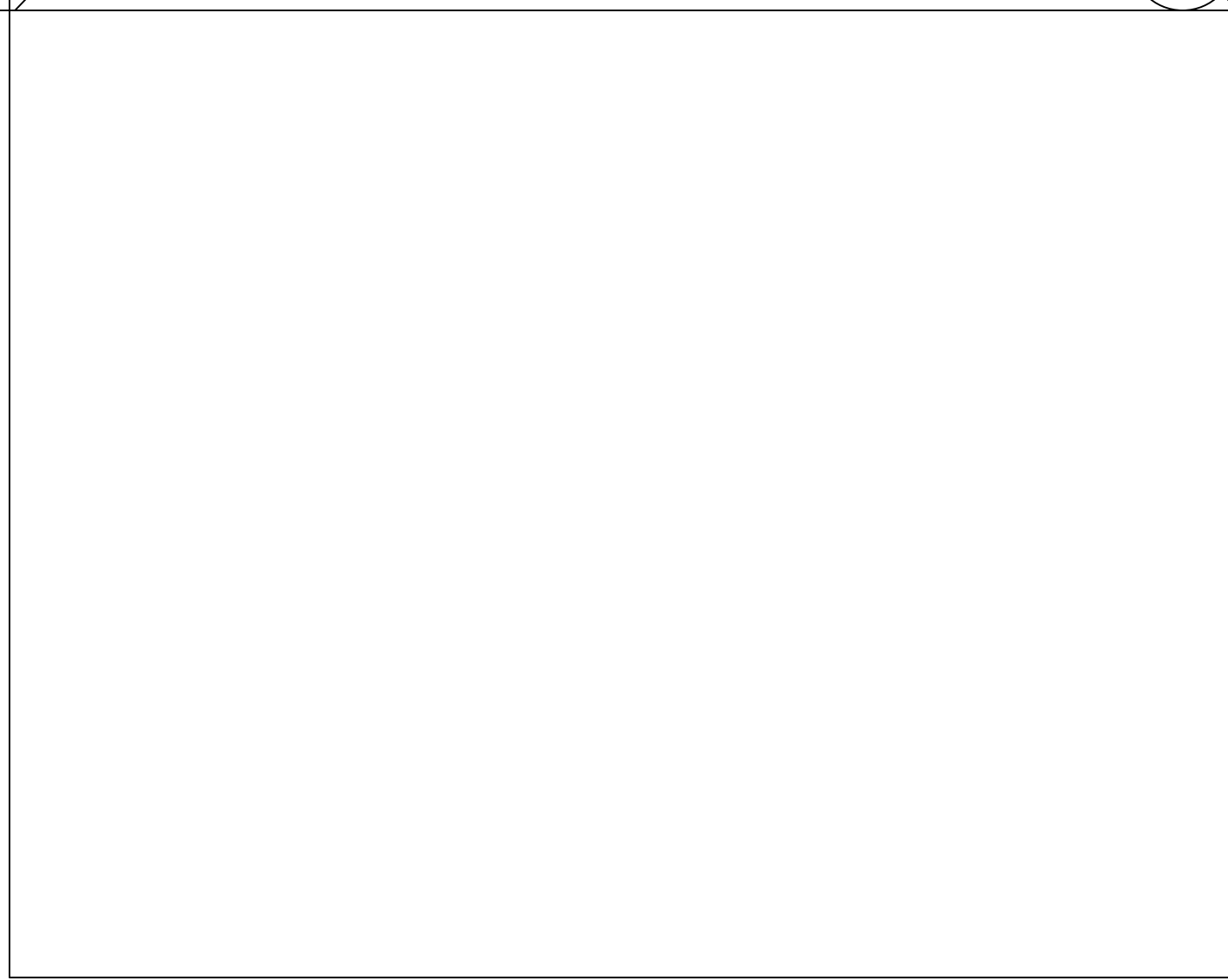
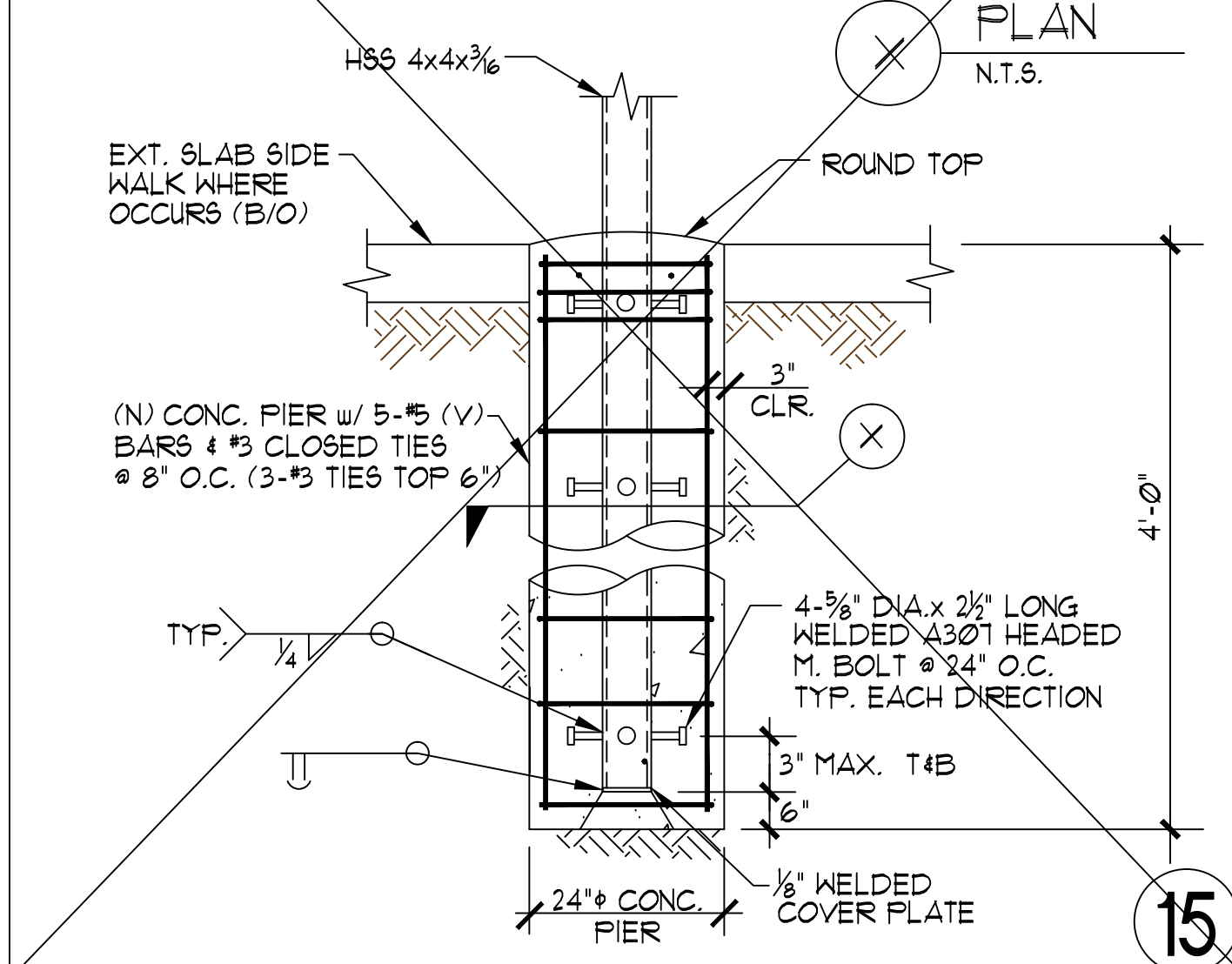
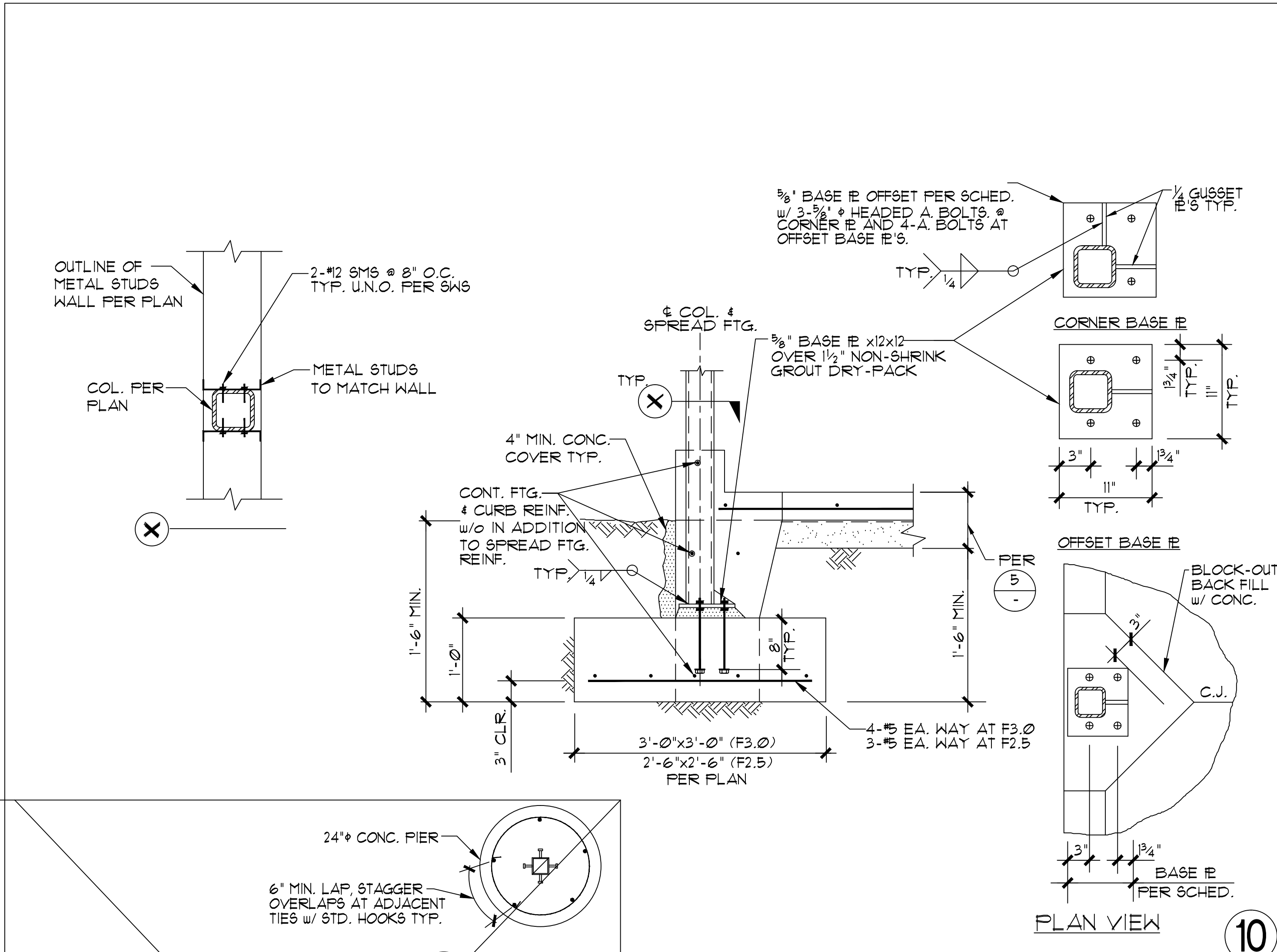
La Puente
ACTIVITY CENTER

501 GLENDORA AVE. LA PUENTE, CA. 91744

PROJECT NO.: 22008	R.S.	A.P.
FILE NAME	DATE: 12/05/2025	DRAWN SM CHECKED OM
REVISIONS	SHEET NO.	
MCG# 23007 B	OF	SHEETS

S1.4

CITY APPROVAL



ARCHITECT

westbergwhite
architecture

1775 HANCOCK ST, SUITE 120
SAN DIEGO, CA 92110
619.542.1188 619.542.1663 FAX

CONSULTANT

City of La Puente

15900 E. MAIN ST. LA PUENTE, CA. 91744

FOUNDATION DETAILS

La Puente
ACTIVITY CENTER

501 GLENDORA AVE. LA PUENTE, CA. 91744

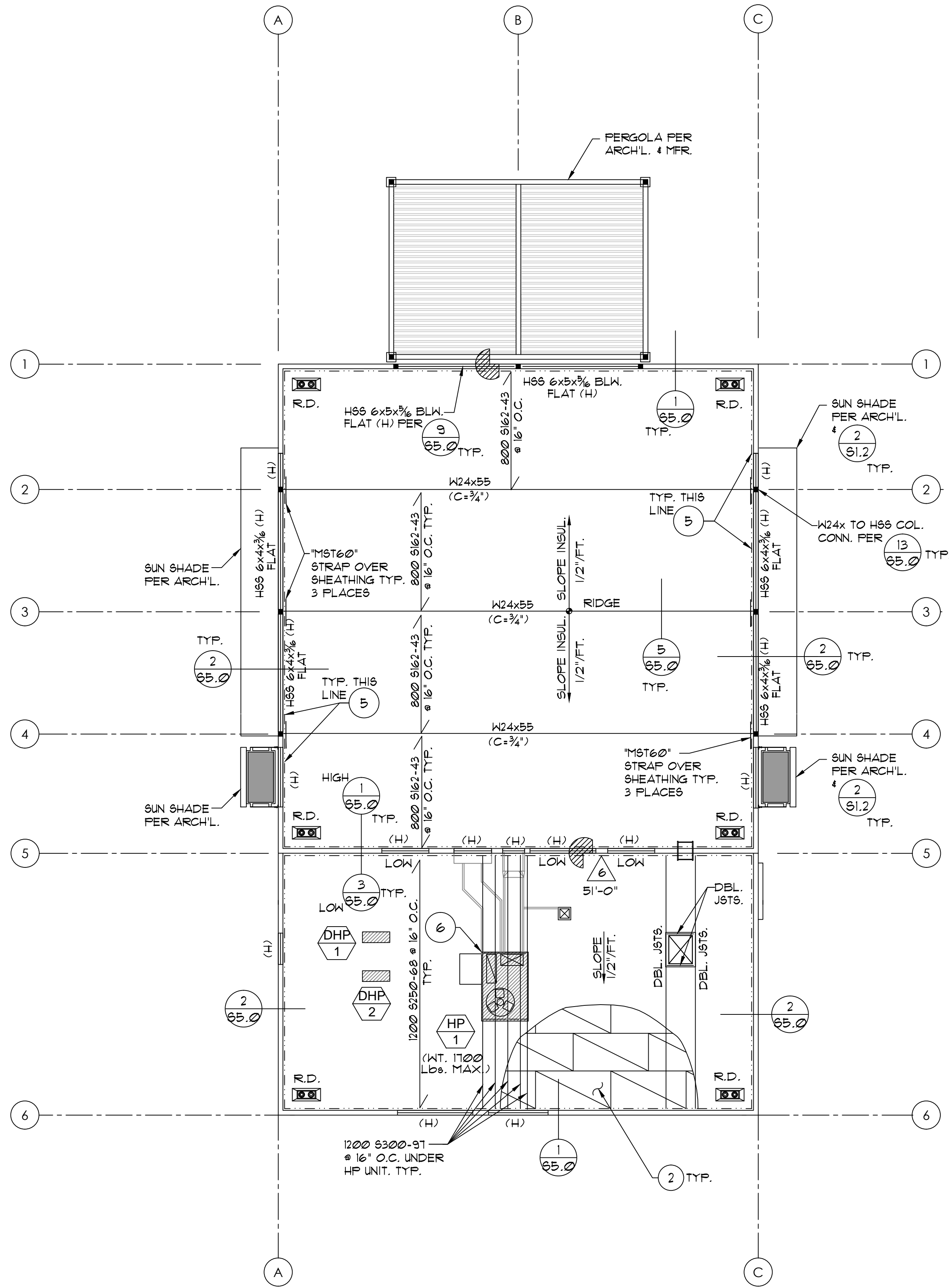
PROJECT NO.: 22008
R.S. A.P.
FILE NAME
DATE: 12/05/2025
DRAWN SM
CHECKED OM
REVISIONS
SHEET NO.
S2.0
MCG# 23007 B OF SHEETS

MCG MOBAYED CONSULTING GROUP

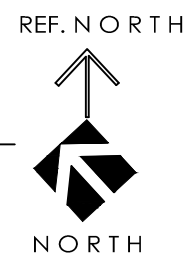
7940 SILVERTON AVENUE, STE. 201 • SAN DIEGO, CALIFORNIA 92126
TEL: (650)866-7855 FAX: (650)866-7845

CITY APPROVAL





ROOF FRAMING PLAN
1/8" = 1'-0"



ROOF FRAMING PLAN'S LEGENDS:

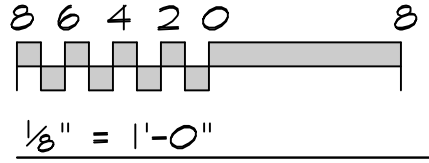
- ALL EXTERIOR & INTERIOR BEARING WALLS SHALL BE 600 S162-54 (16 GA.) MTL. STUDS @ 16" O.C. FOR WALLS UP TO 16'-0" HIGH, OTHERWISE USE 600 S250-68 (14 GA.) STUDS @ 16" O.C. TYP. UNO.
- SEE "NOTES" THIS SHEET
- INDICATES STEP IN SURFACES
- INDICATES SHEAR WALL PANEL MARK FROM THIS LEVEL TO LEVEL ABOVE PER SHEAR WALL SCHEDULE ON PROVIDE NON-SHEAR PLYWOOD ADJACENT TO SHEAR PANELS IN ORDER TO PROVIDE A FLUSH FINISH.
- INDICATES SHEAR WALL PANEL APPROX. MIN. LENGTH IF NOT SHOWN, THEN PROVIDE PLYWOOD ON ENTIRE FACE.
- INDICATES BOXED HEADER PER 3/51.4
- INDICATES BEAM FLUSH W/ JOISTS
- INDICATES TIE JOIST (ADDITIONAL) PER 7/51.3
- INDICATES CAMBER UP



ROOF FRAMING NOTES:

- ALL EXTERIOR WALL FACES IN LINE WITH DESIGNATED SHEAR WALL PANELS SHALL HAVE SAME THICKNESS PLYWOOD (CD OR BETTER) OVER ENTIRE AREA. (SCREWED W/ #10 SCREWS @ 6" O.C. B.N. & E.N. AND @ 12" O.C. F.N.)
- TYPICAL ROOF DIAPHRAGM
5/8" PLYWOOD - STR 1 (INDEX 24/16),
W/ #10X1-1/2" LONG FLAT HEAD SCREWS (0.275" DIA. FLAT HEAD)
@ 6" B.S.
@ 6" E.S.
@ 12" F.S.

BLOCK DIAPHRAGM W/ 4X18 GA. FLAT TRACKS/ BLK'GS. W/ 2-#10 S16M. EA. END.
- FOR WALL'S OPENING FRAMING SEE DETAIL 3/51.4
- FOR TYP. HSS BM. TO COL. CONNECTION SEE 14/55.0
- CONT. WALL LEDGER BETWEEN GRIDS (DO NOT SPLICE)
- "HP" MECH'L UNITS (WEIGHT PER PLAN INCLUDING MTL. CURB), PER 7/55.0 AND 9/55.0



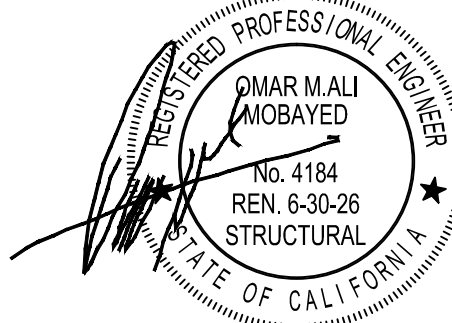
IF DRAWING IS NOT 24"x36" IT HAS BEEN REDUCED.
REDUCE SCALE ACCORDINGLY.

GRAPHIC SCALE

MCG MOBAYED CONSULTING GROUP
7940 SILVERTON AVENUE, STE. 201 • SAN DIEGO, CALIFORNIA 92126
TEL : (656)866-7855 FAX : (656)866-7845



