

A. SITE PLAN
 1/10" = 1'-0"

▲ = WALL SEGMENT TAG FOR HEIGHT CALCULATION
 --- = EAVE/ROOF LINE
 --- = REVISED TOPO (FINISHED GRADES)
 --- = EXISTING TOPOGRAPHY
 --- = EXISTING HOUSE, DRIVEWAY AND ALL HARDSCAPE ON PROPERTY TO BE REMOVED

Owner

Millad V LLC
 7683 SE 27th St #187
 Mercer Island WA 98040
 contact = Farzad Ghazvinian
 206.972.4140

Civil Engineer

Duffy Ellis
 CES Civil Engineering
 102 NW Canal St Seattle WA 98107
 206.930.0342

Structural Engineer

Javid Abdi, PE, SE Atlas Consulting Structural Engineers
 6810 NE 149th St Kenmore WA 98028
 Phone: (206) 427-7233

Contractor

Millad Homes LLC
 7683 SE 27th St #187
 206.498.6045
 LIC # MILLAHL836LI

Project Description

New single family residence

CONTINUOUS GEOTECHNICAL INSPECTION IS REQUIRED DURING EXCAVATION.

All Japanese knotweed (*Polygonum cuspidatum*) and Regulated Class A, Regulated Class B, and Regulated Class C weeds identified on the King County Noxious Weed list, as amended, shall be removed from the property.

development proposals for a new single-family home shall remove japanese knotweed (*Polygonum cuspidatum*) and regulated class a, regulated class b, and regulated class c weeds identified on the king county noxious weed list, as amended, from required landscaping areas established pursuant to subsection 19.02.020(f)(3)(a). new landscaping associated with new single-family home shall not incorporate any weeds identified on the king county noxious weed list, as amended, provided, that removal shall not be required if the removal will result in increased slope instability or risk of landslide or erosion.

ABE CALCULATION

	EL @ MIDPOINT	segment	wtd sgmnt
A	115	20	2300.00
B	113	25.33	2862.29
C	108	22.54	2434.32
D	101.9	7.08	721.45
E	95	22	2090.00
F	92.5	13.33	1233.03
G	94	5.5	517.00
H	97	18.63	1807.11
I	98.1	4.5	441.45
J	97.2	11.5	1117.80
K	96.8	3.46	334.93
L	96.7	10	967.00
M	97.8	3.46	338.39
N	99	20.54	2033.46
O	105	21.54	2261.70
P	110.6	6	663.60
Q	112.7	12.5	1408.75
R	115.4	11.85	1367.49
S	114.8	0.5	57.40
T	114	15.15	1727.10
U	111.9	6.92	774.35
V	110.3	12.13	1337.94
W	112	6.92	775.04
X	113.3	8.46	958.52
Y			
		289.84	30530.11

AVG. EL = **105.3343**
 all midpoints are existing grade
 all final grades same or higher than existing

Parcel Number/Legal

Parcel # 7776700010 (parent lot)
 Lot Size = 16,549 sf
 RELATED PERMITS = LOT 1 PER 01-PSP18-142

ZONING = R-15

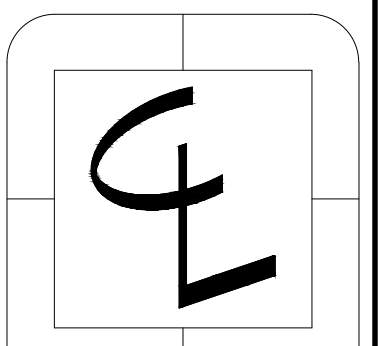
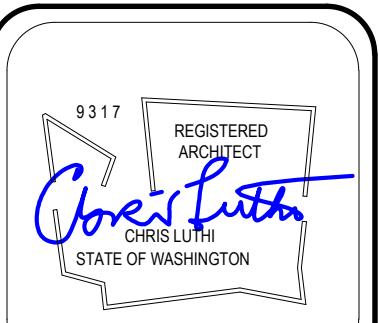
LEGAL DESCRIPTION LOT 1

THAT PORTION OF LOT 2, SHORERIDGE ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 49 OF PLATS, PAGE 2, RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
 BEGINNING AT THE MOST SOUTHERLY POINT OF SAID LOT 2; THENCE N55°39'26"W 165.39 FEET TO THE SOUTHEAST MARGIN OF EAST MERCER WAY; THENCE, ALONG SAID SOUTHEAST MARGIN, ALONG A CURVE TO THE LEFT, THE RADIUS OF WHICH BEARS S55°39'35"E 543.70 FEET, WITH A CENTRAL ANGLE OF 14°30'59" AND AN ARC DISTANCE OF 137.75; THENCE S41°14'09"E 105.08 FEET; THENCE S19°40'48"W 60.72 FEET; THENCE S10°51'52"E 53.74 FEET; THENCE S62°29'30"W 15.33 FEET, TO THE POINT OF BEGINNING.

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

FAR CALCULATION

Main Floor = 2280.5 sf
 Lower Floor = 1893.8 sf
 Upper Floor = 414 sf
 Garage = 570 sf
 12'16" clg = 301 sf
 covered decks = 220 sf
 stairs = (-88)
 TOTAL = 5591.3 sf
 allowable = 16,549 x .4 = 6619.6 sf



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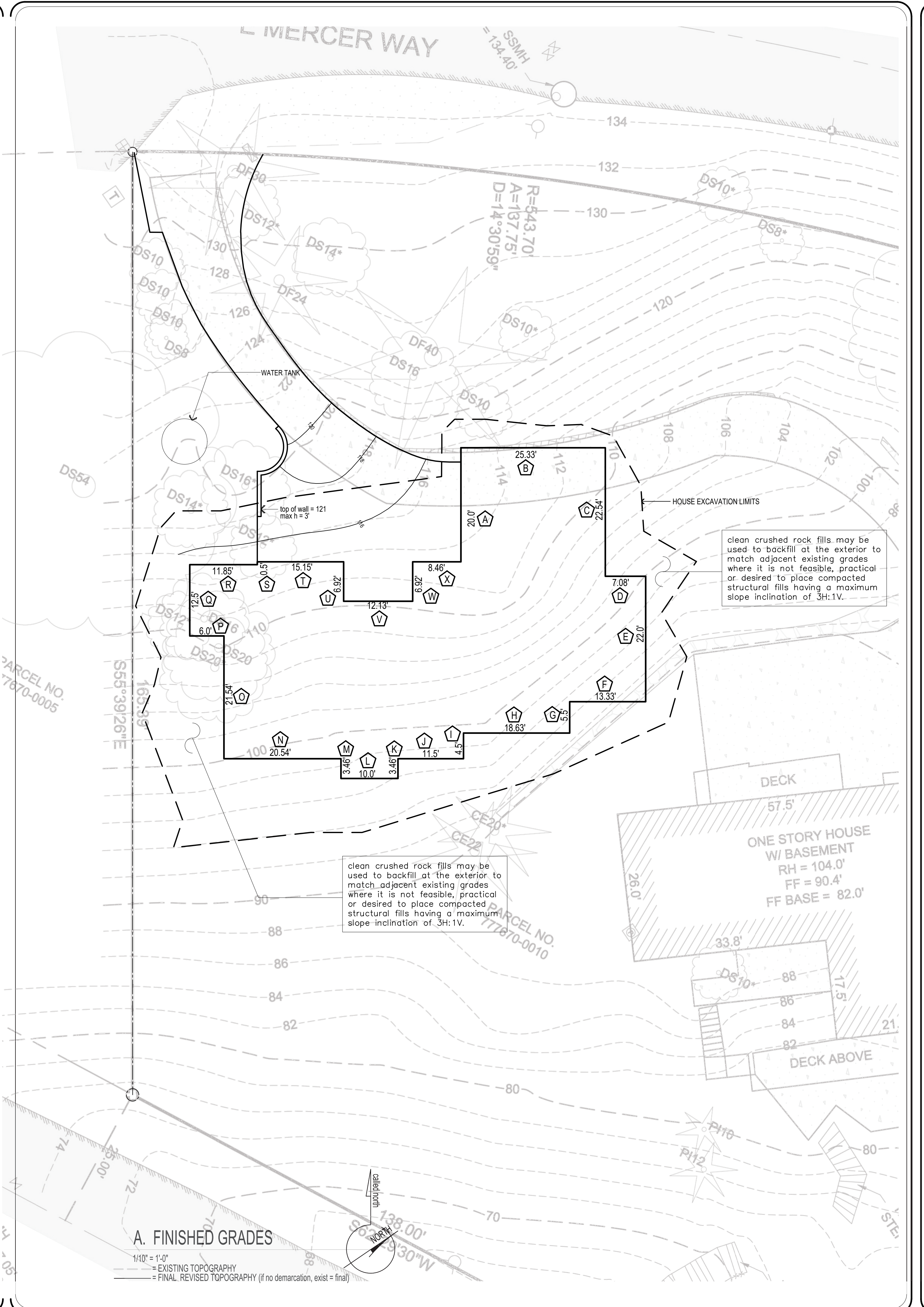
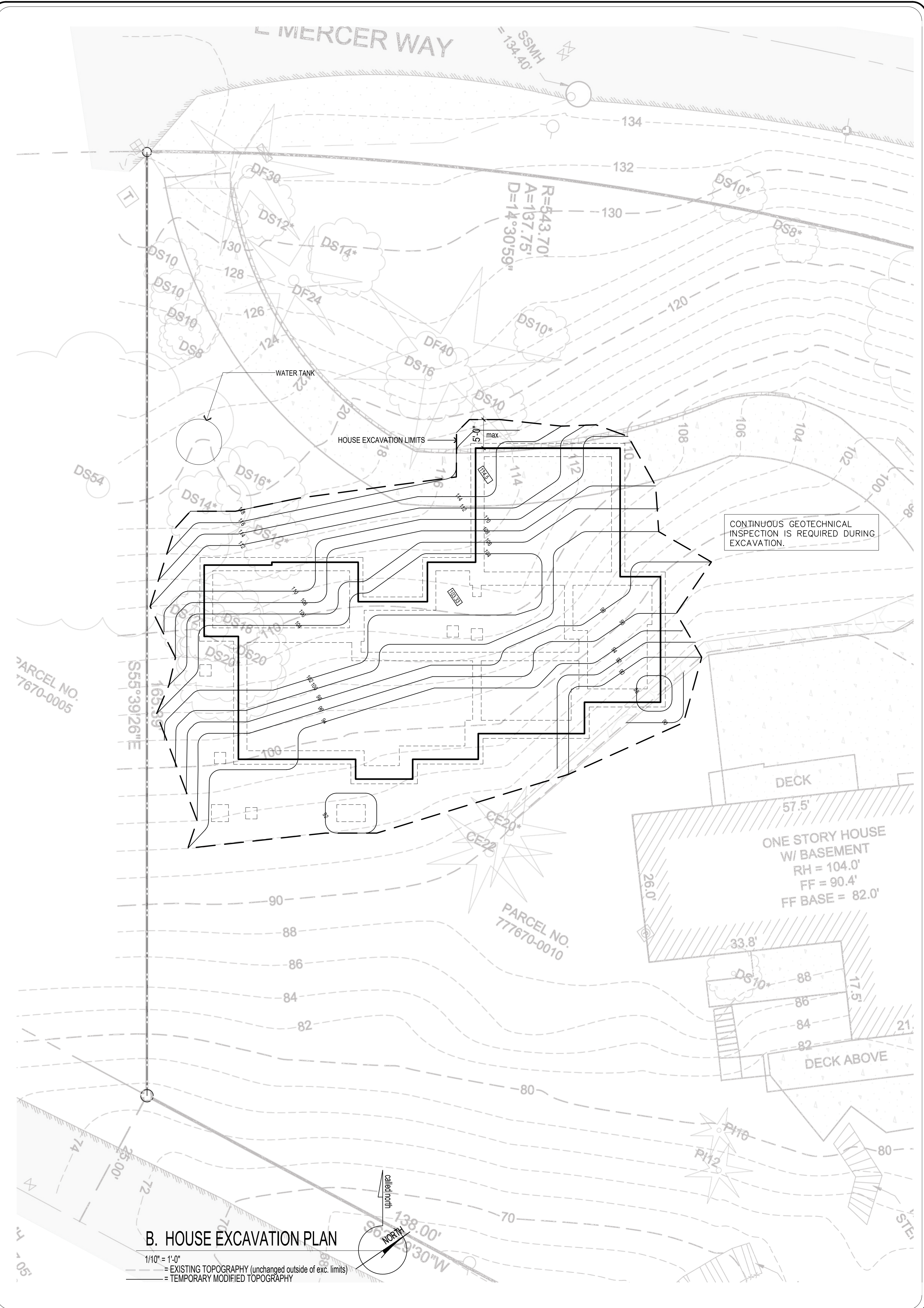
CONTENTS

Site Plan

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 3.17.21

1A



9317 REGISTERED ARCHITECT
 Centerline Design
 CROSS COUNTRY ARCHITECTS
 STATE OF WASHINGTON

C

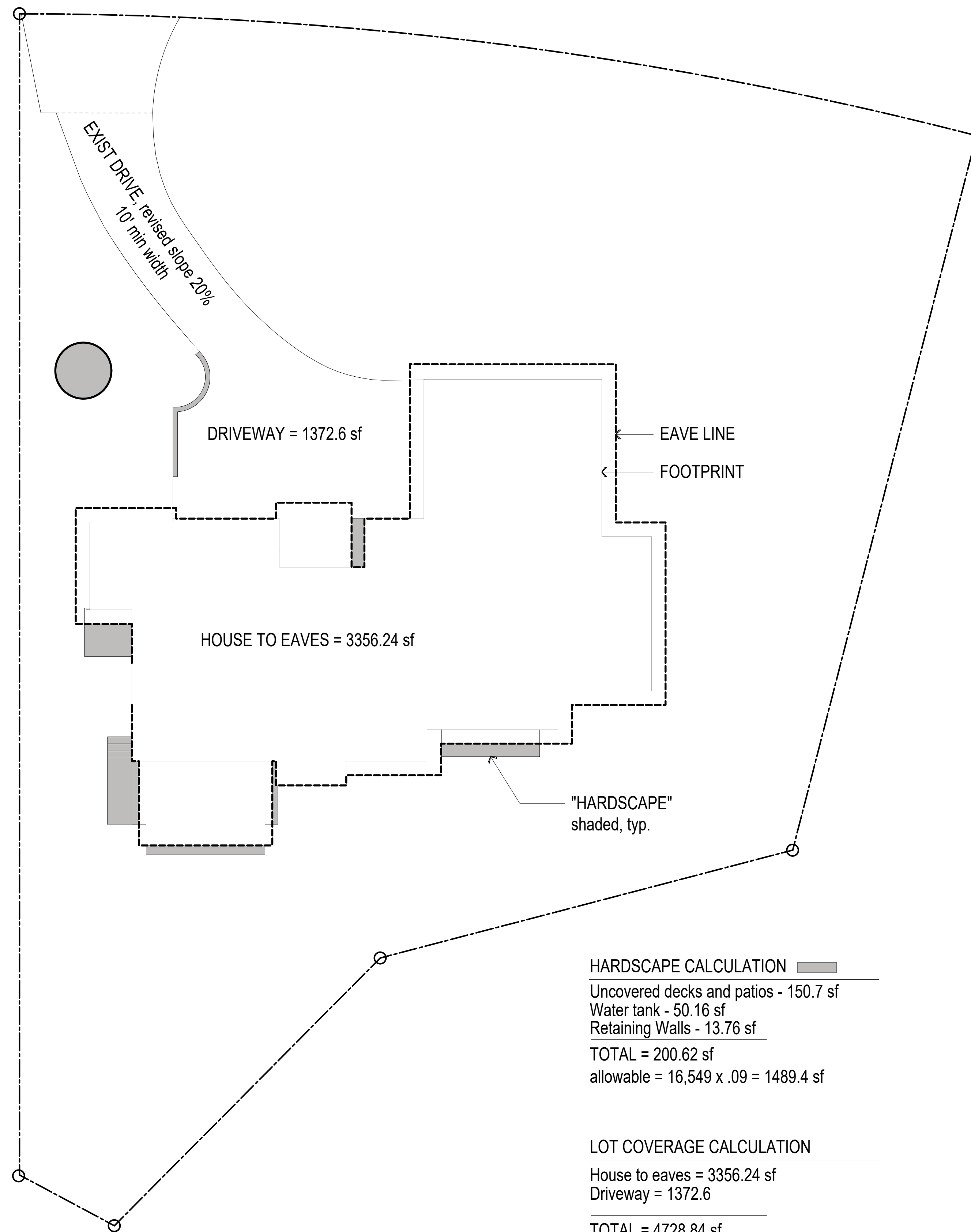
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1B



HARDSCAPE CALCULATION

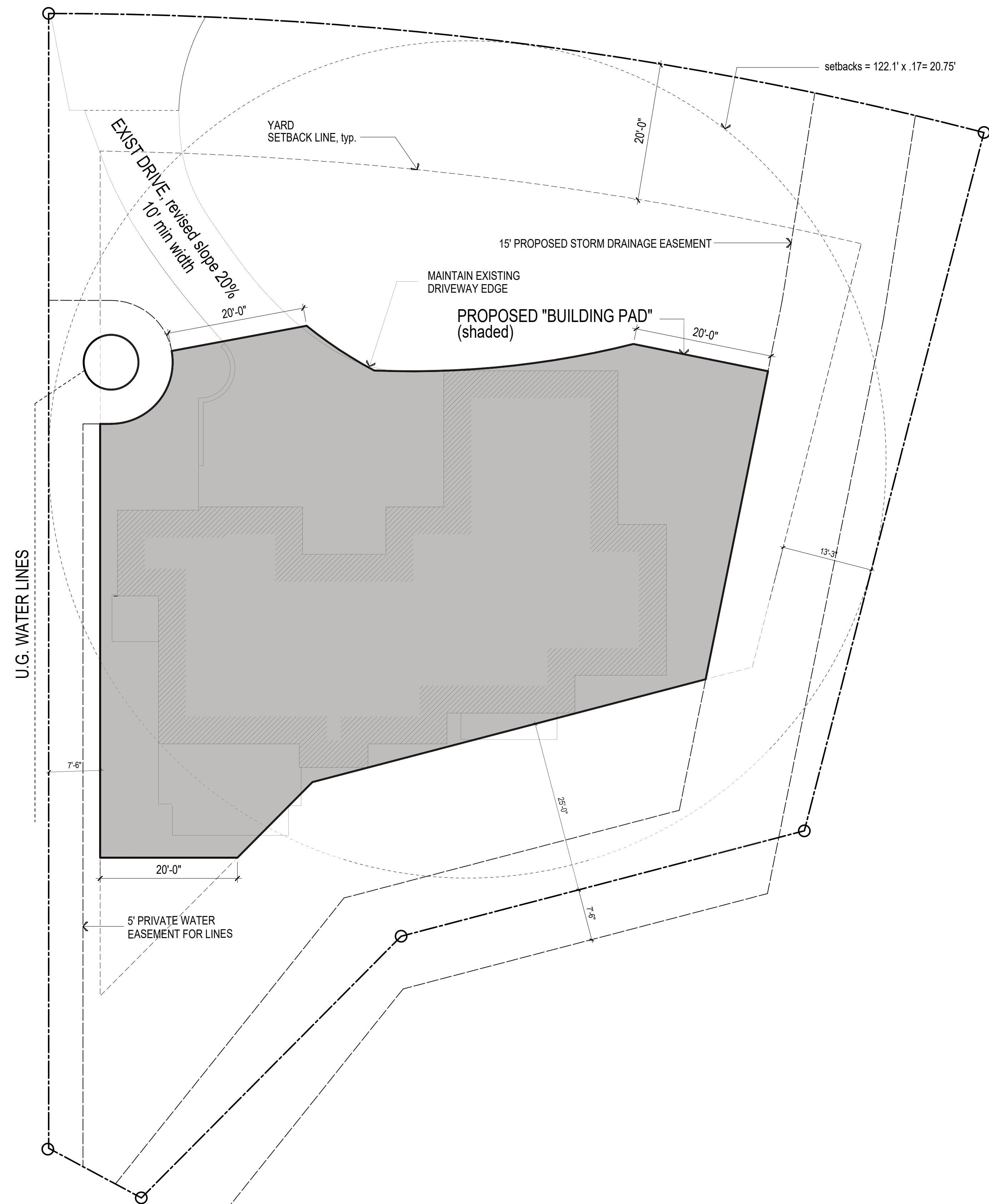
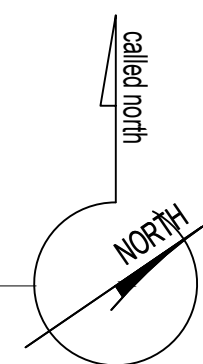
- Uncovered decks and patios - 150.7 sf
- Water tank - 50.16 sf
- Retaining Walls - 13.76 sf
- TOTAL = 200.62 sf
- allowable = $16,549 \times .09 = 1489.4$ sf

LOT COVERAGE CALCULATION

- House to eaves = 3356.24 sf
- Driveway = 1372.6
- TOTAL = 4728.84 sf
- allowable = $16,549 \times .3 = 4964.7$ sf

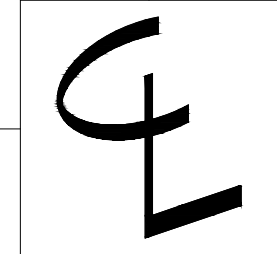
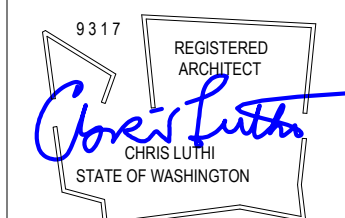
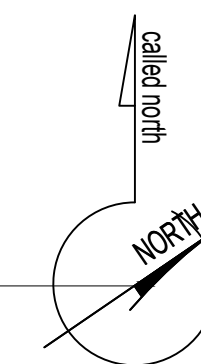
B. LOT COVERAGE / HARDSCAPE

1/10" = 1'-0"



A. "BUILDING PAD" DIAGRAM

1/10" = 1'-0"



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1C

NOTES

- [SD] = SMOKE DETECTOR, HARDWIRE, INTERCONNECTED w/ BATTERY BACK-UP
- [CO] = CARBON MONOXIDE DETECTOR, HARDWIRE w/ BATTERY BACK-UP

DOORS ARE 3-0 x 6-8 (r.o. = 3'-2" x 6'-10") unless otherwise indicated
 ☉ = FAN, 50 CFM UNLESS OTHERWISE INDICATED
 FOR SHEAR WALL INFORMATION SEE STRUCTURAL PLANS
 ALL INTERIOR WALLS TO BE 2x4, EXTERIOR WALLS 2x6, EXCEPT AS INDICATED, OR EXISTING

(E) = EGRESS WINDOWS
 Contractor shall verify to Inspector all guards and railings shall be capable of resisting 200 lb load on top rail acting in any direction as required by IRC Table R301.5.
 ALL WALLS FULL HEIGHT UNLESS OTHERWISE INDICATED
 (T) = TEMPER/SAFETY GLAZE WINDOWS
 ALL GAS F.P. TO BE APPROVED DIRECT VENT

Energy Code Info

WA STATE PRESCRIPTIVE PATH FOR ALL CLIMATE ZONES
 ENERGY CREDIT OPTIONS =
 2a(.5),3b(1),4(1),5a(.5),5c(1.5) = 4.5 CREDITS
 Vertical fenestration U = 0.30
 Floor R-30

SEE SHEET 04 FOR ENERGY CREDIT DESCRIPTION

PRIMARY RESIDENCE HVAC NOTES

DUCTED HEAT PUMP (HSPF>9.0) INT. AIR HANDLER
 INTEGRATED VENTILATION
 REQUIRED VENTING = CONTINUOUS 120CFM
 SET TO OPERATE AT 240 CFM FOR 2 HOURS IN EA. 4 HR PERIOD (50%)
 PROVIDED BY VARIABLE SPEED HIGH EFF. FAN (MAX. 35 WATTS/CFM)
 CONTROLLED TO OPERATE AT LOW SPEED IN VENTILATION MODE ONLY.

design professional or builder shall complete and post an "Insulation Certificate for Residential Construction" within 3' of the electrical panel prior to final inspection.

A minimum of 75 percent of permanently installed lamps in lighting fixtures shall be high-efficacy lamps.

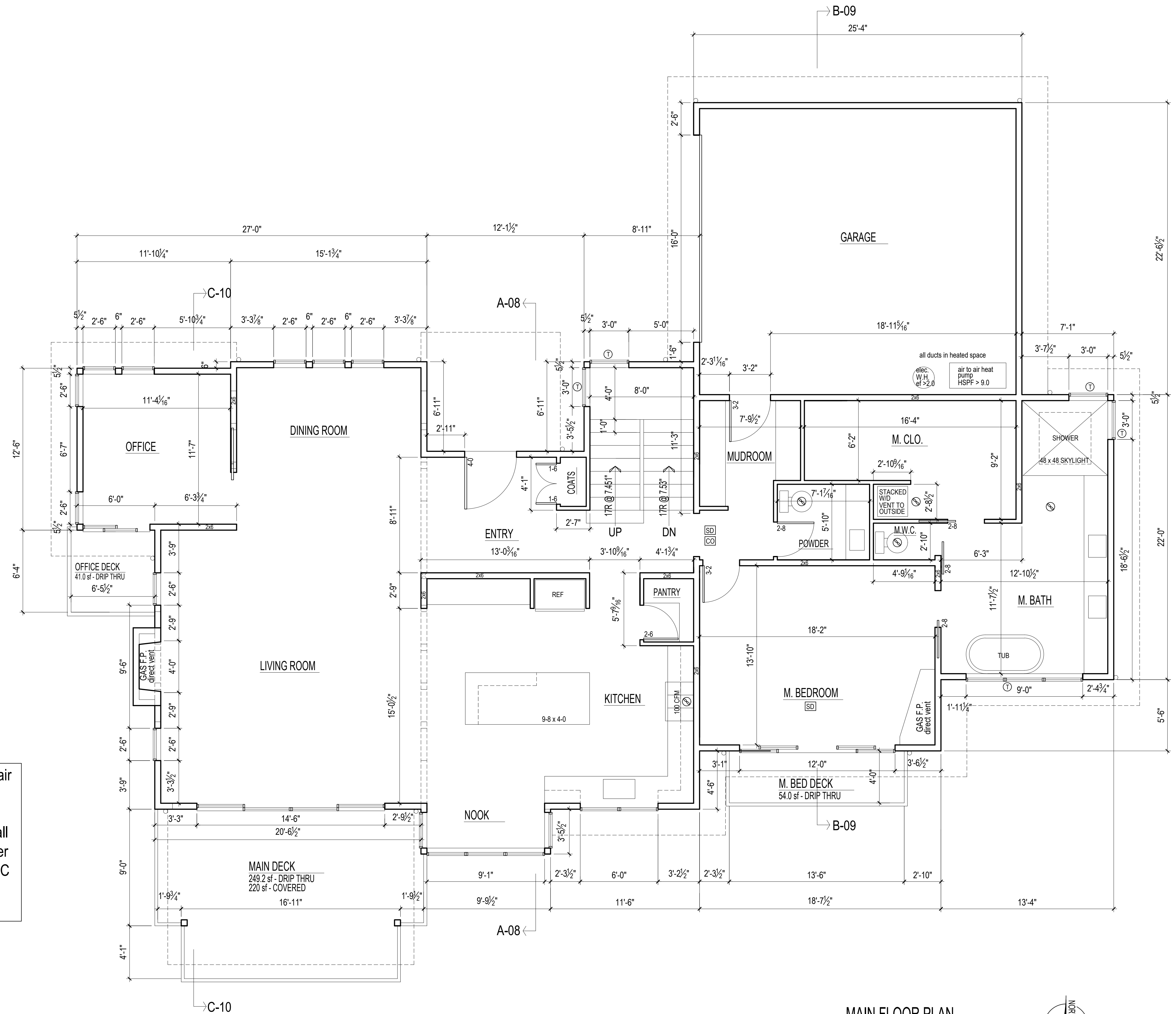
Air leakage shall not exceed 3 air changes/ hour and shall be tested as such. A written report of the test results, shall be signed by the testing party and provided to the building inspector, prior to call for final inspection.

Maximum flow rates for shower heads and kitchen sink - 1.75 GPM or less. All other lavatory faucets - 1.0 GPM or less.

Per WSEC R402.4, The building thermal Envelope shall be constructed to limit air leakage to 3.0 air changes per hour maximum. The results of the test shall be signed by the party conducting the test and provided to the code official (R402.4.1.2). Per WSEC R403.1.1, at least one thermostat per dwelling unit shall be capable of controlling the heating and cooling system on a daily schedule. Per WSEC R403.2.2, Ducts, air handlers, and filter boxes shall be sealed. Per WSEC R404.1, A minimum of 75 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps.

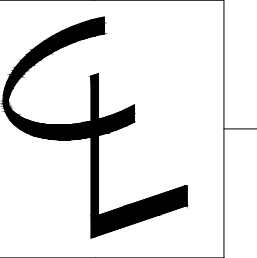
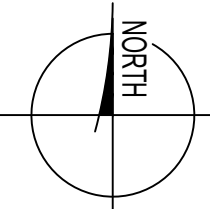
All Climate Zones		
	R-Value ^a	U-Factor ^a
Fenestration U-Factor ^b	n/a	0.30
Skylight U-Factor	n/a	0.50
Glazed Fenestration SHGC ^{b,e}	n/a	n/a
Ceiling ^k	4 ^g	0.026
Wood Frame Wall ^{g,m,n}	21 int	0.056
Mass Wall R-Value ^l	21/21 ^h	0.056
Floor	30 ^o	0.029
Below Grade Wall ^{o,m}	10/15/21 int + TB	0.042
Slab ^d R-Value & Depth	10, 2 ft	n/a

^aTable R402.1.1 and Table R402.1.3 Footnotes included on Page 2.



MAIN FLOOR PLAN

1/4" = 1'-0"
 GARAGE = 570 (gross)
 LIVING = 2280.5 sf (gross)
 interior LIVING = 2156.6 sf (net)
 [Symbol] = SHEAR WALL PE STRUCTURAL PLANS, SEE S2.2



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Main Floor

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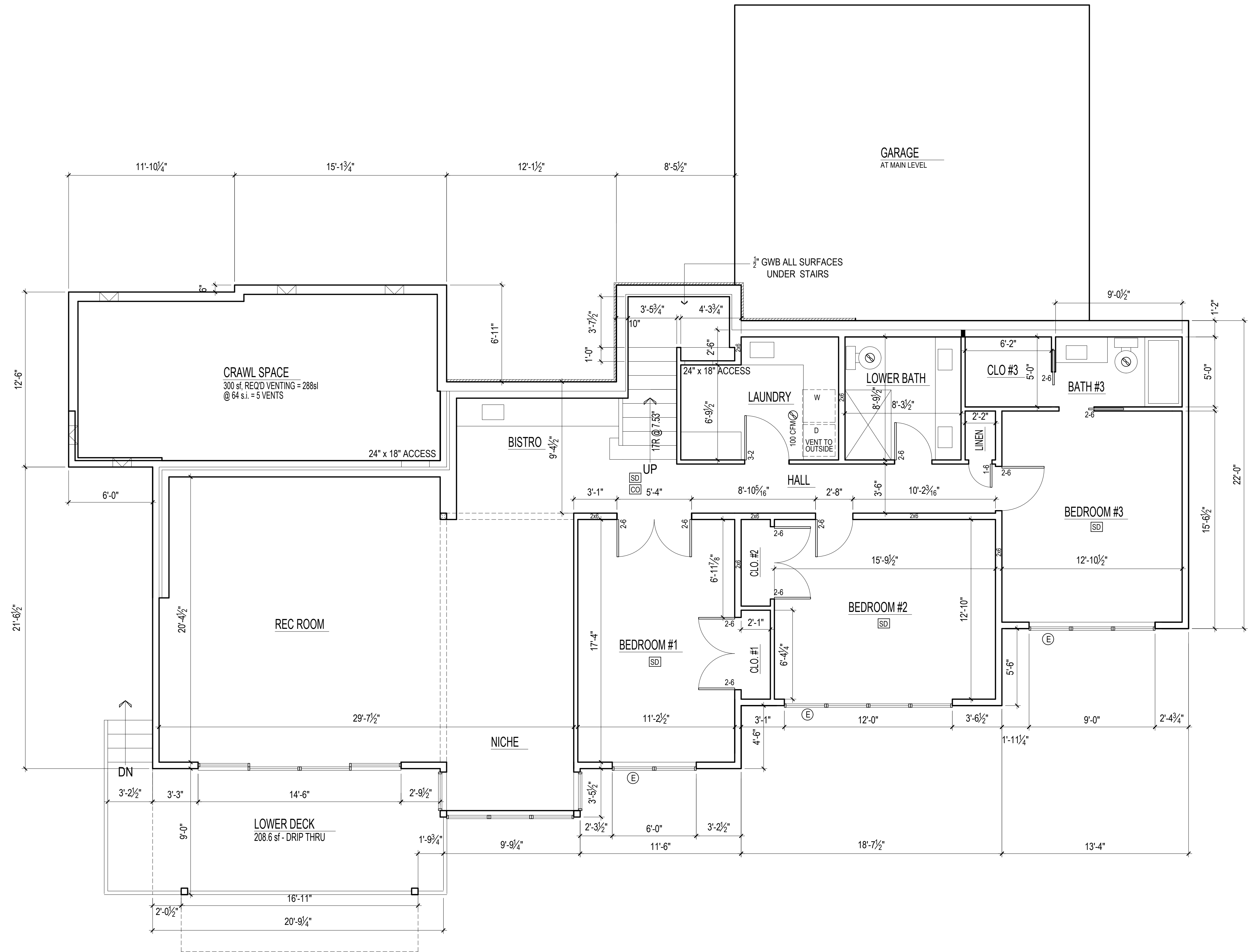
02

NOTES

- SD = SMOKE DETECTOR, HARDWIRE, INTERCONNECTED w/ BATTERY BACK-UP
- CO = CARBON MONOXIDE DETECTOR, HARDWIRE w/ BATTERY BACK-UP

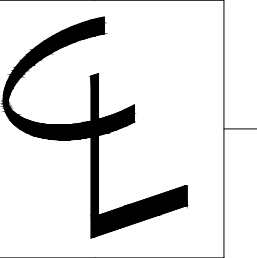
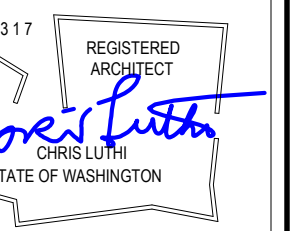
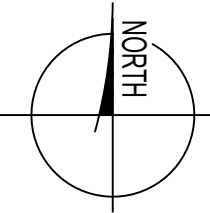
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E = EGRESS WINDOWS
 Contractor shall verify to Inspector all guards and railings shall be capable of resisting 200 lb load on top rail acting in any direction as required by IRC Table R301.5.
 ALL WALLS FULL HEIGHT UNLESS OTHERWISE INDICATED
T = TEMPER/SAFETY GLAZE WINDOWS
 ALL GAS F.P. TO BE APPROVED DIRECT VENT



LOWER FLOOR PLAN

1/4" = 1'-0"
 LIVING = 1893.8 sf (gross)
 interior LIVING = 1783.5 sf (gross)
 = SHEAR WALL PE STRUCTURAL PLANS, SEE S2.2



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Lower Floor

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03

Energy Credit Descriptions

2a - AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION

Compliance based on R402.4.1.2: Reduce the tested air leakage to 3.0 air changes per hour maximum

and

All whole house ventilation requirements as determined by Section M1507.3 of the International Residential Code shall be met with a high efficiency fan (maximum 0.35 watts/cfm), not interlocked with the furnace fan. Ventilation systems using a furnace including an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode.

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the qualifying ventilation system.

3b - HIGH EFFICIENCY HVAC EQUIPMENT

Air-source heat pump with minimum HSPF of 9.0

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.

4 - HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM:

All heating and cooling system components installed inside the conditioned space. This includes all equipment and distribution system components such as forced air ducts, hydronic piping, hydronic floor heating loop, convectors and radiators. All combustion equipment shall be direct vent or sealed combustion.

For forced air ducts: A maximum of 10 linear feet of return ducts and 5 linear feet of supply ducts may be located outside the conditioned space. All metallic ducts located outside the conditioned space must have both transverse and longitudinal joints sealed with mastic. If flex ducts are used, they cannot contain splices. Flex duct connections must be made with nylon straps and installed using a plastic strapping tensioning tool. Ducts located outside the conditioned space must be insulated to a minimum of R-8. Locating system components in conditioned crawl spaces is not permitted under this option.

Electric resistance heat and ductless heat pumps are not permitted under this option.

Direct combustion heating equipment with AFUE less than 80% is not permitted under this option.

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and shall show the location of the heating and cooling equipment and all the ductwork.

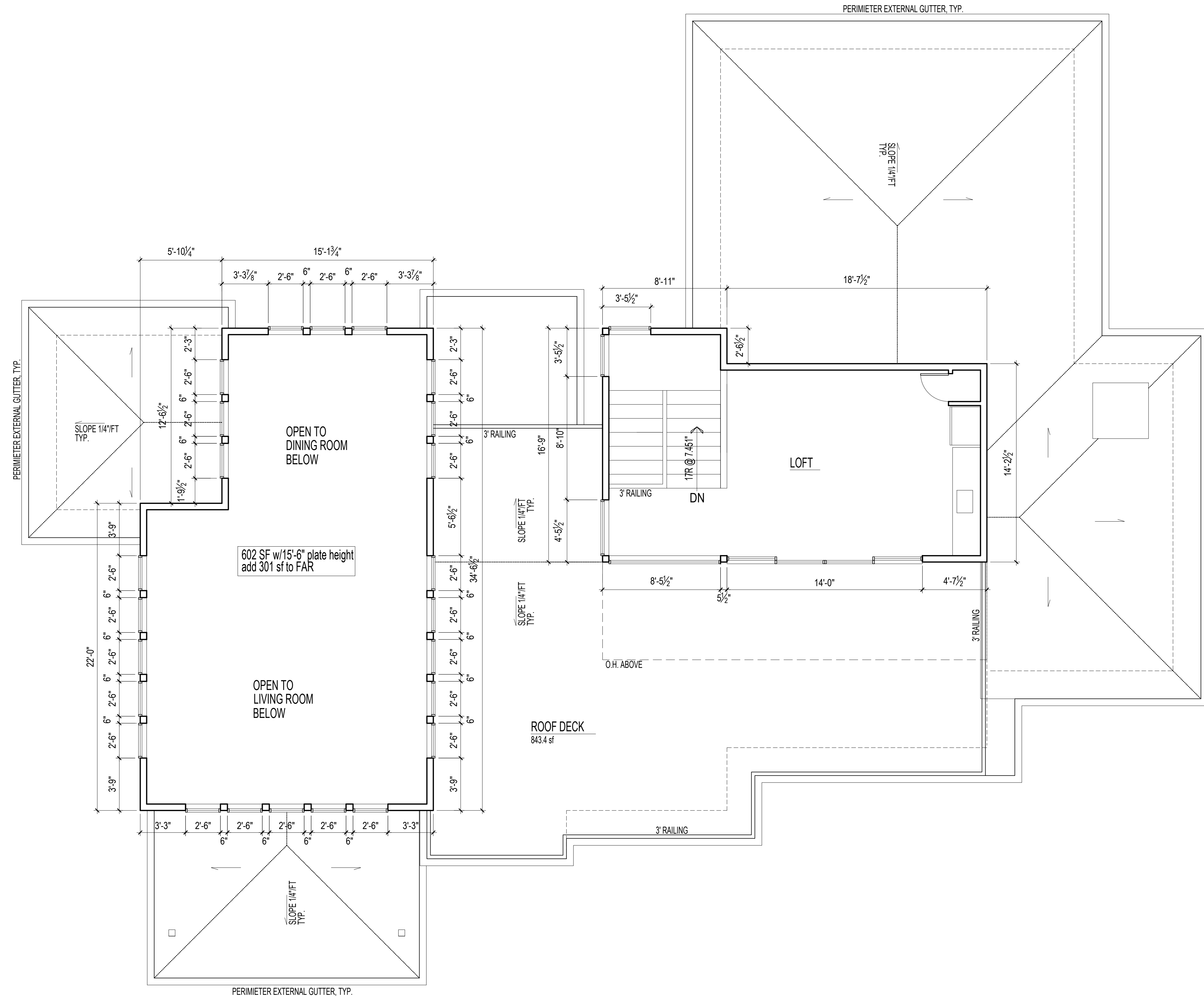
5a - EFFICIENT WATER HEATING

All showerhead and kitchen sink faucets installed in the house shall be rated at 1.75 GPM or less. All other lavatory faucets shall be rated at 1.0 GPM or less.c

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum flow rates for all showerheads, kitchen sink faucets, and other lavatory faucets.

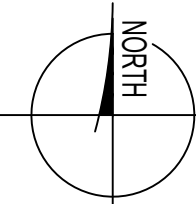
5c - EFFICIENT WATER HEATING

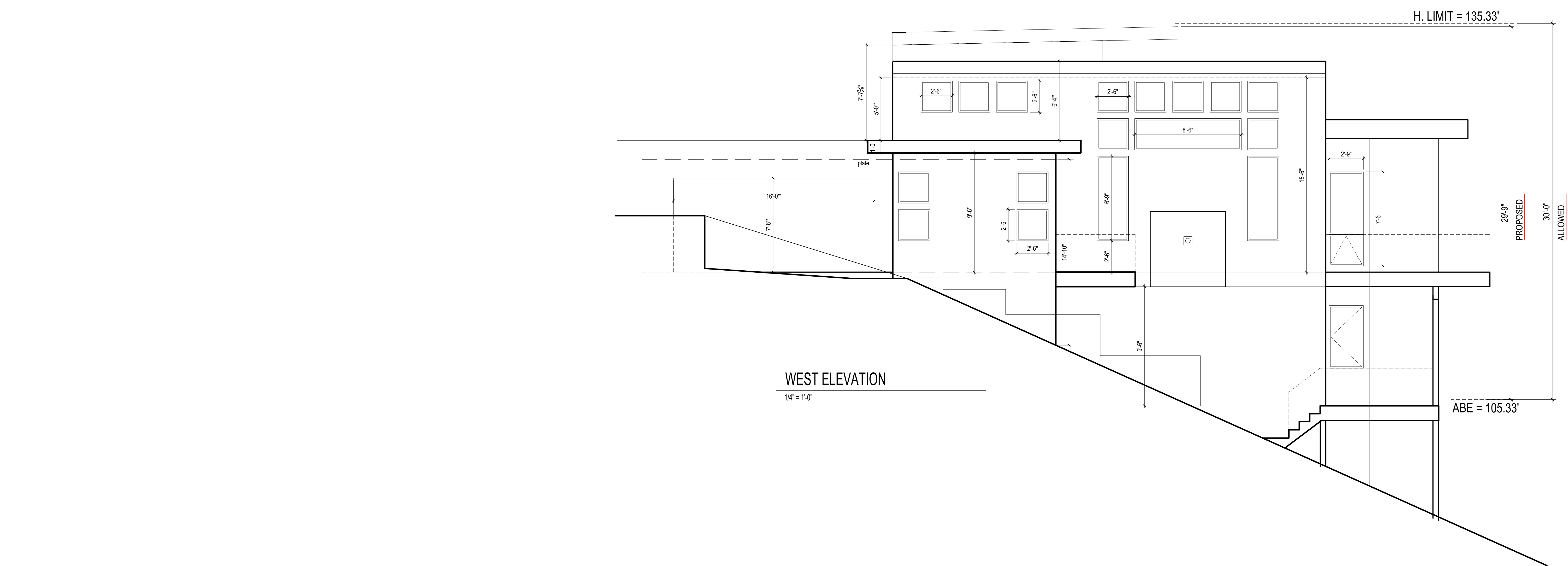
Electric heat pump water heater with a minimum EF of 2.0 and meeting the standards of NEEA's Northern Climate Specifications for Heat Pump Water Heaters To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.



UPPER FLOOR PLAN

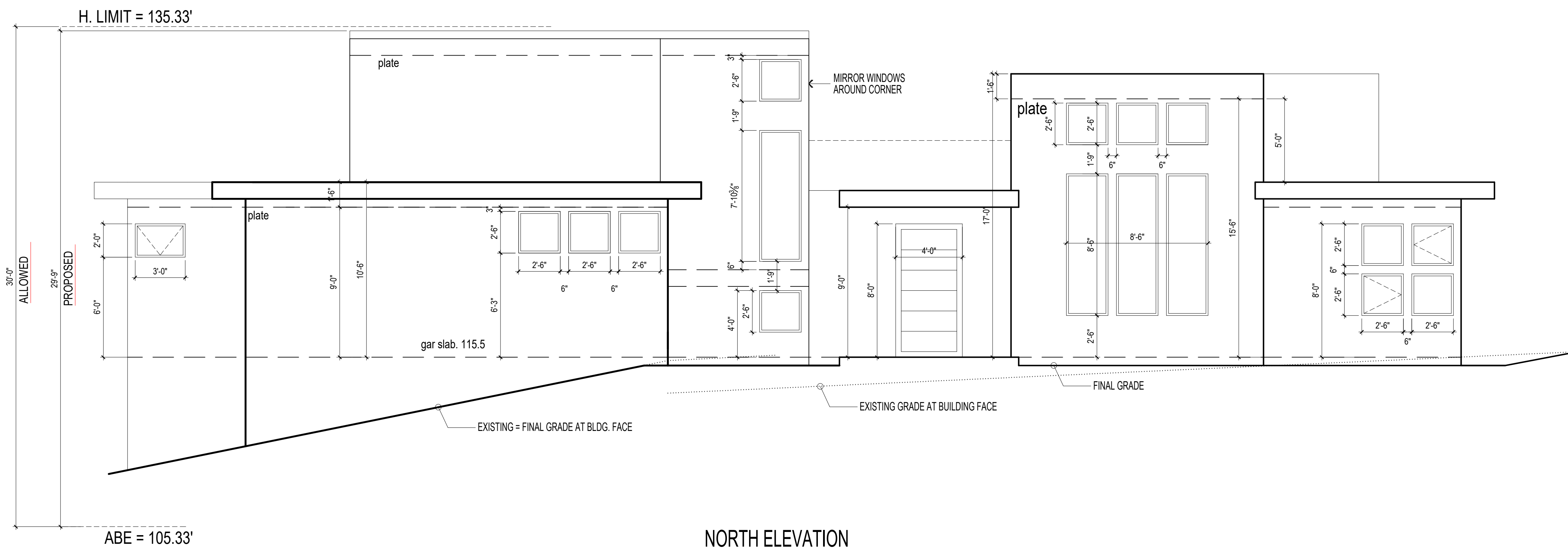
1/4" = 1'-0"
 LIVING = 414 sf (gross)
 interior LIVING = 370.7 sf (gross)
 = SHEAR WALL PE STRUCTURAL PLANS, SEE S2.2





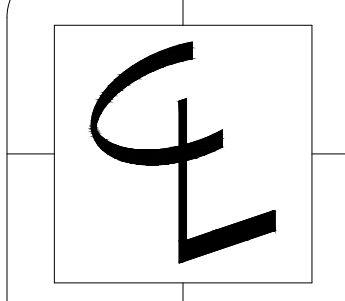
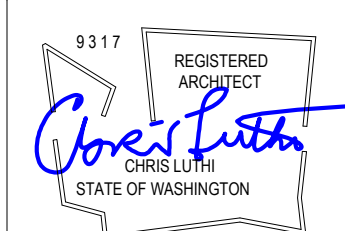
WEST ELEVATION

1/4" = 1'-0"



NORTH ELEVATION

1/4" = 1'-0"



