

MORTON BUILDINGS GENERAL SPECIFICATIONS

LAMINATED COLUMNS - NO. 1 OR BETTER SOUTHERN YELLOW PINE NAIL LAMINATED 3 MEMBER S4S COLUMNS NAILED 8" O.C. STAGGERED ON EACH SIDE WITH 4" NAILS.

MFS PRE-CAST CONCRETE COLUMN - MORTON BUILDINGS FOUNDATION SYSTEM IS A PRE-ENGINEERED, 10,000 PSI, STEEL REINFORCED COLUMN FOR BELOW GROUND INSTALLATION. DESIGNED TO BE MECHANICALLY FASTENED TO ABOVE GROUND NAIL LAMINATED COLUMNS. THE SYSTEM IS DESIGNED TO RESIST BOTH AXIAL AND BENDING FORCES.

FOOTINGS AND ANCHORAGE - COLUMN HOLES ARE DUG A MINIMUM DEPTH OF 4'-0" BELOW GRADE (SEE PLANS FOR DIAMETER AND DEPTH). MFS PRE-CAST CONCRETE COLUMNS ARE PLACED IN THE HOLE. CONCRETE (MINIMUM COMPRESSIVE STRENGTH 2500 PSI) IS POURED IN PLACE TO THE SPECIFIED THICKNESS (SEE PLANS FOR REQUIRED THICKNESS ABOVE AND BELOW THE COLUMN). THE COLUMN IS THEN BACKFILLED WITH SOIL AND COMPACTED AT 8" INTERVALS OR BACKFILLED WITH CONCRETE (SEE PLANS).

TREATED LUMBER -- PRESSURE PRESERVATIVE TREATED LUMBER OTHER THAN LAMINATED COLUMNS ARE NO. 1 OR BETTER SOUTHERN YELLOW PINE AND CENTER MATCHED OR NOTCHED AND GROOVED OR S4S. PRESSURE TREATMENT TO GROUND CONTACT RETENTION WITH PRESERVATIVE TREATMENT COMPLYING WITH USE CATEGORY UC4B (AWPA OR ICC-ES) AND IN COMPLIANCE WITH USEPA GUIDELINES AND STANDARDS.

FRAMING LUMBER - SIDING NAILERS ARE 2x4 S4S OR 2x6 SPF NO. 2 OR BETTER SPACED APPROXIMATELY 36" O.C. WITH ALL JOINTS STAGGERED AT ATTACHMENT TO COLUMNS. ROOF PURLINS ARE 2x4 S4S NO. 2 OR BETTER ON EDGE SPACED APPROXIMATELY 24" O.C. ALL OTHER FRAMING LUMBER IS NO. 2 OR BETTER.

ROOF TRUSSES - FACTORY ASSEMBLED WITH 18 OR 20 GAUGE GALVANIZED STEEL TRUSS PLATES AS REQUIRED AND KILN DRIED LUMBER AS SPECIFIED, IN-PLANT QUALITY CONTROL INSPECTION IS CONDUCTED UNDER THE AUSPICES OF THE TPI INSPECTION BUREAU. TRUSSES ARE DESIGNED IN ACCORDANCE WITH CURRENT STANDARDS AND SPECIFICATIONS FOR THE STATED LOADING.

SIDING & ROOFING PANELS (FLUOROFLEX 1000™) - 0.019" MIN., G90 GALVANIZED OR AZ55 GALVALUME STEEL WITH AN ADDITIONAL BAKED-ON 70% PVDF FINISH WITH A NOMINAL 1 MIL. PAINT THICKNESS ON EXTERIOR.

TRIM - DIE-FORMED TRIM OF 0.017" MIN., G90 GALVANIZED OR AZ55 GALVALUME STEEL ON GABLES, RIDGES, CORNERS, BASE WINDOWS, AND DOORS WITH SAME FINISH AS ROOFING OR SIDING PANELS.

GUTTERS - 5" OR 6" K-STYLE, .030 HIGH TENSILE ALUMINUM GUTTER, 70% PVDF FINISH TO MATCH TRIM, ON BOTH SIDES OF THE BUILDING.
2x4 F1 F1 MFS 09/20

SHEET INDEX	
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CURRENT LUMBER SPECIFICATIONS (06-01-2013)		
SIZE	DESCRIPTION	BENDING VALUE Fb
2x4	NO. 2 SPF	1313 PSI
2x4	NO. 1 SYP	1500 PSI
2x4	2100f MSR SPF	2100 PSI
2x6	NO. 2 SPF	1138 PSI
2x6	NO. 1 SYP	1350 PSI
2x6	2100f MSR SPF	2100 PSI
2x6	2400 MSR SYP	2400 PSI
2x8	NO. 1 SYP	1250 PSI
2x8	2400 MSR SYP	2400 PSI
2x10	NO. 1 SYP	1050 PSI
2x10	2400 MSR SYP	2400 PSI
2x12	NO. 1 SYP	1000 PSI
2x12	2250f MSR SYP	2250 PSI
1 1/2"x1 1/2"	LAMINATED VENEER LUMBER	2800 PSI
3 1/2"x1 1/2"	GLU-LAM	1650 PSI
5 1/4"x1 1/2"	GLU-LAM	2400 PSI
5 1/4"x1 1/2"	GLU-LAM	2400 PSI

BUILDING DESIGN CRITERIA	
CONSTRUCTION TYPE	VB
RISK CATEGORY	II
ROOF SNOW LOAD *	35 PSF
GROUND SNOW LOAD	35 PSF
WIND SPEED (V _{ULT})	119 MPH
WIND SPEED (V _{ASD})	92 MPH
FLOOR LOAD	125 PSF

*ROOF SNOW LOAD CALCULATIONS

$P_f = 0.7 \times C_e \times I \times P_g \times C_t$
 $C_e = \text{SNOW EXPOSURE FACTOR} = 1.0$
 $I = \text{IMPORTANCE FACTOR} = 1.0$
 $P_g = \text{GROUND SNOW LOAD} = 35 \text{ PSF}$
 $C_t = \text{THERMAL FACTOR} = 1.1$
 $P_f = 0.7 \times 1.0 \times 1.0 \times 35 \times 1.1 = 26.95 \text{ PSF}$
 $P_{f, \text{min}} = 35 \text{ PSF (PER MA STATE CODE)}$
 $C_s = \text{ROOF SLOPE FACTOR} = 1.00$
 $P_s = P_f \times C_s = 35 \times 1.00 = 35 \text{ PSF}$

DESIGN AND EXPLANATORY NOTES

- 1.) ALL PLOT PLANS AND RELATED DETAILS SHALL BE PROVIDED BY OWNER UNLESS INCORPORATED AS PART OF THESE DRAWINGS.
- 2.) MORTON BUILDINGS GENERAL SPECIFICATIONS APPLY UNLESS INDICATED DIFFERENTLY ON SPECIFIC JOB DRAWINGS OR SUPPLEMENTAL INFORMATION.
- 3.) NO ONE MAY ALTER ANY ENGINEERING ITEM UNLESS ACTING UNDER THE DIRECTION OF THE LICENSED / REGISTERED ENGINEER.
- 4.) ♦ THE PRECEDING SYMBOL IDENTIFIES ITEMS THROUGHOUT THE PLANS THAT ARE NOT PROVIDED BY MORTON BUILDINGS, INC. OR MORTON BUILDINGS' SUBCONTRACTORS AND ARE THE OWNER'S RESPONSIBILITY.

OFFICE:
WESTFIELD, MA
JOB NO.
115-135287

LORI JERUSIK
CHICOPEE, MA

MA
ALLIED DESIGN ARCHITECTURAL & ENGINEERING GROUP, P.C.
100 S. PERSHING P.O. BOX 110 MORTON, IL 61550
PHONE NUMBER: 309-263-4105

DRAWN BY:	LLG
DATE:	8/16/2024
CHECKED BY:	KNO
DATE:	9/16/2024
REVISED DATE:	----
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I HEREBY CERTIFY THAT THE STRUCTURAL DESIGN FOR THIS BUILDING WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED/REGISTERED PROFESSIONAL ENGINEER.

