GENERAL STRUCTURAL NOTES

APPLY UNLESS NOTED ON STRUCTURAL DRAWINGS. IN CASE OF CONFLICT BETWEEN GSN, DETAILS AND PLANS, THE GREATER REQUIREMENTS GOVERN.

CODE:

COMPLY WITH 2018 INTERNATIONAL BUILDING CODE.

FLOOR LIVE LOADS
- RESIDENTIAL PLUS PARTITIONS..60 PSF
- RESIDENTIAL BALCONIES...60 PSF
- ELEVATED CORRIDORS..80 PSF
- ASSEMBLY AREAS (5th FLOOR GYM AND VIEWING DECK)...........................100 PSF

ROOF LIVE LOADS...20 PSF

DEAD LOADS:
- ROOF DEAD LOAD...15 PSF
- FLOOR DEAD LOAD...30 PSF

WIND CRITERIA
- BASIC DESIGN WIND SPEED (3 SEC GUST)..106 MPH
- WIND EXPOSURE CATEGORY...B
- MWFRS (CORNER/TYPICAL/INTERNAL)...24/18/5 PSF
- COMPONENTS AND CLADDING (10 SQ. FT AREA)
  - ROOF (PERIMIETER AND CORNER/TYPICAL)..................................41/25 PSF
  - WALLS (ENDZONES/TYPICAL)...33/26 PSF

SEISMIC CRITERIA
- SITE CLASS...C
- SEISMIC IMPORTANCE FACTOR...1.15
- MAPPED SPECTRAL RESPONSE ACCELERATIONS......................S_s =0.487, S_1 =0.165
- DESIGN SPECTRAL RESPONSE ACCELERATIONS......................S_{ds} =0.422, S_{D1}=0.165
- SEISMIC DESIGN CATEGORY..C
- SEISMIC-FORCE-RESISTING SYSTEM.....SPECIAL REINFROCED MASONRY SHEAR WALLS
- RESPONSE MODIFICATION FACTOR..5.0
- SEISMIC RESPONSE COEFFICIENT..Cs=0.1055
- ANALYSIS PROCEDURE USED.................. EQUIVALENT LATERAL FORCE PROCEDURE

FOR MECHANICAL LOADS SEE MECHANICAL DRAWINGS. VERIFY ANY LOADS SHOWN ON STRUCTURAL DRAWINGS WITH MECHANICAL DRAWINGS.

FOUNDATIONS:

SOIL REPORT BY: DUPONT ENGINEERING, INC. REPORT NO: 18-0379
REPORT DATE: SEPTEMBER 4, 2018 UPDATED: OCTOBER 11, 2018

FOOTINGS SHALL BEAR ON FIRM UNDISTURBED OR COMPACTED SOIL AT 18" MINIMUM BELOW FINISH GRADE OR NATURAL GRADE, WHICHEVER IS LOWER. FOR INTERIOR FOOTINGS, FINISH FLOOR IS CONSIDERED AS FINISH GRADE. ALLOWABLE BEARING = 3000 PSF.

ALL EARTHWORK, FOOTING DEPTHS, AND EXCAVATIONS FOR FOUNDATIONS SHALL BE INSPECTED BY THE SOILS ENGINEER TO VERIFY ASSUMED ALLOWABLE SOIL BEARING AND LOW SETTLEMENT AND SWELL POTENTIAL, AND TO MAKE ANY ADDITIONAL RECOMMENDATIONS.

CONCRETE:

SHALL MEET ALL THE REQUIREMENTS OF THE CURRENT ISSUE OF THE ACI MANUAL OF CONCRETE PRACTICE, WITH TYPE V CEMENT. MINIMUM 28 DAY STRENGTH, 3000 PSI, EXCEPT AS FOLLOWS:

FOUNDATIONS, GRADE BEAMS, OR ANY OTHER CONCRETE
IN CONTACT WITH EARTH..4500 PSI (MAX W/C = 0.45)

CAST IN PLACE SLABS NOT ON GRADE..4000 PSI

LACE WALLS AND COLUMNS..4000 PSI

CONCRETE FILL ON METAL DECK
(FIRE RATED ASSEMBLY)......................................3500 PSI...(TYPE II OR V CEMENT)

MAXIMUM SLUMP: FOR SLABS NOT ON GRADE..3 1/2"
FOR OTHER CONCRETE..4 1/2"

CONTRACTOR SHALL SUBMIT FOR APPROVAL CONCRETE MIX DESIGNS FOR EACH CLASS OF CONCRETE. THE MIX SUBMITTAL SHALL INDICATE WHICH OF THE FOLLOWING ACI 318 METHODS THE CONCRETE SUPPLIER ALONG WITH HIS TESTING LAB INTENDS TO USE FOR CONCRETE PROPORTIONING - THE FIELD EXPERIENCE METHOD, THE LABORATORY TRIAL MIXTURE METHOD OR A COMBINATION OR BOTH. IF CONSECUTIVE TESTS (15 TO 30) ARE BEING RELIED UPON PER ACI 318, SECTION 5.3 THOSE TESTS SHALL BE SUBMITTED ALONG WITH THE MIX DESIGNS. MIX DESIGNS SHALL BEAR THE STAMP OF AN ENGINEER LICENSED IN THE STATE OF NEVADA.

NO ADMIXTURES SHALL BE USED WITHOUT APPROVAL. NO AIR ENTRAINMENT SHALL BE ALLOWED IN FLAT SLABS. ADMIXTURES CONTAINING CHLORIDES SHALL NOT BE USED. CONCRETE SHALL NOT BE IN CONTACT WITH ALUMINUM. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND EMBEDDED ITEMS. DO NOT TAMP SLABS. USE ROLLER BUG, VIBRATING SCREED OR BULL FLOAT TO FINISH. SEE SPECIFICATIONS FOR CURING. REVIBRATE TOPS OF COLUMNS SOON AFTER PLACING CONCRETE, TO CLOSE PLASTIC SHRINKAGE CRACKS.

MINIMUM STRENGTH FOR REMOVAL OF FORMS AND SHORING SHALL BE 75% OF SPECIFIED STRENGTH AT 28 DAYS.

FLY ASH (POZZOLAN) IF PERMITTED PER ARCHITECTURAL SPECIFICATIONS SHALL NOT EXCEED 15% REPLACEMENT OF TOTAL CEMENT CONTENT USING A 1.3 REPLACEMENT FACTOR.

REINFORCING:

LATEST ACI CODE AND DETAILING MANUAL APPLY. ALL REINFORCING BARS DEFORMED EXCEPT #2 BARS AND WIRE MESH.

ALL REINFORCING SHALL BE ASTM A-615 GRADE 60 EXCEPT AS FOLLOWS:

SPIRALS..GRADE 60 OR COLD DRAWN A-82
#2 AND #3 BARS...GRADE 40
WIRE MESH...ASTM A-1064
WELDED ANCHORS..GRADE 40 CHEMICAL ANALYSIS LIMITED PER AWS SPECIFICATIONS FOR WELD WITHOUT PREHEAT.
WELDED ANCHORS #5 AND LARGER..ASTM A-706

CLEAR CONCRETE COVER TO REINFORCING ARE AS FOLLOWS:

CAST-IN-PLACE CONCRETE (NONPRESTRESSED):

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.......................................3"

EXPOSED TO EARTH OR WEATHER:
#6 THROUGH #18...2"
#5 AND SMALLER..1 1/2"

NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
SLABS, WALLS, JOISTS: #11 AND
SMALLER...3/4"
BEAMS AND COLUMNS...1 1/2"

MESH SPLICES: TYPICAL SPACING PLUS 2" (MINIMUM 8") MEASURED BETWEEN CROSS WIRES.

LAP SPLICES IN MASONRY SHALL BE PER ACI 530.

LAP SPLICES IN CONCRETE SHALL BE CLASS B TENSION LAPS PER ACI 318. SPLICE BOTTOM BAR OVER SUPPORTS AND TOP BAR AT MIDSPAN ONLY.

WHERE BARS ARE SHOWN SPLICED, THEY MAY RUN CONTINUOUS AT CONTRACTOR'S OPTION.

PROVIDE SHOP DRAWINGS AND FABRICATE AFTER THE ARCHITECTS REVIEW. ALL SPLICE LOCATIONS ARE SUBJECT TO APPROVAL. PLACE REBAR PER CRSI STANDARDS.

REBAR SPACING GIVEN IS MAXIMUM ON CENTER AND ALL REBAR IS CONTINUOUS UNLESS OTHERWISE NOTED. PROVIDE BENT CORNER REBAR TO MATCH AND LAP WITH HORIZONTAL REBARS AT CORNERS AND INTERSECTIONS OF WALLS. DOWEL ALL VERTICAL WALL AND COLUMN REBAR TO FOUNDATIONS. SECURELY TIE ALL REBAR, INCLUDING DOWELS, IN LOCATION BEFORE PLACING CONCRETE OR GROUT.

MASONRY:

BLOCK UNITS: GRADE N-1, RUNNING BOND. PRISM STRENGTH = 1500 PSI. MORTAR TYPE S, 1800 PSI. GROUT 2000 PSI. ALL CONSTRUCTION BELOW GRADE OR IN CONTACT WITH SOIL SHALL USE TYPE V CEMENT FOR MASONRY UNITS, GROUT AND MORTAR, OTHER CONDITIONS MAY BE TYPE II CEMENT. NO POZZOLAN WILL BE PERMITTED IN MORTAR.

MECHANICALLY VIBRATE GROUT IN VERTICAL CELLS IMMEDIATELY AFTER POURING AND AGAIN ABOUT 5 MINUTES LATER. MAXIMUM GROUT LIFT WITHOUT CLEANOUTS 5'-0". STAY EACH END OF EACH VERTICAL REBAR USING SINGLE WIRE AND LOOP TYPE TIES. MAXIMUM VERTICAL SPACING OF TIES 8'-0".

SEE ARCHITECTURAL DRAWINGS FOR EXPANSION OR CONTROL JOINTS. LOCATE AT 20 FEET MAXIMUM O.C., BUT NOT LESS THAN 2'-0" FROM A BEARING PLATE OR FROM A JAMB OF AN OPENING WIDER THAN 4'-0".

MASONRY WALLS TO BE PARTIALLY GROUTED, GROUT REQUIRED: IN CELLS WITH REINFORCING, BOND BEAMS, LINTELS, AROUND EMBEDS AND OTHER LOCATIONS SPECIFICALLY CALLED FOR ON PLANS.

8" WALL VERTICAL REINFORCING: LOCATE REINFORCING IN CENTER OF GROUT, AT CENTER OF WALL, CONTINUOUS FULL HEIGHT OF WALL AS FOLLOWS:

(2) #5 AT ALL CORNERS, INTERSECTIONS, WALL ENDS, JAMBS, AND EACH SIDE OF EXPANSION OR CONTROL JOINTS.

(1) #5 AT 24" O.C. ELSEWHERE.

HORIZONTAL REINFORCING: (2) #5 IN MINIMUM 8" DEEP GROUTED CONTINUOUS BOND BEAM AT ROOF LINES, WHERE WALLS ARE ANCHORED TO FLOORS AND TOP OF ALL WALLS AND PARAPETS AND AT 4'-0" O.C. IN BETWEEN. HORIZONTAL REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS EXCEPT AT FLOOR AND ROOF BOND BEAMS OR UNLESS NOTED OTHERWISE ON PLANS. GROUT BARRIER BELOW BOND BEAMS SHALL BE CONTINUOUS WIRE LATH. PROVIDE LADDER TYPE #9 JOINT REINFORCING AT 16" O.C.

WALLS NOTED ON PLANS AS "SOLID GROUTED" SHALL HAVE #4 HORIZONTAL REINFORCING AT 40" MAXIMUM (LADDER TYPE JOINT REINFORCEMENT NOT REQUIRED). PROVIDE (2) #5 BOND BEAMS AT FLOOR, ROOF AND TOP OF WALLS AND PARAPETS.

PROVIDE 2-#3 IN BED JOINT IMMEDIATELY BELOW OPENINGS IN BEARING WALLS, EXTENDING 24" BEYOND EACH JAMB, FOR ALL OPENINGS EXCEEDING 2'-0" IN SIZE.

WEDGE AND SLEEVE TYPE ANCHORS SHALL NOT BE PERMITTED IN MASONRY CONSTRUCTION WITHOUT PRODUCT ICC REPORT AND PREAPPROVAL.

LINTELS: OPEN END BLOCKS SHALL BE USED AT ALL SOLID GROUTED LINTEL SECTIONS. FOR REINFORCEMENT AND ADDITIONAL INFORMATION, SEE LINTEL SCHEDULE DETAIL.

WELDING:

ALL CONSTRUCTION AND TESTING PER AMERICAN WELDING SOCIETY CODES AND RECOMMENDATIONS. ALL WELDING SHALL BE BY WELDERS HOLDING CURRENT VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN TYPE OF WELD CALLED FOR. WELDING RODS TO BE LOW HYDROGEN TYPE, E70 FOR STRUCTURAL STEEL AND E60 FOR METAL DECK.

ALL BUTT WELDED SPLICES IN MATERIAL THICKER THAN 5/16" SHALL BE INSPECTED BY AN INDEPENDENT TESTING LABORATORY, TO CERTIFY CONNECTION AS MEETING OR EXCEEDING STRENGTH OF MATERIALS SPLICED.

ALL WELDING OF REINFORCING SHALL CONFORM TO THE "STRUCTURAL WELDING CODES-REINFORCING STEEL" AWS D1.4, CURRENT EDITION.

ALL WELDING OF STRUCTURAL STEEL SHALL CONFORM TO THE "STRUCTURAL WELDING CODES-STEEL" AWS D1.1, CURRENT EDITION.

WELDS INDICATED MAY BE MADE IN SHOP OR FIELD WITH APPROVAL.

WOOD:

GENERAL:
ALL STRESS GRADE LUMBER CONSTRUCTION SHALL COMPLY WITH AITC TIMBER CONSTRUCTION STANDARDS LATEST EDITION. ALL LUMBER (EACH PIECE) SHALL BEAR THE GRADE STAMP OF GRADING RULES AGENCY APPROVED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). REGARDLESS OF REQUIRED GRADE STAMP AND CERTIFICATIONS, ALL LUMBER (EACH PIECE) IN PLACE IN THE STRUCTURE SHALL BE OF THE ORIGINAL GRADE SPECIFIED OR BETTER WHEN INSPECTED BY THE GRADING AGENCY APPROVED BY THE ALSC. GRADE LOSS RESULTING FROM EFFECTS OF WEATHERING, HANDLING, STORAGE, RESAWING OR DIVIDING LENGTHS WILL BE CAUSE FOR REJECTION.

DO NOT NOTCH OR DRILL JOISTS, BEAMS OR LOAD BEARING STUDS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT.

DOUBLE UP FLOOR JOISTS UNDER PARTITIONS. WHEN JOIST DEPTH EXCEEDS 10" PROVIDE METAL BRIDGING OR SOLID BLOCKING AT MIDSPAN.

SPRINKLER ALLOWANCE IS 1.5 LBS. PER SQUARE FOOT. SUSPEND SPRINKLERS SO THAT THIS ALLOWANCE IS NOT EXCEEDED ON ANY MEMBER. ADD MEMBERS IF NECESSARY.

SEE MECHANICAL DRAWINGS FOR SPREADERS TO SUPPORT MECHANICAL EQUIPMENT FROM PURLINS, BEAMS OR SUFFICIENT NUMBER OF JOISTS.

GLULAM BEAMS:
WEST COAST DOUGLAS FIR WITH F(b) = 2400 PSI (24F-V4) STRESS GRADE WITH EXTERIOR GLUE. PROVIDE 2400 PSI (24F-V8) AT CANTILEVERED BEAMS. FABRICATION AND HANDLING SHALL BE PER LATEST AITC STANDARDS. BEAMS SHALL BEAR AITC STAMP WITH CERTIFICATES.

CAMBER = L/300 WHERE L = SPAN IN INCHES. UNLESS NOTED OTHERWISE.

BEAMS TO BE ARCHITECTURAL OR INDUSTRIAL APPEARANCE GRADE PER ARCHITECTURAL SPECIFICATION. INDIVIDUALLY OR LOAD WRAPPED.

SAWN LUMBER:
WEST COAST DOUGLAS FIR - LARCH, SURFACED DRY. 6 X BEAMS AND POSTS: NO. 1. 4 X JOISTS: NO 1. ALL OTHER STRUCTURAL FRAMING NO. 2 OR BETTER. SILL PLATES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR (PTDF). FASTENERS FOR PRESSURE TREATED LUMBER SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER, FASTENERS AND HARDWARE SHALL BE OF THE SAME MATERIAL AND/OR COATING.

PLYWOOD:
APA RATED PLYWOOD SHEATHING EXPOSURE 1 (CDX) OR STRUCTURAL 1 (PS 1 CURRENT EDITION). STAGGER JOINTS, TYPICAL.

WALL PLYWOOD: (3/8") NAIL PLYWOOD WITH 8d COMMON NAILS AT 6" O.C. ALL EDGES AND AT 12" O.C. ALL INTERMEDIATE SUPPORTS, EXCEPT WHEN NOTED OTHERWISE ON PLANS. WALLS DESIGNATED AS SHEARWALLS SHALL HAVE ALL EDGES BLOCKED.

FLOOR PLYWOOD: (1 1/8" 60/48 MIN, T&G) SHALL BE TONGUE AND GROOVE TYPE AND SHALL BE GLUED TO EACH SUPPORT WITH ADHESIVE PER A.P.A. SPECIFICATIONS. SHALL HAVE FACE GRAIN LAID PERPENDICULAR TO SUPPORTS, MINIMUM 2 SPAN CONTINUOUS. STAGGER JOINTS. NAIL PLYWOOD WITH 10d COMMON NAILS AT 6" O.C. ALL EDGES AND AT 10" O.C. ALL INTERMEDIATE SUPPORTS, EXCEPT WHEN NOTED OTHERWISE ON PLANS.

OTHER HORIZONTAL PLYWOOD: (1/2" 32/16 MIN), SHALL HAVE FACE GRAIN LAID PERPENDICULAR TO STUDS OR SUPPORTS, MINIMUM 2 SPAN CONTINUOUS. STAGGER JOINTS. NAIL PLYWOOD WITH 8d COMMON NAILS AT 6" O.C. ALL EDGES AND AT 12" O.C. ALL INTERMEDIATE SUPPORTS, EXCEPT WHEN NOTED OTHERWISE ON PLANS. PROVIDE PLYWOOD CLIPS AT ALL UNBLOCKED EDGES. (CLIPS NOT REQUIRED FOR TONGUE AND GROOVE TYPE PLYWOOD).

CONNECTIONS:
ALL NAILING REFERRED TO IN THIS SECTION SHALL BE WITH COMMON NAILS. ALL FRAMED CONNECTIONS SHALL BE MADE WITH ICC APPROVED FRAMING ANCHORS OR JOIST HANGERS, BY SIMPSON OR KC METALS. ANY HANGERS USED SHALL HAVE ICC CAPACITIES EQUAL TO OR GREATER THAN THE SIMPSON HANGER CALLED OUT. FOR NAILING SCHEDULE, SEE TABLE 2304.9.1 OF 2012 INTERNATIONAL BUILDING CODE. FIELD DRILL ALL HOLES FOR PROPER MATCHING AND BEARING. PROVIDE CUT WASHERS AT BOLTS IN WOOD. PREDRILL ALL HOLES FOR NAILS LARGER THAN 20d AND FOR LAG SCREWS LARGER THAN 1/4"Ø.

TRUSS JOIST/WOOD TRUSSES:
FABRICATOR SHALL BE RESPONSIBLE FOR DESIGN USING THE FOLLOWING LOADS:

ROOF LIVE LOAD: 20 PSF - 7 DAY DURATION - HORIZONTAL PROJECTION.
FLOOR LIVE LOAD: SEE CODE SECTION - 10 YEAR DURATION.

DEAD LOADS (INCLUDING WEIGHT OF TRUSS/JOIST): 15 PSF ROOF, 30 PSF FLOOR.

MECHANICAL EQUIPMENT - SEE MECHANICAL DRAWINGS, INCLUDING SPRINKLERS.

JOIST/WOOD TRUSS MANUFACTURER SHALL LIMIT THE TOTAL LOAD DEFLECTION TO L/240 AND LIVE LOAD DEFLECTION TO L/360.

AITC STANDARDS APPLY. PRIOR TO MANUFACTURING TRUSSES, FABRICATOR SHALL SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS SEALED BY AN ENGINEER REGISTERED IN THE STATE OF NEVADA FOR REVIEW (INCLUDING WOOD GRADE SPECIFICATIONS). ALL PERMANENT AND TEMPORARY BRACING AND FASTENING AT BEARING SHALL BE BY TRUSS MANUFACTURER.

STRUCTURAL STEEL:

FOR ALL STRUCTURAL STEEL FABRICATION AND CONSTRUCTION LATEST AISC HANDBOOKS AND CODES SHALL APPLY. ALL STEEL FABRICATION IS REQUIRED TO BE COMPLETED BY AN APPROVED STEEL FABRICATOR RECOGNIZED BY THE BUILDING DEPARTMENT.

ASTM A36, EXCEPT AS FOLLOWS: WIDE FLANGE SECTIONS - ASTM A992, PIPE SECTIONS - ASTM A53 GRADE B, HSS SECTIONS - ASTM A500 GRADE B, HP SECTIONS - ASTM A572 GRADE 50.

ANCHOR BOLTS, ASTM A307 UNO; HIGH STRENGTH BOLTS, A325-X OR A325-SC PER SCHEDULES. MINIMUM EMBEDMENT OF ALL BOLTS IN GROUT OR CONCRETE SHALL BE 8" INCLUDING BOLT HEAD OR 5" WITH A STD HOOK. WELDED ANCHORS AND SHEAR CONNECTORS SHALL BE ICC APPROVED.

UNLESS OTHERWISE NOTED MINIMUM CONNECTION SHALL BE: (2) 3/4" DIAMETER BOLTS OR 3/16" FILLET WELD 4" LONG, USING 1/4" CONNECTION MATERIAL AND DETAILED TO MINIMIZE BENDING IN THE CONNECTION.

COMPOSITE METAL DECK WITH CONCRETE FILL:

STEEL DECK INSTITUTE SPECIFICATIONS AND RECOMMENDATIONS APPLY.

MATERIAL DESIGN, MANUFACTURE AND INSTALLATION SHALL BE EQUIVALENT TO THAT MANUFACTURED BY VERCO MANUFACTURING, INC., UNLESS OTHERWISE NOTED.

DECK UNITS SHALL BE CONTINUOUS OVER THREE SPANS, WHERE POSSIBLE. USE NEXT HEAVIER GAGE FOR SIMPLE OR TWO SPAN CONTINUOUS CONDITIONS. METAL DECK SHALL HAVE DEFORMATIONS TO PROVIDE STRUCTURAL BOND WITH CONCRETE. MINIMUM YIELD STRESS SHALL BE 33,000 PSI. DECKING SHALL BOND TO CONCRETE AND BE TREATED PER CURRENT ICC RESEARCH RECOMMENDATION FOR RUST PREVENTION. SURFACES IN CONTACT WITH CONCRETE SHALL BE GALVANIZED. DECK ACTING COMPOSITE WITH CONCRETE SLAB SHALL BE CAPABLE OF CARRYING SUPERIMPOSED LOADS SHOWN BELOW. DECK SHALL NOT BE ASSUMED TO ACT COMPOSITELY WHERE ANY PORTION OF ITS SPAN IS OVERLAID WITH A TRENCH HEADER. PROVIDE BOTTOM SHEETS WHEREVER REQUIRED BY ELECTRICAL PLANS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE-RATED ASSEMBLY REQUIREMENTS. PROVIDE ALL NECESSARY DETAILS SUCH AS FILLER AND SPLICE PLATES TO COMPLETE THE JOB.

ERECT IN ACCORDANCE WITH THE CURRENT ICC RESEARCH RECOMMENDATIONS TO MEET THE LOAD AND SHEAR REQUIREMENTS STATED BELOW. EXCEPT THAT IN NO CASE SHALL CONNECTION TO STEEL MEMBERS BE LESS THAN NOTED BELOW.

WELDING ELECTRODES SHALL BE LOW HYDROGEN TYPE E70XX OR E60XX. PUDDLE WELD DECK TO SUPPORTING STEEL USING MINIMUM 1/2" DIAMETER FUSION AREA AS FOLLOWS:

1. TO ALL TRANSVERSE SUPPORTS (JOISTS, BEAMS, ANGLES, PLATES, ETC.) FOUR WELDS PER SHEET. WELD EACH SIDE OF SEAM AND FIVE INTERMEDIATE.

2. TO ALL STEEL PARALLEL TO FLUTES, 18" O.C.

3. STITCH WELD OR BUTTON PUNCH SIDE SEAMS AT 3'-0" O.C.

SHOP DRAWINGS SHALL SHOW THE ERECTION PROCEDURE AND DETAILS. THE ICC REPORT, INCLUDING LOAD AND DIAPHRAGM SHEAR CAPACITY SHALL BE FURNISHED, AND SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.

PROVIDE SHORING TO SUPPORT CONSTRUCTION LOADS IF REQUIRED. SUBMIT SHORING REQUIREMENTS WITH SHOP DRAWINGS.

TYPE	HEIGHT (INCHES)	GAGE	PROPERTIES			SUPERIMPOSED LOADS		SHEAR CAP. (REQUIRED U.N.O.)
			I in^4	+S in^3	-S in^3	PSF	SPAN (FT)	
W3 FORMLOCK	3"	20	0.907	0.510	0.528	125	10'-0"	1390 PLF

1 1/2" TYPE B METAL ROOF DECK:

STEEL DECK INSTITUTE SPECIFICATIONS AND RECOMMENDATIONS APPLY. DECK SHALL BE PAINTED OR GALVANIZED.

DECK UNITS SHALL BE CONTINUOUS OVER THREE SPANS, WHERE POSSIBLE. USE NEXT HEAVIER GAGE FOR SIMPLE OR TWO SPAN CONTINUOUS CONDITIONS. YIELD STRESS SHALL BE 33,000 PSI MINIMUM.

PROVIDE SPREADER BAR AT TOP OF DECK WHEN SUSPENDING CEILING FROM DECK. HOWEVER, DO NOT SUSPEND PLASTERED CEILING FROM DECK. PROVIDE ALL NECESSARY DETAILS SUCH AS RIDGE OR VALLEY SPLICE PLATES.

ERECT IN ACCORDANCE WITH THE CURRENT ICC RESEARCH RECOMMENDATIONS TO MEET THE LOAD AND SHEAR REQUIREMENTS STATED BELOW. EXCEPT THAT IN NO CASE SHALL CONNECTIONS TO STEEL MEMBERS BE LESS THAN SHOWN BELOW.

WELDING ELECTRODES SHALL BE LOW HYDROGEN TYPE E70 OR E60. PUDDLE WELD DECK TO SUPPORTING STRUCTURAL STEEL, USING MINIMUM 1/2" DIAMETER FUSION AREA, AS FOLLOWS:

1. TO ALL TRANSVERSE SUPPORTS (JOISTS, BEAMS, ANGLES, PLATES, ETC.). SEVEN WELDS PER SHEET. WELD EACH SIDE OF SEAM AND FIVE INTERMEDIATE.

2. TO ALL STEEL PARALLEL TO FLUTES, 18" O.C.

3. SIDE SEAMS, STITCH WELD OR BUTTON PUNCH AT 12" O.C.

ATTACH TO LIGHT GAGE JOISTS WITH TEK SCREWS AS FOLLOWS:

1. TO ALL TRANSVERSE SUPPORTS (4) #12'S PER SHEET. PLACE EACH SIDE OF SEAM AND TWO INTERMEDIATE.

2. TO ALL STEEL PARALLEL TO FLUTES AND SIDE SEAMS, #10'S AT 18" O.C.

OPENING EDGES SHALL RECEIVE SAME WELDING/ATTACHMENT AS REQUIRED FOR TRANSVERSE SUPPORTS.

SHOP DRAWINGS SHALL SHOW THE ERECTION PROCEDURE AND DETAILS. THE ICC REPORT, INCLUDING VERTICAL LOAD AND DIAPHRAGM SHEAR CAPACITY SHALL BE FURNISHED, AND SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.

METAL DECK SHALL BE PER IAPMO ES-0217 OR PRE-APPROVED EQUAL AND MEET OR EXCEED CRITERIA IN TABLE BELOW:

TYPE	HEIGHT (INCHES)	GAGE	PROPERTIES			SUPERIMPOSED LOADS		SHEAR CAP. (REQUIRED U.N.O.)
			I in^4	+S in^3	-S in^3	PSF	SPAN (FT)	
B	1 $^1/_2$"	20	0.219	0.230	0.237	15	8'-0"	359 PLF

SUPPLEMENTARY NOTES:

PROVIDE ALL TEMPORARY BRACING, SHORING, GUYING OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

THE STRUCTURAL ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

FOR CONNECTIONS, SEE DETAILS.

POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE SPECIFIED SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER-OF-RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE EQUIVALENT OR GREATER PERFORMANCE VALUES OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE BUILDING CODE. CONTACT MANUFACTURER'S REPRESENTATIVE FOR THE INITIAL TRAINING AND INSTALLATION OF ANCHORS AND FOR PRODUCT RELATED QUESTIONS AND AVAILABILITY.

COST OF ADDITIONAL FIELD AND OFFICE WORK NECESSITATED BY REQUEST BY THE CONTRACTOR FOR AN OPTION OR DUE TO ERRORS OR OMISSIONS IN CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR. OPTIONS ARE FOR CONTRACTORS CONVENIENCE. HE SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF HE CHOOSES AN OPTION AND HE SHALL COORDINATE ALL DETAILS.

ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE STATE OF NEVADA.

UNLESS OTHERWISE NOTED, DETAILS ON STRUCTURAL DRAWINGS ARE TYPICAL AS INDICATED BY CUTS, REFERENCES OR TITLES.

VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.

CONTRACTOR SHALL VERIFY IN FIELD ALL EXISTING CONDITIONS SHOWN ON DRAWINGS.

ALL CONSTRUCTION MEETING OR CROSSING EXPANSION OR SHRINKAGE CONTROL JOINTS IN FLOORS OR ROOFS MUST HAVE PROVISIONS TO ACCOMMODATE MOVEMENT OR MUST BE DELAYED UNTIL THE JOINT IS CLOSED.

DEFERRED SUBMITTAL:

DEFERRED SUBMITTALS MUST BE REVIEWED BY THE ENGINEER OF RECORD FOR CONFORMANCE TO THE CONTRACT DOCUMENTS. A SET OF DEFERRED SUBMITTAL DOCUMENTS WITH A NOTIFICATION INDICATING IT HAS BEEN REVIEWED BY THE ENGINEER OF RECORD AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING SHALL BE FORWARDED TO THE BUILDING DEPARTMENT AND BUILDING INSPECTOR ON SITE PRIOR TO INSTALLATION OF DEFERRED ITEMS.

DEFERRED SUBMITTALS FOR STRUCTURAL ITEMS INCLUDE:

A) WOOD TRUSSES.

B) STEEL STAIRS.

SPECIAL INSPECTION:

PER THE INTERNATIONAL BUILDING CODE, SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING ITEMS NOT NOTED ON SHEET S1.01:

- POST-INSTALLED ANCHORS.

LEGEND:

ARCH'L = ARCHITECTURAL
C.I.P. = CAST IN PLACE
C.J. = CONTROL/CONSTRUCTION JOINT
C.M.U. = CONCRETE MASONRY UNIT
CONC. = CONCRETE
CONT. = CONTINUOUS
EXIST. = EXISTING
GLB = GLULAM BEAM
G.S.N. = GENERAL STRUCTURAL NOTES
M.C.J. = MASONRY CONTROL JOINT
MECH'L = MECHANICAL
M.L. = MASONRY LINTEL
P.C. = PRECAST
U.N.O. = UNLESS NOTED OTHERWISE

INDICATES CONCRETE FOOTING.
INDICATES STEEL COLUMN.
INDICATES WOOD POST.
INDICATES WIDE FLANGE COLUMN.
INDICATES WOOD OR STEEL STUD WALL SEE PLAN.
INDICATES MOMENT FRAME.
500# INDICATES MECH'L EQUIPMENT ON ROOF. VERIFY SIZE AND LOCATION W/ARCH'L AND MECH'L DRAWINGS.
INDICATES OPENING IN ROOF OR FLOOR. VERIFY SIZE AND LOCATION W/ARCH'L AND MECH'L DRAWINGS. ALL OPENINGS AND OPENING FRAMING NOT NECESSARILY SHOWN ON PLANS.

LEGEND:

SEAL

PROFESSIONAL ENGINEER STATE OF NEVADA
KURT GUIDICE
Exp. 6/30/21
CIVIL/ STRUCTURAL
No. 21312
22 APR 2020

A NEW SHELL BUILDING IMPROVEMENT
31 SOUTH WATER STREET
APN #179-18-611-055
CITY OF HENDERSON, NV 89015
DATE: 04.17.2020
PROJECT NUMBER: 0201909

P. JAMES ARCHITECT

ARCHITECTURE
PLANNING
DESIGN
4629 VICTORIA BEACH WAY
LAS VEGAS, NV 89103
702.683.3277

REV	DESCRIPTION	DATE
REVISED		

Kurt Guidice

Digitally signed by Kurt Guidice
DN: cn=Kurt Guidice, o=Barker Structural, ou, email=kurt@barkerstructural.com, c=US
Date: 2020.04.22 10:15:09 -07'00'

BARKER STRUCTURAL
FIRM #F-12673
303 PEARL PKWY, SUITE 210
SAN ANTONIO, TX 78215
210.446.5500
5960 S. RAINBOW BLVD. SUITE 300
LAS VEGAS, NV 89118
702.310.8000
WWW.BARKERSTRUCTURAL.COM

S1.00
GENERAL STRUCTURAL NOTES

STATEMENT OF SPECIAL INSPECTIONS:

THE SPECIAL INSPECTION TO BE PROVIDED AS LISTED BELOW FOR SECTION 1705 AND FOR TESTING SECTION 1706 THROUGH 1709 OF THE IBC.

REQUIRED SPECIAL INSPECTIONS AND TESTS FOR STEEL CONSTRUCTION (IBC 1705.2)

TABLE N5.4-1 (AISC 360)
INSPECTION TASKS PRIOR TO WELDING

INSPECTION TASKS PRIOR TO WELDING	QC	QA
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	P	O
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	P	P
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O
WELDER IDENTIFICATION SYSTEM [a]	O	O
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOF FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)	O	O
FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K-JOINTS WITHUT BACKING (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOF FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION)	P	O
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O
FIT-UP OF FILLET WELDS · DIMENSIONS (ALIGNMENT, GAP AT ROOT) · CLEANLINESS (CONDITION OF STEEL SURFACES) · TACKING (TACK WELD QUALITY AND LOCATION)	O	O
CHECK WELDING EQUIPMENT	O	-

[a] THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.

TABLE N5.4-2 (AISC 360)
INSPECTION TASKS DURING WELDING

INSPECTION TASKS DURING WELDING	QC	QA
CONTROL AND HANDLING OF WELDING CONSUMABLES · PACKAGING · EXPOSURE CONTROL	O	O
NO WELDING OVER CRACKED TACK WELDS	O	O
ENVIRONMENTAL CONDITIONS · WIND SPEED WITHIN LIMITS · PRECIPITATION AND TEMPERATURE	O	O
WPS FOLLOWED · SETTINGS ON WELDING EQUIPMENT · TRAVEL SPEED · SELECTED WELDING MATERIALS · SHIELDING GAS TYPE/FLOW RATE · PREHEAT APPLIED · INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.) · PROPER POSITION (F, V, H, OH)	O	O
WELDING TECHNIQUES · INTERPASS AND FINAL CLEANING · EACH PASS WITHIN PROFILE LIMITATIONS · EACH PASS MEETS QUALITY REQUIREMENTS	O	O
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P	P

TABLE N5.4-3 (AISC 360)
INSPECTION TASKS AFTER TO WELDING

INSPECTION TASKS AFTER WELDING	QC	QA
WELDS CLEANED	O	O
SIZE, LENGTH AND LOCATION OF WELDS	P	P
WELDS MEET VISUAL ACCEPTANCE CRITERIA · CRACK PROHIBITION · WELD/BASE-METAL FUSION · CRATER CROSS SECTION · WELD PROFILES · WELD SIZES · UNDERCUT · POROSITY	P	P
ARC STRIKES	P	P
k-AREA [a]	P	P
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES [b]	P	P
BACKING REMOVED AND WELD TABS REMOVED (IF REQ'D)	P	P
REPAIR ACTIVITIES	P	P
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	O	O

[a] WHEN WELDING OF DOUBLE PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE k-AREA, VISUALLY INSPECT THE WEB k-AREA FOR CRACKS WITHIN 3" OF THE WELD
[b] AFTER ROLLED HEAVY SHAPES (SEE SECTION A3.1C) AND BUILT UP HEAVY SHAPES (SEE SECTION A3.1d) ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS

TABLE N5.6-1 (AISC 360)
INSPECTION TASKS PRIOR TO BOLTING

INSPECTION TASKS PRIOR TO BOLTING	QC	QA
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O
CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O	O
CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O
PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	O	O

TABLE N5.6-2 (AISC 360)
INSPECTION TASKS DURING BOLTING

INSPECTION TASKS DURING BOLTING	QC	QA
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O	O
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROCESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O

TABLE N5.6-3 (AISC 360)
INSPECTION TASKS AFTER BOLTING

INSPECTION TASKS AFTER BOLTING	QC	QA
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTION	P	P

P = PERFORM THESE TASKS FOR EACH CONDITION.
0 = OBSERVE THESE ITEMS ON A RANDOM BASIS.

APPENDIX 1 TABLE 1.1 (SDI QA/QC-2011)
INSPECTION OR EXECUTION TASKS PRIOR TO DECK PLACEMENT

TASK	QC	QA
A. VERIFY COMPLIANCE OF MATERIALS (DECK AND ALL DECK ACCESSORIES) WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, MATERIAL PROPERTIES, AND BASE METAL THICKNESS	PERFORM	PERFORM
B. DOCUMENT ACCEPTANCE OR REJECTION OF DECK AND DECK ACCESSORIES	PERFORM	PERFORM

APPENDIX 1 TABLE 1.2 (SDI QA/QC-2011)
INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT

TASK	QC	QA
A. VERIFY COMPLIANCE OF DECK AND DECK ACCESSORIES INSTALLATION WITH CONSTRUCTION DOCUMENTS	PERFORM	PERFORM
B. VERIFY DECK MATERIALS ARE REPRESENTED BY THE MILL CERTIFICATIONS THAT COMPLY WITH CONSTRUCTION DOCUMENTS	N/A	PERFORM
C. DOCUMENT ACCEPTANCE OR REJECTION OF INSTALLATION OF DECK AND DECK ACCESSORIES	PERFORM	PERFORM

APPENDIX 1 TABLE 1.3 (SDI QA/QC-2011)
INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT

TASK	QC	QA
A. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	OBSERVE	OBSERVE
B. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILAIBLE	OBSERVE	OBSERVE
C. MATERIAL IDENTIFICATION (TYPE/GRADE)	OBSERVE	OBSERVE
D. CHECK WELDING EQUIPMENT	OBSERVE	OBSERVE

APPENDIX 1 TABLE 1.4 (SDI QA/QC-2011)
INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT

TASK	QC	QA
A. USE OF QUALIFIED WELDERS	OBSERVE	OBSERVE
B. CONTROL AND HANDLING OF WELDING CONSUMABLES	OBSERVE	OBSERVE
C. ENVIRONMENTAL CONDITIONS (WIND SPEED, MOISTURE, TEMPERATURE)	OBSERVE	OBSERVE
D. WPS FOLLOWED	OBSERVE	OBSERVE

APPENDIX 1 TABLE 1.5 (SDI QA/QC-2011)
INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT

TASK	QC	QA
A. VERIFY SIZE AND LOCATION OF WELDS, INCLUDING SUPPORT, SIDELAP, AND PERIMETER WELDS	PERFORM	PERFORM
B. WELDS MEET VISUAL ACCEPTANCE CRITERIA	PERFORM	PERFORM
C. VERIFY REPAIR ACTIVITIES	PERFORM	PERFORM
D. DOCUMENT ACCEPTANCE OR REJECTION OF WELDS	PERFORM	PERFORM

APPENDIX 1 TABLE 1.6 (SDI QA/QC-2011)
INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT

TASK	QC	QA
A. MANUFACTURER INSTALLATION INSTRUCTIONS AVAILAIBLE FOR MECHANICAL FASTENERS	OBSERVE	OBSERVE
B. PROPER TOOLS AVAILAIBLE FOR FASTENER INSTALLATION	OBSERVE	OBSERVE
C. PROPER STORAGE OF MECHANICAL FASTENERS	OBSERVE	OBSERVE

APPENDIX 1 TABLE 1.7 (SDI QA/QC-2011)
INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT

TASK	QC	QA
A. FASTENERS ARE POSITIONED AS REQUIRED	OBSERVE	OBSERVE
B. FASTENERS ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS	OBSERVE	OBSERVE

APPENDIX 1 TABLE 1.8 (SDI QA/QC-2011)
INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT

TASK	QC	QA
A. CHECK SPACING, TYPE, AND INSTALLATION OF SUPPORT FASTENERS	PERFORM	PERFORM
B. CHECK SPACING, TYPE, AND INSTALLATION OF SIDELAP FASTENERS	PERFORM	PERFORM
C. CHECK SPACING, TYPE, AND INSTALLATION OF PERIMETER FASTENERS	PERFORM	PERFORM
D. VERIFY REPAIR ACTIVIES	PERFORM	PERFORM
E. DOCUMENT ACCEPTANCE OR REJECTION OF MECHANICAL FASTENERS	PERFORM	PERFORM

"OBSERVE" SHALL MEAN INSPECT THESE ITEMS ON AN INTERMITTENT BASIS.
"PERFORM" SHALL MEAN TO PERFORM THESE TASK PRIOR TO FINAL ACCEPTANCE FOR EACH ITEM OR ELEMENT

TABLE 1705.2.3 (IBC 2015)
REQUIRED SPECIAL INSPECTIONS OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS

TYPE	CONTINUOUS	PERIODIC	REFERENCED STANDARDS[a]
1. INSTALLATION OF OPEN WEB STEEL JOISTS AND JOIST GIRDERS			
a. END CONNECTIONS - WELDING OR BOLTED	-	X	SJI SPECIFICATIONS LISTED IN SECTION 2207.1
b. BRIDGING - HORIZONATAL OR DIAGONAL			
1. STANDARD BRIDGING	-	X	SJI SPECIFICATIONS LISTED IN SECTION 2207.1
2. BRIDGING THAT DIFFERS FROM SJI SPECIFICATIONS LISTED IN SECTION 2207.1	-	X	

[a] WHERE APPLICABLE SEE ALSO SECTION 1705.12, SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION (IBC TABLE 1705.3)

VERIFICATION AND INSPECTION	CONT.	PERIODIC	REFERENCE STANDARDS[a]	IBC STANDARDS
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS AND PLACEMENT	-	X	ACI 318: CH. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. REINFORCING BAR WELDING:[c]			AWS D1.4 ACI 318: 26.6.4	-
a. VERIFYWELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	-	X		
b. INSPECT SINGLE PASS FILLET WELDS, MAXIMUM $^5/_{16}$"; AND	-	X		
c. INSPECT ALL OTHER WELDS	X	-		
3. INSPECT ANCHORS CAST IN CONCRETE	-	X	ACI 318: 17.8.2	-
4. INSPECT ANCHORS POST INSTALLED IN HARDENED CONCRETE MEMBERS [b]:				-
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X	-	ACI 318: 17.8.2.4	
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a	-	X	ACI 318: 17.8.2	
5. VERIFYING USE OF REQUIRED DESIGN MIX	-	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C172 ASTM C31 ACI 318: 26.4, 26.12	1908.10
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	X	ACI 318: 26.5.3-26.5.5	1908.9
9. INSPECTION OF PRESTRESSED CONCRETE:			ACI 318: 26.10	-
a. APPLICATION OF PRESTRESSING FORCES; AND	X			
b. GROUTING OF BONDED PRESTRESSING TENDONS	X			
10. INSPECT ERECTION IF PRECAST CONCRETE MEMBERS	-	X	ACI 318: 26.8	-
11. VERIFY 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	ACI 318: 26.11.2	-
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEBER BEING FORMED	-	X	ACI 318: 26.11.1.2(b)	-

[a] WHERE APPLICABLE SEE ALSO SECTION 1705.12, SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE
[b] SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO COMMENCEMENT OF THE WORK
[c] SPECIAL INSPECTIONS OF WELDING AND QUALIFICATIONS OF SPECIAL INSPECTORS FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF AWS D1.4 FOR SPECIAL INSPECTION AND OF AWS D1.4 FOR SPECIAL INSPECTOR QUALIFCATIONS

SPECIAL INSPECTION FOR MASONRY CONSTRUCTION (TMS 402, ACI 530, ASCE 5) LEVEL A QUALITY ASSURANCE PROGRAM

MINIMUM TESTS

NONE

MINIMUM INSPECTION

VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS

SPECIAL INSPECTION FOR MASONRY CONSTRUCTION (TMS 402, ACI 530, ASCE 5) LEVEL B QUALITY ASSURANCE PROGRAM

MINIMUM TESTS

VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO PROJECT SITE IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.5 B.1.b.3 FOR SELF CONSOLIDATING GROUT

VERIFICATION OF f'_m AND f'_{AAC} IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.4 B PRIOR TO CONSTRUCTION, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE

MINIMUM INSPECTION

INSPECTION TASK	FREQUENCY (a)		REFERENCE FOR CRITERIA	
	CONT.	PERIODIC	TMS 402/ ACI 530/ ASCE 5	TMS 602/ ACI 530.1/ ASCE 6
1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS	-	X		ART 1.5
2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
a. PROPORTIONS OF SITE-PREPARED MORTAR	-	X		ART 2.1, 2.6A
b. CONSTRUCTION OF MORTAR JOINTS	-	X		ART 3.3B
c. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	-	X		ART 2.4B, 2.4H
d. LOCATION OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES	-	X		ART 3.4, 3.6A
e. PRESTRESSING TECHNIQUE	-	X		ART 3.6B
f. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	X(b)	X(c)		ART 2.1C
3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
a. GROUT SPACE		X		ART. 3.2 D 3.2 F
b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES		X	SEC 1.16	ART 3.4, 2.4
c. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES		X	SEC 1.16	ART 3.2E, 3.4, 3.6A
d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS		X		ART 2.6B, 2.4 G.1.b
e. CONSTRUCTION OF MORTAR JOINTS		X		ART 3.3B
4. VERIFY DURING CONSTRUCTION:				
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS		X		ART 3.3F
b. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION		X	SEC 1.16.4.3, 1.17.1	
c. WELDING OF REINFORCEMENT	X	X	SEC. 2.1.7.7.2, 3.3.3.4 (c), 8.3.3.4 (b)	
d. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C))	X			ART 1.8 C, 1.8 D ART 3.6 B
e. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	X			ART 3.5, 3.6 C
f. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X(b)	X(c)		ART 3.3 B.8
g. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS				
5. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS		X		ART 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4

(a) FREQUENCY REFERS TO THE FREQUENCY OF INSPECTIONS, WHICH MAY BE CONTINUOUS DURING THE TASK LISTED OR PERIODICALLY DURING THE LISTED TASK, AS DEFINED IN THE TABLE.
(b) REQUIRED FOR THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.
(c) REQUIRED AFTER THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.

SPECIAL INSPECTION FOR MASONRY CONSTRUCTION (TMS 402, ACI 530, ASCE 5) LEVEL C QUALITY ASSURANCE PROGRAM

MINIMUM TESTS

VERIFICATION OF f'_m AND f'_{AAC} IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.4 B PRIOR TO CONSTRUCTION AND FOR EVERY 5000 SQ. FT. DURING CONSTRUCTION

VERIFICATION OF PROPORTIONS OF MATERIALS IN PREMIXED OR PREBLENDED MORTAR, PRESTRESSING GROUT AND GROUT OTHER THAN SELF-CONSOLIDATING GROUT, AS DELIVERED TO THE PROJECT SITE

VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO PROJECT SITE IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.5 B.1.b.3 FOR SELF CONSOLIDATING GROUT

MINIMUM INSPECTION

INSPECTION TASK	FREQUENCY (a)		REFERENCE FOR CRITERIA	
	CONT.	PERIODIC	TMS 402/ ACI 530/ ASCE 5	TMS 602/ ACI 530.1/ ASCE 6
1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS		X		ART 1.5
2. VERIFY THE FOLLOWING ARE IN COMPLIANCE:				
a. PROPORTIONS OF SITE-MIXED MORTAR, GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS		X		ART 2.1, 2.6A, 2.6B, 2.6C, 2.4 G.1.b
b. GRADE, TYPE AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS AND PRESTRESSING TENDONS AND ANCHORAGES		X	SEC 1.16	ART 2.4, 3.4 ART 3.3B
c. PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS		X		
d. PLACEMENT OF REINFORCEMENT, CONNECTORS AND PRESTRESSING TENDONS AND ANCHORAGES	X		SEC 1.16	ART 3.2E, 3.4, 3.6A
e. GROUT SPACE PRIOR TO GROUTING	X			ART 3.2D, 3.2F
f. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	X			ART 3.5, 3.6C
g. SIZE AND LOCATION OF STRUCTURAL ELEMENTS		X		ART 3.3F
h. TYPE, SIZE, AND LOCATION OF ANCHORS INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES AND OTHER CONSTRUCTION	X		SEC 1.16.4.3, 1.17.1	
i. WELDING OF REINFORCEMENT	X		SEC 2.17.7.2, 3.3.3.4(c), 8.3.3.4(b)	
j. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C))		X		ART 1.8C, 1.8D
k. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	X			ART 3.6B
l. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	X			ART 3.3 B.8
m. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	X			ART 2.1 C.1
3. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	X			ART 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4

(a) FREQUENCY REFERS TO THE FREQUENCY OF INSPECTIONS, WHICH MAY BE CONTINUOUS DURING THE TASK LISTED OR PERIODICALLY DURING THE LISTED TASK, AS DEFINED IN THE TABLE.

REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS (IBC TABLE 1705.6)

TYPE	CONTINUOUS	PERIODIC
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, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X

REQUIRED INSPECTIONS AND TESTS OF DRIVEN DEEP FOUNDATION ELEMENTS (IBC TABLE 1705.7)

TYPE	CONTINUOUS	PERIODIC
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. INSPECT 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 PENETRATION, 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 1705.2	-	-
6. FOR CONCRETE ELEMENTS AND CONCRETE-FILLED ELEMENTS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.3	-	-
7. FOR SPECIALITY ELEMENTS, PERFORM ADDITIONAL INSPECTIONS AS DETERMINED BY THE REGISTERED PROFESSIONAL IN RESPONSIBLE CHARGE.	-	-

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CAST IN PLACE DEEP FOUNDATION ELEMENTS (IBC TABLE 1705.8)

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
1. INSPECT 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 SPECIAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.3	-	-

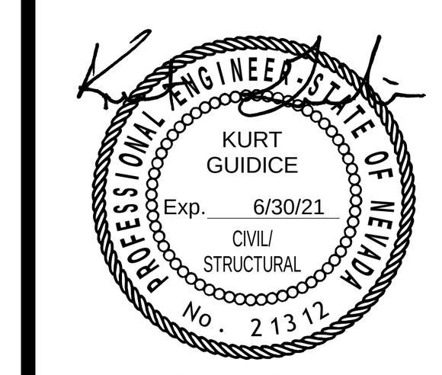
THE TYPE AND FREQUENCY OF TESTING REQUIRED SHALL BE THE MINIMUM AS REQUIRED BY THE BUILDING DEPARTMENT.

THE TYPE AND FREQUENCY OF OF SPECIAL INSPECTIONS REQUIRED SHALL BE THE MINIMUM AS REQUIRED BY THE BUILDING DEPARTMENT.

THE REQUIRED FREQUENCY AND DISTRIBUTION OF TESTING AND SPECIAL INSPECTION REPORTS SHALL BE A MINIMUM AS REQUIRED BY THE BUILDING DEPARTMENT.

SPECIAL INSPECTION IS REQUIRED FOR NONSTRUCTURAL COMPONENTS PER SECTIONS 1705.11.5 THROUGH 1705.11.7 OF THE IBC. SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

SEAL



22 APR 2020

A NEW SHELL BUILDING IMPROVEMENT
31 SOUTH WATER STREET
CITY OF HENDERSON, NV 89015
APN #179-18-611-055

PROJECT NUMBER: 0201909
DATE: 04.17.2020

P. JAMES ARCHITECT
ARCHITECTURE
PLANNING
DESIGN
4629 VICTORIA BEACH WAY
LAS VEGAS, NV 89103
702.683.3277

REV	REVISED DESCRIPTION	DATE

BARKER STRUCTURAL

S1.01
STATEMENT OF SPECIAL INSPECTION

LAP SPLICE LENGTHS (IN.)