CONSULTANT



City of La Puente

15900 E. MAIN ST. LA PUENTE, CA. 91744

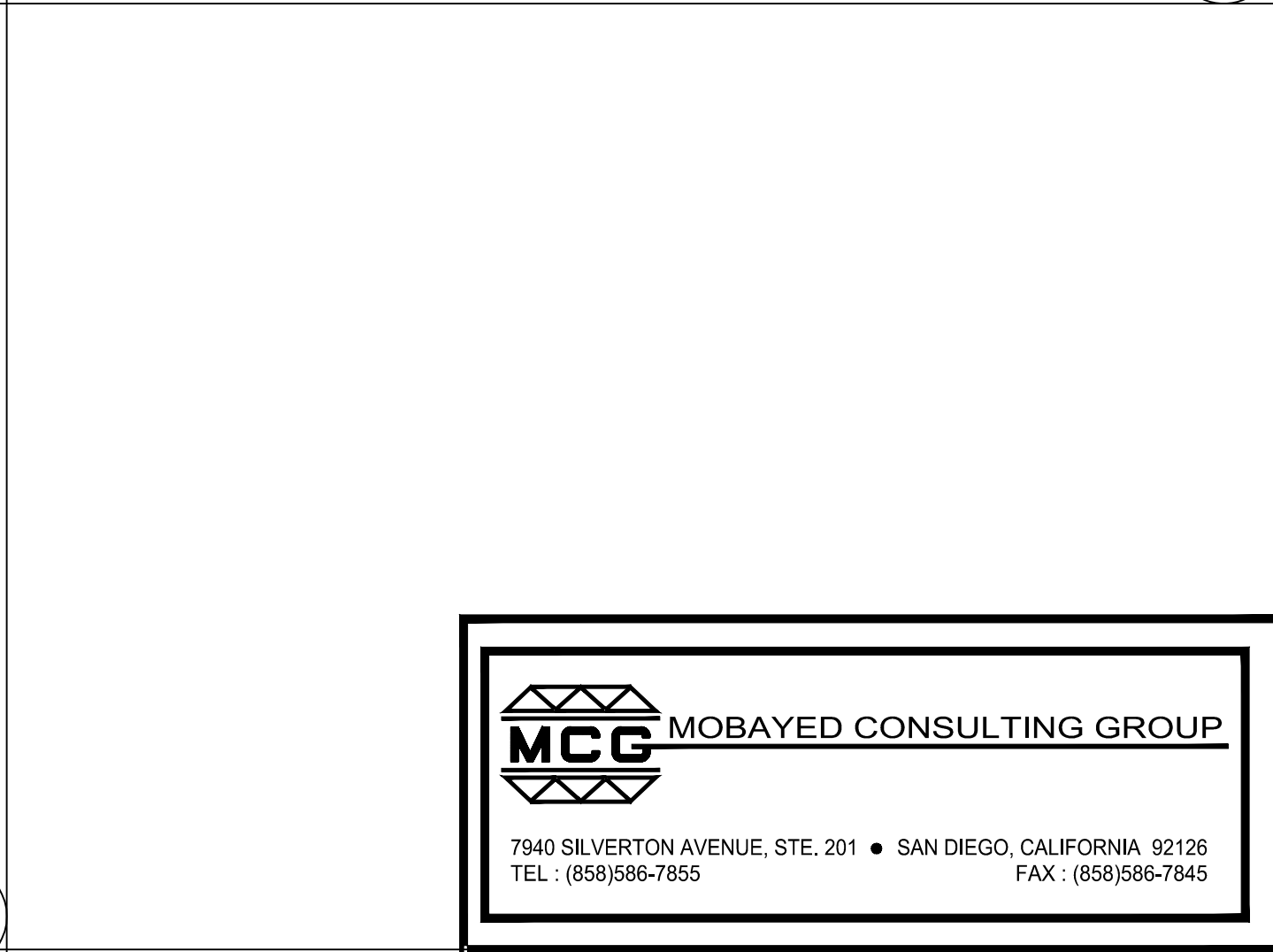
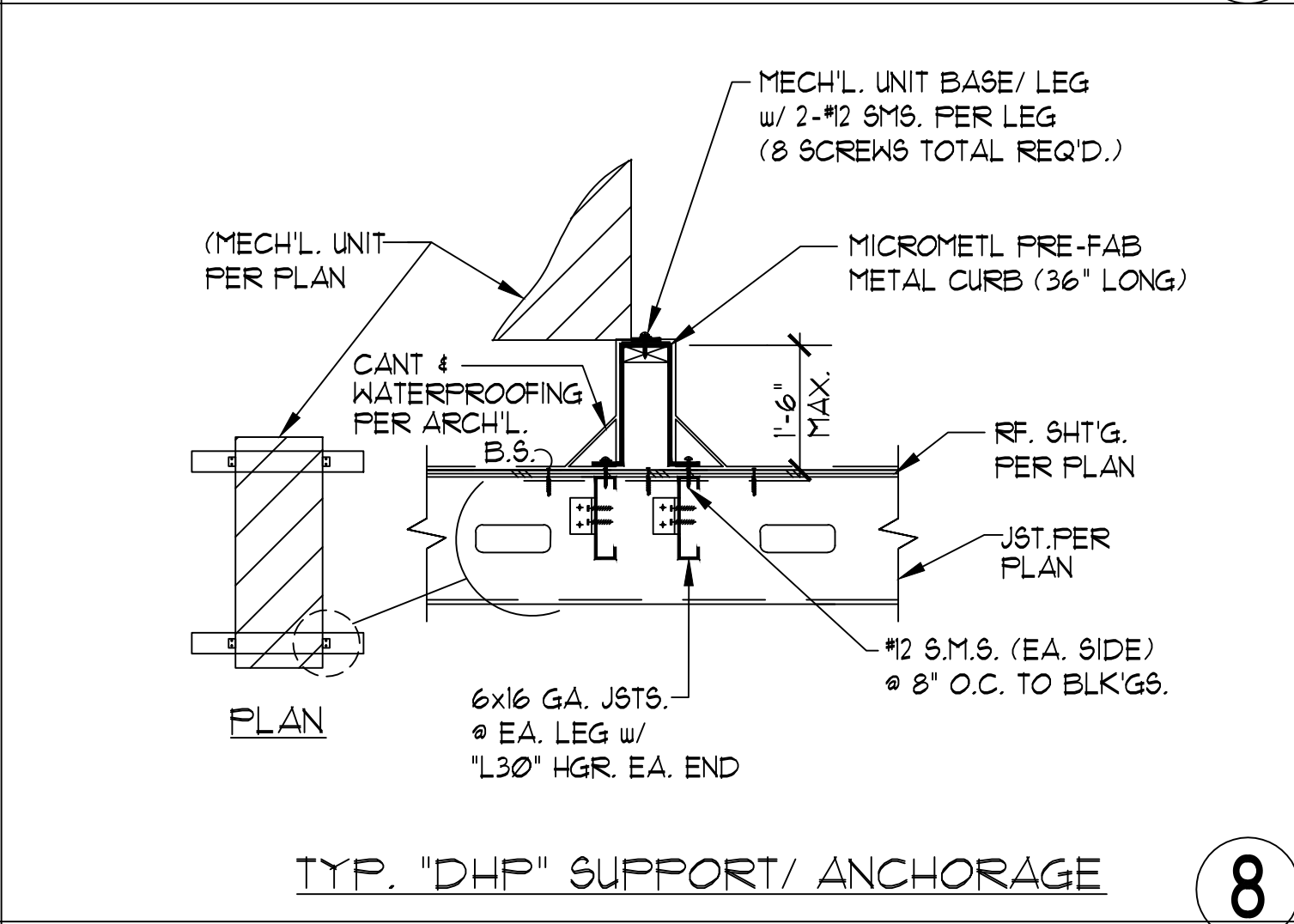
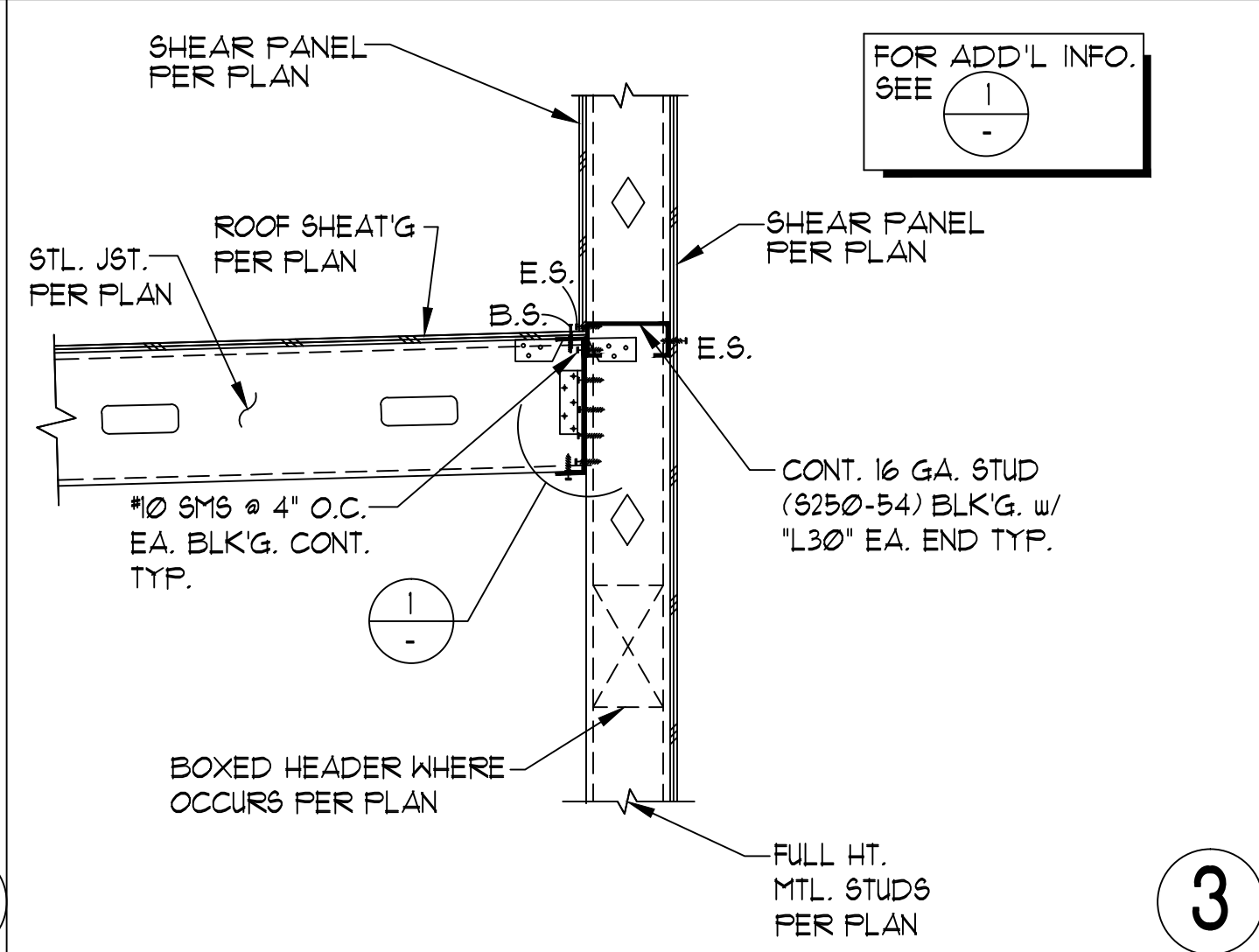
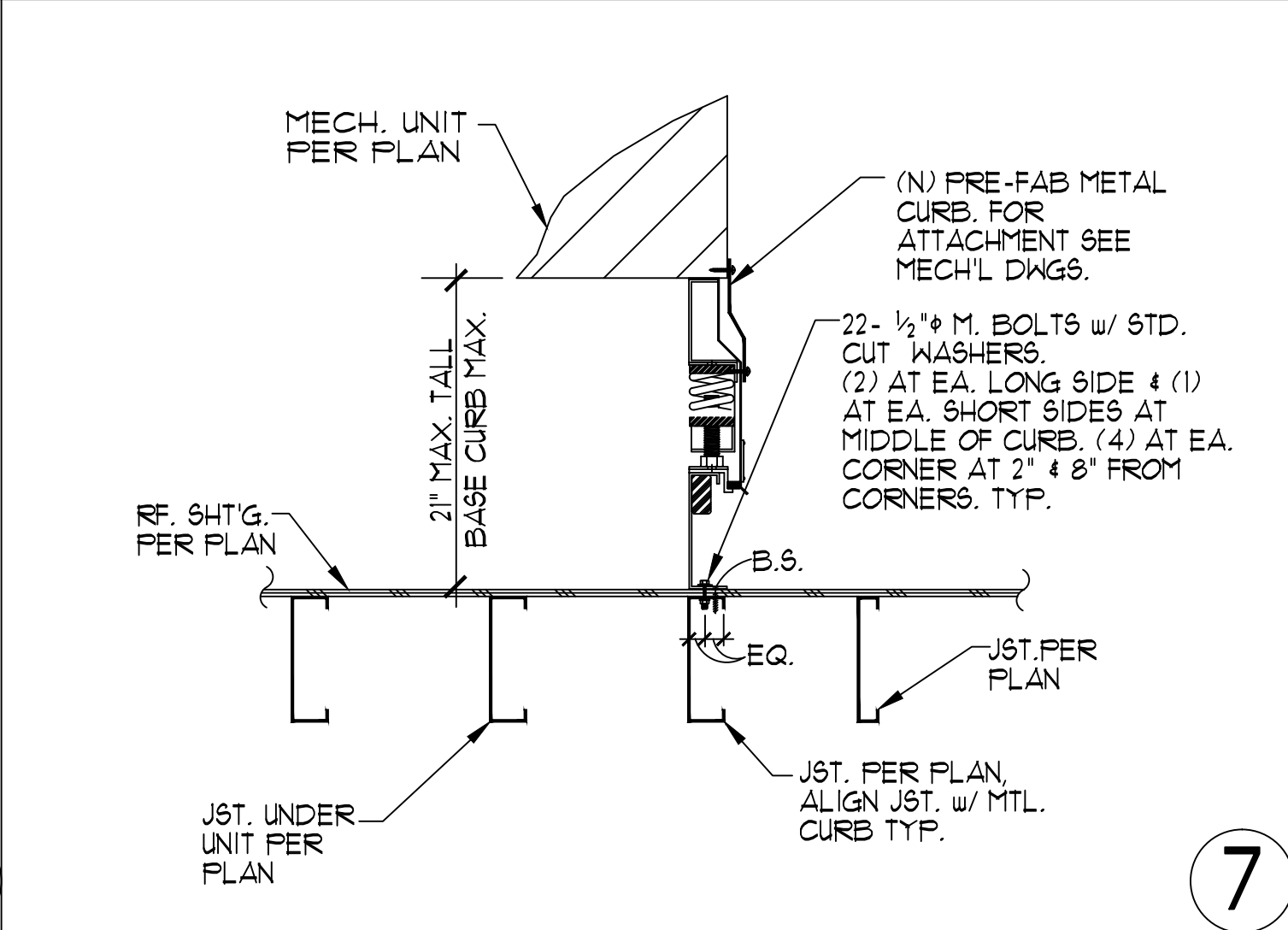
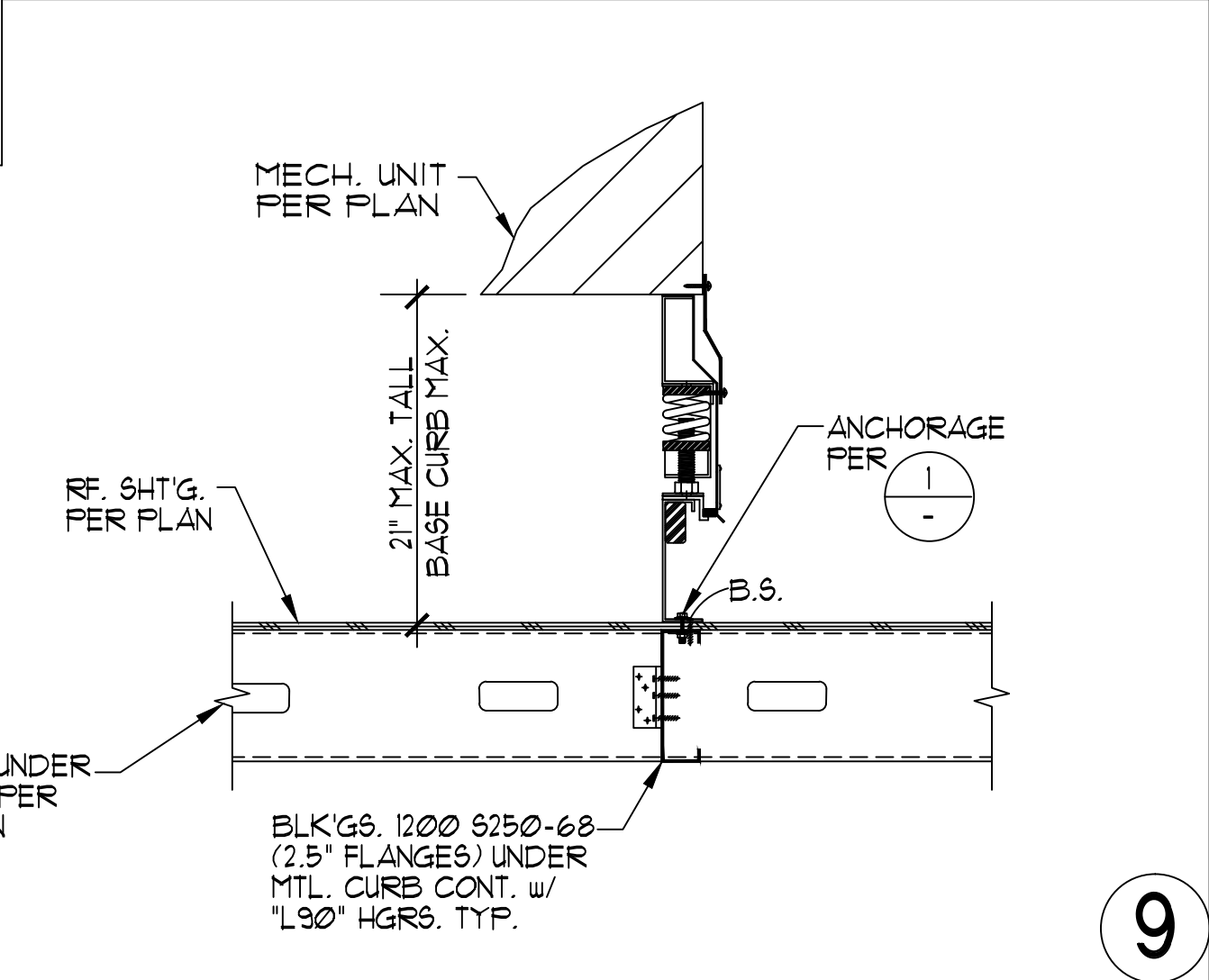
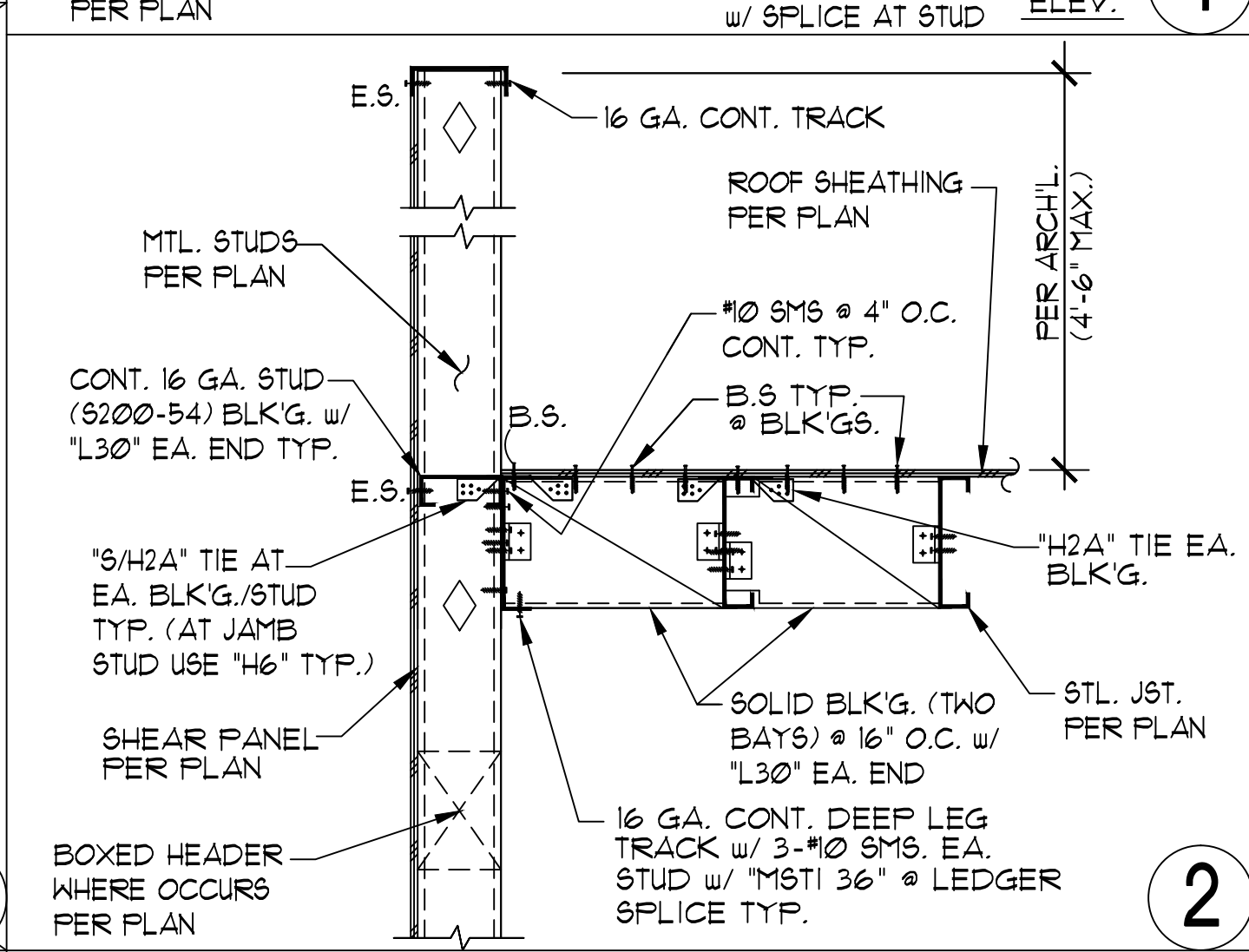
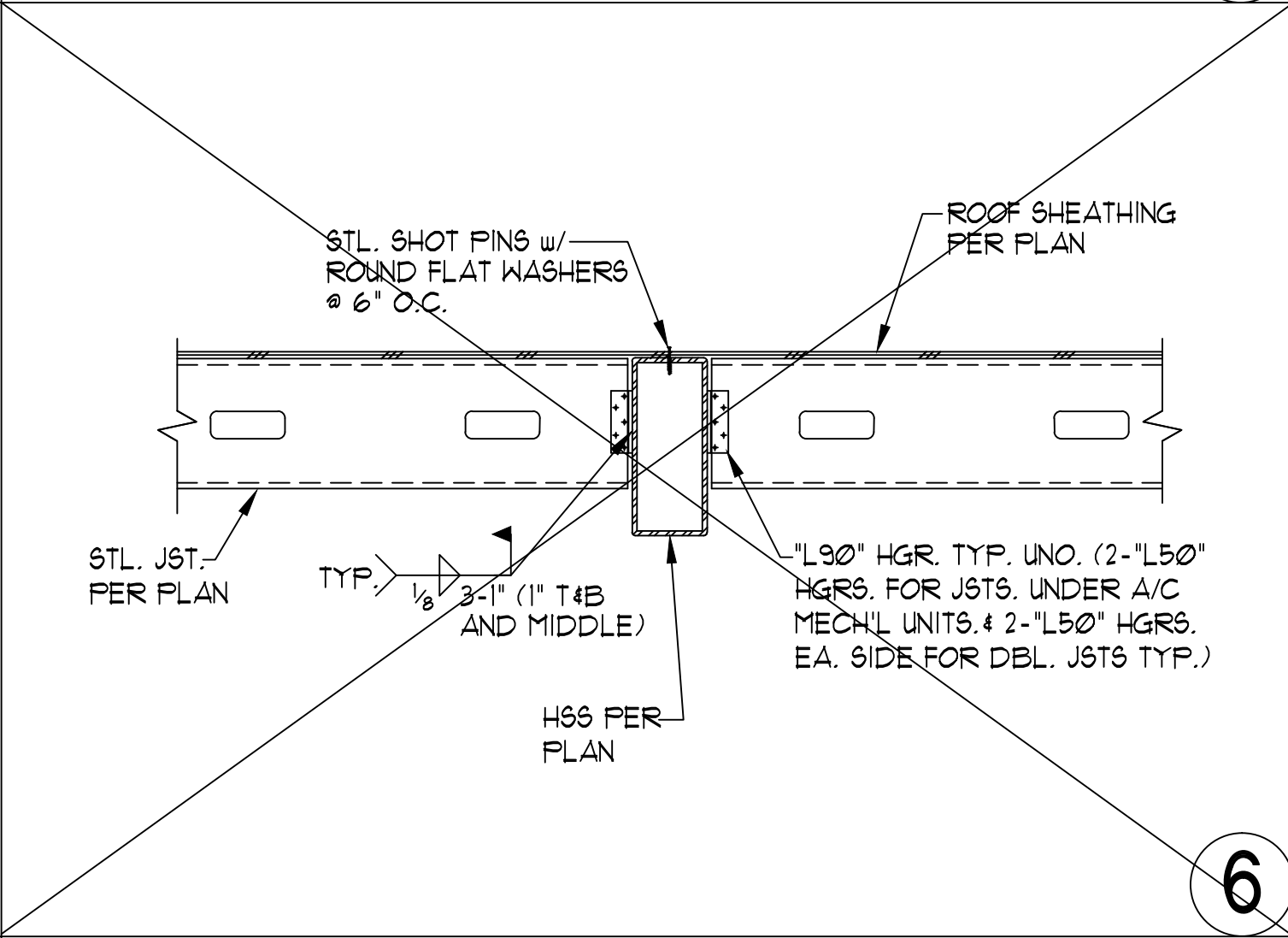
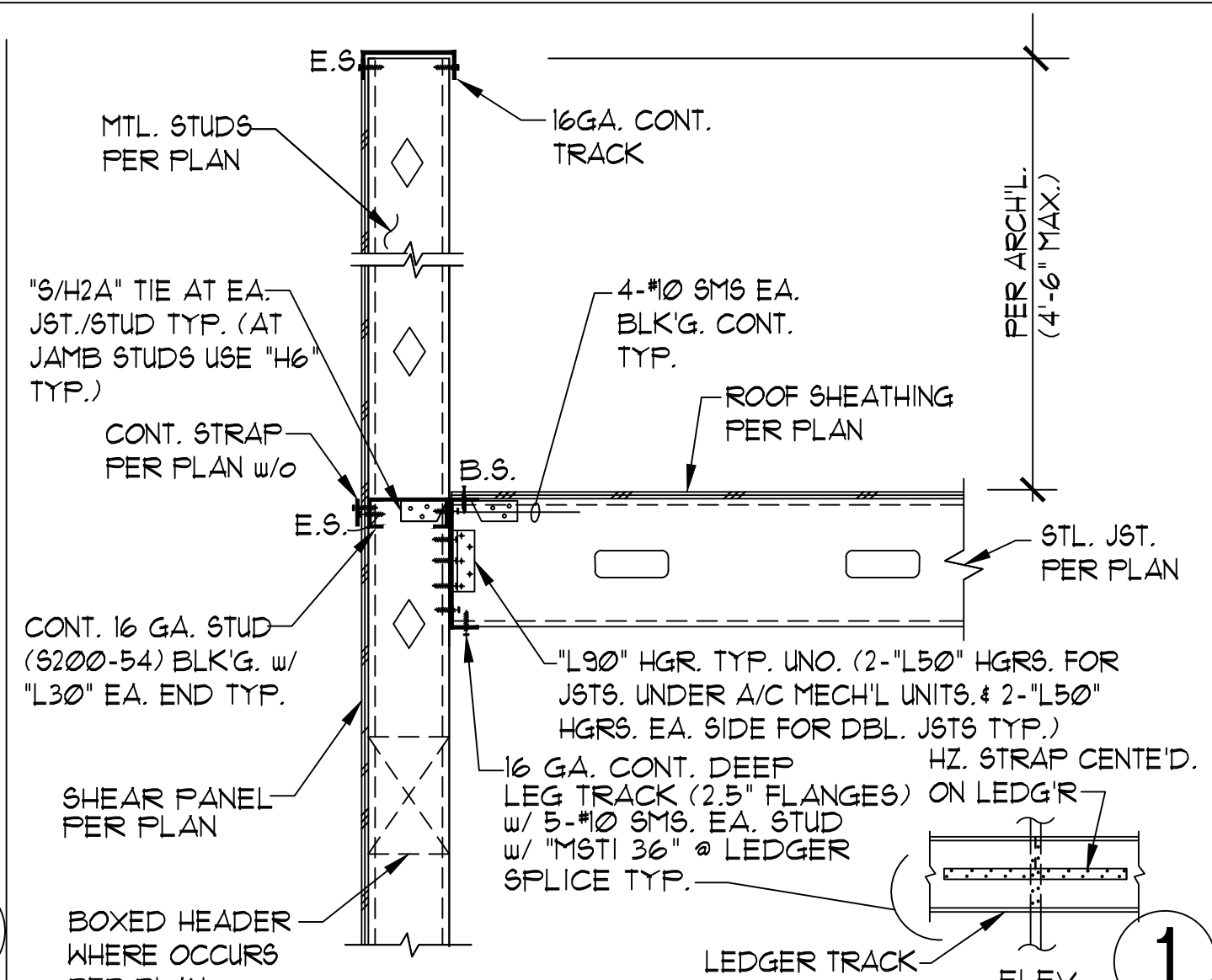
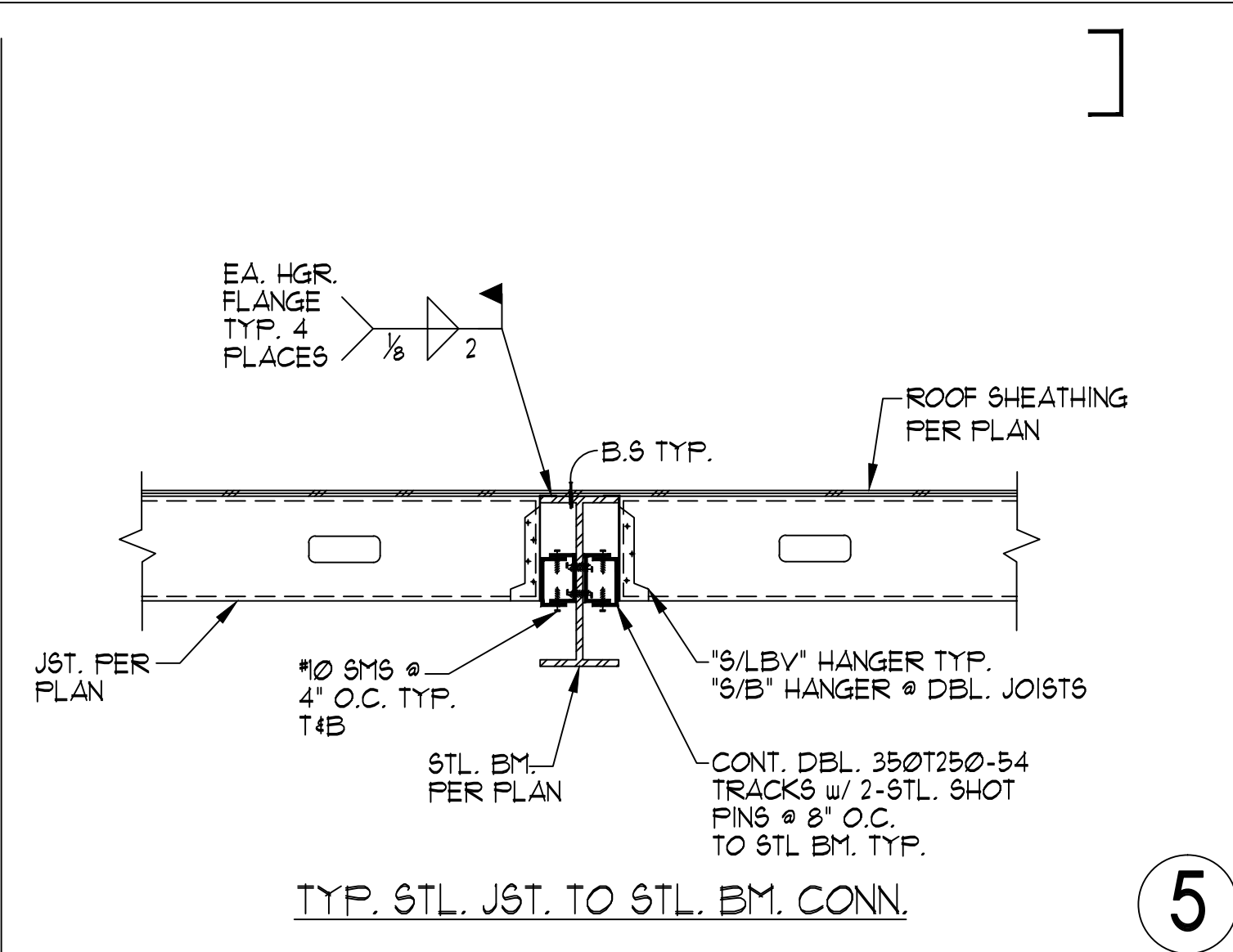
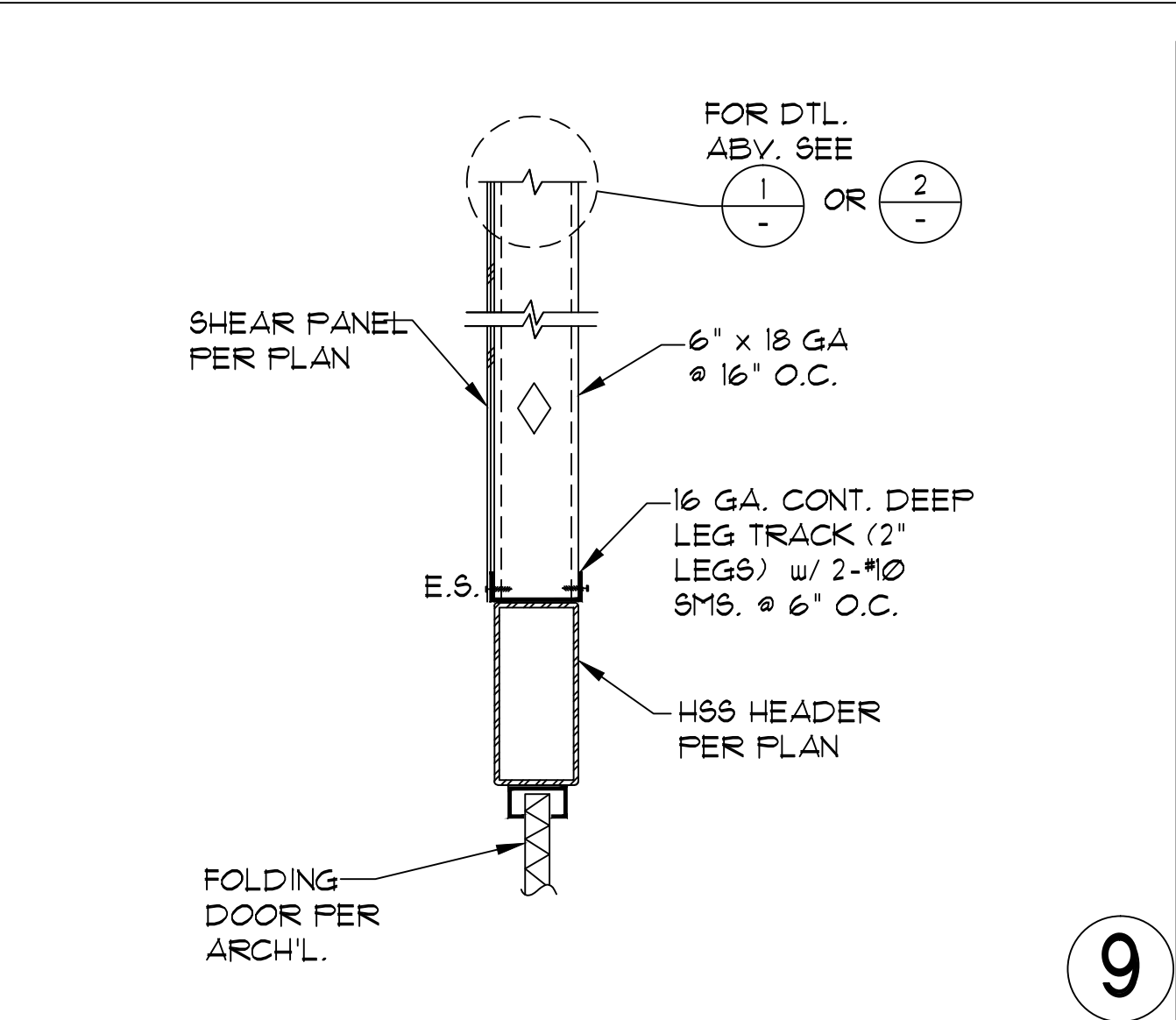
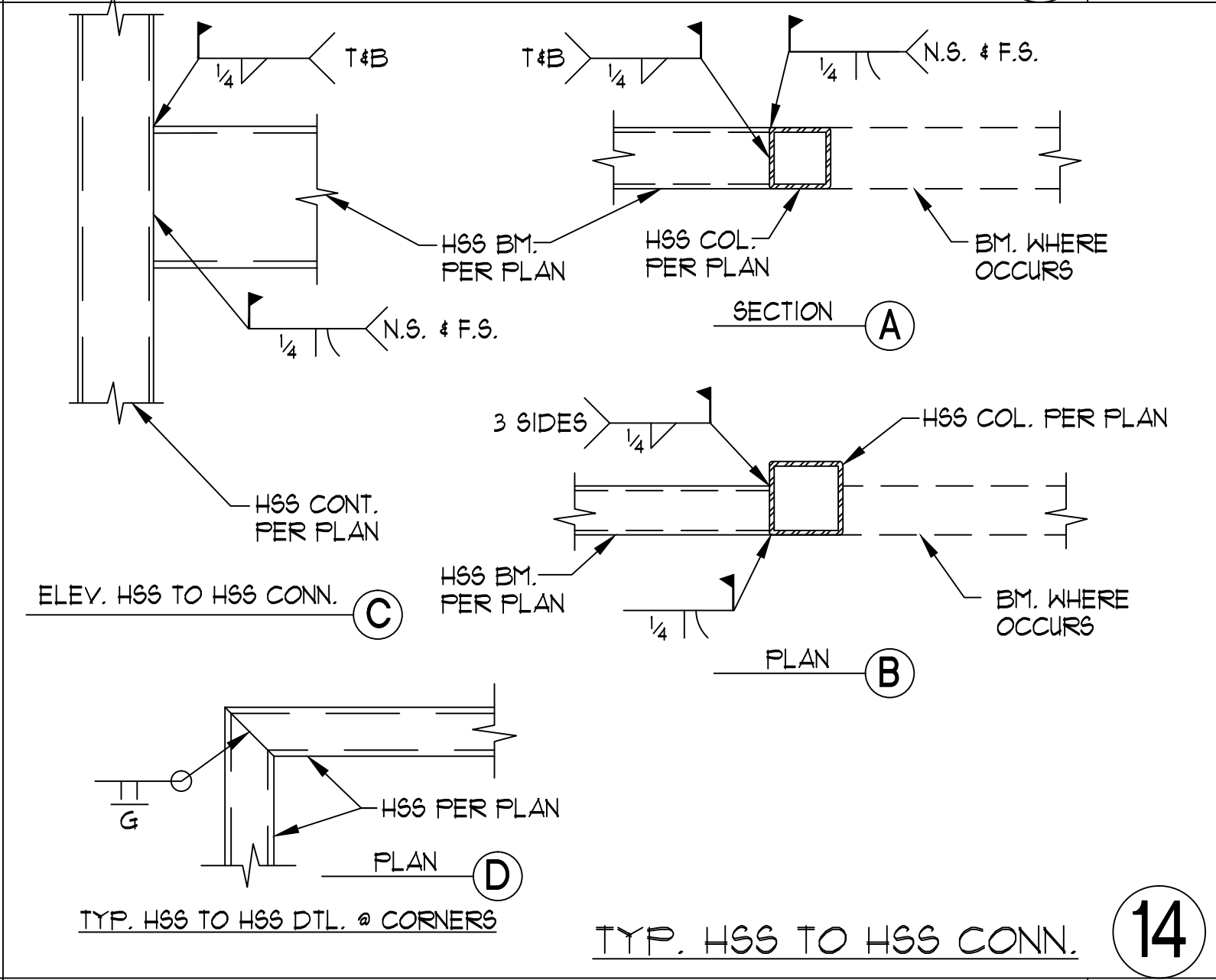
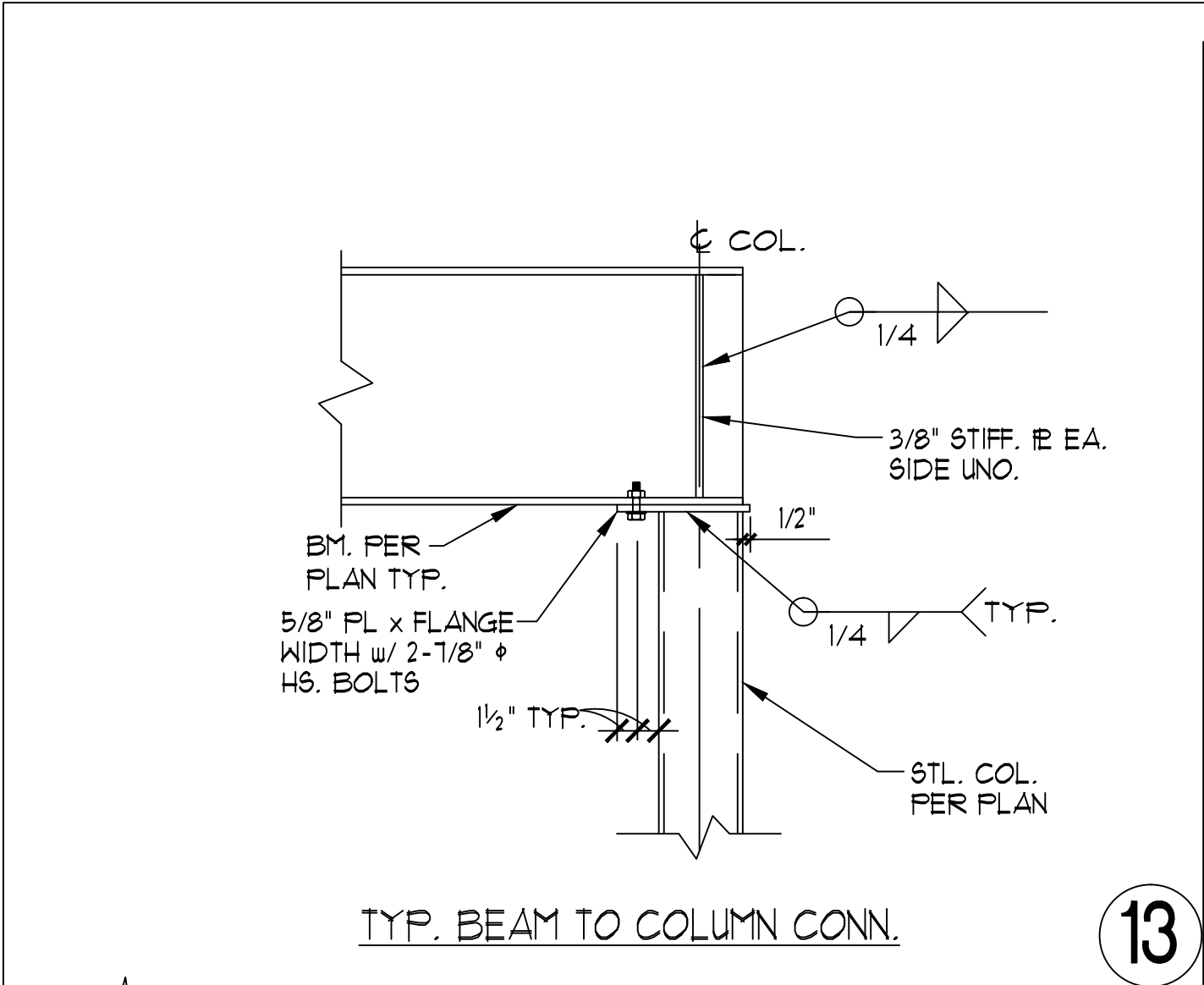
ROOF FRAMING PLAN