Benjamin J. Zobrist

Date: 2024.09.18
13:47:05'00"

BENJAMIN J. ZOBRIST, P.E.
LICENSE #56782
EXPIRATION DATE: 30 - JUN - 2026
ben.zobrist@allegdesignaes.com



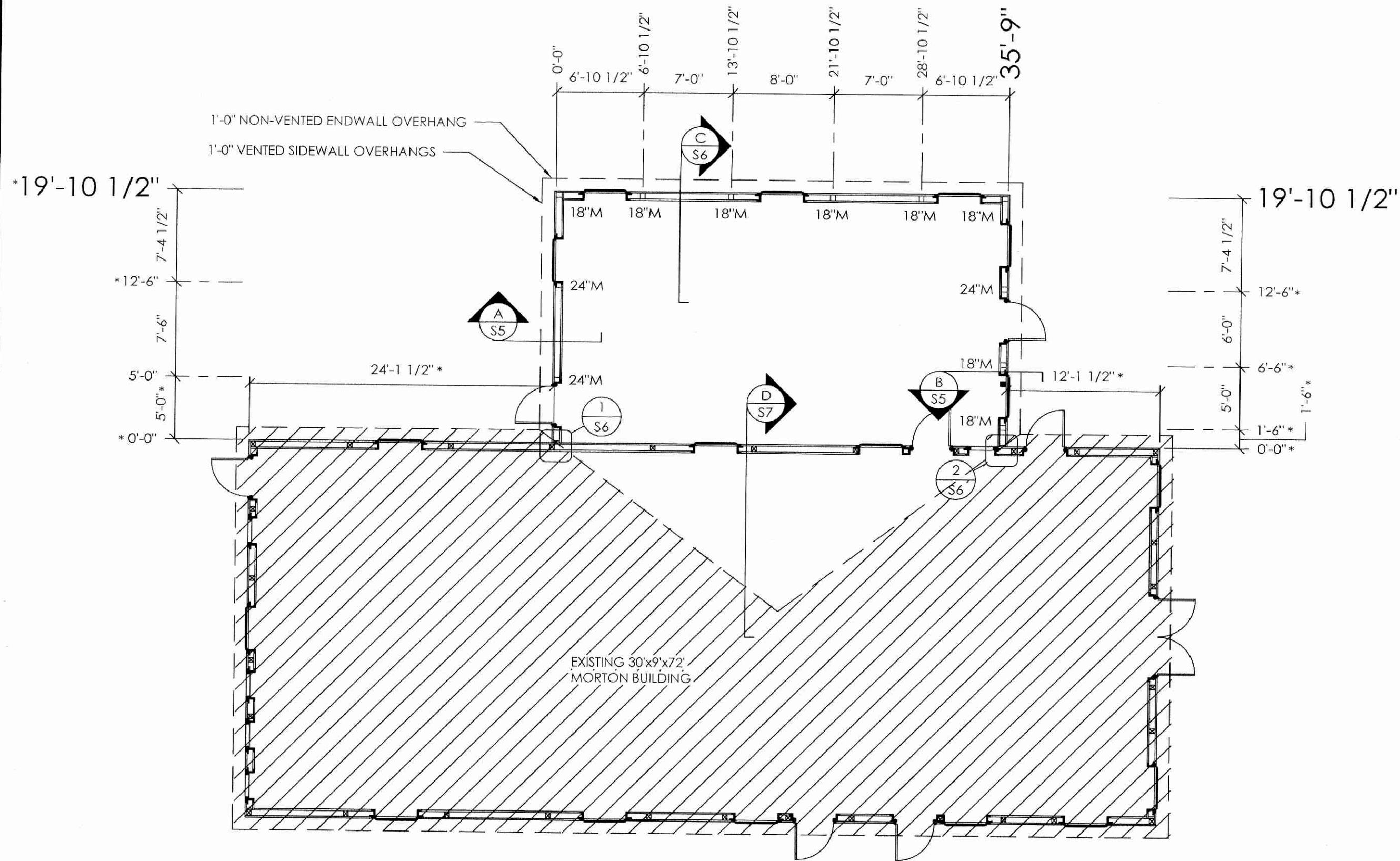
DIGITALLY CERTIFIED BY BENJAMIN J. ZOBRIST ON DATE ADJACENT TO SIGNATURE ABOVE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE CERTIFICATE MUST BE VERIFIED ON ELECTRONIC COPIES.

SCALE: AS NOTED	
SHEET NO:	OF:
GS1	GS1

DESIGN AND EXPLANATORY NOTES

1.) * - INDICATES DIMENSIONS ARE TAKEN FROM THE OUTSIDE FACE OF THE EXISTING BUILDING NAILERS.

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COLUMN PLAN

COLUMN PLAN LEGEND

- - 3-2x6 LAMINATED COLUMN LOCATION
- - HEADERED TRUSS LOCATION
- - EXISTING COLUMN LOCATION
- ALL STEEL FASTENED WITH STAINLESS STEEL SCREWS
- 30x30 ATTIC ACCESS PANEL (VERIFY LOCATION)
- 18" M - 18" DIAMETER FOOTING WITH 4" TO BOTTOM OF 21" THICK CONCRETE PAD (2500 PSI MINIMUM). 20" BELOW BOTTOM OF PRECAST CONCRETE COLUMN AROUND EXPOSED REBAR CAGE AND 3/4"x1/4" THREADED ROD WITH AN ADDITIONAL MINIMUM 1" ABOVE BOTTOM OF PRECAST CONCRETE COLUMN. PLACE CONCRETE BELOW AND ABOVE BOTTOM OF LOWER COLUMN IN ONE OPERATION.
- 24" M - 24" DIAMETER FOOTING WITH 4" TO BOTTOM OF 21" THICK CONCRETE PAD (2500 PSI MINIMUM). 20" BELOW BOTTOM OF PRECAST CONCRETE COLUMN AROUND EXPOSED REBAR CAGE AND 3/4"x1/4" THREADED ROD WITH AN ADDITIONAL MINIMUM 1" ABOVE BOTTOM OF PRECAST CONCRETE COLUMN. PLACE CONCRETE BELOW AND ABOVE BOTTOM OF LOWER COLUMN IN ONE OPERATION.



SCALE: 1" = 4'

