

GENERAL NOTES

STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (ANSI/AISC 360) AND THE LATEST EDITION OF AISC "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS" (ANSI/AISC 341), AS AMENDED BY CBC SECTIONS 2203A, 2204A AND 2205A.
- STRUCTURAL STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS, UNLESS NOTED OTHERWISE ON DRAWINGS:

WIDE FLANGE SHAPES.....	ASTM A992	
CHANNELS, ANGLES, M-, S-SHAPES.....	ASTM A36	
PIPES.....	ASTM A53, GRADE B (35 KSI)	
TUBES.....	ASTM A500, GRADE B (46 KSI)	
PLATES.....	ASTM A36 (UNO)	
ANCHOR BOLTS.....	ASTM F1554, GRADE 36 (UNO)	
COMMON BOLTS.....	ASTM A307	
THREADED ROUND STOCK.....	ASTM A36	

FURNISH READILY IDENTIFIABLE STRUCTURAL STEEL IN COMPLIANCE WITH CBC SECTION 2203A.1.

- HIGH STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", AS AMENDED BY CBC SECTION 2204A.2. USE STANDARD HOLES (UNO).
 - PROVIDE SNUG-TIGHTENED JOINTS USING ASTM A325-N, BEARING TYPE BOLTS WITH THREADS INCLUDED IN SHEAR PLANE, (UNO). PROVIDE SLIP-CRITICAL JOINTS USING ASTM A325-SC BOLTS AT CONNECTIONS IN SLRS AND WHERE SPECIFICALLY INDICATED.
 - ASTM A325-N BOLTS SHALL BE SNUG TIGHTENED IN ACCORDANCE WITH RCSC SPECIFICATION SECTION 8.1, UNLESS NOTED OTHERWISE. FULLY TENSION ALL ASTM A325-SC BOLTS AND ALL BOLTS REQUIRED TO BE TENSIONED BY AISC SPECIFICATION SECTION J1.10 AND RCSC SPECIFICATION SECTION 4.2. FULLY TENSIONED BOLTS SHALL BE TIGHTENED TO THE MINIMUM TENSION USING TURN-OF-THE-NUT METHOD, CALIBRATED WRENCH METHOD, OR DIRECT TENSION INDICATOR TIGHTENING METHOD.
- HOURLY FIRE RESISTIVE REQUIREMENTS FOR STRUCTURAL STEEL MEMBERS SHALL BE DETERMINED USING CBC TABLE 601. BUILDING TYPES OF CONSTRUCTION AND FIREPROOFING MATERIALS ARE AS INDICATED ON ARCHITECTURAL DRAWINGS.
- ALL STRUCTURAL STEEL AND MISCELLANEOUS METALS EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION UNLESS NOTED OTHERWISE ON ARCHITECTURAL DRAWINGS.

BUILDING DESIGN LOADS

- GOVERNING CODE: CBC 2022, ASCE 7-16, CITY OF LOS ANGELES
- APPLIED VERTICAL DESIGN LOADS TABLE:

LOCATION: _____	GRAVITY L.L. * _____	GRAVITY D.L. _____
A. ROOF	20.0 PSF	17 PSF
B. FLOOR	40.0 PSF	17 PSF
C. WALL	N/A	18 PSF
D. ROOF DECK	60.0 PSF	17

* LIVE LOADS ARE REDUCIBLE IN ACCORDANCE WITH APPLICABLE CODES

THERE IS NO CONCRETE TOPPING ASSUMED IN DEAD LOAD CALCULATIONS. CONTRACTOR TO VERIFY IN FIELD
- APPLIED WIND DESIGN BASIS TABLE:

A. ULT. WIND SPEED/ NOM. WIND SPEED=	110 MPH/85 MPH	
B. RISK CATEGORY	CATEGORY II	
C. WIND EXPOSURE	C	
D. INTERNAL PRESSURE COEF.	Ps= 15.9 PSF ZONE A; 10.6 PSF ZONE C 20° RF. SLOPE	
E. COMP. CLAD WIND PRESSURE	Ps= 5.3 PSF / -15.2 PSF	
- APPLIED SEISMIC DESIGN BASIS TABLE:

A. SEISMIC IMPORTANCE	1.00	
B. SOIL PROFILE TYPE	Sd	
C. SDC	D	
D. SEISMIC FACTOR	Ss= 1.66g	S _{rs} = 1.32g
E. SEISMIC FACTOR	S1= 0.557g	
F. SHEAR WALLS	R= 6.5	Ω= 3.0 C _d = 4.0
G. OMF	R= 3.5	Ω= 3.0 C _d = 3.0
H. SEISMIC OCCUP. CATEGORY	II	
I. RESPONSE COEFFICIENT	Cs= 0.20W	
J. BASE SHEAR/WEIGHT	V= 14,944 LBS	W= 65,500 LBS
K. REDUNDANCY FACTOR	ρ= 1.0	
J. LAT. & LONG.	LAT = 34.058	LONG = -118.475

CAST-IN-PLACE CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO THE STANDARDS OF THE AMERICAN CONCRETE INSTITUTE, ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
- CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28-DAY (f_c), UNLESS NOTED OTHERWISE:

ISOLATED AND CONTINUOUS FOOTINGS	3,000 PSI	NORMAL WEIGHT
SLABS-ON-GRADE	3,000 PSI	NORMAL WEIGHT
RETAINING WALLS	3,000 PSI	NORMAL WEIGHT
CONCRETE ON METAL DECK	3,000 PSI	LIGHTWEIGHT
ALL OTHER CONCRETE	3,000 PSI	NORMAL WEIGHT
- PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR TYPE II.
- CHEMICAL ADMIXTURES SHALL CONFORM TO ASTM C494 OR ASTM C1017. MINERAL ADMIXTURES SHALL CONFORM TO ASTM C618.
- AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33. NORMAL WEIGHT CONCRETE SHALL HAVE A DRY UNIT WEIGHT OF 150 ± 3 PCF.
- AGGREGATES FOR LIGHTWEIGHT CONCRETE SHALL BE EXPANDED SHALE CONFORMING TO ASTM C330. PRESIZE AGGREGATE BEFORE FIRING TO ALLOW OUTER CERAMIC SHELL TO REMAIN INTACT. LIGHTWEIGHT CONCRETE SHALL HAVE A DRY UNIT WEIGHT OF 110 ± 3 PCF.
- MAXIMUM AGGREGATE SIZE SHALL BE 1-1/2 INCHES FOR FOUNDATIONS AND 1 INCH ELSEWHERE, BUT NO LARGER THAN (A) 1/5 THE NARROWEST DIMENSION BETWEEN SIDES OF FORMS, (B) 1/3 THE DEPTH OF SLABS, OR (C) 3/4 THE MINIMUM CLEAR SPACING BETWEEN INDIVIDUAL TENDONS, BUNDLED TENDONS, OR DUCTS. SMALLER AGGREGATE SIZES MAY BE ALLOWED WITH THE APPROVAL OF THE ARCHITECT (STRUCTURAL ENGINEER).
- MAXIMUM SLUMP SHALL BE 5 INCHES TYPICALLY AND 4 INCHES IN FLATWORK, UNLESS A HIGH-RANGE WATER REDUCING ADMIXTURE (SUPERPLASTICIZER) IS USED IN THE CONCRETE MIX PROPORTIONS.
- CONCRETE SHRINKAGE SHALL BE LIMITED TO 0.05 PERCENT AS DETERMINED BY ASTM C157.
- WATER CEMENT RATIO SHALL NOT EXCEED 0.45 FOR ALL FLATWORK THAT RECEIVES A MOISTURE SENSITIVE ADHESIVE TO AFFIX FLOOR FINISHES AND 0.50 ELSEWHERE. EXCEPTION: FOR CONCRETE ON METAL DECK, A WATER CEMENT RATIO OF 0.50 MAY BE USED FOR CONCRETE PLACED ON VENTED METAL DECKS.
- CONCRETE MIX PROPORTIONING SHALL BE BASED ON FIELD EXPERIENCE AND/OR TRIAL MIXTURES AS STIPULATED IN CBC SECTION 1905A.3. SUBMIT CONCRETE MIX PROPORTIONING DATA, INCLUDING HISTORICAL STRENGTH RECORDS AND/OR RESULTS OF TRIAL MIXTURES, FOR EACH TYPE AND COMPRESSIVE STRENGTH OF CONCRETE. CONCRETE MIX PROPORTIONING SHALL BE SIGNED AND SEALED BY A PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA AND SHALL BE SUBMITTED TO THE ARCHITECT (STRUCTURAL ENGINEER) FOR REVIEW AND APPROVAL.
- CONCRETE MIXING SHALL CONFORM TO ASTM C94.
- THE MAXIMUM SIZE OF A SINGLE POUR FOR ELEVATED SLABS SHALL NOT EXCEED 25,000 SQUARE FEET AND THE LENGTH TO WIDTH RATIO OF THE POUR SHALL NOT EXCEED 2 WITHOUT THE APPROVAL OF THE ARCHITECT (STRUCTURAL ENGINEER).
- SUBMIT SHOP DRAWINGS INDICATING LOCATIONS OF CONCRETE CONSTRUCTION JOINTS TO THE ARCHITECT (STRUCTURAL ENGINEER) FOR REVIEW AND APPROVAL PRIOR TO PLACING CONCRETE. LOCATE CONSTRUCTION JOINTS TO MINIMIZE EFFECTS OF SHRINKAGE AND AT POINTS OF LOW STRESS. HORIZONTAL CONSTRUCTION JOINTS ARE NOT PERMITTED IN BEAMS AND SLABS UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS OR APPROVED BY THE ARCHITECT (STRUCTURAL ENGINEER) PRIOR TO CONSTRUCTION.
- PROVIDE SLEEVES FOR ELECTRICAL AND PLUMBING OPENINGS. IF CONFLICT OCCURS BETWEEN REINFORCING AND SLEEVES, REPOSITION REINFORCING OR SLEEVES OR BOTH. DO NOT CUT ANY REINFORCING. CORING IS NOT PERMITTED.
- PRIOR TO PLACING CONCRETE, REINFORCING BARS, EMBEDDED PLATES, ANCHOR BOLTS, AND OTHER CONCRETE EMBEDMENTS SHALL BE WELL SECURED IN POSITION.
- CONCRETE PLACEMENT SHALL CONFORM TO ACI 304 AND CONTRACT DOCUMENTS. INTENTIONALLY ROUGHEN ALL HARDENED CONCRETE SURFACES TO A FULL AMPLITUDE OF 1/4-INCH AGAINST WHICH FRESH CONCRETE IS PLACED.
- PROVIDE KEYED CONSTRUCTION JOINT WHERE INDICATED ON DRAWINGS. CLEAN, REMOVE LAITANCE, THOROUGHLY WET, AND REMOVE STANDING WATER IMMEDIATELY BEFORE PLACING FRESH CONCRETE.
- CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES FAHRENHEIT AND IN A MOIST CONDITION FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT UNLESS OTHERWISE ACCEPTED BY ARCHITECT (STRUCTURAL ENGINEER).
- CURING COMPOUNDS, SEALERS, HARDENERS, ETC., USED ON CONCRETE THAT RECEIVES A FINISH SHALL BE APPROVED BY THE ARCHITECT BEFORE USE.
- GROUT SHALL BE NON-SHRINK, NON-METALLIC, SHALL NOT CONTAIN CHLORIDES, AND SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 6,000 PSI.
- LEAN CONCRETE SHALL CONTAIN 2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE. USE ONLY WHERE SPECIFICALLY INDICATED.

REINFORCING STEEL

- REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE TO AMERICAN CONCRETE INSTITUTE ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE".
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE. BARS TO BE WELDED SHALL CONFORM TO LOW ALLOY ASTM A706.
- REINFORCEMENT RESISTING EARTHQUAKE-INDUCED FLEXURAL AND AXIAL FORCES IN FRAME MEMBERS AND IN STRUCTURAL WALL BOUNDARY ELEMENTS SHALL COMPLY WITH ASTM A706, ASTM A615, GRADES 40 AND 60, REINFORCEMENT MAY BE PERMITTED IN THESE MEMBERS IF:
 - THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI (RETESTS SHALL NOT EXCEED THIS VALUE BY MORE THAN AN ADDITIONAL 3000 PSI).
 - THE RATIO OF THE ACTUAL TENSILE STRENGTH TO THE ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25.
- WELDED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A185. LAP WELDED WIRE REINFORCEMENT 1-1/2 MESHES OR ONE FOOT MINIMUM.
- DEFORMED BAR ANCHORS (DBA) SHALL BE NELSON STUD WELDING, INC. TYPE D2L (ICC EVALUATION SERVICE REPORT ER-5217), OR AN APPROVED EQUAL, AND SHALL BE MADE FROM DEFORMED STEEL WIRE CONFORMING TO ASTM A496, WITH A MINIMUM YIELD STRENGTH OF 70 KSI AND A MINIMUM TENSILE STRENGTH OF 80 KSI.
- PREPARE REINFORCING STEEL SHOP DRAWINGS IN ACCORDANCE TO ACI 315, PART B. SHOP DRAWINGS MAY BE PREPARED MANUALLY OR BY COMPUTER. PLACING DRAWINGS SHALL BE PREPARED TO THE SAME STANDARD AS CONTRACT DRAWINGS. SHOW REINFORCING PLACEMENT, SPLICE LOCATIONS, REINFORCING LENGTHS, DETAILS, ELEVATIONS, BEND DETAILS, ETC. SUBMIT TO ARCHITECT (STRUCTURAL ENGINEER) FOR REVIEW PRIOR TO FABRICATION. PROMPTLY NOTIFY ARCHITECT (STRUCTURAL ENGINEER) PRIOR TO DEVELOPING REINFORCING STEEL SHOP DRAWINGS IF INSUFFICIENT CLEAR DISTANCES BETWEEN REINFORCING STEEL OR OTHER CONGESTION IS ENCOUNTERED. DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE CLEARLY IDENTIFIED ON THE SHOP DRAWINGS. IF SUBMITTAL IS PARTIAL, CLEARLY INDICATE ITEM EXCLUDED FROM SUBMITTAL. SHOP DRAWINGS WILL BE REJECTED IF NOT PREPARED TO THE STANDARDS STATED ABOVE.
- REINFORCING STEEL SHALL BE SPLICED AS SHOWN ON THE DRAWINGS. IF NOT SHOWN, LOCATE SPLICES IN AREAS OF MINIMUM STRESS. LAP (SPICE) LENGTHS ARE AS INDICATED ON THE DRAWINGS.
- MINIMUM CLEARANCES BETWEEN PARALLEL REINFORCING STEEL INCLUDING SPLICED BARS SHALL BE ONE INCH, ONE BAR DIAMETER, OR 4/3 TIMES THE MAXIMUM SIZE AGGREGATE, WHICHEVER IS GREATER. PROVIDE 1 1/2 INCHES OR 1 1/2 BAR DIAMETERS, WHICHEVER IS GREATER, AT COLUMNS ONLY. FOR BUNDLED BARS, MINIMUM CLEAR DISTANCES BETWEEN UNITS OF BUNDLED BARS SHALL BE SAME AS SINGLE BARS EXCEPT BAR DIAMETER IS DERIVED FROM EQUIVALENT TOTAL AREA OF BUNDLE.
- PROVIDE THE FOLLOWING MINIMUM CONCRETE COVERAGE FOR REINFORCING STEEL PLACED IN CAST-IN- PLACE CONCRETE:

A. CONCRETE AGAINST EARTH (UNFORMED)	3"
B. CONCRETE AGAINST EARTH (FORMED)	2"
C. CONCRETE BEAMS AND COLUMNS (STRUCTURAL)	2"
D. CONCRETE SLABS (STRUCTURAL)	3/4" U.N.O.
E. CONCRETE WALLS - INTERIOR FACE	1"
- EXTERIOR FACE	1 - 1 1/2"

STRUCTURAL OBSERVATION PROGRAM

PROJECT ADDRESS: 4119 MAGUIRE DRIVE, MALIBU, CA PERMIT APPL. NO.: _____

DESCRIPTION OF WORK: FIRE REBUILD

OWNER: MAGUIRE DR RESIDENCE ARCHITECT: _____ ENGINEER: SHAHZAIN HUSAIN, P.E.

STRUCTURAL OBSERVATION (ONLY CHECKED ITEMS ARE REQUIRED)			
THE OWNER SHALL EMPLOY THE ENGINEER OR ARCHITECT REGISTERED IN STATE OF CALIFORNIA WHO IS RESPONSIBLE FOR STRUCTURAL DESIGN TO DO STRUCTURAL OBSERVATION			
NAME: <u>SHAHZAIN HUSAIN, P.E.</u>		PHONE: (805) 426-9477 CALIF. REGISTRATION: <u>C62744</u>	
FOUNDATION	ROOF/FLOOR DIA. NAILING	EXTERIOR FRAMING PRIOR TO PREWRAP	FINAL OBSV.
<input checked="" type="checkbox"/> FOOTING, STEM WALLS, PIERS	<input type="checkbox"/> CONCRETE	<input type="checkbox"/> SHEARWALL NAILING	<input checked="" type="checkbox"/> ALL COMPLIANCE TO STRUC. PLANS
<input type="checkbox"/> ANCHOR BOLTS, HOLDOWN LOCATIONS	<input type="checkbox"/> MASONRY	<input type="checkbox"/> HOLDOWNS	
<input type="checkbox"/> CAISSON, PILES, GRADE BEAMS	<input checked="" type="checkbox"/> WOOD	<input type="checkbox"/> RAFTER, JOISTS, BEAMS, & POSTS	
<input type="checkbox"/> STEPPING/RETAINING FOUNDATION, HILLSIDE SPECIAL ANCHORS	<input checked="" type="checkbox"/> BLOCKING	<input type="checkbox"/> MOMENT FRAMES	
<input type="checkbox"/> OTHERS: UNDER PINNING FOOTINGS		<input type="checkbox"/> OTHERS:	

DECLARATION BY OWNER

I, THE OWNER OF THE PROJECT, DECLARE THAT THE ABOVE LISTED FIRM OR INDIVIDUAL IS HIRED BY ME TO BE THE STRUCTURAL OBSERVER.

SIGNATURE _____ DATE _____

DECLARATION BY ARCHITECT OR ENGINEER OF RECORD (REQUIRED IF THE STRUCTURAL OBSERVER IS DIFFERENT FROM THE ARCHITECT OR ENGINEER OF RECORD)

I, THE ARCHITECT OR ENGINEER OF RECORD FOR THE PROJECT, DECLARE THAT THE ABOVE LISTED FIRM OR INDIVIDUAL IS DESIGNATED BY ME TO BE RESPONSIBLE FOR THE STRUCTURAL OBSERVATION.

SIGNATURE _____ LICENSE NO. _____ DATE _____

THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL OBSERVATION, THE CONTRACTOR, AND APPROPRIATE SUBCONTRACTORS SHALL HOLD A PRE-CONSTRUCTION MEETING TO REVIEW THE DETAILS OF STRUCTURAL SYSTEM TO BE STRUCTURALLY OBSERVED.

ROUGH CARPENTRY AND TIMBER SPECIFICATIONS

- ALL FRAMING LUMBER SHALL BE STRESS GRADED DOUGLAS FIR LARCH, STAMPED BY AN APPROVED GRADING AGENCY, WITH MAX. MOISTURE CONTENT OF 19%. LUMBER TO HAVE THE FOLLOWING MINIMUM GRADES UNLESS NOTED OTHERWISE:

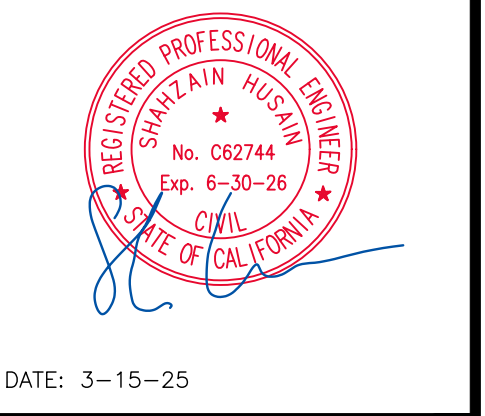
RAFTERS, POSTS, BEAMS, STUDS, PLATES	NO.1 GRADE
BLOCKING	NO.2 GRADE
- PLYWOOD: U.S. PRODUCT STANDARD PS 1-83 AND CBC STANDARD 23A-2 AND CLASSIFIED AS EXPOSURE 1. EACH SHEET OF PLYWOOD SHALL BE IDENTIFIED WITH APPROPRIATE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION.
- PRESSURE TREATED STRUCTURAL LUMBER BEARING ON CONCRETE OR MASONRY: SEE SPECIFICATIONS. PROVIDE HOT DIPPED GALVANIZED OR STAINLESS STEEL FASTENERS AND HARDWARE CONNECTORS AT PRESSURE TREATED STRUCTURAL LUMBER.
- NAILS: COMMON NAILS WITH DIMENSIONAL PROPERTIES COMPLYING WITH CBC TABLE 2304.9.1. INSTALL NAILS IN COMPLIANCE WITH CBC CHAPTER 23, INCLUDING TABLE 2304.9.1 (SEE NAILING SCHEDULE).
- BOLTS: ASTM A307 BOLTS WITH STANDARD CUT WASHER UNDER BOLT HEAD AND NUT. PROVIDE HOLES FOR BOLTS 1/32 TO 1/16 INCH LARGER THAN NOMINAL BOLT DIAMETER. RE-TIGHTEN BOLTS PRIOR TO APPLICATION OF SHEATHING OR FINISH.
- LAG SCREWS: ANSII/ASME STANDARD B18.2.1-81 (REFERENCE 6) INCLUDING APPENDIX L FOR LAG SCREW DIMENSIONS. PRE-DRILL ALL HOLES. HOLE AT SHANK PORTION OF MATCH DIAMETER OF SHANK. HOLES AT THREADED PORTION TO BE 60 TO 75 PERCENT OF SHANK DIAMETER AND EQUAL TO LENGTH OF THREADED PORTION. USE SOAP AND LUBRICANTS TO FACILITATE INSTALLATION. DRIVING WITH HAMMER IS NOT PERMITTED.
- PLATE WASHERS: PROVIDE UNDER HEADS AND NUTS OF BOLTS (INCLUDING ANCHOR BOLTS AT SILL PLATES) AND LAG SCREWS OF THE FOLLOWING SIZES WHEN ANCHORING WOOD:

5/8" DIAMETER, 3/8"x3" SQ.	3/4" DIAMETER, 3/8"x3" SQ.
1" DIAMETER, 3/8"x3-1/2" SQ.	
- WOOD HARDWARE CONNECTORS: MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. COMPLYING WITH ICBO EVALUATION REPORT NOS. 1211, 1258, 1746.
- DO NOT CUT OR NOTCH NEW OR EXISTING WOOD FRAMING UNLESS APPROVED BY ENGINEER IN WRITING PRIOR TO PERFORMING THE WORK.
- ALL NAILING, BOLTING, NOTCHING, CUTTING AND BORING OF WOOD SHALL CONFORM TO CALIFORNIA BUILDING CODE.
- ALL WOOD FRAMING SHALL COMPLY TO CHAPTER 23A OF THE CBC U.N.O.
- 2x Solid BLOCKING SHALL BE PLACED BETWEEN JOISTS AND RAFTERS AT ALL SUPPORTS
- NOTCHING OR CUTTING STRUCTURAL LUMBER: NOT PERMITTED UNLESS SPECIFICALLY DETAILED OR APPROVED BY STRUCTURAL ENGINEER.
- LATERAL SUPPORT FOR BEAMS, RAFTERS AND JOISTS: CBC SECTION 2320A.8.3.
- ALL DOUBLE STUDS AND POSTS SHALL BE CONTINUOUS DOWN TO FOUNDATION. SOLID BLOCKED AT FLOOR LEVELS.
- ALL DOUBLE ROOF RAFTERS AND FLOOR JOISTS SHALL BE NAILED TOGETHER WITH 16D AT 6" O.C. STAGGERED.
- ALL JOISTS SHALL HAVE MINIMUM BEARING OF 1 1/2" ON WOOD OR METAL AND NOT LESS 3" ON MASONRY.
- ALL FLOOR JOISTS AND ROOF RAFTERS SHALL BEAR WITHIN 4" OF THE STUD BELOW.

NAILING SCHEDULE (TABLE 2304.9.1)

JOIST TO SILL OR GIRDER, TOE NAIL	3-8d
BRIDGING TO JOIST, TOENAIL EACH END	2-8d
SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d@16"oc
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	3-16d per 16"
TOP PLATE TO STUD, END NAIL	2-16d
STUD TO SOLE PLATE	4-8d, toenail, or 2-16d, endnail
DOUBLE STUDS, FACE NAIL	16d@24"oc
DOUBLE TOP PLATES, TYPICAL FACE NAIL	16d@16"oc
DOUBLE TOP PLATE, LAP SPlice	8-16d
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3-8d
RIM JOIST TO TOP PLATE, TOE NAIL	8d@6"oc
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2-16d
CEILING JOISTS TO PLATE, TOENAIL	3-8d
CONTINUOUS HEADER TO STUD, TOENAIL	4-8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3-16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3-16d
RAFTER TO PLATE, FACE NAIL	3-8d
BUILT-UP CONER STUDS	16d@24"oc
20 PLANKS	2-16d@each bearing

CLIENT		
DATE ISSUED:		
MARCH 15, 2025		
NO.	REVISIONS	DATE
1	PLAN CHECK CORRECTIONS	3-12-25
2		
3		
4		
5		
6		



DATE: 3-15-25

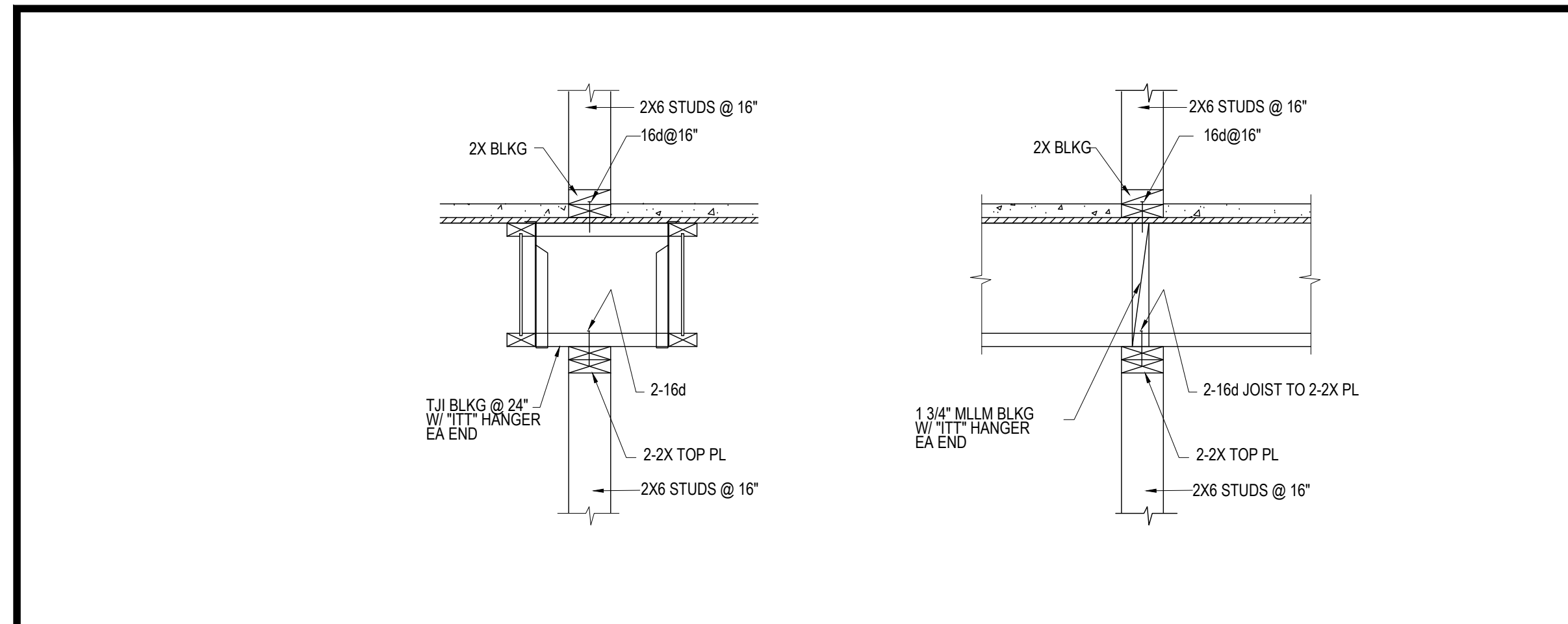
SHEET TITLE:

GENERAL NOTES

JOB NO. 2404-038	DRAWING NO.
SCALE : PER PLAN	S1.0
DRAWN BY: MG	
CHECKED BY: SH	

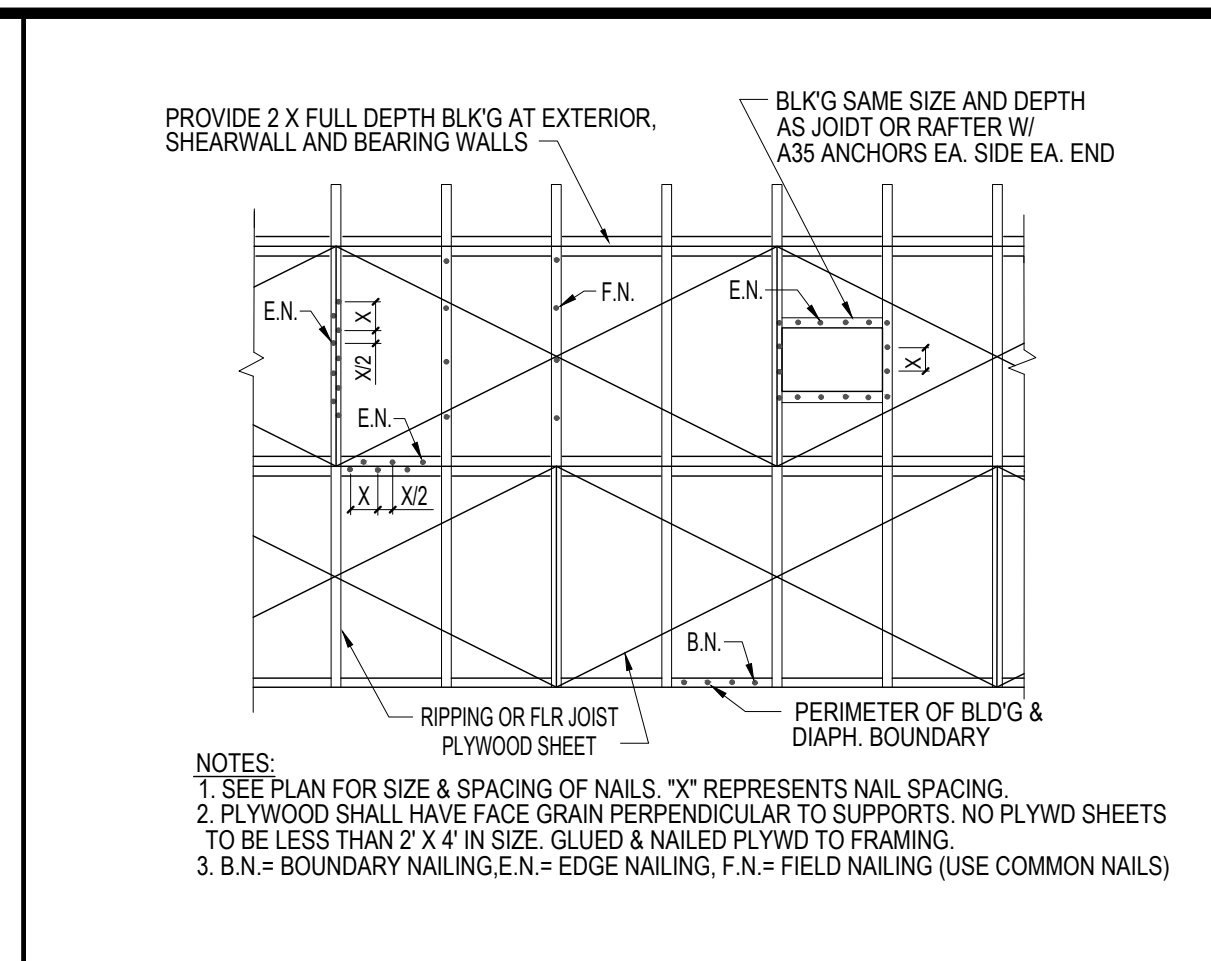


**THE MAGUIRE RD RESIDENCE
FIRE REBUILD
4119 MAGUIRE ROAD
MALIBU, CA 90265**



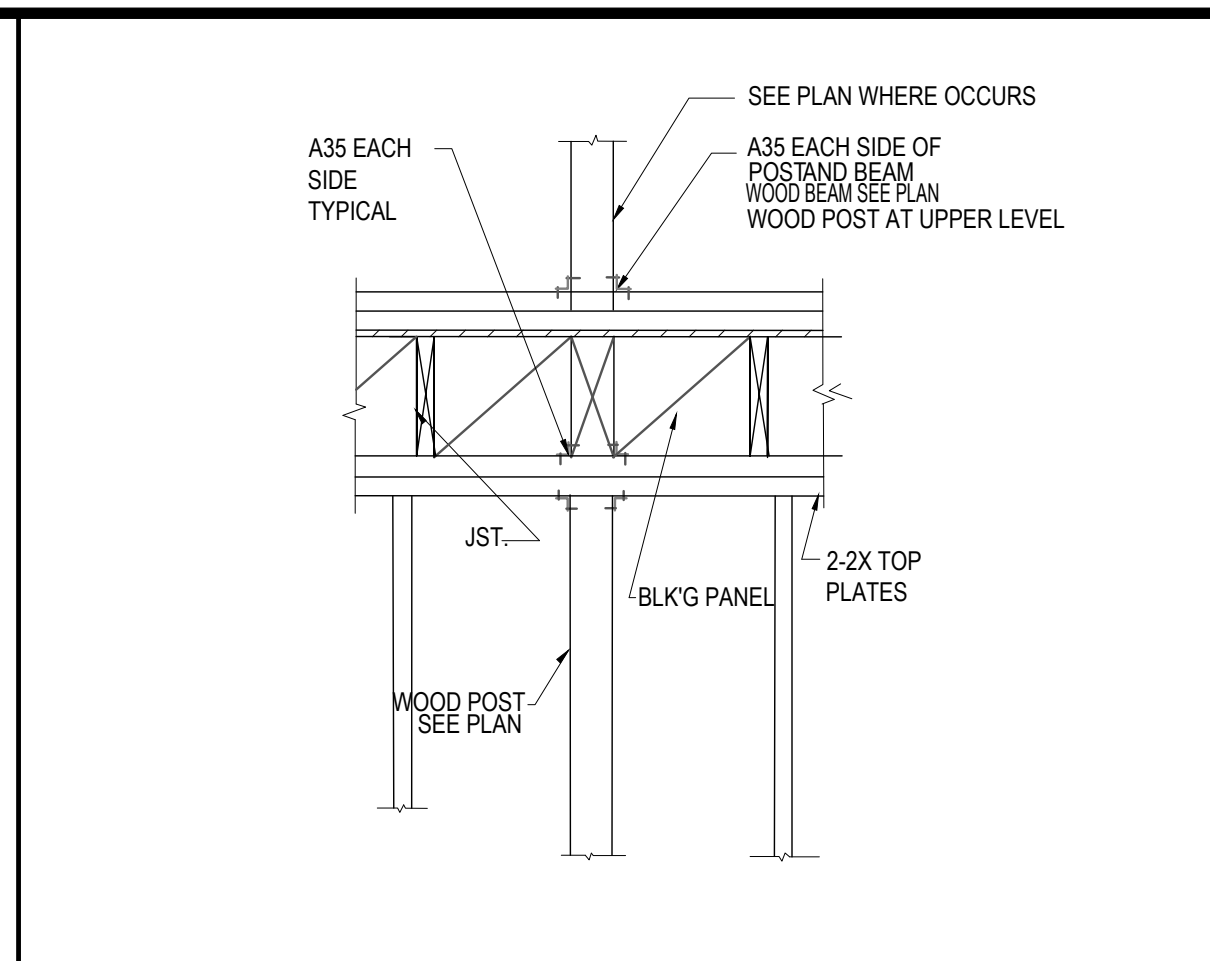
TYPICAL NON-BEARING PARTITION WALL AT TJI

