

GENERAL STRUCTURAL

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE CALIFORNIA BUILDING CODE (CBC) 2015 EDITION...
2. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS...
3. THE CONTRACTOR SHALL READ AND FOLLOW ALL REFERENCED ICG-ES OR IAPMO-ES REPORTS FOR INSTALLATION OF ITEMS SHOWN...
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL VERIFY ALL DIMENSIONS, CONDITIONS, AND ELEVATIONS BEFORE STARTING WORK...
5. ON PROJECTS WITH EXISTING STRUCTURES, ALL WORK SHALL BE DONE SO AS TO MINIMIZE DAMAGE TO THE EXISTING STRUCTURE AND FINISHES...
6. ALL WORK SHALL CONFORM TO THE LATEST APPLICABLE CONSTRUCTION QUALITY REQUIREMENTS OF OSHA AND ANY OTHER GOVERNMENTAL AGENCY HAVING JURISDICTION IN THE AREA OF THE WORK...
7. THE CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMAN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK...
8. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR, AND DOES NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR JOB SITE CONDITIONS, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK...
9. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR, AND DOES NOT HAVE CONTROL OF, ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OF THEIR AGENTS OR EMPLOYEES, OR ANY OTHER PERSONS PERFORMING ANY OF THE CONSTRUCTION WORK...
10. STRUCTURAL OBSERVATION BY THE STRUCTURAL ENGINEER OF RECORD DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR BUILDING THE PROJECT, CONTROLLING THE PROGRESS, PROVIDING SAFE WORKING CONDITIONS, AND CORRECTING ANY DEVIATIONS FROM PROJECT REQUIREMENTS...
11. THE DETAILS ON THESE STRUCTURAL DRAWINGS SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY SHOWN OTHERWISE...
12. NOTES AND DETAILS ON STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES...
13. OPENINGS, POCKETS, ETC., SHALL NOT BE PLACED IN SLABS, PILASTERS, OR WALLS UNLESS DETAILED ON THE STRUCTURAL DRAWINGS...
14. IT IS THE INTENTION OF THESE STRUCTURAL DRAWINGS TO PROVIDE FOR THE FOLLOWING CONTINUITIES:
A. ALL ROOF AND FLOOR STRUTS SHALL BE CONTINUOUSLY CONNECTED FOR THE LENGTH OF THE ROOF/FLOOR SYSTEM.
B. ALL WALL BRACINGS AND/OR SHEAR PANELS SHALL BE CONNECTED TO THE ROOF AND/OR FLOOR STRUTS.
15. FRAME OPENINGS AND SUPPORT MISCELLANEOUS EQUIPMENT AS DETAILED ON THE CONTRACT DRAWINGS, WHERE NO DETAILS ARE PROVIDED, OBTAIN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD BEFORE PROCEEDING WITH WORK.
16. ALL EQUIPMENT AND MACHINERY SHALL BE PLUMB AND LEVEL UNLESS NOTED OTHERWISE.
17. ALL EXTERIOR GLAZING AND FRAMES SHALL BE DESIGNED TO RESIST THE WIND LOADS PRESENTED IN THE 'BASIS OF DESIGN' SPECIFICATION.
18. LATERALLY BRACE ALL SUSPENDED EQUIPMENT AND CEILING IN CONFORMANCE WITH THE CALIFORNIA BUILDING CODE.
19. IT IS THE INTENT OF THE STRUCTURAL DRAWINGS TO PROVIDE DETAILS OF CONSTRUCTION NECESSARY TO GUIDE THE GENERAL CONTRACTOR WITH STRUCTURAL ASPECTS OF THE PROJECT ONLY. ARCHITECTURAL FEATURES SHALL BE COORDINATED WITH THE OWNER.

BASIS OF DESIGN

- 1. DESIGN LOADS:
ROOF LIVE LOAD----- 20 PSF
ROOF DEAD LOAD----- 4 PSF
ROOF LIVE LOAD MAY BE REDUCED PER CBC 1607.12

SUBMITTALS/SPECIAL CONDITIONS

- 1. PRIOR TO REQUESTING A FOUNDATION INSPECTION (AT LEAST 48 HOURS) THE CONTRACTOR IS TO CONTACT THE GEOTECHNICAL ENGINEER...
2. STEEL FABRICATORS WHO PERFORM WORK UNDER A CERTIFICATION PROGRAM (SUCH AS ALSO) ARE TO SUBMIT COPIES OF THEIR APPROVAL, CBC SEC. 1704.2.5.
3. SPECIAL INSPECTION REPORTS ARE TO BE SUBMITTED DIRECTLY TO THE ENFORCEMENT AGENCY PER CBC SEC. 1704.2.4 (WITH COPIES TO STRUCTURAL ENGINEER OF RECORD, GENERAL CONTRACTOR AND OWNER).
4. SPECIAL INSPECTORS BACKGROUND AND QUALIFICATIONS SHALL BE FORWARDED TO THE BUILDING DEPARTMENT AT LEAST 3 DAYS BEFORE ANY INSPECTIONS ARE PERFORMED.
5. THE FOLLOWING SHOP DRAWINGS/SUBMITTALS SHALL BE PROVIDED FOR REVIEW BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO FABRICATION OR DELIVERY:
A. STRUCTURAL STEEL
B. METAL DECK
C. MISCELLANEOUS STEEL
D. CONTRACTORS STATEMENT OF RESPONSIBILITY
6. PRODUCT SUBSTITUTIONS MAY BE ALLOWED ONLY IF THEY MEET THE REQUIREMENTS OF THESE GENERAL NOTES AND THE SPECIFICATIONS, AND IF COMPLETE WRITTEN ENGINEERING DATA FOR EACH CONDITION REQUIRED FOR THIS PROJECT IS PROVIDED TO THE STRUCTURAL ENGINEER OF RECORD TWO WEEKS PRIOR TO BID DATE AND APPROVED IN WRITING APPENDIX BY THE ARCHITECT...

Table with 3 columns: DIAMETER, TENSION (LBS), TORQUE (FT-LBS). Rows for diameters 3/8", 1/2", 5/8", 3/4".

NOTE: FOR EXPANSION BOLT TENSION TEST LOADS SEE PLANS AND DETAILS.

CONTRACTOR RESPONSIBILITY

CONTRACTOR RESPONSIBILITY - CBC 1704.4. EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND-OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND- OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS (SECTION 1704.3) SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT...

STRUCTURAL OBSERVATION PROGRAM

- 1. STRUCTURAL ENGINEER OF RECORD SHALL PROVIDE STRUCTURAL OBSERVATION PER CBC 1704.5. CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER OF RECORD 48 HOURS PRIOR TO COMPLETION OF THE FOLLOWING TO ARRANGE FOR PERIODIC OBSERVATION:
I. ROOF DECK WELDING PRIOR TO PLACEMENT OF ROOFING.
2. OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER'S REPRESENTATIVE, SPECIAL INSPECTOR, CONTRACTOR, AND BUILDING OFFICIAL. THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFYING ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED. THE STRUCTURAL OBSERVER SHALL MAKE ADDITIONAL SITE VISITS AS NECESSARY TO VERIFY THAT ALL REPORTED DEFICIENCIES HAVE BEEN SATISFACTORILY CORRECTED.

CONCRETE EXPANSION BOLT NOTES

- 1. EXPANSION BOLT ASSEMBLIES SHALL BE THE FOLLOWING:
I.1. HILTI KNIX BOLT TZ ASSEMBLY ICG REPORT NO. ESR-1117, DATED MAY 1, 2013 AS MANUFACTURED BY HILTI, INC., 5400 SOUTH 122nd EAST AVENUE, TULSA, OKLAHOMA 74146.
I.1.1. MINIMUM EMBEDMENT DEPTHS SHALL BE PER CONTRACT DRAWING PLANS AND DETAILS.
I.2. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. HOLES SHALL BE DRY AND CLEANED WITH WIRE BRUSH AND PRESSURIZED AIR JUST PRIOR TO INSTALLATION.

- 2. ALL EXPANSION BOLTS SHALL BE INSPECTED BY AN APPROVED TESTING AND INSPECTION AGENCY AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ICG REPORT AND CBC SECTION 193A.7 TO THE TEST VALUES STATED IN THE TABLE BELOW.
2.1. THE LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION IN THE ANCHOR, SUCH AS DIRECT PULL WITH A HYDRAULIC JACK, CALIBRATED SPRING LOADING DEVICE, A TORQUE WRENCH CALIBRATED FOR USE WITH THE SPECIFIC ANCHOR, ETC.
2.2. TEST FREQUENCY:
2.2.1. SILL PLATE, 10 PERCENT
2.2.2. ALL OTHER STRUCTURAL APPLICATIONS, 100 PERCENT
2.2.3. NON STRUCTURAL APPLICATIONS (EQUIPMENT ANCHORAGE, ETC.) 50 PERCENT OR ALTERNATE BOLTS IN A GROUP, INCLUDING AT LEAST ONE-HALF THE ANCHORS IN EACH GROUP.
2.2.4. "1" INDICATES A TEST FREQUENCY OF 10 PERCENT PER 193A.7.3, EXCEPTION #2
2.3. TEST ACCEPTANCE:
2.3.1. HYDRAULIC RAM METHOD: ANCHORS TESTED WITH A HYDRAULIC JACK OR SPRING LOADED DEVICES SHALL MAINTAIN THE TEST LOAD FOR A MINIMUM OF 15 SECONDS AND SHALL EXHIBIT NO DISCERNABLE MOVEMENT DURING THE TENSION TEST.
2.3.2. TORQUE WRENCH METHOD:
2.3.2.1. ANCHORS TESTED WITH A CALIBRATED TORQUE WRENCH MUST ATTAIN THE SPECIFIED TORQUE WITHIN 1/2 TURN OF THE NUT.
2.4. IF ANY ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME TYPE SHALL BE TESTED, WHICH ARE INSTALLED BY THE SAME TRADE, NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL TEST FREQUENCY.

STRUCTURAL STEEL

- 1. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERRECTED PER AISC SPECIFICATIONS FOR BUILDINGS AND SHALL CONFORM TO THE FOLLOWING, UNLESS:
N SHAPES: ASTM A992 (Fy = 50 ksi)
HSS SHAPES: ASTM A500, GRADE B (Fy = 46 ksi)
PIPE SHAPES: ASTM A53, GRADE B (Fy = 35 ksi)
ALL OTHER SHAPES: ASTM A36 (Fy = 36 ksi)
PLATES AND BARS: ASTM A36 (Fy = 36 ksi)
2. WIDE FLANGE MEMBERS THAT HAVE FLANGE THICKNESS EXCEEDING 2 INCHES SHALL CONFORM TO ASTM A6 SUPPLEMENTARY REQUIREMENT 530, CHARPY V-NOTCH IMPACT TEST FOR STRUCTURAL SHAPES - ALTERNATE CORE LOCATION. TEST SHALL MEET A MINIMUM AVERAGE VALUE OF 20 FT LB AT +10 DEG F. WIDE FLANGE MEMBERS THAT ARE PART OF THE LATERAL FORCE RESISTING SYSTEM THAT HAVE FLANGE THICKNESS EXCEEDING 1 1/2 INCHES SHALL ALSO CONFORM.
3. PLATES THAT HAVE 2 INCH THICKNESS AND THICKER SHALL CONFORM TO ASTM A6 SUPPLEMENTARY REQUIREMENT 55 CHARPY V-NOTCH IMPACT TEST. TEST SHALL MEET A MINIMUM AVERAGE VALUE OF 20 FT LB AT +10 DEG F.
4. FOR ANCHOR ROD REQUIREMENTS SEE CONCRETE SPECIFICATIONS.
5. FOR NON-SHRINK GROUT REQUIREMENTS SEE CONCRETE SPECIFICATIONS.
6. ALL UNFINISHED NUTS AND BOLTS (M.B.) SHALL BE ASTM A307 UNO.
7. ALL BOLT HOLES IN STEEL SHALL BE ROUNDED OR DRILLED, NO TORCHING OF HOLES ALLOWED, HOLES SHALL BE STANDARD ROUND HOLES 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER, UNO.
8. HOLES, COPIES OR OTHER CUTS OR MODIFICATIONS OF THE STRUCTURAL STEEL MEMBERS SHALL NOT BE MADE IN THE FIELD WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
4. WELDING:
4.1. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS USING THE SHIELDED ARC PROCESS AND IN ACCORDANCE WITH AWS STANDARDS. JOINT DETAILS SHALL COMPLY WITH AWS REQUIREMENTS FOR JOINTS ACCEPTED WITHOUT QUALIFICATION TESTS.
4.2. ALL WELDS SHALL BE UNIFORM IN SIZE AND APPEARANCE, AND FREE OF PINHOLES, POROSITY, UNDERCUTTING OR OTHER DEFECTS. ALL BUTT WELDS SHALL BE FULL PENETRATION.
4.3. NO WELDING PERMITTED ON MEMBERS SUPPORTING LOADS.
4.4. WELD METAL SHALL HAVE A NOMINAL TENSILE STRENGTH OF 70000 PSI MINIMUM.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION AIDS AND JOINT PREPARATIONS THAT INCLUDE BUT ARE NOT LIMITED TO: ERECTION ANGLES, LIFT HOLES, AND OTHER AIDS, WELDING PROCEDURES, REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, WELD EXTENSION TABS, COPIES, SURFACE ROUGHNESS VALUES AND TAPERS OF UNEQUAL PARTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLIANCE WITH ALL CURRENT OSHA REQUIREMENTS.
11. ALL STEEL SHALL BE THOROUGHLY CLEANED, REMOVING ALL LOOSE MILL SCALE, GREASE, DIRT AND FOREIGN MATTER BY SCRAPING OR SANDBLASTING.
12. ALL STEEL TO BE GREY PRIMER COLOR. DO NOT SHOP PAINT TO THE FOLLOWING:
12.1. SURFACES WHICH WILL BE ENCASED IN CONCRETE OR MORTAR. PAINT SHALL BE REMOVED FROM THESE SURFACES PRIOR TO CASTING.
12.2. SURFACES WITHIN 2 INCHES OF JOINTS TO BE WELDED IN FIELD INCLUDING TOP FLANGES OF MEMBERS SUPPORTING STEEL DECKING WHICH ARE TO BE WELDED.
12.3. SURFACES WHICH WILL RECEIVE SPRAYED ON FIREPROOFING.
12.4. TOP FLANGE OF MEMBERS WHICH WILL HAVE SHEAR CONNECTOR STUDS APPLIED.
13. WHERE STRUCTURAL STEEL IS NOTED TO BE GALVANIZED, IT SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123, A304, AND A305. ALL SURFACES WITHIN TWO INCHES OF ANY FIELD WELD LOCATION SHALL BE FREE OF MATERIAL THAT WOULD PREVENT PROPER WELDING OF PRODUCE OBJECTIONABLE FUMES.
14. FIELD TOUCH-UP OF PRIMED, PAINTED, AND GALVANIZED SURFACES SHALL BE PERFORMED TO REPAIR COATING ABRASIONS, AS WELL AS TO PROTECT ALL AREAS AT CONNECTIONS.
15. FINAL PAINT AND COLOR FOR EXPOSED STEEL SHALL BE PER OWNER'S SPECIFICATION.
16. IMMEDIATELY AFTER ERECTION, CLEAN FIELD WELDS, BOLTED CONNECTIONS, AND ABRADED AREAS OF SHOP PAINT. APPLY PRIMER TO EXPOSED AREAS WITH SAME MATERIAL AS USED FOR SHOP PRIMER.