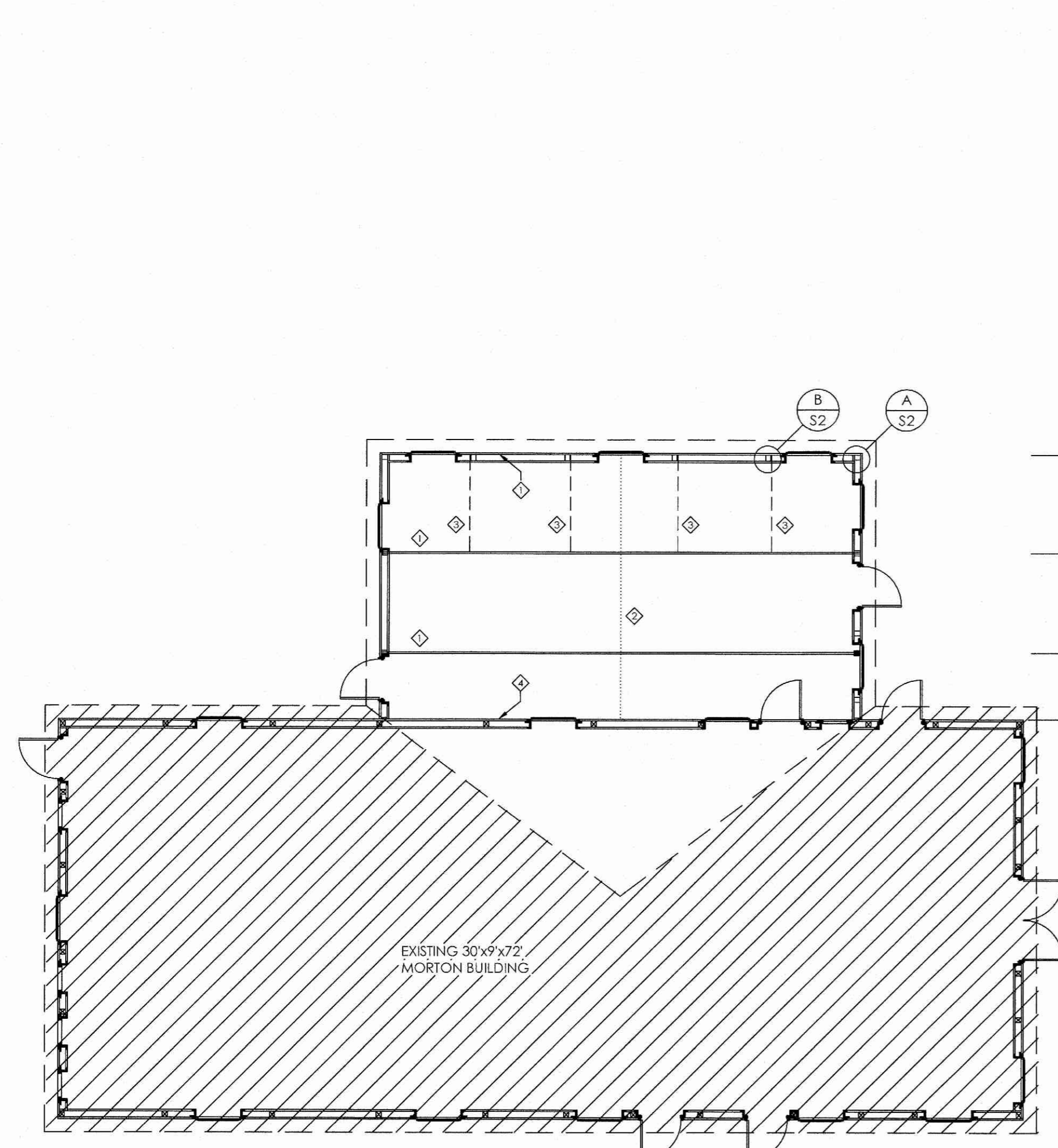
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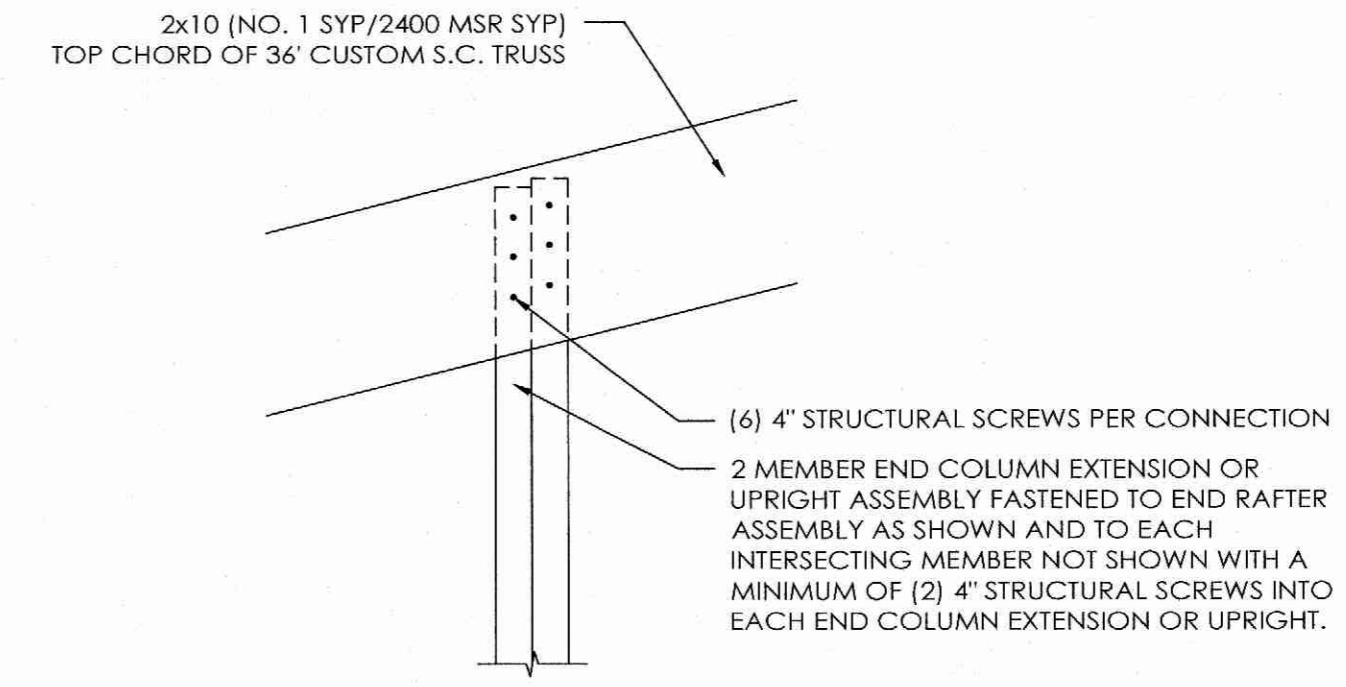
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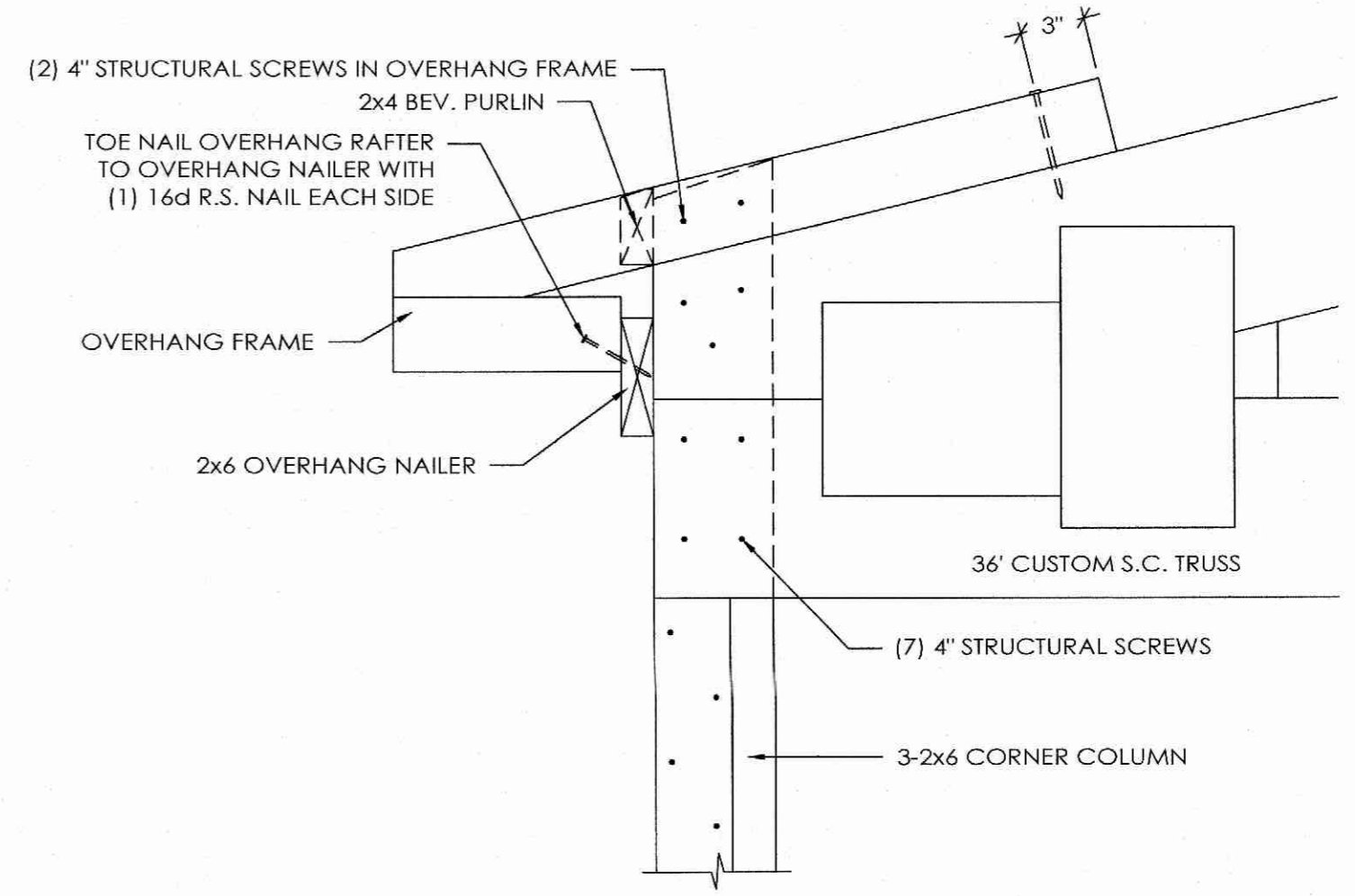
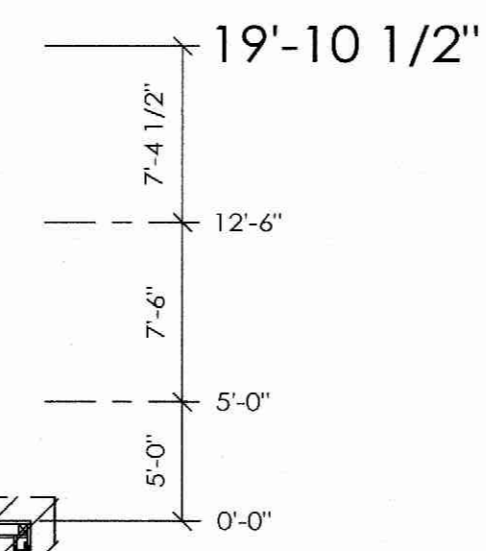
TRUSS/BRACING PLAN

