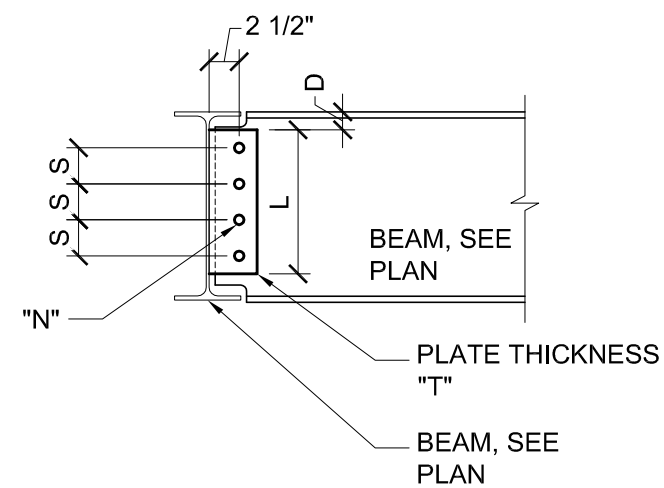
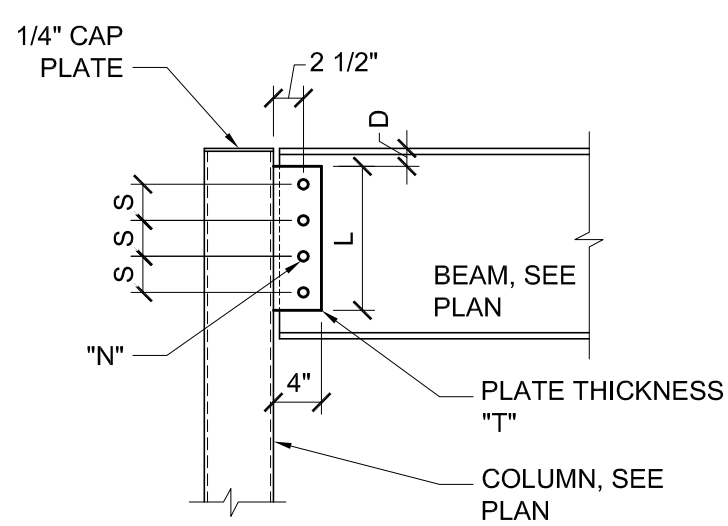


1. **BUILDING CODE:**
- A. INTERNATIONAL BUILDING CODE – 2009 EDITION
 - B. ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
2. **MINIMUM LOADING REQUIREMENTS:**
- A. **ROOF SNOW LOADS: (UNREDUCIBLE – GOVERNS)**
 - a. **GROUND SNOW LOAD:** $P_g = 60.0$ PSF
 - i. **IMPORTANCE FACTOR:** $I = 1.2$
 - ii. **COLD ROOF SLOPE FACTOR:** $C_s = 1.0$
 - iii. **THERMAL FACTOR:** $C_t = 1.0$
 - iv. **EXPOSURE FACTOR:** $C_e = 1.0$
 - v. **TERRAIN CATEGORY:** C
 - b. **FLAT ROOF SNOW LOAD:** $P_f = 51$ PSF
 - B. **ROOF DEAD LOAD:** ALL PERMANENT STRUCTURE AND EQUIPMENT.
 - C. **ROOF LIVE LOAD:**
 - a. **STANDARD ROOF LIVE LOAD:** 20 PSF
 - D. **FLOOR LIVE LOADS:**