La Puente
ACTIVITY CENTER

501 GLENDORA AVE. LA PUENTE, CA. 91744

PROJECT NO.: 22008	
R.S.	A.P.
FILE NAME	
DATE: 12/05/2025	DRAWN SM CHECKED OM
REVISIONS	SHEET NO.
	S3.1
MCG# 23007 B	OF SHEETS

CITY APPROVAL



MCG MOBAYED CONSULTING GROUP

7940 SILVERTON AVENUE, STE. 201 • SAN DIEGO, CALIFORNIA 92126
TEL.: (656)986-7855 FAX.: (656)986-7845

ARCHITECT

westbergwhite architecture

1775 HANCOCK ST, SUITE 120
SAN DIEGO, CA 92110
619.542.1188 619.542.1663 FAX

LICENSED ARCHITECT
STATE OF CALIFORNIA
C-6090
EXP. 12-2025

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
NO. 4184
REN. 6-30-26
STRUCTURAL
STATE OF CALIFORNIA

City of La Puente

15900 E. MAIN ST. LA PUENTE, CA. 91744

FRAMING DETAILS


La Puente
ACTIVITY CENTER

501 GLENDORA AVE. LA PUENTE, CA. 91744

PROJECT NO.: 22008
R.S. A.P.
FILE NAME
DATE: 12/05/2025
DRAWN SM
CHECKED OM
REVISIONS
SHEET NO.
S5.0
MCG# 23007 B OF SHEETS

CITY APPROVAL

PACKAGE HEAT PUMP SCHEDULE

MARK					
SERVES	ACTIVITY CENTER				
S.A. C.F.M.	5000				
O.A. C.F.M.	500				
EXT. S.P.	1.7				
WEIGHT (LBS.)	1250				
CLG. M.B.H. TOTAL	154.2				
CLG. M.B.H. SENS.	115.0				
CLG. E.A.T. D.B. °F	80				
CLG. E.A.T. W.B. °F	67				
CLG. AMBIENT AIR	95 °F				
HTG. M.B.H.	136.5				
S.E.E.R./E.E.R.	-/10.6				
H.S.P.F./C.O.P.	-/3.3				
VOLTS/PHASE	208/3				
EVAP. MOTOR B.H.P.	2.9				
UNIT M.C.A.	63				
UNIT M.O.C.P.	80				
MANUFACTURER	CARRIER				
MODEL NO.	50FEQM14A2A5				
MECHANICAL CURB	MICROMETL				
REFRIGERANT	R-454				
REMARKS	<div>①②③④⑤ ⑥ 12.5 TON</div>				

- ① PROVIDE & FIELD INSTALL MANUFACTURER SUPPLIED MERV 13 - 2" FILTER & FILTER RACK. FILTERS SHALL BE KOCH MULTI-PLEAT GREEN13 FILTERS. FILTER SHALL NOT EXCEED 0.12" PRESSURE DROP AT 300 F.P.M.
- ② PROVIDE WITH HORIZONTAL POWER EXHAUST/ECONOMIZER MICROMETL PECE-SRT05CB-D2DH-2L3. ECONOMIZER AND MODULATING 2.0 HP POWER EXHAUST COMBINATION PACKAGE. PROVIDE WITH HONEYWELL JADE 27220 ELECTROMECHANICAL CONTROLLER. 208-230/3PHASE, 13.6 FLA, 17 MCA, 30.6 MOCP, 313 LBS. PROVIDE SEPARATE POINT OF ELECTRICAL CONNECTION.
- ③ UNIT WEIGHT PROVIDED IS BASE UNIT ONLY. WEIGHT DOES NOT INCLUDE CURB OR POWER/EXHAUST ECONOMIZER.
- ④ PROVIDE WITH DEMAND CONTROLLED VENTILATION.
- ⑤ PROVIDE & FIELD INSTALL SMOKE DETECTOR ON SUPPLY AIR OUTLET OF EVAPORATOR FAN. WIRE DETECTOR TO SHUT OFF EVAPORATOR FAN WHEN SMOKE IS DETECTED. SMOKE DETECTOR SHALL BE 24 VOLTS. SMOKE DETECTOR SHALL HAVE CONTACTS TO INTERFACE WITH BUILDING FIRE PROTECTION/ALARM SYSTEM TO MEET CODE REQUIREMENTS AND UL-268A CFC 907.
- ⑥ PROVIDE MICROMETL CRBV-SRT05HA VIBRATION ISOLATION SLOPED ROOF CURB TO MATCH ROOF SLOPE AND DUCT ALIGNMENT INTO SPACE.

EXHAUST FAN SCHEDULE





MARK					
SERVES	JANITOR	RESTROOM	RESTROOM	STORAGE	
TYPE	CEILING	CEILING	CEILING	CEILING	
C.F.M.	100	100	100	400	
EXT. S.P.	.3"	.3"	.3"	.3"	
R.P.M.	675	675	675	1291	
B.H.P.	-	-	-	-	
H.P./WATTS	- / 51	- / 51	- / 51	- / 117	
VOLTS/PHASE	115/1	115/1	115/1	115/1	
SONES	1.4	1.4	1.4	2.5	
WEIGHT (LBS)	16	16	16	51	
MANUFACTURER	COOK	COOK	COOK	COOK	
MODEL NO.	GC-186	GC-186	GC-186	GC-622	
REMARKS	<div>①②③④</div>	<div>①②③④</div>	<div>①②③④</div>	<div>①②③④⑤</div>	

- ① FAN SHALL HAVE MANUFACTURER'S INTEGRAL BACKDRAFT DAMPER.
- ② PROVIDE WITH MANUFACTURER'S FAN SPEED CONTROLLER 5A 120V PRE-WIRED.
- ③ PROVIDE AND INSTALL WITH GEMINI ISOLATOR KIT.
- ④ PROVIDE WITH TIME CLOCK CONTROLS.
- ⑤ PROVIDE WITH MANUFACTURER'S ALUMINUM GRILLE

















GENERAL NOTES:

1. THESE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL NECESSARY OFFSETS OF DUCTWORK AND PIPING. THE CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT IN A MANNER AS TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. ALL INSTALLATIONS SHALL BE CONSISTENT WITH NORMALLY ACCEPTABLE INDUSTRY STANDARDS.
2. NEW AND/OR EXISTING EQUIPMENT INDICATED ON THESE DRAWINGS ARE SHOWN IN APPROXIMATE POSITIONS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING EQUIPMENT LOCATIONS, POINT OF CONNECTIONS, AND STRUCTURAL MEMBERS PRIOR TO INSTALLATION. IN ALL CASES, ADEQUATE ACCESS (PER MANUFACTURER'S RECOMMENDATIONS AND CODE COMPLIANCE) FOR MAINTENANCE AND REPLACEMENT OF EQUIPMENT SHALL BE PROVIDED.
3. AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEMS. CAL GREEN SECTION 4.504.1.
4. INSTALL MECHANICAL EQUIPMENT PER MANUFACTURER'S INSTRUCTION. ALL EQUIPMENT, MATERIAL, AND ALL CONNECTION THERETO SHALL BE INSTALLED COMPLETE PER MANUFACTURER'S INSTRUCTIONS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL SYSTEM.
5. INSTALL HVAC UNITS TO MEET CLEARANCE REQUIREMENTS FOR MANUFACTURER'S RECOMMENDATIONS AND CODE REQUIREMENTS.
6. H.V.A.C. UNITS SHALL BE INSTALLED LEVEL AND PLUMB. PROVIDE ALL NECESSARY WORK INCLUDING LEVELING DEVICES.
7. IN MECHANICALLY VENTILATED BUILDINGS, REGULARLY OCCUPIED AREAS OF THE BUILDING SHALL BE PROVIDED WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 13. MERV 13 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY, AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL. CAL GREEN SECTION 5.504.5.3.
8. FILTERS TO BE KOCH MULTI-PLEAT GREEN13 FILTERS. FILTER SHALL NOT EXCEED 0.12" PRESSURE DROP AT 300 F.P.M.
9. INSTALLED FILTERS SHALL BE CLEARLY LABELED BY THE MANUFACTURER INDICATING THE MERV RATING.
10. SEE ARCHITECTURAL PLANS FOR EXACT PLACEMENT OF DIFFUSERS, REGISTERS AND GRILLES.
11. DUCT SIZES NOTED ON PLANS ARE NET, CLEAR INSIDE DIMENSIONS.
12. INSULATION MATERIAL SHALL MEET THE CALIFORNIA QUALITY STANDARD PER CBEEES 110.8.
13. ALL PIPING AND DUCT WORK SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF CBEEES 120.3, 120.4 AND 120.7 TITLE 24 ENERGY STANDARDS AND CMC CH. 6.
14. FACTORY-MADE FLEXIBLE AIR DUCTS AND CONNECTORS SERVING NON-RESIDENTIAL SHALL NOT BE MORE THAN 5 FEET IN LENGTH AND SHALL COMPLY WITH SECTIONS 603.4.1 AND 603.5 C.M.C.
15. BALANCE SYSTEMS TO CFMS SHOWN ON PLANS.
16. ALL HVAC EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS PER SECTION 110.1-110.3, 110.5, 120.1-120.4 TITLE 24 ENERGY STANDARDS.
17. ALL HVAC SYSTEMS SHALL MEET THE CONTROL REQUIREMENTS PER SECTIONS 110.2 AND 120.2 E.E.S., AND THE CONTRACT DRAWINGS AND SPECIFICATIONS.
18. EXHAUST AND INTAKE OPENINGS TERMINATING TO THE OUTDOORS SHALL BE COVERED WITH A CORROSION-RESISTANT SCREEN HAVING NOT LESS THAN 1/4 OF AN INCH (6.4 MM) OPENINGS, AND SHALL HAVE NOT MORE THAN 1/2 OF AN INCH (12.7 MM) OPENINGS. 502.1, 2022 CMC.

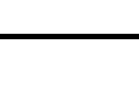





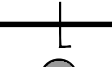







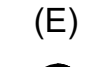

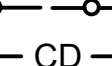
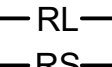













DUCTLESS SPLIT SYSTEM HEAT PUMP SCHEDULE

MARK	DESCRIPTION
<div> </div>	<div>INDOOR UNIT WITH OUTDOOR UNIT: 1.5 TON CARRIER SYSTEM OUTDOOR UNIT MODEL 38MARBQ18AA3, INDOOR UNIT HIGH-WALL MODEL 40MAHBQ18XA3.</div> <div>INDOOR UNIT WEIGHT 27 LBS., OUTDOOR UNIT WEIGHT 101 LBS. 208/230 VOLTS/ 1 PHASE, 16.0 M.C.A., 20.0 M.O.C.P. POWER FOR INDOOR UNIT THRU OUTDOOR UNIT, 21.5 S.E.E.R., 13 HSPF, 8.9-19.4 M.B.H. TOTAL COOLING CAPACITY, 8.4-19.5 M.B.H. HEATING CAPACITY. 306 C.F.M./376C.F.M./524C.F.M./635 C.F.M. 1/4" LIQUID LINE PIPING - INSULATED, 1/2" SUCTION LINE PIPING - INSULATED.</div> <div>FAN COIL SHALL HAVE MANUFACTURER SUPPLIED WALL MOUNTED CONDENSATE PUMP - RESERVOIR MODEL X87-711 WITH COVER. MOUNT PUMP BELOW FAN COIL. PROVIDE 110 VOLT .7 AMPS POWER TO PUMP.</div>

DIFFUSER AND GRILLE SCHEDULE

CEILING SUPPLY AIR DIFFUSER			CEILING RETURN AIR AND EXHAUST AIR GRILLE			ROUND DUCT DIFFUSER  		NOTES:
MARK	NECK SIZE	C.F.M. RANGE	MARK	NECK SIZE	C.F.M. RANGE	MARK	C.F.M. RANGE	
	6"Ø	10 - 100*		8"Ø	10 - 200		18"Ø	BALANCE TO C.F.M. SHOWN ON PLANS.
	8"Ø	101 - 200*		10"Ø	201 - 350		20"Ø	PROVIDE MANUAL AIR VOLUME BALANCE DAMPERS IN ALL SUPPLY/RETURN AND EXHAUST BRANCH DUCTS TO BALANCE AIR FLOWS AS SHOWN ON PLAN.
							24"Ø	
			TRANSFER GRILLE			WALL RETURN		
			MARK	DIMENSIONS	C.F.M. RANGE	MARK	DIMENSIONS	C.F.M. RANGE
				12"x 12"	0 - 300		36"x 18"	1000 - 3000
							36"x 30"	3001 - 4200
							42"x 30"	4201 - 5050
 MARK 100 C.F.M. - BALANCE TO NUMBER SHOWN ON PLANS			 MARK 100 C.F.M. - BALANCE TO NUMBER SHOWN ON PLANS			 MARK 100 C.F.M. - BALANCE TO NUMBER SHOWN ON PLANS		

MECHANICAL LEGEND

SYMBOL	ABBREV.	DESCRIPTION
	10"x4" OR 10"ø	NEW RIGID DUCT, 1ST NUMBER INDICATES SIDE SHOWN
		EXISTING DUCTWORK OR PIPING EXISTING TO BE REMOVED
		RECTANGULAR TO ROUND TRANSITION
	B.D.D.	BACKDRAFT DAMPER
	B.R.D.	BARO-METRIC RELIEF AIR DAMPER
	F.D.	FIRE DAMPER
	F.S.D.	FIRE SMOKE DAMPER
	M.V.D.	MANUAL VOLUME DAMPER
		ROUND DUCT UP
		ROUND DUCT DOWN
	S.A.	SQUARE OR RECTANGULAR SUPPLY AIR DUCT UP
	R.A. OR O.A.	SQUARE OR RECTANGULAR RETURN AIR OR OUTSIDE AIR DUCT UP
	E.A.	SQUARE OR RECTANGULAR EXHAUST AIR DUCT UP
	S.A.	SQUARE OR RECTANGULAR SUPPLY AIR DUCT DOWN
	R.A. OR O.A.	SQUARE OR RECTANGULAR RETURN AIR OR OUTSIDE AIR DUCT DOWN
	E.A.	SQUARE OR RECTANGULAR EXHAUST AIR DUCT DOWN
	E.R./G.	EXHAUST REGISTER/GRILLE. REGISTER SHALL HAVE OPPOSED BLADE DAMPER
	T'STAT	THERMOSTAT (NUMBER INDICATES EQUIPMENT OR ZONE SERVED)
	EXIST.	DENOTES EXISTING
	P.O.C.	POINT OF CONNECTION
	DN.	DOWN OR DROP
	UP.	RISE OR RISER
	C.D.	CONDENSATE DRAIN
	R.L.	REFRIGERANT LIQUID
	R.S.	REFRIGERANT SUCTION
	U.C.	UNDER CUT DOOR
		PROVIDED & INSTALLED BY ELECT. CONTRACTOR
		PROVIDED & INSTALLED BY MECH. CONTRACTOR
	S.D.	SMOKE DETECTOR
A/C		ABOVE CEILING
A.F.F.		ABOVE FINISH FLOOR
ARCH.		ARCHITECT
B.O.D.		BOTTOM OF DUCT
CLG.		CEILING
CONT.		CONTINUATION
D.T.F.		DOWN THRU FLOOR
D.T.R.		DOWN THRU ROOF
E.A.L.		EXHAUST AIR LOUVER
E.A.T.		ENTERING AIR TEMPERATURE
ELECT.		ELECTRICAL
E.W.T.		ENTERING WATER TEMPERATURE
EXT.		EXTERNAL
F.P.F.		FINS PER FOOT
G.C.		GENERAL CONTRACTOR
G.P.M.		GALLONS PER MINUTE
HTG.		HEATING
L.A.T.		LEAVING AIR TEMPERATURE
MAX.		MAXIMUM
M.C.A.		MINIMUM CIRCUIT AMPS
MECH.		MECHANICAL
MFR.		MANUFACTURER
MIN.		MINIMUM
M.O.C.P.		MAXIMUM OVER CURRENT PROTECTION
O.A.L.		OUTSIDE AIR LOUVER
P.D.		PRESSURE DROP (FEET OF HEAD)
R.A.D.		RELIEF AIR DUCT
R.A.L.		RELIEF AIR LOUVER
S.P.		STATIC PRESSURE
T.O.D.		TOP OF DUCT
TYP.		TYPICAL
U.O.N.		UNLESS OTHERWISE NOTED
U.T.F.		UP THRU FLOOR
U.T.R.		UP THRU ROOF
W.M.S.		WIRE MESH SCREEN (1/4"x1/4" GRID)
	1 M5	DETAIL IDENTIFICATION NUMBER REFERENCE NUMBER OF SHEET ON WHICH DETAIL IS DRAWN
	AC 1	UNIT CALL OUT UNIT NUMBER

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A.L.M. PROJECT NO. 22013

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SDG

ARCHITECT



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SAN DIEGO, CA 92110
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CONSULTANT



City of La Puente

15900 E. MAIN ST. LA PUENTE, CA. 91744

MECHANICAL LEGEND, SCHEDULES AND NOTES

La Puente
ACTIVITY CENTER

501 GLENDORA AVE. LA PUENTE, CA. 91744

PROJECT NO.: 22008

R.S. A.P.

FILE NAME

DATE: 12/05/2025

DRAWN

CHECKED

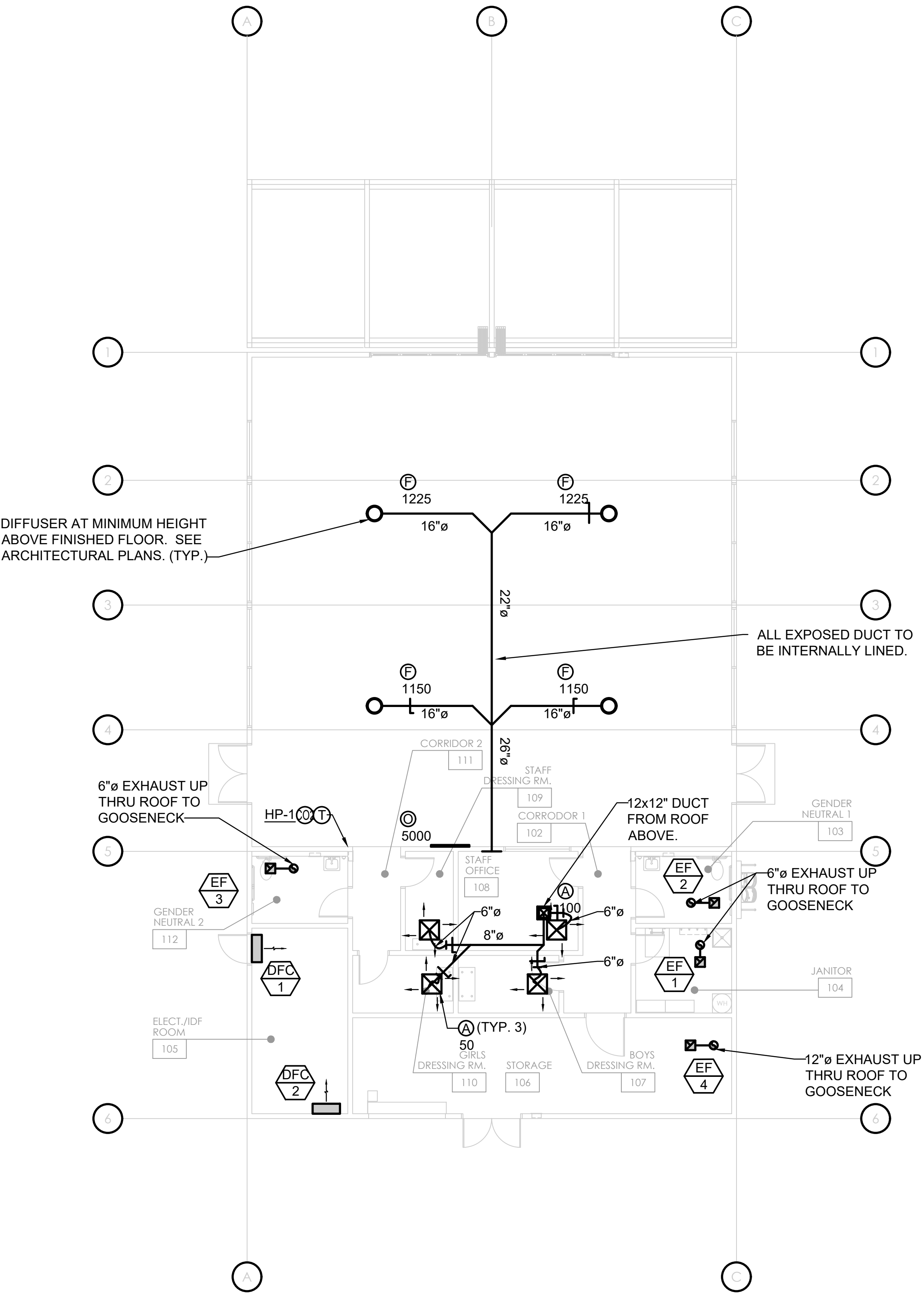
REVISIONS

SHEET NO.

M-1

OF SHEETS

CITY APPROVAL



MECHANICAL FLOOR PLAN
SCALE: 1/8" = 1'-0"

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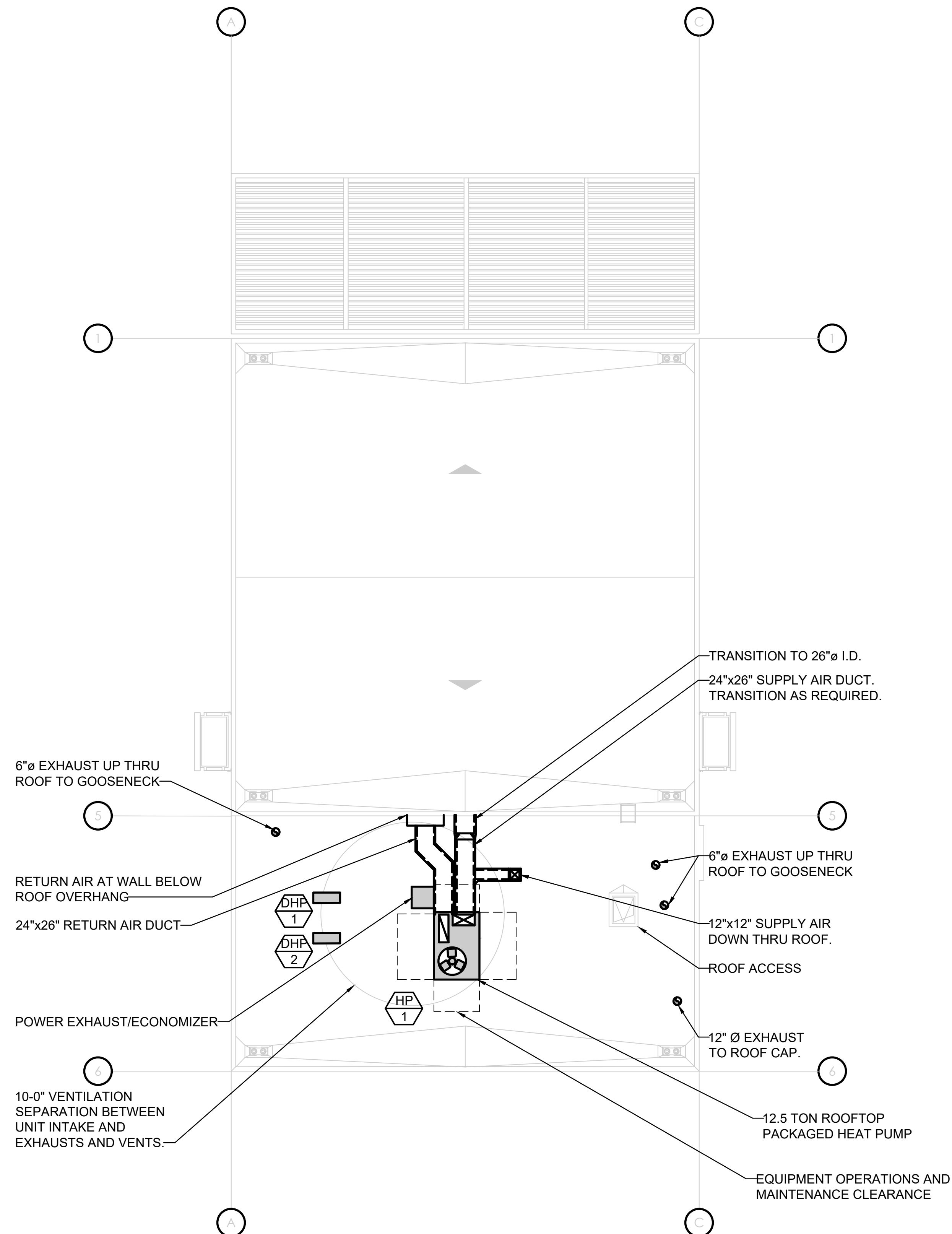
MECHANICAL FLOOR PLAN

**La Puente
ACTIVITY CENTER**

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DATE: 12/05/2025	DRAWN CHECKED
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	OF SHEETS

CITY APPROVAL



MECHANICAL ROOF PLAN
SCALE: 1/8" = 1'-0"



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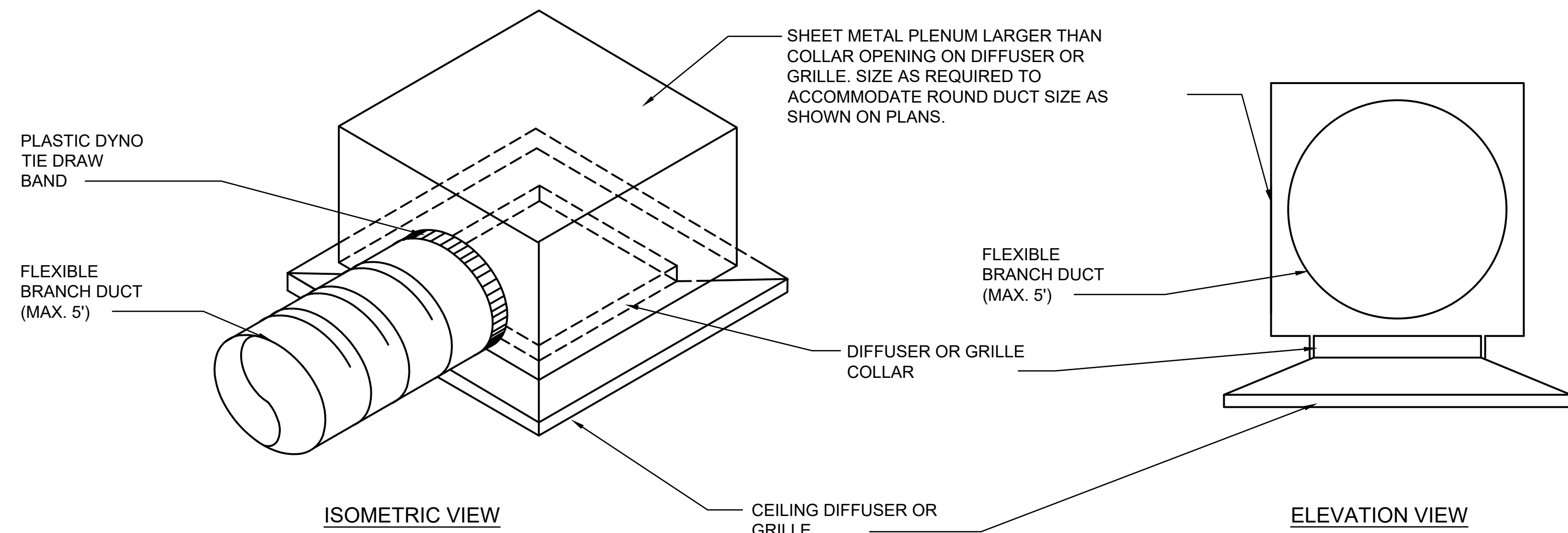
MECHANICAL ROOF PLAN