13



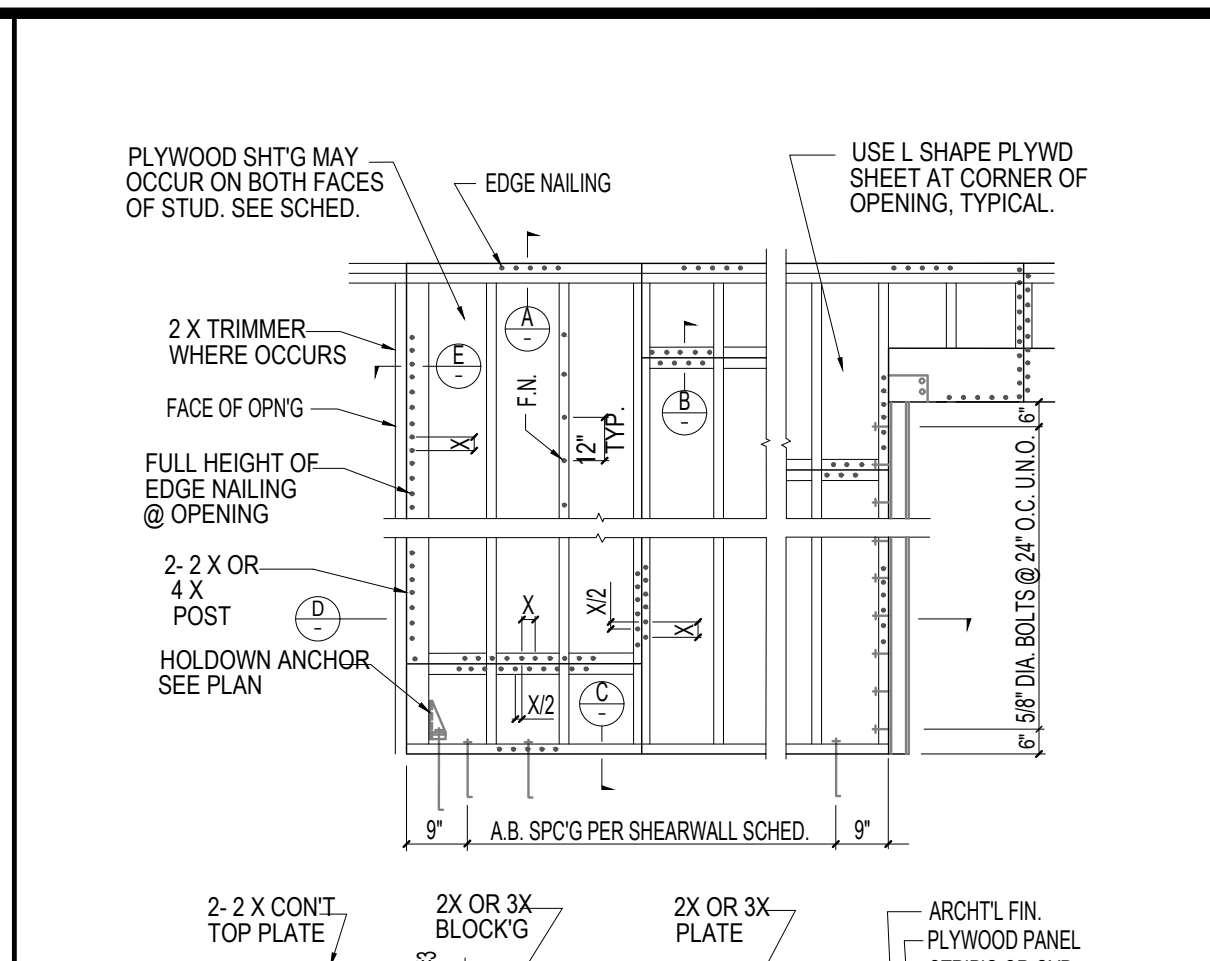
PLYWOOD FLOOR/ROOF SHEATHING

9



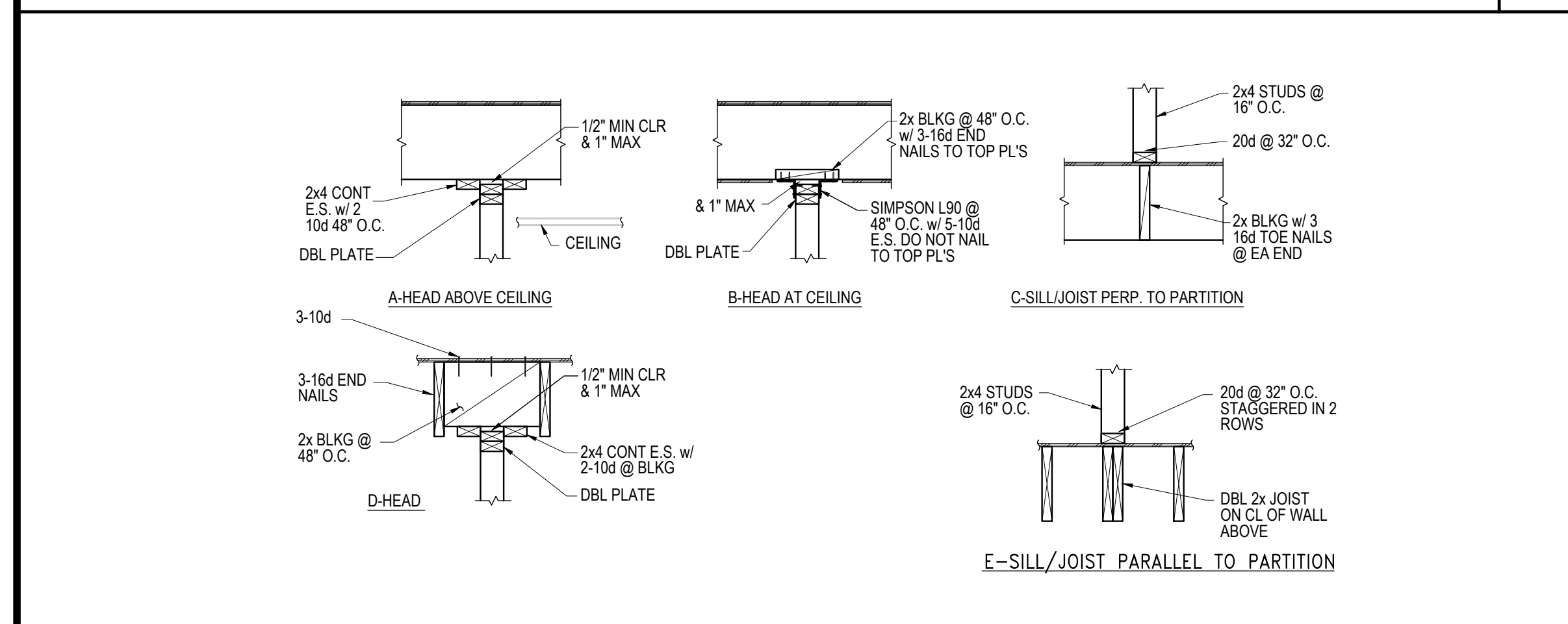
TYPICAL BEAM TO WALL CONNECTION

5



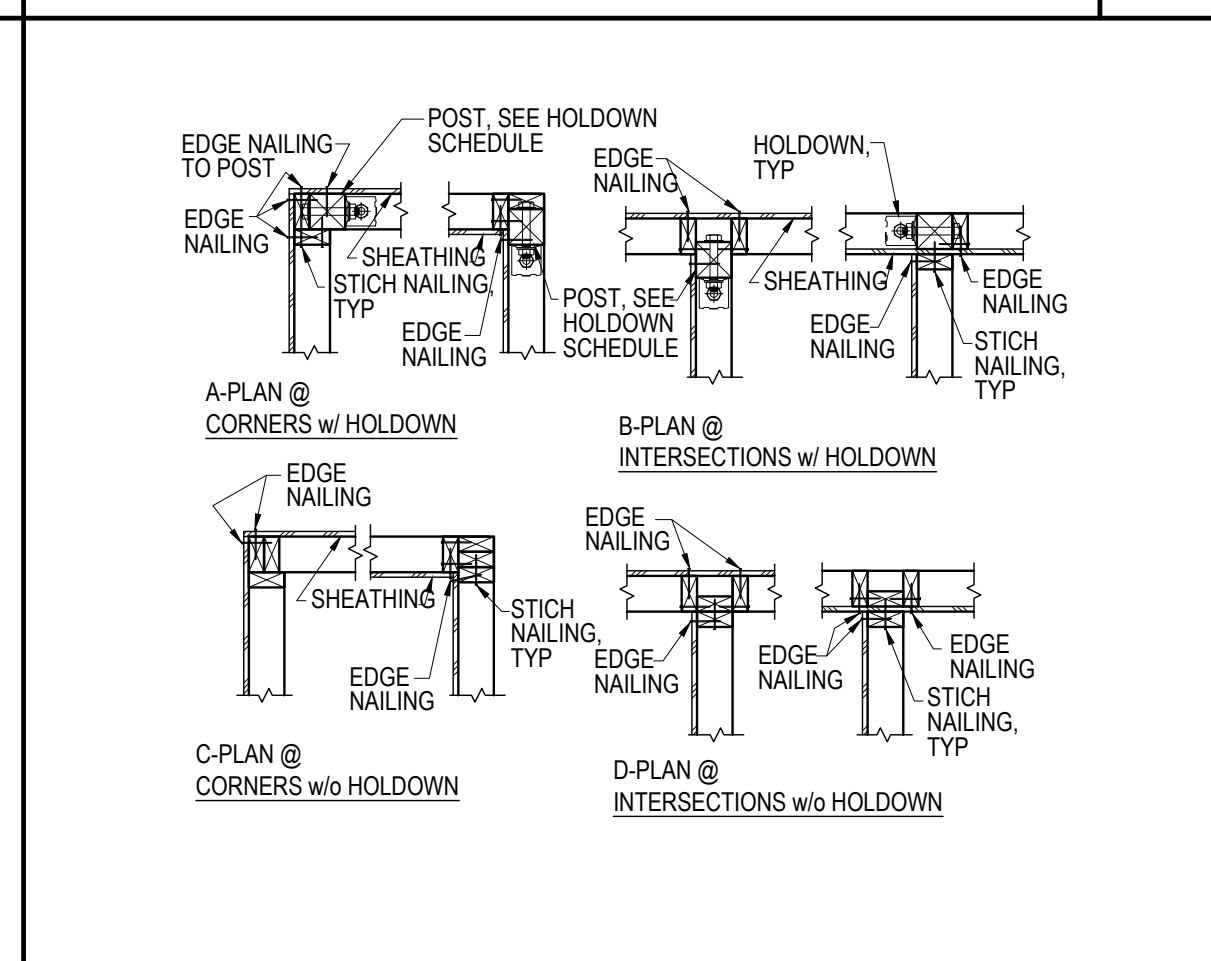
TYPICAL PLYWOOD SHEAR PANEL DETAIL

2



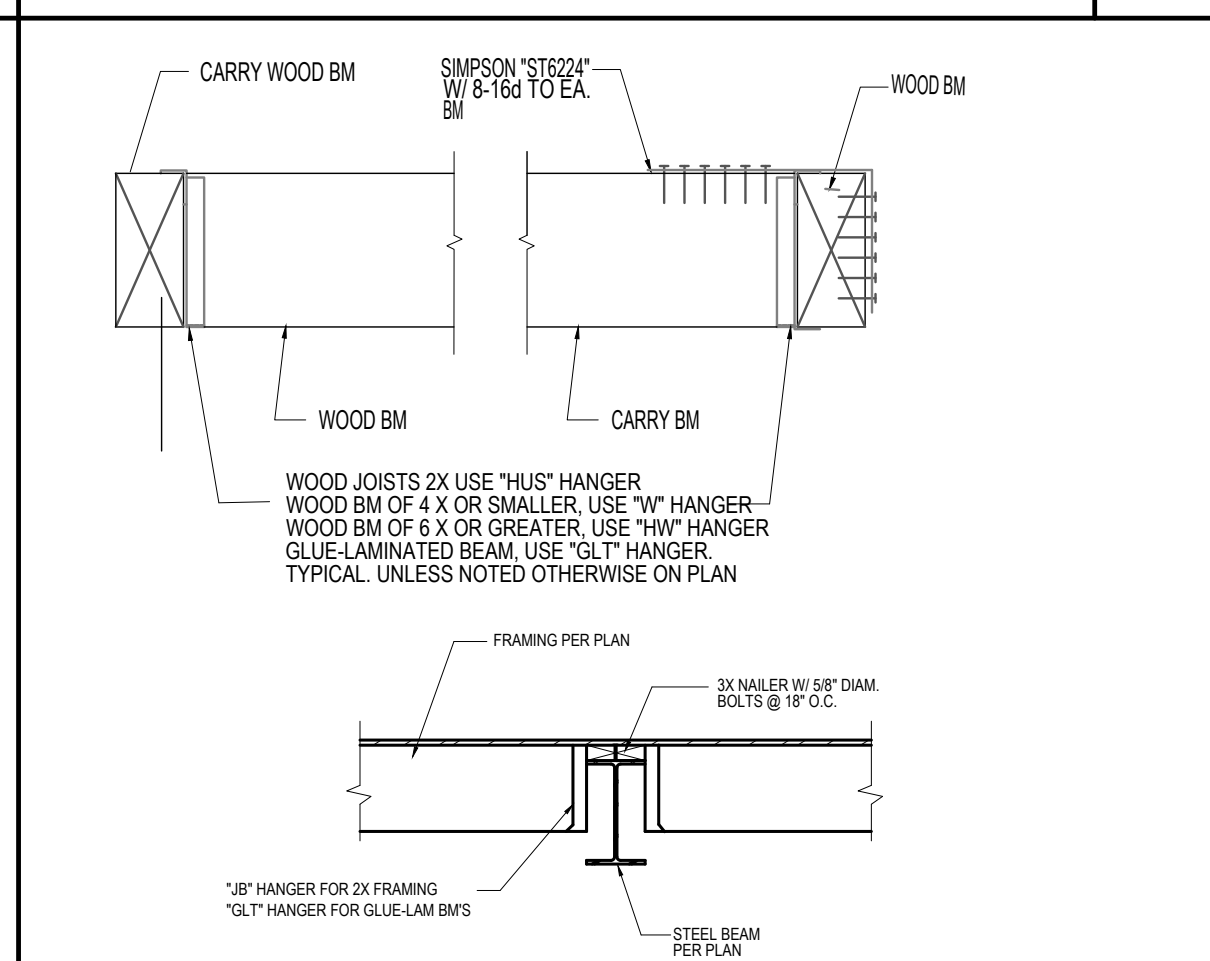
NON-BEARING PARTITION

12



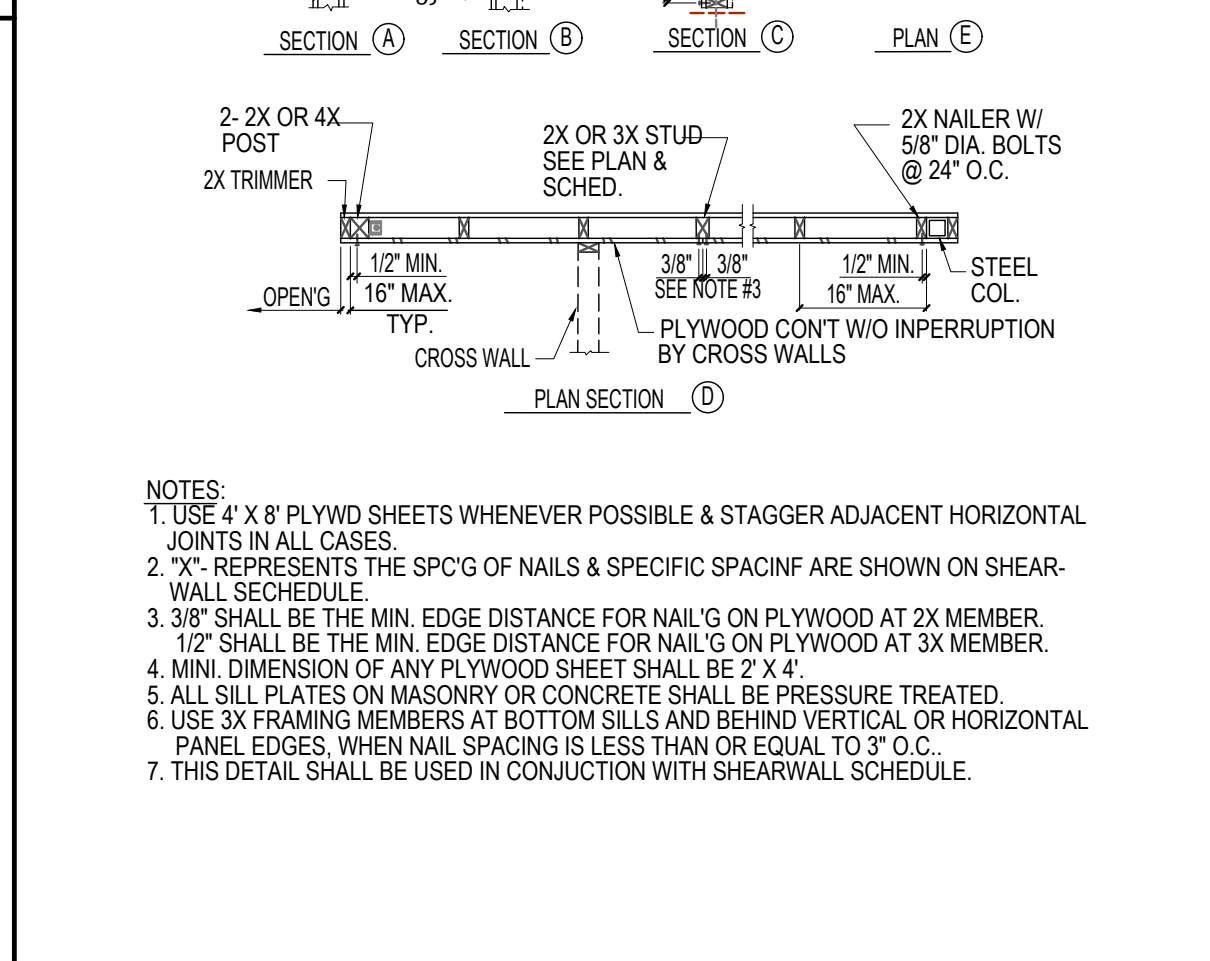
TYPICAL SHEAR WALL CORNERS

8



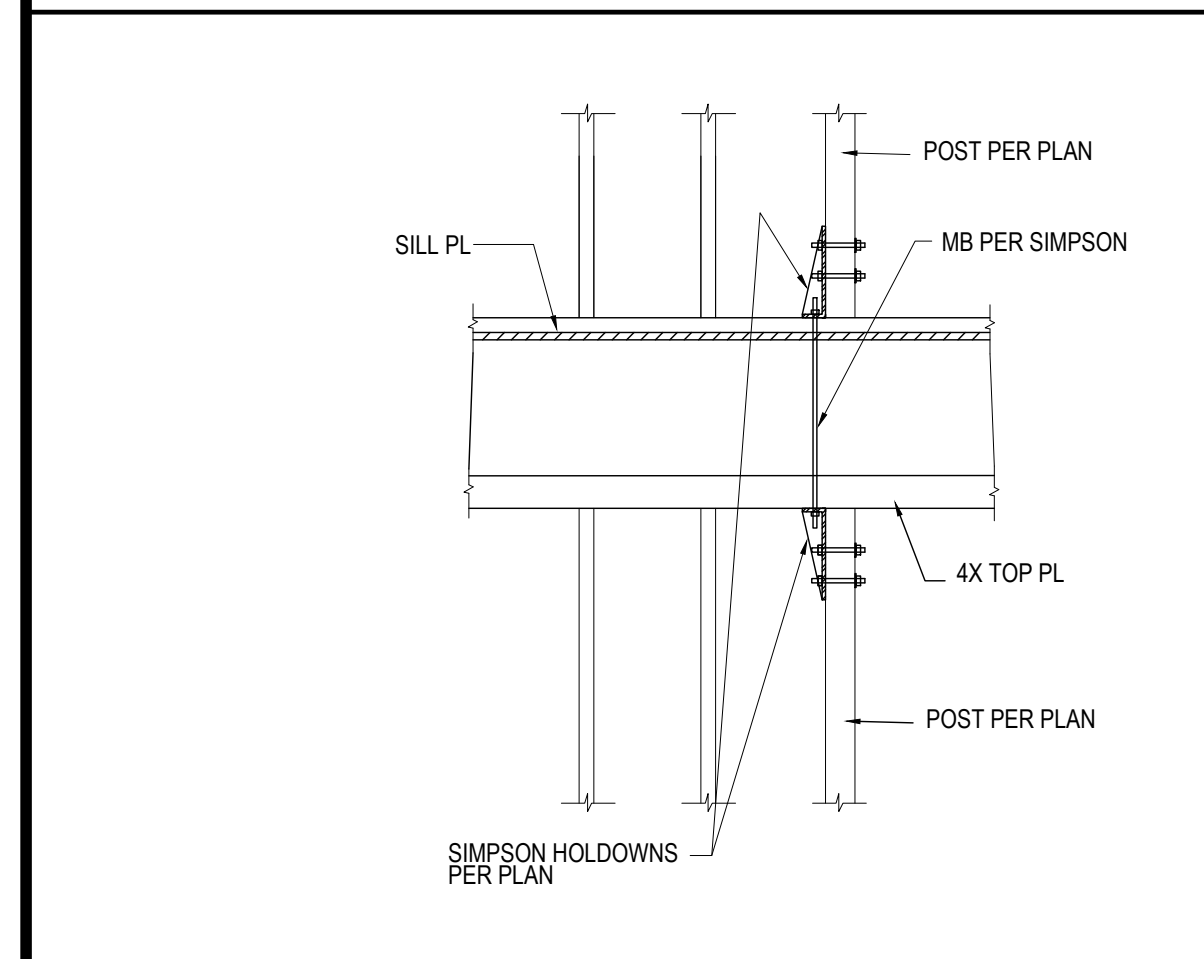
TYPICAL BEAM TO BEAM DETAILS

4



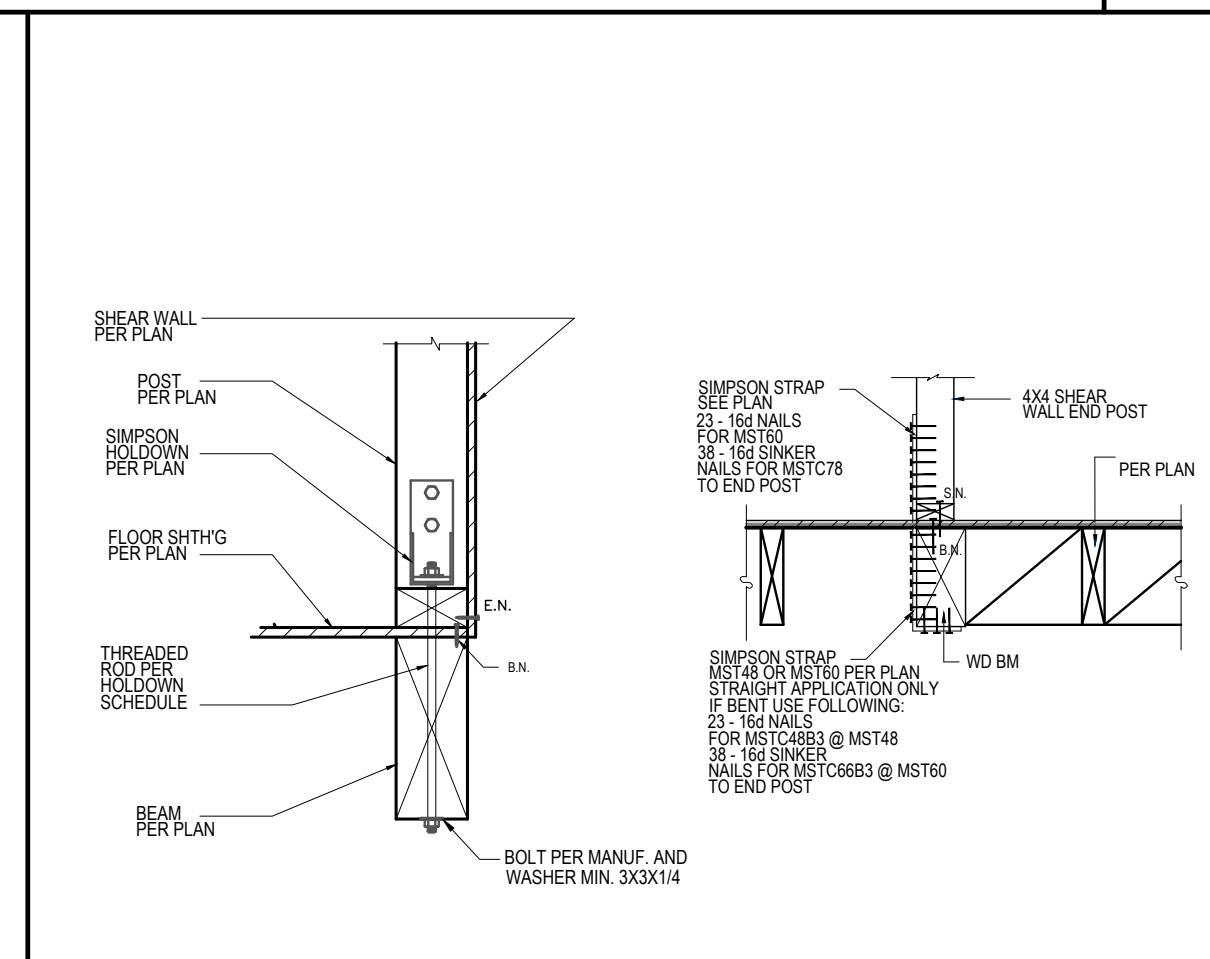
TYPICAL PLYWOOD SHEAR PANEL DETAIL

2



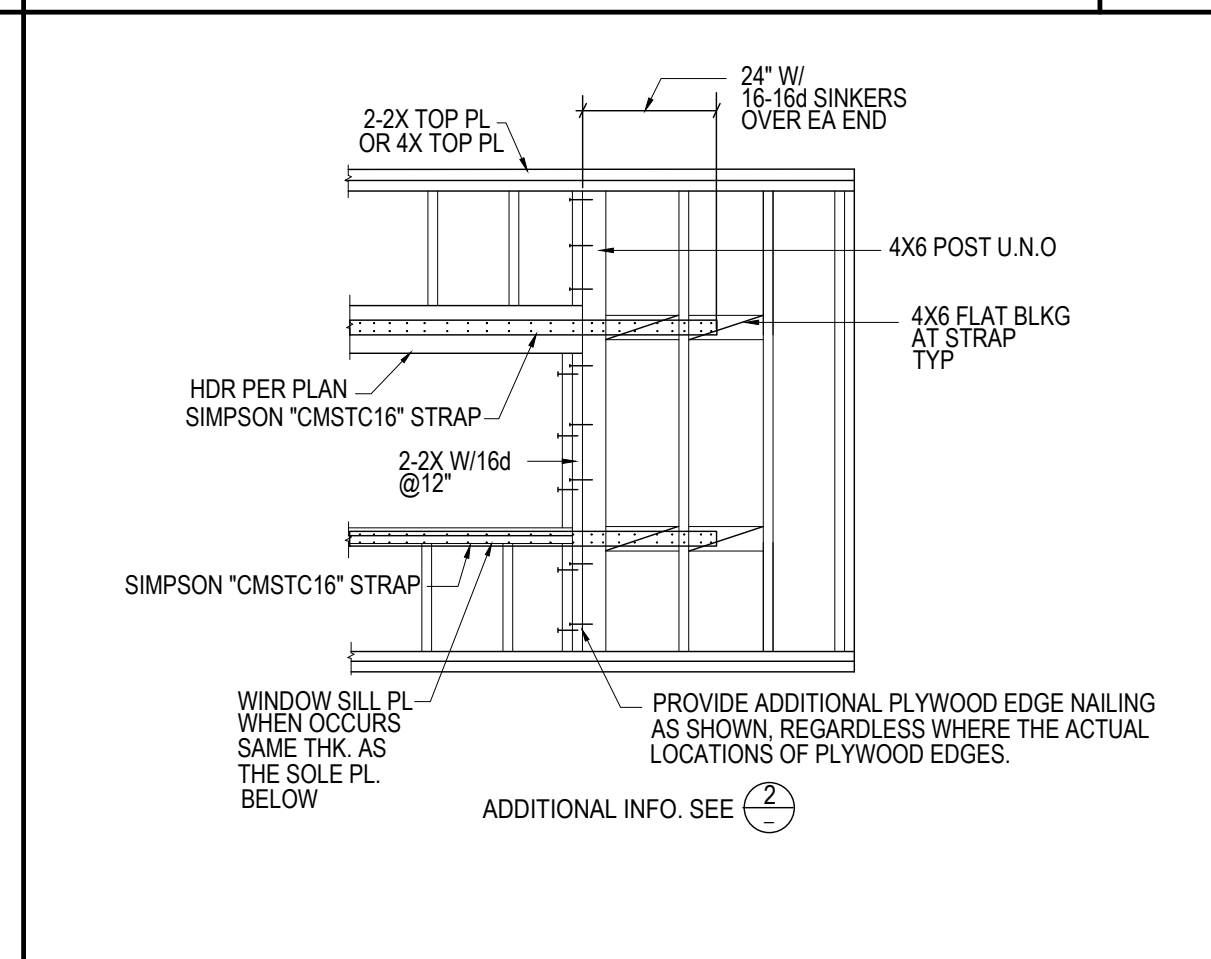
FLOOR HOLDDOWN

15



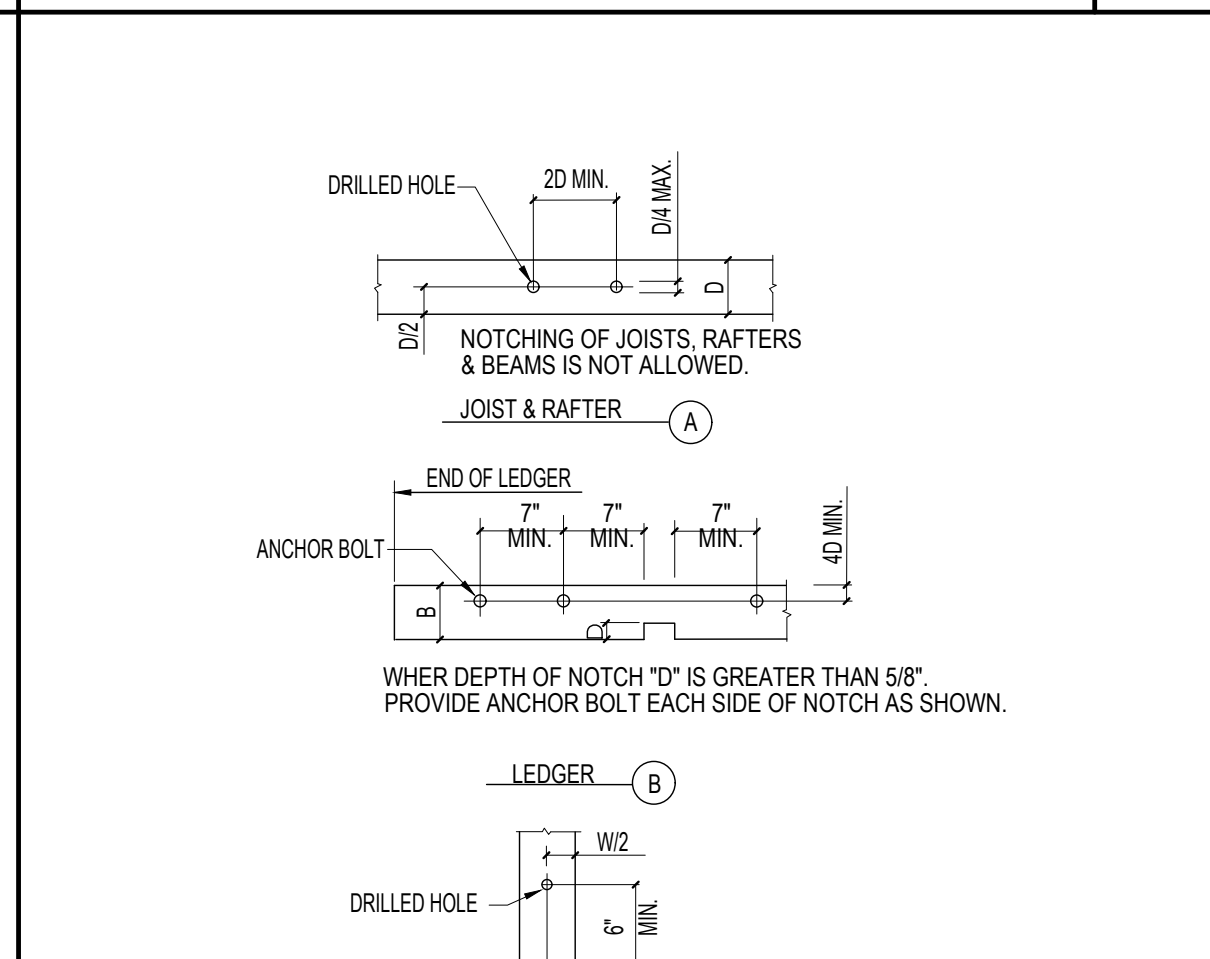
BEAM HOLDDOWN

11



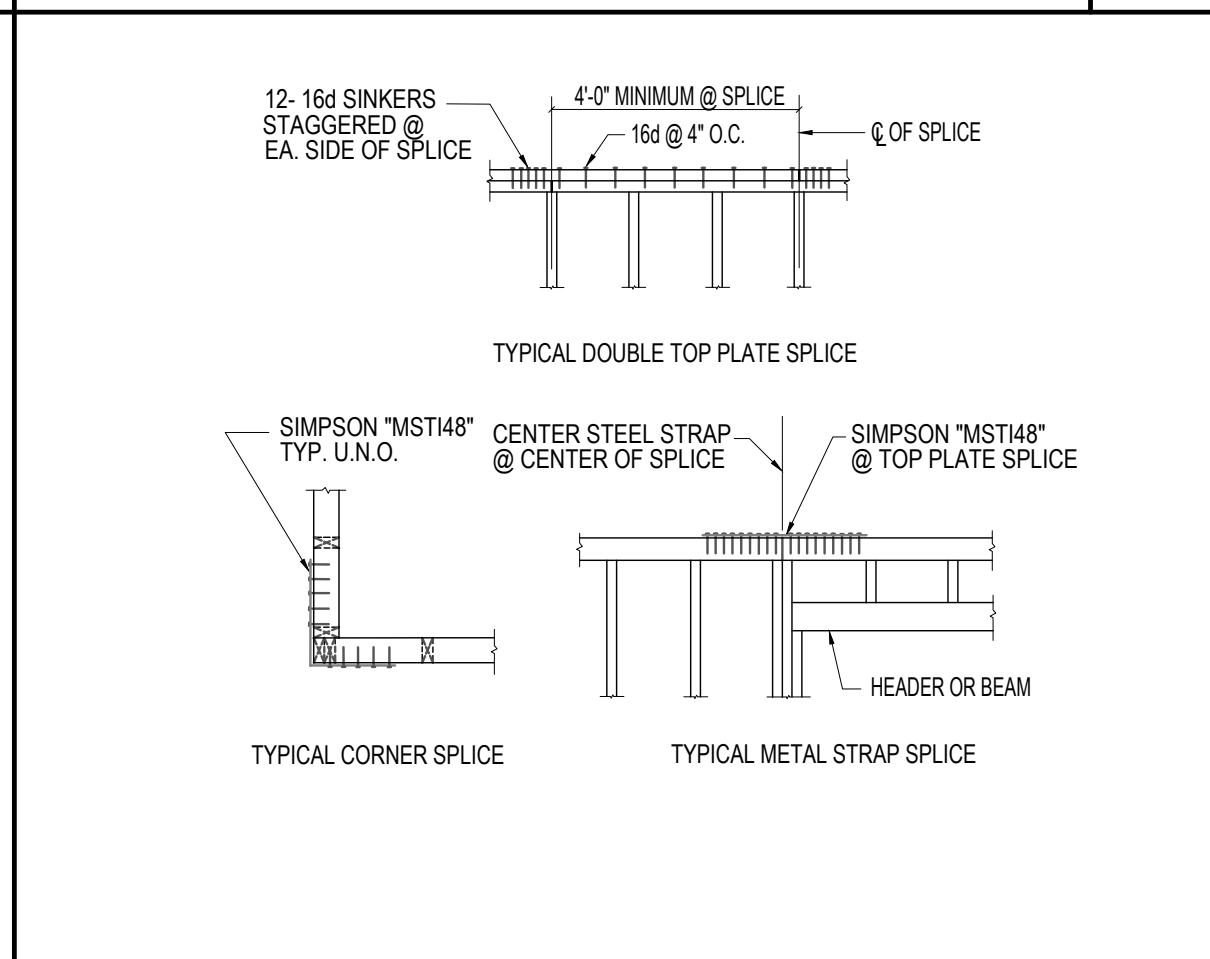
TYPICAL PLYWOOD S.W. AT OPENING

7



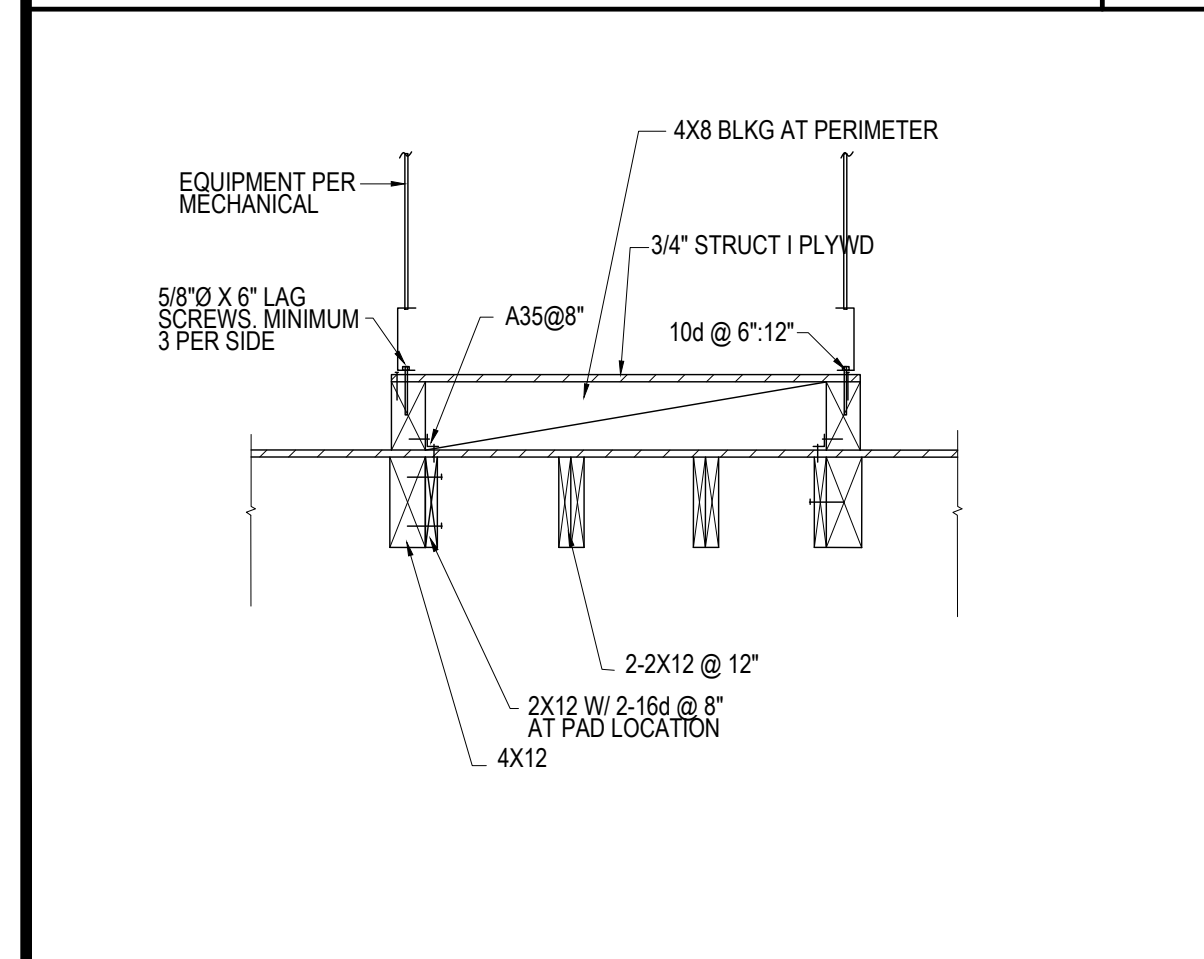
NOTCH AND HOLES IN WOOD FRAMING

3



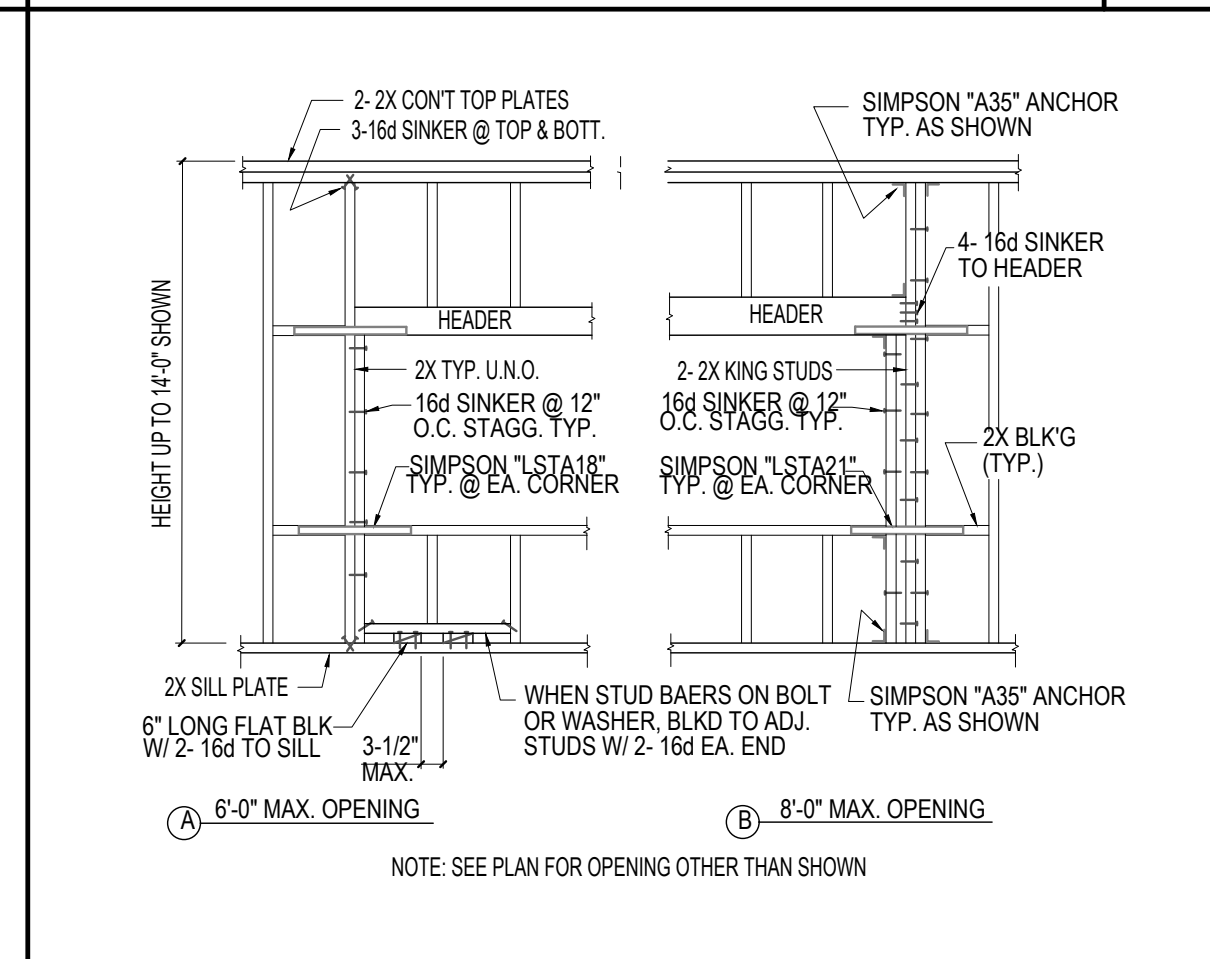
TYPICAL TOP PLATE SPLICE DETAIL

1



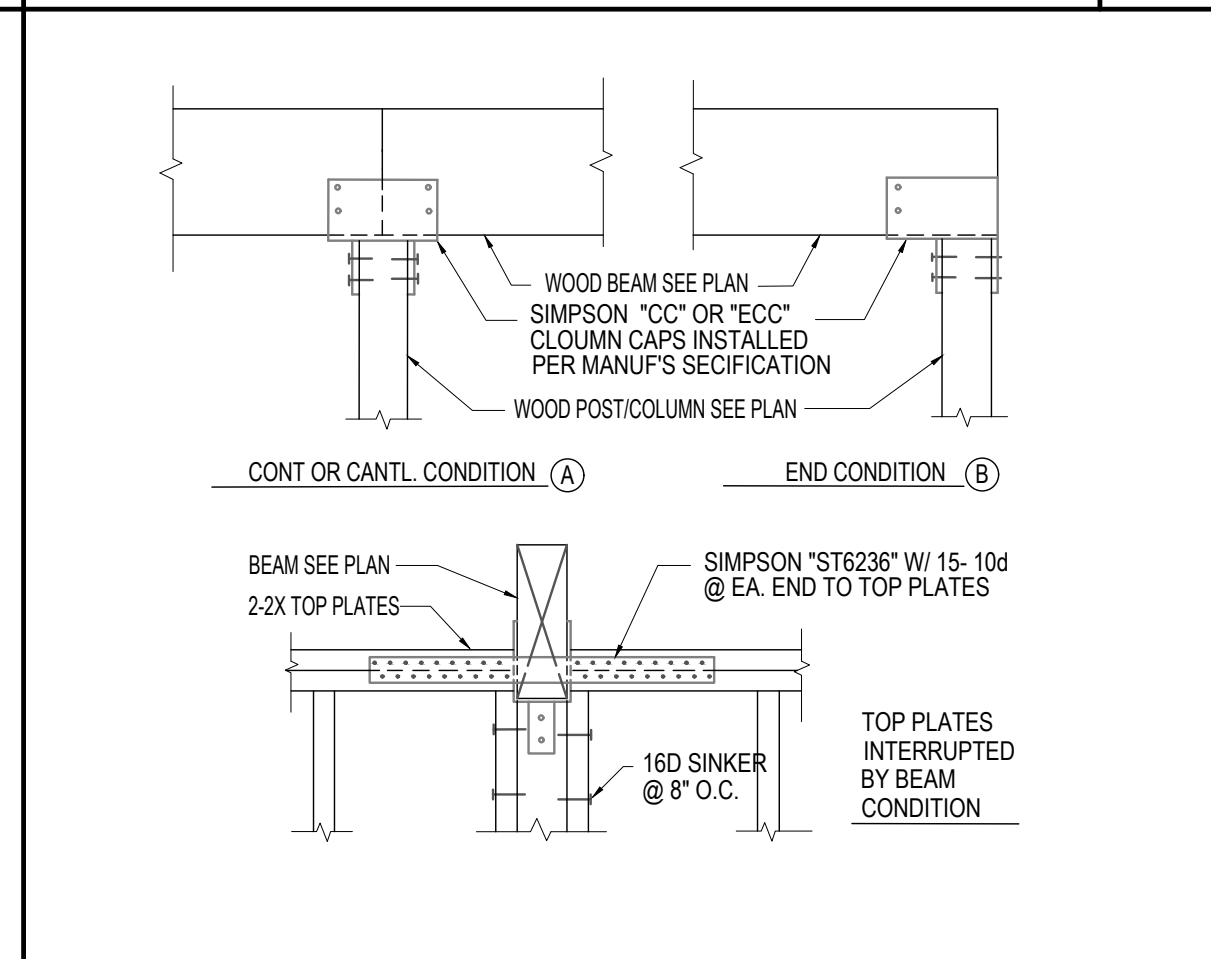
TYPICAL ROOF TOP EQUIP. PLATF.

14



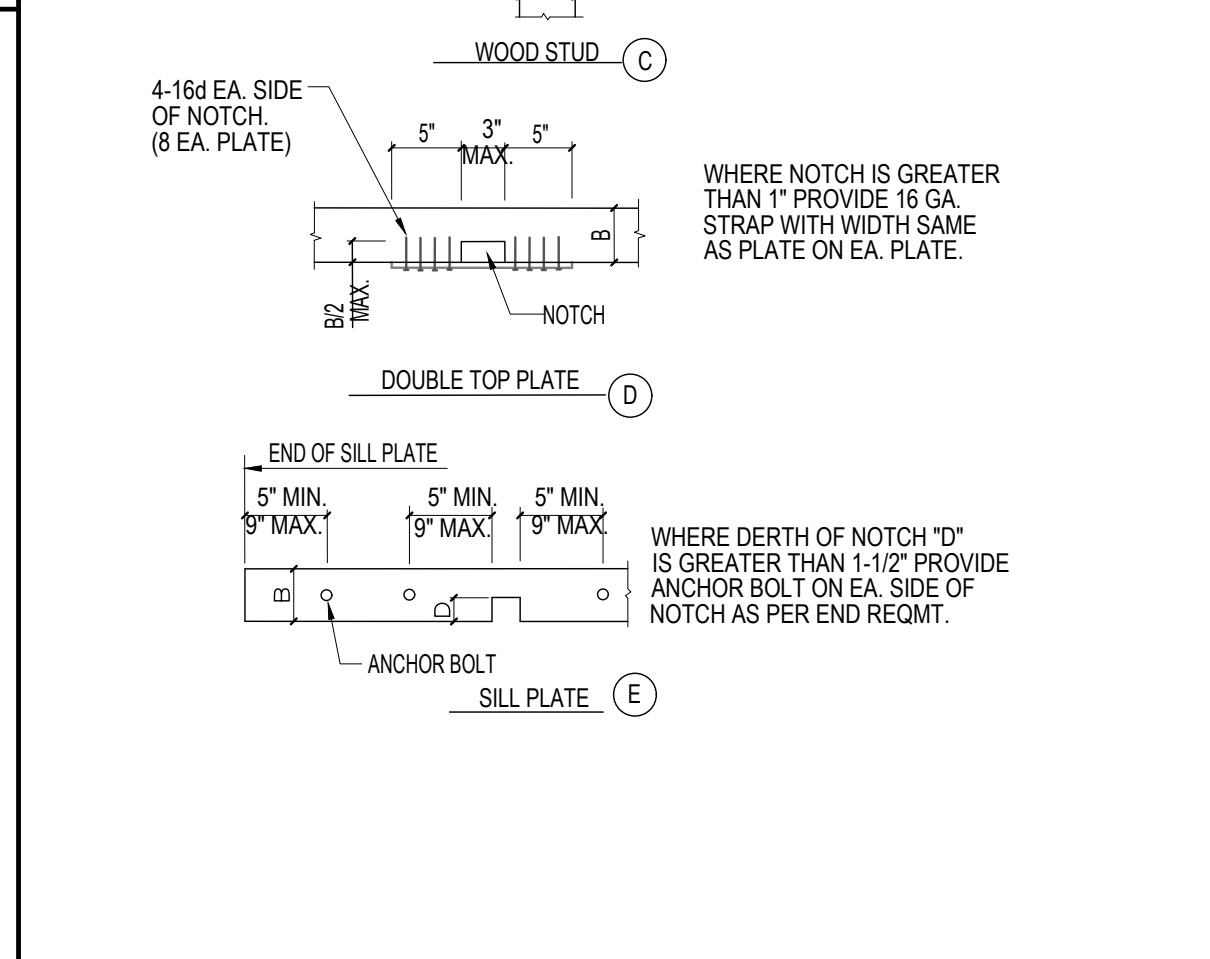
TYPICAL NON-BEARING HEADER

10



TYPICAL BEAM TO POST DETAILS

6



DRAG TYPICAL

1A



THE MAGUIRE RD RESIDENCE
FIRE REBUILD
4119 MAGUIRE ROAD
MALIBU, CA 90205

CLIENT: _____

DATE ISSUED: MARCH 15, 2025

NO.	REVISIONS	DATE
▲	PLAN CHECK CORRECTIONS	3-12-25
▲		
▲		
▲		
▲		
▲		



DATE: 3-15-25
SHEET TITLE:

STRUCTURAL
TYPICAL DETAILS

JOB NO. 2404-038 DRAWING NO.
SCALE: PER PLAN
DRAWN BY: MG
CHECKED BY: SH
S1.2

Statement of Special Inspections
LABC Form 12a Page ___ of ___

Project Information
The following information should be included in the statement of special inspections:
Project Address: 4119 MAGUIRE ROAD
Permit/Plan Check No: _____
Engineer and Architect: SHAHZAIN HUSAIN, P.E.

Building Permit
Scope of Work: FIRE REBUILD SFR

Describe all work that requires special inspections and denote whether required inspections and verifications of materials are continuous or periodic (for larger projects see LABC Form 12b):

1. EPOXY BOLT AND DOWEL
2. FIELD WELDING
3. WOOD LATERAL RESISTING SYSTEM
4. CONCRETE > 2,500 PSI
5. SOIL FILL PLACEMENT
6. STRUCTURAL WOOD: SFRS SHEARWALLS AND DIAGPH. NAILING
7. _____

Design License Professional In Responsible Charge: SHAHZAIN HUSAIN
Print Signature Date

Statement of Special Inspection
Periodic and Continuous Inspection Schedule
LABC Form 12b Page ___ of ___

Masonry Level 1 - Verification / Inspection - (Continued)	Continuous	Periodic
d. Construction of mortar joints.	X	—
7. Grout placement shall be verified to ensure compliance:	X	—
a. Grouting of prestressing bonded tendons.	X	X
8. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.	—	X
Soils - Verification / Inspection See Table 1704.7		
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	—	X
2. Verify excavations are extended to proper depth and have reached proper material.	—	X
3. Perform classification and testing of compacted fill materials.	—	X
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	X	—
5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	—	X
Deep Driven Foundation Elements - Verification / Inspection See Table 1704.8		
1. Verify element materials, sizes and lengths comply with the requirements.	X	—
2. Determine capacities of test elements and conduct additional load tests, as required.	X	—
3. Observe driving operations and maintain complete and accurate records for each element.	X	—
4. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetrations, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element.	X	—
5. For steel elements, perform additional inspections in accordance with Section 1704.3.	—	—
6. For concrete elements and concrete-filled elements, perform additional inspections in accordance with Section 1704.4.	—	—
7. For specialty elements, perform additional inspections in accordance with Section 1704.5.	—	—
Cast-In-Place Deep Foundation Elements - Verification / Inspection See Table 1704.9		
1. Observe drilling operations and maintain complete and accurate records for each element.	X	—
2. Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes.	X	—
3. For concrete elements, perform additional inspections in accordance with Section 1704.4.	—	X
Other Materials - Verification / Inspection		
Other Work - Verification / Inspection		

Statement of Special Inspection
Periodic and Continuous Inspection Schedule
LABC Form 12b Page ___ of ___

Steel Construction - Verification / Inspection	Continuous	Periodic
See Table 1704.3 - Required Verification and Inspection of Steel Construction		
1. Material verification of high-strength bolts, nuts and washers		
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	—	X
b. Manufacturer's certificate of compliance required.	—	X
2. Inspection of high-strength bolting		
a. Straight joints.	—	X
b. Pretensioned and slip-critical joints using turn-of-nut with matchmarking, twist-of-bolt or direct tension indicator methods of installation.	—	X