TRUSS/BRACING PLAN LEGEND

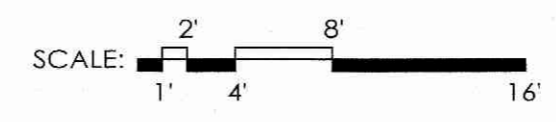
- ◇ - 36' CUSTOM S.C. TRUSS
- ◇ - 2x6 FLAT TRUSS TIE CENTERED IN BUILDING
- ◇ - 2x6 DIAGONAL END BRACES (TO EXTEND TO FIRST TRUSS IN FROM ENDWALL)
- ◇ - 2x10 (NO. 1 SYP) RAFTER



DETAIL B
SCALE: 1 1/2" = 1'-0"



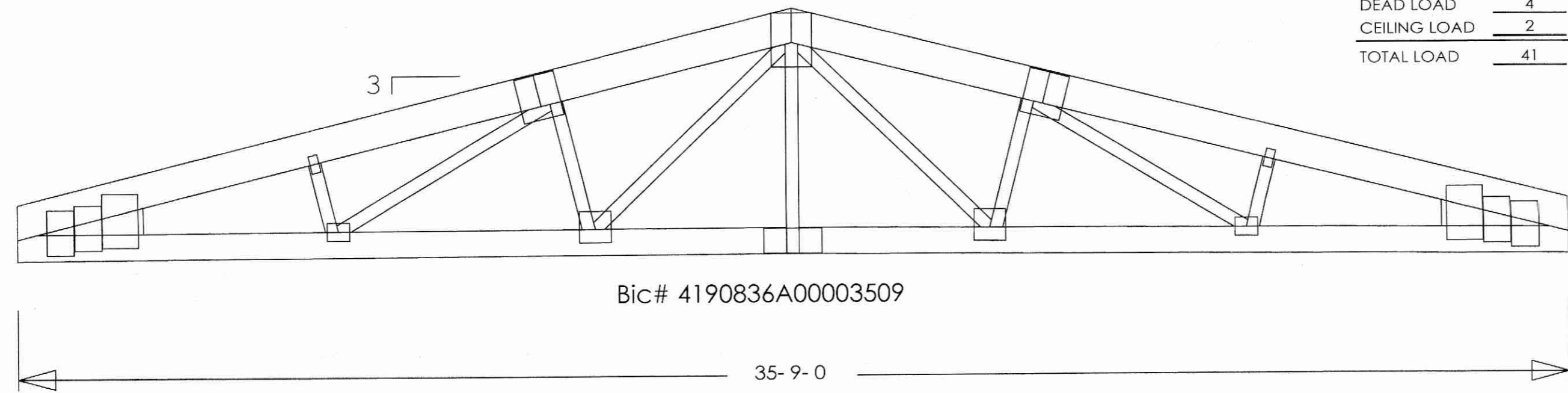
DETAIL A
SCALE: 1 1/2" = 1'-0"



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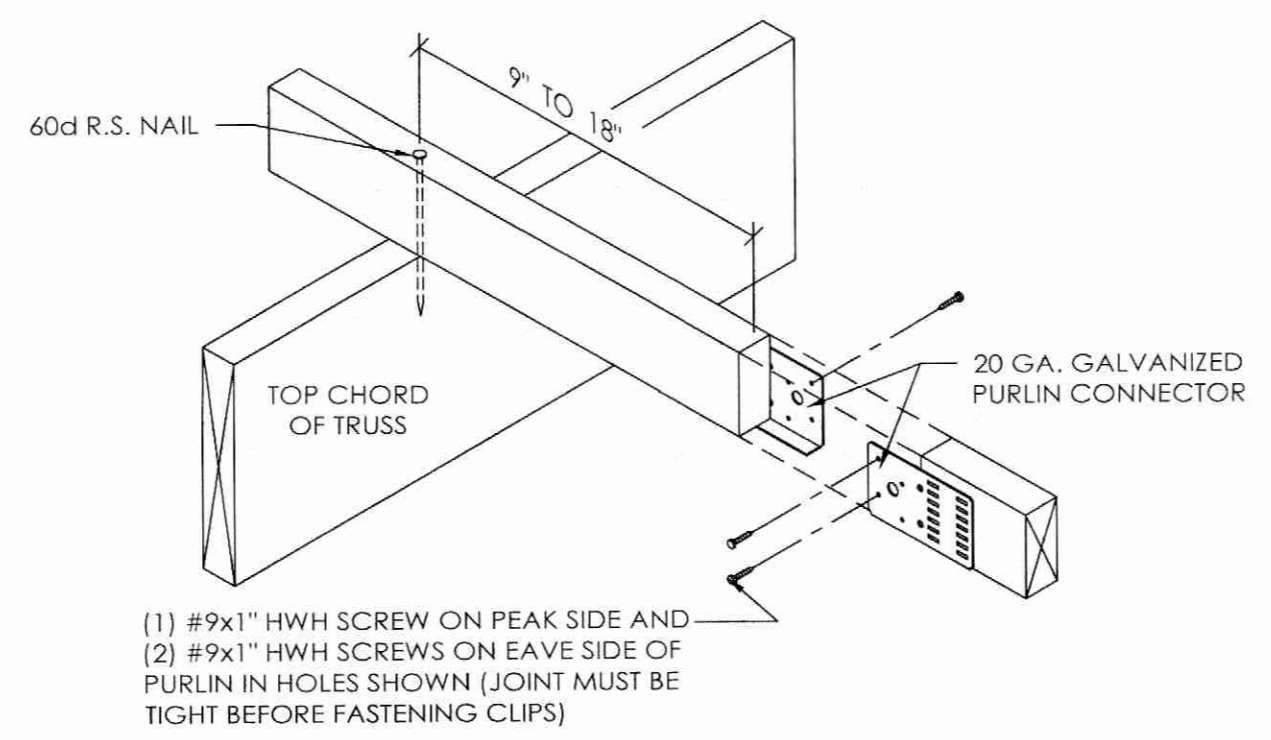


TRUSS SPACING	7'-6"	O.C.
LIVE LOAD	35	PSF
DEAD LOAD	4	PSF
CEILING LOAD	2	PSF
TOTAL LOAD	41	PSF

Bic# 4190836A00003509

35-9-0

36' CUSTOM S.C. TRUSS
SCALE: 3/8" = 1'-0"



- (1) #9x1" HWH SCREW ON PEAK SIDE AND
- (2) #9x1" HWH SCREWS ON EAVE SIDE OF PURLIN IN HOLES SHOWN (JOINT MUST BE TIGHT BEFORE FASTENING CLIPS)

2x4 BUTTED PURLIN DETAIL
(PURLIN CONNECTED WITH 60D R.S. NAIL)
SCALE: 1 1/2" = 1'-0"