BAR SIZE	LAP CLASS	LENGTHS (IN.)																							
		2500 PSI				3000 PSI				3500 PSI				4000 PSI				4500 PSI				5000 PSI			
		TOP BARS [5]		OTHER BARS		TOP BARS [5]		OTHER BARS		TOP BARS [5]		OTHER BARS		TOP BARS [5]		OTHER BARS		TOP BARS [5]		OTHER BARS		TOP BARS [5]		OTHER BARS	
		CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	A	24	36	18	27	22	33	17	25	20	30	16	23	19	28	15	22	18	27	14	21	17	25	13	20
	B	31	46	24	36	28	42	22	33	26	39	20	30	25	37	19	28	23	35	18	27	22	33	17	25
#4	A	32	47	24	36	29	43	22	33	27	40	21	31	25	37	19	29	24	35	18	27	23	34	17	26
	B	41	61	32	47	38	56	29	43	35	52	27	40	33	49	25	37	31	46	24	35	29	44	23	34
#5	A	39	59	30	45	36	54	28	42	33	50	26	39	31	47	24	36	30	44	23	34	28	42	22	32
	B	51	77	39	59	47	70	36	54	43	65	33	50	41	61	31	47	38	57	30	44	36	54	28	42
#6	A	47	71	36	54	43	65	33	50	40	60	31	46	37	56	29	43	35	53	27	41	34	50	26	39
	B	61	92	47	71	56	84	43	65	52	78	40	60	49	73	37	56	46	69	35	53	44	65	34	50
#7	A	69	103	53	79	63	94	48	72	58	87	45	67	54	81	42	63	51	77	40	59	49	73	38	56
	B	89	134	69	103	81	122	63	94	75	113	58	87	71	106	54	81	67	100	51	77	63	95	49	73
#8	A	78	117	60	90	72	107	55	83	66	99	51	77	62	93	48	72	59	88	45	68	56	83	43	64
	B	102	153	78	117	93	139	72	107	86	129	66	99	81	121	62	93	76	114	59	88	72	108	56	83
#9	A	88	132	68	102	81	121	62	93	75	112	58	86	70	105	54	81	66	99	51	76	63	94	48	72
	B	115	172	88	132	105	157	81	121	97	146	75	112	91	136	70	105	86	128	66	99	81	122	63	94
#10	A	100	149	77	115	91	136	70	105	84	126	65	97	79	118	61	91	74	111	57	86	71	106	54	81
	B	129	194	100	149	118	177	91	136	109	164	84	126	102	153	79	118	96	144	74	111	92	137	71	106
#11	A	110	165	85	127	101	151	78	116	93	140	72	108	87	131	67	101	82	123	64	95	78	117	60	90
	B	143	215	110	165	131	196	101	151	121	182	93	140	114	170	87	131	107	160	82	123	102	152	78	117
#14	N/A [4]	133 [4]	199 [4]	102 [4]	153 [4]	121 [4]	181 [4]	93 [4]	140 [4]	112 [4]	168 [4]	86 [4]	129 [4]	105 [4]	157 [4]	81 [4]	121 [4]	99 [4]	148 [4]	76 [4]	114 [4]	94 [4]	141 [4]	72 [4]	108 [4]
#18	N/A [4]	177 [4]	265 [4]	136 [4]	204 [4]	161 [4]	242 [4]	124 [4]	186 [4]	149 [4]	224 [4]	115 [4]	172 [4]	140 [4]	209 [4]	108 [4]	161 [4]	132 [4]	197 [4]	101 [4]	152 [4]	125 [4]	187 [4]	96 [4]	144 [4]

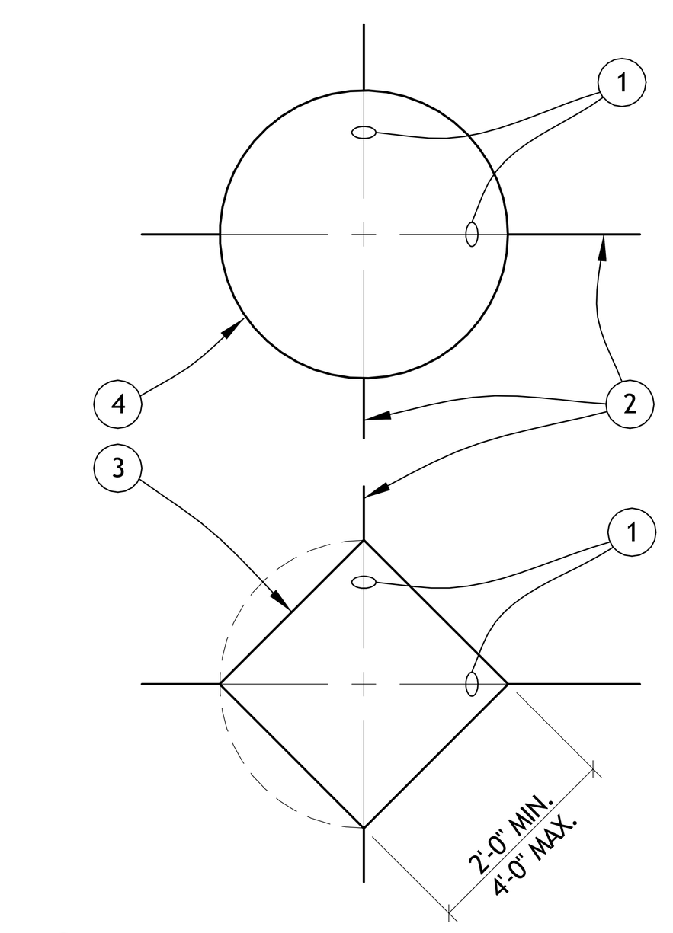
1. TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONC.
2. TENSION LAP-SPLICE LENGTHS ARE CALCULATED PER ACI 318, SECTIONS 12.15. TABULATED VALUES FOR BEAMS OR COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MIN. CODE REQUIREMENTS.
3. CASES 1 AND 2, WHICH DEPEND ON THE TYPE OF STRUCTURAL ELEMENT, CONCRETE COVER, AND CENTER-TO-CENTER SPACING OF THE BARS ARE DEFINED AS:

BEAM OR COLUMNS:
- CASE 1 - COVER AT LEAST 1.0 db AND CENTER-TO-CENTER SPACING AT LEAST2.0db
- CASE 2 - COVER LESS THAN 1.0db OR CENTER-TO-CENTER SPACING LESS THAN 2.0 db.

ALL OTHERS:
- CASE 1 - COVER AT LEAST 1.0 db AND CENTER-TO-CENTER SPACING AT LEAST 3.0db.
- CASE 2 - COVER LESS THAN 1.0 db OR CENTER-TO-CENTER SPACING LESS THAN 3.0 db

4. ACI 318 DOES NOT ALLOW LAP SPLICES OF #14 OR #18 BARS. THE TABULATED VALUES FOR THOSE BAR SIZES ARE THE TENSION DEVELOPMENT LENGTHS.
5. TOP BARS ARE HORIZ. BARS WITH MORE THAN 12 IN. OF CONCRETE CAST BELOW THE BARS.
6. FOR GRADE 40 REINFORCING BARS, MULTIPLY TABULATED VALUES BY 0.67 (12" LAP MIN.). FOR LIGHT WEIGHT CONC., MULTIPLY TABULATED VALUES BY 1.3.

5 LAP SPLICE SCHEDULE FOR UNCOATED REINFORCING BARS
C501



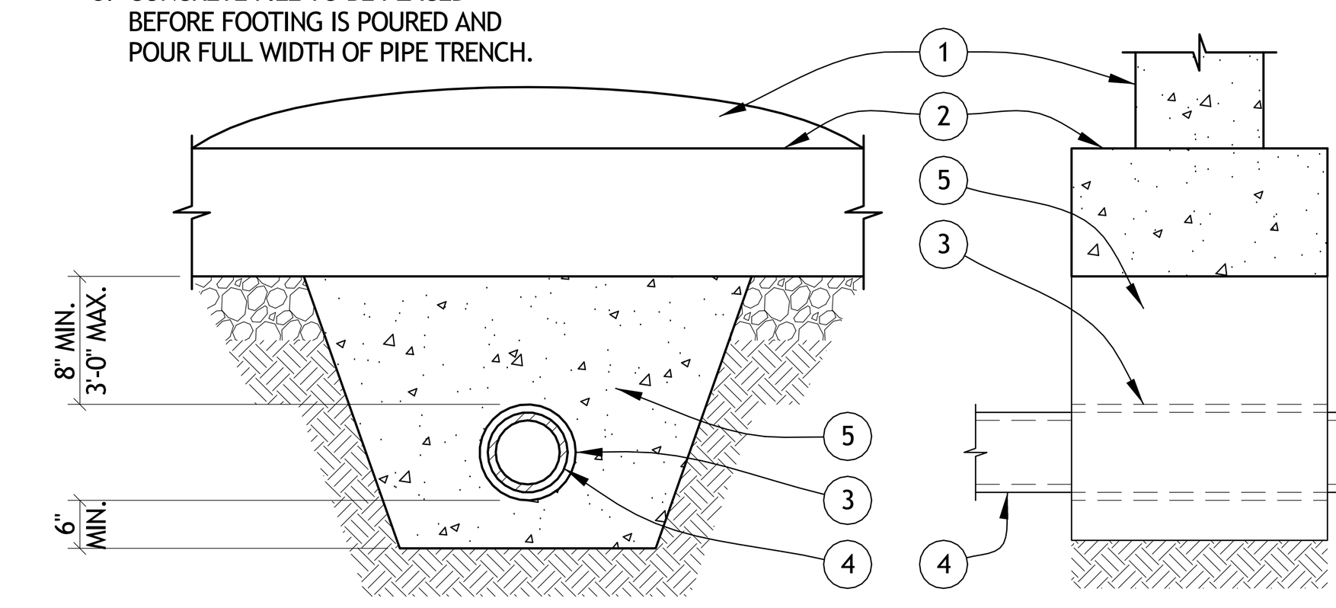
1. CENTERLINE OF COLUMN.
2. CONCRETE C.J. WHERE SHOWN ON PLANS.
3. KEYED JOINT. SEE TYPICAL CONTROL JOINT DETAIL.
4. RADIUS = 3'-0" MAX., 1'-6" MIN. SEE PLANS.

NOTE:
COLUMNS OMITTED FOR CLARITY. FOR CONFIGURATION OF SPECIFIC CLOSURE POURS, SEE PLAN.

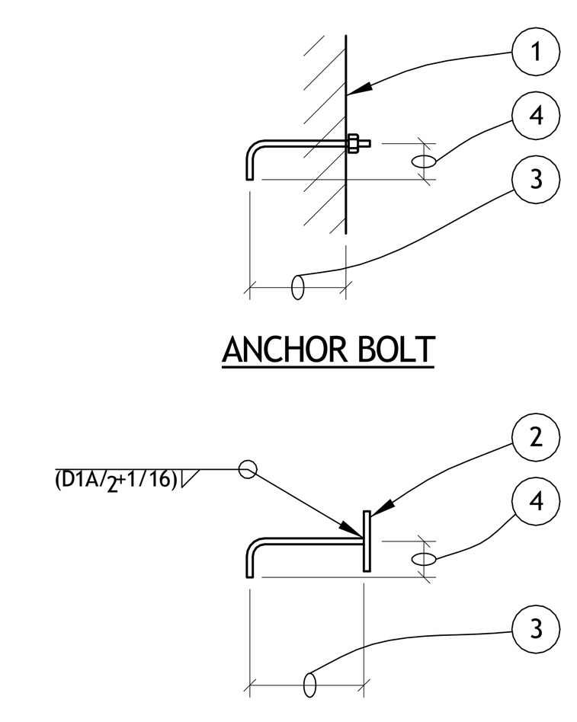
6 TYP. CLOSURE POUR AT SLAB ON GRADE
TYP2

1. STEM WALL AS OCCURS.
2. CONCRETE FOOTING OR FOUNDATION.
3. SLEEVE. PROVIDE 1/2" MIN. CLEARANCE AROUND PIPE.
4. PIPE.
5. CONCRETE FILL TO BE PLACED BEFORE FOOTING IS POURED AND POUR FULL WIDTH OF PIPE TRENCH.

NOTE:
FOR PIPE BURIAL DEPTH OF MORE THAN 3'-0", SEE TYPICAL PIPE UNDER FOOTING DETAIL 2/SG1.10. FOR PIPE BETWEEN FOOTING, SEE DETAIL 17/SG1.10. FOR PIPE BETWEEN FOOTINGS SEE DETAIL 17/S1.01.



1 PIPE PASSING BELOW CONT. FOOTING
TYP5

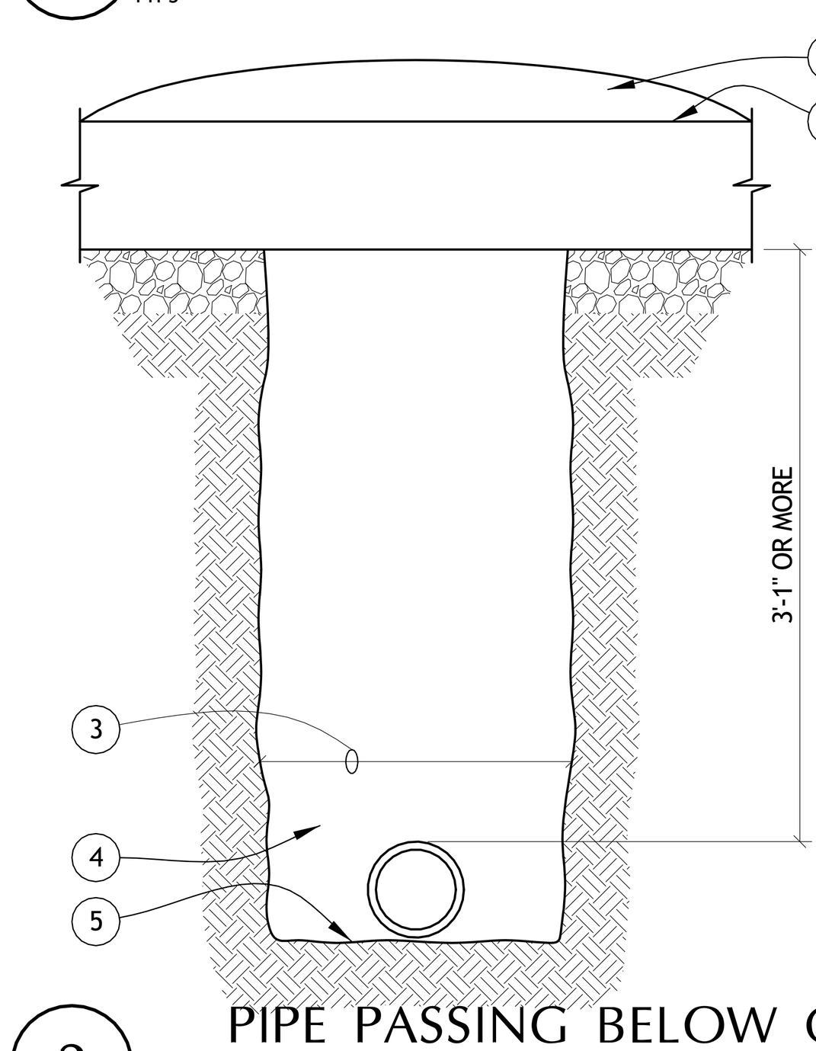


1. FACE OF WALL.
2. PLATE, ANGLE, CHANNEL, ETC.
3. EMBED LENGTH.
4. STANDARD HOOK.

BOLT DIA.	VERT BOLT EMBED LENGTH	HORIZ BOLT EMBED LENGTH
1/2"	6"	4"
5/8"	6"	4"
3/4"	7"	5"
7/8"	8"	6"
1"	9"	7"

NOTE:
A. PROVIDE ANCHORS AND ANCHOR BOLTS PER THIS SCHEDULE U.N.O. ON PLANS OR DETAILS.
B. WELDED HEADED STUDS MAY BE USED IN LIEU OF ANCHOR BOLTS, TYPICAL.

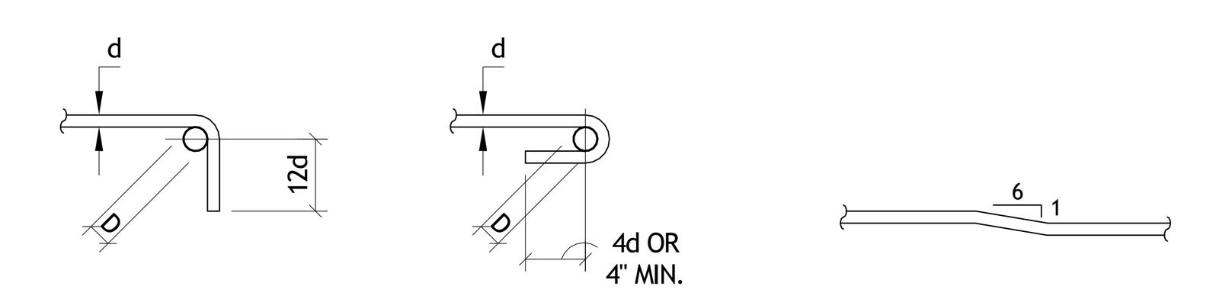
7 TYP. ANCHOR BOLT/ANCHOR BOLT SCHED.
S34



1. STEM WALL AS OCCURS.
2. CONCRETE FOOTING OR FOUNDATION.
3. 1'-6" MAX. WHERE TRENCH EXCEEDS 1'-6", NOTIFY THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT OF FOOTING.
4. BACKFILL AND RECOMPACTED TRENCH PER THE SOIL REPORT AND SPECIFICATIONS.
5. BOTTOM OF TRENCH.

NOTE:
FOR PIPE BURIAL DEPTH OF 3'-0" OR LESS, SEE TYPICAL PIPE UNDER FOOTING DETAIL 1/SG1.10. FOR PIPE BETWEEN FOOTING, SEE DETAIL 17/SG1.10.

2 PIPE PASSING BELOW CONT. FOOTING
TYP3



90° STD. HOOK

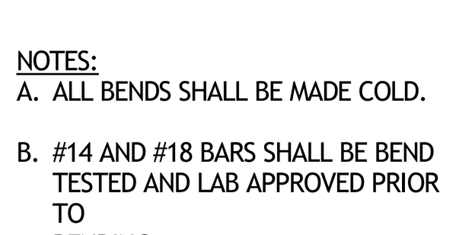
180° STD. HOOK

MAX. OFFSET BEND

D=6d FOR #3 TO #8
D=8d FOR #9 TO #11
D=12d FOR #14 TO #18

PRINCIPAL REINFORCING

MIN. D=1 1/2" FOR #3
MIN. D=2" FOR #4
MIN. D=2 1/2" FOR #5
MIN. D=4 1/2" FOR #6
MIN. D=5 1/4" FOR #7
MIN. D=6" FOR #8

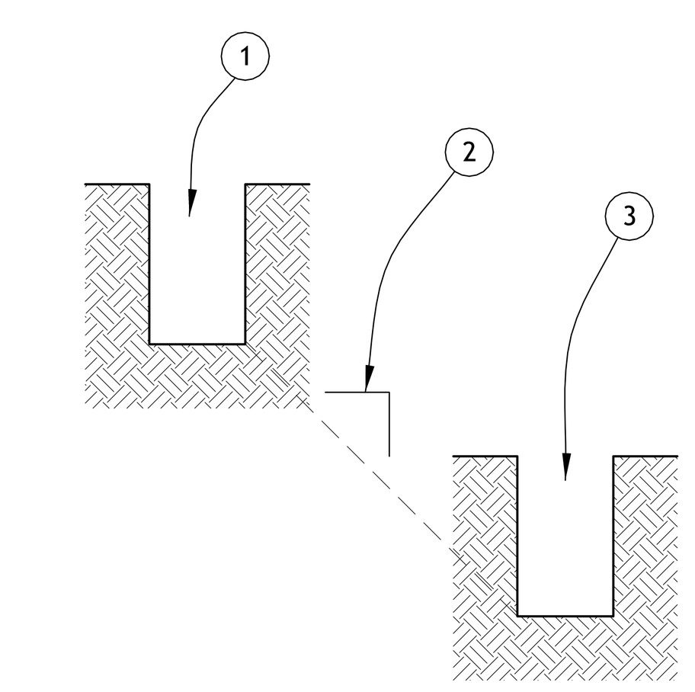


135° STD. HOOK

STIRRUP AND TIES

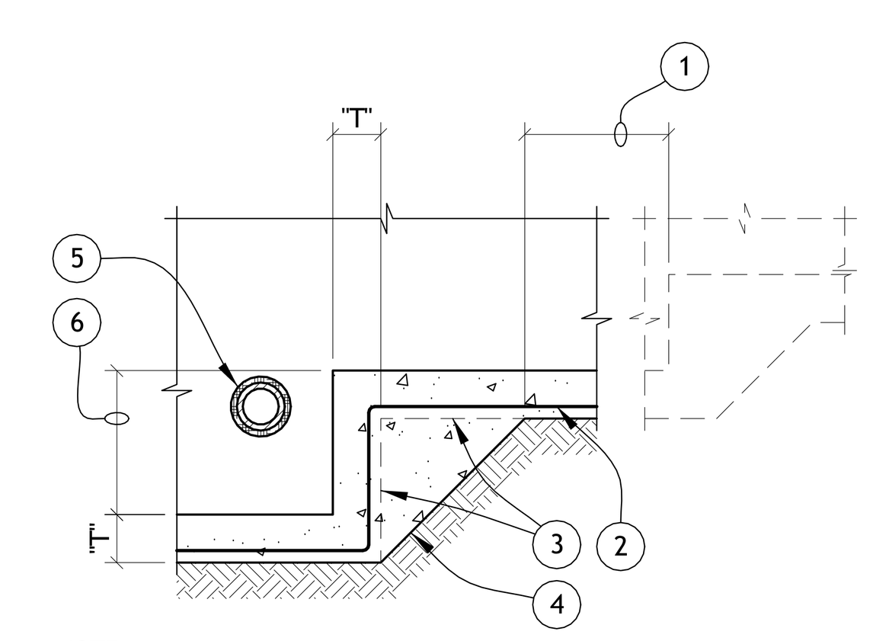
NOTES:
A. ALL BENDS SHALL BE MADE COLD.
B. #14 AND #18 BARS SHALL BE BEND TESTED AND LAB APPROVED PRIOR TO BENDING.

8 TYPICAL BAR BENDS
S33



1. ISOLATED OR CONTINUOUS FOOTING.
2. THIS SLOPE SHALL NOT EXCEED 1 VERTICAL TO 1 HORIZONTAL. IF EXCAVATIONS CAN STAND VERTICALLY WITHOUT SHORING AND 1 VERTICAL TO 1 1/2" HORIZONTAL IF EXCAVATIONS NEED TO SLOPE OR BE SHORED.
3. ISOLATED OR CONTINUOUS FOOTING. PIT OR PIPE TRENCH UNDERMINING FOOTING ABOVE.

3 MAX. SLOPES BETWEEN ADJ. EXCAVATIONS
TYP1



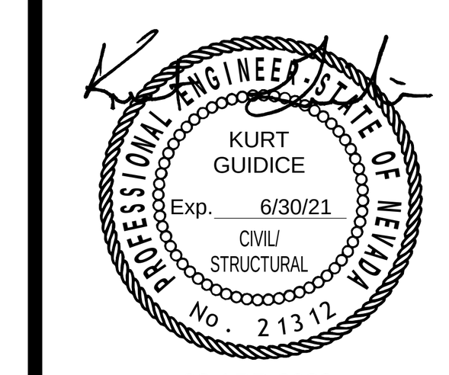
1. 4'-0" MINIMUM FOR MULTIPLE STEPS IN FOOTING.
2. REBAR MAY BE LAP SPLICED AT CONTRACTOR'S OPTION.
3. BOTTOM OF FOOTING WHERE EARTH CAN STAND VERTICALLY WITHOUT SHORING.
4. SLOPE AS REQUIRED FOR EARTH STABILITY.
5. 1 1/2" COMPRESSIBLE MATERIAL.
6. 4'-0" MAX.

NOTE:
A. THIS DETAIL TO BE USED AS REQUIRED TO DEPRESS FOOTING TO FIRM BEARING, OR TO GET BELOW UNDERGROUND PIPING OR WHEREVER CHANGE IN FOOTING ELEVATION OCCURS. SEE DETAIL 3/SG1.10 FOR MAX. SLOPES BETWEEN ADJACENT FOOTINGS WHICH MAY REQUIRE LOWERING OF FOOTING ELEVATION.
B. PLACE ALL CONCRETE AGAINST UNDISTURBED SOIL. IF SOIL IS DISTURBED DURING CONCRETE PLACING, REPLACE DISTURBED SOIL WITH CONCRETE.

4 STEP IN FOOTING
C400

BARKER STRUCTURAL
FIRM #F-12673
303 PEARL PKWY, SUITE 210
SAN ANTONIO, TX 78215
210.446.5500
5960 S. RAINBOW BLVD. SUITE 300
LAS VEGAS, NV 89118
702.310.8000
WWW.BARKERSTRUCTURAL.COM

SEAL



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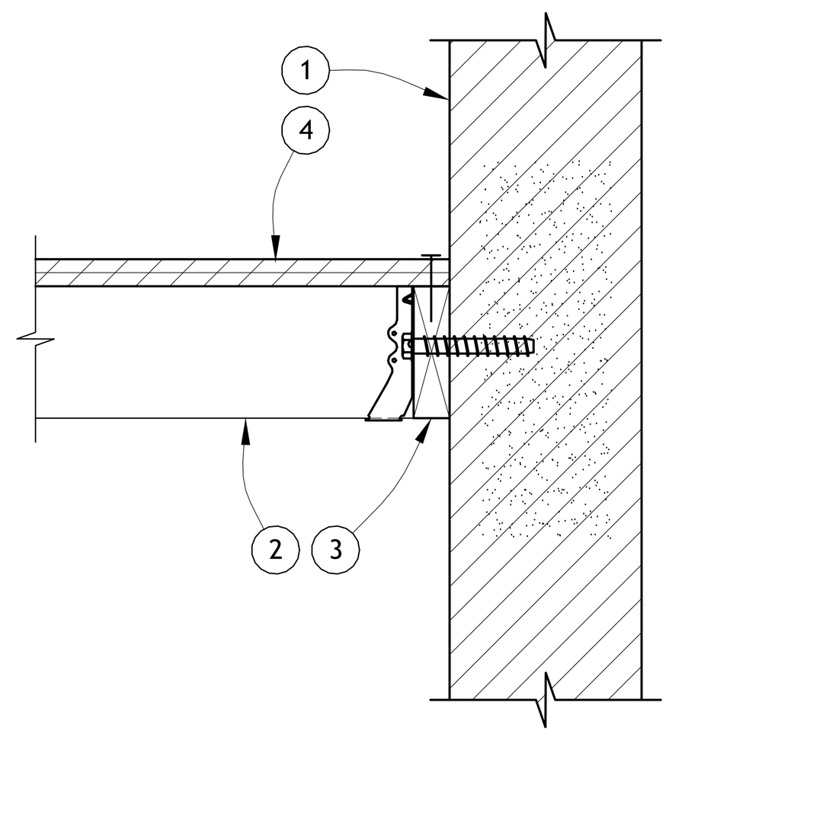
REVISED		
REV	DESCRIPTION	DATE

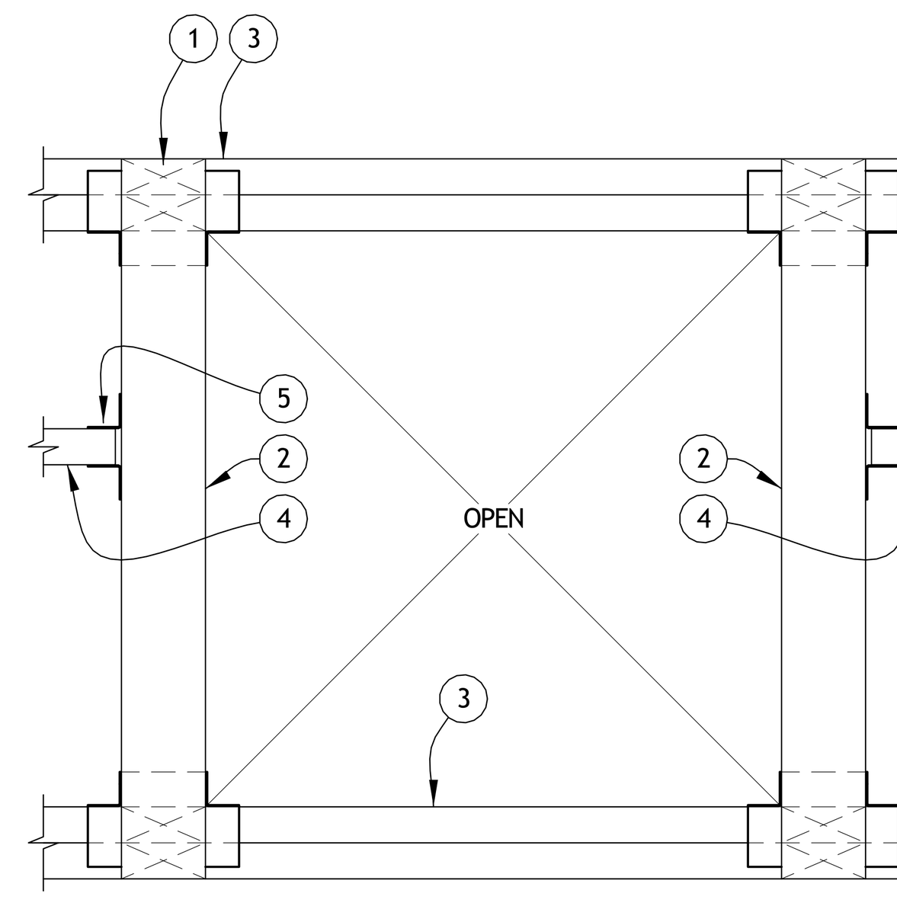
S1.10
TYPICAL FOUNDATION DETAILS



1. MASONRY WALL.
2. 2x6 JOIST AT 24" O.C. WITH SIMPSON JB TYPE HANGER.
3. 2x6 LEDGER WITH 5/8" Ø SIMPSON TITEN HD ANCHORS EMBEDDED 4 1/2" MIN. PER ESR 1056 AT 24" O.C.
4. PLYWOOD FLOOR SHEATHING.

15 STRINGER AT MASONRY WALL

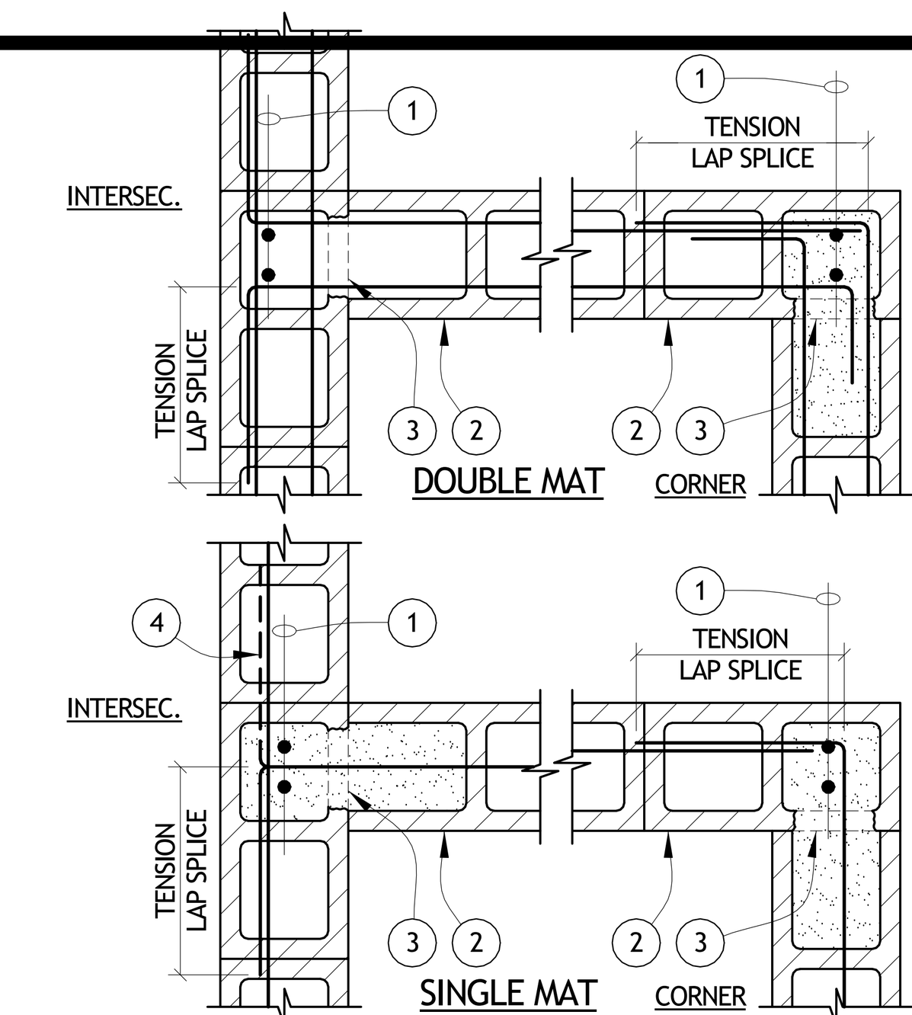
218029DS120-15



1. 2x4 VERTICAL FROM TOP CHORD OF WOOD TRUSS TO PANEL POINT OF BOTTOM CHORD.
2. XxX HEADER WITH SIMPSON THAXXX HANGERS.
3. MULTIPLE TRUSSES AS REQUIRED BY TRUSS MFR.
4. WOOD TRUSS OR WOOD JOIST AS OCCURS ON PLANS.
5. SIMPSON JB TYPE HANGER AT SAWN JOISTS. HANGER BY TRUSS MFR. AT WOOD TRUSS.

10 PLAN - TYP. FRAMING AT LARGE OPENING

W1A.dwg



1. (2) #5 VERTICALS MIN.
2. OPEN END BLOCK.
3. BREAK SHELL AT HORIZONTAL REINFORCING.
4. BEND BARS ALTERNATE.

5 MASONRY WALL INTERSECTIONS

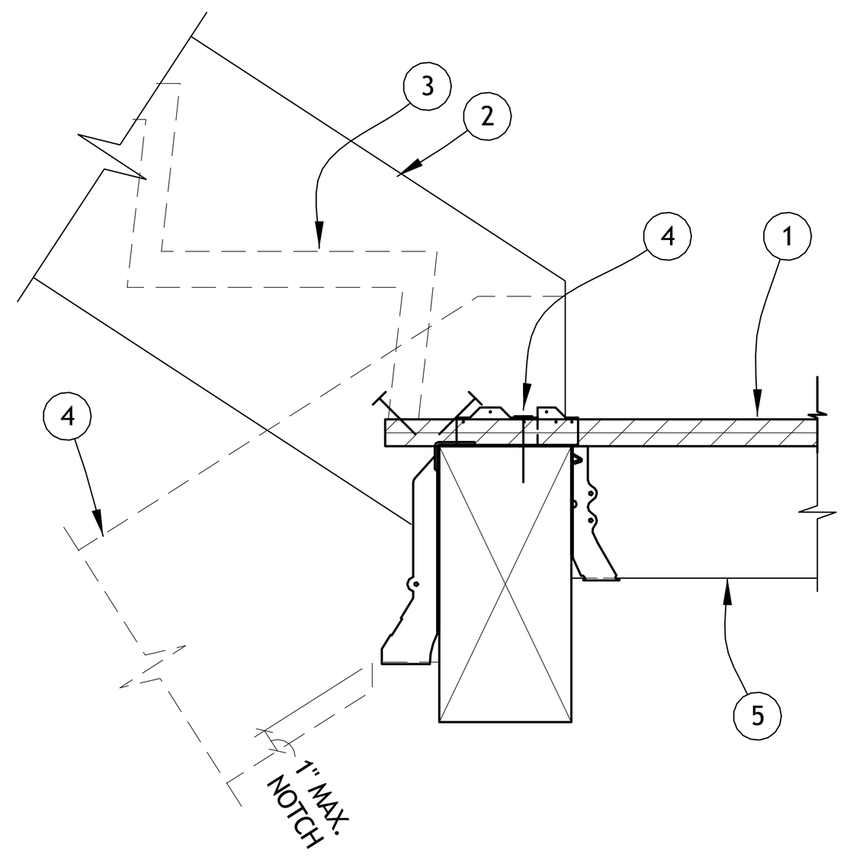
M502

LAP-SPLICE LENGTH FOR UNCOATED REINFORCING BARS						
	LENGTHS (IN.)					
	SINGLE MAT			DOUBLE MAT		
BARSIZE	1500 PSI	1800 PSI	2000 PSI	1500 PSI	1800 PSI	2000 PSI
#3	19	17	17	19	17	17
#4	25	23	22	31	29	27
#5	31	29	27	49	45	42
#6	53	48	46	98	90	85
#7	67	61	58	133	122	116
#8	93	85	81	186	170	161
#9	119	108	103	237	216	205

NOTE:
1. LAP-SPLICE LENGTHS ARE CALCULATED PER 2012 IBC 2107.5.
2. TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS.
3. FOR GRADE 40 REINFORCING BARS MULTIPLY TABULATED VALUES BY 0.67 (15" LAP MIN).
4. MECHANICAL SPLICE REQUIRED FOR BAR SIZES GREATER THAN #9. (MECHANICAL SPLICES SHALL DEVELOP 125% OF THE TENSILE STRENGTH OF THE BAR).

1 LAP-SPLICE LENGTHS FOR MASONRY REINF.

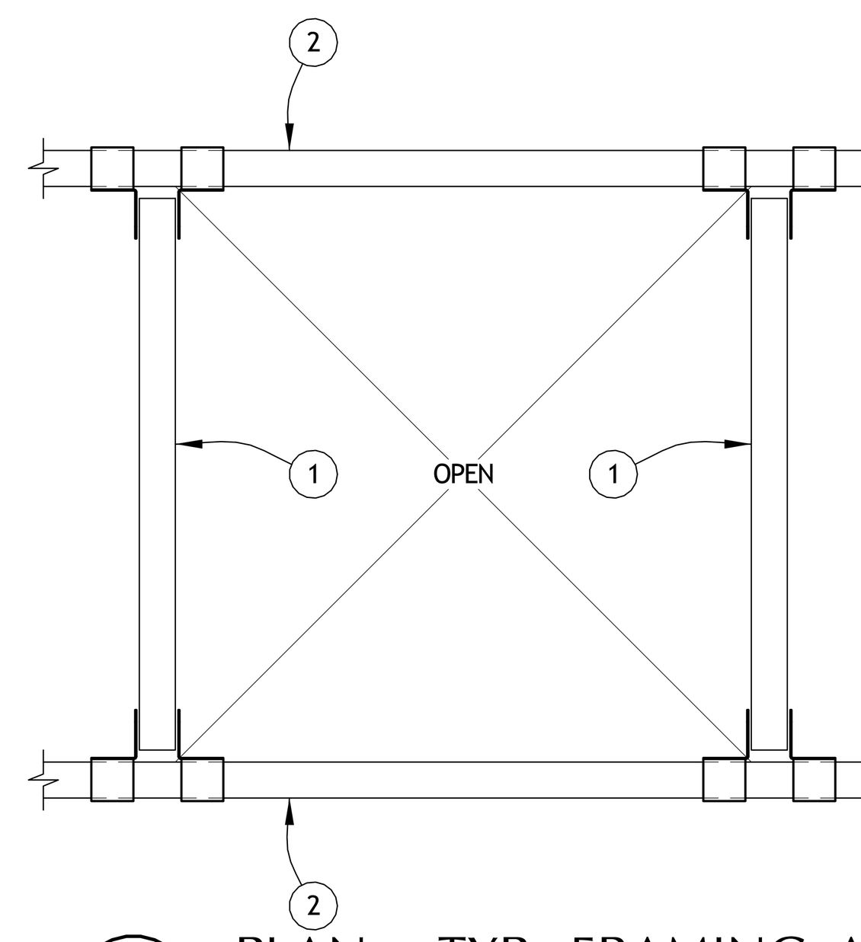
M400 - 2009 IBC



1. PLYWOOD FLOOR SHEATHING.
2. WOOD STRINGER.
3. 2x WOOD TREAD.
4. SIMPSON A35.
5. WOOD JOIST. 2x6 AT 24" O.C. WITH SIMPSON JB TYPE HANGER.

16 STAIR AT FLOOR LANDING

218029DS120-16

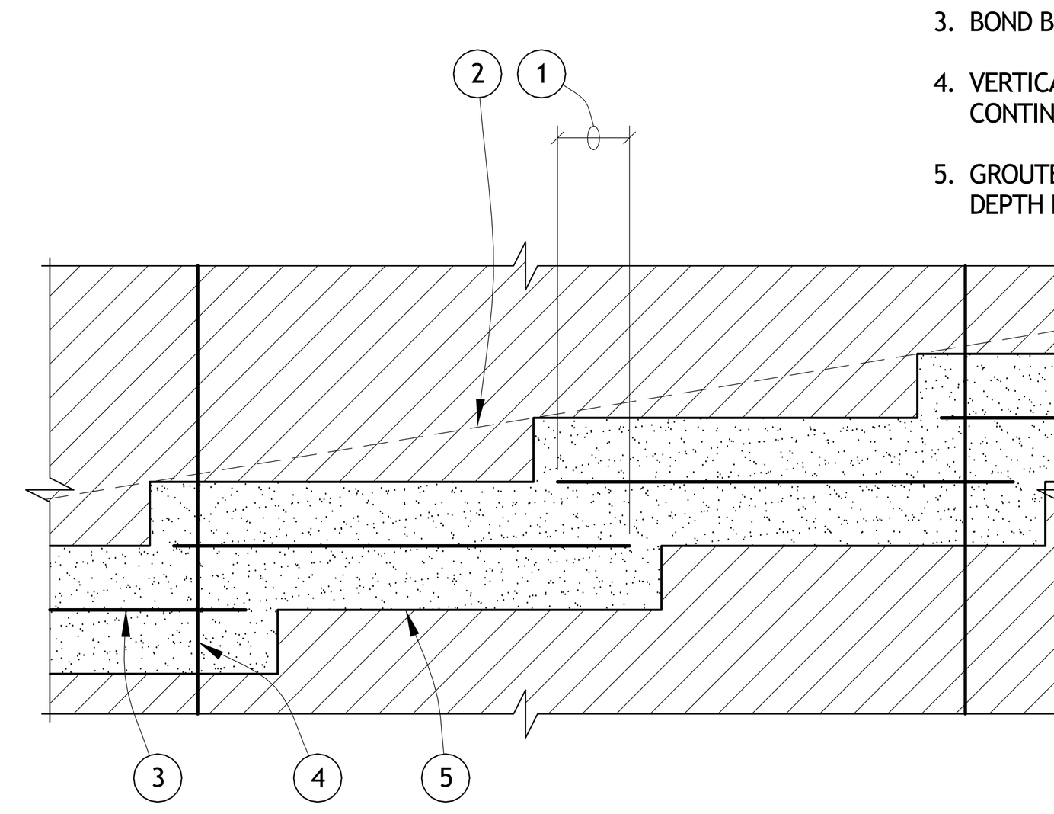


1. 2x4 HEADER WITH SIMPSON HU24TF HANGERS.
2. WOOD TRUSS.

NOTE:
THIS DETAIL IS REQUIRED AT ANY ROOF PENETRATION LARGER THAN 6"x6". IT MAY NOT BE USED WHERE OPENING WIDTH EXCEEDS TRUSS SPACING.

11 PLAN - TYP. FRAMING AT SMALL OPENING

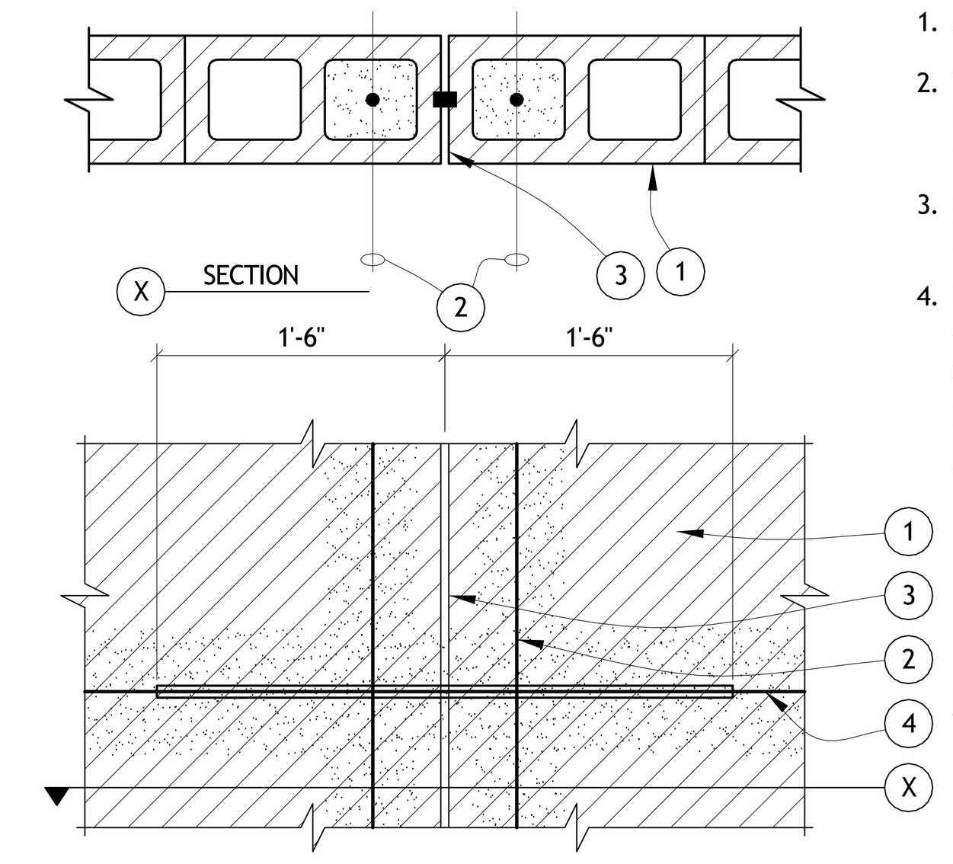
W1B.dwg



1. LAP LENGTH PER DETAIL 1/S1.02.
2. TOP OF WALL WHERE APPLICABLE.
3. BOND BEAM REINFORCING.
4. VERTICAL WALL REINFORCING CONTINUOUS THROUGH BOND BEAM.
5. GROUTED BOND BEAM MINIMUM DEPTH PER DETAILS AND G.S.N.

6 STEPPED BOND BEAM IN MASONRY WALL

M501

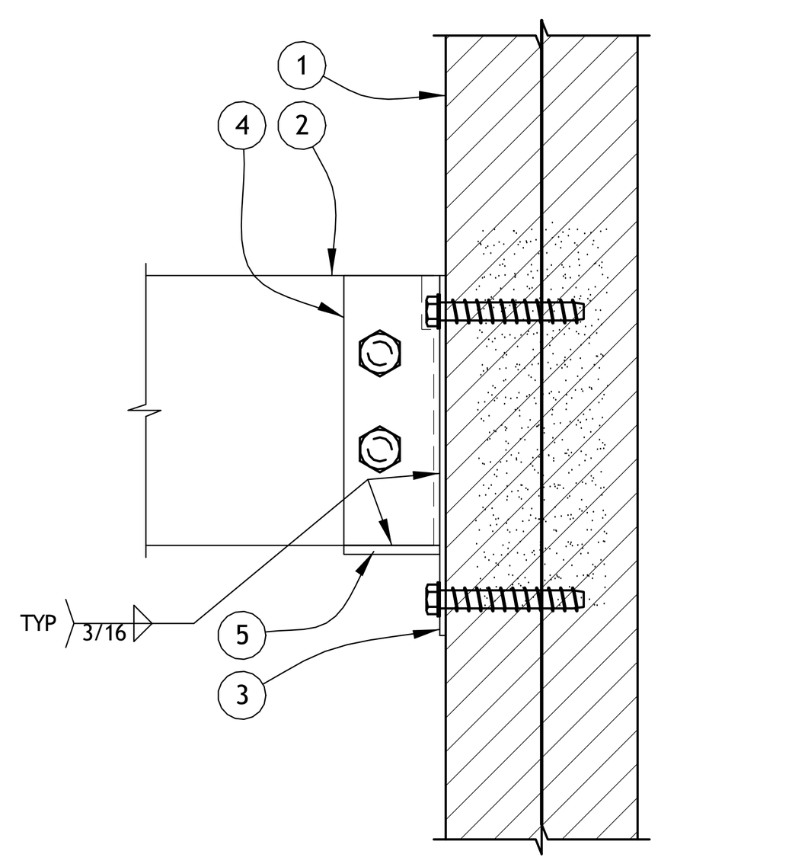


1. MASONRY WALL.
2. VERTICAL WALL REINFORCING IN SOLID GROUTED CELL EACH SIDE OF JOINT.
3. CONT. VERTICAL CONTROL MATERIAL PER SPECIFICATIONS.
4. CONTINUE HORIZONTAL BOND BEAM AND REINFORCING THROUGH JOINT AT ROOF AND FLOOR LINES ONLY. WRAP BARS W/ MASTIC FOR BOND BREAK WITHIN 1'-6" OF JOINT. DO NOT LAP HORIZONTAL REINFORCING WITHIN 4'-0" OF CONTROL JOINT.

NOTE:
CONTROL JOINTS TO BE LOCATED AS SHOWN ON PLANS AND AS SPECIFIED IN THE G.S.N.

2 CONTROL JOINT IN MASONRY WALL

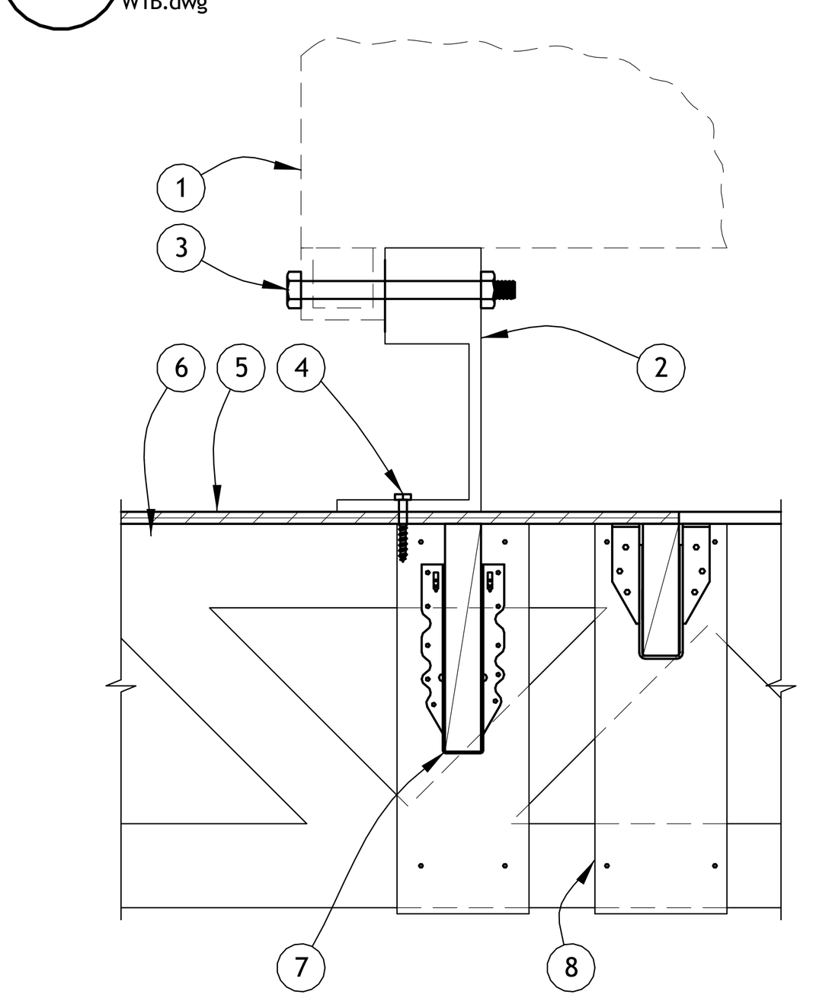
M500



1. MASONRY WALL.
2. WOOD BEAM, NOTCH TOP OF BEAM AT ANCHOR AS REQUIRED.
3. 3/8"x6 1/2" WIDE STEEL PLATE 15" TALL WITH (2) 3/4" DIA. SIMPSON TITEN HD ANCHORS EMBEDDED 5 1/2" MIN. PER ESR 1056 AT 12" O.C. CENTERED ON PLATE.
4. 1/4"x4" WIDE SIDE PLATES WITH (2) 3/4" DIA. THROUGH BOLTS.
5. 3/8"x4"x6 1/2" WIDE BEARING PLATE.

17 STAIR HEADER AT MASONRY WALL

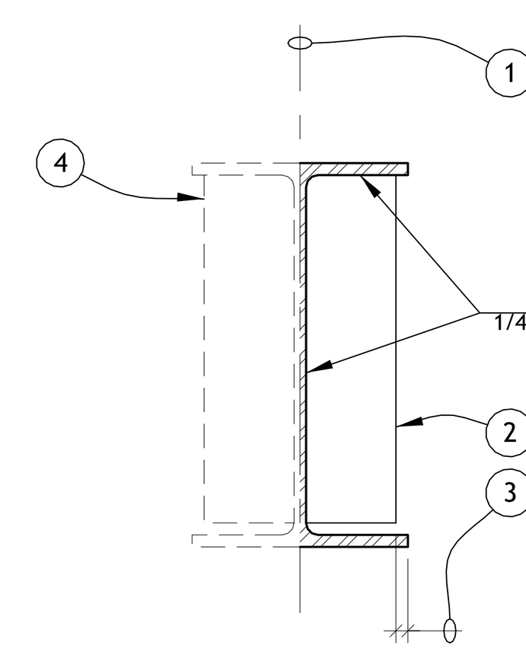
218029DS120-17



1. LINE OF MECHANICAL UNIT.
2. ROOF CURB BY MECHANICAL CONTRACTOR.
3. CONNECTION OF MECHANICAL UNIT TO THE ROOF CURB PER MECHANICAL DRAWINGS.
4. (1) #12x2 1/2" SCREW INTO EACH TRUSS.
5. PLYWOOD ROOF SHEATHING.
6. WOOD TRUSS.
7. 2x BLOCKING WITH SIMPSON LU TYPE HANGER.
8. 2x6 WITH (2) 10d AT EACH CHORD.

12 MECH'L. UNIT ANCHORAGE AT SUPPORT

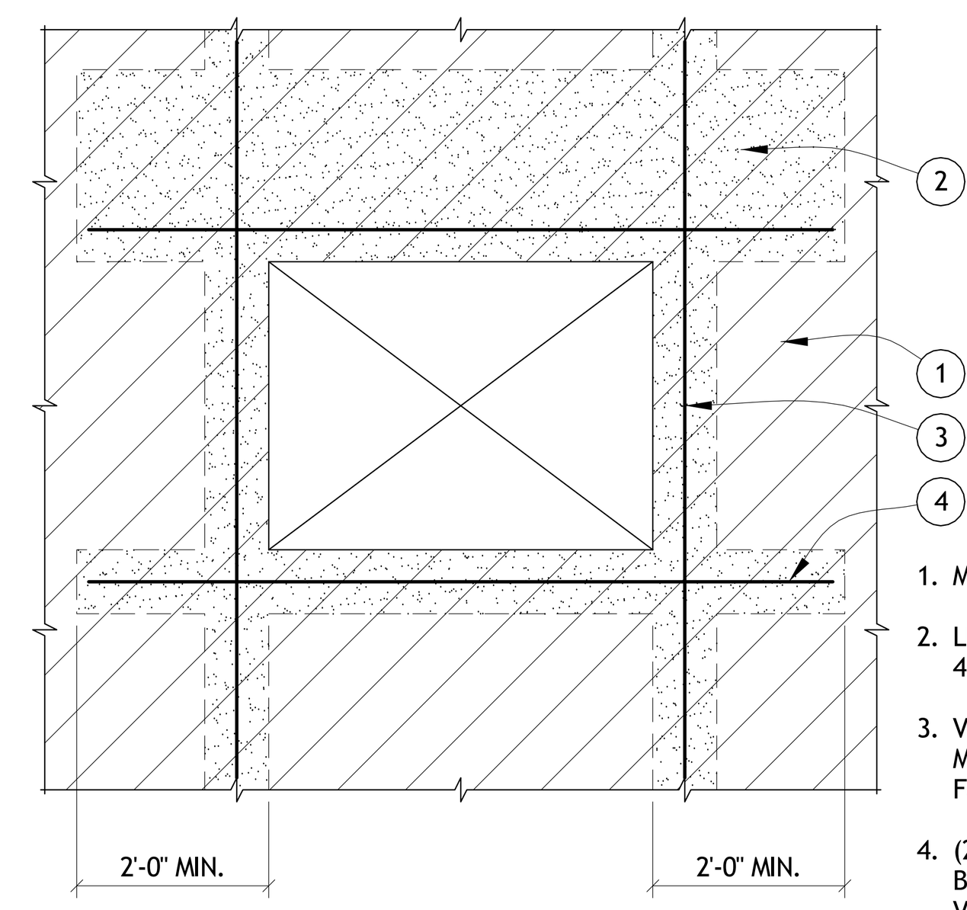
W32B.dwg



1. CENTERLINE BEAM OR BACK OF CHANNEL.
2. 5/16" THICK STIFFENER. FULL DEPTH WHERE CALLED FOR IN DETAILS.
3. 1/4" MAX.
4. PROVIDE STIFFENER BOTH SIDES OF BEAM WEB, U.N.O. ON PLANS.