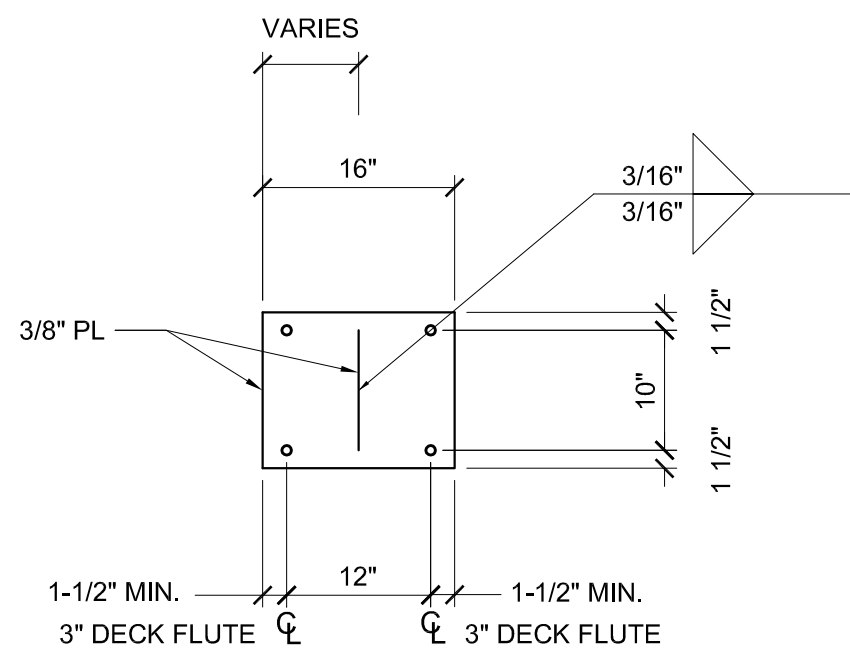
	UNIFORM	CONCENTRATED	PARTITION
a. CORRIDORS – ABOVE GROUND FLOOR	80 PSF		
b. ELEVATED MECHANICAL PLATFORM	300 #		
c. OPERATING ROOMS, LABORATORIES	60 PSF	1,000#	
d. PATIENT ROOMS	40 PSF	1,000#	
e. CORRIDORS ABOVE 1 ST FLOOR	80 PSF	1,000#	
f. TYPICAL FLOORS (OPERATING ROOMS)	60 PSF		
g. PARTITION LOADS (UNIFORM, UNREDUCIBLE)			
 - E. **WIND:**
 - a. **FACTORS:**
 - i. **BASIC WIND SPEED:** 100 MPH
 - ii. **EXPOSURE CATEGORY:** "B"
 - iii. **IMPORTANCE FACTOR:** 1.15
 - iv. **BUILDING CATEGORY:** III
 - F. **SEISMIC**
 - a. **COEFFICIENTS:**
 - i. **RESPONSE SPECTRAL ACC. (0.2 SEC.):** $S_s = 0.40$ G
 - ii. **RESPONSE SPECTRAL ACC. (1.0 SEC.):** $S_1 = 0.10$ G
 - iii. **IMPORTANCE:** D
 - iv. **SOIL CLASSIFICATION:** III
 - v. **MAX. CONSIDERED EARTHQUAKE ACC @ 5% DAMPED DESIGN:** $S_{DS} = 0.39; S_{D1} = 0.16$
 - vi. **BUILDING CATEGORY:** D
 - vii. **SEISMIC DESIGN CATEGORY FOR 0.1 AND 1.0 SECONDS:** D
 - viii. **SEISMIC RESPONSE COEFFICIENT:** $C_s = 0.035$
 - b. **DESIGN COEFFICIENTS AND FACTORS FOR SEISMIC FORCE RESISTING SYSTEMS**
 - i. **MOMENT RESISTING FRAME SYSTEMS**
 - 1. **ORDINARY STEEL MOMENT FRAMES**
 - a. **RESPONSE MODIFICATION:** $R = 3 \frac{1}{4}$
 - b. **SYSTEM OVERSTRENGTH FACTOR:** $\Omega_b = 3$
 - c. **DEFLECTION AMPLIFICATION FACTOR:** $C_d = 3$



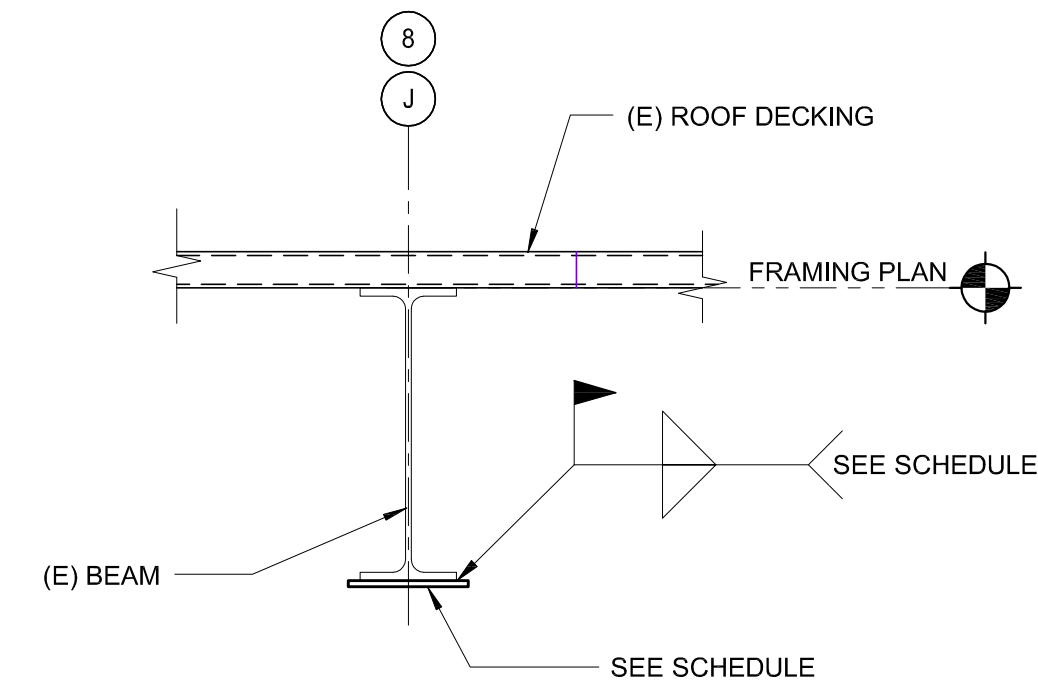
CONNECTION SCHEDULE					
BEAM	N	L	T	D	S
W12	3	9"	3/8"	1 1/2"	3"