STEEL DECK NOTES

- 1. STEEL DECKING SHALL BE AS INDICATED ON PLANS, FABRICATION AND INSTALLATION SHALL CONFORM TO ICG-ES REPORT NO. ESR-2408 (REISSUED 08/01/11) FOR AISC PROFILES STEEL DECK OR IAPMO-ES REPORT NO. ER-0226 (REISSUED 04/11/12) FOR EPIC METALS CORPORATION STEEL DECK OR IAPMO-ES REPORT NO. ER-0217 (ISSUED 11/04/11) FOR VERGO DECKING, INC.
2. DECK PANELS SHALL SPAN OVER THREE SUPPORTS WHERE STRUCTURAL STEEL FRAMING PERMITS. FLOOR DECK SUPPORTING CONCRETE FILL MUST SPAN OVER THREE SUPPORTS FOR THE OMISSION OF SHORING. DECK PANELS SHALL INCLUDE ALL ACCESSORIES FOR THIS TYPE OF DECKING, SUCH AS CLOSURE, FLASHING, EDGE FORMS, ETC., TO COMPLETE THE INSTALLATION OF THE STEEL DECK. PANELS SHALL BE ALIGNED AND PLACED IN ACCORDANCE WITH THE MANUFACTURER'S ICG-ES OR IAPMO-ES REPORT AND THESE DRAWINGS.
3. OPENINGS IN THE STEEL DECKING SUPPORTING CONCRETE FILL CUTTING NO MORE THAN ONE FLUTE AND LESS THAN 6" IN DIAMETER NEED NO REINFORCING. FOR OPENINGS EXCEEDING THIS LIMITATION, SEE TYPICAL DETAILS FOR OPENING DETAILS.
4. FOR NELSON STD ANCHOR REQUIREMENTS SEE STEEL SPECIFICATIONS.
5. WELDING SHALL CONFORM TO AWS D11 AND D13. SEE STRUCTURAL STEEL SPECIFICATIONS FOR ADDITIONAL WELDING REQUIREMENTS.
6. ENDS OF STEEL DECKING PANELS SHALL BUTT OVER SUPPORTS (NO LAP). DECK SHALL BEAR 2" MINIMUM ON SUPPORTING FRAMEWORK.
7. THE STEEL DECKING SHALL BE CLEANED OF ALL DIRT, DEBRIS, OIL, WATER AND ANY FOREIGN MATERIAL PRIOR TO APPLICATION OF CONCRETE.
8. APPROVED SHOP DRAWINGS SHOWING LAYOUT AND FASTENING PATTERN MUST BE ON JOB SITE FOR INSPECTION PURPOSES.

CONCRETE MIX

- 1. NON-SHRINK GROUT SHALL BE MASTER BUILDERS "MASTERFLOW 555" OR PRE-APPROVED EQUAL. GROUT SHALL CONFORM TO CRD-C621 AND ASTM C1017 GRADE B WHEN TESTED AT A FLUID CONSISTENCY PER CRD-C611-95 FOR 30 MINUTES. GROUT MAY BE PLACED FROM A 25 SECOND FLOW TO A STIFF PACKING CONSISTENCY. FILL OR PACK ENTIRE SPACE UNDER PLATES OR SHAPES. FOR MORE MANUFACTURER'S RECOMMENDATIONS FOR PREPARATION, INSTALLATION, AND CURING.

ABBREVIATIONS

Table with 3 columns: Symbol, Description, and Unit/Notes. Includes abbreviations like AND, ANGLE, AT, CENTERLINE, etc.

STRUCTURAL NOTES

Project information table including Drawing Title (STRUCTURAL NOTES), Project Title (RENOVATE 7TH FLOOR BUILDING 1), Project Number (570-15-202), Building Number (1), Drawing Number (S000), Date (4-30-14), Location (FRESNO, CA), and Office of Construction and Facilities Management.

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## REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION (CBC TABLE 1704.3)

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	COMMENTS	REFERENCES	PERFORMED BY	PERFORMED BY NOTES
<b>1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS</b>						
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS		X		AISC 360 SECTION A3.3, AND APPLICABLE ASTM MATERIAL STANDARDS		
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED		X				
<b>2. INSPECTION OF HIGH-STRENGTH BOLTING</b>						
A. SNUG-TIGHT JOINTS		X		AISC 360 SECTION M2.5 CBC 1704.3.3		
B. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TIGHT-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION						
C. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION						
<b>3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED STEEL DECK</b>						
A. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360		X		AISC 360 SECTION M5.5		
B. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS		X		APPLICABLE ASTM MATERIAL STANDARDS		
C. MANUFACTURER'S CERTIFIED TEST REPORTS		X		MANUFACTURER TO PROVIDE CERTIFIED MILL TEST REPORTS		
<b>4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS</b>						
A. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS		X		AISC 360 SECTION A3.5, AND APPLICABLE AWS A5 DOCUMENTS		
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED		X		MANUFACTURER TO PROVIDE CERTIFICATE OF COMPLIANCE		
<b>5. INSPECTION OF WELDING</b>						
<b>A. STRUCTURAL STEEL AND COLD-FORMED STEEL DECK</b>						
1) COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	X		SPECIAL INSPECTIONS IN THIS SECTION ARE HAIVED WHERE FABRICATION IS PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED IN ACCORDANCE WITH CBC SECTION 1704.2	AWS D1.1 CBC 1704.3.1		
2) MULTIPASS FILLET WELDS	X					
3) SINGLE-PASS FILLET WELDS > 5/16"						
4) FLUG AND SLOT WELDS						
5) SINGLE-PASS FILLET WELDS ≤ 5/16"		X				
6) FLOOR AND ROOF DECK WELDS		X		AWS D1.3 CBC 1704.3.1		
<b>B. REINFORCING STEEL</b>						
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A106			SPECIAL INSPECTIONS IN THIS SECTION ARE HAIVED WHERE FABRICATION IS PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED IN ACCORDANCE WITH CBC SECTION 1704.2	AWS D1.4 ACI 308, SECTION 3.9.2 CBC 1704.3.1		
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT						
3) SHEAR REINFORCEMENT						
4) OTHER REINFORCING STEEL						
<b>6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE (WITH APPROVED CONSTRUCTION DOCUMENTS)</b>						
A. DETAILS SUCH AS BRACING AND STIFFENING		X		CBC 1704.3.2		
B. MEMBER LOCATIONS		X				
C. APPLICATION OF JOINT DETAILS AT EACH CONNECTION		X				
T. SPRAYED FIRE-RESISTANT MATERIALS		X		CBC 1704.12		
B. MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS		X		CBC 1704.13 AWSI 12-B		

## REQUIRED VERIFICATION AND INSPECTION FOR NON-STRUCTURAL COMPONENTS

STRUCTURAL SYSTEM	VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	COMMENTS	REFERENCES	PERFORMED BY	PERFORMED BY NOTES
STORAGE RACKS AND ACCESS FLOORS	2. INSPECTION OF CONNECTION DETAILS FOR COMPLIANCE WITH MANUFACTURER'S REQUIREMENTS DURING ANCHORAGE		X	SPECIAL INSPECTION NOT REQUIRED FOR STORAGE RACKS ≤ 8 FT. HIGH	CBC 1705.11.5.1, 1705.11.7		
	<b>3. INSPECTION PROGRAM SHALL VERIFY</b>						
ANCHORED VENEER	A. SIZE, TYPE OF VENEER ANCHORS			VERIFICATION AT BEGINNING OF CONSTRUCTION	CBC 1705.11.5, 1705.4 ACI 530/ASCE 57 TMS 402 SEC. 1.2.2(a), 2.1.4.3.1.6		
	B. SIZE, GRADE OF JOINT REINF.						
	C. PROPORTIONS OF MORTAR						
	D. CONSTRUCTION OF MORTAR JOINTS						
	E. INSTALLATION OF TIES						
CLADDING	4. ERECTION AND FASTENING		X	NOT REQUIRED FOR STRUCTURES ≤ 30 FT AND FOR CLADDING ≤ 5 PSF	CBC 1705.11.5		
EMERGENCY OR STANDBY POWER SYSTEMS	5. ANCHORAGE OF EQUIPMENT TO STRUCTURE		X		CBC 1705.11.6(1)		
PIPING SYSTEMS INTENDED TO CARRY FLAMMABLE COMBUSTIBLE OR HIGHLY TOXIC CONTENTS AND ASSOCIATED MECHANICAL EQUIPMENT	6. ANCHORAGE AND BRACING OF EQUIPMENT TO STRUCTURE		X		CBC 1705.11.6(3)		
HVAC DUCTWORK CONTAINING HAZARDOUS MATERIALS	7. ANCHORAGE AND BRACING OF DUCTWORK TO STRUCTURE		X		CBC 1705.11.6(4)		
VIBRATION ISOLATION SYSTEMS	8. INSTALLATION OF SYSTEMS REQUIRING ≤ 1/4 IN. CLEARANCE BETWEEN EQUIPMENT SUPPORT FRAME AND RESTRAINT		X		CBC 1705.11.6(5)		

## REQUIRED VERIFICATION AND INSPECTION OF COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	COMMENTS	REFERENCES	PERFORMED BY	PERFORMED BY NOTES
1. WELDING, SCREW ATTACHMENT, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE LATERAL FORCE RESISTING SYSTEM, INCLUDING SHEAR WALLS, BRACES, DIAPHRAGMS, COLLECTORS (DRAG STRUTS) AND HOLD-DOWNS		X	SPECIAL INSPECTION NOT REQUIRED IF EITHER OF THE FOLLOWING APPLY: 1) THE SHEATHING IS GYPSUM BOARD OR FIBERBOARD 2) THE SHEATHING IS RIGID STRUCTURAL PANEL OR STEEL SHEETS ON ONLY ONE SIDE OF THE SHEAR WALL, SHEAR PANEL OR DIAPHRAGM ASSEMBLY AND THE FASTENER SPACING OF THE SHEATHING IS MORE THAN 4 IN. ON CENTER.	CBC 1705.10.2, 1705.11.3		
2. ERECTION AND FASTENING OF EXTERIOR CLADDING, INTERIOR AND EXTERIOR NONBEARING WALLS AND INTERIOR VENEER		X	SEE CBC FOR EXCEPTIONS	CBC 1705.11.5		
<b>3. COLD-FORMED STEEL TRUSSES SPANNING 60 FEET OR GREATER</b>						
A. VERIFY THAT THE TEMPORARY INSTALLATION RESTRAINT/BRACING AND THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE				CBC 1705.2.2.2		

- SPECIAL INSPECTION**
- IN ACCORDANCE WITH CBC SECTION 110, SECTION 1704, AND SECTION 1705, OWNER SHALL EMPLOY AN INDEPENDENT AGENCY TO PERFORM REQUIRED TESTS AND SPECIAL INSPECTIONS DURING CONSTRUCTION PER THE REQUIREMENTS OF CBC CHAPTER 17, THE LOCAL BUILDING OFFICIAL OR APPLICABLE JURISDICTION, AND THE CONTRACT DOCUMENTS.
  - TESTING AND SPECIAL INSPECTION REPORTS SHALL BE PREPARED FOR EACH INSPECTION ITEM ON A DAILY BASIS WHENEVER WORK IS PERFORMED ON THAT ITEM FOLLOWING THE CONTINUOUS OR PERIODIC REQUIREMENTS SPECIFIED.
  - REPORTS SHALL INDICATE WHETHER THE WORK INSPECTED WAS DONE IN CONFORMANCE OR NONCONFORMANCE WITH APPROVED CONSTRUCTION DOCUMENTS. NONCONFORMITIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF NOT CORRECTED, THE NONCONFORMITIES SHALL BE BROUGHT TO THE ATTENTION OF THE GOVERNING CODE AUTHORITY AND THE ARCHITECT (STRUCTURAL ENGINEER) PRIOR TO THE COMPLETION OF THAT PHASE OF WORK. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF NONCONFORMITIES SHALL BE SUBMITTED UPON COMPLETION OF WORK.
  - TESTING AND SPECIAL INSPECTION REPORTS SHALL BE DISTRIBUTED TO OWNER, CONTRACTOR, BUILDING OFFICIAL, ARCHITECT AND STRUCTURAL ENGINEER.
  - TESTING AND SPECIAL INSPECTION SHALL BE PROVIDED ON THE ITEMS AS INDICATED IN THE TABLES FOLLOWING. ALSO, FOR ADDITIONAL TESTING AND INSPECTION REQUIREMENTS SEE THE PROJECT SPECIFICATIONS AND FORM DSA-103 STATEMENT OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS.