**La Puente
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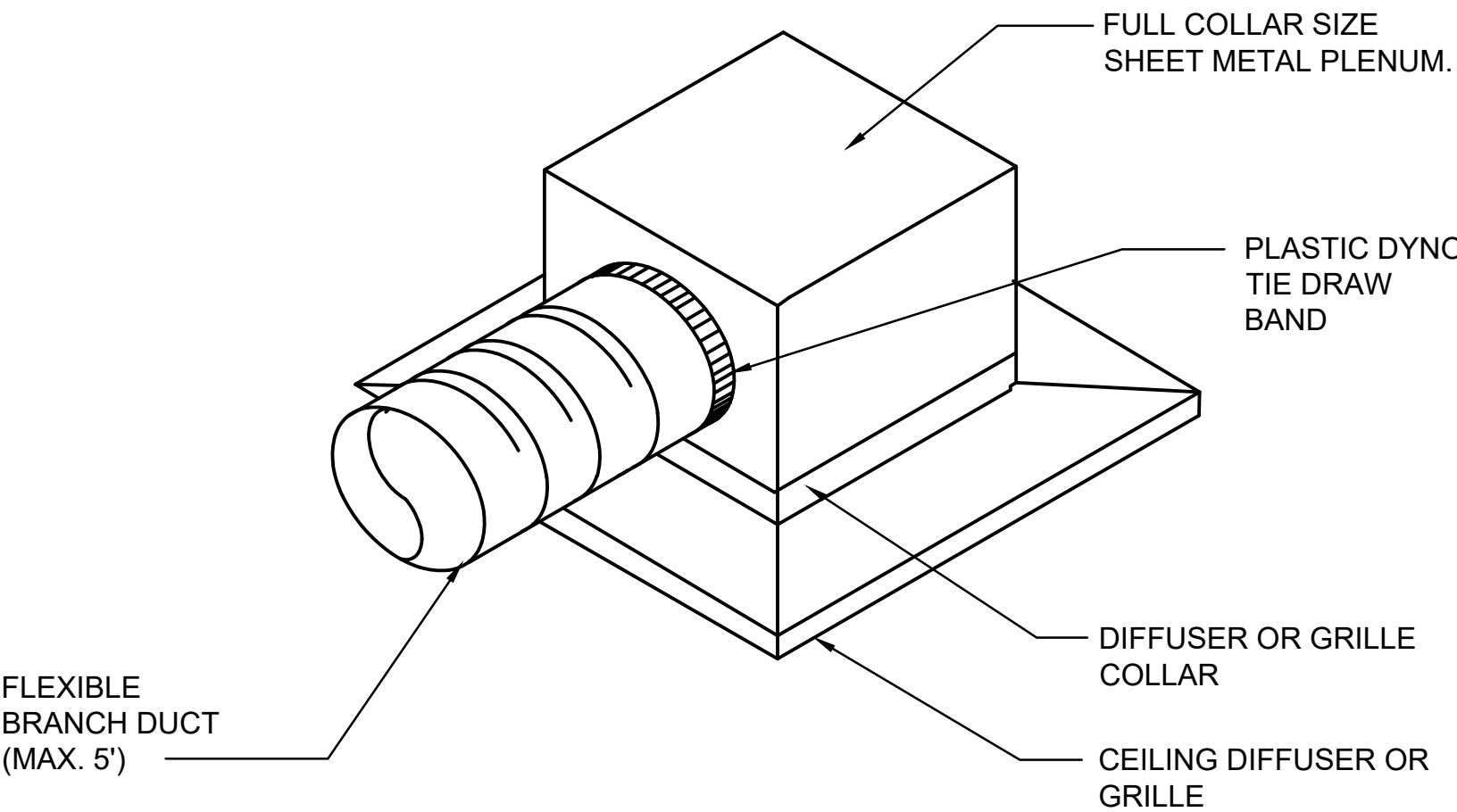
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	M-3
	OF SHEETS

CITY APPROVAL



USE THIS FITTING WHERE BRANCH DUCT IS LARGER THAN DIFFUSER OR GRILLE COLLAR OPENING



- NOTES:
- 1) ONE VERTICAL 12 GA. WIRE SHALL BE ATTACHED TO OPPOSING CORNERS ALONG THE DIFFUSER'S & GRILLE'S DIAGONAL TO MEET CALIFORNIA BUILDING CODE STANDARDS
 - 2) SCREW PLENUM TO COLLAR WITH SHEET METAL SCREWS AND SEAL AIR TIGHT AROUND COLLAR WITH DUCT SEALANT.
 - 3) SEE PLANS FOR FLEX DUCT SIZES
 - 4) SEE PLANS FOR DIFFUSER AND GRILLE COLLAR SIZES

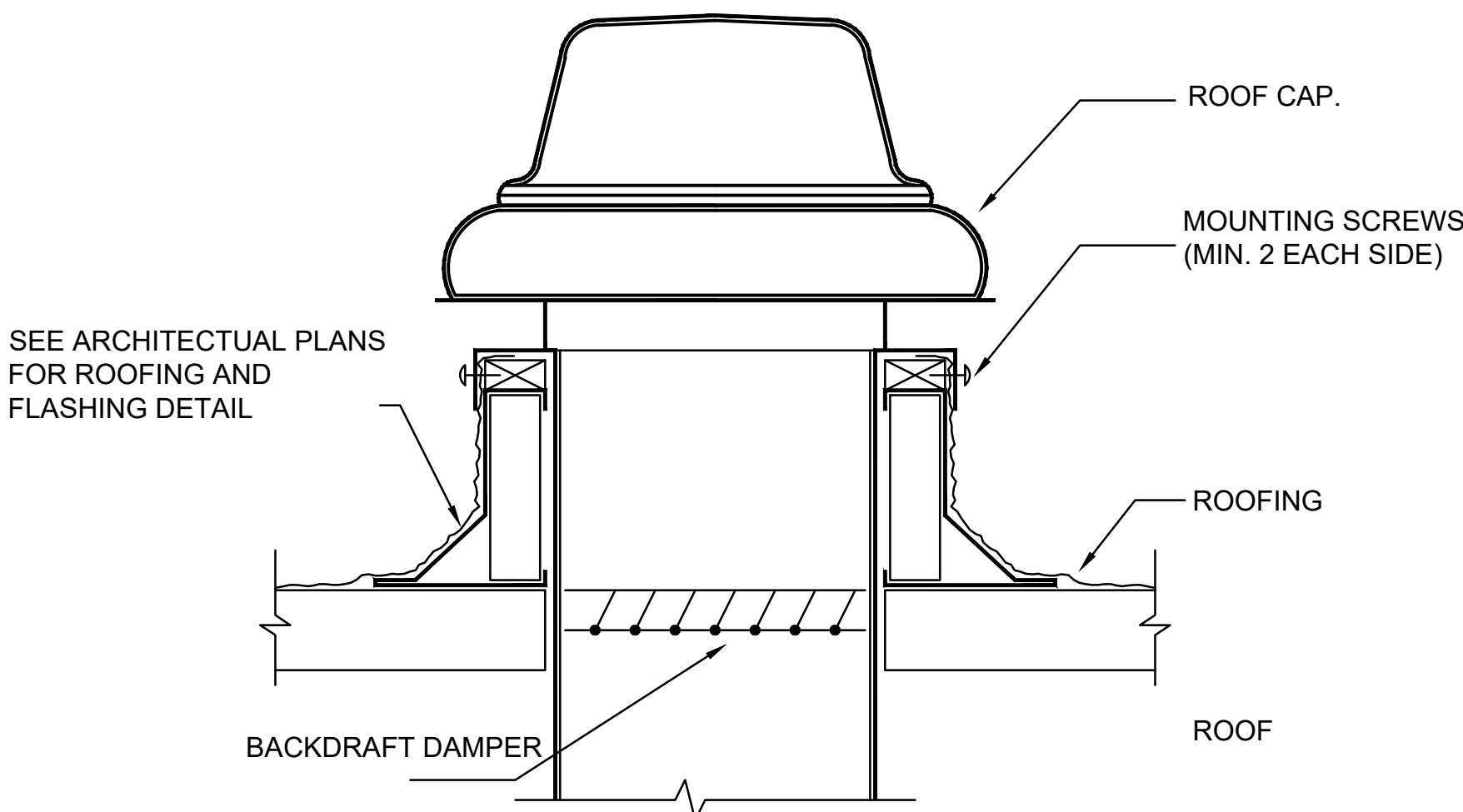
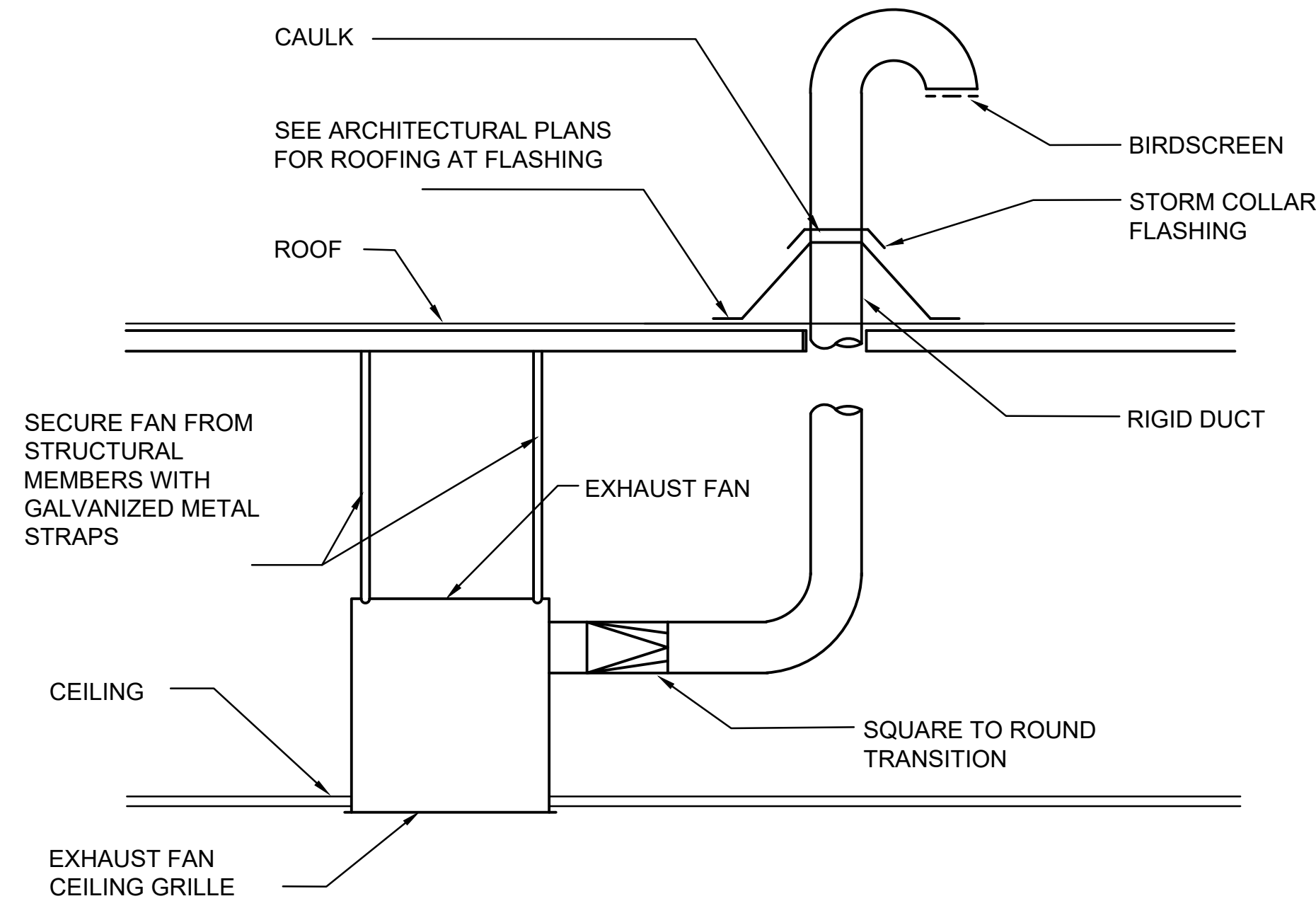
USE THIS FITTING WHERE BRANCH DUCT IS SMALLER THAN DIFFUSER OR GRILLE COLLAR OPENING

CEILING DIFFUSER AND GRILLE CONNECTION DETAIL

NOT TO SCALE

MDM3022

3



ROOF EXHAUST CAP DETAIL (FOR EF-4)

NOT TO SCALE

MDA2006

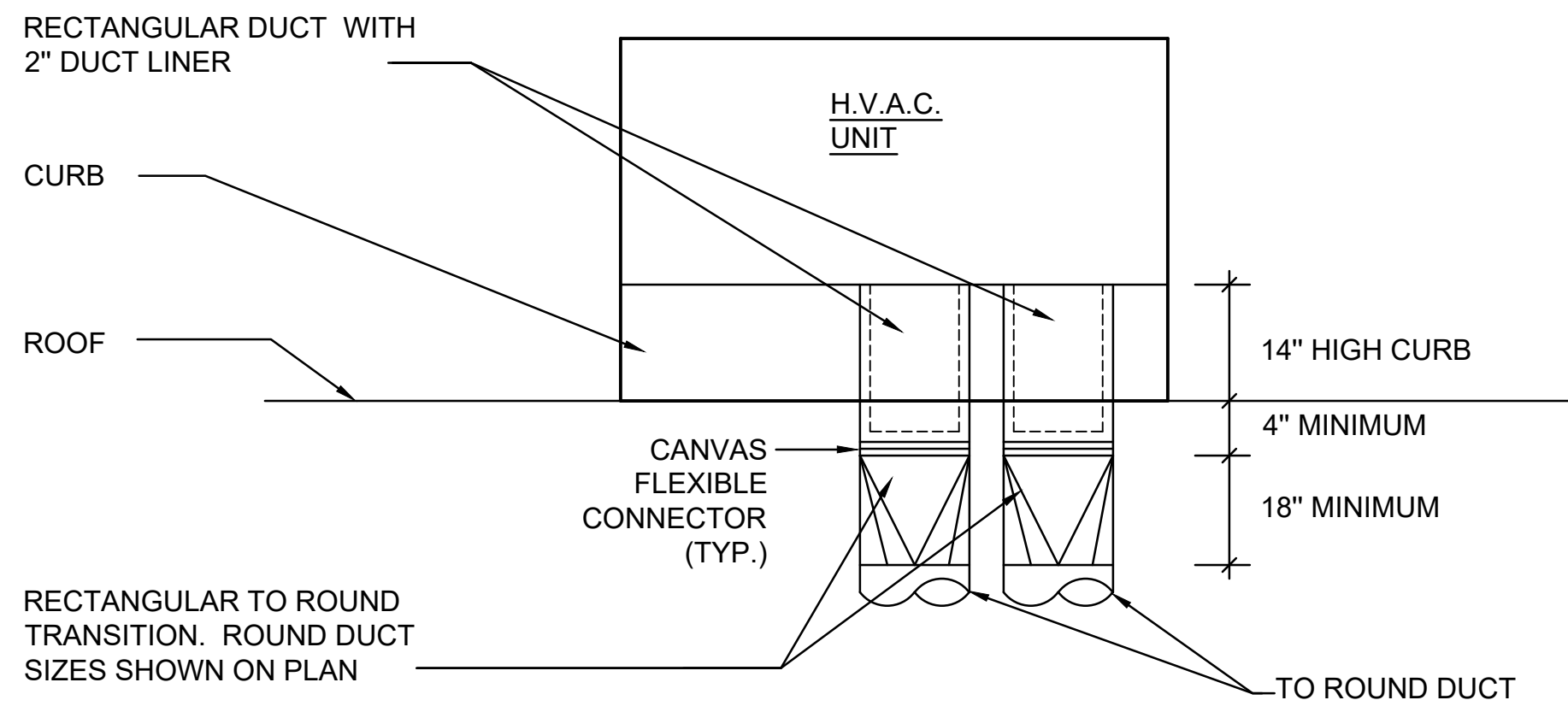
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CEILING EXHAUST FAN DETAIL

NOT TO SCALE

MDA2033A

5



NOTES:

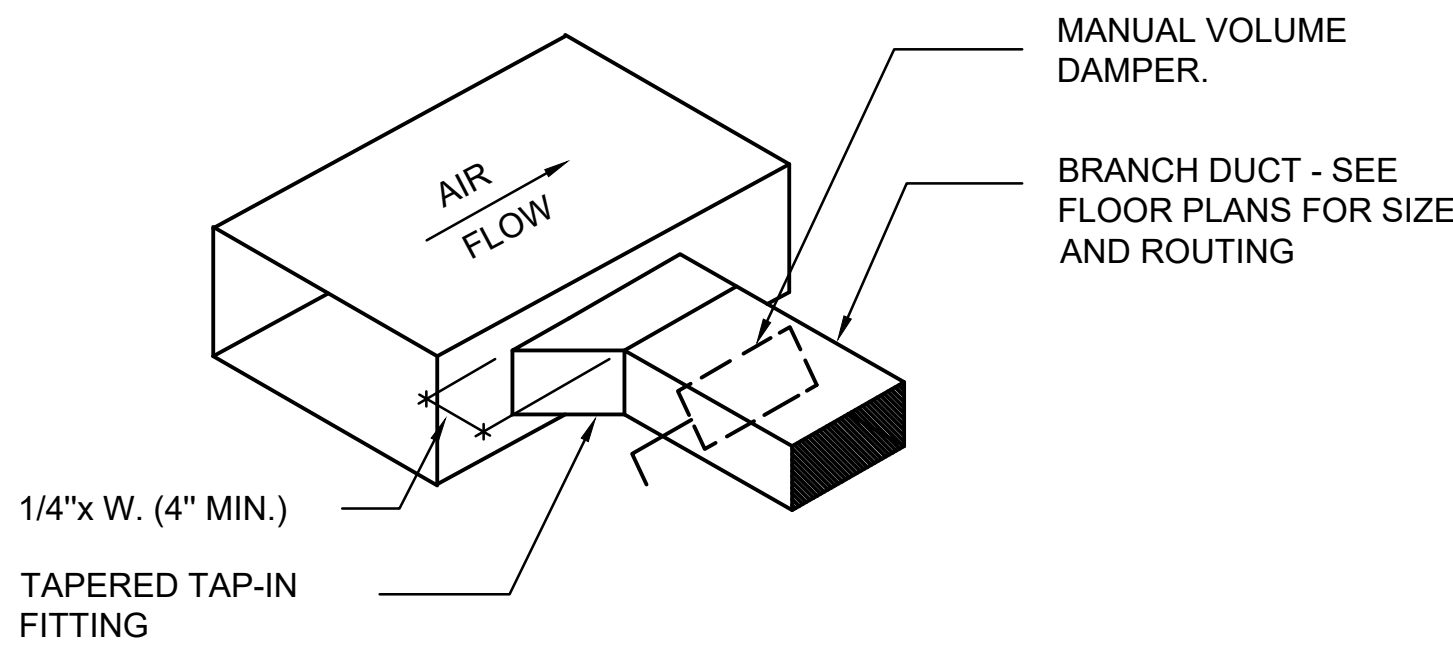
1. SECURE H.V.A.C. UNIT TO CURB.
2. SEE ARCHITECTURAL PLANS FOR SECURING CURB TO ROOF & ROOFING AT CURB DETAIL

PACKAGE H.V.A.C. UNIT DETAIL

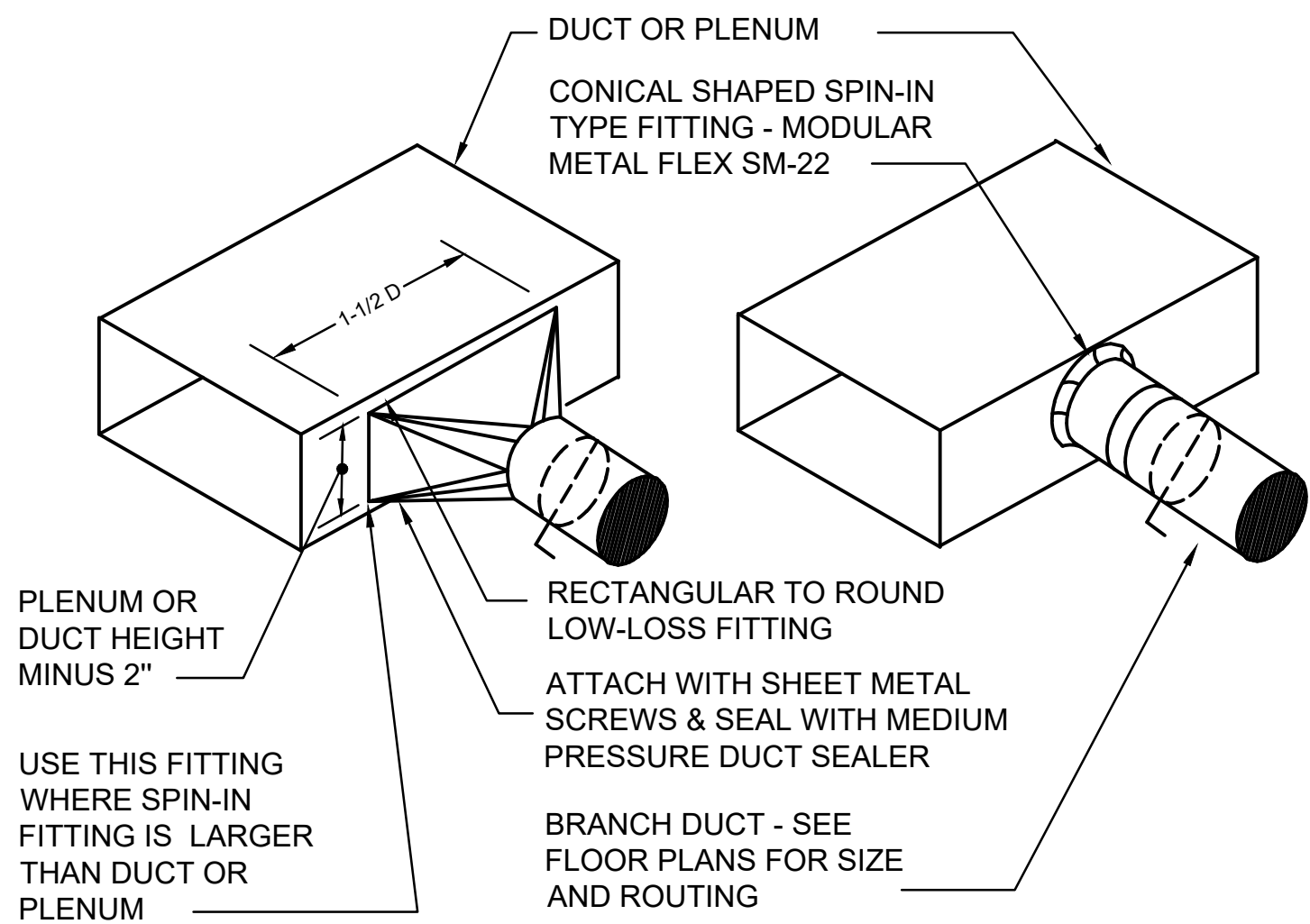
NOT TO SCALE

MDA2001

1



RECTANGULAR BRANCH TAKE-OFF



ROUND BRANCH TAKE-OFF

BRANCH DUCT TAKE-OFF DETAIL

NOT TO SCALE

MDA2003

2

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MECHANICAL DETAILS

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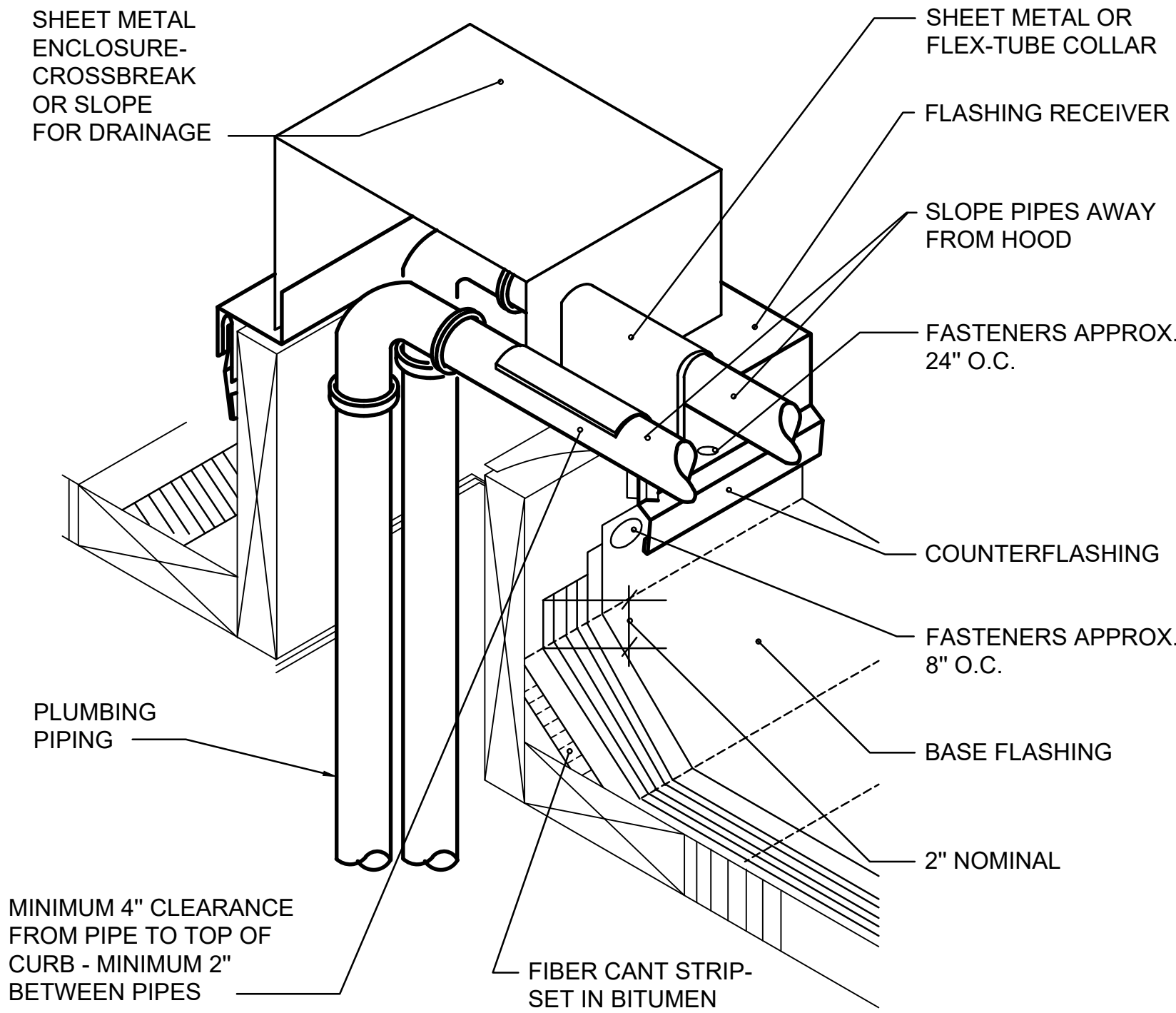
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M-5

OF SHEETS

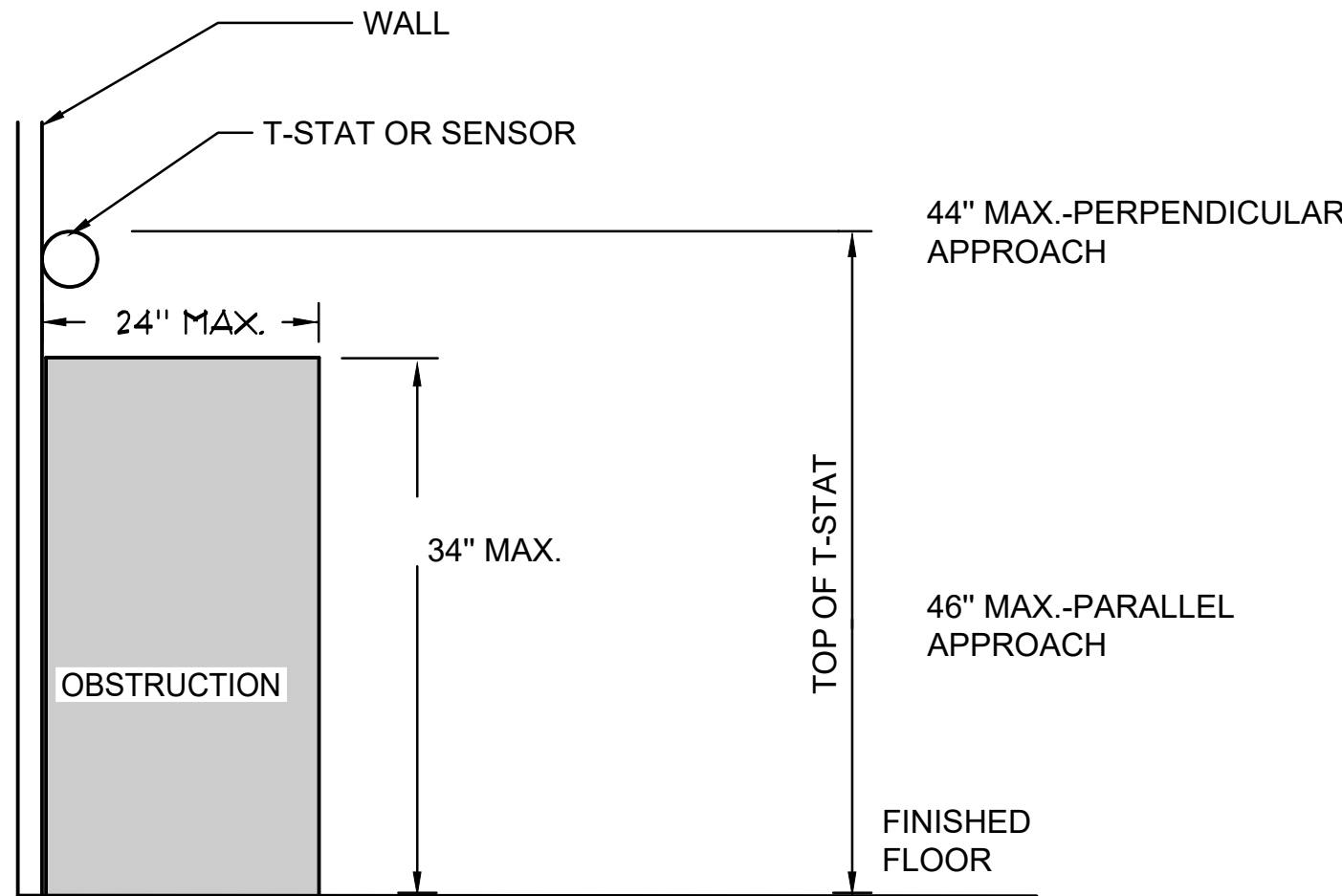
CITY APPROVAL



ROOF PIPING PENETRATION DETAIL
NOT TO SCALE

MDM3015

4



NOTE: PROVIDE MINIMUM 30"x48" CLEAR FLOOR SPACE FOR PERPENDICULAR APPROACH AT EACH LOCATION

T-STAT & SENSOR MOUNTING DETAIL

NOT TO SCALE

MDM3034

5

OUTSIDE OF EXTERIOR WALL. SEE ARCHITECTURAL PLAN FOR SEALING AROUND DUCT THRU WALL OPENING AND WEATHERPROOF FLASHING DETAIL

INSIDE OF EXTERIOR WALL. SEE ARCHITECTURAL PLAN FOR SEALING AROUND DUCT THRU WALL OPENING (TYP.)

LINED DUCTWORK (TYP.)

SEE STRUCTURAL DETAIL FOR SECURING DUCT TO WALL DETAIL (TYP.)