NOTES:

- BOLTS SHALL BE 3/4" DIA A325N (U.N.O.)
- N = NUMBER OF BOLTS
- L = LENGTH OF PLATE
- T = THICKNESS OF PLATE
- D = DEPTH OF PLATE FROM TOP FLANGE OF BEAM
- S = BOLT SPACING



NOTE: CONTRACTOR SHALL FIELD VERIFY GUSSET LOCATIONS RELATIVE TO BOLT ALIGNMENT W/ 3" DECK FLUTES FOR FASTENING.



BEAM REINFORCEMENT SCHEDULE				
BEAM	ρ	LENGTH (CENTER ON BM SPAN)	WELD EA FLANGE EACH END	WELD INTERMEDIATE BOTH FLANGE EDGES
W18x35	3/4"x7"	24' LONG	30" LONG 1/4" FILLET	1/4" FILLET ON 5"@12"
W24x55	1 1/4"x9"	20' LONG	24" LONG 5/16" FILLET	5/16" FILLET ON 3"@12"

3. STRUCTURAL STEEL SHALL BE DESIGNED USING THE 13TH EDITION OF THE AISC STEEL CONSTRUCTION MANUAL. STEEL BEAMS SHALL CONFORM TO ASTM A992, FY = 50KSI; MISCELLANEOUS PLATES, SHAPES, CHANNELS, ANGLES ETC. SHALL CONFORM TO ASTM A36, FY = 36KSI. ALL STEEL SUPPORTING MECHANICAL EQUIPMENT AND TO RECEIVE FIREPROOFING SHALL BE UNPAINTED AND UNPRIMED.
4. SEE ARCHITECTURAL WALL SECTIONS AND DETAILS FOR MISCELLANEOUS STEEL.
5. INSPECTION REPORTS SHALL BE FURNISHED TO THE OWNER, BUILDING OFFICIAL, ARCHITECT AND SER. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR AND IF NOT CORRECTED, SHALL BE REPORTED TO THE OWNER, BUILDING OFFICIAL, ARCHITECT AND SER.
- CONNECTIONS:**
- ALL DETAILS ARE CONCEPTUAL ONLY AND DO NOT INDICATE THE REQUIRED NUMBER OF BOLTS OR WELD SIZES, UNLESS SPECIFICALLY NOTED OTHERWISE.
- FIELD CONNECTIONS SHALL BE FIELD BOLTED WITH A325N HIGH STRENGTH BOLTS (U.N.O.)
 - UNLESS NOTED OTHERWISE, CONNECTIONS SHALL BE WELDED OR BOLTED WITH 3/4" DIAMETER BOLTS (BEARING TYPE, DESIGNATION N, THREADS IN SHEAR PLANE) BEAM TO COLUMN CONNECTIONS SHALL BE FULL DEPTH (BOLT SPACING 3" ON-CENTER).
 - OVERSIZE OR SLOTTED HOLES SHALL NOT BE USED FOR ANY CONNECTIONS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR APPROVED IN WRITING BY ENGINEER OF RECORD.
 - MINIMUM NUMBER OF BOLTS PER CONNECTION SHALL BE 2.
 - ALTERNATE CONNECTIONS WILL BE ACCEPTED ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD; HOWEVER, THE ENGINEER SHALL BE THE SOLE JUDGE OF ACCEPTABILITY. THE CONTRACTOR'S BID SHALL ANTICIPATE THE USE OF THOSE SPECIFIC DETAILS SHOWN ON THE DRAWINGS. IN ANY EVENT THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF SUCH ALTERNATE DETAILS.