c. Pretensioned and slip-critical joints using turn-of-bolt without matchmarking or calibrated wrench methods of installation.	X	—
3. Material verification of structural steel and cold-formed steel deck:		
a. For structural steel, identification markings to conform to AISC 360.	—	X
b. For other steel, identification markings to conform to ASTM Standards specified in the approved construction documents.	—	X
c. Manufacturer's certified test reports.	—	X
4. Material verification of weld filler materials:		
a. Identification markings to conform to AWS specification in the approved construction documents.	—	X
b. Manufacturer's certificate of compliance required.	—	X
5. Inspection of welding:		
a. Structural steel and cold-formed steel deck:		
1. Complete and partial joint penetration groove welds.	X	—
2. Multi-pass fillet welds.	X	—
3. Single-pass fillet welds >5/16"	X	—
4. Plug and slot welds.	X	—
5. Single-pass fillet welds <5/16"	—	X
6. Floor and roof deck welds.	—	—
b. Reinforcing steel:		
1. Verification of weldability of reinforcing steel other than ASTM A 706.	—	X
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.	X	—
3. Shear reinforcement.	X	—
4. Other reinforcing steel.	—	X
6. Inspection of steel frame joint details for compliance:		
d. Details such as bracing and stiffening.	—	X
e. Member locations.	—	X
f. Application of joint details at each connection.	—	X

Statement of Special Inspection
Periodic and Continuous Inspection Schedule
LABC Form 12b Page ___ of ___

Concrete Construction - Verification / Inspection	Continuous	Periodic
See Table 1704.4 - Required Verification and Inspection of Concrete Construction		
1. Inspection of reinforcing steel welding in accordance with Table 1704.3 Item 5b.	—	X
2. Inspection of bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased or where strength design is used.	X	—
3. Inspection of anchors installed in hardened concrete.	—	X
4. Verifying use of required design mix.	—	X
5. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	—
6. Inspection of concrete and shotcrete placement for proper application techniques.	X	—
7. Inspection for maintenance of specified curing temperatures and techniques.	X	—
8. Inspection of prestressed concrete:		
a. Application of prestressing forces.	X	—
b. Grouting of bonded prestressing tendons in the seismic-force-resisting system.	X	—
9. Erection of precast concrete members.	—	X
10. Verification of in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	—	X
11. Inspect framework for shape, location and dimensions of the concrete member being formed.	—	X
Masonry Level 1 - Verification / Inspection See Table 1704.5 - Level 1 Special Inspection		
1. Compliance with required inspection provision of the construction documents and the approved submittals shall be verified.	—	X
2. Verification of Fm and FAAC prior to construction except where specifically exempted by this code.	—	X
3. Verification of slump flow and VSI as delivered to the site for self-consolidating grout.	X	—
4. As masonry construction begins, the following shall be verified to ensure compliance:		
a. Proportions of site-prepared mortar.	—	X
b. Construction of mortar joints.	—	X
c. Location of reinforcement, connectors, prestressing tendons and anchorages.	—	X
d. Prestressing Technique.	—	X
e. Grade and size of prestressing tendons and anchorages.	—	X
5. During construction the inspection program shall verify:		
a. Size and location of structural elements.	—	X
b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.	—	X
c. Specified size, grade and type of reinforcement, anchor bolts, prestressing tendons and anchorages.	—	X
d. Welding of reinforcing bars.	X	—
e. Preparation, construction and protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90 degrees F).	—	X
f. Application and measurement of prestressing force:		
a. Grout space is clean.	—	X
b. Placement of reinforcement and connectors, and prestressing tendons and	—	X



THE MAGUIRE RD RESIDENCE
FIRE REBUILD
4119 MAGUIRE ROAD
MALIBU, CA 90265

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△	PLAN CHECK CORRECTIONS	3-12-25
△		
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DATE: 3-15-25

SHEET TITLE:

SPECIAL INSPECTION

JOB NO. 2404-038 DRAWING NO.
SCALE: PER PLAN
DRAWN BY: MG
CHECKED BY: SH
S1.4

**THE MAGUIRE RD RESIDENCE
FIRE REBUILD
4119 MAGUIRE ROAD
MALIBU, CA 90265**

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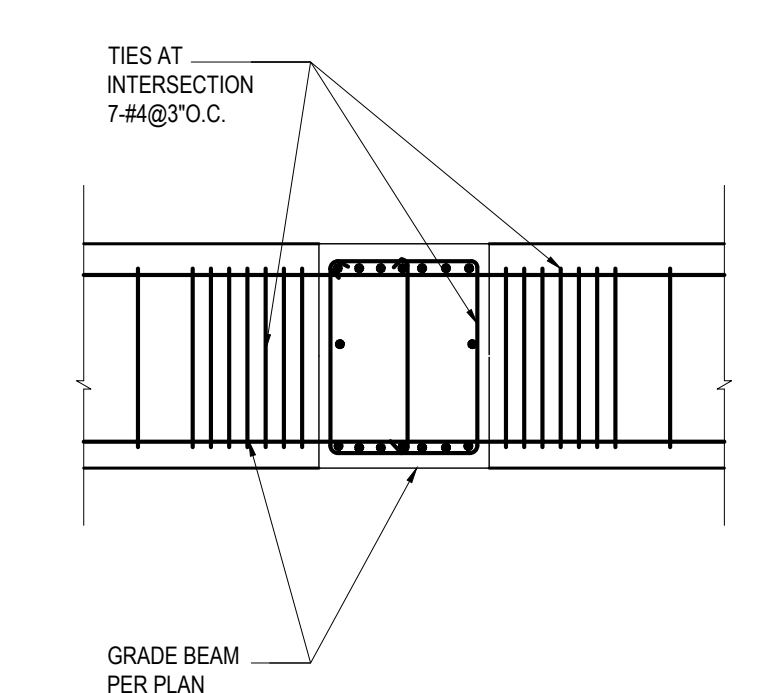
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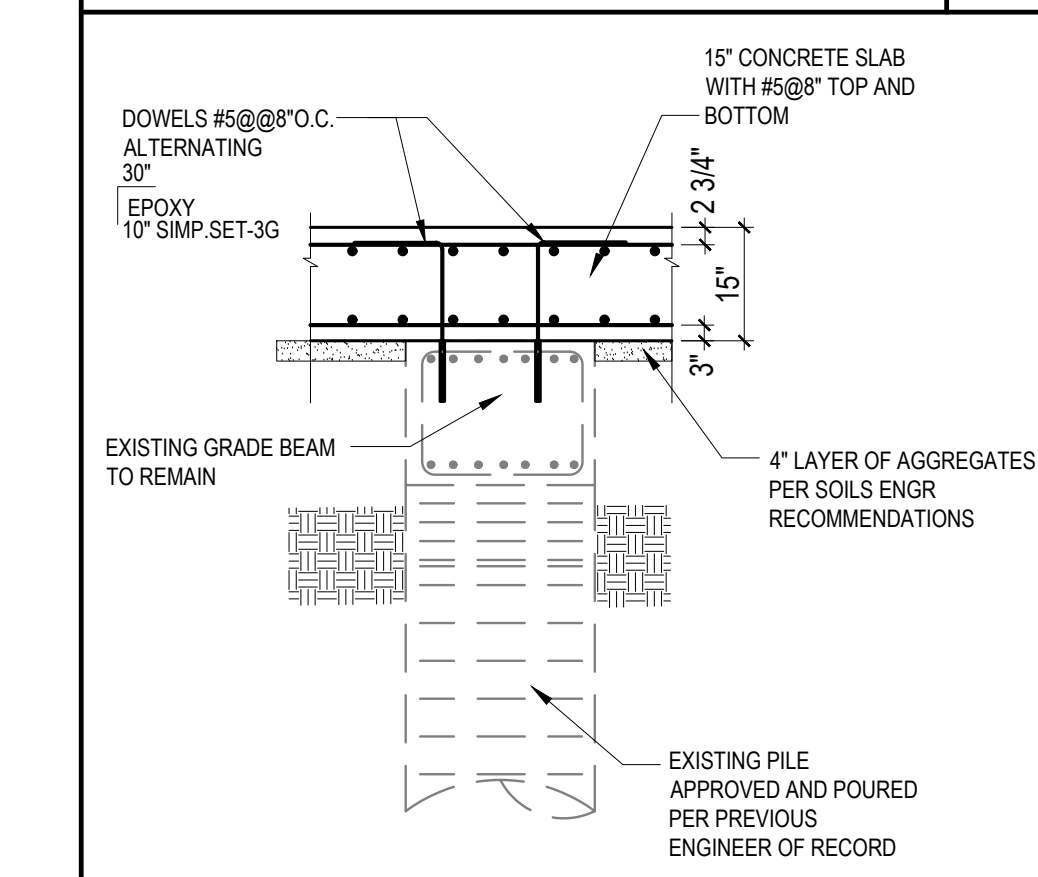
FOUNDATION PLAN

JOB NO. 2404-038 DRAWING NO.
SCALE 1/4" = 1'-0"
DRAWN BY: MG
CHECKED BY: SH

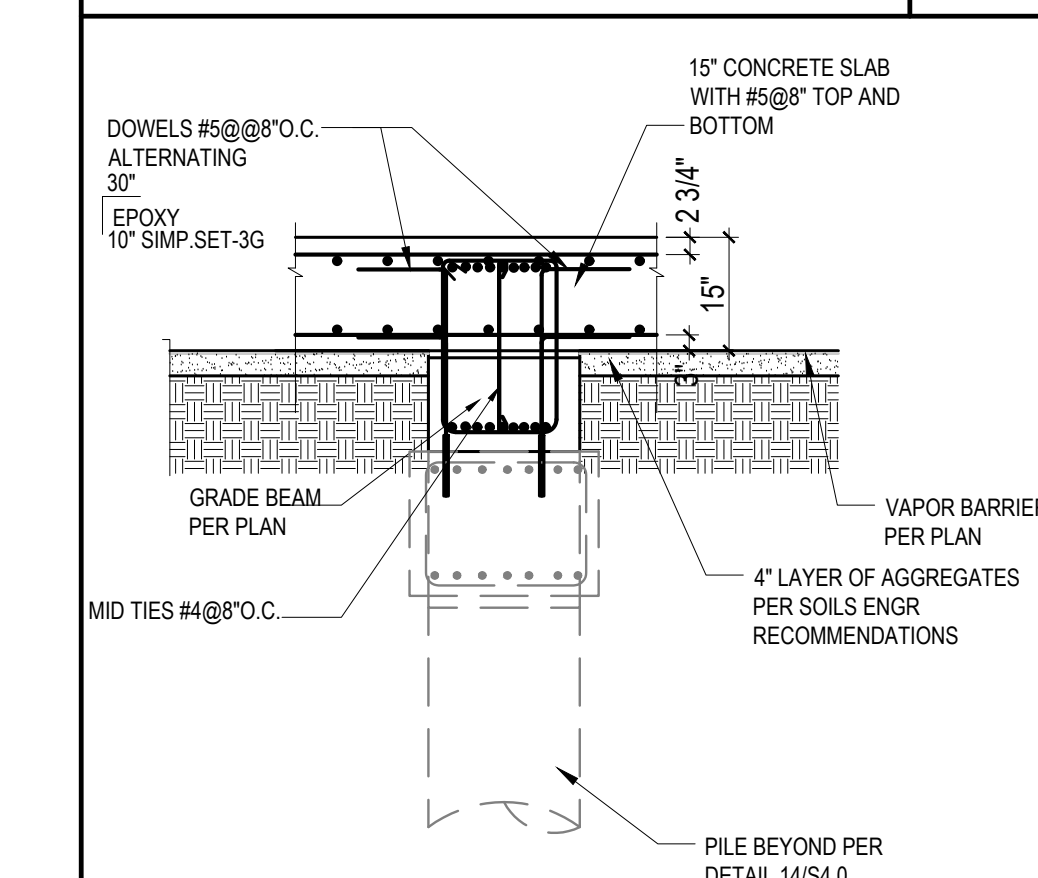
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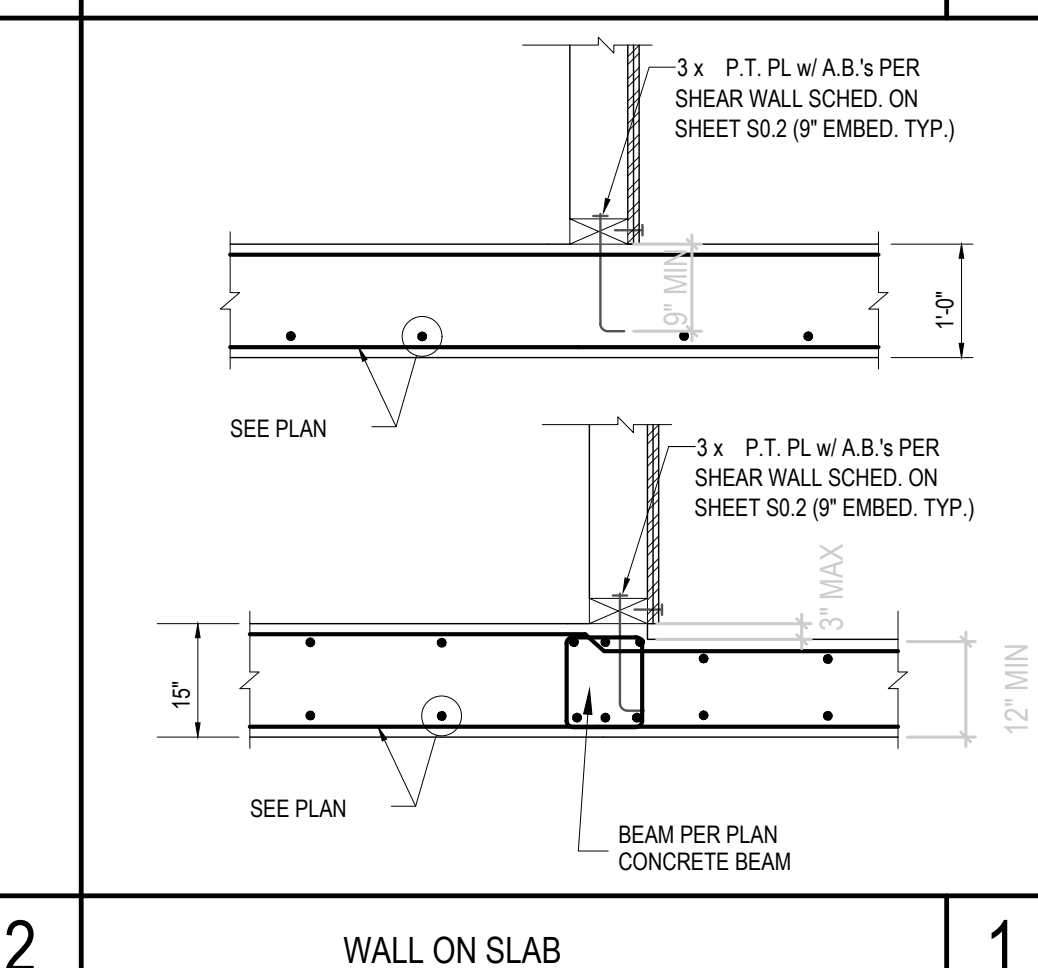
GRADE BEAM TO GRADE BEAM 9



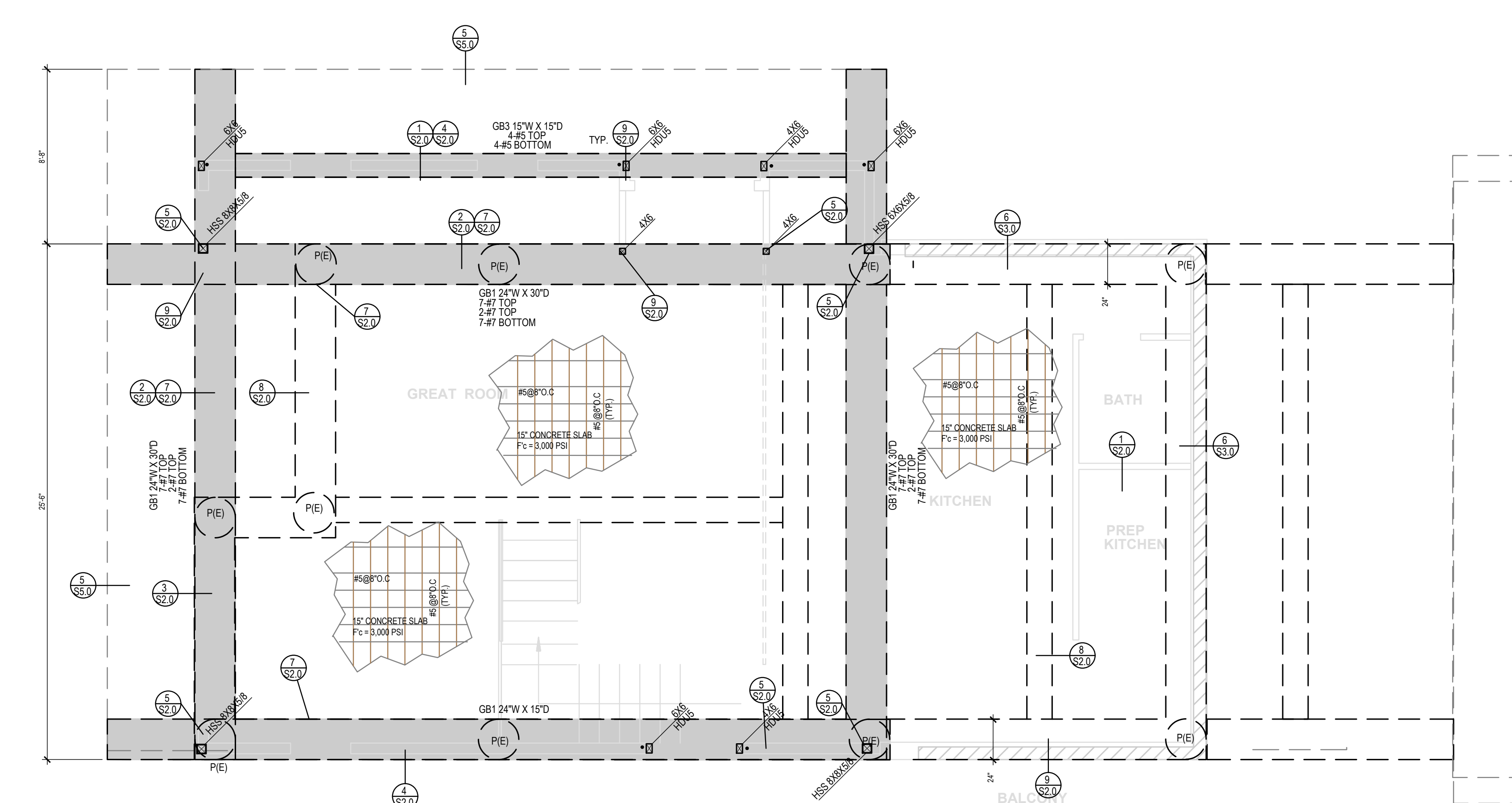
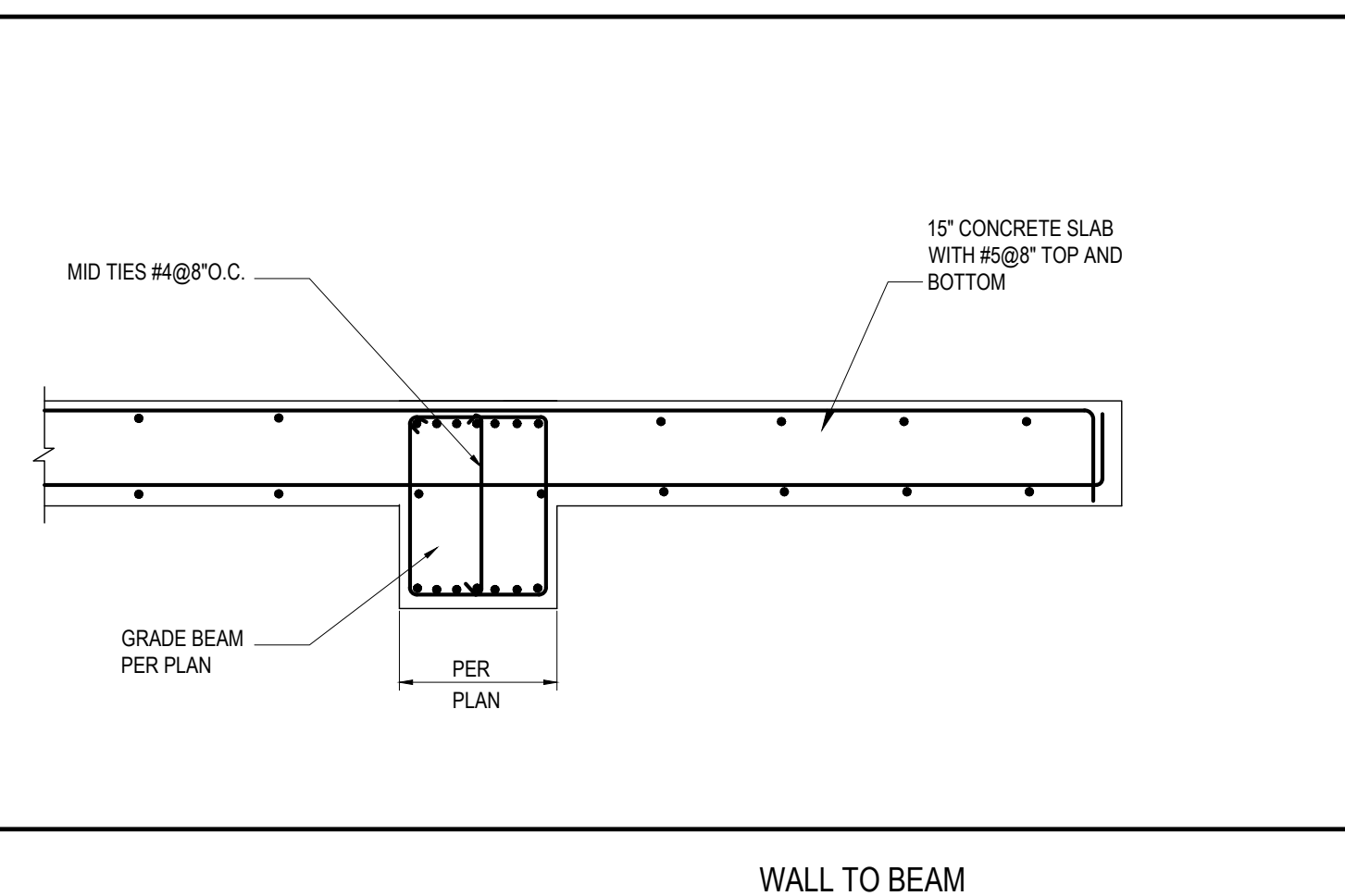
EXISTING PILE TO GRADE BEAM 8



