

GENERAL NOTES

GENERAL: THESE DRAWINGS ARE THE PROPERTY OF THE ARCHITECT AND MAY BE REPRODUCED ONLY WITH THE WRITTEN PERMISSION OF THE ARCHITECT. AUTHORITY BEAR THE NAME OF THE ARCHITECT. THESE DRAWINGS ARE FULLY PROTECTED BY FEDERAL AND STATE COPYRIGHT LAWS...

WANG & YANG ADU
6450 E MERCER WAY
MERCER ISLAND, WA 98040

PROJECT ADDRESS: 6450 E MERCER WAY, MERCER ISLAND, WA 98040
LEGAL DESCRIPTION & TAX PARCEL NUMBER: POR OF GL 1 IN NE 1/4 BEG ON S LN OF N 498 FT OF SD GL 1646.58 FT E OF W LN SD NE 1/4 TH S 01-25-38 W...

ZONING CLASSIFICATION: R-15

BUILDING CLASSIFICATION: OCCUPANCY (IBC Chapter 3 & 4) R-3 (SINGLE FAMILY RESIDENCE)
CONSTRUCTION TYPE (IBC 602.5) V-B
ALLOWABLE FLOOR AREA (IBC Table 506.2) Unlimited



SOILS: UNLESS A SOILS REPORT BY A SOILS ENGINEER IS PROVIDED AND ATTACHED THIS OFFICE ASSUMES NO RESPONSIBILITY AS TO THE PHYSICAL CHARACTERISTICS OF THE SOIL. FOUNDATION DESIGN IS BASED ON ASSUMED AVERAGE SOIL BEARING OF 2,000 PSF...

CLEARING AND GRADING (T.E.S.C. MEASURES): ALL CLEARING AND GRADING MUST BE IN ACCORDANCE WITH LOCAL JURISDICTION CLEARING AND GRADING EROSION CONTROL STANDARDS...

GARAGES: OPENINGS FROM A PRIVATE GARAGE DIRECTLY INTO A ROOM USED FOR SLEEPING PURPOSES SHALL NOT BE PERMITTED. DOORS BETWEEN GARAGE AND DWELLING SHALL BE SOLID WOOD DOORS...

FIREPLACES: FACTORY-BUILT FIREPLACES SHALL BE LISTED AND LABELED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE CONDITIONS OF THE LISTING...

PROJECT DIRECTORY

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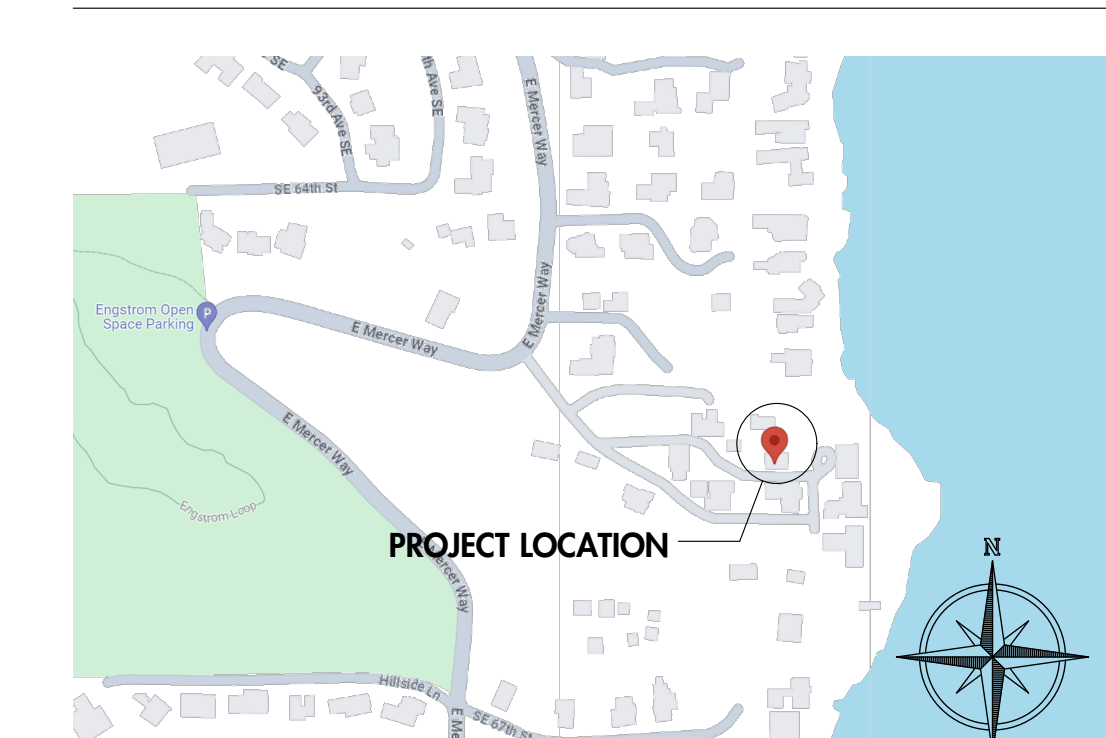
Project Information and Contact Information table with fields for Project Name, Location, and Contact details.

Energy Performance Summary table with columns for Fuel Normalization Descriptions, Credits, and User Notes.

Summary of Table R602.2 and 606.3 table listing energy credits for various building envelope and HVAC options.

Summary of Table R606.2 (cont.) table listing energy credits for water heating and appliance packages.

VICINITY MAP



DRAWING INDEX

Table listing drawing sheets: A0.01 COVER SHEET, A1.00 SURVEY, A1.01 ARCHITECTURAL DEMO SITE PLAN, etc.

STRUCTURAL

Table listing structural drawing sheets: S1.0 GENERAL STRUCTURAL NOTES/SHEET INDEX, S1.1 GENERAL STRUCTURAL NOTES, etc.

SIYAO STUDIO

WANG & YANG ADU
6450 E MERCER WAY
MERCER ISLAND, WA 98040

Job No. 2303
Project Manager: SW
Issue Date: 2/25/2024

Revision table with columns for NO., DATE, and REVISION, listing several structural and pricing revisions.

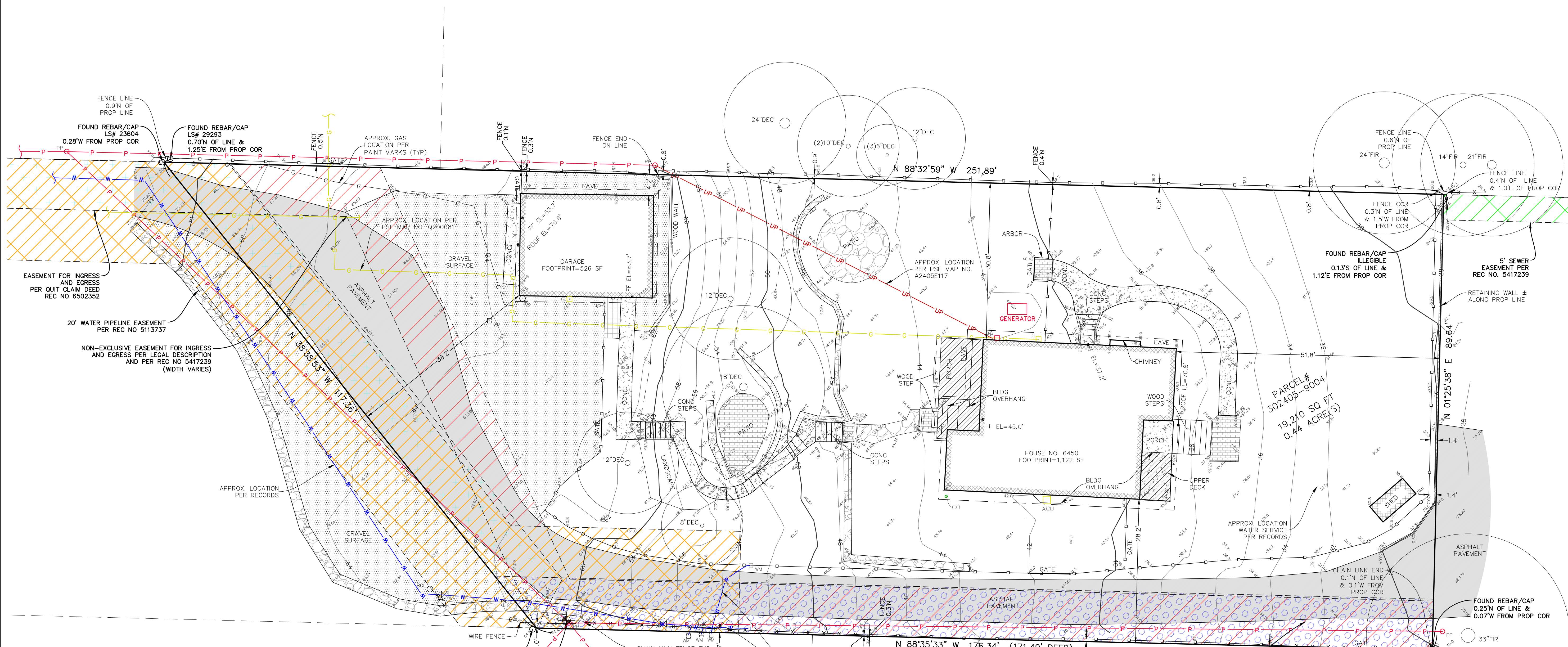
COVER SHEET

A0.01



# TOPOGRAPHIC & BOUNDARY SURVEY

We are the measure | terrane.net



TOPOGRAPHIC & BOUNDARY SURVEY  
PARCEL NO. 302405-9004

Wang / Yang Residence  
6450 E Mercer Way  
MERCER ISLAND, WA 98040



# TERRANE

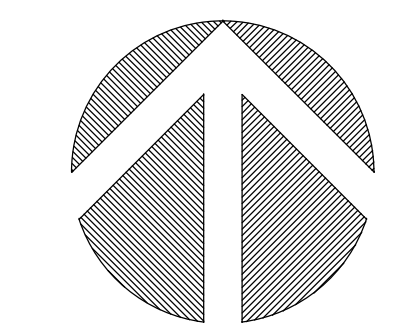
10801 Main Street, Suite 102  
Bellevue, WA 98004  
p: 425-458-4488 | e: info@terrane.net

### LEGEND

- ASPHALT SURFACE
- BENCHMARK
- BOLLARD
- BRICK SURFACE
- BUILDING
- CENTERLINE ROW
- CLEANOUT
- CONCRETE SURFACE
- DECK
- FENCE LINE (CHAIN LINK)
- FENCE LINE (WIRE)
- FENCE LINE (WOOD)
- FIRE HYDRANT
- FLAGSTONE SURFACE
- GAS LINE
- GAS METER
- GRAVEL SURFACE
- PAVER SURFACE
- POWER METER
- POWER (OVERHEAD)
- POWER (UNDERGROUND)
- POWER POLE
- PROPERTY LINE (SUBJECT)
- PROPERTY LINES (ADJACENT)
- REBAR & CAP (SET)
- REBAR AS NOTED (FOUND)
- RETAINING WALL
- RIGHT-OF-WAY LINES
- ROCKERY
- TREE (AS NOTED)
- WATER LINE
- WATER METER
- WATER VALVE
- AIR CONDITION UNIT
- CONCRETE
- CORNER
- DECIDUOUS
- ELEVATION
- EVERGREEN
- FINISH FLOOR
- LAND SURVEYOR NUMBER
- PROPERTY
- RECORD DATA

### EASEMENTS

- INGRESS, EGRESS EASEMENT  
REC. NO. 5417239
- WATER EASEMENT  
REC. NO. 20221208000443
- WATER PIPELINE EASEMENT  
REC. NO. 5113737
- INGRESS, EGRESS EASEMENT  
REC. NO. 6502352
- SEWER EASEMENT  
REC. NO. 5417239



10 0 5 10  
( IN FEET )  
1 INCH = 10 FT.

INDEXING INFORMATION	
	NE 1/4 NE 1/4
	SECTION: 30
	TOWNSHIP: 24N
	RANGE: 05E, W.M.
	COUNTY: KING

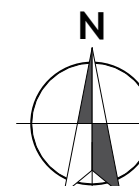
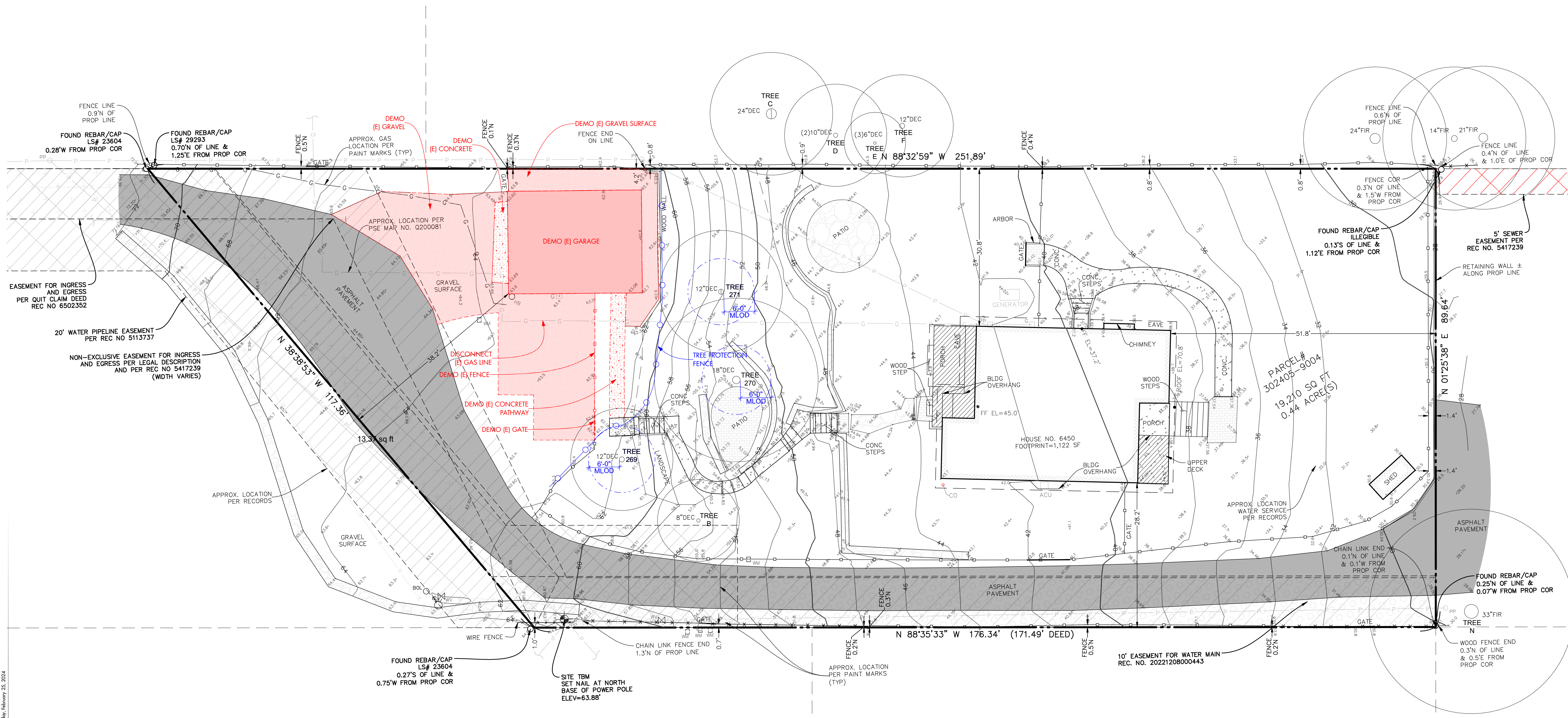
**STEEP SLOPE/BUFFER DISCLAIMER:**  
THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

JOB NUMBER:	230545
DATE:	04/28/23
DRAFTED BY:	TLR
CHECKED BY:	JGM/DRT
SCALE:	1" = 10'
<b>REVISION HISTORY</b>	
05/10/23	POWER LINES



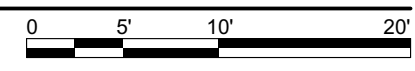
# LEGEND

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  - FENCE LINE (WIRE)
  - FENCE LINE (WOOD)
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  - REBAR & CAP (SET)
  - REBAR AS NOTED (FOUND)
  - RETAINING WALL
  - RIGHT-OF-WAY LINES
  - ROCKERY
- SIZE TYPE
  - TREE (AS NOTED)
  - WM WATER METER
  - WV WATER VALVE
  - ACU AIR CONDITION UNIT
  - CONC CONCRETE
  - COR CORNER
  - DEC DECIDUOUS
  - ELEV ELEVATION
  - EVG EVERGREEN
  - FF FINISH FLOOR
  - LS# LAND SURVEYOR NUMBER
  - PROP PROPERTY
  - RD RECORD DATA
  - MLD MINIMUM LIMITS OF DISTURBANCE (MLOD) PER ARBORIST
  - TREE PROTECTION FENCE
  - EXCEPTIONAL TREE LESS THAN 24 INCHES
  - EXCEPTIONAL TREE GREATER THAN 24 INCHES



## ARCHITECTURAL DEMO SITE PLAN

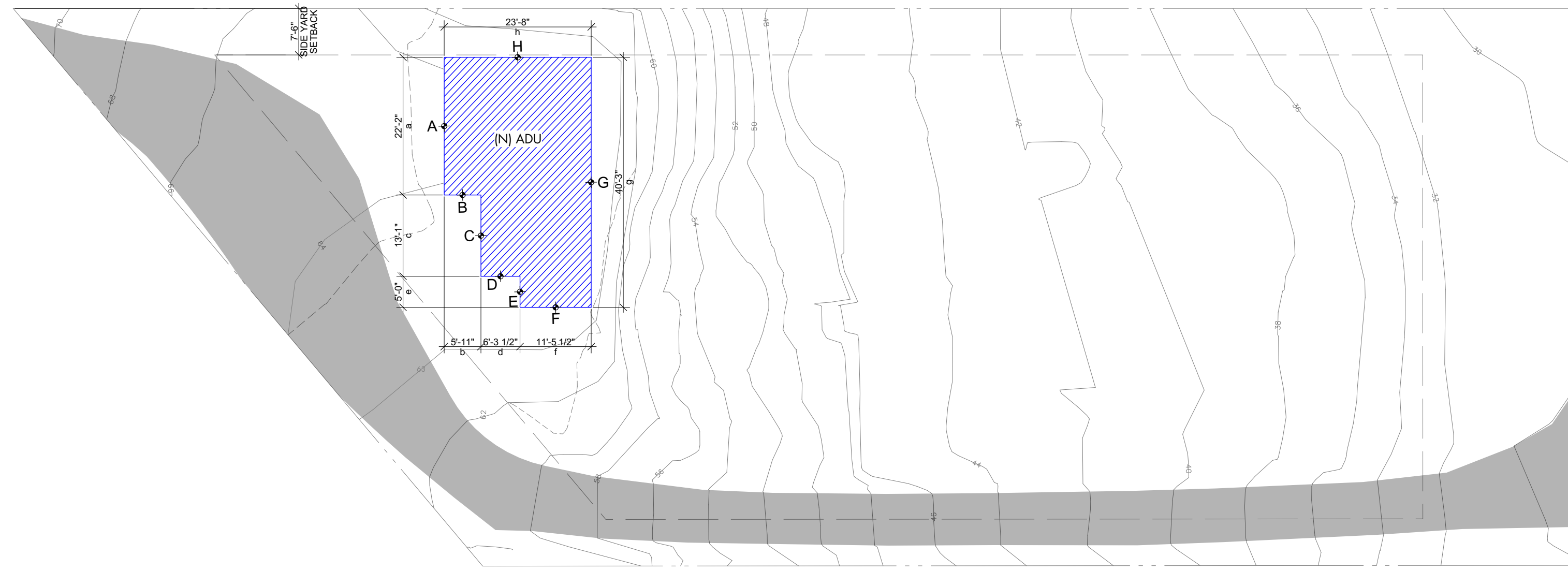
SCALE: 1" = 10'



Job No. 2303  
Project Manager: SW  
Issue Date: 2/25/2024

NO.	DATE	REVISION
1	10/17/2023	STRUCTURAL
2	12/01/2023	STRUCTURAL REV 1
3	12/07/2023	PRICING
4	12/16/2023	PRE-APP MEETING #2
5	02/25/2024	BUILDING PERMIT





**BUILDING HEIGHT DIAGRAMS**  
SCALE: 1/16" = 1'-0"

**MAX BUILDING HEIGHT CALCULATIONS**

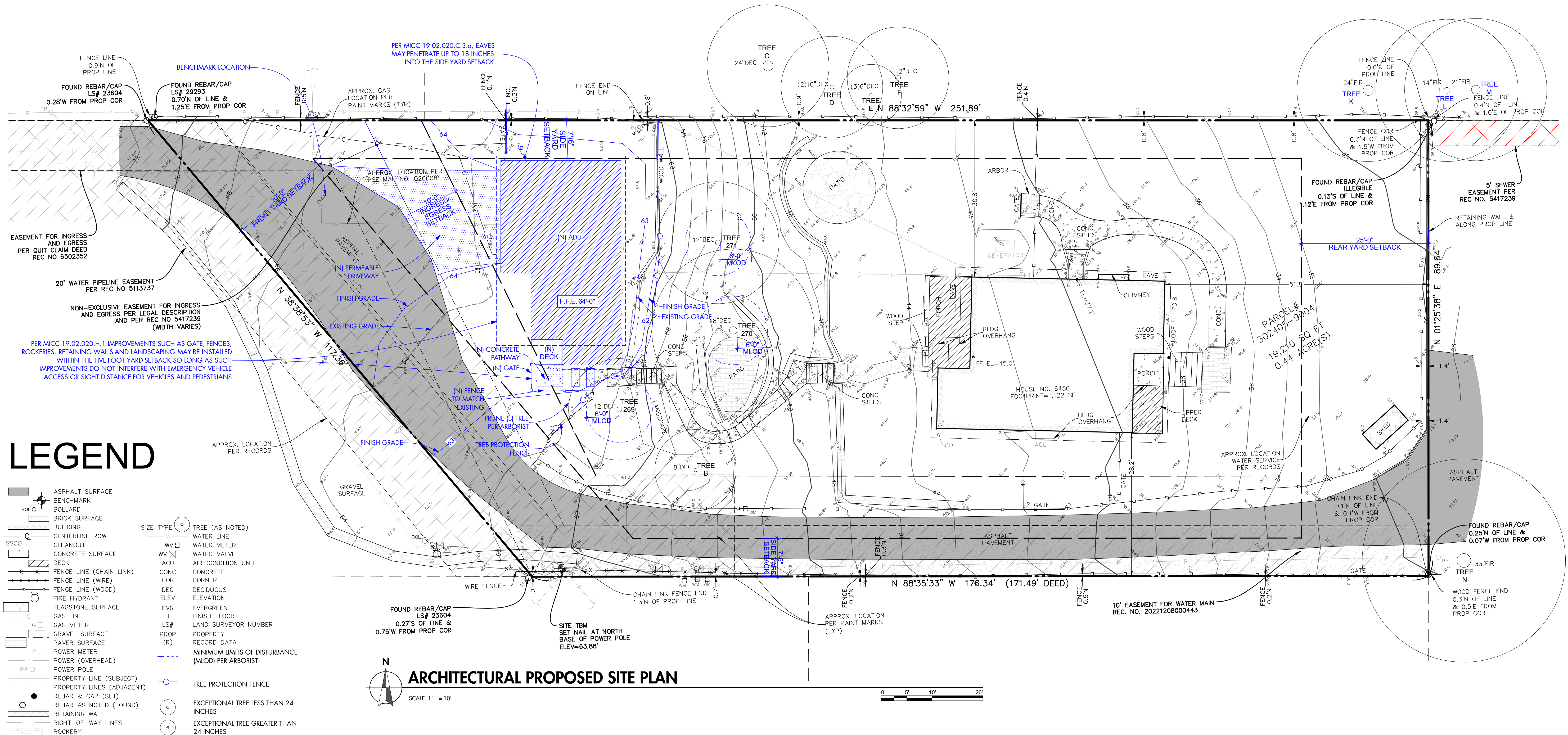
	Top of Gabled Roof	Existing		Finished		Length of Wall Segment
		Existing grade	Existing Ground Elevation	Finish Grade	Finished Ground Elevation	
A	88.02'	63.76'	24.26'	64.00'	24.02'	22.17'
B		63.77'	24.25'	63.90'	24.12'	5.92'
C		63.45'	24.57'	63.70'	24.32'	13.08'
D		63.14'	24.88'	63.40'	24.62'	6.29'
E		62.93'	25.09'	63.40'	24.62'	5.00'
F		62.61'	25.41'	63.50'	24.52'	11.46'
G		62.99'	25.03'	63.10'	24.92'	40.25'
H		63.42'	24.60'	63.54'	24.48'	23.67'

PER MICC 19.02.020.C.1.c.iii.(a),(2) and 19.02.020.C.1.c.iii.(b), GABLED ROOF SINGLE-FAMILY DWELLINGS SHALL PROVIDE A MINIMUM SIDE YARD DEPTH OF SEVEN AND ONE-HALF FEET IF THE BUILDING HEIGHT IS MORE THAN 15 FEET BUT LESS THAN 25 FEET MEASURED FROM EXISTING OR FINISHED GRADE, WHICHEVER IS LOWER, TO THE TOP OF THE GABLED ROOF END ADJOINING THE SIDE YARD.

**AVERAGE BUILDING ELEVATION** = (A\*a + B\*b + C\*c + D\*d + E\*e + F\*f + G\*g + H\*h) / (a + b + c + d + e + f + g + h)  
 = (63.76\*22.17 + 63.77\*5.92 + 63.45\*13.08 + 63.14\*6.29 + 62.93\*5 + 62.61\*11.46 + 62.99\*40.25 + 63.42\*23.67) / (22.17 + 5.92 + 13.08 + 6.29 + 5 + 11.46 + 40.25 + 23.67) = 8,085.22 / 127.84 = **63.26'**

**ALLOWABLE BUILDING HEIGHT** = 63.26' + 25' = **88.26'**

**PROPOSED BUILDING HEIGHT** = 88.02' < 88.26' (SEE A3.01)



**LEGEND**

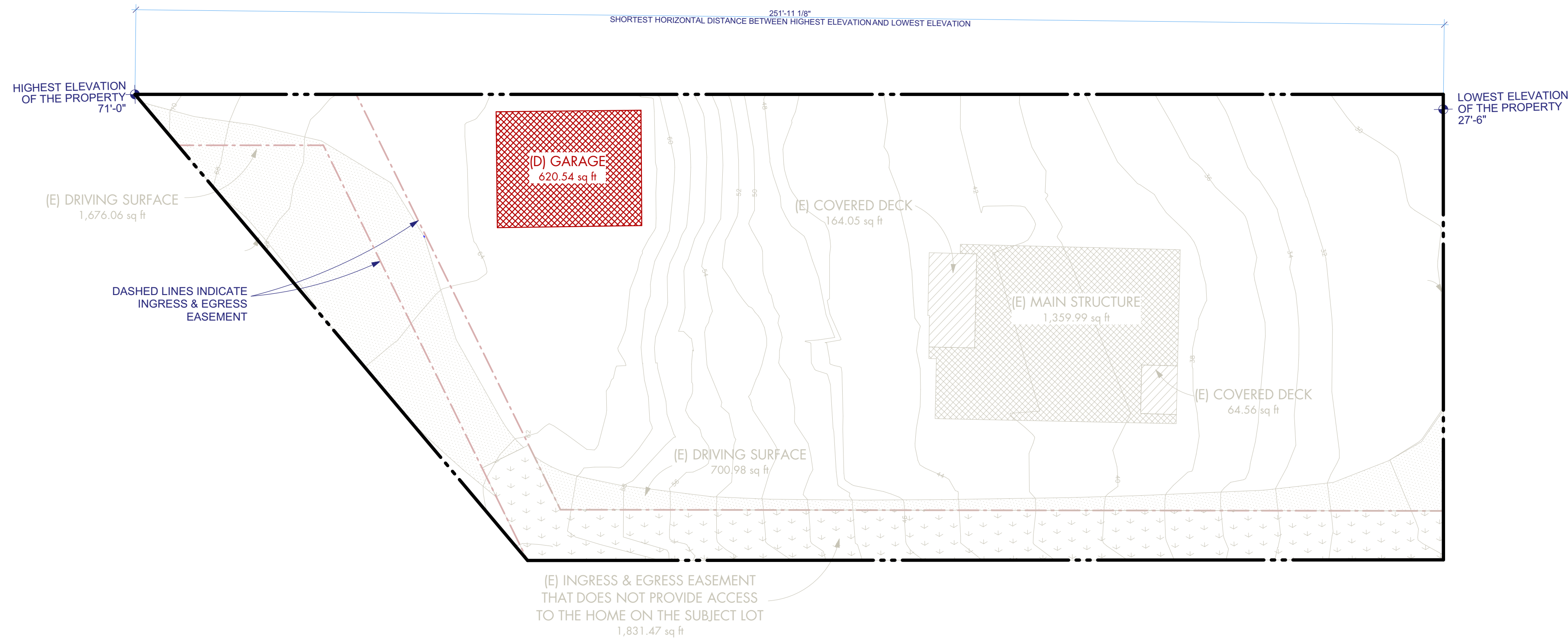
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- EXCEPTIONAL TREE GREATER THAN 24 INCHES

**ARCHITECTURAL PROPOSED SITE PLAN**  
SCALE: 1" = 10'

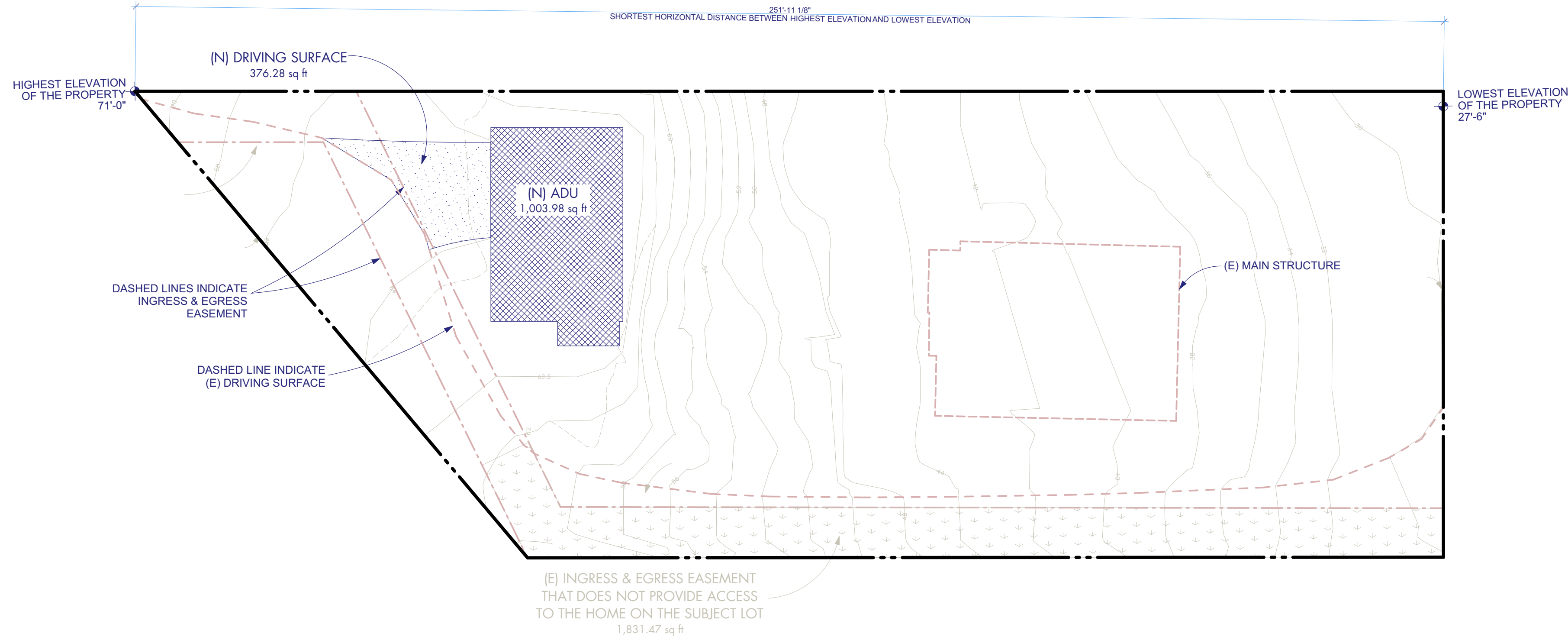
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Project Manager: SW  
Issue Date: 2/25/2024

NO.	DATE	REVISION
1	10/17/2023	STRUCTURAL
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5	02/25/2024	BUILDING PERMIT





**(E) LOT COVERAGE DIAGRAM**  
 SCALE: 1/16" = 1'-0"  
 0 8' 16' 32'



**(N) LOT COVERAGE DIAGRAM**  
 SCALE: 1/16" = 1'-0"  
 0 8' 16' 32'

**LOT COVERAGE CALCULATIONS**

**LOT SLOPE CALCULATIONS**

HIGHEST ELEVATION OF THE PROPERTY ..... 71'-0" (71')  
 LOWEST ELEVATION OF THE PROPERTY ..... 27'-6" (27.5')  
 SHORTEST HORIZONTAL DISTANCE BETWEEN HIGHEST ELEVATION AND LOWEST ELEVATION ..... 251'-11 1/8" (251.93')  
 LOT SLOPE ..... (71'-27.5') / 251.93' \* 100% = **17.27%**

**NET LOT AREA CALCULATIONS**

LOT AREA ..... 19,270 SF  
 ACCESS EASEMENT AREA THAT DOES NOT PROVIDE ACCESS TO HOME ON THE SUBJECT LOT ..... 1,831.47 SF  
 NET LOT AREA ..... 19,270 - 1,831.47 = **17,438.53 SF**

**LOT COVERAGE CALCULATIONS**

**LOT COVERAGE EXISTING**

(D) GARAGE ..... 621  
 (E) COVERED DECK ..... 229  
 (E) DRIVING SURFACE ..... 2,377  
 (E) MAIN STRUCTURE ..... 1,360  
**4,586 ft<sup>2</sup>**

**LOT COVERAGE DEMO**

(D) GARAGE ..... 621  
**621 ft<sup>2</sup>**

**LOT COVERAGE NEW**

(N) ADU ..... 1,004  
 (N) DRIVING SURFACE ..... 376  
**1,380 ft<sup>2</sup>**

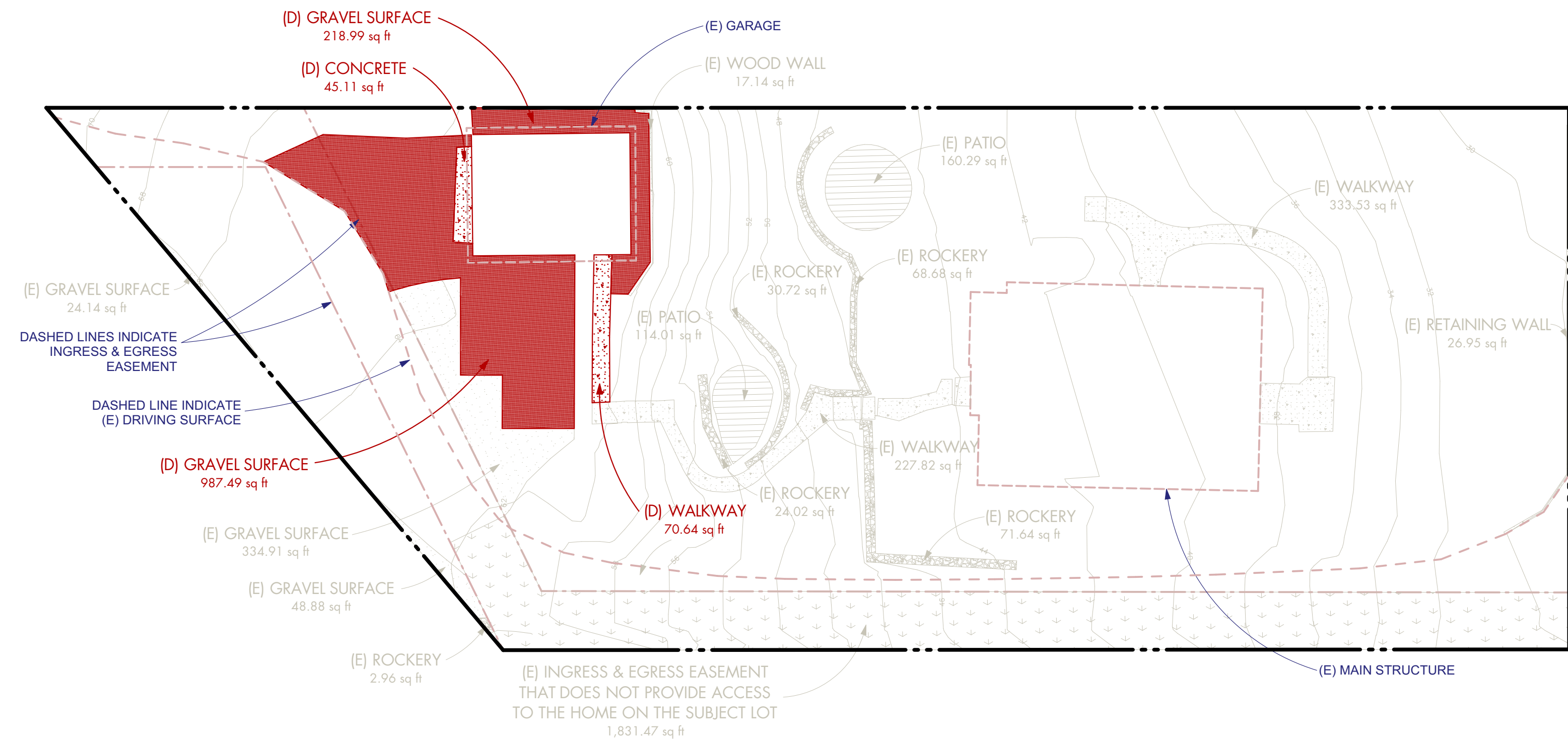
Lot Slope	Maximum Lot Coverage (house, driving surfaces, and accessory buildings)	Required Landscaping Area
Less than 15%	40%	60%
15% to less than 30%	35%	65%
30% to 50%	30%	70%
Greater than 50% slope	20%	80%