 - ALL WELDS INDICATED SHALL BE THE MINIMUM WELD SIZED SPECIFIED BY THE AISC MANUAL OF STEEL DESIGN (SINGLE PASS AS REQUIRED) ALL BUTT AND FULL PENETRATION WELDS SHALL BE MADE USING RUN OFF TABS THAT SHALL BE REMOVED AND GROUND SMOOTH AFTER WELD IS COMPLETED. ALL WELD BACK UP BARS SHALL BE REMOVED AND GROUND SMOOTH AFTER WELD IS COMPLETED.
 - SHOP CONNECTIONS, UNLESS NOTED OTHERWISE, SHALL BE WELDED. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, BEAM CONNECTION CAPABILITIES SHALL BE CALCULATED IN ACCORDANCE WITH AISC'S "THE STEEL CONSTRUCTION MANUAL", 13TH EDITION, FOR EACH SHEAR CONNECTION PROVIDE THE GREATER OF THE FOLLOWING SHEAR CAPACITIES:
 - A. BEAMS: SUPPORT A REACTION @ EQUAL TO HALF TOTAL UNIFORM LOAD CAPACITY OF BEAM FOR GIVEN SHAPE, SPAN AND STEEL SPECIFICATION (AISC) WITH EFFECT OF CONCENTRATED LOADS ACCOUNTED FOR OR THE (UNFACTORED) REACTIONS SHOWN ON PLAN, WHICHEVER IS GREATER.
 - CONNECTION DESIGN IS THE RESPONSIBILITY OF THE FABRICATOR FOR OTHER THAN THE STANDARD CONNECTIONS NOTED ON THE CONNECTION SCHEDULE. CONNECTIONS CALCULATIONS SHALL BE SIGNED, SEALED BY A PE REGISTERED IN THE PROJECT STATE AND SUBMITTED FOR REVIEW WITH THE SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. PARTIAL SUBMITTAL PACKAGES WILL BE RETURNED.
- FIELD TESTING**
- BOLTED CONNECTIONS: 100% OF COMPONENTS AND FASTENERS IN SLIP CRITICAL CONNECTIONS, AS IDENTIFIED IN THE PROJECT CONTRACT DOCUMENTS SHALL BE VISUALLY INSPECTED AND TESTED FOR TIGHTNESS IN ACCORDANCE WITH AISC SPECIFICATIONS FOR STRUCTURAL JOINTS, PARTS 8 AND 9.
 - CHECK BY CALIBRATION TORQUE WRENCH 25% OF BOLTS IN EACH NON-SC SHEAR CONNECTION BUT NOT LESS THAN (2) PER CONNECTION.
 - FIELD WELDED CONNECTIONS: PERFORM TESTING IN ACCORDANCE WITH ANSI/AWS D1.1, CHAPTER 6.
 - CONDUCT TESTING OF 10% OF WELDS ON STRUCTURAL STEEL BY DYE PENETRATION OR MAGNETIC PARTICLE TESTING.
 - CONDUCT TESTING OF 100% OF GROOVE, PLUG, OR SLOT WELDS IN STRUCTURAL STEEL BY ULTRASONIC TESTING OR OTHER NONDESTRUCTIVE TESTING APPROVED BY ENGINEER OF RECORD.
 - RADIOGRAPHICALLY TEST 5% OF ALL FULL PENETRATION WELDS.
 - THE STRUCTURAL FABRICATOR AND ERECTOR SHALL SCHEDULE ALL WORK TO ALLOW THE ABOVE INSPECTION AND TESTING REQUIREMENTS TO BE COMPLETED.