INTERIOR GRADE BEAM 7



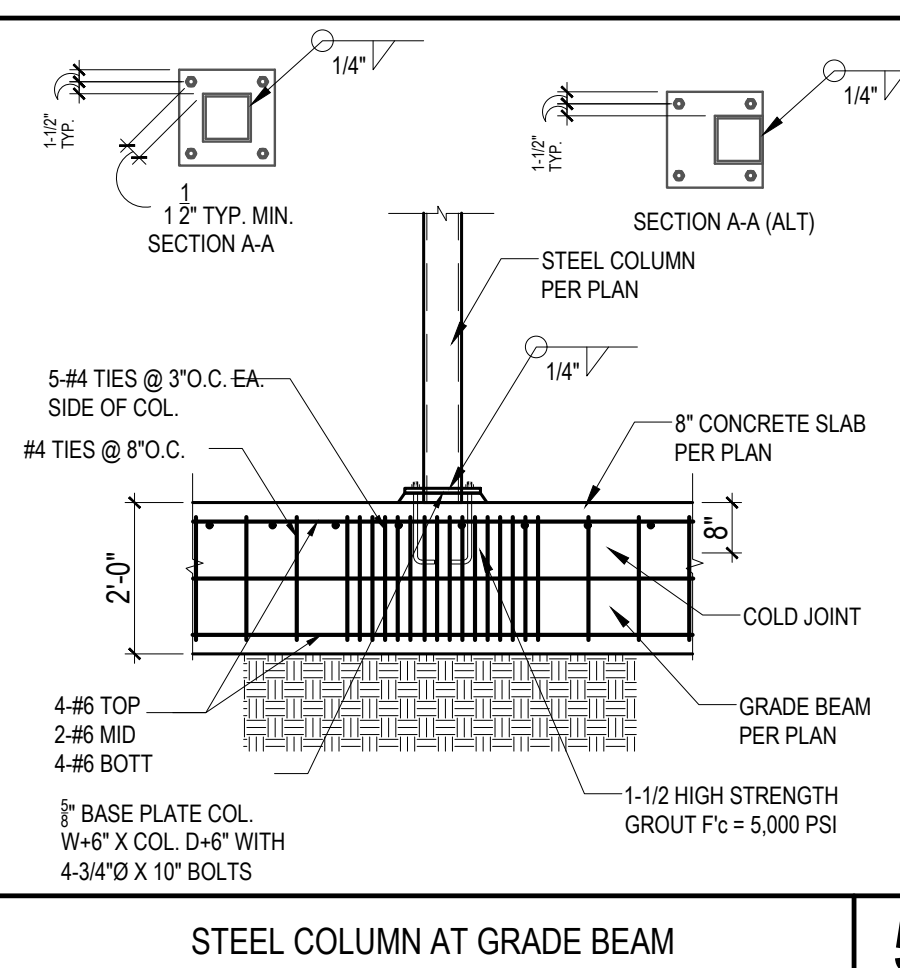
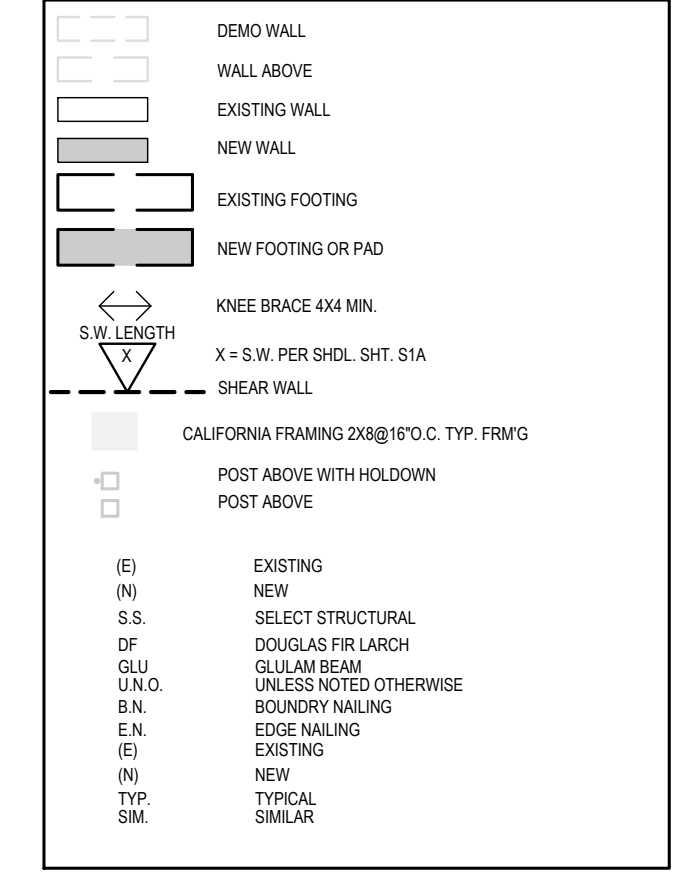
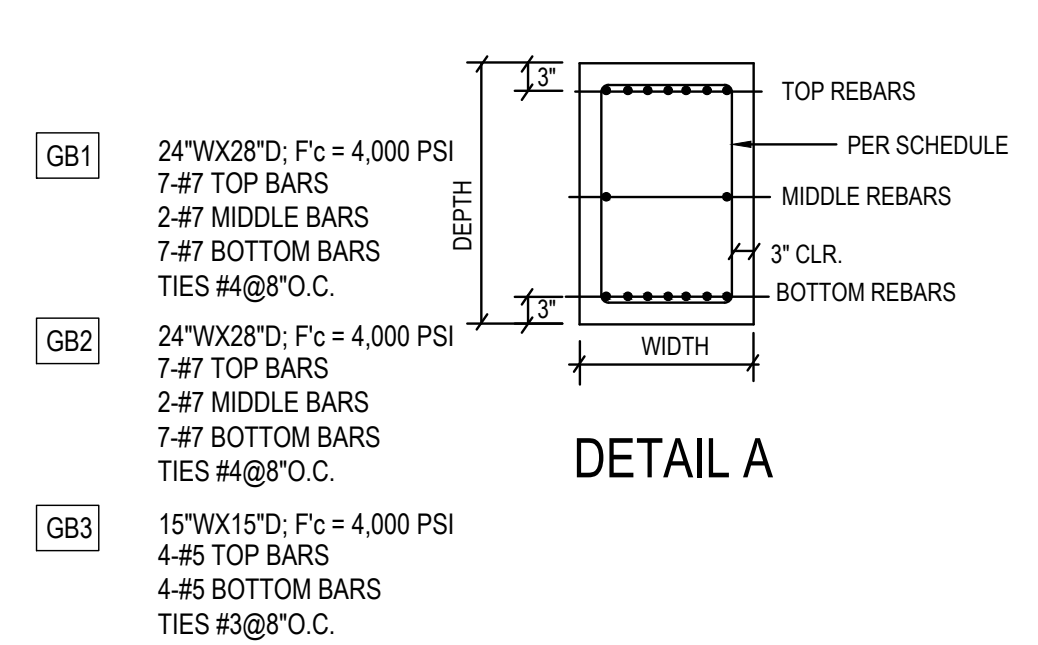
WALL ON SLAB 1



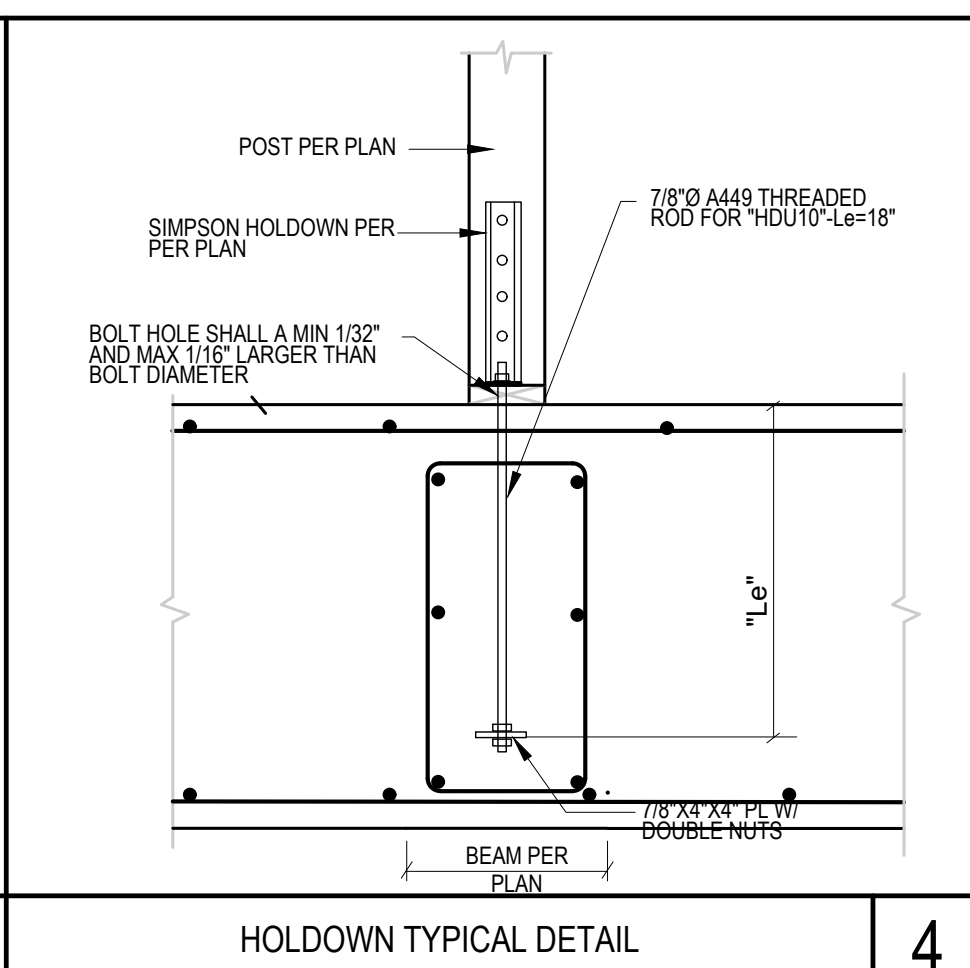
- FOUNDATION NOTES**
- ALL ANCHOR BOLTS SHALL BE 5/8"Ø W/ 1/4"X3"X3" PLATE WASHER EMBEDDED AT LEAST 7" INTO CONCRETE/ MASONRY 6 FEET MAX. IF NOT SPECIFIED ON SHEARWALL SCHEDULE.
 - ALL FOOTINGS SHALL BE EMBEDDED INTO COMPITENT MATERIAL PER SOILS ENGINEER. BEARING ALLOWED IS 1500 PSF.
 - EXPANSIVE SOIL REQUIREMENT:
a. EXTERIOR WALLS AND INTERIOR BEARING WALLS SHALL BE SUPPORTED ON CONTINUOUS FOOTINGS.
b. THE SOIL BELOW AN INTERIOR CONCRETE SLAB SHALL BE SATURATED WITH MOISTURE TO A DEPTH OF 18 IN. PRIOR TO PLACING THE CONCRETE.
 - CONCRETE SLABS ON GRADE ON EXPANSIVE SOIL OR COMPACTED FILL SHALL BE PLACED ON A 6 IN. FILL OF COARSE AGGREGATE OR ON A 6 IN. SAND BED COVERED 6 MIL. MOISTURE BARRIER MEMBRANE.
 - PROVIDE RAIN GUTTERS AND CONVEY RAIN WATER TO THE STREET.
 - PLATE WASHERS ARE REQUIRED FOR ALL HOLD DOWNS.
 - CONTRACTOR TO NOTIFY ENGINEER OF RECORD IF THERE ARE ANY DISCREPANCIES BETWEEN PLANS AND SITE CONDITIONS.
 - FOUNDATION EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE GEOLOGICAL / GEOTECHNICAL CONSULTANTS PRIOR TO PLACEMENT OF STEEL OR CONCRETE. A MEMORANDUM SIGNED BY THE CONSULTANTS SHALL BE PROVIDED.

CONTRACTOR FIELD VERIFY LOCATION OF PILES AS SHOWN ON PLANS PRIOR TO STARTING WORK. NOTIFY ENGINEER OF RECORD IF PLAN DOES NOT MATCH FIELD CONDITIONS

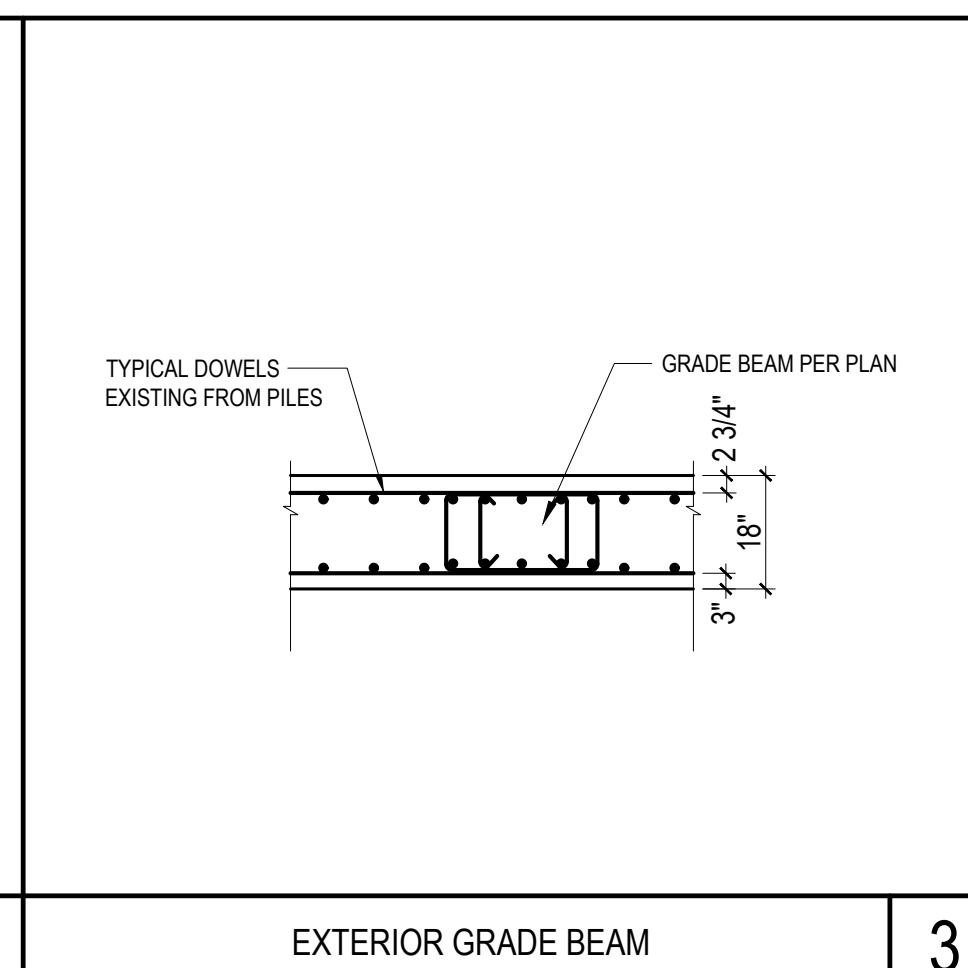
SOILS ENGINEER TO APPROVE PLANS AND FOUNDATION SYSTEM PRIOR TO POURING CONCRETE



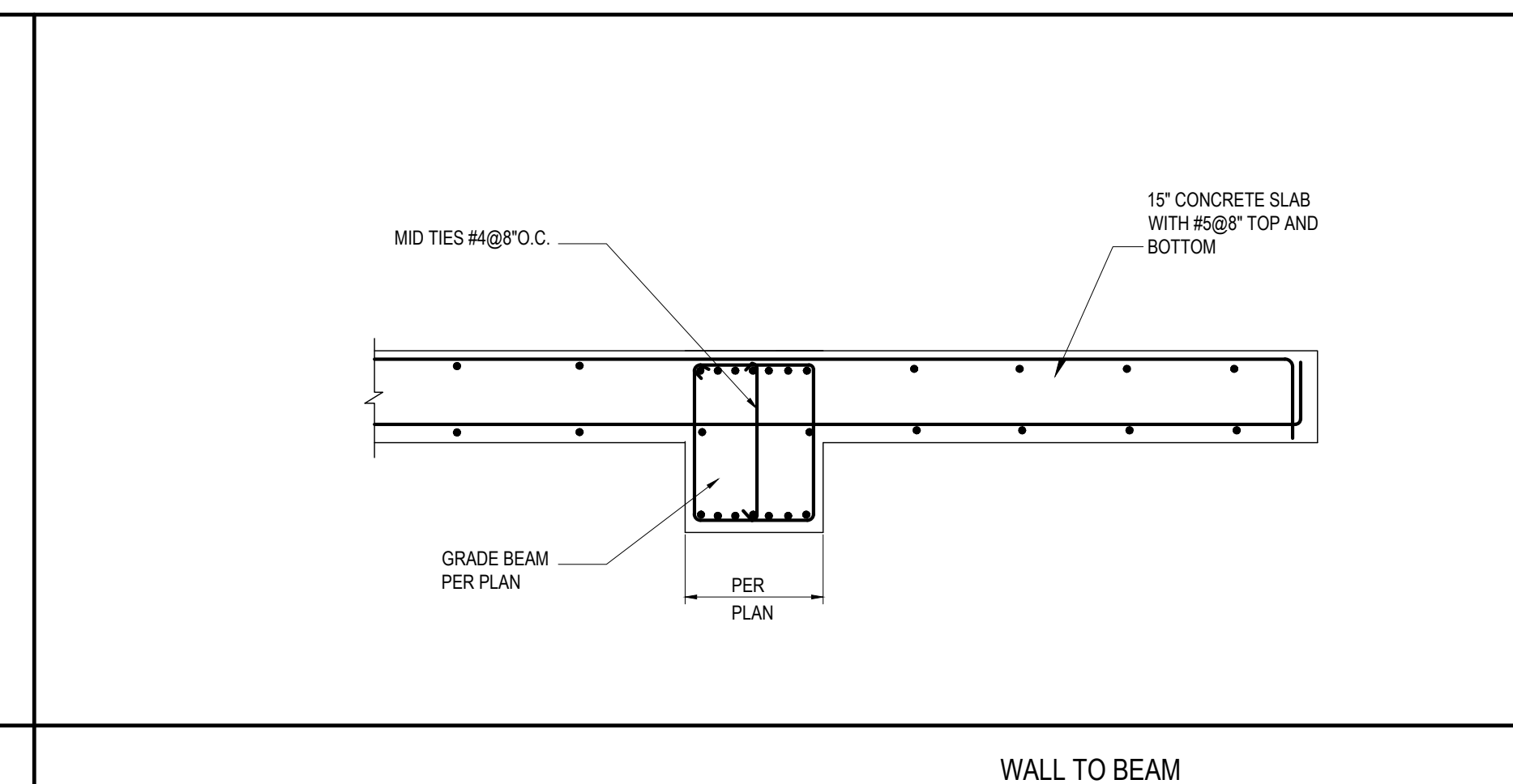
STEEL COLUMN AT GRADE BEAM 5



HOLDOWN TYPICAL DETAIL 4



EXTERIOR GRADE BEAM 3



WALL TO BEAM 2



**THE MAGUIRE RD RESIDENCE
FIRE REBUILD**
4119 MAGUIRE ROAD
MALIBU, CA 90265

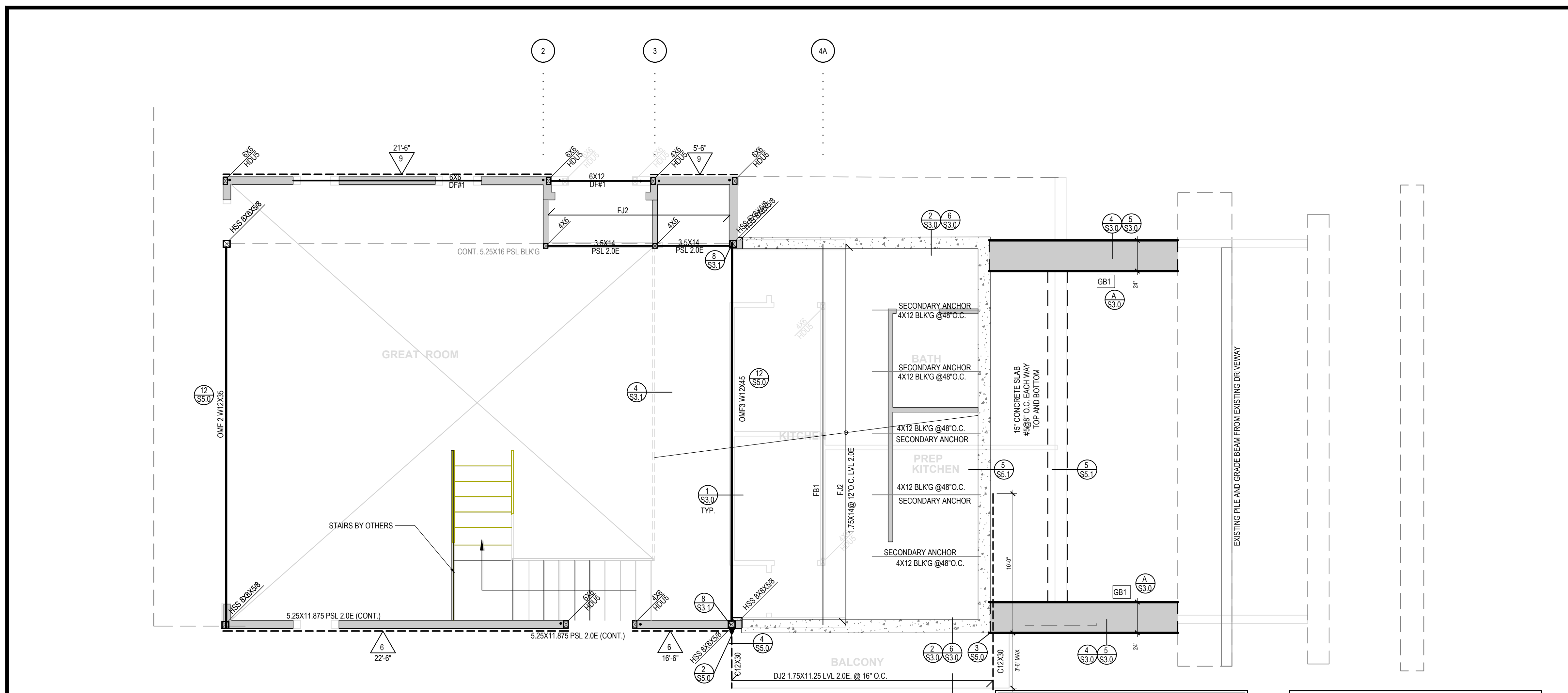
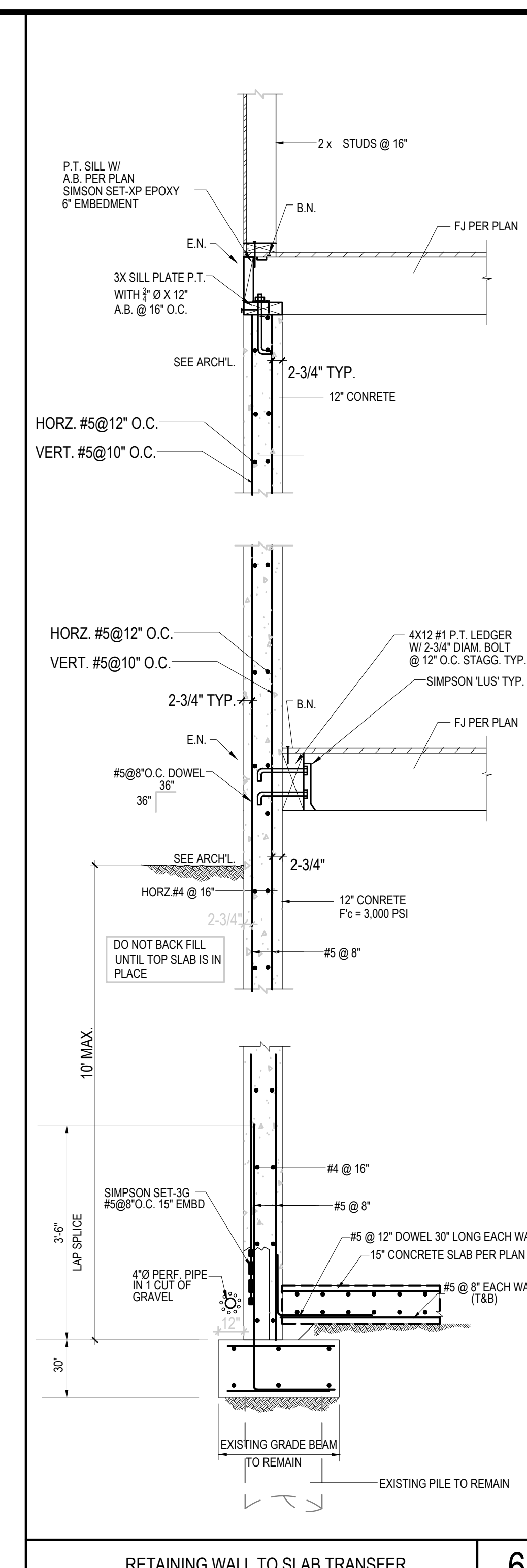
CLIENT: _____
DATE ISSUED: MARCH 15, 2025

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▲	PLAN CHECK CORRECTIONS	3-12-25
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DATE: 3-15-25
SHEET TITLE:

**BASEMENT
FRAMING PLAN AND
DETAILS**

JOB NO. 2404-038 DRAWING NO. S3.0
SCALE: 1/4"=1'-0"
DRAWN BY: MG
CHECKED BY: SH



NOTES

- PROVIDE RAIN GUTTERS AND CONVEY RAIN WATER TO THE STREET.
- HOLD DOWN HARDWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.
- HOLD-DOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS ON OPPOSITE. HOLD-DOWN SHALL BE TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
- THE CONTRACTORS SHALL HAVE ON THE JOB DURING CONSTRUCTION A COPY OF THE SIMPSON CO. CONNECTORS FOR WOOD CONSTRUCTION CATALOG NO. C-2009.
- PROVIDE RAIN GUTTERS AND CONVEY RAIN WATER TO THE STREET.
- PLATE WASHERS ARE REQUIRED FOR ALL HOLD DOWNS.
- CONTRACTOR TO NOTIFY ENGINEER OF RECORD IF THERE ARE ANY DISCREPANCIES BETWEEN PLANS AND SITE CONDITIONS.
- CONTRACTORS RESPONSIBLE FOR THE CONSTRUCTION OF A WIND OR SEISMIC FORCE RESISTING SYSTEM LISTED IN THE "STATEMENT OF SPECIAL INSPECTION" SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE LADBS INSPECTORS AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON SUCH SYSTEM OR COMPONENT PER SEC. 1706.1.
- CONTINUOUS SPECIAL INSPECTION BY A REGISTERED DEPUTY INSPECTOR IS REQUIRED FOR FIELD WELDING, CONCRETE STRENGTH F_c≥2500 PSI, HIGH STRENGTH BOLTING, SPAYED ON FIRE-PROOFING, ENGINEERED MASONRY, HIGH LIFT GROUTING, PRE-STRESSED CONCRETE, HIGH LOAD DIAPHRAGMS, AND SPECIAL MOMENT-RESISTING CONCRETE FRAMES.
- FOUNDATION SILLS SHALL BE NATURALLY DURABLE OR PRESERVATIVE TREATED WOOD.
- GLU LAM BEAMS MUST BE FABRICATED IN A LADBS LICENCED FABRICATORS SHOP.
- A COPY OF THE LOS ANGELES RESEARCH REPORT AND/OR CONDITIONS OF LISTING SHALL BE MADE AVAILABLE AT THE JOB SITE.
- ROOF DIAPHRAGM NAILING TO BE INSPECTED BEFORE COVERING. FACE GRAIN OF PLYWOOD SHALL BE PERPENDICULAR TO SUPPORTS. FLOOR SHALL HAVE TONGUE AND GROOVE OR BLOCKED PANEL EDGES. PLYWOOD SPAN SHALL CONFORM WITH TABLE 2304.7.
- ALL DIAPHRAGM AND SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS OR GALVANIZED BOX.
- ALL BOLT HOLES SHALL BE DRILLED 1/8" TO 1/4" OVERSIZED.
- SHOP WELDS MUST BE PERFORMED IN A LADBS LICENCED FABRICATORS SHOP.
- LADBS LICENCED FABRICATOR IS REQUIRED FOR STRUCTURAL STEEL.
- IF ADVERSE SOIL CONDITIONS ARE ENCOUNTERED, A SOILS INVESTIGATION REPORT MAY BE REQUIRED.
- SPECIAL INSPECTION REQUIRED ON ALL CONCRETE WORK PER TOMC 8-1.18
- EXTERIOR STUCCO SHALL BE 7/8" PORTLAND CEMENT PLASTER PAPER BACKED LATH WITH 16 GAUGE STAPLES AT 16" O.C.