MAX. LOT COVERAGE ALLOWED ..... 35%  
 MAX. LOT COVERAGE AREA ALLOWED ..... 17,438.53 \* 35% = 6,103.49 SF  
 LOT COVERAGE AREA PROVIDED ..... 4,586 - 621 + 1,380 = 5,345 SF < 6,103.49 SF  
 LOT COVERAGE PROVIDED ..... 5,345 / 17,438.53 = 30.65% < 35%

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**(E) HARDSCAPE DIAGRAM**  
 SCALE: 1/16" = 1'-0"  
 0 8' 16' 32'

**HARDSCAPE CALCULATIONS**

**HARDSCAPE COVERAGE EXISTING**

(D) CONCRETE	45
(D) GRAVEL SURFACE	1,206
(D) WALKWAY	71
(E) GRAVEL SURFACE	408
(E) PATIO	274
(E) RETAINING WALL	27
(E) ROCKERY	198
(E) WALKWAY	561
(E) WOOD WALL	17
<b>TOTAL</b>	<b>2,808 ft<sup>2</sup></b>

**HARDSCAPE COVERAGE DEMO**

(D) CONCRETE	45
(D) GRAVEL SURFACE	1,206
(D) WALKWAY	71
<b>TOTAL</b>	<b>1,322 ft<sup>2</sup></b>

**HARDSCAPE COVERAGE NEW**

(N) UNCOVERED DECK	19
(N) WALKWAY	34
<b>TOTAL</b>	<b>52 ft<sup>2</sup></b>

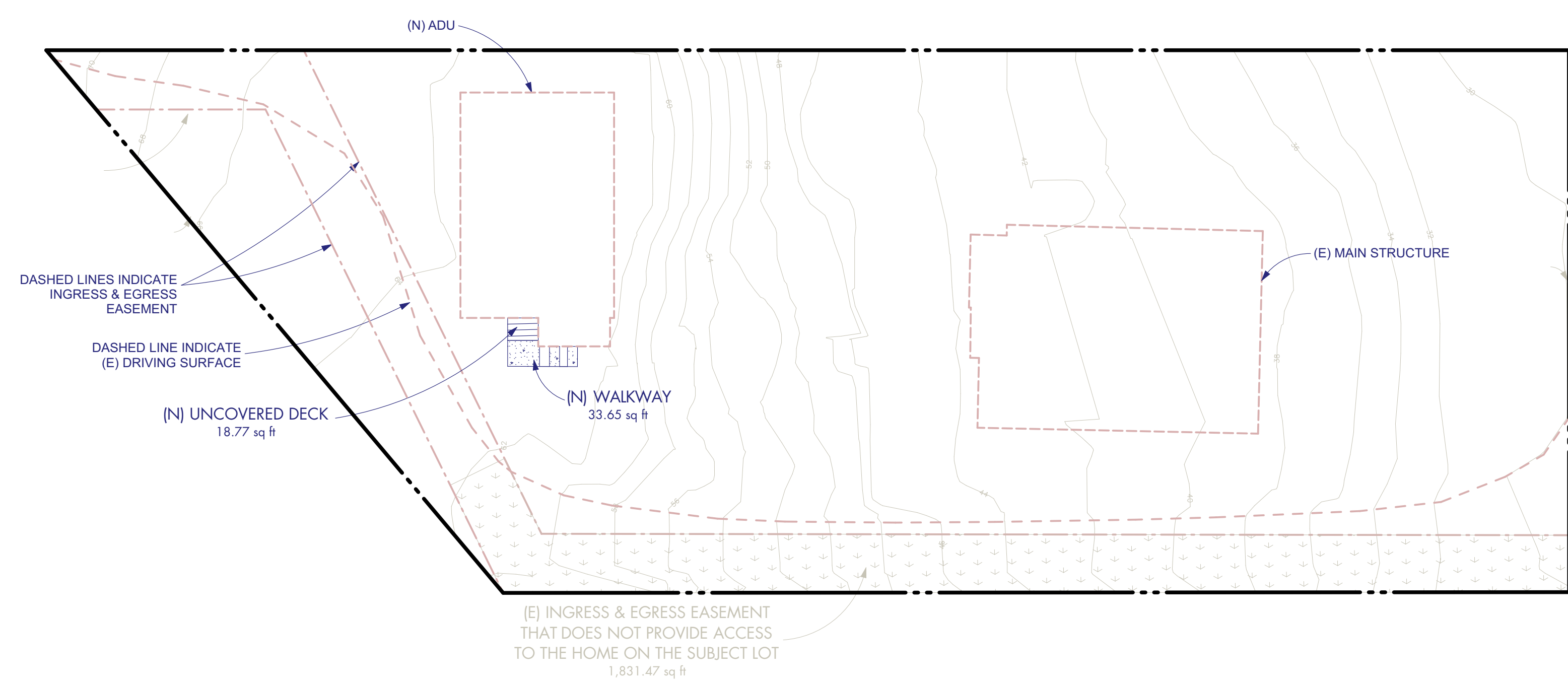
**NET LOT AREA CALCULATIONS**

LOT AREA	19,270 SF
ACCESS EASEMENT AREA THAT DOES NOT PROVIDE ACCESS TO HOME ON THE SUBJECT LOT	1,831.47 SF
<b>NET LOT AREA</b>	<b>19,270 - 1,831.47 = 17,438.53 SF</b>

PER MICC 19.02.020.F.3.b.i, A MAXIMUM OF NINE PERCENT OF THE NET LOT AREA MAY CONSIST OF HARDSCAPE IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, WALKWAYS, DECKS, ETC.

MAX. HARDSCAPE ALLOWED	9%
MAX. HARDSCAPE AREA ALLOWED	17,438.53 * 9% = 1,569.47 SF

HARDSCAPE AREA PROVIDED	2,808 - 1,322 + 52 = 1,538 SF < 1,569.47 SF
HARDSCAPE PROVIDED	1,538 / 17438.53 = 8.82% < 9%



**(N) HARDSCAPE DIAGRAM**  
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 0 8' 16' 32'

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GROSS FLOOR AREA &  
IMPERVIOUS

A1.05

**ADU SQUAREFOOTAGE CALCULATIONS**

PER MICC 19.02.030.B.4, THE SQUARE FOOTAGE OF THE ACCESSORY DWELLING UNIT SHALL BE A MINIMUM OF 220 SF AND A MAXIMUM OF 900 SF, EXCLUDING ANY GARAGE AREA. PROVIDED, THE SQUARE FOOTAGE OF THE ACCESSORY DWELLING UNIT SHALL NOT EXCEED 80% OF THE TOTAL SQUARE FOOTAGE OF THE PRIMARY DWELLING UNIT, EXCLUDING THE GARAGE AREA.

**ADU SQUARE FOOTAGE**

MAIN FLOOR	171 SF
UPPER FLOOR	591 SF
STAIRS (2-STORY)	50 SF
200% GFA MODIFIER FOR CEILING HEIGHT MORE THAN 16 FT	
FOYER	38 SF
<b>TOTAL SQUARE FOOTAGE</b>	<b>171 + 591 + 50 + 38*2 = 888 SF &lt; 900 SF</b>

**GROSS FLOOR AREA CALCULATIONS**

**GROSS FLOOR AREA - EXISTING**

FINISHED BASEMENT	1,070 SF
MAIN FLOOR	1,130 SF
UPPER FLOOR	1,150 SF
COVERED DECK	65 SF
GARAGE	527 SF
<b>TOTAL GROSS FLOOR AREA EXISTING</b>	<b>3,942 SF</b>

**GROSS FLOOR AREA - DEMO**

GARAGE	527 SF
<b>TOTAL GROSS FLOOR AREA DEMO</b>	<b>527 SF</b>

**GROSS FLOOR AREA - NEW**

MAIN FLOOR	171 SF
UPPER FLOOR	591 SF
STAIRS (2-STORY)	50 SF
GARAGE	513 SF
200% GFA MODIFIER FOR CEILING HEIGHT MORE THAN 16 FT	
FOYER	38 SF
<b>TOTAL GROSS FLOOR AREA NEW</b>	<b>1,401 SF</b>

GROSS FLOOR AREA ALLOWED	19,270 * 40% = 7,708 SF
GROSS FLOOR AREA PROVIDED	3,942 - 527 + 1,401 = 4,816 SF < 7,708 SF

**IMPERVIOUS COVERAGE CALCULATIONS**

**IMPERVIOUS COVERAGE EXISTING**

(E) DRIVING SURFACE	3,436
(E) GRAVEL SURFACE	532
(E) HOUSE	1,589
(E) PATIO	274
(E) RETAINING WALL	27
(E) ROCKERY	220
(E) SHED	34
(E) WALKWAY	561
(E) WOOD WALL	17
<b>TOTAL</b>	<b>6,690 ft<sup>2</sup></b>

**IMPERVIOUS SURFACE REPLACE**

(R) CONCRETE	42
(R) GARAGE	409
(R) GRAVEL SURFACE	805
(R) WALKWAY	71
<b>TOTAL</b>	<b>1,327 ft<sup>2</sup></b>

**IMPERVIOUS COVERAGE DEMO**

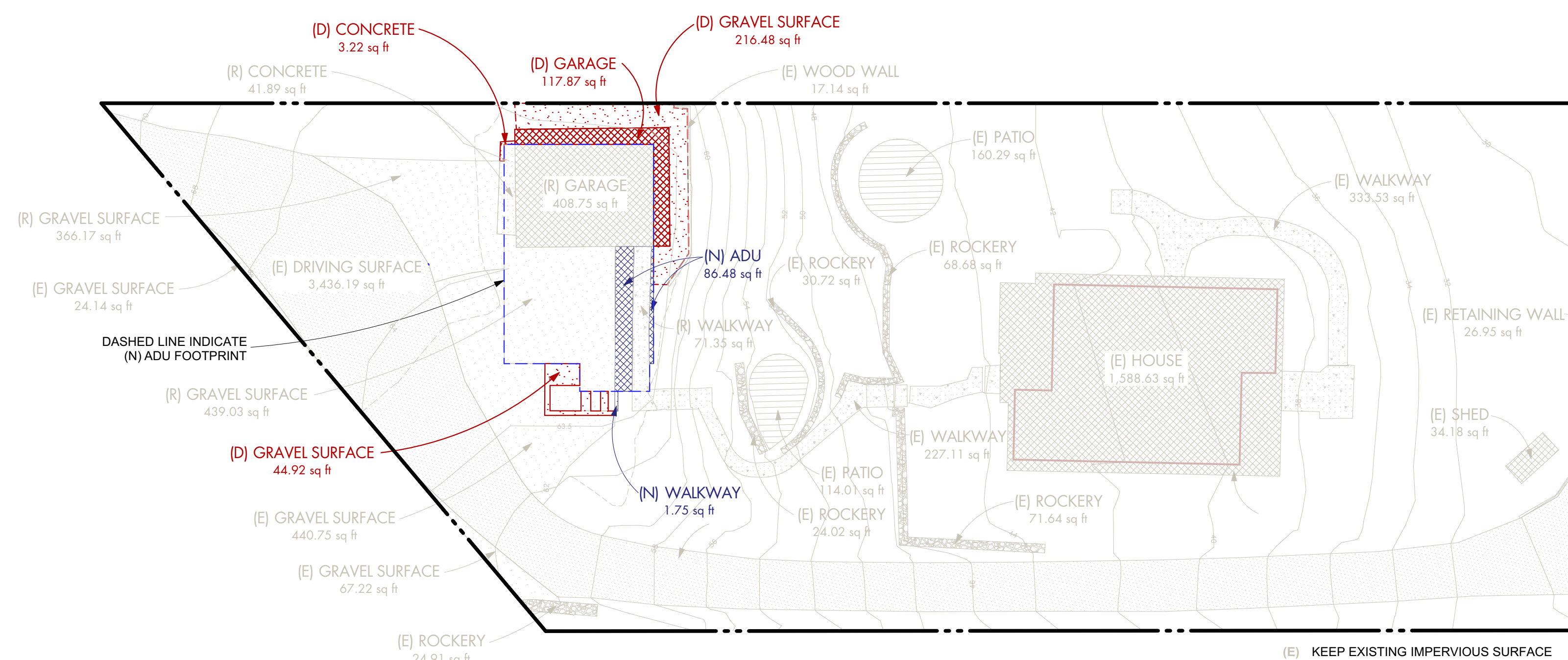
(D) CONCRETE	3
(D) GARAGE	118
(D) GRAVEL SURFACE	261
<b>TOTAL</b>	<b>382 ft<sup>2</sup></b>

**IMPERVIOUS COVERAGE NEW**

(N) ADU	86
(N) WALKWAY	2
<b>TOTAL</b>	<b>88 ft<sup>2</sup></b>

PREVIOUS IMPERVIOUS COVERAGE	6,690 + 1,327 + 382 = 8,399 SF
PROPOSED IMPERVIOUS COVERAGE	6,690 + 1,327 + 88 = 8,105 SF

IMPERVIOUS COVERAGE INCREASE 8,105 - 8,399 = -294 SF < 500 SF



- (E) KEEP EXISTING IMPERVIOUS SURFACE
- (R) REPLACE EXISTING IMPERVIOUS SURFACE WITH NEW IMPERVIOUS SURFACE
- (D) DEMO EXISTING IMPERVIOUS SURFACE
- (N) NEW IMPERVIOUS SURFACE



**IMPERVIOUS COVERAGE CALCULATION**



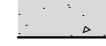
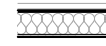

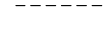


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5	02/25/2024	BUILDING PERMIT

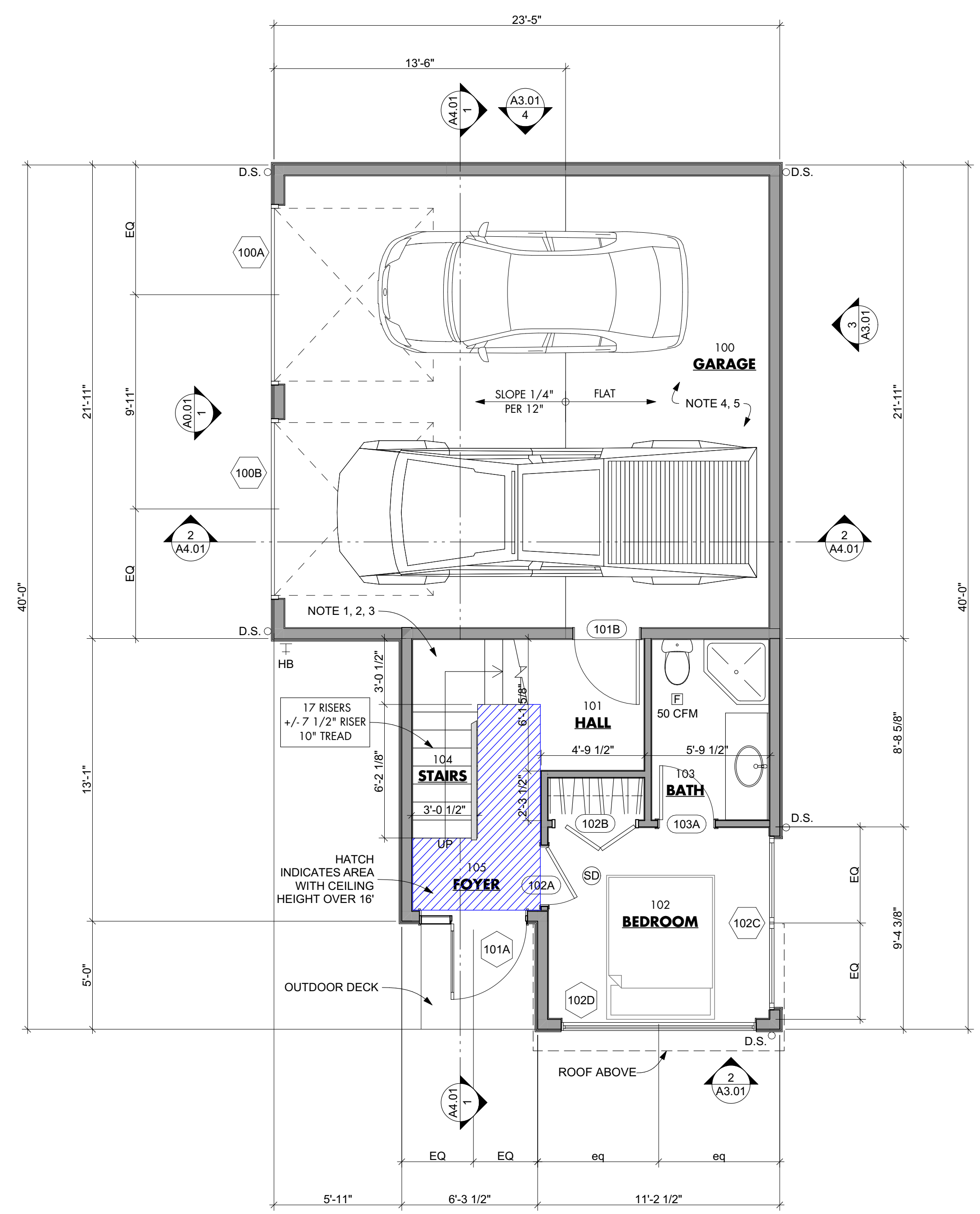
PLAN NOTES

- 1) INTERIOR STAIRWAYS SHALL BE ILLUMINATED PER IRC, SECTION R303.7.
- 2) ALL HANDRAILS TO BE 34"-38" ABOVE TREAD NOSING, 1 1/2" FROM WALL, NOT LESS THAN 1 1/4" OR MORE THAN 2" IN DIAMETER PER IRC, SECTION R311& R312
- 3) ALL GUARD RAILS SHALL BE MIN 36" HIGH AND HAVE A MAXIMUM OPENING SUCH THAT A 4" SPHERE CANNOT PASS THROUGH PER IRC, SECTIONS R312.1.2 & R312.1.3
- 4) THE GARAGE SHALL BE SEPARATED FROM THE RESIDENCE WITH A MIN 1/2" GYPSUM BOARD OR EQUIV. APPLIED TO THE GARAGE SIDE. 5/8" TYPE 'X' GYPSUM BOARD IS REQUIRED WHERE THERE ARE HABITABLE ROOMS ABOVE THE GARAGE. SUPPORTING COLUMNS, WALLS AND BEAMS USE 1/2" GYPSUM WALL BOARD PER IRC, SECTION 302.6
- 5) OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL HAVE A SOLID WOOD, SOLID OR HONEYCOMB-CORE STEEL DOORS NOT LESS THAN 1 3/8" IN THICKNESS OR 20-MIN FIRE-RATED DOORS. ALL DOORS SHALL BE EQUIPPED WITH A SELF-CLOSING OR AUTOMATIC CLOSING DEVICE. PER IRC, SECTION R302.5.1

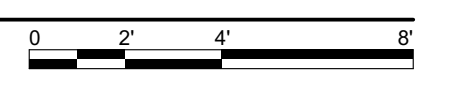
LEGEND

-  CONCRETE WALL
-  EXTERIOR FRAMED WALL, FINISH VARIES
-  INTERIOR WALL
-  ELEMENT ABOVE
-  SMOKE DETECTOR/  
CARBON MONOXIDE DETECTOR
-  FAN

MAIN FLOOR SQUARE FOOTAGES	
BATH	49
BEDROOM	107
FOYER	38
HALL	15
STAIRS	50
<b>TOTAL</b>	<b>258 ft<sup>2</sup></b>



N  
MAIN FLOOR PLAN  
SCALE: 1/4" = 1'-0"




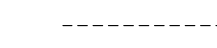






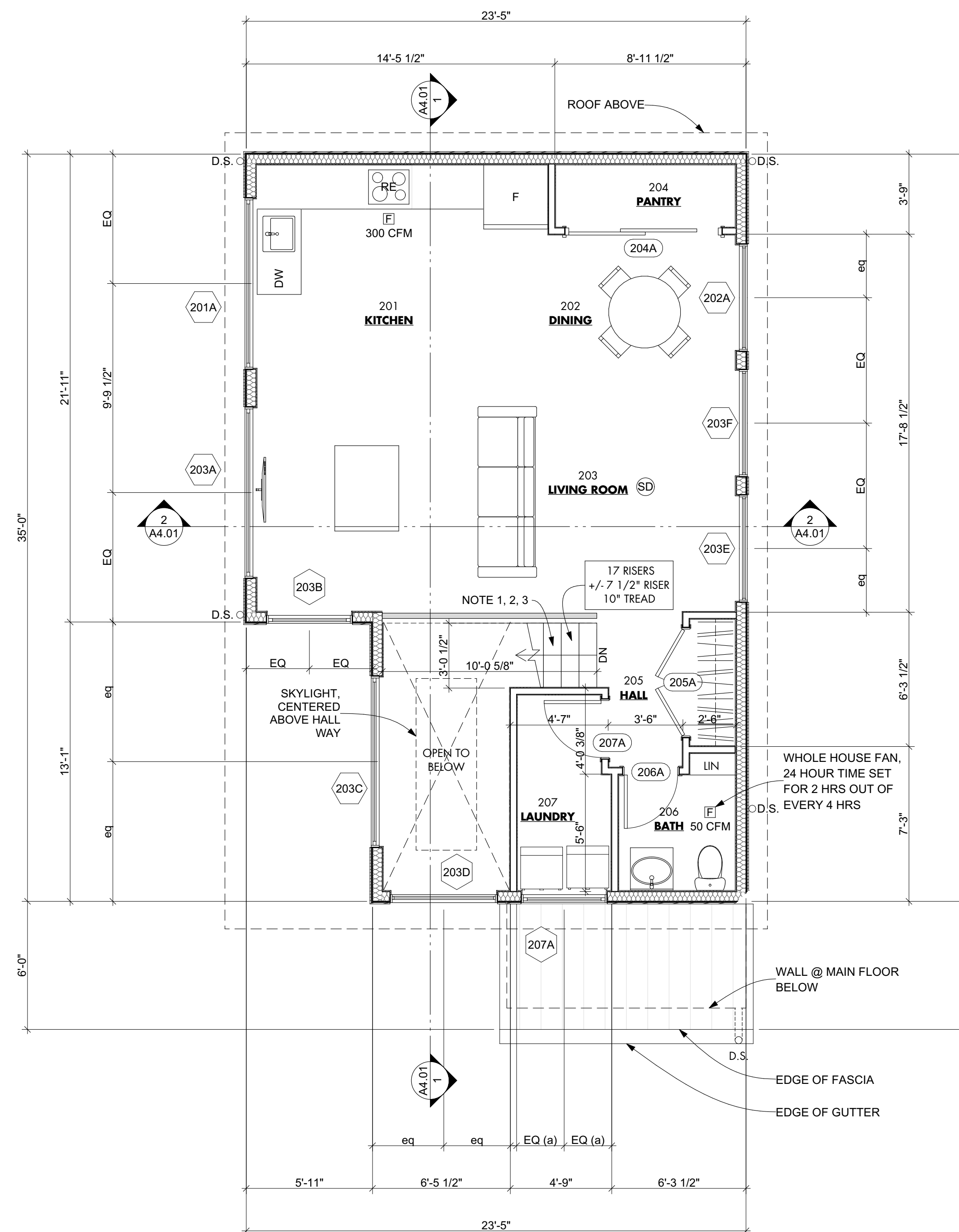
**PLAN NOTES**

- 1) INTERIOR STAIRWAYS SHALL BE ILLUMINATED PER IRC, SECTION R303.7.
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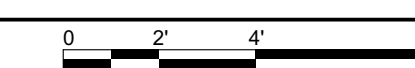
**LEGEND**

-  CONCRETE WALL
-  EXTERIOR FRAMED WALL, FINISH VARIES
-  INTERIOR WALL
-  ELEMENT ABOVE
-  SMOKE DETECTOR/  
CARBON MONOXIDE DETECTOR
-  FAN

UPPER FLOOR SQUARE FOOTAGES	
BATH	34
DINING	56
HALL	39
KITCHEN	132
LAUNDRY	42
LIVING ROOM	259
PANTRY	29
<b>TOTAL</b>	<b>591 ft<sup>2</sup></b>



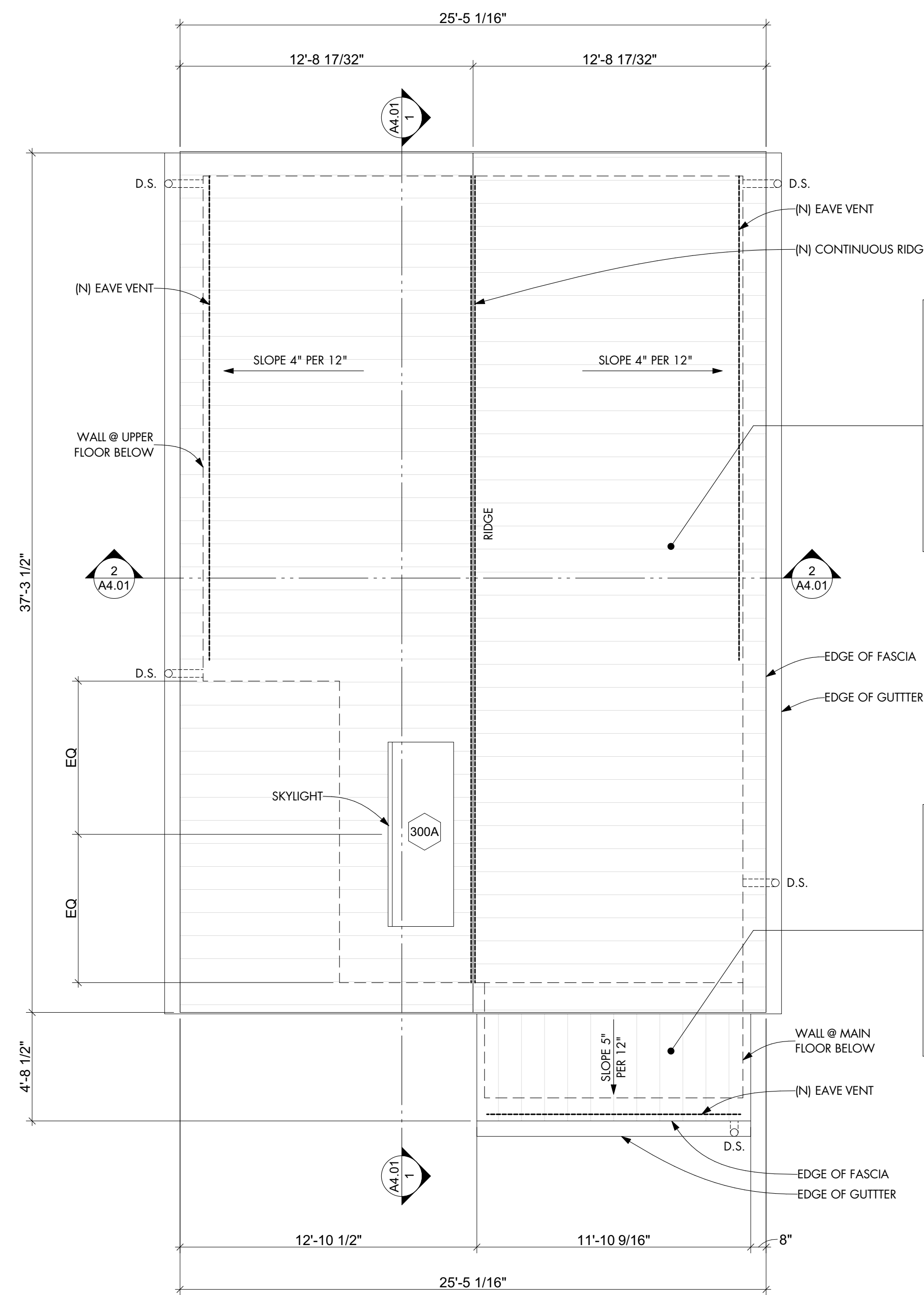
**UPPER FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



Job No. 2303  
Project Manager: SW  
Issue Date: 2/25/2024

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**ROOF VENTING CALCULATIONS**

ROOF VENTING PER IRC R806

EAVE VENTING  
VENTING PRODUCT: COR-A VENT S-400, 10 SQ IN NFVA/LINEAL FOOT(10/144=0.06944 SG FT/LINEAL FOOT)

**UPPER FLOOR ROOF**

UPPER FLOOR ROOF AREA: 742 SF  
REQUIRED VENTING AREA: 1/300 X 742 SF= 2.47 SF

EAVE VENTING  
PROVIDED: 77 X 0.06944 CONTINUOUS EAVE VENT= 5.34 SF > 2.47 SF

**ROOF VENTING CALCULATIONS**

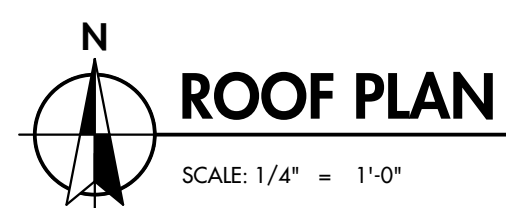
ROOF VENTING PER IRC R806

EAVE VENTING  
VENTING PRODUCT: COR-A VENT S-400, 10 SQ IN NFVA/LINEAL FOOT(10/144=0.06944 SG FT/LINEAL FOOT)

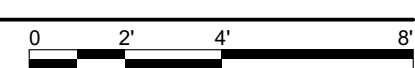
**MAIN FLOOR BEDROOM ROOF**

MAIN FLOOR BEDROOM ROOF AREA: 56 SF  
REQUIRED VENTING AREA: 1/150 X 56 SF= 0.37 SF

EAVE VENTING  
PROVIDED: 11 X 0.06944 CONTINUOUS EAVE VENT= 0.76 SF > 0.37 SF



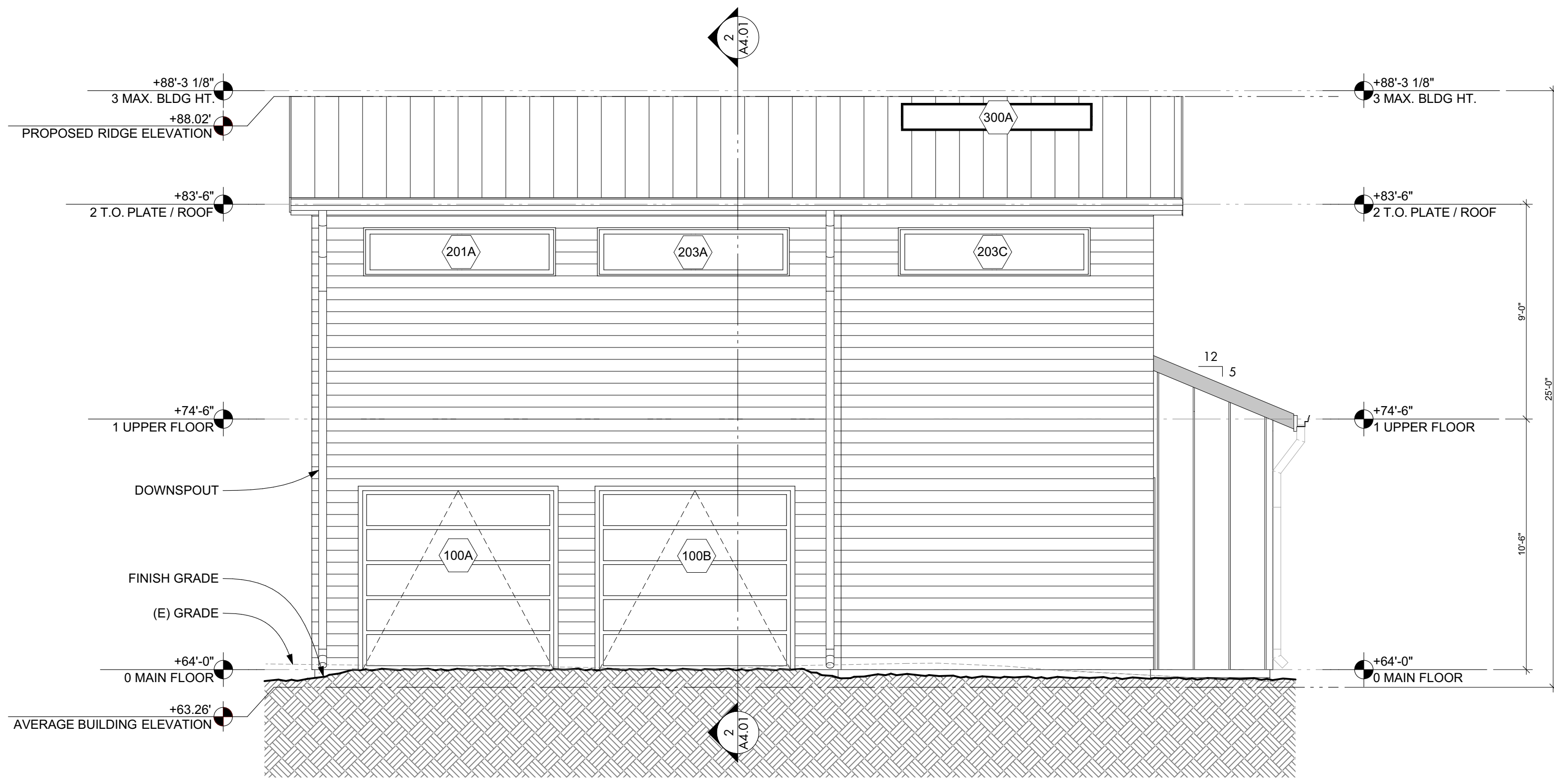
SCALE: 1/4" = 1'-0"