DUCT THRU EXTERIOR WALL DETAIL

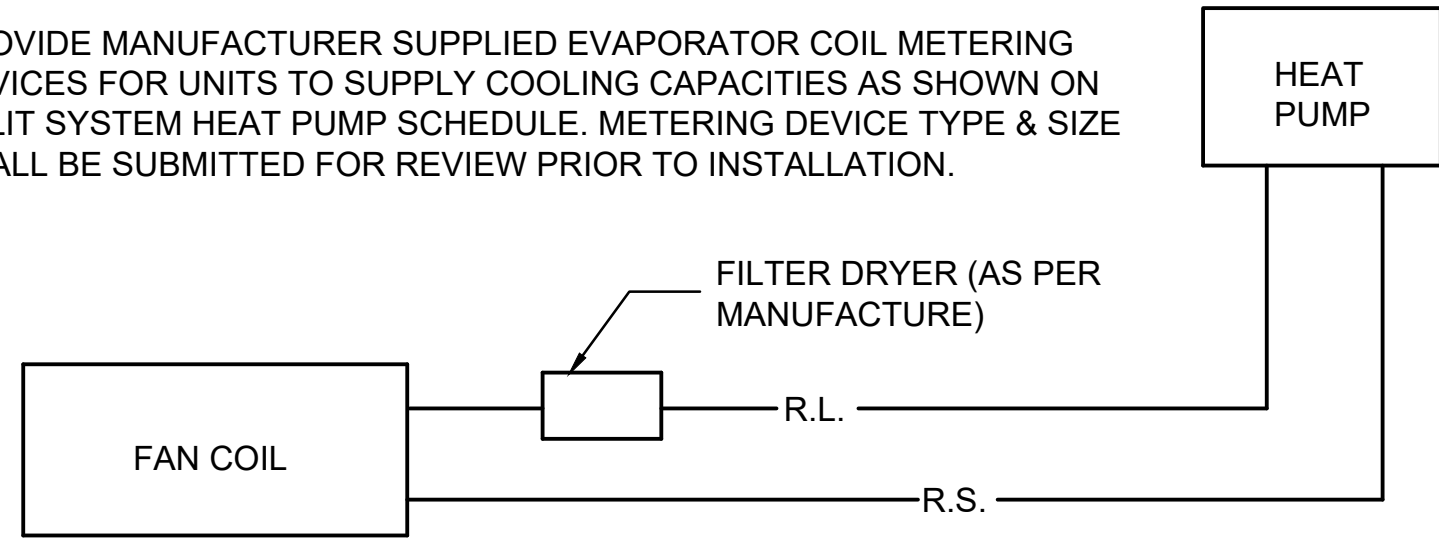
NOT TO SCALE

MDA2051

6

REFRIGERANT PIPING SCHEDULE			
MARK	R.S.	R.L.	REMARKS
DHP-1 & DFC-1	1/2"	1/4"	①②③
DHP-2 & DFC-2	1/2"	1/4"	①②③
DHP-3 & DFC-3	1/2"	1/4"	①②③

- PROVIDE MANUFACTURER SUPPLIED OUTDOOR UNIT CYCLE PROTECTOR.
- PROVIDE ALL NECESSARY REFRIGERANT PIPING FROM FAN COIL TO HEAT PUMPS.
- PROVIDE MANUFACTURER SUPPLIED EVAPORATOR COIL METERING DEVICES FOR UNITS TO SUPPLY COOLING CAPACITIES AS SHOWN ON SPLIT SYSTEM HEAT PUMP SCHEDULE. METERING DEVICE TYPE & SIZE SHALL BE SUBMITTED FOR REVIEW PRIOR TO INSTALLATION.



REFRIGERANT PIPING DIAGRAM

NOT TO SCALE

MDM3017A

3

SPLIT SYSTEM HEAT PUMP UNIT ON ROOF DETAIL

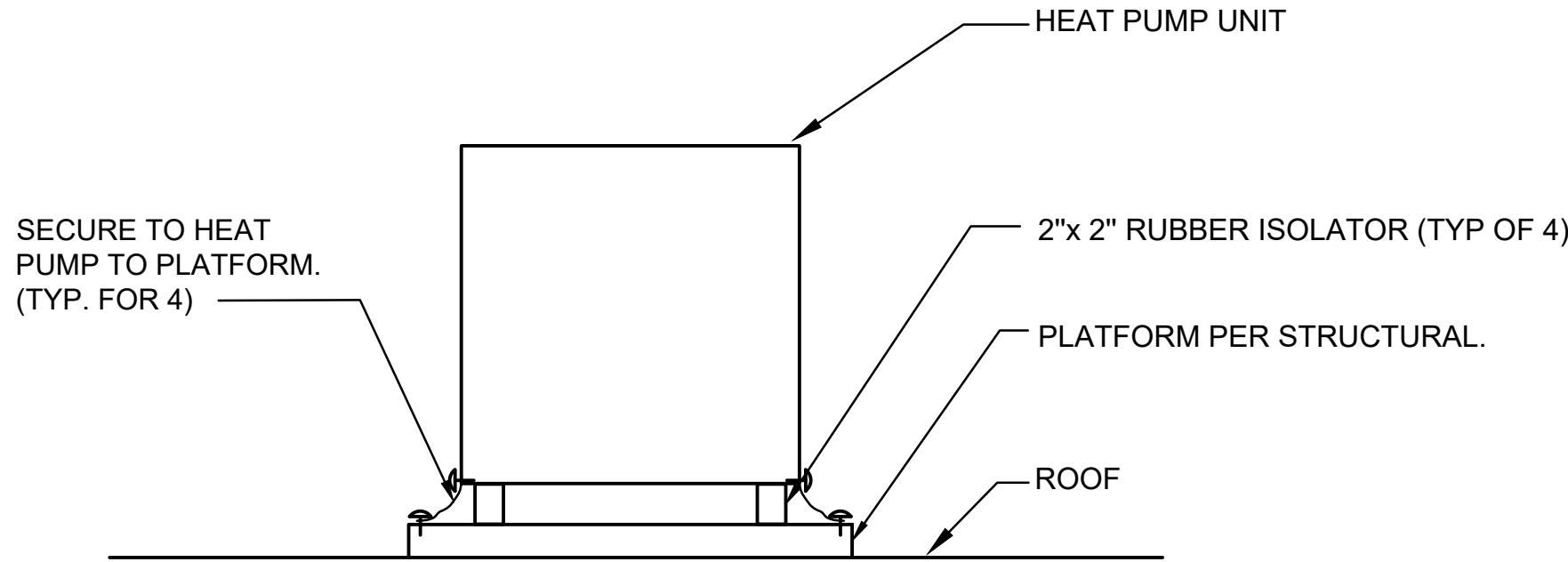
NOT TO SCALE

MDM3006

1

NOTES:

- SEE 4/S0.6 FOR PLATFORM.
- SECURE ISOLATORS TO HEAT PUMP UNIT AND TO PLATFORM OR SLEEPERS.
- SEE ARCHITECTURAL PLANS FOR WATERPROOFING.



ARCHITECT

westbergwhite
architecture
1775 HANCOCK ST, SUITE 120
SAN DIEGO, CA 92110
619.542.1188 619.542.1663 FAX



CONSULTANT



City of La Puente

15900 E. MAIN ST. LA PUENTE, CA. 91744

MECHANICAL DETAILS

La Puente
ACTIVITY CENTER

501 GLENDORA AVE. LA PUENTE, CA. 91744

PROJECT NO.: 22008

R.S.

A.P.

FILE NAME

DATE: 12/05/2025

DRAWN

CHECKED

REVISIONS

SHEET NO.

M-5A

OF

SHEETS

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• Plumbing Design • Energy Analysis

8330 Juniper Creek Lane
San Diego, CA 92126
Tel: (858) 792-1700

A.L.M. PROJECT NO. 22013

PRELIMINARY PLANS FOR REVIEW ONLY, NOT FOR CONSTRUCTION.

SDG

CITY APPROVAL

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION	
Domestic Water Heating System			
CERTIFICATE OF COMPLIANCE			
Project Name:	La Puente Activity Center	Report Page:	NRC-FILE
		Date Prepared:	(Page 4 of 6) 4/7/2025

	Yes	No	Not Applicable	Requirement
01	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Construction documents require manufacturer certification that service water heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per 110.3(f).
02	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per 110.3(c)1 unless covered by California Plumbing Code 613.0.
03	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless systems serves healthcare facility.
04	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per 170.2(f) or 180.1(b)3 for additions.
05	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 per 170.2(d).
06	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Combustion air positive shut-off shall be provided per 160.4(3) on all newly installed commercial boilers as follows: <ul style="list-style-type: none"> Boilers with input capacity >= 2.5 MMBTU/h, in which the boiler is designed to operate with a nonpositive vent static pressure Boilers where one stack serves two or more boilers with a total combined input capacity per stack of 2.5 MMBTU/h.
07	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Boiler combustion air fans with motor >= 10 hp shall meet one of the following <ul style="list-style-type: none"> The fan motor shall be driven by a variable speed drive OR The fan motor shall include controls that limit the fan motor demand to <=30% of the total design wattage at 50% of the design air volume
08	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Newly installed boilers with an input capacity (dpp)/ SMMBTU/h and a steady state full-load combustion efficiency < 90% shall maintain excess (stack-gas) oxygen concentrations <= 5% by volume on a dry basis over firing rates of 20-100%. Combustion air volume shall be controlled with respect to firing rate or flue gas oxygen concentration. Use of a common gas and combustion air control linkage or jack shaft is prohibited.

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
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 Schema Version: rev 2020101
 Documentation Software: EnergyPro

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION	
Domestic Water Heating System			
CERTIFICATE OF COMPLIANCE		Report Page:	NWCC-PUB-E
Project Name:	La Puente Activity Center	Date Prepared:	(Page 5 of 6) 4/7/2025

<p>I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION</p> <p><i>Sections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional remarks, these comments must be provided to the building inspector during construction and can be found online.</i></p>	Form/Title
<p>NRCI-PLB-E – Must be submitted for all buildings</p>	
<p>J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE</p> <p><i>There are no forms required for this project.</i></p>	
<p>K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION</p> <p><i>There are no forms required for this project.</i></p>	

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
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Schema Version: rev 2020101
Documentation Software: EnergyPro

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION	
Domestic Water Heating System			
CERTIFICATE OF COMPLIANCE		NRCC-PUE-E	
Project Name:	La Puente Activity Center	Report Page:	(Page 6 of 6)
Project Address:	15900 E. Main St.	Date Prepared:	4/7/2025

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
(I certify that this Certificate of Compliance Documentation is accurate and complete.)	
Documentation Author Name:	Documentation Author Signature:
Date Signed: 2025-04-07	Date Signed: 2025-04-07
Address:	CEV / HERS Certification Identification (if applicable):
City/State/Zip:	Phone:
RESPONSIBLE PERSON'S DECLARATION STATEMENT	
I certify the following under penalty of perjury, under the laws of the State of California: 1. The information provided on this Certificate of Compliance is true and correct. 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). 3. I am a duly licensed architect, engineer, contractor, interior designer, landscape architect, or manufacturer of the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations. 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available to the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspection disciplines. 6. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the building provides to the building owner at occupancy.	
Responsible Designer Name:	
Responsible Designer Signature:	Responsible Designer Signature:
Date Signed: 2025-04-07	Date Signed: 2025-04-07
License:	License:
Company: A.L.M. Consulting Engineers Inc.	Company: A.L.M. Consulting Engineers Inc.
Address: 8330 Juniper Creek Ln	Address: 8330 Juniper Creek Ln
City/State/Zip: San Diego CA 92126	City/State/Zip: San Diego CA 92126
Phone: 858 792-1700	Phone: 858 792-1700

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
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 Report Version: 2022.0.000
 Compliance ID: EnergyPro-7528-0425-0102
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 Schema Version: rev 2020101

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DOMESTIC HOT WATER ENERGY COMPLIANCE FORMS		<div>La Puente</div> <div>ACTIVITY CENTER</div>		501 GLENDORA AVE. LA PUENTE, CA. 91744
PROJECT NO. : 22008		R.S.		A.P.
FILE NAME		DATE: 12/05/2025		DRAWN CHECKED
REVISIONS		SHEET NO.		T24-1
		OF		SHEETS

CITY APPROVAL

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION		
Domestic Water Heating System		NCC-PUB E		
CERTIFICATE OF COMPLIANCE				
This document is used to demonstrate compliance for nonresidential occupancies with requirements in 140.1, 140.3, and 140.5, and with requirements in 141.0 for additions and alterations to existing systems using the 180.1 and 180.2 occupancy compliance demonstration process. For more information on the requirements, see the NCC-PUB E document.				
Project Name: 110.1, 110.3, 160.4 and 170.2(d) and with requirements 180.1 for additions and 180.2 for alterations				
Project Address: La Puente Activity Center		Report Page: 47/2025		
1900 E. Main St		Date Prepared:		
A. GENERAL INFORMATION				
01	Project Location (City)	La Puente	Climate Zone	9
03	Occupancy Types Within Project (select all that apply):			
• Office • Support Areas • All Other Occupancies				
B. PROJECT SCOPE				
This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in 140.1/170.2(d) and 141.0(a)/180.1, or 141.0(b)(2)/180.2 for additions or alterations. Solar water heating systems are documented on the NCC-Solar compliance document. Combined hydronic water heating systems are documented on the NCC-MCH compliance document.				
01		02		03
My project consists of (check all that apply):		System Type: ²		System Components
<input checked="" type="checkbox"/> New system (DHW system being installed for the first time):		Individual System (serving nonresidential spaces)		<input checked="" type="checkbox"/> Equipment <input checked="" type="checkbox"/> Distribution <input checked="" type="checkbox"/> Controls
<input type="checkbox"/> System alteration (equipment, distribution, or controls)				<input type="checkbox"/> Equipment <input type="checkbox"/> Distribution <input type="checkbox"/> Controls
FOOTNOTES: Point-of-use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.				
¹ Dwelling units refer to hotel/motel guest rooms and units in a multifamily residential occupancy.				
² DHW systems serving 2 or more dwelling units are considered "Central Systems" for multifamily occupancies				
C. COMPLIANCE RESULTS				
Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to table D, or the table indicated as not compliant for guidance.				
01		02		03
Domestic Hot Water Equipment		Distribution Systems		Controls
Table F		Table G		Table H
Yes		Yes		Yes
Compliance Results				
COMPLIES				
D. EXCEPTIONAL CONDITIONS				
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.				
Generated Date/Time:		Documentation Software: EnergyPro		
Report Version: 2022.0.0.000		Compliance ID: EnergyPro-7598-0425-0102		
Scheme Version: rev 20220101		Report Generated: 2025-04-07 13:47:15		

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION	
Domestic Water Heating System			
CERTIFICATE OF COMPLIANCE			
Project Name:	La Puente Activity Center	Report Page:	NMCC-PUB-6 (Page 2 of 6)
		Date Prepared:	4/7/2025

E. ADDITIONAL REMARKS									
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.									
F. DOMESTIC HOT WATER EQUIPMENT									
This table is used to demonstrate compliance with mandatory equipment requirements in 110.1 and 110.3. Compliance with prescriptive requirements in 140.5(c) / 170.3(d) must also be demonstrated and with 141.0 / 180.1 / 180.2 for addition and alteration scopes.									
Equipment Schedule: Water Heating Efficiency and Standby Loss									
	03		04		05		06		
System Name	A.O SMITH DEL-65-1.5	Exception to 140.5(c) / 170.2(d)(3)			Gas Service Water Heating System >= 1MMBtu/h ¹	Capacity-weighted Average Efficiency %			
07		09	10	11	12	13	14		15
Name or Item Tag	Equipment Type	Volume (gal)	Rated Input Capacity (Btu/h)	Max GPM/ First Hour Rating (FHR)	Rated Efficiency	Minimum Efficiency Required	Efficiency Unit	Designed Standby Loss	Maximum Standby Loss
A.O SMITH DEL-65-1.5	Consumer Rated Electric Storage	6	5,118	0 <= FHR <18	0.99	0.93	UEF		
¹ FOOTNOTE: In systems >= 1MMBtu/h with multiple units, gas water heaters with input capacity > 100,000 Btu/h may meet 90% Ef requirements via an input capacity-weighted average.									
Water Heating Equipment All Occupancies									
	Yes		No		Not Applicable		Requirement		
18	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unfired storage tank insulation shall have Internal + External >R-16 Or External >R-3.5. Label Required per 110.3(c)(3)		
19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	New state buildings: 60% of energy for service water heating from site solar energy or recovered energy per 110.3(c)(5)		
20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Isolation valves for instantaneous water heater with input rating >6.8 MBTUH or 2 kW has been specified per 110.3(c)(6)		
21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	School buildings < 25,000 ft ² and < 4 stories must install a heat pump water heating system per 140.5(a)(1). Water heating systems serving an individual bathroom space may be an instantaneous electric water heater.		

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
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 Report Version: rev 20220101
 Compliance ID: EnergyPro-7528-0425-0102
 Documentation Software: EnergyPro

STATE OF CALIFORNIA		CALIFORNIA ENERGY COMMISSION	
Domestic Water Heating System			
CERTIFICATE OF COMPLIANCE			
Project Name:	La Puente Activity Center	Report Page:	NRCC-PUB-6 (Page 3 of 6)
		Date Prepared:	4/7/2025

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM				
This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in 120.3 and 140.5. For multifamily and hotel/motel occupancies, compliance is demonstrated with requirements 110.3(c), 160.4, and 170.2(d).				
Mandatory Pipe Insulation All Occupancies				
For systems serving dwelling units, pipe insulation must meet the minimum insulation requirements in Table 160.4-A (see flow) except:				
13	<input type="checkbox"/>	<ul style="list-style-type: none"> Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall abut securely against all framing members Piping installed in interior or exterior walls shall not be required to have pipe insulation if all of the requirements are met for compliance with Quality Insulation Installation (QII) as specified in the Reference Residential Appendix RA3.5. Piping surrounded with a minimum of 1 inch of wall insulation, 2 inches of crawlspace insulation, or 4 inches of attic insulation, shall not be required to have pipe insulation. 		
14	<input checked="" type="checkbox"/>	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per 120.3:		
		<ul style="list-style-type: none"> Recirculating system piping, including supply and return piping of the water heater The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system Pipes that are externally heated 		
15	<input checked="" type="checkbox"/>	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be protected for outdoor service per 120.3(b) / 160.4(f). Pipe insulation buried below grade must be installed in a water proof and non-crushable casing or sleeve.		
TABLE 120.3-A / 160.4-A PIPE INSULATION THICKNESS				
Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft ² per °F)	Nominal Pipe Diameter (in)		
		Insulation Material Rating Temp (°F)	< 1	1 to < 1.5
105-140	0.22 - 0.28	Minimum Insulation Required		
		1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11
			1.5 to < 4 Multifamily & Hotel/Motel	2.0 in or R-16

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
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Schema Version: rev 20220101

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRI-E (Page 4 of 18)
Nonresidential Performance Compliance Method				
C2. TDV ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kWh/(ft ² · yr)				
COMPLIES ³				
Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹	
Space Heating	1.37	0.91	0.46	
Space Cooling	123.07	96.53	26.54	
Indoor Fans	115	23.68	91.32	
Heat Rejection	0	0	0	
Pumps & Misc.	0	0	0	
Domestic Hot Water	5.93	4.32	1.61	
Indoor Lighting	66.54	66.54	0	
Flexibility	---	---	---	
EFFICIENCY COMPLIANCE TOTAL	311.91	191.98	119.93 (38.5%)	
Photovoltaics	-35.09	-173.65	138.56	
Batteries	---	---	---	
TOTAL COMPLIANCE	276.82	18.33	258.49 (93.4%)	
¹ Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.				

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000
Schema Version: rev 20220601

Report Generated: 2025-04-07 15:22:15
Compliance ID: EnergyPro-7558-0425-0057

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRI-E (Page 5 of 18)
Nonresidential Performance Compliance Method				

C3. TDV ENERGY RESULTS FOR NON-REGULATED COMPONENTS ¹			
Non-Regulated Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹
Receptacle	160.51	160.51	---
Process	146.93	146.93	---
Other Lig	7.17	7.17	---
Process Motors	5.06	5.06	---
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	596.49	338	258.49 (43.3%)
¹ Notes: This table is not used for Energy Code Compliance.			

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000
Schema Version: rev 20220601

Report Generated: 2025-04-07 15:22:15
Compliance ID: EnergyPro-7558-0425-0057

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRI-E (Page 6 of 18)
Nonresidential Performance Compliance Method				

C4. SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual SOURCE Energy Use, kWh/(ft ² · yr)			
COMPLIES ³			
Energy Component	Standard Design (SOURCE)	Proposed Design (SOURCE)	Compliance Margin (SOURCE) ¹
Space Heating	0.43	0.14	0.29
Space Cooling	7.32	4.93	2.39
Indoor Fans	11.26	1.95	9.31
Heat Rejection	0	0	0
Pumps & Misc.	0	0	0
Domestic Hot Water	0.56	0.38	0.18
Indoor Lighting	5.89	5.89	0
Flexibility	---	---	---
EFFICIENCY COMPLIANCE TOTAL	25.46	13.29	12.17 (47.8%)
Photovoltaics	-1.31	-6.4	5.09
Batteries	---	---	---
TOTAL COMPLIANCE	24.15	6.89	17.26 (71.5%)
¹ Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.			

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000
Schema Version: rev 20220601

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• H.V.A.C. Design • Title 24 Compliance
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8330 Juniper Creek Lane
San Diego, CA 92126
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A.L.M. PROJECT NO. 22013

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRI-E (Page 1 of 18)
Nonresidential Performance Compliance Method				
Project Name:		La Puente Activity Center	Date Prepared:	2025-04-07
A. General Information				
1	Project Name	La Puente Activity Center		
2	Run Title	Title 24 Analysis		
3	Project Location	15900 E. Main St.		
4	City	La Puente	5	Standards Version
6	Zip code	91744	7	Compliance Software (version)
8	Climate Zone	9	9	Building Orientation (deg)
10	Building Type(s)	• Nonresidential	11	Weather File
12	Project Scope	• New envelope and mechanical	13	Number of Dwelling Units
14	Total Conditioned Floor Area in Scope (ft ²)	3285	15	Total # of hotel/motel rooms
16	Total Unconditioned Floor Area (ft ²)	535	17	Fuel Type
18	Nonresidential Conditioned Floor Area	3285	19	Total # of Stories (Habitable Above Grade)
20	Residential Conditioned Floor Area	0		

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000
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Report Generated: 2025-04-07 15:22:15
Compliance ID: EnergyPro-7558-0425-0057

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRI-E (Page 2 of 18)
Nonresidential Performance Compliance Method				

B. PROJECT SUMMARY			
Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within the permit application.			
Building Components Complying via Performance		Building Components Complying Prescriptively	
Envelope (See Table G)	Nonres Performance	Solar Thermal Water Heating (See Table I3)	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
	MultiFam	Covered Process: Commercial Kitchens (see Table J)	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
Mechanical (See Table H)	Nonres	Covered Process: Laboratories (see Table J)	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
	MultiFam	Photovoltaics (see Table F)	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
Domestic Hot Water (See Table I)	Nonres	Sign Lighting 140.8 & 170.2(e)	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
	MultiFam	Sign Lighting 140.8 & 170.2(e)	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
Lighting (Indoor Conditioned, see Table K)	Nonres	Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should be documented on the NRCC form listed if applicable (see compliance will not be shown on the NRCC-PRI-E)	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
	MultiFam	Electrical Power Distribution 110.11	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
		Battery (see Table F)	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRI-E (Page 3 of 18)
Nonresidential Performance Compliance Method				

C1. COMPLIANCE SUMMARY			
COMPLIES ³			
	Time Dependent Valuation (TDV)		Source Energy Use
	Efficiency ² (kWh/(ft ² · yr)	Total ² (kWh/(ft ² · yr)	Total ² (kWh/(ft ² · yr)
Standard Design	311.91	276.82	24.15
Proposed Design	191.98	18.33	6.89
Compliance Margins	119.93	258.49	17.26
		Pass	Pass
¹ Efficiency measures include improvements like a better building envelope and more efficient equipment			
² Compliance Totals include efficiency, photovoltaics and batteries			
³ New Construction, Complete Addition Scope: Building complies when all efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded			
Existing, Addition and Alteration Scope: Building complies when efficiency compliance margin is greater than or equal to zero and unmet load hour limits are not exceeded			

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000
Schema Version: rev 20220601

Report Generated: 2025-04-07 15:22:15
Compliance ID: EnergyPro-7558-0425-0057

City of La Puente

15900 E. MAIN ST. LA PUENTE, CA. 91744

ENERGY COMPLIANCE FORMS

La Puente ACTIVITY CENTER

PROJECT NO.: 22008

R.S.

A.P.

FILE NAME

DATE: 12/05/2025

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REVISIONS

SHEET NO.

T24-2

OF SHEETS

CITY APPROVAL

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD					NRCC-PRI-E (Page 10 of 18)
Nonresidential Performance Compliance Method					
F.B. PV BATTERY BUILDING TYPE(S)					
01		02		03	
Building Occupancy Type ¹ [From Table 140.10-A(4)(b) and 170.2-4(U)]		Conditioned Floor Area (ft²)		Unconditioned Floor Area (ft²)	
Grocery		0		0	
High-Rise Multifamily		0		0	
Office, Financial Institutions, Unleased Tenant Space		655		535	
Retail		0		0	
School		0		0	
Warehouse		0		0	
Auditorium, Convention Center, Hotel/Motel, Library, Medical Office Building/Clinic, Restaurant, Theater		2630		0	
None		0		0	

G.L. ENVELOPE GENERAL INFORMATION (conditioned spaces only)				
01		02	03	04
Opaque Surfaces & Orientation		Total Gross Surface Area (ft²)	Total Fenestration Area (ft²)	Window to Wall Ratio (%)
North-Facing¹		675	200	29.63
East-Facing²		750	250	33.33
South-Facing³		99	0	0
West-Facing⁴		930	250	26.88
Total		2454	700	28.52
Roof		3285	0	0
Notes				
¹North-Facing is oriented to within 45 degrees of true north, including 45 00'00" east of north (NE), but excluding 45 00'00" west of north (NW).				
²East-Facing is oriented to within 45 degrees of true east, including 45 00'00" south of east (SE), but excluding 45 00'00" north of east (NE).				
³South-Facing is oriented to within 45 degrees of true south, including 45 00'00" west of south (SW), but excluding 45 00'00" east of south (SE).				
⁴West-Facing is oriented to within 45 degrees of true west, including 45 00'00" north of west (NW), but excluding 45 00'00" south of west (SW).				

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD					NRCC-PRI-E (Page 11 of 18)
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G4. NONRESIDENTIAL AIR BARRIER		
01		02
Building Story Name		Air Barrier
Com-Floor 1		No air barrier

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD					NRCC-PRI-E (Page 12 of 18)
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G5. OPAQUE SURFACE ASSEMBLY SUMMARY									
01	02	03	04	05	06	07	08	09	10
Surface Name	Construction Type	Area (ft²)	Framing Type	Cavity R-Value	Continuous R-Value	Units	Value	Description of Assembly Layers	Status¹
Slab On Grade⁸	Underground Floor	3,820	N/A	0	N/A	F-factor	0.73	Slab Type -ultrathin slab on grade Insulation Orientation -none Insulation R-Value -none	N
La Puente Roof10	Roof	3,485	Metal	30	N/A	U-factor	0.03	Single PV Roofing - 1/4 in. Compliance Insulation R19.00 Plywood - 5/8 in. Composite-1	N
La Puente Wall12	Exterior Wall	2,995	Metal	19	N/A	U-factor	0.0733	Stucco - 7/8 in. Composite-2 Gypsum Board - 5/8 in. Compliance Insulation R7.00	N
R-11 Wall29	Interior Wall	200	Wood	11	N/A	U-factor	0.1028	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Composite-3	N
R-21 Wall51	Exterior Wall	279	Wood	21	N/A	U-factor	0.0691	Gypsum Board - 1/2 in. Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Composite-4	N

¹ Status: N - New, A - Altered, E - Existing

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD					NRCC-PRI-E (Page 7 of 18)
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C5. SOURCE ENERGY RESULTS FOR NON-REGULATED COMPONENTS¹				
Non-Regulated Energy Component		Standard Design [SOURCE]	Proposed Design [SOURCE]	Compliance Margin [SOURCE]²
Receptacle		14.12	14.12	---
Process		8.99	8.99	---
Other Ltg		0.63	0.63	---
Process Motors		0.45	0.45	---
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)		48.34	31.08	17.26 (35.7%)

¹Notes: This table is not used for Energy Code Compliance.

G6. ABOVE CODE QUALIFICATIONS	
<input type="checkbox"/> This project is pursuing CalGreen Tier 1	<input type="checkbox"/> This project is pursuing CalGreen Tier 2

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Report Generated: 2025-04-07 15:22:15
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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD					NRCC-PRI-E (Page 8 of 18)
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C7. ENERGY USE SUMMARY					
Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)
Space Heating	---	0.1	---	1.6	---
Space Cooling	13.4	9.4	4	---	---
Indoor Fans	12.8	2.6	10.2	---	---
Heat Rejection	---	---	---	---	---
Pumps & Misc.	---	---	---	---	---
Domestic Hot Water	0.7	0.5	0.2	---	---
Indoor Lighting	7.7	7.7	0	---	---
Flexibility	---	---	---	---	---
EFFICIENCY TOTAL	34.6	20.3	14.3	1.6	0
Photovoltaics	-5.3	-25.7	20.4	---	---
Batteries	---	---	---	---	---
ENERGY USE SUBTOTAL	29.3	-5.4	34.7	1.6	0
Receptacle	18.6	18.6	0	---	---
Process	19.9	19.9	0	---	---
Other Ltg	0.8	0.8	0	---	---
Process Motors	0.6	0.6	0	---	---
ENERGY USE TOTAL	68.2	34.5	34.7	1.6	0

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD					NRCC-PRI-E (Page 9 of 18)
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C8. ENERGY USE INTENSITY (EUI)				
Standard Design (kBtu/ft² / yr)		Proposed Design (kBtu/ft² / yr)	Margin (kBtu/ft² / yr)	Margin Percentage
GROSS EUI¹		53.77	13.19	19.7
NET EUI¹		30.82	31.41	50.47

¹ Notes: Gross EUI is Energy Use Total (not including PV)/Total Building Area. Net EUI is Energy Use Total (including PV)/Total Building Area.

D1. EXCEPTIONAL CONDITIONS				
*The project uses the Simplified Geometry Performance Modeling Approach which is not capable of modeling daylighting controls and assumes the prescriptive Secondary controls are met. PRESCRIPTIVE COMPLIANCE documentation (form NRCC-CT102-E) for the requirements of section 140.9(d) Automatic Daylighting Controls in Secondary Daylight Zone.				
*PV/Battery Building Type has been modified from software defaults for one or more spaces. Review project's PV/Battery Building Type(s) with documentation author. Refer to Energy Code section 140.10 for Nonresidential or 170.2(B) for more information.				

F1. REQUIRED PV SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception¹	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt (° in 12)	Inverter Eff. (%)	Annual Solar Access (%)
15		Standard	Fixed	none	false	180	Degrees	22	4.85	96	100

¹See Table D1 for any PV exceptions used.

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ENERGY COMPLIANCE FORMS

La Puente
ACTIVITY CENTER

501 GLENDORA AVE. LA PUENTE, CA. 91744

PROJECT NO.: 22008

R.S. A.P.