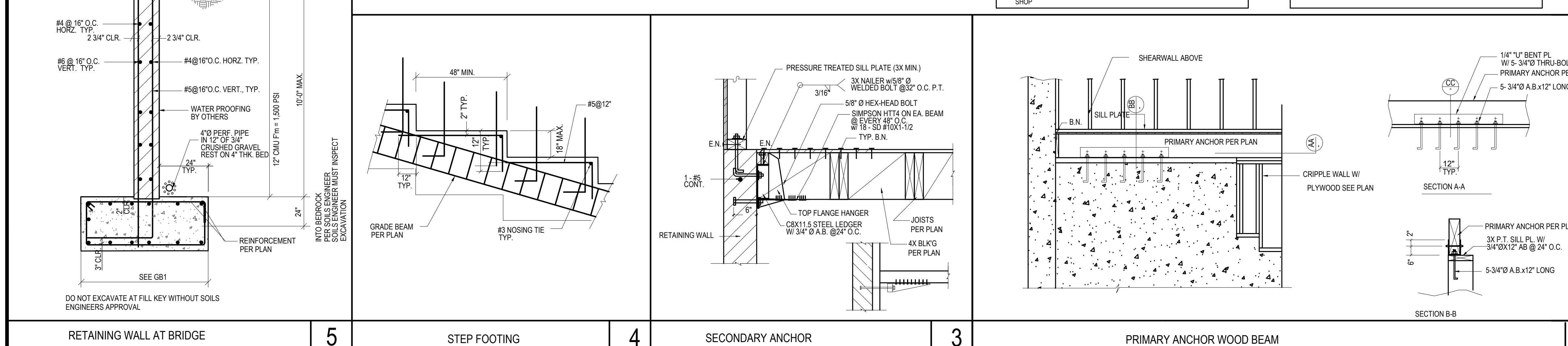
SCHEDULES

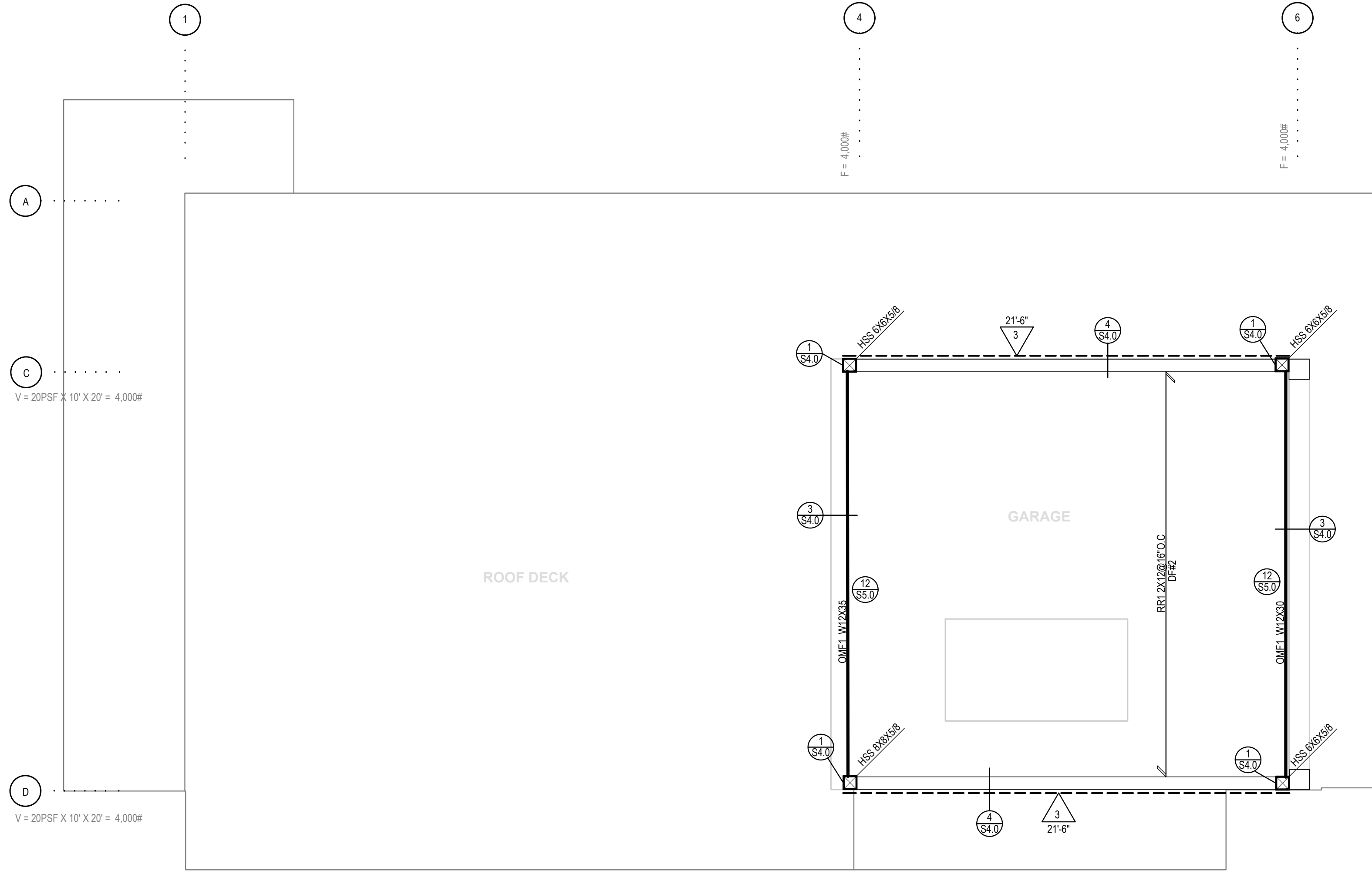
ROOF DIAPHRAGM:
5/8" CDX PLY. COMMON NAILS ONLY
P.1. 40/20
10d NAILS 6/12. ALLOW 275#'

FLOOR/DECK DIAPHRAGM:
3/4" CDX PLY. T&G COMMON NAILS ONLY
P.1. 48/24
10d NAILS 6/12. ALLOW 300#'

STUD WALL SCHEDULE
EXISTING
NEW
S.S. SELECT STRUCTURAL
DF DOUGLAS FIR LARCH
GLU GLULAM BEAM
UNO UNLESS NOTED OTHERWISE
B.N. BOUNDARY NAILING
E.N. EDGE NAILING
EX. EXISTING
IN. NEW
TYP. TYPICAL
SM. SIMILAR

LEGEND:
DEMO WALL
WALL ABOVE
EXISTING WALL
NEW WALL
EXISTING FOOTING
NEW FOOTING OR PAD
KNEE BRACE 4X4 MIN.
X = S.W. PER SHLD. SHT. S1A
SHEAR WALL
CALIFORNIA FRAMING 2X8@16" O.C. TYP. FRM/G
POST ABOVE WITH HOLD-DOWN POST ABOVE

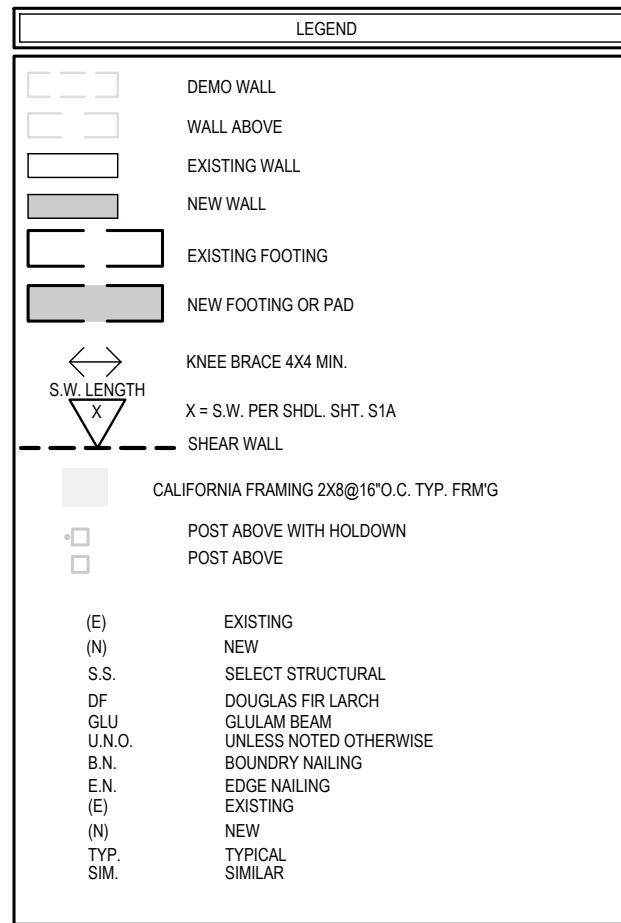




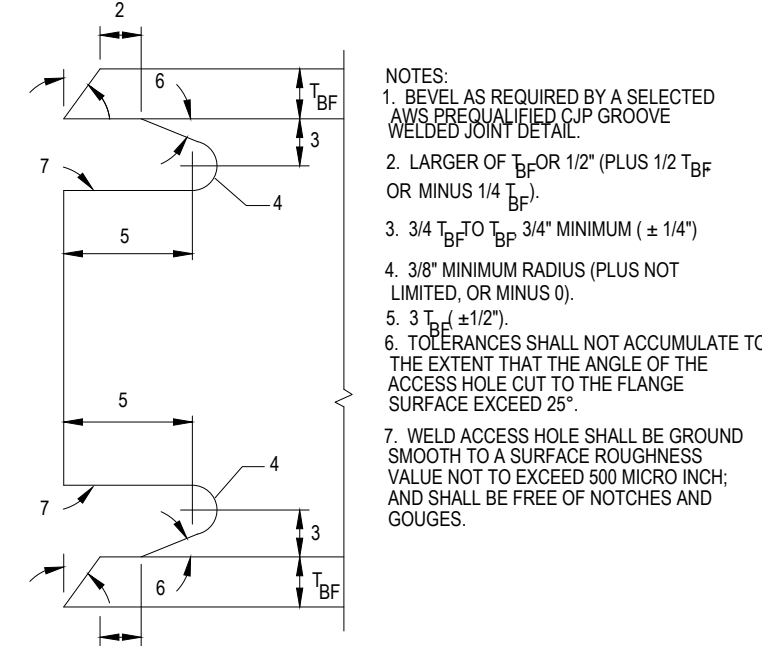
ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"

NOTES

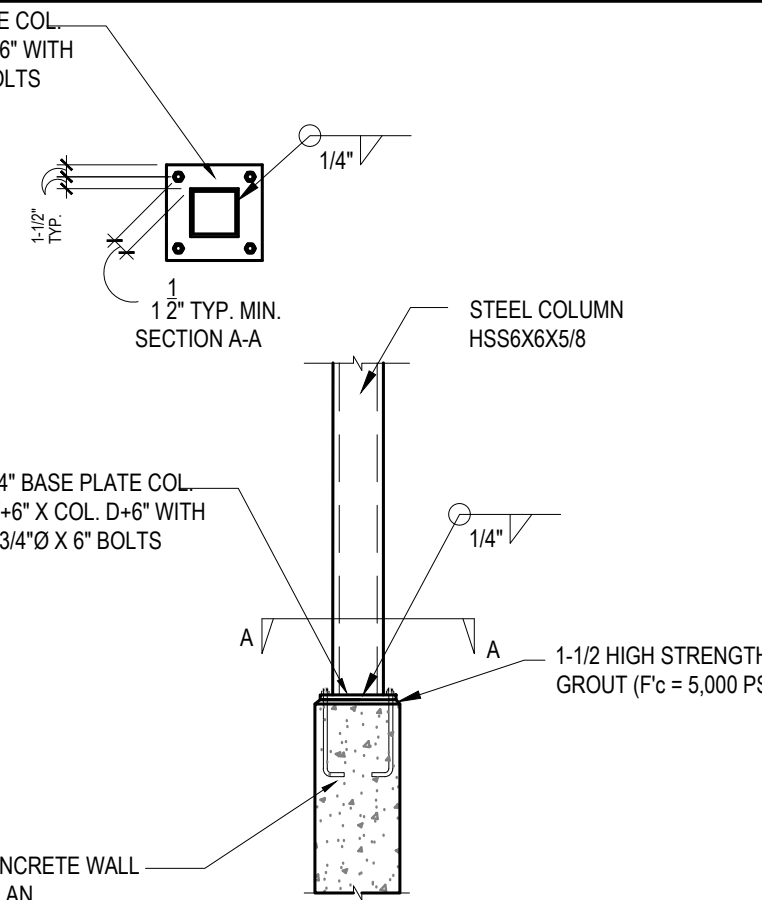
1. PROVIDE RAIN GUTTERS AND CONVEY RAIN WATER TO THE STREET.
2. HOLD DOWN HARDWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.
3. HOLD-DOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE 0.225"x0.75"x3" PLATE WASHERS ON THE POST OPPOSITE THE HOLD-DOWN. HOLD-DOWN SHALL BE TIGHTENED TO FINGER TIGHT PLUS ONE-HALF WRENCH JUST PRIOR TO COVERING THE WALL FRAMING.
4. THE CONTRACTORS SHALL HAVE ON THE JOB DURING CONSTRUCTION A COPY OF THE SIMPSON CO. CONNECTORS FOR WOOD CONSTRUCTION CATALOG NO. C-2009.
5. PROVIDE RAIN GUTTERS AND CONVEY RAIN WATER TO THE STREET.
6. PLATE WASHERS ARE REQUIRED FOR ALL HOLD-DOWNS.
7. CONTRACTOR TO NOTIFY ENGINEER OF RECORD IF THERE ARE ANY DISCREPANCIES BETWEEN PLANS AND SITE CONDITIONS.
8. CONTRACTORS RESPONSIBLE FOR THE CONSTRUCTION OF A WIND OR SEISMIC FORCE RESISTING SYSTEM LISTED IN THE "STATEMENT OF SPECIAL INSPECTION" SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE LADBS INSPECTORS AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON SUCH SYSTEM OR COMPONENT PER SEC 1706.1.
9. CONTINUOUS SPECIAL INSPECTION BY A REGISTERED DEPUTY INSPECTOR IS REQUIRED FOR FIELD WELDING. CONCRETE STRENGTH $F_c > 2500$ PSI. HIGH STRENGTH BOLTING, SPRAYED ON FIRE-PROOFING, ENGINEERED MASONRY, HIGH LIFT GROUTING, PRE-STRESSED CONCRETE, HIGH LOAD DIAPHRAGMS, AND SPECIAL MOMENT-RESISTING CONCRETE FRAMES.
10. FOUNDATION SILLS SHALL BE NATURALLY DURABLE OR PRESERVATIVE TREATED WOOD.
11. CLU LAM BEAMS MUST BE FABRICATED IN A LADBS LICENCED FABRICATOR'S SHOP.
12. PROVIDE LEAD HOLE 40%-70% OF THREADED SHANK DIA. FOR SMOOTH SHANK PORTION.
13. A COPY OF THE LOS ANGELES RESEARCH REPORT AND/OR CONDITIONS OF LISTING SHALL BE MADE AVAILABLE AT THE JOB SITE.
14. ROOF DIAPHRAGM NAILING TO BE INSPECTED BEFORE COVERING. FACE GRAIN OF PLYWOOD SHALL BE PERPENDICULAR TO SUPPORTS. FLOOR SHALL HAVE TONGUE AND GROOVE OR BLOCKED PANEL EDGES. PLYWOOD SPAN SHALL CONFORM WITH TABLE 2304.7.
15. ALL DIAPHRAGM AND SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS OR GALVANIZED BOX.
16. ALL BOLT HOLES SHALL BE DRILLED $\frac{1}{8}$ " TO $\frac{1}{4}$ " OVERSIZED.
17. SHOP WELDS MUST BE PERFORMED IN A LADBS LICENCED FABRICATOR'S SHOP.
18. LADBS LICENCED FABRICATOR IS REQUIRED FOR STRUCTURAL STEEL.
19. IF ADVERSE SOIL CONDITIONS ARE ENCOUNTERED, A SOILS INVESTIGATION REPORT MAY BE REQUIRED.
20. SPECIAL INSPECTION REQUIRED ON ALL CONCRETE WORK PER TOMC 8-1.18
21. EXTERIOR STUCCO SHALL BE 7/8" PORTLAND CEMENT PLASTER PAPER BACKED LATH WITH 16 GAUGE STAPLES AT 16" O.C.



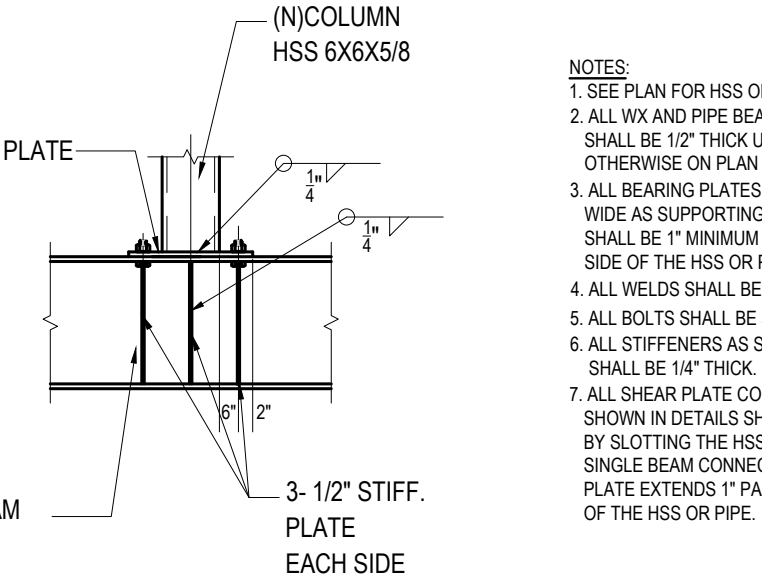
SCHEDULES	
ROOF DIAPHRAGM: 5/8" CDX PLY. COMMON NAILS ONLY P.I. 40/20 10d NAILS 6/12. ALLOW 275#'	
FLOOR/DECK DIAPHRAGM: 1-1/8" STRC 1 PLY. T&G COMMON NAILS ONLY P.I. 40/20 10d NAILS 6/12. ALLOW 300#'	
STUD WALL SCHEDULE 2X6 @16" O.C. UP TO 11'-0" MAX (2) 2X6 @16" O.C. UP TO 12'-0" 14'-0" 4X6 @16" O.C. UP TO 18'-0" MAX BALLOON FRAMING	



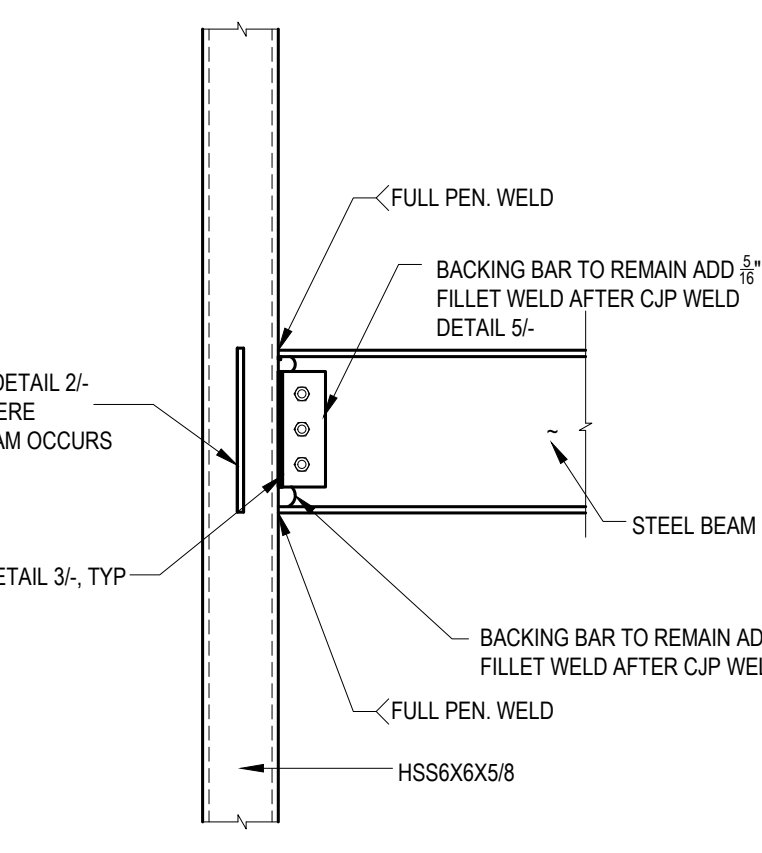
MOMENT FRAME ACCESS HOLE



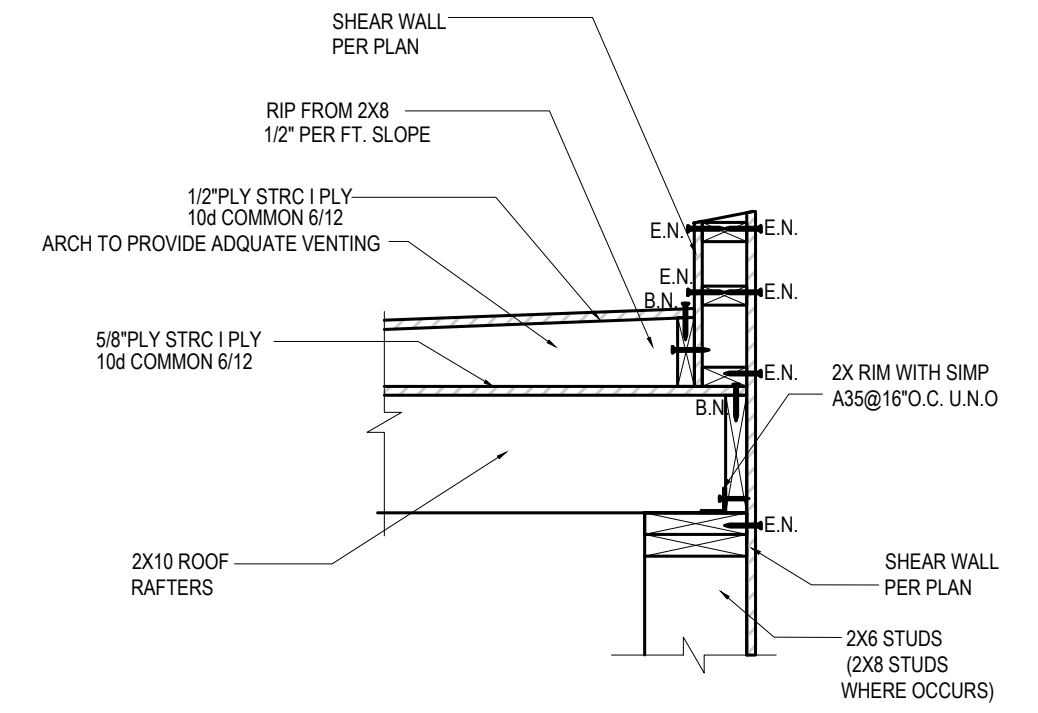
STEEL COLUMN ON CONCRETE WALL



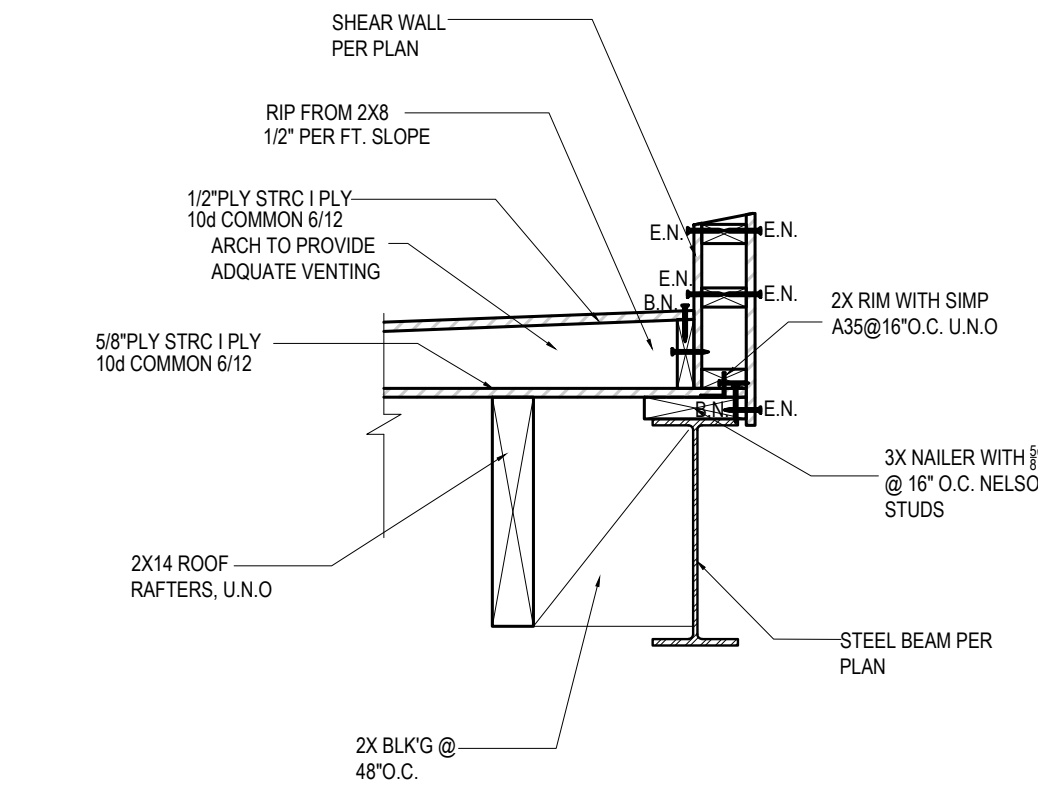
STEEL COLUMN ON NEW BEAM



HSS COLUMN TO STEEL BEAM



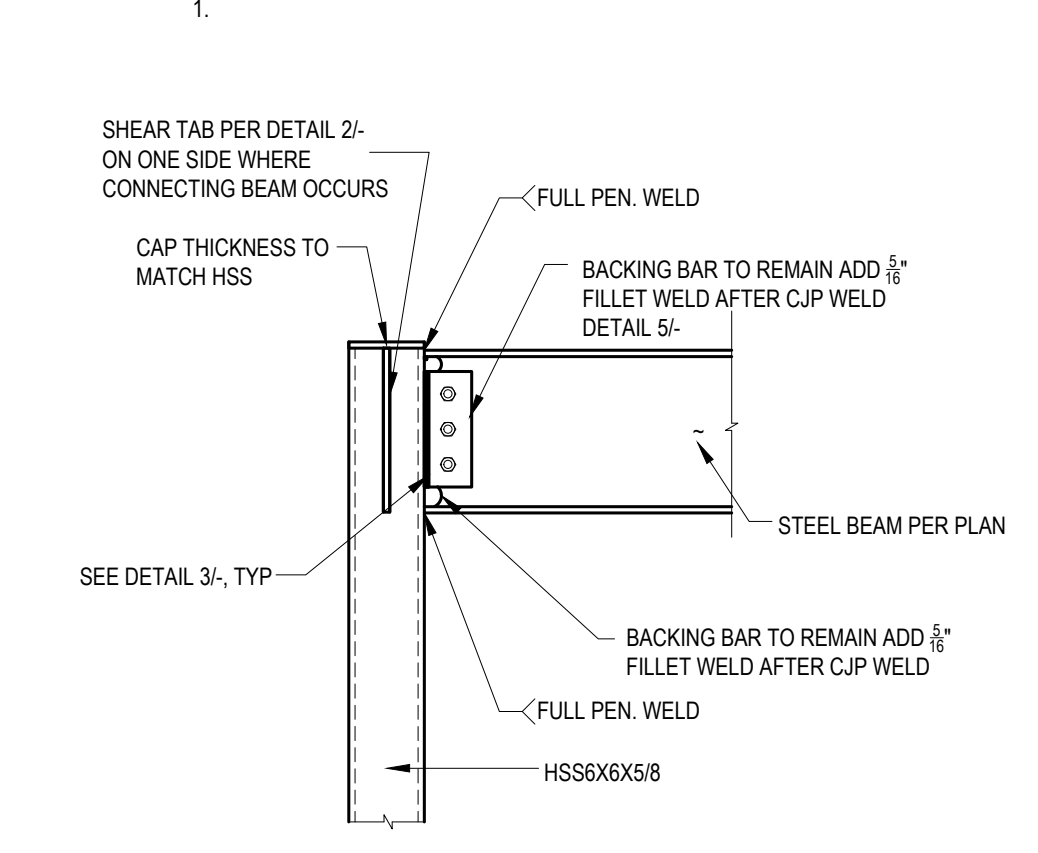
RAFTER TO WALL TRANSFER



MOMENT FRAME ACCESS HOLE

BEAM SIZE	SHEAR PLATE (A36)		
	THICKNESS (IN)	WELD (3/16" MIN)	FASTENER (A325-H/SB)
W16x C16	3/8	1/4	(2)-3/4" DIA.
W16x C18	3/8	1/4	(2)-3/4" DIA.
W16x C20	3/8	1/4	(2)-3/4" DIA.
W16x C24	1/2	5/16	(3)-7/8" DIA.
W16x C28	1/2	5/16	(4)-7/8" DIA.
W16x C30	5/8	5/16	(4)-7/8" DIA.
W16x C36	5/8	5/16	(4)-7/8" DIA.
W16x C40	5/8	5/16	(5)-7/8" DIA.

KNIFE PLATE BEAM TO BEAM CONNECTION



HSS COLUMN TO STEEL BEAM



**THE MAGUIRE RD RESIDENCE
FIRE REBUILD
4119 MAGUIRE ROAD
MALIBU, CA 90265**

CLIENT		
DATE ISSUED: MARCH 15, 2025		
NO.	REVISIONS	DATE
▲	PLAN CHECK CORRECTIONS	3-12-25
▲		
▲		
▲		
▲		
▲		
▲		
▲		



DATE: 3-15-25

**GARAGE FRAMING
AND FOUNDATION
PLAN WITH DETAILS**

JOB NO. 2404-038 DRAWING NO.
SCALE: 1/4" PER PLAN
DRAWN BY:
MG
CHECKED BY:
SH

S4.0



SAPPHIRE
engineering company, inc.
741 Lakeland Road, Unit J - Westlake Village - ca 91351 - 805-601-5106 - www.sapphirecorp.com

**THE MAGUIRE RD RESIDENCE
FIRE REBUILD
4119 MAGUIRE ROAD
MALIBU, CA 90265**

CLIENT

DATE ISSUED:
MARCH 15, 2025

NO.	REVISIONS	DATE
▲	PLAN CHECK CORRECTIONS	3-12-25
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DATE: 3-15-25

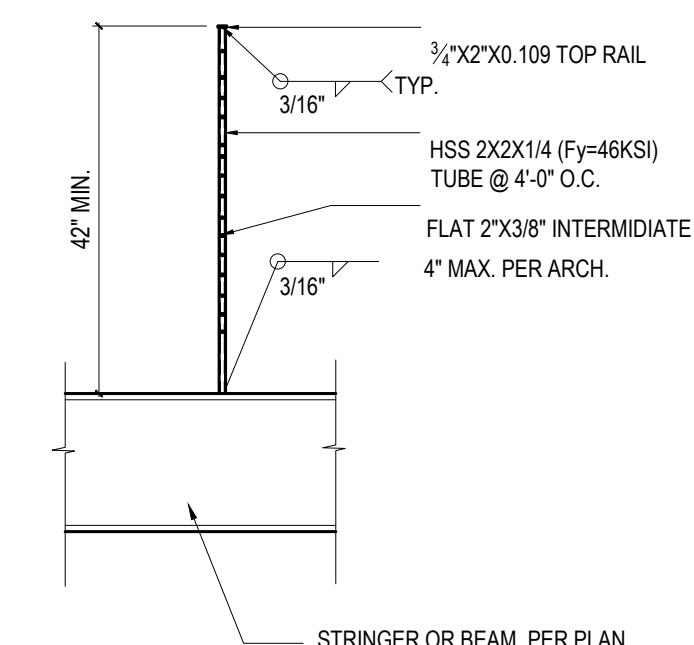
SHEET TITLE:

**STRUCTURAL
DETAILS**

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SCALE - PER PLAN
DRAWN BY: MG
CHECKED BY: SH

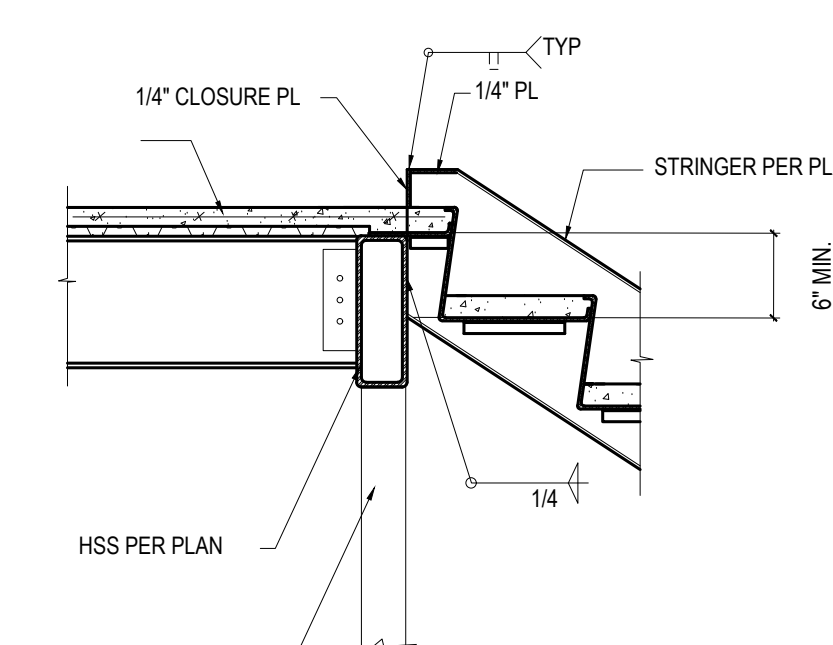
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13



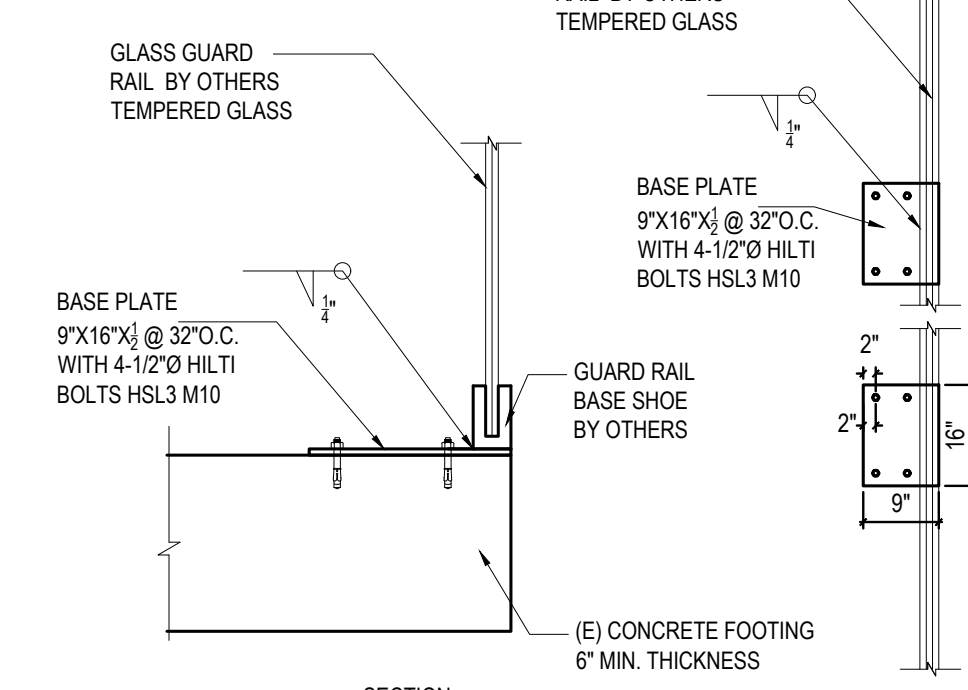
GUARD RAIL

11



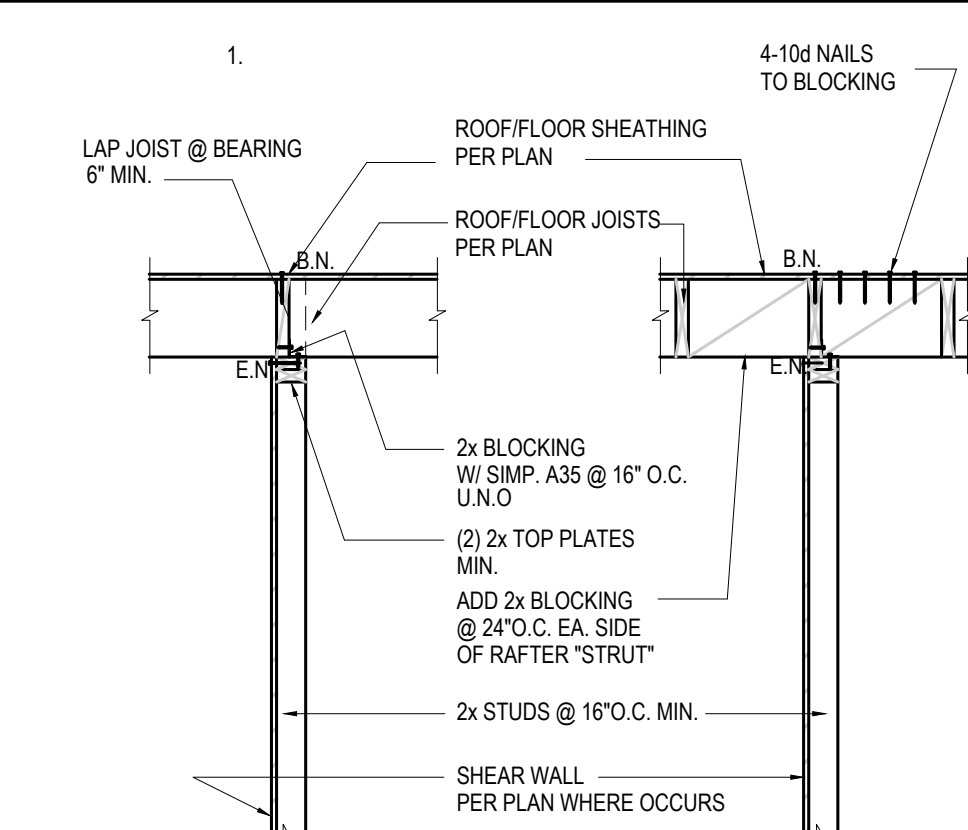
UPPER LANDING

9



GUARD RAIL

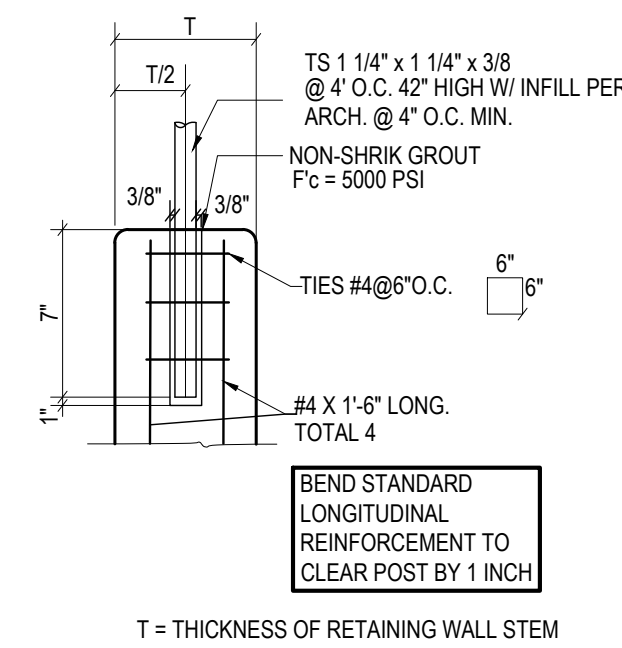
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SHEAR WALL TRANSFER TO ROOF OR FLOOR

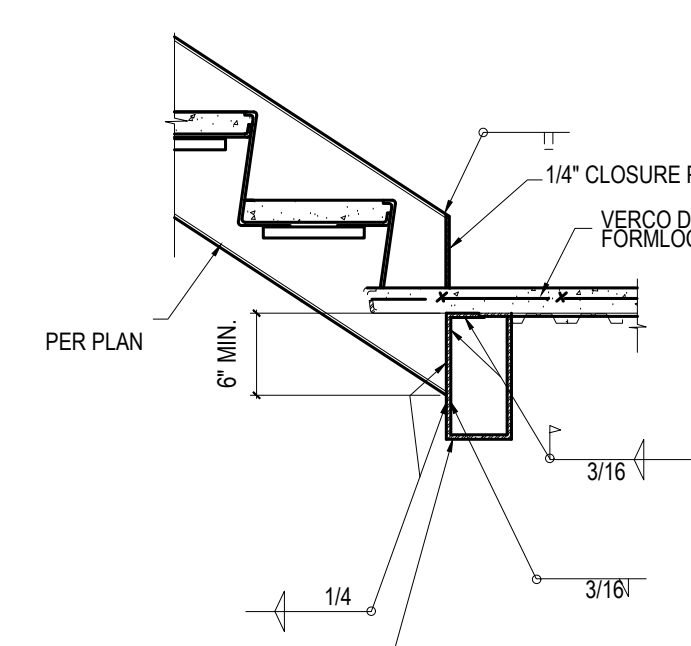
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GAURD RAIL TYPICAL