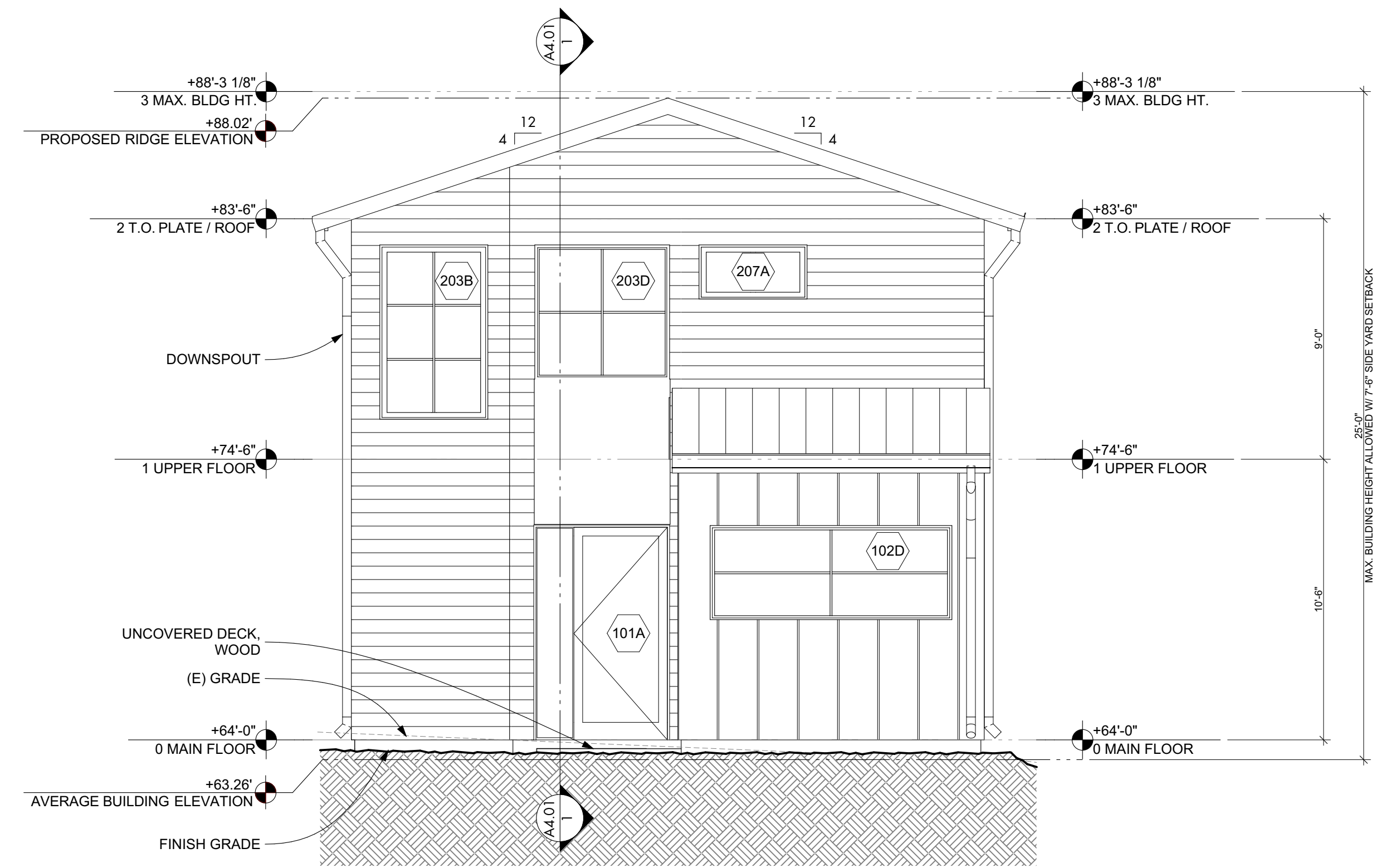
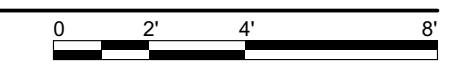
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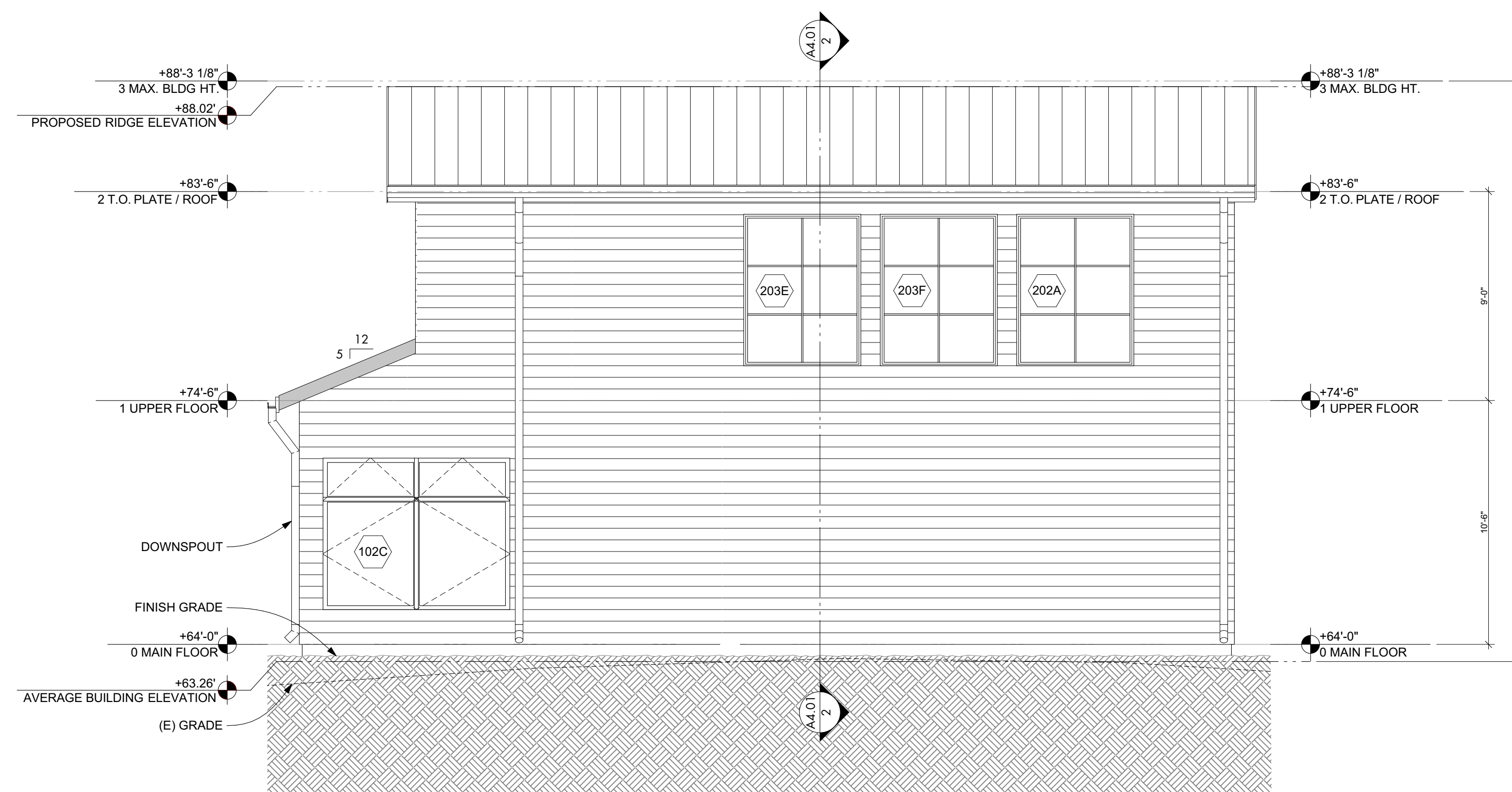
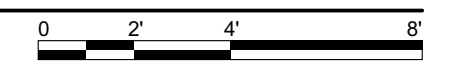




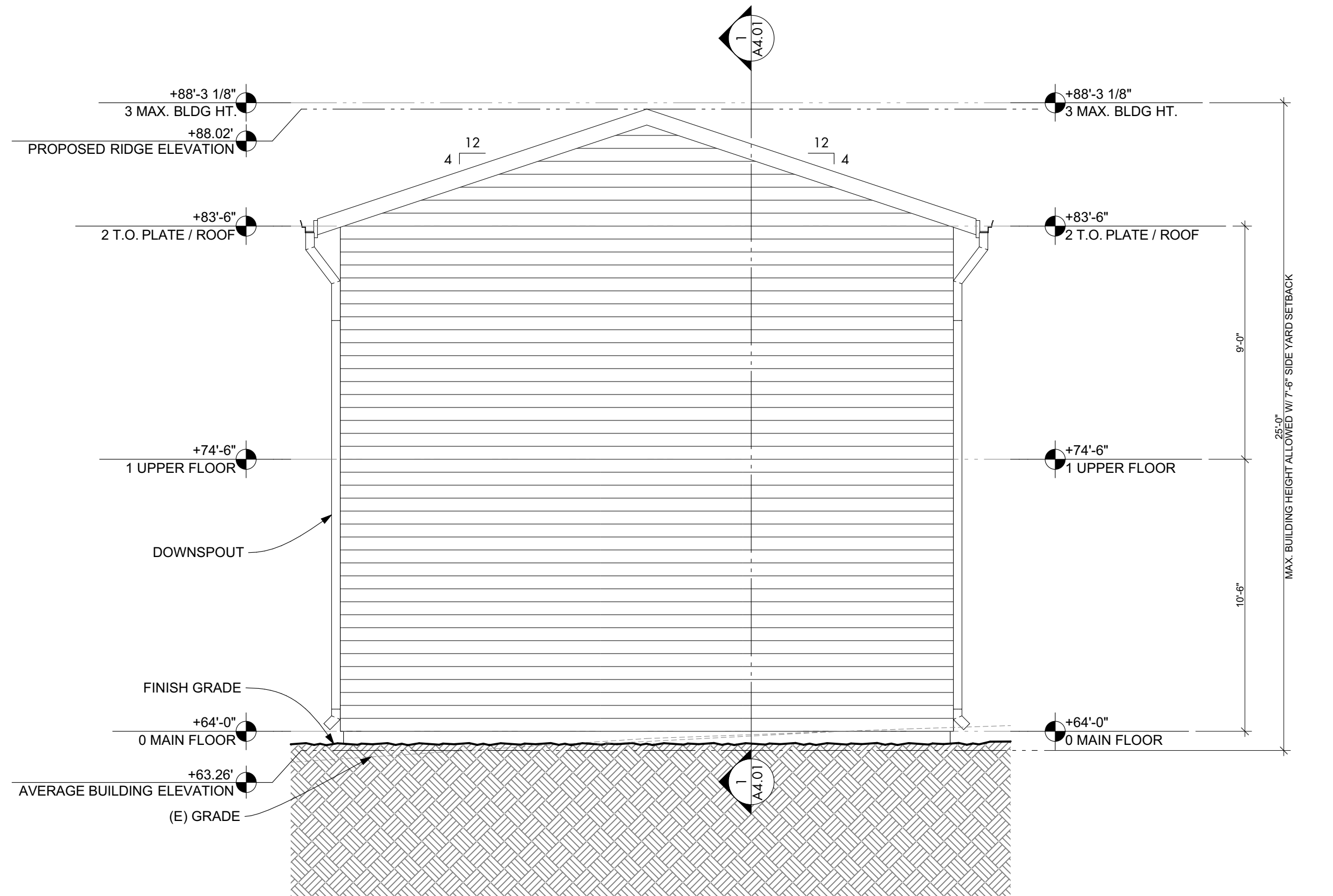
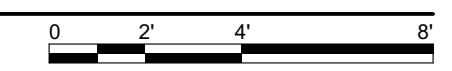
**1 WEST ELEVATION**  
SCALE: 1/4" = 1'-0"



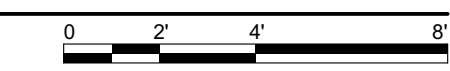
**2 SOUTH ELEVATION**  
SCALE: 1/4" = 1'-0"



**3 EAST ELEVATION**  
SCALE: 1/4" = 1'-0"



**4 NORTH ELEVATION**  
SCALE: 1/4" = 1'-0"



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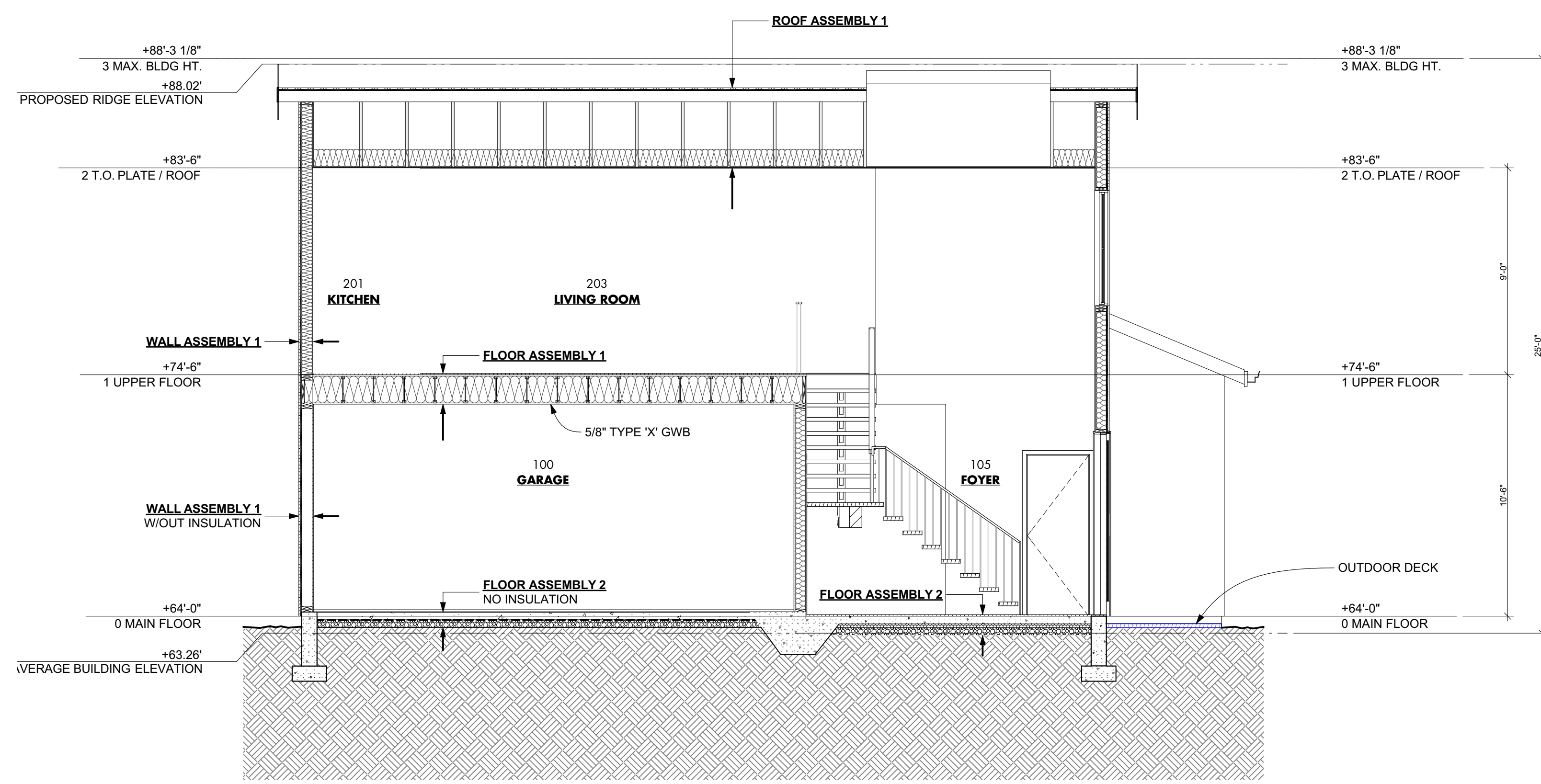
CONSTRUCTION ASSEMBLIES

**FLOOR ASSEMBLY 1**  
 \* FINISHED FLOORING  
 \* PLYWOOD SUBFLOOR PER STRUCT.  
 \* FLOOR FRAMING PER STRUCT.  
 \* R-38 BATT INSULATION  
 \* 5/8" TYPE 'X' GYPSUM BOARD

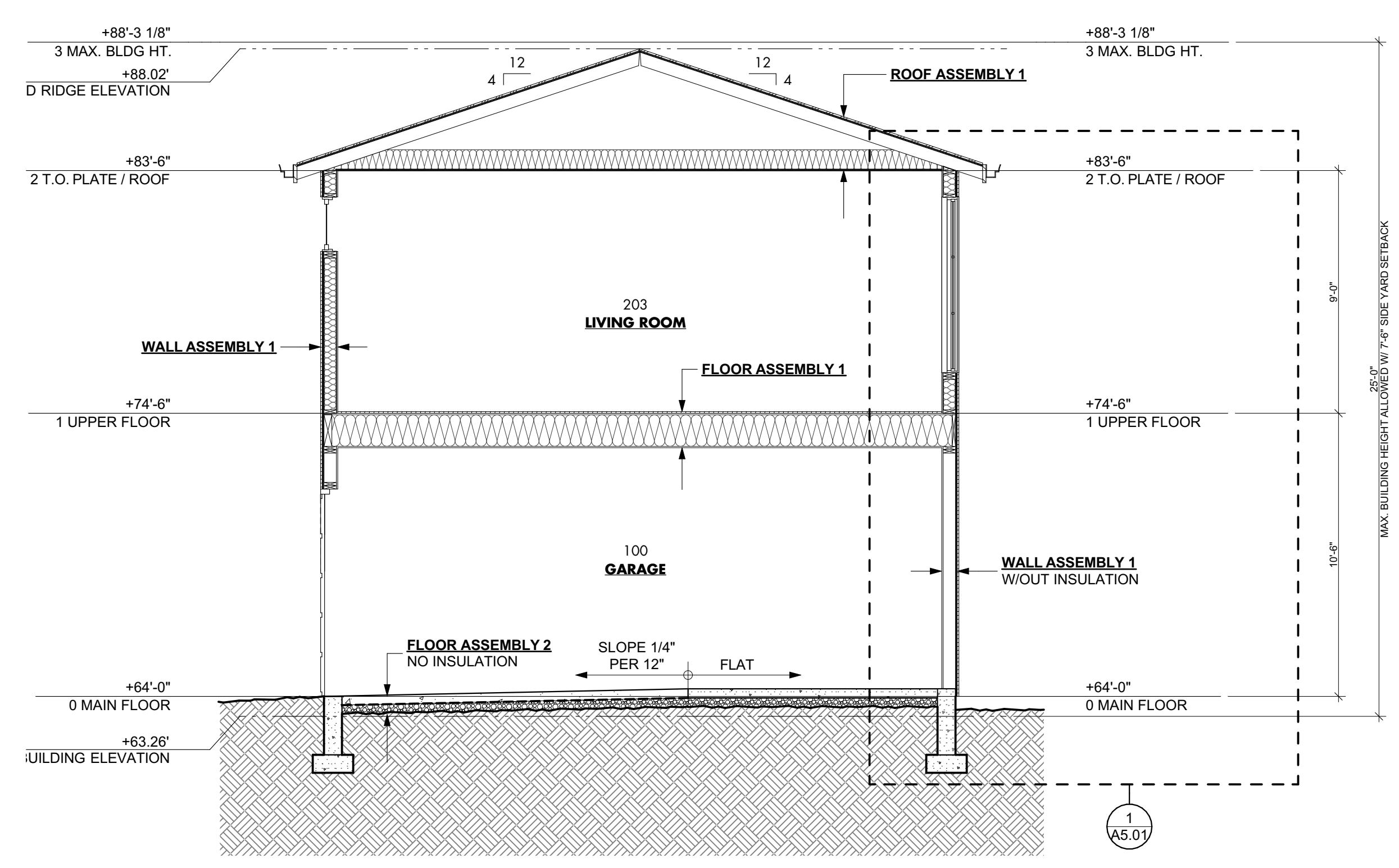
**FLOOR ASSEMBLY 2**  
 \* FINISH FLOORING  
 \* 4" CONCRETE SLAB  
 \* 6 mil VAPOR BARRIER  
 \* R-10 RIGID INSULATION UNDER ENTIRE SLAB  
 \* 4" MIN. GRANULAR FILL

**WALL ASSEMBLY 1**  
 \* FINISH SIDING PER ELEVATIONS  
 \* DRAIN MAT  
 \* BUILDING WRAP  
 \* PLYWOOD SHEATHING PER STRUCT.  
 \* STUD WALL PER STRUCT.  
 \* MIN. R-21 BATT INSULATION  
 \* 5/8" TYPE 'X' GYPSUM BOARD FINISH

**ROOF ASSEMBLY 1**  
 \* COMPOSITE SHINGLE METAL ROOF PER ELEVATIONS  
 \* ROOFING FELTS  
 \* PLYWOOD SHEATHING PER STRUCT.  
 \* TRUSS PER STRUCT.  
 \* R-38 INSULATION + MIN. 1" AIR SPACE TO VENT  
 \* 5/8" TYPE 'X' GWB CEILING

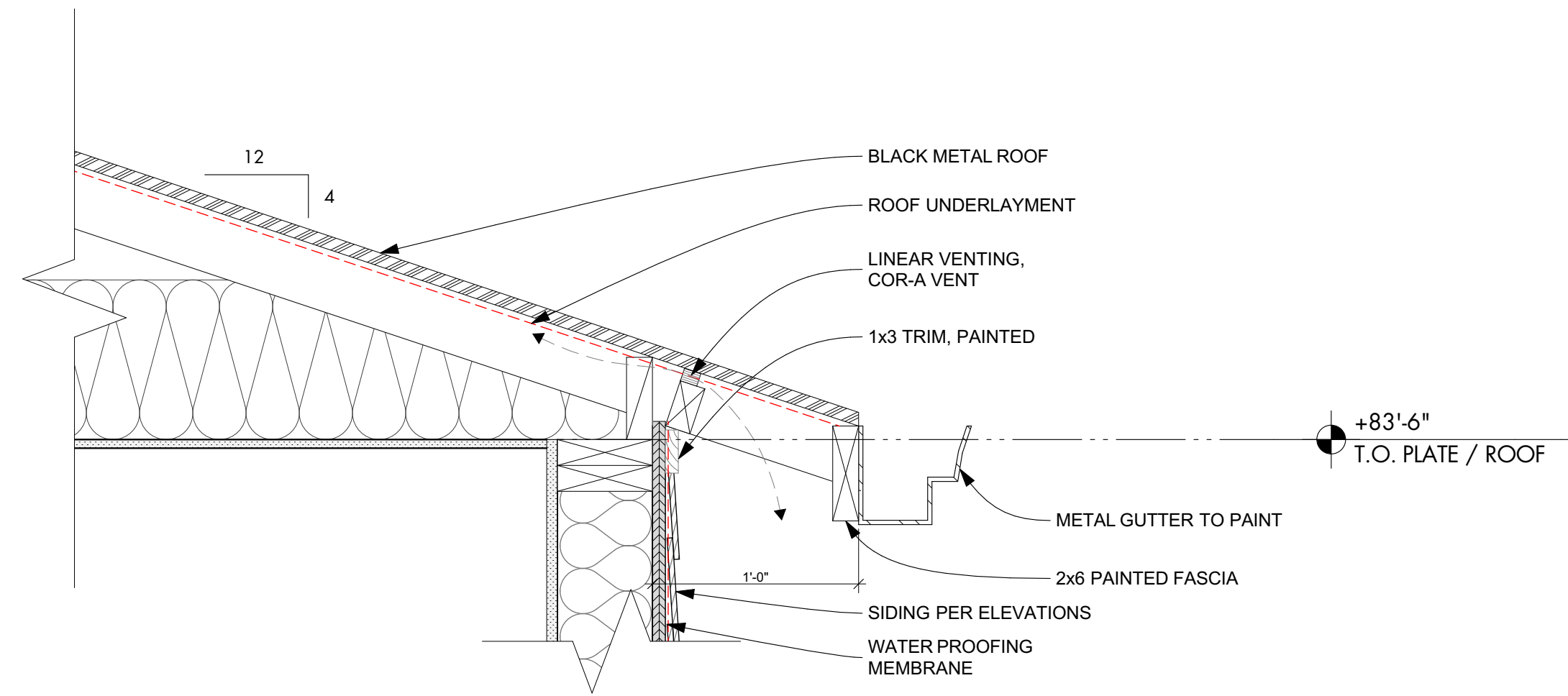


**1 BUILDING SECTION A**  
 SCALE: 1/4" = 1'-0"

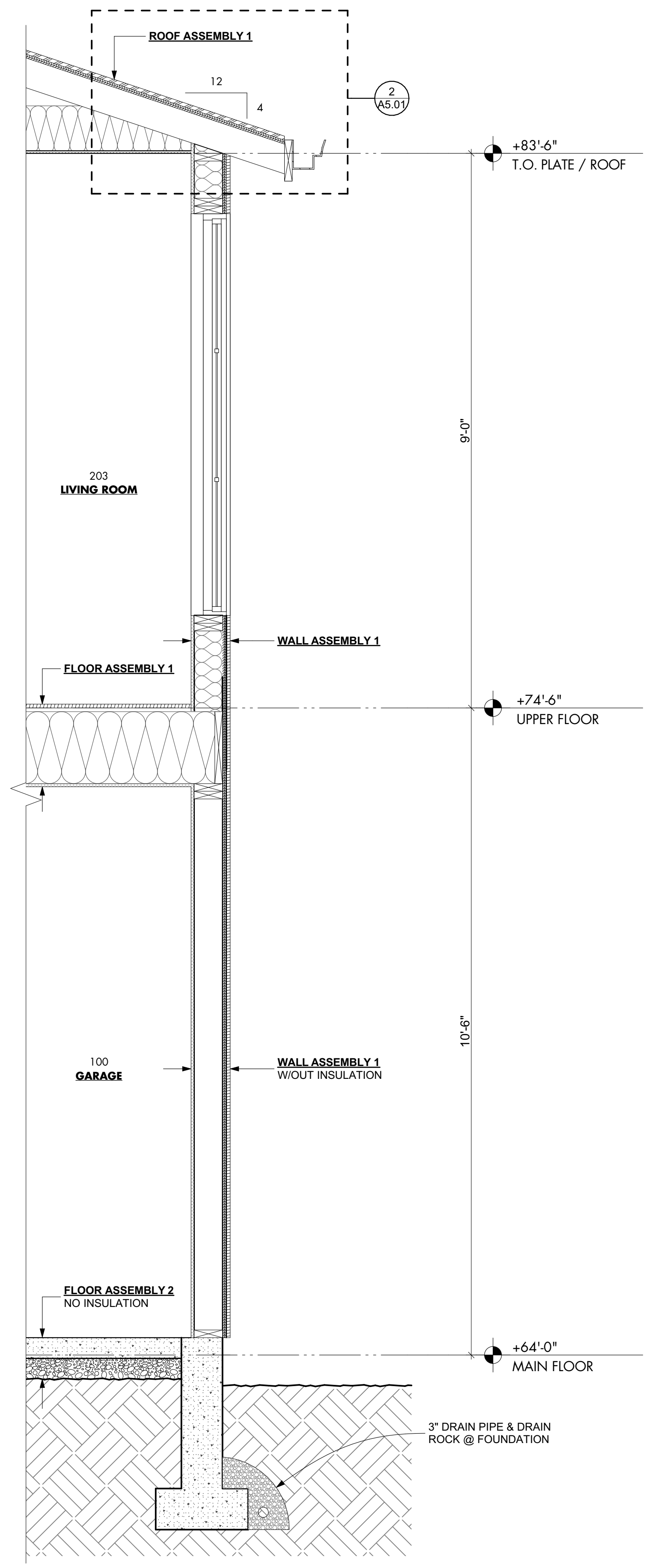


**2 BUILDING SECTION B**  
 SCALE: 1/4" = 1'-0"





**2 EAVE DETAILS**  
 SCALE: 1 1/2" = 1'-0"  
 0 6" 12" 18"



**1 WALL SECTION**  
 SCALE: 3/4" = 1'-0"  
 0 1' 2' 3'

FILE: Wang & Yang ADU.rvt PRINTED: Sunday, February 25, 2024

**SIYAO**  
STUDIO

**WANG & YANG ADU**  
 6450 E MERCER WAY  
 MERCER ISLAND, WA 98040

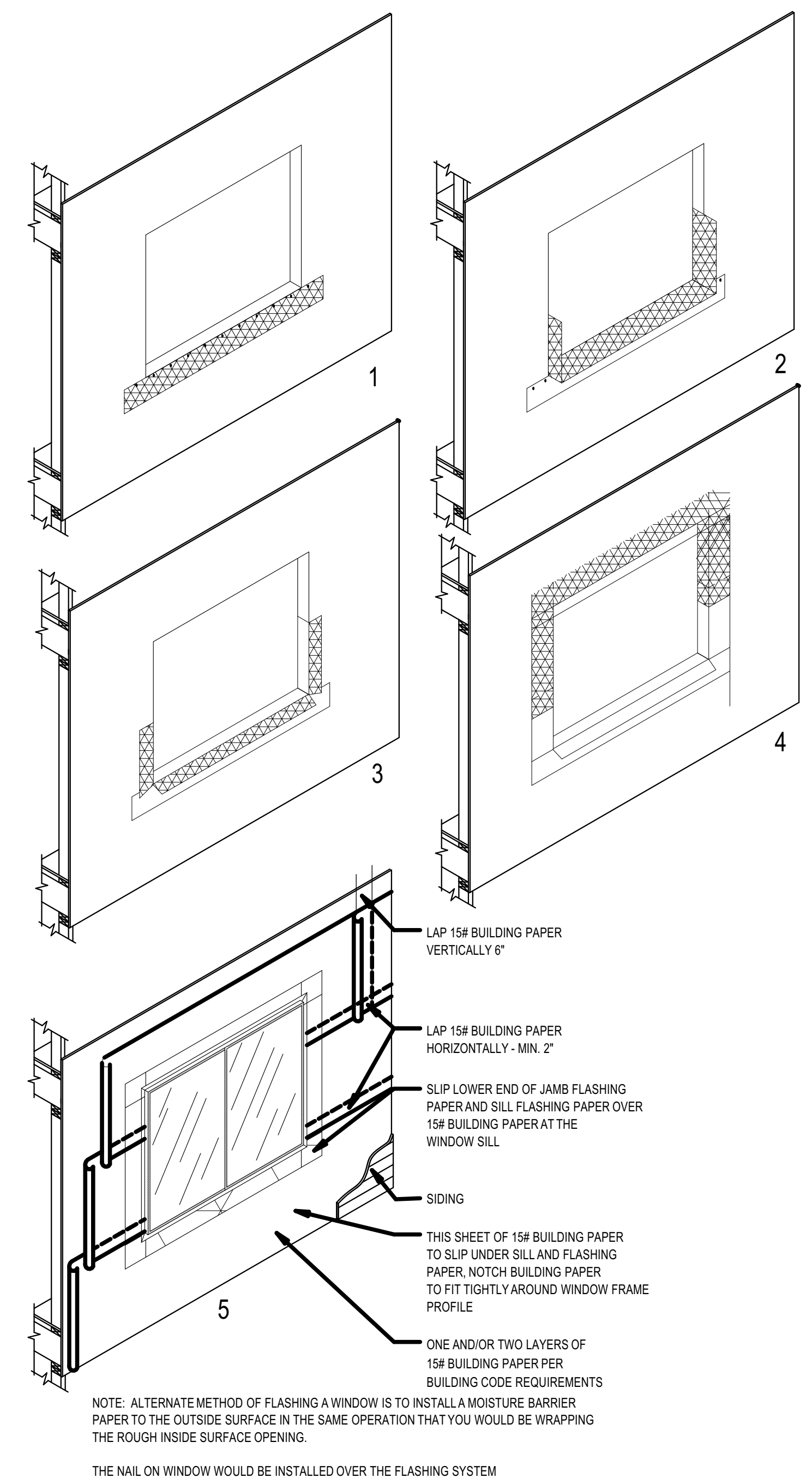
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WALL SECTIONS

**A5.01**

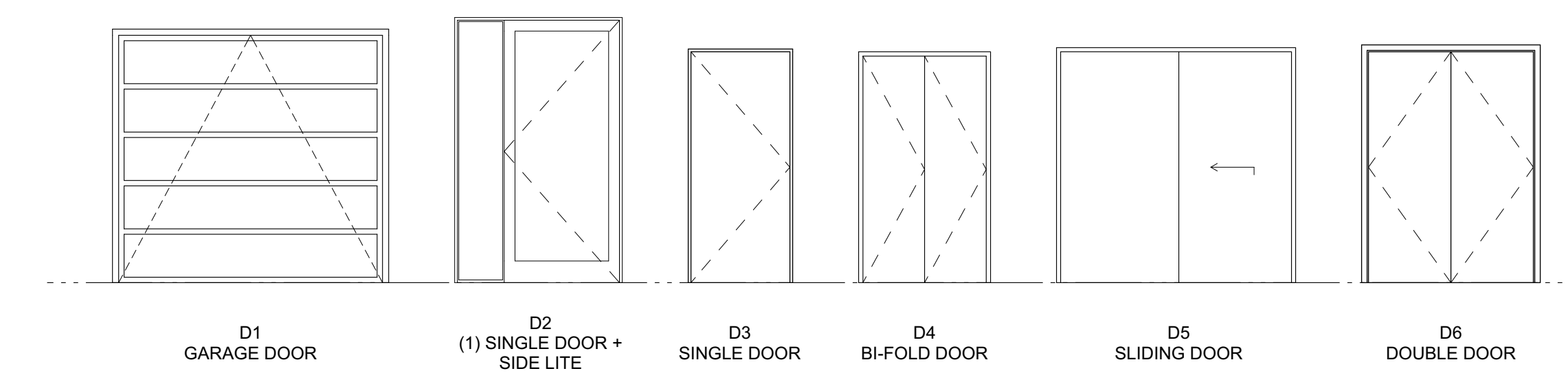




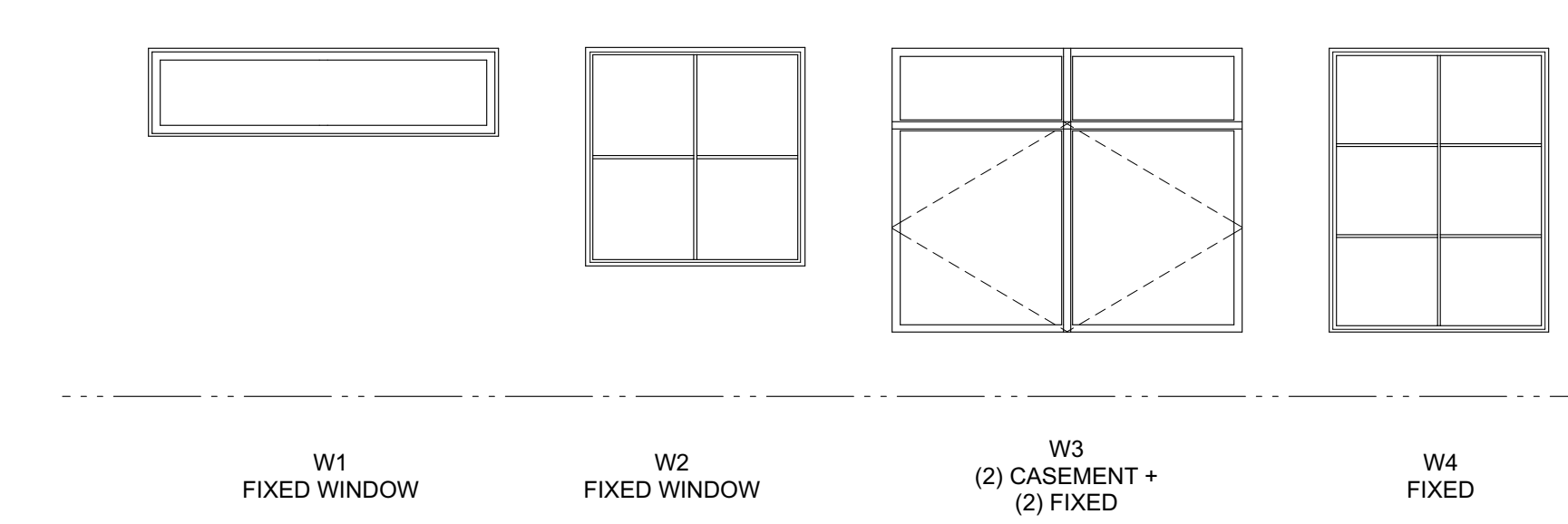
WINDOW SCHEDULE											
LOCATION	NO.	UNIT DIMENSIONS			OPERATION	MFR	TYPE	EGRESS	SAFETY GLASS	U-VALUE	NOTES:
		WIDTH	HEIGHT	HEAD HEIGHT							
<b>MAIN FLOOR</b>											
	102C	8'-0"	6'-6"	8'-0"	CSMT	PER CONTRACTOR	W3	YES	NO	0.28	
	102D	9'-0"	3'-6"	8'-0"	FIXED	PER CONTRACTOR	W2		NO	0.28	
<b>UPPER FLOOR</b>											
	201A	8'-0"	2'-0"	8'-0"	FIXED	PER CONTRACTOR	W1		NO	0.28	
	202A	5'-0"	6'-6"	8'-0"	FIXED	PER CONTRACTOR	W4		NO	0.28	
	203A	8'-0"	2'-0"	8'-0"	FIXED	PER CONTRACTOR	W1		NO	0.28	
	203B	4'-0"	6'-6"	8'-0"	FIXED	PER CONTRACTOR	W4		NO	0.28	
	203C	8'-0"	2'-0"	8'-0"	FIXED	PER CONTRACTOR	W1		NO	0.28	
	203D	5'-0"	5'-0"	18'-6"	FIXED	PER CONTRACTOR	W2		NO	0.28	
	203E	5'-0"	6'-6"	8'-0"	FIXED	PER CONTRACTOR	W4		NO	0.28	
	203F	5'-0"	6'-6"	8'-0"	FIXED	PER CONTRACTOR	W4		NO	0.28	
	207A	4'-0"	2'-0"	8'-0"	FIXED	PER CONTRACTOR	W1		NO	0.28	

EXTERIOR DOOR SCHEDULE									
LOCATION	NO.	UNIT DIMENSIONS		TYPE	MFR	SAFETY GLASS	U-VALUE	REMARKS	
		WIDTH	HEIGHT						
<b>MAIN FLOOR</b>									
	100A	8'-0"	7'-6"	D1	AMARR	NO		GARAGE DOOR, AMARR LINCOLN	
	100B	8'-0"	7'-6"	D1	AMARR	NO		GARAGE DOOR, AMARR LINCOLN	
	101A	5'-0"	8'-0"	D2	PER CONTRACTOR	YES		CUSTOM ENTRY DOOR WITH SIDE LITE	

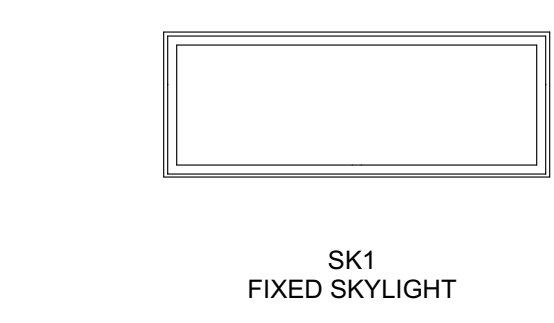
SKYLIGHT SCHEDULE									
LOCATION	NO.	UNIT DIMENSIONS		MFR	TYPE	OPERATION	SAFETY GLASS	U-VALUE	NOTES:
		WIDTH	HEIGHT						
<b>T.O. PLATE / ROOF</b>									
	300A	8'-0"	3'-0"	PER CONTRACTOR	SK1	FIXED	NO		



DOOR TYPES



WINDOW TYPES



SKYLIGHT TYPES

INTERIOR DOOR SCHEDULE							
LOCATION	NO.	UNIT DIMENSIONS		MFR	TYPE	SAFETY GLASS	NOTES
		WIDTH	HEIGHT				
<b>MAIN FLOOR</b>							
	101B	3'-0"	7'-0"	PER CONTRACTOR	D3	NO	
	102A	2'-8"	7'-0"	PER CONTRACTOR	D3	NO	
	102B	4'-0"	7'-0"	PER CONTRACTOR	D4	NO	
	103A	2'-6"	7'-0"	PER CONTRACTOR	D3	NO	
<b>UPPER FLOOR</b>							
	204A	7'-0"	7'-0"	PER CONTRACTOR	D5	NO	
	205A	5'-0"	7'-0"	PER CONTRACTOR	D6	NO	
	206A	2'-6"	7'-0"	PER CONTRACTOR	D3	NO	
	207A	2'-8"	7'-0"	PER CONTRACTOR	D3	NO	

NOTE:  
ALL DOORS TO BE SOLID CORE.



# GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

## CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE 2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC)

### DESIGN LOADING CRITERIA

ROOF SNOW LOAD 25 PSF  
FLOOR LIVE LOAD (RESIDENTIAL) 40 PSF

**SNOW :**  
ROOF SNOW LOAD = 25 PSF  
GROUND SNOW LOAD = 20 PSF  
EXPOSURE  $C_e = 1.00$   
IMPORTANCE FACTOR  $I_s = 1.00$   
THERMAL FACTOR  $C_t = 1.00$

**WIND :** ANALYSIS PROCEDURE: ASCE 7-16 CHAPTER 27 "PART 1 - BUILDINGS OF ALL HEIGHTS"  
RISK CATEGORY II  
98 MPH  
EXPOSURE "B"  
TOPOGRAPHIC FACTOR  $K_{zt} = 1.0$

CLADDING / WINDOW DESIGN PRESSURE (MAX.) 35 PSF  
ROOFING DESIGN PRESSURE NOT AT A CORNER (MAX.) 44 PSF  
ROOFING DESIGN PRESSURE AT CORNER (MAX.) 67 PSF

THE DESIGN WIND PRESSURES LISTED ABOVE ARE INWARD OR OUTWARD AND ARE BASED ON AN EFFECTIVE WIND AREA OF 10 SQUARE FEET NEAR A BUILDING CORNER, U.O.N. CORNER AND OTHER ZONES ARE DEFINED BY FIGURE 30.3-1, 30.3-2A TO 2I AND 30.3-5A TO 5B IN ASCE 7-16. REDUCED DESIGN PRESSURES MAY BE CALCULATED USING ASCE 7. NOTE THAT THE DESIGN WIND PRESSURES NOTED ABOVE ARE ULTIMATE VALUES PER THE 2018 IBC AND SHALL BE MULTIPLIED BY 0.6 FOR ALLOWABLE STRESS DESIGN.

**EARTHQUAKE :** ANALYSIS PROCEDURE: IBC "EQUIVALENT LATERAL FORCE PROCEDURE"  
SEISMIC DESIGN CATEGORY (SDC) = D  
RISK CATEGORY = II  
SEISMIC SITE CLASS = D  
IMPORTANCE FACTOR  $I_e = 1.0$   
MAPPED MCE  $S_s = 1.61$ ;  $S_1 = 0.62$   
DESIGN ACCELERATION  $S_{ds} = 1.14$ ;  $S_{d1} = 0.86$   
SEISMIC RESISTING SYSTEM: WOOD PANEL BEARING SHEAR WALL,  $R = 6.5$

3. LATERAL LOADS ARE TRANSFERRED BY THE ROOF AND FLOOR DIAPHRAGMS TO THE SHEAR WALLS. FORCES ARE BASED ON THE TRIBUTARY AREA FOR EACH SHEAR WALL AND ARE CARRIED BY THE SHEAR WALLS TO THE FOUNDATION.

4. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

5. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.

6. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THEIR WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.

8. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.

9. 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. WHERE INFORMATION ON THE DRAWINGS IS IN CONFLICT WITH THE SPECIFICATIONS, THE MORE STRINGENT SHALL APPLY, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. DO NOT SCALE THE DRAWINGS.

10. ALL STRUCTURAL SYSTEMS WHICH ARE COMPOSED OF FIELD ERECTED COMPONENTS SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

11. SHOP DRAWINGS FOR CONNECTOR PLATE WOOD ROOF TRUSSES AND PLYWOOD WEB JOISTS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

12. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, AND THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR REVIEW.

13. 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.

## GEOTECHNICAL

14. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL REPORT OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH (CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH) AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND GEOTECHNICAL ENGINEER. UNLESS OTHERWISE NOTED, FOOTINGS SHALL BE CENTERED UNDER COLUMNS OR WALLS ABOVE.

BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE GEOTECHNICAL REPORT.

THE STRUCTURAL DESIGN IS BASED ON THE FOLLOWING VALUES FROM THE REFERENCED GEOTECHNICAL REPORT:  
ALLOWABLE SOIL BEARING PRESSURE 2,500 PSF

GEOTECHNICAL REPORT REFERENCE PROJECT # 2EH03221024 DATED OCT.5<sup>TH</sup>, 2023 PREPARED BY MERIT ENGINEERING, INC.

## CONCRETE

15. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301. CONSTRUCTION TOLERANCES SHALL NOT EXCEED THOSE LISTED IN ACI 117. STRENGTHS AT 28 DAYS AND MIX CRITERIA SHALL BE AS FOLLOWS:

TYPE OF CONSTRUCTION	28 DAY STRENGTH (fc)	MAXIMUM SLUMP	MIN. CEMENT CONTENT PER CUBIC YARD	MAX. AGGREGATE SIZE
A. FOOTINGS, SLABS-ON-GRADE, STEM WALLS	2,500 PSI	5"	5-1/2 SACKS	1 1/4"

MIXES SHALL BE PROPORTIONED SO AS NOT TO EXCEED THE MAXIMUM SLUMPS INDICATED (BEFORE THE ADDITION OF ADMIXTURES). THE WATER/CEMENT RATIO SHALL NOT EXCEED 0.55 FOR FOOTINGS AND 0.45 FOR ALL SLABS AND EXPOSED CONCRETE.

THE MINIMUM AMOUNT OF CEMENT AND THE MAXIMUM SLUMP MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. (THE W/C RATIO LIMITS STILL APPLY). THE PERFORMANCE MIX 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 SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 301. CHEMICAL ADMIXTURES AND FLY ASH SHALL CONFORM TO ASTM C494 AND C618 RESPECTIVELY. FLY ASH PERCENTAGE OF TOTAL CEMENTITIOUS MATERIAL SHALL NOT EXCEED 20%. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION, THE COST OF WHICH SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY TO CONTRACT DOCUMENTS. CONTRACTOR MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

16. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60,  $f_y = 60,000$  PSI. GRADE 60 REINFORCING STEEL INDICATED ON DRAWINGS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING STEEL COMPLYING WITH ASTM A615 (S1) MAY BE WELDED ONLY IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN A.W.S. D1.4 ARE SUBMITTED.

LONGITUDINAL REINFORCING STEEL IN DUCTILE FRAME MEMBERS AND IN SHEAR WALL BOUNDARY MEMBERS SHALL COMPLY WITH ASTM A706. ASTM A615 GRADE 60 REINFORCING STEEL IS ALLOWED IN THESE MEMBERS IF (A) THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI (RETESTS SHALL NOT EXCEED THIS VALUE BY MORE THAN AN ADDITIONAL 3,000 PSI) AND (B) THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRESS TO THE ACTUAL TENSILE YIELD STRENGTH IS NOT LESS THAN 1.25.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

SPIRAL REINFORCEMENT SHALL BE PLAIN WIRE CONFORMING TO ASTM A615, GRADE 60,  $f_y = 60,000$  PSI.

17. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315 AND 318. LAP ALL CONTINUOUS REINFORCEMENT #5 AND SMALLER 60 BAR DIAMETERS, 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 60 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318, CLASS B. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS. PROVIDE (2) #5 MIN. U.N.O. TRIM BARS AROUND ALL OPENINGS IN CONCRETE WALLS OR SLABS EXTENDING 2'-6" PAST CORNERS, TYPICAL.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO REINFORCING BARS SHALL BE "WET-SET" INTO THE CONCRETE. PROVIDE A 20' LONG REBAR GROUND (UFER GROUND) PER ELECTRICIAN.

18. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST EARTH	3"
FORMED SURFACES EXPOSED TO EARTH (i.e. WALLS BELOW GROUND) OR WEATHER (#5 BARS OR SMALLER)	1-1/2"
SLABS AND WALLS (INTERIOR FACE)	GREATER OF (BAR DIAMETER PLUS 1/8") OR 3/4"

19. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND PRECAST.

20. POLYSTYRENE (RIGID INSULATION) LIGHTWEIGHT STRUCTURAL FILL PLACED BELOW CONCRETE SLABS SHALL BE RIGID CELLULAR POLYSTYRENE CONFORMING TO ASTM D6817 OR ASTM C578, WITH A MINIMUM COMPRESSIVE RESISTANCE OF 5 PSI @ 1% DEFORMATION AND A MINIMUM COMPRESSIVE RESISTANCE OF 15 PSI @ 10% DEFORMATION, U.O.N. MAXIMUM DENSITY SHALL BE 2.0 PCF. OFFSET BLOCK JOINTS BETWEEN ADJACENT LAYERS AND ATTACH BLOCKS PER THE MANUFACTURER'S RECOMMENDATIONS.

## ANCHORAGE

21. SCREW ANCHORS INTO CONCRETE SHALL BE "TITEN HD", AS MANUFACTURED BY SIMPSON STRONG-TIE ANCHOR SYSTEMS. INSTALL IN STRICT CONFORMANCE WITH I.C.C. REPORT NO. ESR-2713 INCLUDING STANDARD EMBEDMENT REQUIREMENTS U.O.N. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW WITH I.C.C. OR IAPMO UES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. SPECIAL INSPECTION IS REQUIRED FOR ALL SCREW ANCHOR INSTALLATION.

## WOOD

22. FRAMING LUMBER: SHALL BE KILN DRIED OR MC-19 (MOISTURE CONTENT LESS THAN 19%), AND GRADED AND MARKED IN CONFORMANCE WITH W.C.L.I.B. STANDARD NO. 17 GRADING RULES FOR WEST COAST LUMBER. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS (2X AND 4X MEMBERS) DOUGLAS FIR OR HEM-FIR NO. 2

BEAMS AND STRINGERS (INCLUDING 6 X AND LARGER MEMBERS) DOUGLAS FIR NO. 1

POSTS AND TIMBERS DOUGLAS FIR NO. 1

STUDS, PLATES & MISCELLANEOUS LIGHT FRAMING (AS NOTED ON PLANS / DETAILS) DOUGLAS FIR OR HEM-FIR NO. 2

2X, 3X AND 4X TONGUE AND GROOVE DECKING HEM-FIR COMMERCIAL DEX

23. WOOD SETTLEMENT SHRINKAGE: DUE TO CROSS GRAIN WOOD SHRINKAGE, THIS BUILDING IS EXPECTED TO SETTLE APPROXIMATELY 1/8 TO 1/4 INCH PER STORY. ALL UTILITIES SHALL BE DESIGNED WITH FLEXIBLE JOINTS OR OTHER MEANS TO APPROPRIATELY ACCOMMODATE THIS NORMAL SETTLEMENT. ALL INTERIOR AND EXTERIOR SHEATHING AND FINISHES SHALL BE INSTALLED SUCH THAT NO DAMAGE WILL OCCUR. SHRINKAGE IS EXPECTED IN THE THICKNESS OF THE WALL PLATES AND NOT IN THE LENGTH OF THE WALL STUDS.

24. LAMINATED VENEER LUMBER (LVL) SHALL BE DESIGNED AND MANUFACTURED PER ASTM D5456. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, AND THE INDEPENDENT INSPECTION AGENCY'S LOGO. ALL LAMINATED VENEER LUMBER SHALL BE MANUFACTURED USING DOUGLAS FIR VENEER GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. MINIMUM STRUCTURAL PROPERTIES ARE AS FOLLOWS:

$F_b = 2600$  PSI,  $E = 2.0 \times 10^6$  PSI,  $F_v = 285$  PSI

DESIGN SHOWN ON PLANS IS BASED ON MATERIALS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

25. LAMINATED STRAND LUMBER (LSL) SHALL BE DESIGNED AND MANUFACTURED PER ASTM D5456. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, AND THE INDEPENDENT INSPECTION AGENCY'S LOGO. ALL LAMINATED STRAND LUMBER SHALL BE MANUFACTURED USING A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559. MINIMUM STRUCTURAL PROPERTIES ARE AS FOLLOWS:

RIM JOISTS AND BLOCKING (1-1/4" MINIMUM THICKNESS AT NON-SHEAR WALLS; SEE SCHEDULE FOR MINIMUM THICKNESS AT SHEAR WALLS):

$F_b = 1700$  PSI,  $E = 1.3 \times 10^6$  PSI,  $F_v = 400$  PSI

BEAMS AND HEADERS:  
 $F_b = 2325$  PSI,  $E = 1.55 \times 10^6$  PSI,  $F_v = 310$  PSI

STUDS:  
2x4 & 2x6  $F_b = 1700$  PSI,  $E = 1.3 \times 10^6$  PSI,  $F_v = 400$  PSI  
> 2x6  $F_b = 2425$  PSI,  $E = 1.6 \times 10^6$  PSI,  $F_v = 400$  PSI

COLUMNS:  
 $F_b = 1700$  PSI,  $E = 1.3 \times 10^6$  PSI,  $F_v = 400$  PSI

DESIGN SHOWN ON PLANS IS BASED ON MATERIALS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

26. PARALLEL STRAND LUMBER (PSL) SHALL BE DESIGNED AND MANUFACTURED PER ASTM D5456. EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, AND THE INDEPENDENT INSPECTION AGENCY'S LOGO. ALL PARALLEL STRAND LUMBER SHALL BE MANUFACTURED USING DOUGLAS FIR STRANDS GLUED WITH A WATERPROOF ADHESIVE MEETING THE REQUIREMENTS OF ASTM D2559 WITH ALL GRAIN PARALLEL WITH THE LENGTH OF THE MEMBER. MINIMUM STRUCTURAL PROPERTIES ARE AS FOLLOWS:

$F_b = 2900$  PSI,  $E = 2.2 \times 10^6$  PSI,  $F_v = 290$  PSI  
 $F_b = 2400$  PSI,  $E = 1.8 \times 10^6$  PSI,  $F_c = 2500$  PSI (COMMERCIAL COLUMNS)

DESIGN SHOWN ON PLANS IS BASED ON MATERIALS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

## SHEET INDEX

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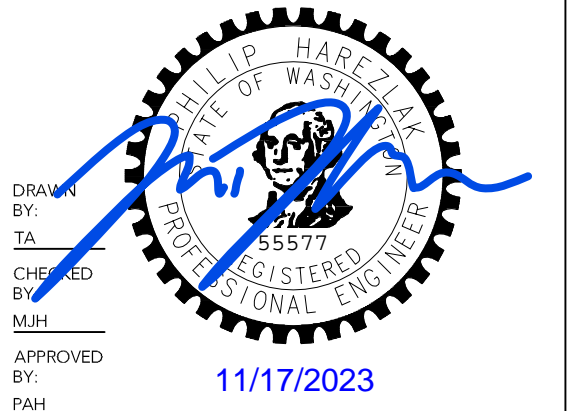


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REVISIONS:

NO.	DESCRIPTION	DATE

PROJECT NUMBER:  
23-146  
ISSUE DATE:  
11.17.2023  
CURRENT REVISION:  
PERMIT

SHEET NAME:  
**GENERAL STRUCTURAL NOTES/SHEET INDEX**

SHEET NUMBER:  
**S1.0**



## GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

27. WOOD I-JOISTS SHALL BE DESIGNED BY THE MANUFACTURER FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS AND SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S PUBLISHED SPECIFICATIONS. ALL NECESSARY BRIDGING, BLOCKING, BLOCKING PANELS, STIFFENERS, ETC., SHALL BE DETAILED AND FURNISHED BY THE MANUFACTURER. SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. DESIGN SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF A STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER. PERMANENT AND TEMPORARY BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S SPECIFICATIONS. GLUE FLOOR JOISTS TO SHEATHING AS REQUIRED BY THE JOIST MANUFACTURER.

DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE WOOD I-JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE JOIST HANGERS AND OTHER HARDWARE MAY BE SUBSTITUTED FOR ITEMS SHOWN PROVIDED THEY HAVE I.C.C. OR IAPMO UES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH PLYWOOD WEB JOIST PROVIDED.

28. PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH IBC SECTION 2303.4 AND ANSIT/PI 1-2014 "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION" FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. TRUSSES SHALL BE HANDLED, INSTALLED, AND BRACED PER "HIB 91" PER THE TRUSS PLATE INSTITUTE. LOADING SHALL BE AS FOLLOWS:

TOP CHORD SNOW LOAD	25 PSF
TOP CHORD DL ALLOWANCE FOR PV PANELS	5 PSF
TOP CHORD DEAD LOAD	5 PSF
BOTTOM CHORD LIVE LOAD	10 PSF (NOT INCLUDED IN TOTAL)
BOTTOM CHORD DEAD LOAD	5 PSF
TOTAL LOAD	40 PSF
NET WIND UPLIFT (TOP CHORD)	10 PSF

THE LOADS ABOVE SHALL BE INCREASED TO THE FOLLOWING IF THE TRUSSES MEET THE DESCRIPTION OF AN "UNINHABITABLE ATTIC WITH LIMITED STORAGE" AS DEFINED IN FOOTNOTE J OF IBC TABLE 1607.1:

BOTTOM CHORD LIVE LOAD	20 PSF - INCLUDE IN TOTAL
BOTTOM CHORD DEAD LOAD	10 PSF

SNOW LOAD DUE TO DRIFTING AND UNBALANCED LOADS SHALL BE INCLUDED PER THE IBC. TOP CHORDS SHALL BE OF LUMBER. UTILIZE A MINIMUM CREEP FACTOR OF 2.0 FOR DEAD AND SUSTAINED LIVE LOADS IN DETERMINING THE TRUSS DEFLECTIONS. MAXIMUM TOTAL DEFLECTION SHALL BE LESS THAN OR EQUAL TO L/240 OF THE TOTAL SPAN AND MAXIMUM LIVE LOAD DEFLECTION SHALL BE LESS THAN OR EQUAL TO L/360 OF THE TOTAL SPAN. PROVIDE ADEQUATE PLIES AND/OR METAL BRACKETS TO ADEQUATELY DISTRIBUTE THE BEARING PRESSURE AT THE ENDS OF THE GIRDER TRUSSES TO THE TOP PLATES OF THE BEARING WALLS SUCH THAT THE BEARING PRESSURE DOES NOT EXCEED 405 PSI. PROVIDE ADDITIONAL TRUSSES (AS REQUIRED) TO CARRY ALL CONCENTRATED LOADS AND MECHANICAL UNITS.

WOOD TRUSSES SHALL UTILIZE I.C.C. OR IAPMO UES APPROVED CONNECTOR PLATES. SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTED DOCUMENTS SHALL BEAR THE STAMP AND SIGNATURE OF A STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER. PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, HIPS, VALLEYS, ETC., SHOWN ON THE DRAWINGS. EXACT COMPOSITION OF SPECIAL HIP, VALLEY, AND INTERSECTION AREAS (USE OF GIRDER TRUSSES, JACK TRUSSES, STEP-DOWN TRUSSES, ETC.) SHALL BE DETERMINED BY THE MANUFACTURER UNLESS SPECIFICALLY INDICATED ON THE PLANS. PROVIDE ALL TRUSS TO TRUSS AND TRUSS TO GIRDER TRUSS CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. PROVIDE FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.

29. WOOD SHEATHING SHALL BE APA RATED, EXTERIOR GLUE, EXPOSURE 1, IN CONFORMANCE WITH THE REQUIREMENTS FOR THEIR TYPE IN DOC PS-1 OR PS-2. SEE PLANS FOR THICKNESS, PANEL IDENTIFICATION INDEX AND NAILING REQUIREMENTS.

UNLESS OTHERWISE NOTED ON THE PLANS, ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH FACE GRAIN PERPENDICULAR TO SUPPORTS. 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 FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH (2) 10d-F NAILS AT EACH END, UNLESS OTHERWISE NOTED. AT BLOCKED FLOOR AND ROOF DIAPHRAGMS PROVIDE FLAT 2X BLOCKING AT ALL UNFRAMED PANEL EDGES AND NAIL WITH EDGE NAILING SPACED PER PLANS.

30. ALL WOOD EXPOSED TO WEATHER, OR BEARING ON UNPROTECTED CONCRETE BELOW GRADE, OR BEARING ON UNPROTECTED CONCRETE LESS THAN 8" FROM EXPOSED EARTH SHALL BE PRESSURE-TREATED, U.O.N. PRESSURE TREATMENT SHALL BE WITH AN APPROVED PRESERVATIVE AND BRANDED WITH A QUALITY CONTROL AGENCY MARK BY THE AMERICAN WOOD PRESERVERS BUREAU OR EQUAL. ALL METAL HARDWARE IN CONTACT WITH TREATED WOOD SHALL BE PROTECTED WITH A G185 GALVANIZED COATING (ZMAX) OR BETTER. ALL NAILS IN TREATED WOOD SHALL BE HOT-DIP GALVANIZED OR BETTER. PROVIDE 2 LAYERS OF 30# ASPHALT IMPREGNATED BUILDING PAPER BETWEEN NON-PRESSURE-TREATED LEDGERS, BLOCKING, ETC., AND CONCRETE.

31. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NO. C-C-2019. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE I.C.C. OR IAPMO UES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. CONNECTORS SHALL BE SIZED TO MATCH THE SIZE OF THE FRAMING MEMBERS BEING CONNECTED. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE COMMON. ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED. ALL BOLTS TIGHTENED TO SNUG TIGHT.

32. WOOD FASTENERS:

A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

DRAWING ID	NAIL NAME	NAIL DIAMETER	NAIL LENGTH
"6d"	6d Common	0.113"	2"
"8d Box"	8d Box	0.113"	2-1/2"
"8d"	8d Common	0.131"	2-1/2"
"10d-F"	10d Frammer	0.131"	3"
"10d"	10d Shear	0.148"	2-1/4"
"16d"	16d Sinker	0.148"	3-1/4"

IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.

B. NAILS - SHEATHING FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.

C. SCREWS SHALL BE WOOD SCREWS OF THE DIAMETER AND LENGTH NOTED ON THE DRAWINGS. SDS FASTENERS ARE SIMPSON STRONG DRIVE SCREWS.

D. HOT DIPPED GALVANIZED NAILS, BOLTS AND METAL PLATES - ALL NAILS, BOLTS AND METAL PLATES IN CONTACT WITH PRESSURE TREATED (INCLUDING FIRE-RETARDANT TREATED) LUMBER SHALL BE HOT DIPPED GALVANIZED.

33. WOOD FRAMING NOTES: THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC. MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO IBC TABLE 2304.10.1. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. TIGHTEN BOLTS AND LAG SCREWS SNUGLY AGAINST WOOD FRAMING AFTER WOOD HAS REACHED SPECIFIED MOISTURE CONTENT.

B. WALL FRAMING: ALL BEARING AND SHEAR WALLS SHOWN AND NOT OTHERWISE NOTED SHALL BE 2 x 4 STUDS @ 16" O.C. AT INTERIOR WALLS AND 2 x 6 @ 16" O.C. AT EXTERIOR WALLS. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL BEARING AND SHEAR WALLS AND AT EACH SIDE OF ALL OPENINGS. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW.

ALL BEARING STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS AT 8" O.C. STAGGERED OR BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS WITH 3"x3"x1/4" PLATE WASHERS @ 4'-0" O.C., UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH 10d-F NAILS @ 8" O.C. STAGGERED. REFER TO THE PLANS AND SHEAR WALL SCHEDULE FOR REQUIRED SHEATHING AND NAILING. WHEN NOT OTHERWISE NOTED, PROVIDE GYPSUM WALLBOARD ON INTERIOR SURFACES AND GYPSUM SHEATHING ON EXTERIOR SURFACES ATTACHED TO ALL STUDS, TOP AND BOTTOM PLATES AND BLOCKING WITH SCREWS AT 8" O.C. USE 1-1/4" W #6 SCREWS FOR 1/2" GWB AND 5/8" GWB WHERE OCCURS. USE 1-1/4" W #6 GALVANIZED SCREWS FOR 1/2" GWB AND 5/8" EXTERIOR GYPSUM SHEATHING, WHERE OCCURS. VERIFY THE FIRE ASSEMBLY REQUIREMENTS WHERE APPLICABLE WITH THE ARCHITECT.

C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH 10d-F NAILS @ 8" O.C. STAGGERED UNLESS OTHERWISE NOTED.

D. POSITIVE CONNECTIONS: PROVIDE THE FOLLOWING SIMPSON CONNECTORS AT TYPICAL FRAMING UNLESS OTHERWISE NOTED ON PLAN OR DETAIL. PROVIDE CQIECOQ CAPS AND PBS BASES AT POSTS. PROVIDE BC BASE WHERE POST BEARS ON WOOD FRAMING BELOW. PROVIDE LUS SERIES HANGERS FOR 2X FLOOR AND ROOF JOISTS. CONNECTORS SHALL BE SIZED TO MATCH THE SIZE OF THE FRAMING MEMBERS BEING CONNECTED.

34. TONGUE AND GROOVE STRUCTURAL ROOF AND FLOOR DECKING SHALL BE INSTALLED AS A RANDOM LENGTH CONTINUOUS LAY-UP SYSTEM. INSTALL DECKING IN RANDOM LENGTHS OVER 3 OR MORE SPANS WITH EACH LENGTH OF DECKING OVER AT LEAST ONE FRAMING SUPPORT MEMBER. LAY WITH TONGUES FACING UPWARD ON SLOPED DECKING. FOR 2X AND 3X DECKING THE MAXIMUM MOISTURE CONTENT SHALL BE 15%. FOR 4X DECKING THE MAXIMUM MOISTURE CONTENT SHALL BE 19%.

END JOINTS: DISPERSE END JOINTS AS RANDOMLY AS POSSIBLE TO MAKE EVEN SEPARATION PATTERN.

- A. AT LEAST 24-INCH APART AT ADJACENT PLANKS.
- B. MORE THAN 1-FOOT APART AT ALTERNATE PLANKS SEPARATED BY ONE ROW.
- C. NO END JOINTS IN 1/3 OF END SPAN COURSE BETWEEN FRAMING MEMBERS.
- D. END MATCH EACH JOINT.

THE MINIMUM LENGTHS SHALL BE BASED ON THE FOLLOWING:

- 2X DECKING
  - NOT LESS THAN 40% TO BE 14 FEET AND LONGER.
  - NOT OVER 10% TO BE LESS THAN 10 FEET.
  - NOT OVER 1% TO BE 4 TO 5 FEET.

DECKING SHALL BE INSTALLED AS FOLLOWS:

2X DECKING SHALL BE TOENAILED THROUGH THE TONGUE AND FACENAILED WITH ONE 16d COMMON NAIL PER PIECE PER SUPPORT. COURSES SHALL BE ATTACHED TO EACH OTHER WITH 6d COMMON TOENAILS @ 30" O.C. MAXIMUM.

ABBREVIATIONS			
@	At	L	Angle
d	Penny (Nails)	LB.	Pound
∅	Diameter	LL	Live Load
°	Degrees	LLH	Long Leg Horizontal
...#	Pounds	LLV	Long Leg Vertical
#...	Number	LONGIT.	Longitudinal
		LT. WT.	Lightweight
(A)	Above		
A.B.	Anchor Bolt	MAX.	Maximum
ADD'L	Additional	MECH.	Mechanical
ALT.	Alternate	MEZZ.	Mezzanine
APPROX.	Approximate	MF	Moment Frame
ARCH.	Architect	MFR.	Manufacturer
		MIN.	Minimum
(B)	Below	MISC.	Miscellaneous
B/	Bottom of	MK.	Mark
BF	Braced Frame		
BLKG.	Blocking	(N)	New
BLDG.	Building	N.	North
BM.	Beam	N.S.	Near Side
BOT.	Bottom	NOM.	Nominal
BRG.	Bearing	NTS	Not to Scale
BTWN.	Between		
		O.C.	On Center
∅	Centerline	O.D.	Outside Diameter
C	Camber	O.F.	Outside Face
CIP	Cast In Place	O.H.	Overhang
C.J.	Construction Joint or Control Joint	OPNG.	Opening
CJP	Complete Joint Penetration	OPP.	Opposite
CLG.	Ceiling		
CLR.	Clear	PAF	Powder Actuated Fastener
CMU	Concrete Masonry Unit	PC	Precast
COL.	Column	PERM.	Permanent
CONC.	Concrete	PERP.	Perpendicular
CONN.	Connections	PJP	Partial Joint Penetration
CONST.	Construction	PL or P	Plate
CONT.	Continuous	PLF	Pounds per linear Foot
CSK.	Countersink	PLYWD	Plywood
		PREFAB.	Prefabricated
DBA	Deformed Bar Anchor	PSF	Pounds per Square Foot
DBL	Double	PSI	Pounds per Square Inch
DEG.	Degree	P.T. or PT	Post-Tensioning
DF	Doug Fir-Larch	PT	Pressure-Treated
DIA.	Diameter		
DIAG.	Diagonal	RAD.	Radius
DIAPH.	Diaphragm	REF.	Reference
DIM.	Dimension	REINF.	Reinforce or Reinforcement
DN.	Down	REQD.	Required
DO	Ditto	REV.	Revise
DTL.	Detail	R.O.	Rough Opening
DWG.	Drawing		
		S.	South
(E)	Existing	SCH. or SCHED.	Schedule
E.	East	SECT.	Section
EA.	Each	SHT.	Sheet
E.F.	Each Face	SIM.	Similar
EL.	Elevation	SOG	Slab On Grade
ELEV.	Elevator	SPEC.	Specification
EMBED.	Embedment Length	SQ.	Square
ENGR.	Engineer	SQ. FT.	Square Feet
EQ.	Equal	SQ. IN.	Square Inch(es)
E.W.	Each Way	SPF	Spruce-Pine-Fir
EXP.	Expansion	S.S.	Stainless Steel
EXT.	Exterior	STD.	Standard
		STIFF.	Stiffener
FDN.	Foundation	STL.	Steel
FIN.	Finish	STR.	Structural
FLR.	Floor	SUB.	Substitute
FRP	Fiber Reinforced Polymer	SYM.	Symmetrical
F.S.	Far Side		
FT.	Foot or Feet	T/	Top of
FTG.	Footing	T&B	Top and Bottom
		T&G	Tongue & Groove
GA.	Gauge	TEMP.	Temporary
GALV.	Galvanized	THRU	Through
GL	Glue Laminated	T.O.C.	Top of Concrete
GWB	Gypsum Wall Board	T.O.S.	Top of Steel
		T.O.W.	Top of Wall
HDG	Hot Dipped Galvanized	TRANS.	Transverse
HF	Hem Fir	TS	Tube Steel
HGR.	Hanger	TYP.	Typical
HORIZ.	Horizontal		
HSS	Hollow Structural Section	U.O.N.	Unless Otherwise Noted
HT.	Height		
		VERT.	Vertical
I.D.	Inside Diameter	VIF	Verify in Field
I.F.	Inside Face		
IN.	Inch	W.	West
INFO.	Information	W/ or w/	With
INT.	Interior	W.H.S.	Welded Headed Stud
		W/O	Without
JT.	Joint	WP	Work Point
		W.T.S.	Welded Threaded Stud
K	Kips	WWF	Welded Wire Fabric
KSF	Kips per Square Foot		
KSI	Kips per Square Inch	X SECT.	Cross Section
		X-STR	Extra Strong
		XX-STR	Double Extra Strong



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11/17/2023

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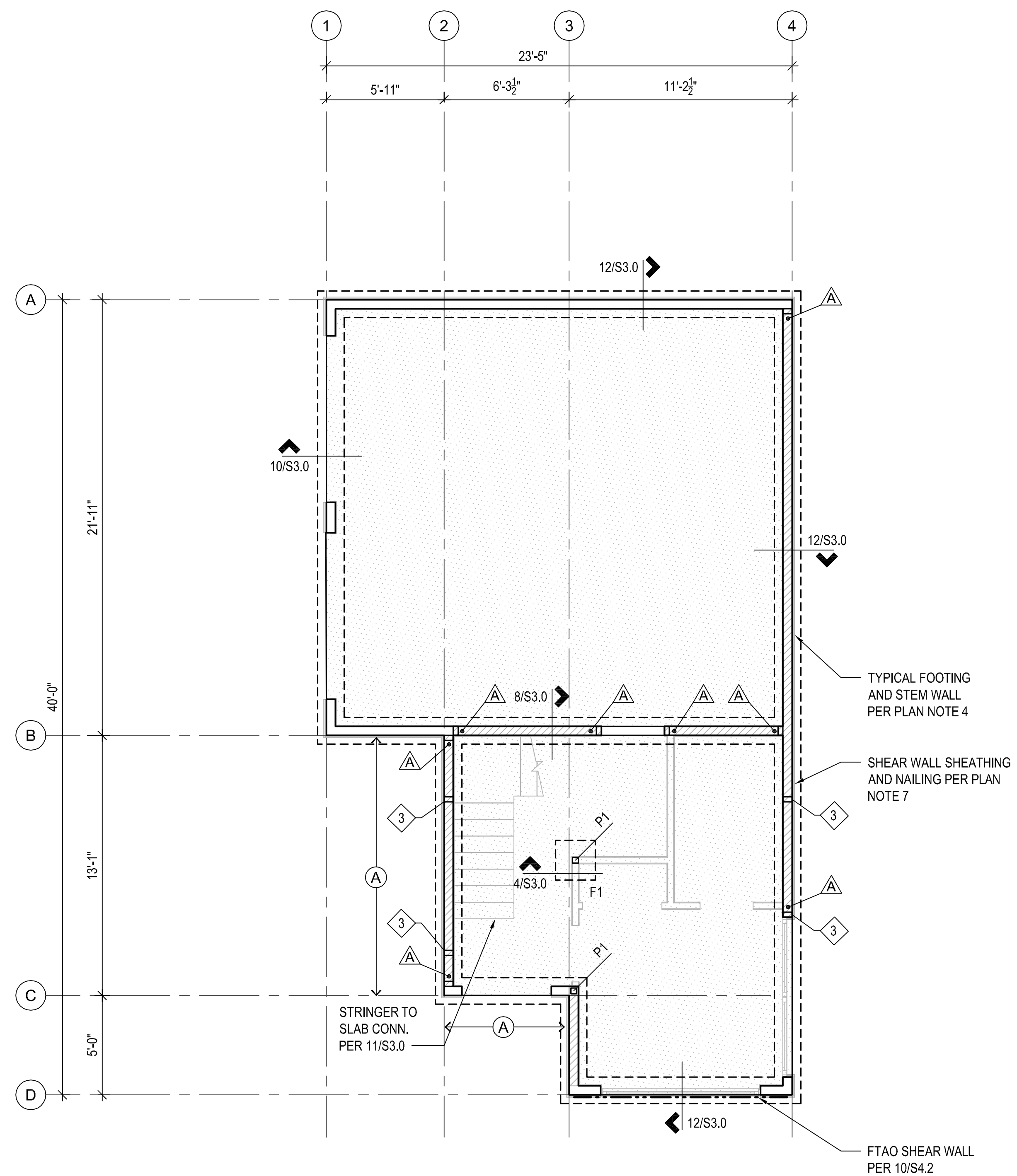
SHEET NAME:

**GENERAL STRUCTURAL NOTES**

SHEET NUMBER:

**S1.1**





**FOUNDATION PLAN**  
SCALE: 1/4" = 1'-0"

STUD WALL TYPE SCHEDULE	
(A)	1 1/2 x 5 1/2 LSL (1.55E) STUDS @ 12" O.C.

FOOTING SCHEDULE	
MARK	SIZE
F1	24" SQ. x 12" DEEP FOOTING w/ (3) #4 E.W. BOTTOM, TYP.