### STRUCTURAL NOTES

CONSTRUCTION DOCUMENT SUBMITTAL (100% CD REVIEW)	DATE
CONSTRUCTION DOCUMENT SUBMITTAL (100%)	4-30-14
CONSTRUCTION DOCUMENT SUBMITTAL (90%)	4-16-14
CONSTRUCTION DOCUMENT SUBMITTAL (80%)	3-19-14
DESIGN DEVELOPMENT SUBMITTAL (30%)	2-14-14
SCHEMATIC DESIGN SUBMITTAL	12-4-13
Revisions:	Date

CONSULTANTS:

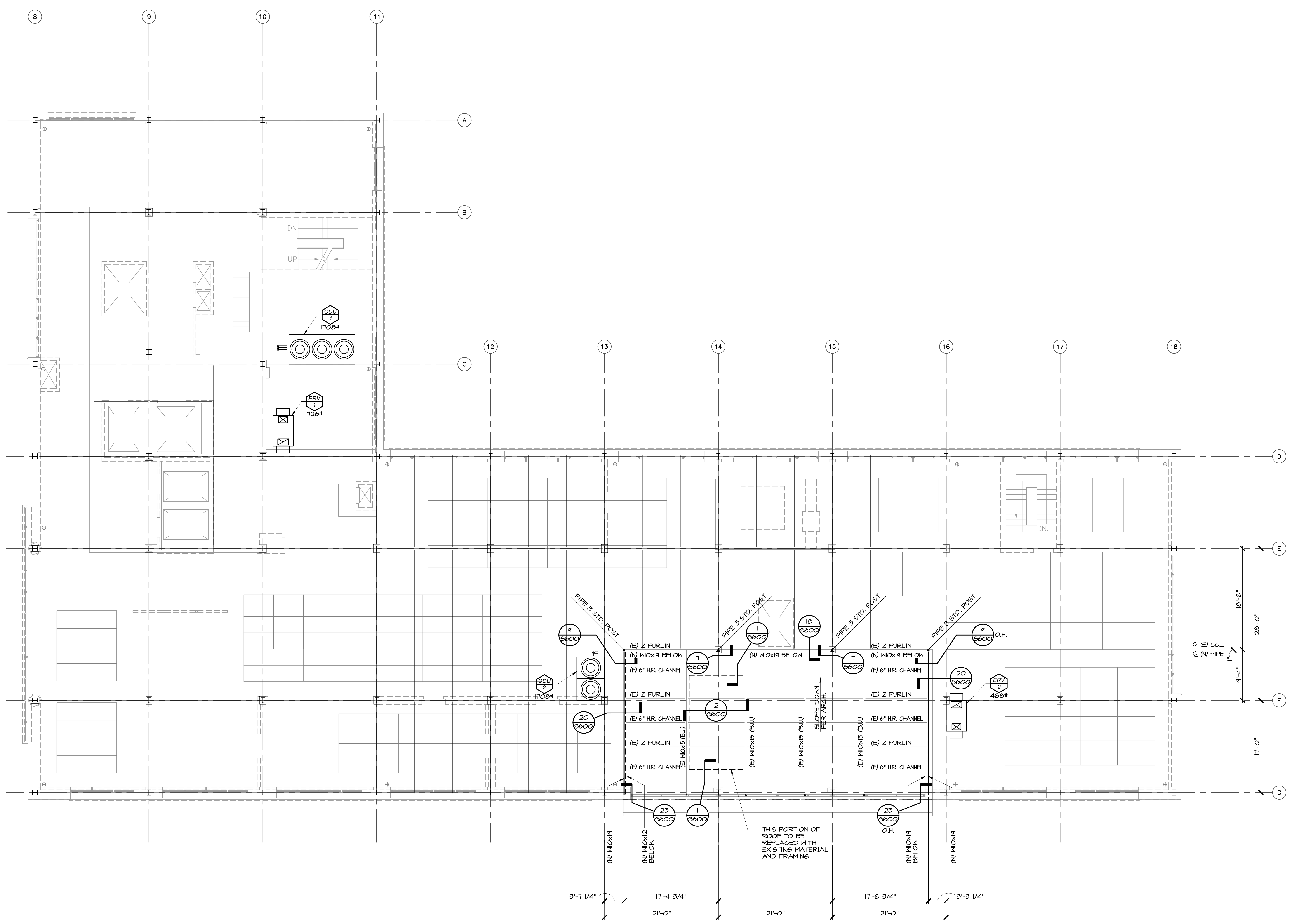
**ARCHITECT/ENGINEERS:**

**TETER, LLP**  
7535 N. PALM AVE. 201 | FRESNO, CA 93711 | 559.437.8887  
 125 S. BRIDGE ST. 150 | VISALIA, CA 93291 | 559.625.5244


**ARCHITECTS ENGINEERS CONNECTED**

Drawing Title <b>STRUCTURAL NOTES</b>	Project Title RENOVATE 7TH FLOOR BUILDING 1	Project Number <b>570-15-202</b>	Office of Construction and Facilities Management 
Approved: Project Director	Location FRESNO, CA	Building Number 1	
Date 4-30-14	Checked Drawn	Drawing Number <b>S001</b>	Dwg. 14 of 51

three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot






**FRAMING NOTES:**

- SEE GENERAL NOTES ON SHEETS S000.
- COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS. CONTRACTOR TO FIELD VERIFY DIMENSIONS AT EXISTING ELEMENTS.
- FOR MECHANICAL DUCT OPENINGS IN ROOF STRUCTURE SEE  S300

**HIGH ROOF LOADS**

<b>HIGH ROOF DEAD LOAD</b>	
THREE PLY ROOFING	1.5 PSF
INSULATION BOARD	1.5 PSF
METAL DECK	2.0 PSF
STEEL FRAMING	1.0 PSF
T-BAR CEILING	2.0 PSF
MISCELLANEOUS	1.5PSF
<b>TOTAL</b>	<b>9.0 PSF</b>
<b>HIGH ROOF LIVE LOAD</b>	
LIVE LOAD	20.0 PSF REDUCIBLE

**LEGEND:**

-  1 INDICATES BUILDING GRID LINE
-  INDICATES MECHANICAL UNIT. SEE MECHANICAL SHEETS M500 AND M600 FOR LOCATION AND CONNECTION OF UNITS.
- (B.U.) INDICATES BUILT-UP BEAM PER 


**ROOF FRAMING PLAN**

1/8"=1'-0" 10 NOTES AND LEGEND 5

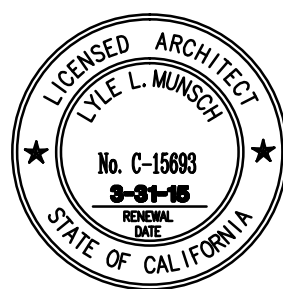
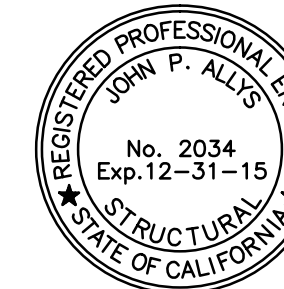
**CONSULTANTS:**

CONSTRUCTION DOCUMENT SUBMITTAL (100% CD REVIEW)	4-30-14
CONSTRUCTION DOCUMENT SUBMITTAL (100%)	4-16-14
CONSTRUCTION DOCUMENT SUBMITTAL (85%)	3-19-14
DESIGN DEVELOPMENT SUBMITTAL (35%)	2-14-14
SCHEMATIC DESIGN SUBMITTAL	12-4-13
Revisions:	Date

**ARCHITECT/ENGINEERS:**

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 125 S. BRIDGE ST. 150 | VISALIA, CA 93291 | 559.625.5244  
 ARCHITECTS ENGINEERS CONNECTED

**Professional Seals:**

Drawing Title  
**ROOF FRAMING PLAN**

Approved: Project Director

Project Title  
**RENOVATE 7TH FLOOR BUILDING 1**

Location  
 FRESNO, CA

Date  
 4-30-14

Checked  
 Drawn

Project Number  
**570-15-202**

Building Number  
 1

Drawing Number  
**S300**

Dwg. 15 of 51

**Office of Construction and Facilities Management**

Department of Veterans Affairs

ROOF						
DECK MARK	DECK PROFILE	GAGE	ATTACHMENT			REMARKS
			(I) TO DECK	(II) TO DECK	SIDE LAPS	
(D)	ASC DGB-36 640	20	(I) #12 (5 PT) GALV. S.D.S. @ 2' O.C.	#12 (5 PT) GALV. S.D.S. @ 2' O.C.	DELTA GRIP CRIMP @ 18" O.C.	COMPLY W/ ICC-ES REPORT ESR-1414 (ISSUED 10/01/12)

- NOTES:**
- WHEREVER POSSIBLE, DECK LAYOUTS SHALL PROVIDE SHEETS OF SUFFICIENT LENGTH TO CONTIGUOUS SPAN AT LEAST ONE SPAN. ENDS SHALL TERMINATE OVER A SUPPORT PERP. TO THE DECK SPAN, EXCEPT AT OPENINGS OR BUILDING EDGES WHERE DECKS MAY BE CANTILEVERED.
  - DECK SHALL HAVE A MINIMUM OF 2" BEARING AT ALL SUPPORTING MEMBERS PERPENDICULAR TO DECK SPAN AND 2" AT ALL MEMBERS PARALLEL TO DECK SPAN.
  - WHERE TWO ADJACENT DECK SHEETS ARE SUPPORTED BY ONE FRAMING MEMBER, EACH SHEET SHALL INDIVIDUALLY SATISFY THE REQUIREMENTS OF NOTE 2 AND OF THE ATTACHMENT SCHEDULE.
  - DO NOT SUSPEND PIPING, LIGHT FIXTURES, CONDUITS OR OTHER UTILITIES FROM METAL DECK ALONE.
  - DECK ATTACHMENTS TO STRUCTURAL MEMBERS, AS SCHEDULED, INSTALL SCREENS PER MANUFACTURERS REQUIREMENTS.