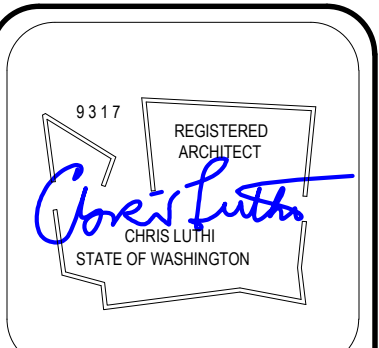
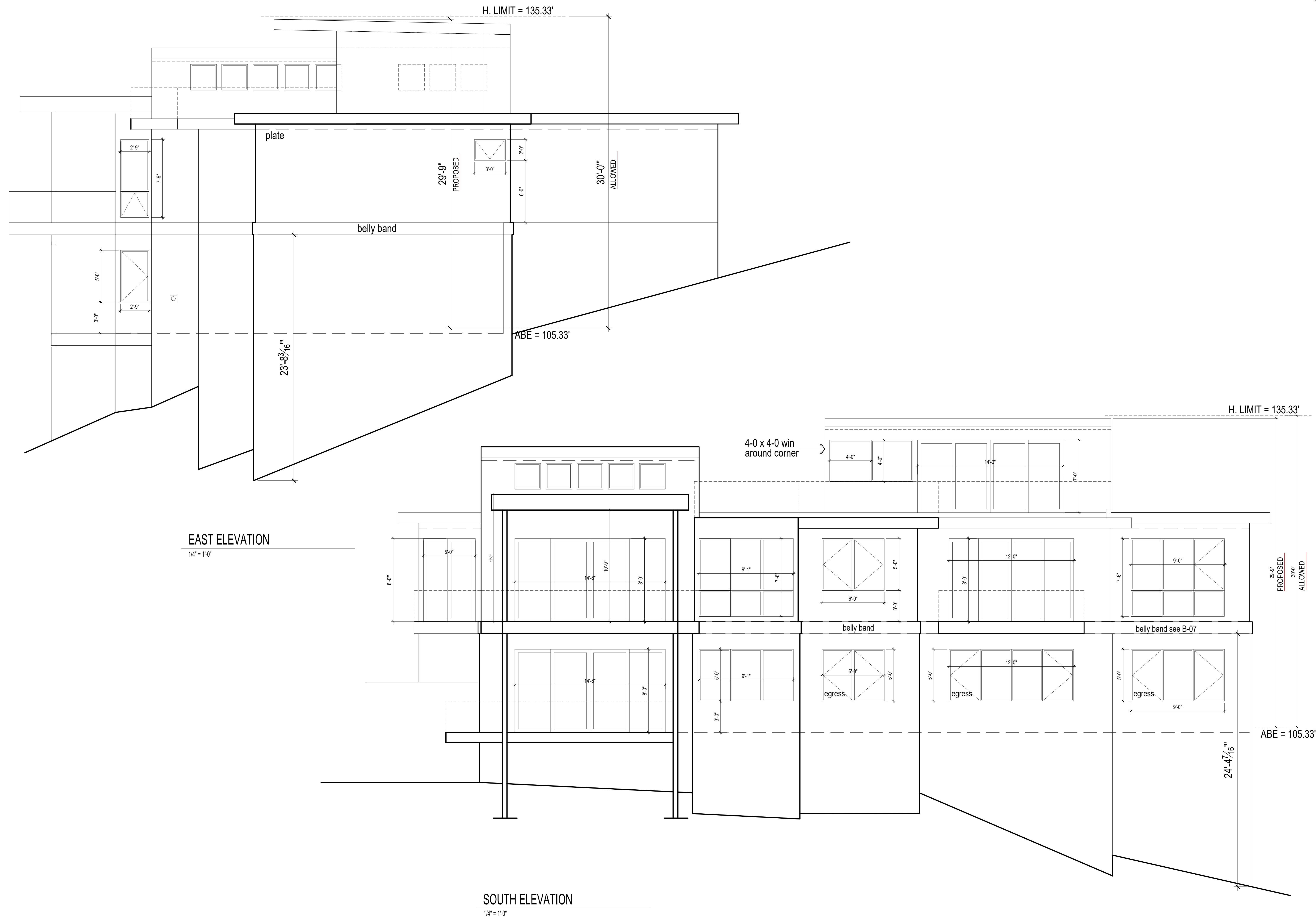
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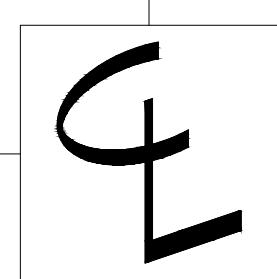
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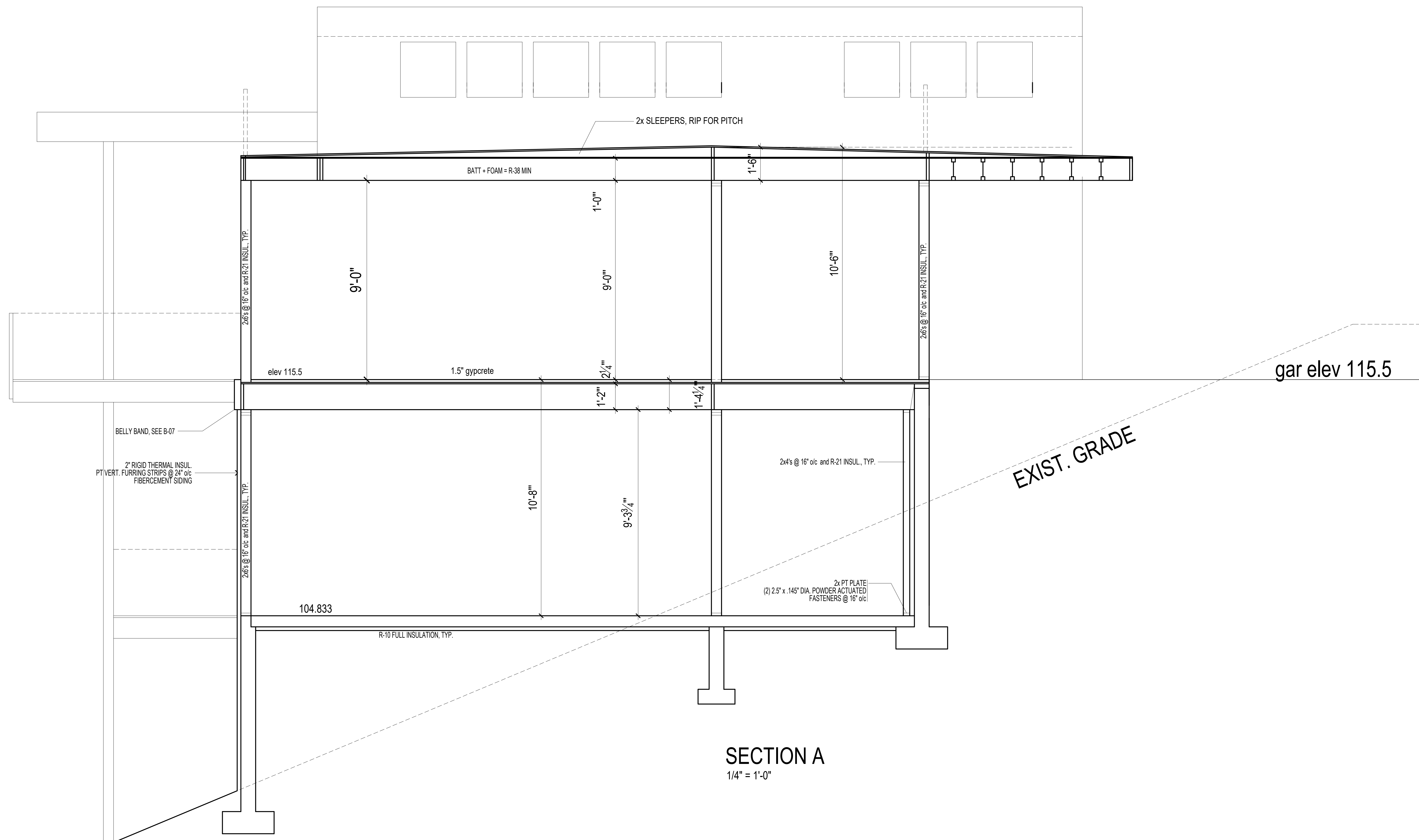
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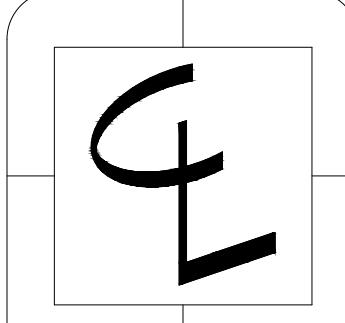
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SECTION A
 1/4" = 1'-0"

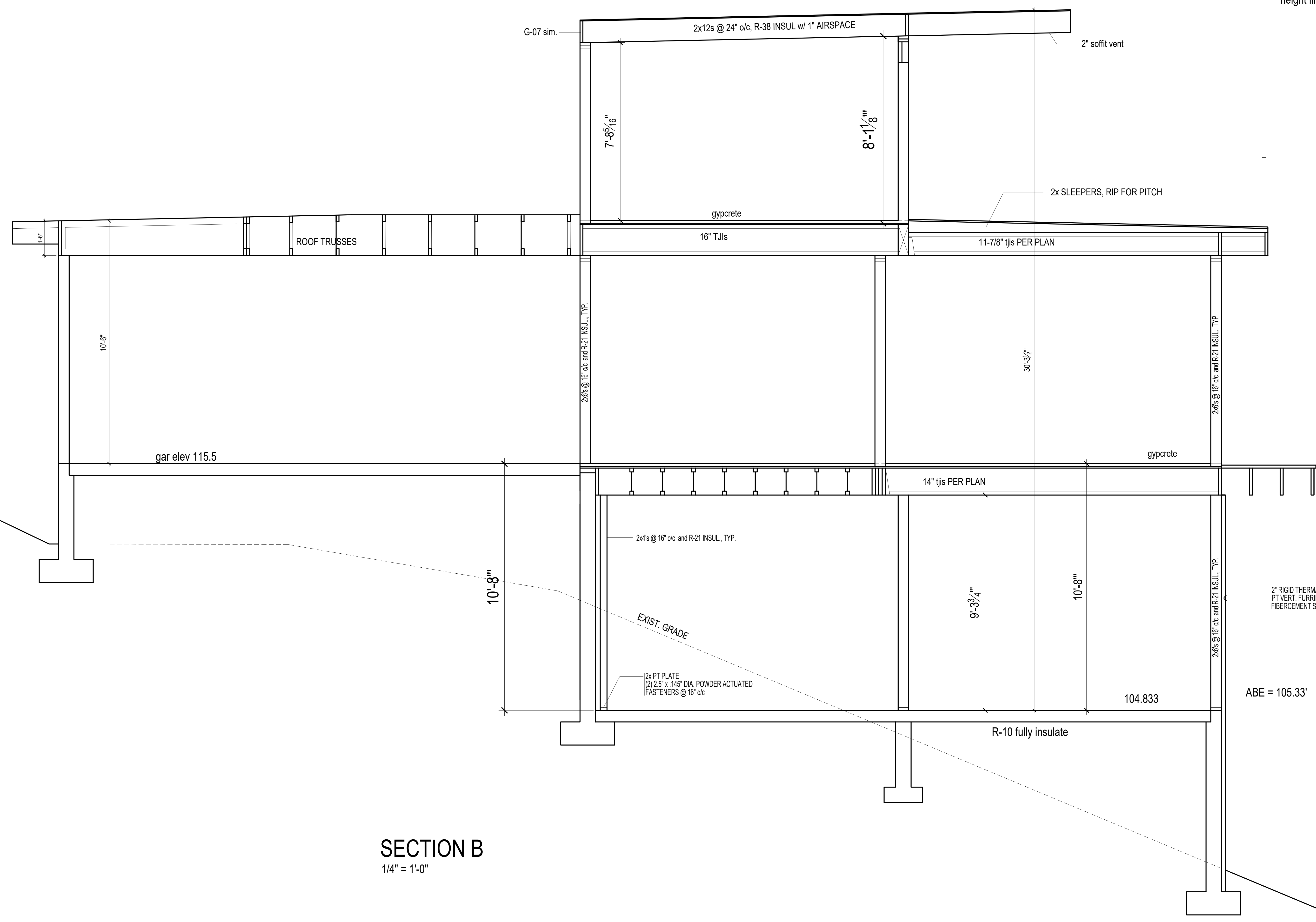


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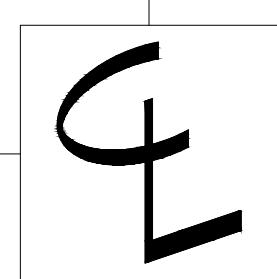
CONTENTS
 Section B

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height limit = A.B.E. + 30' = 135.33'



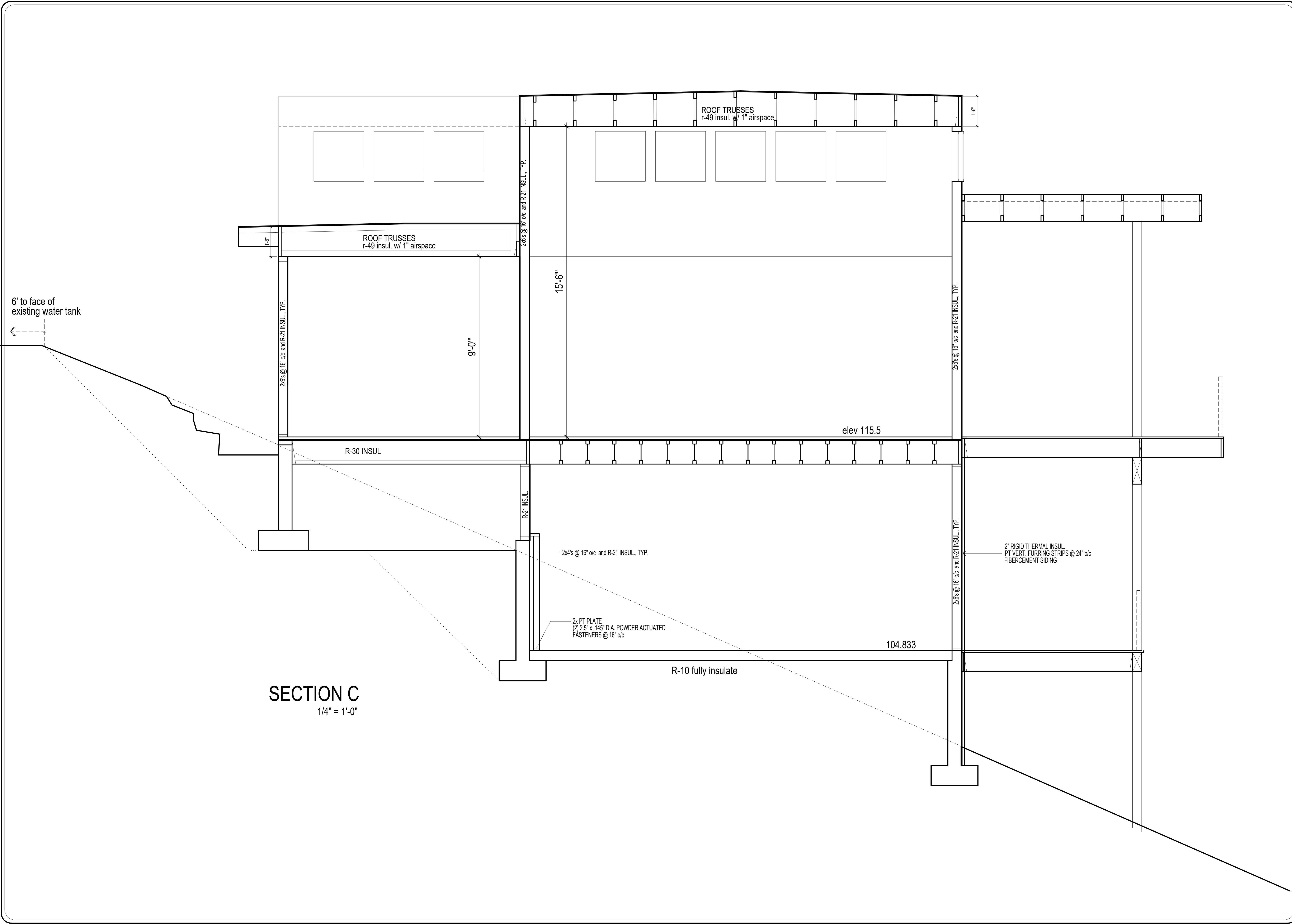
SECTION B
 1/4" = 1'-0"



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CONTENTS
 Section C

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SECTION C
 1/4" = 1'-0"

General Structural Notes (GSN's)

CRITERIA:

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (IBC) WITH WASHINGTON STATE ADMINISTRATIVE CODE AMENDMENTS, 2015 EDITION.

2. DESIGN LOADING CRITERIA	RISK CATEGORY IBC TABLE 1604.5	II
ROOF SNOW LOAD	25 PSF ($s_g = 1.0$)	
ROOF DEAD LOAD	20 PSF	
LIVE LOAD	40 PSF	
DECK LIVE LOAD	60 PSF	
FLOOR DEAD LOAD	25 PSF (ACCOUNTS FOR 1/2" GYPCRETE)	

EARTHQUAKE	SEISMIC DESIGN CATEGORY D	$S_s = 1.43, S_1 = 0.496, S_{0.5} = 0.953, S_{0.1} = 0.547$
	EQUIVALENT LATERAL FORCE PROCEDURE	LIGHT FRAME (WOOD) WALLS AND ROOFS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR
WIND	$C_s = 6.5, D_s = 2\%, I_e = 1.0, C_e = 4, C_d = 0.147$	BASIC WIND VELOCITY = 42.0 MPH (LRFD)
	110 MPH, EXPOSURE "C", $K_{zt} = 1.15$	COMPONENTS & CLADDING

WIND PRESSURES BASED ON LESS THAN 10 SQUARE FOOT TRIANGULAR AREA NEAR WALL CORNERS OR ROOF EDGES (EXCLUDING CORNER ZONES AT ROOF). REDUCED DESIGN PRESSURES MAY BE CALCULATED IN ACCORDANCE WITH ASCE 7-10 CHAPTER 30.

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ENGINEER OF ALL DISCREPANCIES PRIOR TO CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE BUILDING LAYOUT DIMENSIONS (GRID LAYOUTS, SITE COORDINATES, ETC.) AMONGST ALL TRADES, INCLUDING SHOP FABRICATED ITEMS.

4. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING, BOTH FOR VERTICAL LOADS AND LATERAL STABILITY, FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

6. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.

7. ALL STRUCTURAL SYSTEMS COMPOSED OF COMPONENTS TO BE FIELD ERRECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

8. SEISMIC BRACING AND/OR GRAVITY SUPPORT AND ANCHORAGE OF ALL MECHANICAL OR ELECTRICAL EQUIPMENT SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. EXCEPT FOR ELEMENTS SPECIFICALLY SHOWN AND DETAILED ON THE STRUCTURAL DRAWINGS, THE MECHANICAL/ELECTRICAL CONTRACTOR MUST HIRE THE ENGINEER AND IS RESPONSIBLE FOR ALL COSTS RELATED TO THE PURCHASE AND INSTALLATION OF NECESSARY SUPPORTS, BRACING AND ANCHORAGE. SEISMIC BRACING AND ANCHORAGE DESIGN AND CONSTRUCTION SHALL COMPLY WITH CHAPTER 13 OF ASCE 7-10.

9. SHOP DRAWING REVIEW. SHOP DRAWINGS FOR TRUSSES SHALL BE SUBMITTED TO THE CONTRACTOR, ARCHITECT, AND ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS. DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, AND THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY. THE REPRODUCIBLE SHALL BE MARKED AND RETURNED. SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED, EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

10. DEFERRED SUBMITTALS SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF WASHINGTON. THE COMPONENT DESIGNER SHALL BE A REGISTERED STRUCTURAL ENGINEER WITH THE ICC-ES REPORTS INDICATED AND MANUFACTURER'S INSTRUCTIONS INCLUDING MINIMUM EMBED REQUIREMENTS. "SET-UP" AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. (ICC-ES NO. 2508); OR "HIT-HY 200" AS MANUFACTURED BY HILTI, INC. (ICC-ES NO. 3187), "SAFE-SET" INSTALLATION WITH HOLLOW CARBIDE DRILL BIT IS PERMITTED; OR "PURE110+" AS MANUFACTURED BY DEWALT/POWERS (ICC-ES NO. 3298). SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH ICC-ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. IN ADDITION, SUBSTITUTIONS SHALL MEET ICC-ES ACCEPTANCE CRITERIA AC308. SPECIAL INSPECTION OF EPOXY-GROUTED ANCHOR INSTALLATION IS REQUIRED. EPOXY-GROUTED RODS OR REBAR SHALL NOT BE USED AS SUBSTITUTES FOR CAST-IN-PLACE ANCHOR BOLTS OR REINFORCING STEEL UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. NOTIFY ENGINEER IF ANCHOR LOCATIONS CONFLICT WITH REINFORCING STEEL - DO NOT CUT REINFORCING OR REDUCE EMBEDMENT DEPTHS WITHOUT PRIOR APPROVAL. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY CERTIFIED PERSONNEL IN CONFORMANCE TO ACI 318-14 SECTION 17.8.2.2. HOLES SHALL BE HAMMER DRILLED AND DRY.

GEOTECHNICAL:

11. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH THE RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE OWNER APPOINTED GEOTECHNICAL ENGINEER. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED EARTH OR CONTROLLED, COMPACTED STRUCTURAL FILL AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. THE OWNER APPOINTED GEOTECHNICAL ENGINEER SHALL APPROVE FOOTING EXCAVATION/PREPARATION PRIOR TO PLACEMENT OF ALL FOOTINGS. FOOTING DEPTHS/ELEVATIONS SHOWN ON THE DRAWINGS ARE MINIMUM AND FOR GUIDANCE ONLY; BY THE ACTUAL ELEVATIONS SHALL BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND GEOTECHNICAL ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING, GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE GEOTECHNICAL REPORT.

ALLOWABLE SOIL PRESSURE	2,000 PSF
LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED)	40/30 PCF
w/ sloped earth against wall no steeper than 2H:1V	60/50 PCF
PASSIVE EARTH PRESSURE	350 PCF
SEISMIC SURCHARGE	8H PSF (UNIFORM)
BASE COEFFICIENT OF FRICTION	0.35
SOIL PROFILE TYPE	SITE CLASS D

GEOTECHNICAL REPORT REFERENCE: "Geo Group Northwest - Geotechnical Report - Project #G-4638" dated July 13th, 2018 and including the 12/27/18, 8/16/19, 10/18/19, 11/4/19, and 2/3/20 addendums.

ANCHORAGE:

12. DRIVE PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE ONE OF THE FOLLOWING INSTALLED IN STRICT ACCORDANCE WITH THE ICC-ES REPORTS INDICATED AND MANUFACTURER'S INSTRUCTIONS INCLUDING MINIMUM EMBED REQUIREMENTS: "E SERIES" (0.157" DIAMETER) AS MANUFACTURED BY ITW RAMSEY (ICC-ES NO. 1799); OR "X-UP" (0.157" DIAMETER) AS MANUFACTURED BY HILTI, INC. (ICC-ES NO. 2269); OR "STRONG-TIE PDPA" (0.157" DIAMETER) AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. (ICC-ES NO. 2138); OR "CSF PIN" (0.151" DIAMETER) AS MANUFACTURED BY DEWALT/POWERS (ICC-ES NO. 2024); OR AN APPROVED EQUIVALENT IN STRENGTH AND EMBEDMENT. MINIMUM EMBEDMENT IN CONCRETE SHALL BE 1" UNLESS OTHERWISE NOTED. MAINTAIN AT LEAST 3-1/2" TO NEAREST CONCRETE EDGE.

CONCRETE:

13. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 318-14 CHAPTER 26 AND ACI 301. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF $f_c = 4,000$ PSI (4,500 PSI AT ALL CONCRETE EXPOSED TO WEATHER). MAXIMUM WATER-CEMENTITIOUS MATERIAL RATIO FOR INTERIOR SLABS SHALL BE BETWEEN 0.40 AND 0.44. ALL CONCRETE SHALL BE EXPOSURE CLASSES FO, SO, WO, AND CO PER ACI 318-14 TABLES 19.3.1.1 AND 19.3.2.1 EXCEPT AS NOTED BELOW.

ALL CONCRETE EXPOSED TO EARTH (FOUNDATIONS, ETC.): (FO, SO, WO, CI)
ALL CONCRETE EXPOSED TO WEATHER: (F1, SO, WO, CI)
SEE SPECIFICATIONS FOR SHRINKAGE REDUCING CONCRETE MIX CRITERIA WHERE INDICATED ON DRAWINGS. CONCRETE MIXES SHALL MEET OR EXCEED THE REQUIREMENTS SPECIFIED ABOVE. MIXES SHALL BE SUBMITTED TO THE ENGINEER AND BUILDING OFFICIAL FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE AND SHALL INCLUDE THE AMOUNTS OF CEMENT, CEMENTITIOUS MATERIAL, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES, AS WELL AS THE WATER-CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTITUTING STRENGTH DATA IN ACCORDANCE WITH ACI 318-14, CHAPTER 26 AND 27. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

14. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, $f_y = 60,000$ PSI. GRADE 60 REINFORCING BARS WHICH ARE TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCEMENT COMPLYING WITH ASTM A615(S1) MAY BE WELDED ONLY IF A MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN A.W.S. D1.4 ARE SUBMITTED. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064.

15. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOPS AND BENDS) IN ACCORDANCE WITH ACI 318-99 AND 318-14. LAP ALL CONTINUOUS REINFORCEMENT IN ACCORDANCE WITH "REINFORCEMENT SLICE AND DEVELOPMENT LENGTH SCHEDULE" OF 10/53.1. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 12" AT SIDES AND ENDS. NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS OTHERWISE NOTED ON THE DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.

16. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
FOOTINGS AND OTHER UNFORMED SURFACES
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
FORMED SURFACES EXPOSED TO EARTH (i.e. WALLS BELOW GROUND) OR WEATHER (#5 BARS OR SMALLER) 1 1/2"

17. BONDING AGENT SHALL BE "MASTEREMACO ADH 326" BY BASF CORPORATION, OR EQUIVALENT, AND SHALL BE USED WHERE NEW CONCRETE IS PLACED AGAINST HARDENED CONCRETE. PLACING IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, INCLUDING PREPARATION OF EXISTING SURFACES. CONCRETE SHALL BE CONSIDERED HARDENED AFTER 56 DAYS.

18. NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (6,000 PSI MINIMUM).

WOOD:

19. FRAMING LUMBER SHALL BE KILN DRIED OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH W.C.L.I.B. STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 17 OR W.W.P.A. WESTERN LUMBER GRADING RULES. FINISH TO THE FOLLOWING MINIMUM STANDARDS:
PLATES, LEDGERS & MSSC: DOUGLAS FIR NO. 3 OR STUD GRADE
LIGHT FRAMING: MIN. BASIC DESIGN STRESS, $F_b = 525$ PSI, $E = 1,400$ KSI
 $F_c = 775$ PSI, $F_t = 325$ PSI

JOISTS, BEAMS & POSTS: DOUGLAS FIR NO. 1
MIN. BASIC DESIGN STRESS, $F_b = 1,000$ PSI, $E = 1,700$ KSI
 $F_c = 1,500$ PSI, $F_t = 1,000$ PSI

20. MANUFACTURED LUMBER SHALL BE AS MANUFACTURED BY TRUS JOIST OR APPROVED EQUAL. REQUESTS FOR APPROVAL AS EQUAL WILL REQUIRE SUBMITTAL OF ICC REPORT EQUIVALENT TO ESR-1387 FOR LAMINATED VENER LUMBER (LVL), LAMINATED STRAND LUMBER (LSL), OR PARALLEL STRAND LUMBER (PSL). THE MINIMUM ALLOWABLE DESIGN VALUES ARE AS FOLLOWS:
LVL - $F_b = 2,600$ $F_c = 290$ PSI $E = 2,000,000$ PSI
LSL - $F_b = 1,900$ $F_c = 150$ PSI $E = 1,300,000$ PSI

21. ENGINEERED WOOD I-JOISTS SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL NECESSARY BRIDGING, BLOCKING, BLOCKING PANELS, STIFFENERS, ETC., SHALL BE DETAILED AND FURNISHED BY THE MANUFACTURER. PERMANENT AND TEMPORARY BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH ENGINEERED WOOD I-JOISTS PROVIDED. DESIGN SHOWN ON THE DRAWINGS IS BASED ON RESIDENTIAL JOISTS MANUFACTURED BY MEYERHAUSER IN ACCORDANCE WITH ICC-ES REPORT NO. ESR-1153. ALTERNATE ENGINEERED WOOD I-JOISTS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.

22. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND A.I.T.C. STANDARDS IN ACCORDANCE WITH IBC SECTION 2303.1.3. EACH MEMBER SHALL BEAR AN A.I.T.C. IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN A.I.T.C. CERTIFICATE OF CONFORMANCE. HORIZONTAL MEMBERS AND INCLINED MEMBERS OF LESS THAN 1:1 SLOPE SHALL HAVE A RADIUSED CAMBER OF 3/300 FT. UNLESS OTHERWISE NOTED.

SIMPLE SPAN BEAMS DOUGLAS FIR COMBINATION 24-VR
 $F_b = 2,400$ PSF; $F_c = 285$ PSI; $E = 1,800,000$ PSI
GLUED LAMINATED MEMBERS EXPOSED TO WEATHER OR MOISTURE SHALL BE TREATED WITH A NON-CORROSIVE, APPROVED PRESERVATIVE.

23. PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH ANS/IFI 1-2007 AND IBC SECTION 2303.4 FOR THE SPANS AND CONDITIONS SHOWN ON THE DRAWINGS. DESIGN LOADS SHALL BE AS FOLLOWS:
TOP CHORD LIVE LOAD 25 PSF, SNOW 0 PSF
BOTTOM CHORD LIVE LOAD 0 PSF
TOP CHORD DEAD LOAD 15 PSF
BOTTOM CHORD DEAD LOAD 5 PSF
WIND UPLIFT (TOP CHORD) SEE NOTE#2 COMPONENTS & CLADDING ROOF LOADS

THE TRUSS MANUFACTURER SHALL COORDINATE LOCATIONS AND SUPPORT CONFIGURATIONS OF PLUMBING, MECHANICAL UNITS, DUCTS, AND/OR OTHER MISCELLANEOUS ITEMS WITH THE CONTRACTOR PRIOR TO TRUSS FABRICATION. THE TRUSS MANUFACTURER SHALL DESIGN TRUSSES TO SUPPORT ALL LOADS ASSOCIATED WITH SUCH ITEMS. THE TRUSS SHOP DRAWINGS SHALL INCLUDE ALL DESIGN LOADS AND APPROVED HANGER CONNECTION DETAILS TO TRUSS CHORDS FOR SUPPORT OF HUNG MECHANICAL SYSTEM COMPONENTS AS APPLICABLE.

WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANGNAU OR EQUAL). SHOP DRAWINGS AND CALCULATIONS SHALL BE PROVIDED AS A DEFERRED SUBMITTAL TO THE CONTRACTOR AND STRUCTURAL ENGINEER OF RECORD PER GENERAL STRUCTURAL NOTE 13. SHOP DRAWINGS SHALL INDICATE SHAPES, BEARING POINTS, INTERSECTIONS, HIPS, VALLEYS, ETC. EXACT COMPOSITION OF SPECIAL HIP, VALLEY, AND INTERSECTION AREAS (USE OF ORDER TRUSSES, JACK TRUSSES, STEP-DOWN TRUSSES, ETC.) SHALL BE DETERMINED BY THE MANUFACTURER UNLESS OTHERWISE NOTED ON THE DRAWINGS. THE TRUSS MANUFACTURER SHALL PROVIDE ALL TRUSS-TO-TRUSS BEAM/JOIST CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. THE TRUSS MANUFACTURER SHALL DESIGN AND PROVIDE DETAILS FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.

24. ROOF & WALL SHEATHING SHALL BE APA RATED, EXTERIOR OR EXPOSURE 1 PLYWOOD OR ORIENTED STRAND BOARD (OSB) IN CONFORMANCE WITH IBC SECTION 2303.1.5. SHEATHING SHALL BE MANUFACTURED UNDER THE PROVISIONS OF VOLUNTARY PRODUCT STANDARDS DOC PS 1-09, PS 2-10, OR APA PRP-108 PERFORMANCE STANDARDS AND POLICES FOR STRUCTURAL USE PANELS. SEE DRAWINGS FOR THICKNESS, SPAN RATING, AND NAILING REQUIREMENTS.

25. AT NON-SHEAR WALL EXTERIOR WALLS, UNLESS OTHERWISE NOTED, WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING OF 2/8 WITH 8d @ 6" o.c. PANEL NAILING (APPLIES TO ALL SHEATHING PANEL EDGES); AND 8d @ 12" o.c. TO INTERMEDIATE FRAMING.

26. ALL PRESSURE-TREATED (P-T) WOOD MEMBERS SPECIFIED ON THE DRAWINGS THAT OCCUR ABOVE GROUND AND CONTINUOUSLY PROTECTED FROM MOISTURE (INTERIOR LOCATIONS) SHALL BE PRESSURE-TREATED WITH DOT SODIUM BORATE (SBX) WITH UNDO $Na_2B_{10}O_{10}$ AT LOCATIONS PERMANENTLY EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND. WOOD MEMBERS SHALL BE PRESSURE-TREATED WITH ALKALINE COPPER QUAT (ACC-C FOR DOUGLAS-FIR) PRESERVATIVE UNLESS OTHERWISE NOTED. AMMONIACAL COPPER ZINC ARSENATE (ACZA) PRESERVATIVE OR OTHER PRESERVATIVES WITH AMMONIA CARRIERS, SHALL NOT BE USED. GLUED LAMINATED MEMBERS EXPOSED TO WEATHER OR MOISTURE SHALL BE TREATED WITH A NON-CORROSIVE, APPROVED PRESERVATIVE.

27. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR WOOD CONSTRUCTION CONNECTORS CATALOG NO. C-C-2017-18. INSTALL NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, CENTER STRAP ON JOINT AND INSTALL NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER, WITH EQUAL NUMBER AND SIZE OF FASTENERS IN EACH MEMBER. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. INSTALL WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

ALL TIMBER CONNECTORS IN CONTACT WITH PRESSURE-TREATED WOOD THAT USED PRESERVATIVE CHEMICALS OTHER THAN DOT SODIUM BORATE (SBX) WITH UNDO $Na_2B_{10}O_{10}$ SHALL BE MANUFACTURED FROM ZMAX STEEL BY SIMPSON (G185 STEEL PER ASTM A653), OR TYPE 304 OR 316 STAINLESS STEEL. ALTERNATIVELY, CONNECTORS CAN BE POST HOLE GALVANIZED PER ASTM A123 OR MECHANICALLY GALVANIZED PER ASTM B695, CLASS 55 OR GREATER. STAINLESS STEEL FASTENERS SHALL BE USED WITH STAINLESS STEEL CONNECTORS, AND HOT DIP GALVANIZED FASTENERS PER ASTM A153 SHALL BE USED WITH GALVANIZED CONNECTORS.

28. WOOD FRAMING NOTES: THE FOLLOWING SHALL APPLY UNLESS OTHERWISE NOTED ON THE DRAWINGS:
A. ALL WOOD FRAMING DETAILS SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC. MINIMUM NAILING SHALL CONFORM TO IBC TABLE 2304.9.1 OR CURRENT ICC-ES REPORT NER-272. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. INSTALL WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. INSTALLATION OF LAG SCREWS SHALL CONFORM TO 2012 NDS SECTION 11.1.4, AND INSTALLATION OF BOLTS SHALL CONFORM TO 2012 NDS SECTION 11.1.3.

B. WALL FRAMING: TWO STUDS MINIMUM SHALL BE INSTALLED AT THE ENDS OF ALL WALLS, UNLESS NOTED OTHERWISE. INSTALL SOLID BLOCKING FOR WOOD COLUMN THROUGH FLOOR SPACES TO SUPPORTS BELOW.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS @ 12" o.c. STAGGERED OR BOLTED TO CONCRETE WITH 3/8" ANCHOR BOLTS @ 4'-0" o.c. PER IBC SECTION 2308.6 (EMBED 7"). UNLESS OTHERWISE NOTED, 3" x 3" x 0.229" PLATE WASHERS SHALL BE USED WITH ALL SILL PLATE ANCHOR BOLTS AND INSTALLED PER AFAPA SDPWS-2008 SECTION 4.3.6.4.3. INDIVIDUAL MEMBERS OF BUILT-UP STUD POSTS SHALL BE NAILED TO EACH OTHER WITH 16d @ 12" o.c. STAGGERED.

C. FLOOR AND ROOF FRAMING: INSTALL SOLID BLOCKING AT ALL BEARING POINTS. TOENAIL JOISTS TO SUPPORTS WITH (2)16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH 16d @ 12" o.c. STAGGERED.

ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAN PERPENDICULAR TO SUPPORTS AND NAILED AS SHOWN ON THE DRAWINGS. INSTALL APPROVED PANEL EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE-AND-GROOVE JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING ALLOW 1/8" SPAcing AT ALL PANEL EDGES AND ENDS OF LOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12" o.c. IN ACCORDANCE WITH IBC SECTION 1604.8.3. DECKS SHALL BE POSITIVELY ANCHORED TO THE STRUCTURE BY MEANS OTHER THAN NAILS SUBJECT TO WITHDRAWAL. ANCHOR WITH MINIMUM (1) C516 STRAP AT EACH END ATTACHED TO DECK JOISTS AND TO A SOLID BLOCKING MEMBER WITHIN THE BUILDING.

POST-INSTALLED ANCHORS AND EPOXY ADHESIVE:

29. EPOXY-GROUTED RODS OR REBAR TO CONCRETE SPECIFIED ON THE DRAWINGS SHALL BE ONE OF THE FOLLOWING INSTALLED IN STRICT ACCORDANCE WITH THE ICC-ES REPORTS INDICATED AND MANUFACTURER'S INSTRUCTIONS INCLUDING MINIMUM EMBED REQUIREMENTS: "SET-UP" AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. (ICC-ES NO. 2508); OR "HIT-HY 200" AS MANUFACTURED BY HILTI, INC. (ICC-ES NO. 3187), "SAFE-SET" INSTALLATION WITH HOLLOW CARBIDE DRILL BIT IS PERMITTED; OR "PURE110+" AS MANUFACTURED BY DEWALT/POWERS (ICC-ES NO. 3298). SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH ICC-ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. IN ADDITION, SUBSTITUTIONS SHALL MEET ICC-ES ACCEPTANCE CRITERIA AC308. SPECIAL INSPECTION OF EPOXY-GROUTED ANCHOR INSTALLATION IS REQUIRED. EPOXY-GROUTED RODS OR REBAR SHALL NOT BE USED AS SUBSTITUTES FOR CAST-IN-PLACE ANCHOR BOLTS OR REINFORCING STEEL UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. NOTIFY ENGINEER IF ANCHOR LOCATIONS CONFLICT WITH REINFORCING STEEL - DO NOT CUT REINFORCING OR REDUCE EMBEDMENT DEPTHS WITHOUT PRIOR APPROVAL. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY CERTIFIED PERSONNEL IN CONFORMANCE TO ACI 318-14 SECTION 17.8.2.2. HOLES SHALL BE HAMMER DRILLED AND DRY.

30. EXPANSION ANCHORS SHALL BE ONE OF THE APPROVED PRODUCTS BELOW:
- KWIK BOLT IZ ANCHORS AS MANUFACTURED BY HILTI, INC. AND INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. 1917, OR
- STRONG-BOLT 2 AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. AND INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. 3037
AND INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

IBC TABLE 1705.3 REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

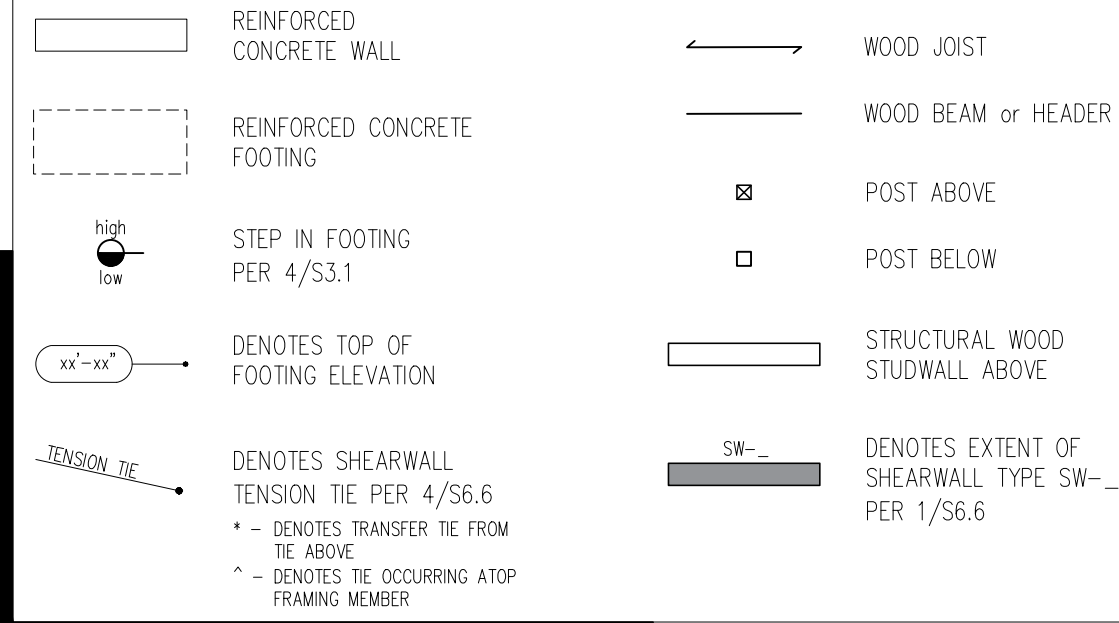
REQUIRED?	VERIFICATION & INSPECTION	CONTINUOUS	PERIODIC	REF. STD.	IBC REF.
N*	1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS AND VERIFY PLACEMENT.	---	X	ACI 318 CH. 20, 25.2, 25.3, 26.5.1-26.5.3	1908.4
N	2. REINFORCING BAR WELDING: A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A 706. B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16" AND C. INSPECT ALL OTHER WELDS	---	X	#WS14 ACI 318 26.5.4	---
YES	3. INSPECT ANCHORS CAST IN CONCRETE.	---	X	ACI 318: 17.8.2	---
YES	4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	X	X	ACI 318: 17.8.2.4 ACI 318:17.8.2	---
N*	5. VERIFY USE OF REQUIRED DESIGN MIX.	---	X	ACI 318 CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
N*	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 C 172 ACI 318: 26.4.5, 26.12	1908.10
N*	7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	---	ACI 318: 26.4.5	1908.6, 1908.7, 1908.8
N*	8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	---	X	ACI 318: 26.4.7-26.4.9	1908.9
N	9. INSPECT PRESTRESSED CONCRETE FOR: A. APPLICATION OF PRESTRESSING FORCES; AND B. GROUTING OF BONDED PRESTRESSING TENDONS	X	---	ACI 318: 26.9.2.1 ACI 318: 26.9.2.3	---
N	10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	---	X	ACI 318: CH. 26.8	---
N*	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: 26.10.2	---
N*	12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	---	X	ACI 318: 26.10.1(b)	---

* EXCEPTIONS 2 PER IBC SECTION 1705.3 APPLIES TO CONCRETE WORK ON THIS PROJECT.

Minimum Connectors and Fasteners for Wood Members per IBC 2015

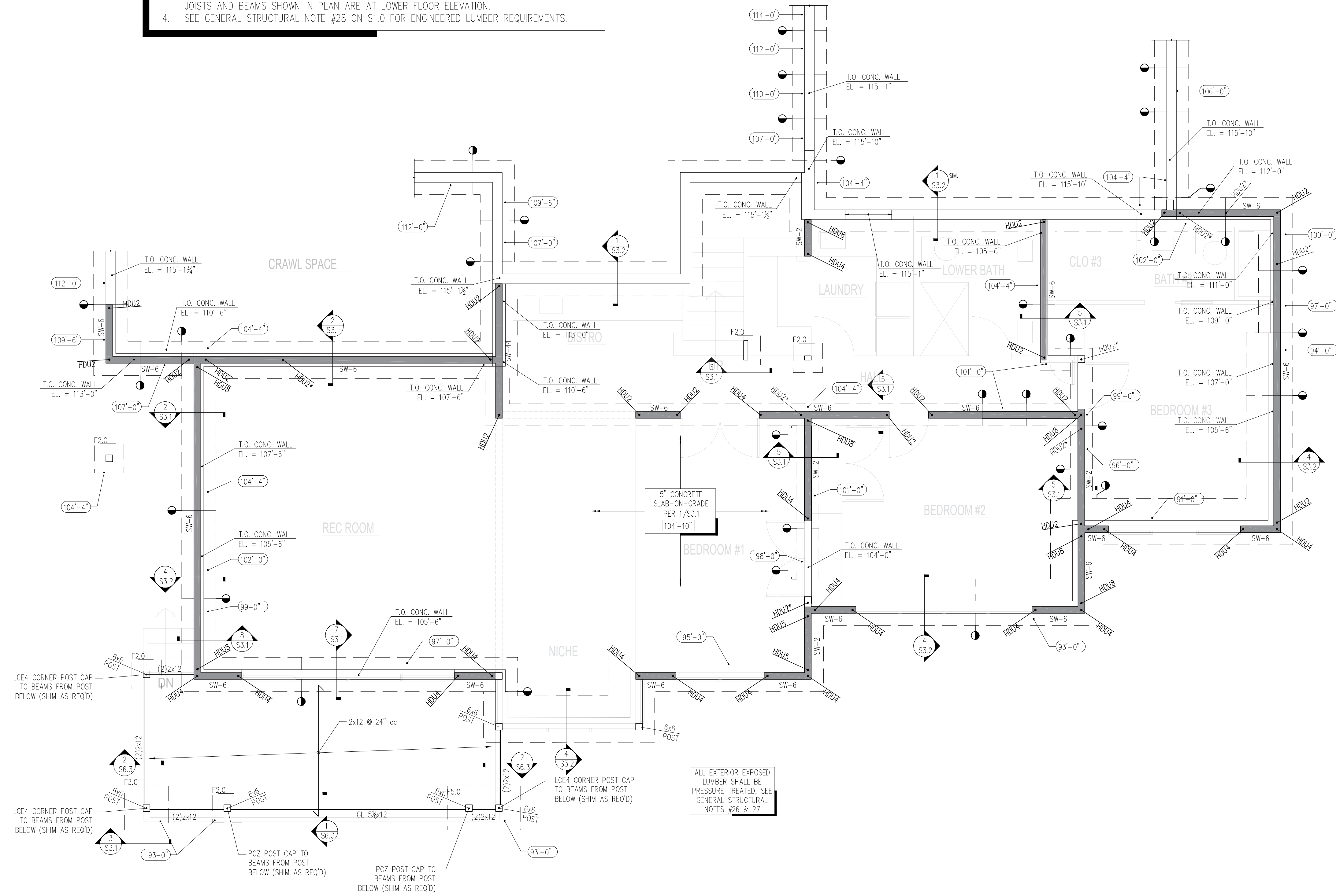
DESCRIPTION OF BUILDING ELEMENT	NUMBER AND TYPE OF FASTENERS	SPACING & LOCATION
ROOF		
1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS, OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	3-8d COMMON (2 1/2" x 0.131"); or 3-10d BOX (3" x 0.128"); or 3-3" x 0.131" NAILS; or 3-3" x 14 GAGE STAPLES, 3/16" CROWN	EACH END, TOENAIL
2. BLOCKING BETWEEN RAFTERS OR TRUSSES NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	2-8d COMMON (2 1/2" x 0.131") 2-3" x 0.131" NAILS 2-3" x 14 GAGE STAPLES	EACH END, TOENAIL
2-16d COMMON (3 1/2" x 0.162") 3-3" x 0.131" NAILS 3-3" x 14 GAGE STAPLES		END NAIL
FLAT BLOCKING TO TRUSS AND WEB FILLER	16d COMMON (3 1/2" x 0.162") @ 6" o.c. 3" x 0.131" NAILS @ 6" o.c. 3" x 14 GAGE STAPLES @ 6" o.c.	FACE NAIL
2. CEILING JOISTS TO TOP PLATE	3-8d COMMON (2 1/2" x 0.131"); or 3-10d BOX (3" x 0.128"); or 3-3" x 0.131" NAILS; or 3-3" x 14 GAGE STAPLES, 3/16" CROWN	EACH JOIST, TOENAIL
3. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITION (NO THROUGH) (SEE 2308.7.3.1, TABLE 2308.7.3.1)	3-16d COMMON (3 1/2" x 0.162"); or 4-10d BOX (3" x 0.128"); or 4-3" x 0.131" NAILS; or 4-3" x 14 GAGE STAPLES, 3/16" CROWN	FACE NAIL
4. CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT)	PER TABLE 2308.7.3.1	FACE NAIL
5. COLLAR TIE TO RAFTIER	3-10d COMMON (3" x 0.148"); or 4-10d BOX (3" x 0.128"); or 4-3" x 0.131" NAILS; or 4-3" x 14 GAGE STAPLES, 3/16" CROWN	FACE NAIL
6. RAFTER OR ROOF TRUSS TO TOP PLATE (SEE 2308.7.5, TABLE 2308.7.5)	3-10d COMMON (3" x 0.148"); or 3-16d BOX (3 1/2" x 0.135"); or 4-10d BOX (3" x 0.128"); or 4-3" x 0.131" NAILS; or 4-3" x 14 GAGE STAPLES, 3/16" CROWN	TOENAIL
7. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2" RIDGE BEAM	2-16d COMMON (3 1/2" x 0.162"); or 3-10d BOX (3" x 0.128"); or 3-3" x 0.131" NAILS; or 3-3" x 14 GAGE STAPLES, 3/16" CROWN	END NAIL
3-10d COMMON (3 1/2" x 0.148"); or 3-16d BOX (3 1/2" x 0.135"); or 4-10d BOX (3" x 0.128"); or 4-3" x 0.131" NAILS; or 4-3" x 14 GAGE STAPLES, 3/16" CROWN		TOENAIL
WALL		
8. STUD TO STUD (NOT AT SHEARWALL CHORDS)	16d COMMON (3 1/2" x 0.162") 10d BOX (3" x 0.128"); or 3" x 0.131" NAILS; or 3-3" x 14 GAGE STAPLES, 3/16" CROWN	24" o.c. FACE NAIL 16" o.c. FACE NAIL

LEGEND

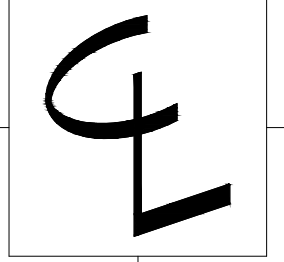
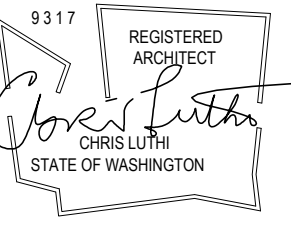


LOWER FLOOR PLAN NOTES

- EXTERIOR STUDWALLS SHALL BE 2x6 STUDS @ 16" oc. SEE 6/6.1, 5/S6.1, AND 2/S6.1 FOR ALLOWABLE HOLES & NOTCHES IN STUDWALL STUDS AND TOP & BOTTOM PLATES.
- SEE 8/S6.1 FOR CONNECTION DETAILS OF INTERIOR NON-STRUCTURAL PARTITION WALLS.
- SOLID WALLS AND SHEARWALLS SHOWN IN PLAN ARE ABOVE FRAMING (i.e. FROM LOWER FLOOR LEVEL TO MAIN FLOOR LEVEL). JOISTS AND BEAMS SHOWN IN PLAN ARE AT LOWER FLOOR ELEVATION.
- SEE GENERAL STRUCTURAL NOTE #28 ON S1.0 FOR ENGINEERED LUMBER REQUIREMENTS.