POST SCHEDULE	
MARK	SIZE
P1	P/T 4x4

**SEISMIC FORCE RESISTING SYSTEM LEGEND**

- SW-X SHEAR WALL TYPE 'X' PER SCHEDULE 8/S4.0
- △ HOLDOWN TYPE 'X' PER SCHEDULE 12/S4.0

**LEGEND**

- 4" SLAB-ON-GRADE PER PLAN NOTE 5

**FOUNDATION & MAIN FLOOR FRAMING PLAN NOTES:**

- TOPS OF ALL EXTERIOR FOOTINGS ON THIS PLAN SHALL BE BURIED BELOW FINISHED GRADE AS SHOWN IN THE DETAILS. FOOTINGS SHALL BEAR ON DENSE NATIVE MATERIAL, OR PREPARED AS SPECIFIED IN THE GEOTECHNICAL REPORT.
- FINAL SITE GRADES TO BE DETERMINED BY THE CONTRACTOR. CONTRACTOR SHALL COORDINATE UNDERSLAB PIPING REQUIREMENTS AS SHOWN IN 7/S3.0.
- POSTS AND STUD PACKS SHALL BE CONTINUOUS TO FOUNDATION. TYPICAL STUD WALLS SHALL BE FRAMED USING HEM-FIR #2 2x STUDS @ 16" O.C., U.O.N. POST LOADS FROM ABOVE TO BE BLOCKED PER 7/S4.1.
- TYPICAL FOOTING TO BE 18"W x 8" DP. CONC. STRIP FTG. w/ (2) #4 CONT. BOTTOM AND #4 @ 16" O.C. TRANS. TYP. STEM WALL TO BE 8" STEM WALL w/ #4 @ 12" O.C. HORIZ. AND 16" O.C. VERT.
- SLAB-ON-GRADE SHALL BE 4" THICK w/ WWF 6x6-W2.1xW2.1 MID-DEPTH OR #4 @ 16" O.C. E.W. MID-DEPTH, U.O.N. PROVIDE VAPOR BARRIER BELOW SLAB AS REQUIRED AND PER 2/S3.0. INSTALL CONSTRUCTION AND CONTROL JOINTS PER 2/S3.0.
- ALL CONNECTIONS AND CONNECTORS IN CONTACT WITH PRESSURE-TREATED LUMBER TO BE HOT DIPPED GALVANIZED OR STAINLESS STEEL, PER GENERAL STRUCTURAL NOTES.
- ALL EXTERIOR WALLS TO BE SHEATHED AND NAILED PER SW-6, U.O.N.



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APPROVED BY: PHM  
DATE: 11/17/2023

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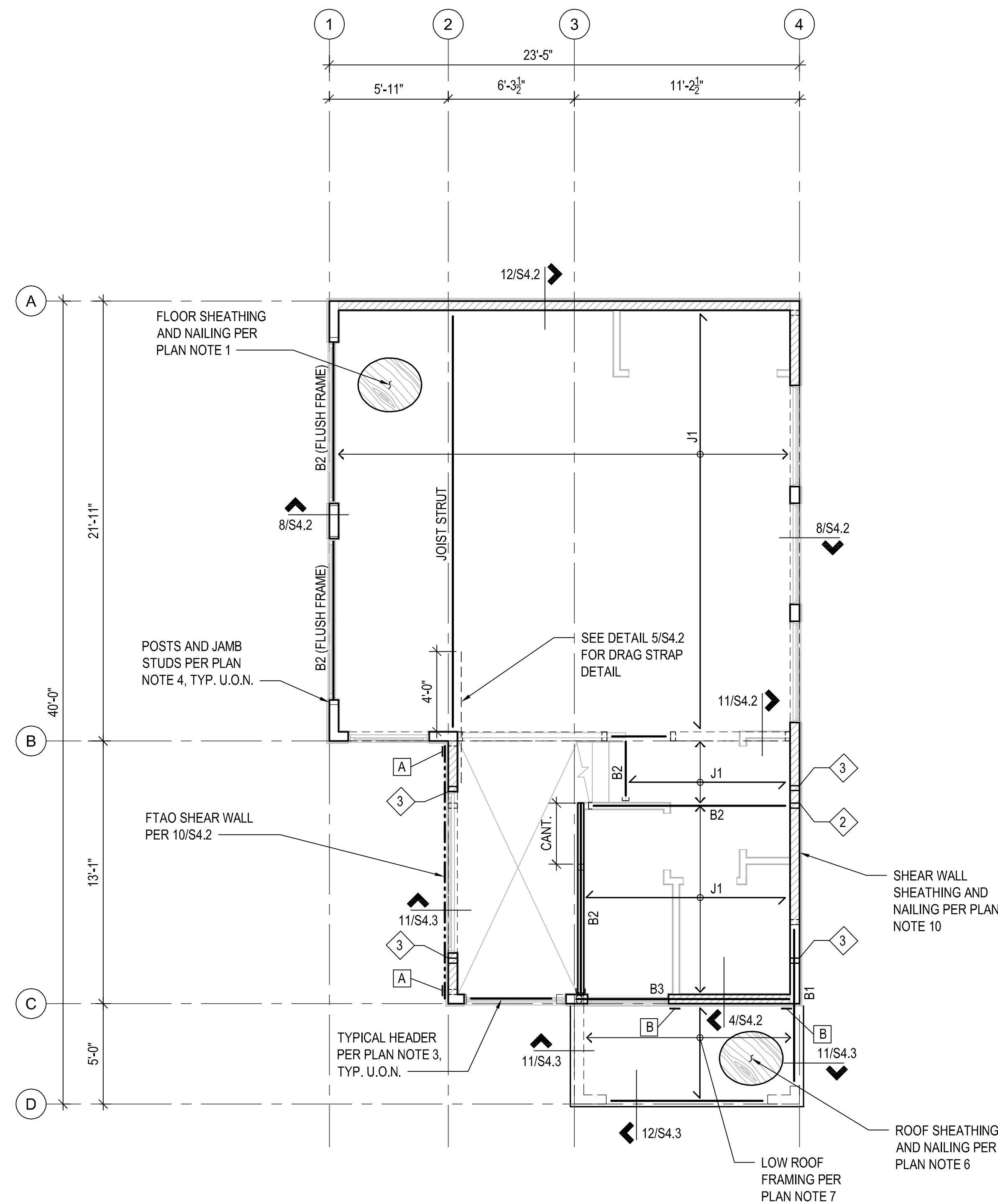
SHEET NAME:

**FOUNDATION PLAN**

SHEET NUMBER:

**S2.0**





**UPPER FLOOR FRAMING PLAN**  
SCALE: 1/4" = 1'-0"

JOIST & BEAM SCHEDULE		
MARK	SIZE	HANGER
J1	14" TJI 110 @ 16" O.C.	PER MFR.
B1	3 1/2" x 9 1/4" LVL	N/A
B2	3 1/2" x 14" LVL	HUS412
B3	5 1/4" x 14" LVL	N/A

**SEISMIC FORCE RESISTING SYSTEM LEGEND**

- SW-X SHEAR WALL TYPE 'X' PER SCHEDULE 8/S4.0
- [X] STRAP TYPE HOLDOWN PER SCHEDULE 10/S4.0
- [Hatched Box] EXTENT OF SHEAR WALL SHEATHING
- STRUT FRAMING MEMBER NAILED AS STRUT PER PLAN NOTE 1

**LEGEND**

- [Arrow] SPAN DIRECTION OF FRAMING MEMBERS (SEE PLAN NOTE 2)
- [Dashed Box] STRUCTURAL WALL BELOW
- [Box with X] POST BELOW
- [Diamond with X] NUMBER OF BUILT-UP STUDS

**FLOOR FRAMING PLAN NOTES:**

- FLOOR SYSTEM SHALL CONSIST OF 2 3/32" PERFORMANCE CATEGORY, APA RATED SHEATHING, 3/8", EXPOSURE 1, NOMINAL 4x8" (T&G OR SQUARE EDGE) PERMANENT OUTDOOR SHEATHING GRADE SHALL BE "EXTERIOR". NAIL SHEATHING AT ALL FRAMED PANEL EDGES, DIAPHRAGM BOUNDARIES, BLOCKING AND EXTERIOR SHEAR WALLS BELOW WITH 10d @ 6" O.C. PROVIDE 1/8" GAP AT ALL PANEL EDGE. FASTENER EDGE DISTANCE TO PANEL EDGE OF 3/8" MINIMUM. NAIL SHEATHING IN PANEL FIELD TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW WITH 10d @ 3" O.C. STAGGERED. NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS WITH 10d @ 12" O.C. GLUE SHEATHING AT ALL SUPPORTS WITH ADHESIVE CONFORMING TO ASTM SPECIFICATION D3498.
- FLOOR JOISTS TO BE 14" TJI 110 @ 16" O.C. PROVIDE HANGERS PER MFR. AS REQUIRED. ALLOWABLE HOLES IN JOISTS PER JOIST SUPPLIER SPECIFICATIONS.
- BEAMS OVER INTERIOR AND EXTERIOR OPENINGS SHALL BE 4x8 AND DROPPED BELOW STUD WALL TOP PLATES PER 10/S4.1, U.O.N.
- POSTS OR JAMB STUDS AT END OF SUPPORTING BEAMS, GIRDER TRUSSES, OR BELOW POSTS SHALL BE (3) STUDS AT A MINIMUM. TYPICAL HEADER STUDS WILL BE (2) CRIPPLE STUDS AND (1) KING STUD.
- OTHER TYPICAL FRAMING DETAILS SHOWN ON SHEET S4.1.
- ROOF SYSTEM SHALL CONSIST OF 1 9/32" PERFORMANCE CATEGORY, APA RATED SHEATHING, 3/8", EXPOSURE 1, NOMINAL 4x8" (T&G OR SQUARE EDGE). NAIL SHEATHING AT ALL FRAMED PANEL EDGES, DIAPHRAGM BOUNDARIES, STRUTS, BLOCKING, AND SHEAR WALLS BELOW w/ 10d @ 6" O.C. PROVIDE 1/8" GAP AT ALL PANEL EDGE. FASTENER EDGE DISTANCE TO PANEL EDGE OF 3/8" MINIMUM. NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS WITH 10d @ 12" O.C. U.O.N. INSTALL PANEL EDGE CLIPS PER GENERAL STRUCTURAL NOTES AT ALL UNFRAMED, UNBLOCKED PANEL EDGES
- ROOF FRAMING SHALL BE CONNECTOR PLATE TRUSSES @ 24" O.C. TRUSS MANUFACTURER SHALL INSTALL ALL TEMPORARY AND PERMANENT TRUSS BOTTOM CHORD BRACING AND BRIDGING, RELATED CONNECTIONS, AND ATTACHMENT DETAILS. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS & ARCHITECTURAL DRAWINGS FOR HEIGHTS AND CONFIGURATIONS. TRUSSES SHALL BE DESIGNED FOR TYPICAL TRUSS LOADING AS SHOWN IN THE GENERAL STRUCTURAL NOTES.
- DO NOT SCALE DRAWINGS. REFER TO ARCH. DRAWINGS FOR ALL DIMENSIONS.
- FOR ALL DUCTS, CHASES, AND PIPES, REFERENCE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- ALL EXTERIOR WALLS TO BE SHEATHED AND NAILED PER SW-6, U.O.N.



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SHEET NAME:

**UPPER FLOOR FRAMING PLAN**

SHEET NUMBER:

**S2.1**



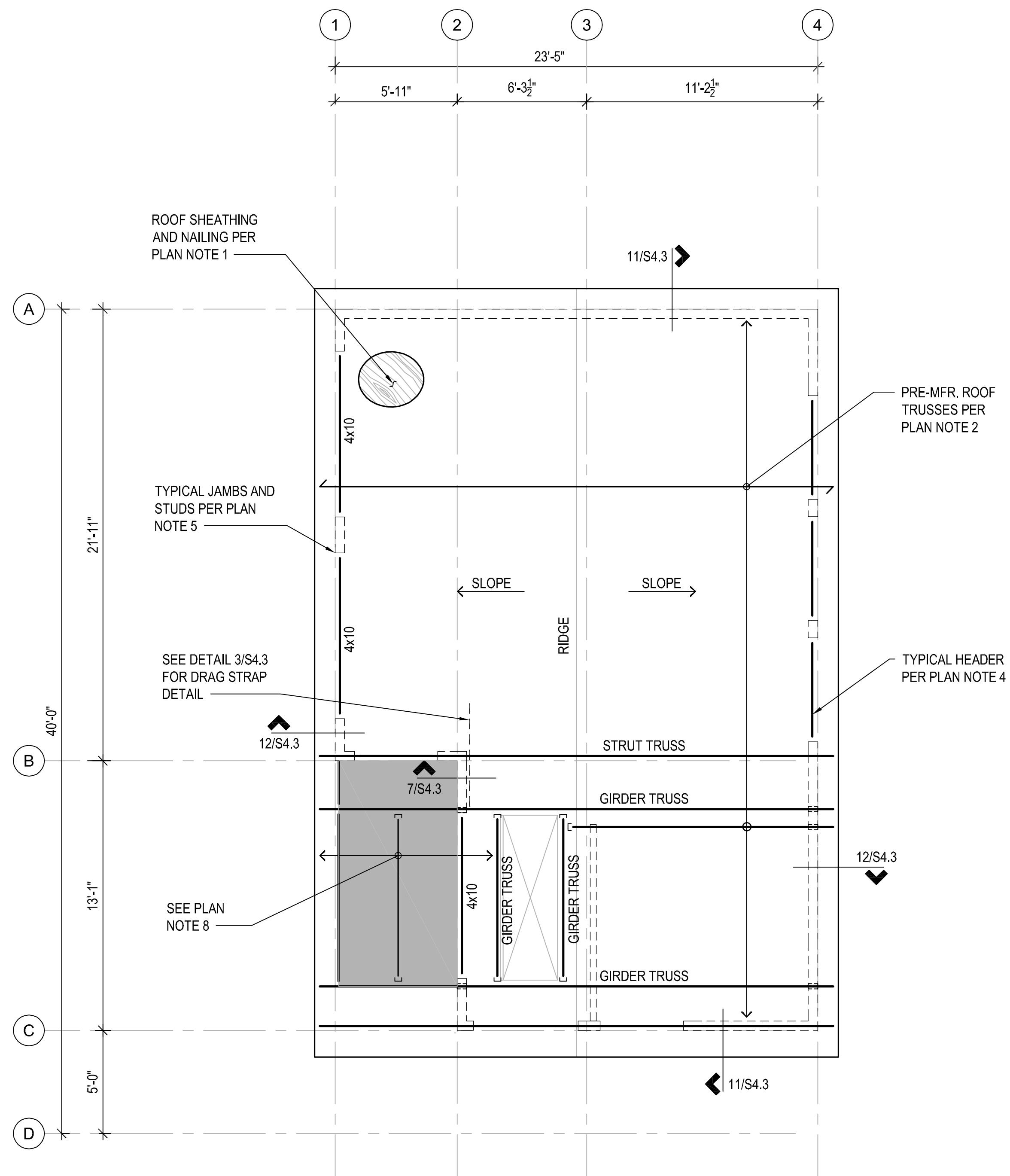
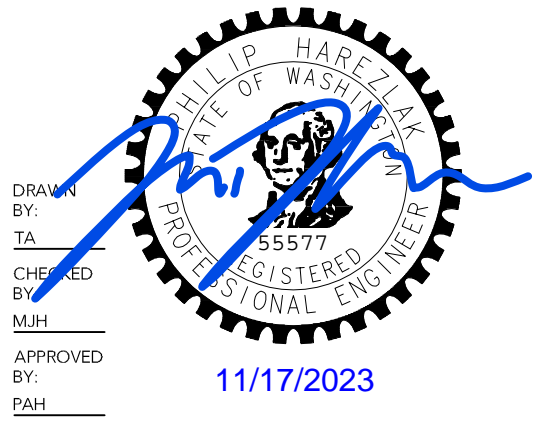


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### SEISMIC FORCE RESISTING SYSTEM LEGEND

STRUT      FRAMING MEMBER NAILED AS STRUT  
PER PLAN NOTE 1

### LEGEND

- STRUCTURAL WALL BELOW
- SPAN DIRECTION OF FRAMING MEMBERS  
(SEE PLAN NOTE 2)
- SEE PLAN NOTE 9

### ROOF FRAMING PLAN NOTES:

1. ROOF SYSTEM SHALL CONSIST OF 1/2" PERFORMANCE CATEGORY, APA RATED SHEATHING, 3/16" EXPOSURE 1, NOMINAL 4x8" (T&G OR SQUARE EDGE), NAIL SHEATHING AT ALL FRAMED PANEL EDGES, DIAPHRAGM BOUNDARIES, STRUTS, BLOCKING, AND SHEAR WALLS BELOW w/ 10d @ 6" O.C. PROVIDE 3/8" GAP AT ALL PANEL EDGE. FASTENER EDGE DISTANCE TO PANEL EDGE OF 3/8" MINIMUM. NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS WITH 10d @ 12" O.C. U.O.N. INSTALL PANEL EDGE CLIPS PER GENERAL STRUCTURAL NOTES AT ALL UNFRAMED, UNBLOCKED PANEL EDGES
2. ROOF FRAMING SHALL BE CONNECTOR PLATE TRUSSES @ 24" O.C. TRUSS MANUFACTURER SHALL INSTALL ALL TEMPORARY AND PERMANENT TRUSS BOTTOM CHORD BRACING AND BRIDGING, RELATED CONNECTIONS, AND ATTACHMENT DETAILS. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS & ARCHITECTURAL DRAWINGS FOR HEIGHTS AND CONFIGURATIONS. TRUSSES SHALL BE DESIGNED FOR TYPICAL TRUSS LOADING AS SHOWN IN THE GENERAL STRUCTURAL NOTES.
3. CONNECTOR PLATE TRUSS SHOP DRAWINGS TO BE APPROVED BY HAREZLAK ENGINEERING PRIOR TO MANUFACTURING AND INSTALLATION.
4. ALL EXT. HEADERS TO BE 4x8 HF#2 UNLESS OTHERWISE NOTED, SEE 10/S4.1.
5. POST OR JAMB STUDS AT END OF SUPPORTING BEAMS, GIRDER TRUSSES, OR BELOW POSTS SHALL BE (3) STUDS AT A MINIMUM. TYPICAL HEADER STUDS WILL BE (2) CRIPPLE STUDS AND (1) KING STUD.
6. FLAT BLOCKING IS REQUIRED AT ALL UNFRAMED RIDGES, HIPS, AND VALLEYS, FOR SHEATHING CONNECTION.
7. NON-STRUCTURAL WALL CONNECTION TO TRUSS PER 4/S4.3.
8. 2x6 RAFTERS BETWEEN GIRDER TRUSSES @ 24" O.C. INSTALL RAFTERS TO TRUSS TOP CHORD w/ LUS26 HANGER. AT LOW END OF TRUSS PROFILE, INSTALL 2x6 CEILING JOISTS @ 24" O.C. w/ LUS HANGER TO TRUSS BOTTOM CHORD. TRUSS MFR. TO DESIGN FOR 2x6 TOP AND BOTTOM CHORD FOR GIRDER TRUSSES NOTED.
9. INSTALL 2x T&G DECKING OR 1/2" PLYWOOD SHEATHING PER PLAN NOTE 1 TO UNDERSIDE OF TRUSS/2x FRAMING AT OVERHANG AS NOTED PER PLAN. COORDINATE WITH ARCH. ON FINAL ASSEMBLY.



## ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"

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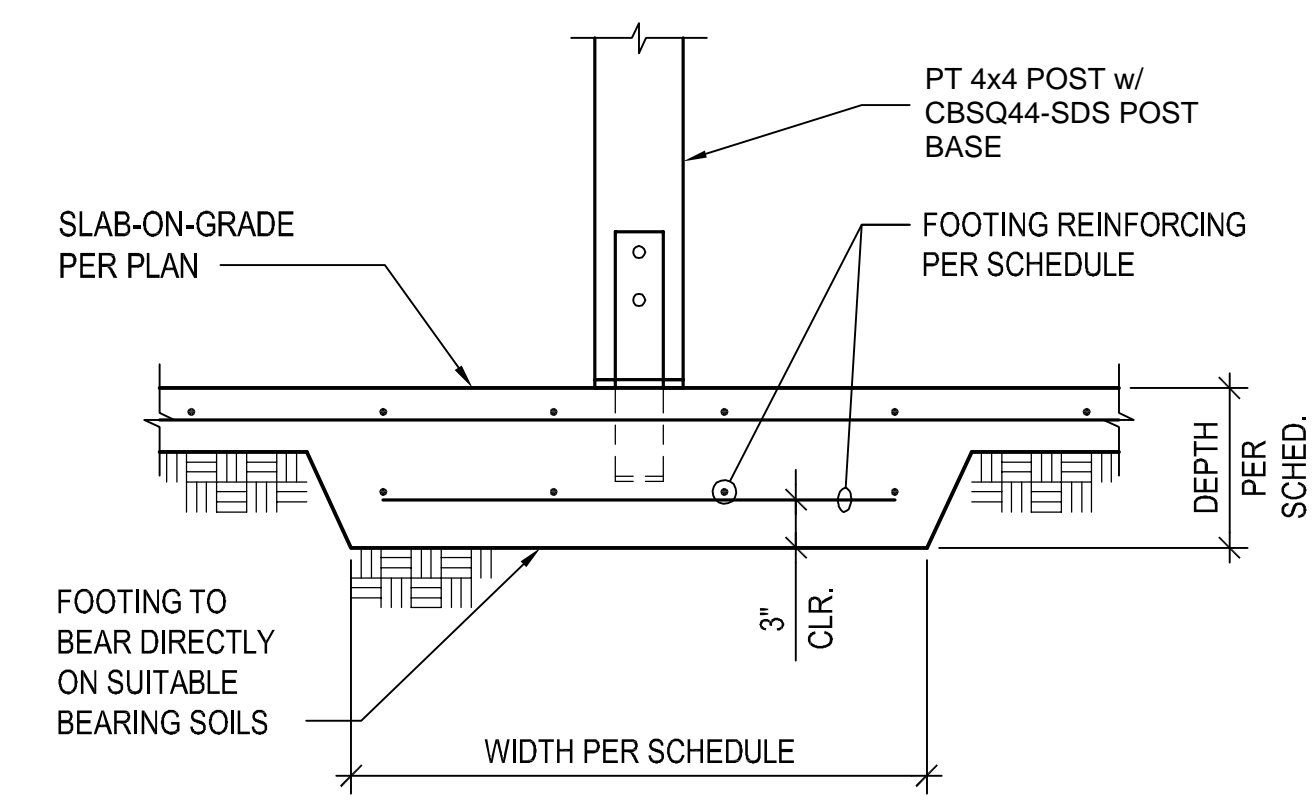
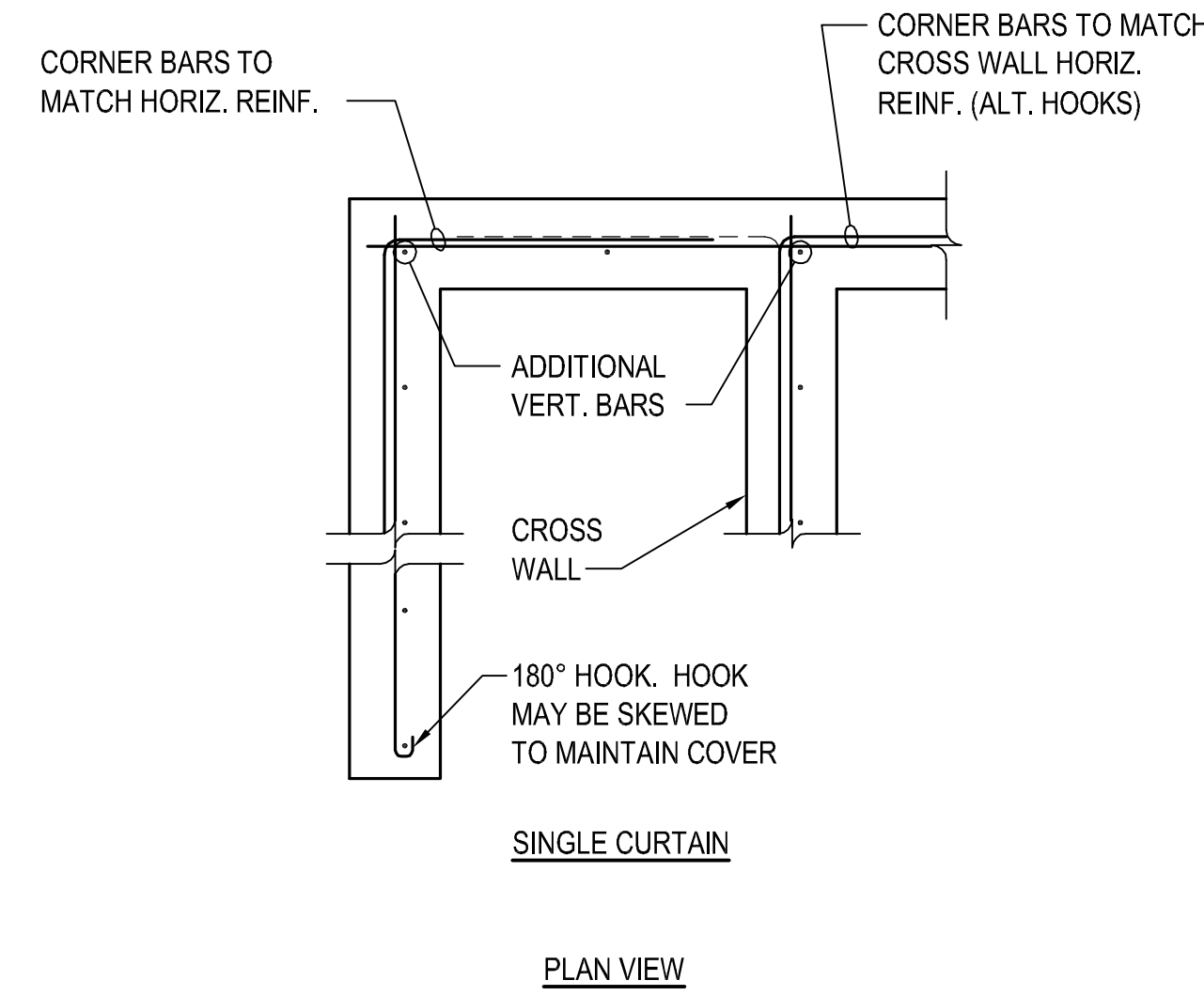
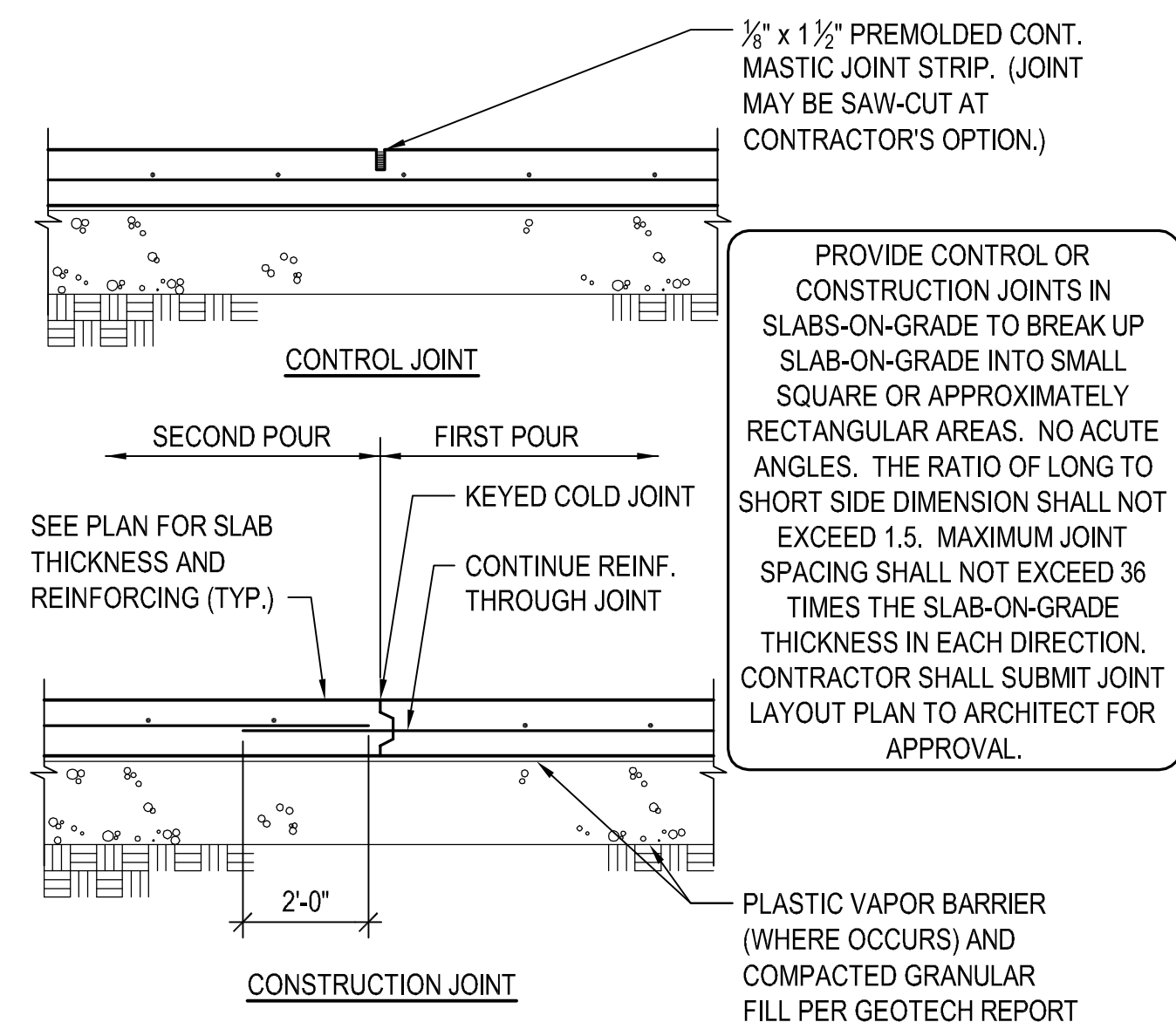
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## ROOF FRAMING PLAN

SHEET NUMBER:

# S2.2



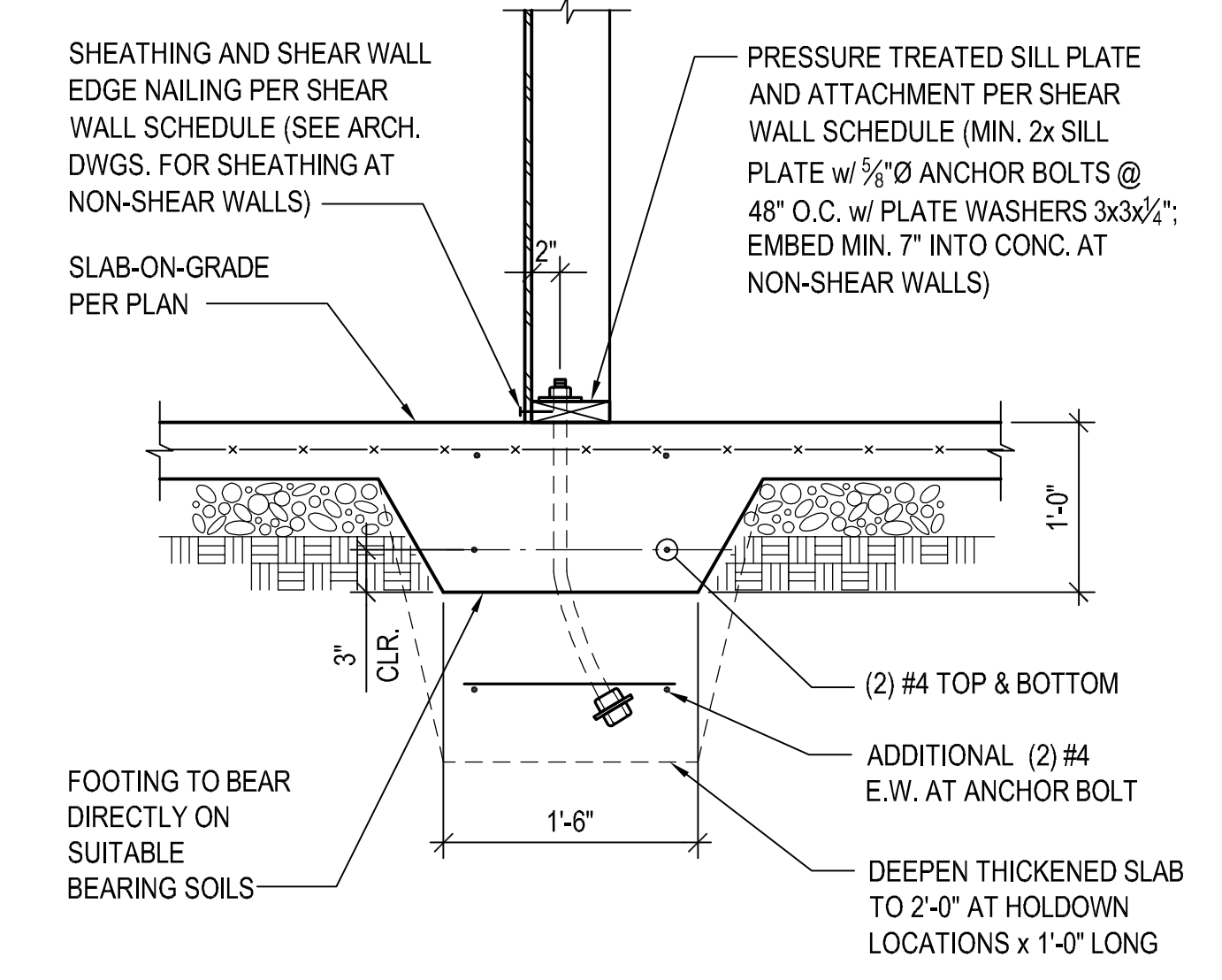
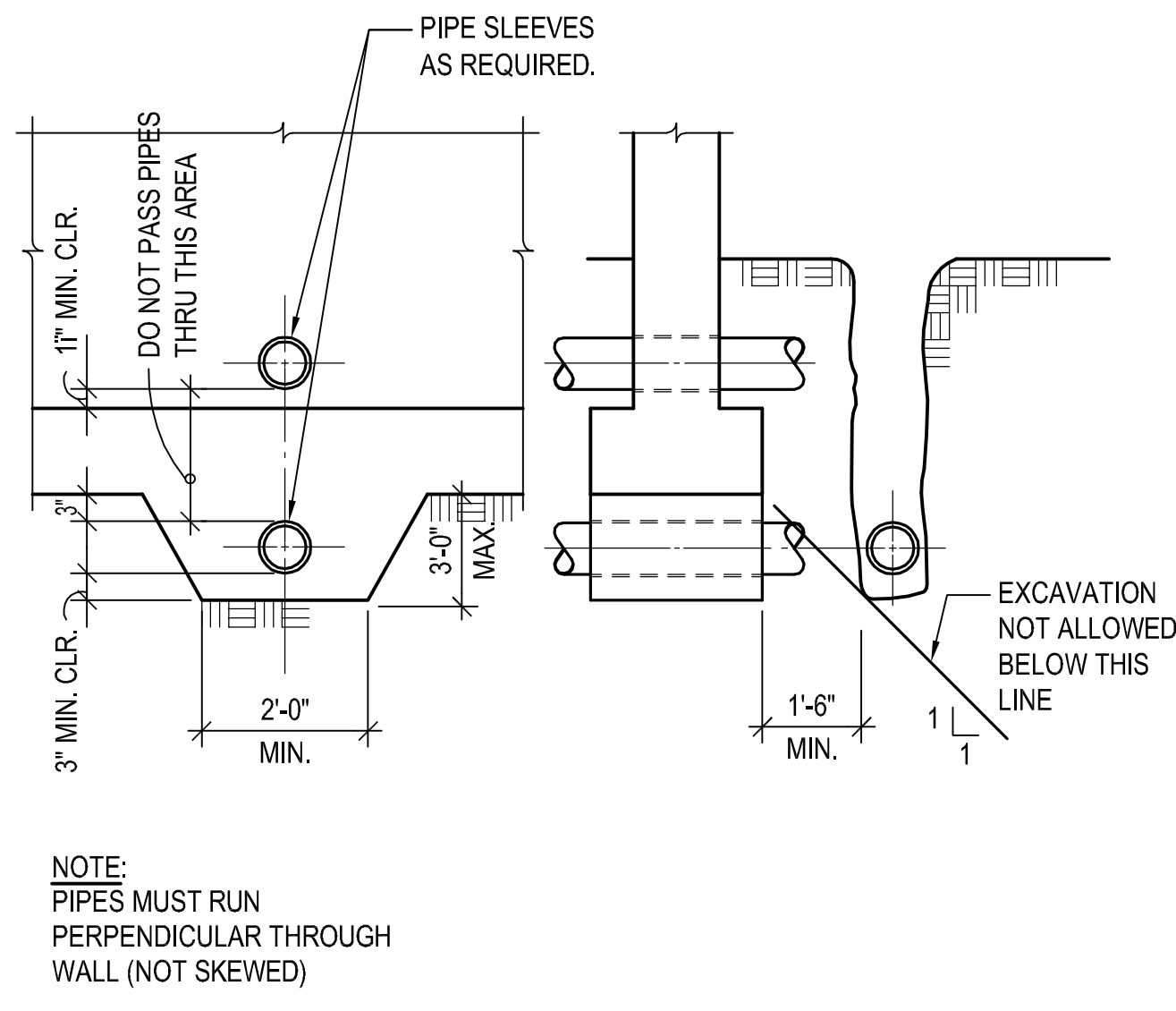