7 BEAM STIFFENER

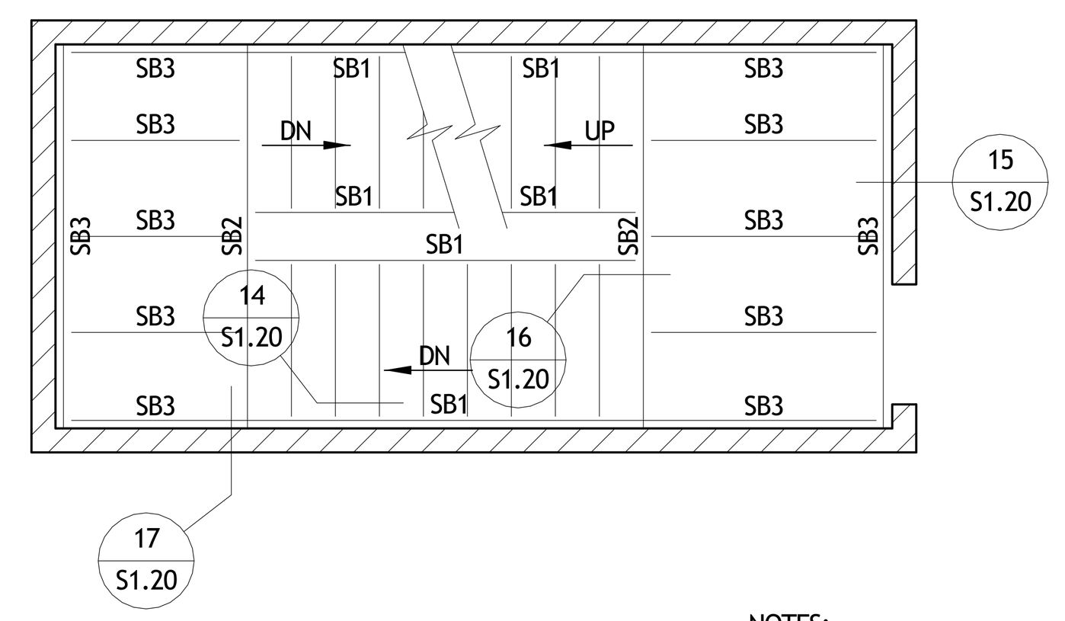
S105



1. MASONRY WALL.
2. LINTEL PER PLAN AND DETAIL 4/SG1.20.
3. VERTICAL BARS IN GROUTED CELL TO MATCH VERTICAL WALL REINFORCING FULL HEIGHT OF WALL.
4. (2) #5 IN 8" DEEP SOLID GROUTED BOND BEAM. (BEND BARS VERTICALLY AT CORNERS, 12" HOOK).

3 TYP. MASONRY OPENING W/MASONRY LINTEL

M503

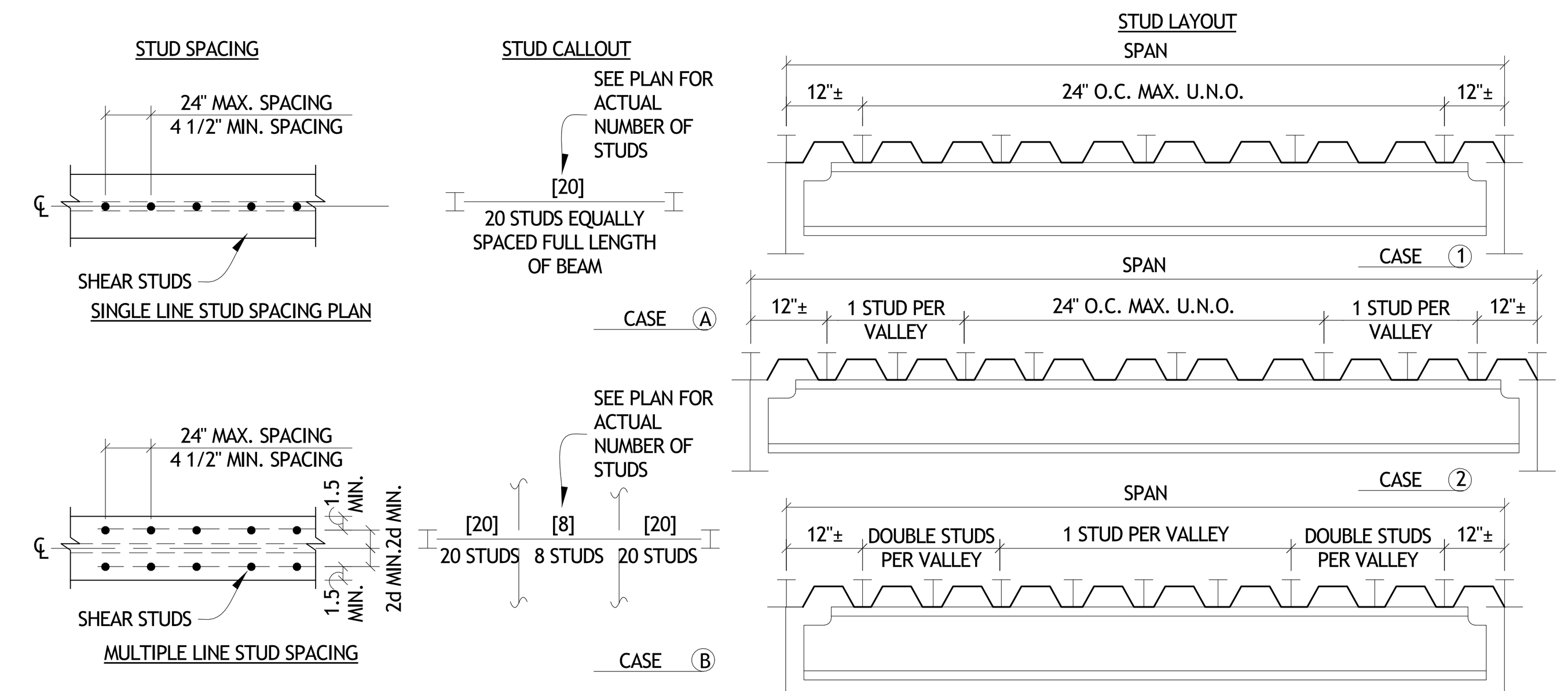


NOTES:
1. FOR ACTUAL STAIR AND LANDING CONFIGURATION SEE ARCH'L DRAWINGS.
2. LANDINGS AND TREADS SHALL BE 3/4" PLYWOOD SHEATHING PER G.S.N.

STAIR BEAM SCHEDULE	
SB1	1 3/4"x14 LVL
SB2	6x12
SB3	2x6

13 TYPICAL STAIR FRAMING PLAN

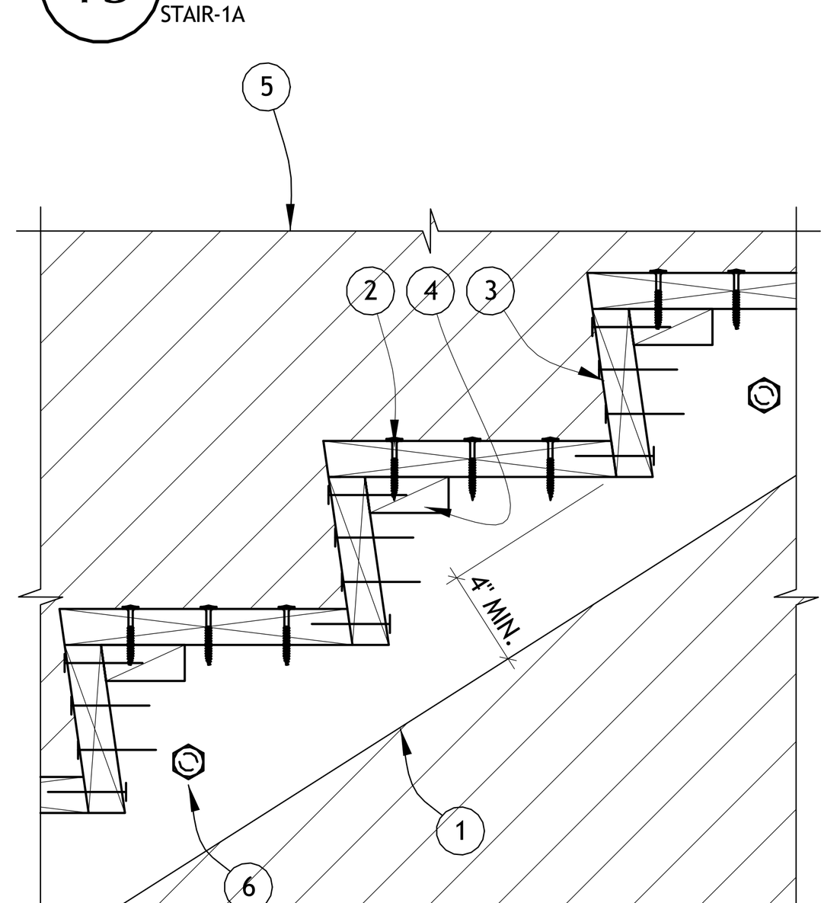
STAIR-1A



1. ALL SHEAR STUDS SHALL BE 3/4"Ø U.N.O. SEE DETAIL 9/S1.02 FOR ADDITIONAL INFO.
2. WHERE CONCRETE FILL OVER DECK OCCURS OVER STEEL BEAM OR GIRDER, IF NO SPECIFIC NUMBER OF STUDS ARE CALLED FOR ON PLAN, PLACE STUDS AT 24" O.C. PER CASE "1", FOR BOLT PARALLEL AND PERPENDICULAR DECK CONDITIONS.
3. WHERE DECK IS PERPENDICULAR TO BEAM, STUDS SHALL BE PLACED IN THE VALLEYS OF THE DECK AND SPACED EQUALLY ALONG THE BEAM.
   3.1. WHERE NUMBER OF STUDS CALLED FOR ON PLANS IS LESS THAN THE NUMBER OF VALLEYS IN THE DECK, PLACE THE STUDS PER CASE "1" OR CASE "2".
   3.2. WHERE THE NUMBER OF STUDS CALLED FOR ON THE PLANS EXCEEDS THE NUMBER OF VALLEYS IN THE DECK, PLACE STUDS PER CASE "3".
4. WHERE DECK IS PARALLEL TO THE BEAM OR GIRDER, STUDS SHALL BE SPACED EQUALLY ALONG THE MEMBER WITHIN THE EXTENT SHOWN ON DETAIL HEREIN.
5. WHERE DECK IS PARALLEL TO THE BEAM OR GIRDER AND STUDS ARE CALLED OUT AS SHOWN IN CASE "B" HEREIN, STUDS SHALL BE PLACED IN MULTIPLE ROWS IF NECESSARY TO KEEP WITHIN THE EXTENT AS SHOWN.

8 SHEAR STUD NOTES AND DETAILS

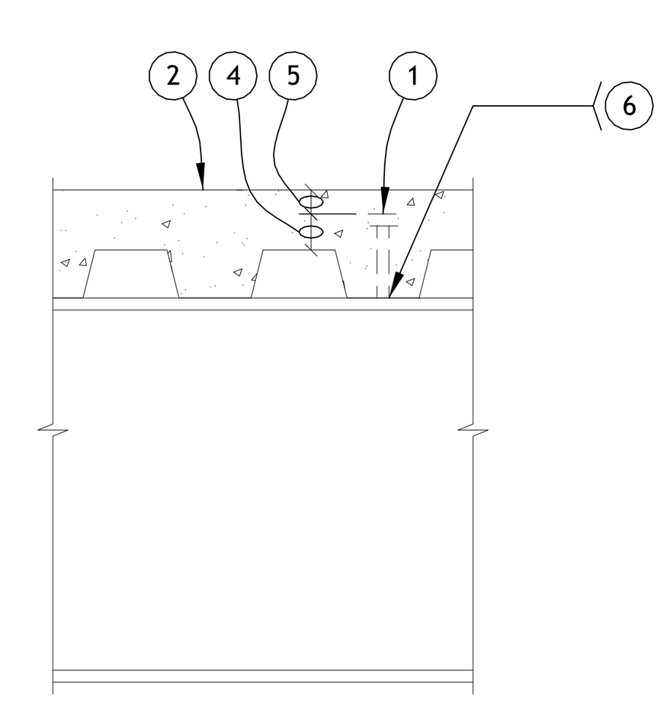
UHFLR204



1. WOOD STRINGER.
2. 2x TREAD WITH (3) #12x2" LONG SCREWS INTO EACH STRINGER.
3. 2x RISER COVER. SEE ARCH'L. ATTACH COVER TO EACH STRINGER WITH (3) 16d NAILS AS SHOWN.
4. 2x BLOCKING, TYP.
5. CMU WALL.
6. 5/8" Ø SIMPSON TITEN HD ANCHORS EMBEDDED 4 1/2" MIN. PER ESR 1056 AT 24" O.C. MAINTAIN 1 1/2" EDGE DISTANCE FROM ALL WOOD EDGES.

14 WOOD STRINGER AT CMU WALL

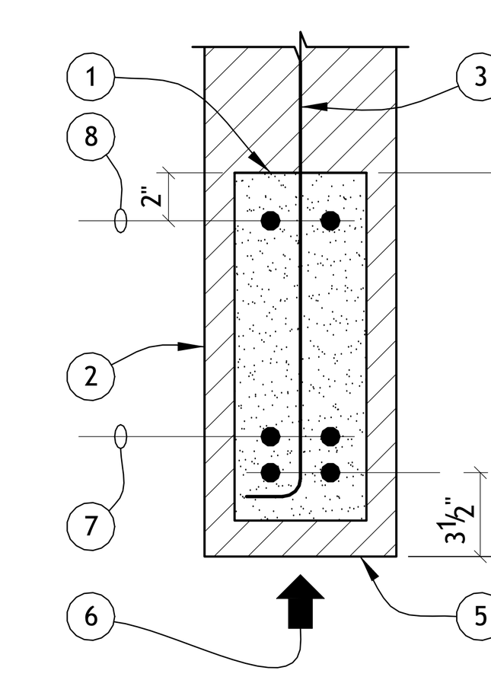
218029DS120-14



1. SHEAR STUD.
2. CONCRETE OVER METAL DECK PER PLANS.
3. STEEL BEAM.
4. 1 1/2" MINIMUM; STUDS TO EXTEND INTO TOPPING SLAB AS STANDARD STUD LENGTHS WILL ALLOW U.N.O.
5. 1" MINIMUM, 2" MAXIMUM.
6. FULL PENETRATION PER MANUFACTURERS RECOMMENDATIONS. UPON PRE-APPROVAL, STUDS MAYBE FIELD WELDING THRU THE DECK PER SECTION 7.5.5.4 OF AWS D1.1.

9 SHEAR STUD TO BEAM

UHFLR200



OPENING WIDTH	"H"	VERT. REINF.
0'-0" TO 3'-11"	1'-4"	PER G.S.N.
4'-0" TO 8'-0"	2'-8"	PER G.S.N.
8'-1" TO 10'-0"	3'-4"	#5 AT 24" O.C.
10'-1" TO 14'-0"	4'-0"	#5 AT 16" O.C.
14'-1" TO 18'-0"	8'-0"	#5 AT 16" O.C.

1. TOP OF SOLID GROUT FILL DEPTH.
2. OPEN END BLOCKS AT SOLID GROUTED SECTION.
3. VERTICAL REINFORCING. HOOK AT BOTTOM. TURN HOOK PARALLEL WITH WALL.
4. (2) #5 BARS.
5. LINTEL "U" BLOCK.
6. SHORE LINTEL UNTIL GROUT REACHES DESIGN STRENGTH.
7. ADDITIONAL (2) #5 CONTINUOUS AT SPANS OVER 10'-0".
8. (2) #5 AT TOP OF SOLID GROUTED SECTION (AT OPENINGS WIDER THAN 14'-0", PROVIDE (2) #5 HORIZONTAL AT 4'-0" O.C. FOR FULL HEIGHT OF LINTEL).

NOTE:
EXTEND OPEN END BLOCK, GROUT AND REINFORCING GREATER OF 40 BAR ◻ OR 2'-0" MIN. CONTINUOUS PAST JAMB EACH END.

4 TYPICAL MASONRY LINTEL

M100

BARKER STRUCTURAL
FIRM #F-12673
303 PEARL PKWY, SUITE 210
SAN ANTONIO, TX 78215
210.446.5500
5960 S. RAINBOW BLVD. SUITE 300
LAS VEGAS, NV 89118
702.310.8000
WWW.BARKERSTRUCTURAL.COM

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22 APR 2020

A NEW SHELL BUILDING IMPROVEMENT

31 SOUTH WATER STREET

APN #179-18-611-055

CITY OF HENDERSON, NV 89015

DATE: 04.17.2020

PROJECT NUMBER: 0201909

P. JAMES ARCHITECT
ARCHITECTURE
PLANNING
DESIGN
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LAS VEGAS, NV 89103
702.683.3277

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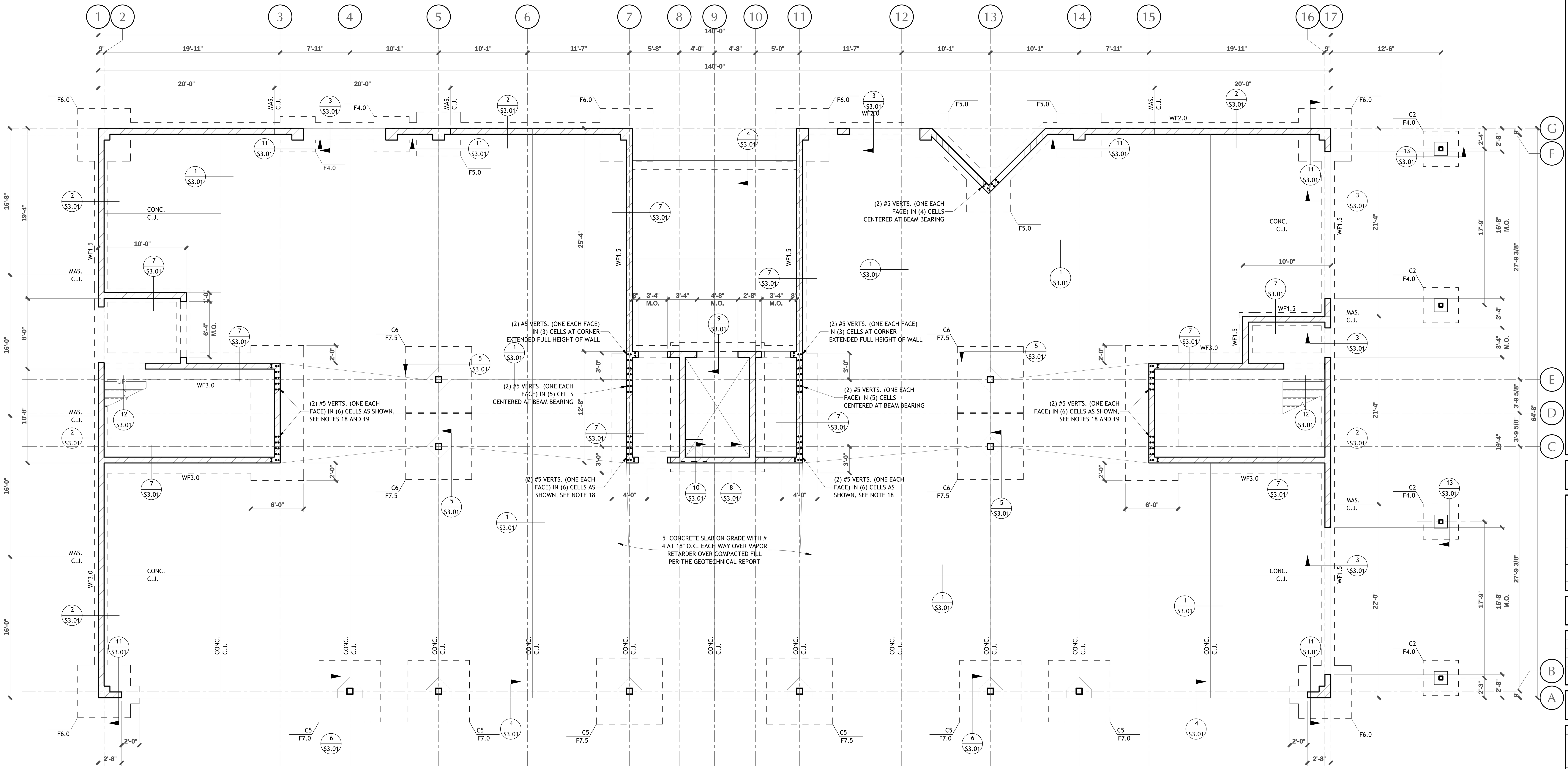
S1.20

TYPICAL FRAMING DETAILS



FOUNDATION PLAN
3/16" = 1'-0"

THIS DRAWING IS FORMATTED TO 30"x42". USE GRAPHIC SCALE BELOW TO DETERMINE IF DRAWING IS REDUCED

NORTH

FOUNDATION NOTES:

1. VERIFY ANY DIMENSIONS SHOWN WITH ARCHITECTURAL DRAWINGS.
2. FOR FOOTING EXCAVATION AND SOIL PREPARATION REQUIREMENTS SEE G.S.N. AND SOILS REPORT.
3. LOCATE FLOOR SINKS AND DEPRESSED SLABS PER ARCH'L AND PLUMBING DRAWINGS.
4. FOR OPENING SIZES IN MASONRY AND WOOD STUD WALLS SEE ARCH'L DRAWINGS.
5. FOR SIDEWALK LOCATIONS, SEE ARCH'L DRAWINGS.
6. CONC. C.J. AS SHOWN ON PLAN INDICATES LOCATION OF EITHER FORMED OR SAWCUT (CONTRACTOR'S OPTION) CONTROL JOINT IN SLAB ON GRADE. SEE G.S.N. AND TYPICAL DETAILS. REBAR SHALL NOT BE CONTINUOUS THROUGH JOINT.
7. ALL SLAB OPENINGS ARE NOT NECESSARILY SHOWN. COORDINATE OPENINGS WITH PLUMBING, MECH'L AND ARCH'L DRAWINGS.
8. T.O.F. 99'-4" INDICATES TOP OF FOOTING ELEVATION. ELEVATION SHOWN IS BASED ON GRADE ELEVATIONS FROM THE CIVIL GRADING PLAN. CONTRACTOR SHALL VERIFY THAT TOPS OF FOOTINGS ARE LOCATED 6" MINIMUM BELOW FINAL GRADE PRIOR TO EXCAVATION. CONTRACTOR SHALL ALSO LOWER FOOTINGS OR THICKEN FOOTINGS, IF NECESSARY, TO MEET MINIMUM BEARING DEPTH REQUIREMENTS PER THE SOILS ENGINEER OR IF SITE CONDITIONS DICTATE.
9. INDICATES STEP IN FOOTING PER DETAIL 4/S1.10. CONTRACTOR TO COORDINATE LOCATION OF STEPS SO AS TO SATISFY MIN. FOOTING DEPTH PER G.S.N. OR TO STEP FOOTINGS BELOW UTILITIES, ETC.
10. INDICATES CHANGE IN GRADE ELEVATION.
11. INDICATES WOOD STUD WALL. STUDS ARE TO BE FULL HEIGHT FROM FOUNDATION OR FROM TOP OF HEADERS TO TOP OF PARAPET. WHERE STUD LENGTH>20'-0" USE 1 1/2" x 5 1/2" "1.3E TIMBERSTRAND LSL" STUDS PER ICC #1387 AT 16" O.C. WHERE STUD LENGTH<20'-0" USE 2x6 AT 16" O.C.
12. INDICATES 8" MASONRY WALL WITH #5 VERTS. AT 24" O.C. SEE G.S.N FOR ADDITIONAL INFORMATION.
13. WF3.0, WF4.0,... AS SHOWN ON PLANS INDICATE CONTINUOUS WALL FOOTING. SEE WALL FOOTING SCHEDULE, THIS SHEET.
14. C1, C2,... AS SHOWN ON PLANS INDICATES WOOD OR STEEL COLUMN. SEE COLUMN SCHEDULE, THIS SHEET.
15. F6.0, F10.0,... AS SHOWN ON PLANS INDICATES PAD FOOTING. SEE FOOTING SCHEDULE, THIS SHEET.
16. MAS. C.J. AS SHOWN ON PLAN INDICATES MASONRY CONTROL. SEE DETAIL 2/S1.20.
17. PRIOR TO THE CONTRACTOR REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION, THE SOILS ENGINEER SHALL ADVISE THE BUILDING OFFICIAL IN WRITING THAT:
    A. THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOILS REPORT.
    B. THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED;
    C. THE FOUNDATION EXCAVATIONS COMPLY WITH THE INTENT OF THE SOILS REPORT.
18. EXTEND (3) SETS OF (2) #5 FULL HEIGHT OF WALL.
19. NON-TYPICAL MASONRY WALL ALONG GRIDS 3 AND 15. PROVIDE (2) #5 IN HORIZONTAL BOND BEAMS AT 32" O.C. GROUT SOLID.

COLUMN (C) SCHEDULE:

MARK	SIZE	BASE PLATE
C1	6x6	N/A
C2	HSS5x5x1/4	3/4"x11" SQ. W/ (4) 3/4" ANCHOR BOLTS
C3	HSS6x6x3/8	SEE DETAILS
C4	HSS6x6x1/2	SEE DETAILS
C5	HSS8x8x1/2	1"x14" SQ. W/ (4) 3/4" ANCHOR BOLTS
C6	HSS8x8x5/8	1"x14" SQ. W/ (4) 3/4" ANCHOR BOLTS
C7	HSS4x4x1/4	SEE DETAILS

FOOTING (F) SCHEDULE:

MARK	LENGTH	WIDTH	THICKNESS	BOTTOM REINFORCING
F4.0	4'-0"	4'-0"	1'-0"	(5) #5 EACH WAY
F5.0	5'-0"	5'-0"	1'-0"	(6) #5 EACH WAY
F6.0	6'-0"	6'-0"	1'-0"	(7) #6 EACH WAY
F7.0	7'-0"	7'-0"	1'-2"	(8) #6 EACH WAY
F7.5	7'-6"	7'-6"	1'-2"	(8) #7 EACH WAY

WALL FTG. (WF) SCHED:

MARK	WIDTH	THICK	REINFORCING
WF1.5	1'-6"	1'-0"	(2) #5 LONG. #5 AT 12" O.C. LONG.
WF2.0	2'-0"	1'-0"	(3) #5 LONG. #5 AT 12" O.C. LONG.
WF3.0	3'-0"	1'-0"	(4) #5 LONG. #5 AT 12" O.C. LONG.

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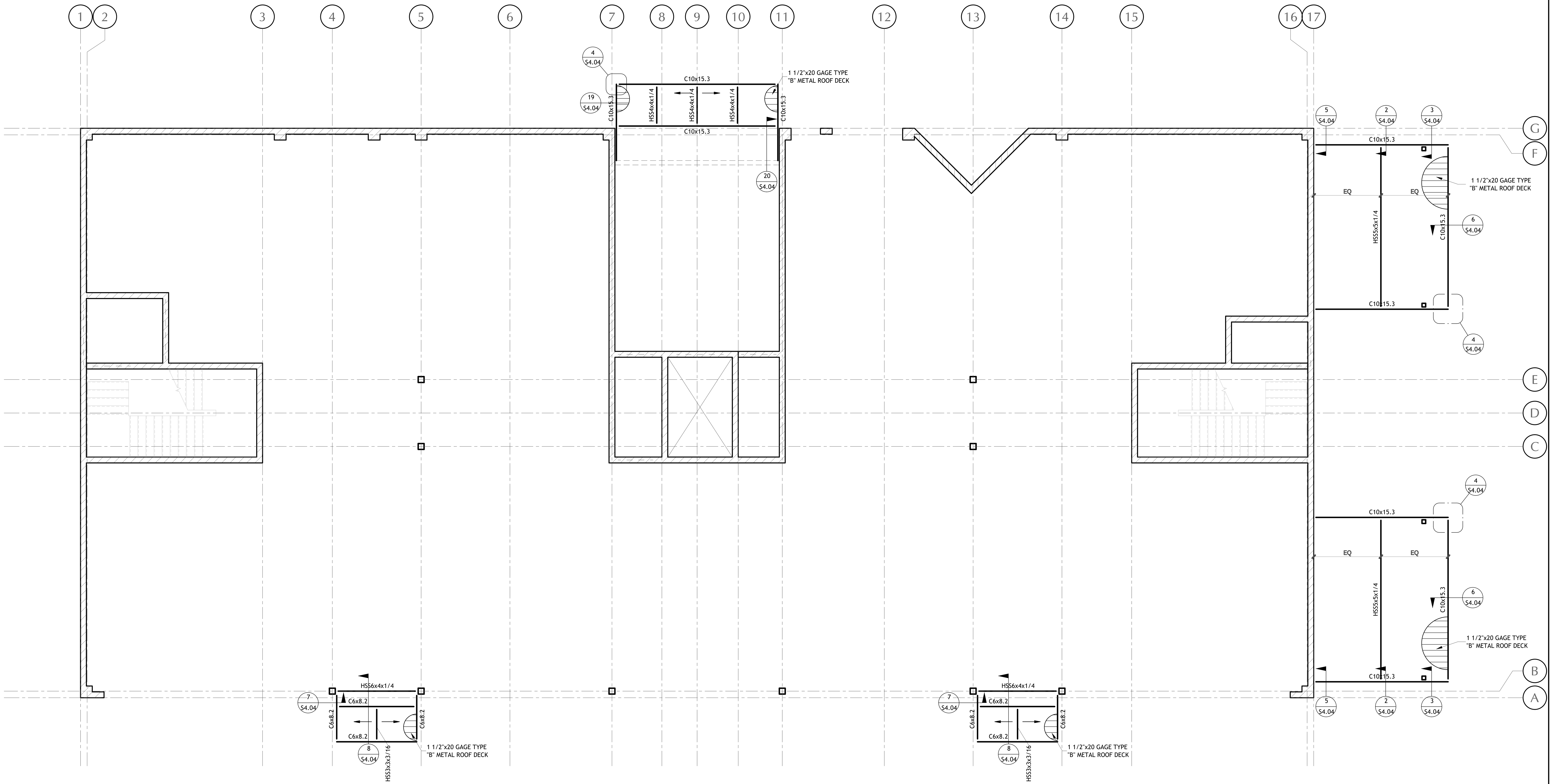
S2.10
FOUNDATION PLAN

FLOOR PLAN NOTES:

1. VERIFY ANY DIMENSIONS SHOWN WITH ARCHITECTURAL DRAWINGS.
2. ALL FLOOR OPENINGS MAY NOT BE SHOWN ON THE FLOOR FRAMING PLAN. FOR EXACT SIZE, NUMBER AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS. FOR FRAMING AT OPENINGS, SEE TYPICAL DETAILS.
3. INDICATES WOOD STUD WALL. WOOD STUDS ARE TO BE FULL HEIGHT FROM FLOOR BELOW TO PLATE HEIGHT OF FLOOR ABOVE. USE 2x6 AT 16" O.C. TYPICAL UNLESS NOTED OTHERWISE.
4. INDICATES CHANGE IN BOTTOM OF SHEATING ELEVATION. COORDINATE EXACT DIMENSION WITH ARCHITECTURAL DRAWINGS.
5. ALL FLOORS ABOVE THE 2ND FLOOR TO BE 3/4" PLYWOOD OVERLAIN WITH 1 1/2" NON-STRUCTURAL TOPPING. SEE ARCHITECUTURAL FOR TOPPING INFORMATION.



CANOPY FRAMING PLAN

3/16" = 1'-0"

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SEAL

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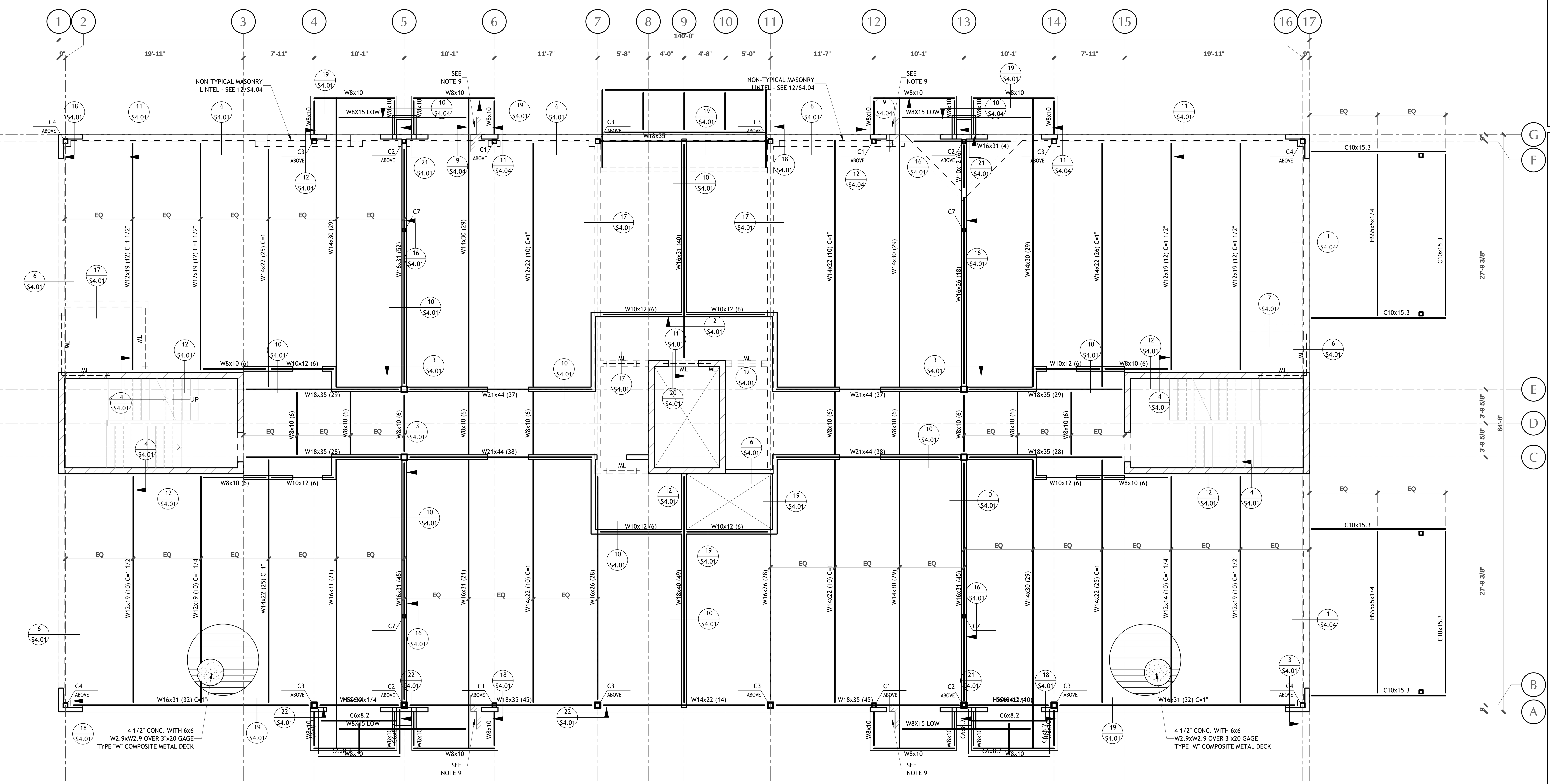
CANOPY FRAMING PLAN



SECOND FLOOR FRAMING PLAN

3/16" = 1'-0"

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FLOOR PLAN NOTES:

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3. THICKNESS INDICATED FOR CONCRETE TOPPING OVER METAL DECK IS TO BE CONSIDERED A MINIMUM BUT SHALL NOT BE EXCEEDED BY MORE THAN 1/2". PROVIDE ADDITIONAL CONCRETE AS REQUIRED PROBABLY NEAR THE COLUMNS BUT NOT MORE THAN 1/2") TO PRODUCE A LEVEL FLOOR.
4. W 16x26 C=1" [11] AS SHOWN ON PLANS INDICATE COMPOSITE STEEL BEAM W/ 11 STUDS. C=1" INDICATES BEAM CAMBER. SEE DETAILS 8/S1.20 AND 9/S1.20.
5. C1, C2.... AS INDICATED ON PLANS INDICATES STEEL COLUMN. SEE SCHEDULE ON SHEET S2.01.
6. BOTTOM OF DECK ELEVATION = 17'-4 1/2", TYPICAL OF SECOND FLOOR FRAMING. VERIFY WITH ARCHITECTURAL.
7. RESERVE CAPACITY FOR SPRINKLER LOADS=1.5 PSF. SPRINKLER SUPPLIER SHALL MULTIPLY TRIBUTARY WIDTH OF SPRINKLER SUPPORT MEMBERS BY 1.5 PSF TO DETERMINE THE ALLOWABLE SPRINKLER LOAD PER LINEAL FOOT. SPRINKLER SUPPORT PLANS AND CALCULATIONS SHALL BE SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
8. "ML", AS INDICATED ON PLAN, INDICATES MASONRY LINTEL PER DETAIL 4/S1.20.
9. CONCRETE THICKNESS OVER METAL DECK MAY BE REDUCED TO ALLOW FOR SLOPED TOPPING OR CONCRETE MAY BE SLOPED. MINIMUM CONCRETE THICKNESS AT BALCONIES IS 2 1/2" OVER THE 3" DECK. COORDINATE WITH ARCHITECTURAL.

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22 APR 2020

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SECOND FLOOR FRAMING PLAN

FLOOR PLAN NOTES:

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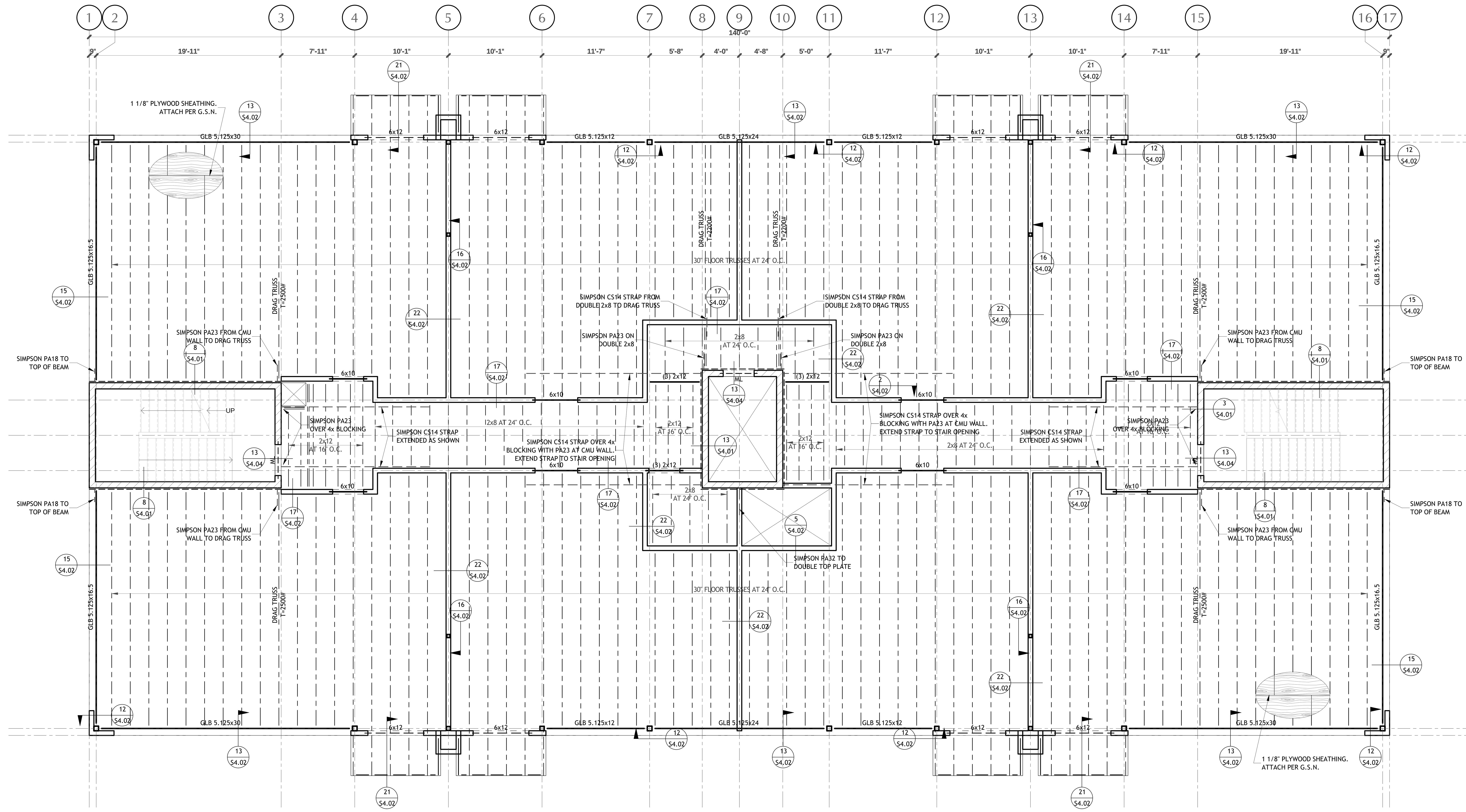
3. INDICATES WOOD STUD WALL. WOOD STUDS ARE TO BE FULL HEIGHT FROM FLOOR BELOW TO PLATE HEIGHT OF FLOOR ABOVE. USE 2x6 AT 16" O.C. TYPICAL UNLESS NOTED OTHERWISE.
4. INDICATES CHANGE IN BOTTOM OF SHEATING ELEVATION. COORDINATE EXACT DIMENSION WITH ARCHITECTURAL DRAWINGS.
5. ALL FLOORS ABOVE THE 2ND FLOOR TO BE 3/4" PLYWOOD OVERLAIN WITH 1 1/2" NON-STRUCTURAL TOPPING. SEE ARCHITECUTURAL FOR TOPPING INFORMATION.



THIRD FLOOR FRAMING PLAN

3/16" = 1'-0"

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THIRD FLOOR FRAMING PLAN

FLOOR PLAN NOTES:

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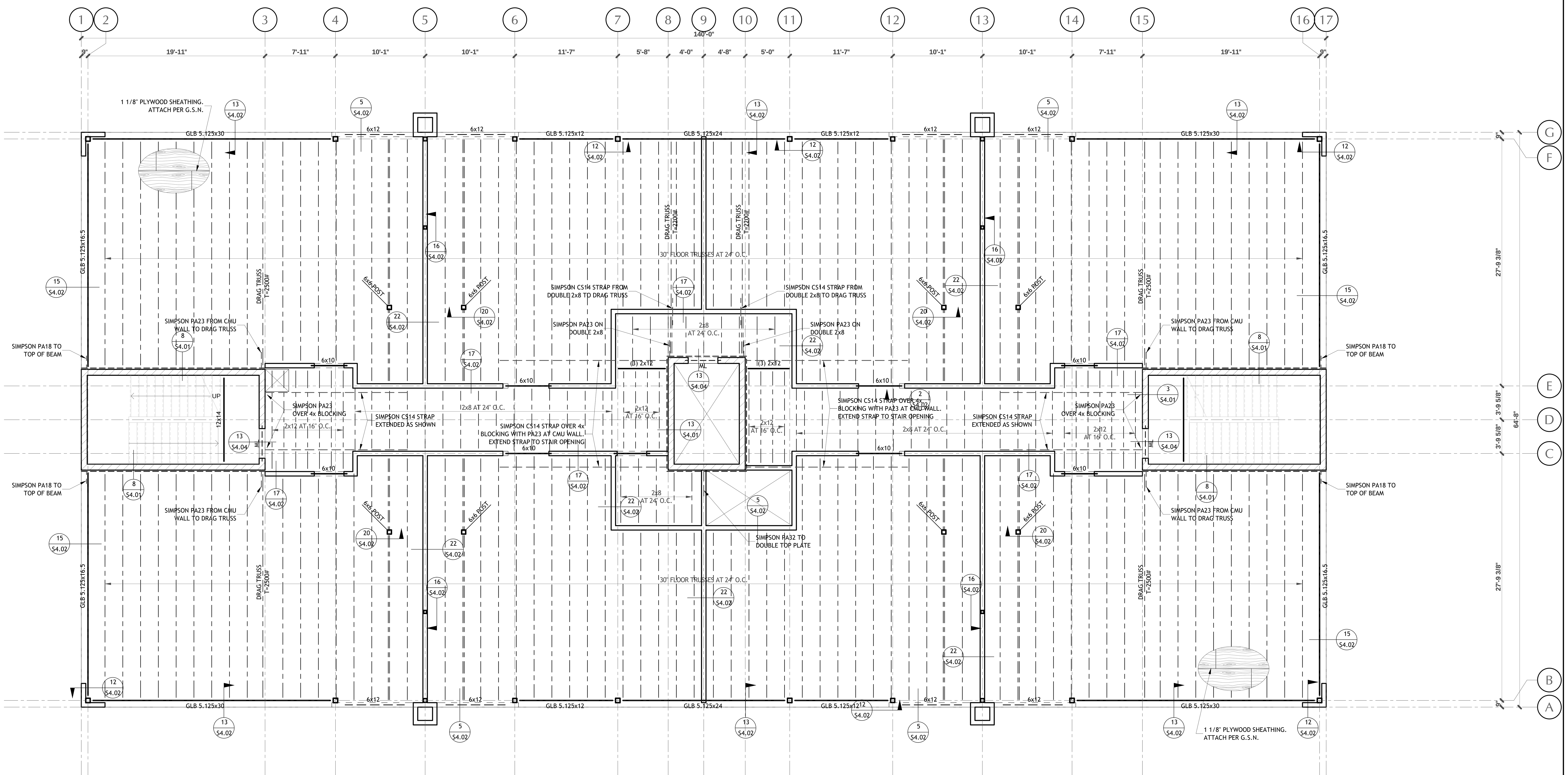

FOURTH FLOOR FRAMING PLAN

3/16" = 1'-0"

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FOURTH FLOOR FRAMING PLAN

FLOOR PLAN NOTES:

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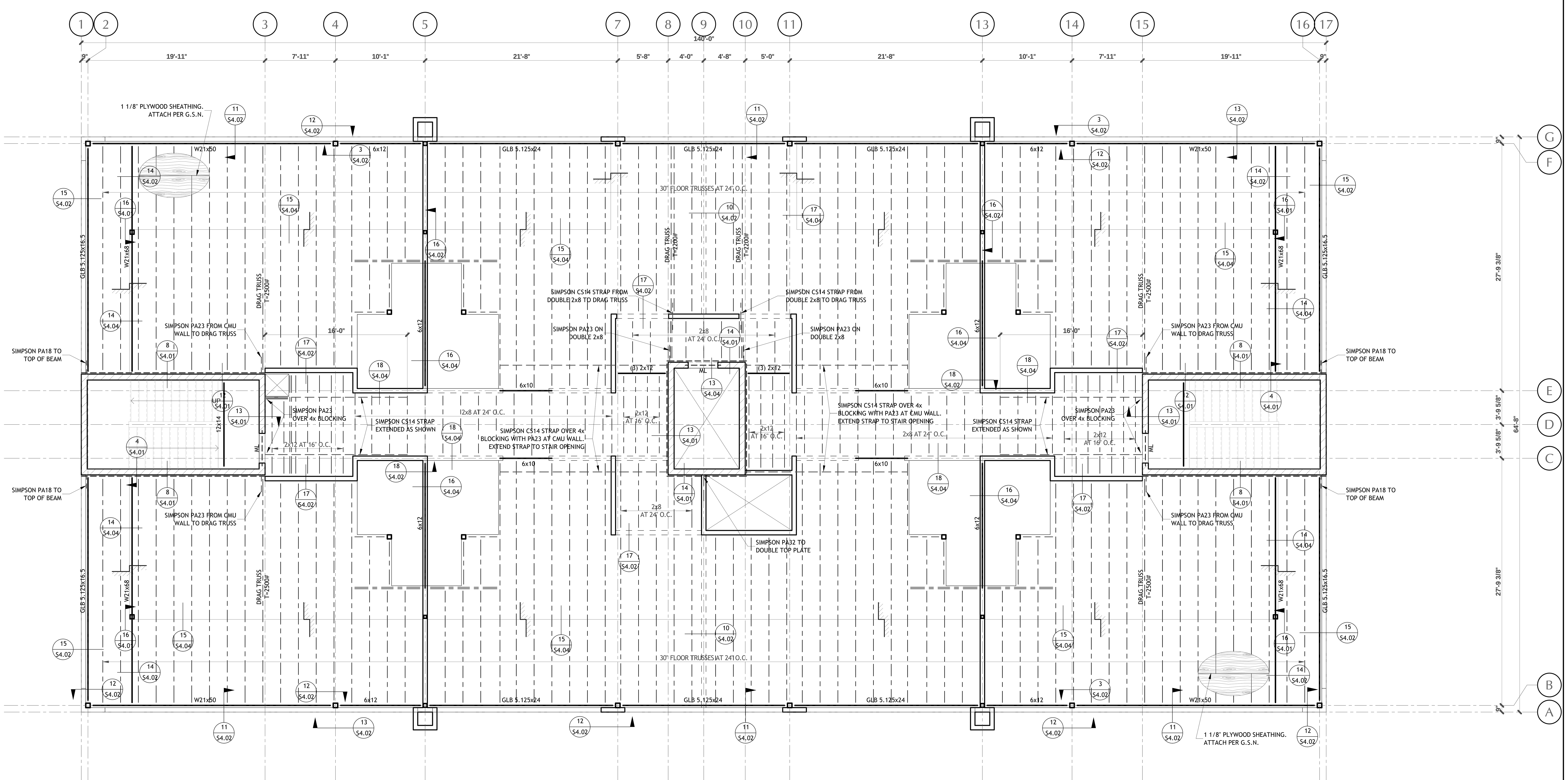
3. INDICATES WOOD STUD WALL. WOOD STUDS ARE TO BE FULL HEIGHT FROM FLOOR BELOW TO PLATE HEIGHT OF FLOOR ABOVE. USE 2x6 AT 16" O.C. TYPICAL UNLESS NOTED OTHERWISE.
4. INDICATES CHANGE IN BOTTOM OF SHEATING ELEVATION. COORDINATE EXACT DIMENSION WITH ARCHITECTURAL DRAWINGS.
5. ALL FLOORS ABOVE THE 2ND FLOOR TO BE 3/4" PLYWOOD OVERLAIN WITH 1 1/2" NON-STRUCTURAL TOPPING. SEE ARCHITECUTURAL FOR TOPPING INFORMATION.



FIFTH FLOOR FRAMING PLAN

3/16" = 1'-0"

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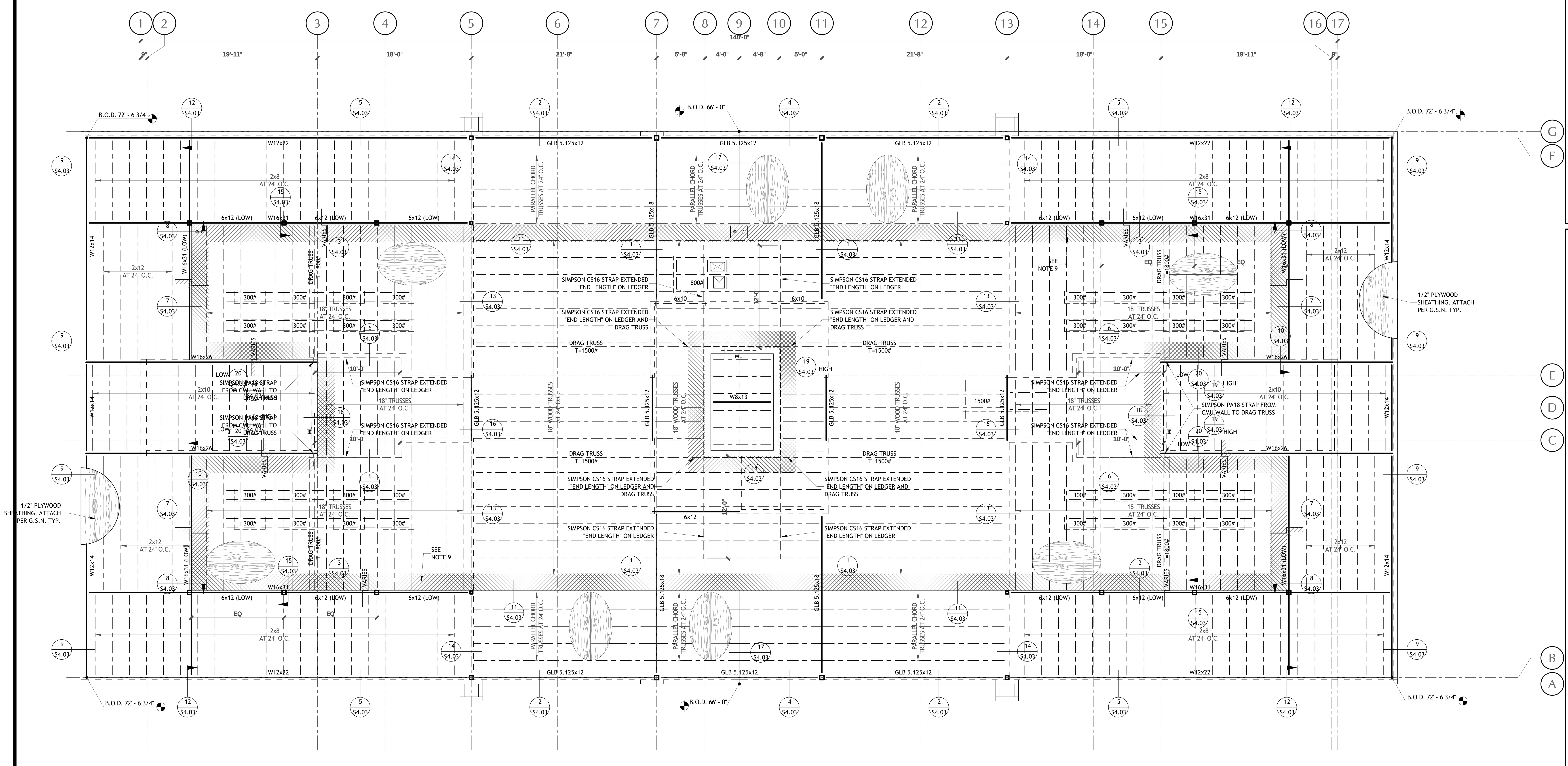
FIFTH FLOOR FRAMING PLAN



ROOF FRAMING PLAN

3/16" = 1'-0"

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NORTH

ROOF PLAN NOTES:

1. VERIFY ANY DIMENSIONS SHOWN WITH ARCHITECTURAL DRAWINGS.

2. MECHANICAL UNITS ARE SHOWN SCHEMATICALLY (DUCT PENETRATIONS, UNIT SIZE, ORIENTATION...ETC.). SPECIFIC UNITS SHALL BE PURCHASED, BASED ON MECHANICAL SPECIFICATIONS, SUBSEQUENT TO SUBMITTAL OF CONSTRUCTION DOCUMENTS. VERIFICATION THAT THE SPECIFIC MECHANICAL UNIT SIZE, WEIGHT AND LOCATION CONFORMS TO THE SCHEMATIC INFORMATION SHOWN IS THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATION OF MECHANICAL UNIT SIZE, WEIGHT AND LOCATION WITH ALL TRADES IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INDICATING MECH'L. UNIT SIZE, WEIGHT, LOCATION AND DUCT PENETRATIONS PRIOR TO SUBMITTAL OF JOISTS/TRUSSES. PROVIDE SUPPORTS AT ALL EDGES OF UNITS AND FRAME AROUND ALL DUCT PENETRATIONS PER TYPICAL DETAILS.

3. FOR OPENING SIZES IN MASONRY AND WOOD STUD WALLS, SEE ARCH'L DRAWINGS.

4. 4200# INDICATES ADDED POINT LOAD ON WOOD TRUSS. TRUSS MANUFACTURER SHALL DESIGN TRUSSES FOR VERTICAL LOAD SHOWN.

5. ALL ROOF OPENINGS MAY NOT BE SHOWN ON THE ROOF FRAMING PLAN. FOR EXACT SIZE, NUMBER AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS. FOR FRAMING AT OPENINGS, SEE TYPICAL DETAILS.

6. B.O.S. 99'-4" INDICATES BOTTOM OF PLYWOOD DECK ELEVATION. FOR OVERALL ROOF SLOPE AND DRAINAGE SCHEME, SEE ARCH'L ROOF PLAN. INTERPOLATE BETWEEN ELEVATIONS GIVEN TO ACHIEVE SLOPE PER ARCH'L ROOF PLAN.

7. ALL ROOF SHEATHING SHALL BE 1/2" PLYWOOD. ALL EXTERIOR WALL SHEATHING SHALL BE 3/8" PLYWOOD. NAIL ROOF PER G.S.N. AND DETAILS. NAIL WALL SHEATHING PER SHEAR WALL SCHEDULE (SEE FOUNDATION PLAN) AND DETAILS. PANEL JOINTS MUST BE STAGGERED. 1/8" GAP SHALL BE PROVIDED AT ALL PLYWOOD PANEL JOINTS.