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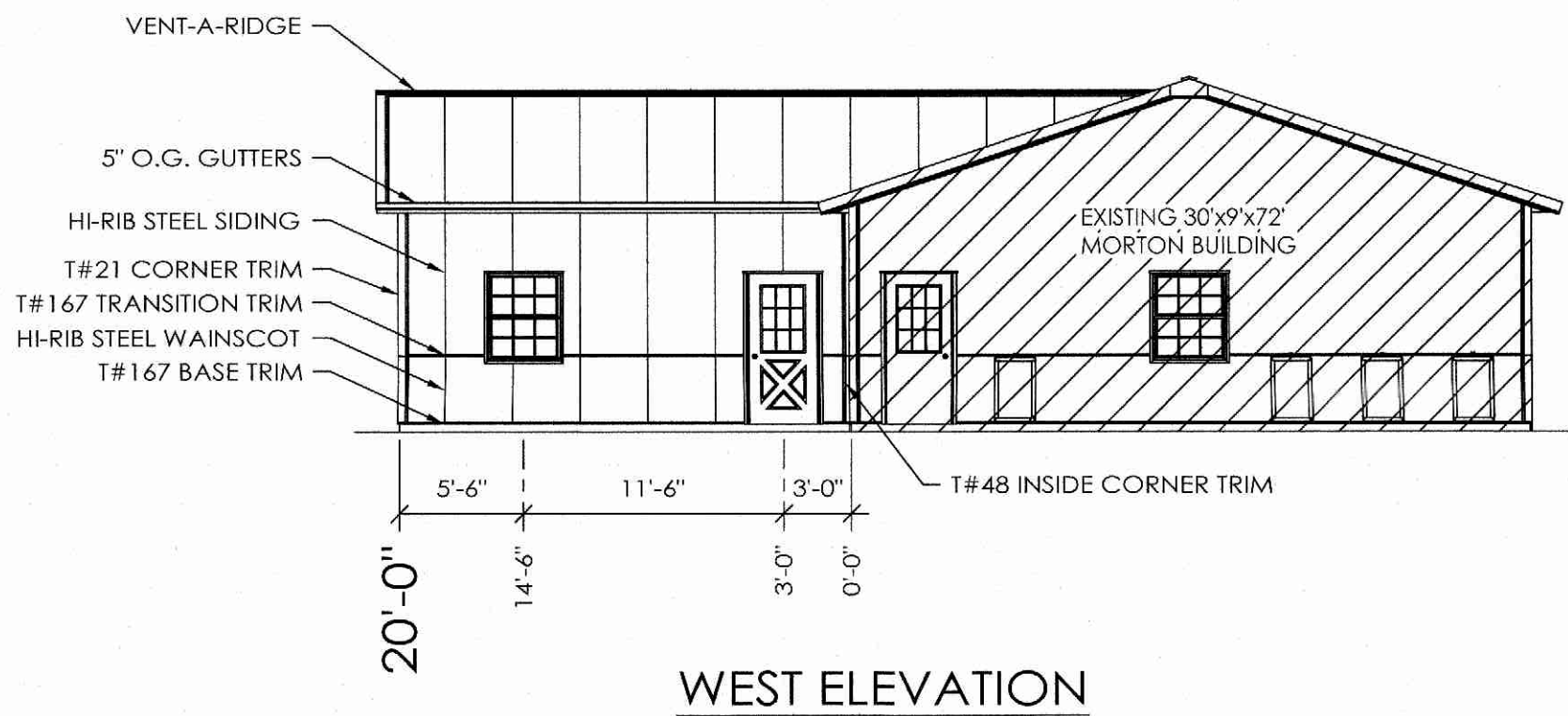
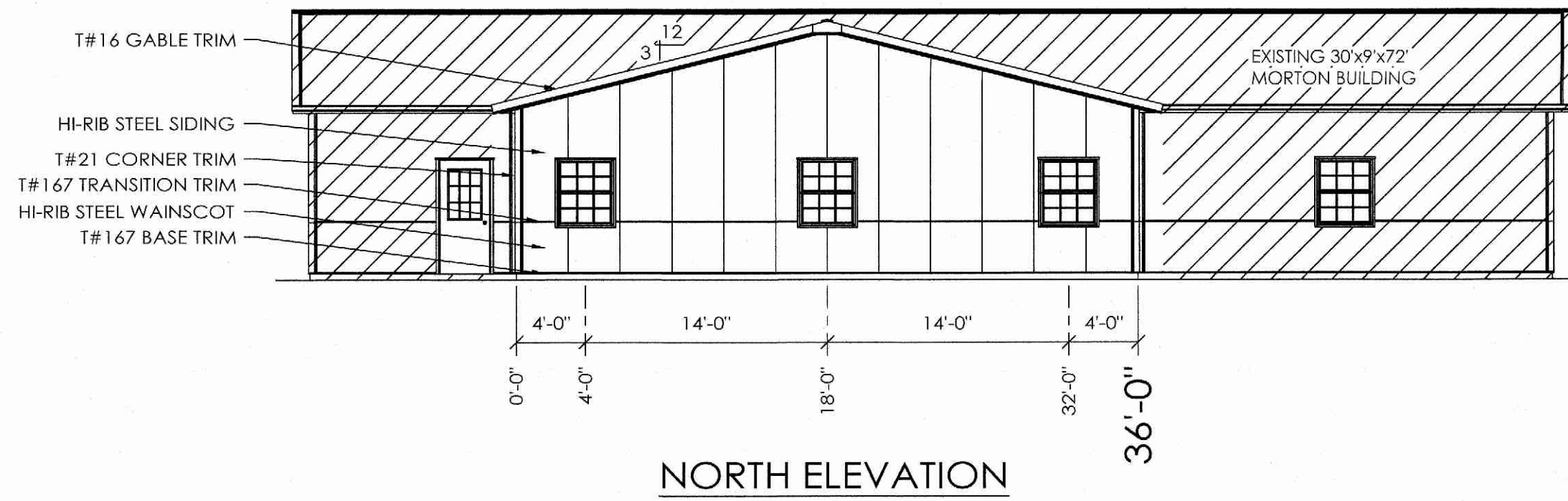
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DESIGN AND EXPLANATORY NOTES

1.) EXTERIOR DOOR AND WINDOW LOCATIONS ARE TAKEN FROM THE EXTERIOR FACE OF THE NAILERS AND ARE TO THE CENTER OF THE DOOR AND WINDOW UNITS. VERIFY ALL DOOR AND WINDOW LOCATIONS WITH THE OWNER.