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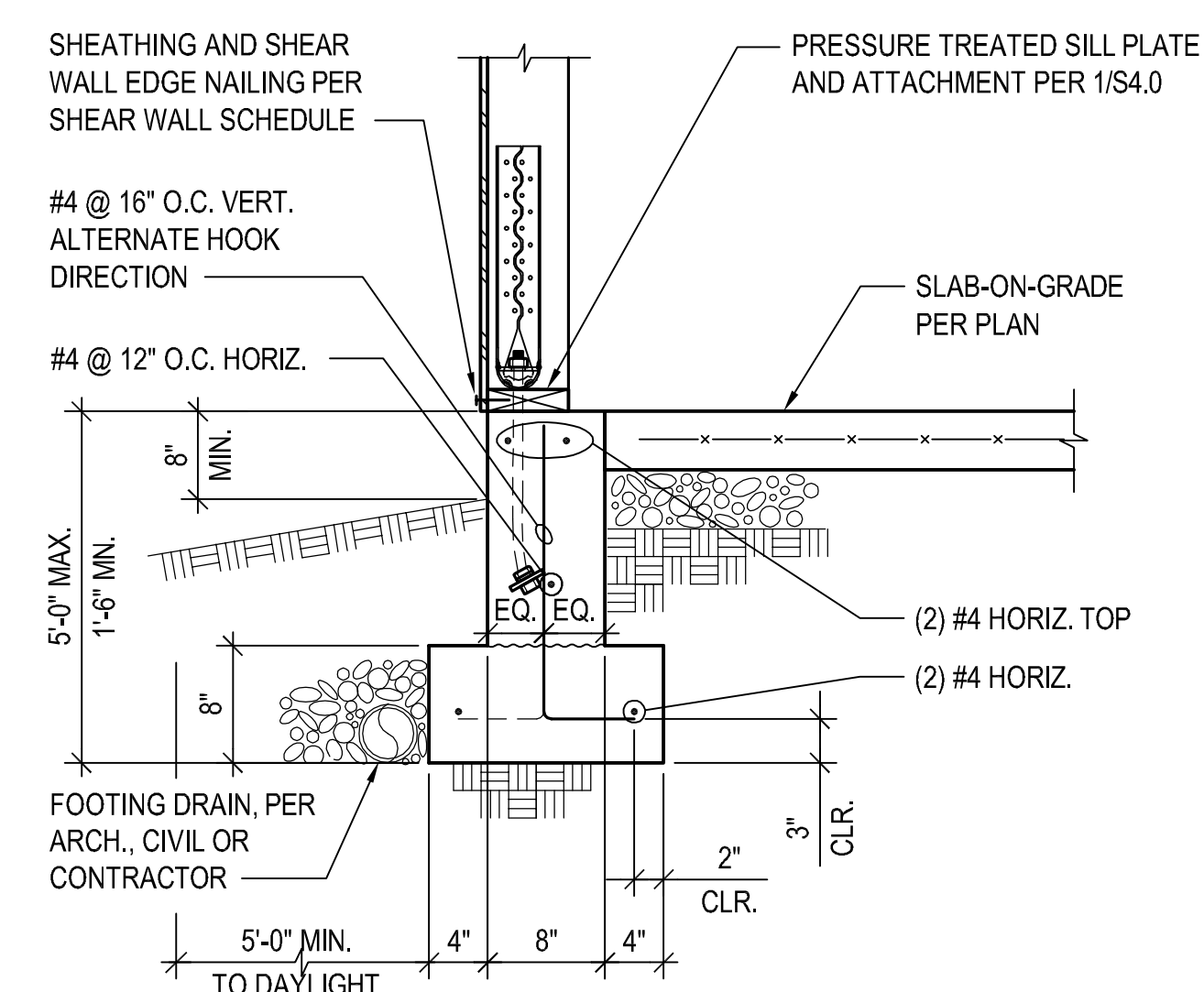
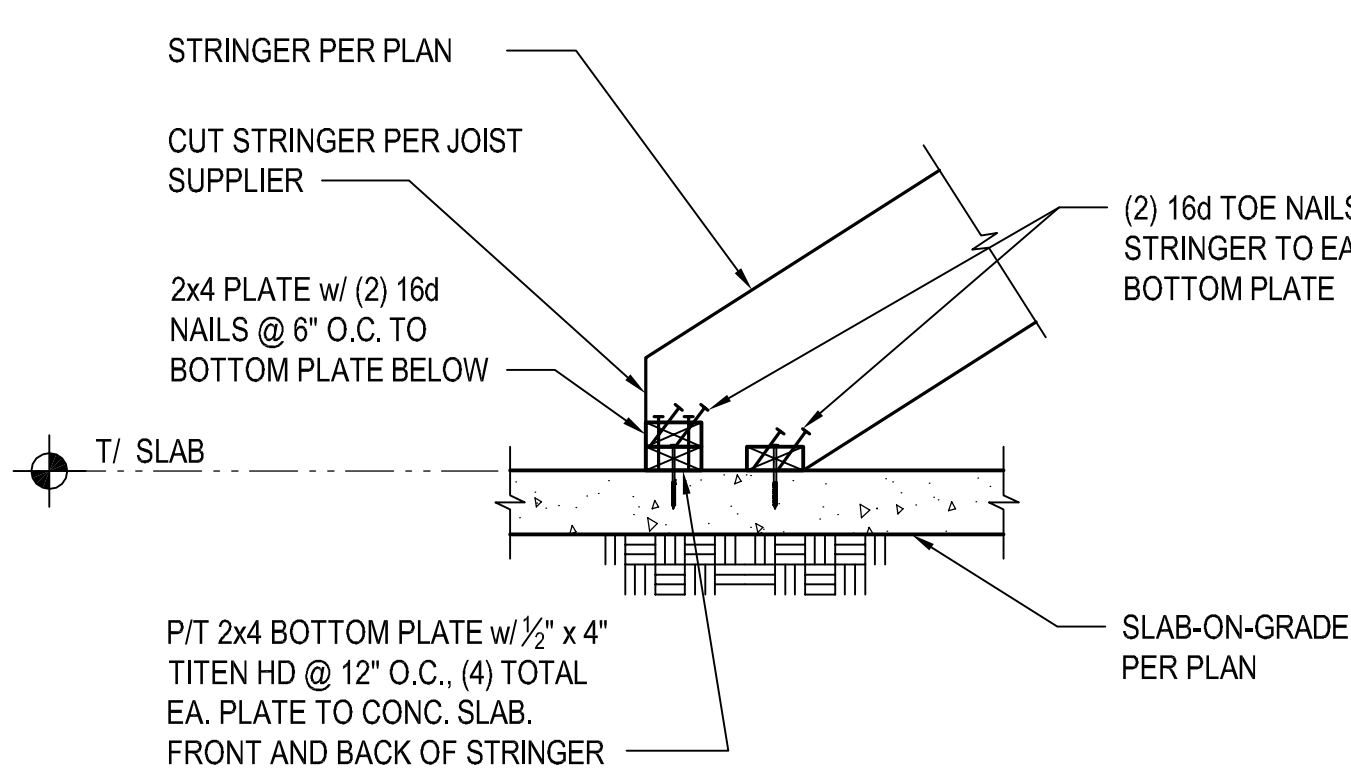
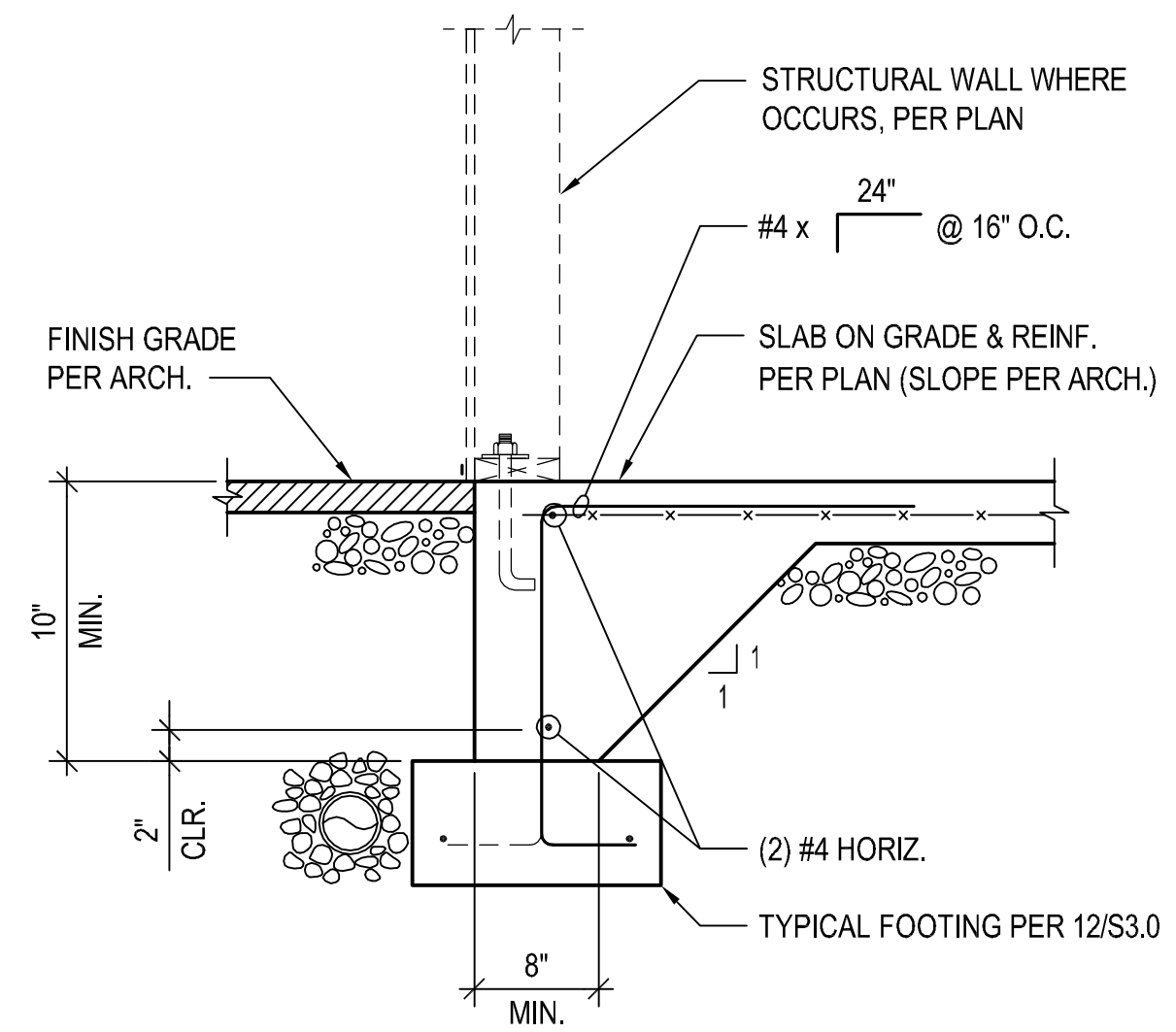


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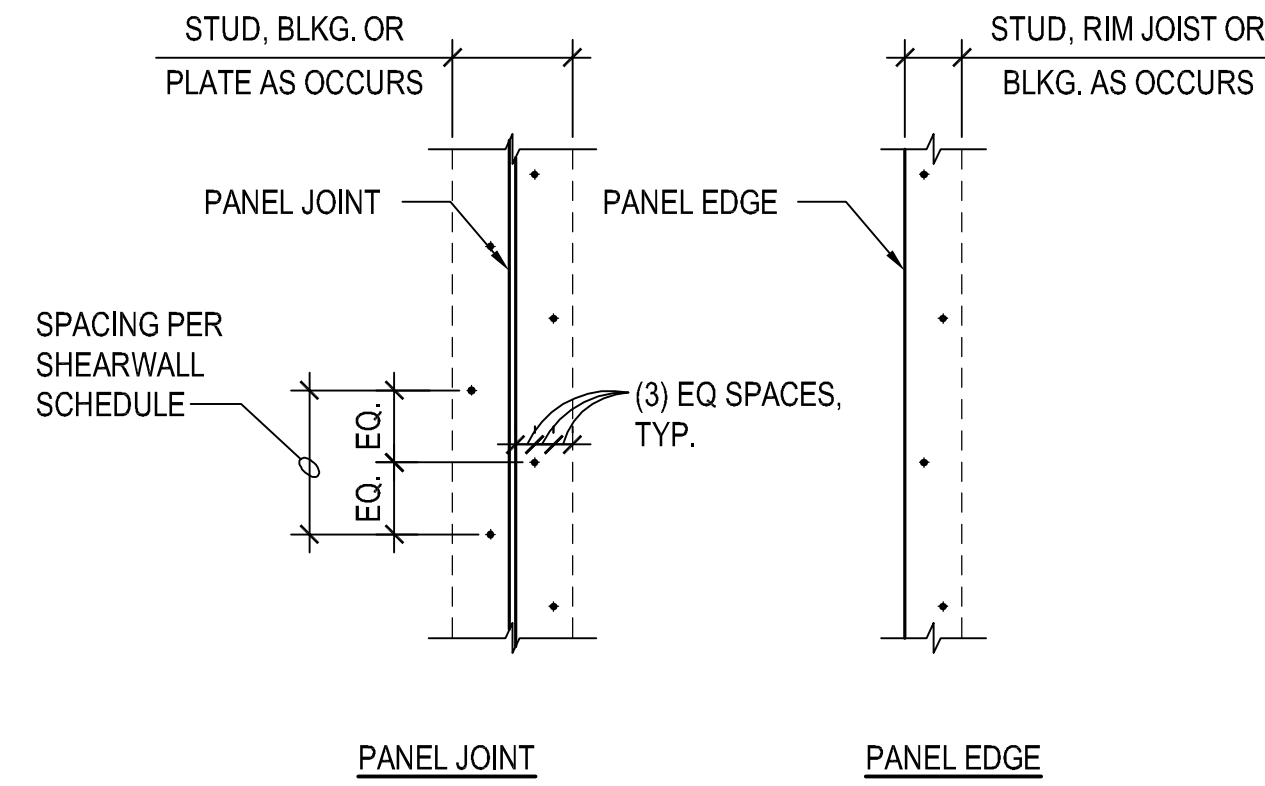
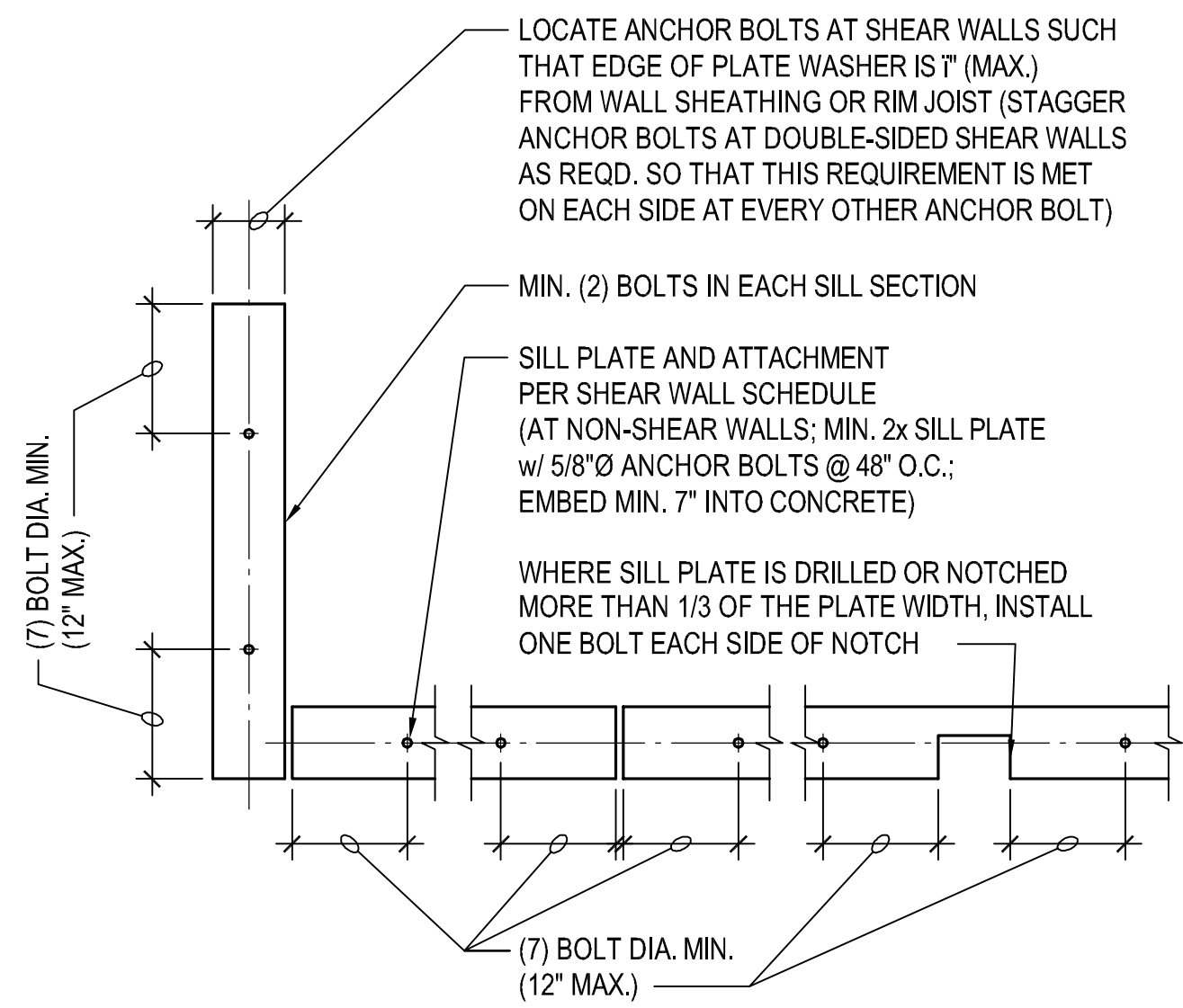
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NOTE:  
STAGGER EA. LINE OF NAILING (AT ALL PANEL EDGES) AS INDICATED

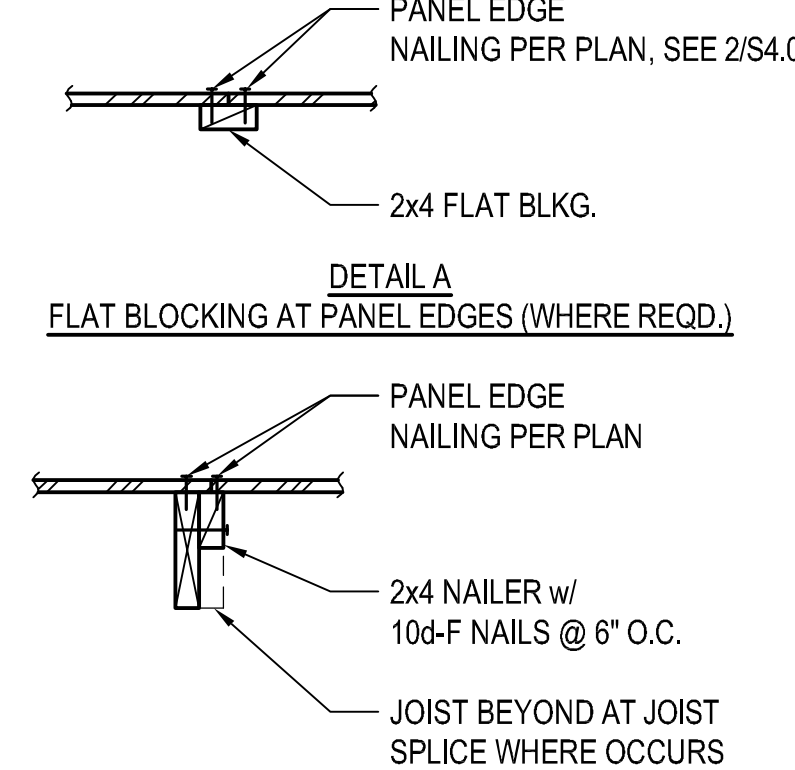
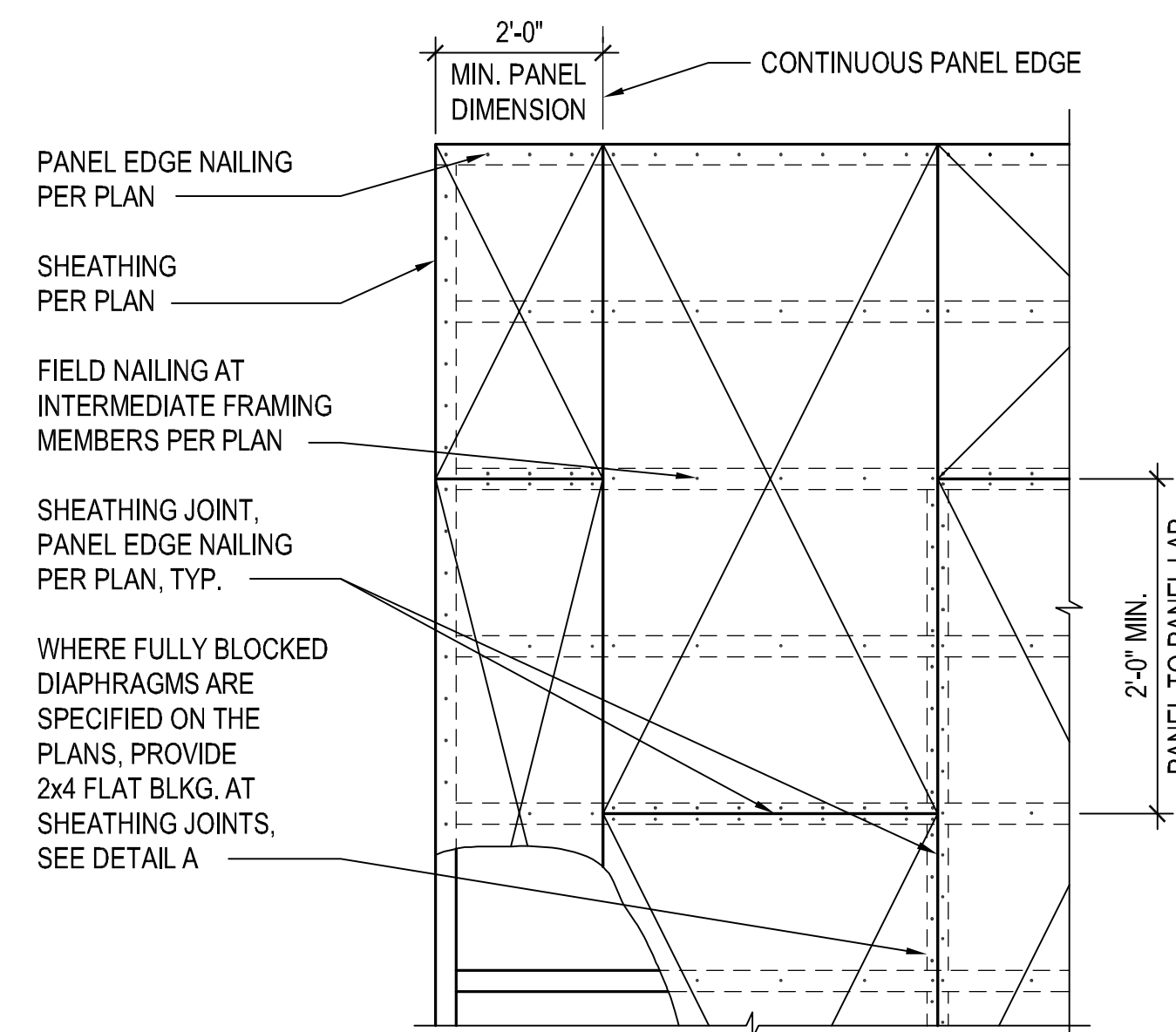
SHEAR WALL SCHEDULE (HEM-FIR, 10d NAILING)										
SHEAR WALL TYPE	SHEAR WALL SHEATHING ①	PANEL EDGE FRAMING ②⑦	PANEL EDGE NAILING ③	BOTTOM PLATE ATTACHMENT		TOP PLATE ATTACHMENT		ALLOWABLE SHEAR WALL CAPACITY (PLF)		
				2x BOTTOM PLATE CONNECTION TO RIM JOIST OR BLOCKING BELOW	ANCHOR BOLTING OF SILL PLATE TO CONCRETE BELOW ④⑤	RIM JOIST OR BLOCKING CONNECTION TO TOP PLATE ⑥		SEISMIC	WIND	
SW-6	15/32" APA ONE-SIDE SHTG.	2x	0.148"Øx2 1/4" @ 6" O.C.	0.148"Øx3 1/2" @ 6" O.C. ⑨	3/8"Ø @ 48" O.C.	5/8"Ø @ 48" O.C.	A35 @ 16" O.C.	LTP4 @ 16" O.C.	288	405

NOTES:

- INSTALL PANEL SHEATHING EITHER HORIZONTALLY OR VERTICALLY FOR THE ENTIRE LENGTH OF THE WALL PER PLAN.
- ALL INTERMEDIATE WALL STUDS SHALL BE PER PLAN. PROVIDE BACKING FRAMING AT ALL PANEL EDGES INCLUDING HORIZONTAL BLOCKING PER THE SCHEDULE.
- PROVIDE NAILING TO ALL PANEL EDGES, TOP & BOTTOM PLATES AND HORIZONTAL BLOCKING. PROVIDE THE SAME NAILING PATTERN TO EACH MULTIPLE STUD OF THE BUILT-UP HOLD DOWN POST. NAIL PANEL TO INTERMEDIATE FRAMING MEMBERS w/ 0.131"Ø x 2 1/2" @ 12" O.C.
- EMBED CAST-IN-PLACE 5/8"Ø ANCHOR BOLTS 7" MIN. (OR EMBED ADHESIVE ANCHOR BOLTS 5 1/2" IN (E) CONCRETE; SEE STRUCTURAL NOTES). PROVIDE PLATE WASHER 3" x 3" x 1/4" AT EACH ANCHOR BOLT. SILL PLATES SHALL BE TREATED PER GENERAL NOTES, AND SHALL BE 2x OR 3x PER THE SCHEDULE. SEE DETAIL 1/S4.0 FOR OTHER REQUIREMENTS.
- PROVIDE HOT DIPPED GALVANIZED NAILS, BOLTS, OR METAL PLATES FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED MEMBERS.
- PROVIDE 0.131"Ø x 1-1/2" LONG NAILS FOR CLIPS DIRECTLY ATTACHED TO FRAMING MEMBERS; PROVIDE 0.131"Ø x 2-1/2" LONG NAILS FOR CLIPS INSTALLED OVER FLOOR OR WALL SHEATHING ON FRAMING MEMBERS. SEE 6/S4.1 FOR TOP PLATE SPLICE.
- ALTERNATIVE TO 3x STUDS AND 3x HORIZ. BLOCKING IS (2) 2x STUDS/BLKG. NAILED TOGETHER WITH 0.148"Ø x 3" LONG NAILS WITH THE SAME SPACING AS THE PANEL EDGE NAILING PER THE SCHEDULE (STAGGER).
- STAGGER NAILS PER 2/S4.0.
- RIM JOIST/BLOCKING MINIMUM WIDTH OF 1 1/2". STAGGER NAILS PER 2/S4.0 WHERE SPACING IS LESS THAN 6" O.C.

①

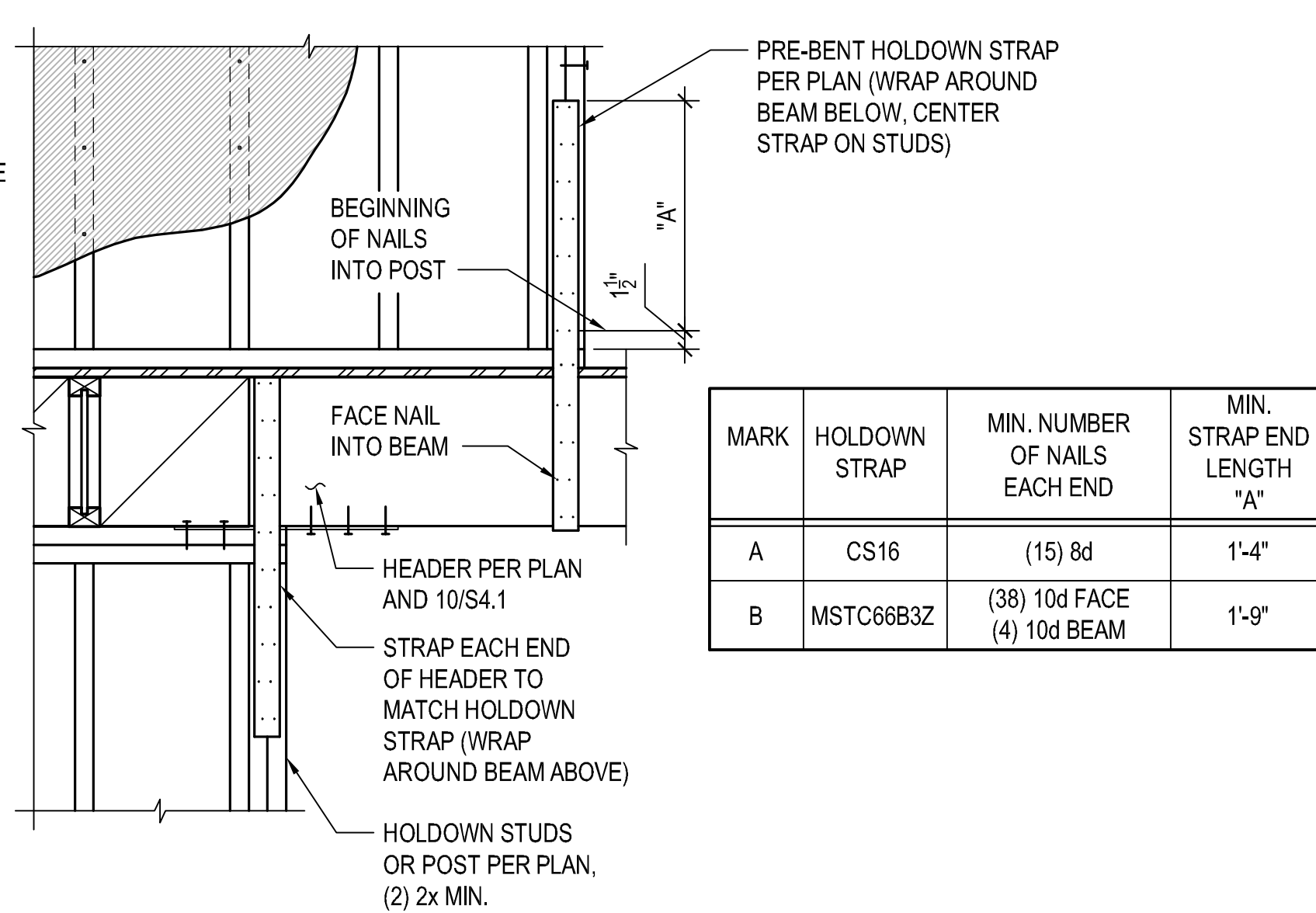
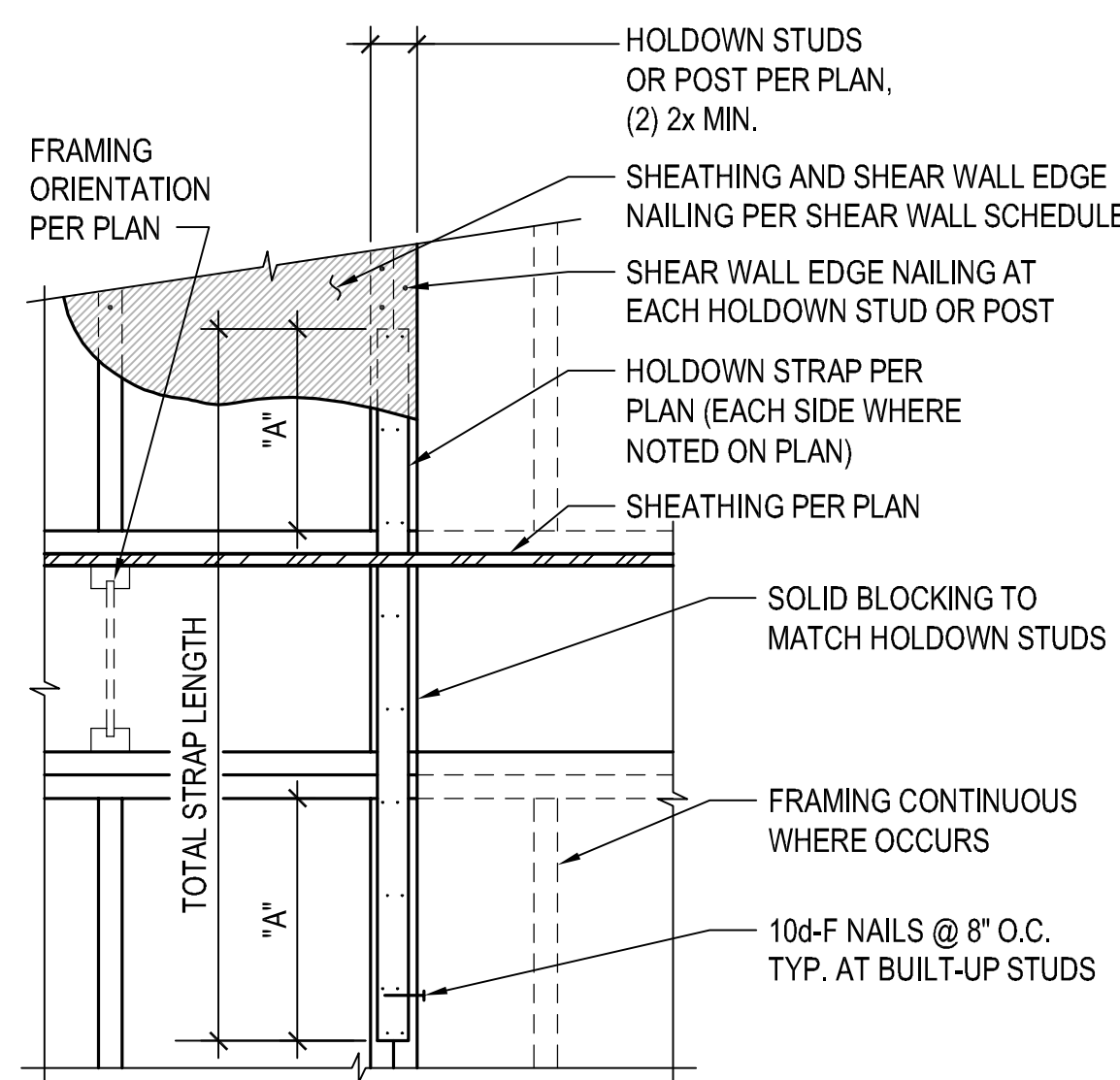
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- NOTES:
- RUN LONG DIMENSION OF SHEATHING PANELS PERPENDICULAR TO FRAMING.
  - WHERE FRAMING LAP SPLICE AND SHEATHING JOINTS ARE OFFSET, SEE DETAIL B ABOVE.