8. "ML" AS SHOWN ON PLANS INDICATES MASONRY LINTEL. SEE DETAIL 4/S1.20.

9. HATCHED AREA INDICTES OUTLINE OF MECHANICAL WELL ON ROOF. BOTTOM OF SHEATING IN THIS AREA TO BE 11 1/4" ABOVE PLATE HEIGHT ELEVATION.

10. PROVIDE DOUBLE TRUSS AT SIMPSON PA STRAPS.

SEAL

KURT GUIDICE CIVIL/STRUCTURAL Exp. 6/30/21

22 APR 2020

A NEW SHELL BUILDING IMPROVEMENT

31 SOUTH WATER STREET

CITY OF HENDERSON, NV 89015

APN #179-18-611-055

PROJECT NUMBER: 0201909

DATE: 04.17.2020

P. JAMES ARCHITECT

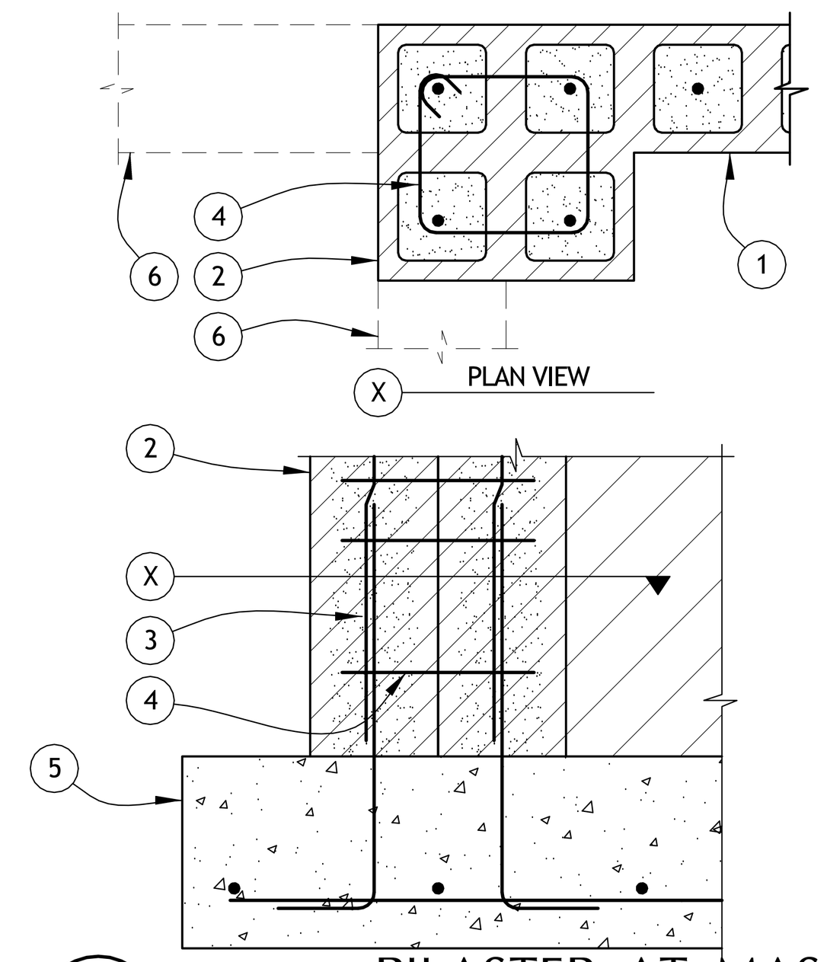
ARCHITECTURE
PLANNING
DESIGN
4629 VICTORIA BEACH WAY
LAS VEGAS, NV 89103
702.683.3277

REV	DESCRIPTION	DATE
	REVISED	

BARKER STRUCTURAL

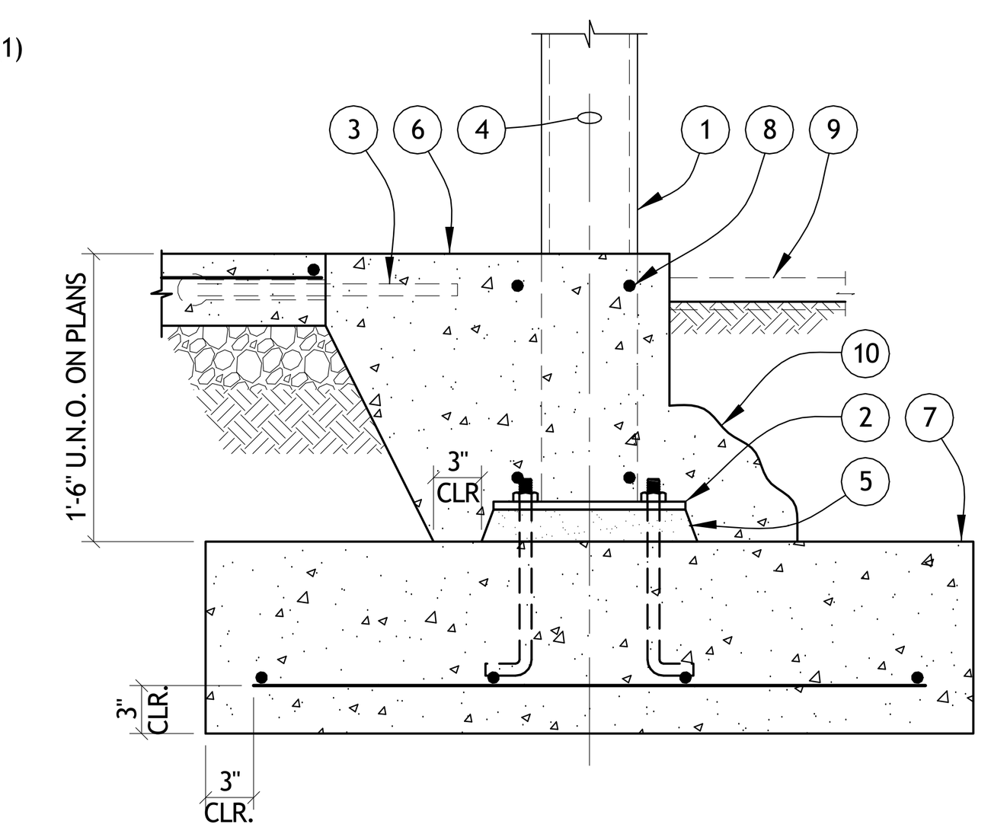
S2.16

ROOF FRAMING PLAN



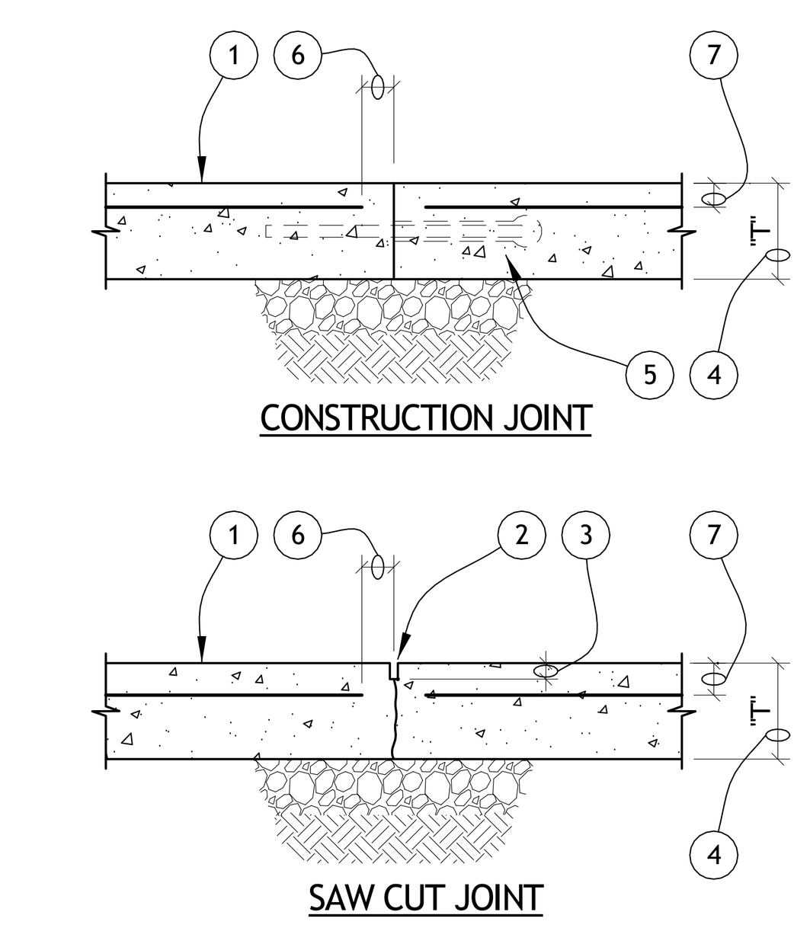
1. MASONRY WALL - SEE DETAIL 2/S301.
2. 16" SQ. MASONRY PILASTER WITH (1) #6 EACH CELL.
3. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING.
4. #2 TIES AT 8" O.C. IN BED JOINTS.
5. CONCRETE FOOTING PER PLANS.
6. WALL CONTINUES AS OCCURS.

11 PILASTER AT MASONRY WALL
218029DS301-11



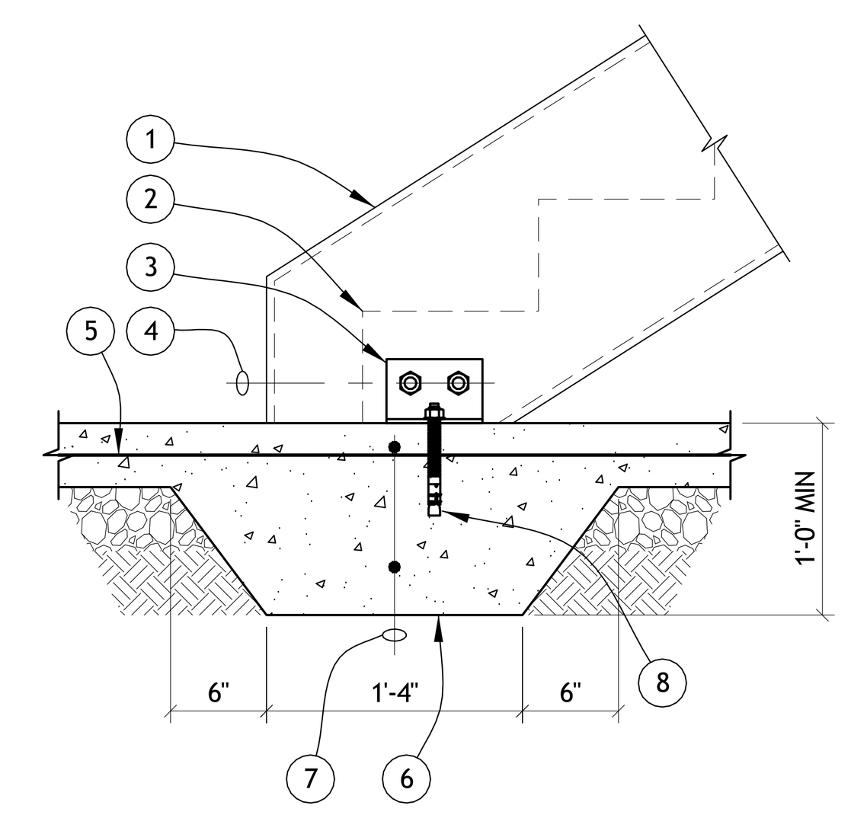
1. STEEL COLUMN. WELD TO BASE PLATE WITH A MINIMUM 3/16" FILLET WELD ALL AROUND.
2. BASE PLATE. FOR SIZE, SEE PLANS AND COLUMN SCHEDULE.
3. SMOOTH DOWELS PER DETAIL XX/SX.XX - 2 MIN. PER SIDE.
4. FOOTING AND COLUMN SYMMETRICAL ABOUT CENTERLINE, U.N.O.
5. 2" DRYPACK.
6. CONCRETE CLOSURE POUR.
7. FOR FOOTING SIZE AND REINFORCING, SEE FOUNDATION PLAN AND FOOTING SCHEDULE.
8. REINFORCING CONTINUOUS FROM TURNDOWN BEYOND.
9. FINISH GRADE AS OCCURS.
10. SLUMP CONCRETE AROUND COLUMN BASE PLATE TO MAINTAIN 3" COVER.

6 STEEL COLUMN FOOTING AT BUILDING EDGE
218029DS301-6



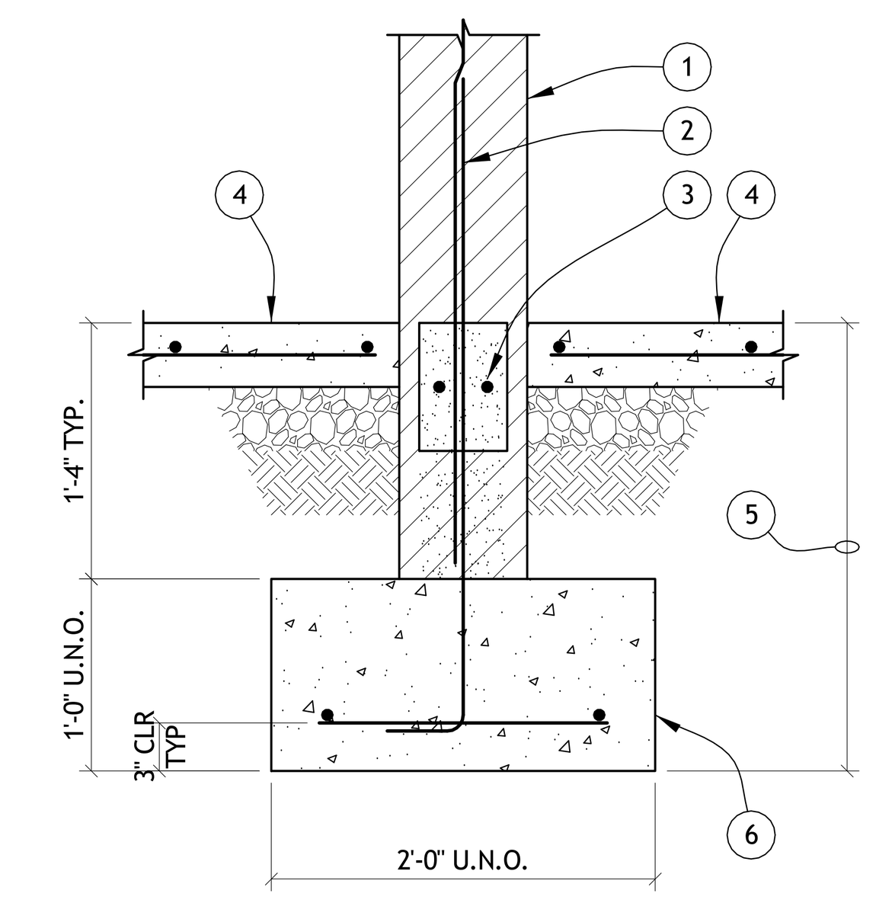
1. CONCRETE SLAB OVER GRAVEL, SAND OR OTHER MATERIAL AS CALLED FOR ON THE FOUNDATION PLAN.
2. SAWCUT SLAB AFTER CONCRETE IS HARD ENOUGH TO AVOID SPALLING AND DAMAGE BUT IN A TIMELY MANNER SO AS TO PREVENT RANDOM CRACKING BUT NOT LATER THAN 12 HOURS AFTER CONCRETE PLACEMENT.
3. 1/4 X "T"=DEPTH OF CUT.
4. "T" SEE PLANS FOR SLAB THICKNESS.
5. 3/4"Ø x 16" LONG SMOOTH DOWELS AT 24" O.C. WITH POLYETHYLENE SLEEVE ON ONE SIDE. SLEEVE MUST HAVE 1/2" LONG GAP AT END OF DOWELS TO ASSURE SLIPPAGE IN BOTH DIRECTIONS. LOCATE DOWELS AT MID-HEIGHT OF SLAB.
6. TERMINATE SLAB REBAR 4" MAX. FROM JOINT.
7. CHAIR TOP REINFORCING "T"/3 FROM TOP OF SLAB BUT NOT LESS THAN 1 1/2".

1 TYPICAL CONTRACTION JOINT IN SLAB
218029DS301-1



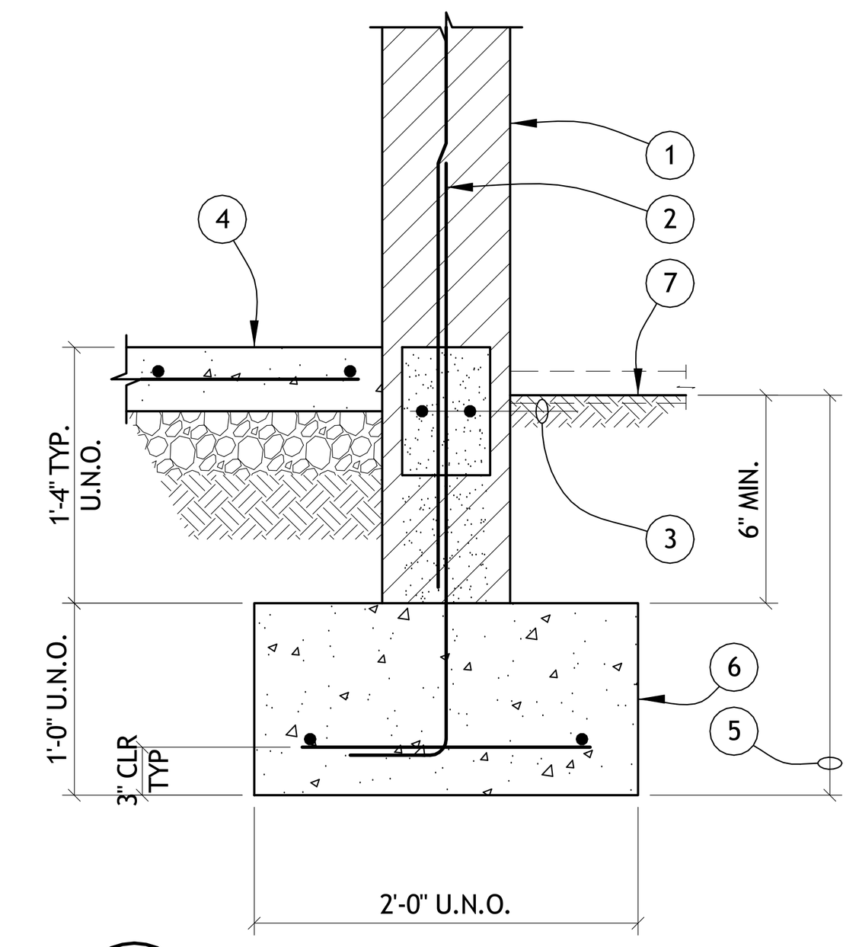
1. STAIR STRINGER.
2. SEE ARCH'L DRAWINGS FOR STAIR CONSTRUCTION.
3. ANGLE - 4x4x5/16x0'-6".
4. (2) 3/4"Ø BOLTS.
5. #4x6'-0" AT 18" O.C. CENTERED OVER FOOTING CENTERLINE.
6. THICKENED SLAB CONTINUOUS BETWEEN STRINGERS. EXTEND MIN. 1'-0" BEYOND EACH END.
7. #4 TOP AND BOTTOM.
8. 3/4"Ø SIMPSON STRONG-BOLT (ICC ESR-1771) EMBEDDED 6 1/4".

12 STRINGER AT SLAB-ON-GRADE
218029DS301-12



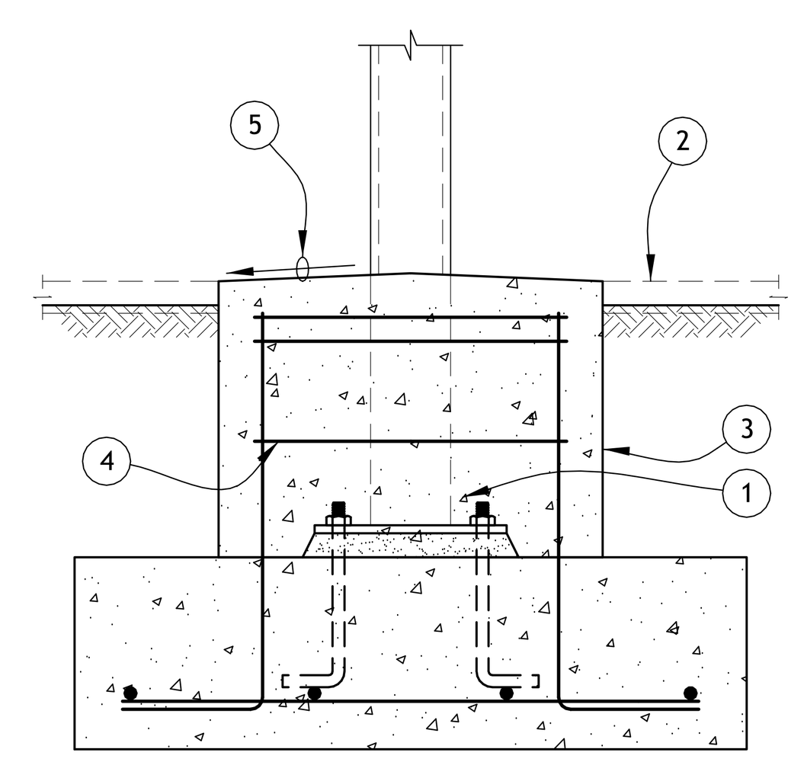
1. MASONRY WALL. FOR THICKNESS AND REINFORCING SEE PLAN AND GSN. SOLID GROUT BELOW GRADE.
2. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING (LAP PER TYPICAL DETAIL).
3. (2) #5 IN 8" DEEP CONTINUOUS BOND BEAM.
4. CONCRETE SLAB ON GRADE. SEE PLAN FOR SIZE AND REINFORCING.
5. FOR FOOTING EMBEDMENT SEE GSN AND SOIL REPORT.
6. CONTINUOUS FOOTING CENTERED UNDER WALL. SEE PLAN AND SCHEDULE FOR SIZE AND REINFORCING.

7 INTERIOR MASONRY WALL FOOTING
218029DS301-7



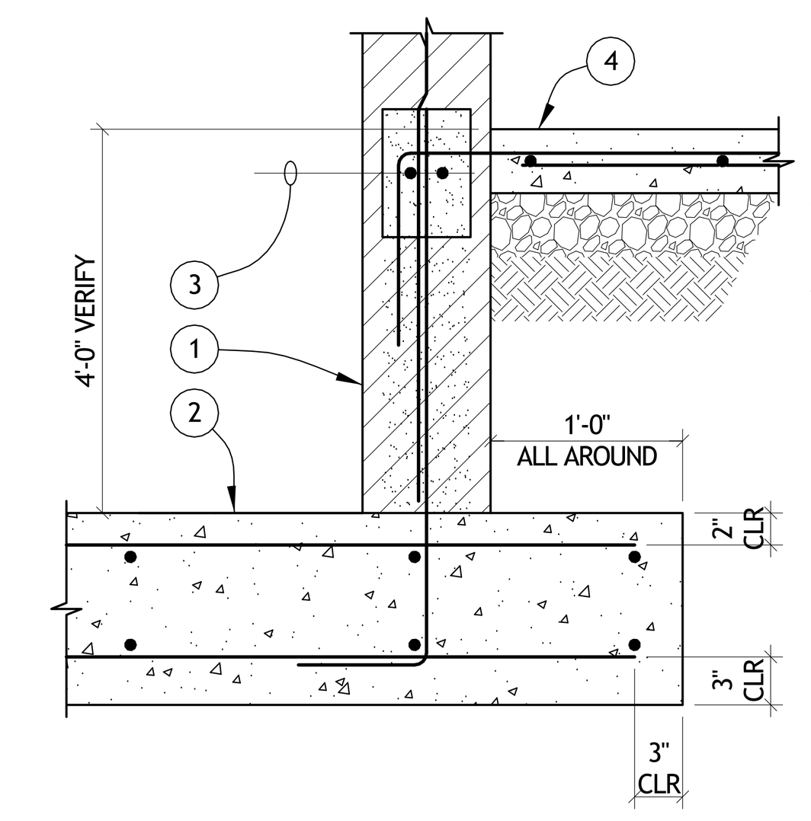
1. MASONRY WALL - SOLID GROUT BELOW GRADE.
2. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING. SEE DETAIL 1/SG1.20 FOR LAP REQUIREMENTS.
3. (2) #5 IN 8" DEEP CONTINUOUS BOND BEAM. SOLID GROUT CELLS BELOW GRADE.
4. CONCRETE SLAB ON GRADE. SEE PLAN FOR SIZE AND REINFORCING.
5. FOR FOOTING EMBEDMENT SEE GSN AND SOIL REPORT.
6. CONTINUOUS FOOTING CENTERED UNDER WALL. SEE PLAN AND SCHEDULE FOR SIZE AND REINFORCING.
7. FINISH GRADE AS OCCURS.

2 EXTERIOR MASONRY WALL FOOTING
218029DS301-2



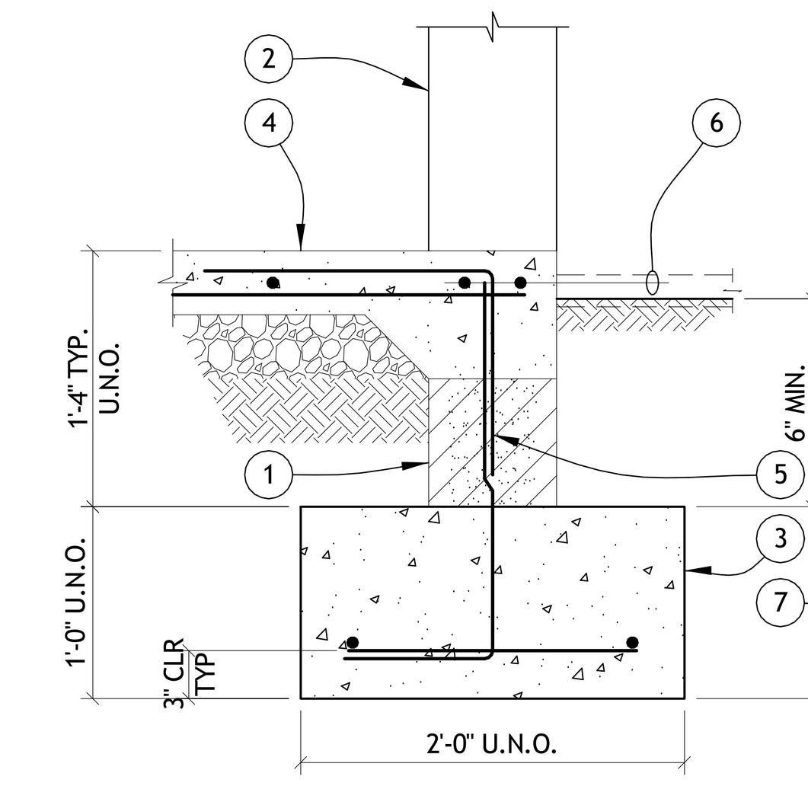
1. STEEL COLUMN AT CONCRETE FOOTING. FOR INFORMATION NOT SHOWN SEE DETAIL 5/S3.01.
2. FINISH GRADE.
3. 18" SQ. CONCRETE PEDESTAL WITH #5 VERT EACH CORNER HOOKED INTO FOOTING.
4. #4 TIES AT 12" O.C. PROVIDE (2) TIES AT 3" O.C. AT TOP OF PEDESTAL.
5. SLOPE TOP OF PEDESTAL AWAY FROM COLUMN.

13 TRELLIS FOOTING AT FOUNDATION
218029DS301-13



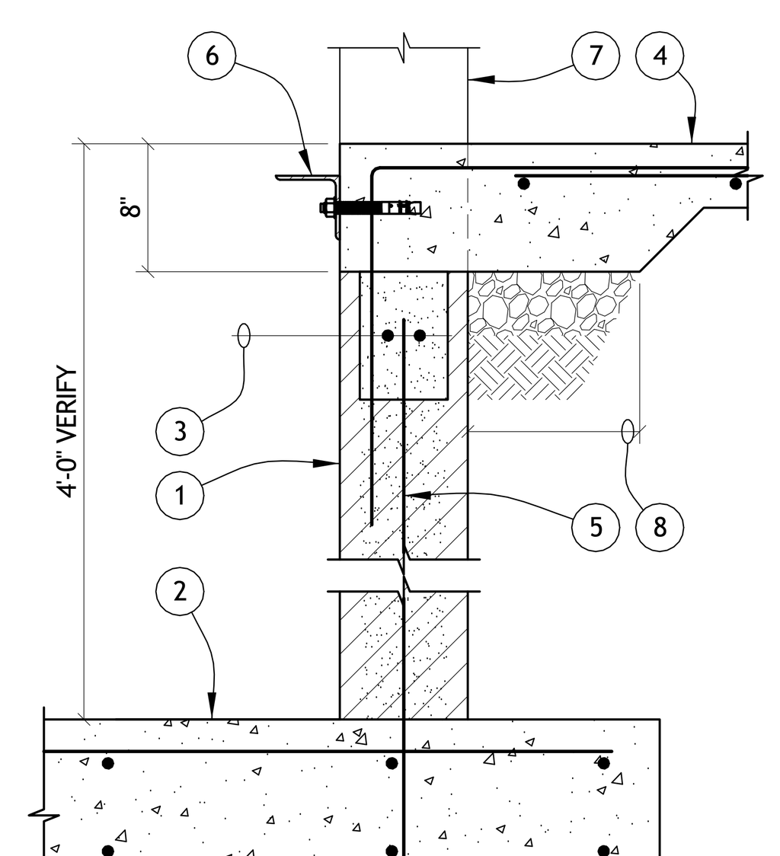
1. 8" MASONRY WALL. SOLID GROUT BELOW GRADE.
2. CONCRETE MATT FOOTING. SEE FOUNDATION PLAN FOR THICKNESS AND REINFORCING.
3. (2) #5 IN 8" DEEP CONTINUOUS BOND BEAM.
4. CONCRETE SLAB ON GRADE.
5. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING (LAP PER TYPICAL DETAIL).

8 MASONRY WALL FOOTING AT ELEVATOR PIT
218029DS301-8



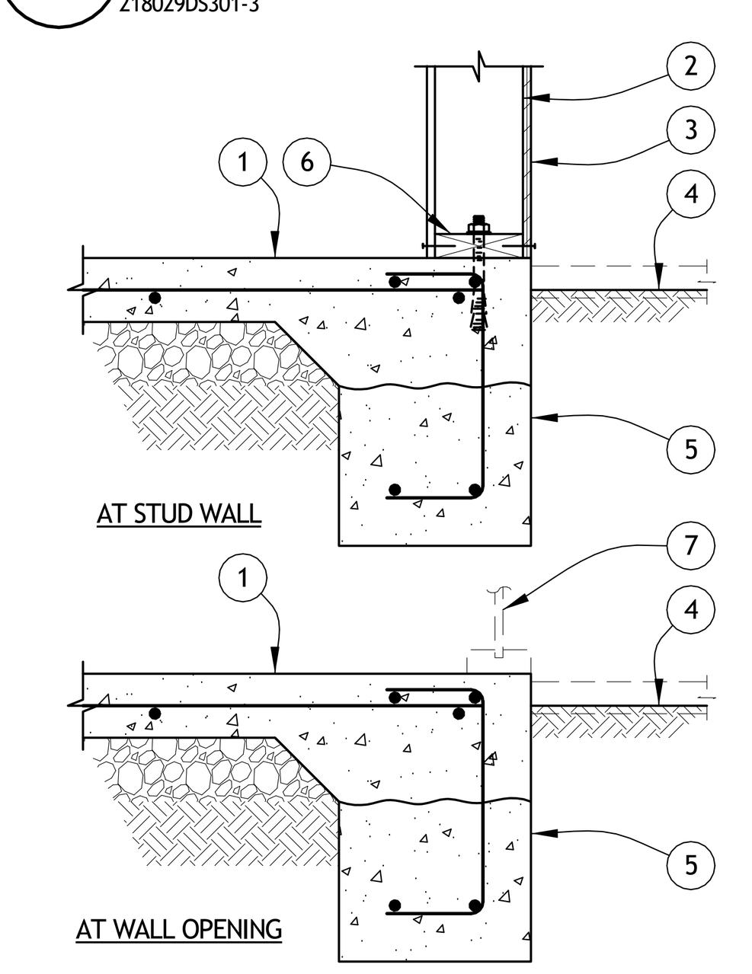
1. SOLID GROUTED MASONRY WALL. FOR THICKNESS AND REINFORCING SEE PLAN AND GSN.
2. MASONRY WALL BEYOND.
3. CONTINUOUS FOOTING CENTERED UNDER WALL. SEE PLAN AND SCHEDULE FOR SIZE AND REINFORCING.
4. CONCRETE SLAB ON GRADE. SEE PLAN FOR SIZE AND REINFORCING.
5. DOWEL TO MATCH AND LAP VERTICAL REINFORCING. (LAP PER TYPICAL DETAIL).
6. (2) #5 CONTINUOUS FROM 8" BOND BEAM.
7. FOR FOOTING EMBEDMENT SEE GSN AND SOIL REPORT.

3 FOOTING AT MASONRY WALL OPENING
218029DS301-3



1. MASONRY WALL. SOLID GROUT BELOW GRADE.
2. CONCRETE MATT FOOTING. FOR REINFORCING SEE FOUNDATION PLAN.
3. (2) #5 IN 8" DEEP CONTINUOUS BOND BEAM.
4. CONCRETE SLAB ON GRADE.
5. DOWELS TO MATCH AND LAP VERTICAL WALL REINFORCING (LAP PER TYPICAL DETAIL).
6. 4x4x1/4 ANGLE WITH 3/4"Ø SIMPSON STRONG-BOLT EXPANSION ANCHORS (PER ICC ESR-1771) EMBEDDED 5" AT 16"O.C. VERIFY ANGLE SIZE AND LENGTH WITH ELEVATOR MANUFACTURER.
7. WALL BEYOND.
8. EXTEND THICKENED SLAB ACROSS BACKFILL ZONE PLUS 12" (4'-0" MIN).

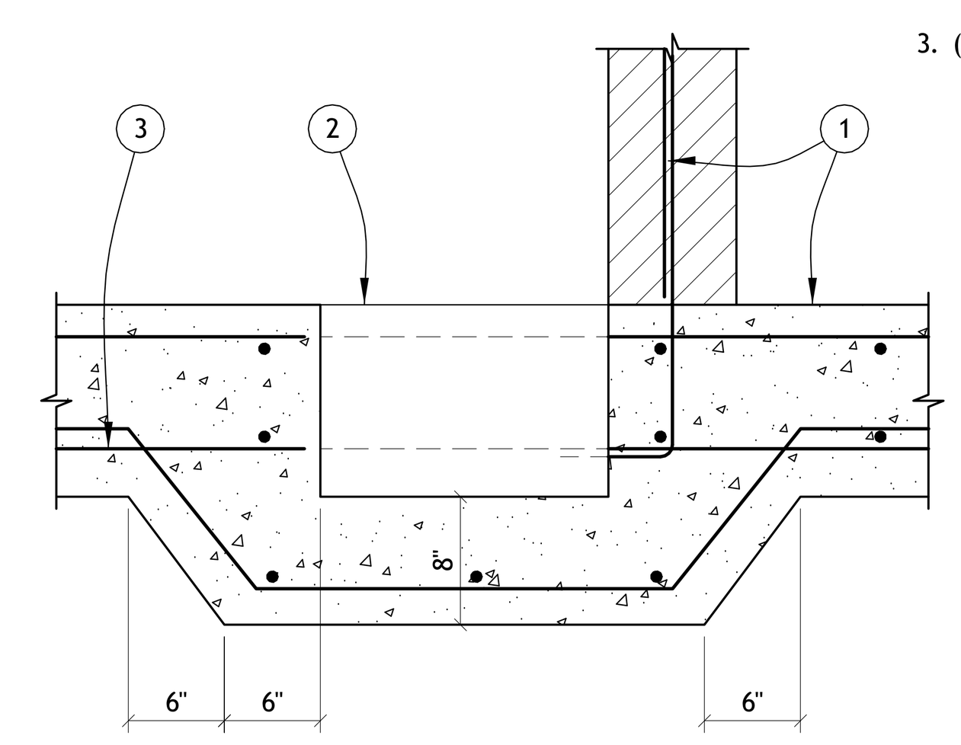
9 MASONRY WALL AT ELEVATOR OPENING
218029DS301-9



1. CONCRETE SLAB ON GRADE.
2. WOOD STUD WALL.
3. PLYWOOD SHEATHING AND NAILING PER SHEAR WALL SCHEDULE AND GSN.
4. FINISH GRADE.
5. SEE DETAIL X/SX.XX FOR FOOTING INFORMATION.
6. PRESSURE TREATED 2x BOTTOM PLATE WITH 5/8"Ø SIMPSON WEDGE-ALL ANCHOR EMBEDDED 4 1/2". MINIMUM 2 1/2" CLEAR TO EDGE OF FOOTING. SEE GSN FOR CORROSION RESISTANT FASTENER REQUIREMENTS.
7. STOREFRONT AS OCCURS, SEE ARCH'L.

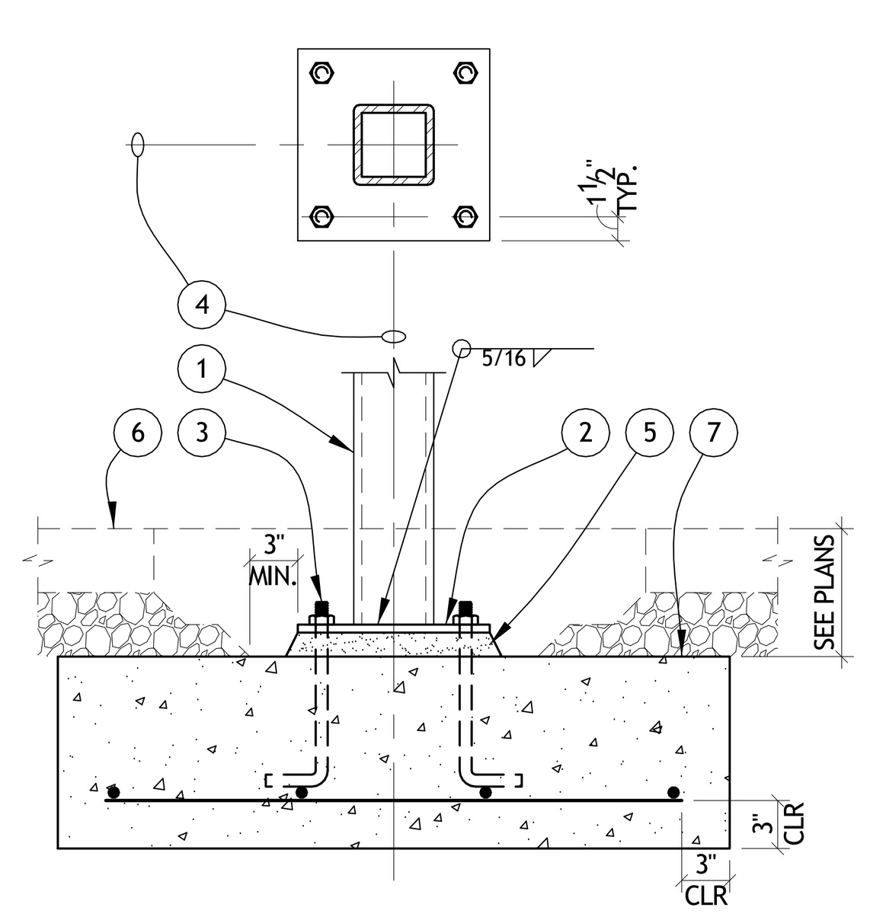
NOTE:
MAY BE USED WHERE ADDITIONAL SILL PLATES ANCHORS ARE REQUIRED OR WHERE ANCHORS WERE MIS-LOCATED.

4 SLAB EDGE
218029DS301-4



1. SEE DETAIL 10/S3.00 FOR STEM WALL AND MAT FOOTING INFORMATION.
2. SUMP PIT.
3. (3) #5 x ___8" IN EACH DIRECTION.

10 SUMP PIT
218029DS301-10



1. STEEL COLUMN.
2. SEE FOUNDATION PLAN AND COLUMN SCHEDULE FOR BASE PLATE SIZE.
3. SEE FOUNDATION PLAN AND COLUMN SCHEDULE FOR NUMBER AND SIZE OF ANCHOR BOLTS. USE (4) 3/4"Ø MINIMUM (GRADE A307) WITH 9" EMBED INTO FOUNDATION. LARGER ANCHOR BOLTS SHALL EXTEND TO 3" CLEAR FROM BOTTOM OF FOOTING.
4. FOOTING AND COLUMN SYMMETRICAL ABOUT CENTERLINE.
5. 2" DRYPACK.
6. FINISH FLOOR.
7. SEE FOUNDATION PLAN AND FOOTING SCHEDULE FOR FOOTING SIZE AND REINFORCING. THICKEN FOOTING IF NECESSARY TO REACH MINIMUM BEARING DEPTH OR ACCEPTABLE BEARING STRATUM PER SOILS REPORT.

5 SHALLOW FOOTING AT STEEL COLUMN
218029DS301-5

BARKER STRUCTURAL

SEAL
KURT GUIDICE
CIVIL/STRUCTURAL
Exp. 6/30/21
No. 21313
22 APR 2020

A NEW SHELL BUILDING IMPROVEMENT
31 SOUTH WATER STREET
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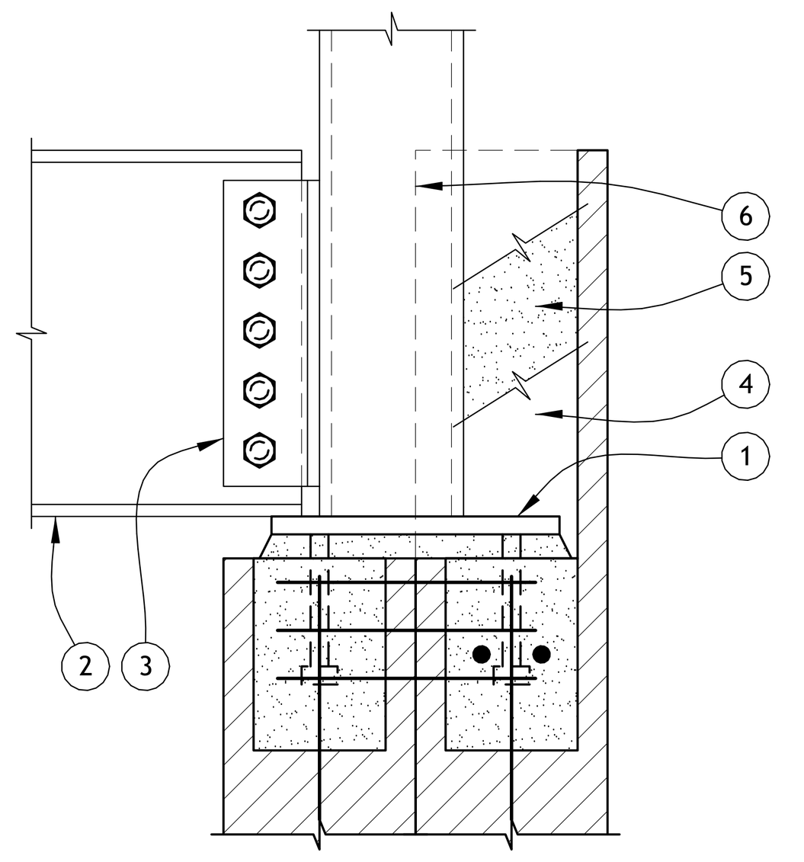
P. JAMES ARCHITECT

ARCHITECTURE
PLANNING
DESIGN
4629 VICTORIA BEACH WAY
LAS VEGAS, NV 89103
702.683.3277

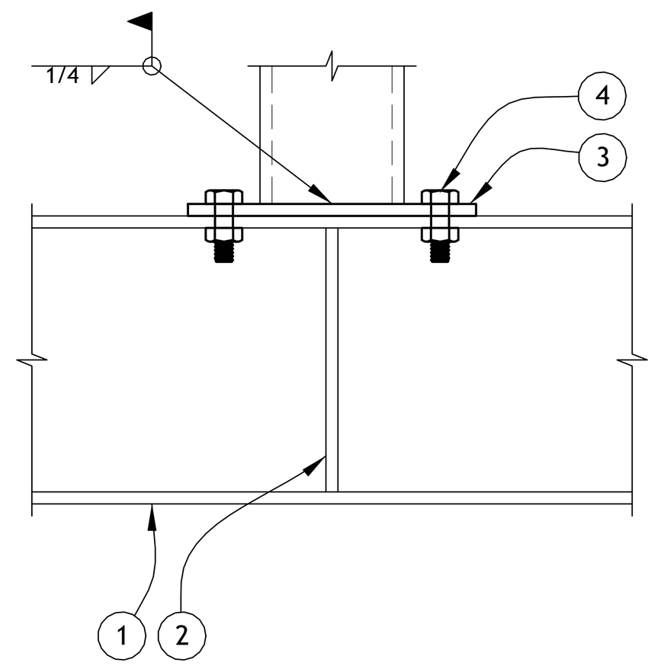
REV	DESCRIPTION	DATE
REVISED		

S3.01
FOUNDATION DETAILS



1. STEEL COLUMN AT MASONRY PILASTER, SEE DETAIL 18/S4.01 FOR INFORMATION NOT SHOWN.
2. STEEL BEAM.
3. BEAM TO COLUMN CONNECTION PER DETAIL 3/S4.01.
4. PROVIDE POCKET IN MASONRY WALL AND EXTEND COLUMN DOWN TO BOTTOM OF BEAM AS SHOWN.
5. GROUT POCKET FULL AFTER BEAM ERECTION.
6. LINE OF MASONRY WALL BEYOND.

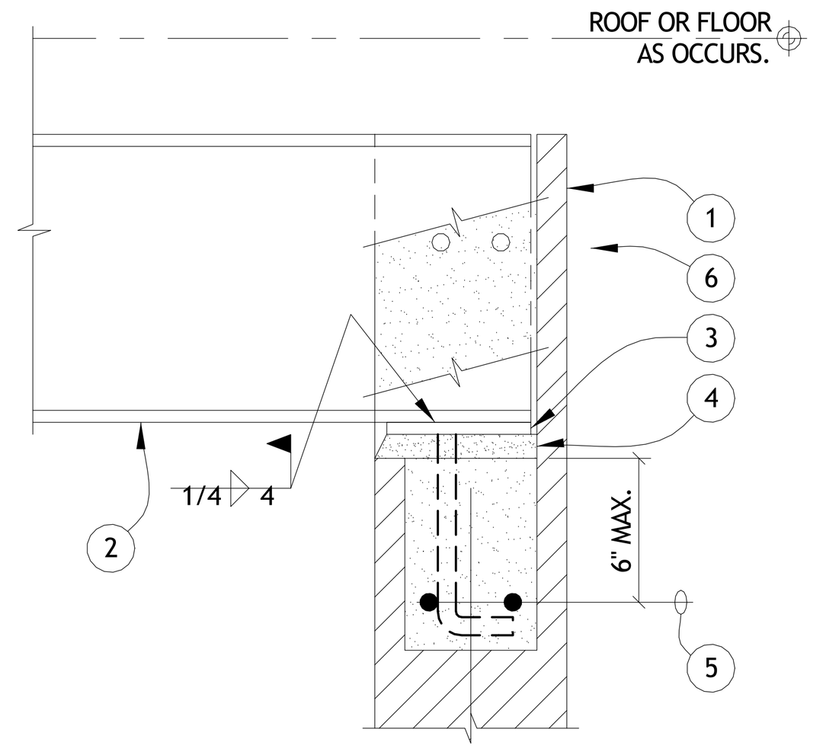
21 STEEL BEAM AT PILASTER
218029DS401-21



1. STEEL BEAM.
2. FULL DEPTH STIFFENER PLATE EACH SIDE OF WEB PER "TYPICAL BEAM STIFFENER" DETAIL. WELD TOP, BOTTOM AND VERTICAL EDGES.
3. 1/2" CAP PLATE.
4. (4) 3/4"Ø BOLTS ON BEAM GAGE.

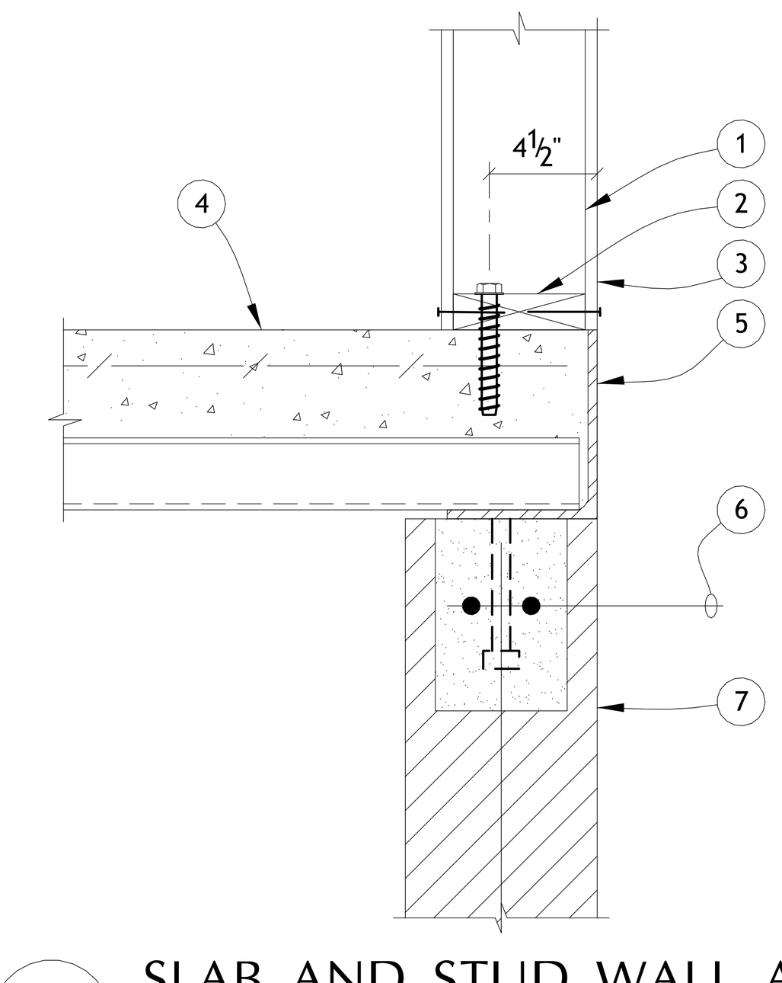
NOTE:
IF OTHER BEAMS FRAME IN AT COLUMN, PROVIDE SHEAR PLATES IN LIEU OF STIFFENERS. CONNECT PER DETAIL 2/S4.01. (SHIFT STIFFENER PLATE SLIGHTLY OFF CENTER AS REQ'D).

16 BEAM AT COLUMN
218029DS401-16



1. MASONRY WALL. POCKET WALL AT BEAM BEARING. FORM INSIDE FACE AND GROUT SOLID AFTER BEAM IS ERECTED.
2. STEEL BEAM.
3. BEARING PLATE. 3/4x6x1'-4" WITH (2) 3/4"Ø ANCHORS AT 8" O.C. (AT 12A/SS404, 3/4x10x1'-4" WITH (2) 3/4"Ø ANCHORS).
4. 1" DRYPACK.
5. (2) #5x6'-0" IN 8" DEEP BOND BEAM CENTERED AT STEEL BEAM.
6. FOR INFORMATION NOT NOTED SEE DETAIL 8/SS404.

11 STEEL BEAM AT MASONRY WALL
218029DS401-11



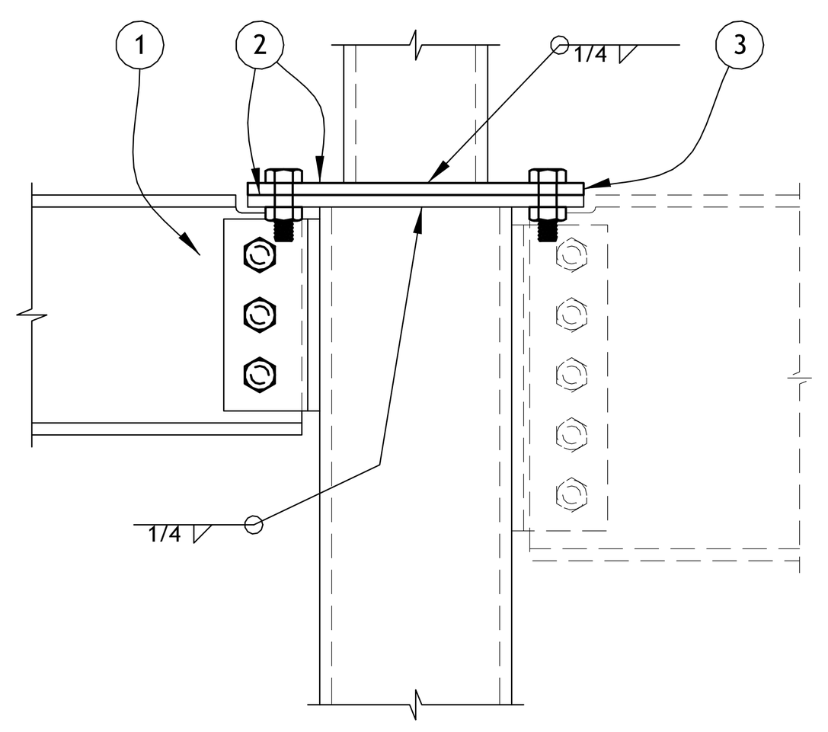
1. WOOD STUD WALL.
2. 2x WOOD PLATE W/ 5/8"Øx5" SIMPSON TITEN HD SCREW ANCHORS AT 48"O.C. INSTALLED PER ESR-2713.
3. SHEATHING PER ARCH'L.
4. CONCRETE OVER METAL DECK.
5. 1/4" CONTINUOUS BENT PLATE WITH 6" HORIZONTAL LEG AND 3/4"x6" HEADED STUDS AT 24" O.C.
6. (2) #5 IN 8" DEEP CONTINOUS BOND BEAM.
7. MASONRY WALL.

6 SLAB AND STUD WALL AT MASONRY WALL
218029DS401-6

NOMINAL BEAM DEPTH "D"	NUMBER OF 1"□ ASTM, A325-N
UP TO 7"	2
7" TO 10"	2
12" TO 14"	3
16"	4
18"	5
21"	6
24" TO 27"	7
30"	8
33"	9
36"	10

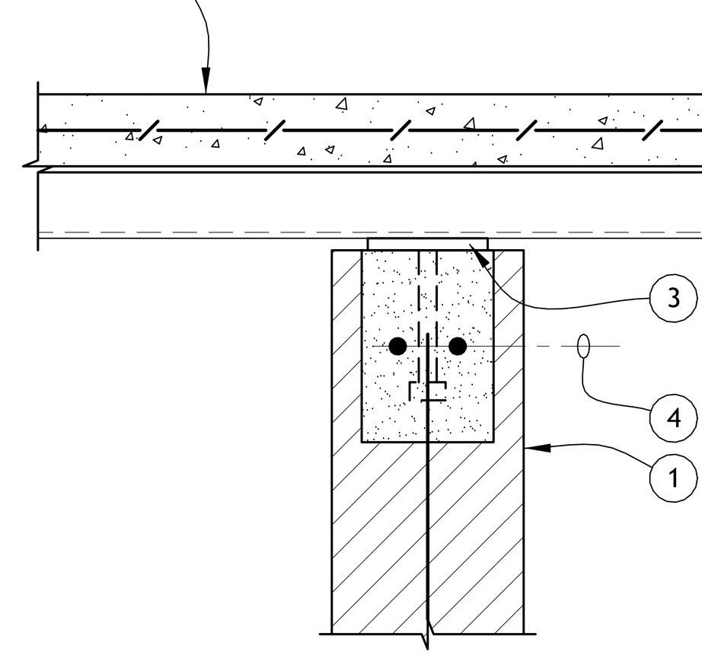
1. THE TYPICAL STEEL BEAM TO STEEL COLUMN OR STEEL BEAM TO STEEL BEAM CONNECTION CONSISTS OF 3/8" SINGLE SHEAR PLATES WITH 1"Ø A325-N BOLTS. USE 5/8" SHEAR PLATES WHERE "D" ≥ 27".
2. ALL BOLTS SHALL BE INSTALLED USING STANDARD ROUND HOLES PER THE LATEST AISC SPECIFICATIONS.
3. MAINTAIN MINIMUM BOLT SPACING AND EDGE DISTANCES PER AISC SPECIFICATIONS J3.7 AND J3.9.