E4 SCHEDULE ~ CONNECTION

E6 DETAIL ~ GUSSET SECTION

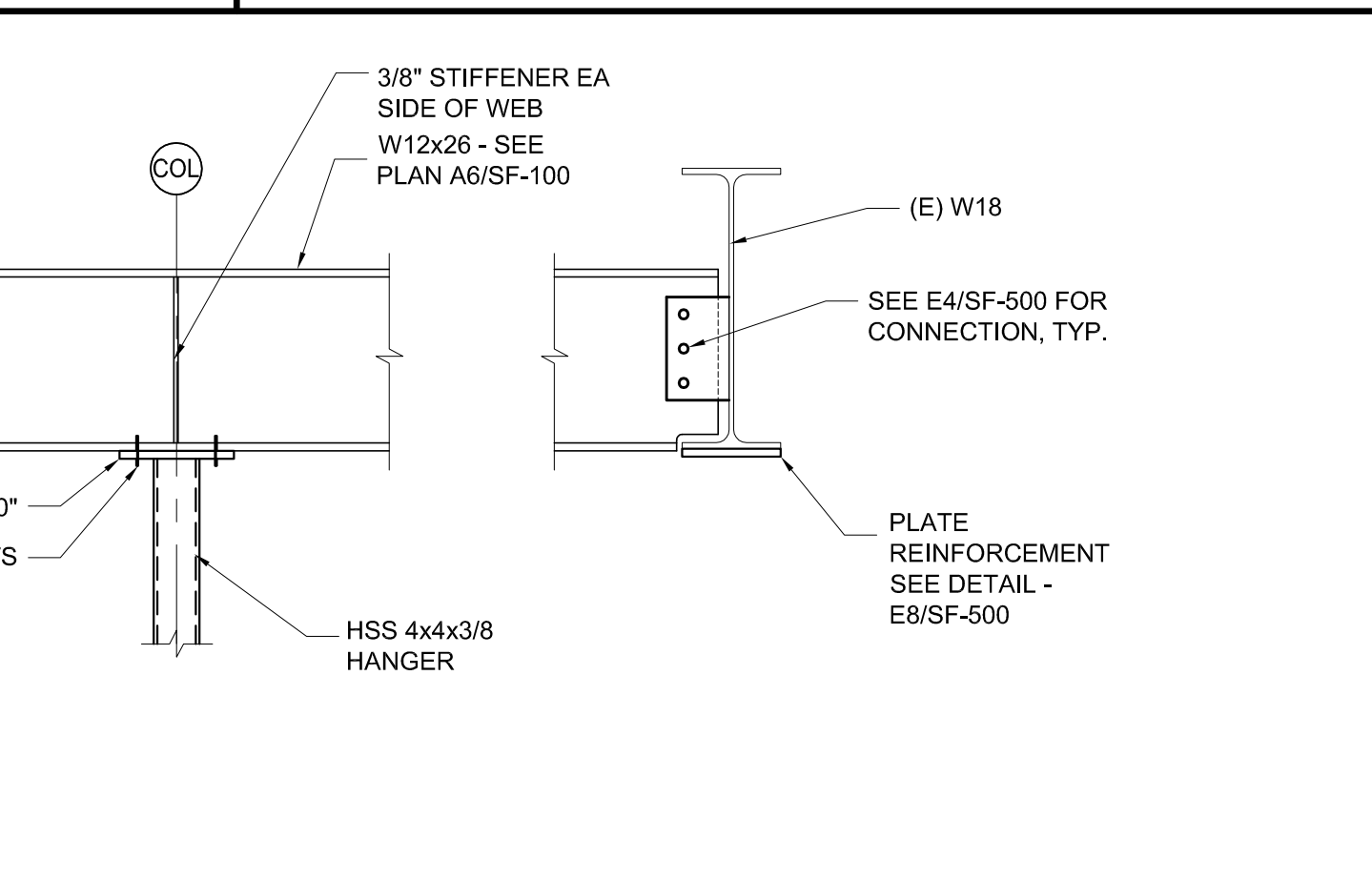