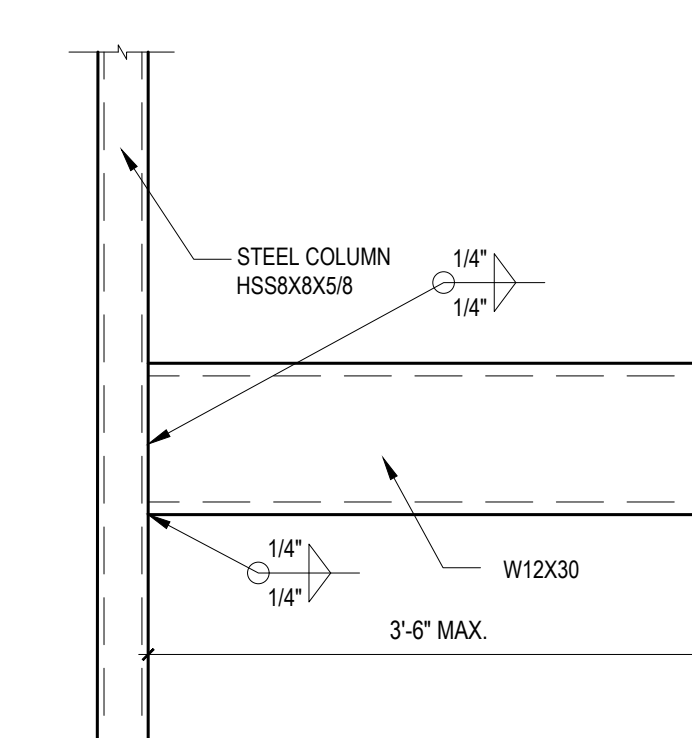
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LOWER LANDING



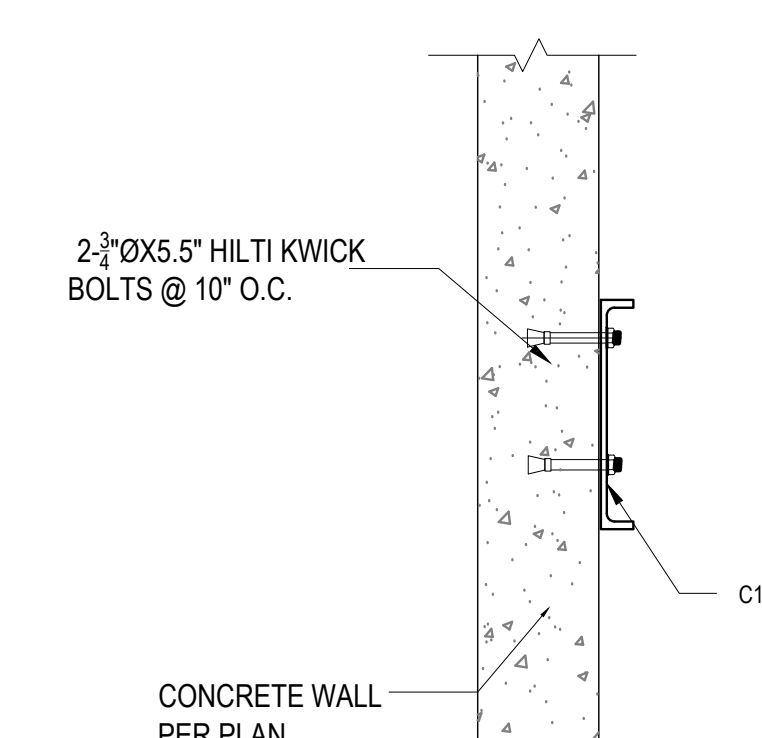
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CANT. STL BEAM WELDED TO COLUMN



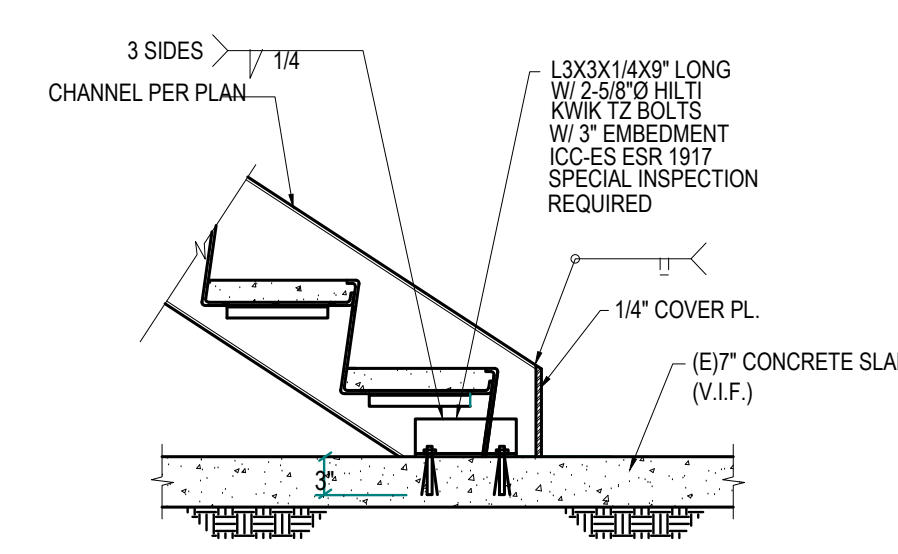
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CANT. STL BEAM BOLTED TO CONCRETE WALL



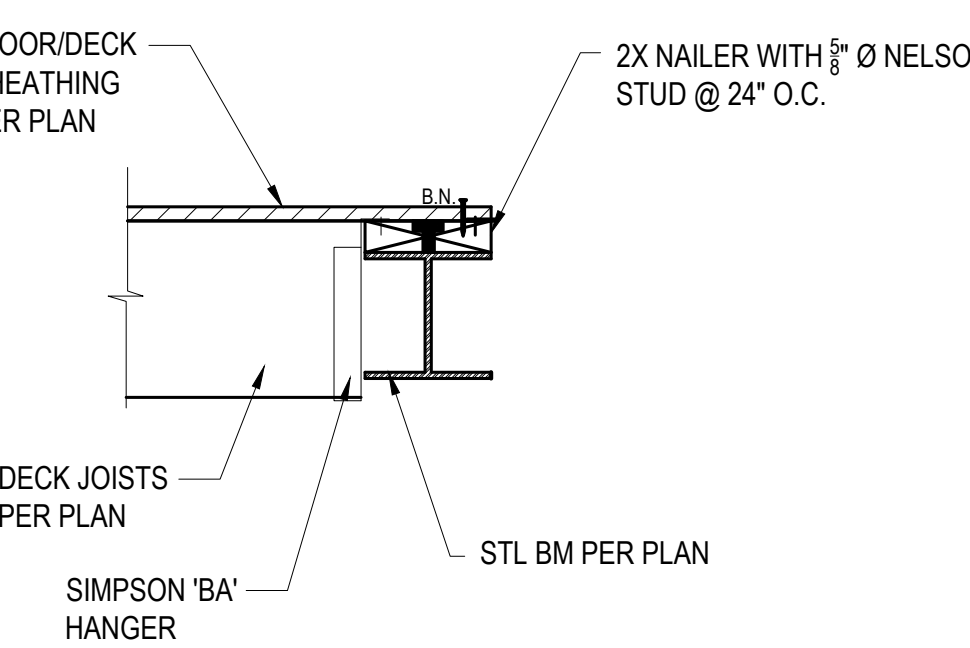
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STAIR BOTTOM



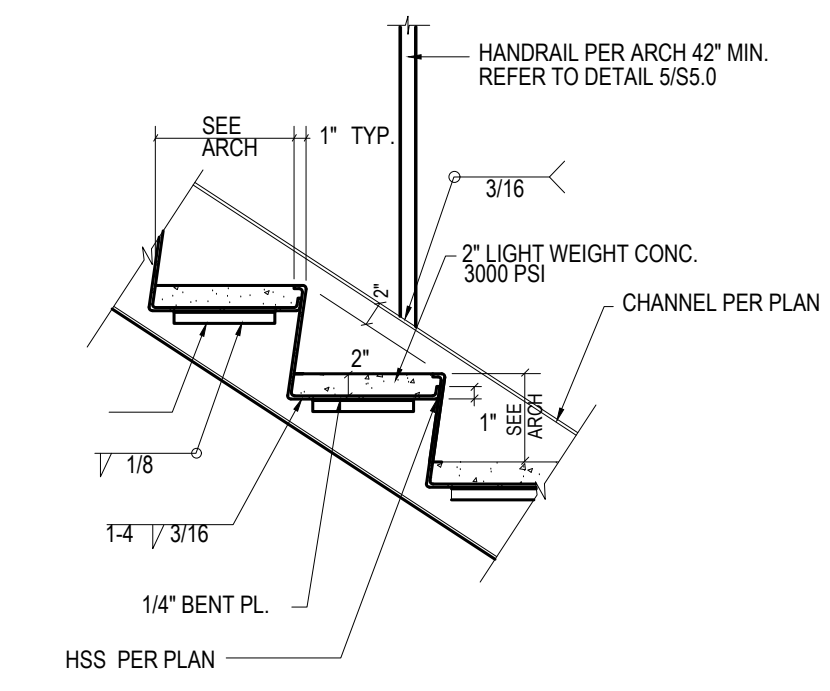
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WOOD JOISTS TO STEEL BEAM



4

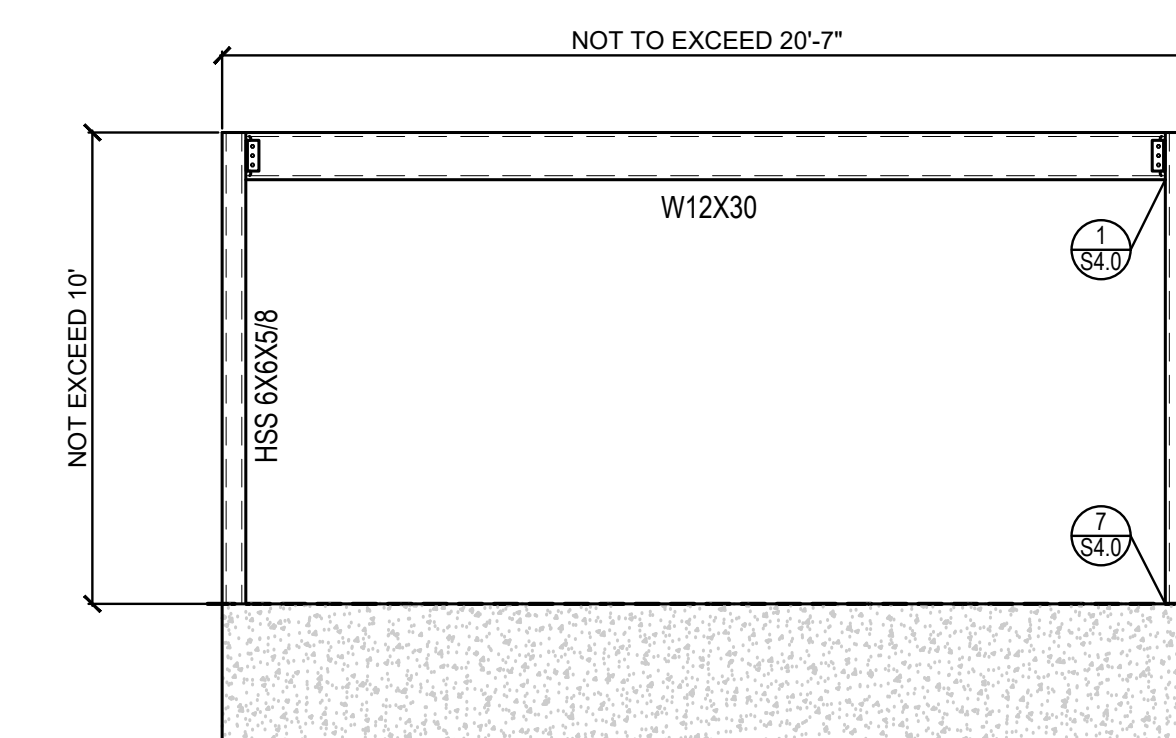
STAIRS



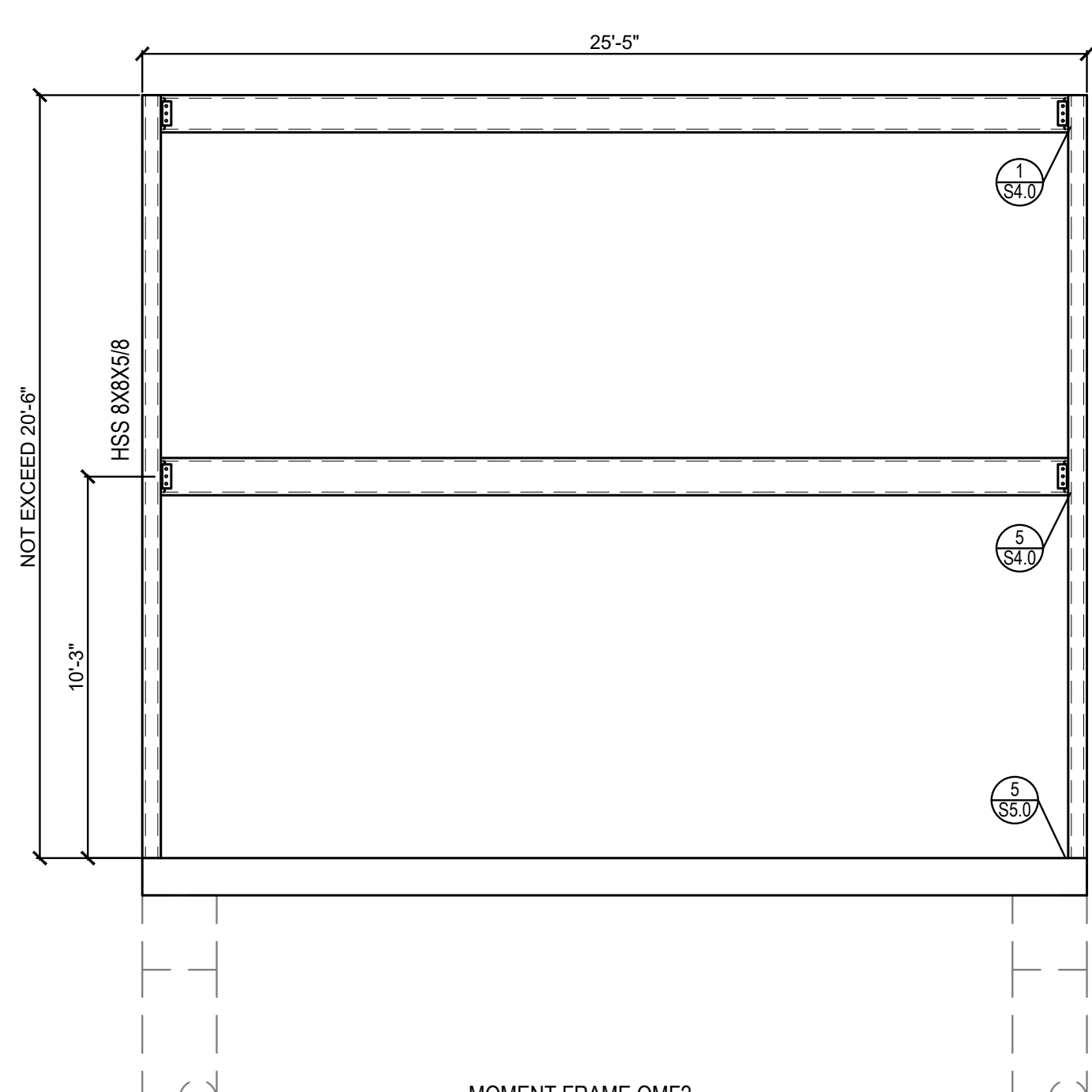
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MOMENT FRAME ELEVATIONS

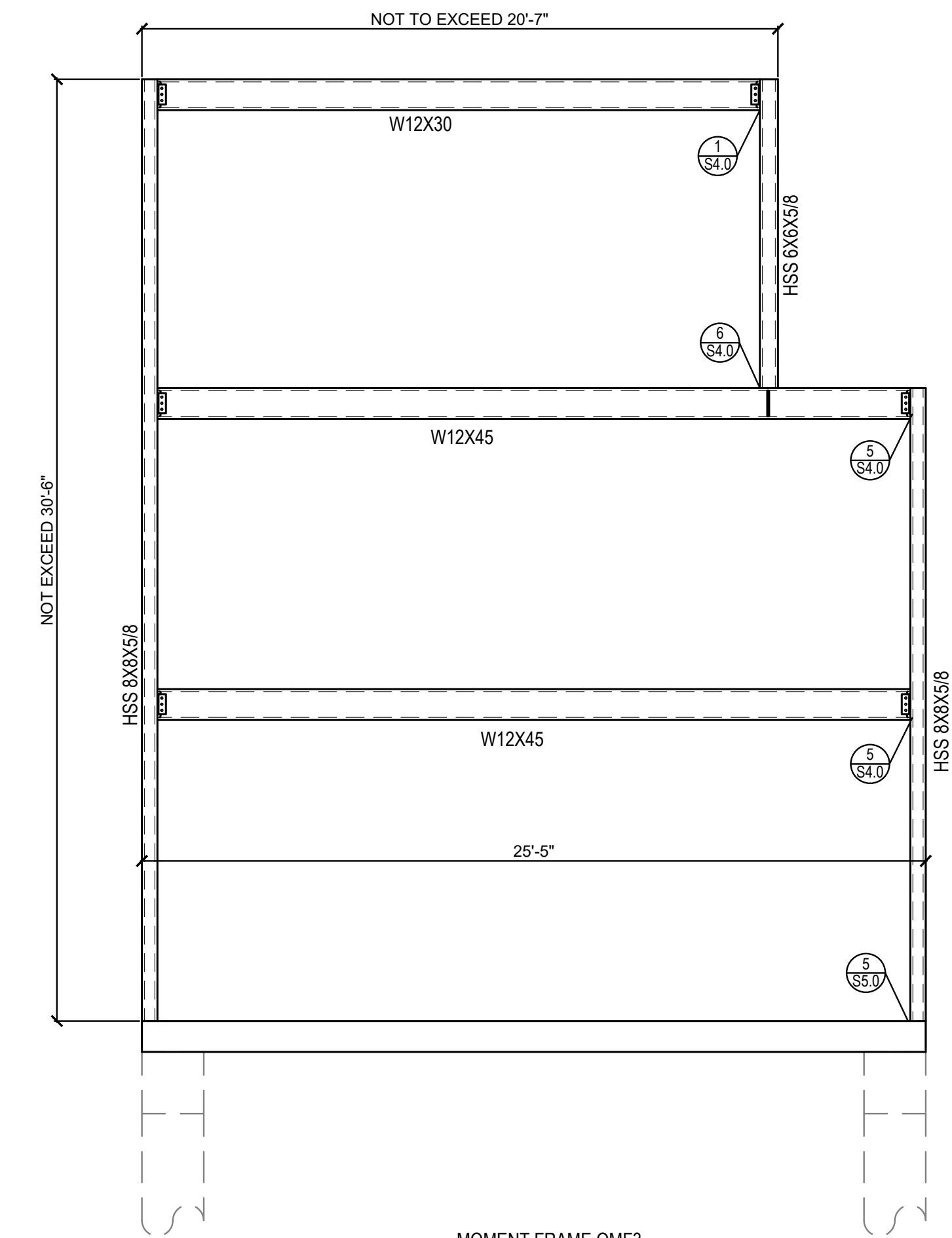
12



MOMENT FRAME OMF1



MOMENT FRAME OMF2



MOMENT FRAME OMF3

STANDARD QUALITY ASSURANCE PLAN

I. PURPOSE

This Standard Quality Assurance (QA) Plan provides specifications, procedures, and illustrative details to comply with the requirements of the 2002 Los Angeles Building Code. The Quality Assurance requirements described in this Standard QA Plan are intended to promote public safety and welfare by standardizing inspections, tests, and all other applicable measures that ensure substantial compliance with the code performance objectives of steel moment frame connections.

II. HOW TO USE THIS STANDARD QA PLAN

To use this Standard QA Plan, follow the seven steps outlined below:

- 1. Standard QA Plan shall be attached to and made part of the structural Plans.
2. Engineer of Record shall identify the type of steel moment frame to be used in the building or structure by placing an "X" mark in the box below:

- Special Moment Frame (SMF)
Intermediate Moment Frame (IMF)
Ordinary Moment Frame (OMF)

- 3. All of the Quality Assurance components listed in this Standard QA Plan shall be applied to special moment frames, intermediate moment frames, and ordinary moment frames, unless noted otherwise herein.
4. Engineer of Record shall place the following note on the structural plans stating "All specifications, tables, and notes in the City of Los Angeles' Standard Quality Assurance Plan for Steel Moment Frames shall be part of these approved structural plans."
5. Engineer of Record shall sign and stamp the Standard QA Plan in the box provided at the lower right corner of each sheet.
6. Organize all reports to be reviewed and submitted to the City Building Inspector as required by Table 1 on Sheet 2.
7. Any deviations in the quality assurance program from this Standard Plan shall require a separate written approval by the Engineer of Record and the Department.

III. GENERAL REQUIREMENTS

- 1. Codes
The design and construction of steel moment frames shall be in compliance with the following codes:
a. 2002 City of Los Angeles Building Code,
b. AISC Seismic Provisions for Structural Steel Buildings, Part I (LRFD) and Part III (ASD), dated May 21, 2002, and
c. AWS D1.1/D1.1M:2002 Structural Welding Code - Steel.
2. Material Specifications
a. Structural steel shall comply with UBC Standard 22-1 and the following ASTM standard specifications:
i. Wide flange shapes...ASTM A572 (50), A913 (50), A992
ii. Continuity, doubler and column base plates, shear tabs...ASTM A36
iii. Anchor bolts at column base plates...ASTM F1554
iv. Fabricate and erect structural steel in compliance with either the 2001 Edition of AISC "Load and Resistance Factor Design Specification for Structural Steel Buildings" or 1989 Edition of the AISC "Allowable Stress Design Specification for Structural Steel Buildings."
b. High strength bolts shall comply with the following requirements and ASTM standard specifications:
i. High strength bolts, nuts, and washers...ASTM A325, A490
ii. Shall be installed in accordance with the "Specifications for Structural Joints using ASTM A325 or A490 Bolts."
iii. Shall be tightened to a snug tight condition that is at least the minimum proper tension and verified using a calibrated tension measuring device.
iv. Shall be slip critical high strength bolts.
v. All faying surfaces of connections with high strength fasteners shall be prepared as required for Class A per the 2002 AISC Seismic Provision, Section 7.2.
c. Filler metal properties and specifications shall be as follows:
i. Electrodes shall be of a low-hydrogen type conforming to AWS specifications as referenced in Table 7 on Sheet 2.
ii. Filler metals shall be classified for nominal 70 ksi tensile strength.
iii. The maximum permitted electrode diameter shall be per Table 5 on Sheet 2.
iv. Filler metals shall have a minimum Charpy V-Notch (CVN) toughness of 20 ft-lbf at -20°F using AWS A5 classification test methods.
v. The use of intermixed welds shall not occur unless it can be demonstrated by testing in accordance with AWS D1.1/D1.1M:2002 Section 4.
vi. The parameters established by the electrode manufacturer shall be reflected in the WPS.
d. Other materials not listed in UBC Standard 22-1 or LABC Chapter 35 are not permitted without specific approval from the Department. Steel having dual ASTM designation shall be clearly identified on each specific plan detail.
3. Welding Processes
Structural welding shall be limited to the Shielded Metal Arc Welding or Flux Cored Arc Welding processes.
4. Base Metal Repairs or Restorations
Any repair or restoration of base metal shall comply with all of the following:
a. AWS D1.1/D1.1M:2002, Section 5.26, and ASTM A6/A6M-02, Section 9.2, 9.3, 9.4 and 9.5,

- b. Engineer of Record shall review and approve the WPS for repair procedures prior to welding.
c. All welding shall be performed using low-hydrogen process or with SMAW using low-hydrogen electrodes.
d. Provide continuous visual inspection by the Deputy Inspector, and
e. Provide non-destructive testing.
5. Deviations From the Standard Quality Assurance Plan
When deviations from the Standard QA Plan are made, comply with all of the following:
a. Deviations from this Standard QA Plan shall be approved by the Deputy Inspector and City Building Inspector prior to commencement of work.
b. Alternate procedures, specifications, or details shall be reviewed and approved by the Engineer of Record.
c. Supplemental testing and additional specifications may be required to approve alternate procedures, specifications, or details.
d. Conformance with all applicable provisions of the 2002 LABC and AWS D1.1/D1.1M:2002 is required.

IV. QUALITY ASSURANCE

- 1. Certification
a. Inspectors shall be LADBS Certified Deputy Inspectors per LABC Section 1701.2 and Information Bulletin P/BC 2002-035 "Regulations Regarding Registration for Deputy and Controlled Activities Inspection." Employment shall be in accordance with Information Bulletin P/BC 2002-034 "Employment and Duties of a Registered Deputy Inspector."
b. Welders shall be LADBS Certified Welders for the Structural Steel classification per LABC Section 1701.18.1, 2205.10, and Information Bulletin P/BC 2002-045 "Welder Certification Rules and Regulations."
c. Shop welds shall be performed in an LADBS certified Fabricator's Shop per LAMC Section 96.204(g) and Information Bulletin P/BC 2002-042 "Application for Approval as Fabricator."
d. Technicians performing NDT shall be certified for Level II in accordance with ASNT SNT-TC-1A 2001 Edition by a Testing Agency approved per LAMC Section 98.0503 and Information Bulletin P/BC 2002-058 "Guidelines for Recognition of Testing Agencies."
2. Pre-Construction Meeting
a. The Owner (or owner's representative) shall arrange a pre-construction meeting(s) with the Engineer of Record (or Structural Observer designated by the Engineer of Record), the Contractor (or affected Sub-Contractor), and the Deputy Inspector to discuss and review welding procedures, bolting procedures, and inspection requirements for all welding and bolting operations.
b. The City Building Inspector shall be notified of such meeting(s) and may participate at his/her discretion.
c. Meeting record(s) shall be included in the first report submitted to the City Building Inspector.
3. Structural Observation
Structural observation shall be performed in accordance with Information Bulletin P/BC 2002-024. The Structural Observer shall:
a. Perform structural observation listed in Table 6 on Sheet 2.
b. Perform structural observation prior to placement of decking, covering by fireproofing, encasement in concrete or placement of other finishes.
c. Submit observation report(s) to the City Building Inspector at each stage observed and upon completion of the structural system.
d. State in the report that the steel moment frame system substantially conforms with the approved structural plans and specifications.
e. Use the Department's Structural Observation Report Form to report all observations. Structural Observation Report Form can be obtained at www.ladbs.org, keyword "Information Bulletin P/BC 2002-024".
4. Deputy Inspection
The following are the basic Quality Assurance responsibilities of the Deputy Inspectors:
a. Arrive on the job in sufficient time to verify the permit information, check for prior inspections and/or approvals by the City Building Inspector or previous Deputy Inspectors, check the quality of all materials and become familiar with the approved structural plans and specifications.
b. Verify that structural steel delivered is from a fabricator currently licensed by the Department.
c. Identify material from an offsite fabricator in accordance with LABC Section 2203 and compare to the approved plans and specifications.
d. Verify that each steel piece is labeled with the approved fabricator's shop name and license number.
e. Visual check shop welds, joint preparation, faying surfaces, indent stamps and color codes of high strength steel, excessive mill scale or lamination, and dimensional conformity with the approved plans.
f. Ensure that welding complies with AWS D1.1/D1.1M:2002.
g. Inspect, before any welding begins, joint preparation, fit-up, condition of surfaces to be welded, storage and use of electrodes, current license of all welders, and voltage/amperage of welding machines.
h. Measure voltage/amperages near the arc with a hand held calibrated averaging type meter. The meter shall be calibrated not less than once a year. This equipment shall be used by the Fabricator, Erector, and Deputy Inspector.
i. During welding operation, provide continuous inspection particularly on multiple pass welds to assure that each pass has been prepared correctly, preheat and interpass temperatures are maintained and that finished welds shall be the correct size and without rejectable discontinuities.
j. Verify type and size of bolts and washers, check mill certificates, and verify faying surfaces are free of burrs, scale, rust, grease or anything that may inhibit full contact.
k. Verify connections involving high strength bolts and welds are fabricated and erected in a sequence specified by the Engineer of Record.
l. Verify high strength bolts are not welded or damaged by preheating.
m. Verify washers are always installed with all bolts, except A-490 bolts which require washers under both elements.
n. Verify that any deficiency noted in the Structural Observation Report Form has been corrected.

- o. Verify the Engineer of Record has approved the written welding procedure specification (WPS) prepared by the Fabricator or Erector. The WPS shall include the following:
i. All applicable code requirements, this Standard Plan, and any other information necessary to produce the welds.
ii. List the applicable base metal types and thicknesses.
iii. List the welding joint details, including joint type, weld type, joint geometry, and applicable dimensions. Individual weld passes shall be identified in sketches and numbered to identify the sequence of their deposition (see Detail 13 on Sheet 3 for example). The sketches shall identify the maximum layer thicknesses and bead widths. In no case shall layer thicknesses exceed 1/4 inch nor shall the maximum bead widths exceed 5/8 inch.
iv. List the welding processes.
v. Specify the required welding positions.
vi. List the filler metal per AWS D1.1 for electrode specification and classification (see Table 7 on Sheet 2), as well as information regarding shielding material to be used.
vii. Indicate the minimum preheat and interpass temperatures (see Table 4 on Sheet 2) and post weld heat treatment.
viii. List all applicable electrical characteristics for the welding process employed. WPS shall clearly indicate the specific values required for each welding pass. These electrical characteristics shall include at minimum the following:
(1) Electrode diameter (see Table 5 on Sheet 2),
(2) Type of current, and acceptable ranges of current measured in amperage,
(3) Voltage,
(4) Travel speed (range), and
(5) Amperage, voltage and electrode extension (as applicable) shall be within the filler metal manufacturer's recommendations.
ix. A copy of the electrode manufacturer's technical information with ID # listed shall be attached to the WPS.
p. Weld joints not conforming to Chapter 3 of AWS D1.1/D1.1M:2002 must be tested by an approved testing agency and accepted by both the Engineer of Record and the Department's Material Control Section before the weld is performed. Material Control Section can be contacted at:
LADBS Material Control Section
221 N. Figueroa St., Suite 1540
Los Angeles, CA 90012
(213) 482-0380 or 1-888-LA-4BUILD
q. Notify the Contractor, Engineer of Record, and City Building Inspector of any deviations or non-compliance with the approved WPS, plans or specifications.
r. "Deputy Inspection Report Form B-94" shall be submitted on a weekly basis to the City Building Inspector and Engineer of Record, unless determined otherwise by the City Building Inspector.
s. During the execution of the work, the Deputy Inspector shall not undertake or engage in any other task or occupation which will interfere with the proper performance of the duties of such inspection.
5. Electrode Storage and Atmospheric Exposure
a. Electrodes are considered to be exposed to the atmosphere if:
i. the manufacturer's sealed electrode containers or packagings are opened or damaged, or
ii. outside of baking or storage ovens.
b. Modification or lubrication of electrodes are not permitted.
c. Drying of electrodes in baking or storage ovens are permitted as recommended by the manufacturer.
d. Electrodes shall be identified to facilitate monitoring of total atmospheric exposure time.
e. Storage and atmospheric exposure of AWS A5.1-91/A5.5-96 low-hydrogen SMAW electrodes shall be in accordance with AWS D1.1/D1.1M:2002 Section 5.3.2.
f. FCAW electrodes not consumed within 24 hrs of accumulated atmospheric exposure time shall not be used. Manufacturer's recommendations that show that drying effectively removes moisture and restores electrodes to their designated diffusible hydrogen levels are permitted.
g. FCAW electrode welding suspended more than 8 hrs shall be removed from the machines and stored in an electrode wire baking or storage oven maintained at a temperature between 250° and 550°F, or as recommended by the electrode manufacturer.
6. Plastic Hinging Zone Protection
a. The plastic hinging zone shall be identified diagrammatically, as illustrated in Detail 15 on Sheet 3, on the structural plans by the Engineer of Record.
b. The Engineer of Record and Contractor shall be responsible for reviewing shop drawings of ALL relevant trades to ensure compliance. This shall be discussed and documented in pre-construction meetings.
c. The Contractor shall be responsible for developing a program to ensure that all workers on the project, including their subcontractors, are aware of and understand this requirement. Failure to comply with these requirements may cause the replacement of steel.
d. Plastic hinging zones shall be defined by permanent markings such as paint or ink.
e. A note, as illustrated in Detail 15 on Sheet 3, shall be prominently placed on the structural plans (general note sheet and adjacent to moment frame detail) and the construction documents of ALL trades.
f. Welded, bolted, screwed, or shot-in (powder driven) attachments for perimeter edge angles, shear studs, exterior facades, partitions, duct work, piping, or other connections shall not be permitted within the plastic hinging zones.
g. Any penetrations or damage from temporary welded attachments within the plastic hinging zones shall be repaired as required by the Engineer of Record.
h. Initially, the plastic hinging zone "Warning Sign", as illustrated in Detail 15 on Sheet 3, may be temporary. However, the temporary "Warning Sign" shall be replaced by a permanent "Warning Sign" before project completion. This sign and identification of the plastic hinging zone shall be maintained during construction, and may require repair after operations such as fireproofing.

- i. Signs shall be affixed to the beam and located within the plastic hinging zone. The City Building Inspector may accept alternate methods of attaching the "Warning Sign" to the plastic hinging zone.
7. Additional Charpy V-Notch Toughness (not required for OMF)
Welds at the locations indicated below shall be made with filler metal having a CVN toughness of 20 ft-lbf at -20°F AND 40 ft-lbf at 70°F as determined by test procedure prescribed in the AISC Seismic Provisions, Appendix X "Weld Metal / Welding Procedure Specification Toughness Verification Test."
a. Beam flanges to columns,
b. Single plate shear connections to columns,
c. Beam webs to columns, and
d. Column splices.
8. Non-Destructive Testing (NDT) Requirements
a. The minimum non-destructive testing at each weld joints or parts shall be conducted at the locations and frequencies as specified in Table 2 and Table 3 on Sheet 2 respectively.
b. A copy of each NDT report shall be provided to the Contractor, Engineer of Record, Deputy Inspector, and City Building Inspector with the following information:
i. Document the accepted and rejected welds, parts, or joints.
ii. Identify the tested weld by piece mark and location in the piece.
iii. Identify the tested weld location in the structure.
c. NDT Technician shall perform the following tasks:
i. Coordinate the NDT scope and schedule with the Deputy Inspector.
ii. Perform NDT in a timely manner, so as not to hinder construction work, and to detect welding problems soon after occurrence so that corrective measures will be taken by the Contractor.
iii. Mark the inspected and accepted welds, parts, and joints with a distinguishing mark or die stamp.
d. Reduction Rate for NDT
i. The rate of UT testing on CJP groove welds may be reduced if approved by the Engineer of Record and the Department. The NDT rate for an individual welder or welding operator may be reduced to 25%, provided the reject rate is demonstrated to be 5% or less of the welds tested for the welder or welding operator. A sampling of at least 40 completed welds for a job shall be made for such reduction evaluation.
ii. The rate of MT testing on CJP groove welds may be reduced if approved by the Engineer of Record and the Department. The MT rate for an individual welder or welding operator may be reduced to 10%, provided the reject rate is demonstrated to be 5% or less of the welds tested for the welder or welding operator. A sampling of at least 20 completed welds for a job shall be made for such reduction evaluation. This reduction is not permitted on welds in the k-area, at repair sites, weld tab and backing removal sites and access holes.
iii. Reject rate shall mean the number of welds containing rejectable defects divided by the number of welds completed.
9. Documentations
The reports listed in Table 1 on Sheet 2 shall be submitted to the City Building Inspector.
V. WELDING PROCEDURES
1. Bottom Beam Flange Moment Connection Welding
Welding the bottom flange to the column flange shall be completed in the flat welding position with the following sequence:
a. Start welding from Side A (one side of the beam) with a maximum 1/4 inch thick root pass beyond the center of the joint on Side B (other side of the beam), reaching past the beam web through the weld access hole.
b. After the arc is initiated, electrode travel shall progress toward the edge of the Side A beam flange, terminating on the Side A weld tab.
c. The Side A root pass, and the root pass deposit on Side B, shall be thoroughly cleaned to allow the Deputy Inspector to verify that the resulting bead profile is suitable for obtaining good fusion by the subsequent root pass to be initiated from Side B. If the profile is not conducive to good fusion, the start of the first root pass shall be ground, gouged, chipped, or otherwise prepared to ensure adequate profile to achieve fusion.
d. Complete the root pass on Side B before any other weld passes are performed.
e. The arc shall be initiated at the start of the first Side A root pass, and electrode travel shall progress toward the edge of the Side B beam flange, terminating on the Side B weld tab.
f. The above sequence shall be repeated for subsequent weld layers, and each weld layer shall be completed on both sides of the joint before a new layer is deposited. The order of operations (Side A, then Side B, or vice versa) is not restricted and may vary for each weld layer. Weld passes shall be placed in horizontal layers. Each pass shall be thoroughly cleaned of slag and wire brushed. Each pass shall be visually inspected by the Deputy Inspector, as described above in Step (c).
2. Sequence for Welding at Multiple Locations
When welding occur at multiple locations of welded steel moment frame connections, the following sequence shall be followed:
a. Weld both top and bottom beam flanges prior to any supplemental welding to the beam web or shear tab.
b. Engineer of Record shall review and approve all field welding sequences prior to the start of work.
c. Field welding of web shear plates with bolts shall occur after field welding of beam flanges to column flange.
d. High strength bolts shall be in the snug tight condition prior to welding.
e. High strength bolts shall be fully tensioned upon completion of all welding activities.
3. Welding Technique
a. Stringer beads shall be used during all welding operations. Maximum bead width, bead thickness, and layer thickness shall be considered. Weaving is not permitted, except when the WPS approved by the Engineer of Record limits electrode oscillation transverse to the weld axis to a maximum of:

- i. 3d for 1G/1F, 2G/2F, and 4G/4F weld positions, or
ii. 5d for the 3G/3f position, where d = electrode diameter.
b. Welding layers should progress from the face of the column flange outward toward the groove face of the beam flange as illustrated in Detail 13 on Sheet 3.
4. Preheat and Interpass Temperature
a. The minimum preheat and interpass temperature requirements in Table 4 of Sheet 2 shall be observed. Special attention shall be given to AWS D1.1/D1.1M:2002 Section 3.5.1 and Section 5.6 for the thickness of the base metal to be welded.
b. Preheat and all subsequent interpass temperatures shall be maintained during the welding operation for a distance at least equal to the thickness of the thicker welded part, but not less than 3", in all directions from the point of welding.
c. Where plates are of different thickness, the higher minimum preheat and interpass temperature requirements of the thicker plate shall govern.
d. Maximum preheat and interpass temperature shall not exceed the lesser of:
i. 550°F, or
ii. The maximum temperature recommended by the manufacturer.