1 BOLT SCHEDULE - NON MOMENT CONNECTION
218029DS401-1



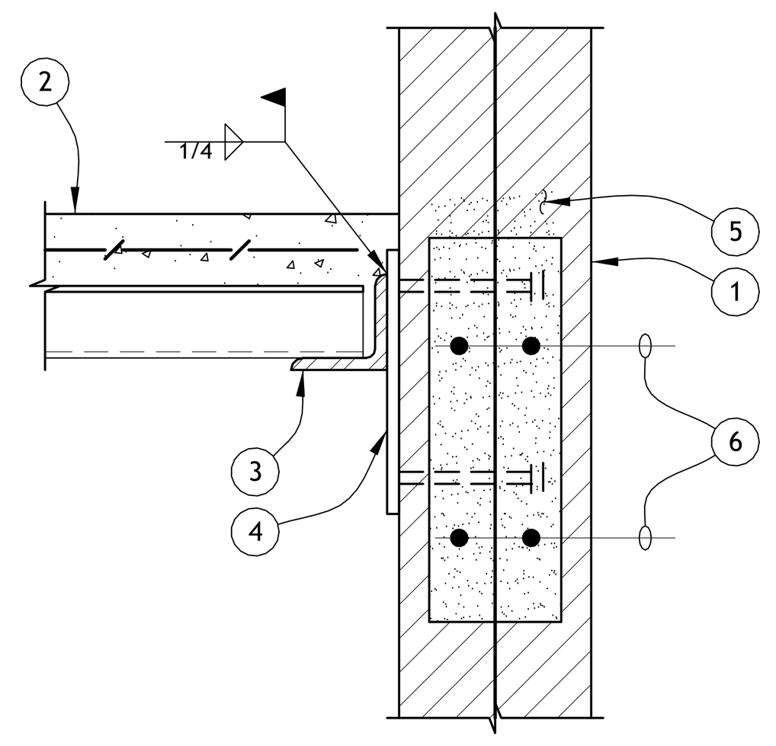
1. STEEL BEAM AT STEEL COLUMN, SEE DETAIL 3/S4.01 FOR INFORMATION NOT SHOWN.
2. 3/4"x9"x1'-2" CAP PLATE AND BASE PLATE WITH (2) 3/4" DIA. A325 BOLTS AT 5" O.C. EACH SIDE.
3. COPE TOP FLANGE OF BEAM AS REQUIRE FOR CONNECTION.

22 STEEL BEAM AT STEEL COLUMN
218029DS401-22



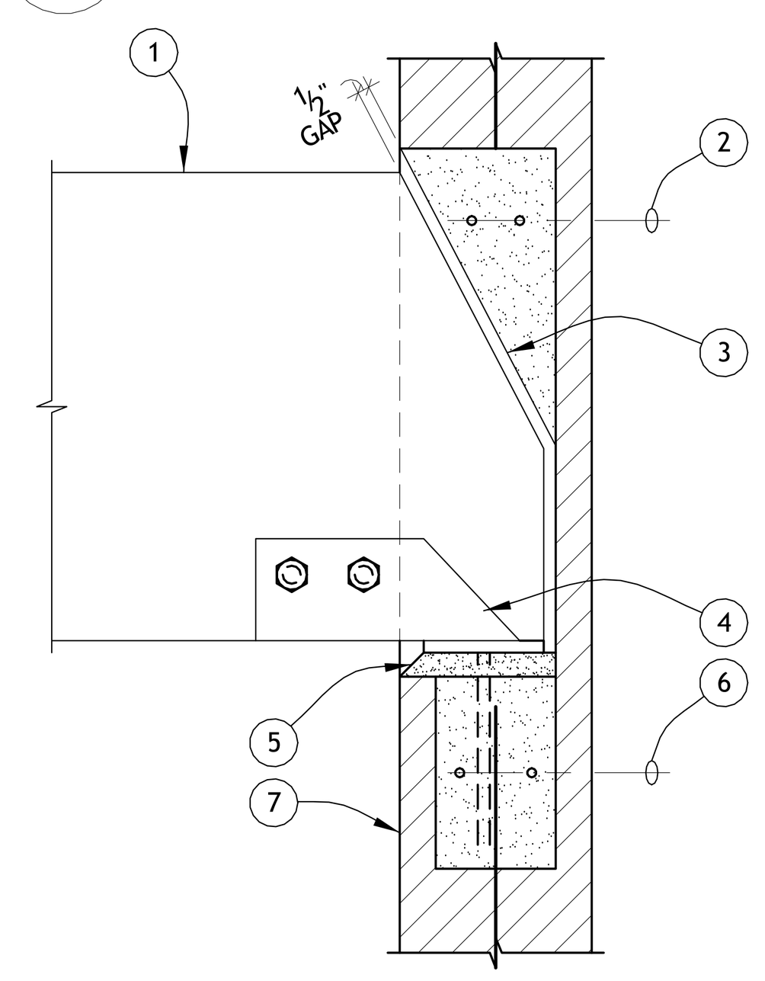
1. MASONRY WALL.
2. CONCRETE OVER METAL DECK.
3. 1/4"x5" WIDE CONTINUOUS STEEL PLATE WITH 3/4"Ø x 6" LONG HEADED STUDS AT 24" O.C.
4. (2) #5 IN 8" DEEP BOND BEAM. EXTEND 2'-0" MIN. PAST JAMB (AROUND CORNER IF NECESSARY).

17 FLOOR SLAB AT ELEVATOR OPENING
218029DS401-17



1. MASONRY WALL.
2. CONCRETE OVER METAL DECK.
3. 4x4x3/8 CONTINUOUS LEDGER ANGLE.
4. 3/8x4x0'-11" WELD PLATES AT 24" O.C. WITH (2) 3/4"Øx6" HEADED STUDS 8" O.C. TOP OF PLATE SHALL BE 1 1/2" BELOW TOP OF FLOOR SLAB.
5. GROUT WALL SOLID WITHIN 8" ANCHOR BOLTS.
6. (4) #5 IN 16" DEEP CONTINUOUS BOND BEAM.

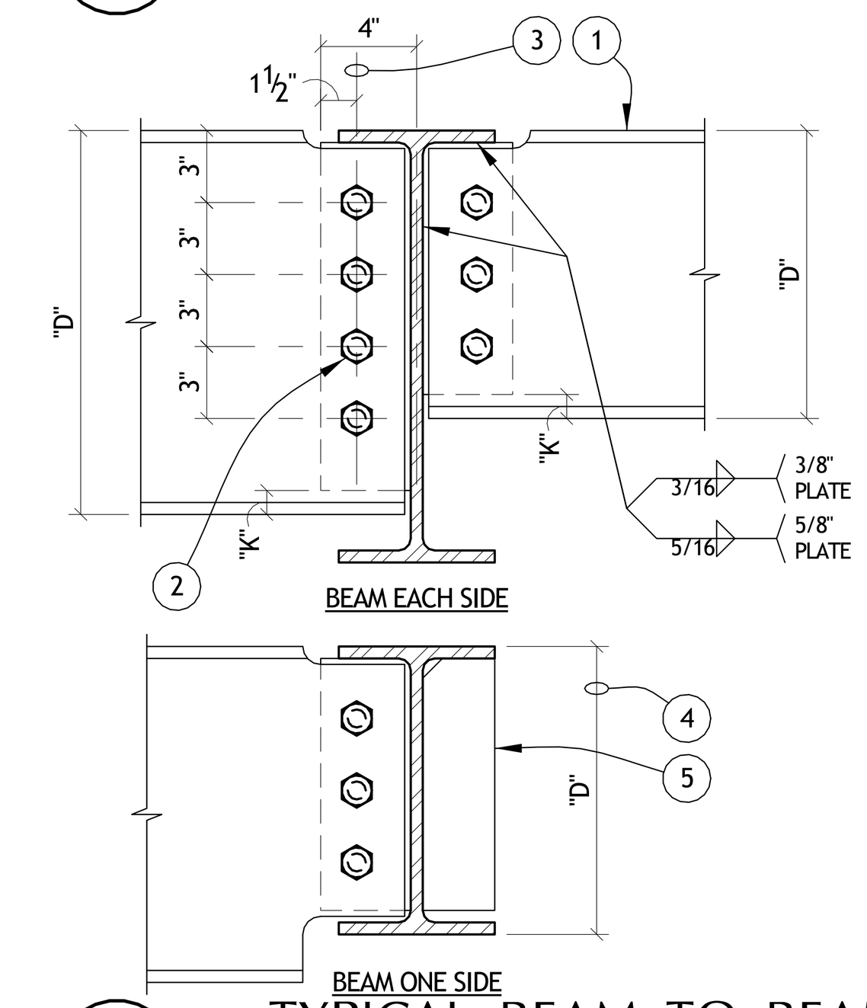
12 FLOOR DECK AT MASONRY WALL
218029DS401-12



1. WOOD BEAM.
2. BOND BEAM REINFORCING FROM BEYOND.
3. NOTCH BEAM BUT NOT BEYOND FACE OF WALL.
4. SIMPSON HGLBB BEAM SEAT.
5. 1" DRYPACK.
6. (2) #5x4'-0" BARS IN 8" DEEPx4'-8" LONG BOND BEAM.
7. MASONRY WALL.

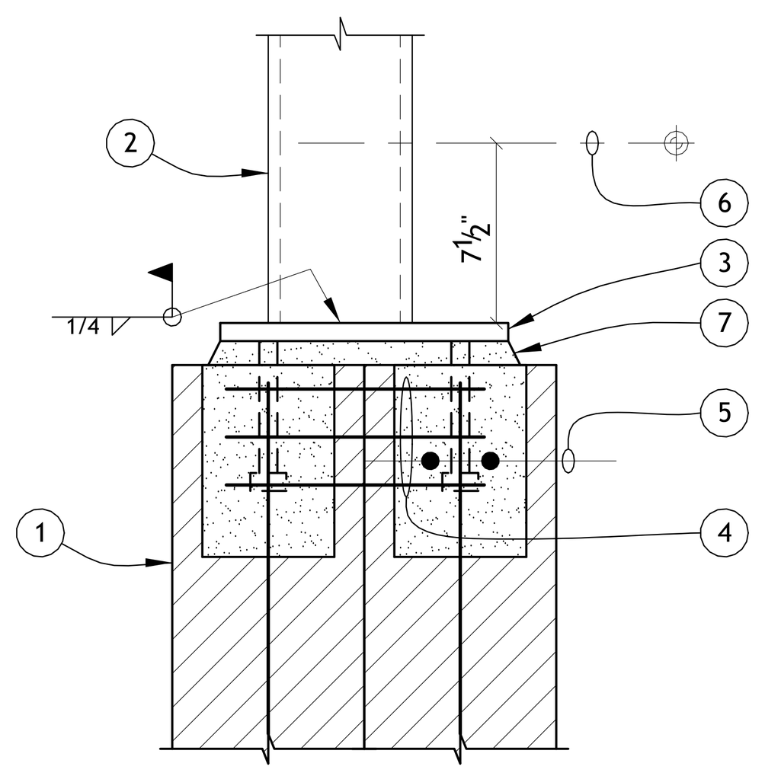
NOTE
CONTRACTOR TO COORDINATE ERECTION SEQUENCE IF POCKET OCCURS AT EACH END OF BEAM (PLACE MASONRY ABOVE POCKET AFTER BEAM IS INSTALLED).

7 WOOD BEAM AT MASONRY WALL
218029DS401-7



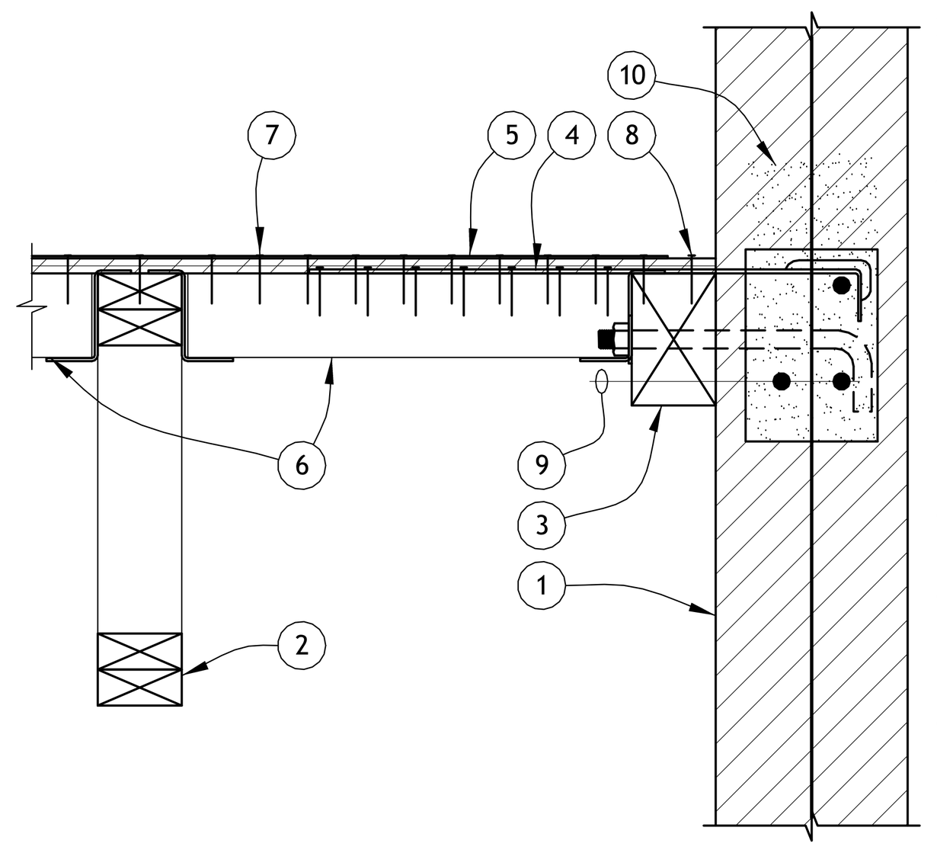
1. STEEL BEAM.
2. 3/8" SHEAR PLATE WHERE "D" < 27", USE 5/8" SHEAR PLATE WHERE "D" ≥ 27".
3. BOLTS. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE BOLT SCHEDULE, DETAIL 1/SS404. "D" REFERS TO NOMINAL BEAM DEPTH IN BOLT SCHEDULE.
4. BEAM DEPTH (LESSER OF 2 BEAM DEPTHS WHERE APPLICABLE).
5. 3/8" STIFFENER PLATE ON OPPOSITE SIDE OF ONE SIDED CONNECTIONS.

2 TYPICAL BEAM TO BEAM CONNECTION
218029DS401-2



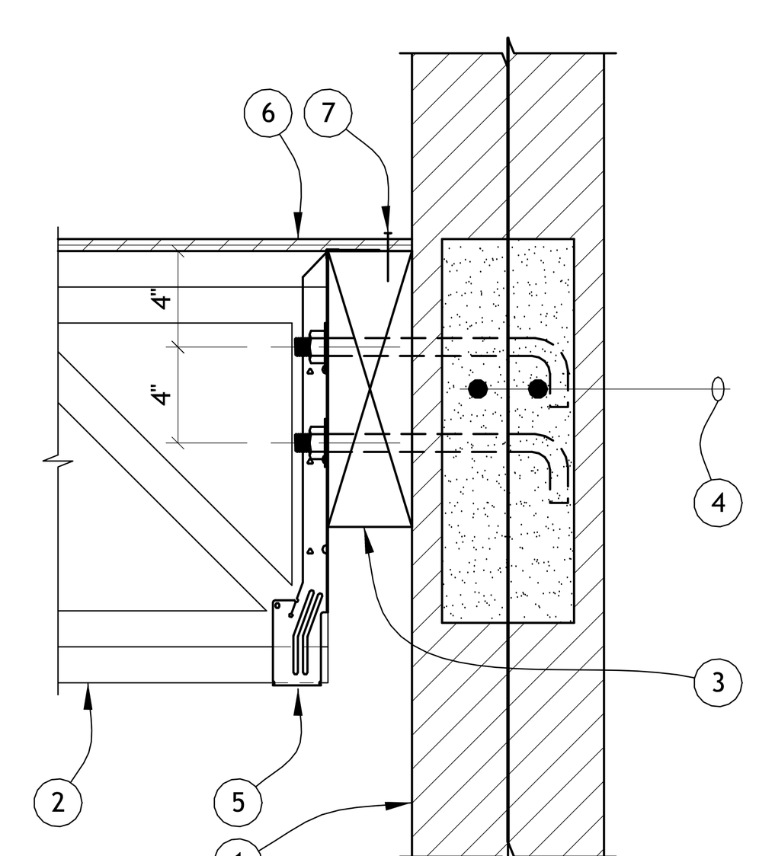
1. MASONRY PILASTER.
2. STEEL COLUMN PER PLANS.
3. 3/4"x12" SQUARE EMBED PLATE WITH (4) 3/4"x10" HEADED STUDS AT 8" O.C.
4. (3) #3 TIES AT 2" O.C. AT TOP OF PILASTER.
5. (2) #5 IN 8" DEEP BOND BEAM, SEE DETAIL 6/S4.01 FOR MORE INFORMATION.
6. LINE OF TOP OF SLAB.
7. 1" +/- DRYPACK.

18 STEEL COLUMN AT PILASTER
218029DS401-18



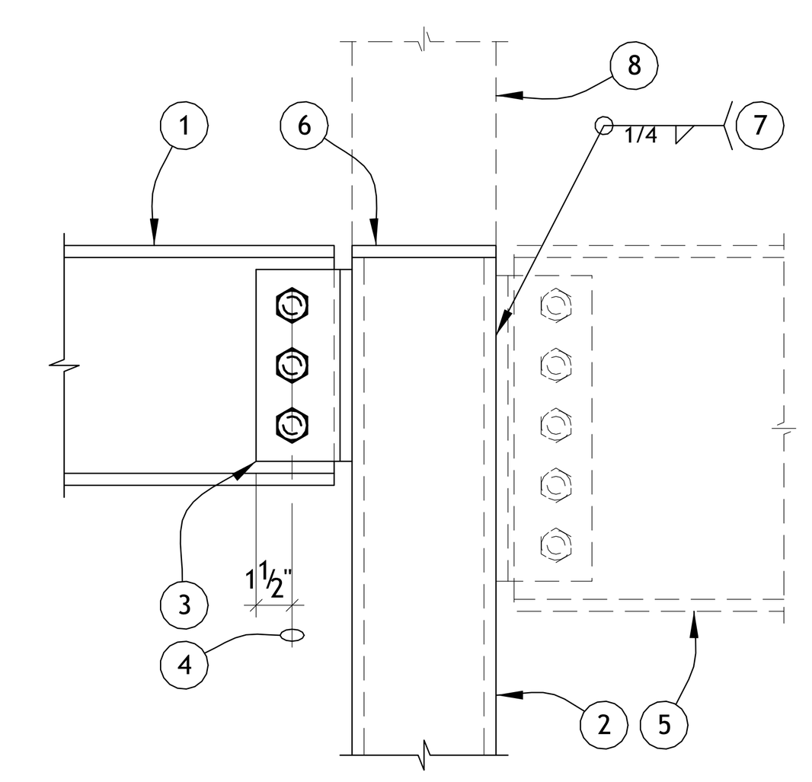
1. MASONRY WALL.
2. WOOD TRUSS.
3. 4x6 LEDGER WITH 3/4"Ø ANCHOR BOLTS AT 32" O.C.
4. SIMPSON PA23 PURLIN ANCHORS AT 8'-0" O.C.
5. SIMPSON CS16 STRAP ALIGNED NEXT TO PA23 STRAPS WITH (12) 10d INTO 1st BLOCK AND WOOD LEDGER AND 10d AT 4 1/8" O.C. BEYOND END OF PA23 STRAP. EXTEND STRAP AND BLOCKING TO 5th TRUSS FROM MASONRY WALL OR 10'-0" WHICHEVER IS GREATER.
6. 4x6 FLAT BLOCKING AT STRAPS WITH SIMPSON "Z" CLIP HANGERS EACH END.
7. 8d AT 4" O.C. TO BLOCKING.
8. EDGE NAILING.
9. (2) #5 IN 8" DEEP CONT. BOND BEAM.
10. GROUT 4" MIN. ABOVE AND EACH SIDE OF ANCHOR.

13 WOOD LEDGER TO MASONRY WALL
218029DS401-13



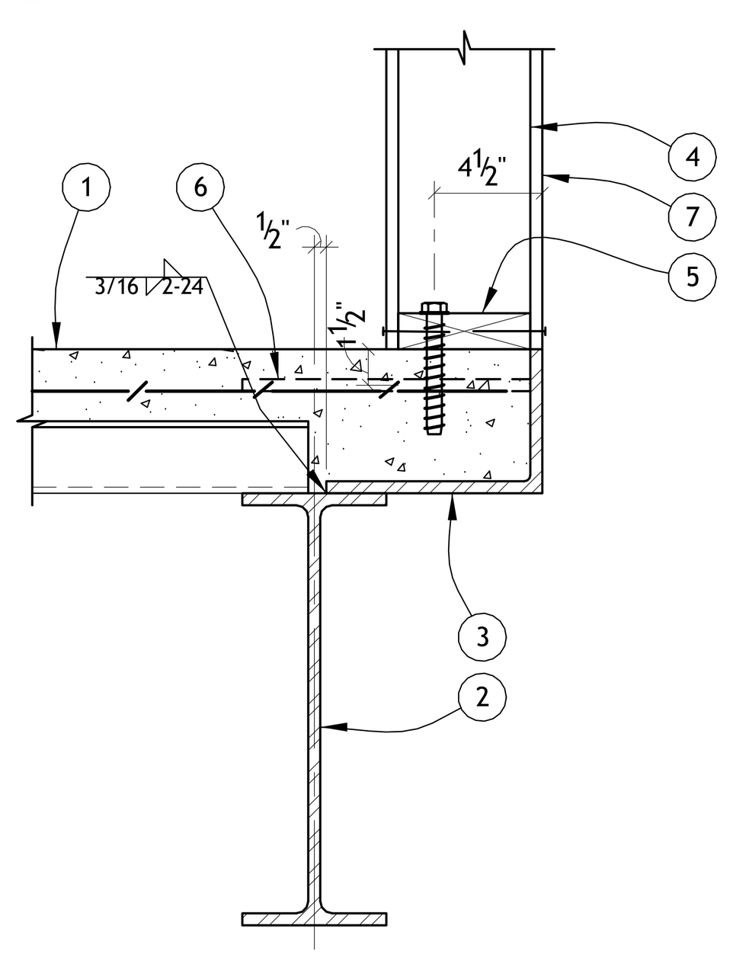
1. MASONRY WALL.
2. WOOD TRUSS.
3. 4x12 LEDGER WITH 3/4"Ø ANCHOR BOLTS AT 8" O.C. STAGGERED.
4. (2) #5 IN 16" DEEP CONTINUOUS BOND BEAM.
5. HANGER BY TRUSS MANUFACTURER. (MINIMUM CAPACITY = XXXX LBS.).
6. PLYWOOD ROOF SHEATHING.
7. EDGE NAILING PER PLAN AND GSN.

8 WOOD TRUSS AT MASONRY WALL
218029DS401-8



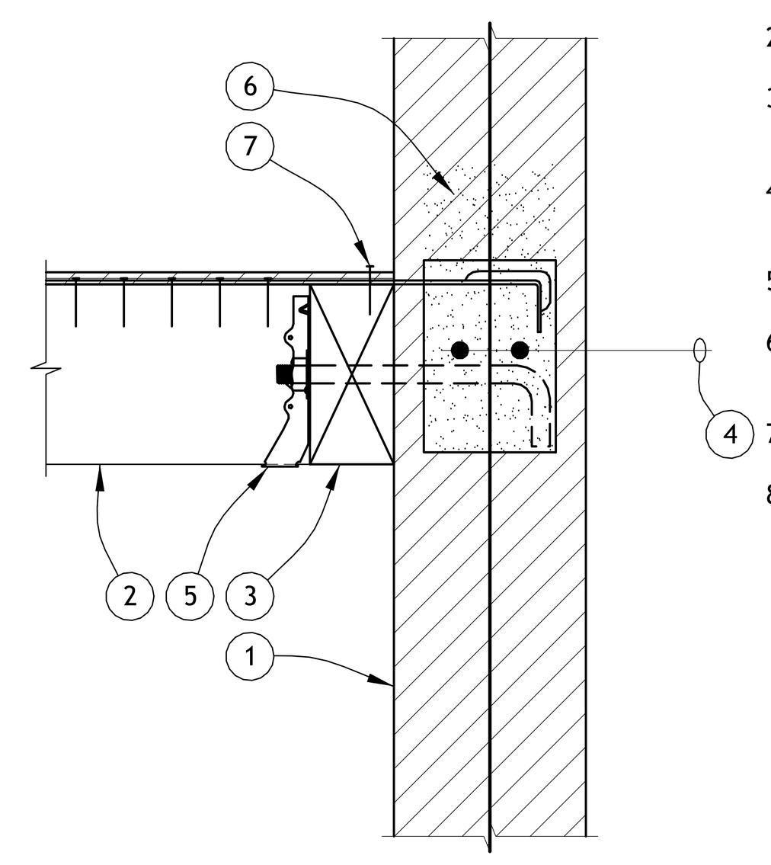
1. STEEL BEAM.
2. STEEL COLUMN.
3. IF "D" <15" - WT 4x7.5
IF "D" >15" - WT 4x20
4. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE DETAIL 1/SS404.
5. BEAM AND CONNECTION ON EACH SIDE WHERE OCCURS.
6. 3/16" COLUMN CAP.
7. FLARED BEVEL WELD WHERE OCCURS.
8. COLUMN CONTINUES AS OCCURS.

3 STEEL BEAM AT STEEL COLUMN
218029DS401-3



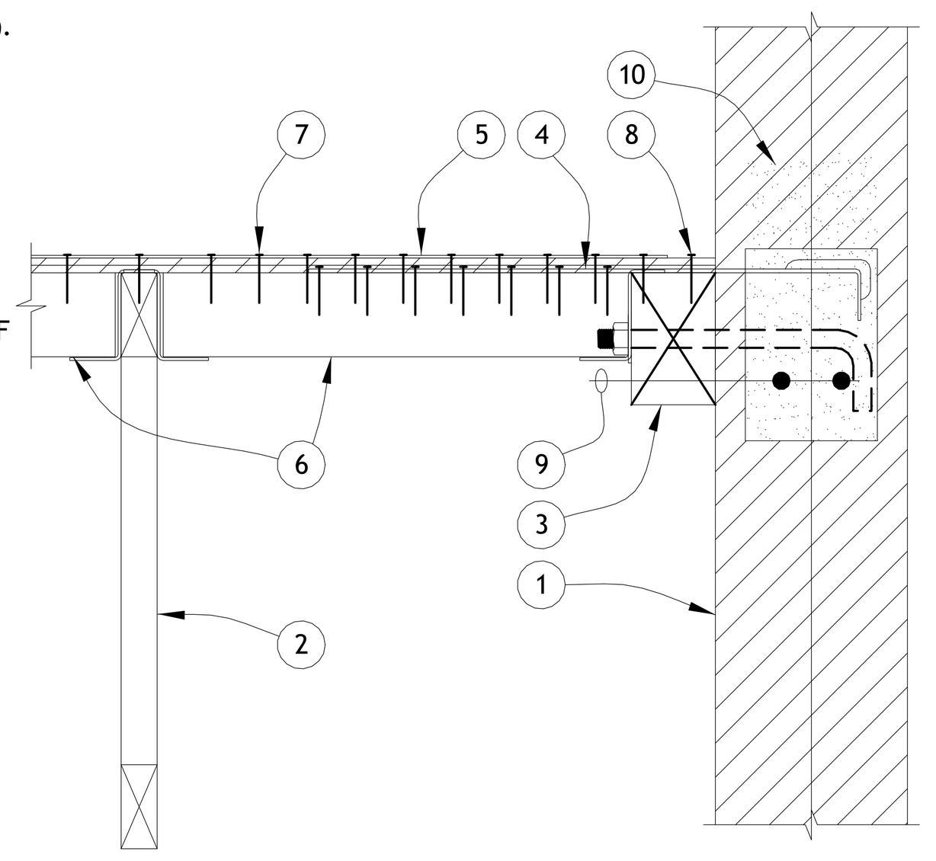
1. CONCRETE OVER METAL DECK.
2. STEEL BEAM.
3. CONTINUOUS 1/4" BENT PLATE.
4. #4 x 12" DEFORMED BAR ANCHORS (DBA'S) AT 18" O.C. REQUIRED ONLY WHERE "L" ≥ 1'-1".
5. WOOD STUD WALL.
6. 2x WOOD PLATE W/ 5/8"Øx5" SIMPSON TITEN HD SCREW ANCHORS AT 48"O.C. INSTALLED PER ESR-2713.
7. SHEATHING PER ARCHITECTURAL.

19 SLAB EDGE AT EXTERIOR WALL
218029DS401-19



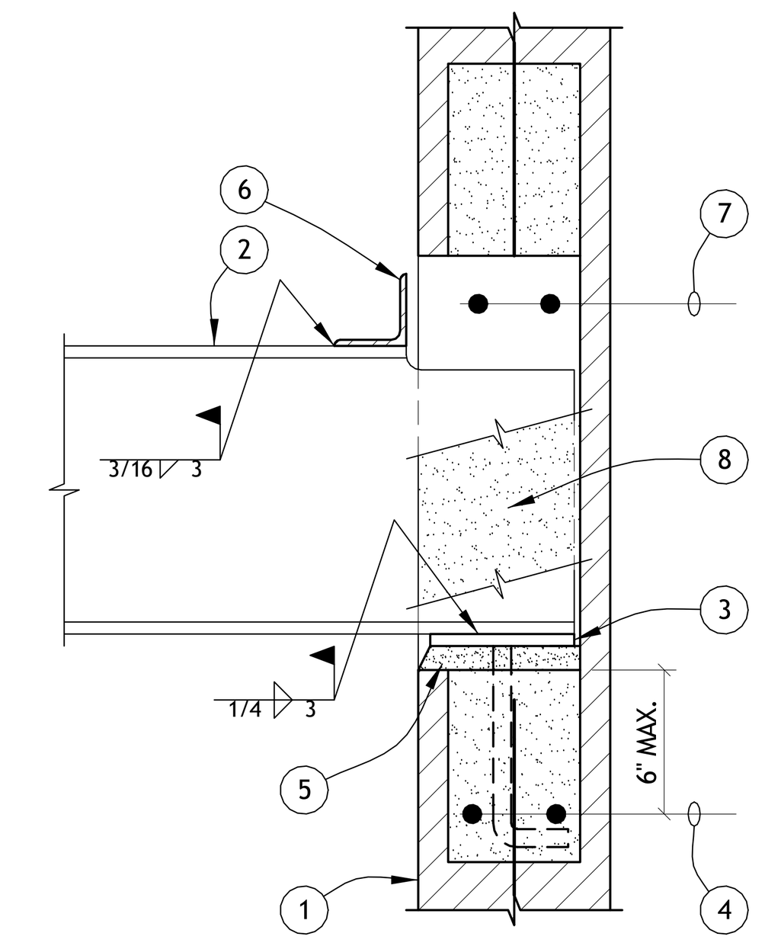
1. MASONRY WALL.
2. WOOD JOIST (4x WOOD JOIST AT STRAP).
3. 4x LEDGER TO MATCH DEPTH OF JOIST WITH 3/4"Ø ANCHOR BOLTS AT 16" O.C.
4. (2) #5 IN 8" DEEP CONTINUOUS BOND BEAM.
5. SIMPSON LU TYPE HANGER.
6. GROUT 4" MIN. ABOVE AND EACH SIDE OF ANCHOR.
7. EDGE NAILING.
8. SIMPSON PA35 AT EACH 4x JOIST.

14 WOOD JOIST AT MASONRY WALL
218029DS401-14



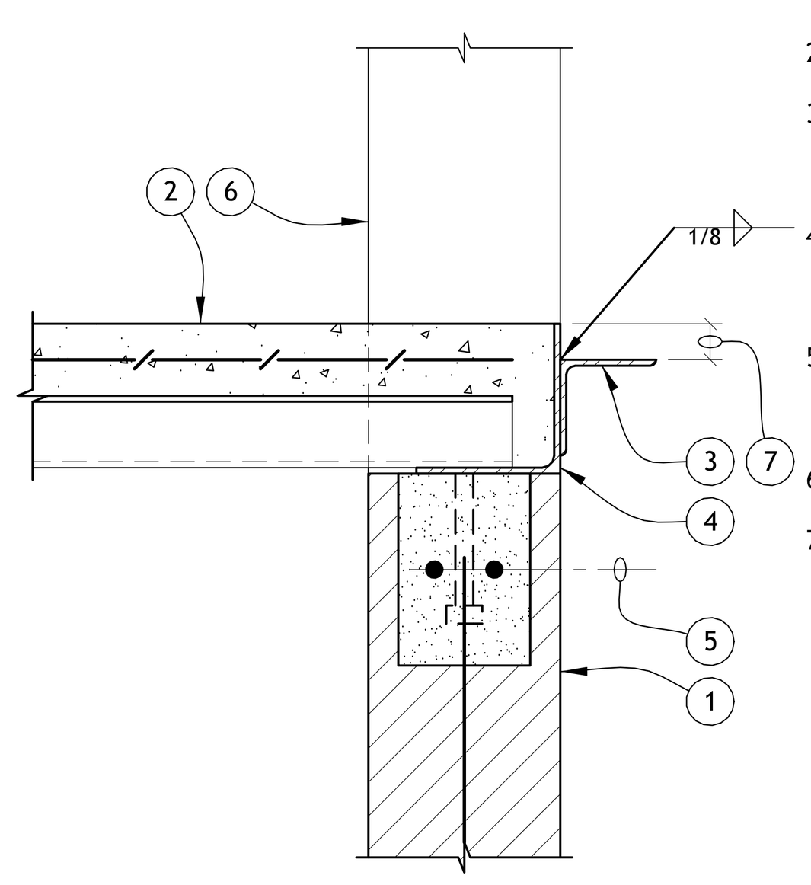
1. MASONRY WALL.
2. WOOD TRUSS.
3. 4x6 LEDGER WITH 3/4"Ø ANCHOR BOLTS AT 48" O.C.
4. SIMPSON PA23 PURLIN ANCHORS AT 8'-0" O.C.
5. SIMPSON CS16 STRAP ALIGNED NEXT TO PA23 STRAPS WITH (12) 10d INTO 1st BLOCK AND WOOD LEDGER AND 10d AT 4 1/8" O.C. BEYOND END OF PA23 STRAP. EXTEND STRAP AND BLOCKING TO 5th TRUSS FROM MASONRY WALL OR 10'-0" WHICHEVER IS GREATER.
6. 4x6 FLAT BLOCKING AT STRAPS WITH SIMPSON "Z" CLIP HANGERS EACH END.
7. 8d AT 4" O.C. TO BLOCKING.
8. EDGE NAILING.
9. (2) #5 IN 8" DEEP CONTINUOUS BOND BEAM.
10. GROUT 4" MIN. ABOVE AND EACH SIDE OF ANCHOR.

9 WOOD LEDGER TO MASONRY WALL
218029DS401-9



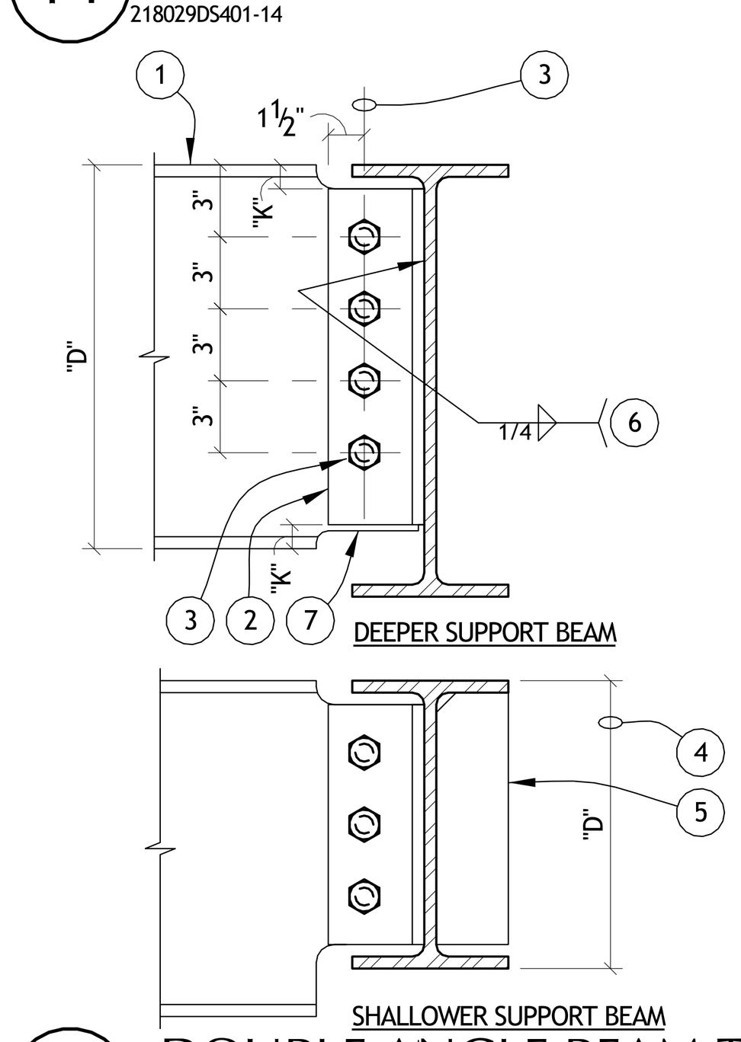
1. MASONRY WALL.
2. STEEL BEAM. BLOCK OUT TOP FLANGE.
3. BEARING PLATE 1/2x6x1'-0" WITH (2) 3/4"Ø ANCHORS AT 8" O.C.
4. (2) #5 x 3'-8" LONG REBAR IN 8" DEEP x 5'-4" LONG BOND BEAM.
5. 1" DRYPACK.
6. LEDGER ANGLE.
7. CONTINUOUS BOND BEAM. TYPICAL ROOF LINE BOND BEAM.
8. GROUT OR DRYPACK POCKET SOLID AFTER BEAM ERECTION.

4 STEEL BEAM AT MASONRY WALL
218029DS401-4



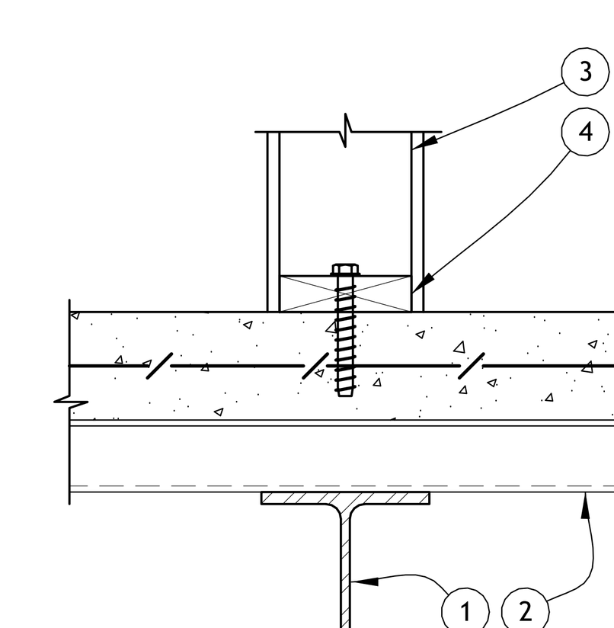
1. MASONRY WALL.
2. CONCRETE OVER METAL DECK.
3. 4x4x1/4 ANGLE. VERIFY SIZE AND LENGTH WITH ELEVATOR MANUFACTURER.
4. 12 GAGE BENT PLATE WITH 6" HORIZONTAL LEG WITH 3/4"Ø x 6 1/4" LONG HEADED STUDS AT 16" O.C.
5. (2) #5 IN 8" DEEP BOND BEAM. EXTEND 2'-0" MIN. PAST JAMB (AROUND CORNER IF NECESSARY).
6. LINE OF WALL BEYOND.
7. COORDINATE WITH ELEVATOR MANUFACTURER.

20 FLOOR SLAB AT ELEVATOR OPENING
218029DS401-20



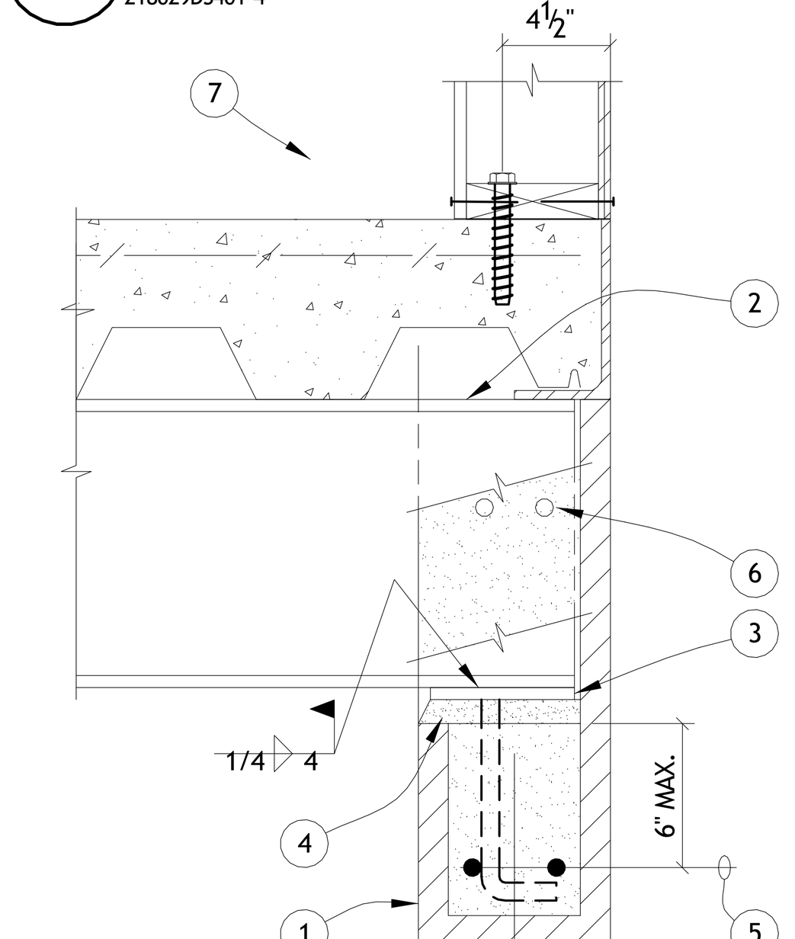
1. STEEL BEAM.
2. ANGLES EACH SIDE - 3/8x4x4.
3. BOLTS. FOR SIZE, TYPE AND NUMBER OF BOLTS, SEE BOLT SCHEDULE, DETAIL 1/S4.02. "D" REFERS TO NOMINAL BEAM DEPTH IN BOLT SCHEDULE.
4. BEAM DEPTH (LESSER OF 2 BEAM DEPTHS WHERE APPLICABLE).
5. 3/8" STIFFENER PLATE ON OPPOSITE SIDE OF ONE SIDED CONNECTIONS.
6. WELD ONE ANGLE BOTH SIDES. FIELD WELD OPPOSITE ANGLE ON OUTSIDE EDGE, TOP AND BOTTOM.
7. BOTTOM FLANGE MAY BE COPED FOR INSTALLATION OF THE BEAM.

15 DOUBLE ANGLE BEAM TO BEAM CONNECTION
218029DS401-15



1. STEEL BEAM.
2. CONCRETE OVER METAL DECK. FOR DIRECTION OF DECK, SEE PLAN.
3. WOOD STUD WALL - 2x6 AT 24"O.C. AT INTERIOR PARTY WALLS. FOR OTHER WALLS SEE PLANS.
4. 2x BOTTOM WOOD PLATE WITH 5/8"Øx5" SIMPSON TITEN HD SCREW ANCHORS AT 48" O.C. INSTALLED PER ESR-2713.

10 WOOD STUD WALL AT COMPOSITE DECK
218029DS401-10



1. MASONRY WALL. POCKET WALL AT BEAM BEARING. FORM INSIDE FACE AND GROUT SOLID AFTER BEAM IS ERECTED.
2. STEEL BEAM.
3. BEARING PLATE. 3/4x6x1'-4" WITH (2) 3/4"Ø ANCHORS AT 8" O.C.
4. 1" DRYPACK.
5. (2) #5x6'-0" IN 8" DEEP BOND BEAM CENTERED AT STEEL BEAM.
6. BOND BEAM REINFORCING FROM BEYOND NEED NOT BE CONTINUOUS THROUGH BEAM. TERMINATE 8" MAX. FROM CENTERLINE OF BEAM ON EACH SIDE.
7. FOR INFORMATION NOT NOTED SEE DETAIL 8/SS404.

5 STEEL BEAM AT MASONRY WALL
218029DS401-5

BARKER STRUCTURAL
5960 S. RAINBOW BLVD. SUITE 300 LAS VEGAS, NV 89118
WWW.BARKERSTRUCTURAL.COM

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KURT GUIDICE
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CIVIL/STRUCTURAL
NO. 21312
22 APR 2020

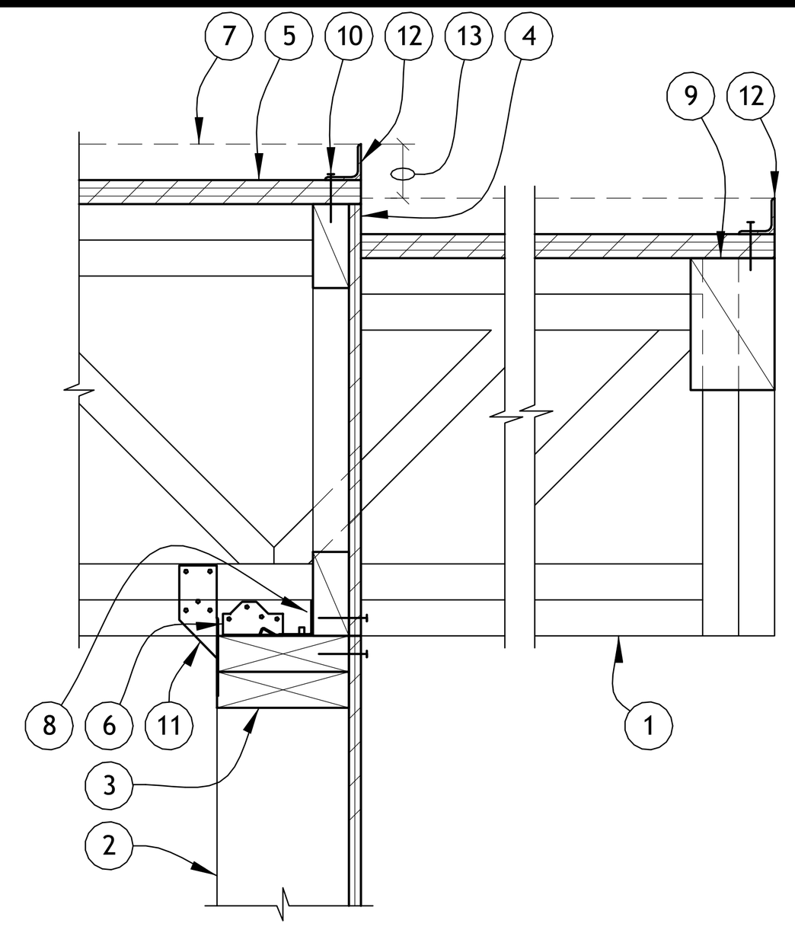
A NEW SHELL BUILDING IMPROVEMENT
31 SOUTH WATER STREET
CITY OF HENDERSON, NV 89015
APN #179-18-611-055
PROJECT NUMBER: 0201909
DATE: 04.17.2020

P. JAMES ARCHITECT
ARCHITECTURE
PLANNING
DESIGN
4629 VICTORIA BEACH WAY
LAS VEGAS, NV 89103
702.683.3277

REV	REVISED DESCRIPTION	DATE

S4.01
FRAMING DETAILS

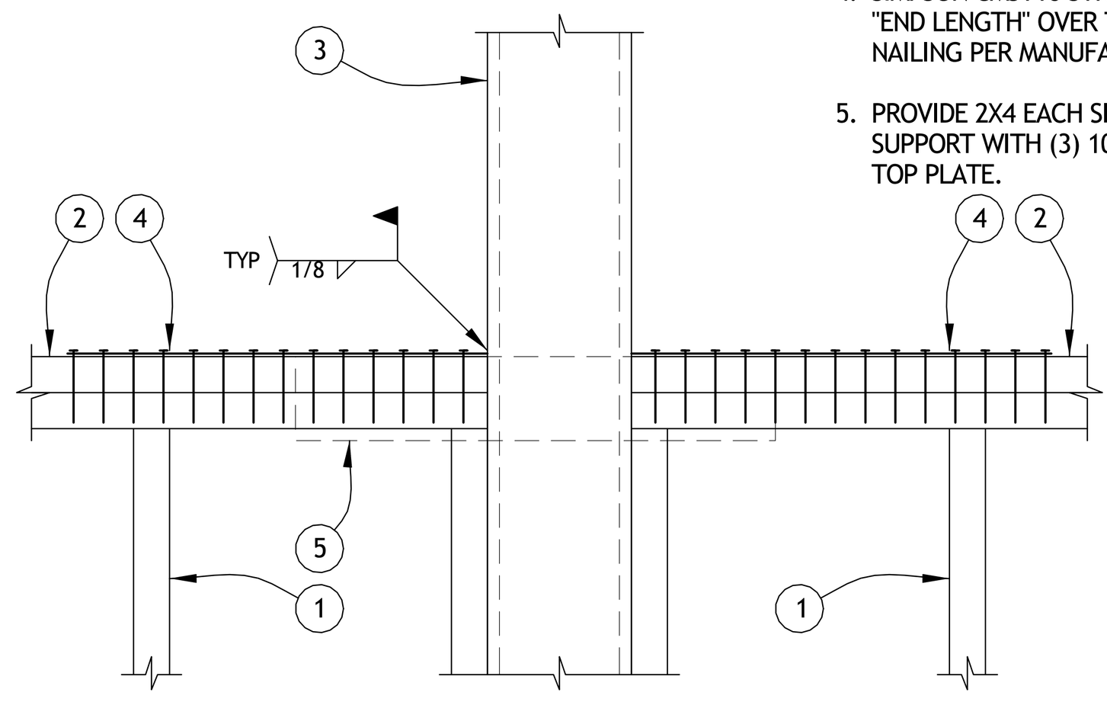
21 STEPPED TRUSS AT BALCONY



1. WOOD TRUSS.
2. WOOD STUD WALL.
3. DOUBLE 2x TOP PLATE WITH NAILING PER TYPICAL DETAIL.
4. SHEAR PANEL BY TRUSS MANUFACTURER.
5. PLYWOOD FLOOR SHEATHING.
6. SIMPSON A34 AT EACH TRUSS.
7. NON-STRUCTURAL TOPPING. SEE ARCH'L.
8. (2) SIMPSON A35 EACH PANEL.
9. 4x6 BLOCKING.
10. EDGE NAILING.
11. SIMPSON H2.5A EVERY OTHER TRUSS.
12. 1 1/2"x1 1/2"x16 GA. BENT PLATE.
13. FOR DIMENSION OF STEP SEE ARCH'L.

218029DS402-21

16 STEEL COLUMN IN STUD WALL



1. WOOD STUD WALL.
2. DOUBLE 2x TOP PLATE.
3. STEEL COLUMN.
4. SIMPSON CMST16 STRAP EXTENDED "END LENGTH" OVER TOP PLATE WITH NAILING PER MANUFACTURER.
5. PROVIDE 2X4 EACH SIDE FOR DECK SUPPORT WITH (3) 10d NAILS EACH TOP PLATE.

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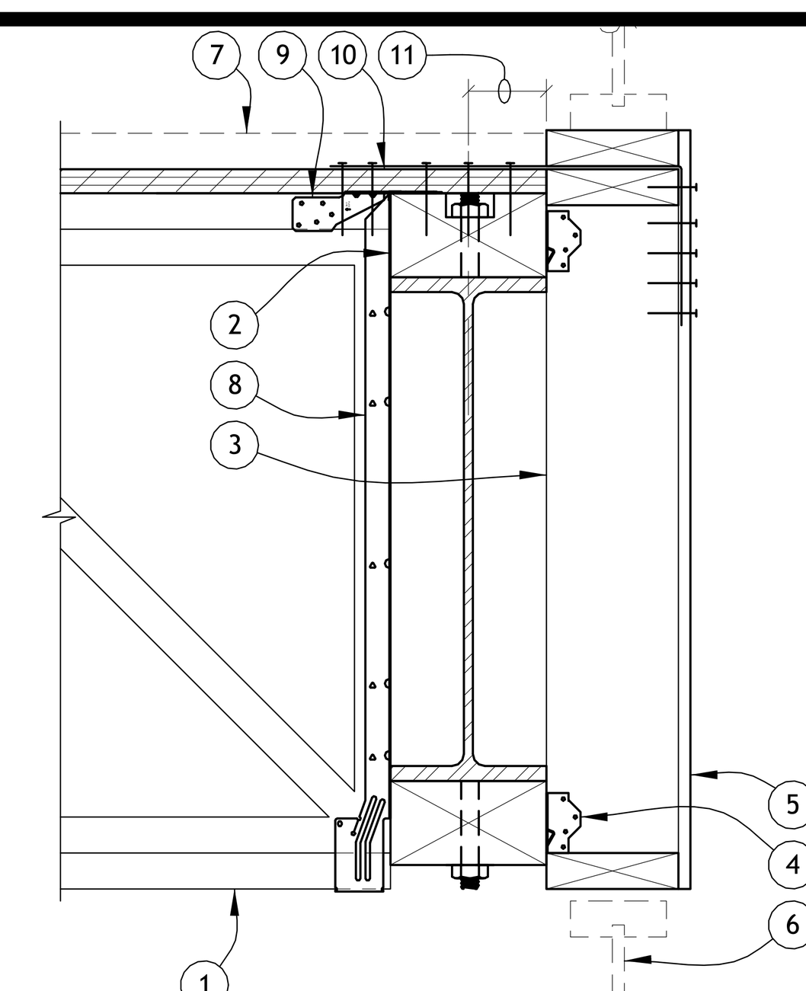
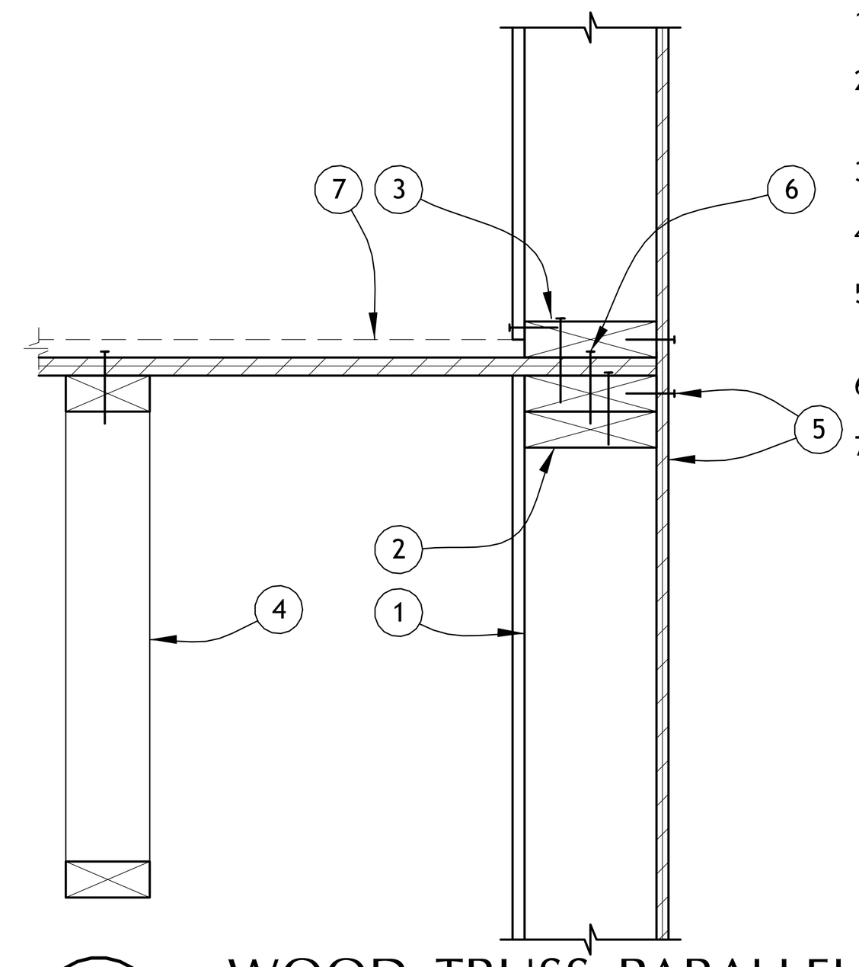
11 SLAB EDGE AT STEEL BEAM



1. WOOD TRUSS.
2. 4x NAILER WITH 5/8" THREADED RODS AT 24" O.C. COUNTERSINK HEADS AT TOP NAILER.
3. 2x6 STUD WALL WITH STUDS AT 24" O.C..
4. SIMPSON A34 EACH NAILER.
5. PLYWOOD SHEATHING.
6. LINE OF WINDOW WALL.
7. LINE OF NON-STRUCTURAL TOPPING, SEE ARCH'L.
8. SIMPSON BA3.56 H=30 HANGER.
9. SIMPSON H2.5A EVERY OTHER TRUSS.
10. SIMPSON CS20 STRAP AT 6'-0" O.C. EXTENDED 12" ALONG FLOOR SHEATHING AND VERTICALLY ALONG STUD.
11. OFFSET BEAM FROM CENTERLINE OF COLUMN AS REQUIRED TO ACHIEVE DIMENSION SHOWN.