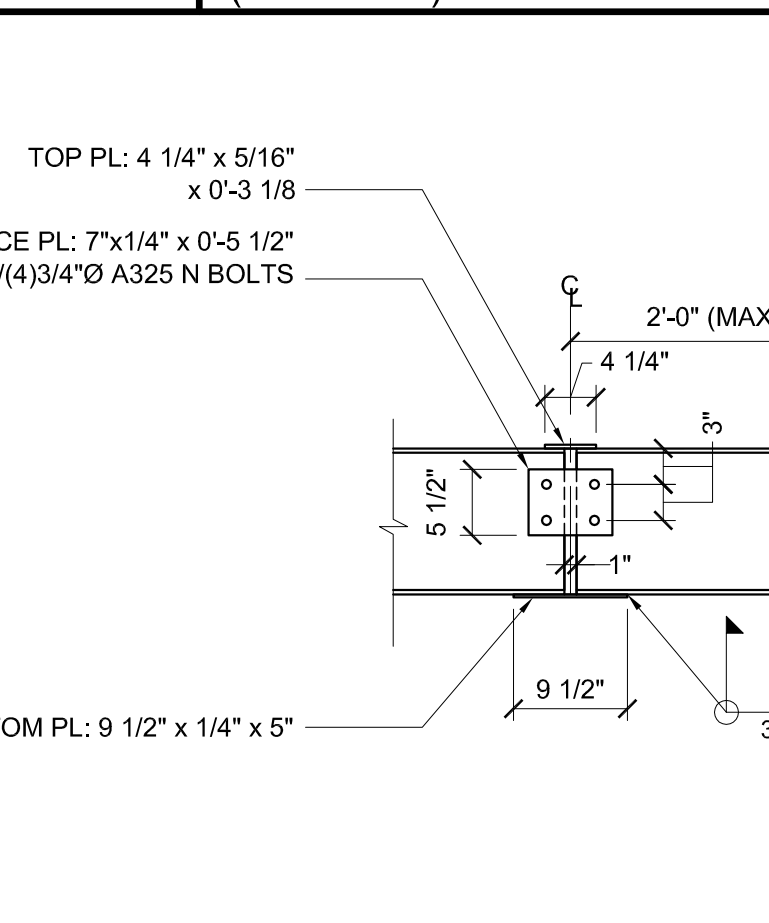
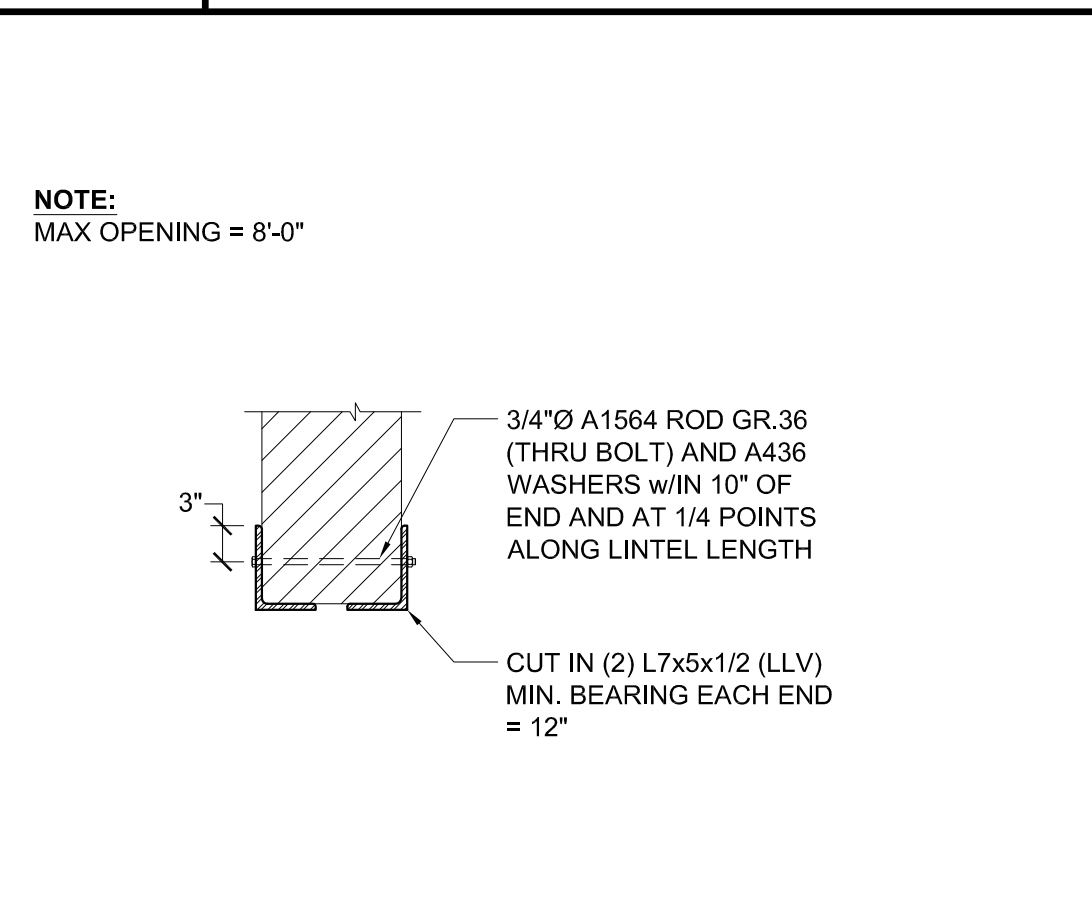
E8 DETAIL ~ BEAM REINFORCEMENT