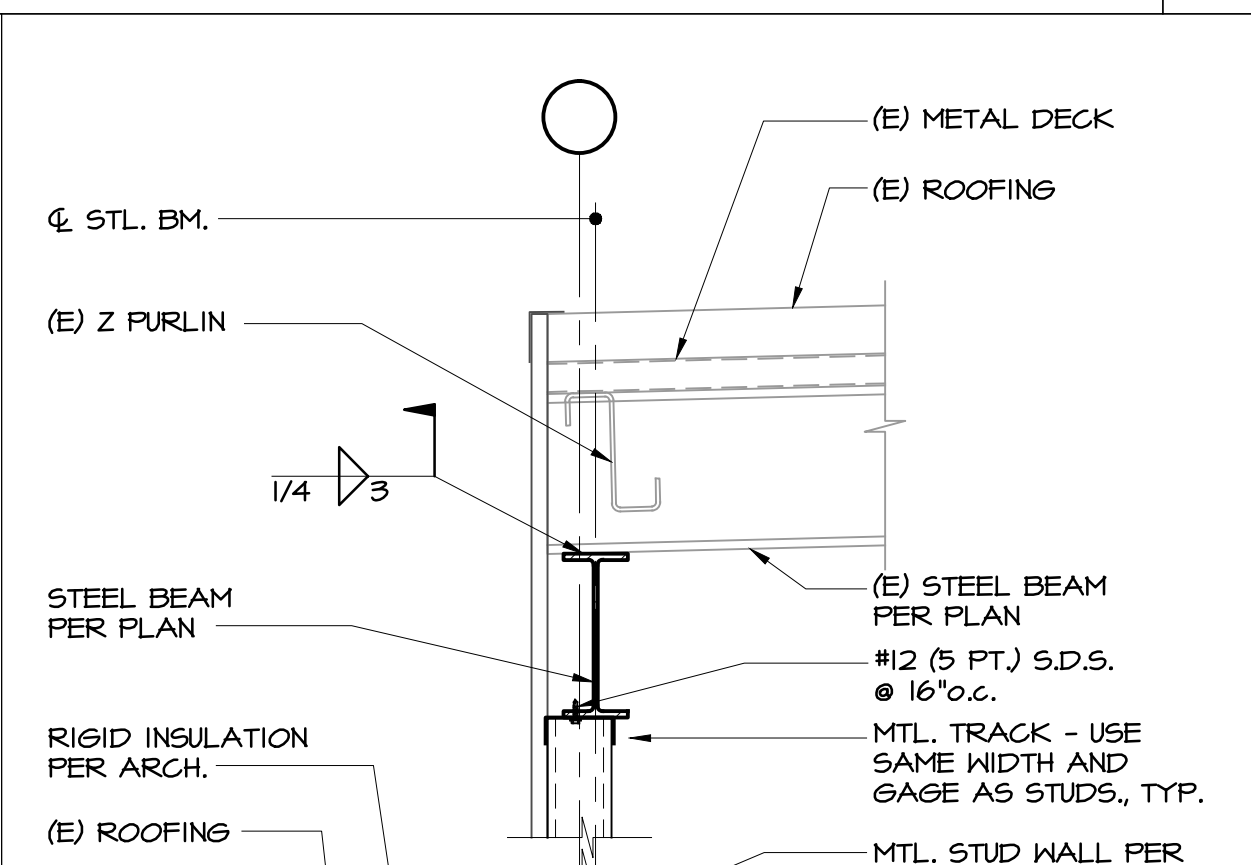
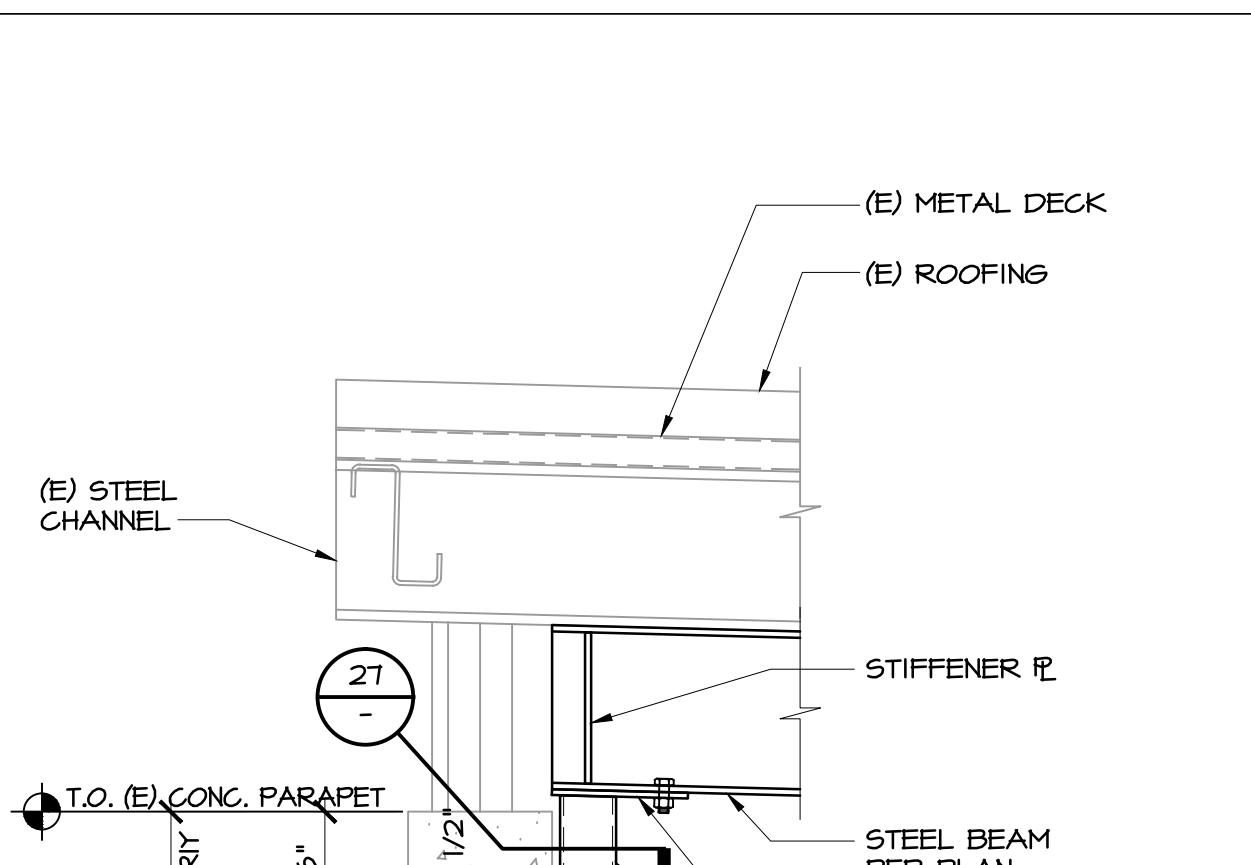
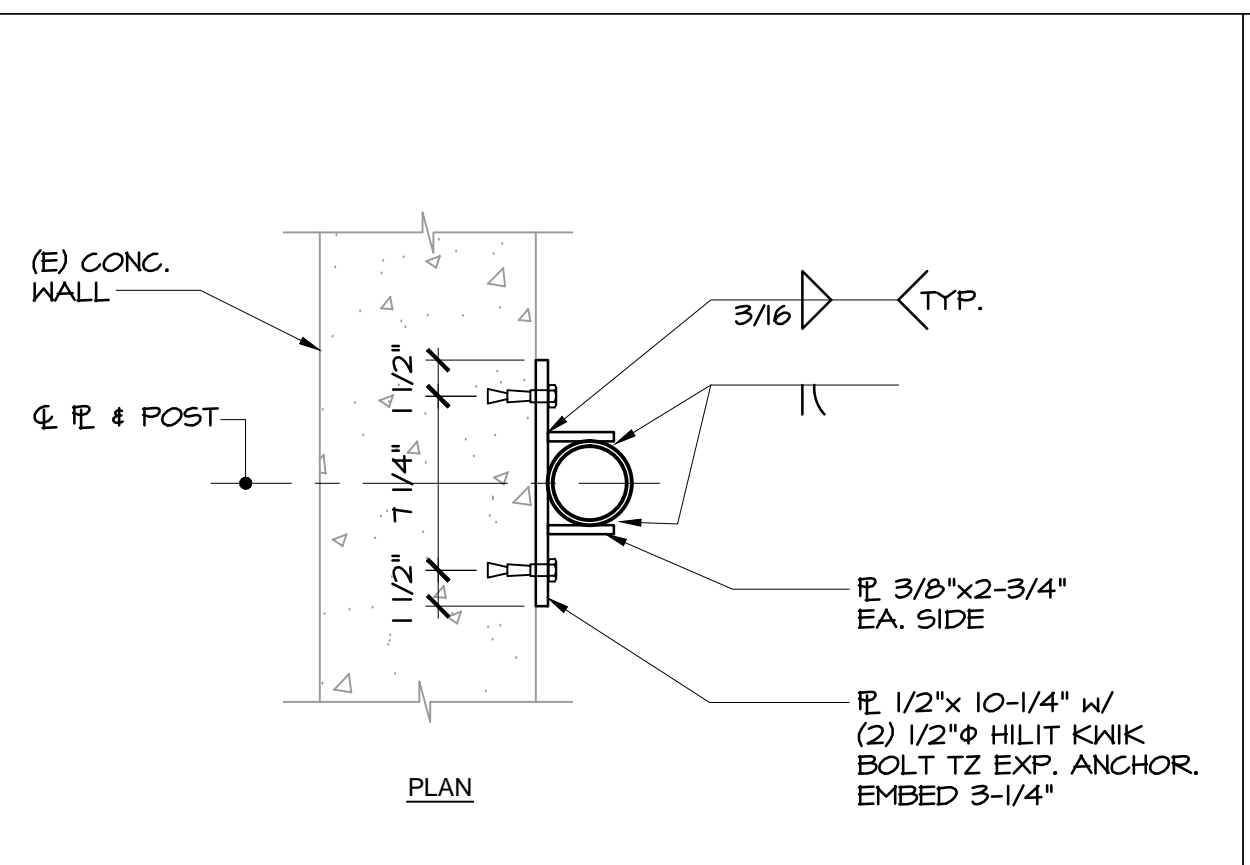
DECK PROPERTIES			
TYPE	GAGE	1 (N <sup>4</sup> )	-5 (N <sup>3</sup> )
DGB-36	20	207	246

- NOTES:**
- ASTM A 653 GRADE 90 WITH GALVANIZED FINISH, 38,000 PSI MINIMUM YIELD STRENGTH, 52,000 PSI MINIMUM TENSILE STRENGTH.

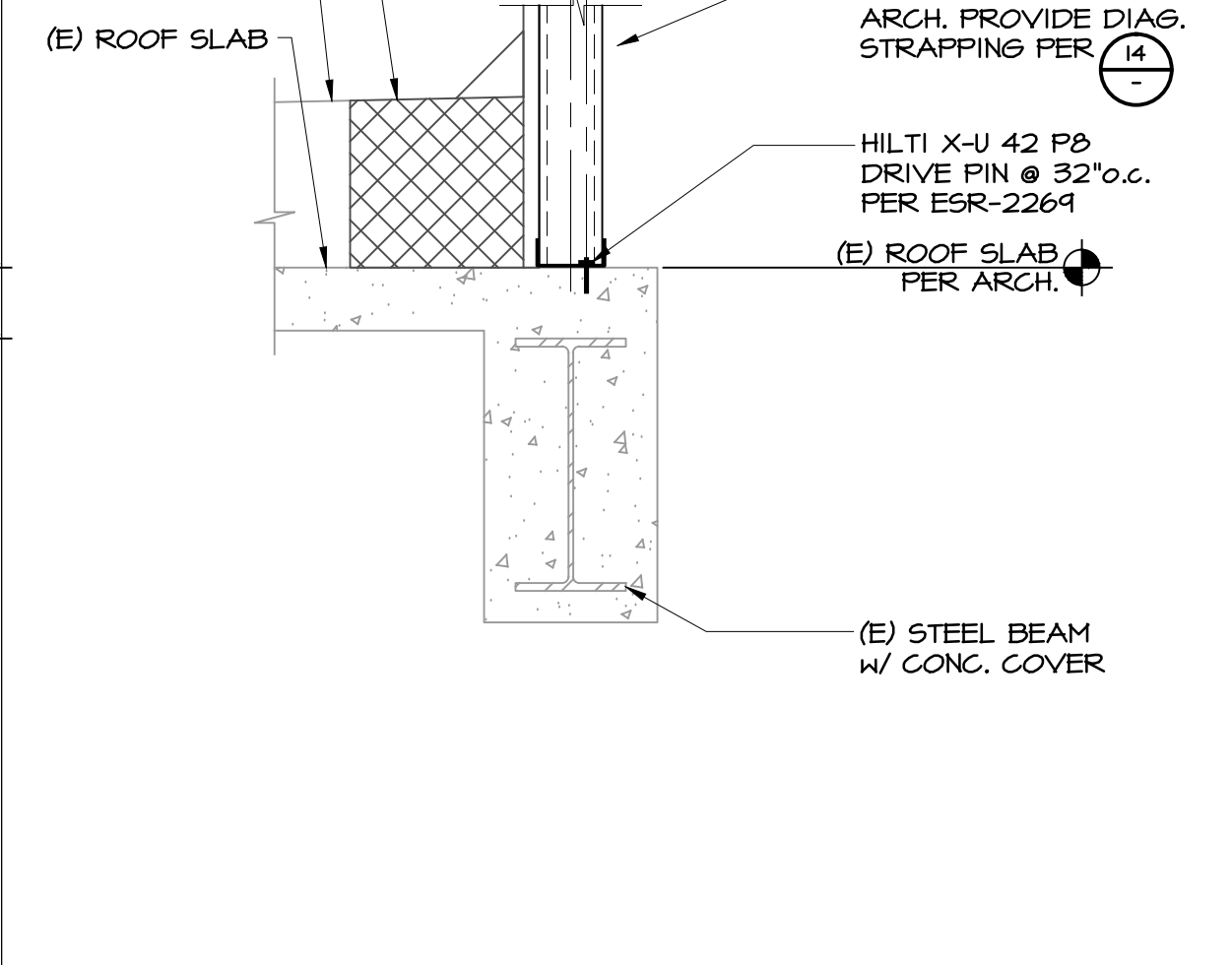
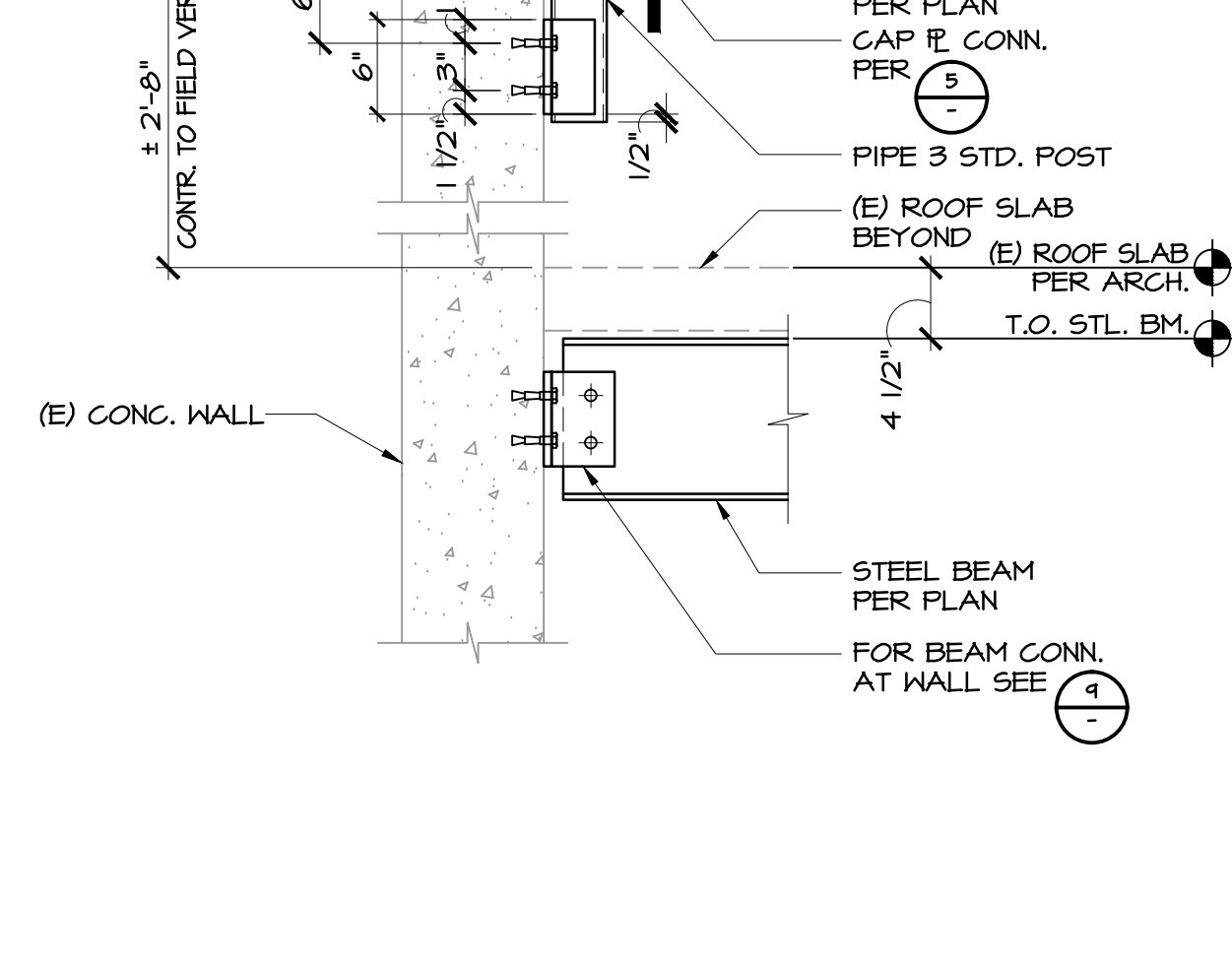
ASC DGB-36 DECK