218029DS402-11

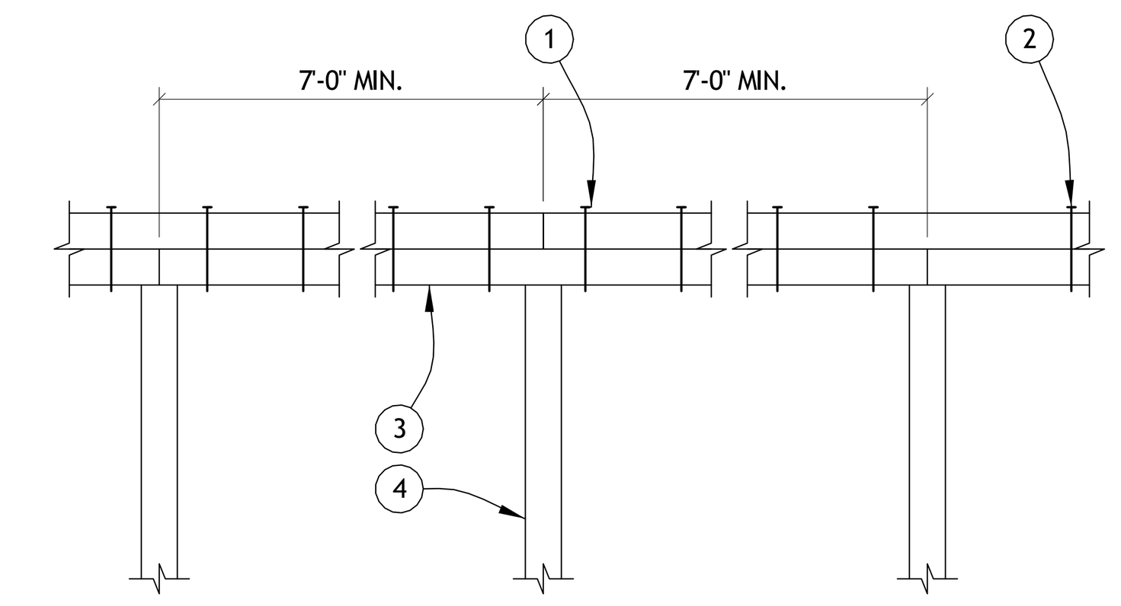
6 WOOD TRUSS PARALLEL TO STUD WALL



1. WOOD STUD WALL.
2. DOUBLE 2x TOP PLATE WITH NAILING PER TYPICAL DETAIL.
3. 2x BOTTOM PLATE WITH 16d AT 12" O.C.
4. WOOD TRUSS.
5. SHEATHING AND NAILING PER SHEAR WALL SCHEDULE AND GSN.
6. EDGE NAILING.
7. NON-STRUCTURAL TOPPING, SEE ARCH'L.

218029DS402-6

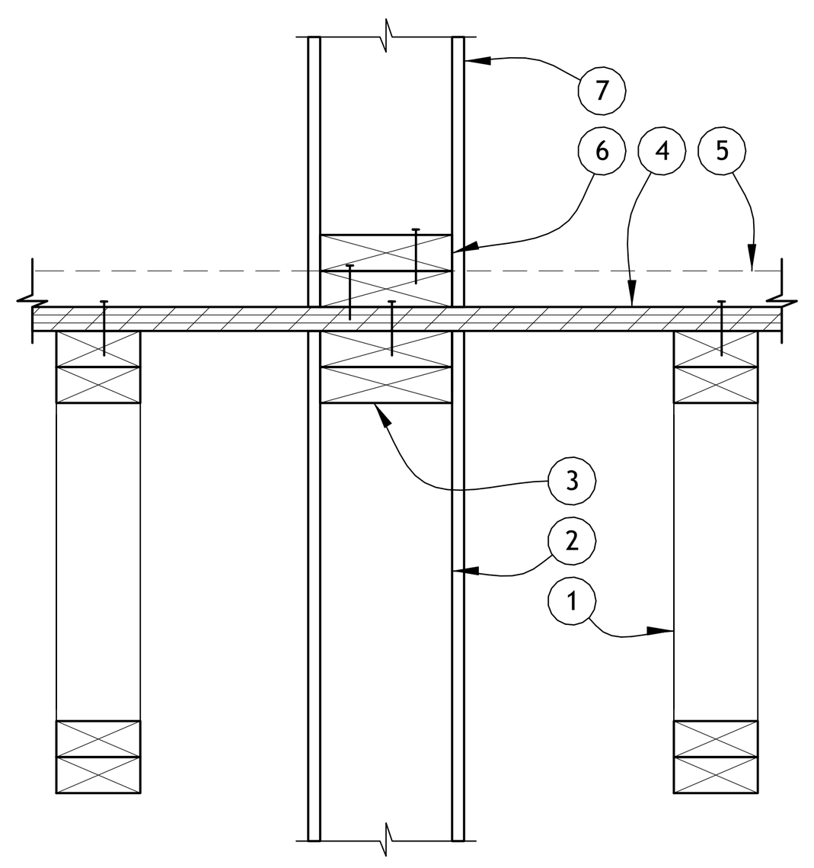
1 TYPICAL TOP PLATE SPLICE



1. 16d AT 4" O.C. AT SPLICE.
2. 16d AT 16" O.C., TYPICAL.
3. DOUBLE 2x TOP PLATE.
4. WOOD STUDS.

218029DS402-1

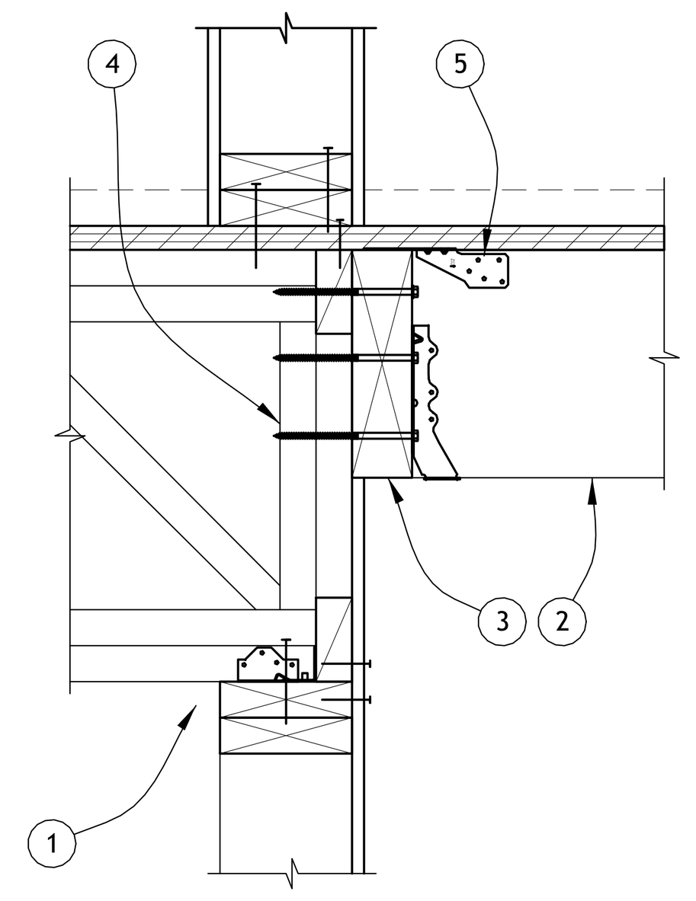
22 WOOD STUD WALL AT FLOOR



1. WOOD TRUSS.
2. WOOD STUD WALL.
3. DOUBLE 2x TOP PLATE PER TYPICAL DETAIL.
4. FLOOR SHEATHING.
5. LINE ON NON-STRUCTURAL TOPPING.
6. DOUBLE 2x BOTTOM PLATE WITH 16d NAILS AT 12" O.C. EACH PLATE.
7. SHEATHING PER ARCH'L.

218029DS402-22

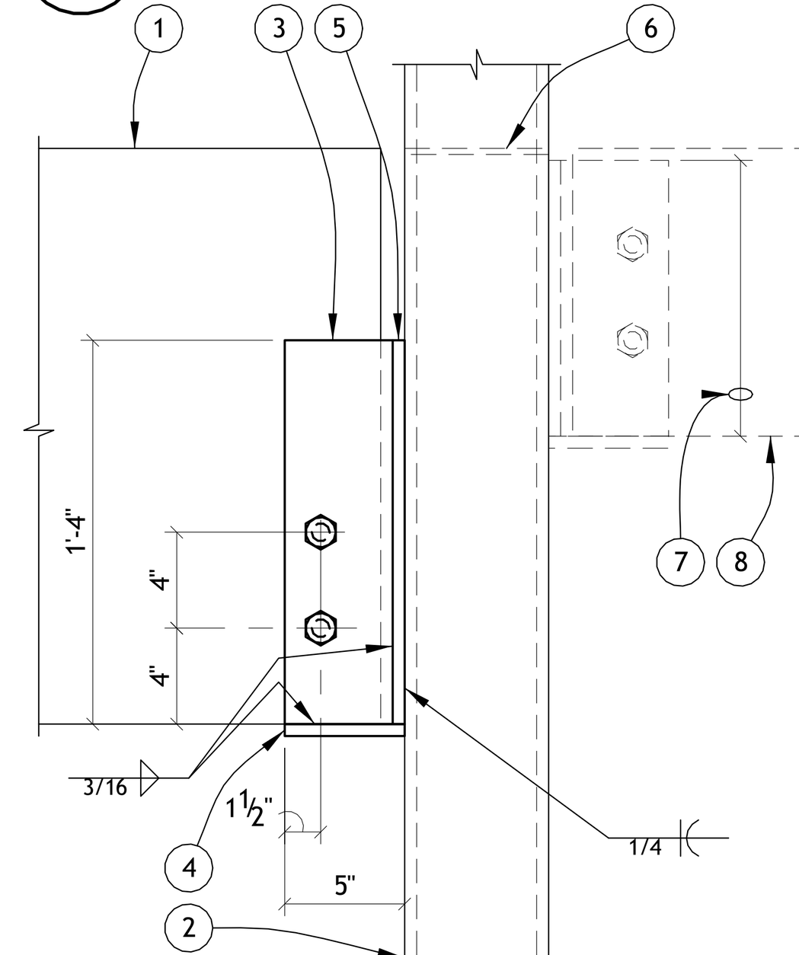
17 WOOD LEDGER AT WOOD TRUSS



1. TRUSS AT WOOD STUD WALL PER DETAIL 5/S4.02.
2. WOOD JOISTS PER PLANS WITH SIMPSON LU TYPE HANGER EACH END.
3. 3x LEDGER, DEPTH TO MATCH JOIST DEPTH, WITH (3) SIMPSON SDS1/4x5 SCREWS AT EACH TRUSS.
4. JOIST MANUFACTURER TO DESIGN TRUSSES WITH DOUBLE VERTICAL WEB AT END OF TRUSS FOR ANCHORAGE OF LEDGER.
5. SIMPSON H2.5A AT 4'-0" O.C.

218029DS402-17

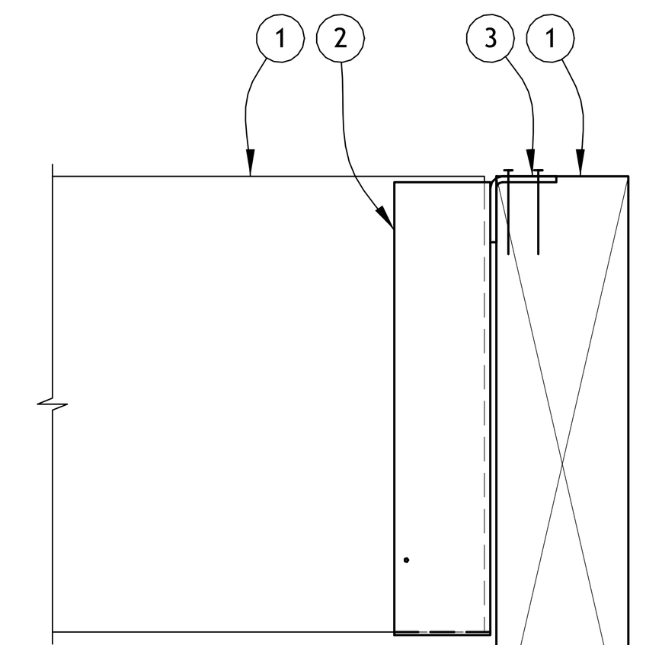
12 WOOD BEAM AT STEEL COLUMN



1. WOOD BEAM.
2. STEEL COLUMN.
3. 1/4" SIDE PLATES WITH (2) 3/4" BOLTS.
4. 1/2" BOTTOM PLATE WITH 1/4" OVERHANG FROM SIDE PLATES.
5. 1/2" BACK PLATE WITH 1/4" OVERHANG FROM SIDE PLATES.
6. 1/4" COLUMN CAP AT TOP OF COLUMN AS OCCURS.
7. PLATE DEPTH TO EQUAL BEAM DEPTH MINUS 1/2" AT BEAM SHALLOWER THAN 16".
8. BEAM EACH SIDE AS OCCURS.

218029DS402-12

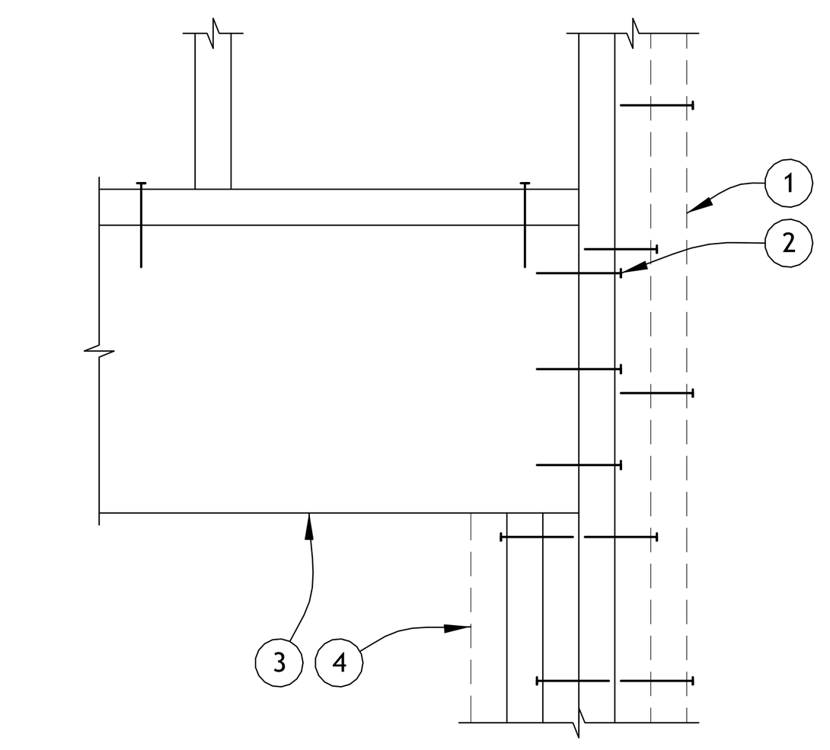
7 WOOD BEAM AT WOOD BEAM



1. WOOD BEAM.
2. SIMPSON HW HANGER.
3. DAP TOP OF BEAM AT HANGER.

218029DS402-7

2 HEADER BEARING DETAIL



1. KING STUD. TRIPLE KING STUDS WHERE HEADER SPAN (h) > 8'-0"; DOUBLE KING STUDS WHERE 4'-0" ≤ h ≤ 8'-0"; SINGLE KING STUD WHERE h < 4'-0". STITCH TOGETHER WITH 10d AT 12" O.C. STAGGERED.
2. (3) 16d INTO HEADER.
3. WOOD HEADER.
4. TRIMMER STUDS. TRIPLE STUDS WHERE HEADER SPAN > 5'-0"; DOUBLE STUDS WHERE HEADER SPAN ≤ 5'-0". STITCH TOGETHER WITH 10d AT 12" O.C. STAGGERED.

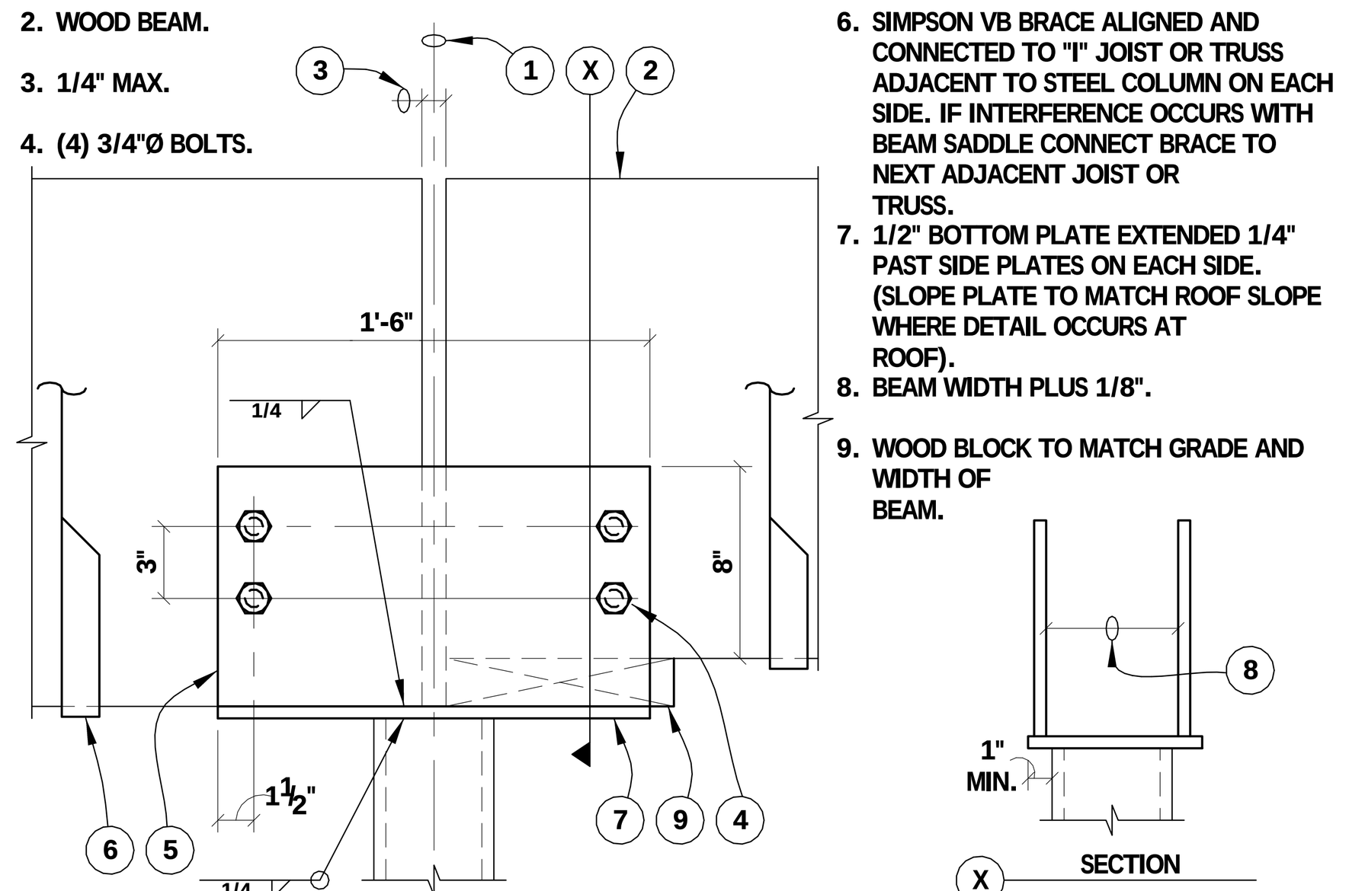
NOTES:

A. THIS DETAIL MAY NOT BE USED WHERE THE HEADER IS A GLB. GLB HEADERS MUST BE SUPPORTED PER DETAIL 4/SS401.
B. WHERE A POST IS REQUIRED AT A HOLDOWN LOCATION THE TRIMMER STUD(S) SHALL BE REPLACED WITH THE POST. SEE DETAIL 3/SS102 FOR FRAMING REQUIREMENTS.

218029DS402-2

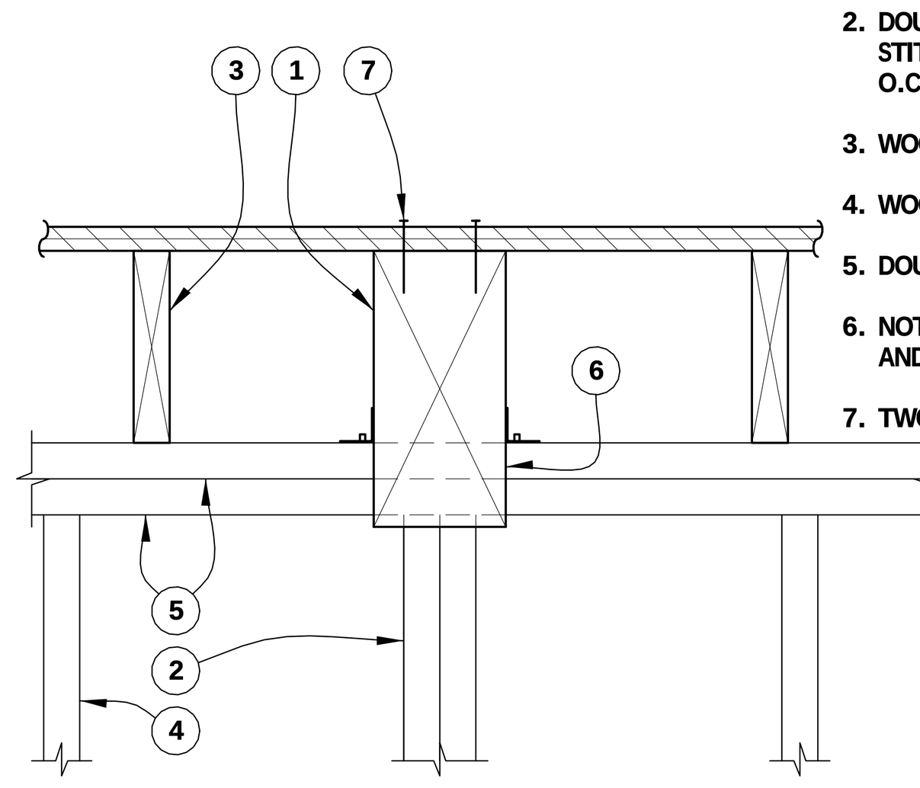
23 WOOD BEAM AT STEEL COLUMN

1. SYMMETRICAL ABOUT CENTERLINE.
2. WOOD BEAM.
3. 1/4" MAX.
4. (4) 3/4"Ø BOLTS.
5. 1/4" PLATE EACH SIDE.
6. SIMPSON VB BRACE ALIGNED AND CONNECTED TO "I" JOIST OR TRUSS ADJACENT TO STEEL COLUMN ON EACH SIDE. IF INTERFERENCE OCCURS WITH BEAM SADDLE CONNECT BRACE TO NEXT ADJACENT JOIST OR TRUSS.
7. 1/2" BOTTOM PLATE EXTENDED 1/4" PAST SIDE PLATES ON EACH SIDE. (SLOPE PLATE TO MATCH ROOF SLOPE WHERE DETAIL OCCURS AT ROOF).
8. BEAM WIDTH PLUS 1/8".
9. WOOD BLOCK TO MATCH GRADE AND WIDTH OF BEAM.



218029DS402-23

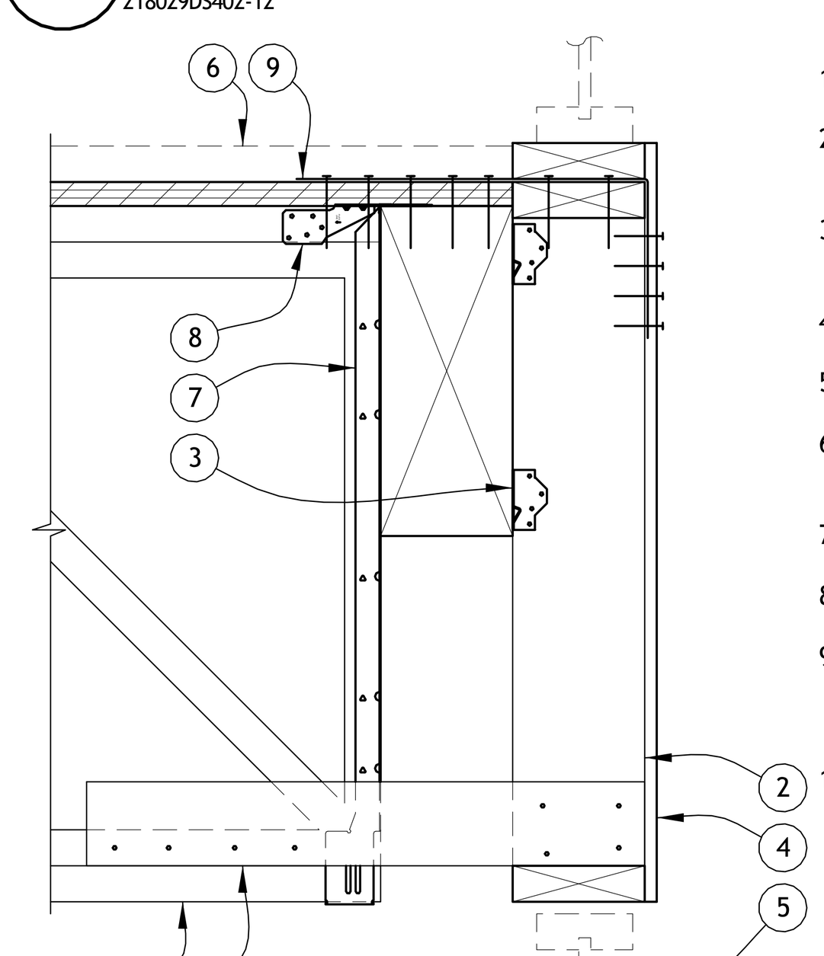
18 WOOD BEAM AT WOOD STUD WALL



1. WOOD BEAM.
2. DOUBLE STUD CENTERED UNDER BEAM. STITCH TOGETHER WITH 10d AT 12" O.C.
3. WOOD JOIST.
4. WOOD STUD WALL.
5. DOUBLE 2x TOP PLATE.
6. NOTCH BEAM TO BEAR AT TOP PLATE AND PROVIDE SIMPSON A35 EACH SIDE.
7. TWO ROWS EDGE NAILING.

218029DS402-18

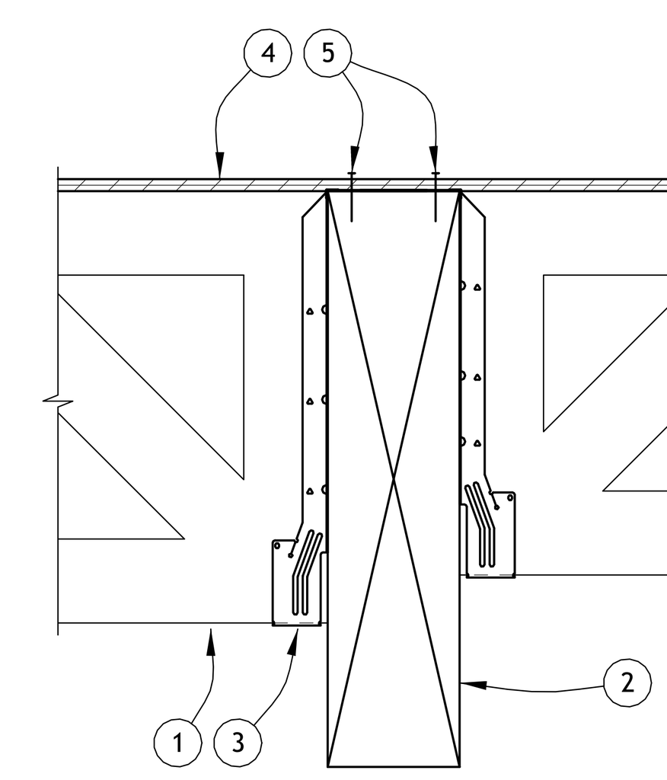
13 WOOD TRUSS AT WOOD BEAM



1. WOOD TRUSS.
2. 2x6 STUD WALL WITH STUDS AT 24" O.C. ALIGNED WITH TRUSSES.
3. SIMPSON A34 TOP AND BOTTOM OF HEADER.
4. SHEATHING PER ARCH'L.
5. LINE OF WINDOW WALL.
6. LINE OF NON-STRUCTURAL TOPPING, SEE ARCH'L.
7. SIMPSON BA3.56 H-30 HANGER.
8. SIMPSON H2.5A EVERY OTHER TRUSS.
9. SIMPSON CS20 STRAP AT 6'-0" O.C. EXTENDED 12" ALONG FLOOR SHEATHING AND VERTICALLY ALONG STUD.
10. 2x4 STRUT AT EACH TRUSS WITH (4) 10d TO STUD AND TO TRUSS.

218029DS402-13

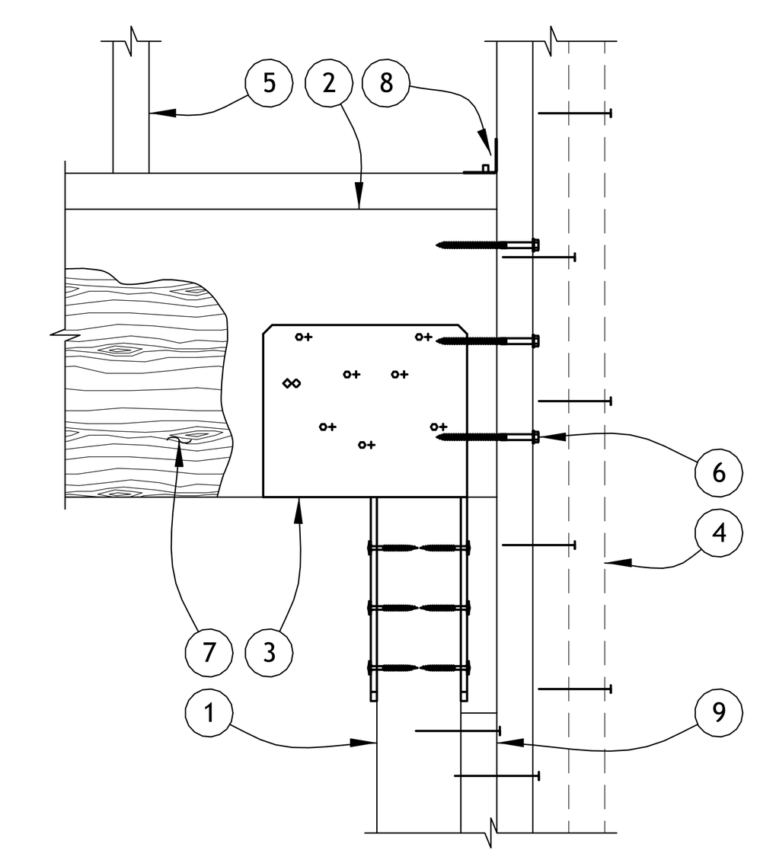
8 WOOD TRUSSES AT WOOD BEAM



1. WOOD TRUSS.
2. WOOD BEAM.
3. HANGER BY TRUSS MANUFACTURER (MINIMUM CAPACITY = XXXX LBS.).
4. PLYWOOD ROOF SHEATHING.
5. TWO ROW EDGE NAILING.

218029DS402-8

3 GLB HEADER AT WOOD POST

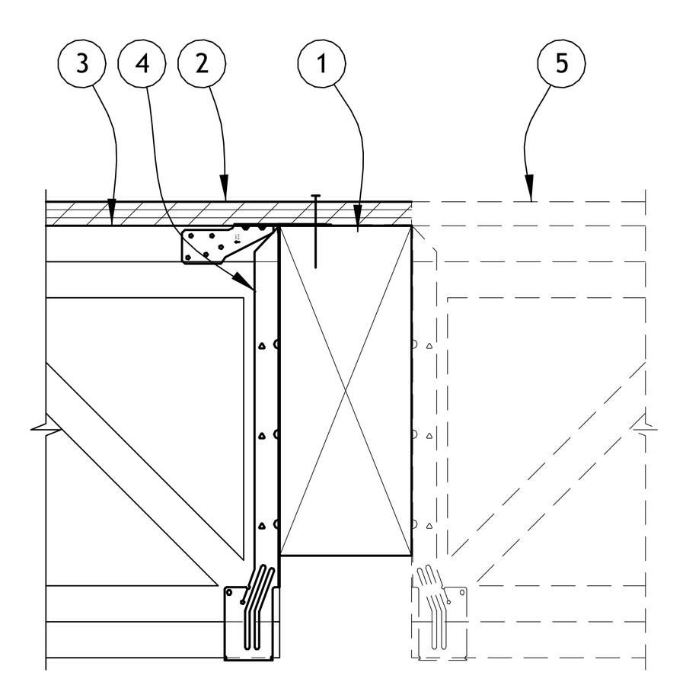


1. WOOD POST. (4x6 U.N.O. ON FOUNDATION PLAN.).
2. GLB HEADER.
3. SIMPSON ECCQ TYPE POST CAP.
4. KING STUD(S). TRIPLE KING STUDS WHERE HEADER SPAN (h) > 12'-0"; DOUBLE KING STUDS WHERE h = 6'-0" TO 12'-0"; SINGLE KING STUD WHERE h < 6'-0". STITCH TOGETHER WITH 10d AT 12" O.C. STAGGERED.
5. WOOD STUDS WALL.
6. (6) SIMPSON SDS1/4x4 SCREWS INTO HEADER.
7. 3/8" PLYWOOD WITH 8d AT 6" O.C. TOP AND BOTTOM.
8. SIMPSON A35.
9. 2x TRIMMER WITH 16d AT 12" O.C. INTO POST.

NOTE:
THIS DETAIL IS REQUIRED AT ALL GLB HEADERS.

218029DS402-3

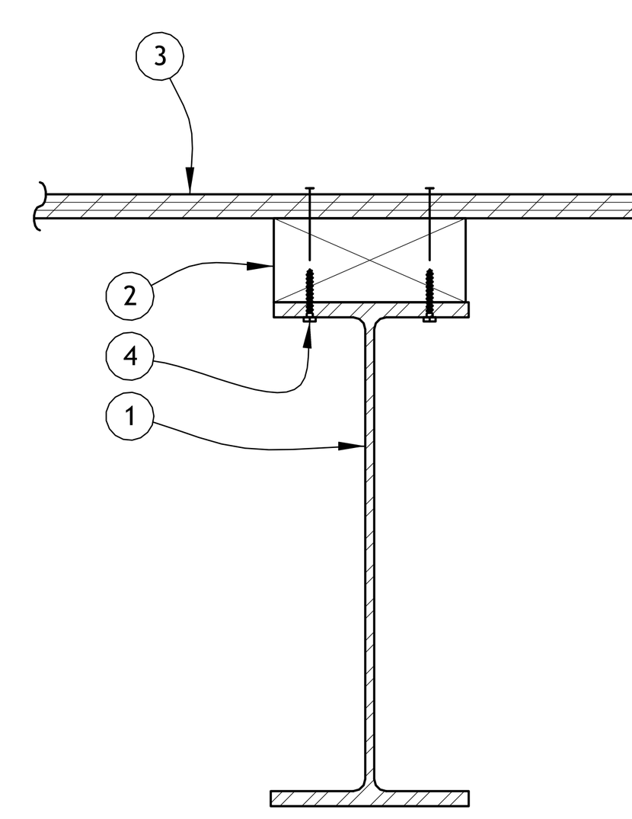
19 WOOD TRUSS AT WOOD BEAM



1. WOOD BEAM.
2. PLYWOOD FLOOR SHEATHING.
3. WOOD TRUSS.
4. TOP FLANGE HANGER - SIMPSON B3.56/24 OR APPROVED ALTERNATE.
5. TRUSS EACH SIDE AS OCCURS.

218029DS402-19

14 WOOD TRUSS AT STEEL BEAM

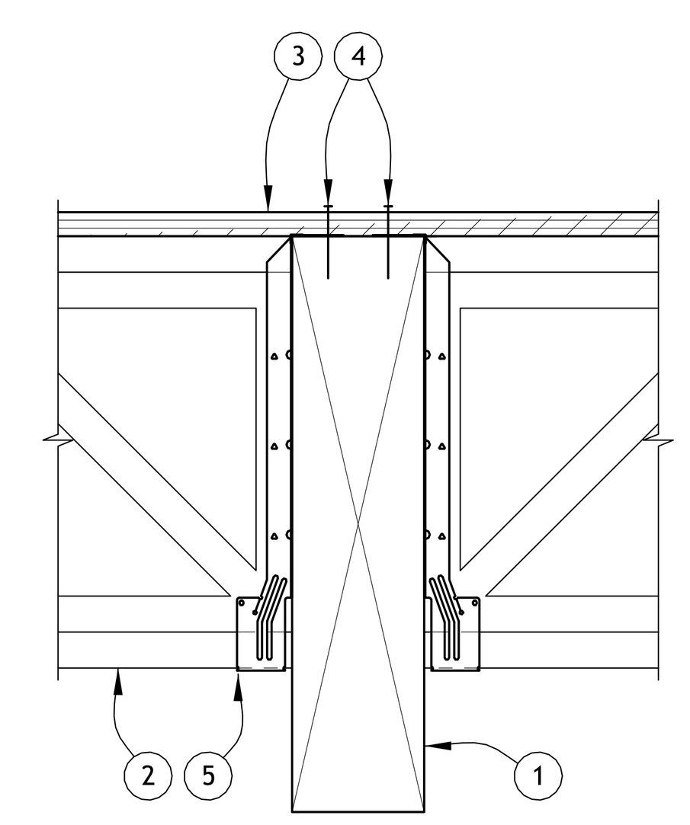


1. STEEL BEAM.
2. 3x WOOD NAILER .
3. PLYWOOD SHEATHING, ROOF OR FLOOR SHEATHING AS OCCURS.
4. 1/4"x2" SCREWS AT 16" O.C. STAGGERED IN PRE-PUNCHED HOLES IN STEEL BEAM.

NOTE:
THREADED RODS WELDED TO TOP OF BEAM MAY BE PROVIDED PER DETAIL 5/S4.03 IN LIEU OF SCREWS AT CONTRACTOR'S OPTION.

218029DS402-14

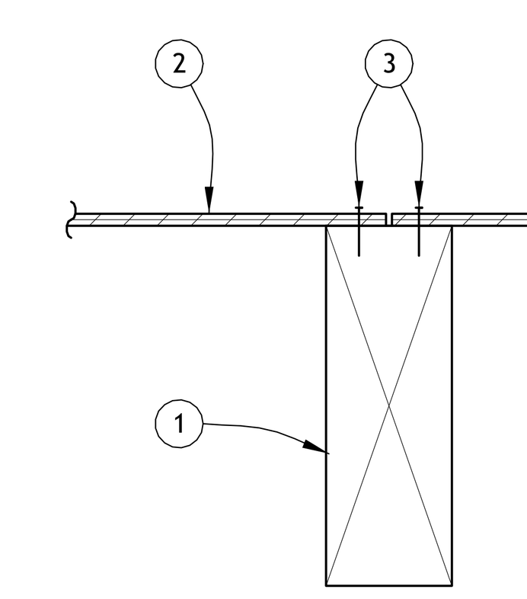
9 WOOD TRUSSES AT WOOD BEAM



1. WOOD BEAM.
2. WOOD TRUSS.
3. PLYWOOD FLOOR SHEATHING.
4. 2 ROWS OF EDGE NAILING.
5. HANGER BY JOIST MANUFACTURER (MINIMUM CAPACITY = XXXX LBS.).

218029DS402-9

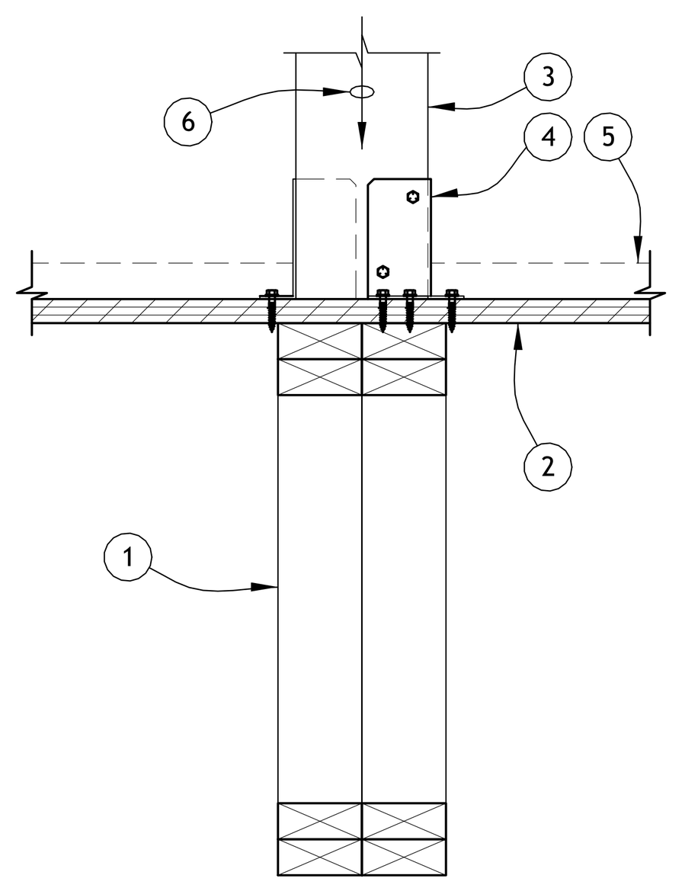
4 PLYWOOD SHEATHING AT WOOD BEAM



1. WOOD BEAM.
2. PLYWOOD ROOF SHEATHING.
3. EDGE NAILING.

218029DS402-4

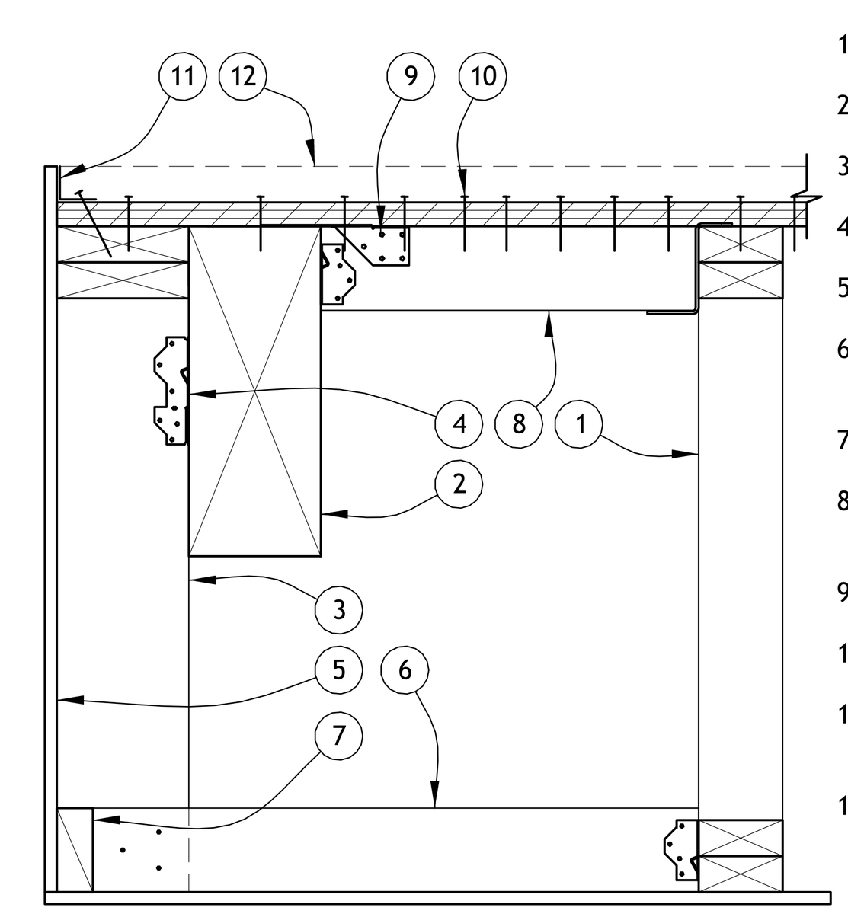
20 POST AT WOOD TRUSS



1. WOOD TRUSS, DOUBLE TRUSS IF REQUIRED BY TRUSS MANUFACTURER.
2. PLYWOOD FLOOR SHEATHING.
3. WOOD POST.
4. SIMPSON RPBZ POST BASE EACH SIDE OF POST WITH (4) 1/4"x1 1/2" SIMPSON SDS SCREWS EACH CONNECTOR TOP AND BOTTOM.
5. LINE OF NON-STRUCTURAL TOPPING, SEE ARCH'L.
6. TRUSS MANUFACTURER TO DESIGN TRUSS FOR 200LB DEAD LOAD AND 400LB LIVE LOAD AT POST REACTION.

218029DS402-20

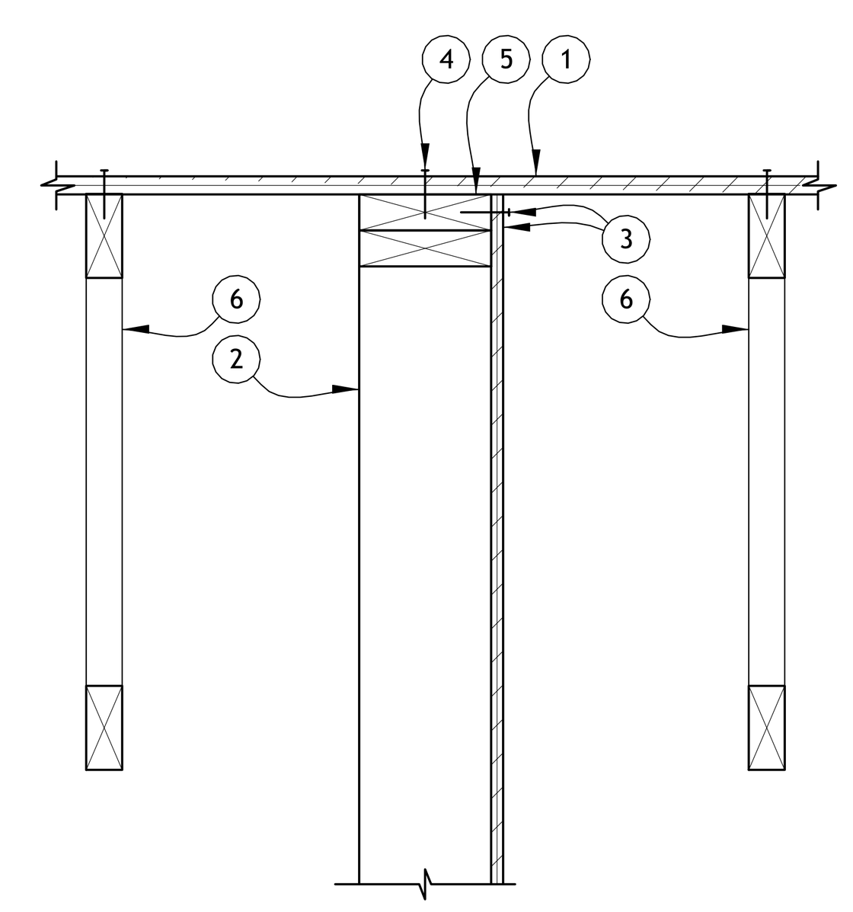
15 SLAB EDGE AT WOOD BEAM



1. WOOD TRUSS.
2. WOOD BEAM.
3. 2x6 STUDS AT 24" O.C.
4. SIMPSON A35 EACH STUD.
5. SHEATHING PER ARCH'L.
6. 2x4 STRUT AT EACH STUD WITH (3) 10d NAILS AT STUD.
7. 2x BLOCKING.
8. 2x4 STRUT AT 4'-0" O.C. WITH SIMPSON A34 AT BEAM AND "Z" CLIP AT TRUSS.
9. SIMPSON H2.5A EACH STRUT.
10. 8d AT 4" O.C. ALONG STRUT.
11. 1 1/2"x1 1/2"x16 GA. BENT PLATE WITH 8d NAILS AT 12" O.C.
12. LINE OF NON-STRUCTURAL TOPPING, SEE ARCH'L.

218029DS402-15.

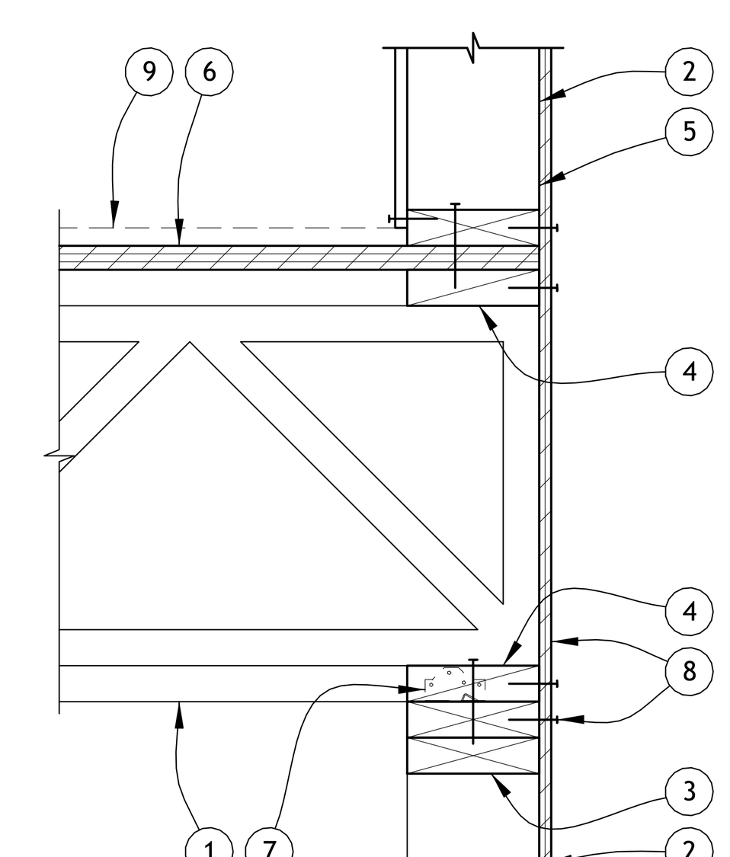
10 WOOD TRUSSES PARALLEL TO STUD WALL



1. PLYWOOD SHEATHING.
2. WOOD STUD WALL.
3. SHEATHING AND NAILING PER SHEAR WALL SCHEDULE AND GSN.
4. EDGE NAILING.
5. DOUBLE TOP PLATE.
6. WOOD TRUSS.

218029DS402-10

5 WOOD TRUSS AT WOOD STUD WALL

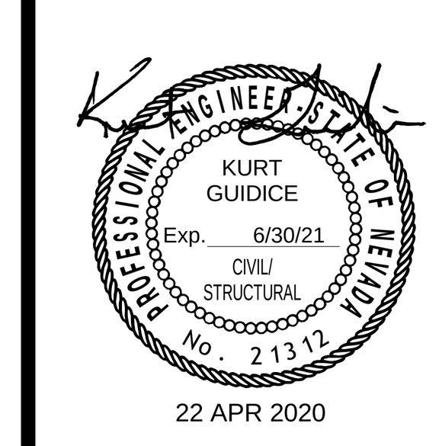


1. WOOD TRUSS.
2. WOOD STUD WALL.
3. DOUBLE 2x TOP PLATE WITH NAILING PER TYPICAL DETAIL.
4. 2x BLOCKING WITH (3) 16d PER BLOCK.
5. 2x BOTTOM PLATE WITH 16d AT 12" O.C.
6. PLYWOOD FLOOR SHEATHING.
7. SIMPSON A34 AT EACH TRUSS.
8. SHEATHING AND NAILING PER SHEAR WALL SCHEDULE AND GSN.
9. NON-STRUCTURAL TOPPING. SEE ARCH'L.