FILE NAME

DATE: 12/05/2025

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T24-3

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CITY APPROVAL

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRI-E
Nonresidential Performance Compliance Method	(Page 16 of 18)

11. WATER HEATER EQUIPMENT SUMMARY													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input	Rated Input	Efficiency	Efficiency Unit	Tank Insulation Int/Ect	Standby Loss Fraction	1st Hc. Flow Rate (gal)	Heat Pump Type	Tank Location or Ambient Condition
A.G.SMITH DEL65-1.52	Electricity	Storage	1	6	1.5	kW	0.99	EF	N/A	N/A	N/A	N/A	N/A

<p>L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION</p> <p>Selections made by Documentation Author indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online</p>
--

Envelope	NRCI-ENVE - Envelope (for all buildings)
Mechanical	NRCI-MCH-E - For all buildings with Mechanical Systems
Plumbing	NRCI-PLB-E - For all buildings with Plumbing Systems
	NRCI-SAB-E - Solar Water Heating, PV and Battery Storage Systems

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE		
<p>Selections made by Documentation Author indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the Building Inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTP).</p>		
Building Component		Form/Title & System Name(s)
Envelope		NRCA-ENV-02-F - NRCC label Verification for Fenestration
Mechanical		NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A supply fan VFD Acceptance (if applicable) since testing activities overlap
		Activity Center
Mechanical		NRCA-MCH-04(a)-H - Air Distribution Duct Leakage - HERS verification required
		Activity Center
Mechanical		NRCA-MCH-05-A - Air Economizer Controls
		Activity Center

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRE-E
Nonresidential Performance Compliance Method	

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M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE	
<p>Selections made by Documentation Author indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the Building Inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP).</p>	
Building Component	Form Title & System Name(s)
Mechanical	<p>NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to fan way outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.</p> <p>Activity Center</p>
Mechanical	<p>NRCA-MCH-07-A Supply Fan Variable Flow Controls</p> <p>Activity Center</p>
Mechanical	<p>NRCA-MCH-12-A FPD for Packaged Direct Expansion Units</p> <p>Activity Center</p>

N. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION
 Solutions made by Documentation Author indicate which Certificates of Verification must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online
 There are no Certificates of Verification applicable to this project

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 18 of 18)

Documentation Author's Declaration Statement	
1. I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name:	Documentation Author Signature:
Company: A.L.M. Consulting Engineers Inc.	Signature Date:
Address:	CEA/HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

1. I certify the following under penalty of perjury, under the laws of the State of California:
2. The information provided on this Certificate of Compliance is true and correct.
3. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
4. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance were designed or designed to meet the energy design features identified on this Certificate of Compliance.
5. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
6. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to accomplish this requirement.
7. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name: A.L.M. Consulting Engineers Inc.	Responsible Designer Signature:
Company: A.L.M. Consulting Engineers Inc.	
Address: 8330 Juniper Creek Ln	Date Signed:
City/State/Zip: San Diego, CA 92126	License #:
Phone: 858 792-1700	Title:
	Scope:

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

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A.L.M. PROJECT NO. 22013

ENERGY COMPLIANCE FORMS		<div>La Puente ACTIVITY CENTER</div>		501 GLENDORA AVE. LA PUENTE, CA. 91744
PROJECT NO.: 22008				
R.S.		A.P.		
FILE NAME				
DATE: 12/05/2025		DRAWN CHECKED		
REVISIONS		SHEET NO.		
		T24-4		
		OF SHEETS		

CITY APPROVAL

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PRELIMINARY PLANS FOR REVIEW ONLY, NOT FOR CONSTRUCTION.

SDG

A.L.M. PROJECT NO. 22013


SECTION 15050 MECHANICAL GENERAL REQUIREMENTS		
GENERAL CONDITIONS		
1.1. GENERAL CONDITIONS		
1.1.1.	The general conditions, drawings, supplementary conditions and Division 1 are a part of this section and the contract for this work and apply to this section as fully as if repeated herein. This section, 15050, applies to all Division 15 categories, including but not limited to:	
	SECTION 15050 Mechanical General Requirements 15100 Heating Ventilating and Air Conditioning 15400 Plumbing	
1.2. SCOPE		
	These Division 15 specifications and the accompanying drawings are intended to comprise the furnishing of all labor, and the furnishing and installing of all materials, equipment and supplies as specified herein and required for the satisfactory completion by the Contractor of all work pertaining to mechanical trades.	
1.3. EXPLANATION AND REFERENCE OF DRAWINGS		
1.3.1.	The drawings and these specifications are complementary to each other in that all materials and equipment outlined in the drawings and/or specified herein shall be considered essential to the contract.	
1.3.2.	The specifications are intended to describe the quality and character of the materials, equipment and methods of installation. All miscellaneous items of work and materials necessary for the completion of the installation shall be provided, whether or not mentioned in the specifications or shown on the drawings.	
1.3.3.	Space allocations, clearances, access, electrical data, structural supports, etc., on drawings, is for equipment models and sizes shown on plans and/or described in specifications. The Contractor shall be responsible for the coordination with other trades required in the use of equal or substitute equipment or materials and pay all difference in cost arising from such substitutions, regardless of approval.	
1.3.4.	Contractor shall review electrical drawings and specifications to assure all necessary electrical work is called for to accompany work under division 15. Necessary electrical work shall include, but not limited to, transformers, starters, conduits, disconnects, power to fire/smoke dampers & control panels, etc. Contractor shall notify the architect 10 days prior to the bid due date if any electrical work is needed to provide or assure a fully functional operating system for all work under division 15. Submittal of bid shall indicate that all necessary electrical work is shown or the contractor has allocated for the above requirements in the bid.	
1.3.5.	For purposes of cleanliness and legibility, drawings are essentially diagrammatic and, although size and location of equipment are shown to scale whenever possible, do not scale drawings. Use Manufacturer's certified drawings for dimensions. Contractor shall make use of all data in all the contract documents with Manufacturer's data and shall verify this information at building site. The contractor shall verify all dimensions, elevations and site conditions prior to the start of construction and notify the Architect and Engineer immediately of any discrepancies or inconsistencies that are found. Noted dimensions take precedence over scaled dimensions. Do not scale drawings.	
1.4. CODES AND STANDARDS		
1.4.1.	All work and materials shall be in full accordance with the latest rules and regulations of the State Fire Marshal; the Safety Orders of the Division of Industrial Safety, California Administrative Code, Title 24; National Fire Protection Assoc.; National Electrical Code; California Plumbing Code; California Mechanical Code; California Building Code; Local Building Codes; and other applicable codes, laws or regulations of bodies lawfully empowered and having jurisdiction over this project. No requirement of these drawings or specifications is to be construed to permit work not conforming to these codes.	
1.5. PERMITS AND FEES:		
1.5.1.	This Contractor shall obtain all permits, patent rights and licenses that are required for the performing of his work by all laws, ordinances, rules and regulations, or orders of any office and/or body, shall give all notices necessary in connection therewith, and pay all fees relating thereto and all costs and expenses incurred on account thereof.	
1.6. SUBMITTAL AND SHOP DRAWINGS:		
1.6.1.	Each item that contractor is proposing to use shall be clearly marked in submittal and show equipment, future or item number (I.E. HP-1, FE-1, AC-1, WC-1, WH-1, ID-1, etc.) and Manufacturer's Data; Submittal of each manufactured item shall be manufacturer's descriptive literature, drawings, diagrams, performances and characteristic curves, and catalog cuts and shall include the manufacturer's name, trade name, catalog model or number, nameplate data, size, layout dimensions, capacity, specification reference, applicable Federal or other standard specification references, and all other information necessary to establish contract compliance. Equipment submittal information shall include (and be highlighted) all the information shown in the equipment schedules shown on plans. Provide shop drawings showing exact installation of all mechanical work (i.e. exact layout of locations and sizes of all mechanical, plumbing, equipment, fixtures, pipes, ducts, valves, etc.) for a complete installation, include all necessary details & sections. Contractor shall review plans for work concerning all trades and coordinate with all trades to develop shop drawings. Submittals not clearly marked showing detailed specific information for proposed items to be used shall be returned to contractor without review. Submittals & shop drawings shall be submitted prior to construction. Five sets of submittals and shop drawings shall be submitted for review. Shop drawings showing exact layout of systems, details and sections shall be developed using AutoCAD release 2020 or higher.	
	ALL SUBMITTALS SHALL BE SENT TO THE ENGINEER AT THE SAME TIME. PIECEMEAL - SUBMITTING VARIOUS ITEMS AT CONTRACTOR DETERMINED INTERVALS WILL NOT BE ACCEPTABLE. THEREFORE SUBMITTAL REVIEW WILL BEGIN WHEN ENGINEER RECEIVES ALL SUBMITTALS	
1.6.2.	No work shall begin until submittals and shop drawings are reviewed and comments are provided by engineer. Submittals not conforming to the requirements of the plans and specifications and requiring resubmittal for additional review will be subject to a one hundred forty five dollars (\$145.00) per hour charge for the time involved in reviewing the resubmittals.	
1.7. COORDINATION:		
1.7.1.	Coordinate installation of all equipment, ductwork and piping with other trades prior to installation. Ensure that all fire dampers, control devices, manual volume dampers, shutoff valves, etc. are accessible for maintenance. Where access panels in finished spaces, other than that shown, contractor shall coordinate exact location of panels with architect prior to installation.	
1.7.2.	Coordinate routing of ducts and piping with general contractor, architect and other trades. Provide and all necessary duct transitions for routing ducts around & under structural members, pipes, conduits, etc. All ducts shall be sized not to exceed .08" s.p. loss per 100 ft. of length. Contractor shall include all cost in the bid for coring and necessary duct transitions, pipes and fittings. Contractor shall include all cost in the bid for everything necessary for a complete operating plumbing system and heating, ventilating and air conditioning system.	
1.7.3.	Contractor shall field verify existing conditions and points of connections. Contractor shall include all cost in the bid for coring, piping and everything necessary for a complete operating plumbing system and heating, ventilating and air conditioning system.	
1.8. DEFINITIONS:		
1.8.1.	"Provide" shall mean "provide complete in place", that is "furnish and install."	
1.8.2.	"Piping" shall mean pipes, fittings, valves and all like pipe accessories connected thereto.	
1.8.3.	"Ductwork" shall mean ducts, plenums, compartments, casings or any like devices, including the building structure, which is used to convey or contain air.	
1.8.4.	"Drawing" and "Plans" when referred to are synonymous.	
1.8.5.	"Mechanical work" shall mean all work specified and shown in the Division 15, "Mechanical," categories. Mechanical work generally includes: Heating, Ventilating; Air Conditioning and Plumbing, Piping and Accessories, and Temperature Controls.	
2. PART 2 - PRODUCTS		
2.1.	The specification of the mechanical products is detailed in the individual specification section of Division 15.	
3. PART 3 - EXECUTION		
	Air intakes/openings to be installed a minimum of 10 feet from all flue vents and plumbing vents. Air intakes/openings to be installed a minimum of 3 feet from exhaust fans and exhaust air openings.	
	TERMINATION OF EXHAUST DUCTS (CMC 502.2):	
	Environmental Air Ducts exhaust shall terminate not less than 3 feet from a property line, 10 feet from a forced air inlet, and 3 feet from openings into the building. Environmental exhaust ducts shall not discharge onto a public walkway.	
	Product Conveying Ducts conveying explosive or flammable vapors, fumes, or ducts shall terminate not less than 30 feet from a property line, 10 feet from openings into the building, 6 feet from exterior walls or roofs, 30 feet from combustible walls or openings into the building that are in the direction of the exhaust discharge, and 10 feet above adjoining grade.	
	Other product-conveying outlets shall terminate not less than 10 feet from a property line, 3 feet from exterior walls or roofs, 10 feet from openings into the building, and 10 feet above adjoining grade.	
	Commercial Kitchen Ducts shall terminate in accordance with CMC Section 510.9 or Section 510.10.	
3.1. ACCESS DOORS AND PANELS		
	Wherever volume dampers, fire dampers, (dampers of any type), equipment, controls, valves or other items or parts of the installation which require periodic inspection maintenance or adjustment are concealed by permanent non-removable construction, an access panel shall be provided. Access doors and panels for fire and/or smoke dampers shall be per CMC 607.5. Contractor shall allow for in bid for access doors and panels whether or not they are shown on plans.	
3.2. PROTECTION OF THE RATED STRUCTURE		
3.2.1.	Contractor shall review all architectural drawings to determine the location of all fire rated structures. Contractor shall include in bid all fire and/or smoke dampers, pipe sleeves or any other necessary items or materials needed to protect pipes or ducts passing through fire rated structures. Contractor shall include all necessary items or materials for fire protection whether shown on plans or not.	
3.3. ACCESSIBILITY:		
3.3.1.	All equipment shall be installed so as to be accessible for maintenance, adjustments, manufactures and code requirements. Special attention shall be given to motors, belts, air filters, manual valves and control valves, operating dampers, coils, etc.	
3.4. NOISE AND VIBRATION		
3.4.1.	It is the specific intent of the specification and design conditions that the entire system, including equipment, air ducts, piping and all other parts, shall be free of excessive vibrations and transmission. If excessive vibration occurs in the building as a result of installation, it shall be the responsibility of the Contractor to correct these conditions at no cost to the owner.	
3.5. VIBRATION ISOLATION		
3.5.1.	Rotating or reciprocating mechanical equipment shall be mounted on or suspended from spring vibration isolators to prevent vibration and structural borne noise transmission to the building.	
3.6. OPERATING INSTRUCTIONS AND SERVICE MANUALS		
3.6.1.	The Contractor shall carefully prepare five (5) operating instruction and service manuals for the entire system including all equipment, except Owner-furnished equipment.	
3.7. EARTHQUAKE RESTRAINT:		
3.7.1.	All earthquake resistant designs for mechanical equipment and plumbing systems including water heaters, storage tanks, air handling units, blower motors and ductwork and piping, shall conform to California Building Code (CBC). Contractor shall be responsible for installation and anchorage of all mechanical equipment to conform to code seismic requirements.	
3.8. PIPING		
3.8.1.	All piping shall be secured by bracing at every fourth hanger transversely and every eighth hanger longitudinally. Bracing shall be done in accordance with the NFPA Code, and as described in paragraph "Sway Bracing for Protection Against Earthquakes," of that code.	
3.8.2.	The SMACNA "Guidelines for Seismic Restraints of Mechanical Systems" may be used as a guide.	
3.9. IDENTIFICATION OF EQUIPMENT, PIPING, VALVES AND THERMOSTATS		
3.9.1.	Identify all mechanical equipment (new and existing) and sensors and thermostats (new and existing) shown on plans with nameplate bearing equipment name and number, using 1" black plastic with 1/2" white letters permanently mounted by screws in a conspicuous place on equipment and next to thermostats.	
	Each individual pipe line shall be marked for quick and easy identification in accordance with ANSI/ASME A13.1-2013 as to content, direction of flow and character of material carried in the pipes by method of stenciling black letters and flow arrows on the colored background. Prefabricated pipe markers may be used in lieu of stenciling.	
	Markers shall be installed and spaced at not more than eight foot intervals and so located that two markers shall be visible where piping system is exposed.	
3.10. PROTECTION OF ELECTRICAL SYSTEMS		
3.10.1.	Do not route ducts or piping over electrical equipment, switchboards, motor control centers, control panels and the like. Installation of mechanical and plumbing systems shall meet all the requirements of the National Electrical Code and other local code requirements.	
3.11. GUARANTEE		
3.11.1.	Furnish a written guarantee for all new systems and work for the period of one year from the date of acceptance of work by Owner. Where equipment such as compressors, heat exchangers, water heaters, etc., have a longer warranty, this shall also be noted in the written guarantee.	
3.12. AS-BUILT RECORD DRAWINGS		
3.12.1.	Provide to Owner drawing files using AutoCAD release 2020 and two sets of as-built record drawings showing exact installation of mechanical work.	
SECTION 15100 HEATING, VENTILATING AND AIR CONDITIONING		
PART 1 - GENERAL		
1.1. GENERAL CONDITIONS		
1.1.1.	The general conditions, supplementary conditions and Division One are hereby made a part of this Section.	
1.2. SCOPE		
1.2.1.	Furnish all labor, materials, equipment, appliances and necessary incidentals for the complete installation of all heating, ventilating and air conditioning systems as shown on the drawings and as specified herein. This is intended to describe, generally, the scope of work but shall not be considered as a list of work to be performed under this contract. All work necessary for the complete operation of all systems with all fixtures and equipment shall be provided.	
1.3. WORK INCLUDED		
1.3.1.	The work includes, but necessarily limited to:	
1.3.1.1.	Duct work and Accessories	
1.3.1.2.	Fire Dampers	
1.3.1.3.	Air Distribution	
1.3.1.4.	Insulation	
1.3.1.5.	Equipment	
1.3.1.6.	Test and Balance	
1.4. REFERENCE TO THE OTHER SECTIONS		
1.4.1.	The applicable requirements from the following Sections shall form a part of this section and the Contractor shall consult them in detail for general and specific requirements.	
2. PART 2 - PRODUCTS		
2.1. DUCTWORK AND ACCESSORIES:		
2.1.1.	The Contractor shall furnish and install all sheet metal plenums and ductwork shown on plans (round rigid, square and rectangular), except where otherwise noted sheet metal shall be galvanized steel conforming to the requirements of California Mechanical Code. Total pressure for system fan(s) (not external static pressure) shall be used for determining duct construction pressure classification. Contractor shall request this information from mechanical equipment manufacturer for equipment specified to be used for this project or Mechanical Engineer prior to bidding project and duct construction if total pressure for system fan(s) is unknown.	
2.1.2.	Construction, gauges and installation of ducts shall conform to California Mechanical Code, unless more restrictive within this specification, and shall have smooth interiors and all seams, braces, stiffeners and hangers shall be on the outside. Cross crimp all rectangular ducts regardless of size.	
2.1.3.	Seal all ductwork seams and joints with Design Polymeric DP 1010 smooth gray duct sealant.	
2.1.4.	Duct connections to mechanical equipment conveying conditioned air shall be made with Duro Dyne flexible connector model IDC-343 Insulflex. "R" value = 4.2 waterproof vinyl coating. Duct connections to mechanical equipment conveying unconditioned air shall be made with Duro Dyne canvas flex connector.	
2.1.5.	All supply and return air plenums and ducts exterior of the building shall be lined with duct liner insulation.	
2.2. FLEXIBLE DUCT		
2.2.1.	Flexible ducts in unconditioned and indirectly conditioned spaces as described by California Title 24 code - All supply and return air ducts located in a space between the roof and an insulated ceiling; or in a space directly under a roof with fixed vents or openings to the outdoors or unconditioned spaces; or in an unconditioned crawl space; or in other unconditioned spaces shall be as follows.	
	approved equal. Flexible duct shall consist of a spring steel wire helix covered with a continuous non-perforated air sealed liner wrapped with fiber insulation having a minimum "R" value = 8 (maximum 2" thick) covered with reinforced metalized polyester vapor barrier having a maximum permeance of 0.01 US perms. The "R" value shall have be labeled on the duct exterior in maximum 3'-0" intervals. Individual lengths of flexible duct shall be a maximum of FIVE feet long and shall include factory installed galvanized steel collars. The assembly shall be listed and labeled as Class 1 air duct under UL Standard of Safety UL-181 having a flame spread of not more 25 and smoke developed rating of not more than 50. Flexible duct shall be installed above ceilings on the end of each duct at the terminal air device. Flexible ducts shall not be installed at the air terminal device where ducts are exposed to view below ceilings. Flexible ducts shall not be installed at the air terminal device where ducts are installed in areas without ceilings and exposed to view.	
2.2.2.	All flexible supply and return air ducts located in conditioned spaces as described by California Title 24 code shall be as follows.	
	Flexible duct shall be factory fabricated assembly manufactured by JP Lamborn Company Model MF05 or approved equal. Flexible duct shall consist of a spring steel wire helix covered with a continuous non-perforated air sealed liner wrapped with fiber insulation having a minimum "R" value = 4.2 (maximum 1-1/2" thick) covered with reinforced metalized polyester vapor barrier having a maximum permeance of 0.01 US perms. The "R" value shall have be labeled on the duct exterior in maximum 3'-0" intervals. Individual lengths of flexible duct shall be a maximum of FIVE feet long and shall include factory installed galvanized steel collars. The assembly shall be listed and labeled as Class 1 air duct under UL Standard of Safety UL-181 having a flame spread of not more 25 and smoke developed rating of not more than 50. Flexible duct shall be installed above ceilings on the end of each duct at the terminal air device. Flexible ducts shall not be installed at the air terminal device where ducts are exposed to view below ceilings. Flexible ducts shall not be installed at the air terminal device where ducts are installed in areas without ceilings and exposed to view.	
2.3. TURNING VANES		
2.3.1.	Turning vanes shall be installed in all right angle turns in rectangular or square ducts. Vanes shall be double thickness airfoil type, 1.5 inches apart on embossed vane runner.	
2.4. DAMPERS		
2.4.1.	Provide balancing volume dampers in each branch duct and in each main duct to provide for complete air balancing. All rectangular manual volume dampers and motorized dampers shall be opposed blade.	
	Install 1" wide X 12" long red fluorescent ribbon on all damper handles above ceiling. Ribbon shall be All state U-RFR15 or approved equal.	
2.4.2.	Install back draft dampers in all outdoor air intakes and exhaust air ducts and relief air ducts to allow air flow as shown on plans. back draft dampers shall be Ruskin CB02 with counter balanced weight to assist damper to open. Provide access doors to access and adjust counter balanced weight.	
2.5. FIRE DAMPERS & FIRE/SMOKE DAMPERS		
2.5.1.	Fire Dampers and Fire/Smoke Dampers. Furnish and install approved fire dampers or fire/smoke dampers in all ducts passing through fire walls, ceilings, floors, and required separations to meet code requirements. Access doors shall be provided with approved steel sleeves.	
2.5.1.1.	T-Bar Ceiling Fire Damper (Radiation Damper): California State Fire Marshal Listing No. 3225-0245-0101. Ruskin CF02 OR CF03. Provide blankets for tee bar ceilings.	
2.5.1.2.	Wall Fire Damper: California State Fire Marshal Listing No. 3225-0245-0005. Ruskin IB02 OR DB02. Damper shall be TYPE "B" (blades out of air stream), unless installation requires a register or grille installed on wall at fire damper location.	
2.5.1.3.	Wall Fire Smoke Dampers: California State Fire Marshal Listing No. 3235-0245-0126, furnish and install in all ducts passing through fire rated corridor/hallway walls. Damper shall be Ruskin FSD60C (Air foil blades).	
2.5.1.4.	Ceiling Fire Smoke Dampers: California State Fire Marshal Listing No. 3235-0245-0121, furnish and install in all ducts passing through fire rated corridor/hallway ceilings. Damper shall be Ruskin FSD60C (Air foil blades).	
2.5.1.5.	Ceiling Fire Smoke Dampers: California State Fire Marshal Listing No. 3225-0245-113 and 3230-0245-0114 furnish and install in all ducts connected to round neck ceiling diffusers, registers and grilles installed in fire/smoke rated suspended ceilings. Damper shall be Ruskin DFSDR1 (Round flat blade).	
2.5.1.6.	Wood Stud Ceiling Fire Damper (Radiation Damper): California State Fire Marshall Listing No. 3225-0245-0123 Ruskin CF07D (square duct) OR CF087-1 (round duct).	
2.6. AIR DISTRIBUTION		
2.6.1.	Ceiling diffusers shall be hinged removable perforated plate 24 X 24 lay in tee bar type and surface mounted with integral opposed blade volume control and removable and rearrangeable cores (cores shall be removable & rearrangeable without removing diffuser from ceiling) multi-deflection spring clip core. Tee bar type diffusers shall be Krueger 1240PE (Frame 23) and surface mounted type diffusers shall be Krueger 1240F (Frame 22) or approved equal. Finish to be baked white acrylic paint.	
2.6.2.	Ceiling return, exhaust, transfer and relief registers & grilles shall be perforated plate tee bar type and surface mounted. Tee bar type registers and grilles shall be Krueger 6490 (Frame 23) and surface mounted type shall be Krueger S80F (Frame 22) or approved equal. Finish shall be baked white acrylic paint. Registers shall have integral opposed blade volume control.	
2.6.3.	Supply registers shall be bar type double deflection Krueger 880H or approved equal with integral opposed blade damper. Finish to be baked white acrylic paint.	
2.6.4.	Wall or exposed duct return, exhaust transfer and relief registers and grilles shall be Krueger S80H or approved equal. Finish to be baked white acrylic paint. Registers shall have integral opposed blade volume control.	
2.6.5.	Round supply air diffusers shall be Krueger RM2 or approved equal, four cone, fully adjustable. Finish to be baked white acrylic paint.	
2.7. INSULATION:		
2.7.1.	Ducts in unconditioned and indirectly conditioned spaces as described by California Title 24 code - All supply and return air ducts located outdoors; or in a space between the roof and an insulated ceiling; or in a space directly under a roof with fixed vents or openings to the outdoors or unconditioned spaces; or in an unconditioned crawl space; or in other unconditioned spaces shall be insulated as follows.	
2.7.1.1.	Liner used for ducts in unconditioned and indirectly conditioned spaces shall be 2" thick (minimum "R" value = 8). Duct dimensions shown are net clear inside dimensions after liner has been installed. Fiberglass mat faced duct liner shall be Johns Manville Permasteat Lincoacoustic per industry standard ASTM C-1071. Flame spread not over 25, fuel contributed and smoke developed not over 50. Installation shall be per manufacturer recommendations document AHS-197 dhd 9-04. Supply and return air plenums for rooftop package units shall also have this type duct liner.	
2.7.1.2.	Thermal duct wrap: All supply and return ductwork in unconditioned and indirectly conditioned spaces, not specified to be lined shall be insulated with foil back fiberglass blanket 3/4 lb. density, type 75. Ductwork insulation shall be 3" thick. Wrap shall be Johns Manville Microbelle XG FSK wrap, formaldehyde free. Flame spread not over 25, fuel contributed and smoke developed not over 50. Minimum "R" value = 8. Installation shall be per manufacturer recommendations document AHS-197 dhd 9-04.	
2.7.2.	All supply and return air ducts located in conditioned spaces as described by California Title 24 code shall be insulated as follows.	
2.7.2.1.	Liner used for ducts in conditioned spaces shall be 1.5" thick (minimum "R" value = 4.2). Duct dimensions shown are net clear inside dimensions after liner has been installed. Fiberglass mat faced duct liner shall be Johns Manville Permasteat Lincoacoustic per industry standard ASTM C-1071. Flame spread not over 25, fuel contributed and smoke developed not over 50. Installation shall be per manufacturer recommendations document AHS-197 dhd 9-04. SUPPLY AND RETURN AIR DUCTS INSTALLED IN CONDITIONED SPACES EXPOSED TO VIEW SHALL HAVE THIS TYPE OF LINER UNLESS OTHERWISE NOTED.	
2.7.2.2.	Thermal duct wrap: All supply and return ductwork in conditioned spaces, not specified to be lined shall be insulated with foil back fiberglass blanket 3/4 lb. density. Ductwork insulation shall be 1.5" thick. Wrap shall be Johns Manville Microbelle XG FSK wrap, formaldehyde free. Flame spread not over 25, fuel contributed and smoke developed not over 50. Minimum "R" value = 4.2. Installation shall be per manufacturer recommendations document AHS-197 dhd 9-04.	
2.7.3.	Refrigerant suction piping and condenserate piping inside of building insulation shall be AP Armaflex, Rubatex, Manville Aerotube or approved equal flexible elastomeric nominal 3/4" wall thickness expanded closed-cell structure. AP Armaflex Pipe Insulation shall have flame-spread rating of 25 or less and smoke developed rating of 50 or less as tested by ASTM E 84.	
	Pipe insulation in exterior or wet locations shall receive an additional aluminum jacketing for weather proofing to meet Title 24 code requirements. Jacketing shall be removable at all valves and other items requiring periodic service.	
2.8. EQUIPMENT		
2.8.1.	H.V.A.C. units shall be as shown on the equipment schedules or Mechanical Engineer approved equal.	
2.9.	Exhaust fans shall be as shown on the equipment schedules or Mechanical Engineer approved equal	
2.10. PIPING:		
2.10.1.	Gas piping above grade shall be Schedule 40 ASTM A53 black steel pipe.	
2.10.2.	Condensate piping shall be hard drawn copper tubing Type "M" or "DWV."	
	2.10.3. Refrigerant suction and liquid piping shall be hard drawn copper type "L", "ACR" cleaned and capped. Suction piping shall be insulated.	
	2.11. LOUVERS:	
2.11.1.	Louvers shall be Ruskin ELF375DX with bird screen and drain holes in bottom of frame or approved equal.	
3. PART 3 - EXECUTION		
3.1. SHEET METAL AND DUCTWORK INSTALLATION		
3.1.1.	All ductwork and plenums exposed to weather shall be sealed weathertight.	
3.2. DUCTS AND AIR DISTRIBUTION INSTALLATION		
3.2.1.	All ducts exposed to view shall be installed level and plumb.	
3.2.2.	All diffusers, grilles, register and air distribution devices shall be installed level. Paint inside of all diffusers, grilles and register boxes and all plenums exposed to view, flat back so no bare metal is seen.	
3.3. THERMOSTATS, SENSORS, AND CONTROL SYSTEM INSTALLATION		
3.3.1.	All wiring and thermostat, sensor mounting screws penetrating walls shall be sealed air tight.	
3.3.2.	Provide 1" thick cork pad between thermostat and wall where thermostat is shown on plans to be installed on inside of exterior wall.	
3.3.3.	Provide 1" thick cork pad between sensor and wall where sensor is shown on plans to be installed on inside of exterior wall.	
3.3.4.	Provide all necessary wiring, programming, WIFI interface and controls for thermostats and/or sensors to control the mechanical equipment.	
3.4. TEST AND AIR SYSTEMS BALANCE		
3.4.1. General Requirements of Balancing Systems		
3.4.1.1.	All work shall be done under direct supervision of a qualified independent test and balance contractor. Contractor shall be certified by Associated Air Balance Council (A.A.B.C.) or National Environmental Balancing Bureau (N.E.B.B.) This Contractor shall balance, adjust and test the air moving equipment and air distribution, and exhaust systems as herein specified.	
3.4.2.	Upon completion of the air conditioning system, the air balance agency shall perform the following tests, compile the test data, and submit five copies of the complete certified test data to the Owner for evaluation and approval.	
3.4.3.	Testing and Balancing Procedure: The air balance agency shall perform the following tests, and balance each system in accordance with the following requirements.	
3.4.3.1.	Test and adjust blower fan RPM design requirements.	
3.4.3.2.	Test and record motor load amperes.	
3.4.3.3.	Make pitot tube travers of main supply and/or return and/or exhaust duct and obtain fan(s) design CFM.	
3.4.3.4.	Test and record system pressures, suction and discharge.	
3.4.3.5.	Test and adjust system for design CFM of recirculating air.	
3.4.3.6.	Test and adjust system for design CFM of outside air.	
3.4.3.7.	Test and record entering air temperature (D.B. Heating and Cooling).	
3.4.3.8.	Test and record entering air temperature (W.B. Cooling).	
3.4.3.9.	Test and record leaving air temperature (D.B. Heating and Cooling).	
3.4.3.10.	Test and record leaving air temperature (W.B. Cooling).	
3.4.3.11.	Adjust all main supply and return air duct to proper design CFM. Test and adjust all diffusers, grilles, and registers for design CFM.	
3.4.3.12.	Test exhaust fans for design CFM and motor amperage draw.	
3.4.3.13.	Test and Balance report shall include return air grille CFM readings with minimum outdoor air CFM and maximum outdoor CFM air quantities.	
3.4.3.14.	Test and Balance report shall include H.V.A.C. unit CFM readings with minimum outdoor air CFM and maximum outdoor CFM air quantities.	
3.4.3.15.	In cooperation with the control manufacturer's representative, set adjustment of automatically operated dampers to operate as specified, indicated and/or noted. Testing agency shall check all controls for proper calibrations and list all controls requiring adjustment by control installers.	
3.4.3.16.	Balance diffusers, registers and grilles with manual air volume dampers in ducts. Do not balance diffusers, registers and grilles with opposed blade dampers. Opposed blade dampers shall be open 100%.	
3.4.3.17.	As part of the work of this contract, the Air Conditioning Contractor shall make any changes (to adjust or replace) in the pulleys, belts and dampers or the addition of dampers required for correct balance for all equipment at no additional charge to the Owner.	
3.4.3.18.	Balance organization shall include an extended warranty of 90 days after completion and acceptance resetting of any air flow quantities or equipment. The organization shall provide technicians to assist the mechanical designer in making any tests he may require.	
3.4.3.19.	Test and Balance report shall include actual measured CFM, and design CFM, with percentage comparison next to this information. I.E. measured CFM 3% of design CFM.	
3.5. TEST REFRIGERANT PIPING SYSTEMS:		
3.5.1.	Refrigerant piping shall be test in accordance with CMC Section 1116.0 with special attention given to Section "Field Tests" 1116.2 and Table 1116.2.	
3.5.2.	Test for each system shall hold pressure for 24 hours with less than 1 P.S.I. charge.	