3/4" = 1'-0"

NTS (TYP. OF 7)

3/4" = 1'-0"

- NOTE: MAX OPENING = 8'-0"
-
- 3/4" DIA A1564 ROD GR.36 (THRU BOLT) AND A436 WASHERS W/IN 10" OF END AND AT 1/4 POINTS ALONG LINTEL LENGTH
- CUT IN (2) L7x5x1/2 (LLV) MIN. BEARING EACH END = 12"



C4 DETAIL AT OPENING IN (E) WALL FOR MECH.

C6 BEAM SPLICE DETAIL

C8 SECTION (TYP. 8 LOCATIONS)

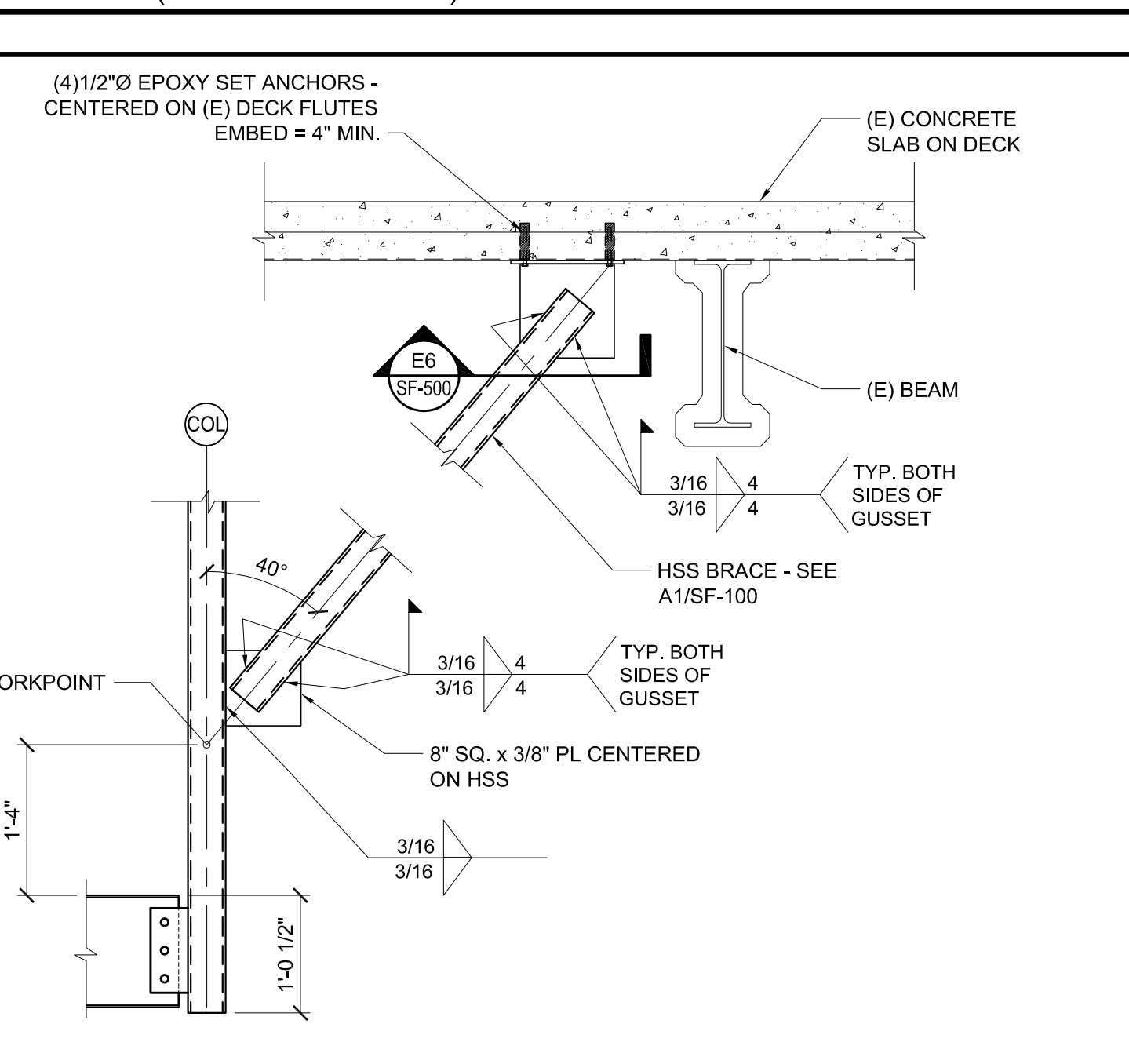
3/4" = 1'-0"

3/4" = 1'-0"

3/4" = 1'-0"