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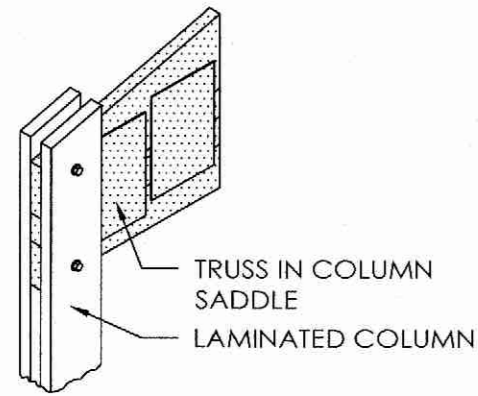
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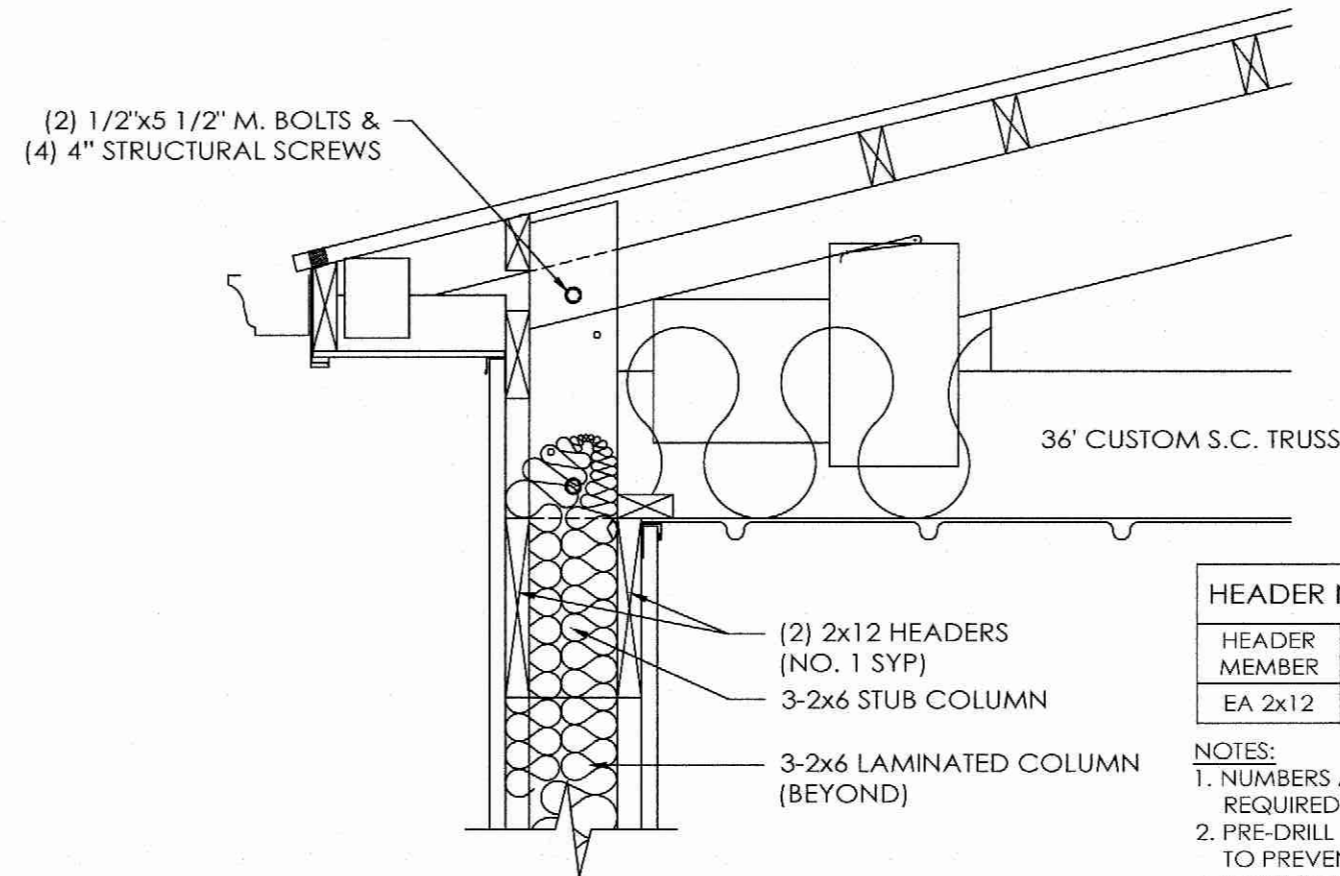
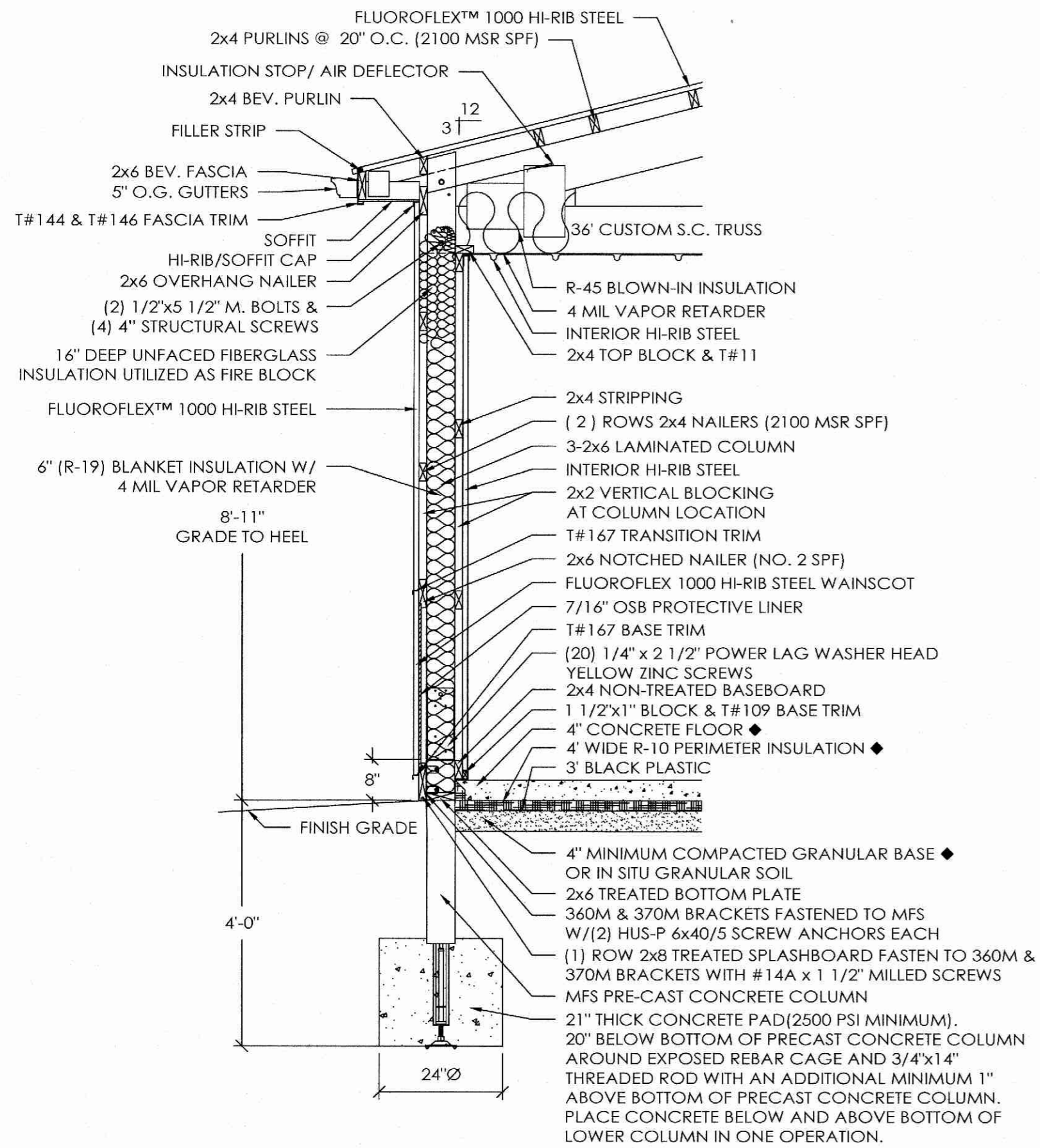


SCALE: 1" = 4'
2" = 8'
16'

SCALE: AS NOTED
SHEET NO: S4 OF: S7



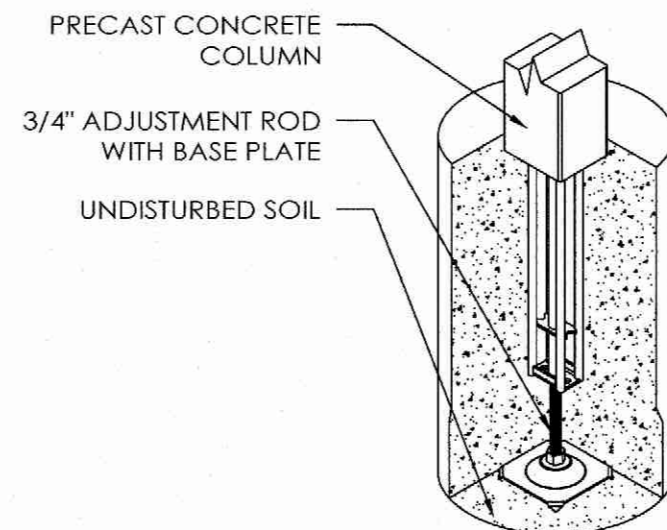
TRUSS SADDLE ISOMETRIC



HEADER NAILING SCHEDULE

HEADER MEMBER	STUB COLUMN	JAMB COLUMN
EA 2x12	12	9

NOTES:
 1. NUMBERS ABOVE ARE 20d R.S. NAILS REQUIRED PER CONNECTION.
 2. PRE-DRILL HEADERS AS REQUIRED TO PREVENT SPLITTING.
 3. IF NUMBER OF NAILS REQUIRED FOR HEADER TO JAMB COLUMN CONNECTION IS EXCESSIVE TO CAUSE SPLITTING, THE EXCESS NAILS MAY BE INSTALLED IN HEADER SUPPORT BLOCKING.



LOWER COLUMN ISOMETRIC

LOWER COLUMN INSTALLATION

1. INSTALL PRECAST CONCRETE COLUMN W/ADJUSTMENT ROD & BASE PLATE IN THE AUGERED HOLE.
2. PLUMB PRECAST CONCRETE COLUMN IN BOTH DIRECTIONS
3. ADJUST HEIGHT UP OR DOWN WITH ADJUSTMENT HEX ROD
4. POUR READI-MIX CONCRETE INTO THE HOLE AS SPECIFIED.
5. BACKFILL AND COMPACT THE ANNULAR SPACE AROUND THE COLUMN TO GRADE WITH SOIL AUGERED FROM THE SITE.