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MECHANICAL AND PLUMBING SPECIFICATIONS

La Puente
ACTIVITY CENTER

501 GLENDORA AVE. LA PUENTE, CA. 91744

PROJECT NO.: 22008

R.S. A.P.

FILE NAME

DATE: 12/05/2025 DRAWN CHECKED

REVISIONS

SHEET NO.

MP-8.0

OF SHEETS

ALM CONSULTING ENGINEERS, INC.

COMMERCIAL • RESIDENTIAL • INSTITUTIONAL

• H.V.A.C. Design • Title 24 Compliance
• Plumbing Design • Energy Analysis

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A.L.M. PROJECT NO. 22013

PRELIMINARY PLANS FOR REVIEW ONLY, NOT FOR CONSTRUCTION.

SDG

CITY APPROVAL

SECTION 15400
PLUMBING

1. PART 1 - GENERAL

1.1. GENERAL CONDITIONS

1.1.1. All piping shall be manufactured in the United States of America.

1.1.2. The general conditions, supplementary conditions and Division One are hereby made a part of this Section.

1.2. WORK INCLUDED

1.2.1. The work includes, but necessarily limited to:

1.2.1.1. Insulation.

1.2.1.2. Soil, waste, vent and down spout piping.

1.2.1.3. Indirect waste system.

1.2.1.4. Domestic water piping system.

1.2.1.5. Industrial cold water piping system.

1.2.1.6. Trap primer piping system.

1.2.1.7. Natural gas piping system.

1.2.1.8. Air conditioning condensate piping system.

1.2.1.9. Piping specialties.

1.2.1.10. Valves and fittings.

1.2.1.11. Hangers and supports.

1.2.1.12. Testing.

1.3. REFERENCE TO THE OTHER SECTIONS

1.3.1. The applicable requirements from the following Sections shall form a part of this section and the Contractor shall consult them in detail for general and specific requirements.

15050 General Requirements

2. PART 2 - PRODUCTS

2.1. INSULATION:

2.1.1. All hot, cold and hot water return piping shall be insulated with Manville "Micro-Lok" Fiberglass with "AS" jacket. Flame spread not over 25, fuel contributed and smoke developed not over 50. Use Manville "Zeston" P.V.C. fitting insulation for pipe fitting and valves. Insulation Thickness shall be as follows per 2022 California Plumbing Code 609.11.2:

Pipe Size	Minimum Insulation Thickness
1/2" thru 3/4"	1"
1" THRU 1-1/2"	1-1/2"
2" and larger	2"

2.1.2. Where piping is exposed to view or exterior to building in lieu of factory applied standard all-purpose jacket. Use aluminum jacket over "Micro-Lok" insulation.

2.2. SOIL, WASTE, VENT SYSTEM AND STORM DRAIN (includes overflow drain piping) PIPING.

2.2.1. All soil, waste, vent and storm drain piping above grade shall be "no-hub" service weight cast iron soil pipe and fittings with stainless steel band clamps. Country of origin shall be United States of America and clearly marked on pipe and fittings.

2.2.2. All soil, waste, vent and storm drain piping under concrete building slab and to point 5'-0" outside and 6" above concrete slabs shall be Schedule 40 acrylonitrile butadiene styrene (ABS) solid wall plastic pipe and fittings.

2.2.3. Sewer pipe shown on the plumbing drawings from a point five (5) feet outside of building walls shall be polyvinyl chloride (PVC) schedule 40 plastic gravity sewer pipe and fittings with integral bell and spigot joints.

2.2.4. Soil, waste, vent and storm drain piping shall have cleanouts install in accordance with 2022 C.P.C. Section 719.0. Note that vertical storm drain piping inside of the building connected to the storm piping outside of the building shall have cleanouts installed at the base of vertical leaders before it connects to horizontal storm drain piping outside of the building - 2022 C.P.C. Section 1107.13.1.

2.3. INDIRECT WASTE SYSTEM:

2.3.1. All indirect waste piping underground under building slab to 6" above slab shall be Schedule 40 acrylonitrile-butadiene-styrene (ABS) solid wall plastic pipe and fittings.

2.3.2. All indirect waste piping above building floor shall be "No-Hub" service weight cast iron soil pipe and fittings stainless steel band clamps and/or above grade Type "DWV" brass or wrought copper fittings conforming to ANSI B16.23 with solder joints.

2.4. DOMESTIC WATER PIPING SYSTEM:

2.4.1. All water piping above finished floor in building shall be hard drawn copper tubing Type "L" and cast brass or wrought copper fittings.

2.4.2. All water piping underground, under concrete building slab and to a point 5'-0" outside of building shall be type "K" copper tubing in single continuous length polyethylene outer tubing.

2.4.3. All water lines underground from a point 5'-0" outside of building walls: 1-1/2" & smaller shall be Schedule 40 PVC. 2" & larger shall be class 200 PVC gasket & bell end with fittings.

2.5. TRAP PRIMER PIPING SYSTEM:

2.5.1. Trap primer piping above floor shall be hard copper tubing Type "L."

2.5.2. Trap primer piping underground and below floor shall be hard copper tubing Type "L" installed in poly sleeve.

2.6. NATURAL GAS PIPING SYSTEM:

2.6.1. All piping below grade outside of building shall be polyethylene (PE) pipe and fittings shall be ASTM D 2513, 100 psig working pressure. Standard Dimension Ratio (SDR), the ratio of pipe diameter to wall thickness, 11.5 maximum. Socket Fittings: ASTM D 2683 Butt-Fusion Fittings: ASTM D 2513, molded.

2.6.2. Risers shall be manufacturer's standard riser, transition from plastic to steel pipe with 7 to 12 mil thick epoxy coating. Use swaged gas-tight construction with O-ring seals, metal insert, and protective sleeve. Provide riser supports.

2.6.3. Transition Fittings: Steel to Plastic (PE): are as specified for 'riser' except designed for steel to plastic with tapping tee or sleeve. Coat or wrap exposed steel pipe with heavy plastic coating.

2.6.4. Gas piping 2" and smaller and 6" above finished floors on grade shall be threaded Schedule 40 galvanized pipe conforming to ASTM A53 with galvanized malleable fittings for screw joint.

2.6.5. Gas piping 2-1/2" and larger and 6" above finished floors on grade shall be welded Schedule 40 conforming to ASTM A53 black steel pipe with black steel welding fittings. Piping exposed to weather shall be primed and painted black.

2.6.6. Install gas cocks and flexible connectors at each gas fired equipment, unless otherwise noted (do not install flexible connectors where gas pipe exceeds 1-1/2").

2.7. AIR CONDITIONING CONDENSATE PIPING SYSTEM:

2.7.1. Air conditioning condensate piping shall be Type "L" hard copper with solder joints.

2.7.2. Condensate piping inside of building insulation shall be AP Armaflex, Rubatex, Manville Aerobute or approved equal flexible elastomeric nominal 3/4" wall thickness expanded closed-spread rating of 25 or less and smoke-developed rating of 50 or less as tested by ASTM E 84.

2.8. ACCESS PANELS:

Provide access panels over all valves and other equipment which is concealed in walls over ceilings or furred in.

2.9. PIPING SPECIALTIES:

2.9.1. Tracer wire: Provide on all polyethylene, PVC, CPVC, ABS, plastic pipe below grade-No. 10 AWG, TW insulated copper wire. Spiral wrap around complete length of all plastic piping at approximately 24" intervals, terminate above grade or in yard box with a 24" pipe.

2.9.2. Provide chrome plated angle valves on hot and cold water supply at each plumbing fixture.

2.10. ESCUTCHEONS:

Provide chrome plated steel escutcheons at all locations where pipe passes through walls, floors and ceilings in finished areas, Provide iron escutcheons in unfinished areas.

2.10.1. Install water hammer arresters at all push button or handle valves, flush valves, foot valves, hose reels, dish and clothes washers. Install water hammer arresters in piping where necessary to omit water hammering.

2.10.2. Unions shall be installed after each screw-type valve, connections for all equipment, appliances, and as required for erection and maintenance. No unions shall be installed in concealed location.

2.10.3. Sleeves through foundation walls shall be standard weight black steel pipe, flush with walls and two pipe sizes larger than the pipe passing through. Sleeves shall be caulked to assure a waterproof penetration. Sleeve diameter for piping through masonry galvanized sheet steel and shall extend completely through the walls or floor finishing flush on both sides. Sleeves shall be 1 inch larger than the pipe passing through with caulking to make opening airtight. Sleeves through fire walls or floor shall be fire stop system assembly, code approved for fire separation rating or wall plates for all pipes, exposed in finished portions of the buildings. See architectural plans for fire rated structures.

2.11. PIPE HANGERS AND SUPPORTS

2.11.1. Seismically brace all piping and equipment as specified in Section 15050.

2.11.2. Trap arms and similar branches must be firmly secured against movement in any direction. Closet bends shall be stabilized by firmly clamping and blocking. Where vertical closet stubs are used, they must be completely stabilized against all horizontal movement.

PIPE HANGER AND SUPPORTS SHALL BE PER 2022 C.P.C. CHAPTER 3 TABLE 313.3			
Materials	Type of Joints	Horizontal	Vertical
Cast	Lead and Okum	5 feet, except 10 feet where lengths are installed- _{1,2,3}	Base and each floor not to exceed 15 feet
	Compression Gasket	Every other joint, unless over 4 feet, then support each joint. _{1,2,3}	Base and each floor not to exceed 15 feet
Cast Iron Hubless	Shielded Coupling	Every other joint, unless over 4 feet, then support each joint. _{1,2,3,4}	Base and each floor not to exceed 15 feet
Copper and Copper Alloys	Soldered, Brazed, Threaded or Mechanical	1-1/2" and smaller, 6 feet 2" and larger, 10 feet	Each floor, not to exceed 10 feet. ₅
Steel Pipe for Water or DWV	Threaded or Welded	3/4" and smaller, 10 feet 1" and larger, 12 feet	Every other floor, not to exceed 25 feet. ₅
Steel Pipe for Gas	Threaded or Welded	1/2 inch, 6 feet 3/4 and 1 inch, 8 feet 1-1/4 inch and larger, 10 feet	1/2 inch, 6 feet, 3/4 and 1 inch, 8 feet, 1-1/4 inch and larger, every floor level
Schedule 40 PVC and ABS DWV	Solvent Cemented	All sizes, 4 feet. Allow for expansion every 30 feet. ₃	Base and each other floor. Provide mid-story guides. Provide for expansion every 30 feet
CPVC	Solvent Cemented	1" and smaller, 3 feet, 1-1/4" and larger, 4 feet	Base and each floor. Provide mid-story guides.
CPVC-AL-CPVC	Solvent Cemented	1/2", 5 feet 3/4", 65 inches 1", 6 feet	Base and each floor. Provide mid-story guides.
Lead	Wiped or Burned	Continuous Support	Not to exceed 4 feet.
Steel	Mechanical	In accordance with standards acceptable to the Administrative Authority Having Jurisdiction	
PEX	Cold Expansion, Insert and Compression	1 inch and smaller, 32 inches, 1-1/4 inch and larger, 4 feet	Base and each other floor. Provide mid-story guides
PEX-AL-PEX	Metal Insert and Metal Compression	1/2" 3/4" 1" All sizes 98"	Base and each other floor. Provide mid-story guides
PE-AL-PE	Metal Insert and Metal Compression	1/2" 3/4" 1" All sizes 98"	Base and each other floor. Provide mid-story guides
PE-RT	Insert and Compression	1" and smaller, 32" 1-1/4" and larger, 4 feet	Base and each other floor. Provide mid-story guides
Polypropylene (PP)	Fusion weld (socket, butt, saddle, electrofusion), threaded (metal threads only), or mechanical	1" and smaller, 32" 1-1/4" and larger, 4 feet	Base and each other floor. Provide mid-story guides

1. Support adjacent to joint, not to exceed eighteen (18) inches (457 mm).

2. Brace at not more than forty (40) foot (12192 mm) intervals to prevent horizontal movement.

3. Support at each horizontal branch connection.

4. Hangers shall not be placed on the coupling.

5. Vertical water lines may be supported in accordance with recognized engineering principles with regard to expansion and contraction, when first approved by the Administrative Authority Having Jurisdiction.

2.11.3. Rod diameters for horizontal pipe supports:

Pipe Size	Rod Diameter
1/2" thru 4"	3/8"
5" thru 8"	1/2"
10" to 12"	5/8"

2.11.4. Use trisulators at all pipe hangers. All hangers for water piping shall be sized for use over trisulator.

2.12. PLUMBING FIXTURES AND EQUIPMENT

2.12.1. Plumbing fixtures and equipment shall be by manufacturer shown on schedules.

3. PART 3 - EXECUTION

3.1. DISINFECTION OF DOMESTIC WATER SYSTEM:

3.1.1. General: Disinfection shall be done only by a commercial disinfecting company. Trident Technologies, Inc. or approved equal.

3.1.2. The system or parts thereof shall be filled with a water-chlorine solution containing not less than fifty (50) parts per million of chlorine, and the system or part thereof shall be valved off and allowed to stand for twenty-four (24) hours; or, the system or part thereof shall be filled with a water-chlorine solution containing not less than two-hundred (200) parts per million of chlorine and allowed to stand for three (3) hours.

Following the allowed standing time, the system shall be flushed with clean potable water until the chlorine residual in the water coming from the system does not exceed the chlorine residual in the flushing water.

The procedure shall be repeated if it is shown by bacteriological examination made by an approved agency (approved by the architect) that contamination persists in the system. The potable water system shall be flushed with clean potable water until only potable water appears and the water meets the water requirements of the city water drinking standards and sample will be tested for total coliform. Reports shall be given to architect upon completion.

3.2. TEST AND ADJUSTMENTS:

3.2.1. Soil, waste, vent, condensate and storm drain piping within the building shall be tested with a minimum of 10 foot head at each joint for a minimum of three hours with no loss in head.

3.2.2. The soil, water and vent piping underground and exterior to building shall be hydrostatic tested to a minimum of 10 feet head above the highest inlet at the adjacent floor level for minimum of (1) hour or longer as necessary to make complete examination of the piping under test. The system shall be tight at the all points.

3.2.3. The water piping shall be hydrostatic tested to 125 psig at the highest outlet for minimum for four (4) hours or longer as necessary to make complete examination of the system under test. No perceptible loss or gauge shall be allowed except for temperature change.

3.2.4. Gas piping tests.

3.2.4.1. Pressure. This inspection shall include an air, CO2, or nitrogen pressure test, at which time the gas piping shall stand a pressure of not less than 10psi (69 kPa) gauge pressure. Test pressures shall be held for a length of time satisfactory to the Authority Having Jurisdiction, but in no case less than 15 minutes with no perceptible drop in pressure. For welded piping, and for piping carrying gas at pressures in excess of 14 inches water column pressure

(3.5 kPa), the test pressure shall be not less than 60 psi (414 kPa) and shall be continued for a length of time satisfactory to the Authority Having Jurisdiction, but in no case for less than 30 minutes. For CSST carrying gas at pressures in excess of 14inches water column (3.5 kPa) pressure, the test pressure shall be 30 psi (207 kPa) for 30 minutes. These tests shall be made using air, CO2, or nitrogen pressure and shall be made in the presence of the Authority Having Jurisdiction. Necessary apparatus for conducting tests shall be furnished by the permit holder. Test gauges used in conducting tests shall be in accordance with Section 318.0.

3.2.4.2. No piping work, fixtures, or equipment shall be concealed or covered until they have been inspected and approved by the Owner's Representative, who shall be notified when the work is ready for inspection. All work shall be completely installed, tested as required by this section and the State Ordinances and State Safety Orders, and shall be leak-tight before inspection is requested. All tests shall be repeated upon request to the satisfaction of those making the inspection.

See architectural drawing for exact placement of plumbing fixtures.

Contractor shall hire a 3rd party waterproofing consultant to review the installation of all penetrations through the weather barrier of the existing buildings. Consultant shall provide recommendations to ensure that all penetrations are weather tight. Consultant shall provide a written report at the completion of the project certifying that all penetrations are in conformance with life contract documents and should prevent water from entering the building. The consultant shall also identify the warrantable life span and maintenance schedule for the penetrations.

AL.M. CONSULTING ENGINEERS, INC.


COMMERCIAL • RESIDENTIAL • INSTITUTIONAL

• H.V.A.C. Design • Title 24 Compliance • Plumbing Design • Energy Analysis


8330 Juniper Creek Lane
San Diego, CA 92126
Tel: (858) 792-1700

A.L.M. PROJECT NO. 22013


ARCHITECT



1775 HANCOCK ST, SUITE 120
SAN DIEGO, CA 92110
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CONSULTANT



City of La Puente

15900 E. MAIN ST. LA PUENTE, CA. 91744

MECHANICAL AND PLUMBING SPECIFICATIONS

La Puente
ACTIVITY CENTER

501 GLENDORA AVE. LA PUENTE, CA. 91744

PROJECT NO.: 22008

R.S. A.P.

FILE NAME

DATE: 12/05/2025 DRAWN CHECKED

REVISIONS

SHEET NO.

MP-8.1

OF SHEETS

CITY APPROVAL

PRELIMINARY PLANS FOR REVIEW ONLY, NOT FOR CONSTRUCTION.

SDG

ACCESSIBLE AND
ENERGY CONSERVATION
NOTES:

- SEE ARCHITECTURAL PLANS FOR ADDITIONAL
ADA REQUIREMENTS FOR INSTALLATION OF
PLUMBING FIXTURES AND SYSTEMS.
1. THE HEIGHT OF ACCESSIBLE WATER
CLOSETS SHALL MEET ADA & TITLE 24
(CURRENT CBC) REQUIREMENTS
CONTROLS SHALL BE OPERABLE WITH ONE
HAND AND SHALL NOT REQUIRE TIGHT
GRASPING, PINCHING, OR TWISTING OF THE
WRIST. CONTROLS FOR THE FLUSH VALVES
SHALL BE MOUNTED ON THE WIDE SIDE OF
TOILET AREAS, NO MORE THAN 44 INCHES
ABOVE THE FLOOR. THE FORCE REQUIRED
TO ACTIVATE CONTROLS SHALL BE NO
GREATER THAN 5 POUNDS FORCE.
2. LAVATORIES ADJACENT TO FINISHED FACE
OF WALL SHALL BE MOUNTED TO MEET CBC
REQUIREMENTS TO THE CENTER LINE OF
THE FIXTURE.
3. HOT WATER AND DRAIN PIPES ACCESSIBLE
UNDER LAVATORIES SHALL BE INSULATED
OR OTHERWISE COVERED. THERE SHALL
BE NO SHARP OR ABRASIVE SURFACES
UNDER LAVATORIES.
4. FAUCET CONTROLS AND OPERATING
MECHANISMS SHALL BE OPERABLE WITH
ONE HAND AND SHALL NOT REQUIRE TIGHT
GRASPING, PINCHING, OR TWISTING OF THE
WRIST. THE FORCES REQUIRED TO
ACTIVATE CONTROLS SHALL BE NO
GREATER THAN 5 LBS. LEVER-OPERATED,
PUSH-TYPE AND ELECTRONICALLY
CONTROLLED MECHANISMS ARE EXAMPLES
OF ACCEPTABLE DESIGNS. SELF-CLOSING
VALVES ARE ALLOWED IF THE FAUCET
REMAINS OPEN FOR AT LEAST 10 SECONDS.
5. PARAPLEGIC USE PLUMBING FIXTURE SHALL
BE MOUNTED AT REQUIRED HEIGHTS AS
SPECIFIED BY THE STATE OF CALIFORNIA
BARRIER FREE REQUIREMENTS.
6. WHERE PLUMBING PENETRATES THE AREA
SEPARATION WALL SURFACE, THE SECTION
PASSING THROUGH THE WALL SURFACE,
AND THE FIXTURE CONNECTIONS
ATTACHED THERETO, SHALL BE ONLY OF
METAL.
7. CROSS CONNECTION PROTECTION SHALL
BE PROVIDED AT ALL POTABLE WATER
SUPPLIED APPLIANCES AND EQUIPMENT.
8. WATER HEATER IS ON CALIFORNIA ENERGY
COMMISSION (CEC) LIST.
9. FIXTURES SHALL BE SET LEVEL AND IN
PROPER ALIGNMENT WITH REFERENCE TO
ADJACENT WALLS AND SHALL BE INSTALLED
TO MEET ADA REQUIREMENTS.
10. ALL PLUMBING FIXTURE THAT ARE
SUPPLIED WITH HOT WATER SHALL HAVE
ALL NECESSARY CONTROLS TO LIMIT HOT
WATER SUPPLY TO 110°F. AUTOMATIC
MIXING VALVES SHALL BE INSTALLED.
11. WATER HEATERS AND BOILERS SHALL
COMPLY WITH CURRENT C.P.C. CODES FOR
THERMAL EXPANSION REQUIREMENTS.

FIXTURE UNIT CALCULATION						
MARK	DESCRIPTION	QTY	2022 CPC APPENDIX A			
			F.U. EACH		TOTAL F.U.	
			WASTE	WATER	WASTE	WATER
WC	WATER CLOSET (FLUSH VALVE)	2	4	5	8	10
LAV	LAVATORY	2	1	1	2	2
DF	DRINKING FOUNTAIN	1	0.5	0.5	0.5	0.5
MS	MOP SINK	1	3	3	3	3
HB	1ST HOSE BIBB	1	-	2.5	-	2.5
HB	ADDITIONAL HOSE BIBB	2	-	1	-	2
FD	FLOOR DRAIN	0	2	-	0	-
FS	FLOOR SINK	0	2	-	0	-
TOTALS =					13.5	20
EQUIVALENT WATER FLOW RATE =					35 GPM	

PLUMBING FIXTURE SCHEDULE


SYMBOL	MIN. BRANCH SIZE				TRAP OR ARM	FIXTURE DESCRIPTION
	CW	HW	V	S/W		
<u>WC-1</u>	1-1/2"	--	2"	4"	INTEGRAL	ACCESSIBLE (ADA) WATER CLOSET; AMERICAN STANDARD MODEL 2859.128 AFWALL FLOWISE WALL MOUNTED, ELONGATED BOWL WITH TOP SPUD. AMERICAN STANDARD 6047.121 FLOWISE MANUAL FLUSH VALVE. 1.28 GALLON FLUSH, SEAT IS AMERICAN STANDARD 5905.100 HEAVY DUTY OPEN FRONT LESS COVER. COLOR: WHITE
<u>L-1</u>	3/4"	3/4"	2"	2"	2"	ACCESSIBLE (ADA) LAVATORY; AMERICAN STANDARD 9024.004EC DECORUM 20" x18-1/4" WALL HUNG LAVATORY. CHICAGO FAUCETS MODEL 802-665CP DECK-MOUNTED MANUAL SINK FAUCET WITH 4" CENTERS. 0.25 GALLONS PER CYCLE WITH AERATOR.
<u>MS-1</u>	3/4"	3/4"	2"	3"	3"	MOP SINK; REGENCY 16GA STAINLESS STEEL FLOOR MOUNT MOP SINK. 24"x24"x12" BOWL WITH 16" OVERALL HEIGHT. T&S BRASS AND BRONZE WORKS B-0665-BSTP-VRS FAUCET WITH TOP BRACE, QUARTER TURN ETERNA CARTRIGES WITH SPRING CHECK & LEVER HANDLES, VACUUM BREAKER, THREADED HOSE END.
<u>DF-1</u>	3/4"	--	2"	2"	2"	ACCESSIBLE (ADA) DRINKING FOUNTAIN; ELKAY MODEL LVRCTL8WSK EZH2O BOTTLE FILLING STATION AND BI-LEVEL ADA COOLER FILTERED REFRIGERATED LIGHT GRAY. DUAL HEIGHT, MECHANICAL FRONT BUBBLER BUTTON ACTIVATION. WALL MOUNT FOR INDOOR/OUTDOOR APPLICATION 104 LBS. F.L.A 6 AMPS, 115 VOLTS, 370 WATTS.
<u>HB-1</u>	3/4"	-	-	-	-	HOSE BIBB: ZURN MODEL Z1330-XL ECOLOTROL CERAMIC DISC WALL HYDRANT WITH STAINLESS STEEL BOX WITH LOCKING HINGED COVER AND CYLINDER LOCK, VACUUM BREAKER AND INTEGRAL BACKFLOW PREVENTER.
<u>FD-1</u>	-	-	2"	2"	2"	FLOOR DRAIN: ZURN ZN-415-P-5B DURA COATED CAST IRON BODY WITH BOTTOM OUTLET. COMBINATION INVERTABLE MEMBRANE CLAMP AND ADJUSTABLE TYPE B 5" DIA. BRONZE STRAINER
<u>FS-1</u>	-	-	2"	3"	3"	FLOOR SINK: ZURN Z1900 CAST IRON BODY WITH ACID RESISTING PORCELAIN ENAMEL, 12" SQUARE, 6" DEEP, FULL GRATE WITH 1/2" SQUARE HOLES, AND ANTI SPLASH INTERIOR DOME STRAINER.
<u>TP-1</u>	3/4"	-	-	-	-	TRAP PRIMER: PRECISION PLUMBING PRODUCTS P1-500, 1/2" CONNECTION. PROVIDE ACCESS DOOR. USE DISTRIBUTION UNIT DU4 FOR INSTALLATIONS SERVING UP TO 4 TRAPS.
<u>TP-2</u>	3/4"	-	-	-	-	TRAP PRIMER: PRECISION PLUMBING PRODUCTS MP-500, 1/2" CONNECTION. 120V. USE DISTRIBUTION UNIT DU4 FOR INSTALLATIONS SERVING UP TO 4 TRAPS. COORDINATE WITH ELECTRICAL. PROVIDE ACCESS DOOR.

WATER PRESSURE LOSS CALCULATION	
TOTAL FIXTURE UNITS	23
GPM DEMAND FLOW	37 GPM
AVAILABLE PRESSURE	55 PSI
PRESSURE REQUIRED AT LAST FIXTURE	25 PSI
STATIC HEAD LOSS (15 FT x 0.434)	6.51 PSI
TOTAL AVAILABLE FOR FRICTION LOSS	23.5 PSI
MAXIMUM LENGTH OF PIPING	100 FEET
TOTAL DEVELOPED LENGTH (100 x 1.5)	150 FEET
(23.5 x 100) / 150 = 15.6 PSI ALLOWABLE LOSS / 100FT	
PIPE SIZING BASED ON 15 PSI / 100 FT LOSS AND 5FT/SEC	
TYPE "L" HARD TEMPERED COPPER (ABOVE GRADE)	

PIPE SIZING CHART		
COLD WATER (15 PSI / 100 FT LOSS AND 5 FT/S)		
SIZE	FLUSH TANK (FU)	FLUSH VALVE (FU)
1/2"	3	0
3/4"	8	0
1"	16	0
1-1/4"	30	0
1-1/2"	46	10
2"	115	42
2-1/2"	245	124
HOT WATER (15 PSI / 100 FT LOSS AND 5 FT/S)		
SIZE	FLUSH TANK (FU)	
1/2"	3	
3/4"	8	
1"	16	
1-1/4"	30	
1-1/2"	46	

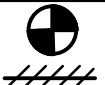
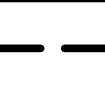
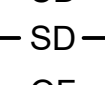
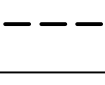
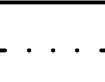
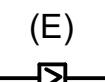
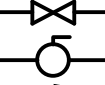
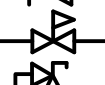
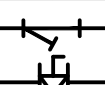
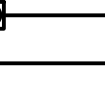
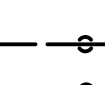
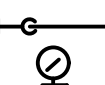
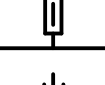










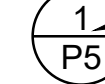

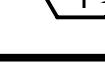




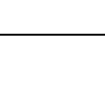
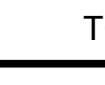
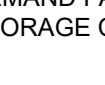




PIPING MATERIAL SCHEDULE


MARK	DESCRIPTION
A	SOIL, WASTE, VENT SYSTEM PIPING. 1. All soil, waste, vent and storm drain piping above grade shall be "no-hub" service weight cast iron soil pipe and fittings with stainless steel band clamps. Country of origin shall be United States of America and clearly marked on pipe and fittings. 2. All soil, waste, vent and storm drain piping under concrete building slab and to point 5'-0" outside and 6" above concrete slabs shall be Schedule 40 acrylonitrile-butadiene styrene (ABS) solid wall plastic pipe and fittings. 3. All sewer pipe shown on the plumbing drawings from a point five (5) feet outside of building walls shall be polyvinyl chloride (PVC) schedule 40 plastic gravity sewer pipe and fittings with integral bell and spigot joints. 4. All soil, waste, vent and storm drain piping shall have cleanouts install in accordance with 2016 C.P.C. Section 719.0. Note that vertical storm drain piping inside of the building connected to the storm piping outside of the building shall have cleanouts installed at the base of vertical leaders before it connects to horizontal storm drain piping outside of the building - 2016 C.P.C. Section 1101.13.1
B	INDIRECT WASTE SYSTEM: 1. All indirect waste piping underground under building slab to 6" above slab shall be Schedule 40 acrylonitrile-butadiene-styrene (ABS) solid wall plastic pipe and fittings. 2. All indirect waste piping above building floor shall be "No-Hub" service weight cast iron soil pipe and fittings stainless steel band clamps and/or above grade Type "DWV" brass or wrought copper fittings conforming to ANSI B16.23 with solder joints.
C	DOMESTIC WATER PIPING SYSTEM: 1. All water piping above finished floor in building shall be hard drawn copper tubing Type "L" and cast brass or wrought copper fittings. 2. All water piping underground, under concrete building slab and to a point 5'-0" outside of building shall be type "K" copper tubing in single continuous length polyethylene outer tubing. 3. All water lines underground from a point 5'-0" outside of building walls: 1-1/2" & smaller shall be Schedule 40 PVC. 2" & larger shall be class 200 PVC gasket & bell end with fittings. <div><div>Pipe Size</div><div>1/2" thru 3/4" 1" thru 1-1/2" 2" and larger</div><div>Minimum Insulation Thickness</div><div>1" 1-1/2" 2"</div></div>
D	TRAP PRIMER PIPING SYSTEM: 1. Trap primer piping above floor shall be hard copper tubing Type "L". 2. Trap primer piping underground ground & below floor shall be hard copper tubing Type "L" installed in poly sleeve.
E	INSULATION: 1. All hot and hot water return piping shall be insulated with Manville "Micro-Lok" Fiberglass with "ASJ" jacket. Flame spread not over 25, fuel contributed and smoke developed not over 50. Use Manville "Zeston" P.V.C. fitting insulation for pipe fitting and valves. Insulation Thickness shall be as follows: <div><div>Pipe Size</div><div>1/2" thru 3/4" 1" thru 1-1/2" 2" and larger</div><div>Minimum Insulation Thickness</div><div>1" 1-1/2" 2"</div></div> 2. Where piping is exposed to view or exterior to building in lieu of factory applied standard all purpose jacket. Use aluminum jacket over "Micro-Lok" insulation.
F	PIPING SPECIALTIES: 1. Tracer Wire: Provide on all polyethylene, PVC, CPVC, ABS, plastic pipe below grade-No. 10 AWG, TW insulated copper wire. Spiral wrap around complete length of all plastic piping at approximately 24" intervals, terminate above grade or in yard box with a 24" pipe.
G	TESTING: <u>Water Testing:</u> 1) Test as follows test piping at 1-1/2 times the existing water pressure for 15min or 80psi which ever is greater. Per 2015 UPC (section 609.9 pg. 105) 2) Area's with small branch line changes will be tested by using line pressure. <u>Waste Water Testing:</u> 1) Test as follows: fill piping full of water with a min of 10' head pressure for 15min. Per 2015 UPC section 712.0 pg. 132) 2) In areas where minor piping changes occur. And a full test cannot be done. A running test will be used to verify a leak proof system. <u>Gas Pipe Testing:</u> 1) Testing as follows: Fill with air to 10psi for 15min on threaded pipe. And 60psi for 30 min on welded piping. Per 2015 UPC (section 1213.3). 2) Testing small branch lines that don't require a full system test. A soap test will occur. Per 2015 UPC section 609.9 pg. 106 1a.) Testing water prior to starting any work to find existing conditions of the system. 2) Have water tested after chlorination cleaning has occurred to be sure system is safe for consumption. Give copies to school district for their records.