- 5. Post Weld Heat Treatment
Post weld heat treatment may reduce cracking tendencies due to possible hydrogen embrittlement. Post weld heat treatment shall be provided as follows:
a. Apply heat in the 400°F to 600°F range after completion of welding.
b. Complying with the conditions of AWS D1.1/D1.1M:2002 Section 3.14 and Section 5.8.
c. Alternatively, the use of insulating blankets after the completion of welding is permitted to control the cooling of the connection to ambient temperature.

VI. WELDING AND FABRICATION DETAILS

- 1. Base Metal Joint Preparation
a. Base metal preparation shall be in comply with AWS D1.1/D1.1M:2002 Section 5.15.
b. All beam flange to column flange welds are to be made with an AWS prequalified CJP groove welded joint detail.
c. Bevel, fit-up and detail tolerances shall be as required by the selected prequalified welded joint detail.
d. Whenever possible, use the AWS prequalified CJP groove welded joint detail as illustrated in Detail 14 on Sheet 3 and the following:
i. Use single bevel CJP groove welds made with a 30° groove angle or double bevel CJP groove welds when flange thickness exceed 1-1/2 inch.
ii. "As Fit-Up" and "As Detailed" shall be the maximum tolerances.
iii. Meet all prequalified WPS variables in Table 5 on Sheet 2.
2. Weld Access Hole
a. Where weld access holes are provided, they shall be detailed as illustrated in Detail 12 on Sheet 3.
b. Notches and gouges shall be repaired following a WPS approved by the Engineer of Record.
c. Weld access holes shall be prepared by grinding to a suitable finish in accordance with AISC LRFD Specification Section J1.6 and provided with a minimum radius of 3/8 inch as illustrated in Detail 12 on Sheet 3.
3. Backing Bar
a. Backing bar used in connections with a CJP groove weld of beam flange to column flange shall be removed except that top flange backing bar attached to the column by a continuous fillet weld on the edge below the CJP groove weld need not be removed.
b. Following removal of backing bar, the root pass shall be backgouged to sound weld metal, and back welded. A reinforcing fillet weld with a minimum leg size of 5/16 inch or the root opening plus 1/16 inch, whichever is larger, shall be provided. The reinforcing fillet weld need not be ground.
4. Weld Tab
a. Weld tabs shall be aligned parallel to the joint preparation.
b. No weld dams are allowed.
c. Weld tabs shall extend beyond the edge of the joint a minimum distance equal to the part thickness, but not less than one inch.
d. Weld tab shall be removed upon completion of the welded joint as follows:
i. No more than 1/8 inch beyond the edge of the joint shall remain, except at continuity plate where up to 1/4 inch is acceptable.
ii. Edges of the weld tab shall be finished to a surface roughness value of 500 micro inch or better. Grinding to a flush condition is not required.
e. Gouges and notches are not permitted. The transitional slope of any area where gouges and notches have been removed shall not exceed 1:5.
f. Material removed by grinding that extends more than 1/16 inch below the surface of the base metal shall be filled with weld metal. The contour of the weld at the ends shall provide a smooth transition, free of notches and sharp corners.
5. Continuity Plate
a. Continuity plates shall be detailed as illustrated in Detail 11 on Sheet 3.
b. The weld attaching the continuity plate to the column flange shall be as follows:
i. Use a CJP groove weld for the full length of the groove preparation.
ii. When backing bars are omitted, the root shall be backgouged and back welded.
iii. When backing bars are used and remain in place, backing bars shall be attached to the column flanges with a reinforcing fillet weld.
iv. Fillet weld shall not be used to connect backing bars to continuity plates.
v. The fillet weld size need not exceed the minimum size requirements of AWS D1.1/D1.1M:2002 Table 5.8.



THE MAGUIRE RD RESIDENCE
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Table with columns: NO., REVISIONS, DATE. Includes a revision history table with one entry: 1, PLAN CHECK CORRECTIONS, 3-12-25.

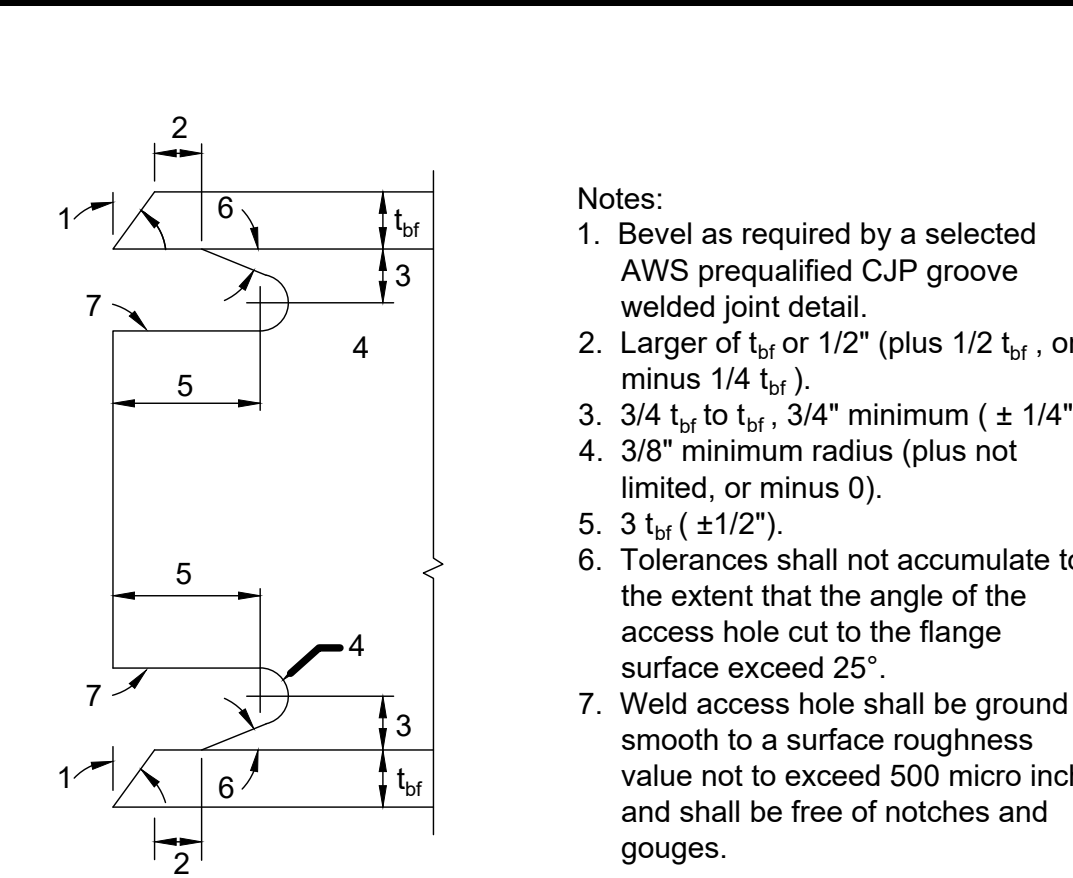
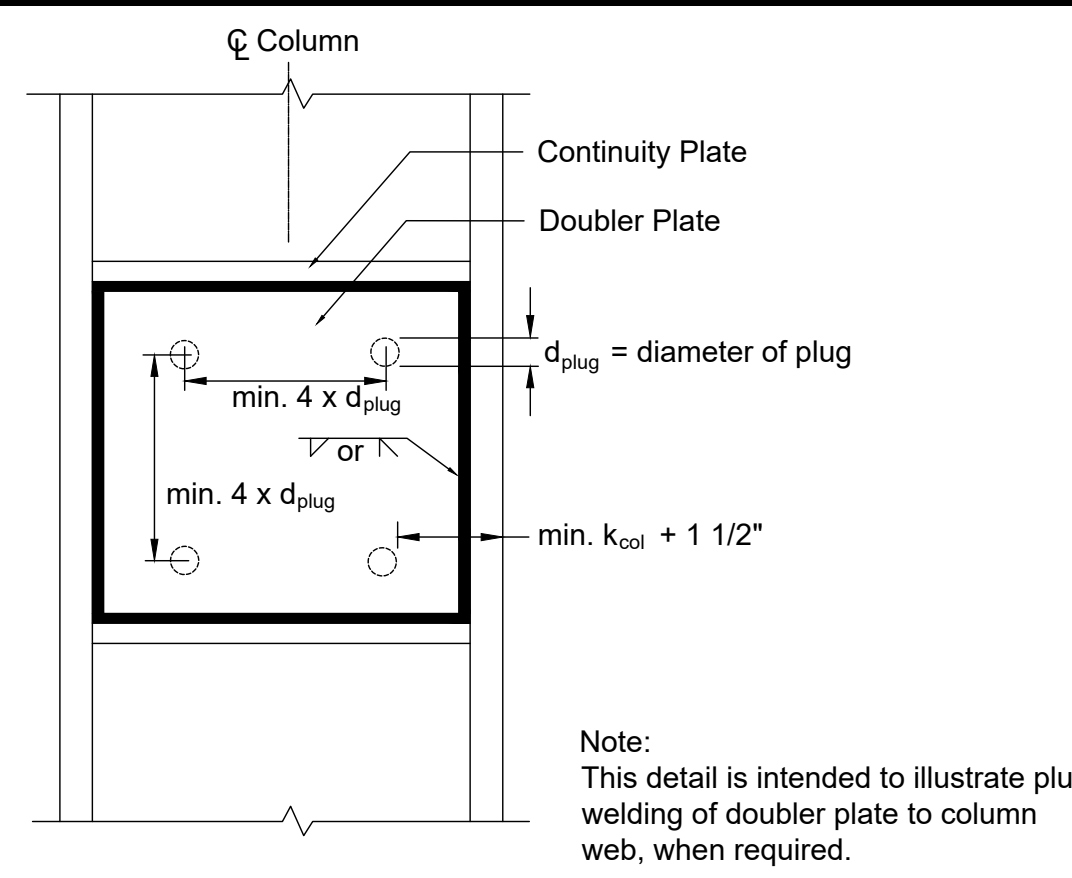


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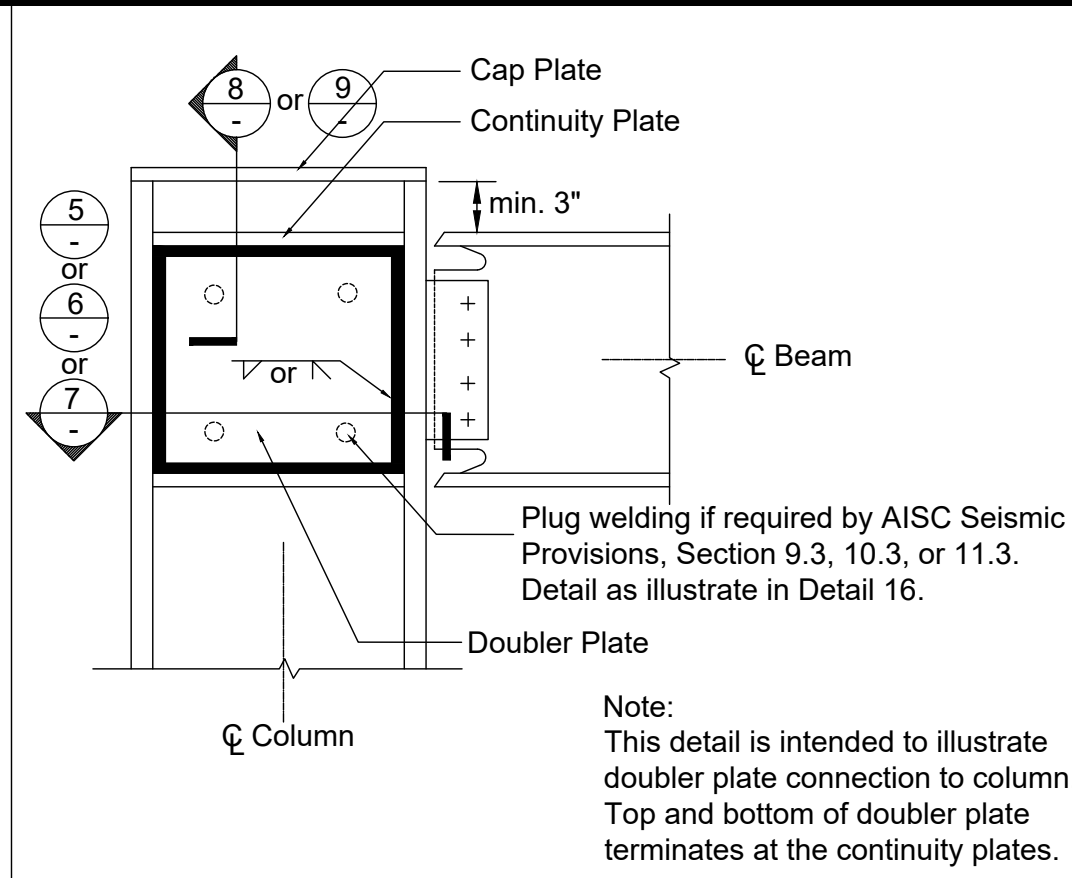
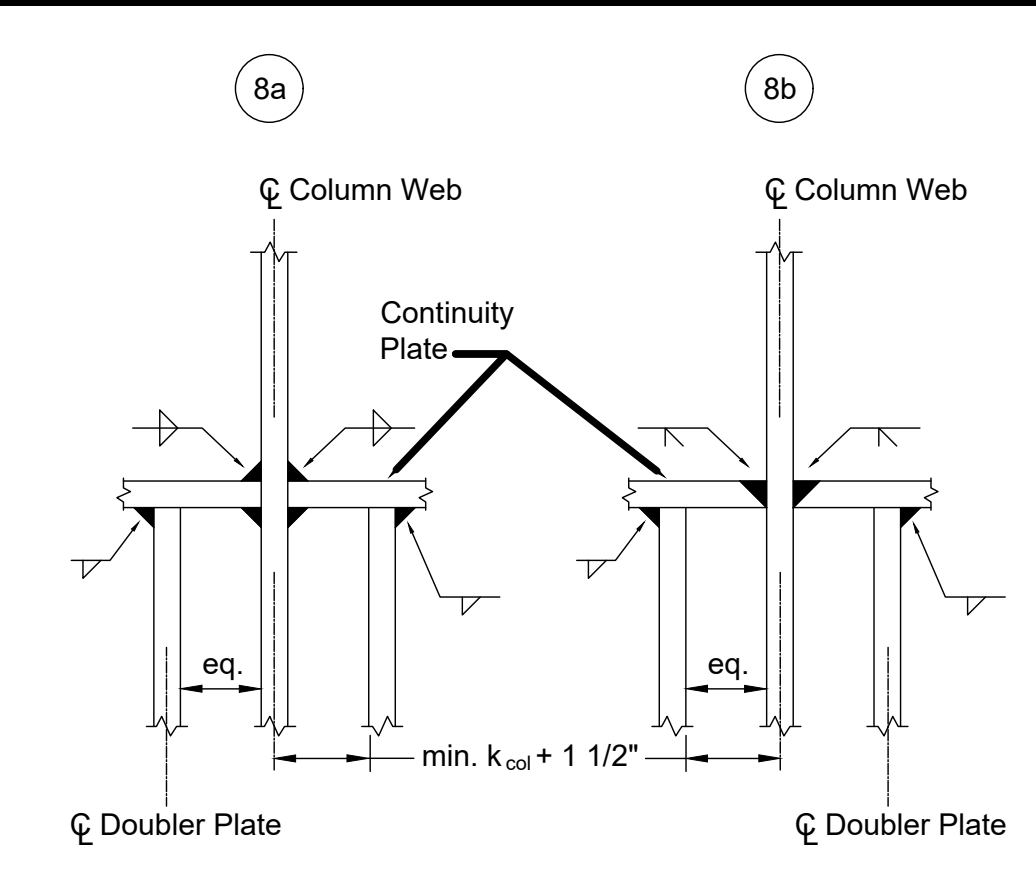
SHEET TITLE:

MOMENT FRAME NOTES

JOB NO. 2404-036 DRAWING NO.
SCALE 1/8" PER PLAN
DRAWN BY: MG
CHECKED BY: SH
MF1



- Notes:
1. Bevel as required by a selected AWS prequalified CJP groove welded joint detail.
 2. Larger of t_{bf} or $1/2"$ (plus $1/2 t_{bf}$, or minus $1/4 t_{bf}$).
 3. $3/4 t_{bf}$ to t_{bf} , $3/4"$ minimum ($\pm 1/4"$).
 4. $3/8"$ minimum radius (plus not limited, or minus 0).
 5. $3 t_{bf}$ ($\pm 1/2"$).
 6. Tolerances shall not accumulate to the extent that the angle of the access hole cut to the flange surface exceed 25° .
 7. Weld access hole shall be ground smooth to a surface roughness value not to exceed 500 micro inch; and shall be free of notches and gouges.



- TYPICAL SHEET 3 GENERAL NOTES:**
1. The size of columns or beams, continuity or doubler plate thickness, size and length of fillet welds, beam to column moment connections, steel column frame to foundation connections, and length of plastic hinging zone shall be determined by the Engineer or Architect of Record.
 2. The Engineer or Architect of Record shall appropriately dimension and specify the minimum detailing information illustrated on this Sheet to the structural plans. The details illustrated herein shall not be used to substitute for actual structural details.
 3. The details provided herein are intended to illustrate the minimum fabrication and welding details that shall be reflected on the structural plans and details.

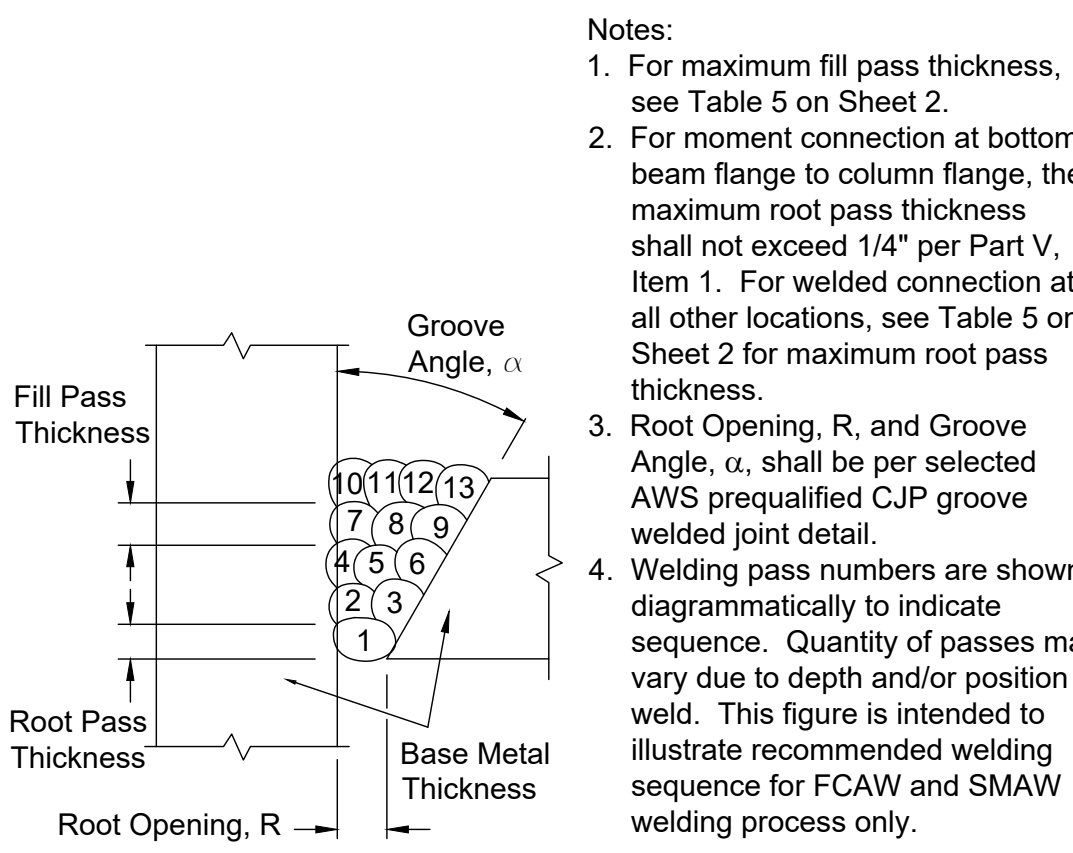
Plug Welding of Doubler Plate to Column **Detail 16**
Scale: Not to Scale

Weld Access Hole Detail **Detail 12**
Scale: Not to Scale

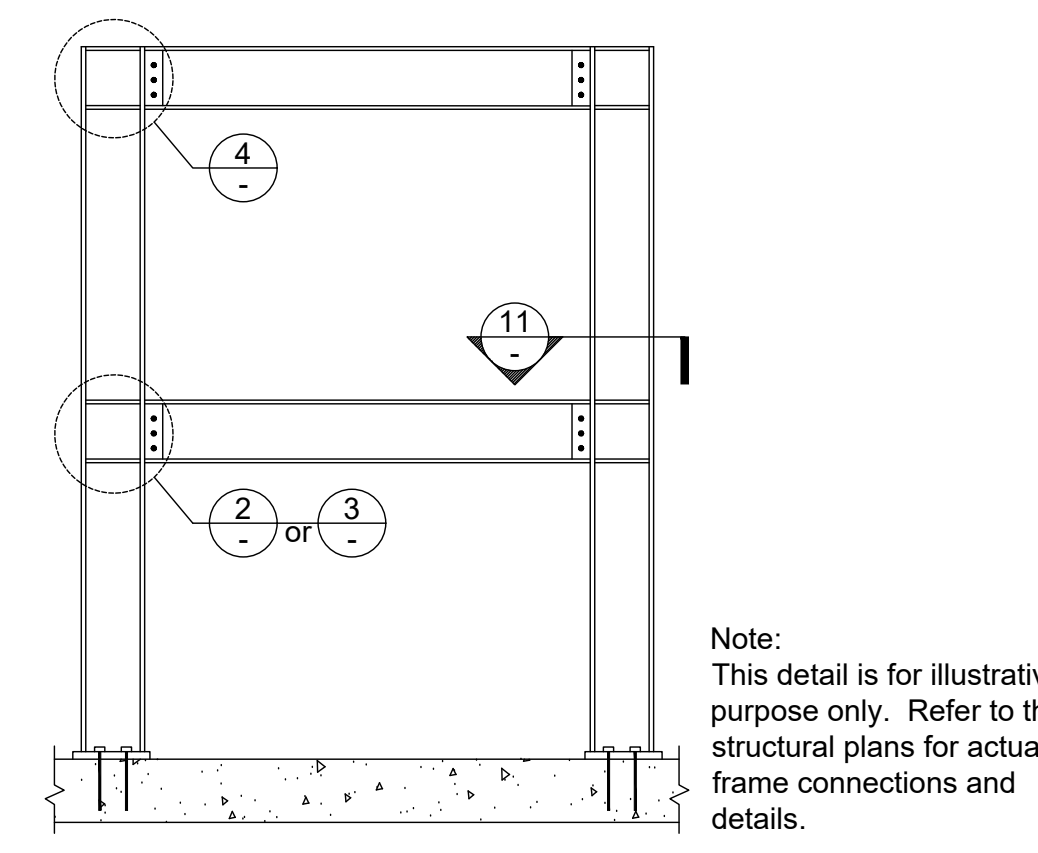
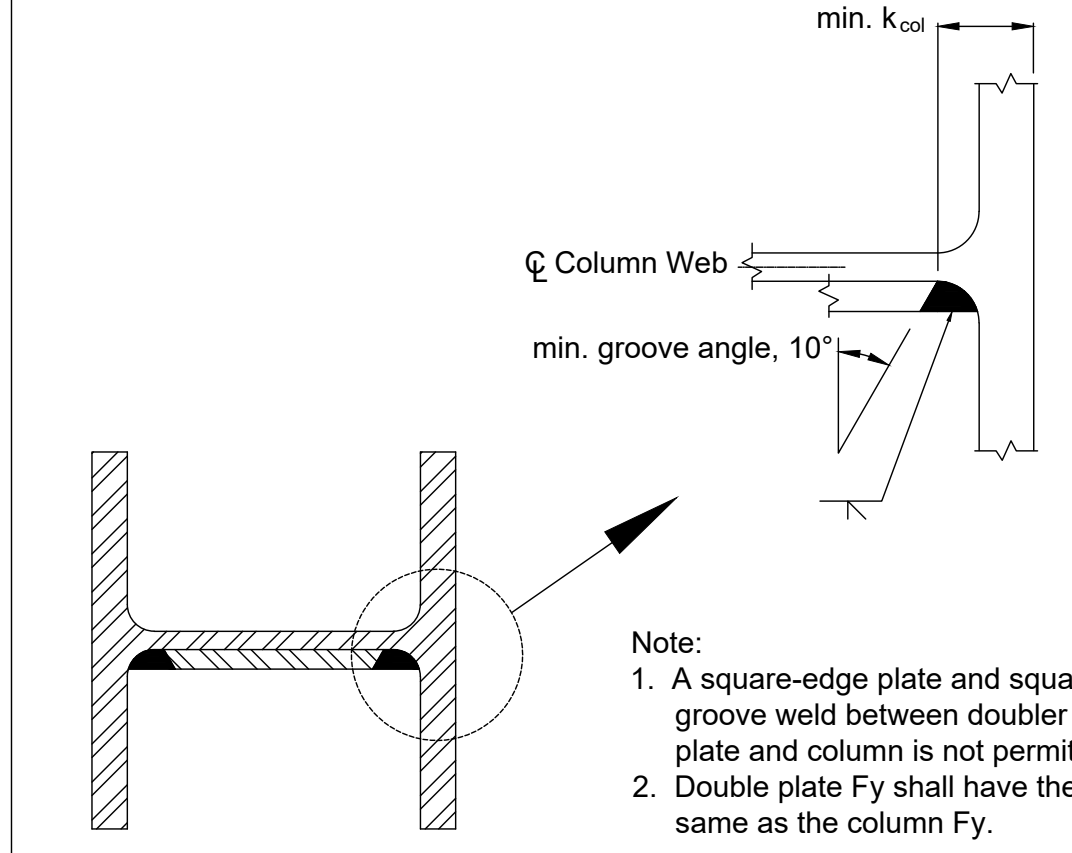
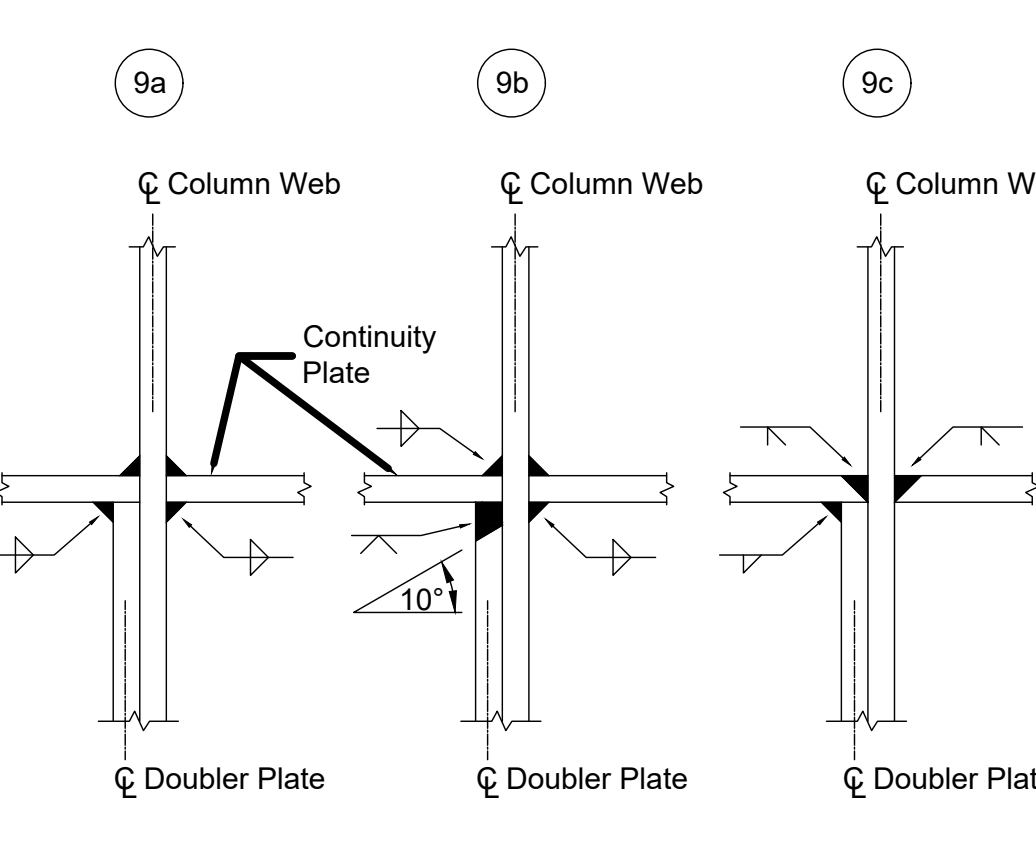
Doubler Plate Welds to Continuity Plate **Detail 8**
Scale: Not to Scale

Web Doubler Plate Detail **Detail 4**
Scale: Not to Scale

Typical Sheet 3 Notes



- Notes:
1. For maximum fill pass thickness, see Table 5 on Sheet 2.
 2. For moment connection at bottom beam flange to column flange, the maximum root pass thickness shall not exceed $1/4"$ per Part V, Item 1. For welded connection at all other locations, see Table 5 on Sheet 2 for maximum root pass thickness.
 3. Root Opening, R, and Groove Angle, α , shall be per selected AWS prequalified CJP groove welded joint detail.
 4. Welding pass numbers are shown diagrammatically to indicate sequence. Quantity of passes may vary due to depth and/or position of weld. This figure is intended to illustrate recommended welding sequence for FCAW and SMAW welding process only.

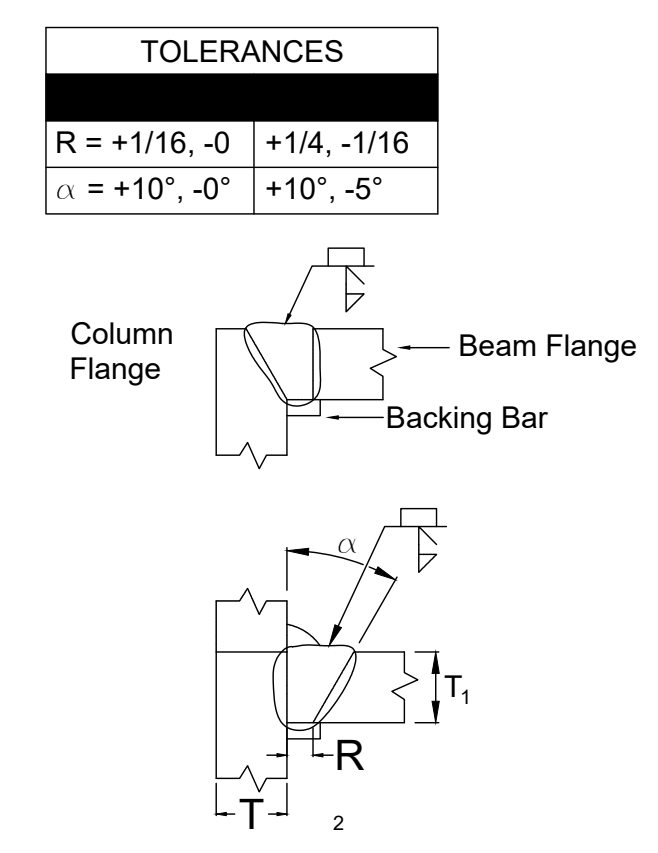


Weld Pass Sequence **Detail 13**
Scale: Not to Scale

Doubler Plate Welds to Continuity Plate **Detail 9**
Scale: Not to Scale

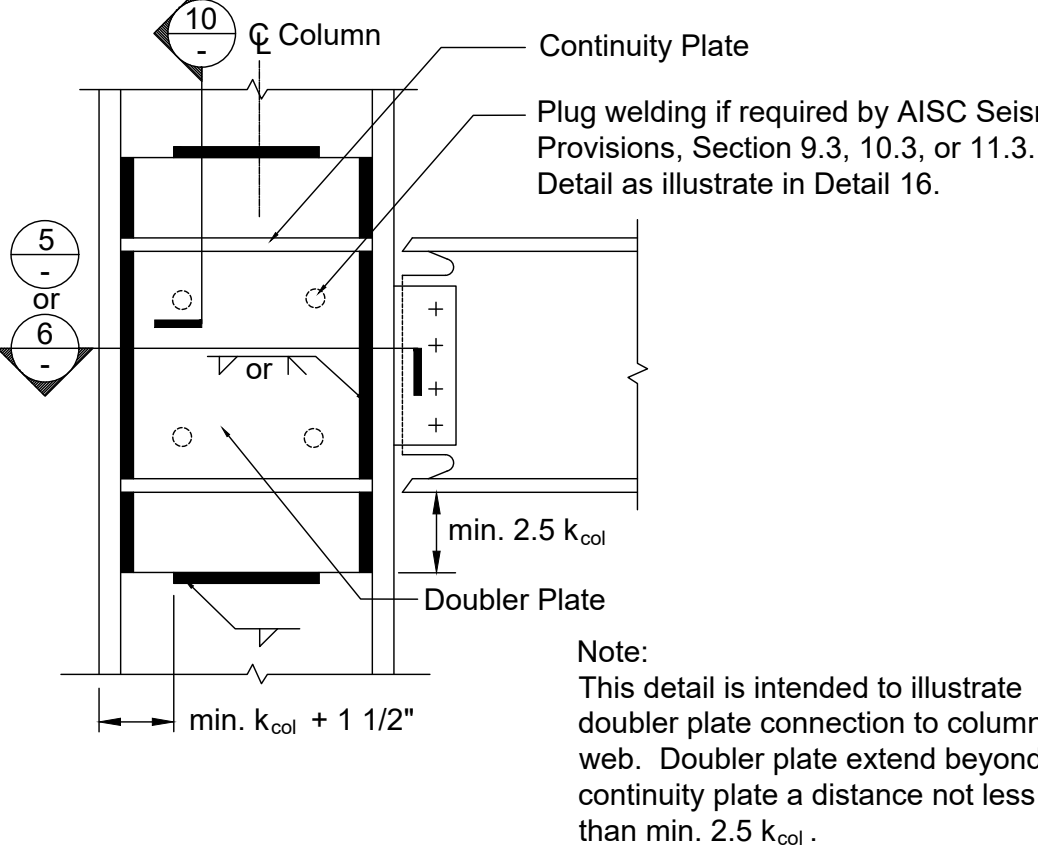
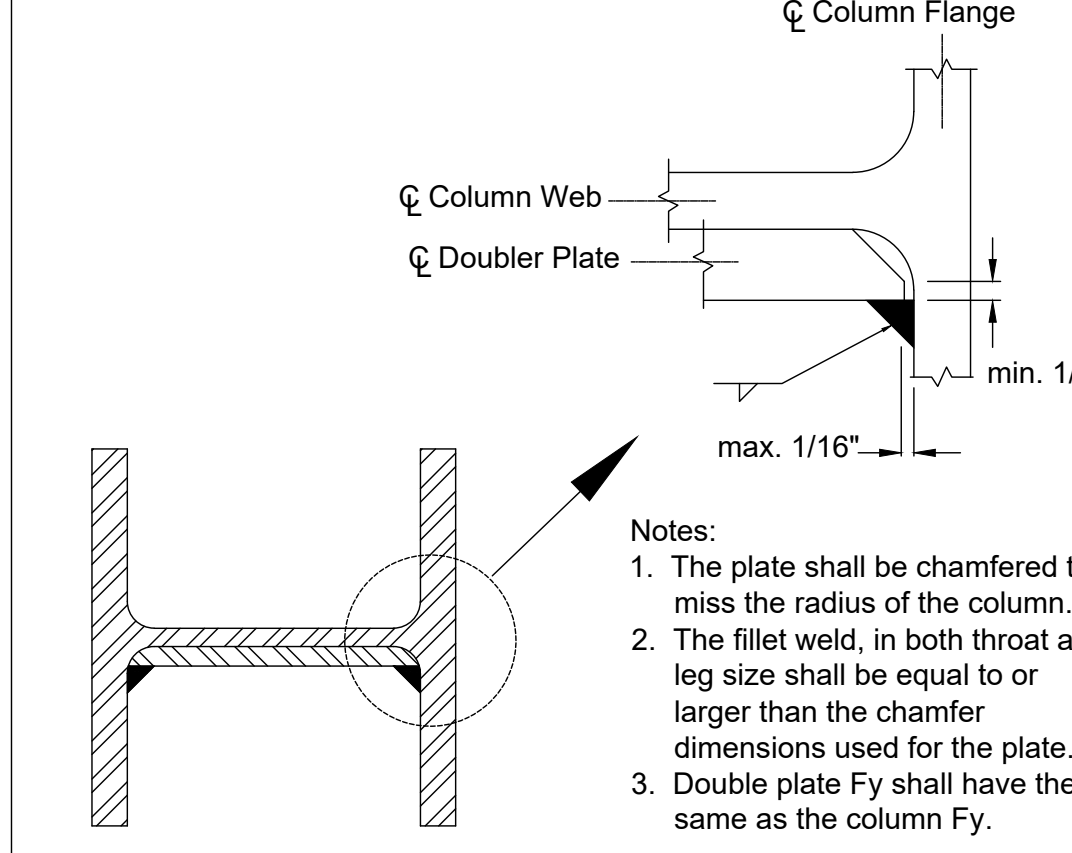
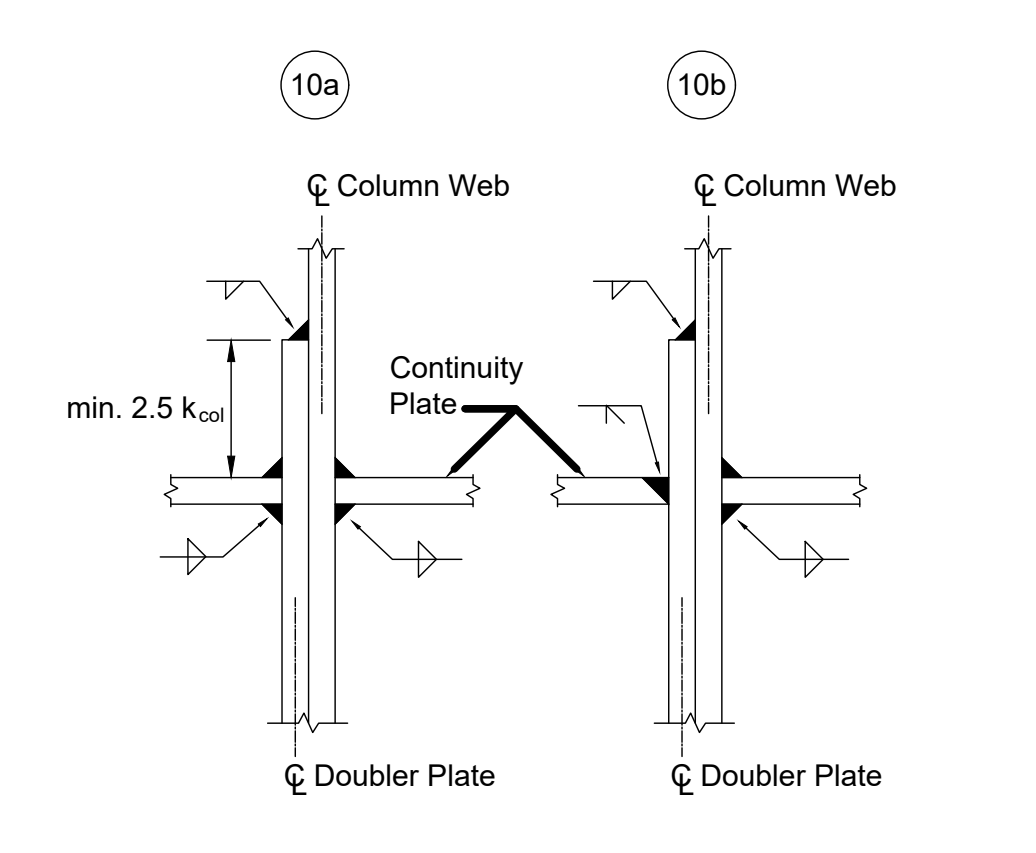
Groove Welded Doubler Plate **Detail 5**
Scale: Not to Scale