- ALL CONTRACTORS SHALL CONFORM TO SAFETY REQUIREMENTS OF THE OWNER, AIA DOCUMENT A201, OSHA SAFETY AND HEALTH STANDARDS, AND OTHER LOCAL AUTHORITIES IN CONNECTION WITH THE PERFORMANCE OF THIS PROJECT.
- ALL REFERENCED STANDARDS OR PUBLICATIONS SHALL PERTAIN TO THE MOST CURRENT DATA, STANDARD OR PUBLICATION, UNLESS NOTED OTHERWISE.
- ANY DIMENSIONS OR ELEVATIONS OMITTED OR NOT SHOWN ON THE STRUCTURAL DRAWINGS SHOULD BE OBTAINED FROM THE DRAWINGS OF THE OTHER DISCIPLINES. ANY INCONSISTENCIES WITH THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE AFFECTED PORTIONS OF THE WORK.
- THE CONTRACTOR SHALL VISIT THE SITE AT A DESIGNATED TIME APPROVED BY THE OWNER, TO VERIFY EXISTING CONDITIONS, DIMENSIONS, LOCATION OF EXISTING UTILITIES, ETC. THE CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES WITHOUT EXCEPTION.
- THE STRUCTURE HAS BEEN DESIGNED AS A SELF-SUPPORTING SYSTEM ONCE ALL WORK CONTAINED ON THESE DRAWINGS HAS BEEN COMPLETED. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ERECTION PROCEDURES AND SEQUENCE OF INSTALLATION TO ENSURE SAFETY OF THE BUILDING AND ITS OCCUPANTS DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS AND TEMPORARY SHORING, PRECAUTIONS DURING BUILDING OPERATIONS, PROTECTION OF PUBLIC AND WORKERS, REMOVAL OF WASTE MATERIAL, PROTECTION OF ADJACENT PROPERTY, PROTECTION OF HAZARDOUS OPENINGS, SAFETY PRECAUTIONS, AND SANITARY PROVISIONS OF EMPLOYEES AND SUBCONTRACTORS AS REQUIRED FOR THE DURATION OF THE CONTRACT.
- WORK SHALL BE DONE IN AN ORDERLY AND PROFESSIONAL MANNER. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK TO BE DONE BY SUBCONTRACTORS, LOCAL AUTHORITIES, STATE AGENCIES AND/OR UTILITY COMPANIES WHICH MAY HAVE JURISDICTION OVER THIS PROJECT.
- UTILITY EXTENSIONS AND CONNECTIONS SHALL BE IN ACCORDANCE WITH STATE AND LOCAL CODES OR AS INDICATED BY THE SPECIFICATIONS.
- CONTRACTOR SHALL REVIEW AND SUBMIT COMPLETE SHOP DRAWINGS FOR ALL SPECIFIED PARTS OF THE WORK, INCLUDING SHORING AND CONSTRUCTION METHODS/SEQUENCING WHERE APPLICABLE. NO PORTION OF THE WORK COVERED BY THESE SHOP DRAWINGS SHALL COMMENCE UNTIL RETURNED APPROVED SHOPS ARE RECEIVED BY THE CONTRACTOR. SEE SPECIFICATIONS FOR SPECIFIC SHOP SUBMITTAL REQUIREMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY EXISTING ITEMS DAMAGED BY NEW CONSTRUCTION, AND FOR ANY INCIDENTAL REPAIRS OF EXISTING FINISHED SURFACES DISTURBED BY NEW CONSTRUCTION; SUCH REPAIRS SHALL MATCH EXISTING TO THE OWNER'S SATISFACTION.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING, HANDLING, AND STORAGE OF ITEMS/MATERIALS TO REMAIN THE PROPERTY OF THE OWNER WITH THE OWNER'S REPRESENTATIVE.
- SPECIAL INSPECTIONS AS REQUIRED BY IBC 2009 SECTION 1704 SHALL BE PERFORMED BY AN INSPECTION AGENCY CONTRACTED BY THE OWNER FOR ALL STEEL ACTIVITIES.

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A6 NOTES ~ GENERAL

A8 DETAIL ~ BRACE CONNECTION

3/4" = 1'-0"

3/4" = 1'-0"

A1 NOTES ~ STRUCTURAL

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STATE OF MAINE

WILLIAM FAUCHER
No. 7133
LICENSED PROFESSIONAL ENGINEER

REVISIONS	DATE	BY	DESCRIPTION

Date: 27 APRIL, 2015	Drawn By: SCL	Checked By: IAM	Project Mgr: IAM	Project No: 14014	Cad File: 14014_SDWG	Graphic Scale: 0
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STRUCTURAL DETAILS AND NOTES

R6 Intermediate Care Unit
Richards Wing Sixth Floor
PORTLAND MAINE

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SF-500

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