MARK	DESCRIPTION
	WATER HEATER: A.O.SMITH DEL-6S-3 DURA-POWER PREFERRED LIGHT DUTY COMMERCIAL. 6GAL INPUT 3.0 KW, DIMENSIONS 15-1/2" HIGH X 14.25" DIA. SHIPPING WEIGHT OF 35 LBS. FIRST HOR DELIVERY OF 20 USGPH @80°F RISE. PROVIDE HOLDRITE QUICK STAND™ #40-SWHP-W AND HOLDRITE QS-50 STRAPS


ALL THERMOSTATIC MIXING VALVES SHALL COMPLY WITH ASSE 1070, CSA B125.1 OR ASME 112.18.1 AND TEMPERATURE SHALL BE LIMITED TO 120° F MAX.

PLUMBING LEGEND


SYMBOL	ABBREV.	DESCRIPTION
	P.O.C.	POINT OF CONNECTION
	S. OR W.	EXISTING TO BE REMOVED
	S. OR W.	SOIL OR WASTE ABOVE SLAB
	C.D.	CONDENSATE DRAIN
	S.D.	STORM DRAIN
	O.F.	STORM DRAIN OVERFLOW
	V.	SANITARY VENT
	C.W.	COLD WATER
	H.W.	HOT WATER
	H.W.R.	HOT WATER RETURN
	T.P.	TRAP PRIMER PIPING
	(E)	DENOTES EXISTING
	B.P.	REDUCED PRESSURE BACKFLOW PREVENTER
	G.V.	GATE VALVE
	B.V.	BALL VALVE
	C.V.	CHECK VALVE (WITH DIRECTIONAL FLOW ARROW)
	P.R.V.	PRESSURE REDUCING VALVE
	R.V.	TEMPERATURE & PRESSURE RELIEF VALVE
	STR.	STRAINER
	G.C.	GAS COCK
	C.O.G.	CLEAN-OUT TO GRADE
	F.C.O.	FLOOR CLEAN OUT
	W.C.O.	WALL CLEAN-OUT
	DN.	DOWN OR DROP
	UP.	RISE OR RISER
	H.B.	HOSE BIBB
	P.G.	PRESSURE GAUGE
	TH.	THERMOMETER
	U.	UNION
	A.F.F.	ABOVE FINISHED FLOOR
	A/C	ABOVE CEILING
	B/F	BELOW FLOOR
	B/G	BELOW GRADE
	CONT.	CONTINUATION
	C.P.C.	CALIFORNIA PLUMBING CODE
	DN.	DOWN
	CONT.	CONTINUATION
	D.T.F.	DOWN THRU FLOOR
	D.T.R.	DOWN THRU ROOF
	ELECT.	ELECTRICAL
	FLR.	FLOOR
	G.C.	GENERAL CONTRACTOR
	G.P.M.	GALLONS PER MINUTE
	H.P.	HORSE POWER
	I.E.	INVERT ELEVATION
	L.W.T.	LEAVING WATER TEMPERATURE
	P.D.	PRESSURE DROP (FEET OF HEAD)
	P.S.I.	POUNDS PER SQUARE INCH
	P&T	PRESSURE AND TEMPERATURE RELIEF
	TYP.	TYPICAL
	U.O.N.	UNLESS OTHERWISE NOTED
	U.T.F.	UP THRU FLOOR
	U.T.R.	UP THRU ROOF
	V.T.R.	VENT THRU ROOF

 1
P5

DETAIL IDENTIFICATION NUMBER

 AC
1

UNIT CALL OUT

 1

UNIT NUMBER

PS5002

WATER HEATER CALCULATION			
QTY.	FIXTURE	GPH	TOTAL
2	LAVATORY	8	16
1	MOP SINK	20	20
TOTAL			36

DEMAND FACTOR = 0.3
STORAGE CAPACITY FACTOR = 1

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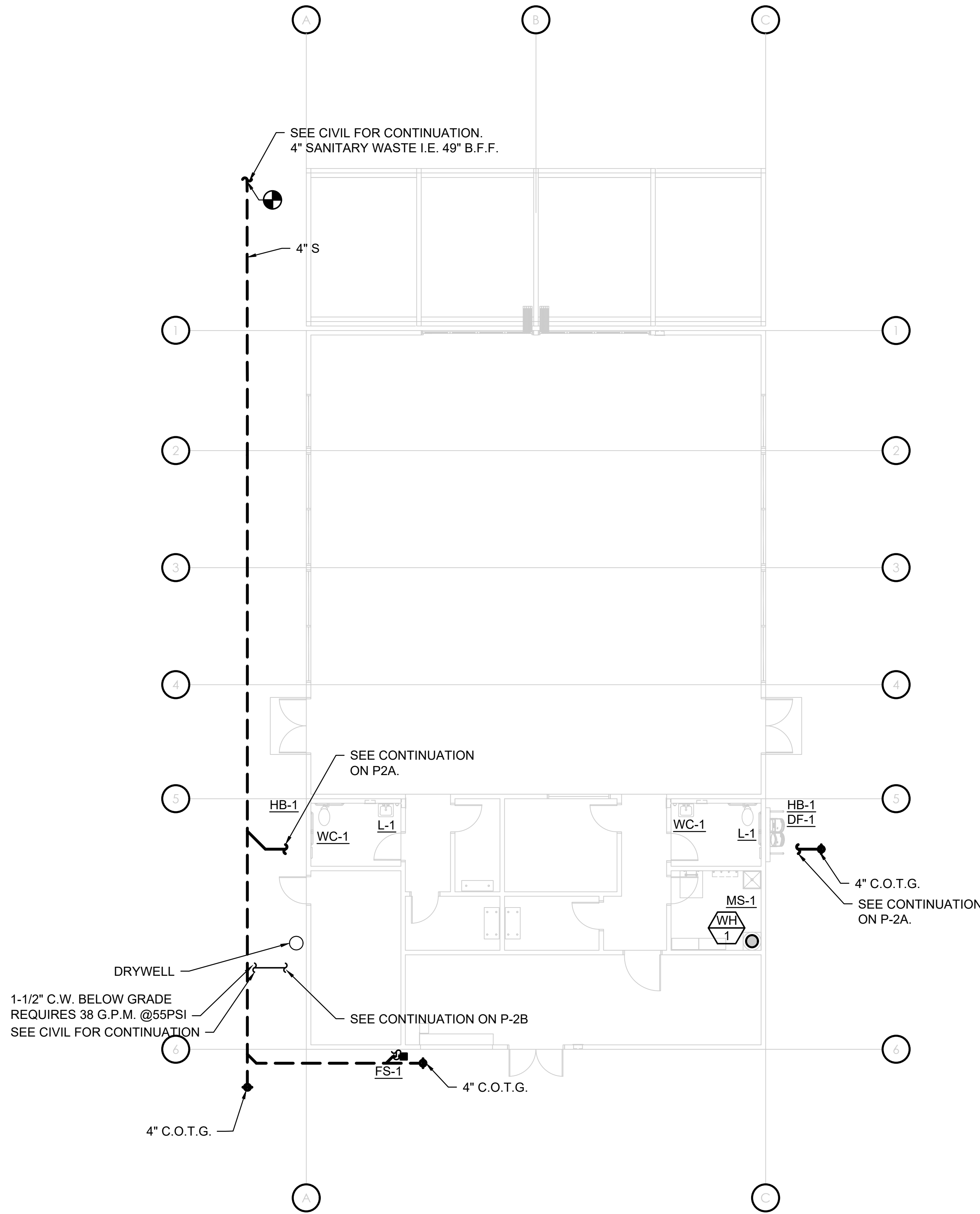
PLUMBING LEGEND, SCHEDULES AND NOTES

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PROJECT NO.: 22008
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DATE: 12/05/2025 DRAWN: _____
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CITY APPROVAL



PLUMBING SITE PLAN

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

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PLUMBING SITE PLAN

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PLUMBING FLOOR PLAN - WASTE AND VENT

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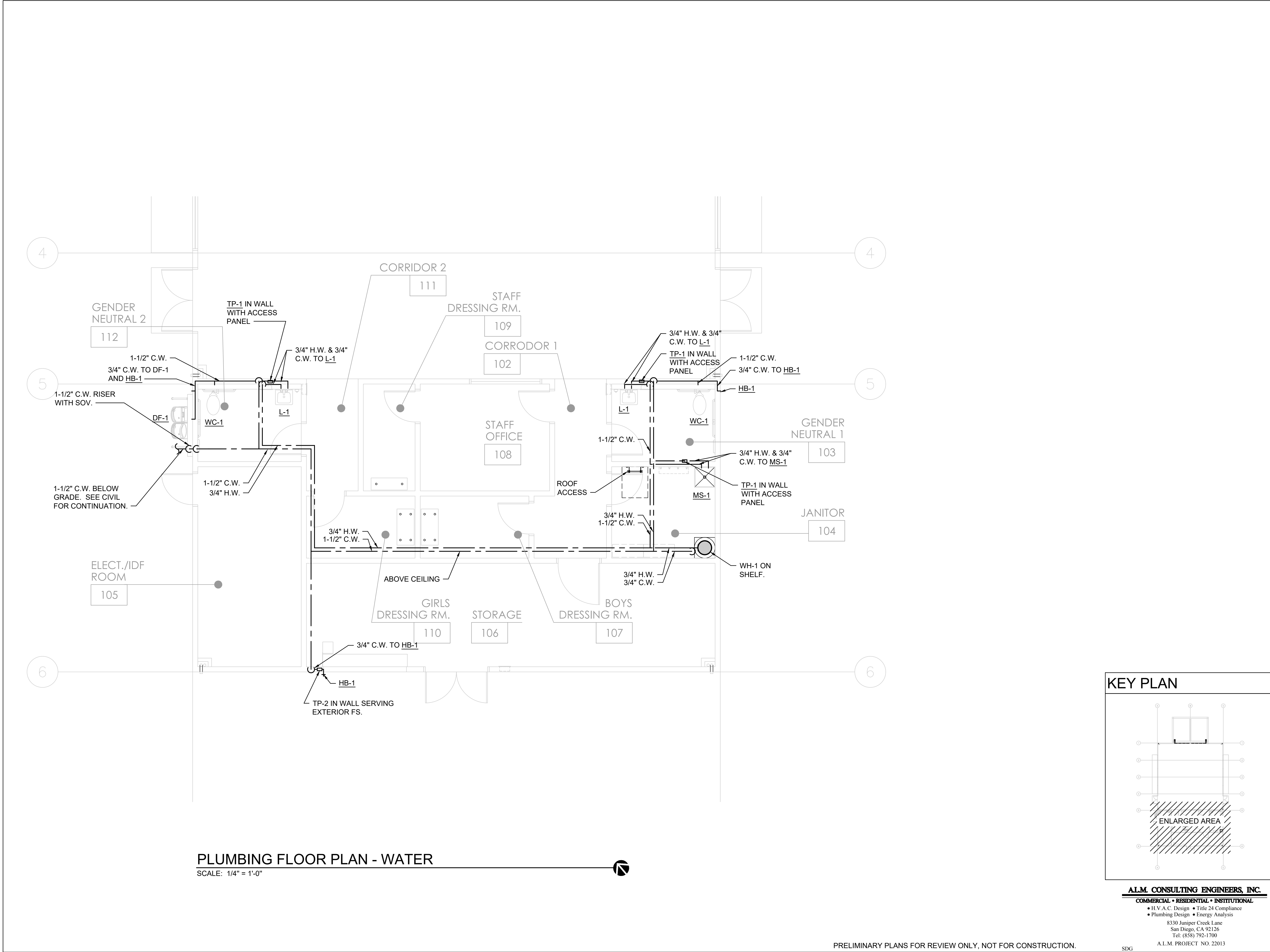
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DATE: 12/05/2025

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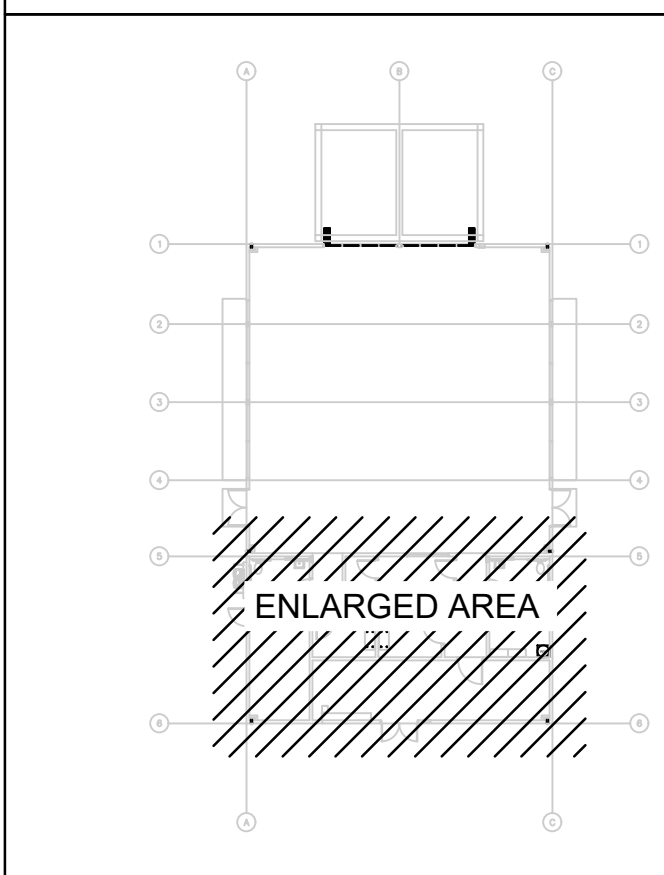
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KEY PLAN



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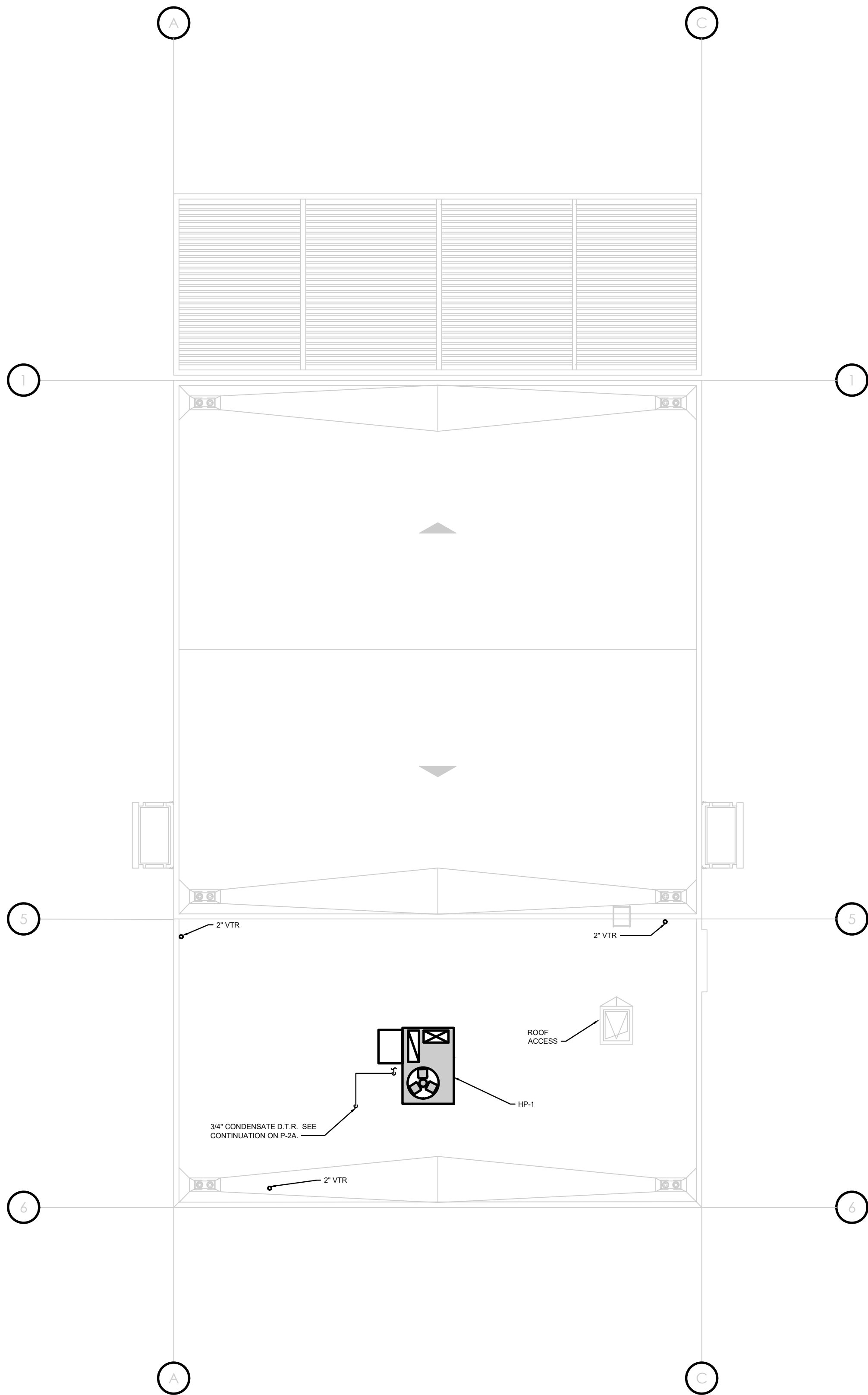
PLUMBING FLOOR PLAN - WATER

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PLUMBING ROOF PLAN

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



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PLUMBING ROOF PLAN

La Puente
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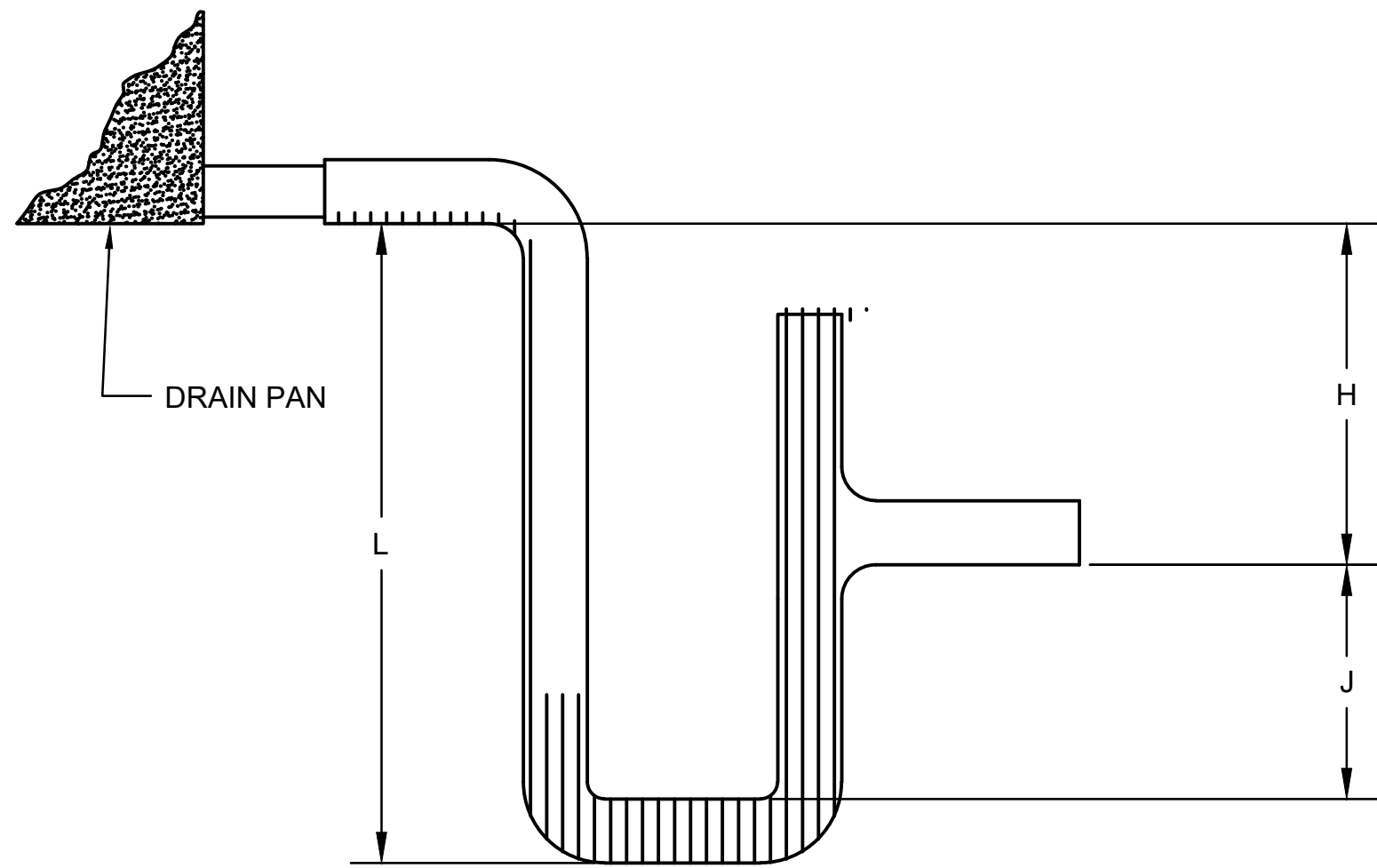
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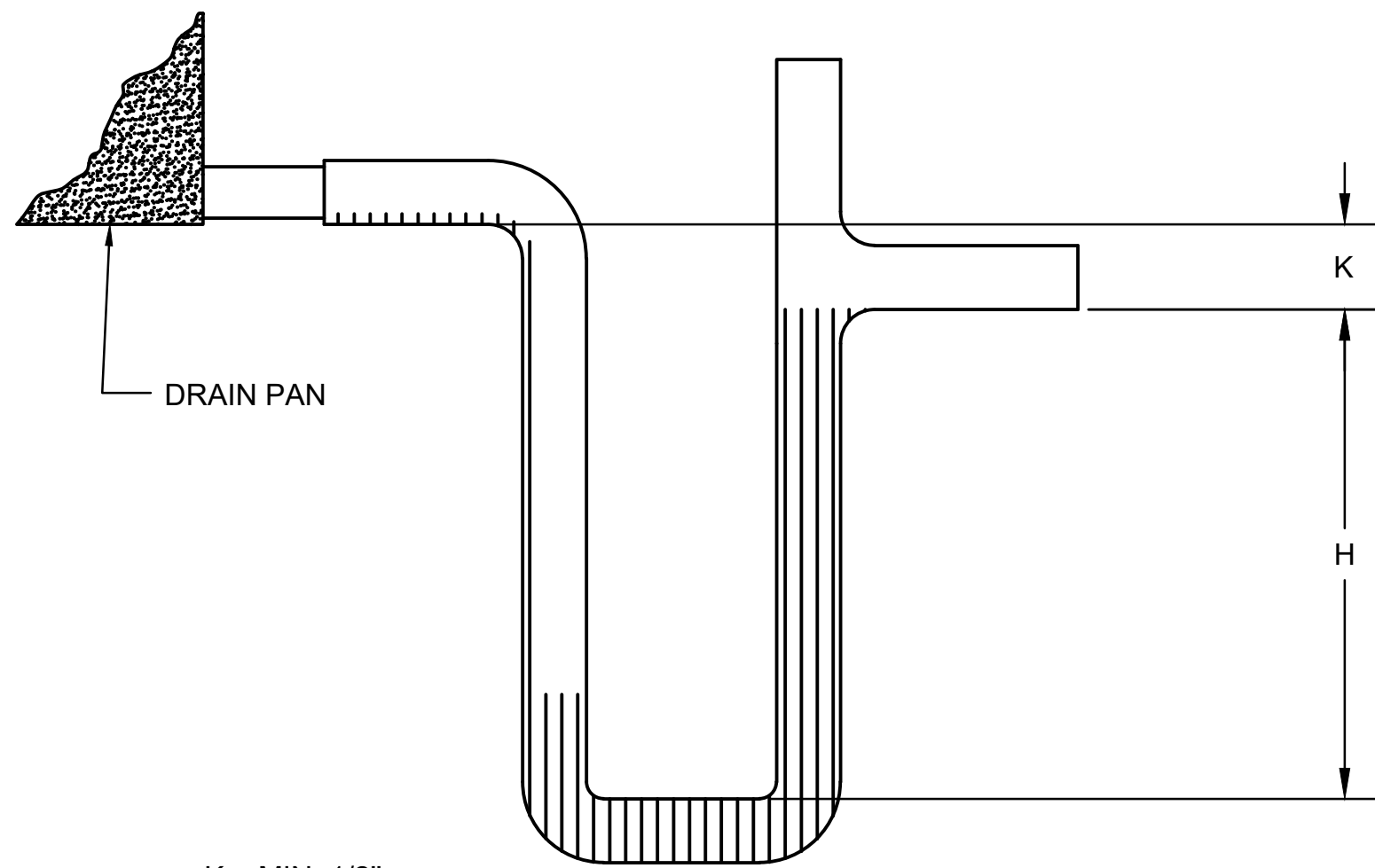
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$H = (1" \text{ FOR EACH } 1" \text{ OF MAXIMUM NEGATIVE PRESSURE}) + 1"$
 $J = 1/2 H$
 $L = H + J + \text{PIPE DIAMETER} + \text{INSULATION}$

DRAIN PAN TRAPPING FOR MODULE UNDER NEGATIVE PRESSURE



$K = \text{MIN. } 1/2"$
 $H = 1/2" \text{ PLUS MAXIMUM TOTAL STATIC PRESSURE}$

DRAIN PAN TRAPPING FOR MODULE UNDER POSITIVE PRESSURE

PRIMARY CONDENSATE DRAIN TRAP DETAIL

NOT TO SCALE

PD6024B

3

THREADED ROD AND
ANGLE SUPPORT. SEE
STRUCTURAL PLANS FOR
MATERIALS AND
SECURING TO
STRUCTURE ABOVE

PIPE (TYP.)

UNISTRUT

STRUT PIPE CLAMP
(TYP.)

PIPE SUPPORT (TWO PIPES) FROM STRUCTURE ABOVE DETAIL

NOT TO SCALE

MDH1015

1

19
5001
THREADED ROD AND
ANGLE SUPPORT. SEE
STRUCTURAL PLANS FOR
MATERIALS AND
SECURING TO
STRUCTURE ABOVE

CLEVIS HANGER

PIPE

PIPE ON CLEVIS HANGER SUPPORT FROM STRUCTURE ABOVE DETAIL

NOT TO SCALE

MDH1023

2

PIPE HANGER AND SUPPORTS SHALL BE PER 2019 C.P.C. CHAPTER 3 TABLE 313.3			
Materials	Type of Joints	Horizontal	Vertical
Cast	Lead and Okum	5 feet, except 10 feet where 10 foot lengths are installed. ^{1,2,3}	Base and each floor not to exceed 15 feet
	Compression Gasket	Every other joint, unless over 4 feet, then support each joint. ^{1,2,3}	Base and each floor not to exceed 15 feet
Cast Iron Hubless	Shielded Coupling	Every other joint, unless over 4 feet, then support each joint. ^{1,2,3,4}	Base and each floor not to exceed 15 feet
Copper and Copper Alloys	Soldered, Brazed, Threaded or Mechanical	1-1/2" and smaller, 6 feet 2" and larger, 10 feet	Each floor, not to exceed 10 feet. ⁵
Steel Pipe for Gas	Threaded or Welded	1/2 inch, 6 feet 3/4 and 1 inch, 8 feet 1-1/4 inch and larger, 10 feet	1/2 inch, 6 feet, 3/4 and 1 inch, 8 feet, 1-1/4 inch and larger, every floor level
Schedule 40 PVC and ABS DWV	Solvent Cemented	All sizes, 4 feet. Allow for expansion every 30 feet. ³	Base and each other floor. Provide mid-story guides. Provide for expansion every 30 feet
CPVC	Solvent Cemented	1" and smaller, 3 feet, 1-1/4" and larger, 4 feet	Base and each floor. Provide mid-story guides.

1. Support adjacent to joint, not to exceed eighteen (18) inches (457 mm).
2. Brace at not more than forty (40) foot (12192 mm) intervals to prevent horizontal movement.
3. Support at each horizontal branch connection.
4. Hangers shall not be placed on the coupling.
5. Vertical water lines may be supported in accordance with recognized engineering principles with regard to expansion and contraction, when first approved by the Administrative Authority Having Jurisdiction.

PIPE HANGER AND SUPPORT TABLE

NOT TO SCALE

3

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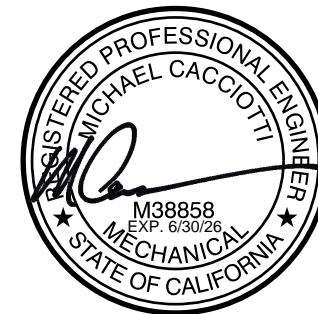
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PLUMBING DETAILS

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