N.T.S. 16

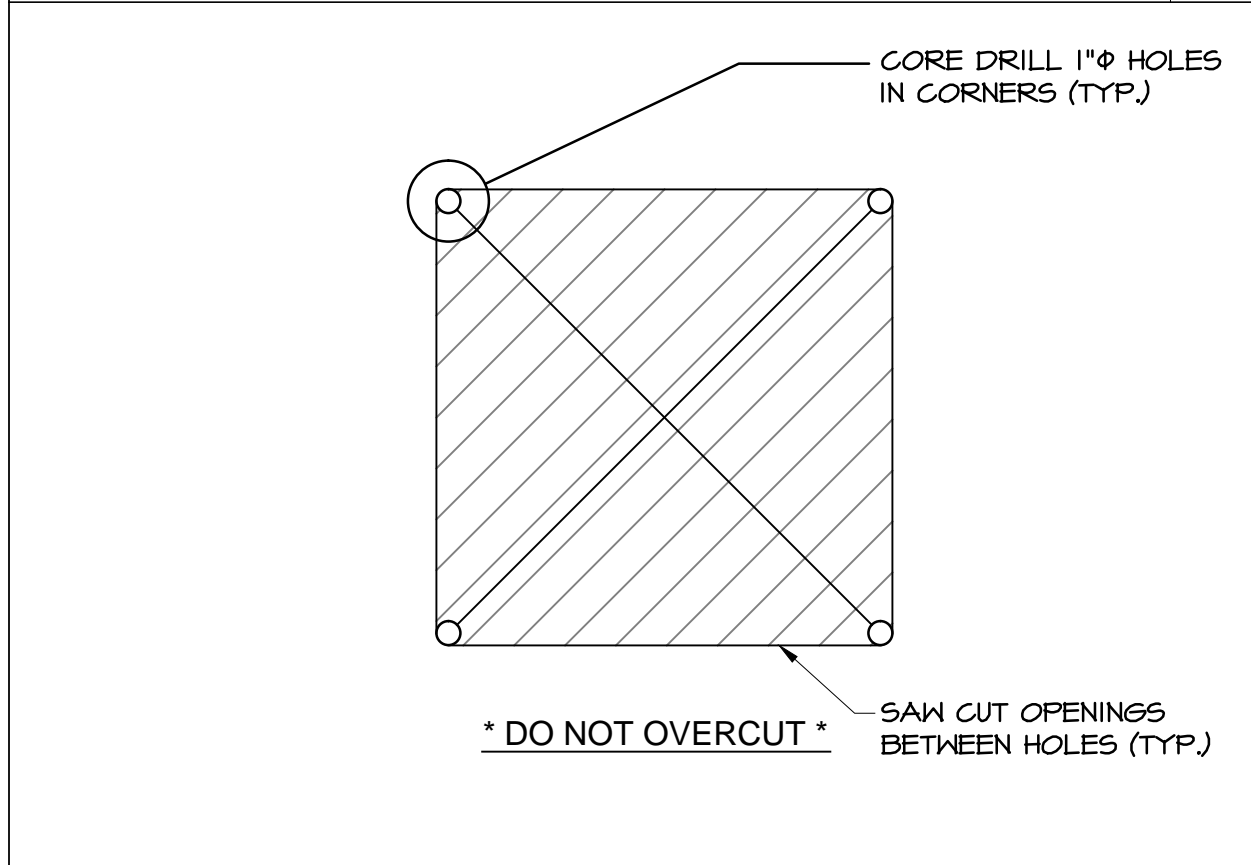
ROOF DECK SCHEDULE/DETAIL



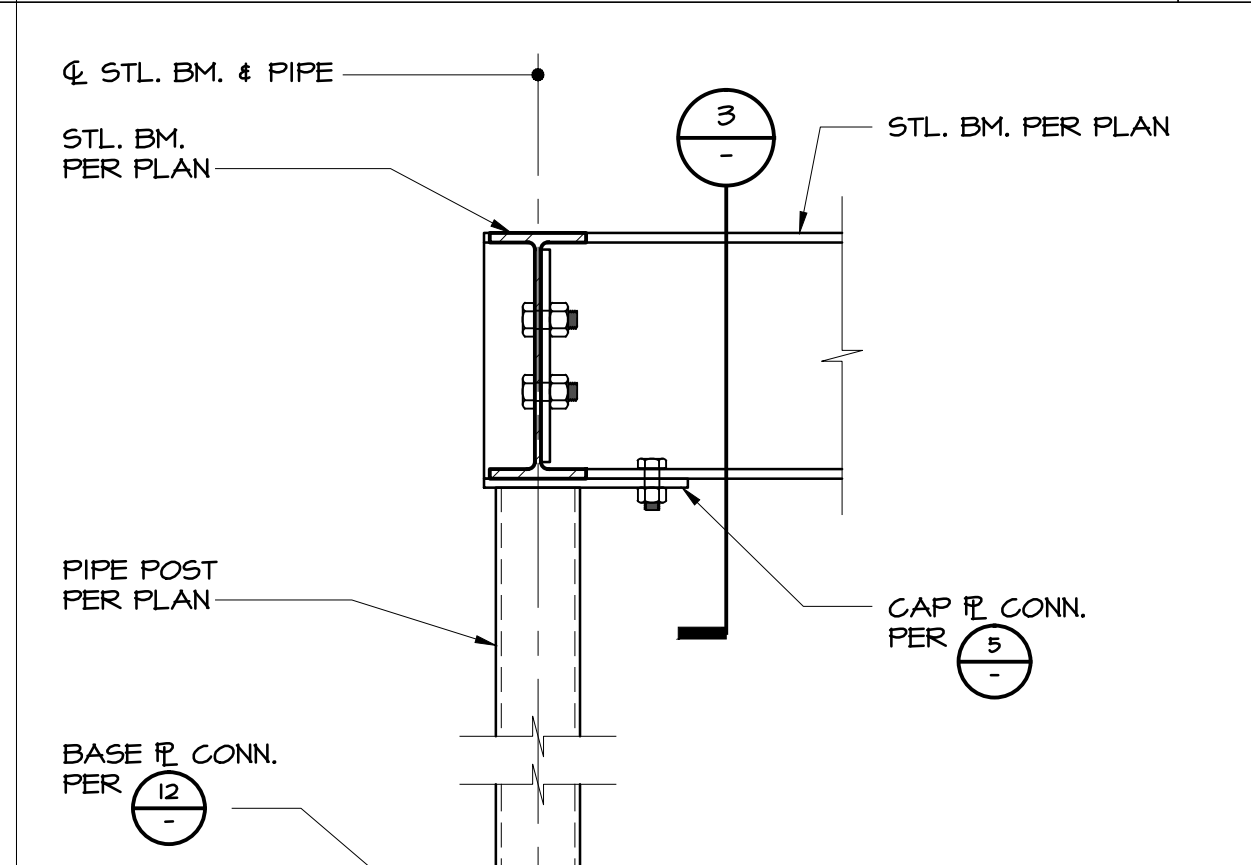
CONNECTION DETAIL 1 1/2"=1'-0" 27



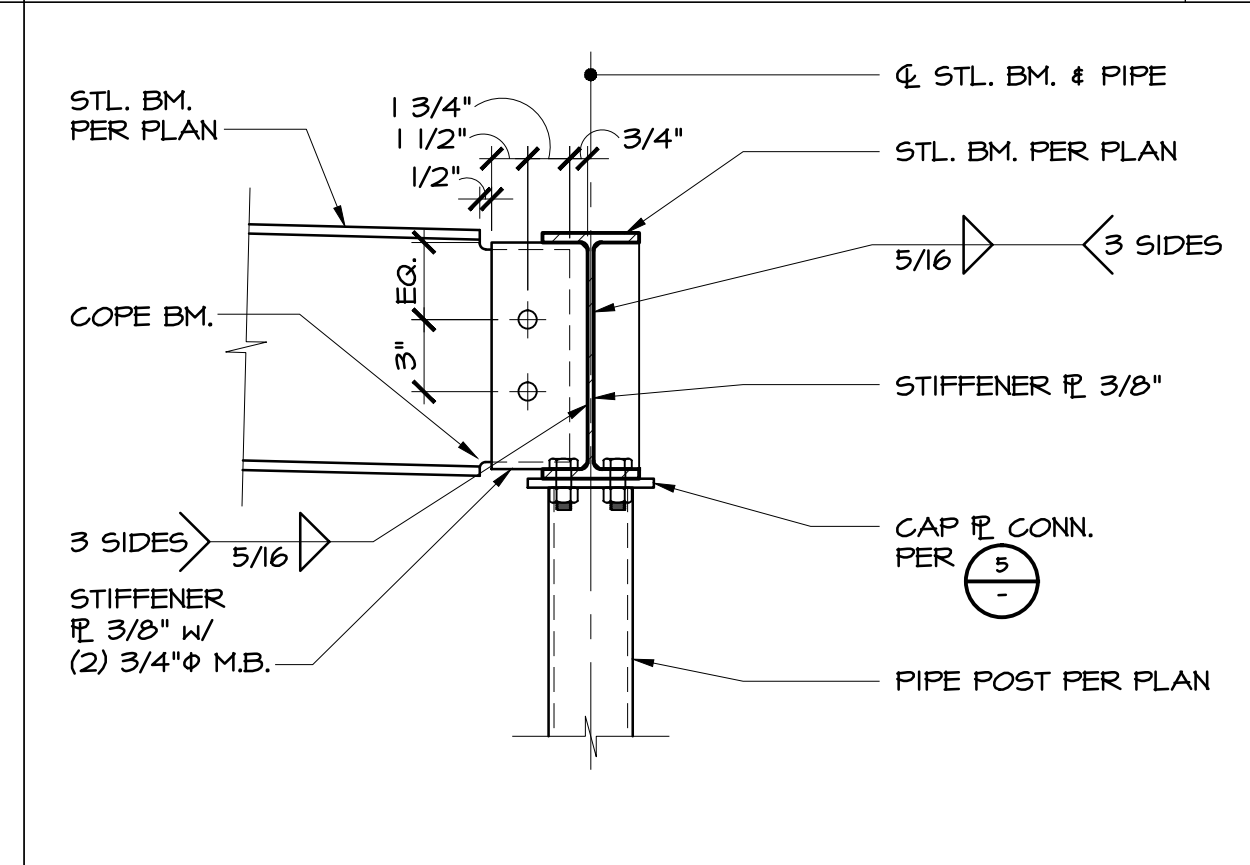
CONNECTION DETAIL 1 1/2"=1'-0" 12



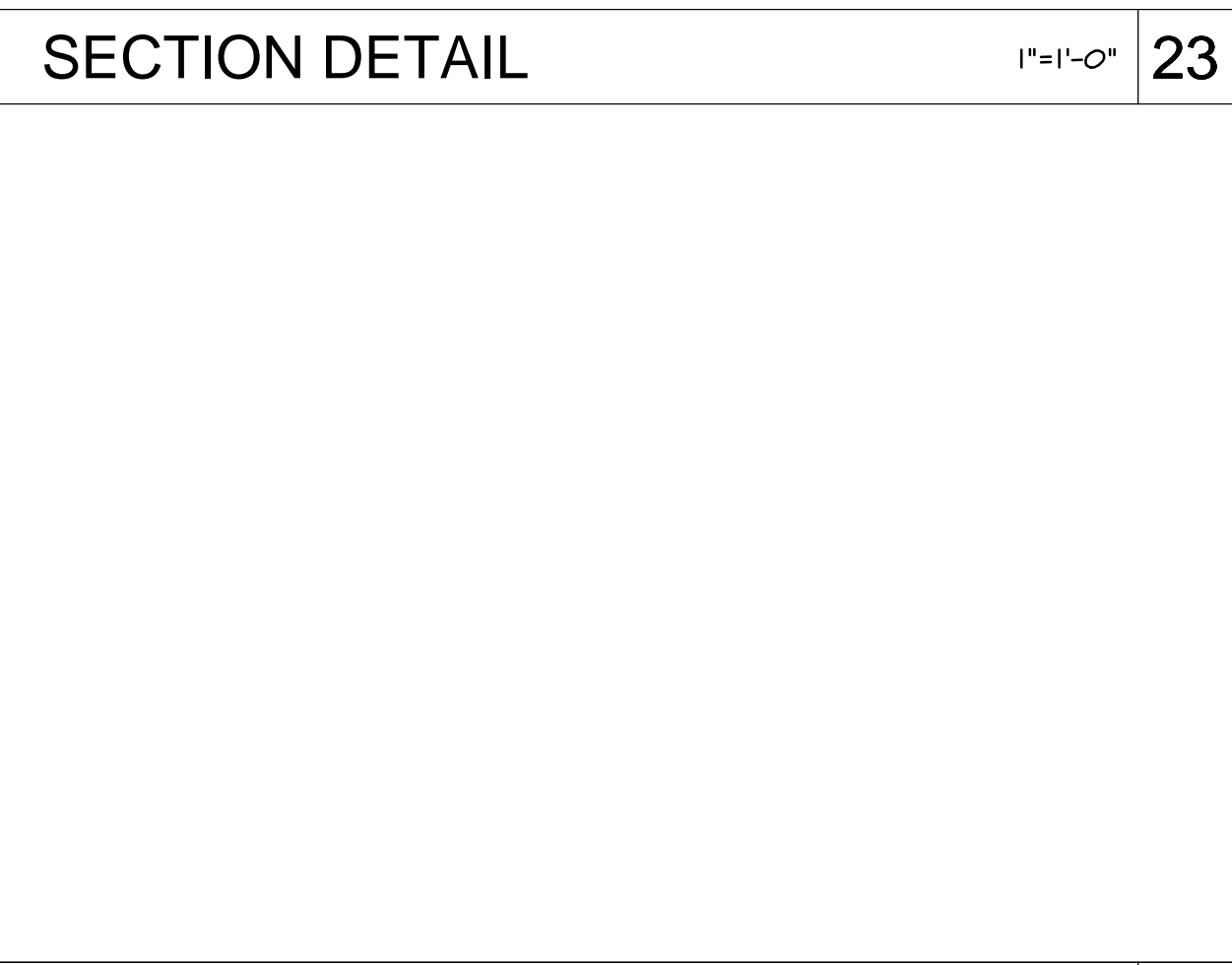
CONNECTION DETAIL 1 1/2"=1'-0" 7