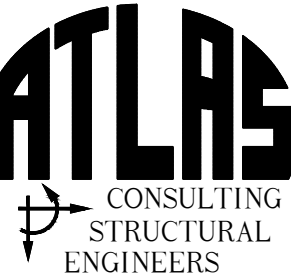


1 FOUNDATION, LOWER FLOOR, AND LOWER DECK FRAMING PLAN
 S2.1 1/4" = 1'-0"



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Foundation &
 Lower Deck
 Framing Plan

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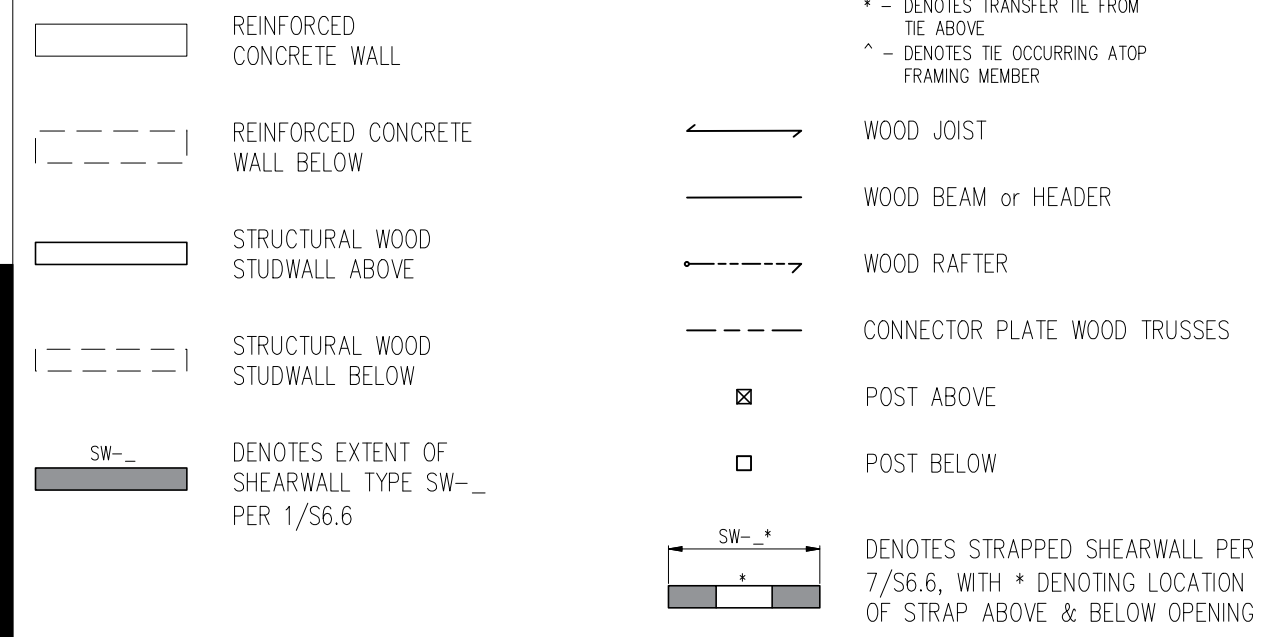
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DATE

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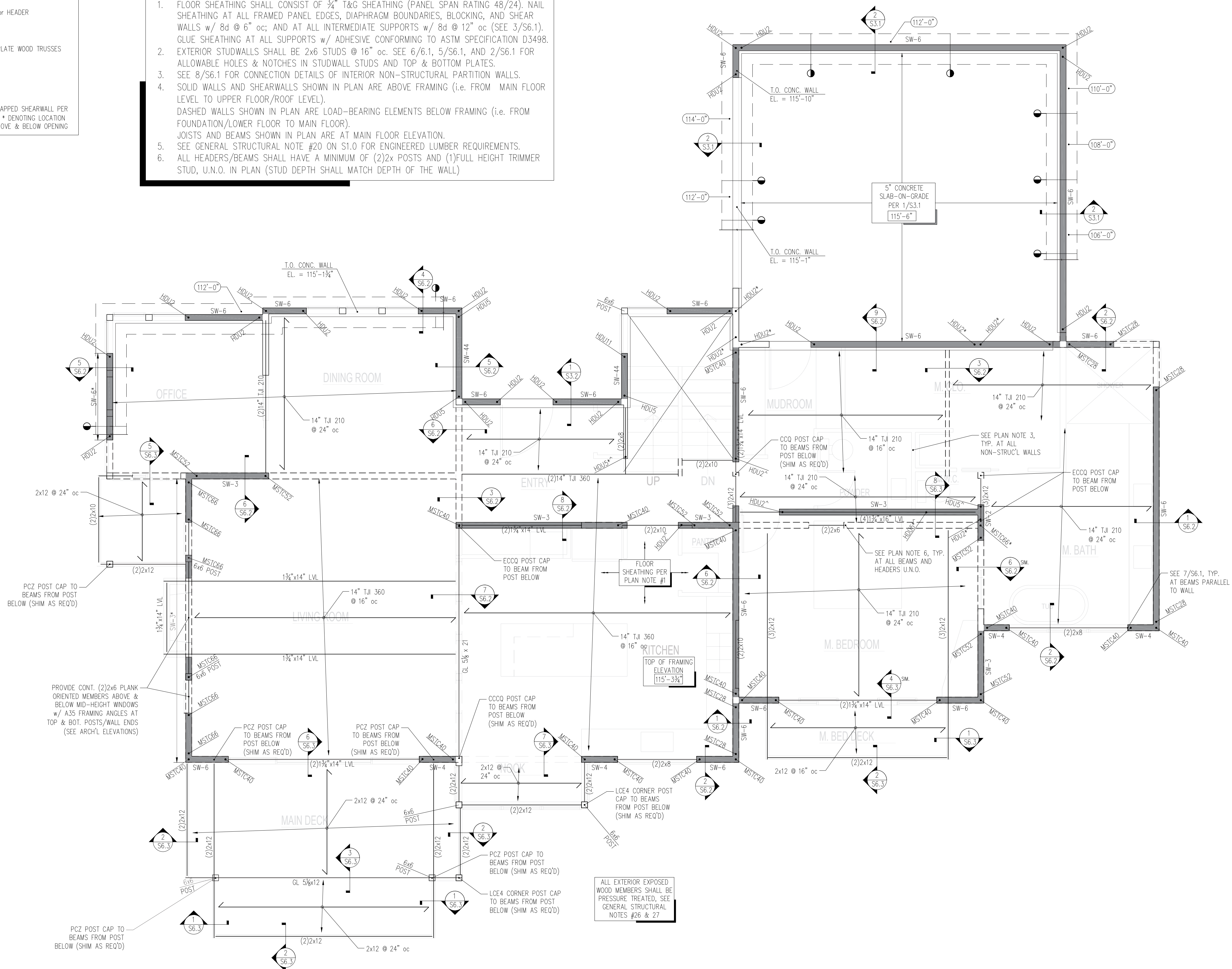
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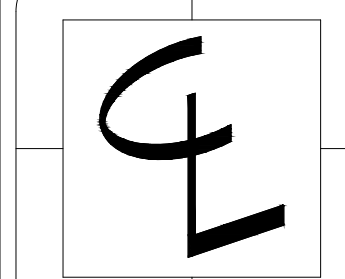
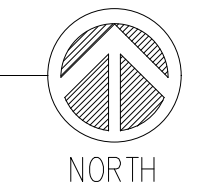


MAIN FLOOR PLAN NOTES

- FLOOR SHEATHING SHALL CONSIST OF 3/4" T&G SHEATHING (PANEL SPAN RATING 48/24). NAIL SHEATHING AT ALL FRAMED PANEL EDGES, DIAPHRAGM BOUNDARIES, BLOCKING, AND SHEAR WALLS w/ 8d @ 6" oc; AND AT ALL INTERMEDIATE SUPPORTS w/ 8d @ 12" oc (SEE 3/S6.1). GLUE SHEATHING AT ALL SUPPORTS w/ ADHESIVE CONFORMING TO ASTM SPECIFICATION D3498.
- EXTERIOR STUDWALLS SHALL BE 2x6 STUDS @ 16" oc. SEE 6/6.1, 5/S6.1, AND 2/S6.1 FOR ALLOWABLE HOLES & NOTCHES IN STUDWALL STUDS AND TOP & BOTTOM PLATES.
- SEE 8/S6.1 FOR CONNECTION DETAILS OF INTERIOR NON-STRUCTURAL PARTITION WALLS.
- SOLID WALLS AND SHEARWALLS SHOWN IN PLAN ARE ABOVE FRAMING (i.e. FROM MAIN FLOOR LEVEL TO UPPER FLOOR/ROOF LEVEL). DASHED WALLS SHOWN IN PLAN ARE LOAD-BEARING ELEMENTS BELOW FRAMING (i.e. FROM FOUNDATION/LOWER FLOOR TO MAIN FLOOR). JOISTS AND BEAMS SHOWN IN PLAN ARE AT MAIN FLOOR ELEVATION.
- SEE GENERAL STRUCTURAL NOTE #20 ON S1.0 FOR ENGINEERED LUMBER REQUIREMENTS.
- ALL HEADERS/BEAMS SHALL HAVE A MINIMUM OF (2)2x POSTS AND (1)FULL HEIGHT TRIMMER STUD, U.N.O. IN PLAN (STUD DEPTH SHALL MATCH DEPTH OF THE WALL)



1 MAIN FLOOR FRAMING PLAN
S2.2 1/4" = 1'-0"



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Main Floor Framing Plan

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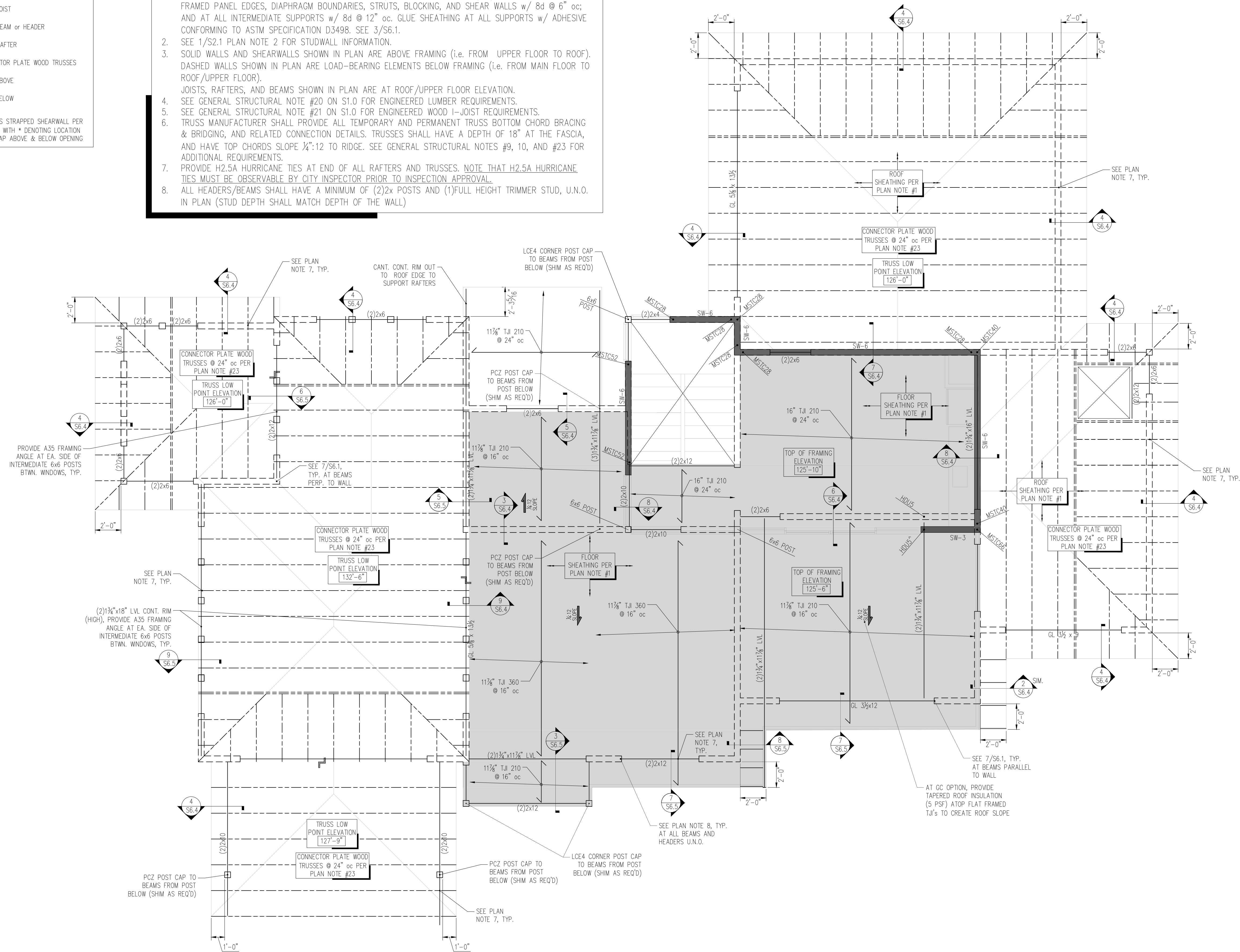
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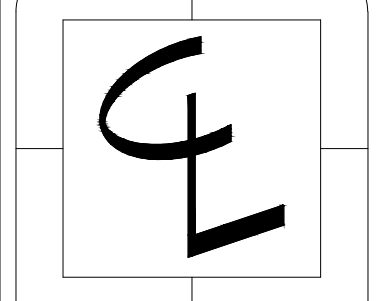
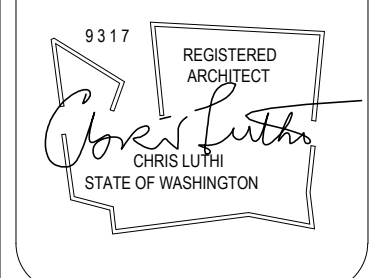
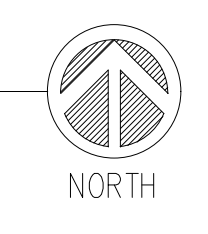
	REINFORCED CONCRETE WALL		WOOD JOIST
	REINFORCED CONCRETE WALL BELOW		WOOD BEAM or HEADER
	STRUCTURAL WOOD STUDWALL ABOVE		WOOD RAFTER
	STRUCTURAL WOOD STUDWALL BELOW		CONNECTOR PLATE WOOD TRUSSES
	POST ABOVE		POST BELOW
	DENOTES EXTENT OF SHEARWALL TYPE SW- PER 1/56.6		DENOTES STRAPPED SHEARWALL PER 7/56.6, WITH * DENOTING LOCATION OF STRAP ABOVE & BELOW OPENING

UPPER FLOOR & ROOF PLAN NOTES

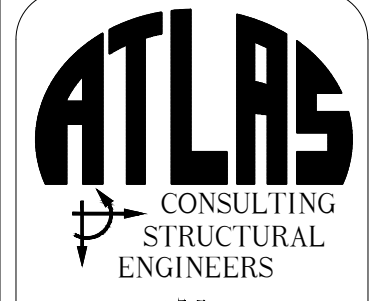
- SEE 1/S2.1 PLAN NOTE 1 FOR FLOOR SHEATHING AND FASTENING REQUIREMENTS. ROOF SHEATHING SHALL CONSIST OF 5/8" SHEATHING (PANEL SPAN RATING 32/16). NAIL SHEATHING AT ALL FRAMED PANEL EDGES, DIAPHRAGM BOUNDARIES, STRUTS, BLOCKING, AND SHEAR WALLS w/ 8d @ 6" oc; AND AT ALL INTERMEDIATE SUPPORTS w/ 8d @ 12" oc. GLUE SHEATHING AT ALL SUPPORTS w/ ADHESIVE CONFORMING TO ASTM SPECIFICATION D3498. SEE 3/56.1.
- SEE 1/S2.1 PLAN NOTE 2 FOR STUDWALL INFORMATION.
- SOLID WALLS AND SHEARWALLS SHOWN IN PLAN ARE ABOVE FRAMING (i.e. FROM UPPER FLOOR TO ROOF). DASHED WALLS SHOWN IN PLAN ARE LOAD-BEARING ELEMENTS BELOW FRAMING (i.e. FROM MAIN FLOOR TO ROOF/UPPER FLOOR). JOISTS, RAFTERS, AND BEAMS SHOWN IN PLAN ARE AT ROOF/UPPER FLOOR ELEVATION.
- SEE GENERAL STRUCTURAL NOTE #20 ON S1.0 FOR ENGINEERED LUMBER REQUIREMENTS.
- SEE GENERAL STRUCTURAL NOTE #21 ON S1.0 FOR ENGINEERED WOOD I-JOIST REQUIREMENTS.
- TRUSS MANUFACTURER SHALL PROVIDE ALL TEMPORARY AND PERMANENT TRUSS BOTTOM CHORD BRACING & BRIDGING, AND RELATED CONNECTION DETAILS. TRUSSES SHALL HAVE A DEPTH OF 18" AT THE FASCIA, AND HAVE TOP CHORDS SLOPE 1/4":12 TO RIDGE. SEE GENERAL STRUCTURAL NOTES #9, 10, AND #23 FOR ADDITIONAL REQUIREMENTS.
- PROVIDE H2.5A HURRICANE TIES AT END OF ALL RAFTERS AND TRUSSES. NOTE THAT H2.5A HURRICANE TIES MUST BE OBSERVABLE BY CITY INSPECTOR PRIOR TO INSPECTION APPROVAL.
- ALL HEADERS/BEAMS SHALL HAVE A MINIMUM OF (2)2x POSTS AND (1)FULL HEIGHT TRIMMER STUD, U.N.O. IN PLAN (STUD DEPTH SHALL MATCH DEPTH OF THE WALL)



1 UPPER FLOOR & ROOF FRAMING PLAN
S2.3 1/4" = 1'-0"



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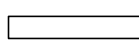
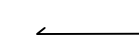
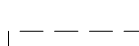
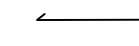

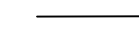
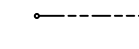
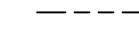

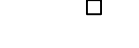
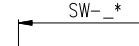
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Upper Floor and Roof Framing Plan

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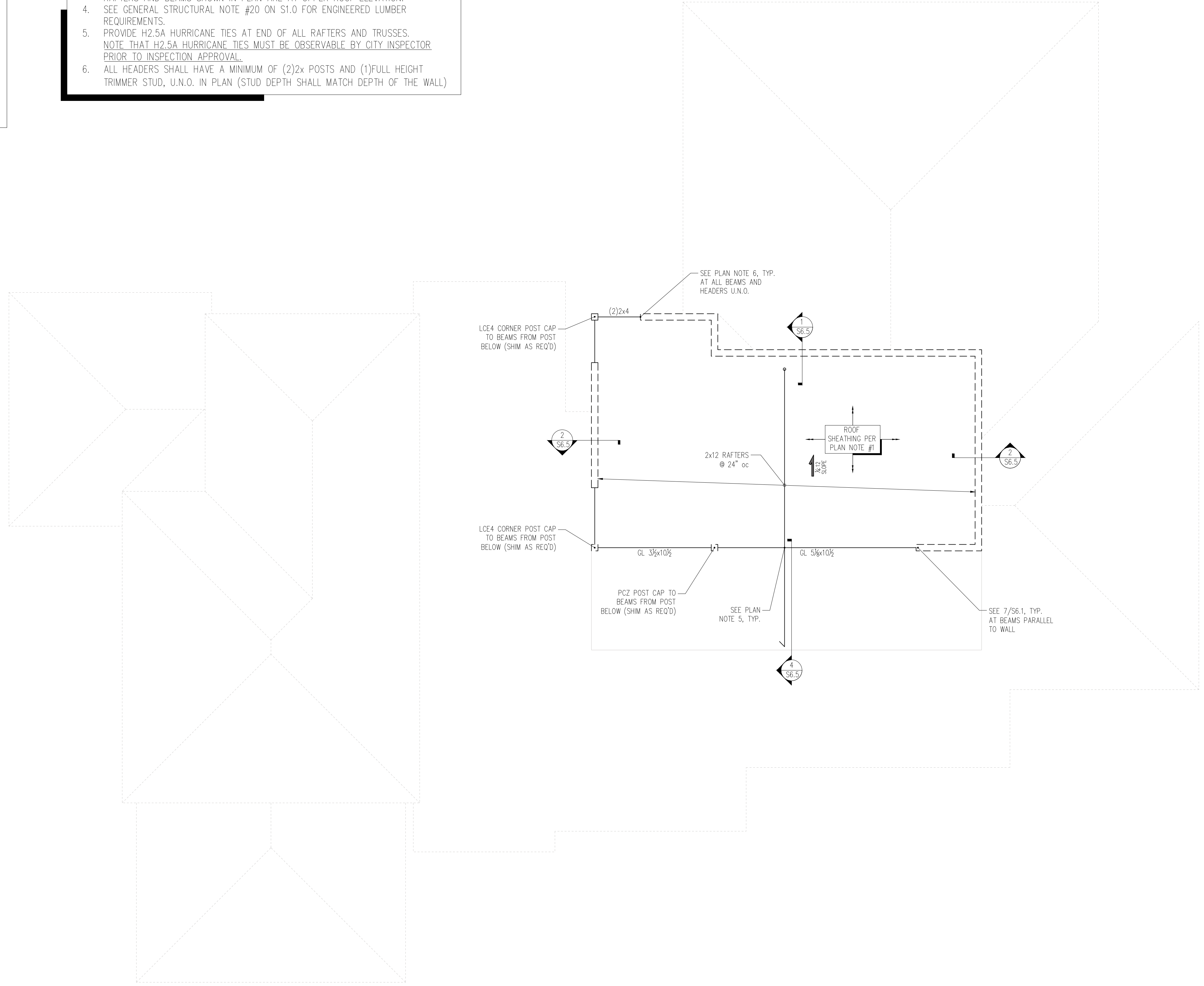
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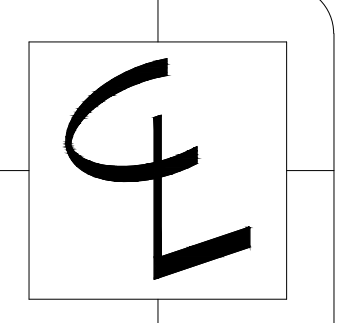
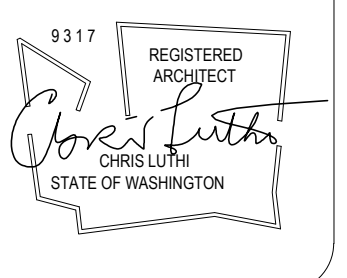
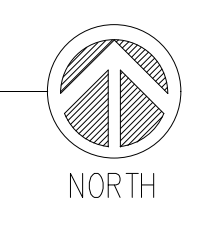
	REINFORCED CONCRETE WALL		DENOTES SHEARWALL TENSION TIE PER 4/56.6
	REINFORCED CONCRETE WALL BELOW		* = DENOTES TRANSFER TIE FROM TIE ABOVE
	STRUCTURAL WOOD STUDWALL ABOVE		^ = DENOTES TIE OCCURRING ATOP FRAMING MEMBER
	STRUCTURAL WOOD STUDWALL BELOW		WOOD JOIST
	DENOTES EXTENT OF SHEARWALL TYPE SW- PER 1/56.6		WOOD BEAM or HEADER
			WOOD RAFTER
			CONNECTOR PLATE WOOD TRUSSES
			POST ABOVE
			POST BELOW
			DENOTES STRAPPED SHEARWALL PER 7/56.6, WITH * DENOTING LOCATION OF STRAP ABOVE & BELOW OPENING

ROOF PLAN NOTES

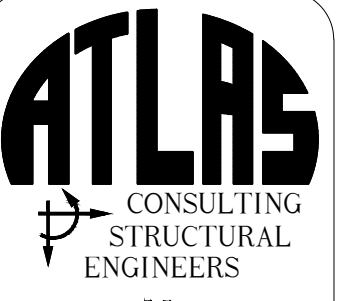
- SEE 1/S2.2 PLAN NOTE 1 FOR ROOF SHEATHING AND FASTENING REQUIREMENTS.
- SEE 1/S2.1 PLAN NOTE 2 FOR STUDWALL INFORMATION BELOW.
- DASHED WALLS SHOWN IN PLAN ARE LOAD-BEARING ELEMENTS BELOW FRAMING (i.e. FROM UPPER FLOOR TO UPPER ROOF). RAFTERS AND BEAMS SHOWN IN PLAN ARE AT UPPER ROOF ELEVATION. SEE GENERAL STRUCTURAL NOTE #20 ON S1.0 FOR ENGINEERED LUMBER REQUIREMENTS.
- PROVIDE H2.5A HURRICANE TIES AT END OF ALL RAFTERS AND TRUSSES. NOTE THAT H2.5A HURRICANE TIES MUST BE OBSERVABLE BY CITY INSPECTOR PRIOR TO INSPECTION APPROVAL.
- ALL HEADERS SHALL HAVE A MINIMUM OF (2)2x POSTS AND (1)FULL HEIGHT TRIMMER STUD, U.N.O. IN PLAN (STUD DEPTH SHALL MATCH DEPTH OF THE WALL)



1 UPPER ROOF FRAMING PLANE
S2.4 1/4" = 1'-0"



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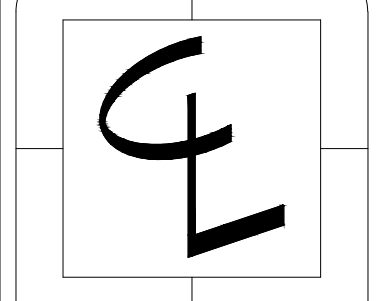
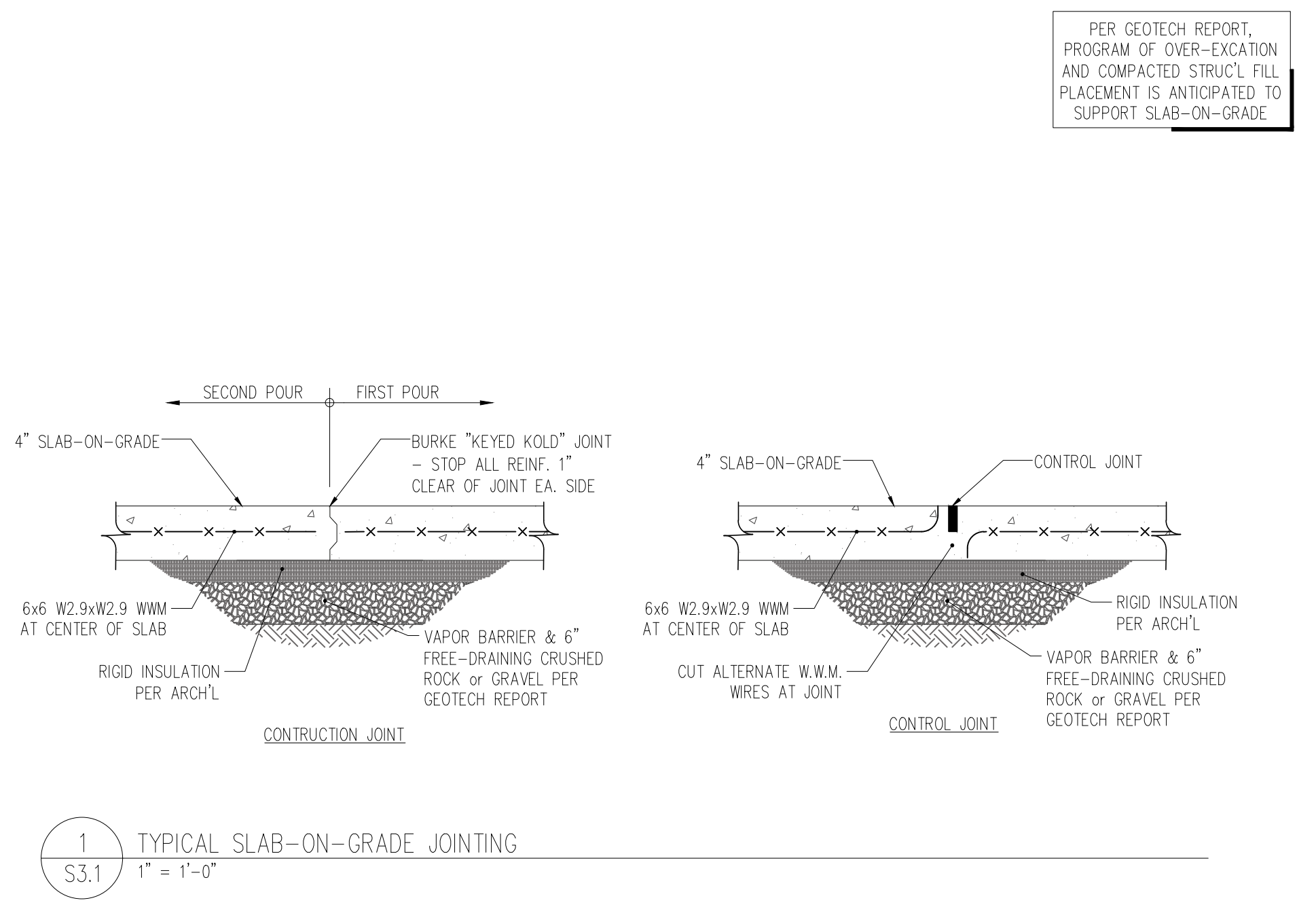
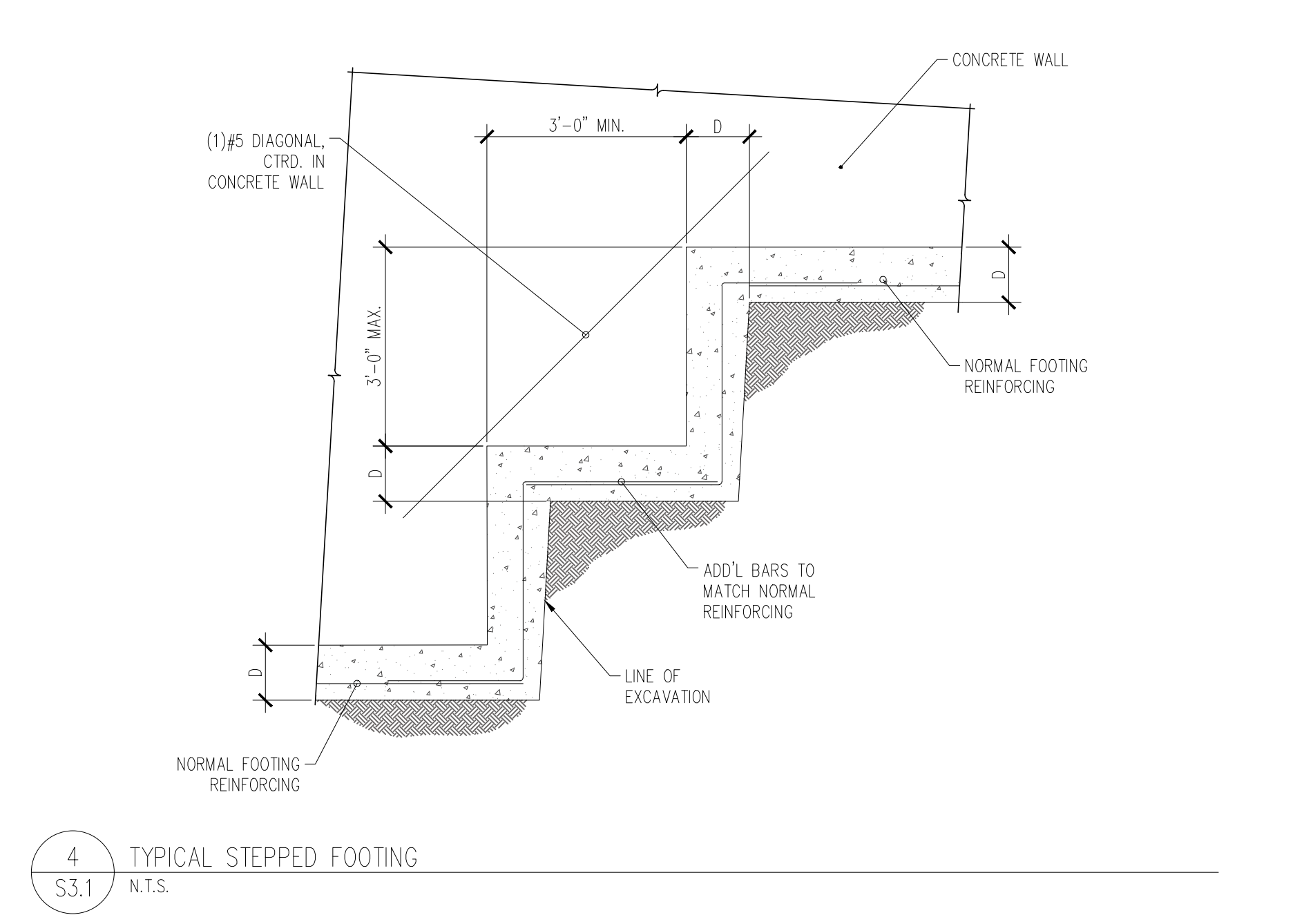
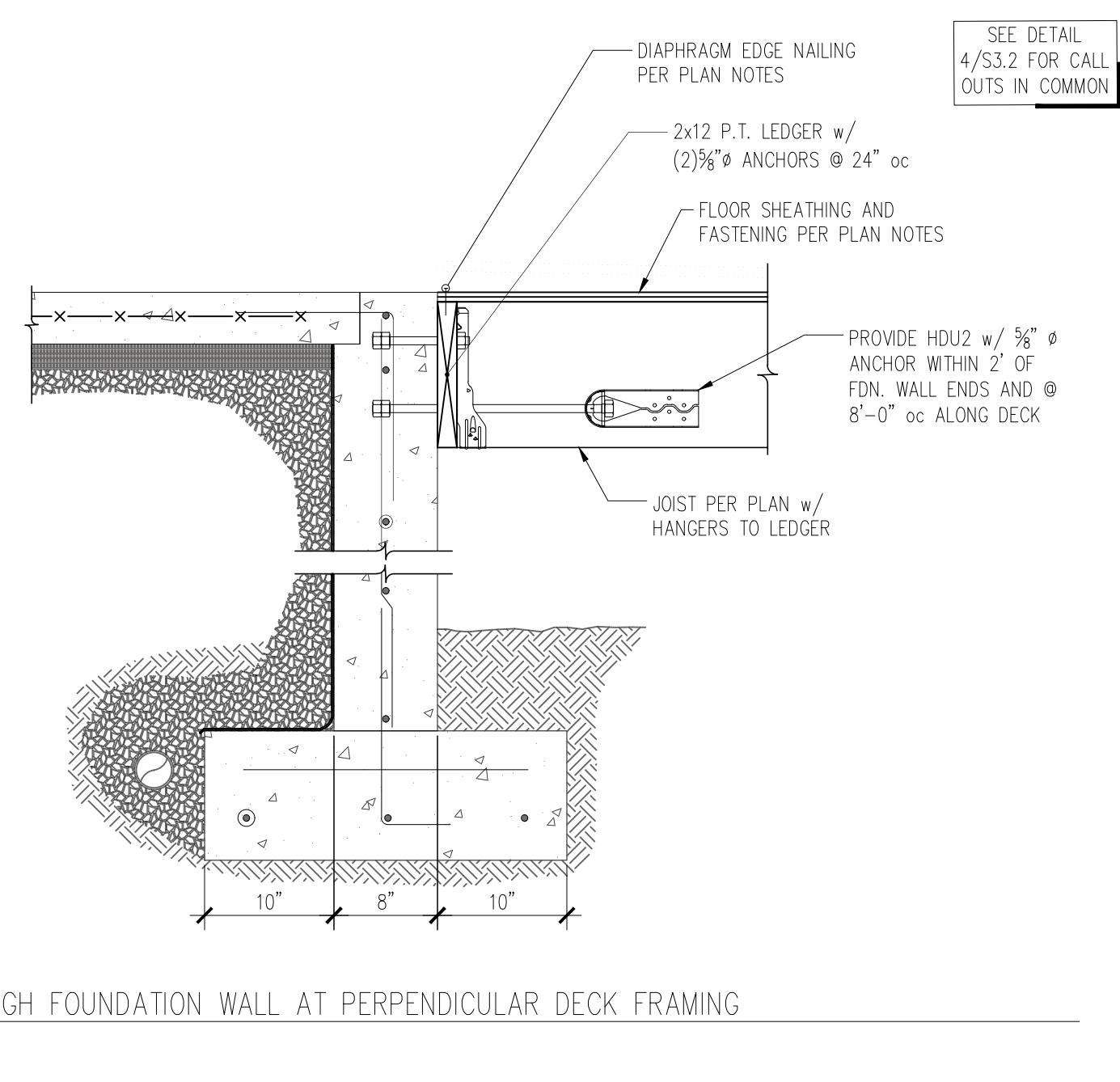
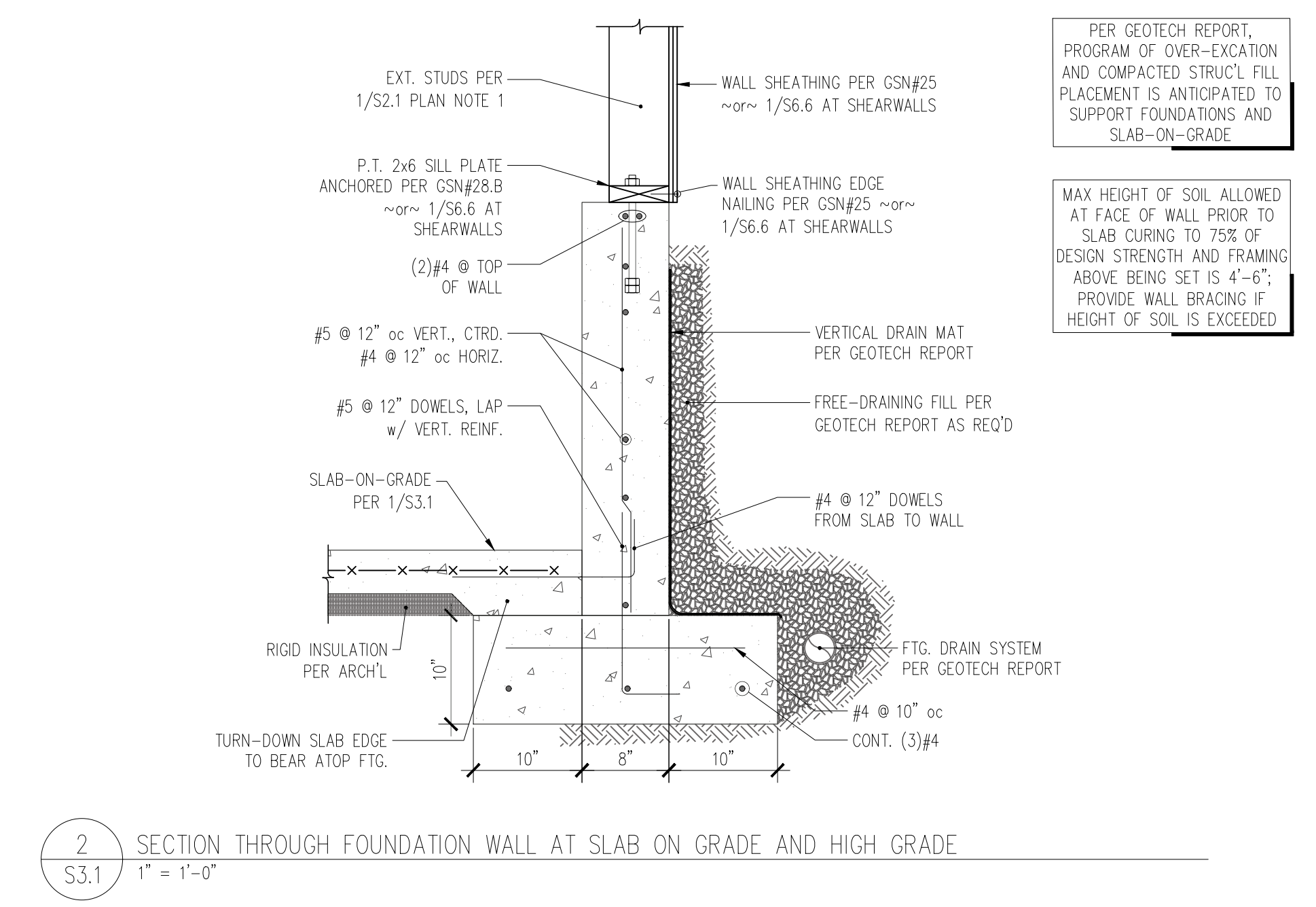
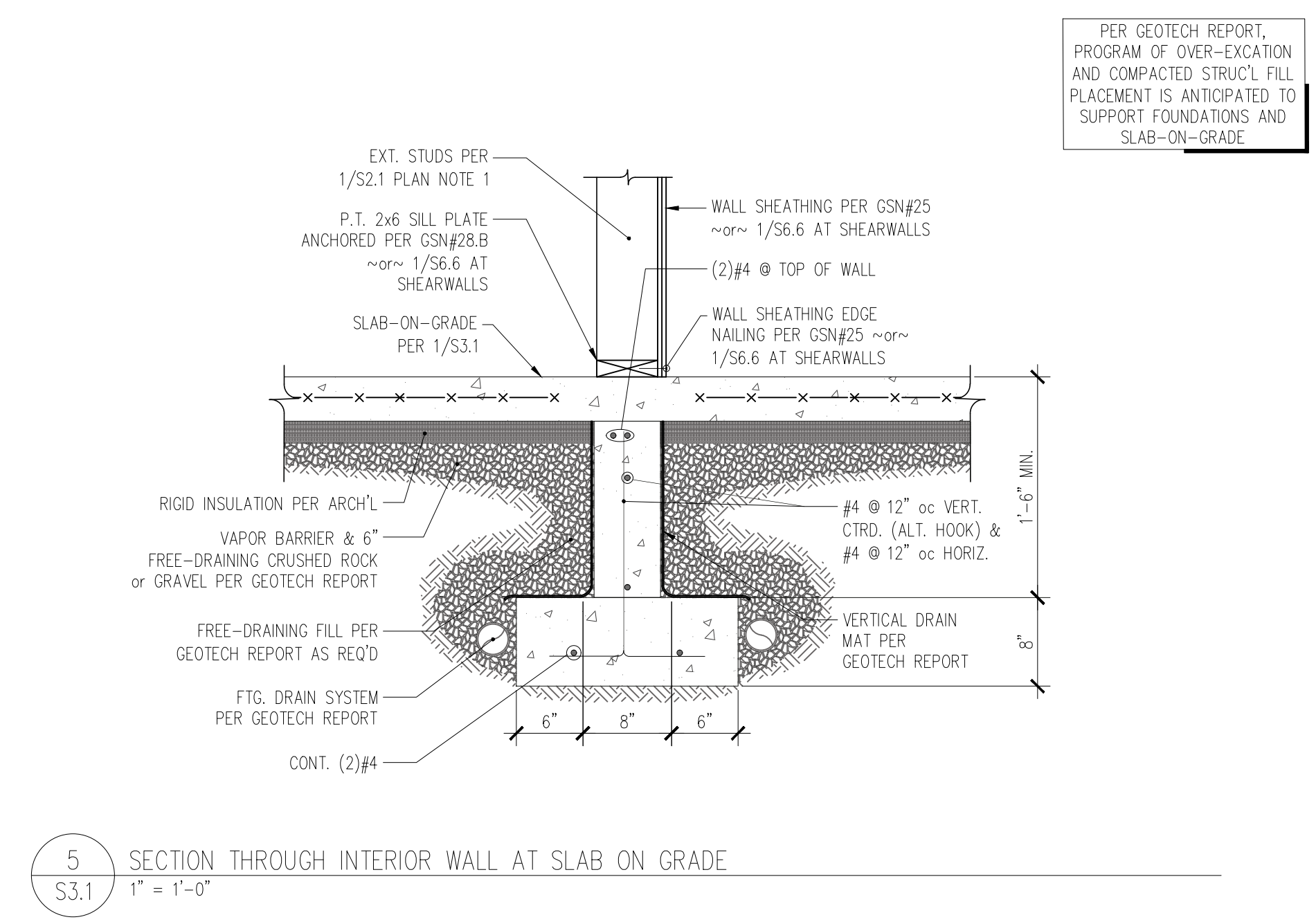
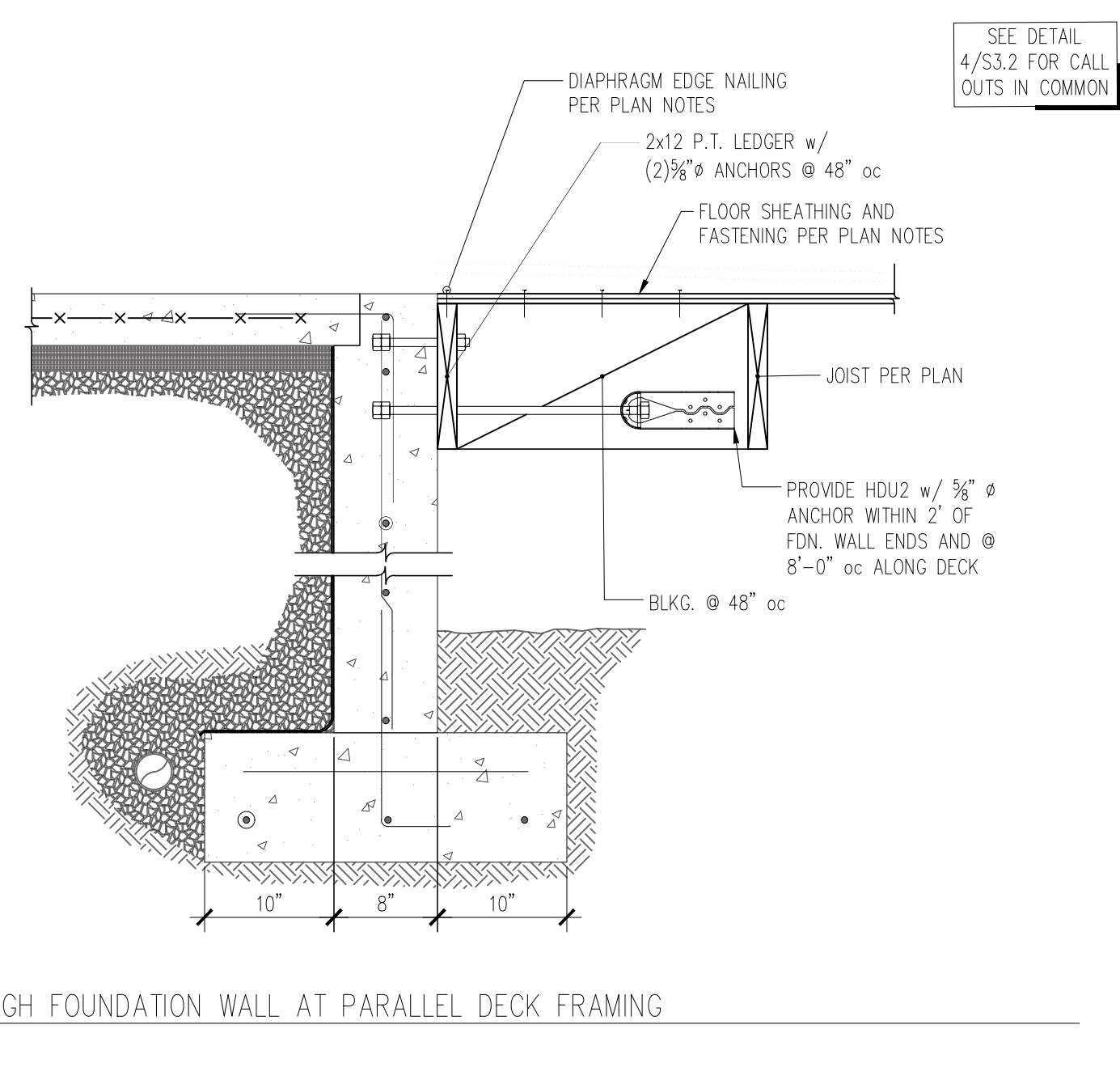
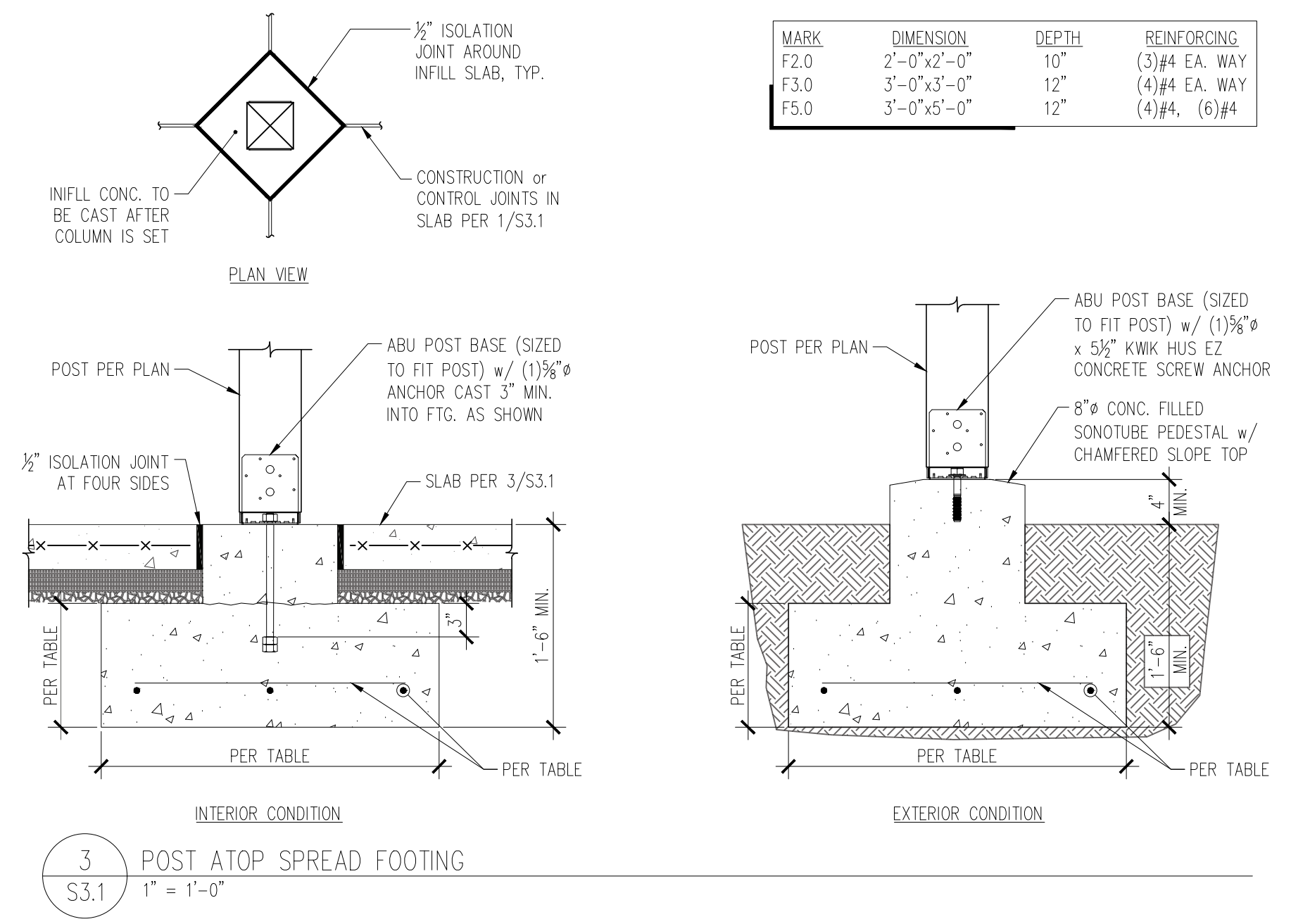


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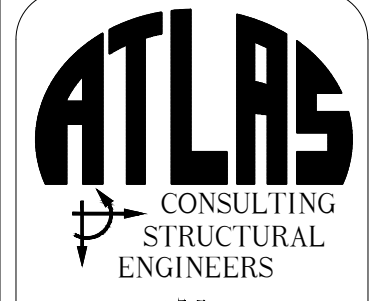
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Upper Roof Framing Plan

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S2.4



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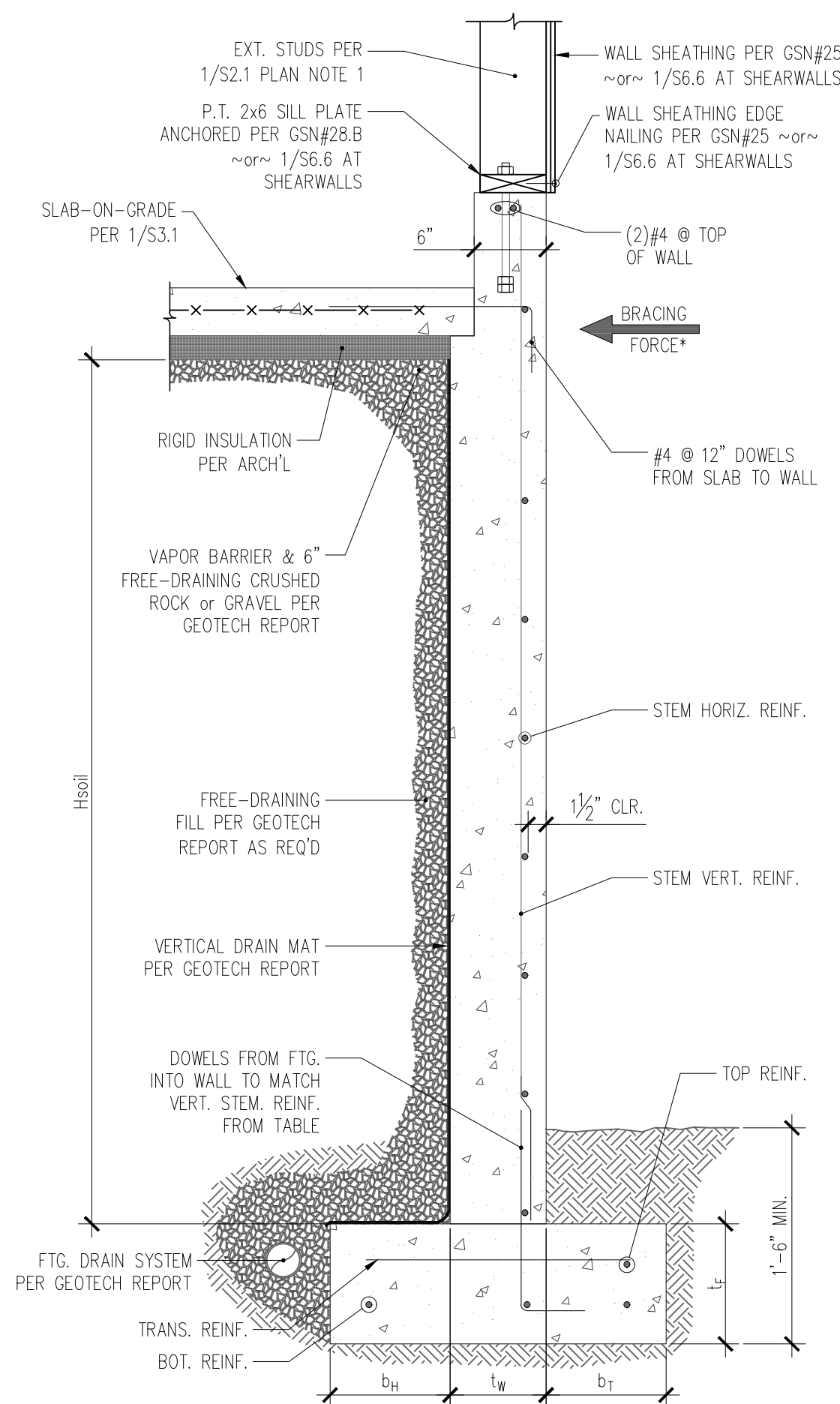
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Foundation
Details

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S3.1

Hsoil	b _H	t _W	b _T	t _F	STEM REINF.		FTG. REINF.			BRACING FORCE*
					VERT.	HORIZ.	LONG.	BOT.	LONG.	
H _{soil} ≤ 4'-6"	10"	8"	10"	10"	#4 @ 16" oc [^]	#4 @ 12" oc [^]	(3) #4	#4 @ 10" oc	-	-
4'-6" < H _{soil} ≤ 6'	10"	8"	10"	10"	#4 @ 12" oc	#4 @ 12" oc	(3) #4	#4 @ 10" oc	-	528 plf
6' < H _{soil} ≤ 8'	10"	8"	10"	10"	#4 @ 12" oc	#4 @ 12" oc	(3) #4	#4 @ 10" oc	-	939 plf
8' < H _{soil} ≤ 10'	10"	8"	10"	10"	#4 @ 10" oc	#4 @ 12" oc	(3) #4	#4 @ 10" oc	-	1,467 plf
10' < H _{soil} ≤ 12'	1'-8"	10"	10"	12"	#5 @ 10" oc	#5 @ 12" oc	(4) #5	#5 @ 10" oc	(1) #5	2,112 plf
12' ≤ H _{soil} < 14'	1'-8"	10"	10"	12"	#5 @ 8" oc	#5 @ 12" oc	(4) #5	#5 @ 10" oc	(1) #5	2,875 plf

* WALLS AND FOUNDATION SYSTEM HAS BEEN DESIGNED TO BE BRACED BY THE SLAB WHERE SOIL HEIGHT EXCEEDS 4'-6". CONTRACTOR SHALL BRACE WALLS FOR LRFD FORCE SHOWN IN TABLE, AND LEAVE BRACING IN PLACE UNTIL CONCRETE SLAB ON GRADE HAS ATTAINED 75% OF ITS DESIGN STRENGTH.
[^] FOR WALLS WITH HEIGHT OF SOIL LESS THAN OR EQUAL TO 4'-6" AND WHERE THE WALL WILL NOT BE BRACED DURING CONSTRUCTION, CENTER THE REINFORCING WITHIN THE WALL THICKNESS AS SHOWN IN 2/S3.1.