DESIGN AND EXPLANATORY NOTES

1. FOOTINGS ARE DESIGNED FOR A 2000 PSF SOIL BEARING CAPACITY. LOCAL CONDITIONS MAY REQUIRE MODIFICATIONS.
2. CONCRETE FLOOR NOTES:
 - a. 3500 PSI, 5 1/2 BAG MIX CONCRETE.
 - b. SLOPE GRADE AWAY FROM BUILDING @ 1" PER FOOT FOR A MINIMUM DISTANCE OF 10' PLUS OVERHANG WIDTH.
 - c. A VAPOR RETARDER IS NOT MANDATED PER IBC SECTION 1907 EXCEPTION 3. UNLESS THE FLOOR WILL BE COVERED BY MOISTURE SENSITIVE FLOORING MATERIALS OR IMPERMEABLE FLOOR COATINGS OR WHERE THE FLOOR WILL BE IN CONTACT WITH ANY MOISTURE SENSITIVE EQUIPMENT OR PRODUCT.
 - d. CONTRACTION JOINTS UNIFORMLY SPACED 12' O.C. OR LESS.
 - e. FOR PERIMETER INSULATION USE EXTRUDED POLYSTYRENE OR A COMPARABLE PRODUCT HAVING A MINIMUM COMPRESSIVE STRENGTH OF 25 PSI.
3. PRIOR TO PLACING THE CONCRETE FOOTINGS, HAND TAMP THE BOTTOM 2'-3" OF LOOSE SOIL TO CONSOLIDATE. IF THE DRILLED HOLE CONTAINS MORE THAN 3" OF LOOSE SOIL, REMOVE EXCESS SOIL TO A UNIFORM THICKNESS OF 2'-3", HAND TAMP AND PROCEED WITH CONCRETE FOOTING PLACEMENT.
4. DO NOT PLACE CONCRETE FOOTING THROUGH MORE THAN 3" OF STANDING WATER. IF MORE THAN 3" OF STANDING WATER IS PRESENT IN THE FOOTING HOLE CONTACT THE STRUCTURAL ENGINEER OF RECORD FOR INSTALLATION INSTRUCTIONS.

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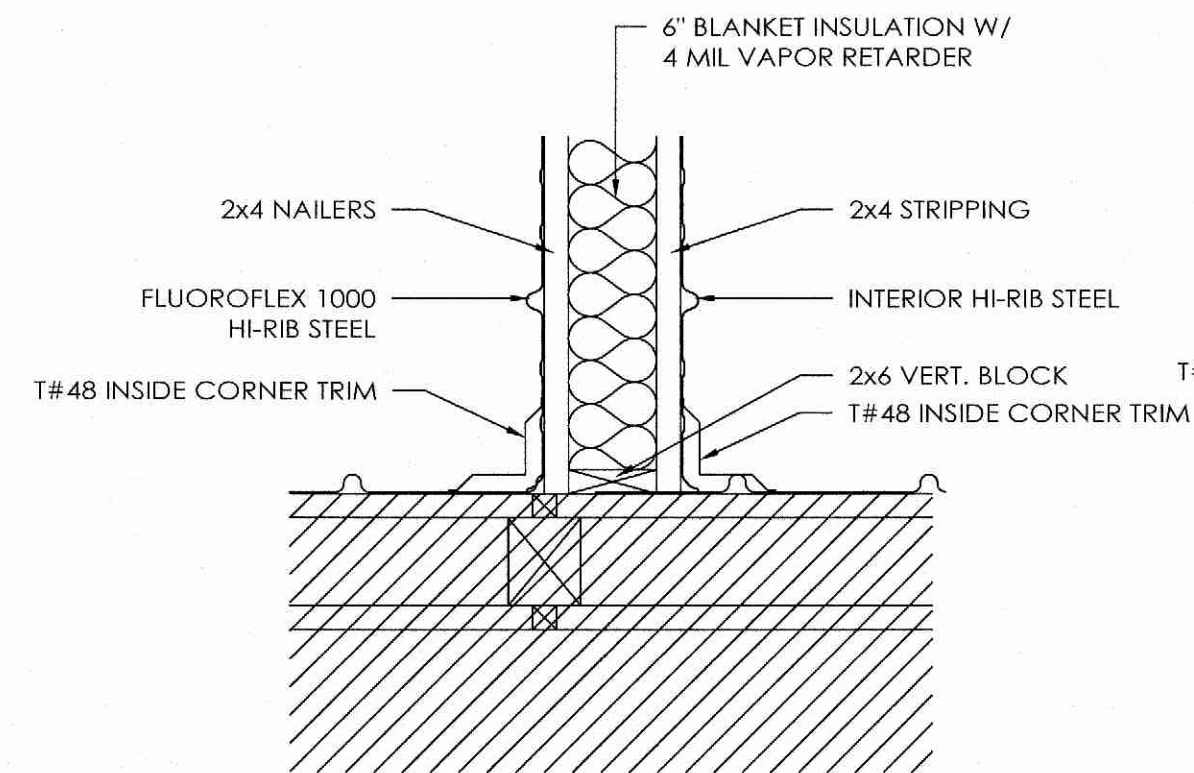
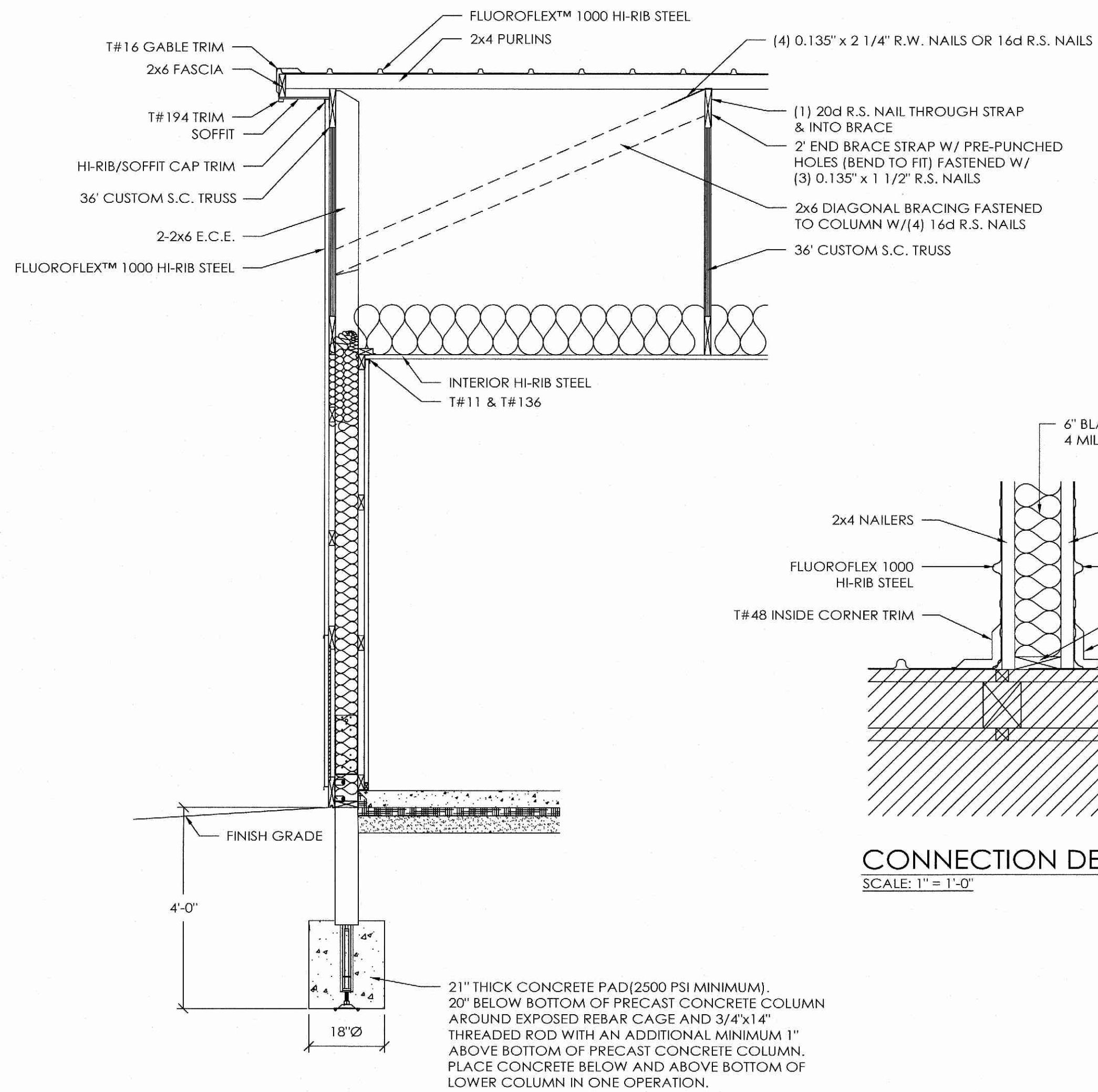
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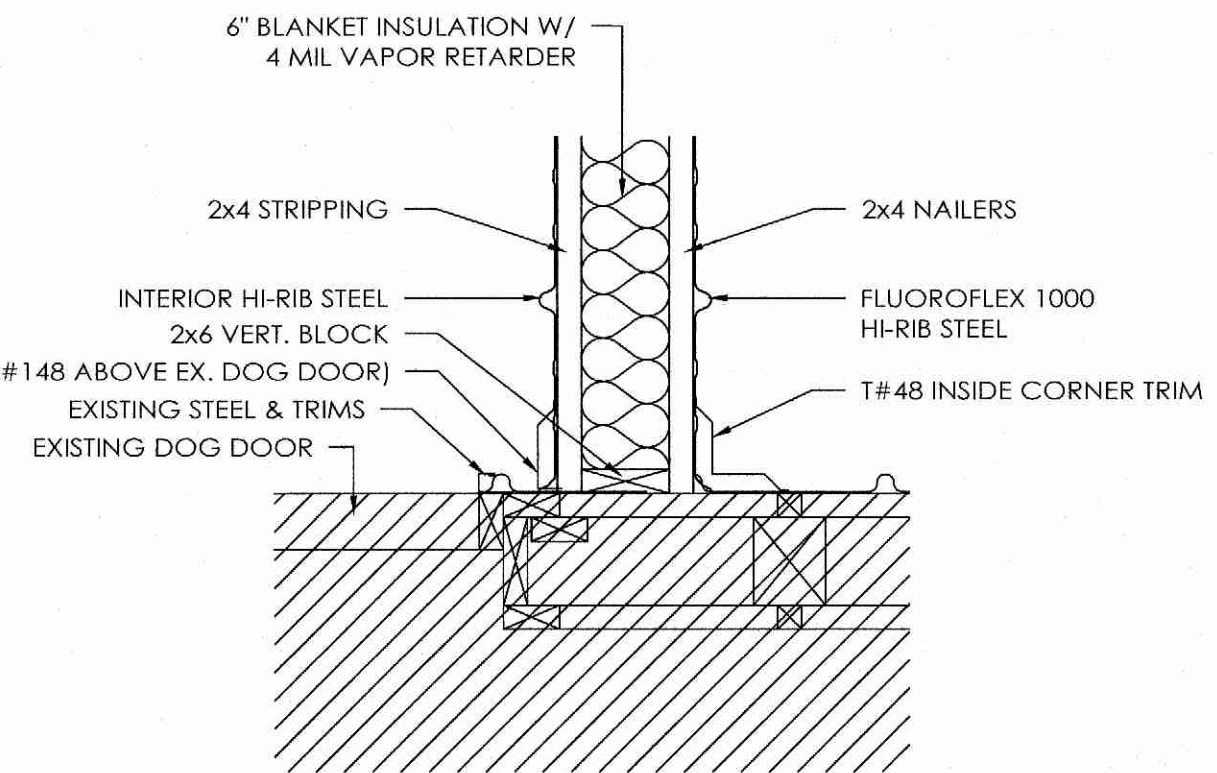
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SCALE: AS NOTED
 SHEET NO: S5 OF: S7