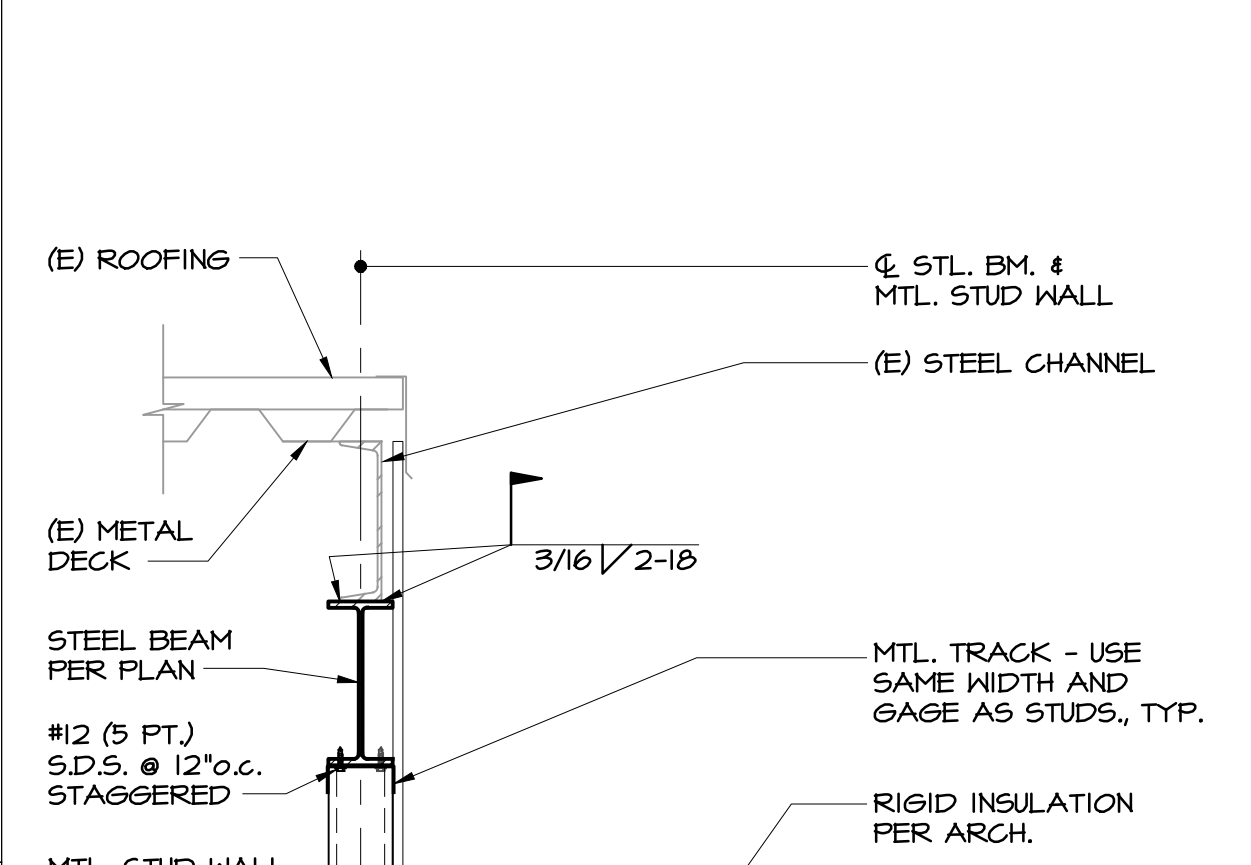
ROOF CONNECTION DETAIL 1 1/2"=1'-0" 2



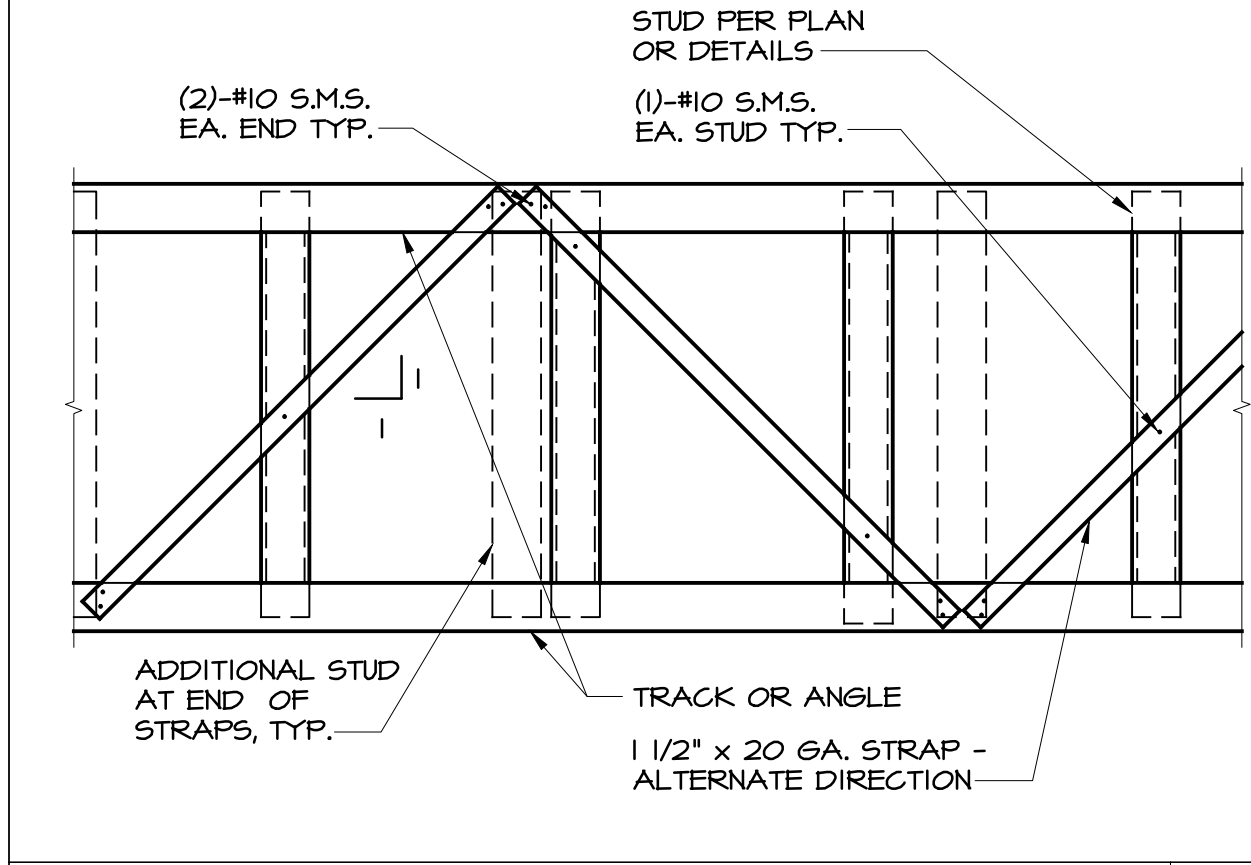
SECTION DETAIL 1"=1'-0" 28



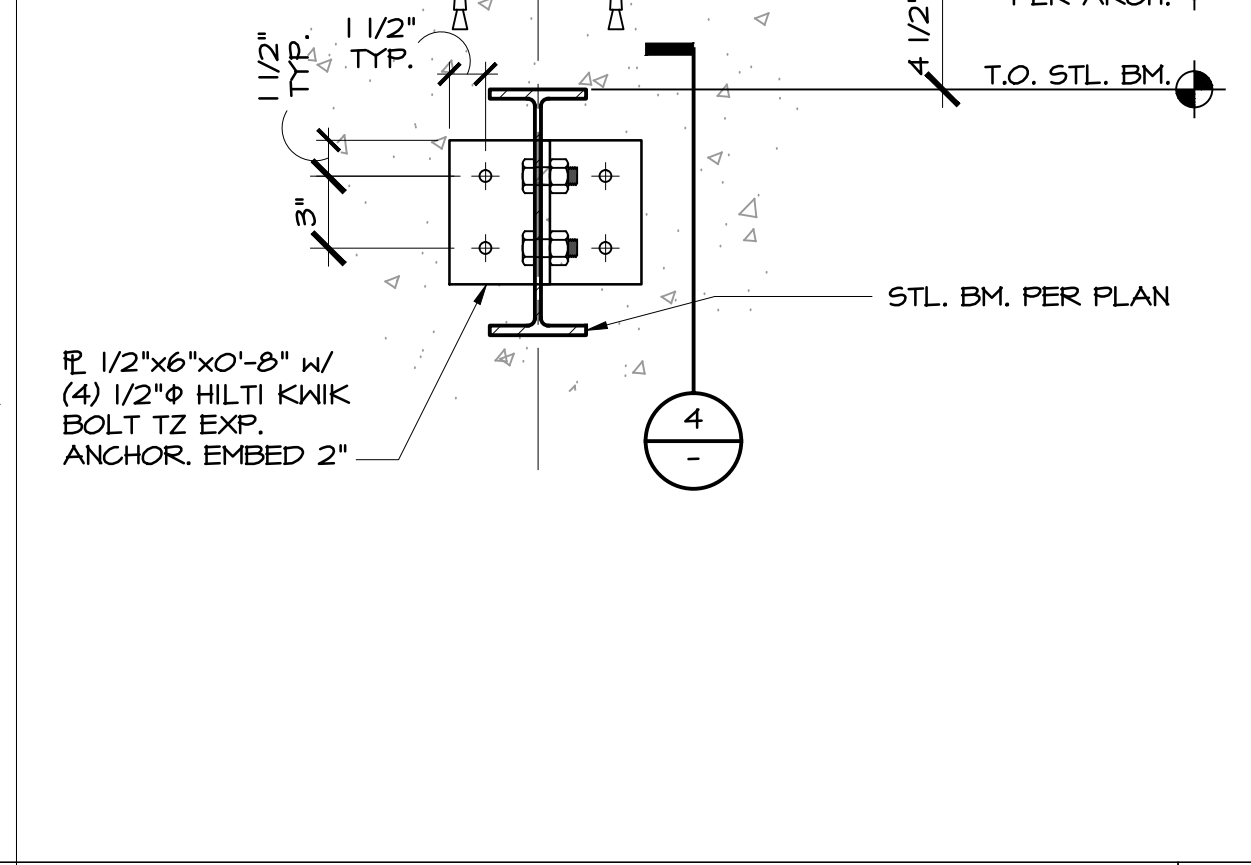
SECTION DETAIL 1"=1'-0" 23



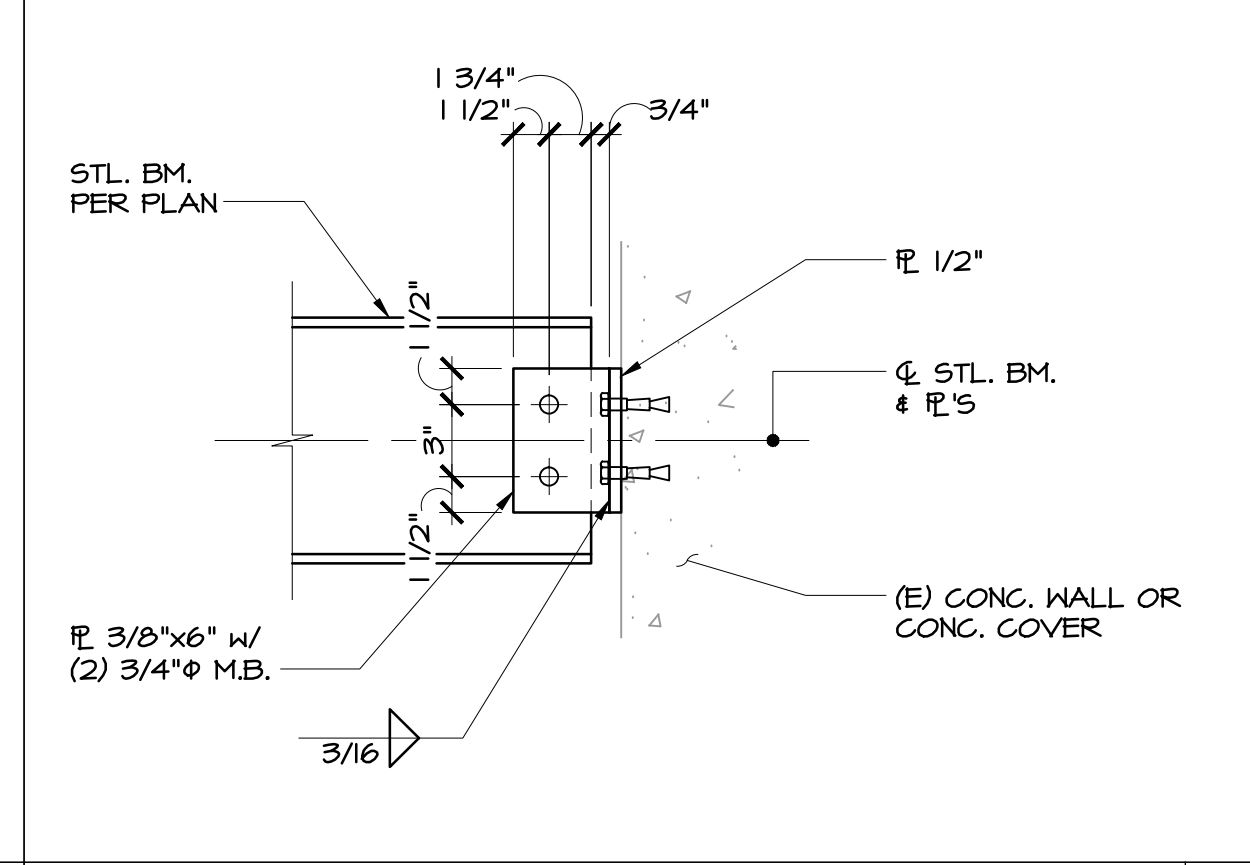
(N) OPENING IN (E) CONC. FLR. 1 1/2"=1'-0" 13