218029DS402-5

BARKER STRUCTURAL

SEAL



A NEW SHELL BUILDING IMPROVEMENT

31 SOUTH WATER STREET

CITY OF HENDERSON, NV 89015

APN #179-18-611-055

PROJECT NUMBER: 0201909

DATE: 04.17.2020

P. JAMES ARCHITECT

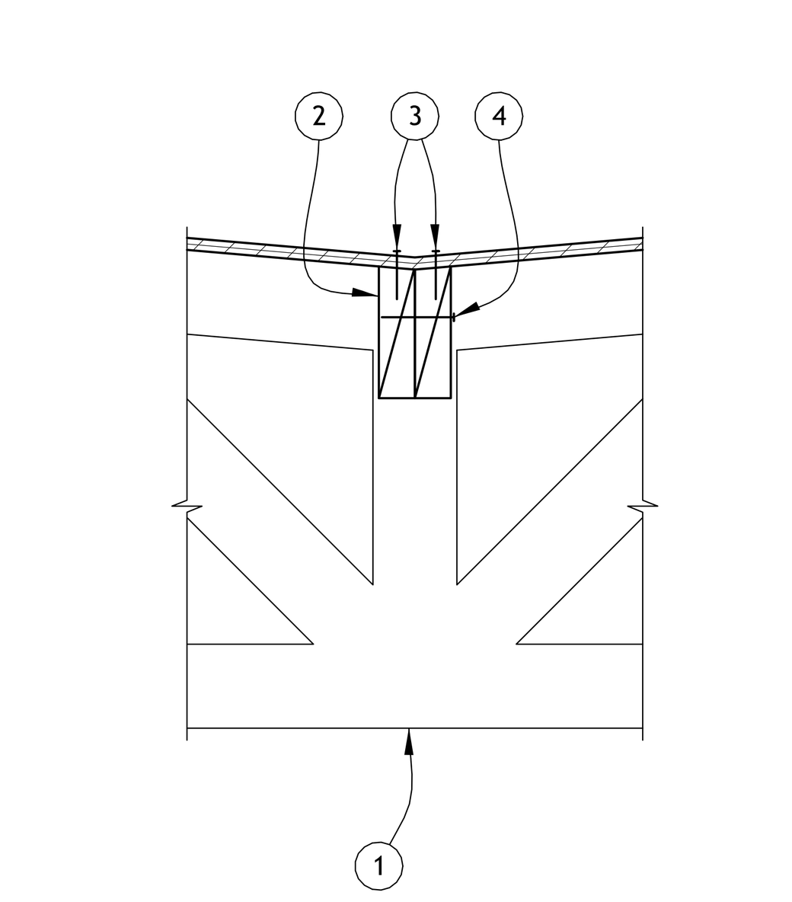
ARCHITECTURE
PLANNING
DESIGN
4629 VICTORIA BEACH WAY
LAS VEGAS, NV 89103
702.683.3277

REV	DESCRIPTION	DATE

REVISED

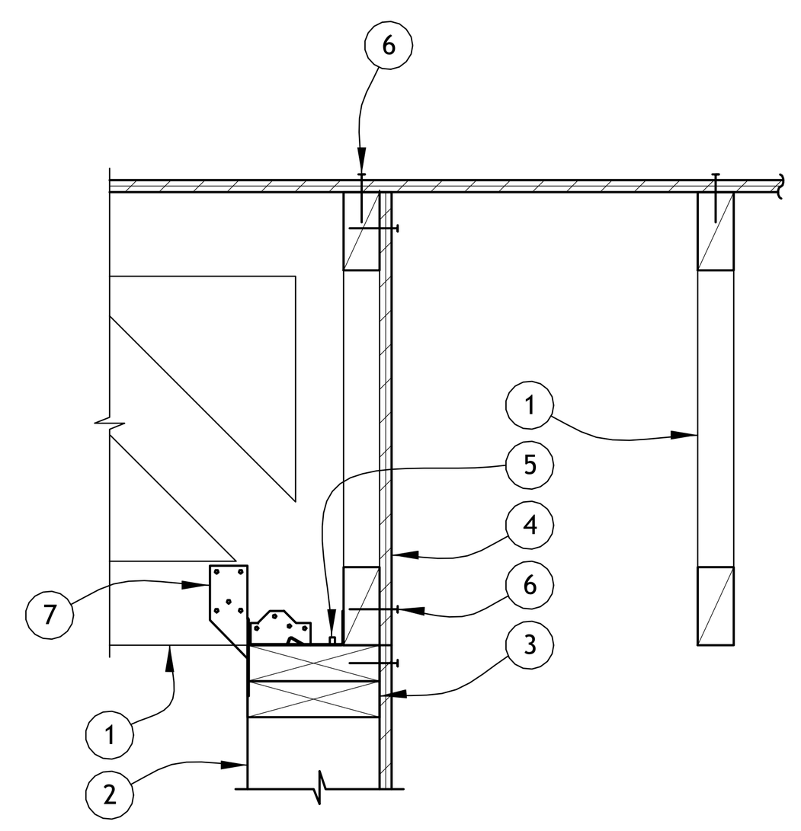
S4.02

FRAMING DETAILS



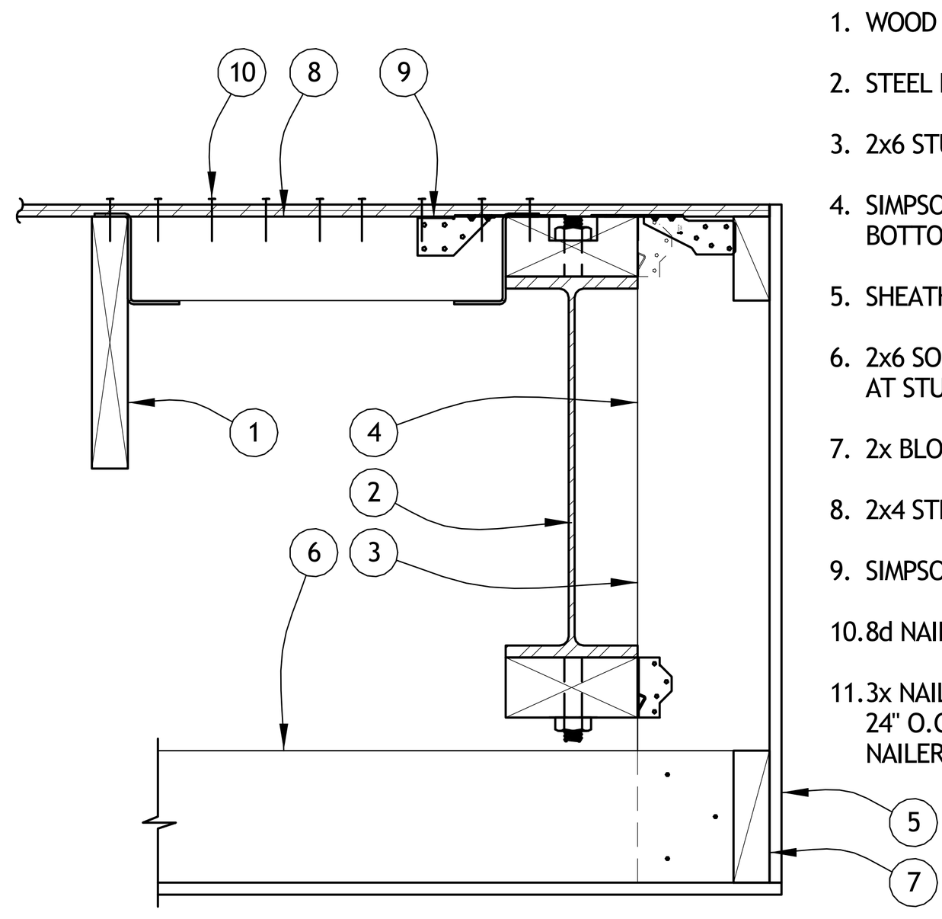
17 VALLEY IN WOOD TRUSSES
21802905403-17

1. WOOD TRUSS.
2. 2x6 BLOCKING RIPPED TO MATCH SLOPE EACH SIDE.
3. EDGE NAILING.
4. 10d NAILS AT 6" O.C. BETWEEN BLOCKING.



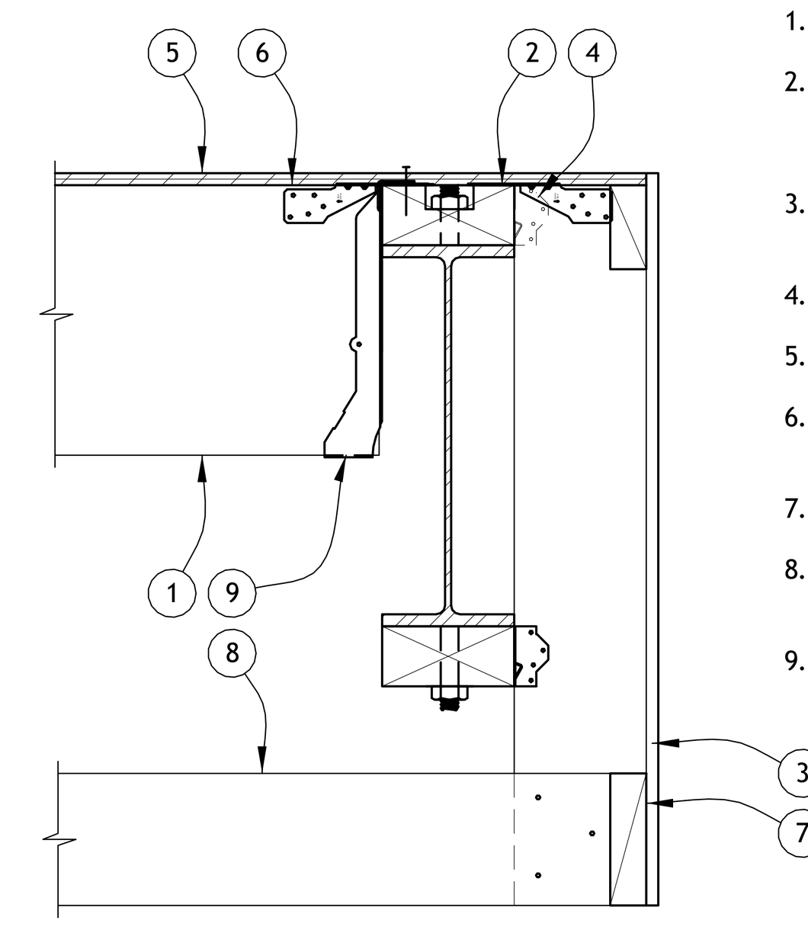
13 WOOD TRUSSES AT WOOD BEAM
21802905403-13

1. WOOD TRUSS.
2. WOOD STUD WALL.
3. DOUBLE 2x TOP PLATE PER TYPICAL DETAIL.
4. TRUSS BLOCKING WITH 2x4 AT PERIMETER AND 3/8" PLYWOOD SHEATHING WITH 8d AT 6" O.C. MAX. AROUND EDGES.
5. (1) SIMPSON A35 EACH BLOCKING.
6. EDGE NAILING.
7. SIMPSON A34 AND H2.5 AT EACH TRUSS.



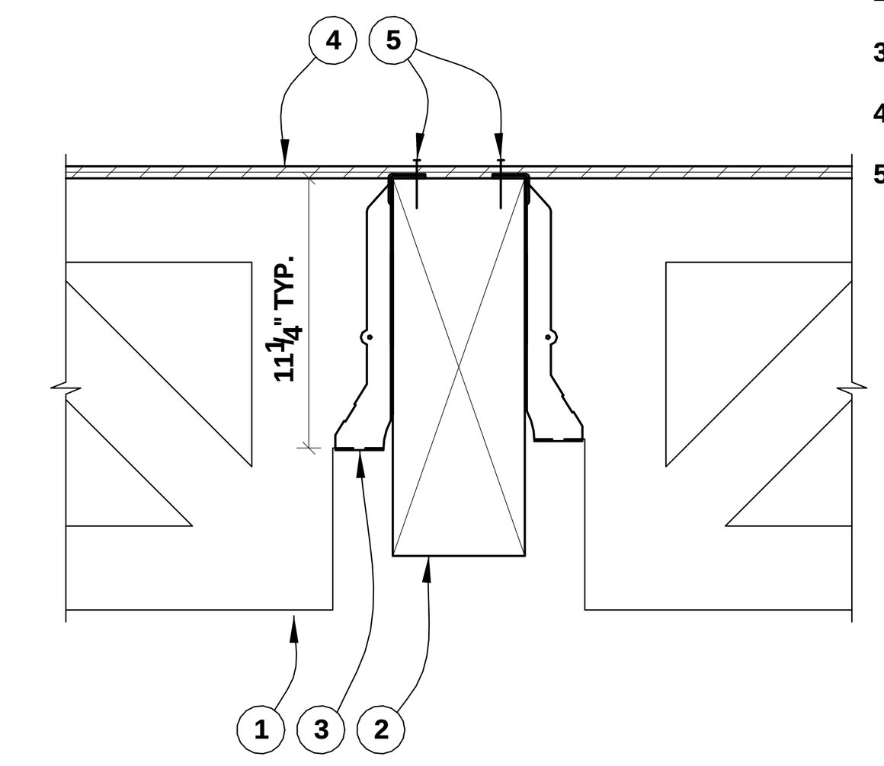
9 WOOD TRUSS AT WOOD BEAM
21802905403-9

1. WOOD JOIST.
2. STEEL BEAM.
3. 2x6 STUDS AT 24" O.C.
4. SIMPSON A34 EACH STUD AT TOP AND BOTTOM NAILER.
5. SHEATHING PER ARCH'L.
6. 2x6 SOFFIT FRAMING WITH (3) 10d NAILS AT STUD.
7. 2x BLOCKING.
8. 2x4 STRUT AT 4'-0" O.C.
9. SIMPSON A34 AND H2.5A EACH STRUT.
10. 8d NAILS AT 4" O.C. ALONG STRUT.
11. 3x NAILER WITH 5/8" THREADED RODS AT 24" O.C. COUNTERSINK HEADS AT TOP NAILER



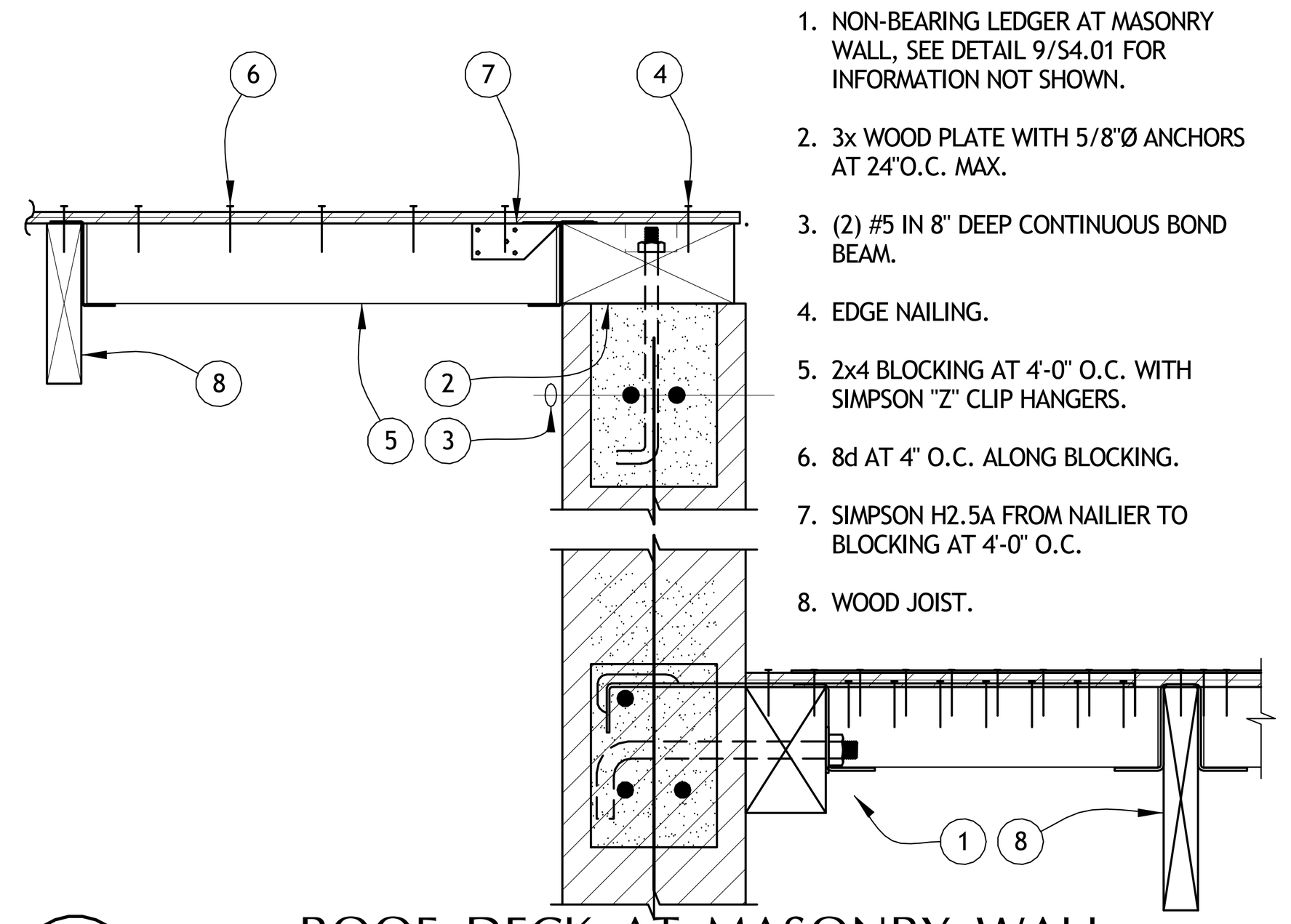
5 SLAB EDGE AT STEEL BEAM
21802905403-5

1. WOOD JOISTS PER PLANS.
2. 3x NAILER WITH 5/8" THREADED RODS AT 24" O.C. COUNTERSINK HEADS AT TOP NAILER.
3. 2x6 STUD WALL WITH STUDS AT 24" O.C..
4. SIMPSON A34 EACH NAILER.
5. PLYWOOD SHEATHING.
6. SIMPSON H2.5A EVERY OTHER TRUSS AND EVERY OTHER STUD.
7. 2x BLOCKING.
8. 2x6 CEILING JOISTS WITH (3) 10d AT STUD.
9. SIMPSON JB TYPE TOP FLANGE HANGER.



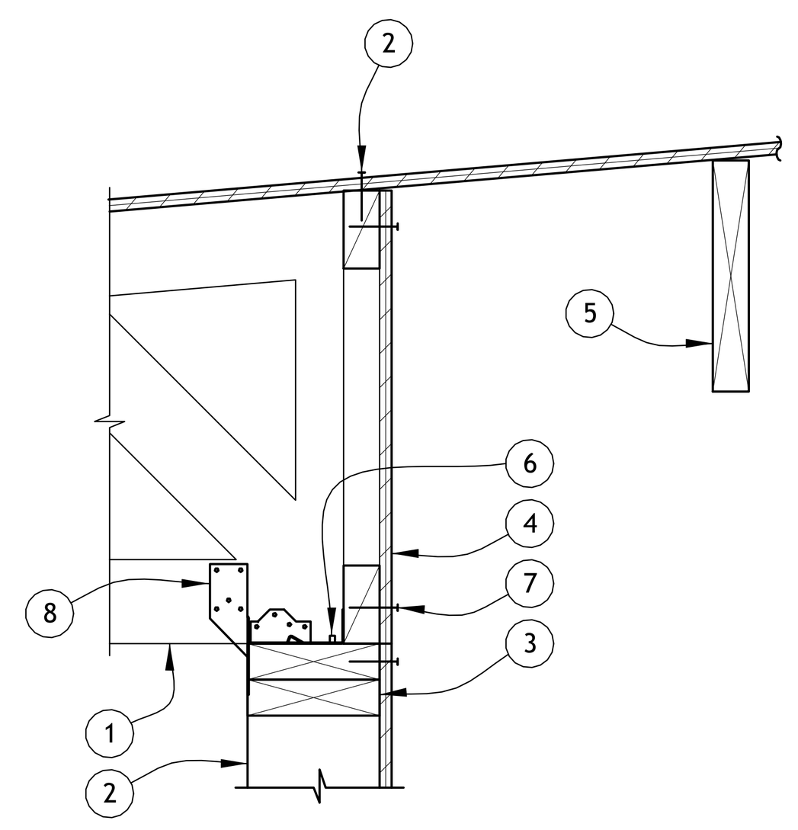
1 WOOD TRUSSES AT WOOD BEAM
21802905403-1

1. **WOOD TRUSS.**
2. **WOOD BEAM.**
3. **SIMPSON JB212A TYPE HANGER.**
4. **PLYWOOD ROOF SHEATHING.**
5. **TWO ROWS EDGE NAILING.**



18 ROOF DECK AT MASONRY WALL
21802905403-18

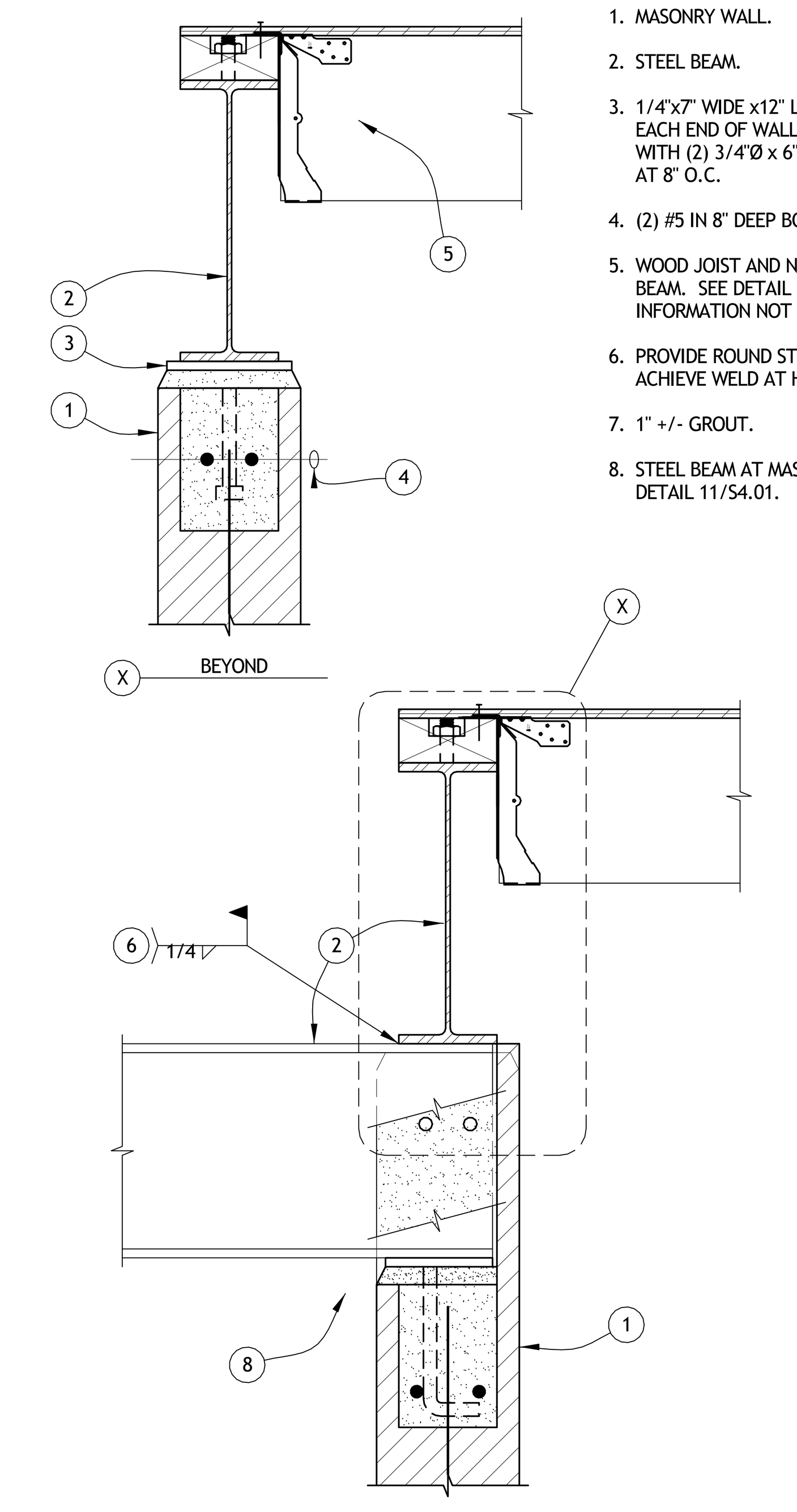
1. NON-BEARING LEDGER AT MASONRY WALL, SEE DETAIL 9/S4.01 FOR INFORMATION NOT SHOWN.
2. 3x WOOD PLATE WITH 5/8"Ø ANCHORS AT 24"O.C. MAX.
3. (2) #5 IN 8" DEEP CONTINUOUS BOND BEAM.
4. EDGE NAILING.
5. 2x4 BLOCKING AT 4'-0" O.C. WITH SIMPSON "Z" CLIP HANGERS.
6. 8d AT 4" O.C. ALONG BLOCKING.
7. SIMPSON H2.5A FROM NAILIER TO BLOCKING AT 4'-0" O.C.
8. WOOD JOIST.



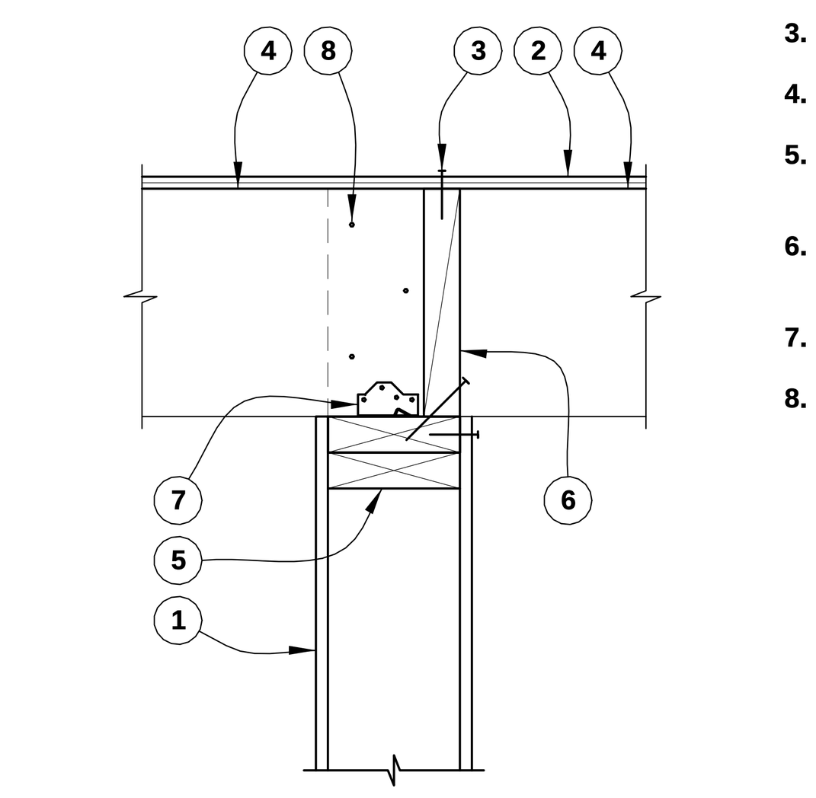
14 WOOD TRUSSES AT WOOD BEAM
21802905403-14

1. WOOD TRUSS.
2. WOOD STUD WALL.
3. DOUBLE 2x TOP PLATE PER TYPICAL DETAIL.
4. TRUSS BLOCKING WITH 2x4 AT PERIMETER AND 3/8" PLYWOOD SHEATHING WITH 8d AT 6" O.C. MAX. AROUND EDGES.
5. WOOD JOIST PER PLANS.
6. (1) SIMPSON A35 EACH BLOCKING.
7. EDGE NAILING.
8. SIMPSON A34 AND H2.5 AT EACH TRUSS.

1. MASONRY WALL.
2. STEEL BEAM.
3. 1/4"x7" WIDE x12" LONG STEEL PLATES EACH END OF WALL AND AT 36" O.C. WITH (2) 3/4"Ø x 6" LONG HEADED STUDS AT 8" O.C.
4. (2) #5 IN 8" DEEP BOND BEAM.
5. WOOD JOIST AND NAILER AT STEEL BEAM. SEE DETAIL 3/S4.03 FOR INFORMATION NOT SHOWN.
6. PROVIDE ROUND STOCK OR BAR TO ACHIEVE WELD AT HIGH END.
7. 1" +/- GROUT.
8. STEEL BEAM AT MASONRY POCKET PER DETAIL 11/S4.01.

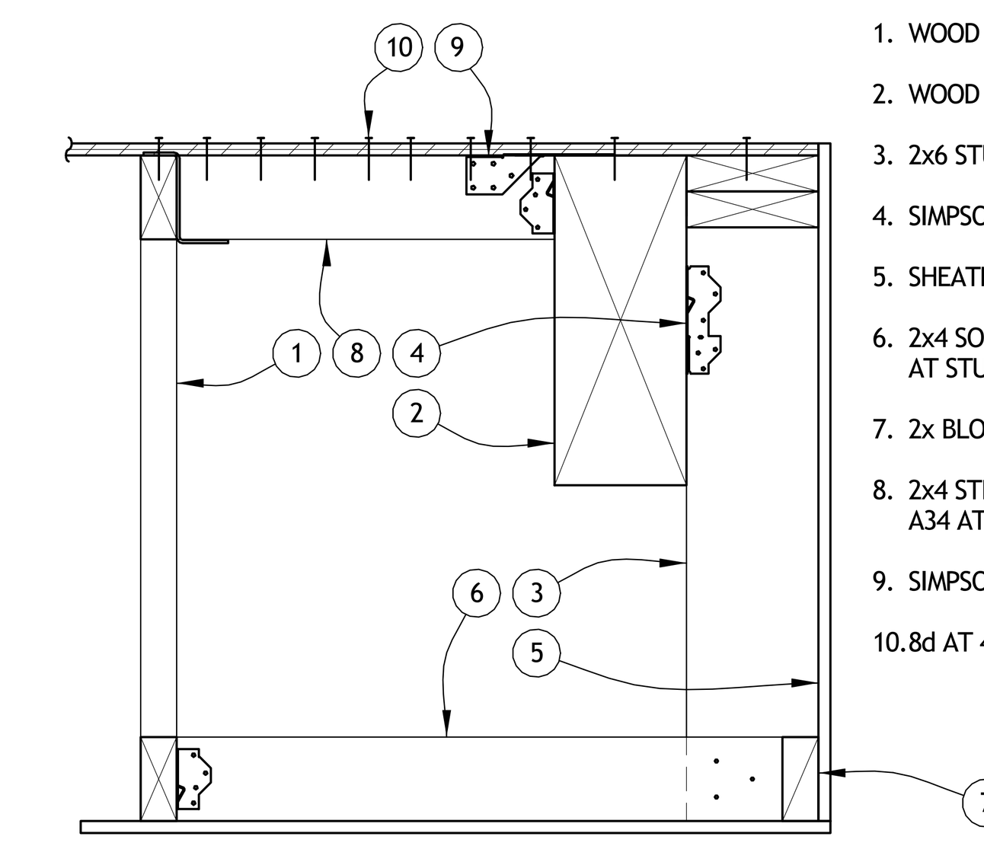


10 STEEL BEAMS AT MASONRY WALL
21802905403-10



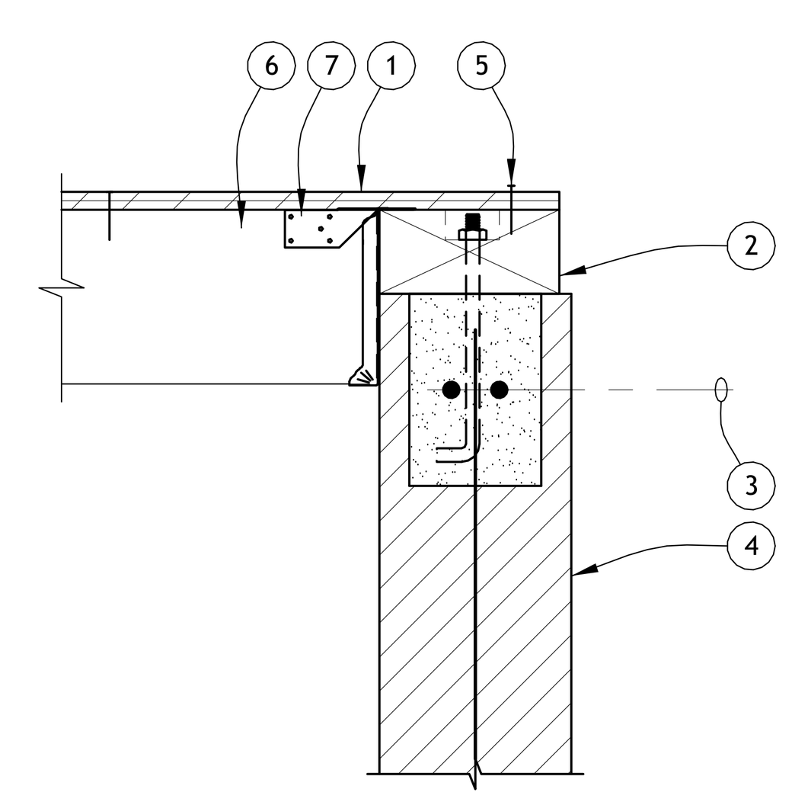
6 WOOD JOISTS AT STUD WALL
21802905403-6

1. **WOOD STUD WALL.**
2. **PLYWOOD ROOF SHEATHING.**
3. **EDGE NAILING.**
4. **WOOD JOISTS PER PLANS.**
5. **DOUBLE 2x TOP PLATE WITH NAILING PER TYPICAL DETAIL.**
6. **2x BLOCKING WITH (3) 16d PER BLOCK TOENAILED INTO DOUBLE TOP PLATE.**
7. **SIMPSON A34 EACH PAIR OF JOISTS.**
8. **(3) 10d FROM JOIST TO JOIST.**



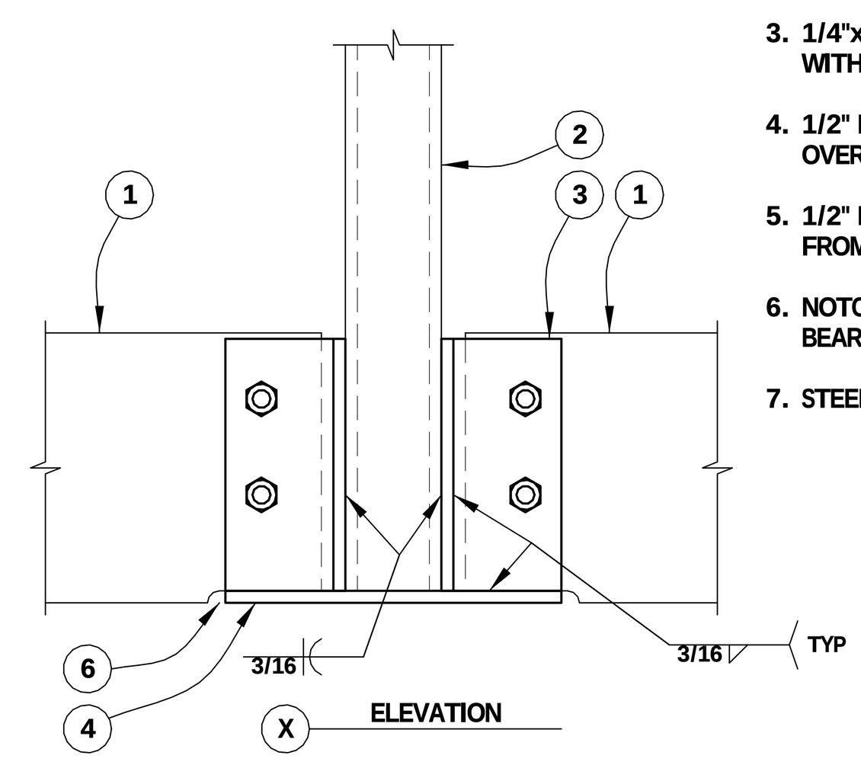
2 WOOD TRUSS AT WOOD BEAM
21802905403-2

1. WOOD TRUSS.
2. WOOD BEAM.
3. 2x6 STUDS AT 24" O.C.
4. SIMPSON A35 EACH STUD.
5. SHEATHING PER ARCH'L.
6. 2x4 SOFFIT FRAMING WITH (3) 10d NAILS AT STUD.
7. 2x BLOCKING.
8. 2x4 STRUT AT 4'-0" O.C. WITH SIMPSON A34 AT BEAM AND "Z" CLIP AT TRUSS.
9. SIMPSON H2.5A EACH STRUT.
10. 8d AT 4" O.C. ALONG STRUT.

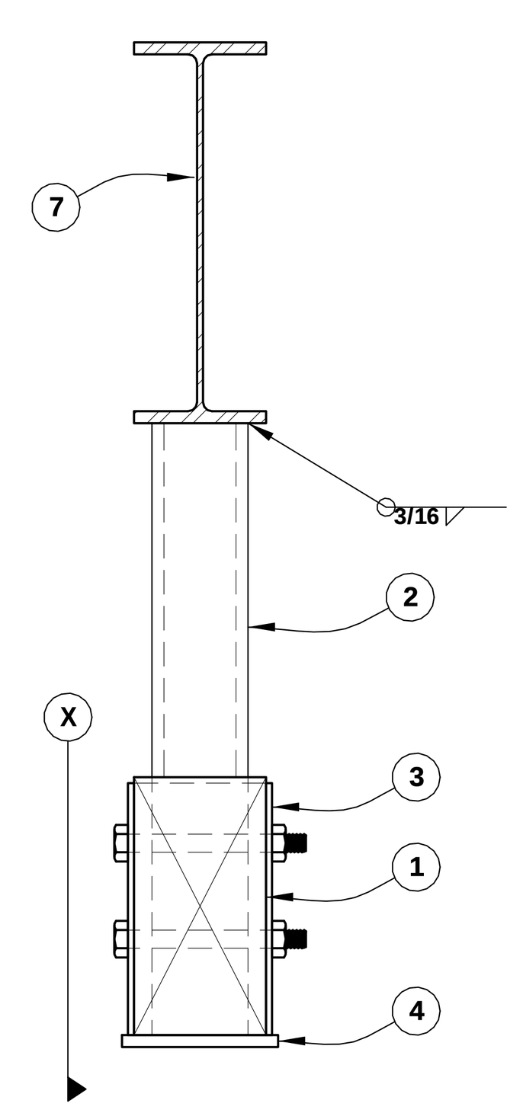


19 ROOF DECK AT MASONRY WALL
218029A05403-13

1. PLYWOOD ROOF SHEATHING.
2. 3x WOOD PLATE WITH 5/8"Ø ANCHORS AT 24"O.C. MAX.
3. (2) #5 IN 8" DEEP CONTINUOUS BOND BEAM.
4. MASONRY WALL.
5. EDGE NAILING.
6. WOOD JOISTS PER PLANS WITH SIMPSON LUTF TYPE HANGERS EACH END.
7. SIMPSON H2.5A EACH JOIST.

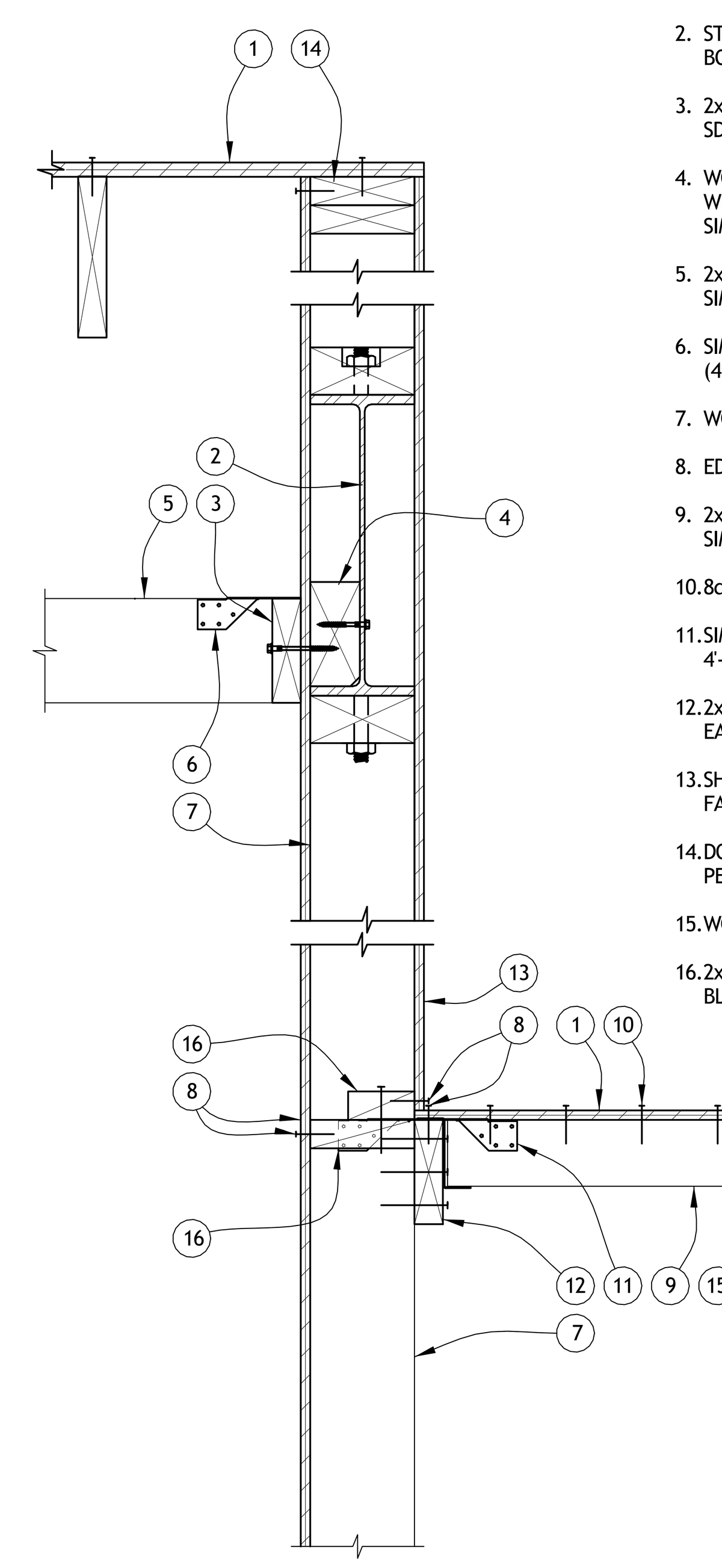


1. **WOOD BEAM.**
2. **HSS 4x4x3/8 HANGER POST.**
3. **1/4"x5"x10 1/2" TALL SIDE PLATES WITH (2) 3/4" BOLTS.**
4. **1/2" BOTTOM PLATE WITH 1/4" OVERHANG FROM SIDE PLATES.**
5. **1/2" BACK PLATE WITH 1/4" OVERHANG FROM SIDE PLATES.**
6. **NOTCH BEAM FOR FLUSH BOTTOM BEARING AS SHOWN.**
7. **STEEL BEAM PER PLANS.**



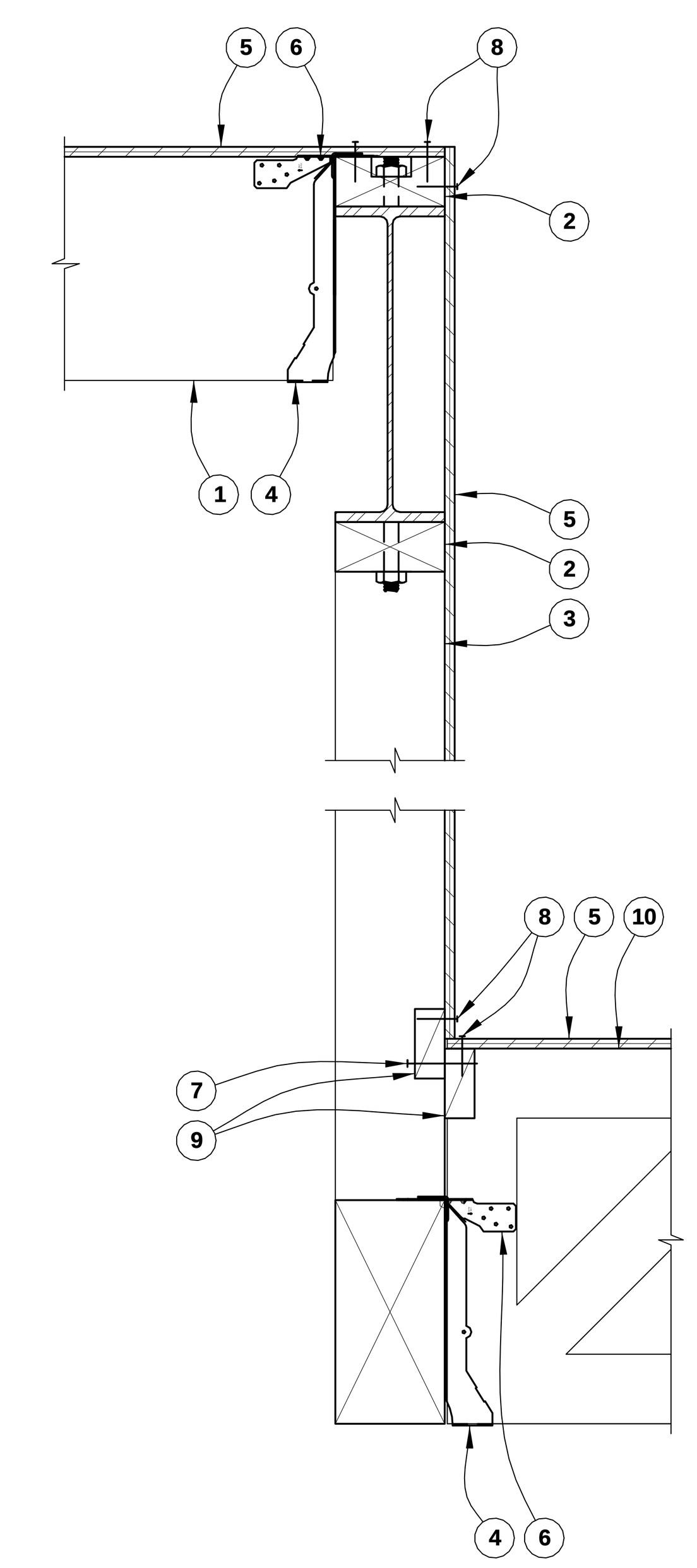
15 LOW BEAM AT STEEL BEAM
21802905403-15

1. PLYWOOD ROOF SHEATHING.
2. STEEL BEAM WITH NAILER TOP AND BOTTOM PER DETAIL 3/S4.03.
3. 2x6 LEDGER WITH 1/4"x4 1/2" SIMPSON SDS SCREWS AT 12" O.C.
4. WOOD BLOCKING, 6" (NOMINAL) TALL, WIDTH AS REQUIRED WITH 1/4"x3 1/2" SIMPSON SDS SCREWS AT 12" O.C.
5. 2x6 CEILING JOISTS AT 24" O.C. PROVIDE SIMPSON LU TYPE HANGER AT LEDGER.
6. SIMPSON H2.5A AT EVERY OTHER JOIST (48" O.C.).
7. WOOD STUD WALL.
8. EDGE NAILING.
9. 2x4 BLOCKING AT 4'-0" O.C. WITH SIMPSON "Z" CLIP HANGERS.
10. 8d AT 4" O.C. ALONG BLOCKING.
11. SIMPSON H2 FROM STUD TO BLOCKING AT 4'-0" O.C.
12. 2x6 WOOD LEDGER WITH (3) 16d AT EACH STUD AND (3) 16d PER BLOCKING.
13. SHEATHING AND NAILING ON VERTICAL FACE TO MATCH ROOF SHEATHING.
14. DOUBLE 2x TOP PLATE WITH NAILING PER TYPICAL DETAIL.
15. WOOD TRUSS.
16. 2x BLOCKING WITH (3) 16d BETWEEN BLOCKS.



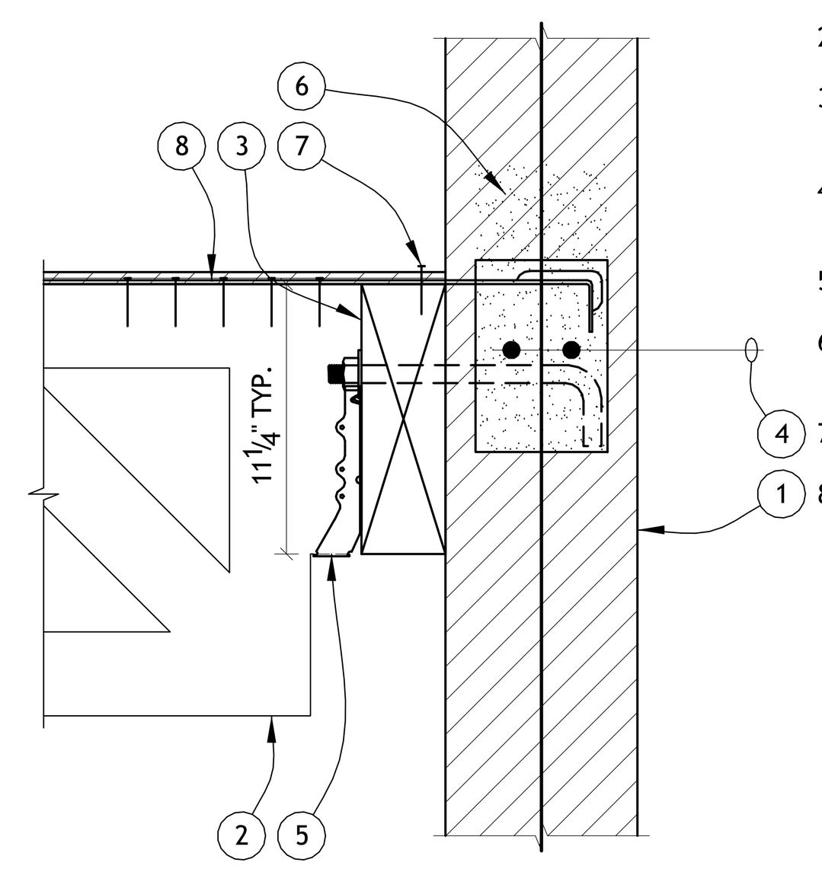
7 LOW STEEL BEAM AT STUD WALL
21802905403-7

1. **WOOD JOIST.**
2. **3x NAILER WITH 5/8" THREADED RODS AT 24" O.C. COUNTERSINK HEADS AT TOP NAILER.**
3. **2x6 STUD WALL WITH STUDS AT 16" O.C..**
4. **SIMPSON JBA TYPE JOIST HANGER.**
5. **PLYWOOD SHEATHING. SHEATHING AND NAILING AT VERTICAL WALL TO MATCH ROOF SHEATHING.**
6. **SIMPSON H2.5A EVERY OTHER JOIST.**
7. **16d NAILS AT 6" O.C. BETWEEN BLOCKING.**
8. **EDGE NAILING.**
9. **2x BLOCKING.**
10. **WOOD TRUSS.**



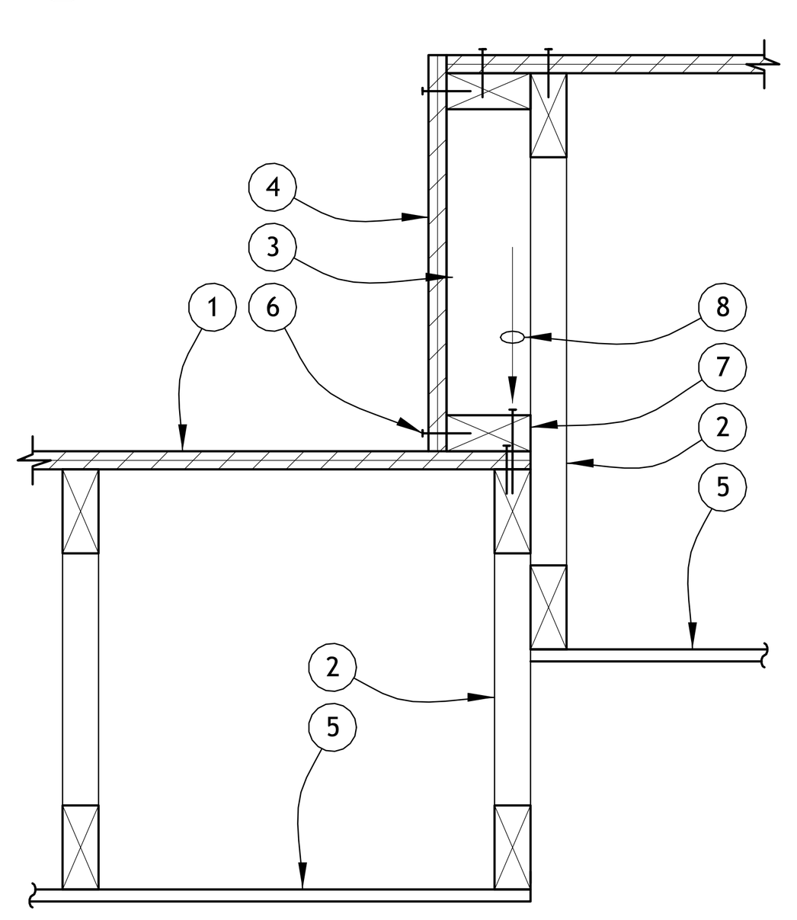
3 STEP AT ROOF
21802905403-3

1. MASONRY WALL.
2. WOOD TRUSS.
3. 4x12 LEDGER WITH 3/4"Ø ANCHOR BOLTS AT 16" O.C.
4. (2) #5 IN 8" DEEP CONTINUOUS BOND BEAM.
5. SIMPSON LUS TYPE HANGER.
6. GROUT 4" MIN. ABOVE AND EACH SIDE OF ANCHOR.
7. EDGE NAILING.
8. SIMPSON PA23 AT 48" O.C. PROVIDE 2x4 ON SIDE OF TRUSS WITH 16d AT 6" O.C. FOR CONNECTION OF STRAP (DOUBLE 2x REQUIRED).



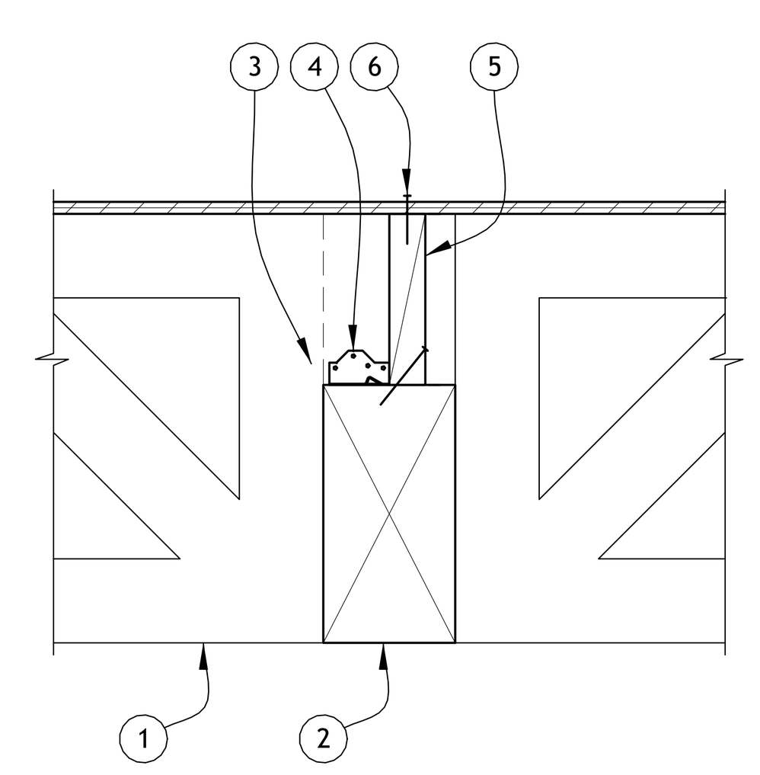
20 WOOD JOIST AT MASONRY WALL
21802905403-20

1. PLYWOOD SHEATHING.
2. WOOD TRUSS, SEE PLANS.
3. 2x4 STUD WALL WITH STUDS AT 16" O.C.
4. SHEATHING AND EDGE NAILING ON VERTICAL FACE OF WALL TO MATCH ROOF SHEATHING.
5. SHEATHING PER ARCH'L.
6. EDGE NAILING.
7. 2x TOP AND BOTTOM PLATE. PROVIDE 16d AT 6" O.C. AT BOTTOM PLATE TO TRUSS BELOW.
8. TRUSS MANUFACTURER TO DESIGN TRUSS FOR 60 PLF DEAD LOAD IN ADDITION TO STANDARD ROOF DEAD AND LIVE LOADS. PROVIDE DOUBLE TRUSS AS REQUIRED.