Sample Steel Moment Frame **Detail 1**
Scale: Not to Scale



Welding Process	Joint Designation	Base Metal Thickness (U = unlimited)		Groove Preparation		Allowed Welding Positions	Gas Shielding for FCAW
		T ₁	T ₂	Root Opening	Groove Angle		
SMAW	TC-U4a	U	U	R = 1/4	$\alpha = 45^\circ$	All	-
		U	U	R = 3/8	$\alpha = 30^\circ$	F, V, OH	-
FCAW	TC-U4a-GF	U	U	R = 3/16	$\alpha = 30^\circ$	All	Required
		U	U	R = 3/8	$\alpha = 30^\circ$	F	Not required
				R = 1/4	$\alpha = 45^\circ$	All	Not required

- Notes:
1. Groove welds in corner and T-joints of cyclically loaded structures shall be reinforced with fillet welds equal to $T_1/4$, but need not exceed $3/8$ inch.
 2. For corner joints, the outside groove preparation may be in either or both members, provided the basic groove configuration is not changed and adequate edge distance is maintained to support the welding operations without excessive edge melting.
 3. Adapted with permission from the AWS D1.1 Committee on Structural Welding, Structural Welding Code - Steel, AWS D1.1/D1.1M: 2002, Miami: American Welding Society, Figure 3.4 pg. 92 (top left).

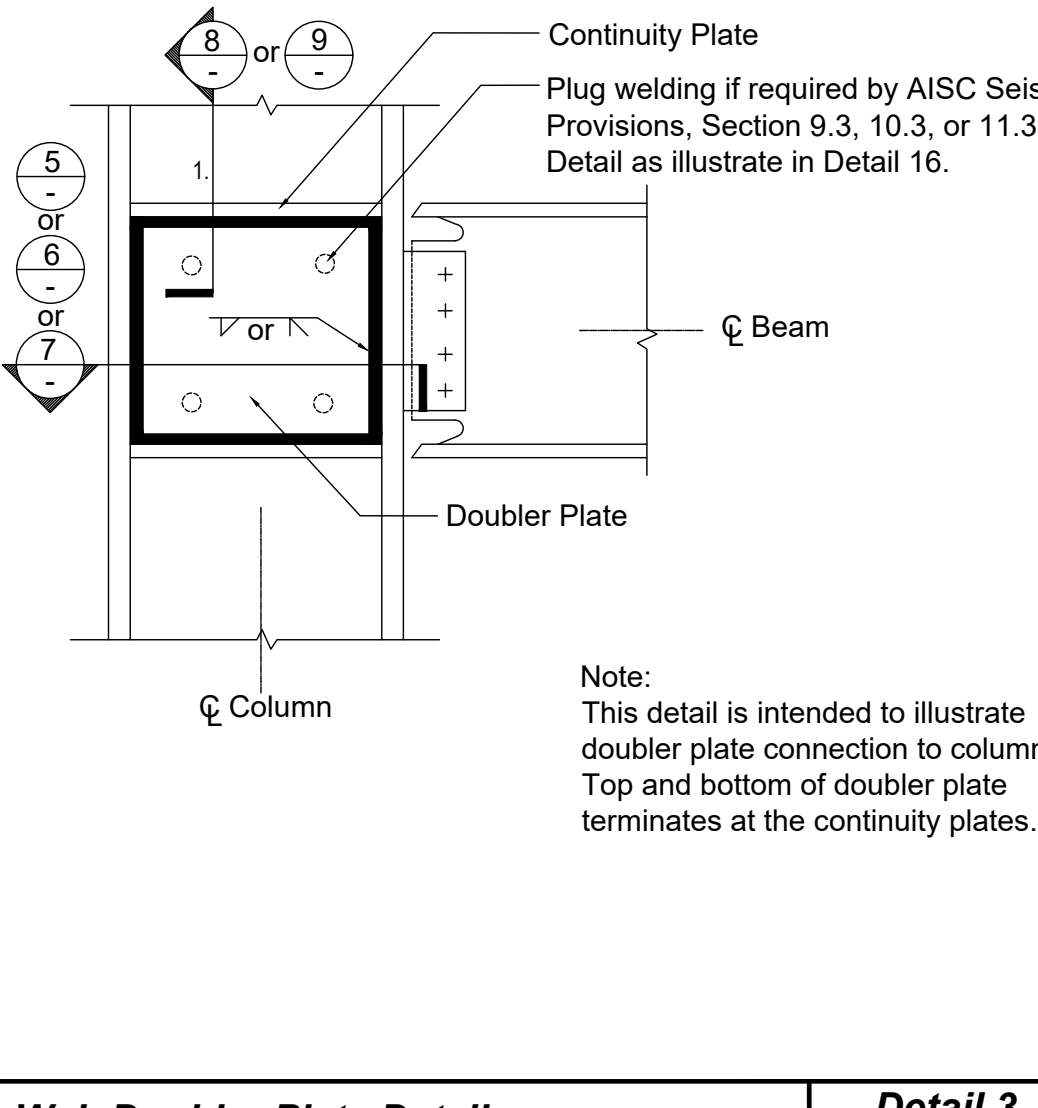
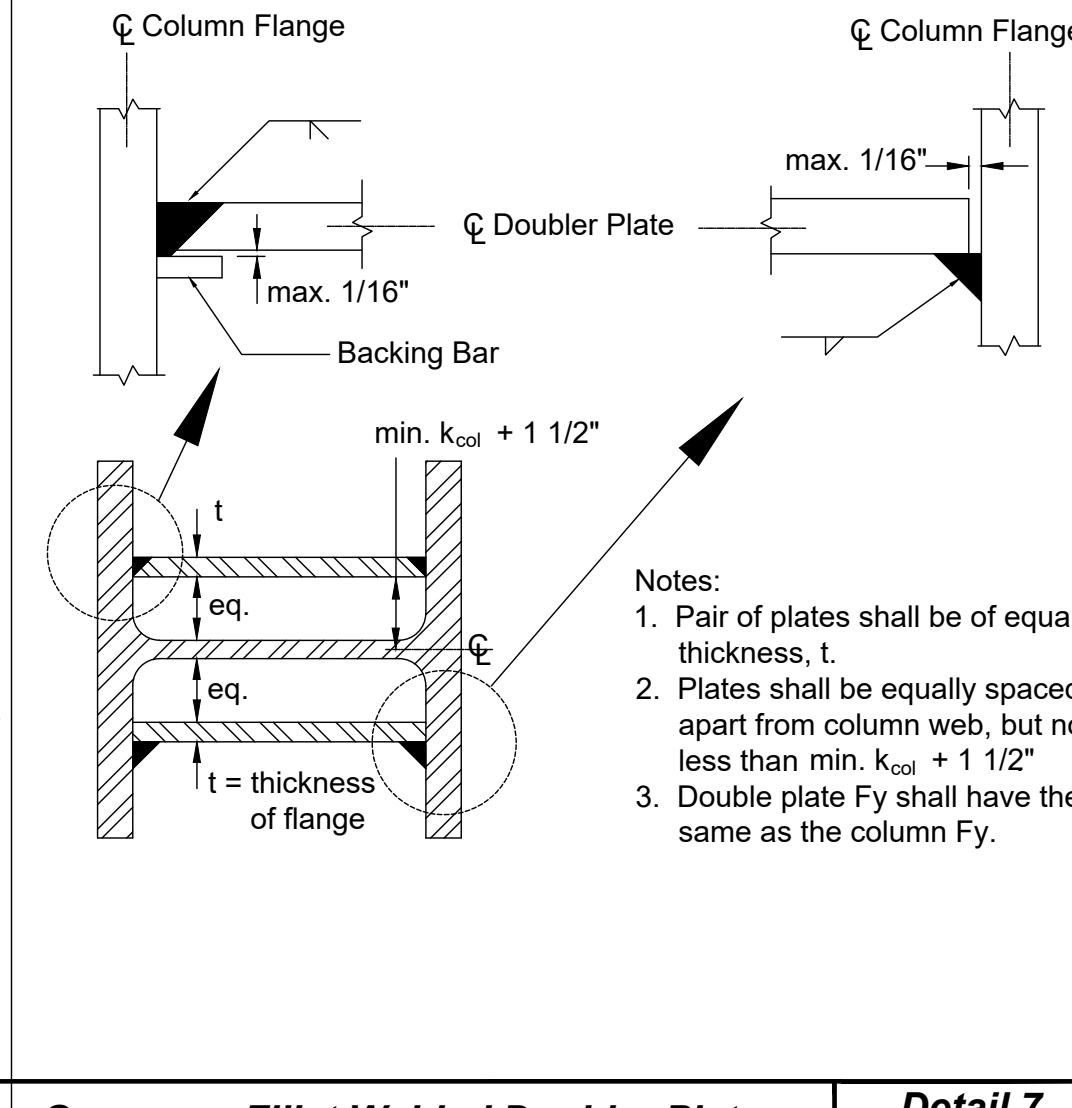
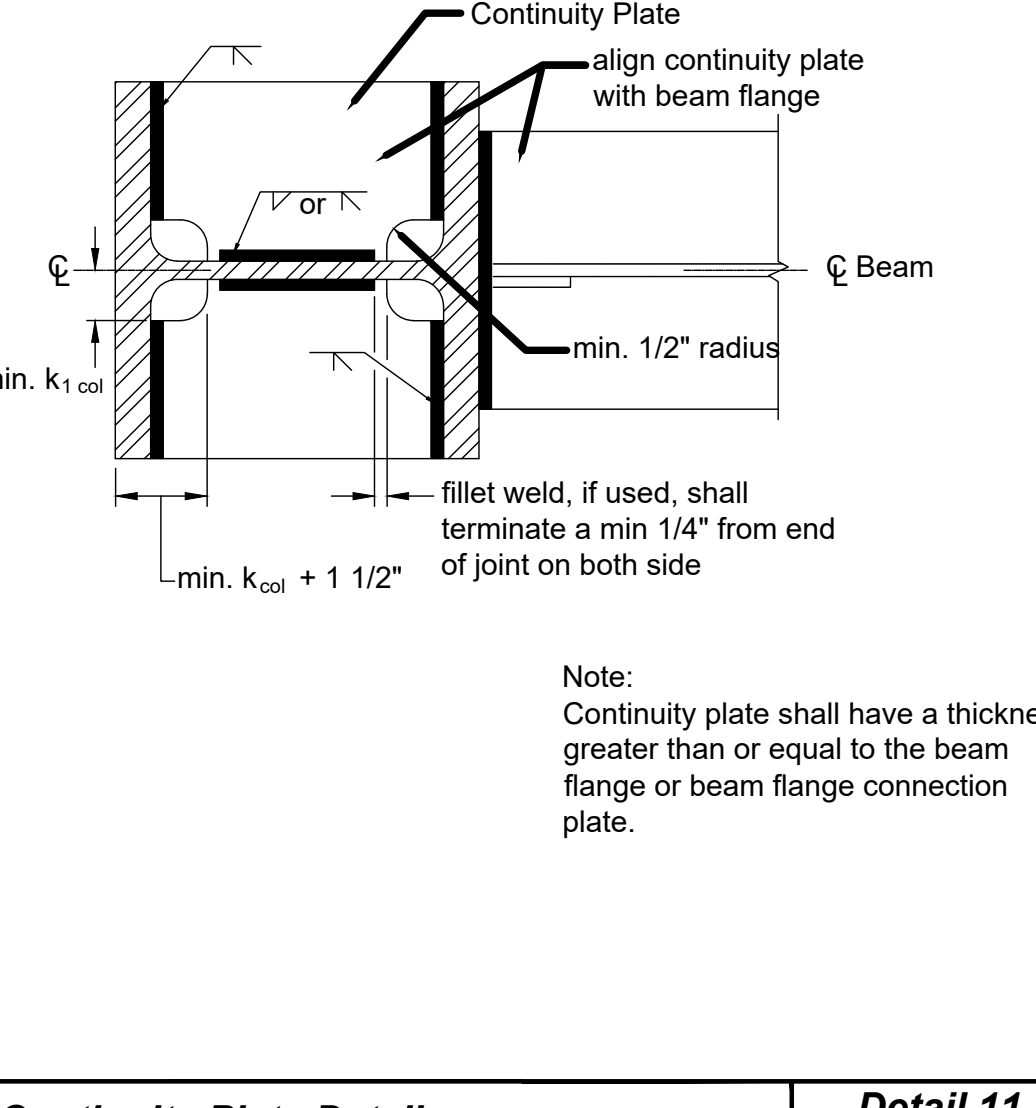
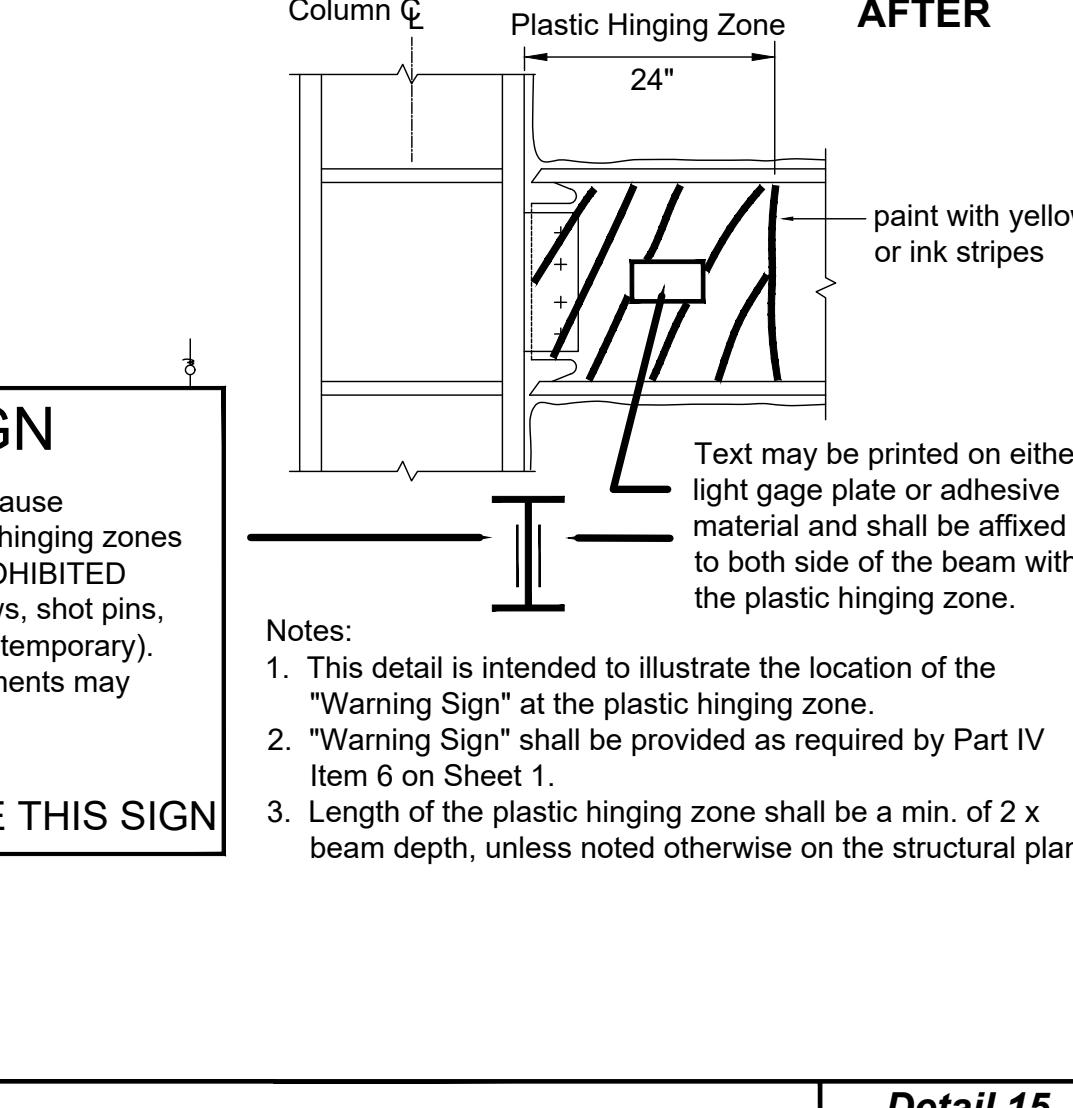
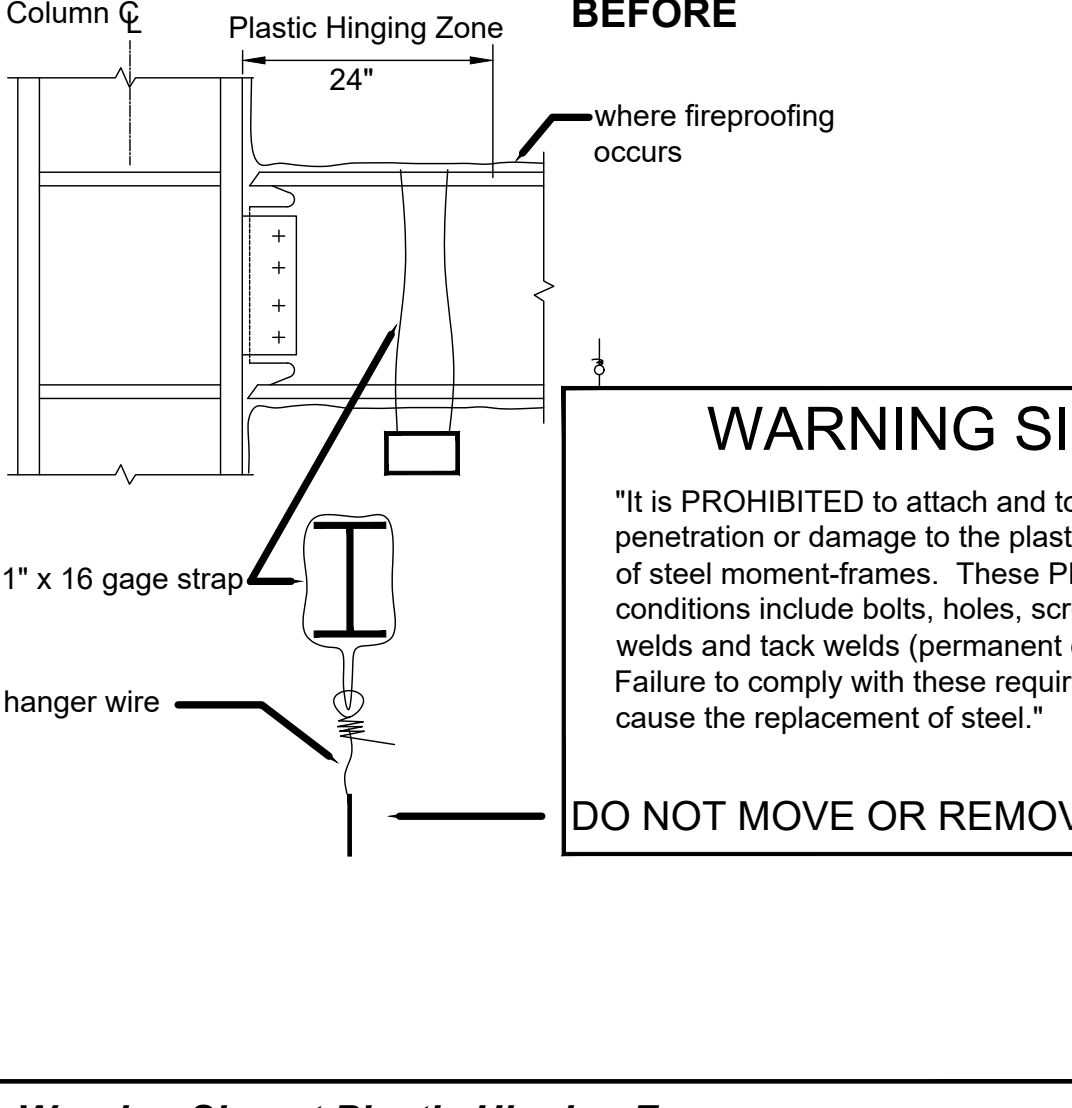


AWS Prequalified CJP Groove Welded Joint Detail **Detail 14**
Scale: Not to Scale

Doubler Plate Welds to Continuity Plate **Detail 10**
Scale: Not to Scale

Fillet Welded Doubler Plate **Detail 6**
Scale: Not to Scale

Web Doubler Plate Detail **Detail 2**
Scale: Not to Scale



Warning Sign at Plastic Hinging Zone **Detail 15**
Scale: Not to Scale

Continuity Plate Detail **Detail 11**
Scale: Not to Scale

Groove or Fillet Welded Doubler Plate **Detail 7**
Scale: Not to Scale

Web Doubler Plate Detail **Detail 3**
Scale: Not to Scale



**THE MAGUIRE RD RESIDENCE
FIRE REBUILD
4119 MAGUIRE ROAD
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MARCH 15, 2025

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DATE: 3-15-25

SHEET TITLE:

**MOMENT FRAME
TYPICAL DETAILS**

JOB NO. 2404-036 DRAWING NO.
SCALE 1/8" PER PLAN
DRAWN BY: MG
CHECKED BY: SH

MF2

Table 7. PREQUALIFIED BASE METAL - FILLER METAL COMBINATIONS FOR MATCHING STRENGTH (1, 2, 3, 4)

BASE METAL		FILLER METAL		
Group	Steel Specification	Welding Process	AWS Electrode Specification	Electrode Classification
I	ASTM A36 < 3/4 in.	SMAW	A5.1	E70XX
			A5.5 (6)	E70XX-X
		FCAW	A5.20 (5)	E70XT-X, E7XT-XM
			A5.29 (6)	E70XTX-X, E7XTX-XM
II	ASTM A36 § 3/4 in. ASTM A572 Grade 50 ASTM A913 Grade 50 ASTM A992	SMAW	A5.1	E7015, E7016, E7018, E7028
			A5.5 (6)	E70XX-X
		FCAW	A5.20 (5)	E70XT-X, E7XT-XM
			A5.29 (6)	E70XTX-X, E7XTX-XM
RELATIONSHIP	BASE METAL(S)	FILLER METAL STRENGTH RELATIONSHIP REQUIRED		
Matching	Any steel to itself or any steel to another in the same group	Any filler metal listed in the same group		
	Any steel in one group to any steel in another	Any filler metal listed for a lower strength group [SMAW electrodes shall be the low-hydrogen classification]		
Under-Matching	Any steel to any steel to any group			

NOTES:

- The base metal/filler metal strength relationships above shall be used to determine whether matching or under-matching filler metals are required. Refer to AWS D1.1/D1.1M:2002, Section 3.3.
- Preheating of joints involving base metals of different groups shall be in conformance with the requirements applicable to the higher strength group.
- When welds are to be stress-relieved, the deposited weld metal shall not exceed 0.05 percent vanadium.
- Adapted with permission from the AWS D1.1 Committee on Structural Welding, Structural Welding Code - Steel, AWS D1.1/D1.1M: 2002, Miami: American Welding Society, Table 3.1.
- FCAW electrodes with the -2, -2M, -3, -4, -7, -10, -11, -13, -14, G, -GS suffix shall be excluded and electrodes with the -11 suffix shall be excluded for thicknesses greater than 1/2 in.
- Filler metals of alloy group B3, B3L, B4, B4L, B5, B5L, B6, B6L, B7, B7L, B8, B8L, B9, or any BXH grade in AWS A5.5 or A5.29 are not prequalified for use in the as-weld condition.

CONTINUED FROM SHEET 1

- Weld terminations near the end of the column flange tips may be completed using weld tabs as follows:
 - Weld tabs may be steel or nonfusible material.
 - Weld terminations near the radius of the column need not be made using weld tabs. The use of small nonfusible weld tabs to assist in weld terminations is permitted.
 - Weld tabs shall be removed following completion of welding.
- Continuity plates may be welded to the column web with groove welds, fillet welds, or a combination of the two. Fillet welds shall terminate a minimum distance of 1/4 inch from each end of the joint.

6. Doubler Plate

Web doubler plates, as illustrated in Detail 2, 3, or 4 on Sheet 3, shall be welded using either Detail 5, 6, or 7 on Sheet 3.

7. Requirements for "k" Area

Welds shall terminate short of the "k" area for continuity plates as illustrated in Detail 11 on Sheet 3.

VII. EXEMPTIONS

- Reduction from certain Quality Assurance components of this Standard Quality Assurance Plan, as listed in Part VII Item 2, are permitted for the following buildings or structures:
 - One or two family dwellings not more than 1 story in height and 2,500 sf of floor area.
 - Buildings or structures accessory to residential uses (such as carport, storage, garage), and
 - Miscellaneous structures (such as walkway, canopy, patio cover, gazebo, storage rack).
- Buildings or structures, as listed in Part VII Item 1, are exempt from providing the following Quality Assurance components:
 - Electrode Storage and Atmospheric Exposure, Part IV, Item 5(f) and 5(g).
 - Plastic Hinging Zone Protection, Part IV, Item 6.
 - Additional CVN Notch Toughness Testing, Part IV, Item 7.
 - Non-Destructive Testing, Part IV, Item 8.
 - Preheat and Interpass Temperature, Part V, Item 4, or
 - Post Weld Heat Treatment, Part V, Item 5.

Table 5. PREQUALIFIED WPS REQUIREMENTS (1, 2, 3)

VARIABLE	POSITION OF WELD	WELD TYPE	SMAW	FCAW
Maximum Electrode Diameter	Flat (F)	Fillet (4)	5/16 in.	1/8 in.
		Groove (4)	1/4 in.	
		Root Pass	3/16 in.	
	Horizontal (H)	Fillet	1/4 in.	1/8 in.
		Groove	3/16 in.	
	Vertical (V)	All	3/16 in.	3/32 in.
Overhead (OH)		All	3/16 in.	5/64 in.
Maximum Current	All	Fillet	Within the range of recommended operation by the filler metal manufacturer and a WPS approved by engineer of record.	Within the range of recommended operation by the filler metal manufacturer and a WPS approved by engineer of record.
	All	Groove weld root pass with opening		
		Groove weld root pass without opening		
		Groove weld fill passes		
		Groove weld cap pass		
Maximum Root Pass Thickness (5)	Flat (F)	All	3/8 in.	3/8 in.
	Horizontal (H)		5/16 in.	5/16 in.
	Vertical (V)		1/2 in.	1/2 in.
	Overhead (OH)	5/16 in.	5/16 in.	
Maximum Fill Pass Thickness	All	All	3/16 in.	1/4 in.
	Maximum Single Pass Fillet Weld Size	Flat (F)	Fillet	3/8 in.
Horizontal (H)		5/16 in.		3/8 in.
Vertical (V)		1/2 in.		1/2 in.
	Overhead (OH)	5/16 in.	5/16 in.	
Maximum Single Pass Layer Width	All	Root opening >1/2 in.	Not applicable.	Split layers (6)
		Any layer of width w		

NOTES:

- Applicable provisions of AWS D1.1/D1.1M:2002 Section 3 "Prequalification of WPSs" must be maintained for prequalified status of SMAW and FCAW WPSs.
- Refer to Detail 13 on Sheet 3 for diagram of weld pass sequence.
- Adapted with permission from the AWS D1.1 Committee on Structural Welding, Structural Welding Code - Steel, AWS D1.1/D1.1M: 2002, Miami: American Welding Society, Table 3.7.
- Except root passes.
- See AWS D1.1/D1.1M:2002, Section 3.7.2, for width-to-depth limitations.
- In the F, H, or OH positions for nontubulars, split layers when the layer width w > 5/8 inch. In the V position for nontubulars or the 5G or 6G for tubulars, split layers when the width w > 1 inch.

Table 6. STRUCTURAL OBSERVATION CHECKLIST

STRUCTURAL OBSERVATION PROGRAM (Steel Moment Frame for Seismic Application)	
<input type="checkbox"/>	Orientation and placement of connected components.
<input type="checkbox"/>	Removal of backing bars, as required on the plans.
<input type="checkbox"/>	Removal of runoff tabs, as required on the plans.
<input type="checkbox"/>	Presence of continuity plates, as required on the plans.
<input type="checkbox"/>	Presence of doubler plates, as required on the plans.
<input type="checkbox"/>	Configuration and finish of weld access holes, if applicable.
<input type="checkbox"/>	Contour of RBS profile, if applicable.
<input type="checkbox"/>	Verify that no welded attachments occur in the plastic hinging region.
<input type="checkbox"/>	Review NDT and deputy inspection reports for general compliance.

NOTES:

- Weld qualities shall be verified by the Deputy Inspector.
- The structural observations listed in this Table are in addition to the structural observations that may be required on the structural plans.

Table 1. REPORTS TO BE SUBMITTED TO THE CITY BUILDING INSPECTOR

	PREPARED BY	TYPE OF REPORT
1.	Structural Observer(s)	<input type="checkbox"/> Structural Observation Reports
2.	Deputy Inspector(s)	<input type="checkbox"/> Deputy Inspection Reports
3.	NDT Technician(s)	<input type="checkbox"/> Non-Destructive Testing Reports

Table 2. NON-DESTRUCTIVE TEST LOCATIONS

	REQUIRED LOCATIONS	OMF	IMF	SMF
1.	CJP Groove Weld Ultrasonic test shall be performed on all CJP groove welds in materials 5/16 inch (8 mm) thick or greater. In addition, magnetic particle test shall be performed on all beam-to-column CJP groove welds.	B	A	A
2.	"k" Area When welding of doubler plates, continuity plates, or stiffeners has been performed in the k-area, the web shall be tested for cracks using magnetic particle testing. The magnetic particle test area shall include the k-area base metal within 3 in. (75 mm) of the weld.	C	B	B
3.	Beam Cope and Access Hole At welded splices and connections, thermally cut surfaces of beam copes and access holes shall be tested using magnetic particle testing, when the flange thickness exceeds 1-1/2 in. (38 mm) for rolled shapes.	C	B	B
4.	Reduced Beam Section Repair Magnetic particle testing shall be performed on any weld and adjacent area of the RBS plastic hinge region that has been repaired by welding, or on the base metal of the RBS plastic hinge region if a sharp notch has been removed by grinding.	B	B	A
5.	Base Metal Lamellar Tearing and Laminations at CJP Groove Weld Base metal thicker than 1-1/2 in. (38 mm) shall be ultrasonically tested for discontinuities behind and adjacent to the fusion line when the base metal is loaded in tension in the through thickness direction in tee and corner joints and the connected material is greater than 3/4 in. (19 mm). Any base metal discontinuities found within 1/4 of the steel surface shall be accepted or rejected on the basis of criteria of AWS D1.1 Table 6.2, where t is the thickness of the part subjected to the through-thickness strain.	B	B	A
6.	End of Weld at Weld Tab Removal Site Magnetic particle testing shall be performed on the end of welds from which the weld tabs have been removed, except for continuity plate weld tabs.	C	B	B
7.	PJP Groove Weld Ultrasonic testing shall be performed on PJP groove welds used in column splices with an effective throat of 3/4 in. (19.1 mm) thick or greater.	C	B	A

NOTE: A, B, and C are the frequencies of non-destructive tests listed in Table 3.

Table 3. NON-DESTRUCTIVE TEST FREQUENCY

	Frequency Designation		
	A	B	C
Ultrasonic Testing (UT)	100% of joints	50% of joints	25% of joints
Magnetic Particle Testing (MT)	50% of joints	25% of joints	Not Required

NOTES:

- Refer to Table 2 for locations of non-destructive testing.
- Rate of non-destructive testing may be reduced as permitted in Sheet 1, Part IV, Item 8(d).

Table 4. PREQUALIFIED MINIMUM PREHEAT AND INTERPASS TEMPERATURE

STEEL SPECIFICATION	WELDING PROCESS	THICKNESS OF THICKEST PART AT POINT OF WELDING (in.)	MINIMUM PREHEAT AND INTERPASS TEMPERATURE (°F)
ASTM A36 ASTM A572 Grade 50 ASTM A913 Grade 50 ASTM A992	SMAW with low-hydrogen electrodes, FCAW	1/8 to 3/4 incl.	32
		Over 3/4 to 1-1/2 incl.	50
		Over 1-1/2 to 2-1/2 incl.	150
		Over 2-1/2	225

NOTES:

- Surfaces to be welded and surfaces adjacent to welds shall be free of moisture pursuant to AWS D1.1/D1.1M:2002 Section 5.15. Use a higher preheat temperature from this Table to remove moisture.
- Adapted with permission from the AWS D1.1 Committee on Structural Welding, Structural Welding Code - Steel, AWS D1.1/D1.1M: 2002, Miami: American Welding Society, Table 3.2.



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MARCH 15, 2025

NO.	REVISIONS	DATE
△	PLAN CHECK CORRECTIONS	3-12-25
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DATE: 3-15-25

SHEET TITLE:

**MOMENT FRAME
TYPICAL DETAILS**

JOB NO. 2404-038 DRAWING NO.
SCALE 1/8" = 1'-0" PER PLAN
DRAWN BY: MG
CHECKED BY: SH

MF3