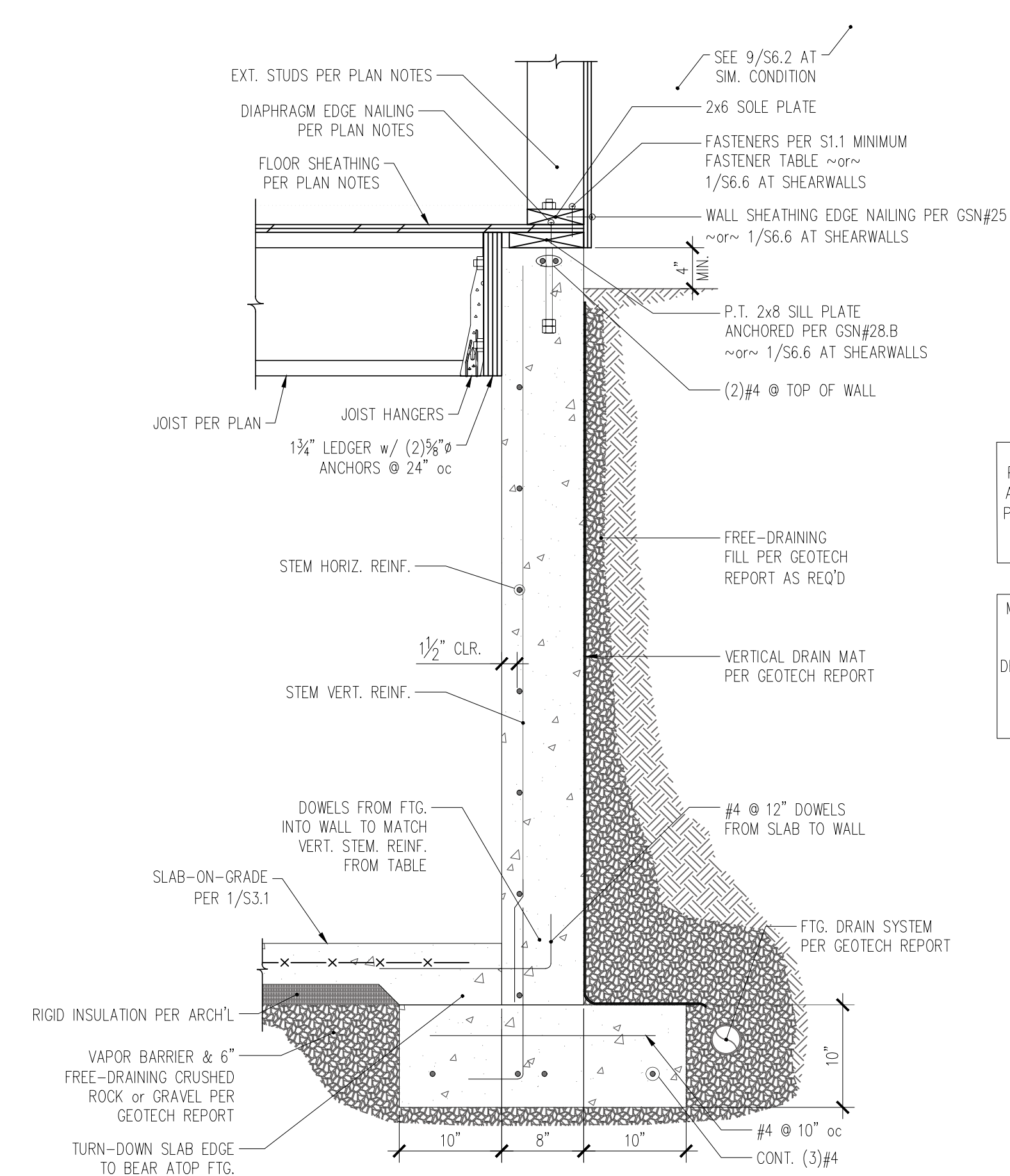
4 SECTION THROUGH FOUNDATION WALL AT RAISED SLAB ON GRADE AND LOW GRADE
 S3.2 1" = 1'-0"

PER GEOTECH REPORT, PROGRAM OF OVER-EXCAVATION AND COMPACTED STRUCT. FILL PLACEMENT IS ANTICIPATED TO SUPPORT FOUNDATIONS AND SLAB-ON-GRADE

MAX HEIGHT OF SOIL ALLOWED AT FACE OF WALL PRIOR TO SLAB CURING TO 75% OF DESIGN STRENGTH IS 4'-6"; PROVIDE WALL BRACING IF HEIGHT OF SOIL IS EXCEEDED

Hsoil	STEM REINF. VERT.	BRACING FORCE*
H _{soil} ≤ 4'-6"	#4 @ 16" oc [^]	-
4'-6" < H _{soil} ≤ 6'	#4 @ 12" oc	720 plf
6' < H _{soil} ≤ 8'	#4 @ 12" oc	1280 plf
8' < H _{soil} ≤ 10'	#4 @ 10" oc	2,000 plf

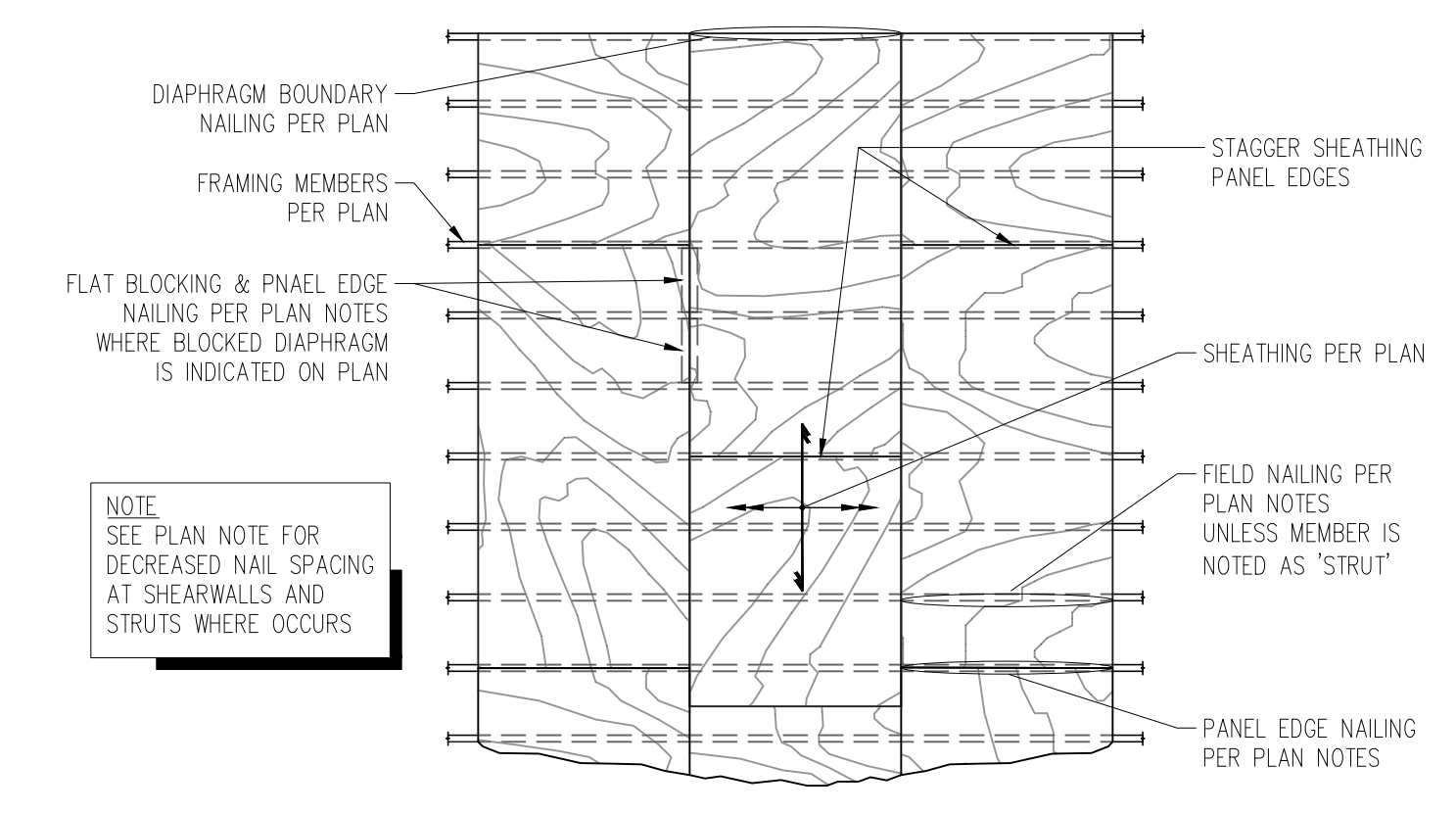
* WALLS AND FOUNDATION SYSTEM HAS BEEN DESIGNED TO BE BRACED BY THE SLAB WHERE SOIL HEIGHT EXCEEDS 4'-6". CONTRACTOR SHALL BRACE WALLS FOR LRFD FORCE SHOWN IN TABLE, AND LEAVE BRACING IN PLACE UNTIL CONCRETE SLAB ON GRADE HAS ATTAINED 75% OF ITS DESIGN STRENGTH.
[^] FOR WALLS WITH HEIGHT OF SOIL LESS THAN OR EQUAL TO 4'-6" AND WHERE THE WALL WILL NOT BE BRACED DURING CONSTRUCTION, CENTER THE REINFORCING WITHIN THE WALL THICKNESS AS SHOWN IN 2/S3.1.



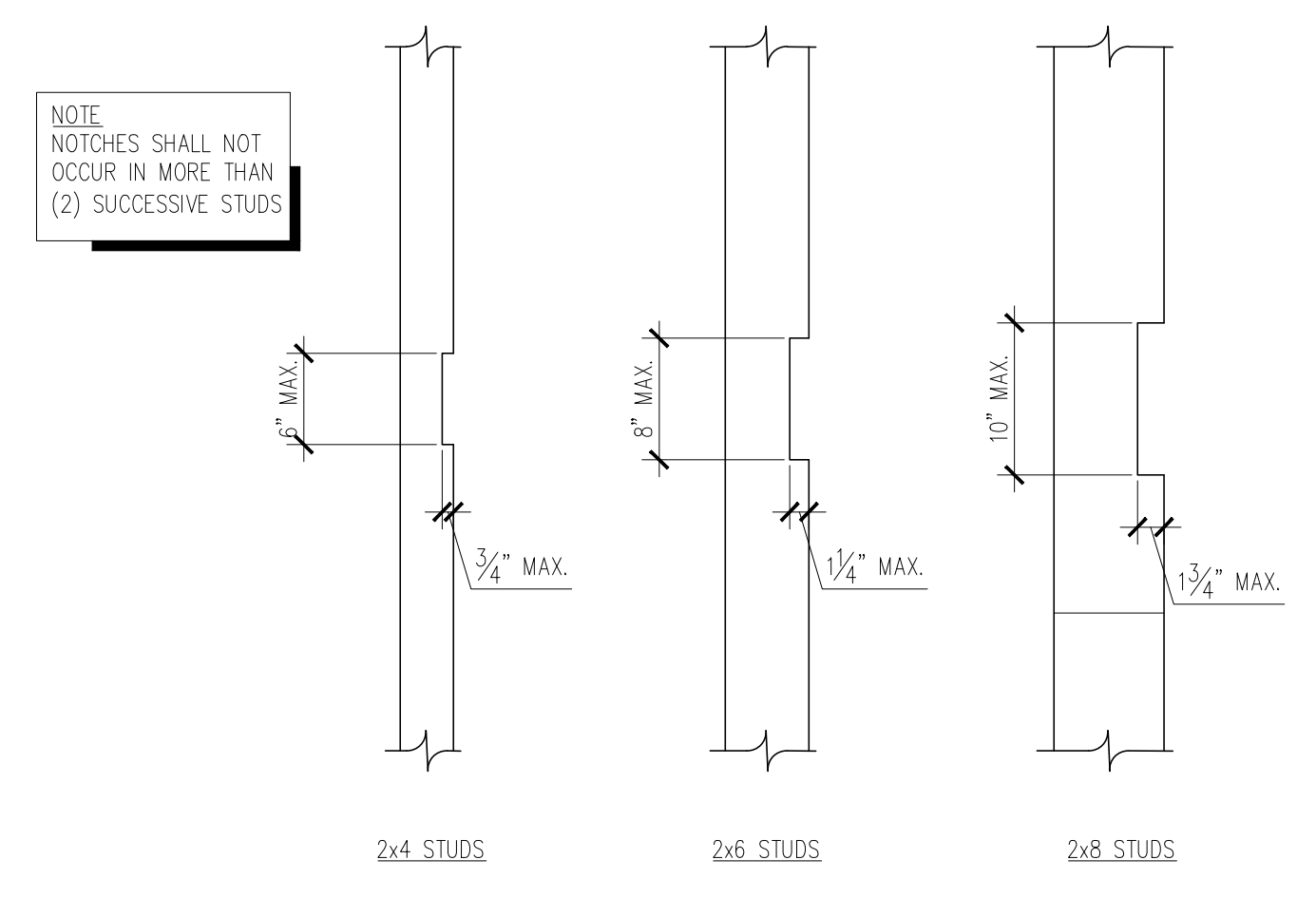
1 SECTION THROUGH FOUNDATION WALL AT SLAB ON GRADE
 S3.2 1" = 1'-0"

PER GEOTECH REPORT, PROGRAM OF OVER-EXCAVATION AND COMPACTED STRUCT. FILL PLACEMENT IS ANTICIPATED TO SUPPORT FOUNDATIONS AND SLAB-ON-GRADE

MAX HEIGHT OF SOIL ALLOWED AT FACE OF WALL PRIOR TO SLAB CURING TO 75% OF DESIGN STRENGTH AND FRAMING ABOVE BEING SET IS 4'-6"; PROVIDE WALL BRACING IF HEIGHT OF SOIL IS EXCEEDED



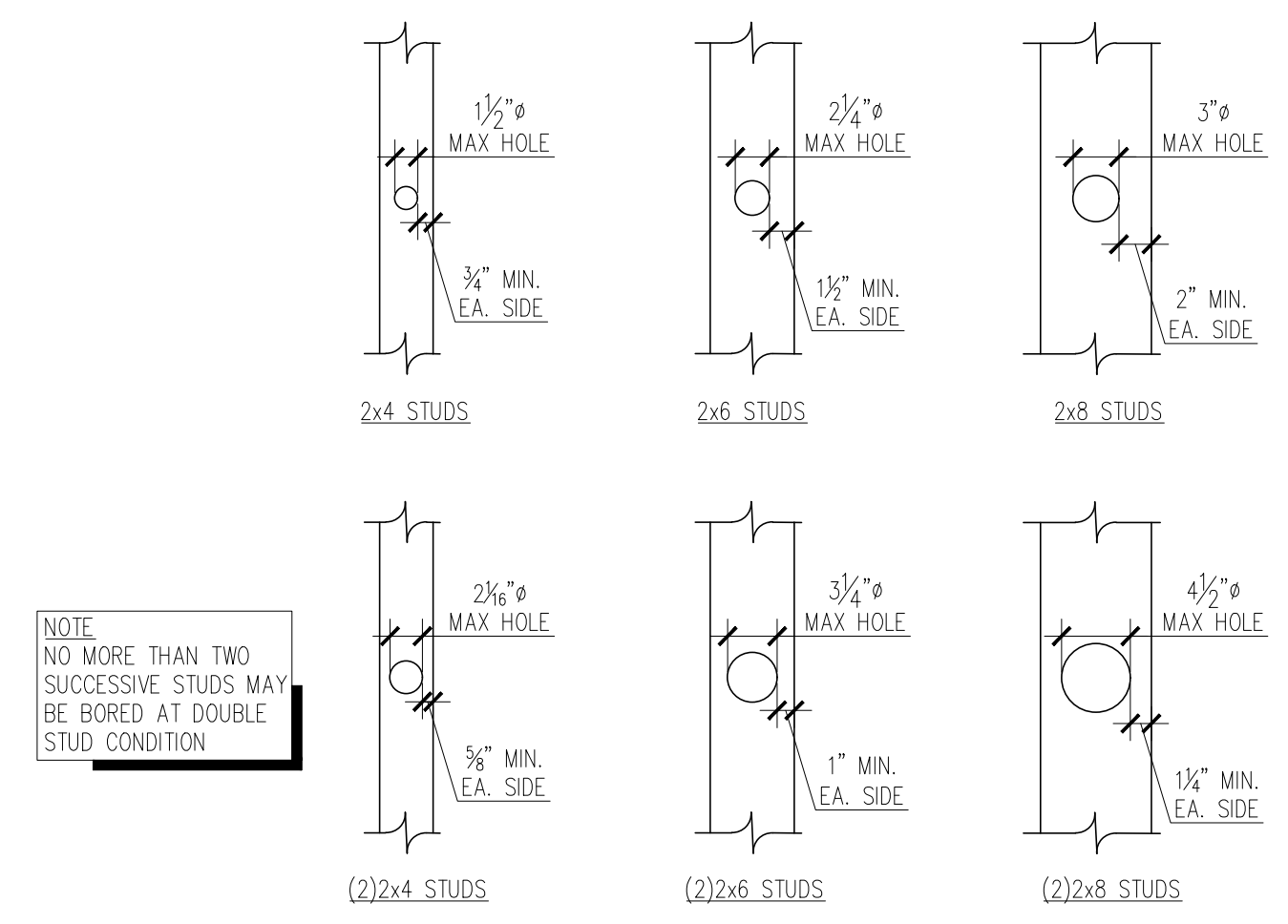
3 TYPICAL DIAPHRAGM NAILING
 S6.1 NTS



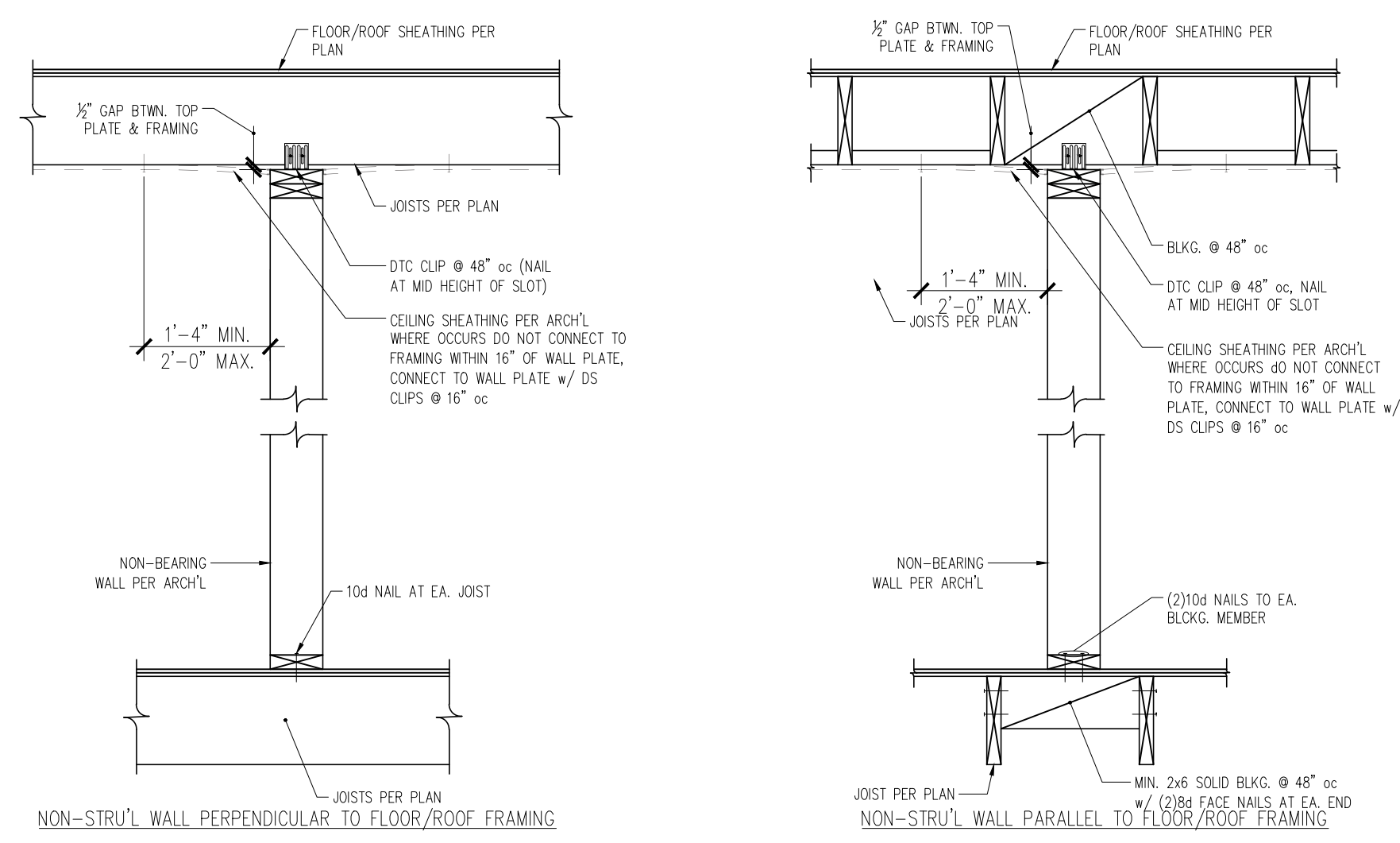
6 ALLOWABLE HOLES IN STUDWALL STUDS
 S6.1 NTS

	NO REINF. REQUIRED	STRAP REINF. REQUIRED
2x4 PLATES	1 1/2" MAX. HOLE 3/4" MIN. EA. SIDE	2 5/8" MAX. HOLE 3/8" MIN. EA. SIDE CMSTC16x3'-0" (CS16x2'-0" AT BOT. PLATES)
2x6 PLATES	2 1/4" MAX. HOLE 1 1/2" MIN. EA. SIDE	3 3/4" MAX. HOLE 3/4" MIN. EA. SIDE CMSTC16x3'-0" (CS16x2'-0" AT BOT. PLATES)
2x8 PLATES	3 1/4" MAX. HOLE 2" MIN. EA. SIDE	5" MAX. HOLE 1 1/2" MIN. EA. SIDE CMSTC16x3'-0" (CS16x2'-0" AT BOT. PLATES)

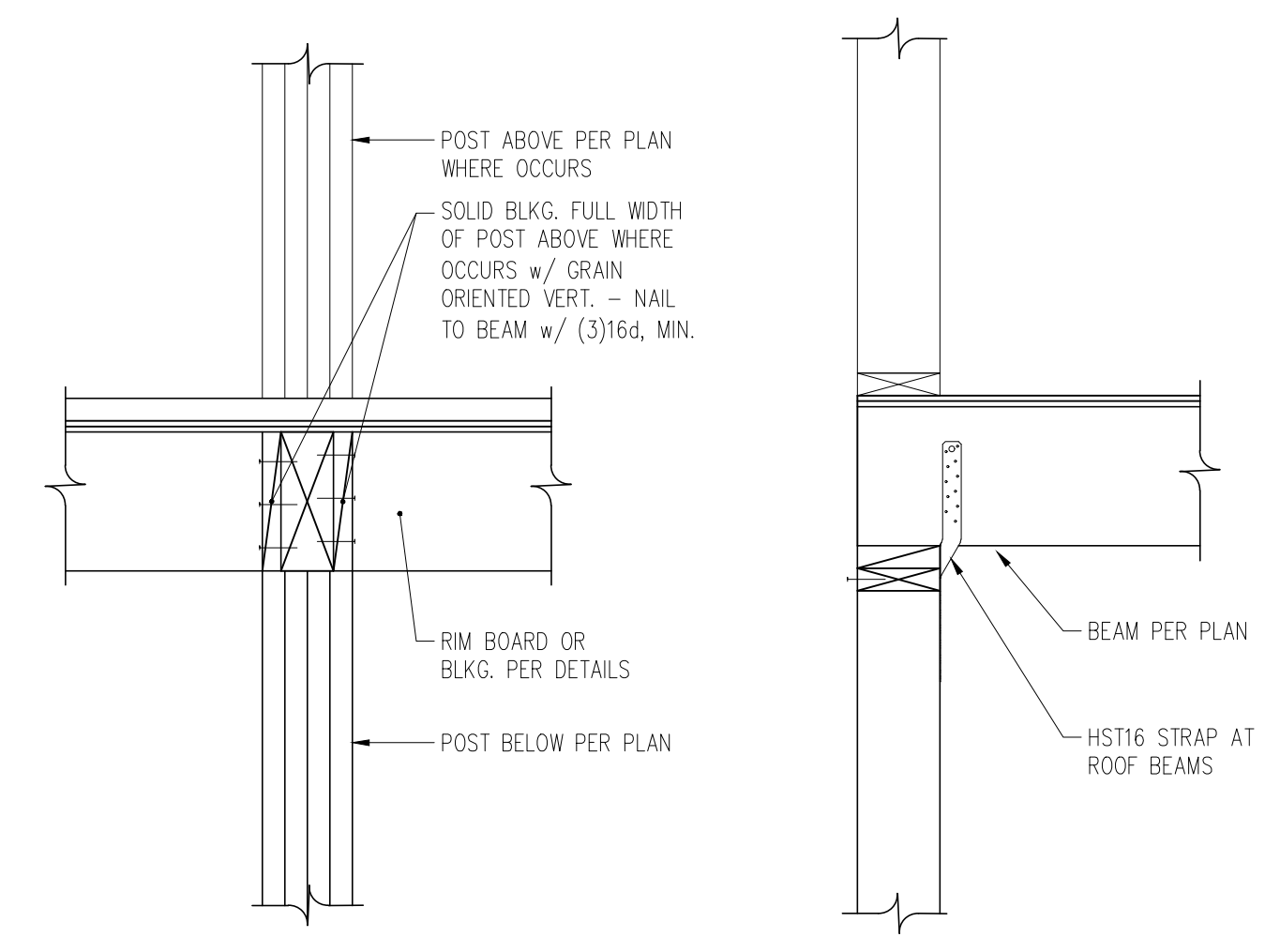
2 ALLOWABLE HOLES THROUGH TOP PLATES
 S6.1 NTS



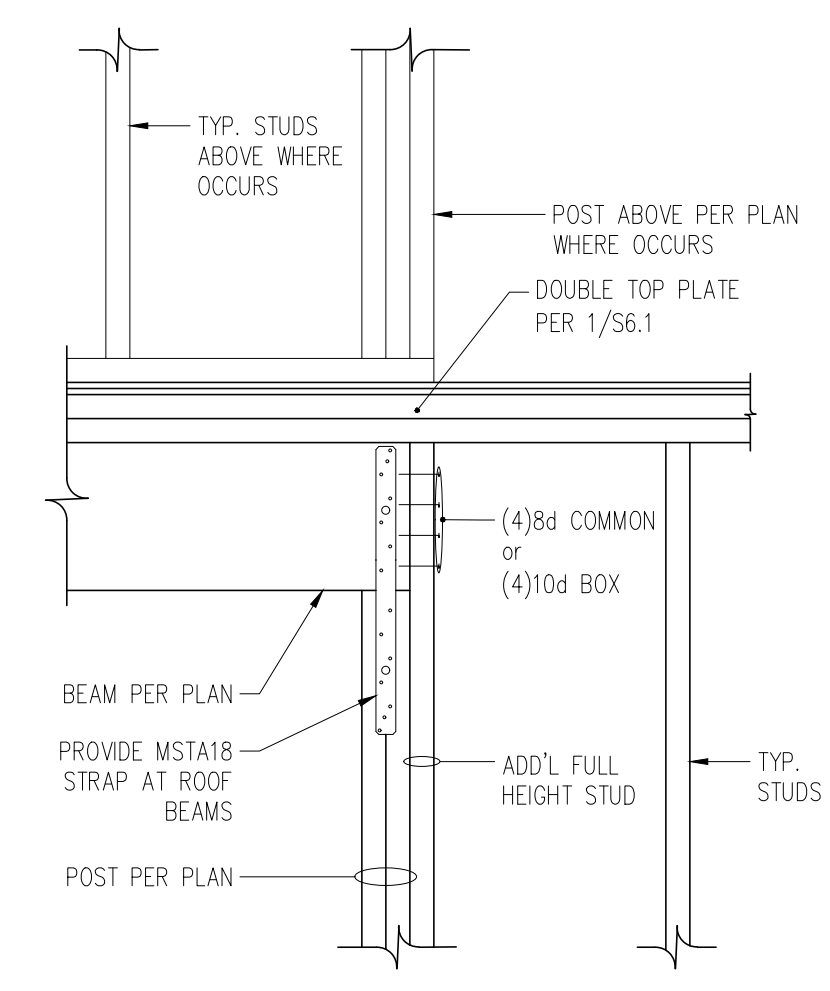
5 ALLOWABLE HOLES IN STUDWALL STUDS
 S6.1 NTS



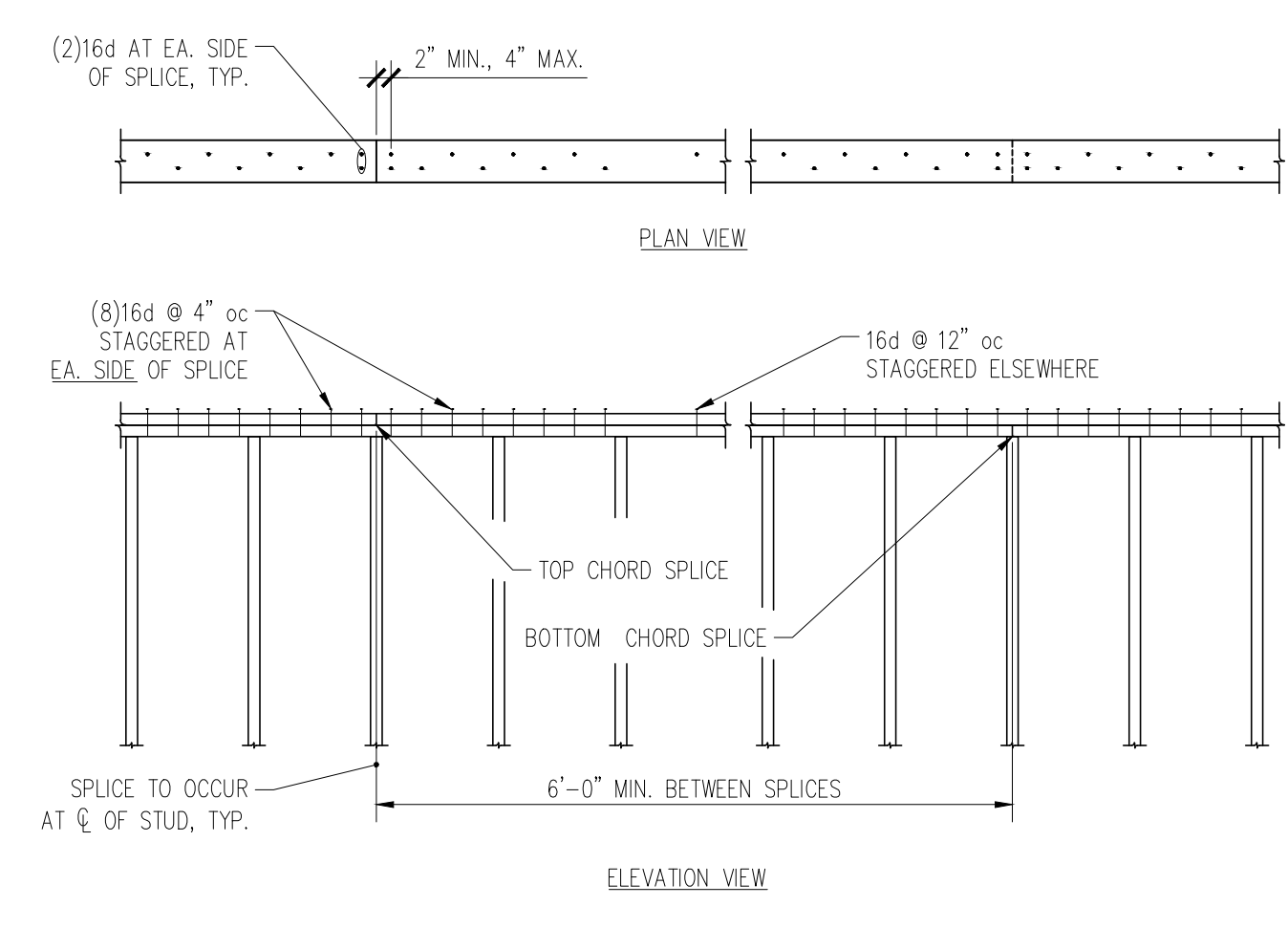
8 CONNECTION OF NON-STRUC'L PARTITION WALL TO STRUCTURE
 S6.1 NTS



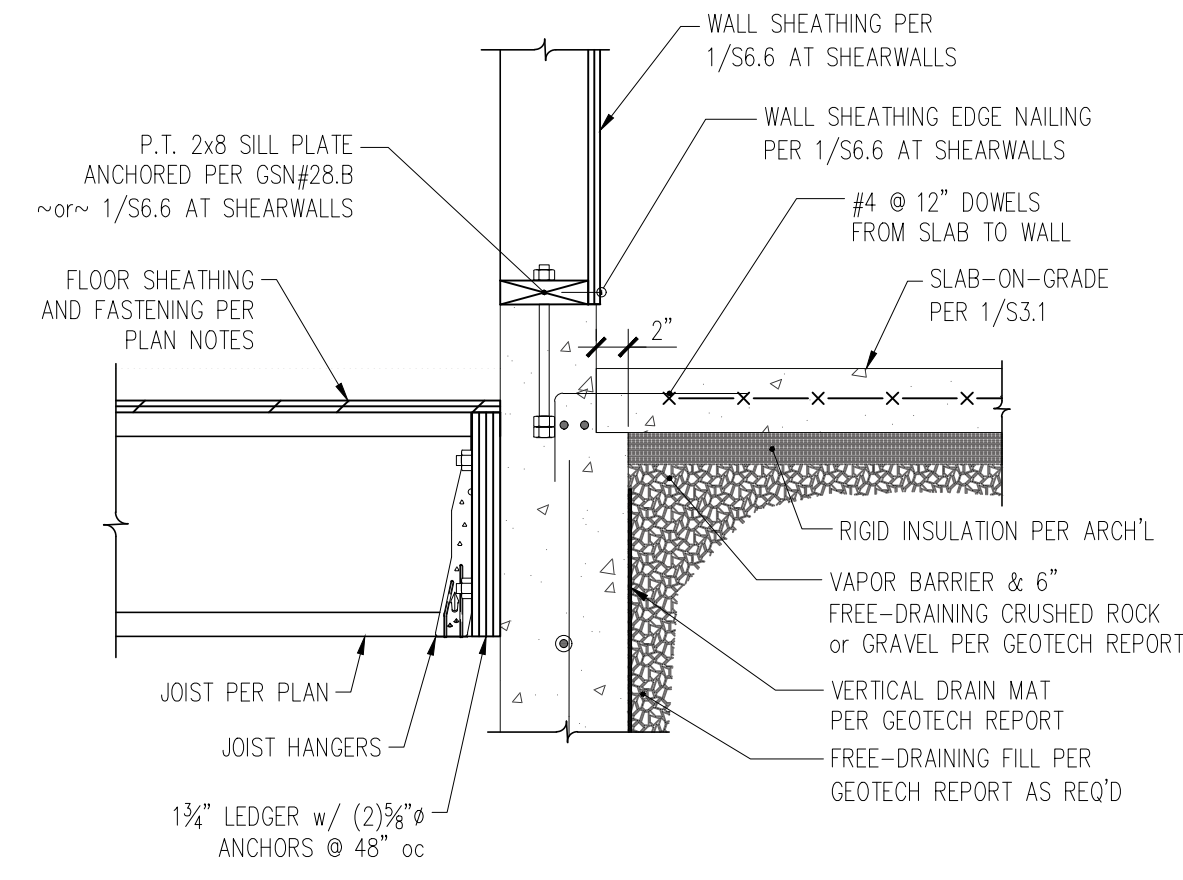
4 TYPICAL BEAM PERPENDICULAR TO WALL
 S6.1 NTS



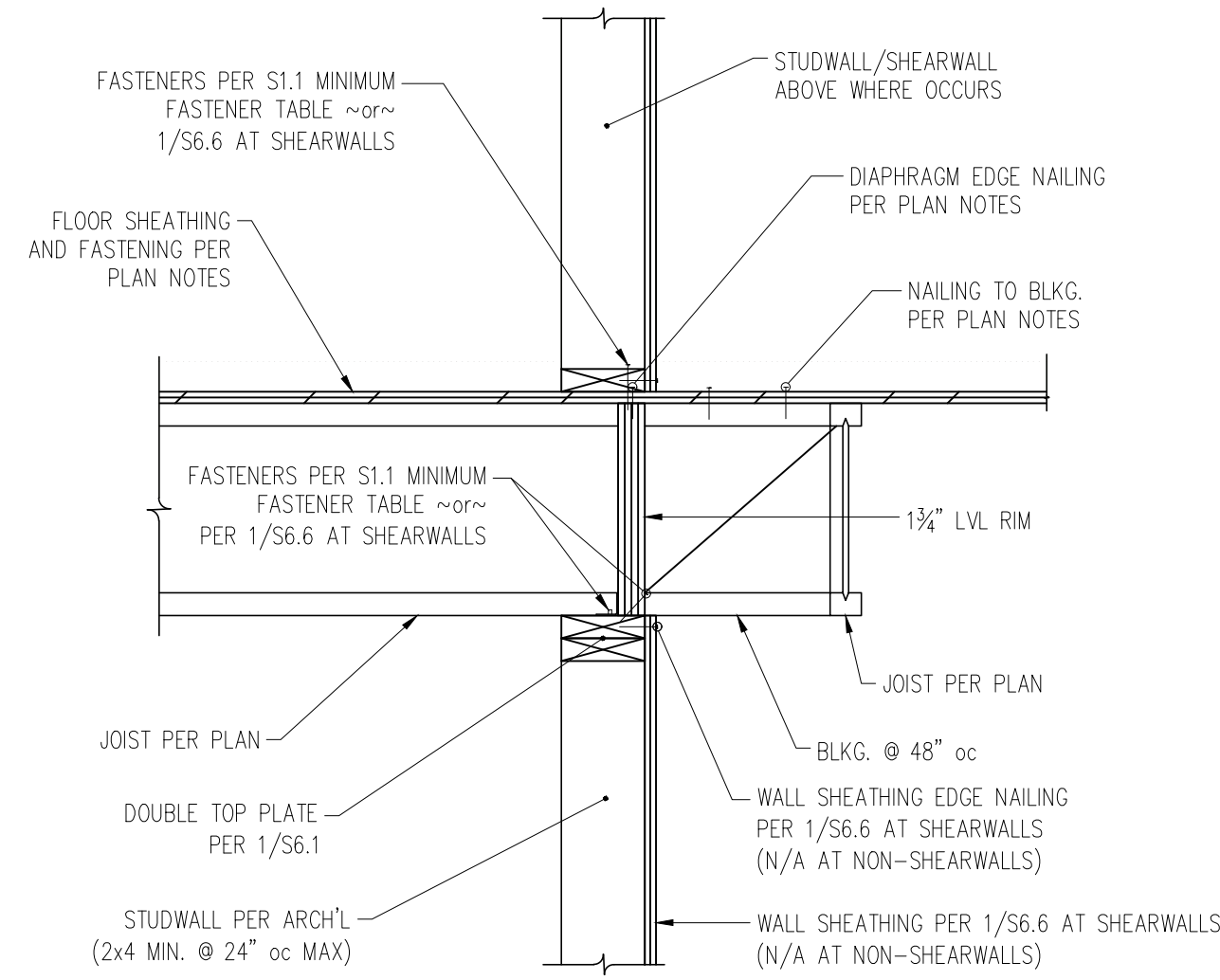
7 TYPICAL BEAM PARALLEL TO WALL
 S6.1 NTS



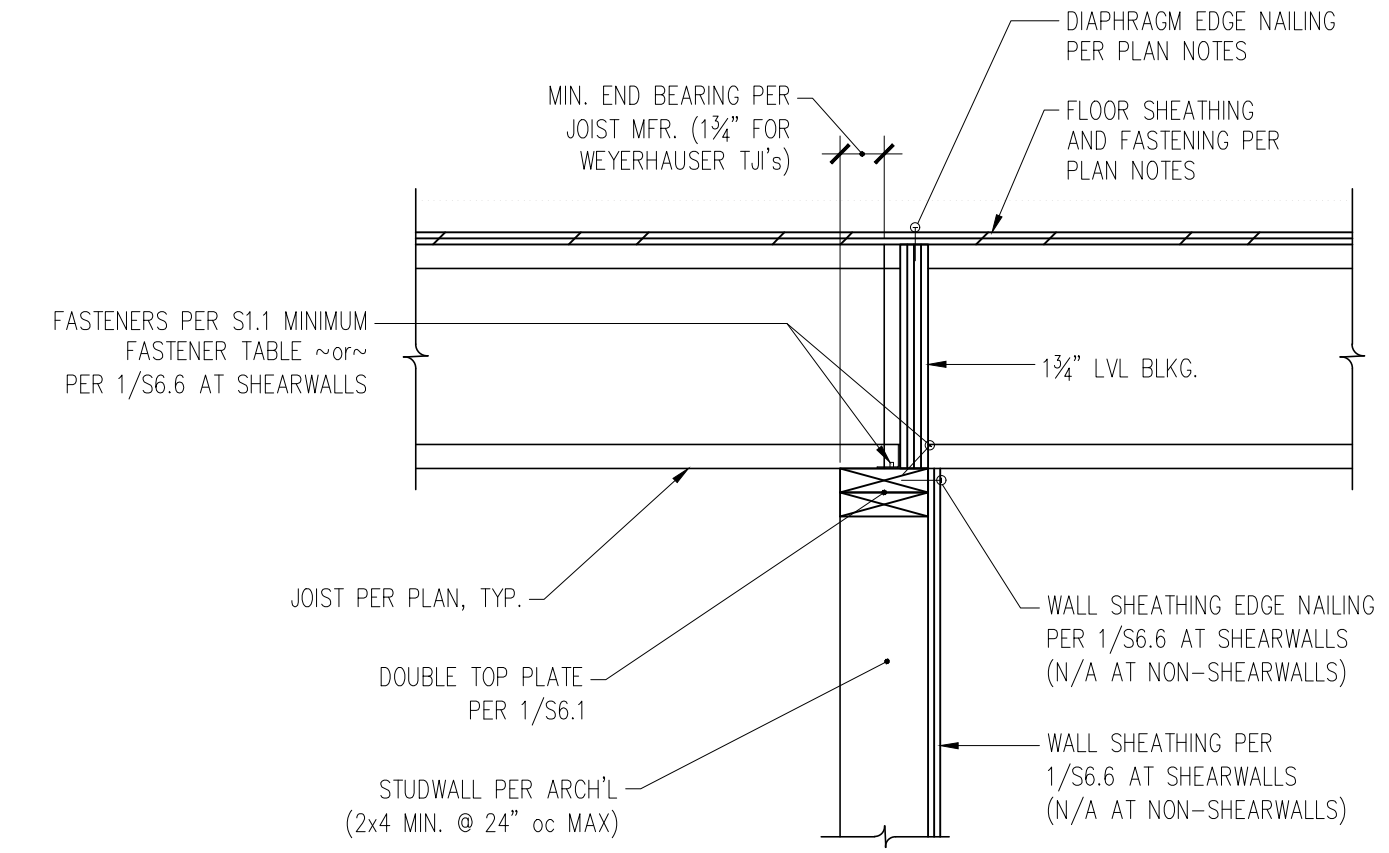
1 TOP PLATE SPLICE
 S6.1 NTS



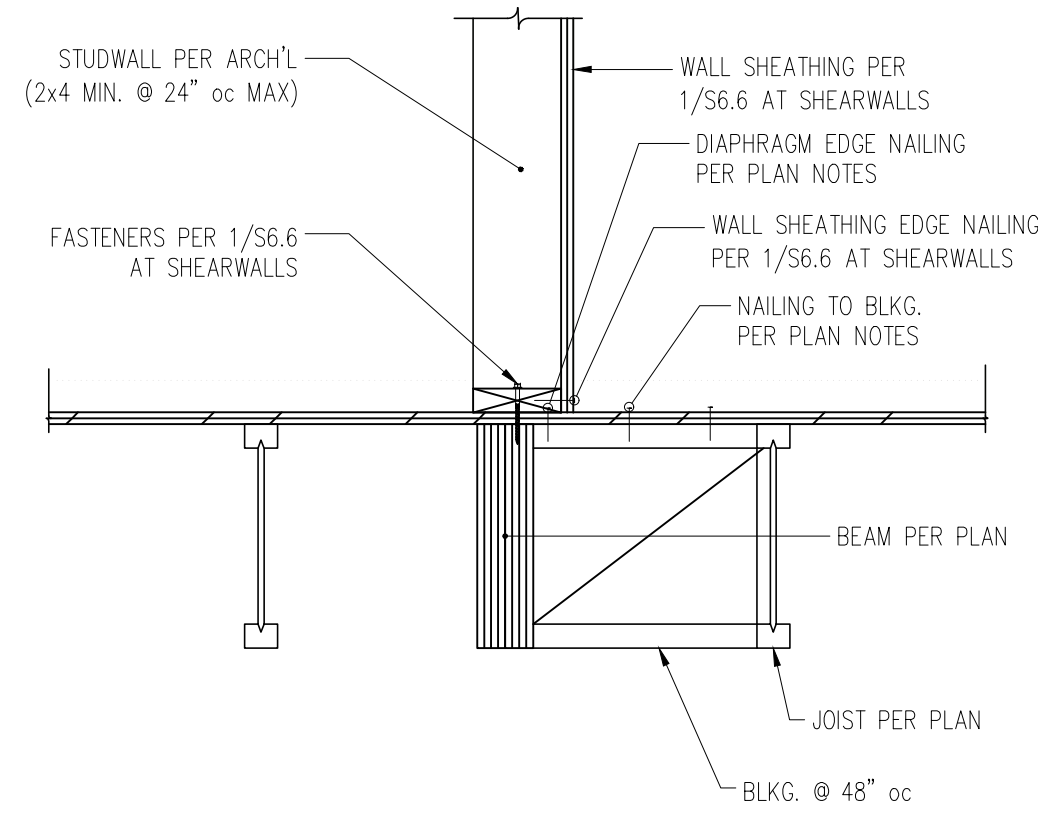
9 SECTION THROUGH WALL AT PARALLEL JOISTS AND SLAB-ON-GRADE
S6.2 1" = 1'-0"



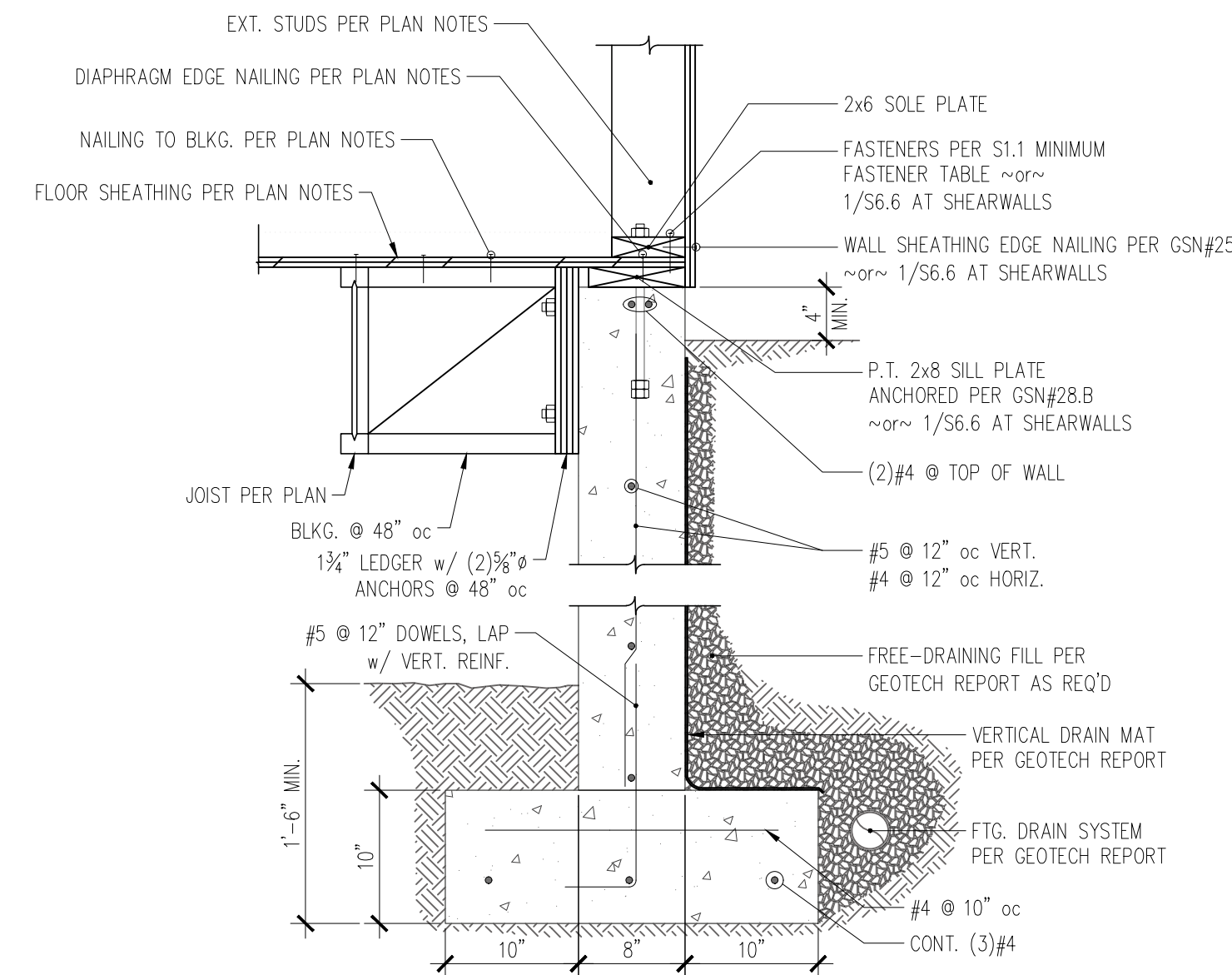
6 SECTION THROUGH INTERIOR BEARING WALL w/ PERPENDICULAR & PARALLEL JOISTS
S6.2 1" = 1'-0"