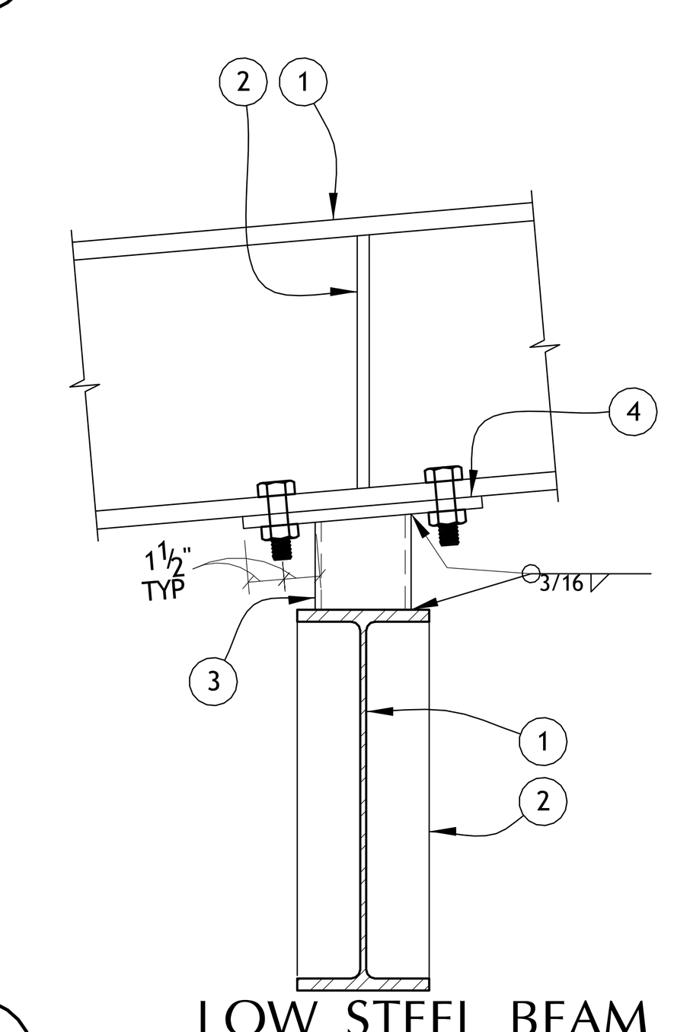
11 DOUBLE TRUSS AT STEPPED CEILING
21802905403-11

1. WOOD TRUSS.
2. WOOD BEAM PER PLANS. .
3. PROVIDE NOTCH IN TRUSS FOR BEAM AS SHOWN FOR BEARING ON TOP OF BEAM.
4. SIMPSON A34 EACH TRUSS.
5. 2x BLOCKING WITH (3) 16d NAIL TOENAILED EACH BLOCK.
6. EDGE NAILING.



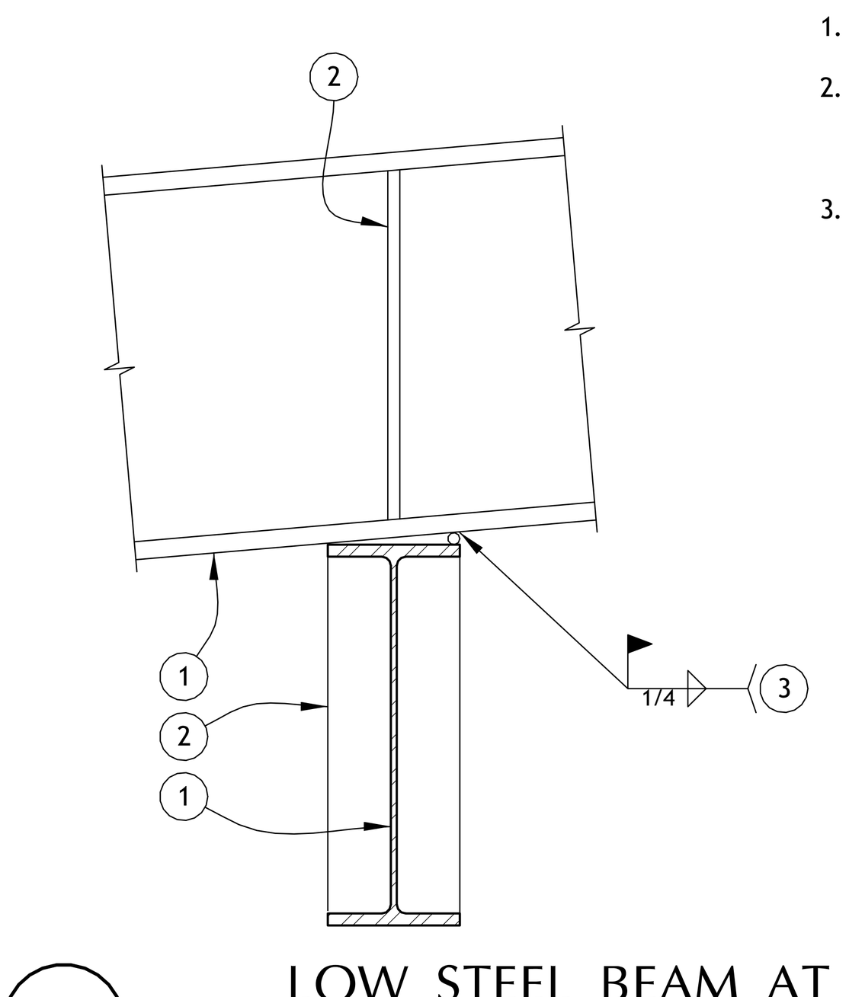
16 WOOD TRUSSES AT WOOD BEAM
21802905403-16

1. STEEL BEAM PER PLANS.
2. 3/8" THICK FULL DEPTH WEB STIFFENERS. WIDTH TO MATCH BEAM FLANGE WIDTH.
3. 4x4x3/8" STUB POST.
4. 1/2" CAP PLATE WITH (4) 5/8" DIA. BOLTS ON BEAM GAGE.



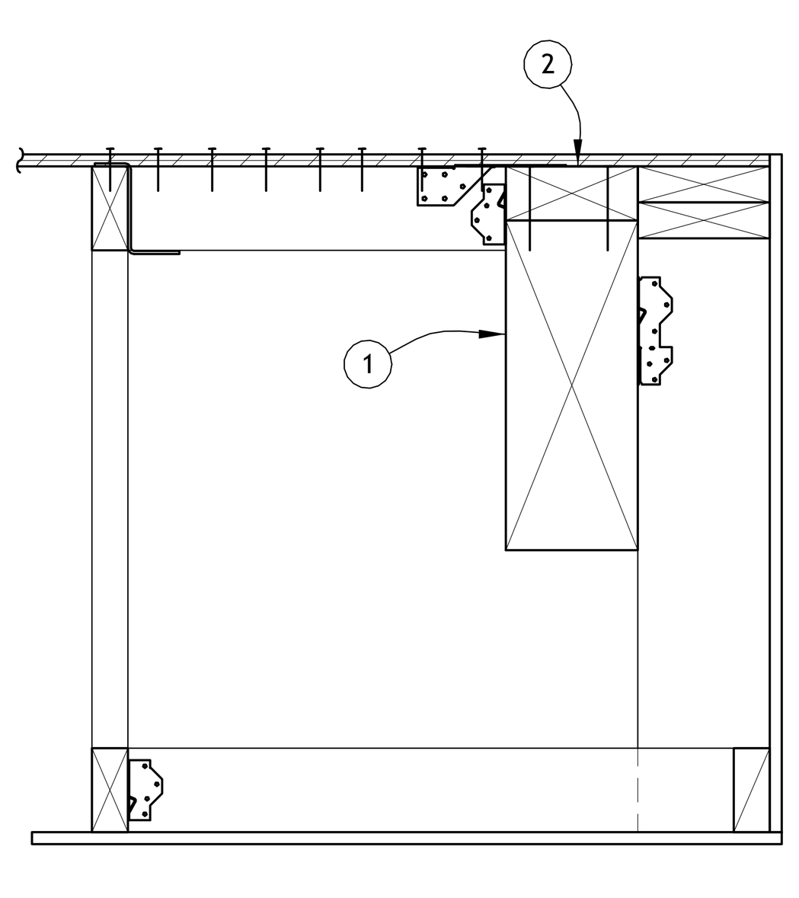
12 LOW STEEL BEAM AT STEEL BEAM
21802905403-12

1. STEEL BEAM PER PLANS.
2. 3/8" THICK FULL DEPTH WEB STIFFENERS. WIDTH TO MATCH BEAM FLANGE WIDTH.
3. PROVIDE ROUND STOCK OR BAR STOCK TO ACHIEVE WELD ON HIGH SIDE.



8 LOW STEEL BEAM AT STUD WALL
21802905403-8

1. SLAB EDGE AT WOOD BEAM PER DETAIL 2/S4.03.
2. TAPERED WOOD NAILER WITH 16d NAILS AT 12" O.C. STAGGERED. PROVIDE MULTIPLE NAILERS OR STUD WALL AS REQUIRED.



4 WOOD TRUSS AT WOOD BEAM
21802905403-4

SEAL

PROFESSIONAL ENGINEER STATE OF NEVADA
KURT GUIDICE
Exp. 6/30/21
CIVIL/STRUCTURAL
No. 21313
22 APR 2020

A NEW SHELL BUILDING IMPROVEMENT
31 SOUTH WATER STREET
CITY OF HENDERSON, NV 89015
APN #179-18-611-055
PROJECT NUMBER: 0201909
DATE: 04.17.2020

P. JAMES ARCHITECT

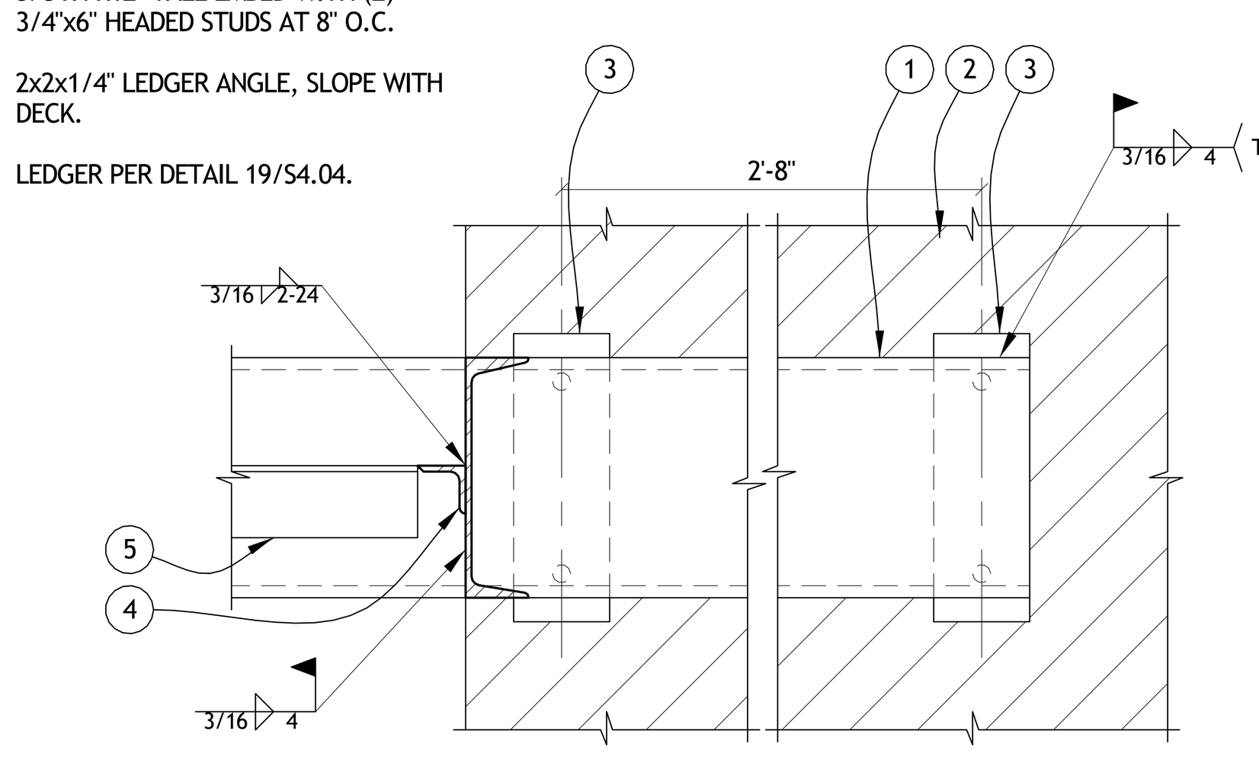
ARCHITECTURE
PLANNING
DESIGN
4629 VICTORIA BEACH WAY
LAS VEGAS, NV 89103
702.683.3277

REV	DESCRIPTION	DATE
REVISED		

BARKER STRUCTURAL
WWW.BARKERSTRUCTURAL.COM

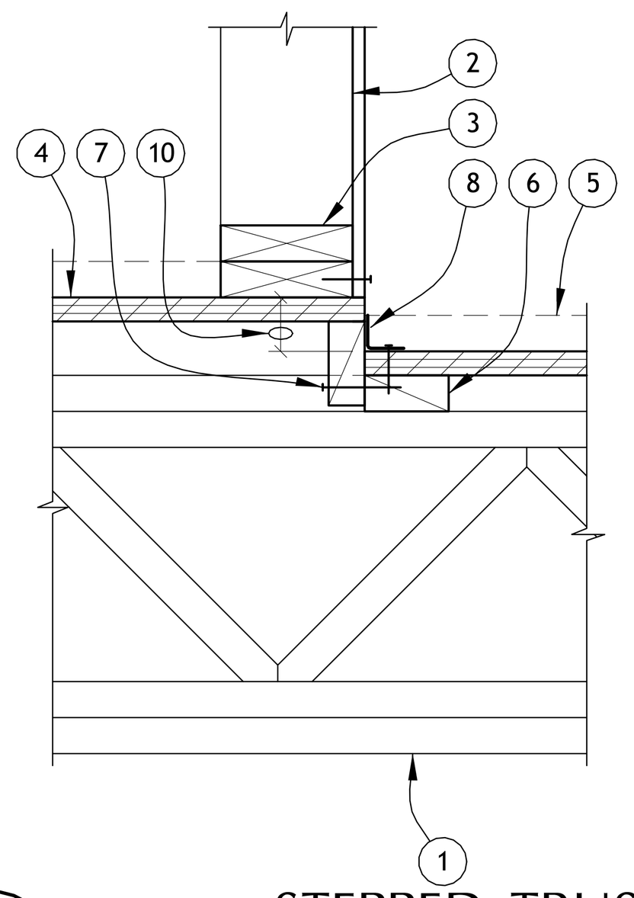
S4.03
FRAMING DETAILS

1. STEEL CHANNEL PER PLANS.
2. MASONRY WALL.
3. 3/8"x4"x12" TALL EMBED WITH (2) 3/4"x6" HEADED STUDS AT 8" O.C.
4. 2x2x1/4" LEDGER ANGLE, SLOPE WITH DECK.
5. LEDGER PER DETAIL 19/S4.04.



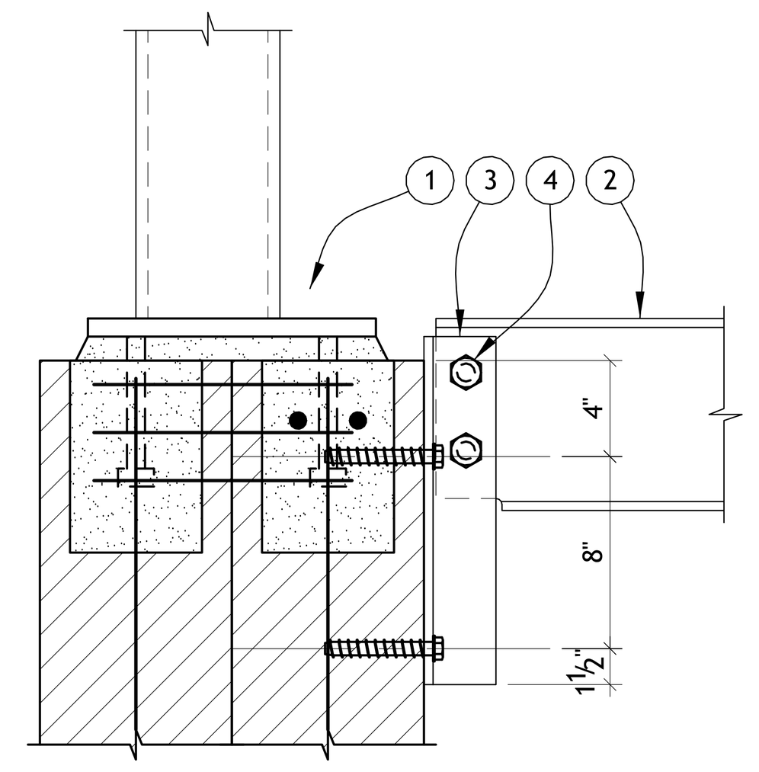
20 STEEL BEAM AT STEEL CHANNEL
218029DS404-20

1. WOOD TRUSS.
2. WOOD STUD WALL OR WINDOW WALL AS OCCURS.
3. DOUBLE 2x BOTTOM PLATE WITH 16d AT 12" O.C. EACH PLATE.
4. PLYWOOD FLOOR SHEATHING.
5. NON-STRUCTURAL TOPPING. SEE ARCH'L.
6. 2x BLOCKING.
7. (3) 16d EACH BLOCK.
8. 1 1/2"x1 1/2"x16 GA. BENT PLATE.
9. FOR DIMENSION OF STEP SEE ARCH'L.



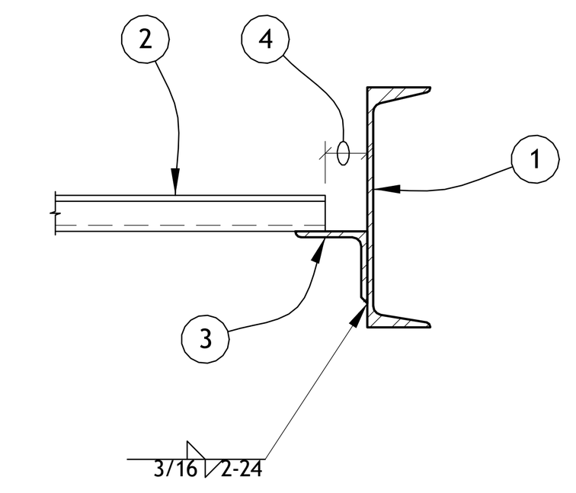
15 STEPPED TRUSS AT BALCONY
218029DS404-15

1. STEEL COLUMN AT MASONRY PILASTER, SEE DETAIL 18/S4.01 FOR INFORMATION NOT SHOWN.
2. STEEL BEAM PER PLANS.
3. 3x3x3/8 ANGLE WITH (2) 5/8" DIA. SIMPSON TITEN HD ANCHORS EMBEDDED 4 1/2" MIN. PER ESR 1056.
4. BOLTS PER DETAIL 1/S4.01.



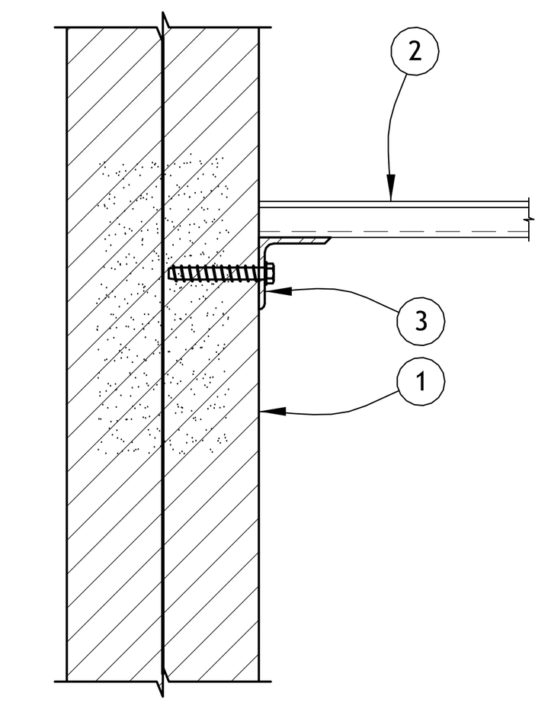
11 STEEL COLUMN AT PILASTER
218029DS404-11

1. STEEL CHANNEL PER PLANS.
2. METAL ROOF DECK PER PLANS.
3. 3x3x1/4" ANGLE.
4. HOLD DECK BACK 1" TO ALLOW FOR DRAINAGE.



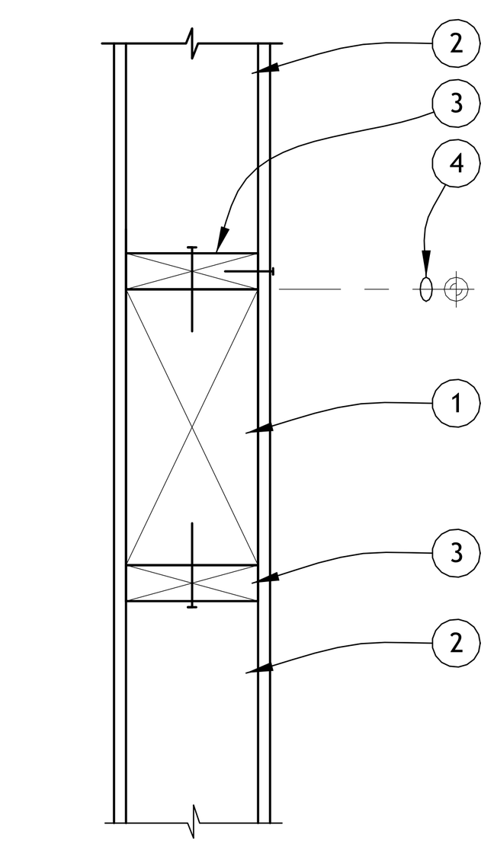
6 SLAB EDGE AT STEEL CHANNEL
218029DS404-6

1. MASONRY WALL.
2. METAL ROOF DECK PER PLANS.
3. 3x3x1/4 ANGLE WITH 5/8" DIA. SIMPSON TITEN HD ANCHORS EMBEDDED 4 1/2" MIN. INTO GROUTED CELLS PER ESR 1056.



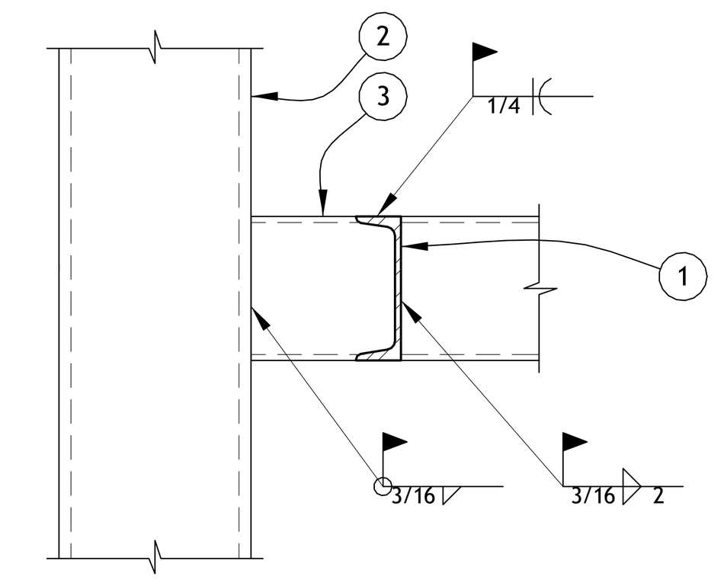
1 STEEL LEDGER TO MASONRY WALL
218029DS404-1

1. WOOD BEAM.
2. WOOD STUD WALL.
3. 2x PLATE WITH 16d AT 12" O.C.
4. BOTTOM OF SHEATHING ELEVATION OF ADJACENT FLOOR.



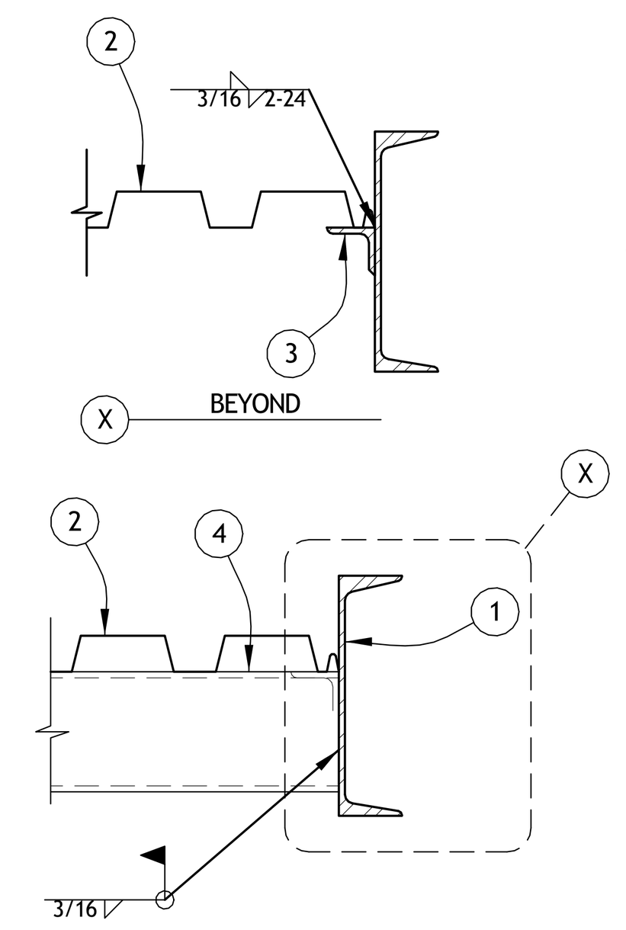
16 LATERAL BEAM AT WOOD STUD WALL
218029DS404-16

1. STEEL CHANNEL PER PLANS.
2. STEEL COLUMN.
3. STEEL BEAM CENTERED ON COLUMNS.



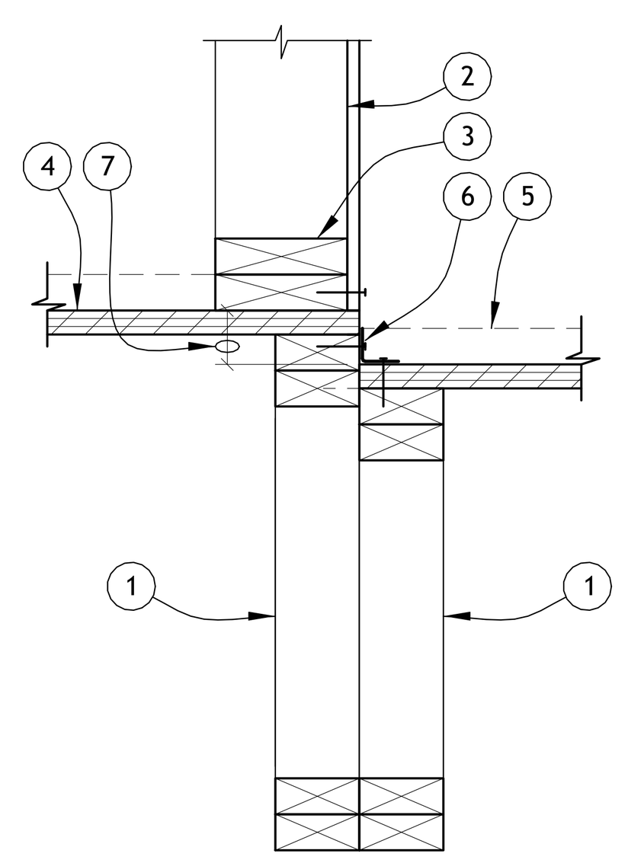
7 STEEL BEAM AT STEEL COLUMN
218029DS404-7

1. STEEL CHANNEL PER PLANS.
2. METAL ROOF DECK PER PLANS.
3. 2x2x1/4" ANGLE. SLOPE TO MATCH SLOPE IN DECK.
4. STEEL BEAM PER PLANS.



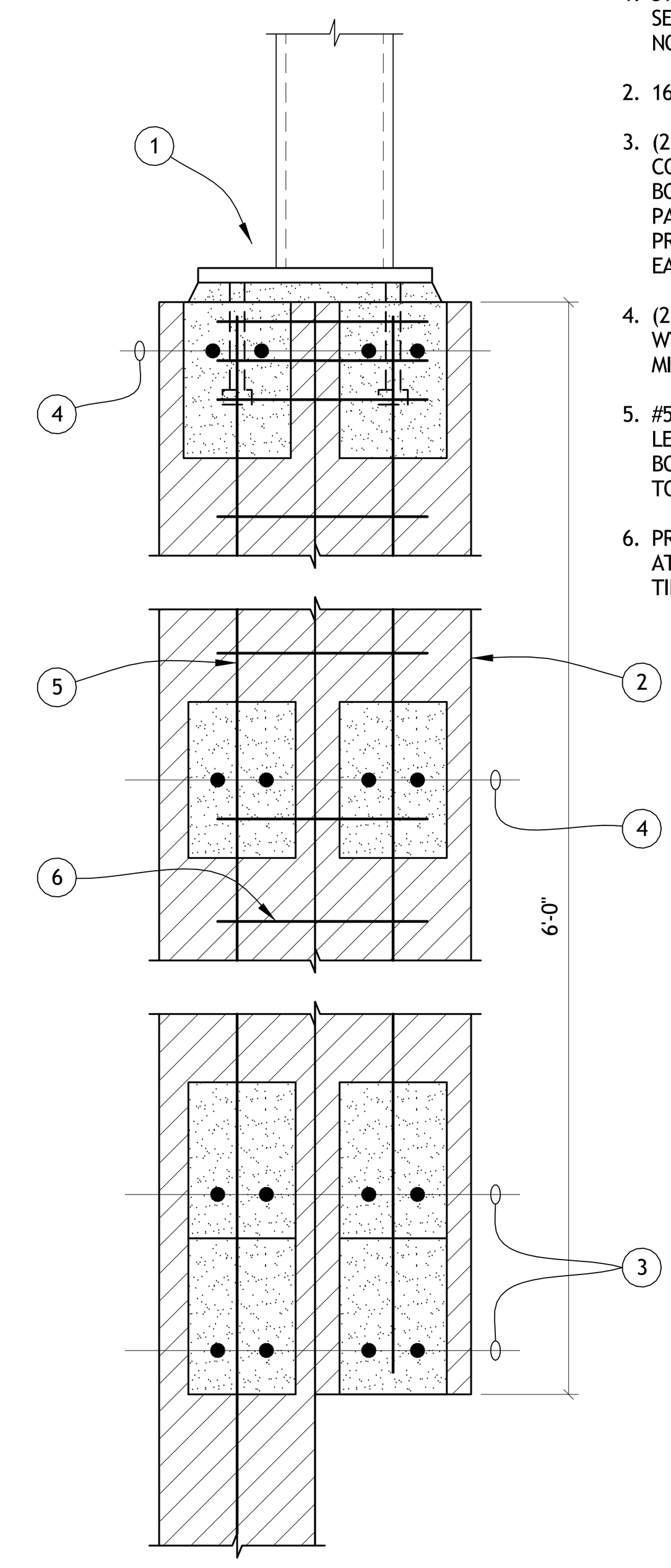
2 STEEL BEAM AT STEEL CHANNEL
218029DS404-2

1. WOOD TRUSS.
2. WOOD STUD WALL OR WINDOW WALL AS OCCURS.
3. DOUBLE 2x BOTTOM PLATE WITH 16d AT 12" O.C. EACH PLATE.
4. PLYWOOD FLOOR SHEATHING.
5. NON-STRUCTURAL TOPPING. SEE ARCH'L.
6. 1 1/2"x1 1/2"x16 GA. BENT PLATE WITH 10d NAILS AT 6" O.C. EACH LEG.
7. FOR DIMENSION OF STEP SEE ARCH'L.



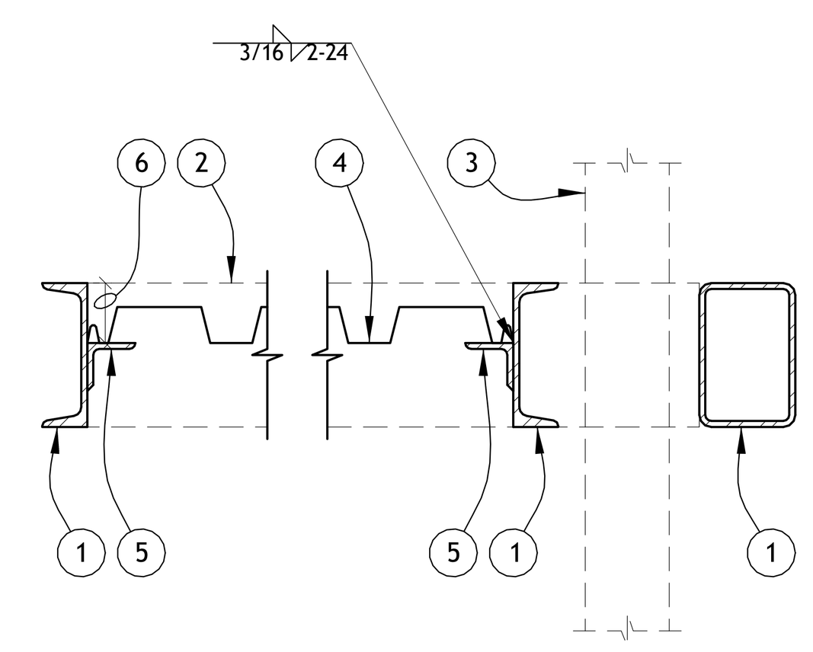
17 WOOD STUD WALL AT FLOOR
218029DS404-17

1. STEEL COLUMN AT MASONRY PILASTER, SEE DETAIL 18/S4.01 FOR INFORMATION NOT SHOWN.
2. 16" WIDE MASONRY LINTEL.
3. (2) #6 LONG EACH WYTHE IN BOTTOM (2) COURSES (TOTAL (8) #6 LONG AT BOTTOM OF LINTEL). EXTEND BARS 36" PAST JAMB IN ALL AT OUTER WYTHE AND PROVIDE HOOK IN DOWELS IN PILASTER EACH END AT INNER WYTHE.
4. (2) #5 IN HORIZONTAL BOND BEAM EACH WYTHE AT TOP OF WALL AND AT MID-HEIGHT OF LINTEL.
5. #5 VERTS AT 8" O.C. IN WALL FULL LENGTH OF LINTEL. PROVIDE HOOK AT BOTTOM OF DOWELS TURNED PARALLEL TO WALL.
6. PROVIDE #4 TIES AT 8" O.C. CENTERED AT COLUMN LOCATION. PROVIDE (3) #4 TIES AT 2" O.C. AT TOP COURSE.



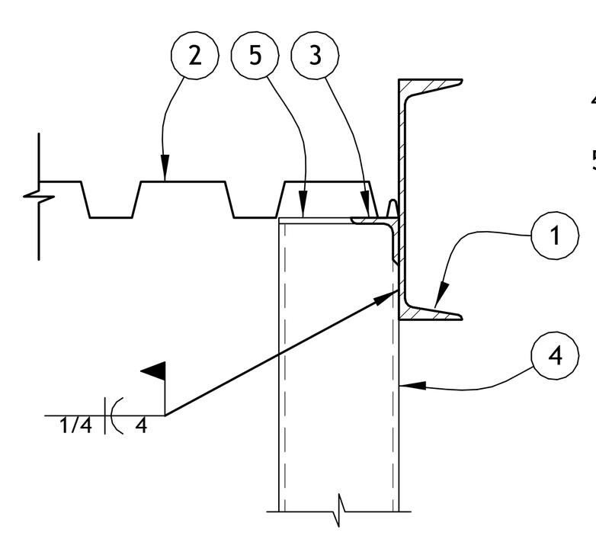
12 STEEL COLUMN AT PILASTER
218029DS404-12

1. STEEL BEAM PER PLANS.
2. LINE OF CHANNEL BEYOND.
3. LINE OF WALL, SEE ARCH'L.
4. METAL ROOF DECK PER PLANS.
5. 2x2x3/16 LEDGER ANGLE.
6. PROVIDE SLOPE IN ANGLE AT 1/4" PER FOOT MIN.



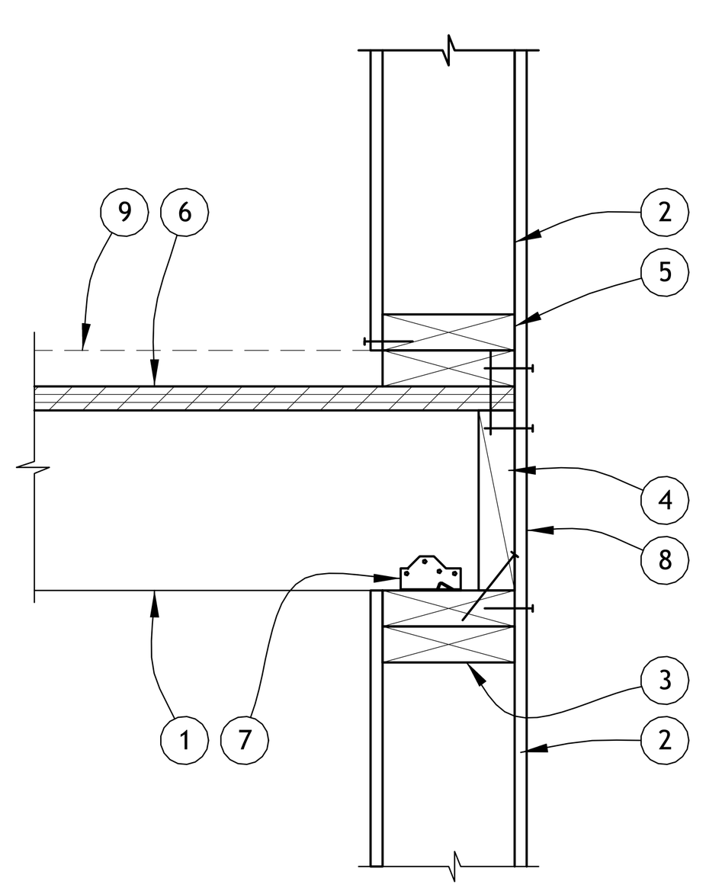
8 STEEL BEAM AT STEEL COLUMN
218029DS404-8

1. STEEL CHANNEL PER PLANS.
2. METAL ROOF DECK PER PLANS.
3. 2x2x1/4" LEDGER ANGLE, SEE DETAIL 2/S4.04 FOR INFORMATION NOT SHOWN.
4. STEEL COLUMN.
5. 1/4" CAP PLATE.



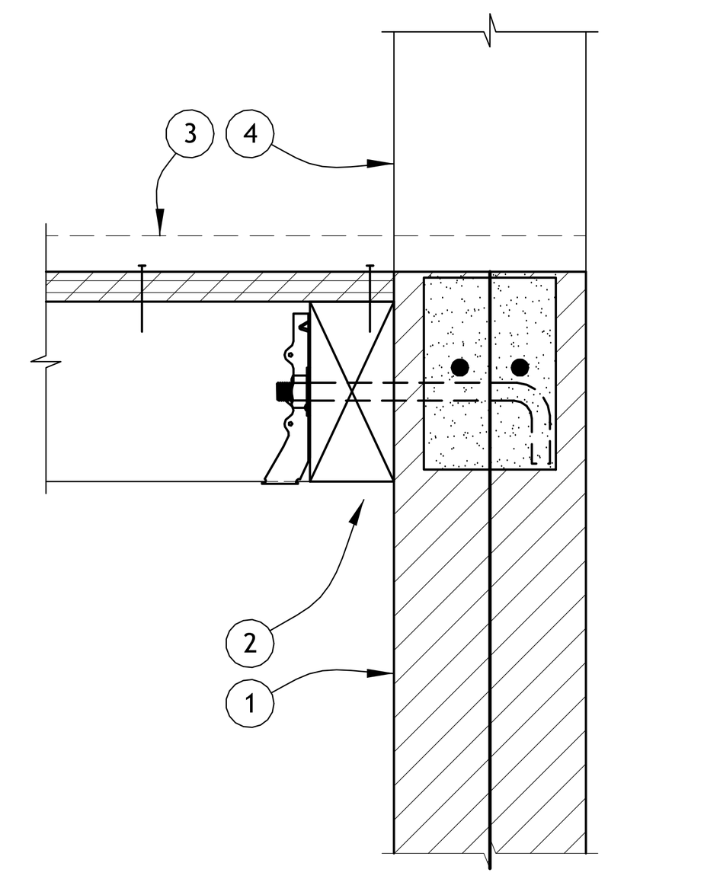
3 STEEL BEAM AT STEEL COLUMN
218029DS404-3

1. WOOD JOIST.
2. WOOD STUD WALL.
3. DOUBLE 2x TOP PLATE WITH NAILING PER TYPICAL DETAIL.
4. 2x BLOCKING WITH (3) 16d TOENAILED PER BLOCK.
5. DOUBLE 2x BOTTOM PLATE WITH 16d AT 12" O.C. EACH PLATE.
6. PLYWOOD FLOOR SHEATHING.
7. SIMPSON A34 AT EACH JOIST.
8. SHEATHING PER ARCH'L.
9. NON-STRUCTURAL TOPPING. SEE ARCH'L.



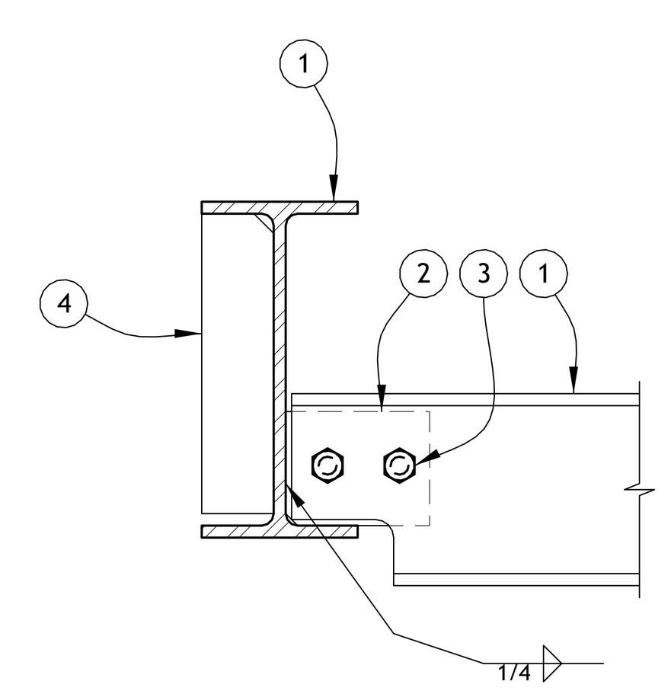
18 WOOD JOIST AT WOOD STUD WALL
218029DS404-18

1. MASONRY WALL.
2. FLOOR SHEATHING AT MASONRY WALL PER DETAIL 13/S4.01 OR 14/S4.01 AS OCCURS.
3. LINE OF NON STRUCTURAL TOPPING.
4. LINE OF MASONRY WALL BEYOND.



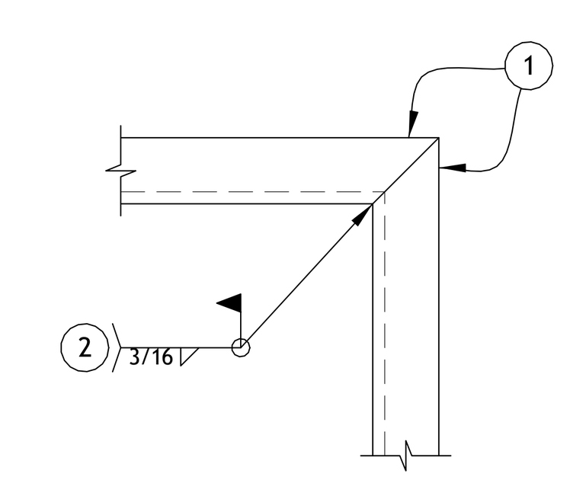
13 OPENING IN MASONRY WALL AT FLOOR
218029DS404-13

1. STEEL BEAM.
2. 3/8" x 4" TALL SHEAR PLATE 6" LONG.
3. (2) BOLTS. FOR SIZE AND TYPE OF BOLTS, SEE BOLT SCHEDULE, DETAIL 1/SS404.
4. 3/8" STIFFENER PLATE.



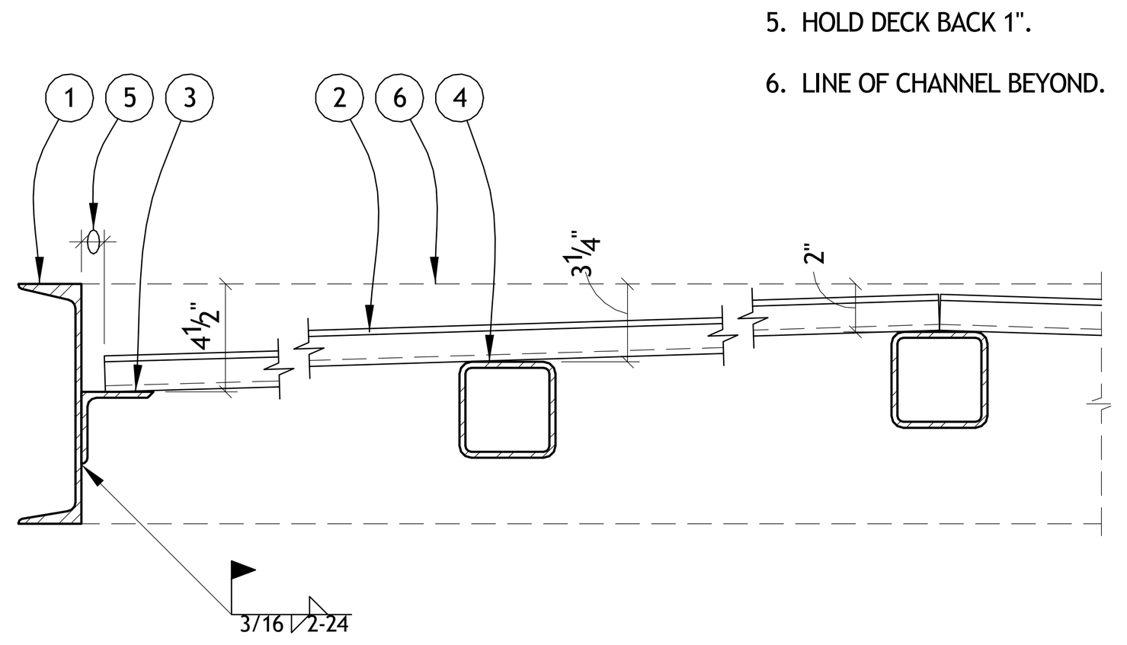
9 LOW BEAM AT STEEL BEAM
218029DS404-9

1. STEEL CHANNEL PER PLANS.
2. BUTT WELD AS OCCURS, GRIND WELDS SMOOTH.



4 STEEL BEAM INTERSECTION
218029DS404-4

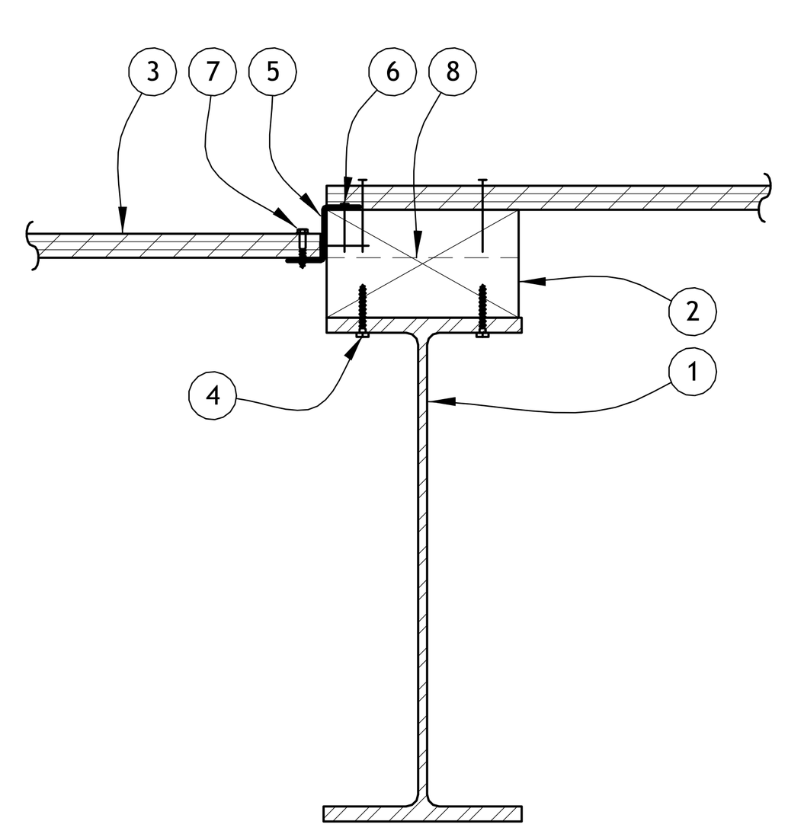
1. STEEL CHANNEL PER PLANS.
2. METAL ROOF DECK PER PLANS.
3. 3x3x1/4" ANGLE. SLOPE TO MATCH SLOPE IN DECK.
4. STEEL BEAM PER PLANS.
5. HOLD DECK BACK 1".
6. LINE OF CHANNEL BEYOND.



19 STEEL BEAM AT STEEL CHANNEL
218029DS404-19

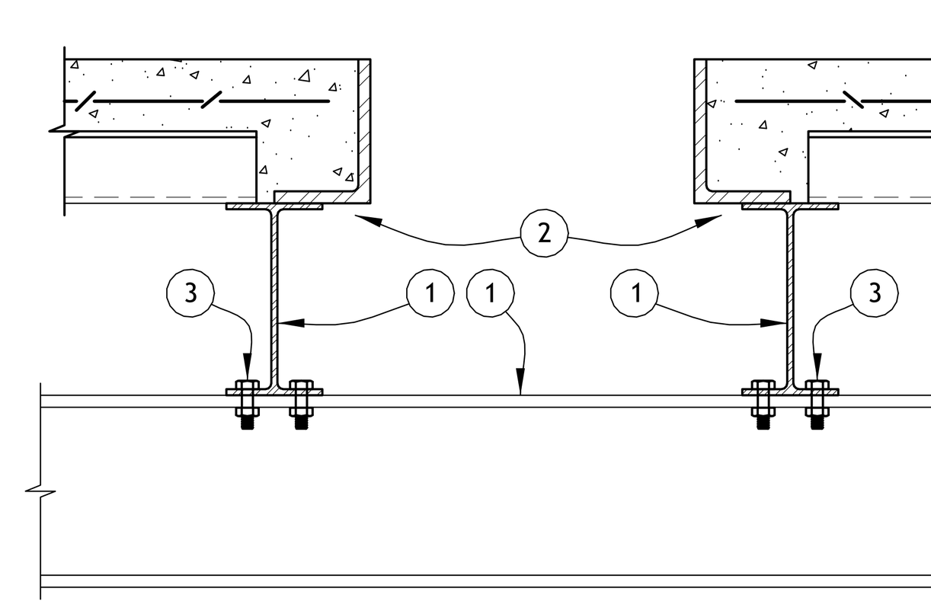
1. STEEL BEAM.
2. WOOD NAILER PROVIDE ADDITIONAL DEPTH AS REQUIRED TO ACHIEVE STEP PER ARCH'L.
3. PLYWOOD FLOOR SHEATHING.
4. 1/4"x2" SCREWS AT 16" O.C. STAGGERED IN PRE-PUNCHED HOLES IN STEEL BEAM.
5. 14 GA. BENT PLATE WITH 1 1/2" HORIZONTAL LEG TOP AND BOTTOM.
6. 10d NAILS AT 16" O.C AT TOP AND VERTICAL LEG STAGGERED.
7. #10 SCREWS AT 6" O.C.
8. LINE OF 3x NAILER BEYOND.

NOTE:
THREADED RODS WELDED TO TOP OF BEAM MAY BE PROVIDED PER DETAIL 5/S4.03 IN LIEU OF SCREWS AT CONTRACTOR'S OPTION.



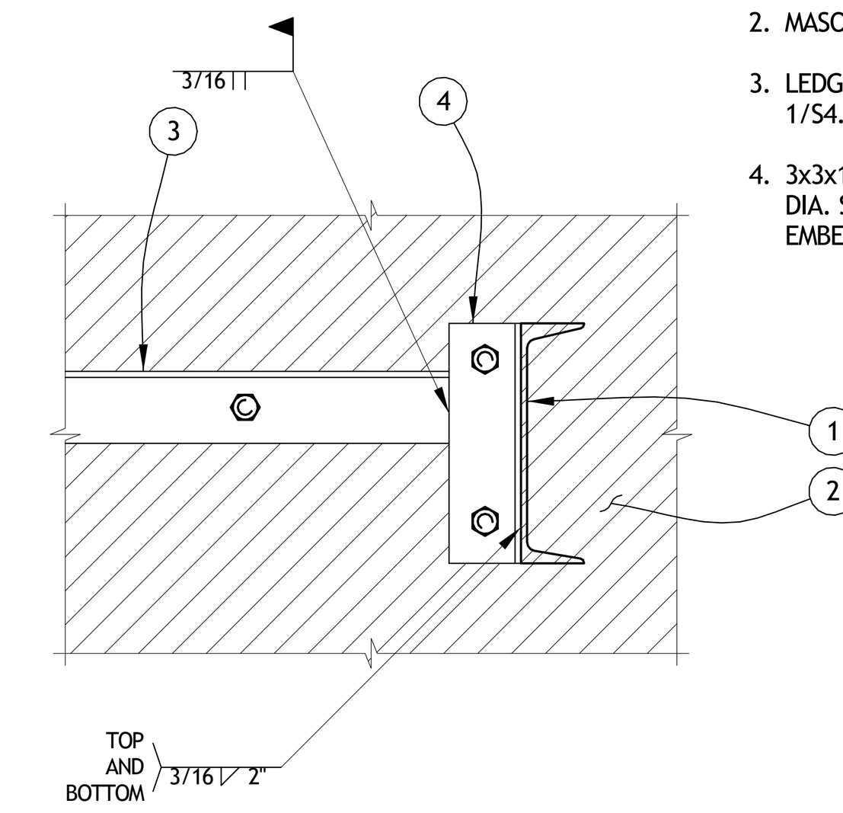
14 STEP AT STEEL BEAM
218029DS404-14

1. STEEL BEAM.
2. SLAB EDGE, SEE DETAIL 19/S4.01 FOR INFORMATION NOT SHOWN.
3. (4) 1/2" DIA. BOLTS ON BEAM GAGE.



10 STEEL BEAM AT STEEL BEAM
218029DS404-10

1. STEEL CHANNEL PER PLANS.
2. MASONRY WALL.
3. LEDGER AT MASONRY WALL PER DETAIL 1/S4.04.
4. 3x3x1/4" ANGLE 10" LONG WITH (2) 5/8" DIA. SIMPSON TITEN HD ANCHORS EMBEDDED 4 1/2" MIN. PER ESR 1056.



5 STEEL BEAM AT MASONRY WALL
218029DS404-5

SEAL
KURT GUIDICE
Exp. 6/30/21
CIVIL/STRUCTURAL
No. 21312
PROFESSIONAL ENGINEER STATE OF NEVADA
22 APR 2020

A NEW SHELL BUILDING IMPROVEMENT
31 SOUTH WATER STREET
APN #179-18-611-055
CITY OF HENDERSON, NV 89015
DATE: 04.17.2020
PROJECT NUMBER: 0201909

P. JAMES ARCHITECT
ARCHITECTURE
PLANNING
DESIGN
4629 VICTORIA BEACH WAY
LAS VEGAS, NV 89103
702.683.3277

REVISED		
REV	DESCRIPTION	DATE

BARKER STRUCTURAL
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S4.04
FRAMING DETAILS