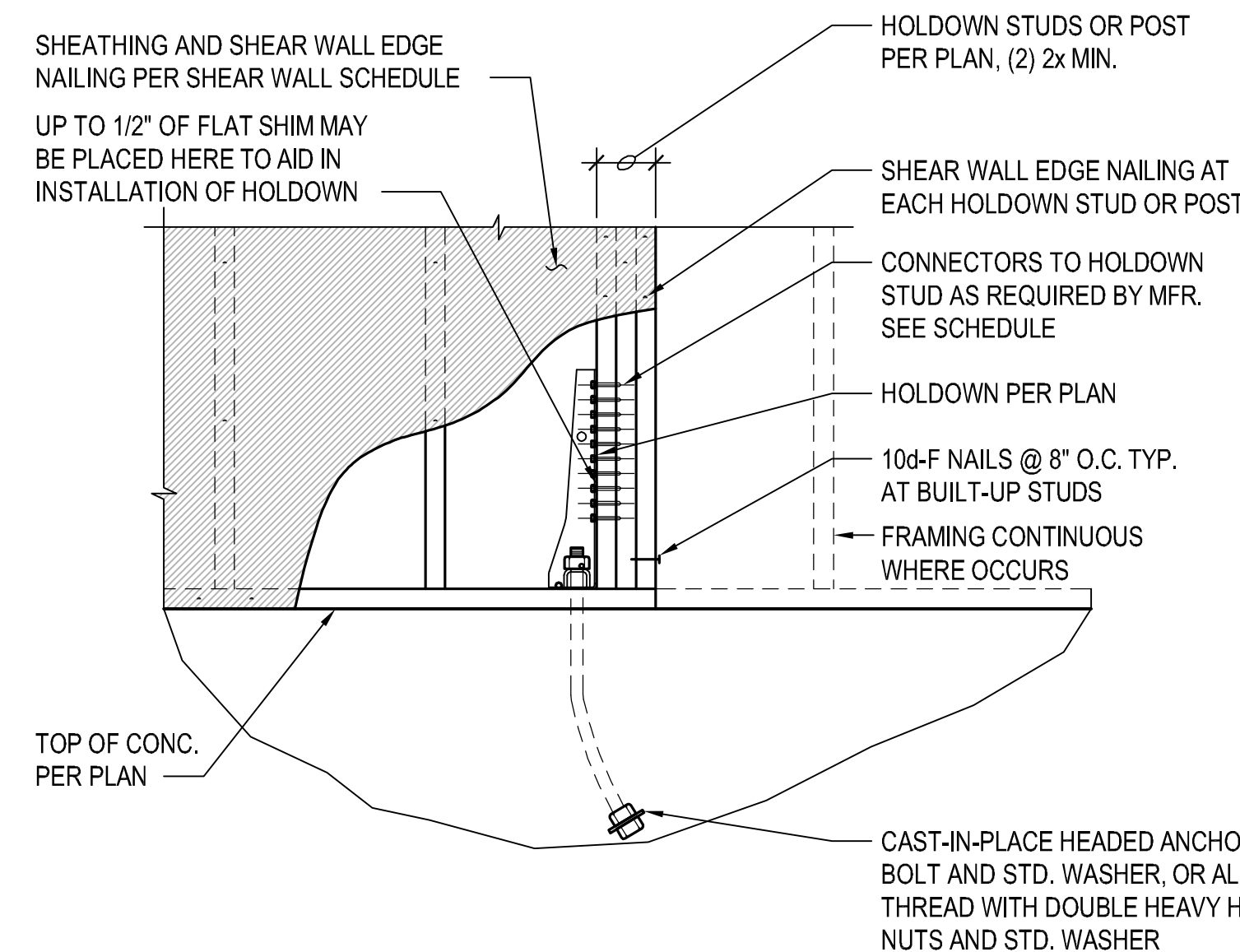
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MARK	HOLD-DOWN STRAP	MIN. NUMBER OF NAILS EACH END	MIN. STRAP END LENGTH "A"
A	CS16	(15) 8d	1'-4"
B	MSTC66B3Z	(38) 10d FACE (4) 10d BEAM	1'-9"

⑩



MARK	HOLDOWN	ANCHOR BOLT *	CONNECTORS TO HOLDOWN STUDS	END STUDS / POST
A	HDU5	SB 5/8 x 24"	(14) SDS 1/4"x2 1/2" SCREWS	(2) 2x

NOTE:  
PROVIDE HOT DIPPED GALVANIZED NAILS, BOLTS, OR METAL PLATES FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED MEMBERS.

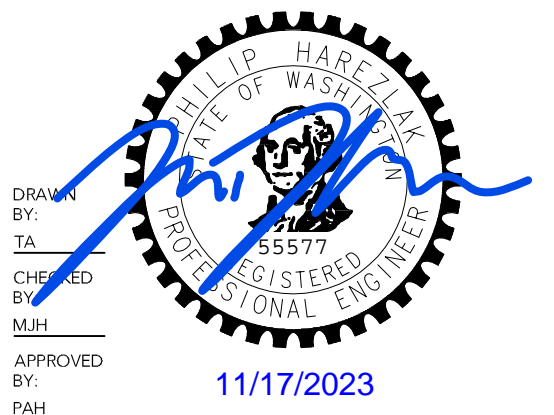
\* CONTRACTOR OPTION TO PROVIDE THREADED ROD IN LIEU OF ANCHOR IN SCHEDULE. DIAMETER TO BE AS INDICATED. CONTACT HAREZLAK ENGINEERING FOR PROJECT SPECIFIC EMBED REQUIREMENTS.

⑫



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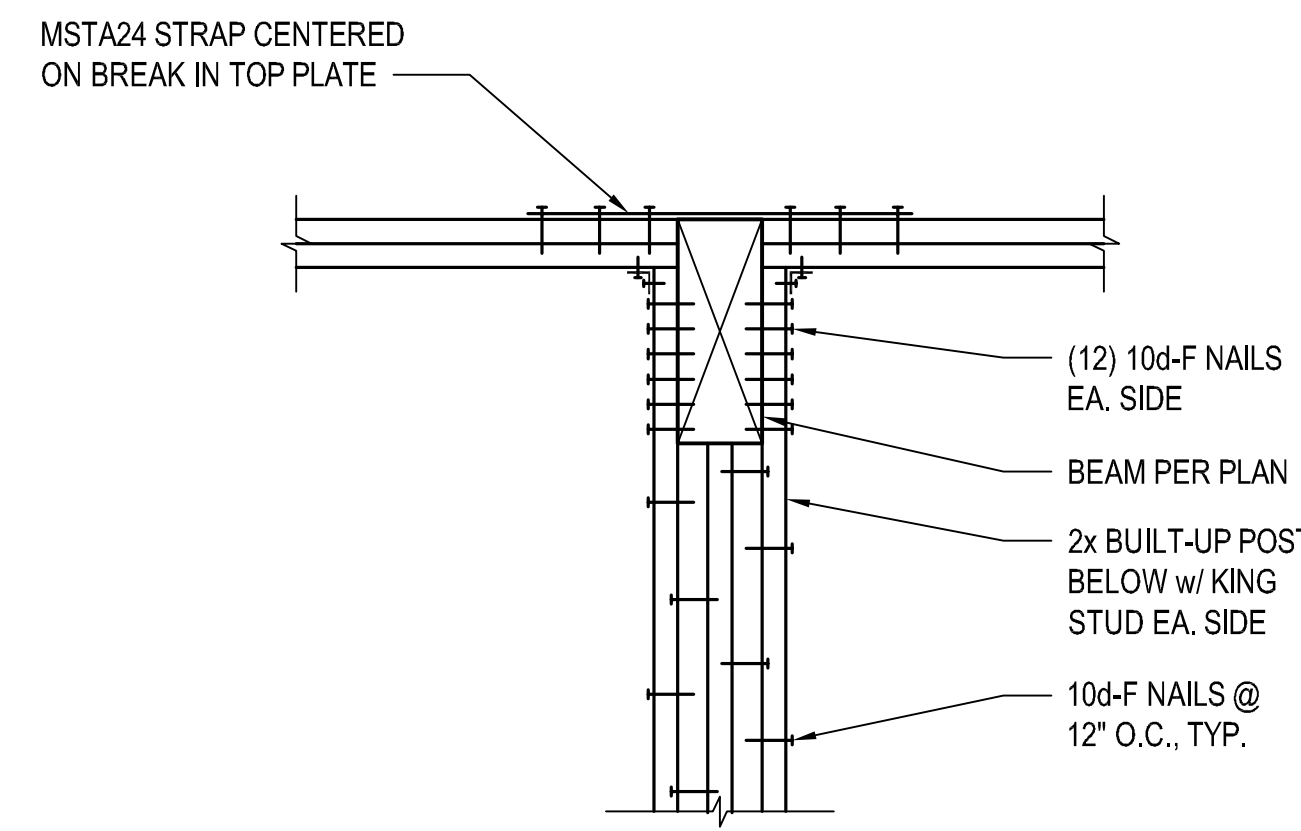
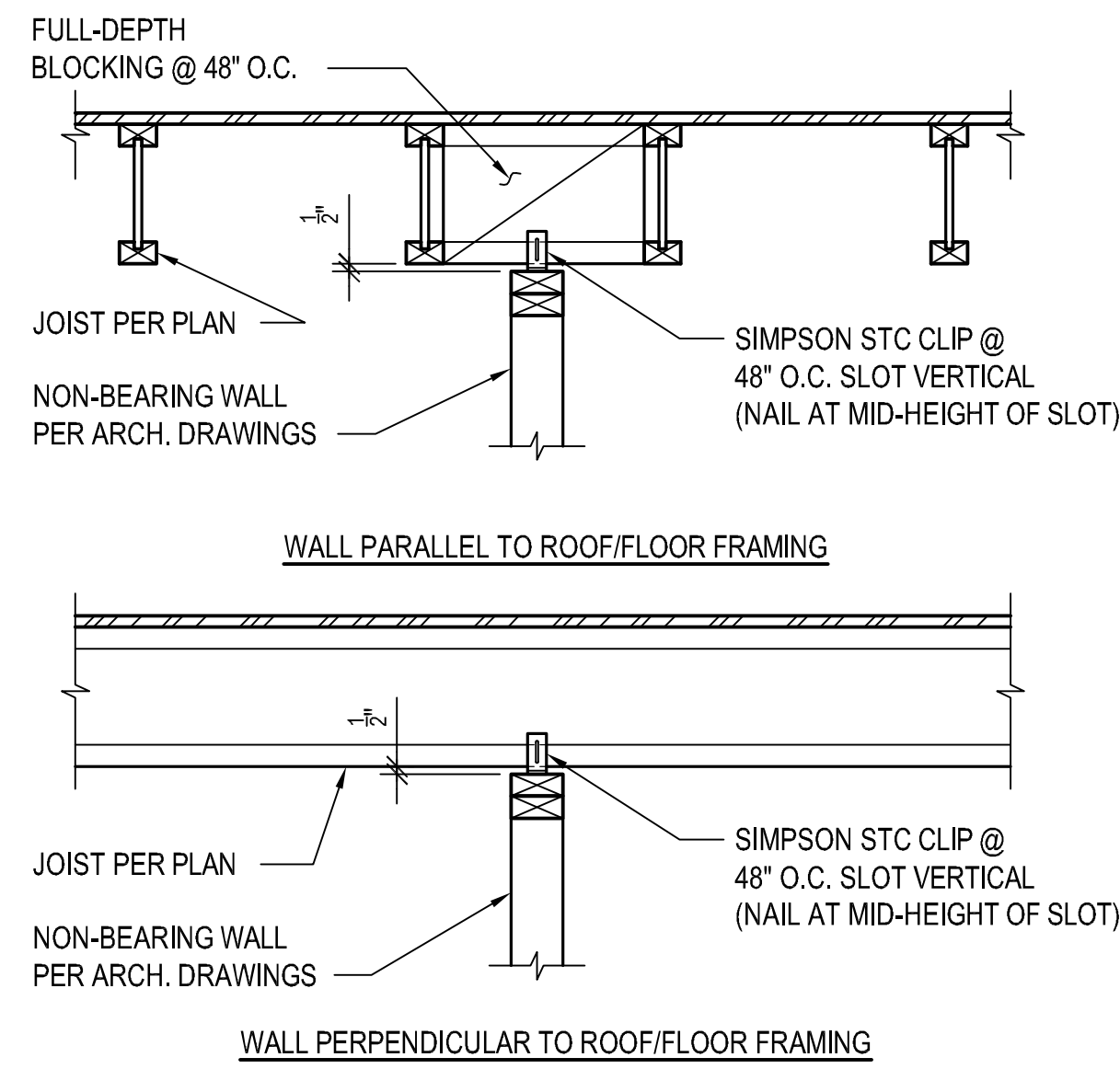
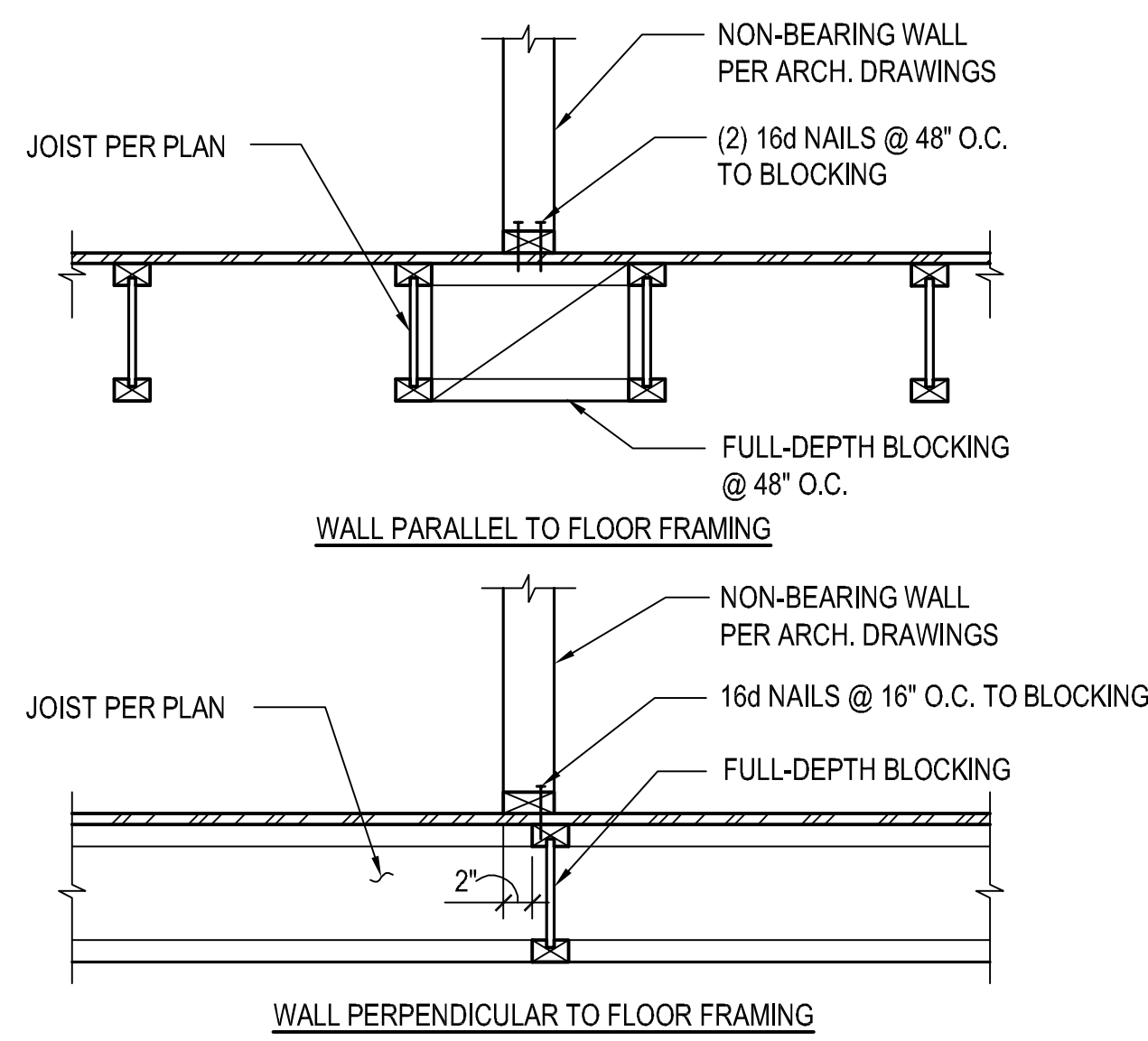
NO.	DESCRIPTION	DATE

PROJECT NUMBER:  
23-146  
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11.17.2023  
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PERMIT

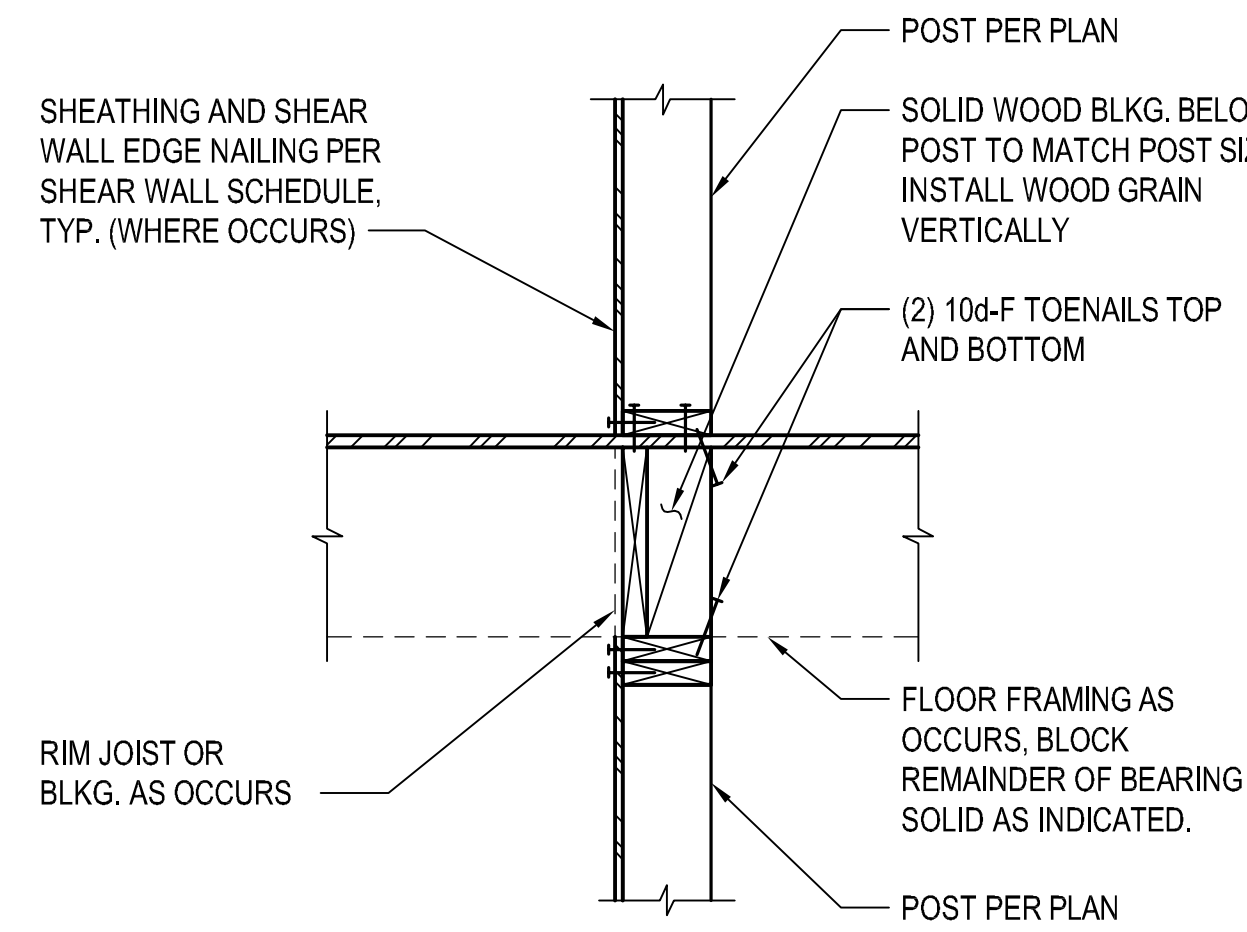
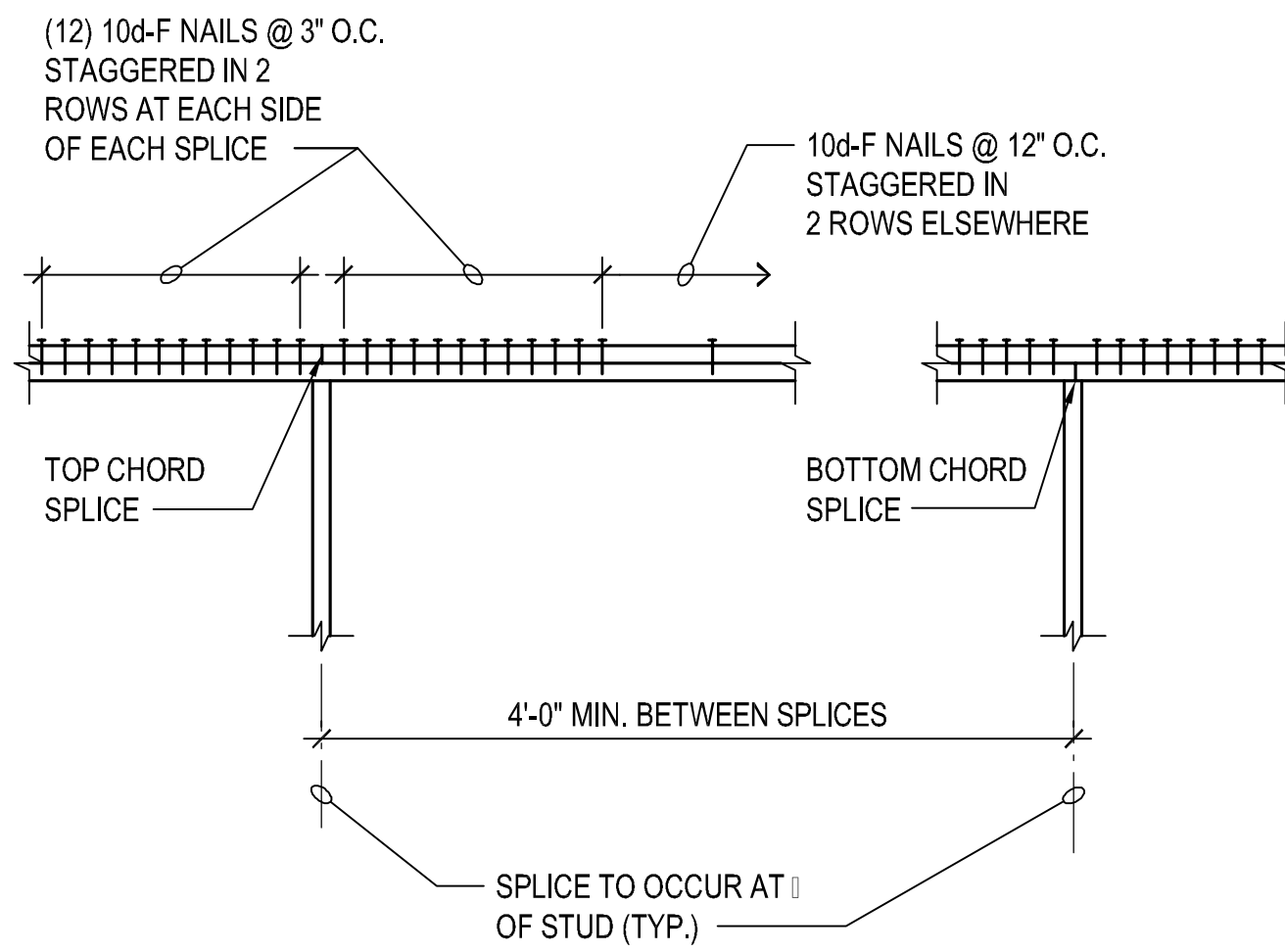
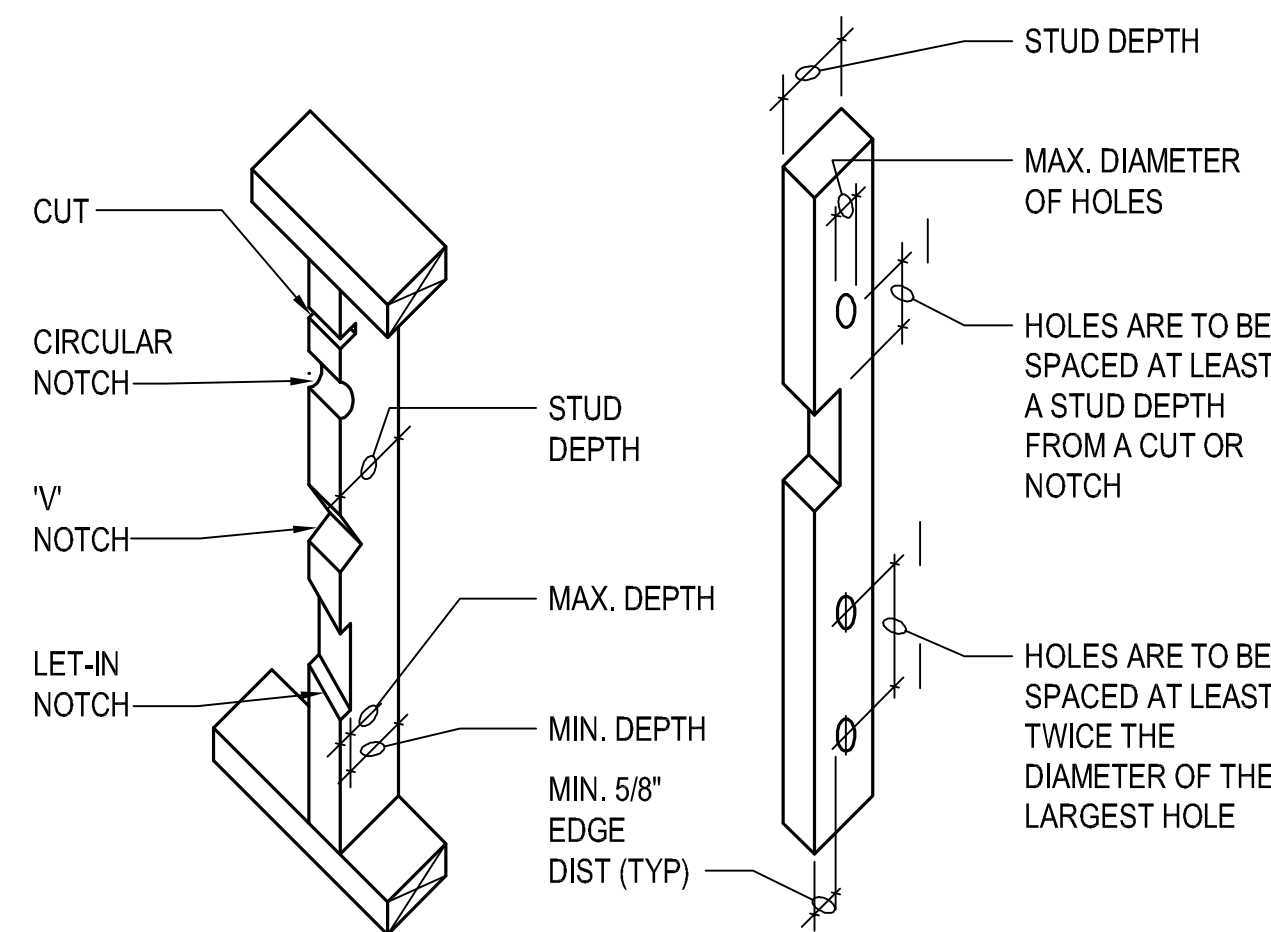
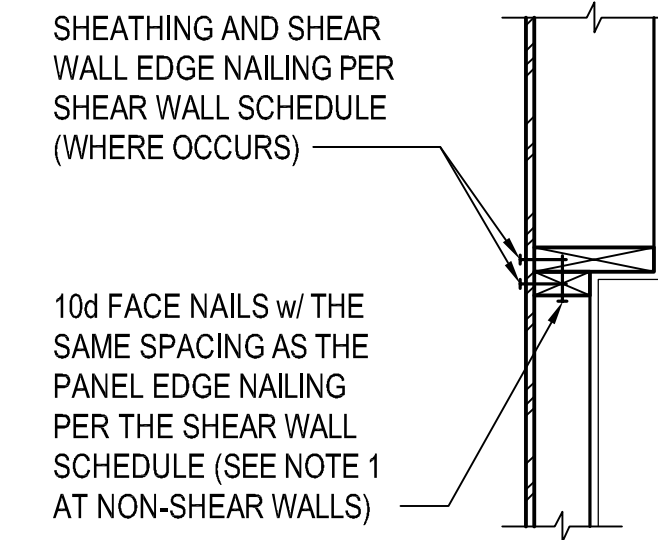
SHEET NAME:  
**FRAMING SCHEDULES**

SHEET NUMBER:  
**S4.0**

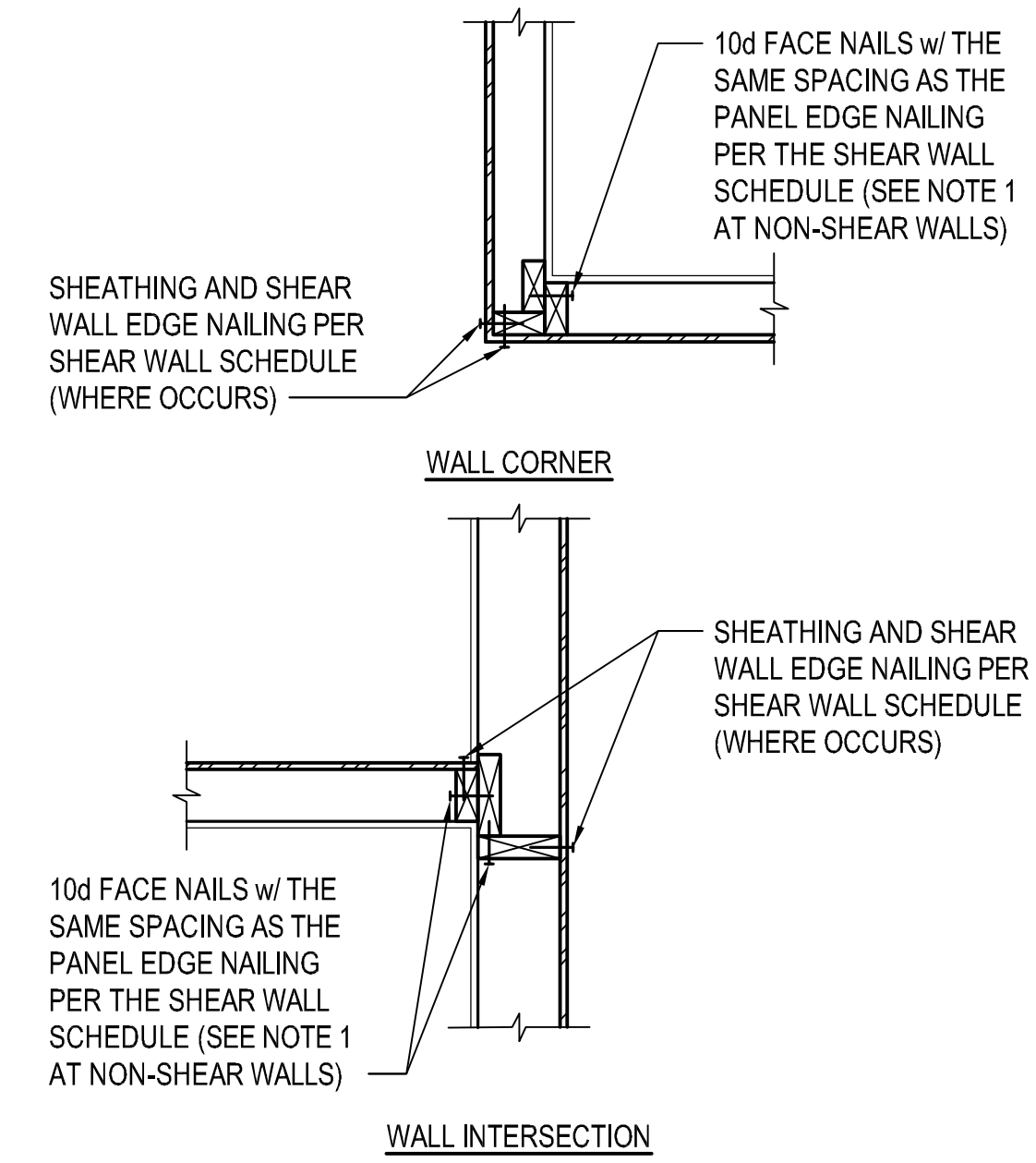




- NOTES:**
- AT NON-SHEAR WALLS, NAIL STUDS TOGETHER WITH 10d-F NAILS @ 8" O.C.
  - ADDITIONAL STUDS REQUIRED AS NAILERS, ETC. ARE NOT SHOWN.