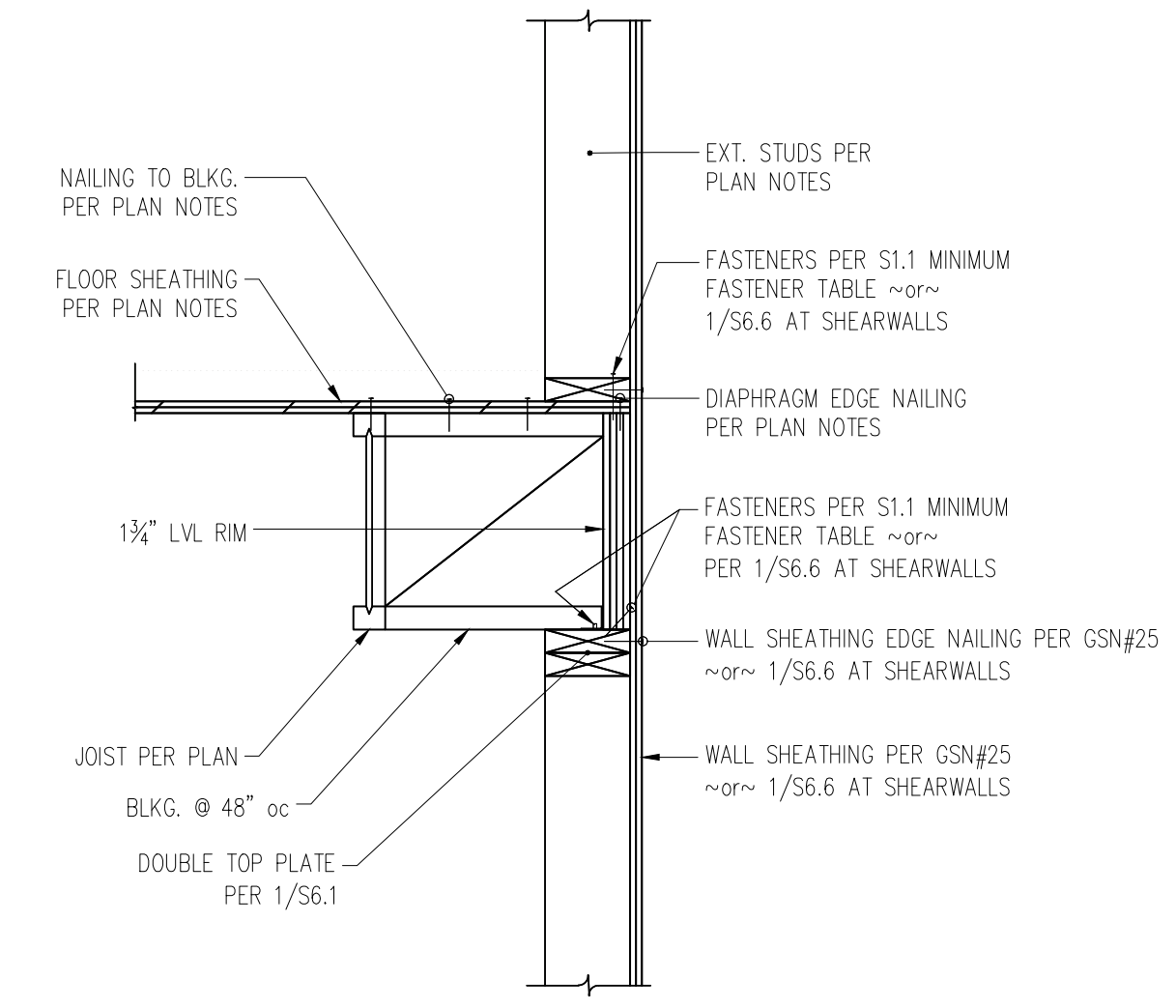
3 SECTION THROUGH INTERIOR BEARING WALL w/ PERPENDICULAR JOISTS AT EA. SIDE
S6.2 1" = 1'-0"



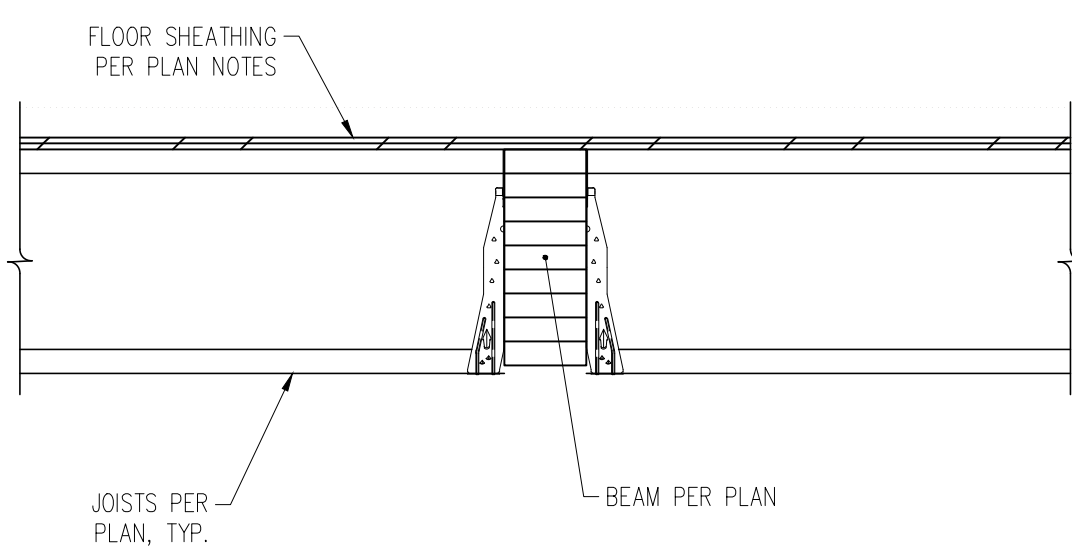
8 SECTION THROUGH BEAM SUPPORTING SHEARWALL ABOVE
S6.2 1" = 1'-0"



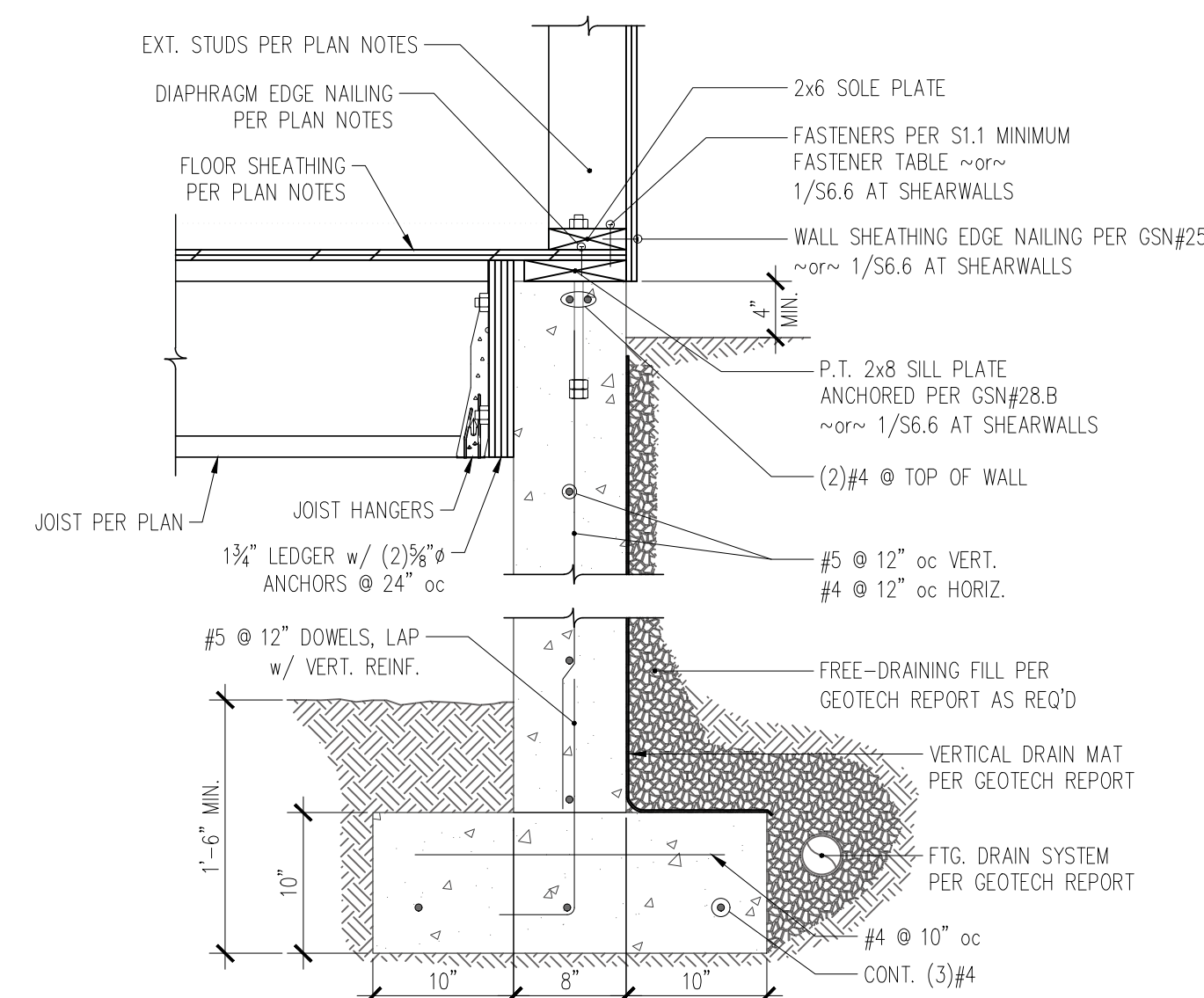
5 SECTION THROUGH CRAWLSPACE FOUNDATION WALL AT PARALLEL JOISTS
S6.2 1" = 1'-0"



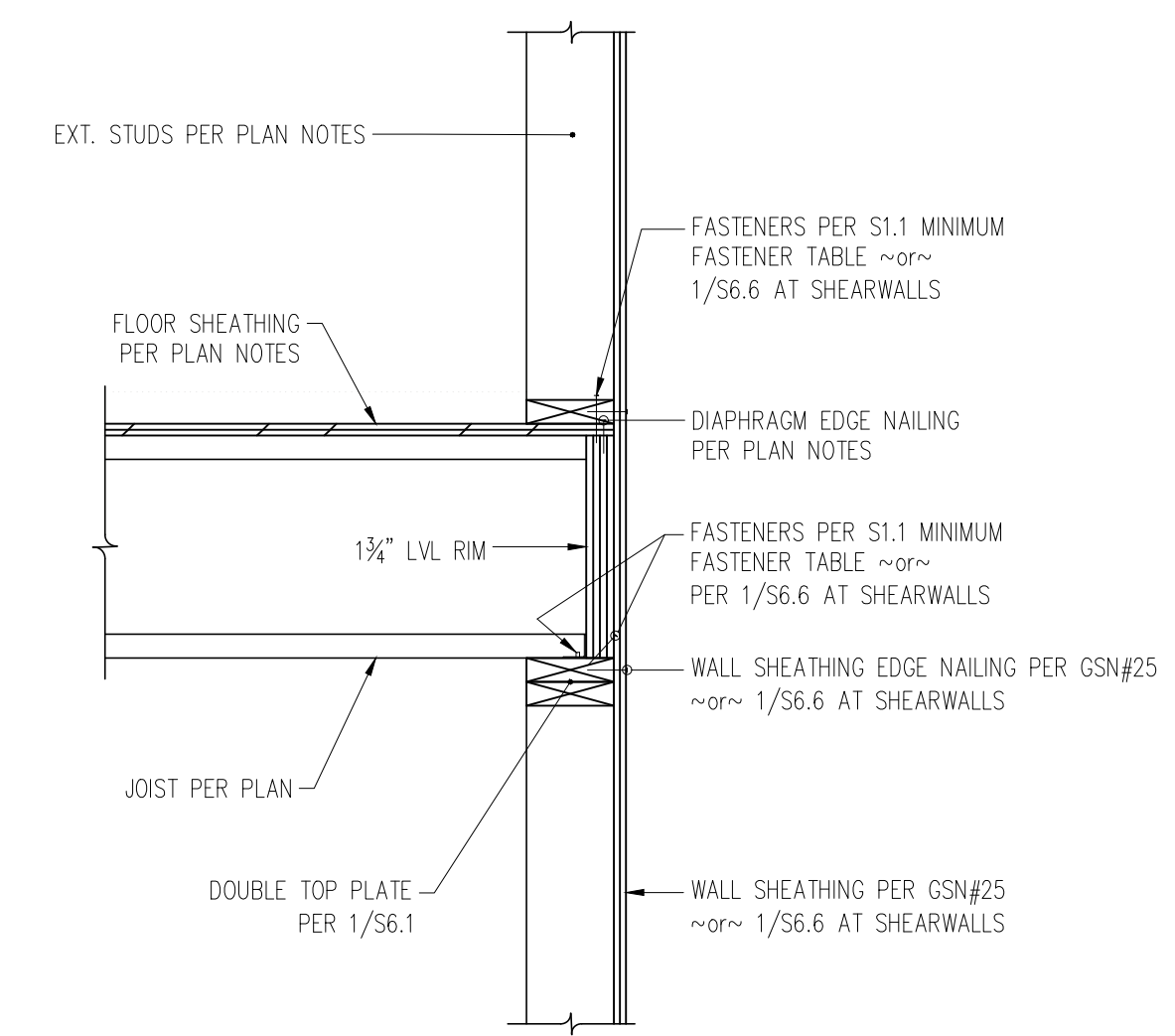
2 SECTION THROUGH EXTERIOR WALL AT PARALLEL JOISTS
S6.2 1" = 1'-0"



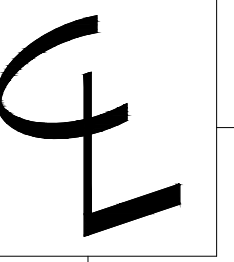
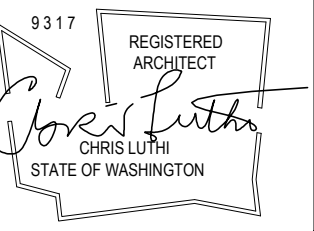
7 SECTION THROUGH BEAM SUPPORTING JOISTS
S6.2 1" = 1'-0"



4 SECTION THROUGH CRAWLSPACE FOUNDATION WALL AT PERPENDICULAR JOISTS
S6.2 1" = 1'-0"

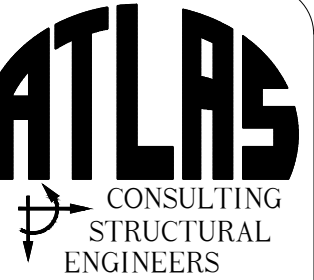


1 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR JOISTS
S6.2 1" = 1'-0"



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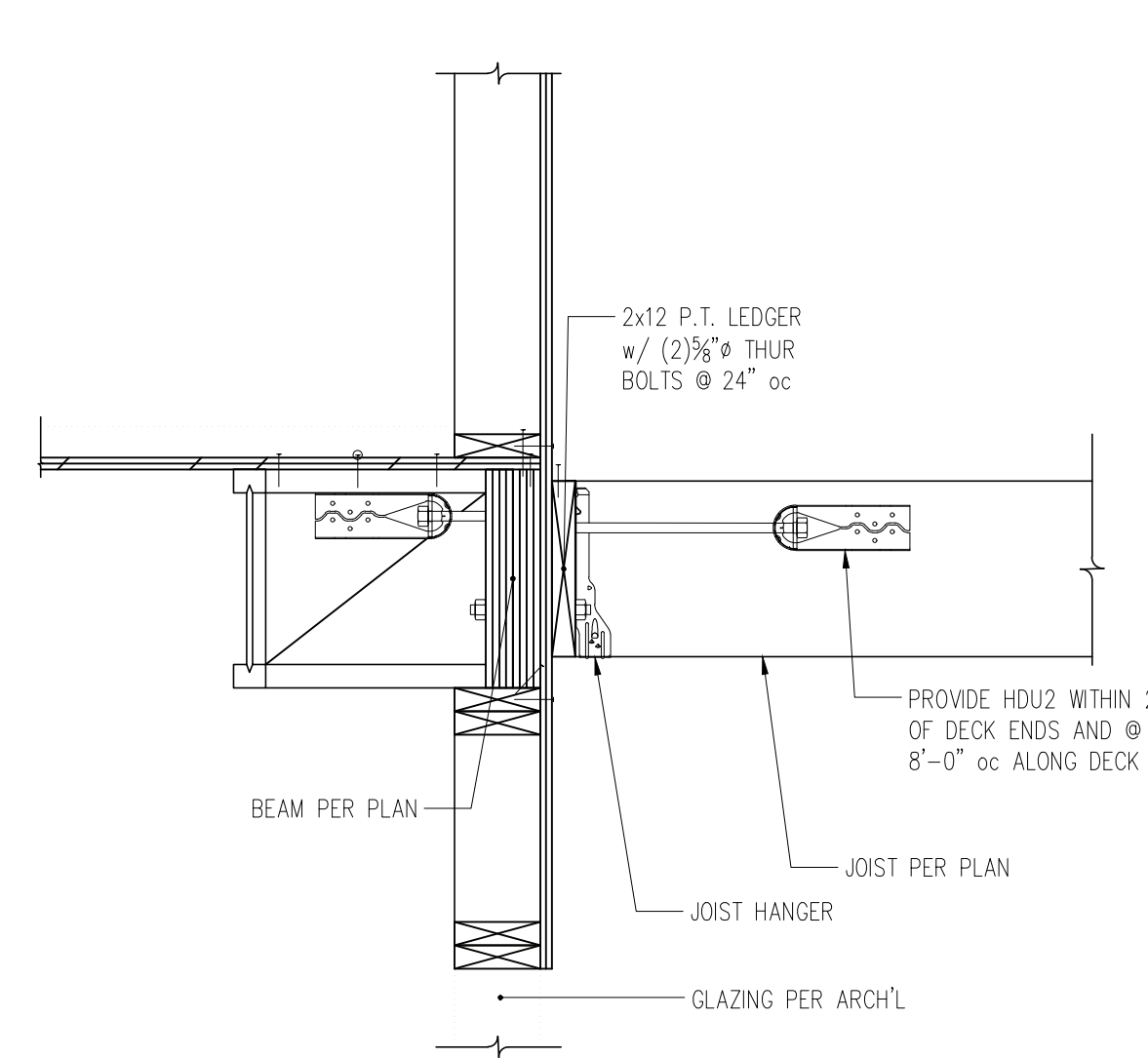
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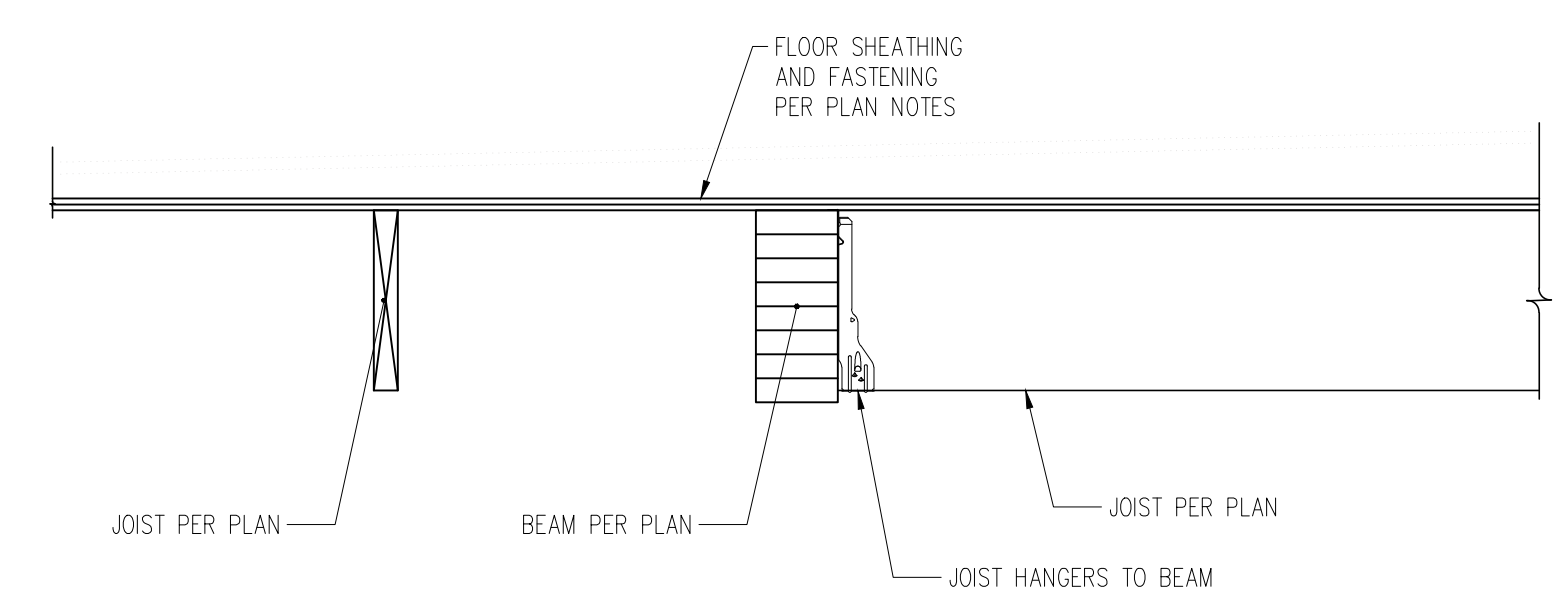
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S6.2

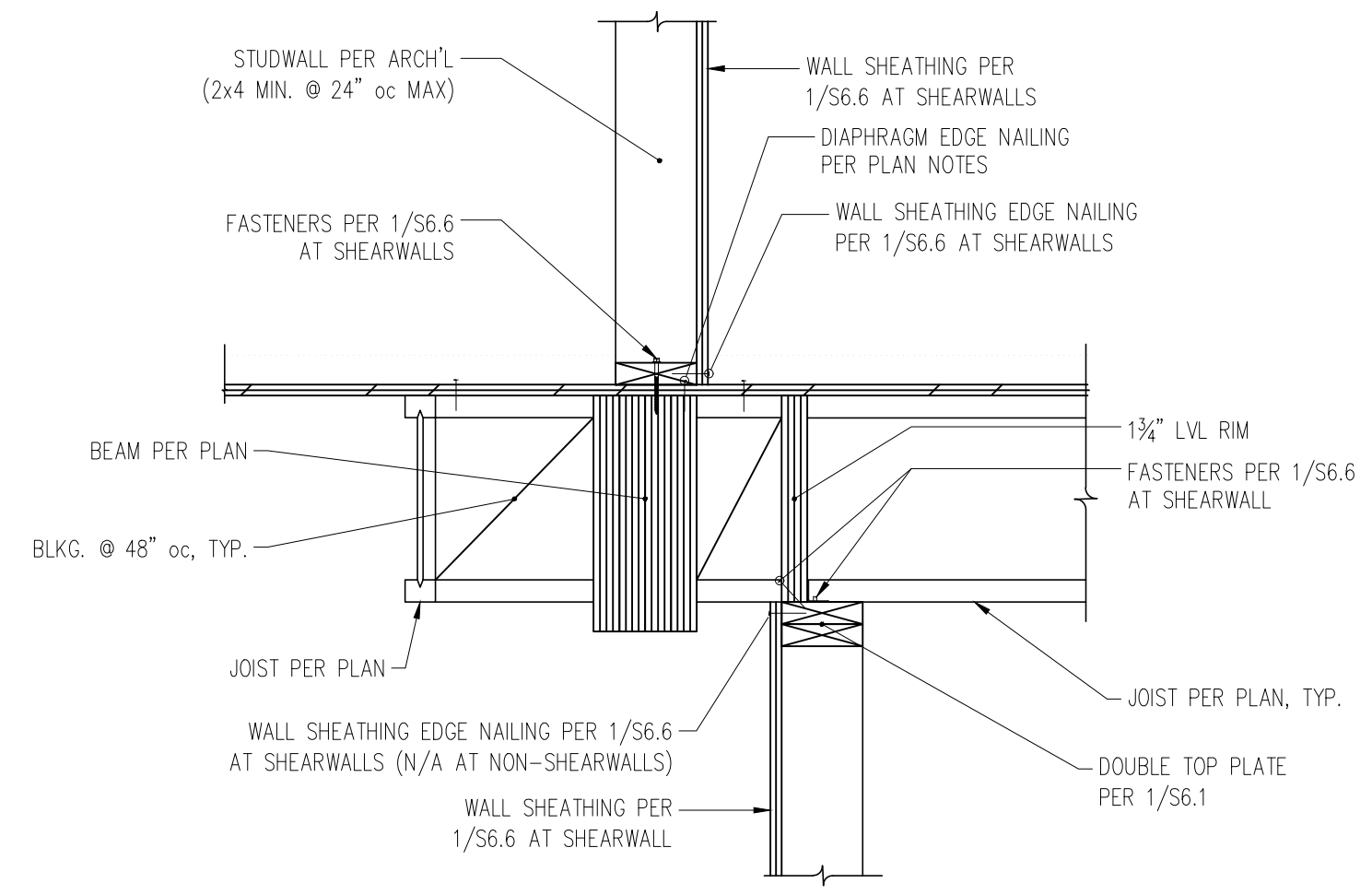


SEE DETAIL
 2/S6.2 FOR CALL
 OUTS IN COMMON

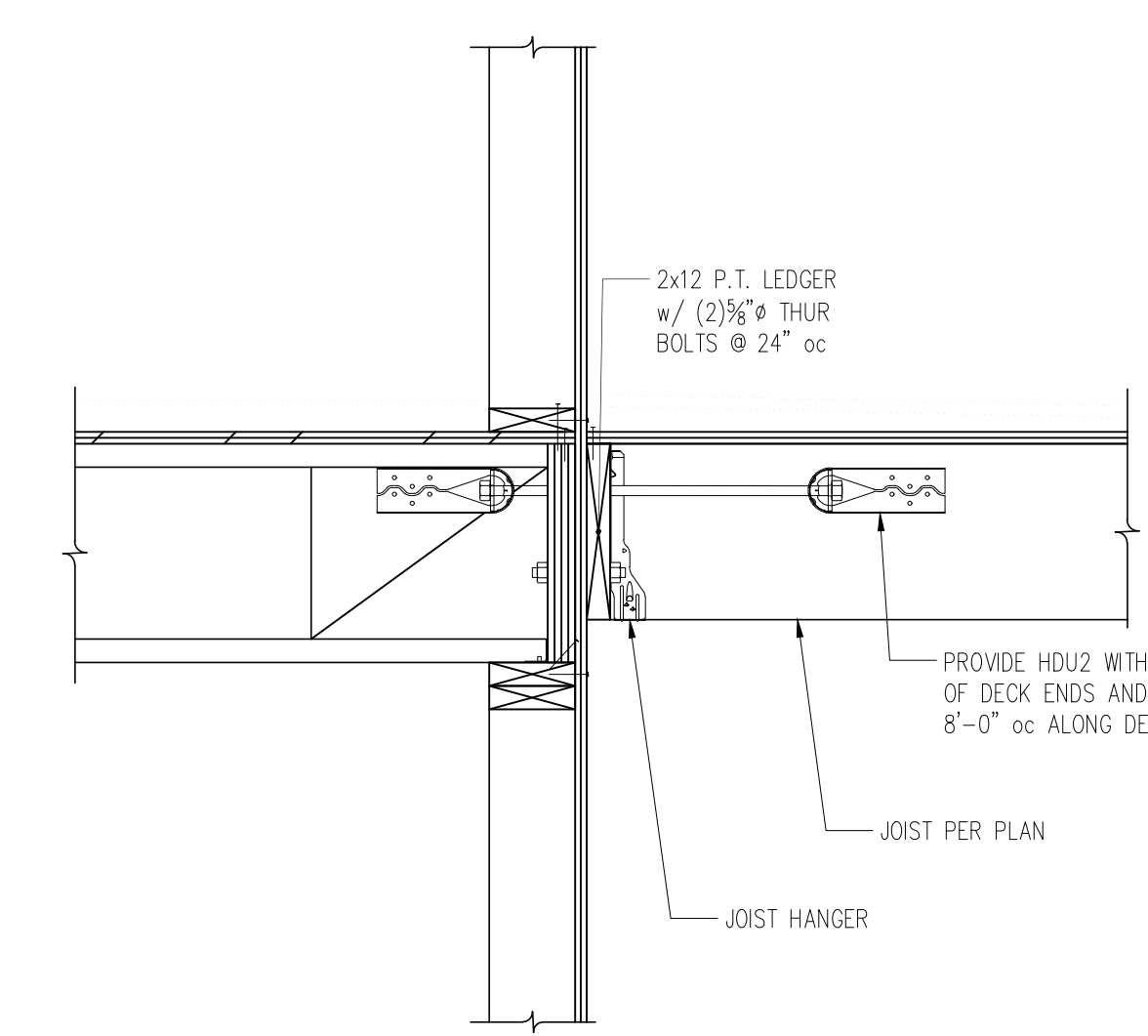
6 SECTION THROUGH EXTERIOR BEAM AT PARALLEL JOISTS AND PARALLEL DECK JOISTS
 1" = 1'-0"



3 SECTION THROUGH DECK BEAM
 1" = 1'-0"

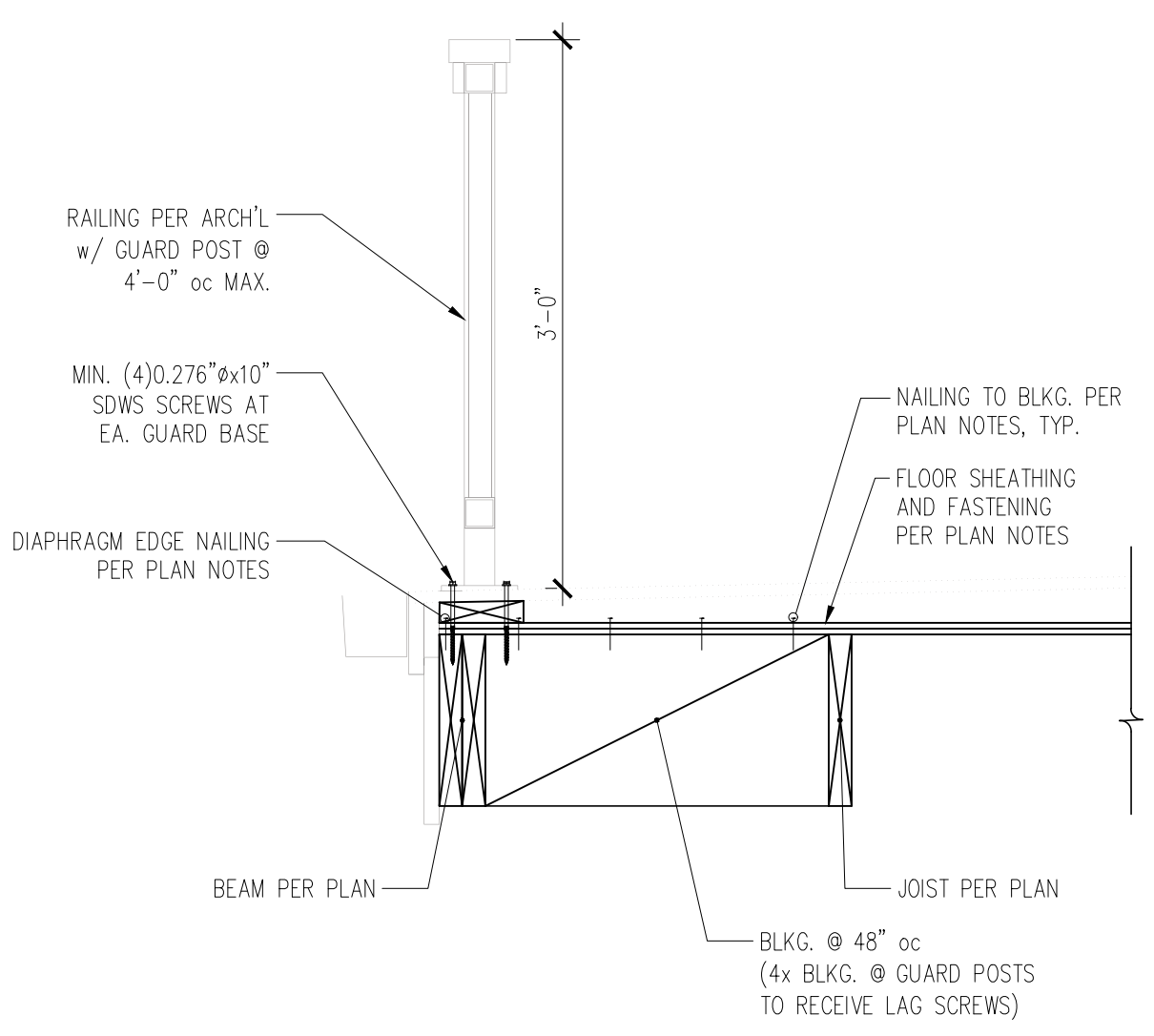


8 SECTION THROUGH BEAM SUPPORTING SHEARWALL ABOVE
 1" = 1'-0"

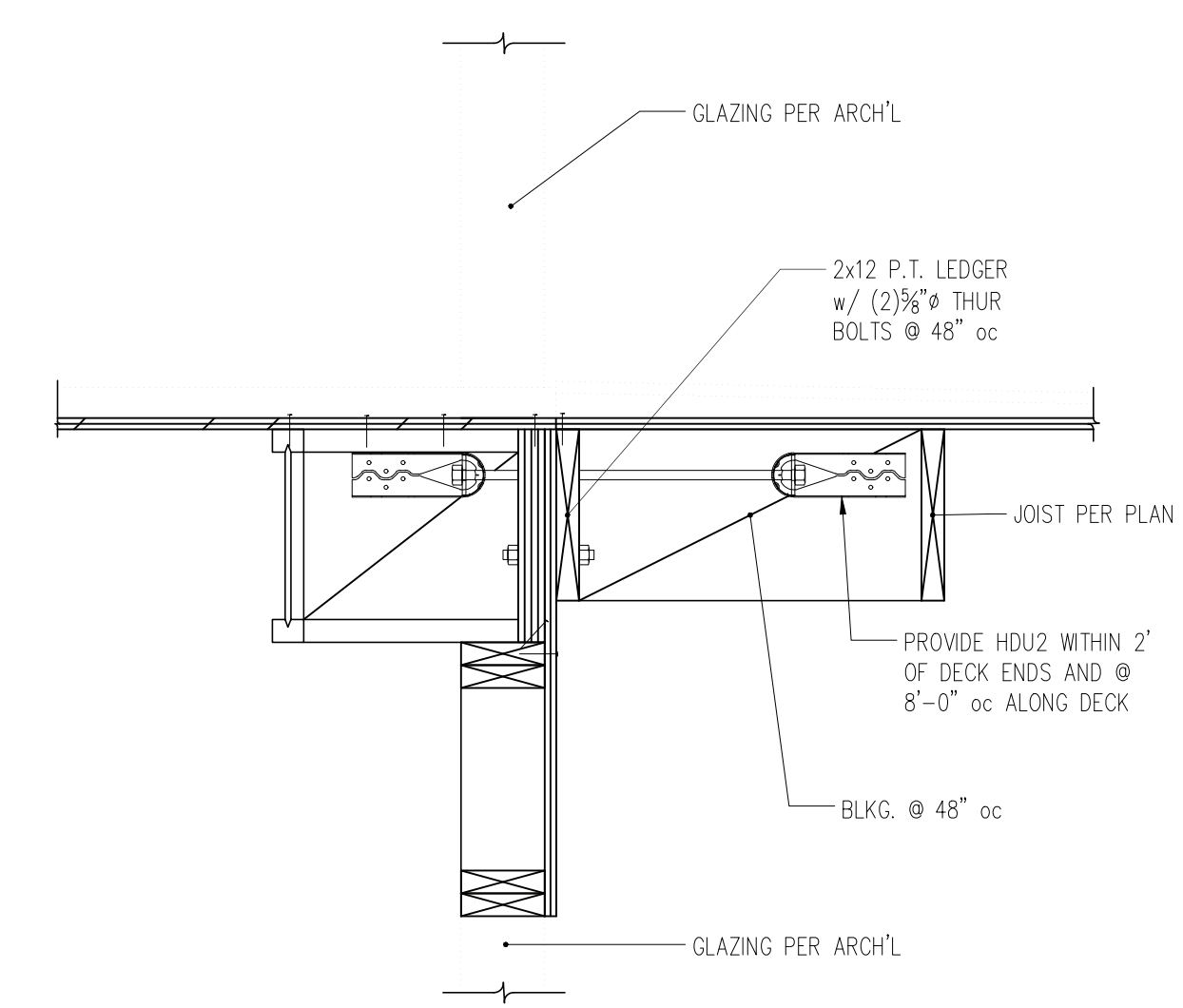


SEE DETAIL
 1/S6.2 FOR CALL
 OUTS IN COMMON

5 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR JOISTS AND PERPENDICULAR DECK JOISTS
 1" = 1'-0"

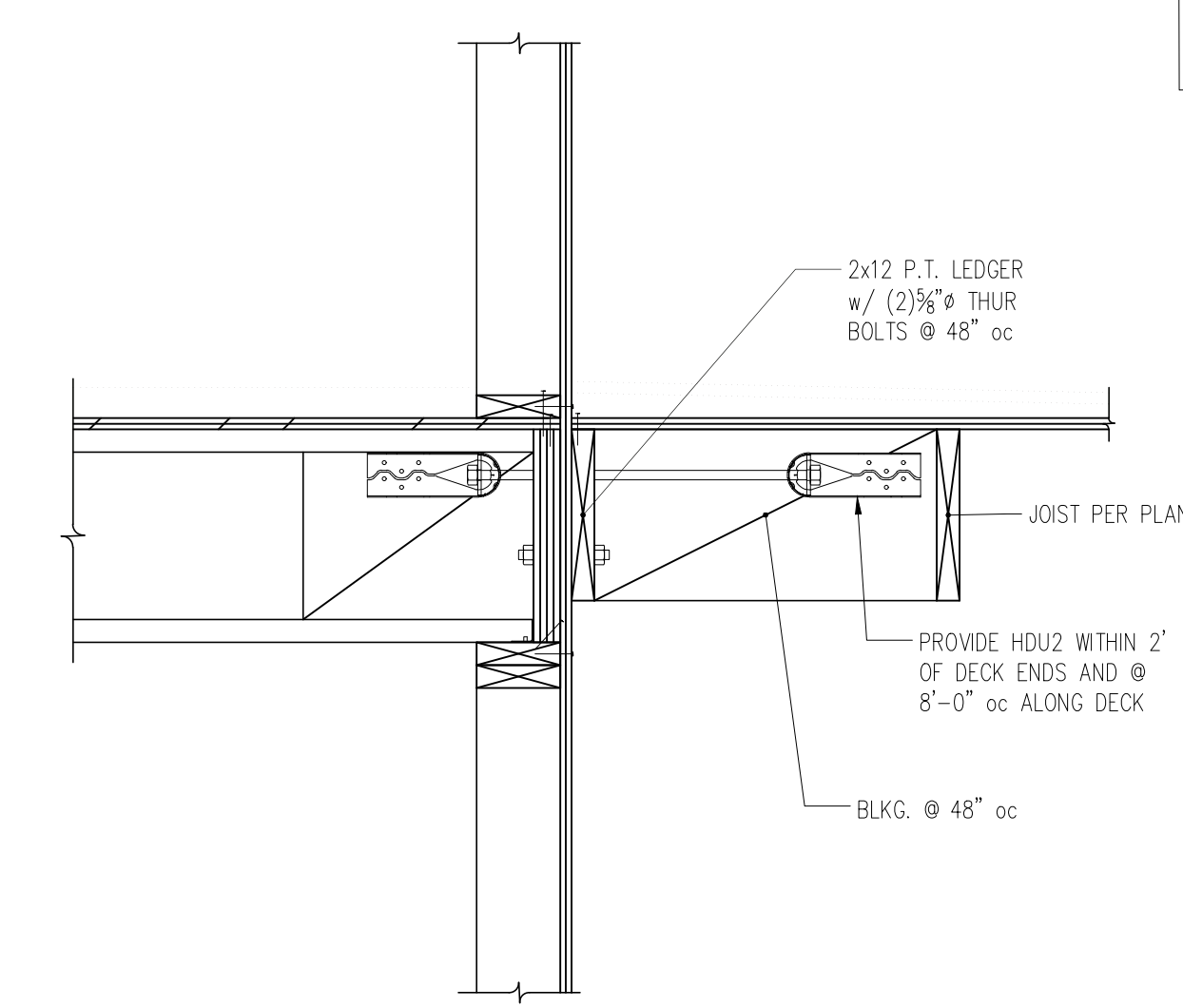


2 SECTION THROUGH DECK EDGE AT PARALLEL JOISTS
 1" = 1'-0"



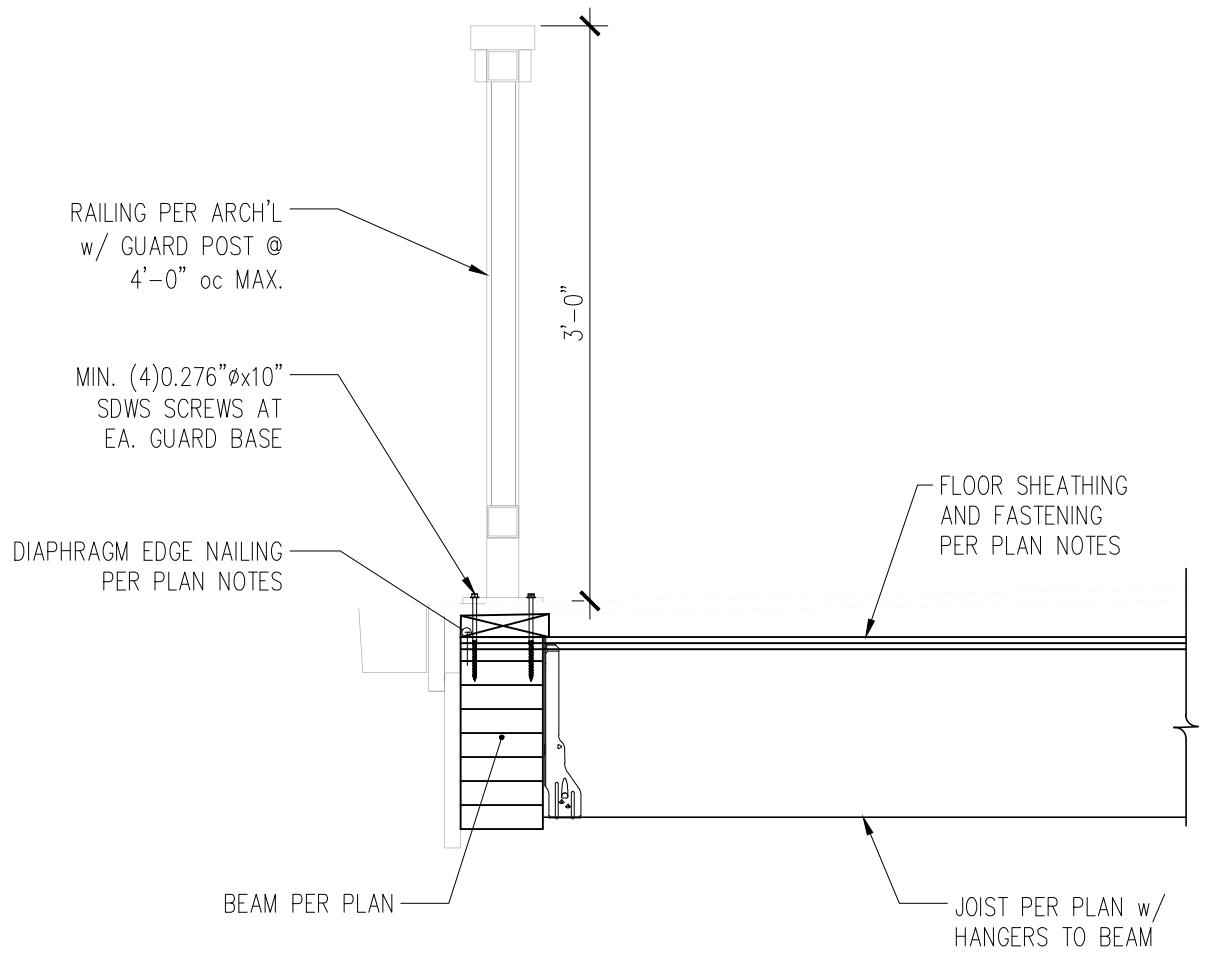
SEE DETAIL
 2/S6.2 FOR CALL
 OUTS IN COMMON

7 SECTION THROUGH EXTERIOR WALL AT PARALLEL JOISTS AND PARALLEL DECK JOISTS
 1" = 1'-0"

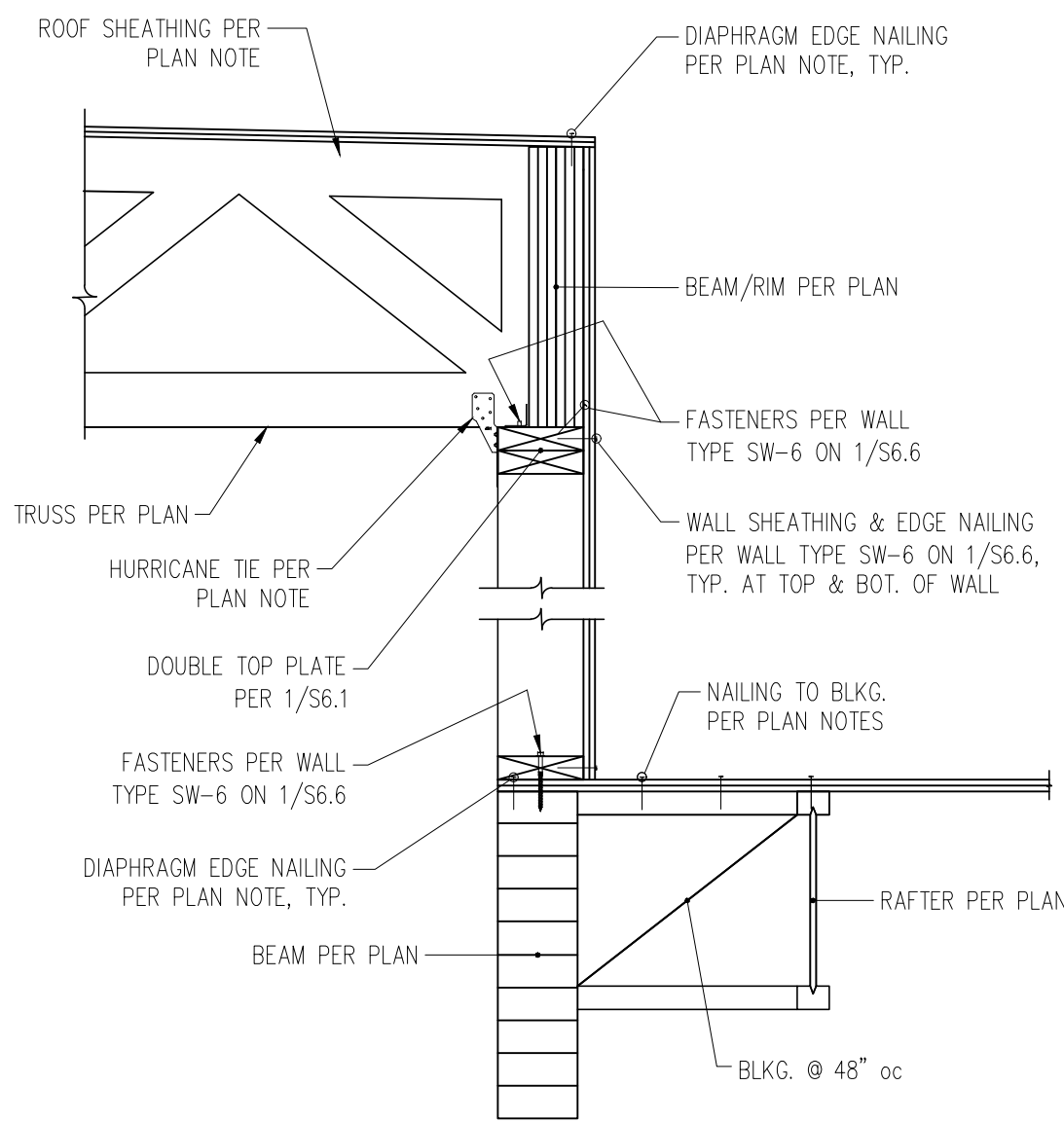


SEE DETAIL
 1/S6.2 FOR CALL
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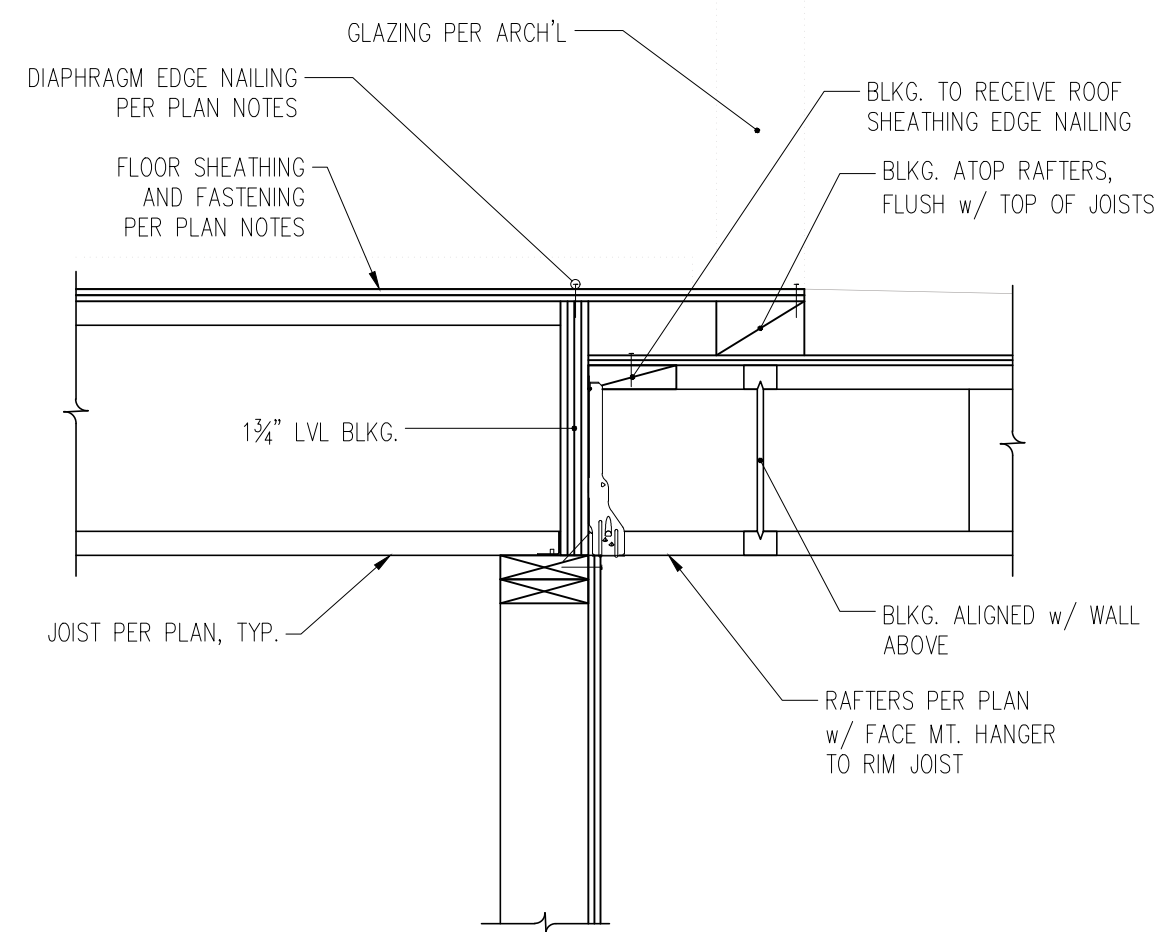
4 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR JOISTS AND PARALLEL DECK JOISTS
 1" = 1'-0"