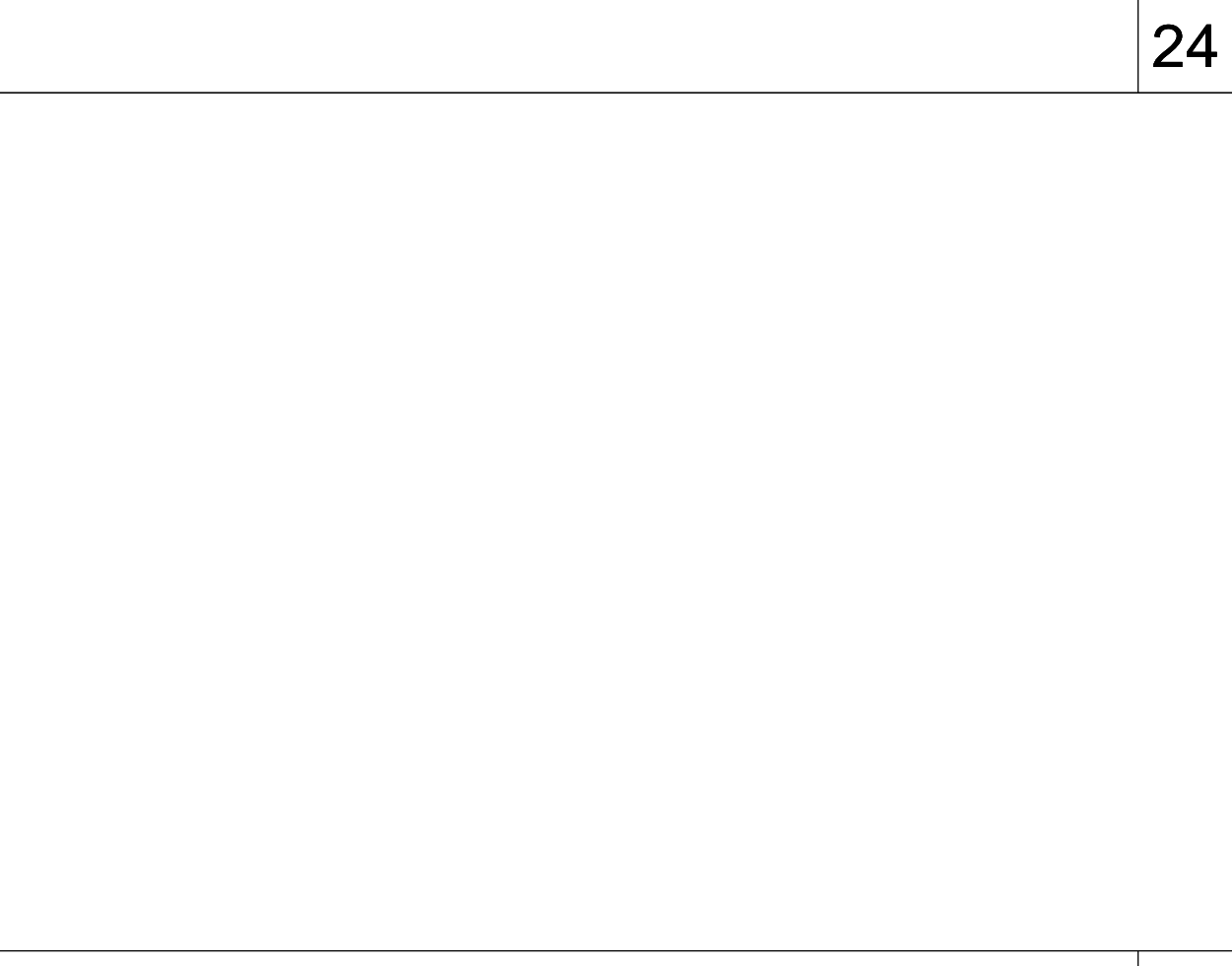
CONNECTION DETAIL 1 1/2"=1'-0" 3



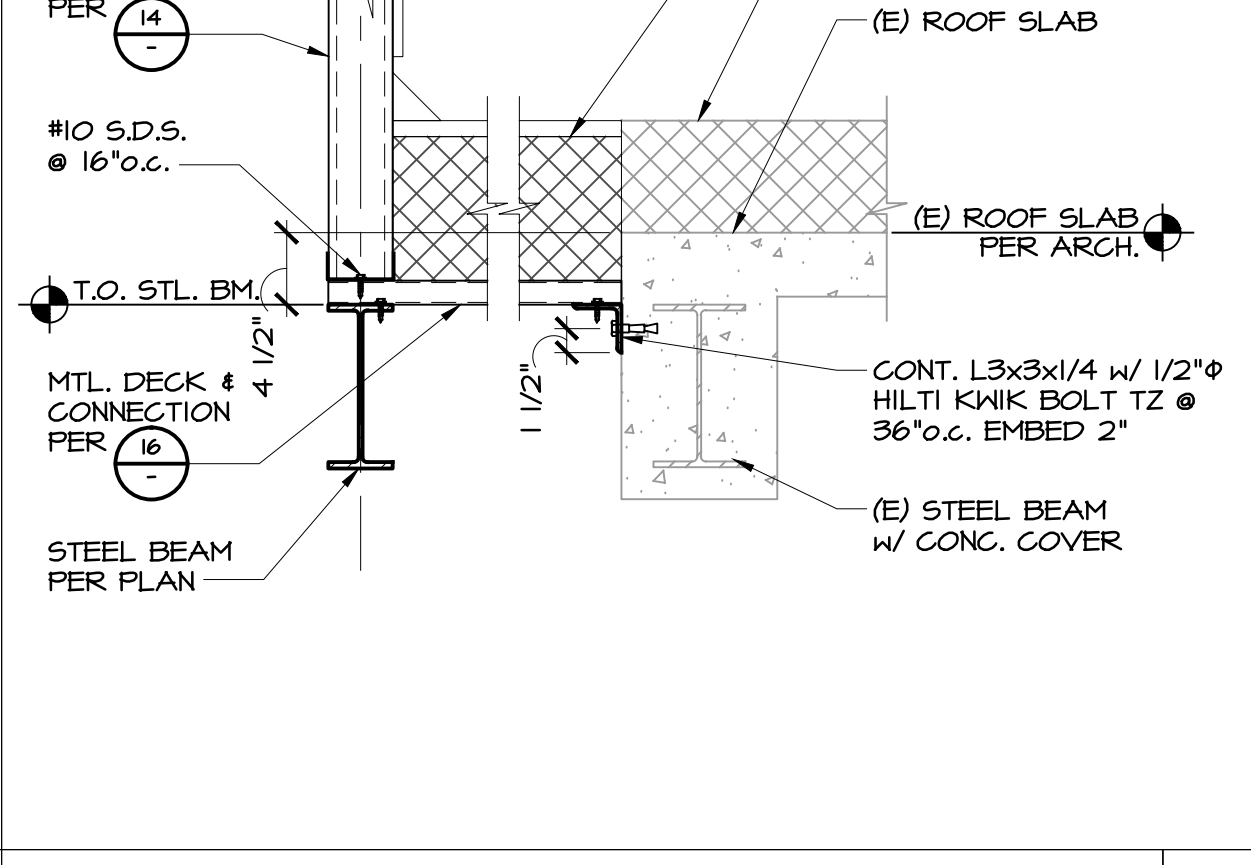
CONNECTION DETAIL 1 1/2"=1'-0" 4



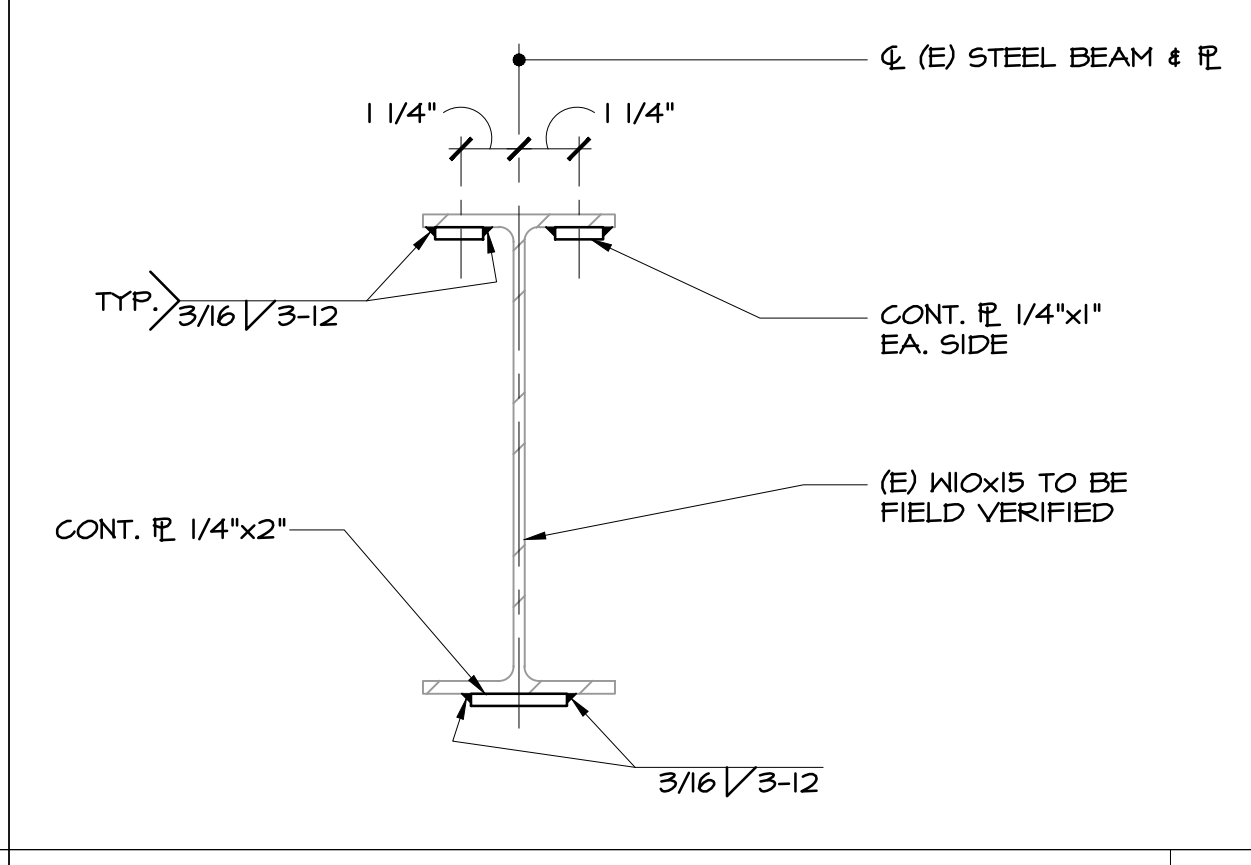
SECTION DETAIL 1"=1'-0" 29



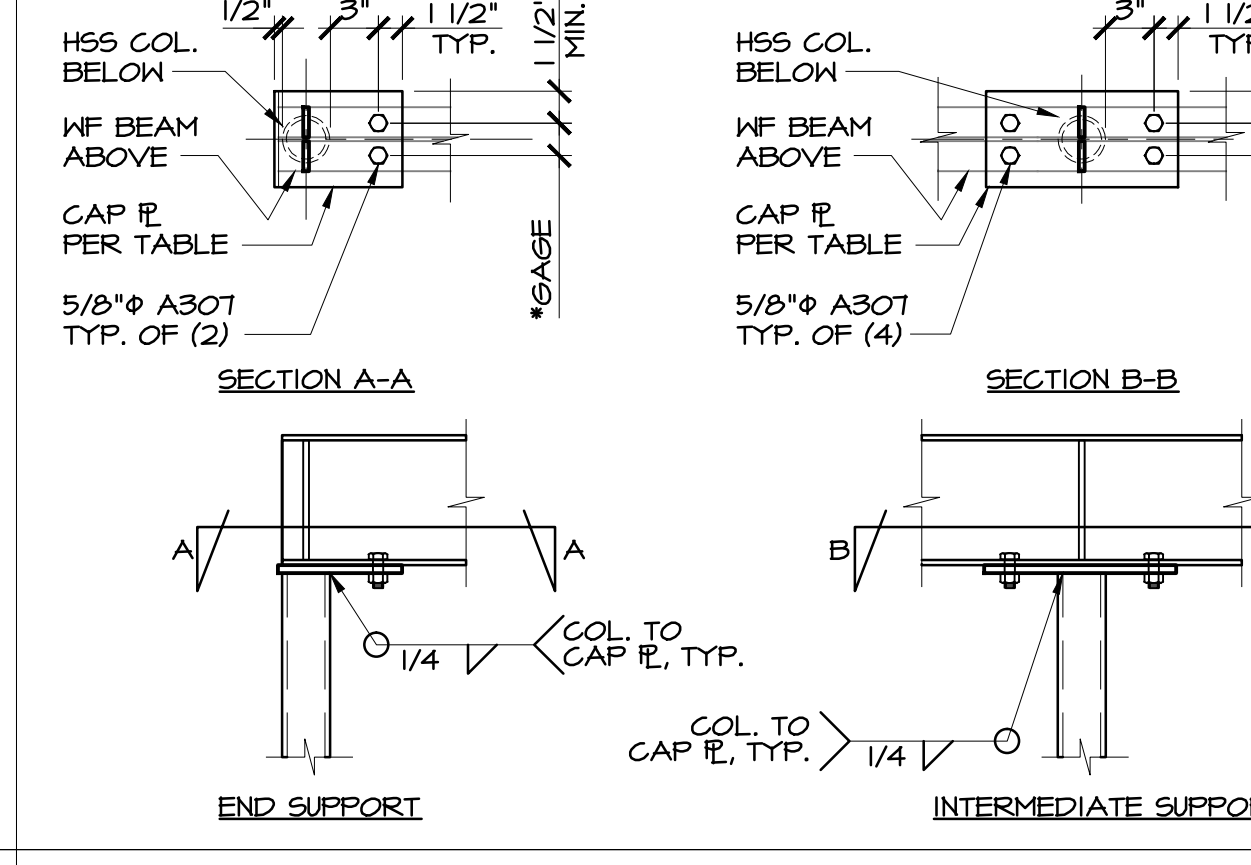
SECTION DETAIL 1"=1'-0" 24



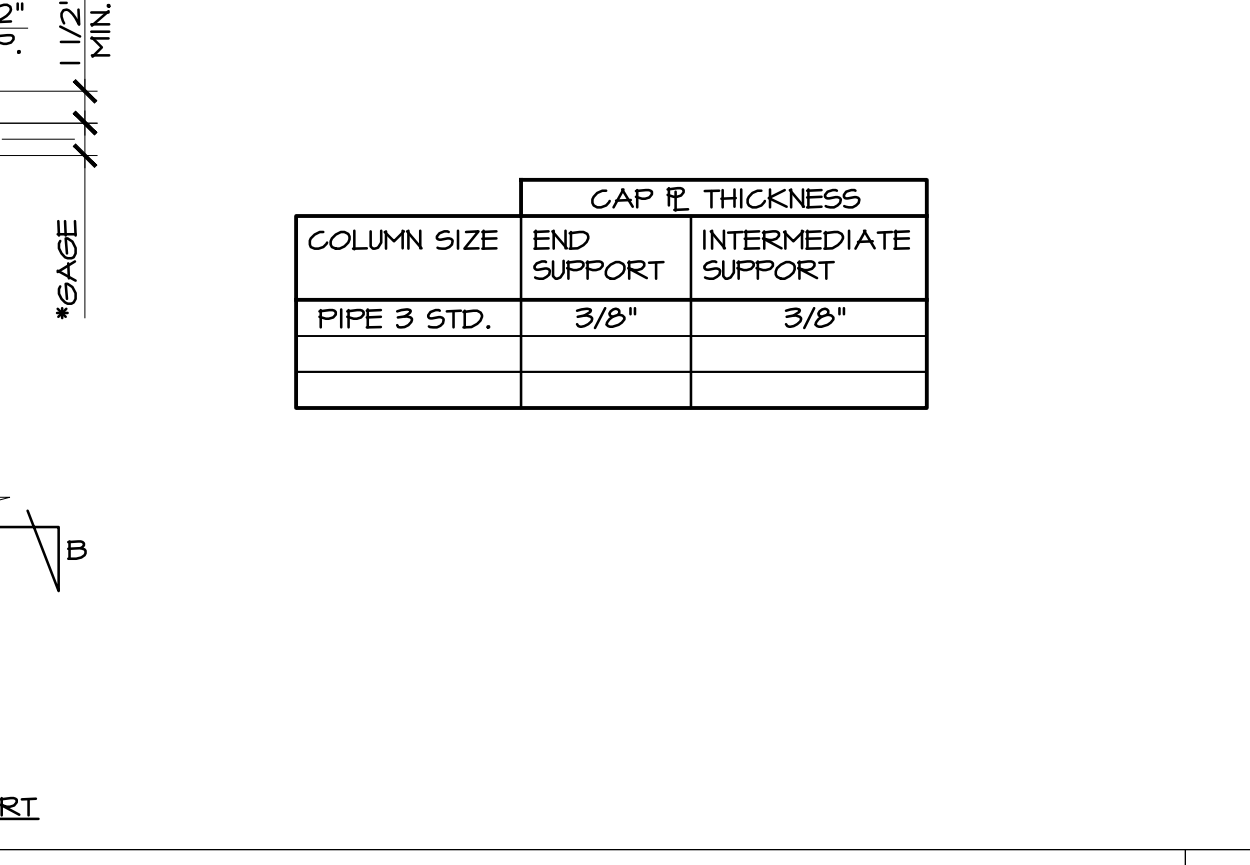
DIAGONAL STRAP DETAIL 1"=1'-0" 14



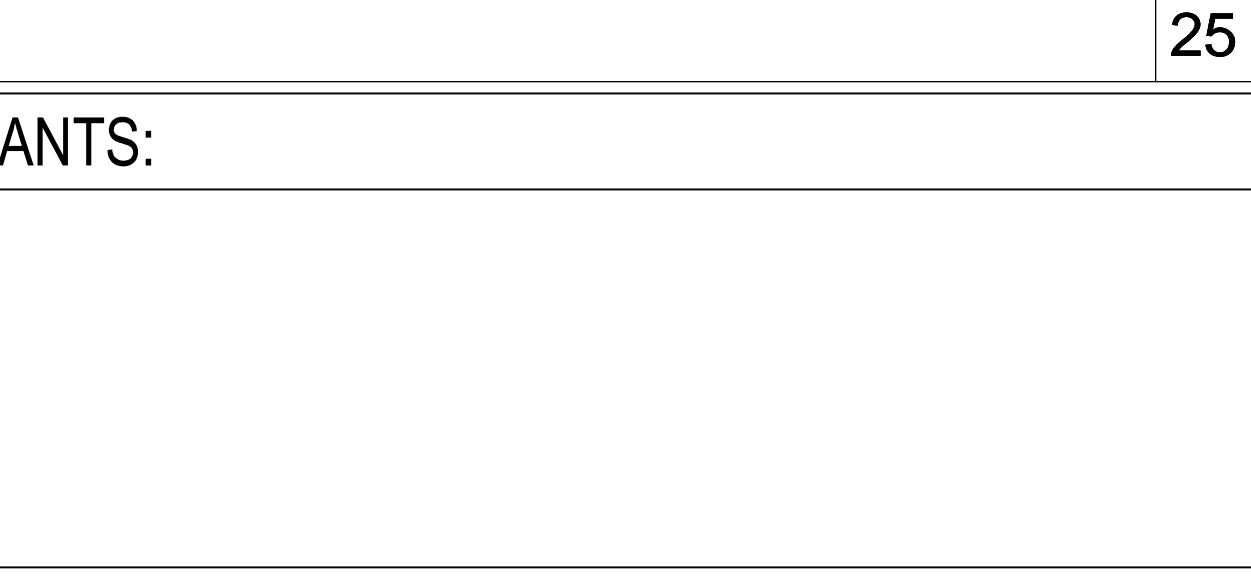
CONNECTION DETAIL 1 1/2"=1'-0" 9



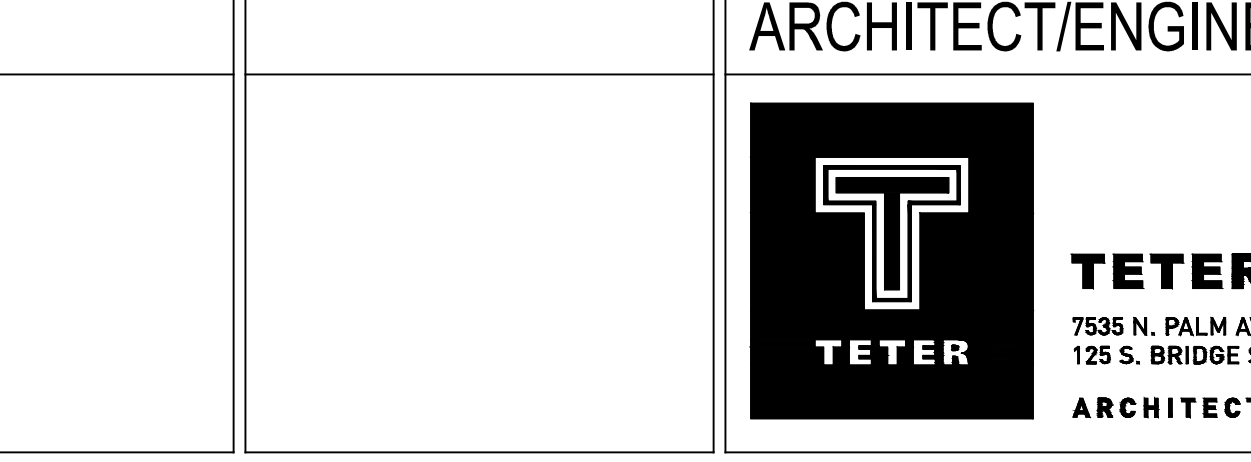
CONNECTION DETAIL 1 1/2"=1'-0" 4



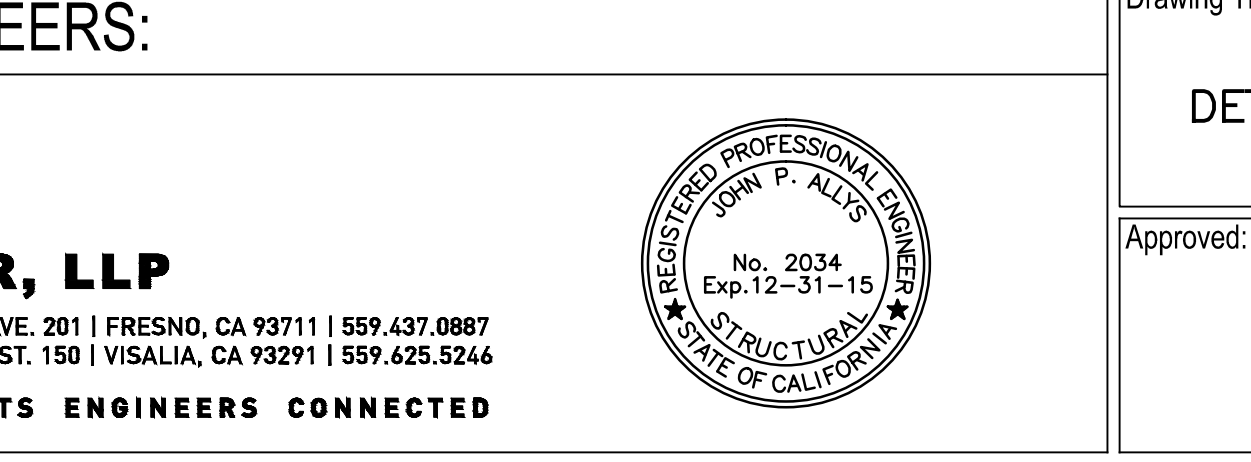
SECTION DETAIL 1"=1'-0" 30



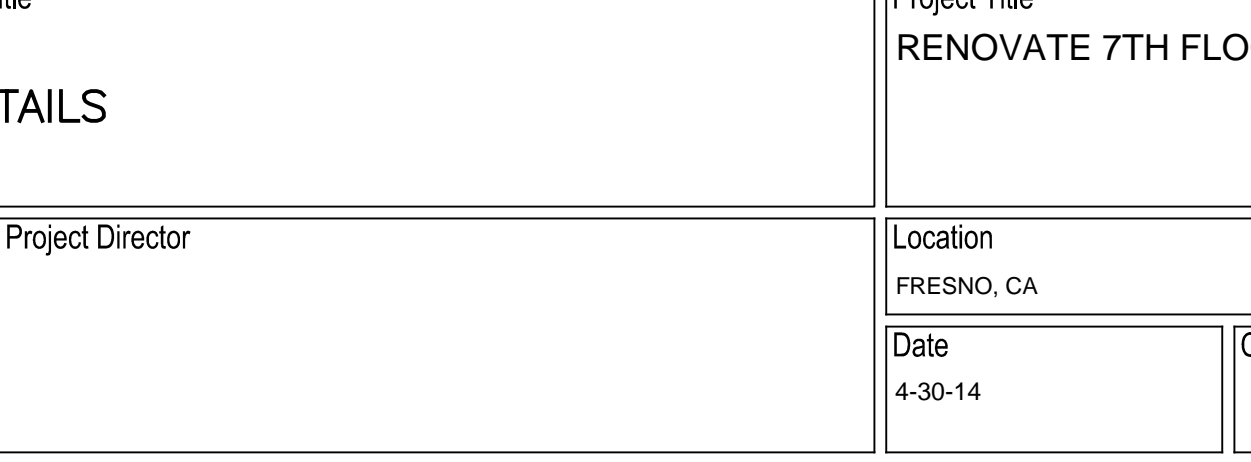
SECTION DETAIL 1"=1'-0" 25



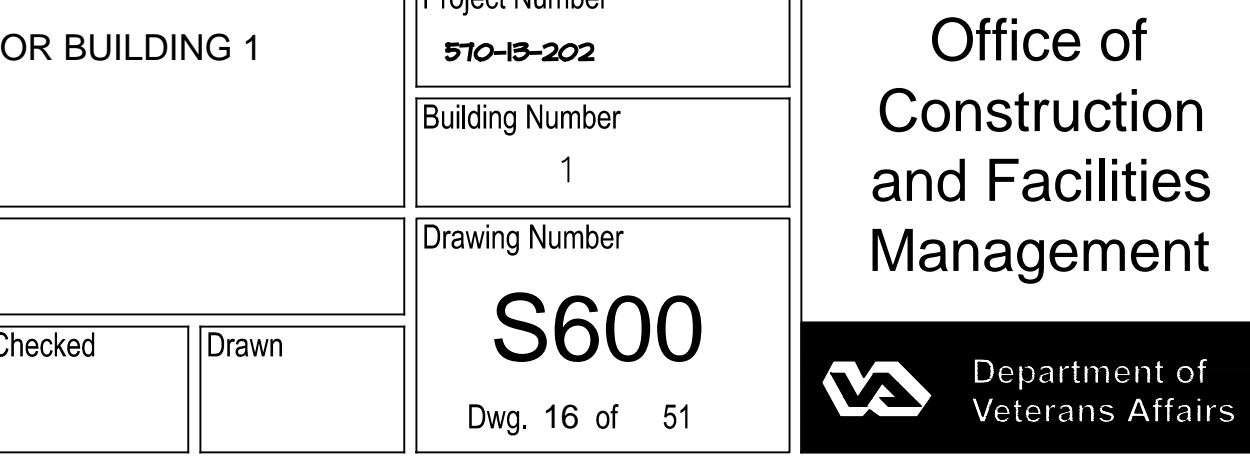
BUILT-UP BEAM (B.U.) 3"=1'-0" 15



CAP PLATE 1 1/2"=1'-0" 9



CONNECTION DETAIL 1 1/2"=1'-0" 5



COLUMN SIZE	CAP PLATE THICKNESS	
	END SUPPORT	INTERMEDIATE SUPPORT
PIPE 3 STD.	3/8"	3/8"

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 one half inch = one foot  
 one quarter inch = one foot  
 three eighths inch = one foot  
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CONSULTANTS:

CONSTRUCTION DOCUMENT SUBMITAL (100% CD REVIEW)	4-30-14
CONSTRUCTION DOCUMENT SUBMITAL (100%)	4-16-14
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Drawing Title

DETAILS
Approved: Project Director

Project Title

RENOVATE 7TH FLOOR BUILDING 1
Location FRESNO, CA
Date 4-30-14

Project Number

570-5-202
Building Number 1
Drawing Number S600
Dwg. 16 of 51

Office of Construction and Facilities Management  
 Department of Veterans Affairs