CONNECTION DETAIL #1
SCALE: 1" = 1'-0"



CONNECTION DETAIL #2
SCALE: 1" = 1'-0"

ENDWALL SECTION C
SCALE: 1/2" = 1'-0"

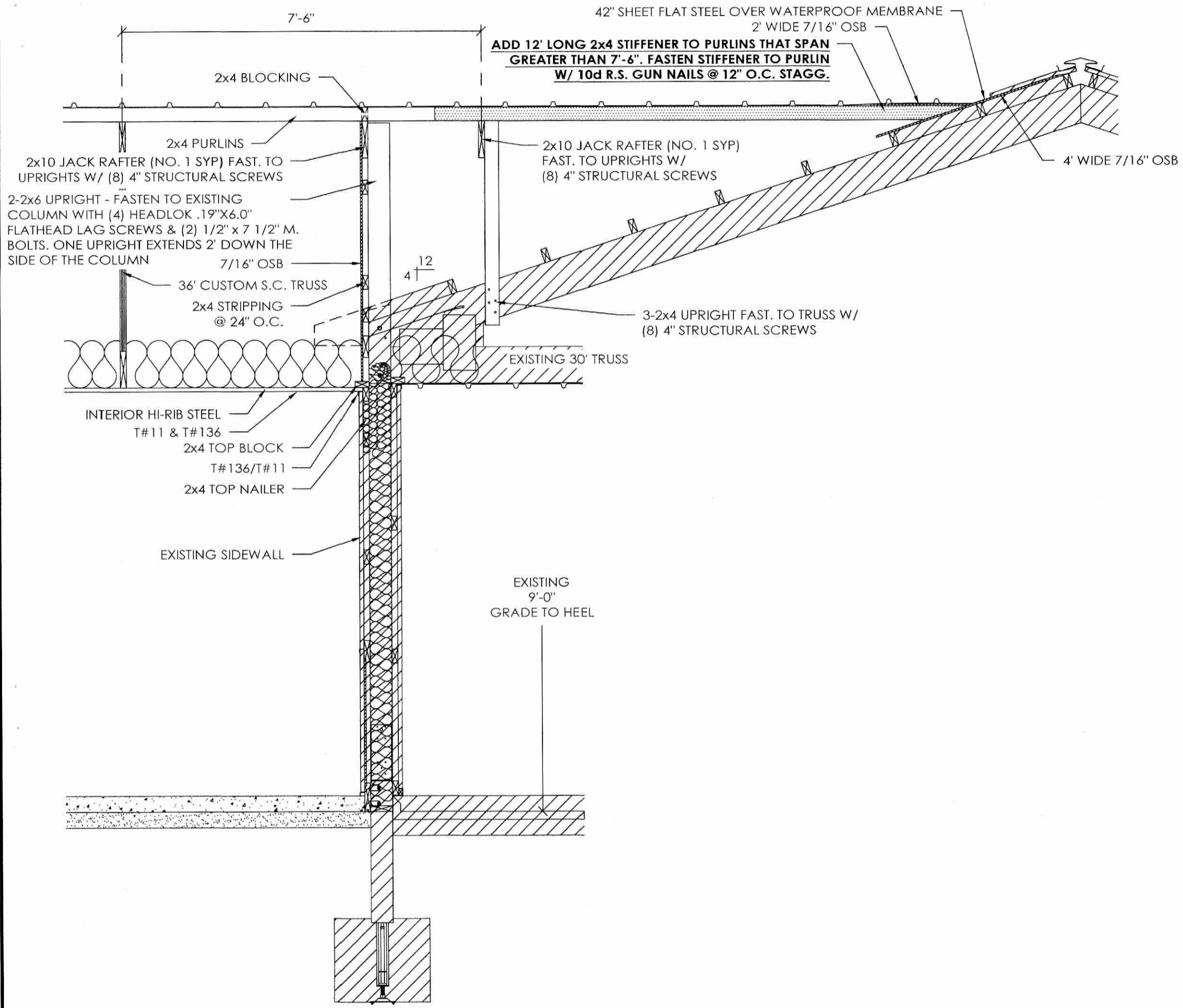
21" THICK CONCRETE PAD (2500 PSI MINIMUM), 20" BELOW BOTTOM OF PRECAST CONCRETE COLUMN AROUND EXPOSED REBAR CAGE AND 3/4"x14" THREADED ROD WITH AN ADDITIONAL MINIMUM 1" ABOVE BOTTOM OF PRECAST CONCRETE COLUMN. PLACE CONCRETE BELOW AND ABOVE BOTTOM OF LOWER COLUMN IN ONE OPERATION.

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VALLEY CONNECTION SECTION D
SCALE: 1/2" = 1'-0"

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