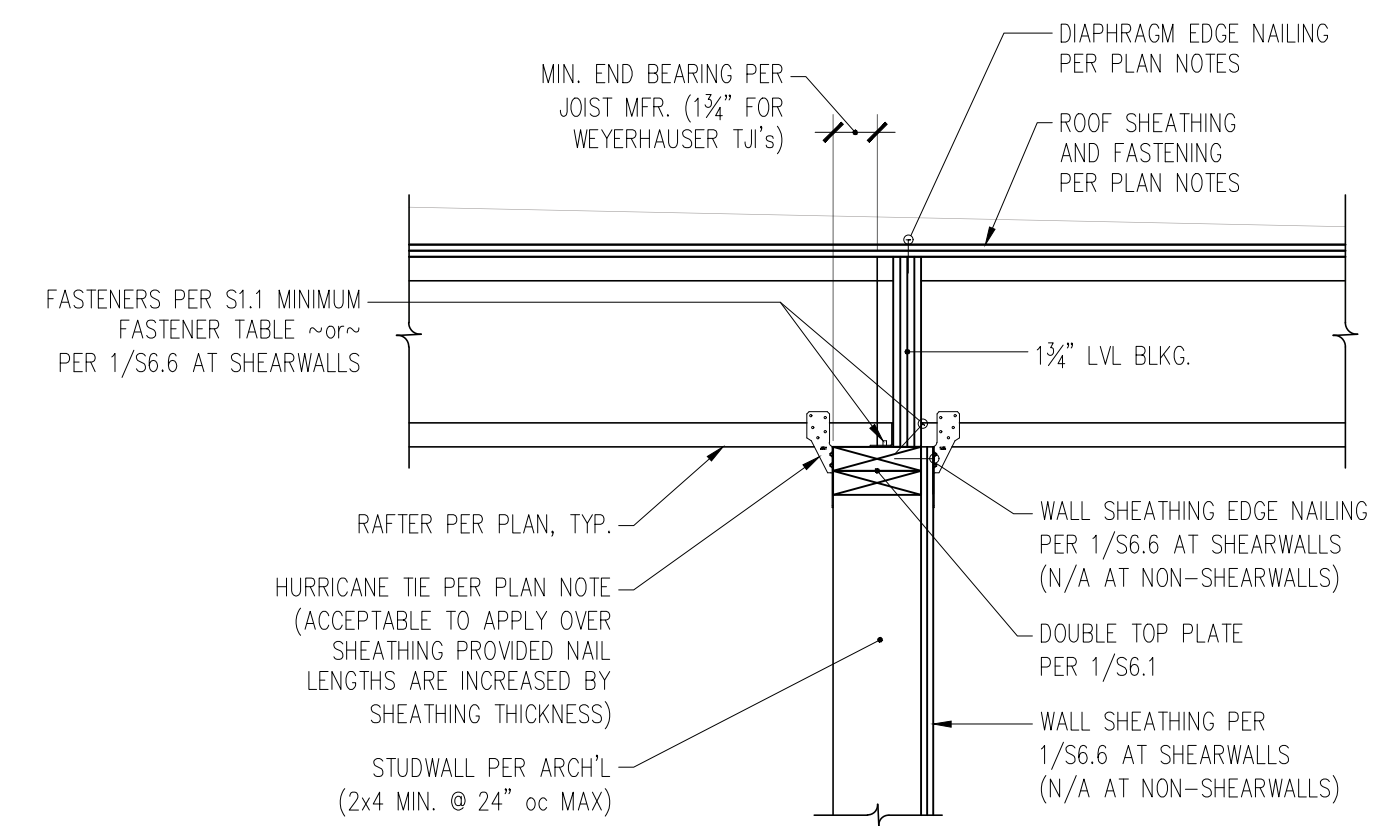
1 SECTION THROUGH DECK EDGE AT PERPENDICULAR JOISTS
 1" = 1'-0"



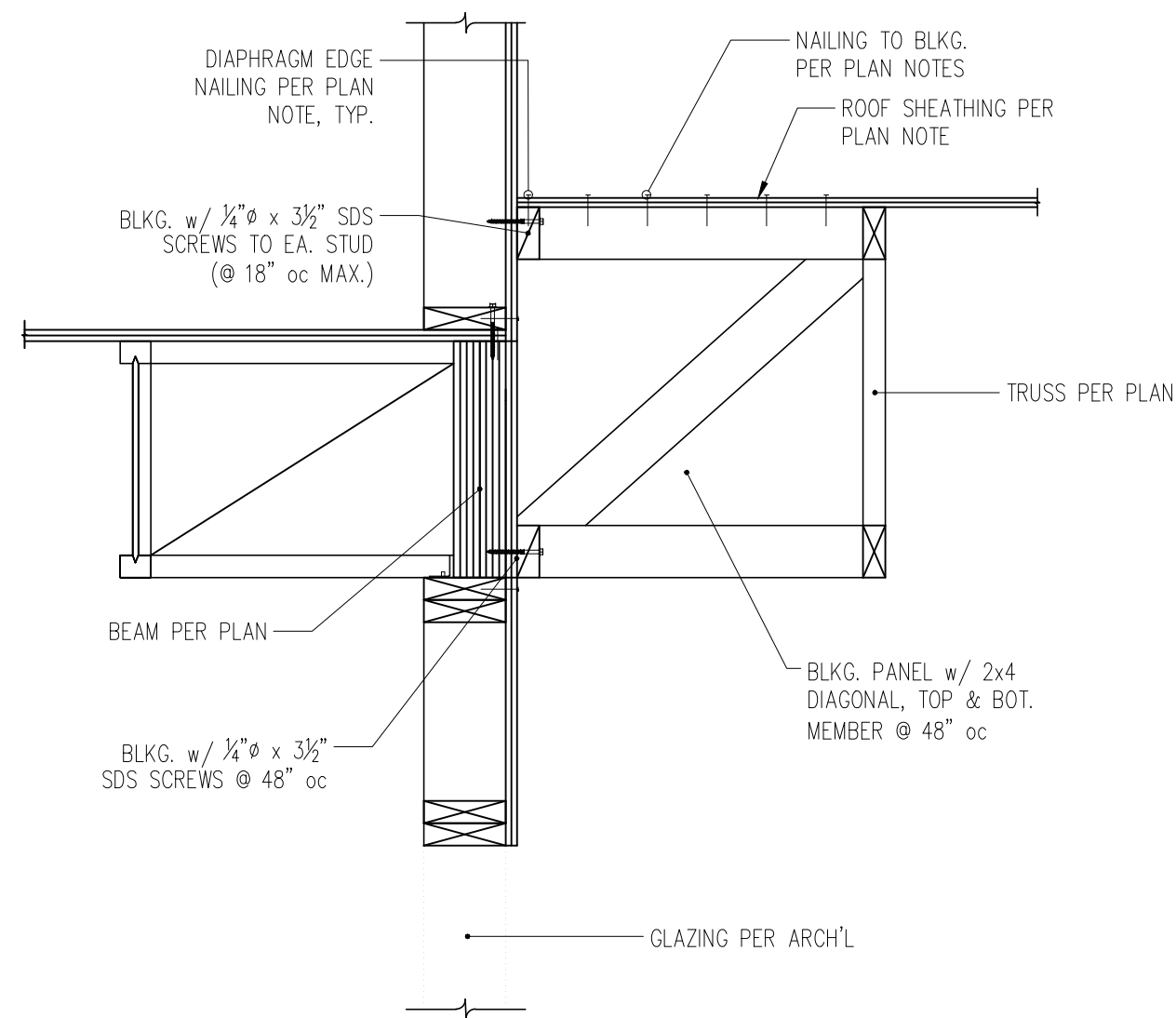
9 SECTION THROUGH BEAM SUPPORTING TRUSSES
S6.4 1" = 1'-0"



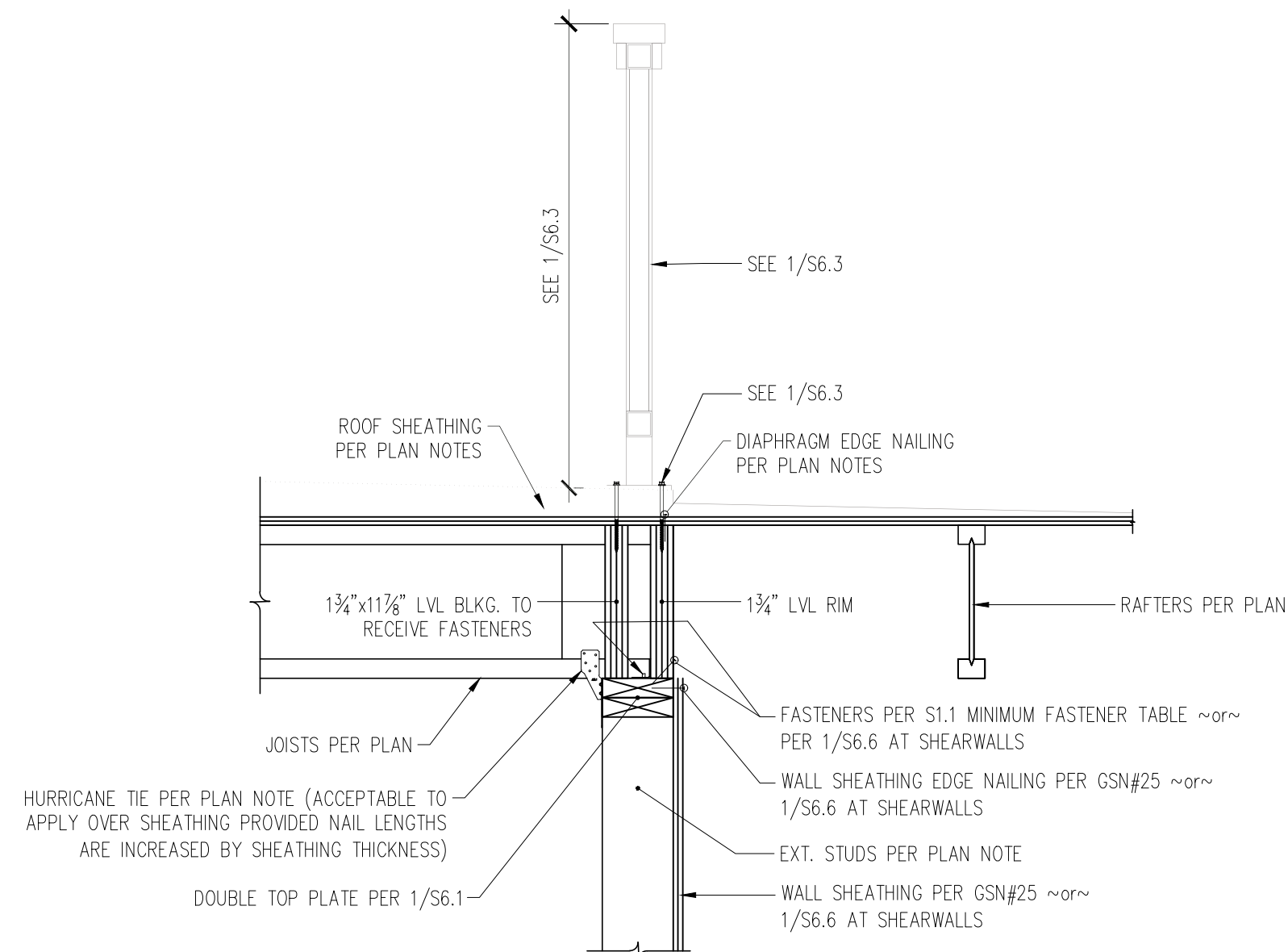
6 SECTION THROUGH INTERIOR BEARING WALL AT INTERIOR-TO-EXTERIOR INTERFACE
S6.4 1" = 1'-0"



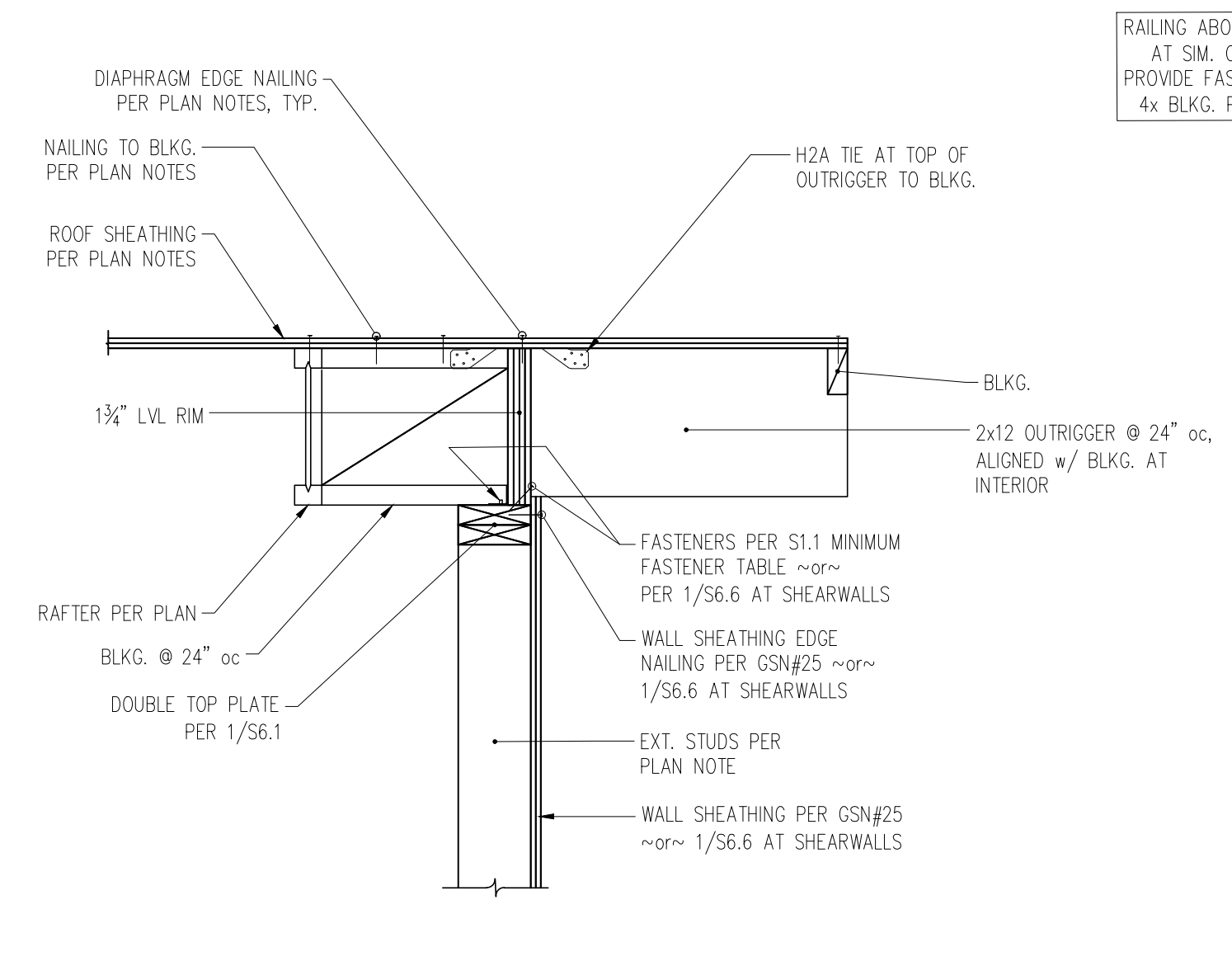
3 SECTION THROUGH INTERIOR BEARING WALL w/ PERPENDICULAR RAFTERS AT EA. SIDE
S6.4 N.T.S.



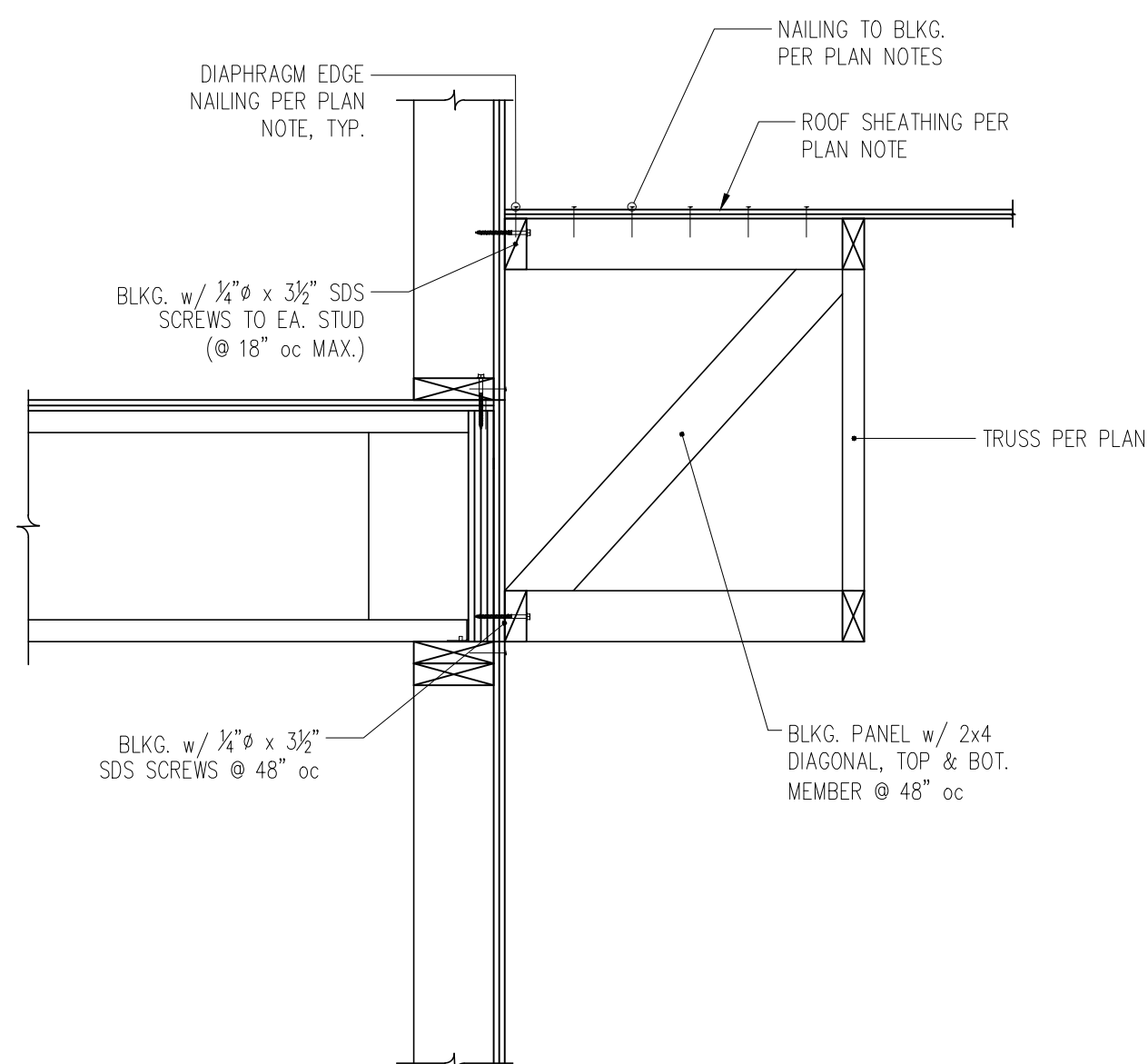
8 SECTION THROUGH EXTERIOR WALL AT PARALLEL JOISTS & PARALLEL TRUSSES
S6.4 1" = 1'-0"



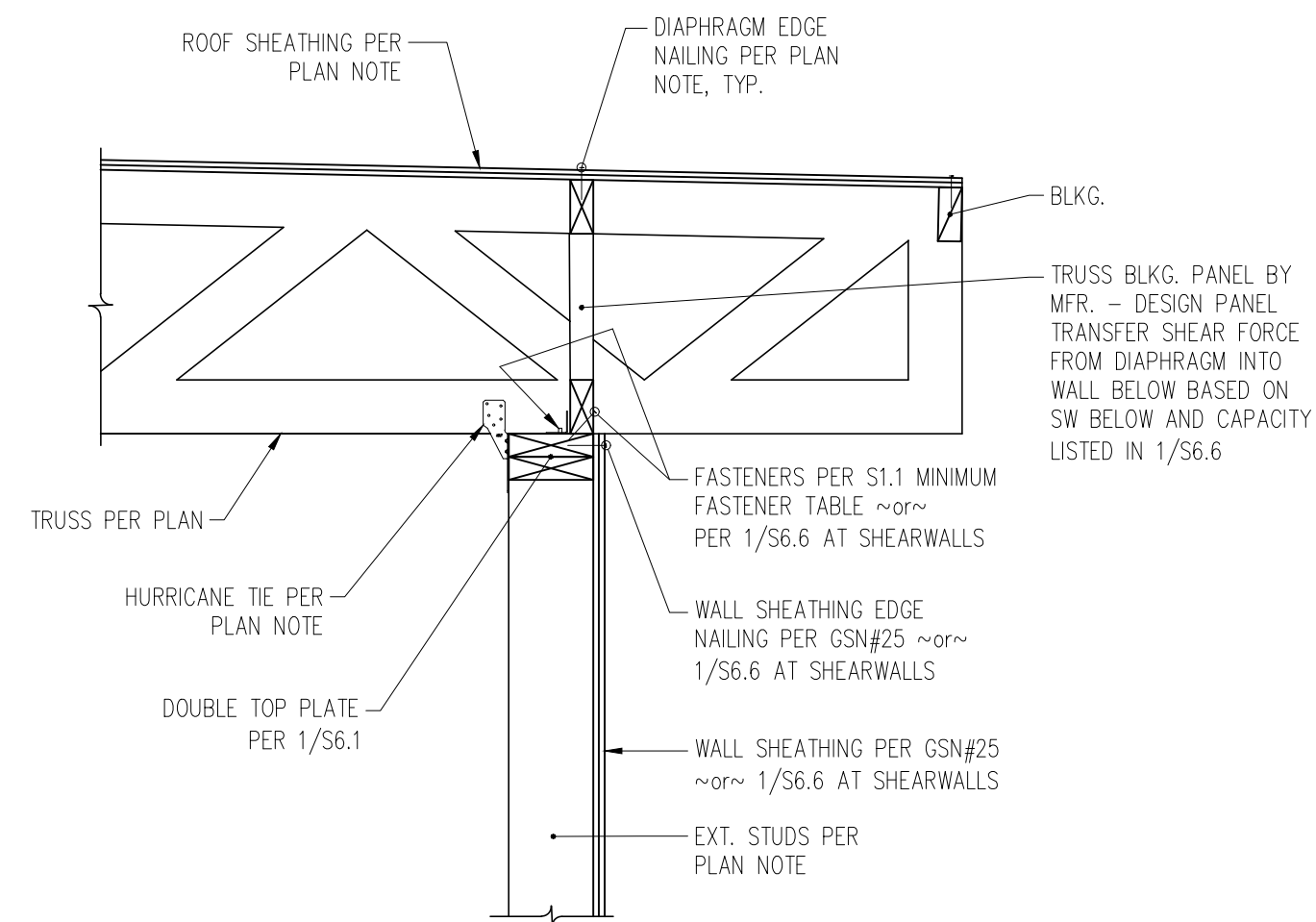
5 SECTION THROUGH EXTERIOR WALL AT EXTENDED ROOF OVERHANG
S6.4 1" = 1'-0"



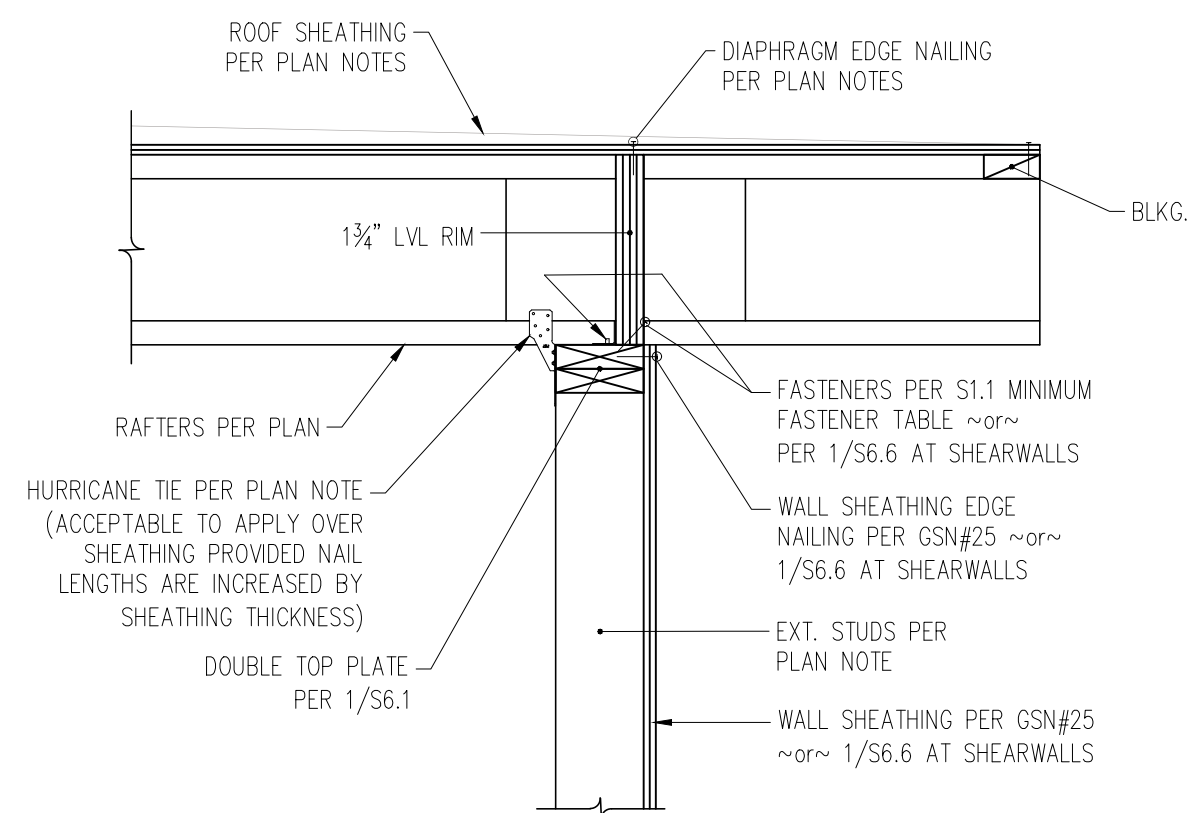
2 SECTION THROUGH EXTERIOR WALL AT PARALLEL RAFTERS
S6.4 1" = 1'-0"



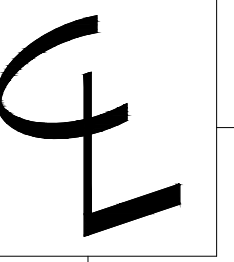
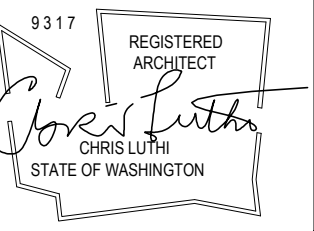
7 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR JOISTS & PARALLEL TRUSSES
S6.4 1" = 1'-0"



4 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR TRUSSES
S6.4 1" = 1'-0"

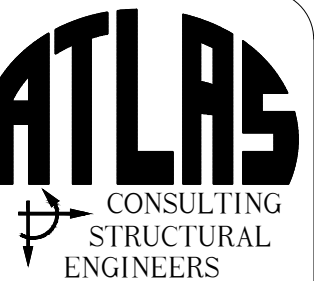


1 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR RAFTERS
S6.4 1" = 1'-0"



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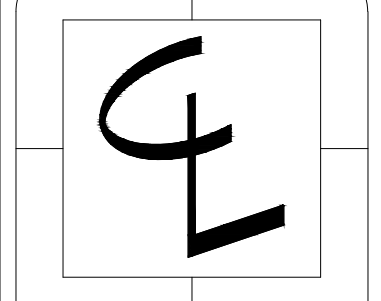
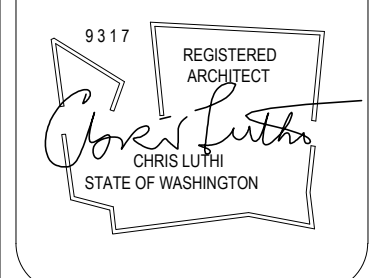


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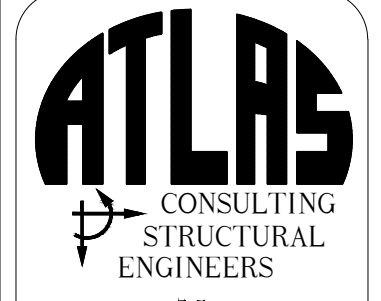
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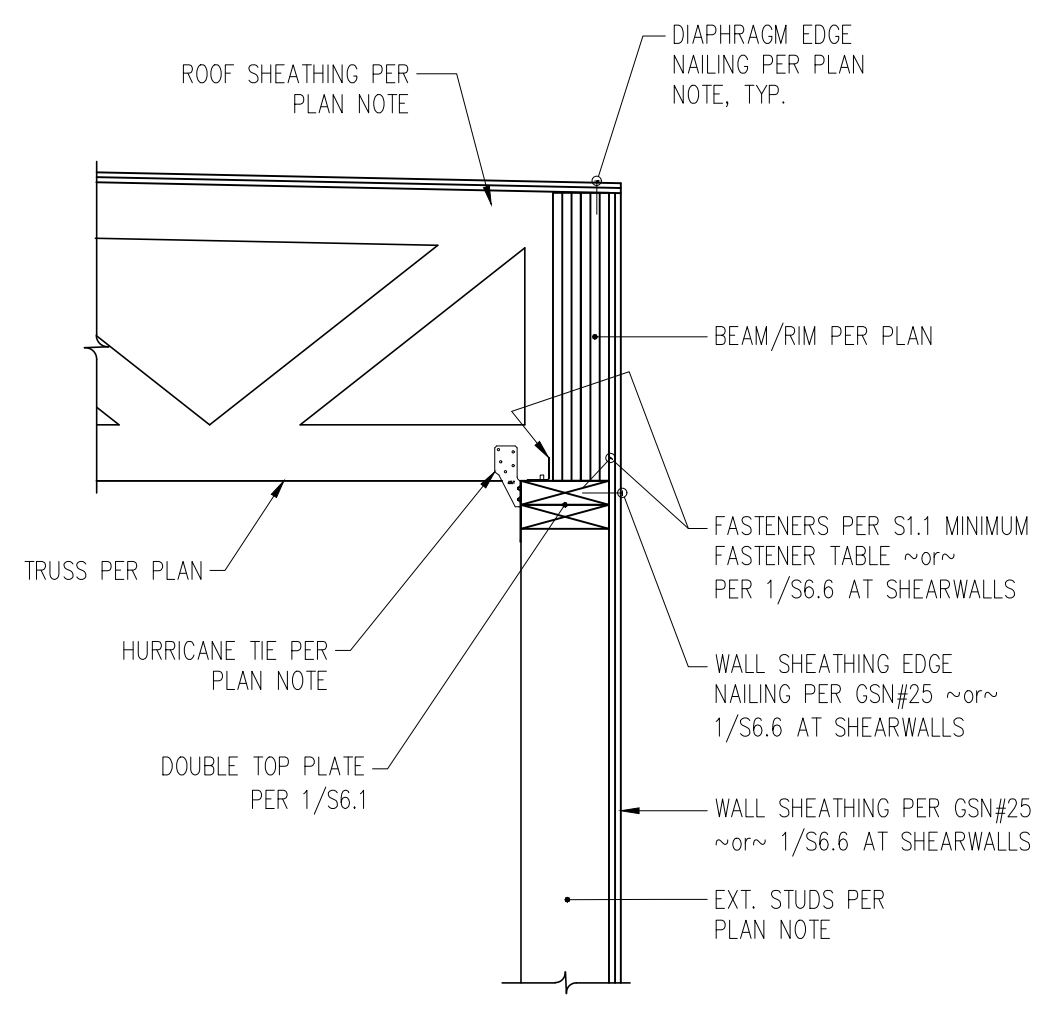


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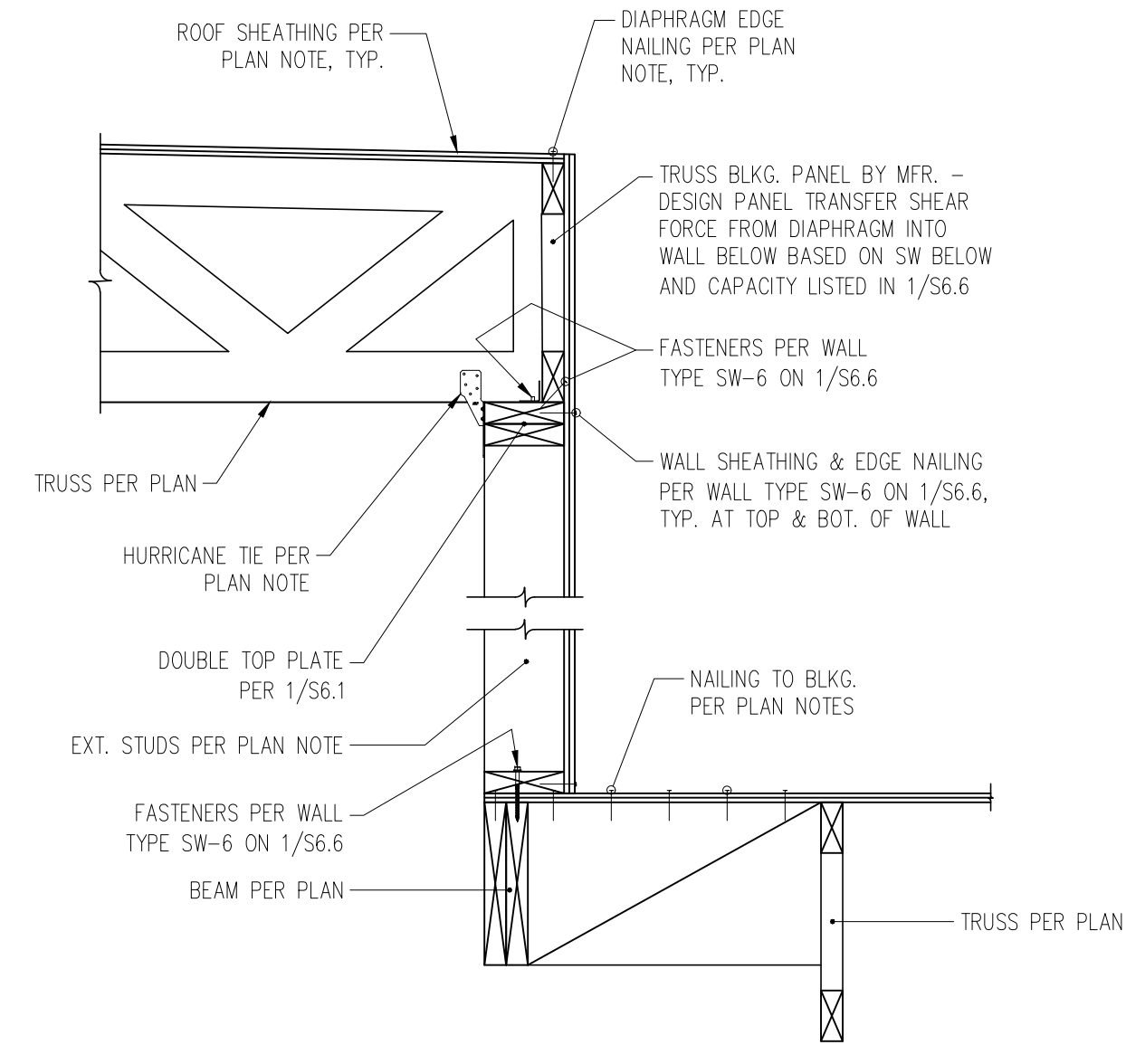
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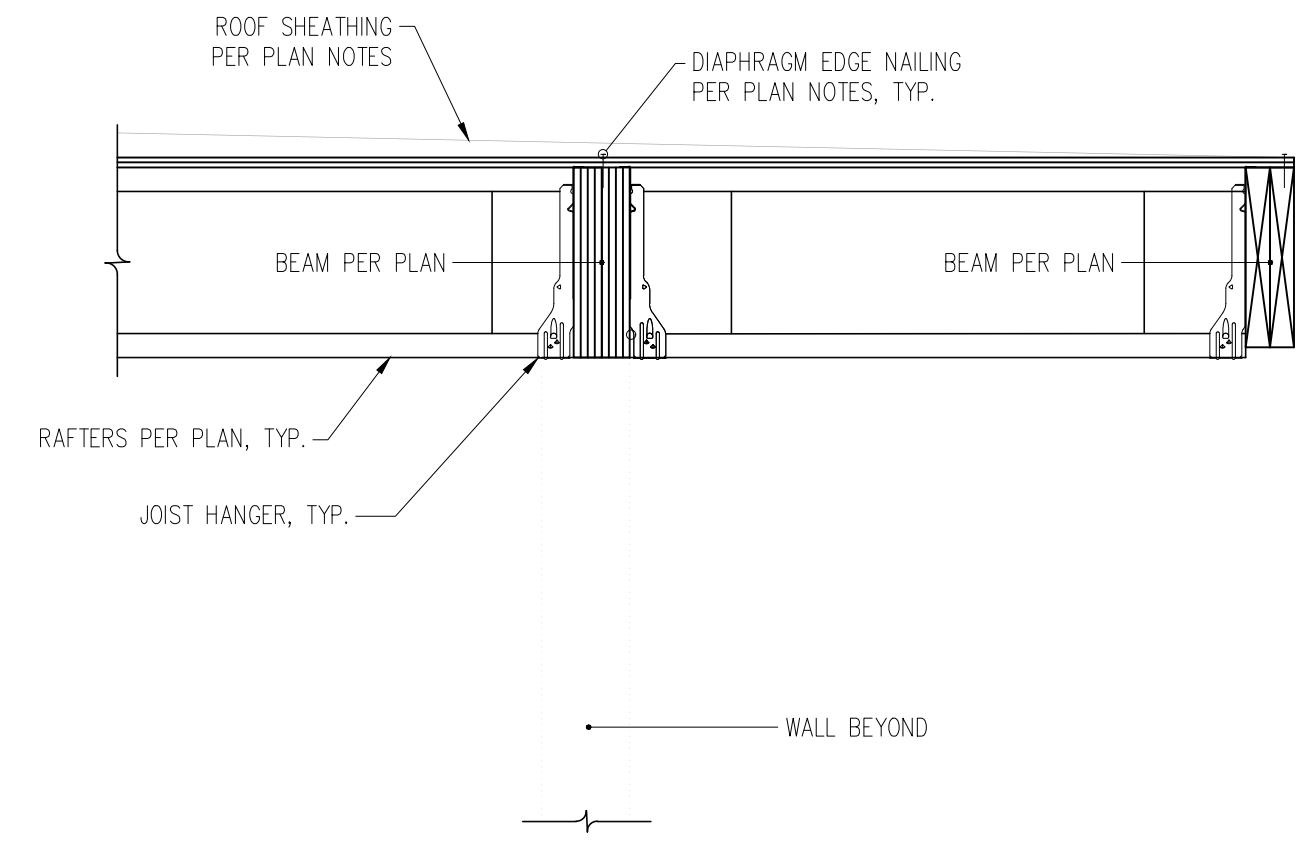
S6.5



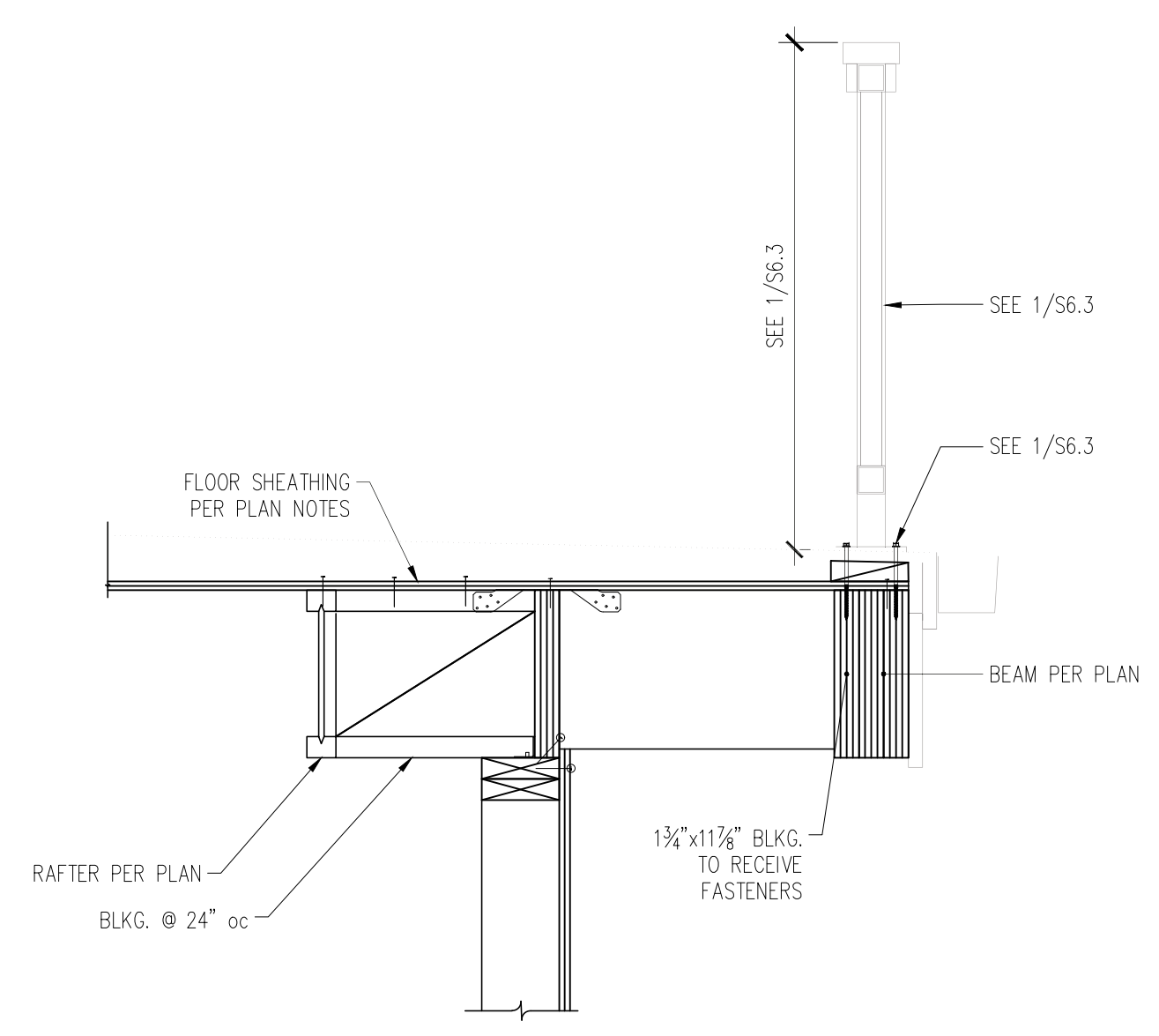
9 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR TRUSSES
S6.5 1" = 1'-0"



6 SECTION THROUGH ROOF BREAK AT INTERIOR WALL
S6.5 1" = 1'-0"

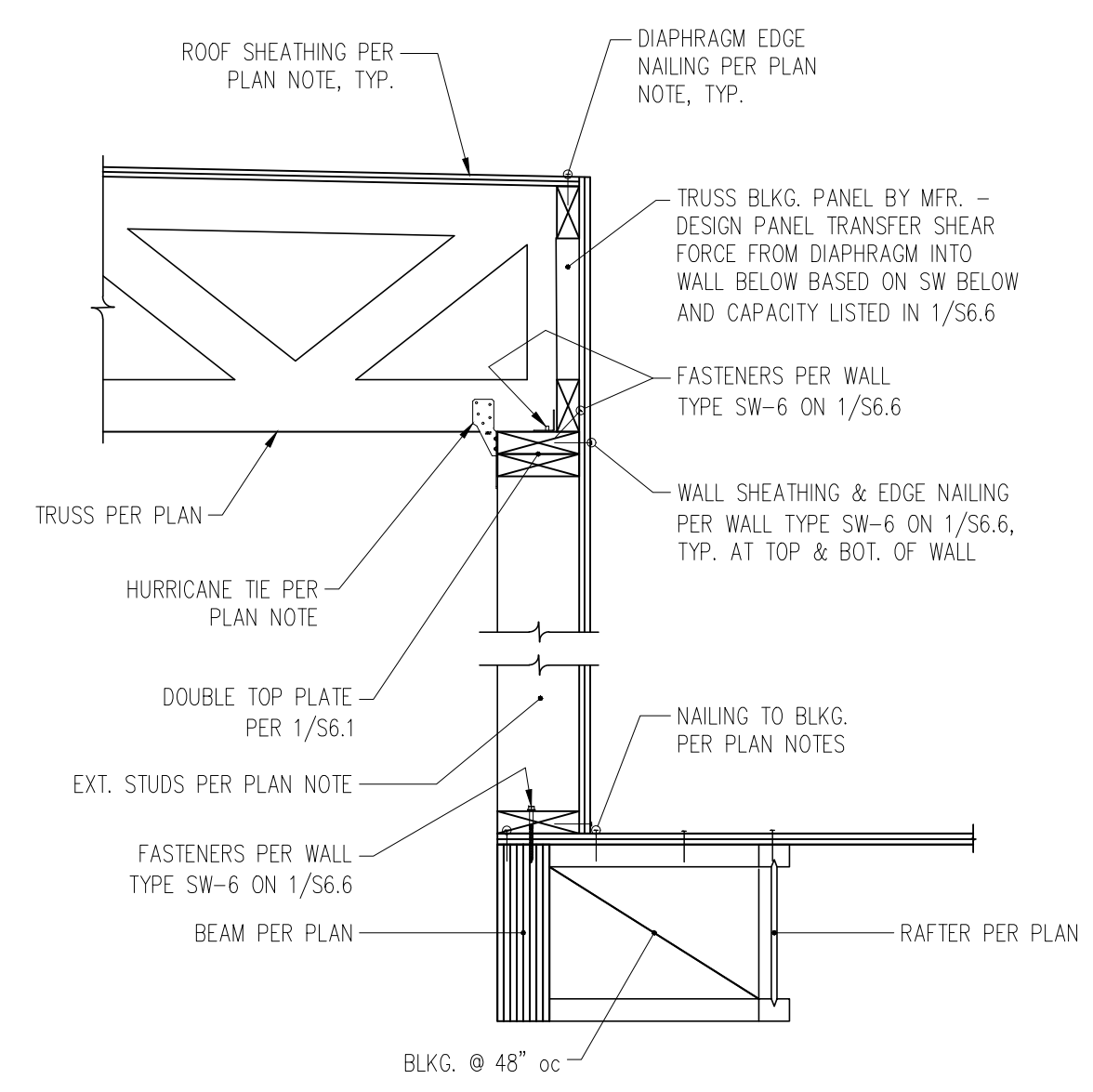


3 SECTION THROUGH INTERIOR BEARING WALL w/ PERPENDICULAR RAFTERS AT EA. SIDE
S6.5 1" = 1'-0"

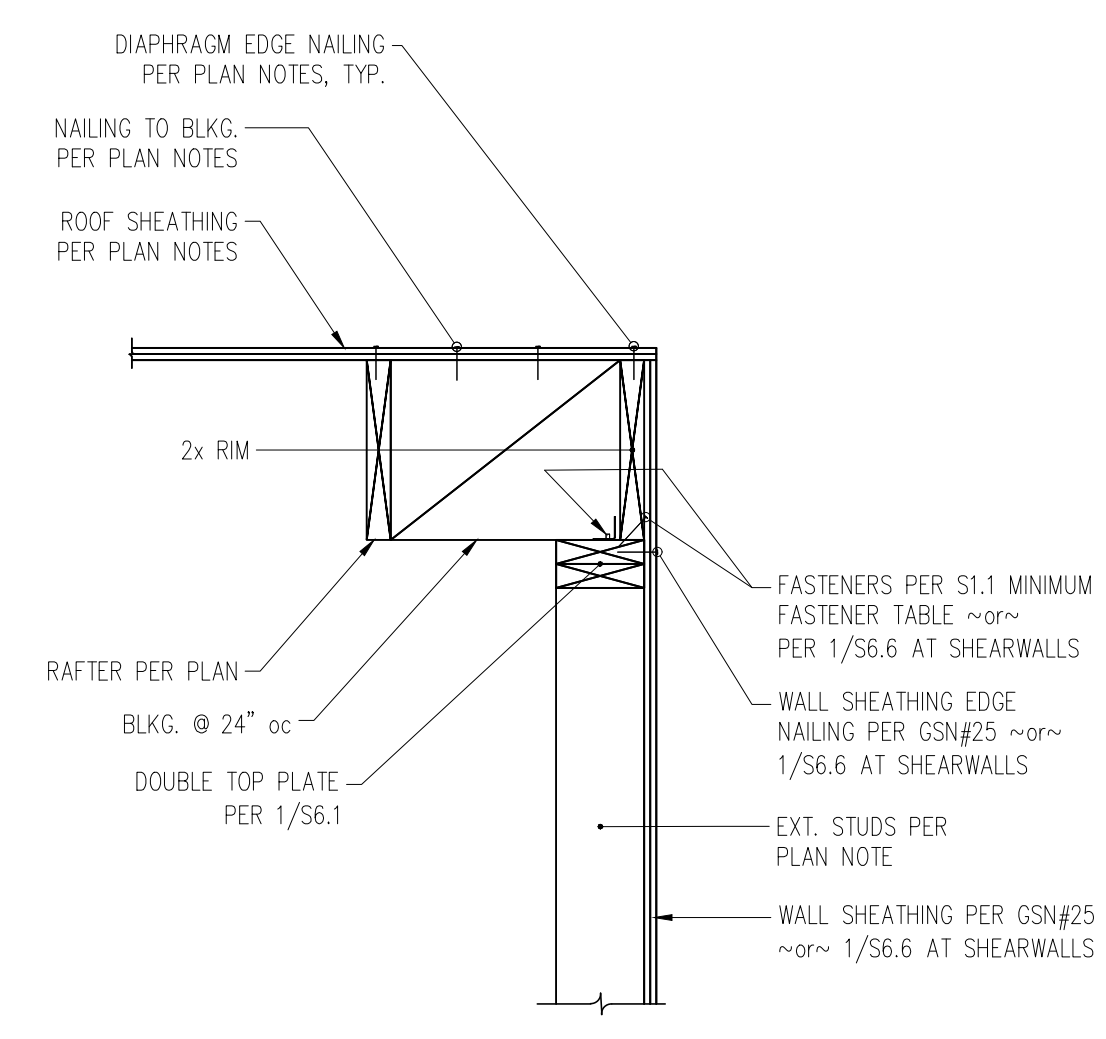


8 SECTION THROUGH EXTERIOR WALL AT PARALLEL ROOF DECK JOISTS
S6.5 1" = 1'-0"

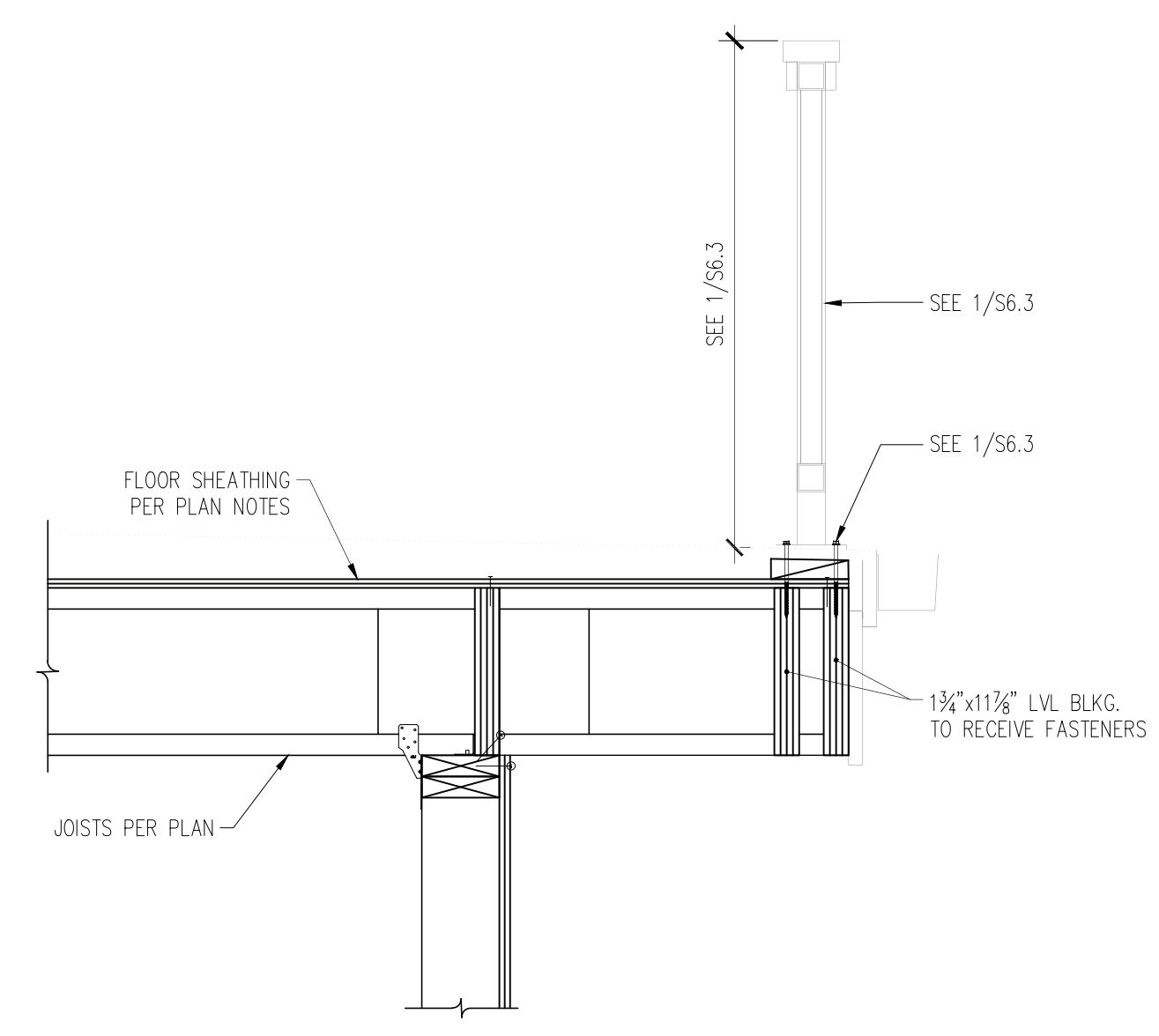
SEE DETAIL 2/S6.4 FOR CALL OUTS IN COMMON



5 SECTION THROUGH ROOF BREAK AT INTERIOR WALL
S6.5 1" = 1'-0"

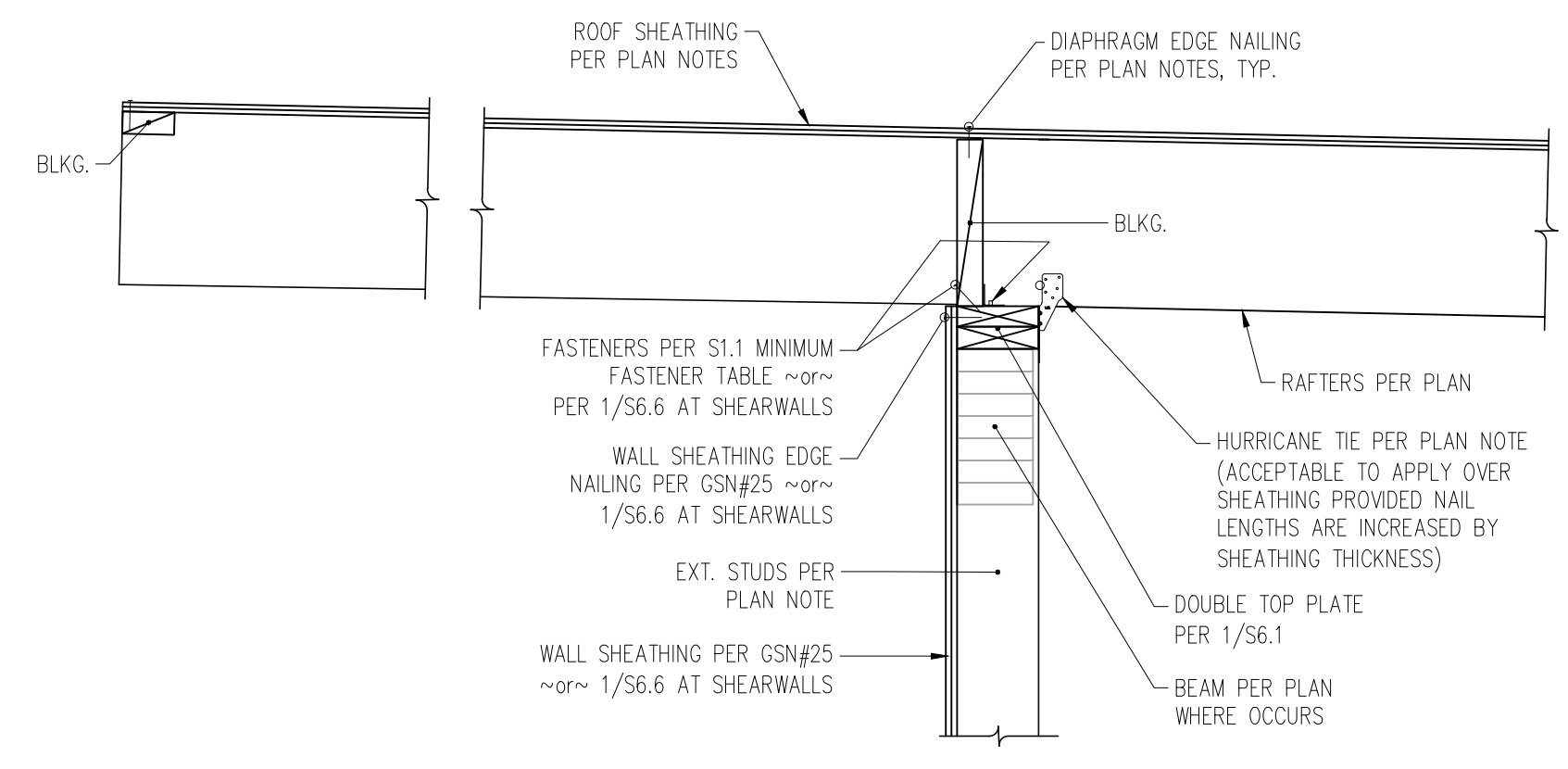


2 SECTION THROUGH EXTERIOR WALL AT PARALLEL HIGH ROOF RAFTERS
S6.4 1" = 1'-0"

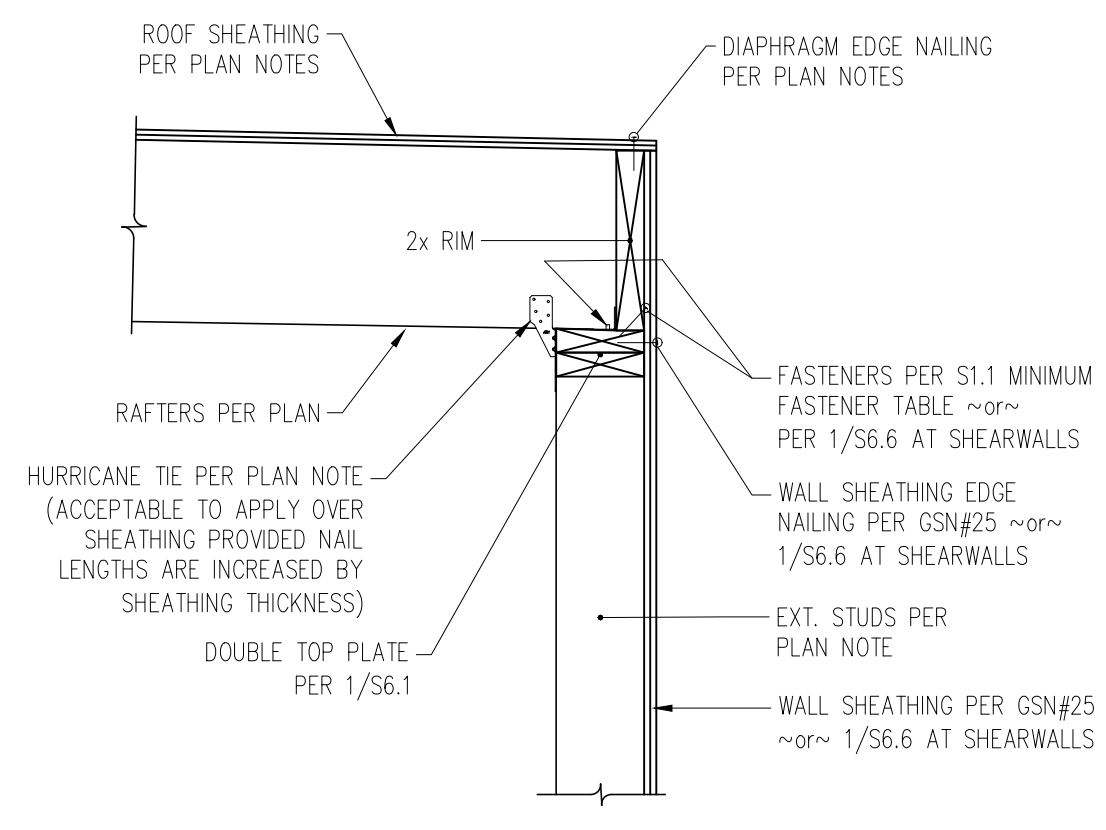


7 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR ROOF DECK JOISTS
S6.5 1" = 1'-0"

SEE DETAIL 1/S6.4 FOR CALL OUTS IN COMMON



4 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR HIGH ROOF CANTILEVERED RAFTERS
S6.5 1" = 1'-0"

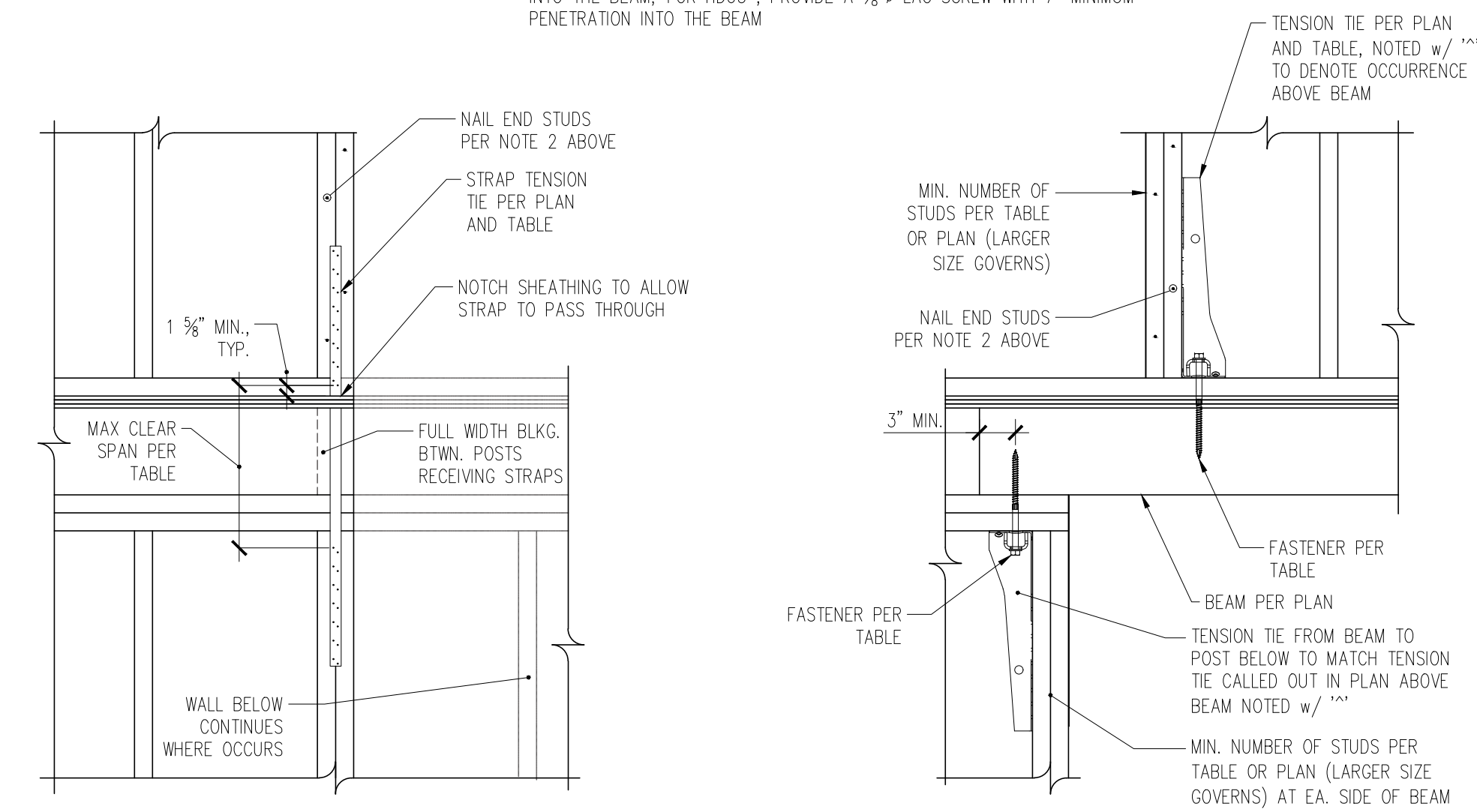


1 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR HIGH ROOF RAFTERS
S6.5 1" = 1'-0"

STRAP TENSION TIE SCHEDULE

TIE MARK	MIN. NUMBER OF STUDS	CLEAR SPAN - TOTAL FASTENERS	ASD CAPACITY
HOU2"	(2)2x	(6)1/4" x 2 1/2" SDS SCREWS	1,500#
HOU5"	(3)2x	(14)1/4" x 2 1/2" SDS SCREWS	4,923#
MSTC28	(2)2x	16" - (16)0.148" x 3/4"	1,330#
MSTC40	(3)2x	16" - (32)0.148" x 3/4"	2,655#
MSTC52	(3)2x	16" - (48)0.148" x 3/4"	3,985#
MSTC66	(4)2x	16" - (68)0.148" x 3/4"	5,850#

- TENSION TIE TYPES REFER TO SIMPSON STRONG-TIE CATALOG CALLOUTS.
- NAIL PLYWOOD SHEATHING TO STUDS RECEIVING HOLDOWN WITH SCHEDULED PANEL EDGE NAILING. STAGGER NAILS SO THAT EACH STUD IS NAILED.
- FASTENERS NOTED IN TABLE ABOVE REPRESENT THE TOTAL AMOUNT FOR STRAPS, HALF OF THE FASTENERS SHALL BE PROVIDED INTO EACH STUD. DENOTES TENSION TIE THAT OCCURS ATOP OF A FRAMING MEMBER BELOW. FOR HOU2", PROVIDE A 3/8" LAG SCREW WITH 3" MINIMUM PENETRATION INTO THE BEAM; FOR HOU5", PROVIDE A 3/8" LAG SCREW WITH 7" MINIMUM PENETRATION INTO THE BEAM.



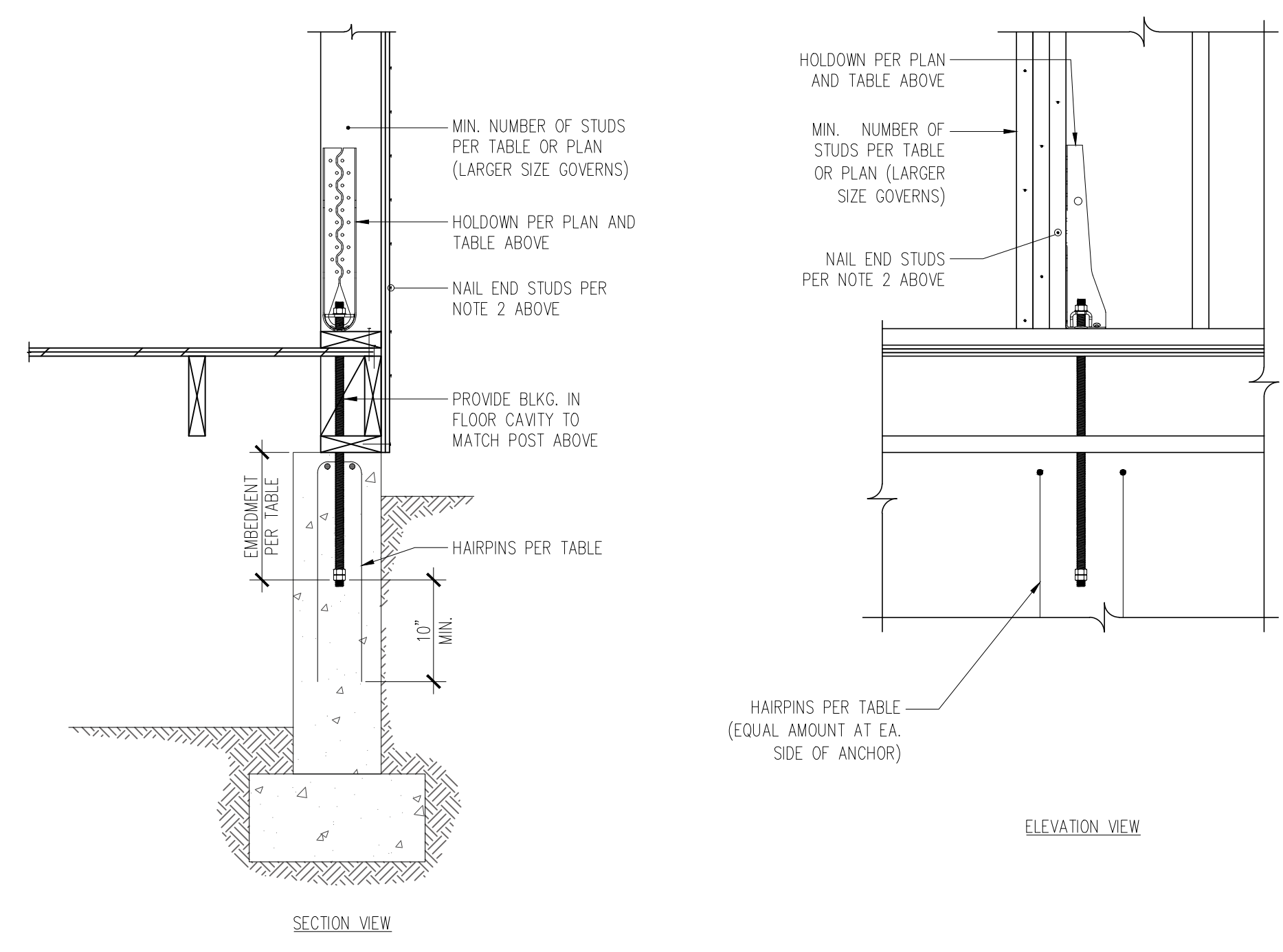
ELEVATION VIEW - TYPICAL CONDITION

ELEVATION VIEW - TENSION TIE ABOVE BEAM

HOLDOWN TENSION TIE SCHEDULE

TIE MARK	MIN. NUMBER OF STUDS	ANCHOR (Ø x EMBEDMENT) and No. OF HAIRPIN DOWELS	FASTENERS FROM TIE TO STUD	ASD CAPACITY
HOU2	(2)2x	3/8" x 20" - (2)#4 HAIRPIN	(6)1/4" x 2 1/2" SDS SCREWS	3,075#
HOU4	(2)2x	3/8" x 20" - (2)#4 HAIRPIN	(10)1/4" x 2 1/2" SDS SCREWS	4,565#
HOU5	(3)2x	3/8" x 20" - (2)#4 HAIRPIN	(14)1/4" x 2 1/2" SDS SCREWS	5,645#
HOU8	(4)2x	3/8" x 20" - (4)#4 HAIRPIN	(20)1/4" x 2 1/2" SDS SCREWS	7,870#
HOU11	(5)2x	1" x 20" - (4)#4 HAIRPIN	(30)1/4" x 2 1/2" SDS SCREWS	11,175#

- TENSION TIE TYPES REFER TO SIMPSON STRONG-TIE CATALOG CALLOUTS.
- NAIL PLYWOOD SHEATHING TO STUDS RECEIVING HOLDOWN WITH SCHEDULED PANEL EDGE NAILING. STAGGER NAILS SO THAT EACH STUD IS NAILED.
- ANCHORS SHALL BE HEAVY HEX HEAD WITH DOUBLE NUT CAST INTO CONCRETE.
 ASTM F 1554 Gr. 36 FOR 3/8" ANCHOR
 ASTM F 1554 Gr. 105 FOR 1" ANCHOR
 ASTM F 1554 Gr. 55 FOR 1" ANCHOR



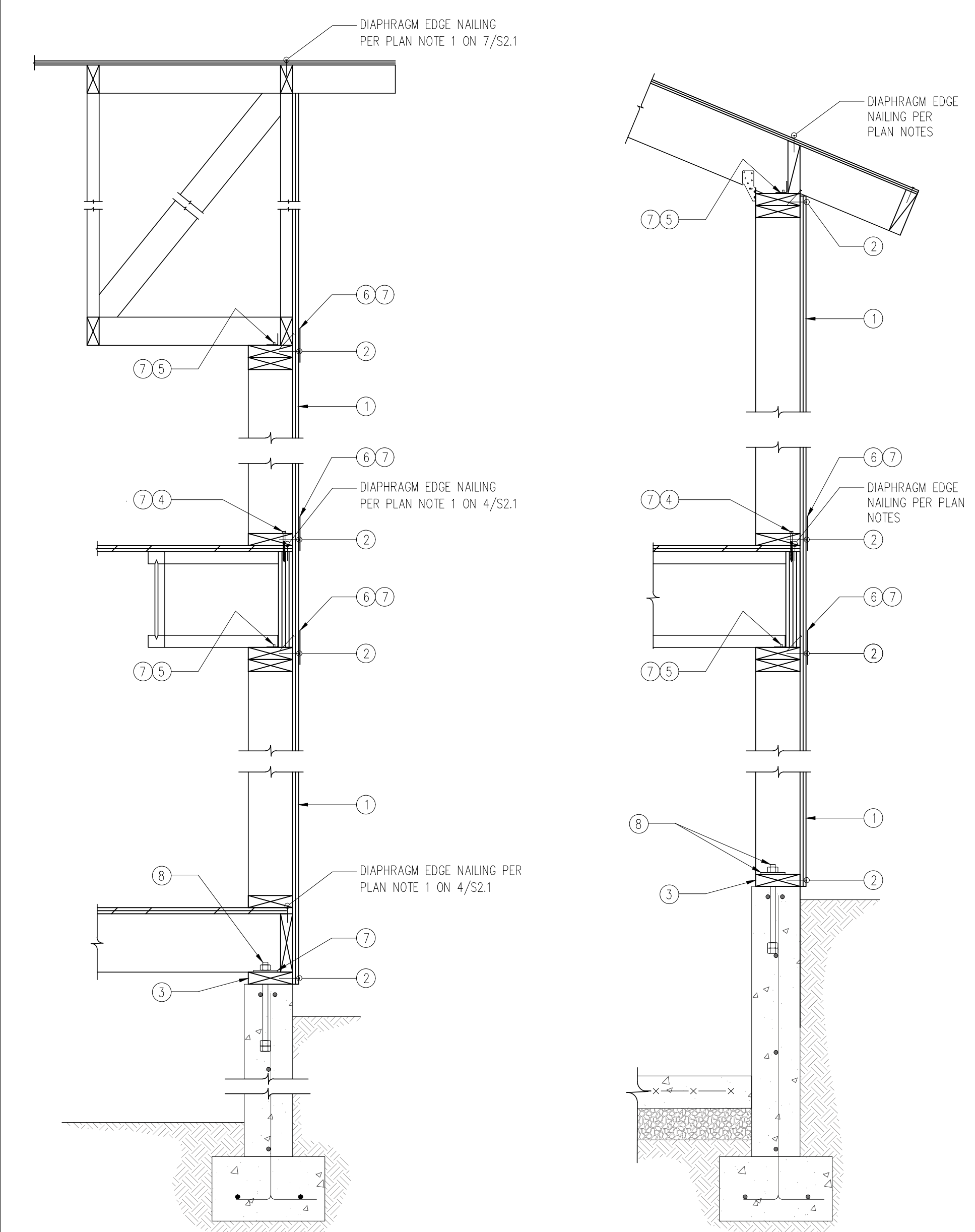
SECTION VIEW

4 HOLDDOWN DETAIL AND SCHEDULE
 1" = 1'-0"

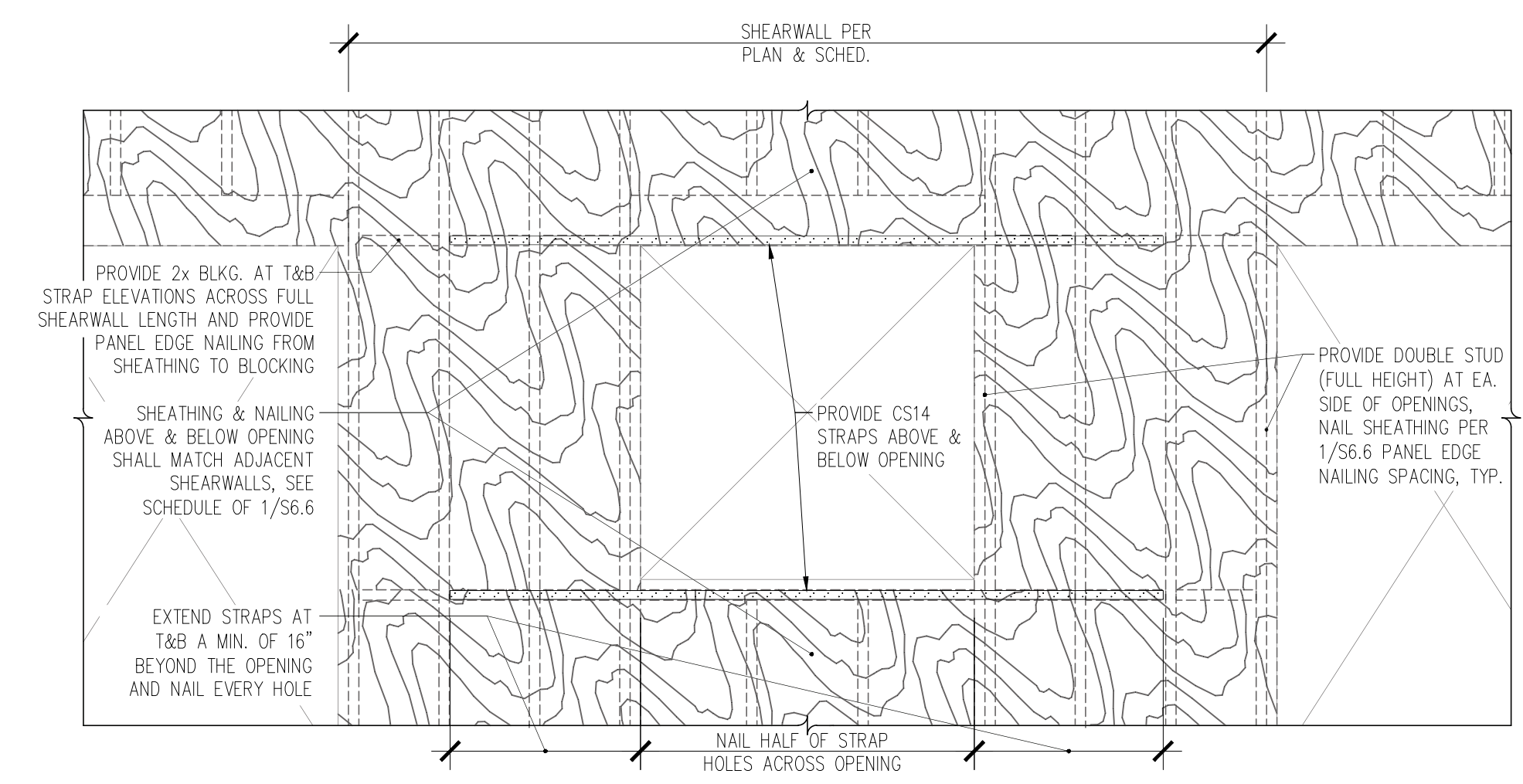
SHEARWALL PANEL TYPE	SHEATHING THICKNESS	0.131" x 2 1/2" PANEL NAILING	STUD/BLKG. AT ABUTTING PANEL EDGES & SILL PLATE THICKNESS	CONN. OF BLKG. OR FRAMING TO TOP PLATE; AND SOLE PLATE TO SILL PLATE			ANCHOR BOLTS TO CONC.		ASD CAPACITY, PLF
				1/2" x 3 1/2" SDS SCREWS	A35 CLIPS	LTP4 PLATES	3/8" Ø	1/2" Ø	
SW-6	1/2"	6" oc	2x	18" oc	30" oc	28" oc	48" oc	48" oc	260
SW-4	1/2"	4" oc	3x	12" oc	20" oc	19" oc	46" oc	48" oc	380
SW-3	1/2"	3" oc	3x	9" oc	15" oc	14" oc	36" oc	48" oc	490
SW-2	1/2"	2" oc	3x	7" oc	12" oc	11" oc	27" oc	38" oc	640
SW-44	1/2"	4" oc EA. SIDE	3x	6" oc	10" oc	9" oc	23" oc	32" oc	760

- SHEATHING SHALL CONSIST OF 1/2" PLYWOOD AND HAVE A MINIMUM SPAN RATING OF 246
- PANEL NAILING APPLIES TO ALL SHEATHING PANEL EDGES. PROVIDE ADDITIONAL FASTENERS AS REQUIRED TO MEET SPACING REQUIREMENTS. INSTALL BLOCKING AT ALL UNFRAMED PANEL EDGES. ENSURE SHEATHING IS NAILED TO EXISTING INTERMEDIATE FRAMING WITH PANEL NAILS AT 12" oc.
- DOUBLE 2x MEMBERS MAY BE SUBSTITUTED FOR 3x MEMBERS AT WALLS WITH ONLY ONE LAYER OF SHEATHING. 2x MEMBERS SHALL BE NAILED TOGETHER WITH 8d FACE: @ 3 1/2" oc FOR SW-6, AND @ 2" oc FOR SW-2 (116#/NAIL)
- ROWS OF NAILS AND SDS SCREWS SHALL BE OFFSET AT LEAST 1/2" AND STAGGERED. MINIMUM EDGE DISTANCE FOR NAILS AND SDS SCREWS INTO EDGE OF MEMBERS SHALL BE 3/8" (400#/SCREW)
- A35 CLIPS SHALL BE INSTALLED w/ (12)0.131 x 1 1/2" NAILS (650#/CLIP)
- LTP4 LATERAL TIE PLATES MAY BE INSTALLED OVER SHEATHING w/ (12)0.131 x 2 1/2" NAILS (625#/CLIP)
- CONTRACTOR SHALL USE A35 or LTP4 CLIPS TO CONNECT ROOF AND UPPER FLOOR FRAMING TO DOUBLE TOP PLATE; AND SDS SCREWS or LTP4 CLIPS TO CONNECT SOLE PLATE TO RM BOARD AT UPPER FLOOR. EXTEND SHEATHING TO BOTTOM OF RM AT MAIN FLOOR AND PROVIDE EDGE FASTENING AS NOTED IN TABLE.
- PLATE WASHERS IN 2x4 STUD WALLS, AND ALL SINGLE SIDED SHEAR WALLS, SHALL BE 3"x3"x0.229". THE EDGE OF PLATE WASHERS SHALL BE LOCATED WITHIN 1/2" OF THE EDGE OF BOTTOM PLATE ON THE SIDE WITH SHEATHING.
- CAST ANCHORS A MINIMUM OF 7" INTO CONCRETE. INSTALL ADDITIONAL ANCHOR BOLTS AT EACH SIDE OF PLATE BREAKS AND PENETRATIONS EXCEEDING THE "NO REINFORCING" HOLE SIZE PER 2/56.1.

NOTE THAT ALL FRAMING SHALL BE DOUG-FIR PER NOTE 21 ON S1.1



1 SHEARWALL SECTION AND SCHEDULE
 S6.6 1" = 1'-0"



7 STRAPPED SHEARWALL DETAIL
 S6.6 N.T.S.

EROSION CONTROL NOTES
SHEET C1.2

EROSION CONTROL DETAILS
SHEET C1.2

SOIL AMENDMENT REQUIRED
COMPOST AMENDED SOIL REQUIRED ON ALL LANDSCAPED AREAS AFTER CONSTRUCTION. SEE DETAIL ON C3.5.

MAX TEMP SLOPES
1:1 TEMP SLOPE (NO SEEPAGE)
2:1 TEMP SLOPE (WITH SEEPAGE)

A CLEARING LIMIT NOTE

ALL SELECTIVE CLEARING, TRENCHING AND OTHER WORK WITHIN THE DRIPLINES OF SIGNIFICANT TREES SHALL BE BY LOW IMPACT HAND METHODS ONLY AND WORK SHALL BE ADJUSTED AS POSSIBLE TO MINIMIZE ANY DISTURBANCE TO THE SIGNIFICANT AND RETAINED TREES AND PROTECTED UNDERSTORY. CONSTRUCTION MATERIALS AND VEHICLES SHALL NOT BE STORED OUTSIDE THE CLEARING LIMITS.

B TREE DRIPLINE NOTE

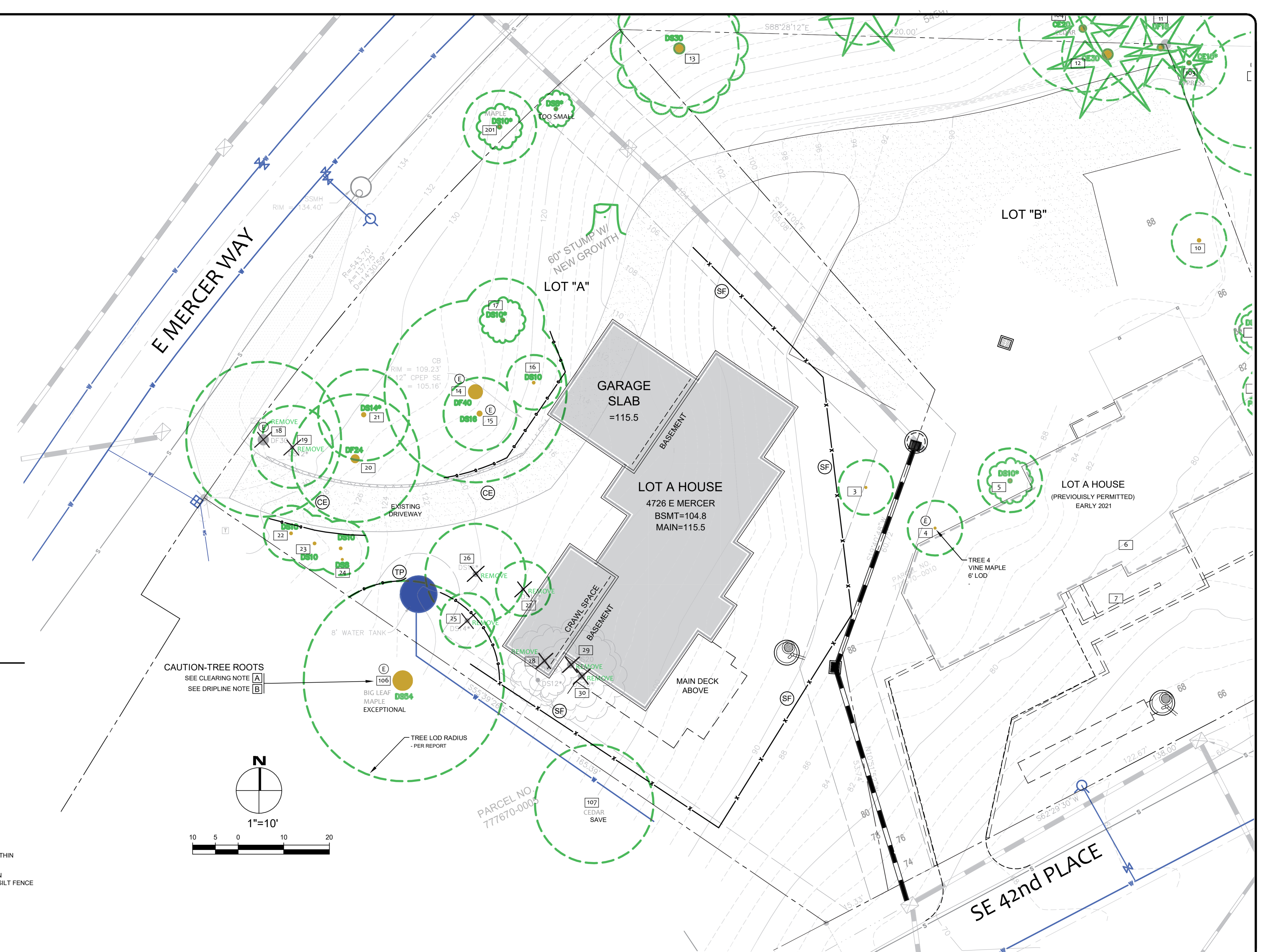
WORK WITHIN THE DRIPLINE OF TREES TO BE SAVED MUST BE UNDER THE DIRECTION OF A CERTIFIED ARBORIST (TYP.) SEE ALSO CLEARING LIMIT NOTE ON THIS SHEET.

EROSION CONTROL LEGEND

- LIMITS OF DISTURBANCE
- FILTER FABRIC FENCE (SILT FENCE) (SF)
 - STABILIZED CONSTRUCTION ENTRANCE (CE)
 - CATCH BASIN INLET PROTECTION (IP)
 - INTERCEPTOR SWALE SEE COR DWG 504 (IS)
 - TYPE A TEMPORARY SWALE
 - TREE PROTECTION FENCING (TP)
 - STOCKPILE (ST)
 - STRAW WATTLES (SW) USE AS NEEDED
 - PLASTIC COVERING (PC) COVER EXPOSED AREAS WITHIN MERCER ISLAND TIME LIMIT
 - COMPOST SOCK (CS) SEDIMENT CONTROL OPTION RECOMMENDED IN LIEU OF SILT FENCE

SOIL INSPECTION REQUIRED BY ENGINEER

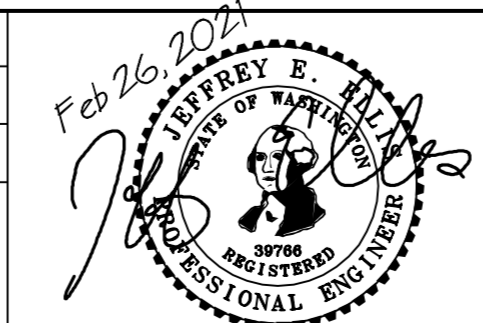
A POST CONSTRUCTION INSPECTION & CERTIFICATION OF AMENDED SOILS IS REQUIRED BY A LICENSED CIVIL ENGINEER. THIS IS REQUIRED BEFORE FINAL SIGN-OFF BY CITY.



NO.	DATE	BY	REVISIONS

APPLICANT:
MILLAD HOMES, LLC

DATE: Feb 26, 2021
JOB#: 1766
DRAFTED: SS DESIGN: DE
DIGITAL SIGNATURE



CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

EROSION CONTROL PLAN
WEST RESIDENCE
4276 EAST MERCER WAY, MERCER ISLAND, WA 98040

DRAWING NO:
C1.0
APN 777670-0010

SILT FENCE DETAIL **DOE**

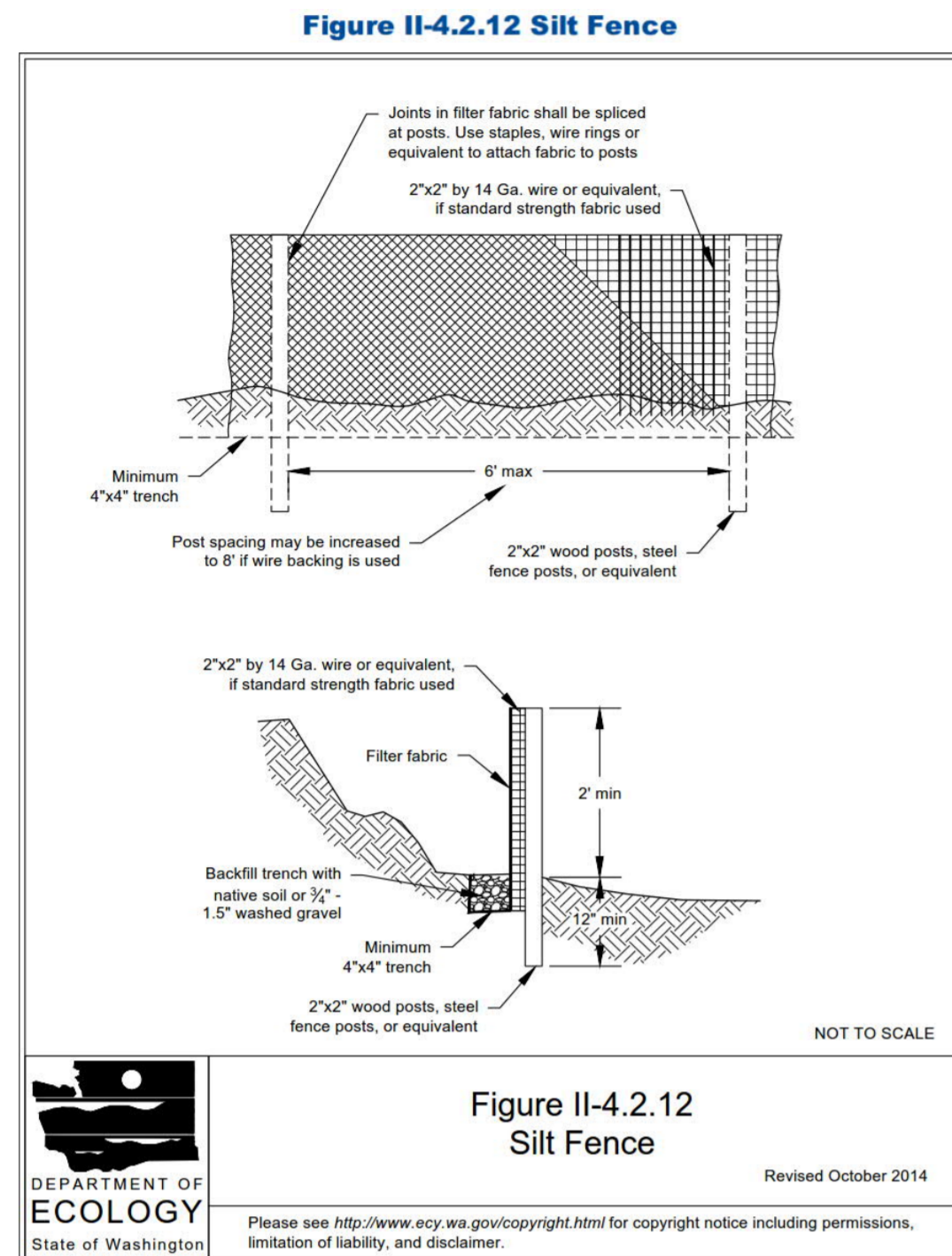


Figure II-4.2.12 Silt Fence

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 Volume II - Chapter 4 - Page 369

CONSTRUCTION ENTRANCE **DOE**

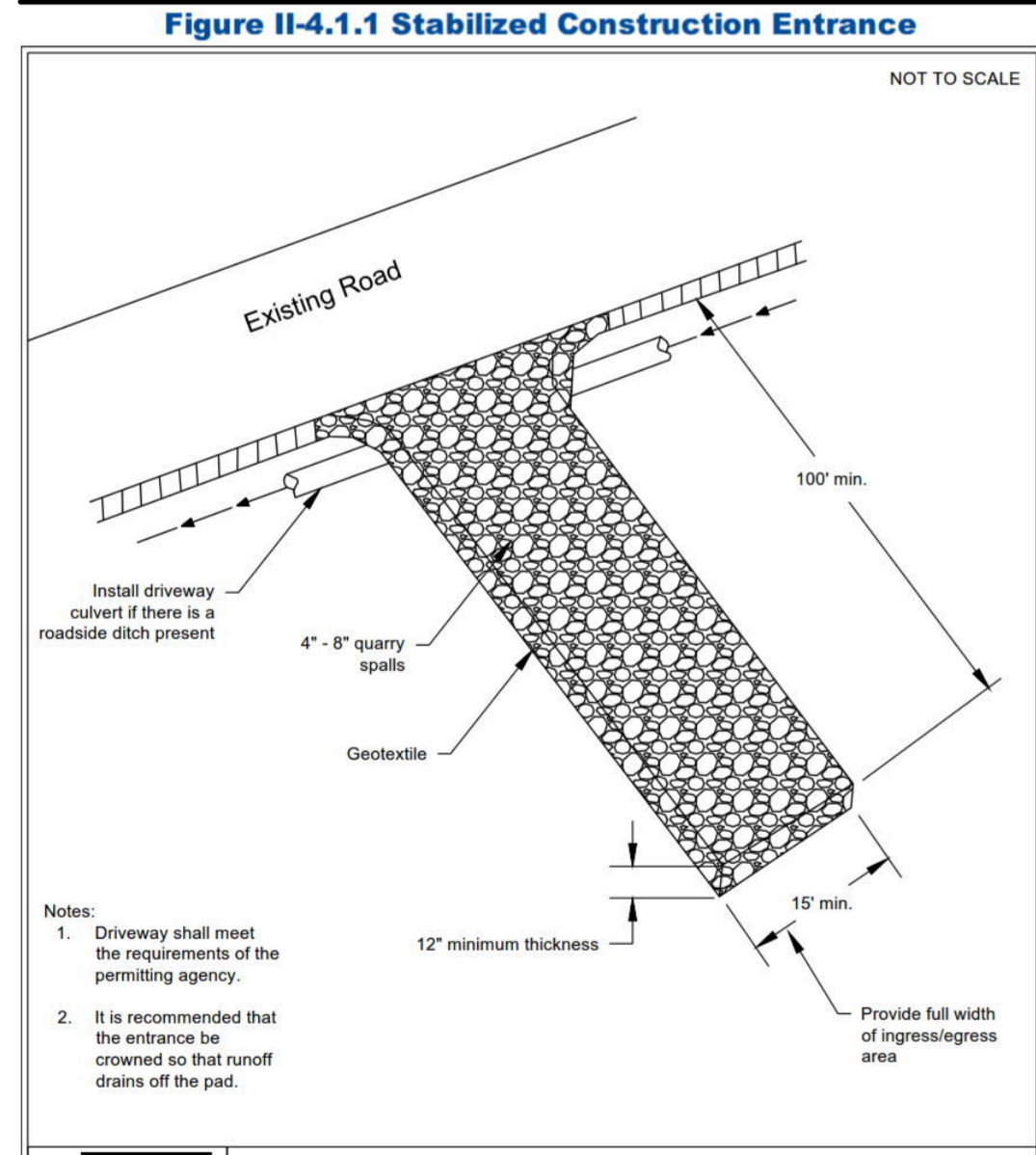


Figure II-4.1.1 Stabilized Construction Entrance

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RECOMMENDED CONSTRUCTION SEQUENCE

A DETAILED CONSTRUCTION SEQUENCE IS NEEDED TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE APPLIED AT THE APPROPRIATE TIMES. A RECOMMENDED CONSTRUCTION SEQUENCE IS PROVIDED BELOW:

- HOLD AN ONSITE PRE-CONSTRUCTION MEETING.
- POST SIGN WITH NAME AND PHONE NUMBER OF ESC SUPERVISOR (MAY BE CONSOLIDATED WITH THE REQUIRED NOTICE OF CONSTRUCTION SIGN).
- FLAG OR FENCE CLEARING LIMITS.
- INSTALL CATCH BASIN PROTECTION, IF REQUIRED.
- GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).
- INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
- CONSTRUCT SEDIMENT PONDS AND TRAPS.
- GRADE AND STABILIZE CONSTRUCTION ROADS.
- CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
- MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OF MERCER ISLAND STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
- RELOCATE SURFACE WATER CONTROLS OR TESC MEASURES, OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE TESC IS ALWAYS IN ACCORDANCE WITH CITY OF MERCER ISLAND TESC REQUIREMENTS.
- COVER ALL AREAS THAT WILL BE UN-WORKED FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON (MAY 1 TO SEPT 30) OR TWO DAYS DURING THE WET SEASON (OCT 1 TO APRIL 30) WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, OR EQUIVALENT.
- STABILIZE ALL AREAS WITHIN SEVEN DAYS OF REACHING FINAL GRADE.
- SEED, SOD, STABILIZE, OR COVER ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.
- UPON COMPLETION OF THE PROJECT, STABILIZE ALL DISTURBED AREAS AND REMOVE BMS IF APPROPRIATE.

TREE INVENTORY TABLE FROM ARBORIST

Proposed Action	Tree No.	DBH	QMD	Category	>24" DBH	Value	Species	Diameter	Health	Structure	Comments on Condition	Tree Type	LOD Radius
RETAIN	1	12, 24"	26"	Large	Yes		Lawson cypress	16'	1	2	Asymmetric	E	13'
RETAIN	2	25"	25"	Large	Yes		Lawson cypress	15'	1	2	Asymmetric	E	13'
RETAIN	3	5, 6"	7"	Small			Vine maple	8'	1	2	Growth obstruction, asymmetric	D	6'
RETAIN	4	4.5, 4.5, 5"	8"	Exceptional			Vine maple	8'	1	2	Growth obstruction, asymmetric	D	6'
RETAIN	5	6, 7, 7, 7"	13"	Significant			Japanese maple	14'	1	2	Growth obstruction	D	7'
RETAIN	6	12"	12"	Significant			Colorado blue spruce	11'	1	1		E	6'
RETAIN	7	17"	17"	Significant			Colorado blue spruce	12'	1	2	Asymmetric	E	8'
RETAIN	8	10"	10"	Significant			Scots pine	12'	1	1		C	6'
RETAIN	9	9, 10"	13"	Significant			Portugal laurel	11'	1	2	Double leader	BE	6'
RETAIN	10	8, 8, 8"	13"	Significant			Thread cypress	12'	1	2	Multiple leader	C	6'
RETAIN	11	20"	20"	Dead	NO		Douglas-fir	0'	3	3	Dead, topped at 40 feet	E	10'
RETAIN	12	21"	21"	Significant			Western red-cedar	16'	1	2	Asymmetric, perched on shoulder	C	10'
RETAIN	13	26"	26"	Large	Yes	NO	Bigleaf maple	20'	3	3	hy, Kretschmaria, decay	D	13'
RETAIN	14	42"	42"	Exceptional	Yes		Douglas-fir	20'	1	1		E	20'
RETAIN	15	15"	15"	Exceptional			Pacific madrone	12'	2	2	Lean, diseased, asymmetric	BE	8'
RETAIN	16	9"	9"	Hazardous	NO		Pacific madrone	8'	3	3	Lean, diseased, minuscule canopy, ivy	BE	6'
RETAIN	17	6, 8, 8, 9, 10"	18"	Significant			Bigleaf maple	20'	1	2	Stumpsprout	D	9'
Remove	18	34"	34"	Exceptional	Yes		Douglas-fir	20'	1	2	Previously topped, hazard	E	17'

Proposed Action	Tree No.	DBH	QMD	Category	>24" DBH	Value	Species	Diameter	Health	Structure	Comments on Condition	Tree Type	LOD Radius
Remove	19	13, 14"	19"	Significant			Bigleaf maple	18'	2	2	Suppressed, asymmetric, double leader	D	9'
RETAIN	20	29"	29"	Large	Yes		Douglas-fir	20'	1	2	Sweep in trunk	E	14'
RETAIN	21	9, 11, 16"	21"	Significant			Bigleaf maple	20'	1	2	Multiple leader	D	10'
RETAIN	22	12"	12"	Significant			European birch	16'	1	2	Lean west toward street, slender	D	6'
RETAIN	23	12"	12"	Significant			Bigleaf maple	16'	1	2	Asymmetric	D	6'
RETAIN	24	13"	13"	Significant			Bigleaf maple	16'	1	2	Slender	D	6'
Remove	25	10, 10, 13"	19"	Significant	NO		Bigleaf maple	16'	2	3	Suppressed, stumpsprout	D	9'
Remove	26	16, 17"	23"	Significant	NO		Bigleaf maple	20'	3	3	Decline, chlorotic, slender, stumpsprout	D	11'
Remove	27	10, 10"	14"	Significant	NO		Bigleaf maple	20'	2	3	Suppressed, asymmetric, stumpsprout	D	6'
Remove	28	9, 14, 15"	22"	Significant	NO		Bigleaf maple	6'	3	3	Decline, suppressed, stumpsprout, decay	D	11'
Remove	29	19"	19"	Significant	NO		Bigleaf maple	20'	1	3	Suppressed, asymmetric, over-extended branches	D	9'
Remove	30	13, 19, 35"	41"	Hazardous	NO		Bigleaf maple	25'	1	3	Crack, decay	D	20'
RETAIN	31	60"	60"	Hazardous	NO		Bigleaf maple	20'	3	3	Topped at 8 feet, multiple water sprout, Kretschmaria	D	16'
OFFSITE	101	38"	38"	Exceptional	Yes		Giant redwood	18'			Topped at 40 feet	E	16'
OFFSITE	102	38"	38"	Exceptional	Yes		Giant redwood	18'			Topped at 40 feet	E	16'
OFFSITE	103	9, 13"	15"	Significant			Lawson cypress					E	8'
OFFSITE	104	12, 18, 20"	29"	Large	Yes		Western red-cedar	16'			Multiple leader	C	14'

Proposed Action	Tree No.	DBH	QMD	Category	>24" DBH	Value	Species	Diameter	Health	Structure	Comments on Condition	Tree Type	LOD Radius
OFFSITE	105	15"	15"	Significant			Western red-cedar	16'				C	8'
OFFSITE	106	54"	54"	Exceptional	Yes		Bigleaf maple	40'			Double leader, chlorotic, declining foliage, ivy	D	22'
OFFSITE	107	26"	26"	Large	Yes		Western red-cedar	18'				C	13'
ROW	201	11, 11"	15"	Significant			Bigleaf maple	20'	1	2	Double leader	D	8'

EROSION CONTROL NOTES

- D.8.2 STANDARD ESC PLAN NOTES
 THE STANDARD ESC PLAN NOTES MUST BE INCLUDED ON ALL ESC PLANS. AT THE APPLICANT'S DISCRETION, NOTES THAT IN NO WAY APPLY TO THE PROJECT MAY BE OMITTED; HOWEVER, THE REMAINING NOTES MUST NOT BE RENUMBERED. FOR EXAMPLE, IF ESC NOTE #3 WERE OMITTED, THE REMAINING NOTES SHOULD BE NUMBERED 1, 2, 4, 5, 6, ETC.
- APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
 - THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
 - THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION (SWDM APPENDIX D). DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
 - STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.
 - THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
 - THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.) AS DIRECTED BY CITY OF MERCER ISLAND.
 - THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.
 - ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO CONSECUTIVE DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
 - ANY AREA NEEDING ESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
 - THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH DURING THE DRY SEASON, BI-MONTHLY DURING THE WET SEASON, OR WITHIN TWENTY FOUR (24) HOURS FOLLOWING A STORM EVENT.
 - AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
 - ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE ROUGH GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.
 - COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL.
 - PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON.

CITY NOTES

- ANY CHANGES TO THE APPROVED PLANS REQUIRES CITY APPROVAL THROUGH A REVISION.
- APPLICANT IS RESPONSIBLE FOR ANY DAMAGES TO UNDERGROUND UTILITIES CAUSED FROM THIS CONSTRUCTION.
- CATCH BASIN FILTERS SHOULD BE PROVIDED FOR ALL STORM DRAIN CATCH BASINS/INLETS DOWNSLOPE AND WITHIN 500 FEET OF THE CONSTRUCTION AREA. CATCH BASIN FILTERS SHOULD BE DESIGNED BY THE MANUFACTURER FOR USE AT CONSTRUCTION SITES AND APPROVED BY THE CITY INSPECTOR. CATCH BASIN FILTERS SHOULD BE INSPECTED FREQUENTLY, ESPECIALLY AFTER STORM EVENTS. IF THE FILTER BECOMES CLOGGED, IT SHOULD BE CLEANED OR REPLACED.
- CONTRACTORS SHALL VERIFY LOCATIONS AND DEPTHS OF UTILITIES.
- AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, CALL "ONE CALL" AT 1.800.424.5555
- DO NOT BACKFILL WITH NATIVE MATERIAL ON PUBLIC RIGHT-OF-WAY. ALL MATERIAL MUST BE IMPORTED
- EROSION CONTROL: ALL "LAND DISTURBING ACTIVITY" IS SUBJECT TO PROVISIONS OF MERCER ISLAND ORDINANCE 95C-118 "STORM WATER MANAGEMENT." SPECIFIC ITEMS TO BE FOLLOWED AT YOUR SITE:
- PROTECT ADJACENT PROPERTIES FROM ANY INCREASED RUNOFF OR SEDIMENTATION DUE TO THE CONSTRUCTION PROJECT THROUGH THE USE OF APPROPRIATE "BEST MANAGEMENT PRACTICES" (BMP) EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO, SEDIMENT TRAPS, SEDIMENT PONS, FILTER FABRIC FENCES, VEGETATIVE BUFFER STRIPS OR BIOENGINEERED SWALES.
- CONSTRUCTION ACCESS TO THE SITE SHOULD BE LIMITED TO ONE ROUTE. STABILIZE ENTRANCE WITH QUARRY SPALLS TO PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING THE STORM DRAINS.
- PREVENT SEDIMENT, CONSTRUCTION DEBRIS, PAINTS, SOLVENTS, ETC., OR OTHER TYPES OF POLLUTION FROM ENTERING PUBLIC STORM DRAINS. KEEP ALL POLLUTION ON YOUR SITE.
- ALL EXPOSED SOILS SHALL REMAIN DENUDED FOR NO LONGER THAN SEVEN (7) DAYS AND SHALL BE STABILIZED WITH MULCH, HAY, OR THE APPROPRIATE GROUND COVER. ALL EXPOSED SOILS SHALL BE COVERED IMMEDIATELY DURING ANY RAIN EVENT.
- INSTALLATION OF CONCRETE DRIVEWAYS, TREES, SHRUBS, IRRIGATION, BOULDERS, BERMS, WALLS, GATES, AND OTHER IMPROVEMENTS ARE NOT ALLOWED IN THE PUBLIC RIGHT-OF-WAY WITHOUT PRIOR APPROVAL, AND AN ENCROACHMENT AGREEMENT AND RIGHT OF WAY PERMIT FROM THE SENIOR DEVELOPMENT ENGINEER.
- OWNER SHALL CONTROL DISCHARGE OF SURFACE DRAINAGE RUNOFF FROM EXISTING AND NEW IMPERVIOUS AREAS IN A RESPONSIBLE MANNER. CONSTRUCTION OF NEW GUTTERS AND DOWNSPOUTS, DRY WELLS, LEVEL SPREADERS OR DOWNSTREAM CONVEYANCE PIPE MAY BE NECESSARY TO MINIMIZE DRAINAGE IMPACT TO YOUR NEIGHBORS. CONSTRUCTION OF MINIMUM DRAINAGE IMPROVEMENTS SHOWN OR CALLED OUT ON THIS PLAN DOES NOT IMPLY RELIEF FROM CIVIL LIABILITY FOR YOUR DOWNSTREAM DRAINAGE.
- POT HOLING THE PUBLIC UTILITIES IS REQUIRED PRIOR TO ANY GRADING ACTIVITIES LESS THAN 6" OVER THE PUBLIC MAINS (WATER, SEWER AND STORM SYSTEMS). IF THERE IS A CONFLICT, THE APPLICANT IS REQUIRED TO SUBMIT A REVISION FOR APPROVAL PRIOR TO ANY GRADING ACTIVITIES OVER THE PUBLIC MAINS.
- REMEMBER: EROSION CONTROL IS YOUR FIRST INSPECTION.
- ROOF DRAINS MUST BE CONNECTED TO THE STORM DRAIN SYSTEM AND INSPECTED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO ANY BACKFILLING OF PIPE.
- SILENT FENCE: CLEAN AND PROVIDE REGULAR MAINTENANCE OF THE SILT FENCE. THE FENCE IS TO REMAIN VERTICAL AND IS TO FUNCTION PROPERLY THROUGHOUT THE TERM OF THE PROJECT.
- WORK IN PUBLIC RIGHT OF WAY REQUIRES A RIGHT-OF-WAY USE PERMIT.
- REFER TO WATER SERVICE PERMIT FOR ACTUAL LOCATION OF NEW WATER METER AND SERVICE LINE DETERMINED BY MERCER ISLAND WATER DEPARTMENT.
- THE TV INSPECTION OF THE EXISTING SIDE SEWER TO THE CITY SEWER MAIN IS REQUIRED. IF THE RESULT OF THE TV INSPECTION IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, THE REPLACEMENT OF THE EXISTING SIDE SEWER IS REQUIRED. ALTERNATELY, A PRESSURE TEST OF THE SIDE SEWER, FROM SEWER MAIN TO POINT OF CONNECTION, MAY BE SUBSTITUTED FOR THE VIDEO INSPECTION.
- NEWLY INSTALLED SIDE SEWER REQUIRES A 4 P.S.I. AIR TEST OR PROVIDE 10' OF HYDROSTATIC HEAD TEST.
- POT HOLING THE PUBLIC UTILITIES IS REQUIRED PRIOR TO ANY GRADING ACTIVITIES LESS THAN 6" OVER THE PUBLIC MAINS (WATER, SEWER AND STORM SYSTEMS). IF THERE IS A CONFLICT, THE APPLICANT IS REQUIRED TO SUBMIT A REVISION FOR APPROVAL PRIOR TO ANY GRADING ACTIVITIES OVER THE PUBLIC MAINS.
- THE LIMITS AND EXTENDS OF THE PAVEMENT IN THE PUBLIC RIGHT OF WAY SHALL BE DETERMINED BY THE CITY ENGINEER PRIOR TO FINALIZE THE PROJECT.

DENUDED AREAS REQUIREMENTS

APRIL 1 TO SEPT 30
 ALL DENUDED AREAS MUST BE STABILIZED WITHIN 7 DAYS OF CONSTRUCTION. PLEASE READ ALL CITY TESC NOTES ON SHEET C.1.2.

OCT 1 TO MARCH 31
 ALL DENUDED AREAS MUST BE STABILIZED WITHIN 2 DAYS OF GRADING. IF AN EROSION PROBLEM ALREADY EXISTS ON THE SITE, OTHER COVER PROTECTION AND EROSION CONTROL WILL BE REQUIRED.

NO.	DATE	BY	REVISIONS

APPLICANT: MILLAD HOMES, LLC

DATE: Feb 25, 2021
 JOB#: 1766
 DRAFTED: SS DESIGN: DE
 DIGITAL SIGNATURE

CIVIL ENGINEERING SOLUTIONS

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TESC & CITY NOTES
TESC DETAILS
 WEST RESIDENCE
 42xx EAST MERCER WAY, MERCER ISLAND, WA 98040

DRAWING NO: **C1.2**
 APN 777670-0010

SANITARY SEWER IMPROVEMENTS

- ① -
- ② - 6" SDR 35 PVC SANITARY SEWER(SS) @ MIN 1.0 %.
- ③ -
- ④ -
- ⑦ -

WATER IMPROVEMENTS

- ⑩ - NEW SF RESIDENTIAL WATER SERVICE & METER PIT. CONFIRM REQUIRED SIZE WITH BUILDING PERMIT REVIEW. INSTALL PER MERCER ISLAND DETAIL W-13, W-14, OR W-14A DEPENDING ON SIZE REQUIREMENT.
- ⑪ - MIN 1.5" 250 PSI PRIVATE HDPE WATER (ASTM D2239) FROM METER TO HOUSE. RECOMMENDED DEPTH=36". COORDINATE HOUSE ENTRY WITH BUILDER/OWNER.
- ⑫ -
- ⑭ -

STORM DRAIN

- ⑳ 4" STORM DRAIN (3034 PVC) @ MIN 2 % GRADE
- ㉑ 4" FOUNDATION DRAIN (3034 PVC) @ MIN 1 % GRADE
- ㉒ 6" STORM DRAIN (3034 PVC) @ MIN 2 % GRADE
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STORM DRAIN STRUCTURES

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STORM BMP'S

COMPOSTED AMENDED SOIL IS REQUIRED FOR DISTURBED AREAS. SEE DETAIL ON C3.5.
 STORM BMP'S ARE NOT PROPOSED FOR PROJECT. SEE STORM REPORT.
 DETENTION IS PROPOSED PER THIS BUILDING PERMIT.

SURVEYOR

TOPOGRAPHIC SURVEY BY:
 SITE SURVEYING, INC.
 21923 NE 11th STREET
 SAMMAMISH, WA 98074
 PHONE 425.298.4412

VERTICAL DATUM

NAVD 88 PER SURVEY

LEGAL DESCRIPTION

PENDING

SOILS

SITE IS IN AN AREA MAPPED "INFILTRATING LID FACILITIES ARE NOT PERMITTED" ON THE "LOW IMPACT DEVELOPMENT INFILTRATION FEASIBILITY ON MERCER ISLAND" MAP. INFILTRATION IS NOT PROPOSED.

SOIL AMENDMENT REQUIRED

COMPOST AMENDED SOIL REQUIRED ON ALL LANDSCAPED AREAS AFTER CONSTRUCTION. SEE DETAIL ON C3.5.

SOIL INSPECTION REQUIRED

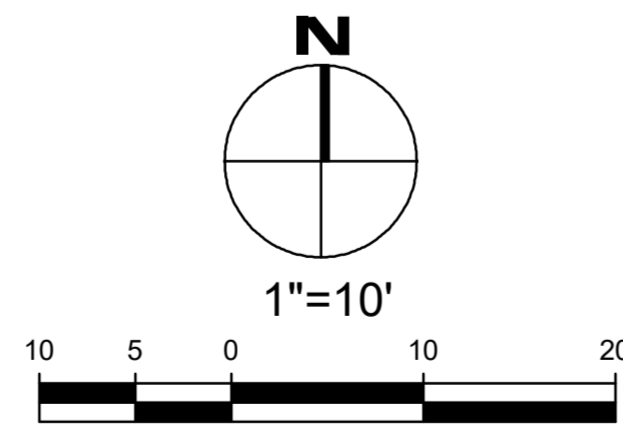
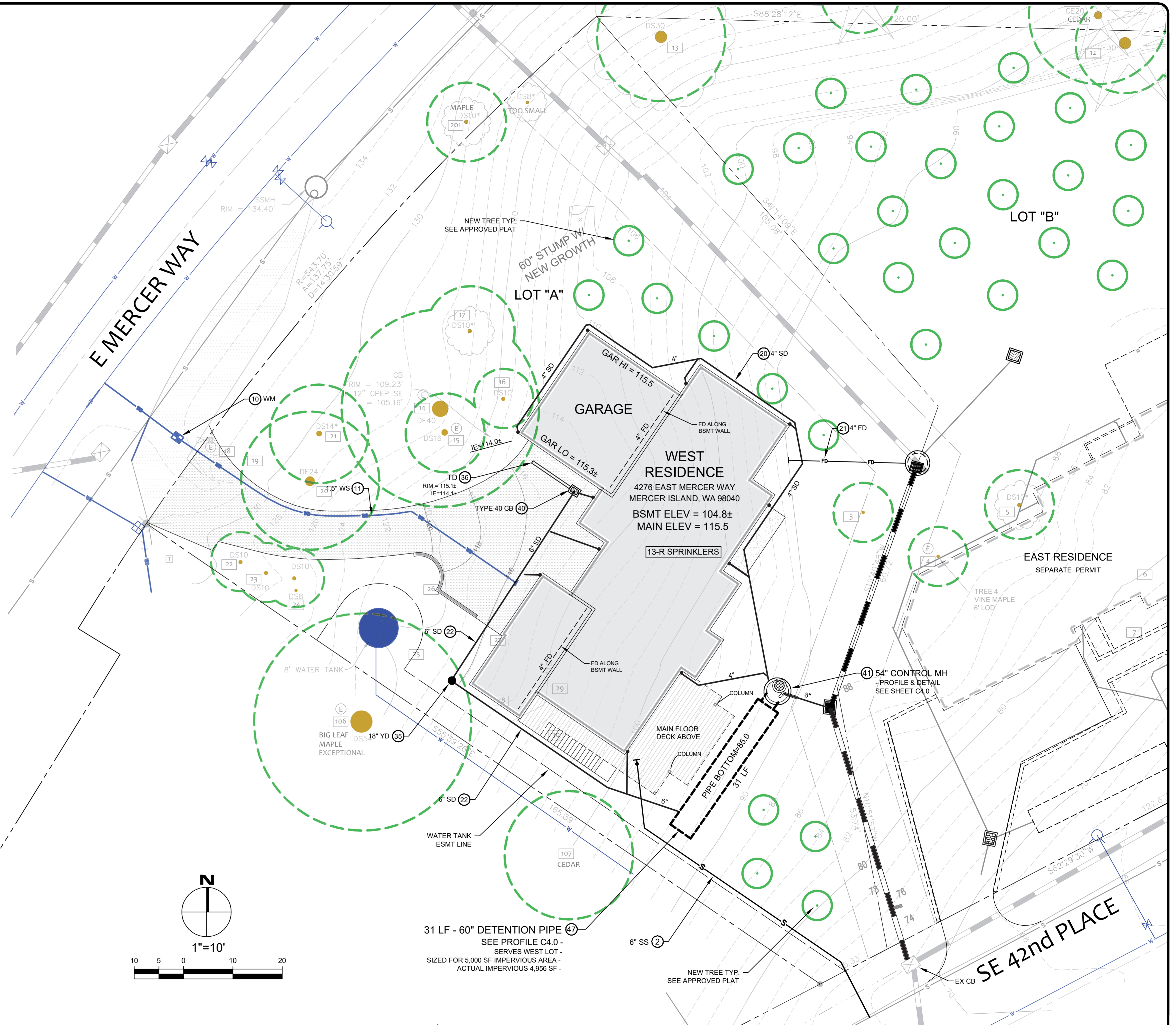
A POST CONSTRUCTION INSPECTION & CERTIFICATION OF AMENDED SOILS IS REQUIRED BY A LICENSED CIVIL ENGINEER. THIS IS REQUIRED BEFORE FINAL SIGN-OFF BY CITY.

TREE PLANTING

SEE C4.0

TREE REMOVALS

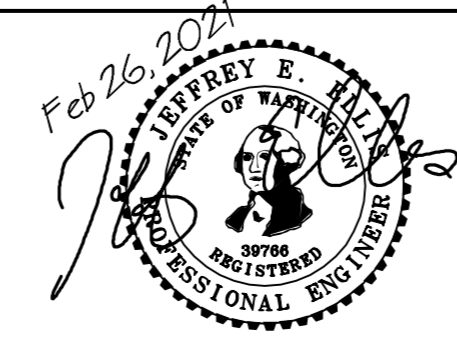
SEE C1.0



NO.	DATE	BY	REVISIONS

APPLICANT: MILLAD HOMES, LLC	DATE: Feb 26, 2021
	JOB#: 1766
	DRAFTED: DE DESIGN: DE
	DIGITAL SIGNATURE

DATE: Feb 26, 2021
 JOB#: 1766
 DRAFTED: DE DESIGN: DE
 DIGITAL SIGNATURE



CIVIL ENGINEERING SOLUTIONS
 102 NW CANAL STREET SEATTLE, WA 98107
 PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

DRAINAGE/CIVIL/TREE PLAN
 WEST RESIDENCE
 4276 EAST MERCER WAY, MERCER ISLAND, WA 98040

DRAWING NO:
C2.0
 APN 777670-0010

STORM DRAIN INSTALLATION SPECIAL REQUIREMENTS

REF: OCTOBER 18, 2019 MEMORANDUM FROM GEO Group NW

Conclusions and Recommendations – New Stormwater Piping

Significant portions of the existing and proposed stormwater piping are located at steep slope areas. We recommend that where piping is removed that temporary shoring is installed as necessary for safety and to mitigate trench collapse risks. From our point of view it is not necessary to remove the existing underground piping at all steep slope areas provided that the upstream end of the existing piping is disconnected from the working drainage system and capped. The downstream section of piping may then be abandoned in place. Of course, where existing piping intercepts the new development then the pipe must be removed.

For the installation of new stormwater piping through the steep slope areas we recommend that the pipe consist of heat-welded HDPE pipe and that the pipe is anchored at the top of each section which traverses steep slopes. There are various methods for anchoring piping such as anchoring to catchbasin structures and/or constructing concrete anchor blocks which surround the pipe and derive resistance to movement by pouring neat against the existing firm soils or compacted structural fills. The designer may assume passive earth pressure of 350 pcf (equivalent fluid weight) and a coefficient of friction = 0.35 for compacted structural fill and undisturbed native site soils (“neat” pour) in contact with the pipe anchor system. We recommend that individual anchors are installed to restrain sloping pipe sections having a fall of not greater than 30-feet. Fills placed at the stormwater piping trenches located at slope areas which are steeper than 25 percent shall consist of clean crushed rock. At less steep trench areas we recommend that fills are compacted in accordance with the recommendations for structural fill noted in the geotechnical report. It is recommended that all piping is properly bedded for the selected pipe type and diameter based upon WSDOT or Mercer Island standard specifications.

SOIL AMENDMENT REQUIRED

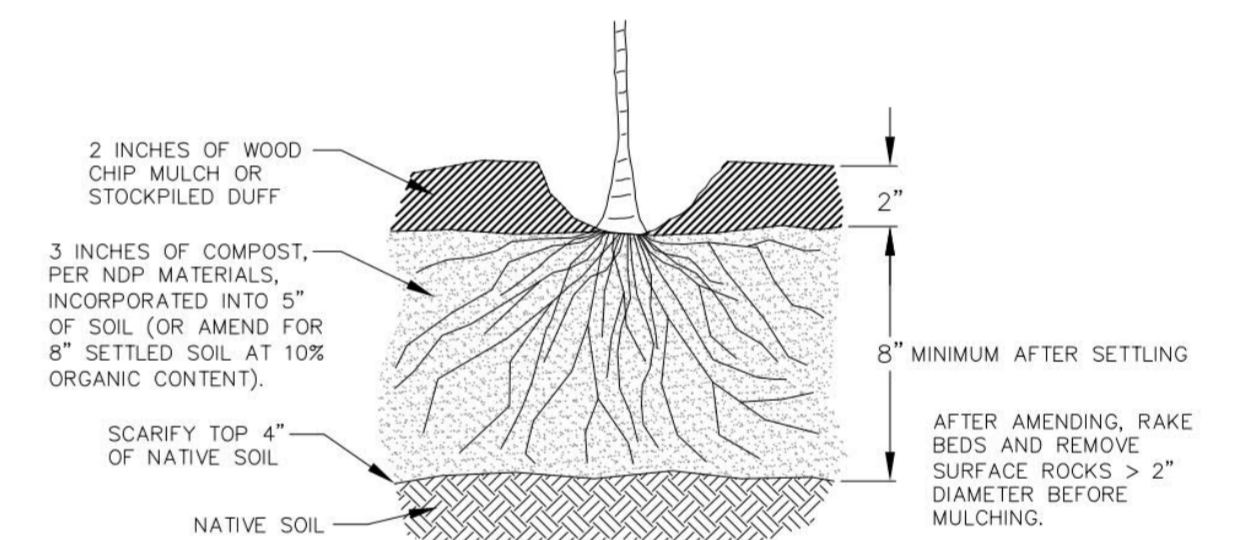
COMPOST AMENDED SOIL REQUIRED ON ALL LANDSCAPED AREAS AFTER CONSTRUCTION. SEE DETAIL ON C3.5.

SOIL INSPECTION REQUIRED BY ENGINEER

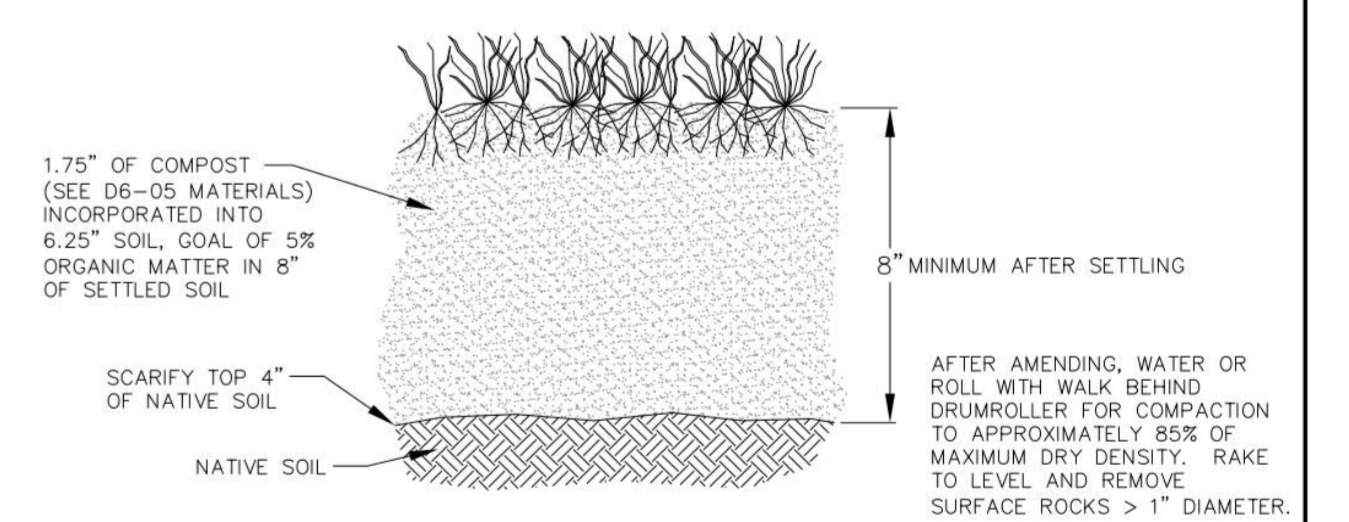
A POST CONSTRUCTION INSPECTION & CERTIFICATION OF AMENDED SOILS IS REQUIRED BY A LICENSED CIVIL ENGINEER. THIS IS REQUIRED BEFORE FINAL SIGN-OFF BY CITY.

COMPOST AMENDED SOIL SPEC

AMENDMENT FOR LANDSCAPED AREAS



SOIL AMENDMENT FOR GRASS OR TURF AREAS



NOTES:

1. AMEND SOILS PER DOE MANUAL, VOL. V, 5.3.1, BMP T5.13, (2012 OR CURRENT) OR WWW.SOILSFORMALION.ORG
2. DO NOT AMEND SOILS IN AREAS WITH UNDISTURBED SOIL AND NATIVE VEGETATION.
3. OPTIONAL ALTERNATIVE: STOCKPILE NATIVE TOPSOIL ON-SITE, AMEND IF NEEDED, AND REPLACE BEFORE PLANTING.
4. OPTIONAL ALTERNATIVE: IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET REQUIREMENTS.

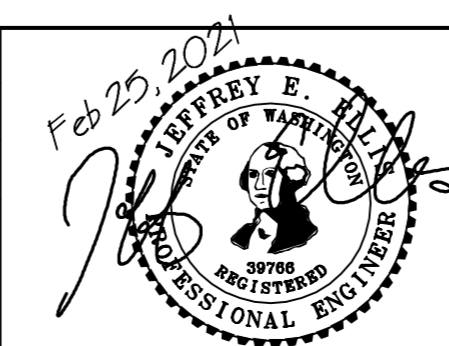
City of Bellevue STORM AND SURFACE WATER UTILITY
TITLE
AMENDED SOILS
NO. NDP-1

JANUARY 2017 NO SCALE

NO.	DATE	BY	REVISIONS

APPLICANT:
MILLAD HOMES, LLC

DATE: Feb 25, 2021
JOB# 1766
DRAFTED: SS DESIGN: SS
DIGITAL SIGNATURE



CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

STORMWATER BMP DETAILS
WEST RESIDENCE
42xx EAST MERCER WAY, MERCER ISLAND, WA 98040

DRAWING NO:
C3.5
APN 777670-0010

MERCER ISLAND DETENTION "TABLE 1"

Table 1
ON-SITE DETENTION DESIGN FOR PROJECTS BETWEEN 500 SF AND 9,500 SF NEW PLUS REPLACED IMPERVIOUS SURFACE AREA

New and Replaced Impervious Surface Area (sf)	Detention Pipe Diameter (in)	Detention Pipe Length (ft)		Lowest Orifice Diameter (in) ⁽¹⁾		Distance from Outlet Invert to Second Orifice (ft)		Second Orifice Diameter (in)	
		B soils	C soils	B soils	C soils	B soils	C soils	B soils	C soils
500 to 1,000 sf	36"	30	22	0.5	0.5	2.2	2.0	0.5	0.8
	48"	18	11	0.5	0.5	3.3	3.2	0.9	0.8
	60"	11	7	0.5	0.5	4.2	3.4	0.5	0.6
1,001 to 2,000 sf	36"	66	43	0.5	0.5	2.2	2.3	0.9	1.4
	48"	34	23	0.5	0.5	3.2	3.3	0.9	1.2
	60"	22	14	0.5	0.5	4.3	3.6	0.9	0.9
2,001 to 3,000 sf	36"	90	66	0.5	0.5	2.2	2.4	0.9	1.9
	48"	48	36	0.5	0.5	3.1	2.8	0.9	1.5
	60"	30	20	0.5	0.5	4.2	3.7	0.9	1.1
3,001 to 4,000 sf	36"	120	78	0.5	0.5	2.4	2.2	1.4	1.6
	48"	62	42	0.5	0.5	2.8	2.9	0.8	1.3
	60"	42	26	0.5	0.5	3.8	3.9	0.9	1.3
4,001 to 5,000 sf	36"	134	91	0.5	0.5	2.8	2.2	1.7	1.5
	48"	73	49	0.5	0.5	3.6	2.9	1.6	1.5
	60"	46	31	0.5	0.5	4.6	3.5	1.6	1.3
5,001 to 6,000 sf	36"	162	109	0.5	0.5	2.7	2.2	1.8	1.6
	48"	90	59	0.5	0.5	3.5	2.9	1.7	1.5
	60"	54	37	0.5	0.5	4.6	3.6	1.6	1.4
6,001 to 7,000 sf	36"	192	128	0.5	0.5	2.7	2.2	1.9	1.8
	48"	102	68	0.5	0.5	3.7	2.9	1.9	1.6
	60"	64	43	0.5	0.5	4.6	3.6	1.8	1.5
7,001 to 8,000 sf	36"	216	146	0.5	0.5	2.8	2.2	2.0	1.9
	48"	119	79	0.5	0.5	3.8	2.9	2.2	1.7
	60"	73	49	0.5	0.5	4.5	3.6	2.0	1.6
8,001 to 8,500 sf ⁽¹⁾	36"	228	155	0.5	0.5	2.8	2.2	2.1	1.9
	48"	124	84	0.5	0.5	3.7	2.9	1.9	1.8
	60"	77	53	0.5	0.5	4.6	3.6	2.0	1.6
8,501 to 9,000 sf	36"	NA ⁽¹⁾	164	0.5	0.5	NA ⁽¹⁾	2.2	NA ⁽¹⁾	1.9
	48"	NA ⁽¹⁾	89	0.5	0.5	NA ⁽¹⁾	2.9	NA ⁽¹⁾	1.9
	60"	NA ⁽¹⁾	55	0.5	0.5	NA ⁽¹⁾	3.6	NA ⁽¹⁾	1.7
9,001 to 9,500 sf ⁽²⁾	36"	NA ⁽¹⁾	174	0.5	0.5	NA ⁽¹⁾	2.2	NA ⁽¹⁾	2.1
	48"	NA ⁽¹⁾	94	0.5	0.5	NA ⁽¹⁾	2.9	NA ⁽¹⁾	2.0
	60"	NA ⁽¹⁾	58	0.5	0.5	NA ⁽¹⁾	3.7	NA ⁽¹⁾	1.7

Notes:

- Minimum Requirement #7 (Flow Control) is required when the 100-year flow frequency causes a 0.15 cubic feet per second increase (when modified in WWHM with a 15-minute timestep). Breakpoints shown in this table are based on a flat slope (0-5%). The 100-year flow frequency will need to be evaluated on a site-specific basis for projects on moderate (5-15%) or steep (> 15%) slopes.
- Soil type to be determined by geotechnical analysis or soil map.
- Sizing includes a Volume Correction Factor of 120%.
- Upper bound contributing area used for sizing.
- ⁽¹⁾ On Type B soils, new plus replaced impervious surface areas exceeding 8,500 sf trigger Minimum Requirement #7 (Flow Control)
- ⁽²⁾ On Type C soils, new plus replaced impervious surface areas exceeding 9,500 sf trigger Minimum Requirement #7 (Flow Control)
- ⁽³⁾ Minimum orifice diameter = 0.5 inches

ft = feet
in = inch
sf = square feet

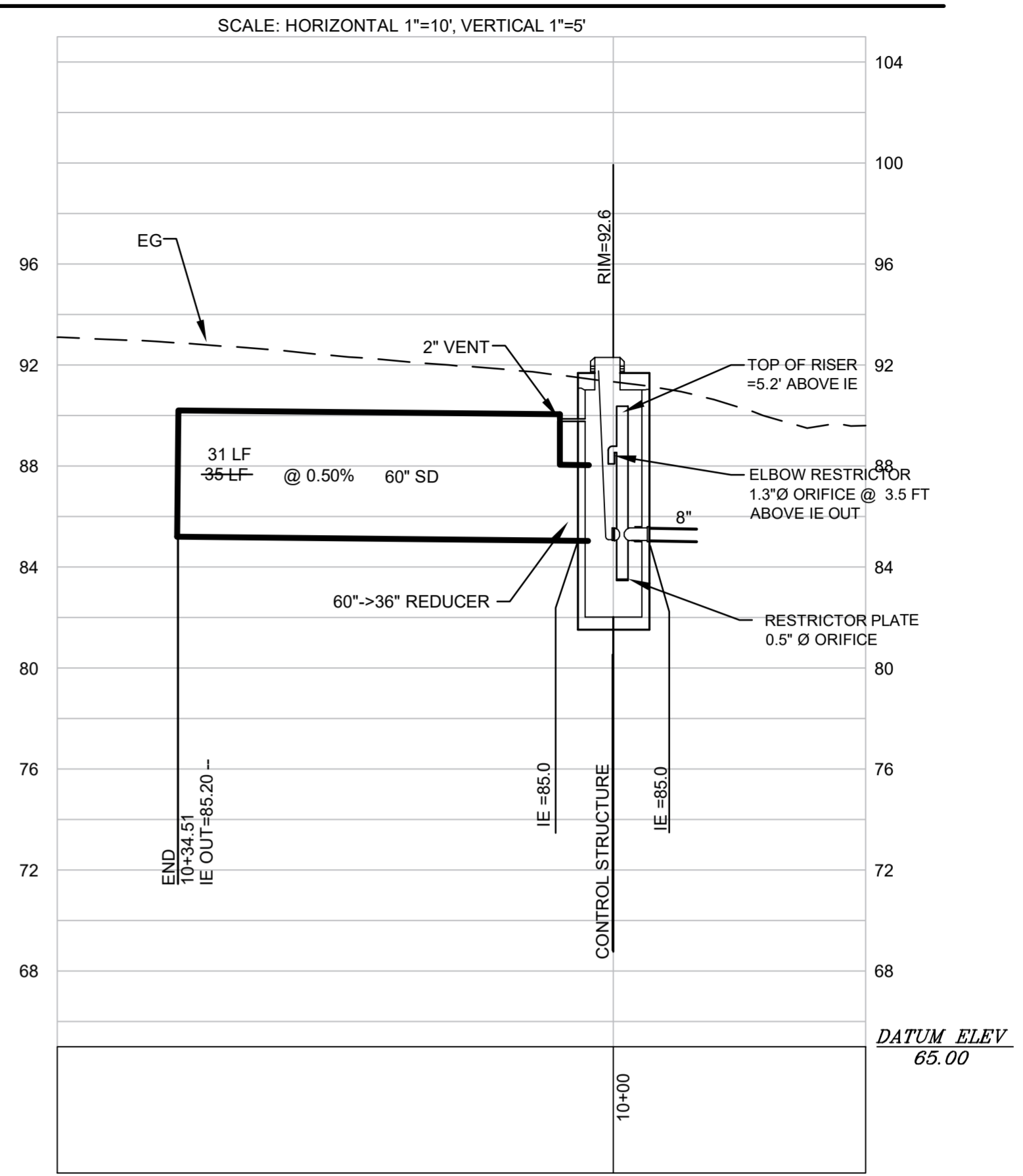
Basis of Sizing Assumptions:

- Sized per MR#5 in the Stormwater Management Manual for Puget Sound Basin (1992 Ecology Manual)
- SBUH, Type 1A, 24-hour hydrograph
- 2-year, 24-hour storm = 2 in; 10-year, 24-hour storm = 3 in; 100-year, 24-hour storm = 4 in
- Predeveloped = second growth forest (CN = 72 for Type B soils, CN = 81 for Type C soils)
- Developed = impervious (CN = 98)
- 0.5 foot of sediment storage in detention pipe
- Overland slope = 5%

IMPERVIOUS TABLE

Impervious Area Spreadsheet	
West Residence - 42xx East Mercer Way, Mercer Island, WA 98040 - CES #1766-W	
Gross Site area	16,549 sf
	0.380 acres
Existing Impervious Area to be demolished	
Ex roof, rocky	740 sf
Ex Driveway, on-site	1,604 sf
total existing, to be demolished =	2,344 sf
Proposed Impervious Area (on-site) (new + replaced)	
Roof	3,583 sf
Exposed driveway, exposed, on-site	1,373 sf
total on-site (new + replaced) proposed =	4,956 sf
total replaced impervious =	2,344 sf
total new impervious =	2,612 sf
total new + replaced impervious =	4,956 sf
total proposed lawn/landscape =	11,593 sf
Proposed Impervious Area into detention pipe	
Roof	3,583 sf
Driveway, exposed, on-site	1,373 sf
Impervious area into detention pipe =	4,956 sf

DETENTION PROFILE



MERCER ISLAND DETENTION DETAIL

ATTACHMENT 1
CITY OF MERCER ISLAND
ON-SITE DETENTION SYSTEM WORKSHEET
(FOR NEW PLUS REPLACED IMPERVIOUS AREA OF 9,500 SF OR LESS)

OWNER: MILLAD ADDRESS: 42xx EAST MERCER WAY, Mercer Island, WA 98040 PREPARED BY: DUFFY ELLIS, P.E.
 PHONE: 206.930.0342
 DATE: FEB 2021

NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 4,956 DETENTION PIPE DIA (INCH): 60" DIA DETENTION PIPE LENGTH (FT): 31 LF ORIFICE #1 DIA: * INCH ELEV: *
 SOIL TYPE: Type C soil PIPE MATERIAL: CMP OR HDPE ORIFICE #2 DIA: * INCH ELEV: *

*SEE TABLE 1, THIS SHEET

CONTROL STRUCTURE NOTES:

- USE A MINIMUM OF A 5/8 IN. DIA. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
- PIPE PARTS: MIN. 6 INCH.
- METAL PARTS: CORROSION RESISTANT, NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
- FRAME AND LADDER OR STEPS OFFSET 50.
- CLEANOUT GATE IS VISIBLE FROM TOP.
- CLAMP-DOWN SPRING IS CLEAR OF RISER AND CLEANOUT GATE.
- FRAME IS CLEAR OF CURB.
- IF METAL OUTLET PIPE CONNECTS TO CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
- PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
- THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 208 AND ASTM B 275, DESIGNATION 2023A, OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B. THE LEFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE TO PREVENT GALVANIC CORROSION. IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOD AS REQUIRED.
- A NONPERFORATED RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVELING MARK IS LEVEL WHEN THE GATE IS CLOSED. THE MOUNTING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT.
- ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
- THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FT.

ON-SITE DETENTION SYSTEM NOTES:

- CALL DEVELOPMENT SERVICES (206-275-7800) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
- RESPONSIBILITY FOR OPERATION AND MAINTENANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
- PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 8.03 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING: LINED CORRUGATED POLYETHYLENE PIPE (LCPPE), ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE, AND PIPE JOINT SHEETS MANUFACTURED ACCORDING TO WSDOT AND WASH. CORRUGATED OR SPIRAL RIB ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.
- FOOTING DRAINS SHALL NOT BE CONNECTED TO THE DETENTION SYSTEM.

NO.	DATE	BY	REVISIONS

APPLICANT: MILLAD HOMES, LLC

DATE: Feb 26, 2021

JOB#: 1766

DRAFTED: SS DESIGN: SS

DIGITAL SIGNATURE

CIVIL ENGINEERING SOLUTIONS

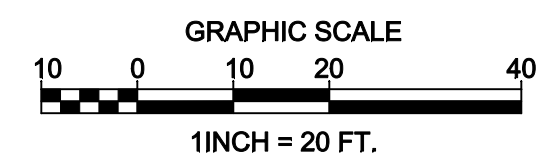
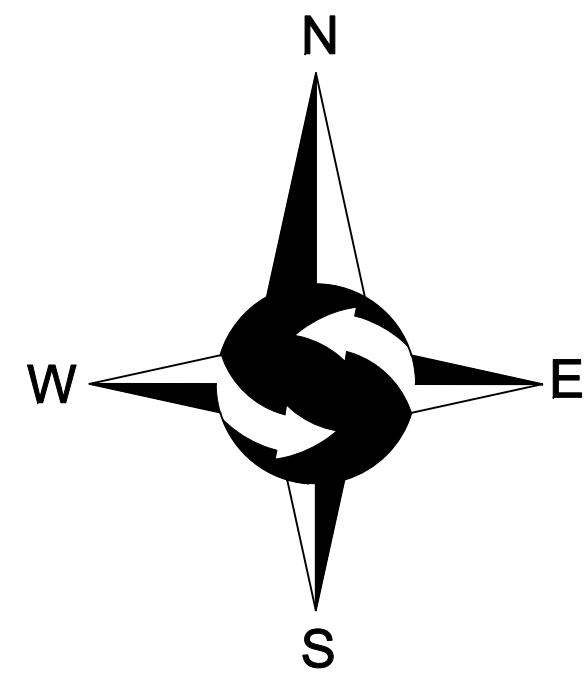
102 NW CANAL STREET SEATTLE, WA 98107

PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

DRAWING NO:
C4.0

WEST RESIDENCE
4276 EAST MERCER WAY, MERCER ISLAND, WA 98040

APN 777670-0010



LEGEND

- FOUND MONUMENT AS DESCRIBED
- FOUND REBAR AS DESCRIBED
- TACK IN LEAD FOUND
- SET 5/8" X 24" IRON ROD W/ Y YELLOW PLASTIC CAP
- ⊠ POWER METER
- ⊠ UTILITY POLE
- ⊠ GAS METER
- ⊠ SANITARY SEWER CLEANOUT
- ⊠ SANITARY SEWER MANHOLE
- ⊠ WATER VALVE
- ⊠ FIRE HYDRANT
- ⊠ WATER METER
- SS — APPROXIMATE LOCATION SANITARY SEWER LINE
- SD — APPROXIMATE LOCATION STORM DRAIN LINE
- OHP — OVERHEAD POWER
- OHU — OVERHEAD UTILITIES
- X — CHAINLINK FENCE
- □ — WOOD FENCE
- ▨ CONCRETE WALL
- ⊠ ROCKERY
- ⊠ ASPHALT SURFACE
- ⊠ CONCRETE SURFACE
- ▨ SLOPE > 40%
- CE CEDAR
- DS DECIDUOUS
- SP SPRUCE
- BI BIRCH
- PI PINE
- * INDICATES MULTI-TRUNK

LEGAL DESCRIPTION

LOT 2, SHORERIDGE ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 49 OF PLATS, PAGE 2, RECORDS OF KING COUNTY, WASHINGTON;
SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

THE PLAT OF SHORERIDGE ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 49 OF PLATS, PAGE 2, RECORDS OF KING COUNTY, WASHINGTON.

PROJECT INFORMATION

SURVEYOR: SITE SURVEYING, INC.
21923 NE 11TH ST
SAMMAMISH, WA 98074
PHONE: 425.298.4412

PROPERTY OWNER: MILLAD V LLC
4270 E MERCER WAY
MERCER ISLAND, WA 98040

TAX PARCEL NUMBER: 777870-0010

PROJECT ADDRESS: 4270 E MERCER WAY
MERCER ISLAND, WA 98040

ZONING: R-15

JURISDICTION: CITY OF MERCER ISLAND

PARCEL ACREAGE: 32,779 S.F. (± 0.753 ACRES)
AS SURVEYED

GENERAL NOTES

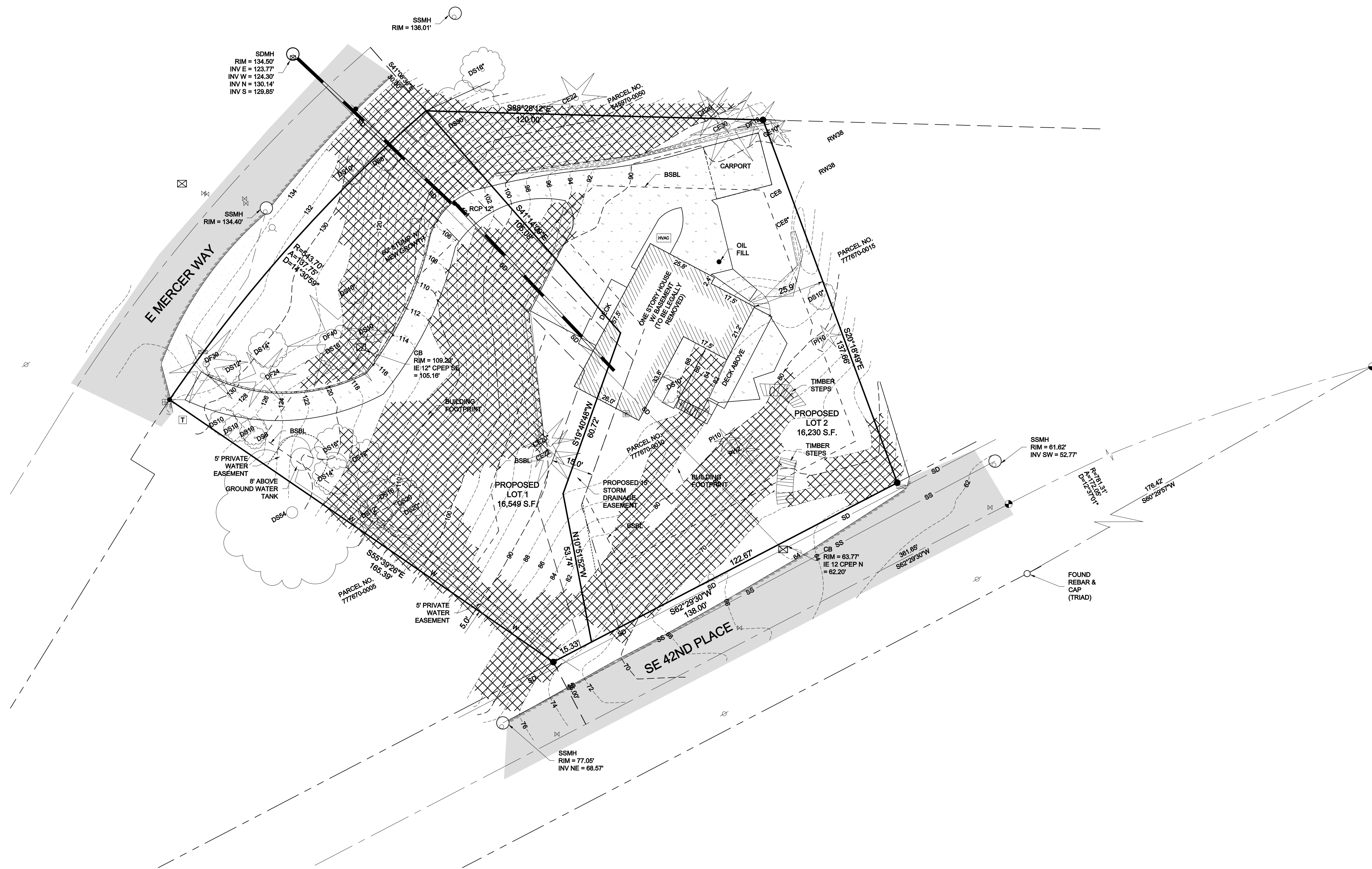
1. THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.
2. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND NIKON NIVO S.C TOTAL STATION. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.
3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN APRIL 2018 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
4. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.
5. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

VERTICAL DATUM & CONTOUR INTERVAL

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY WCCS SURVEY CONTROL DATABASE.

POINT ID NO. CASC57
MONUMENT IN CASE AT THE END OF THE CUL-DE-SAC OF 42ND PLACE SE, MERCER ISLAND.
ELEVATION: 52.72 FEET (NAVD 88).

2.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 1.0' FOR THIS PROJECT.



VICINITY MAP
NTS



SE 1/4, NE 1/4, SEC 18, TWP 24N, RNG 5E, W.M.

PRELIMINARY SHORT PLAT

MILLAD V LLC
4270 E MERCER WAY
MERCER ISLAND, WA 98040

DATE	REVISION	DRN

PROJECT NO. 18-142

DRAWN BY: EFJ
CHECKED BY: TNW
DATE: 4/16/2020

SHEET 1 OF 1