**NOTE:**  
FRAMING CONDITIONS VARY, FOR INFORMATION NOT NOTED SEE PLAN & APPROPRIATE DETAILS



**A. CUTTING AND NOTCHING WOOD STUDS**  
(DO NOT NOTCH MORE THAN 3 ADJACENT STUDS w/o REVIEW BY ENGINEER)

**BEARING WALL STUDS:**

STUD SIZE	MAX. DEPTH OF SAW CUT OR NOTCH	MIN. DEPTH REMAINING AFTER CUT OR NOTCH
2x4	7/8"	2-3/8"
2x6	1-3/8"	4-1/8"
2x8	1-7/8"	5-3/8"

**NON-BEARING WALL STUDS:**

STUD SIZE	MAX. DEPTH OF SAW CUT OR NOTCH	MIN. DEPTH REMAINING AFTER CUT OR NOTCH
2x4	1-1/2"	2"
2x6	2-3/8"	3-1/8"
2x8	3"	4-1/4"

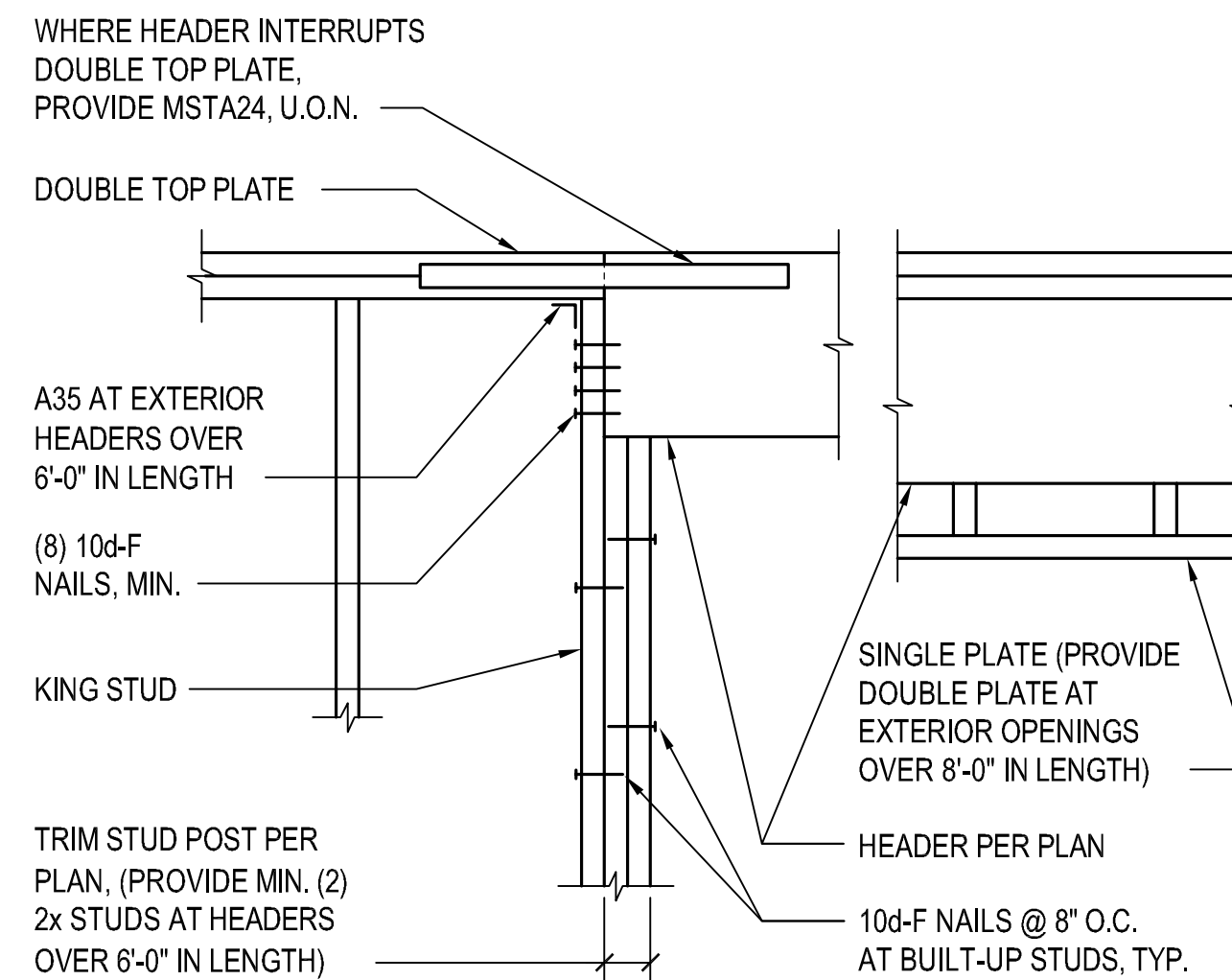
**B. HOLES IN WOOD STUDS**

**BEARING WALL:**

STUD SIZE	MAX. DIAMETER OF HOLE
2x4	1-1/2"
2x6	2-3/8"
2x8	3"

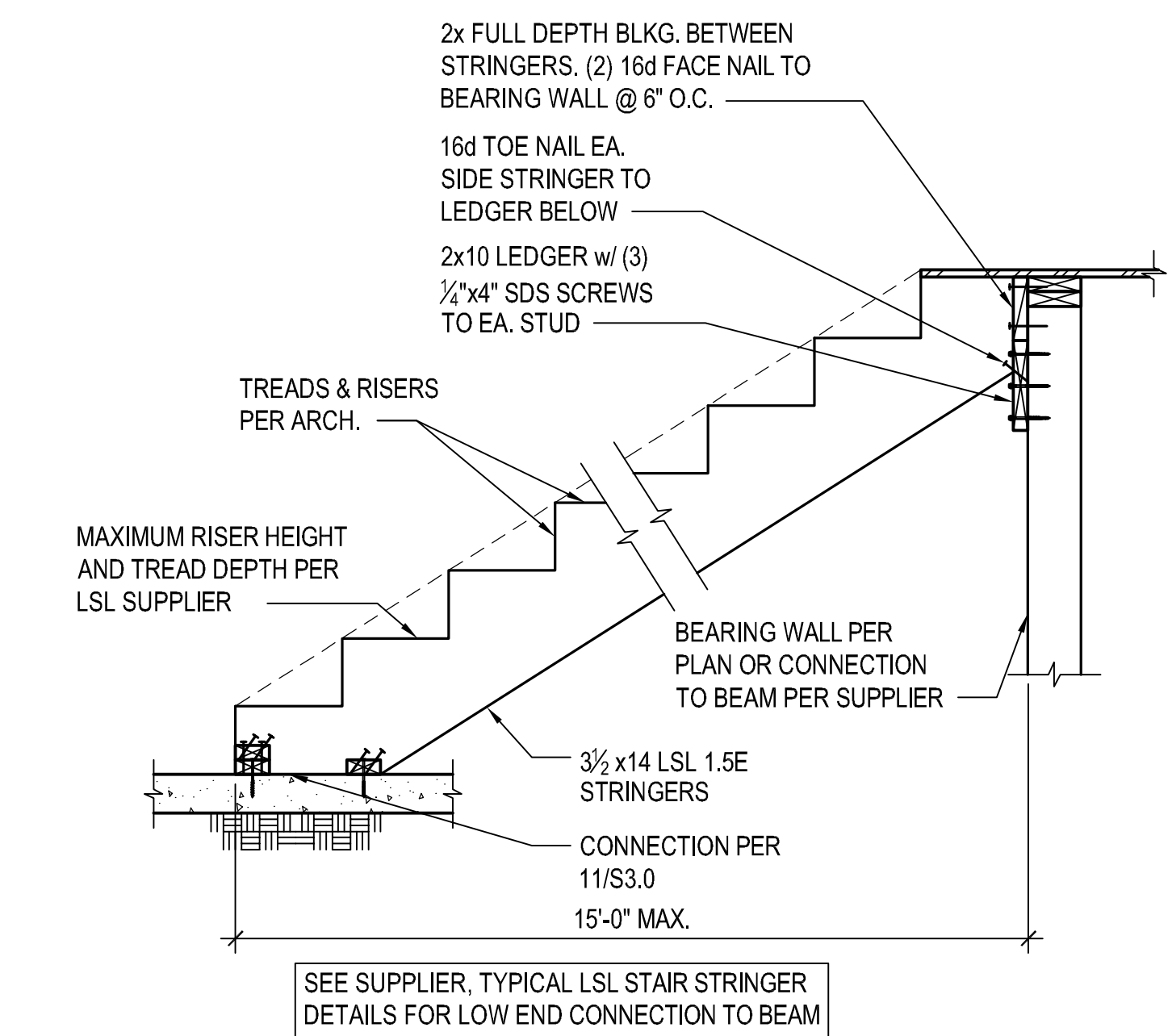
**NON-BEARING WALL:**

STUD SIZE	MAX. DIAMETER OF HOLE
2x4	2-1/4"
2x6	3-3/8"
2x8	4-1/2"



**7**

**8**



**9**

**10**

**11**

**12**

REVISIONS:

NO.	DESCRIPTION	DATE

PROJECT NUMBER: 23-146  
ISSUE DATE: 11.17.2023  
CURRENT REVISION: PERMIT

SHEET NAME:  
**WOOD FRAMING DETAILS**





**HAREZLAK ENGINEERING**

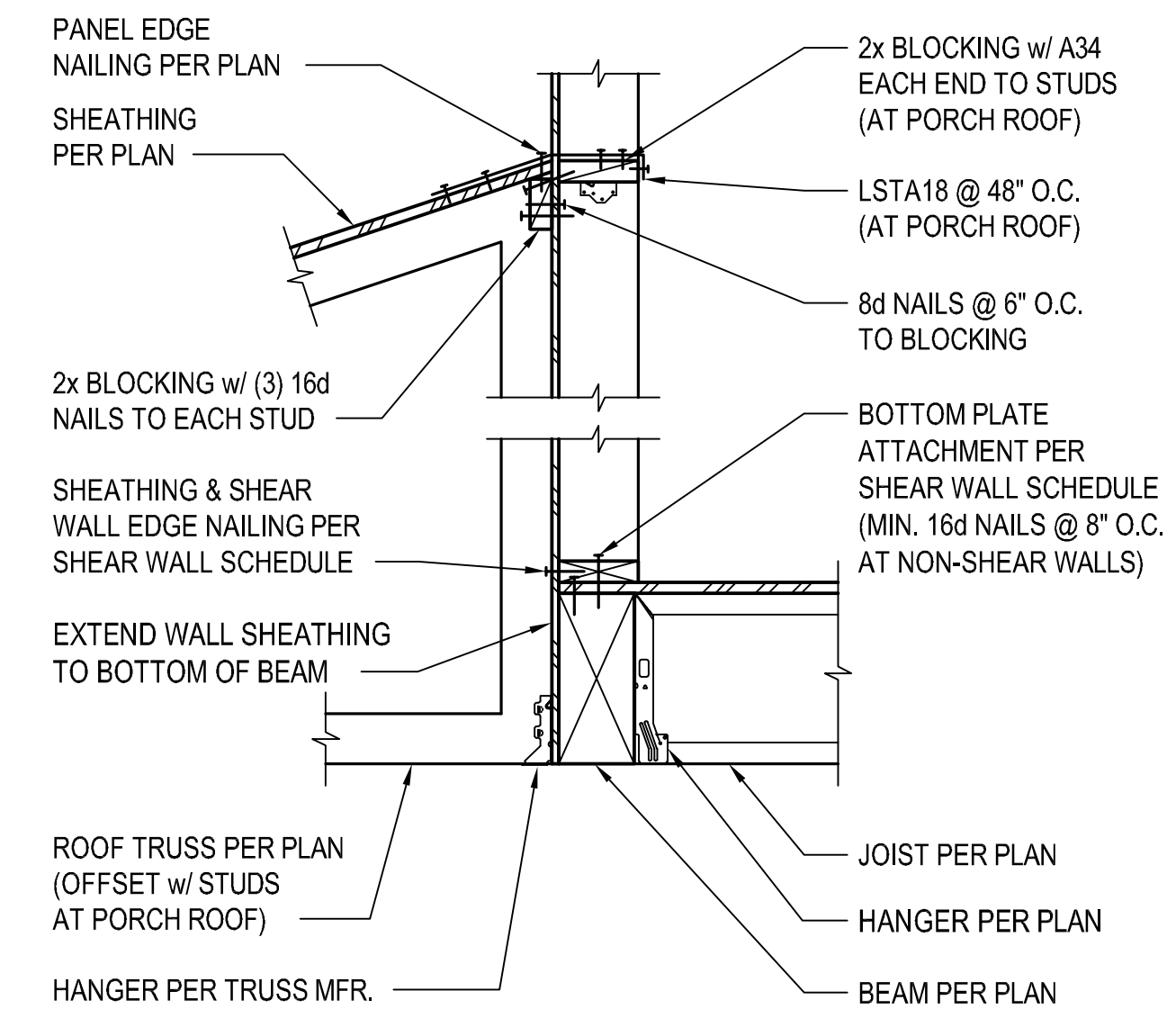
HAREZLAK ENGINEERING  
11745 87th Ave. S.  
Seattle, WA 98178

PH: 360.224.0627  
E: phil@harezlakengineering.com

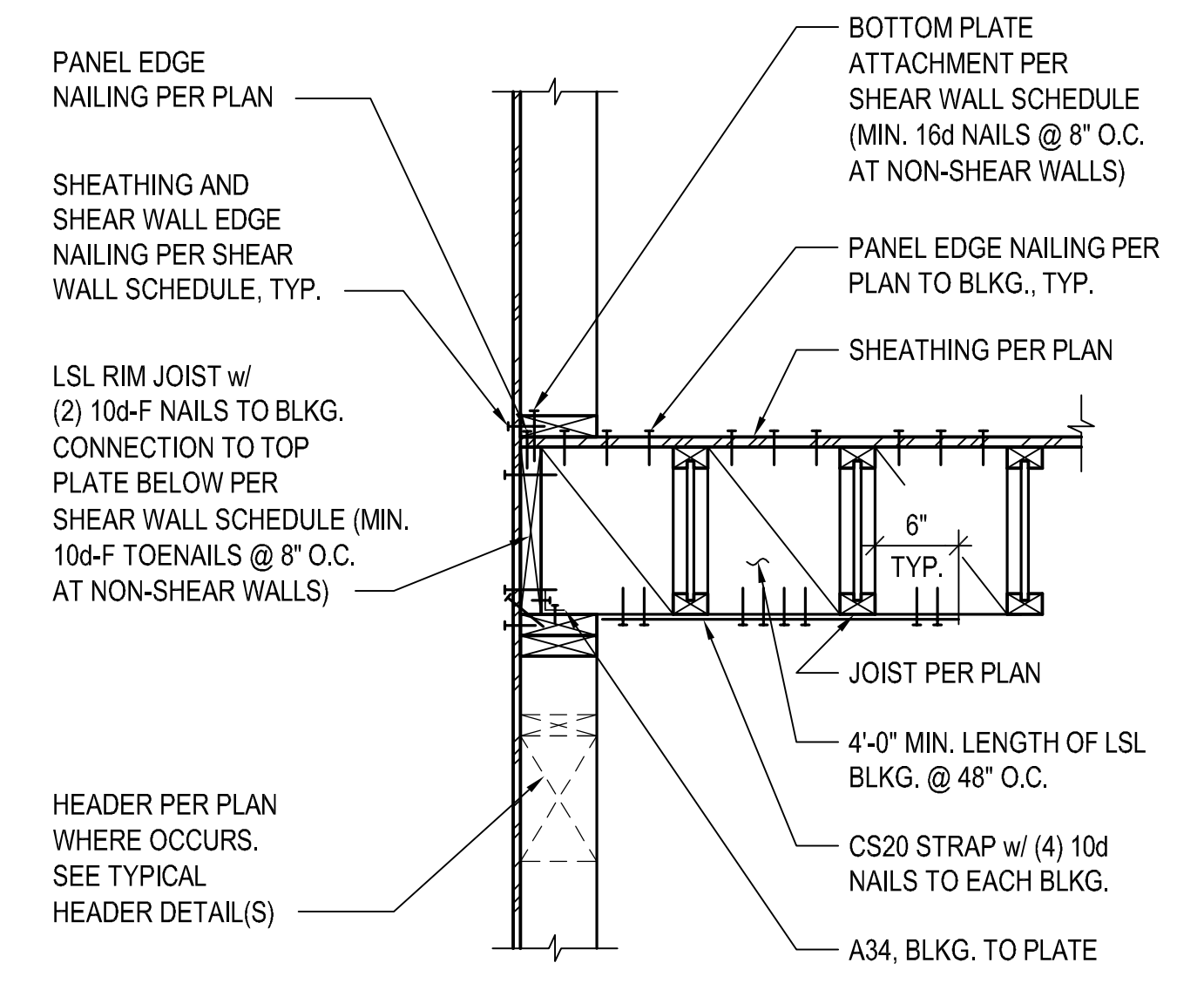
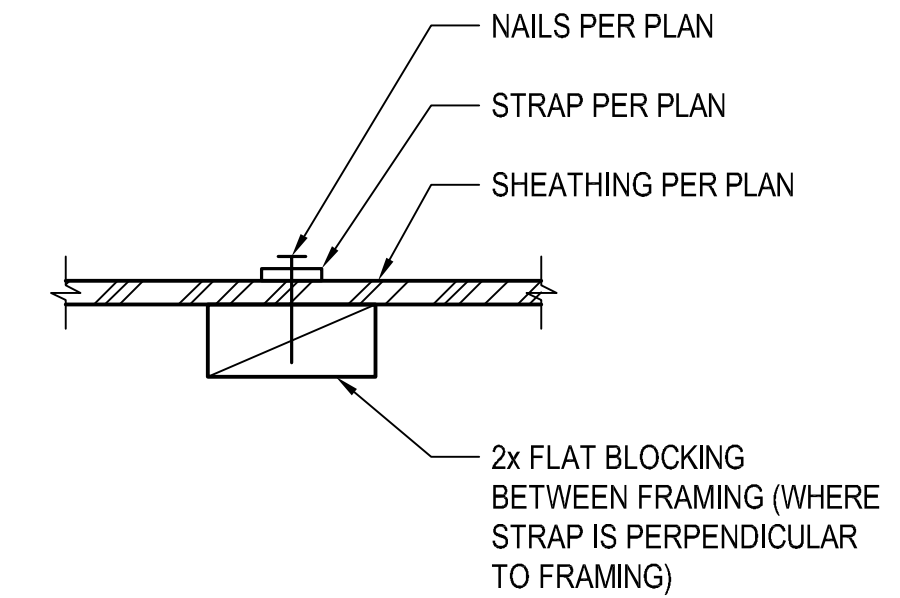
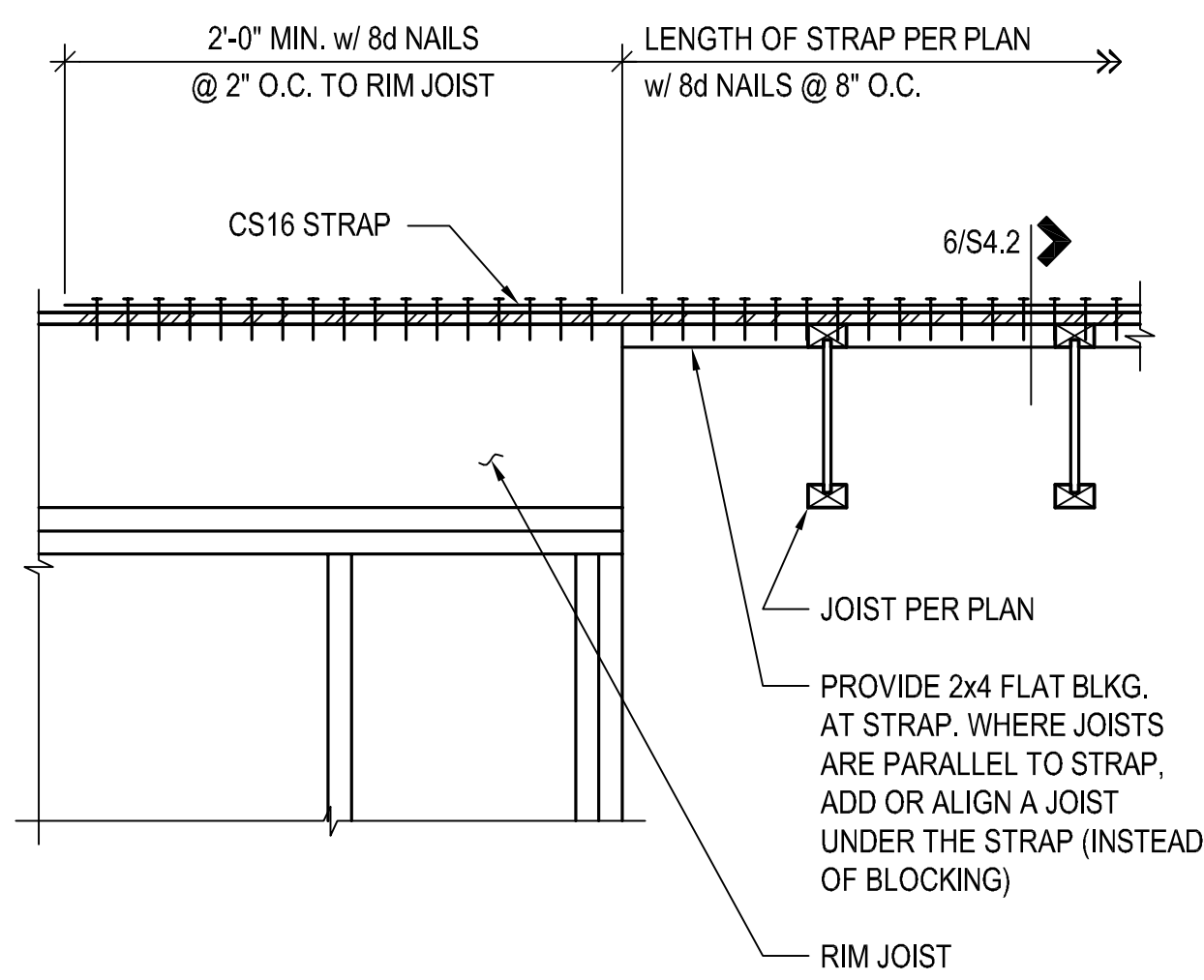
CONSULTANT STAMP:



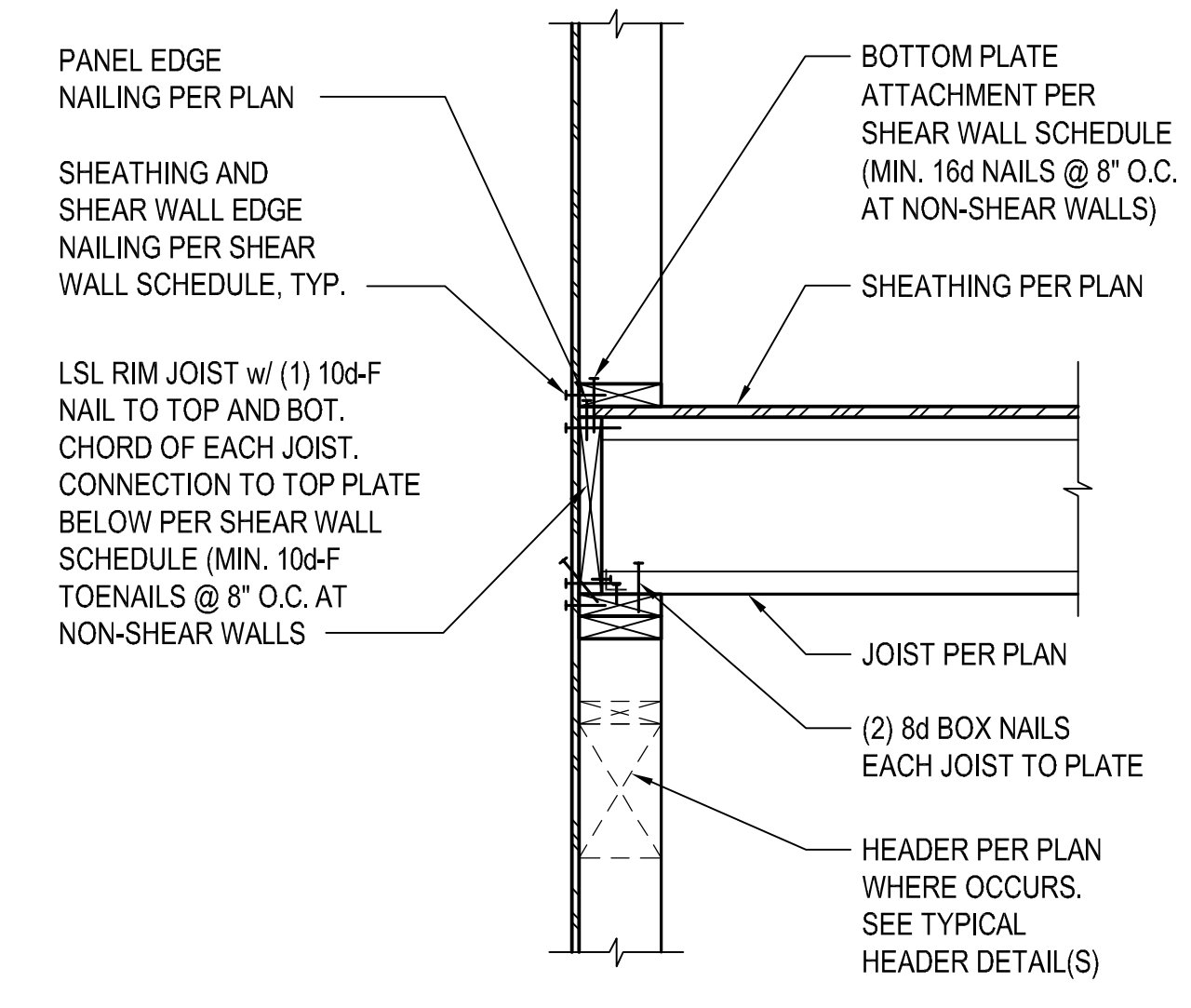
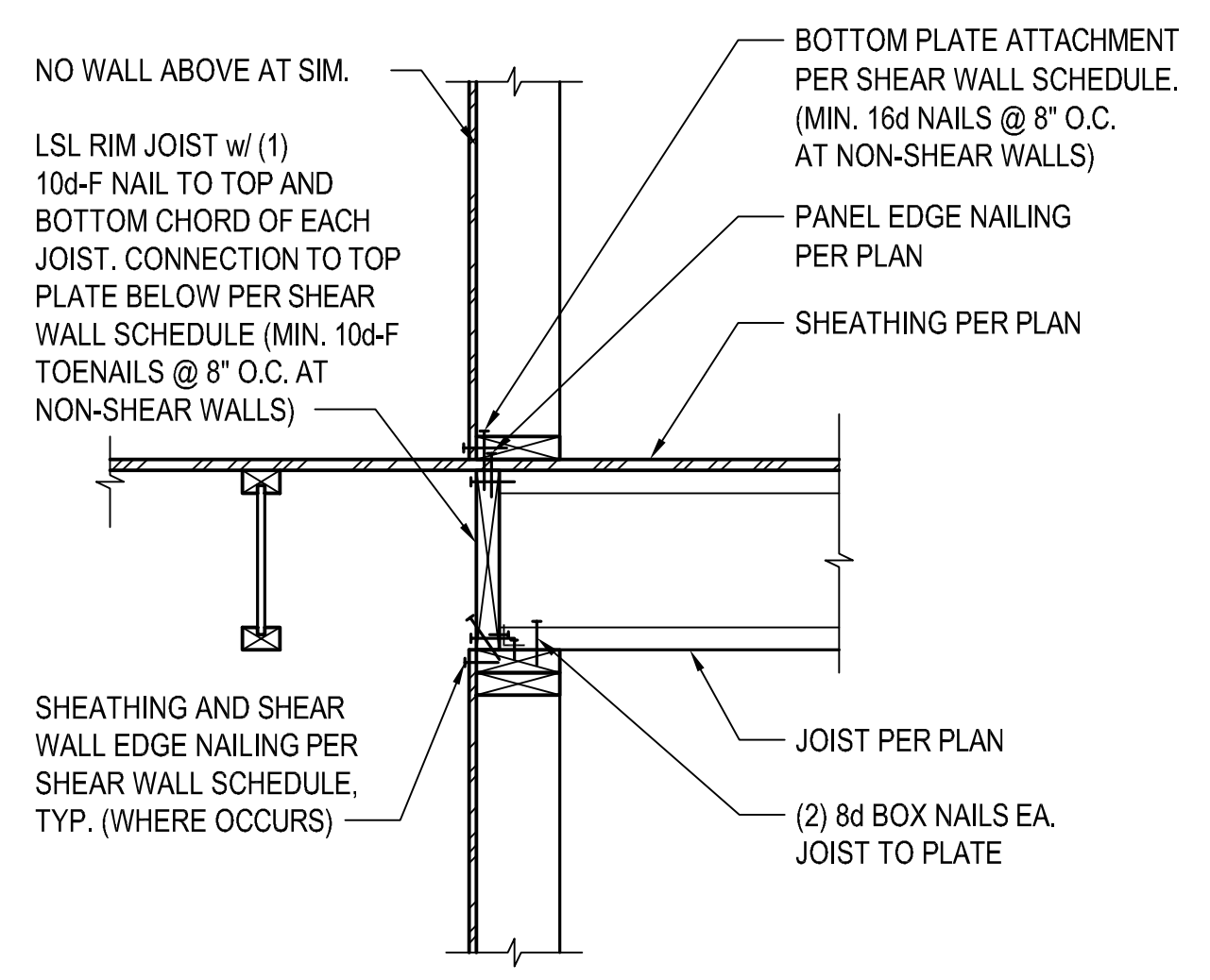
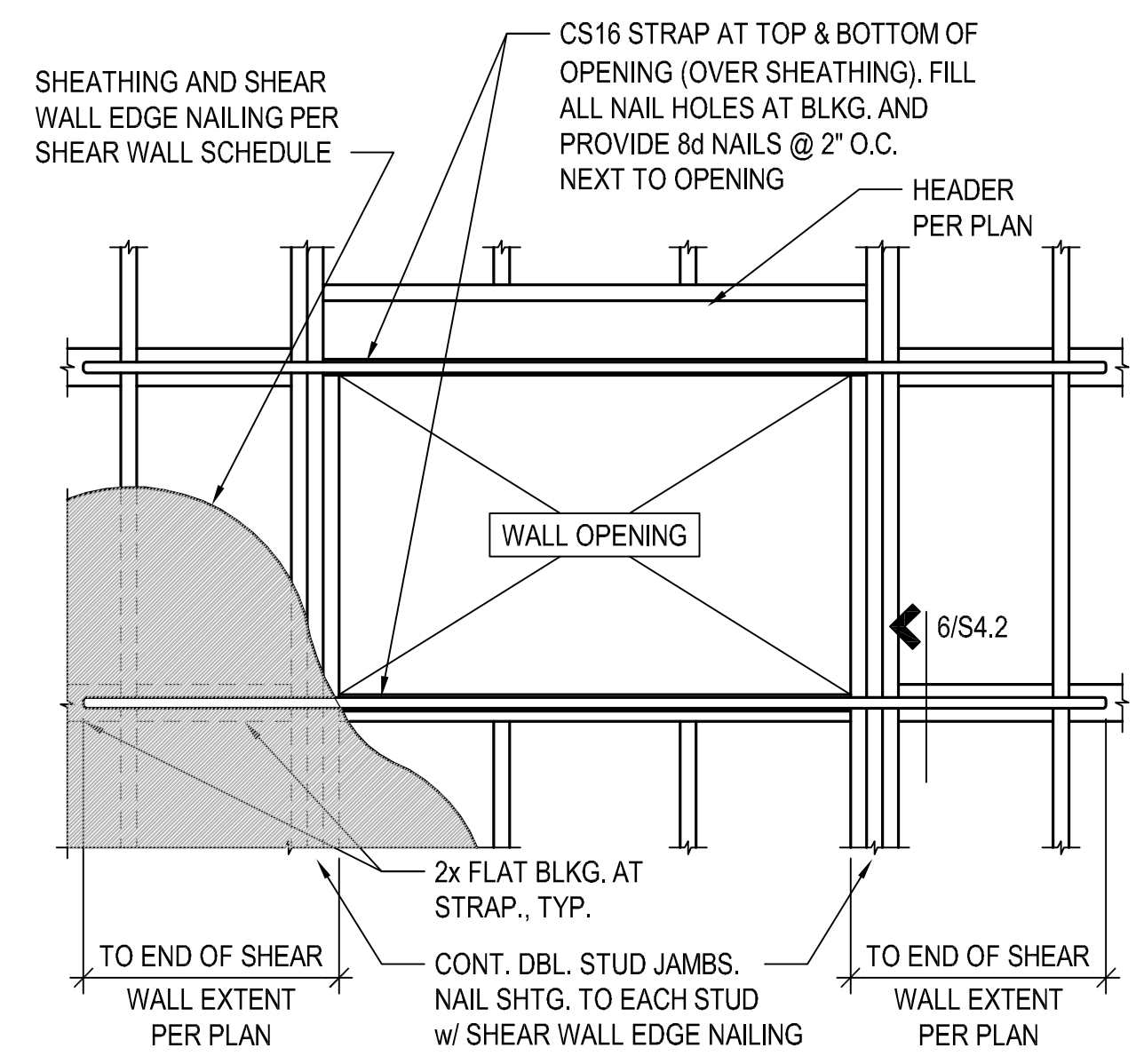
11/17/2023



① ————— ② ————— ③ ————— ④



⑤ ————— ⑥ ————— ⑦ ————— ⑧



⑨ ————— ⑩ ————— ⑪ ————— ⑫

PROJECT INFORMATION:  
**WANG & YANG ADU**  
PROJECT ADDRESS:  
**6450 E MERCER WAY  
MERCER ISLAND, WA 98040**

REVISIONS:

NO.	DESCRIPTION	DATE

PROJECT NUMBER:	23-146
ISSUE DATE:	11.17.2023
CURRENT REVISION:	
PERMIT	

SHEET NAME:  
**FLOOR FRAMING DETAILS**

SHEET NUMBER:  
**S4.2**





**HAREZLAK ENGINEERING**

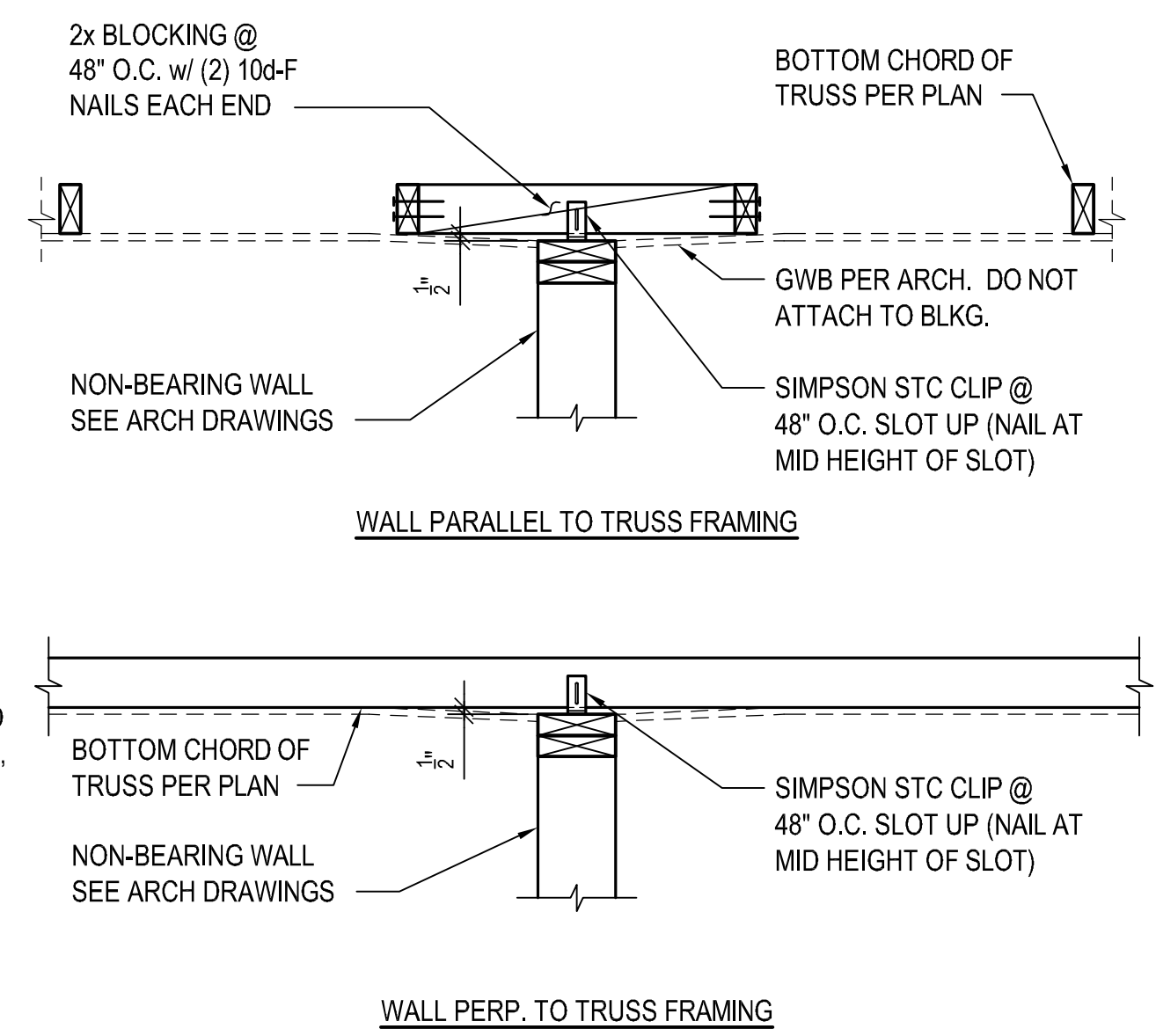
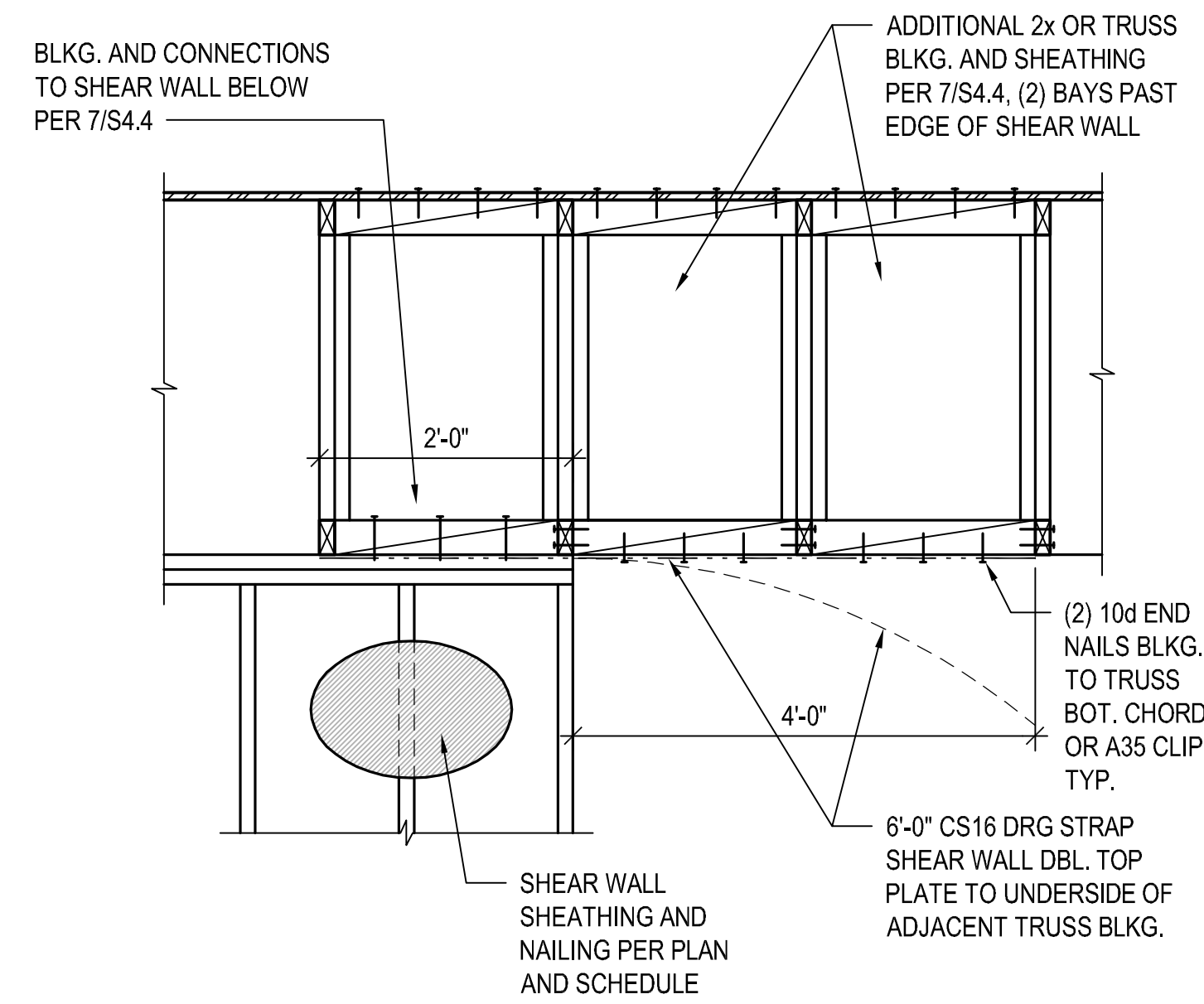
HAREZLAK ENGINEERING  
11745 87th Ave. S.  
Seattle, WA 98178

PH: 360.224.0627  
E: phil@harezlakengineering.com

CONSULTANT STAMP:



11/17/2023



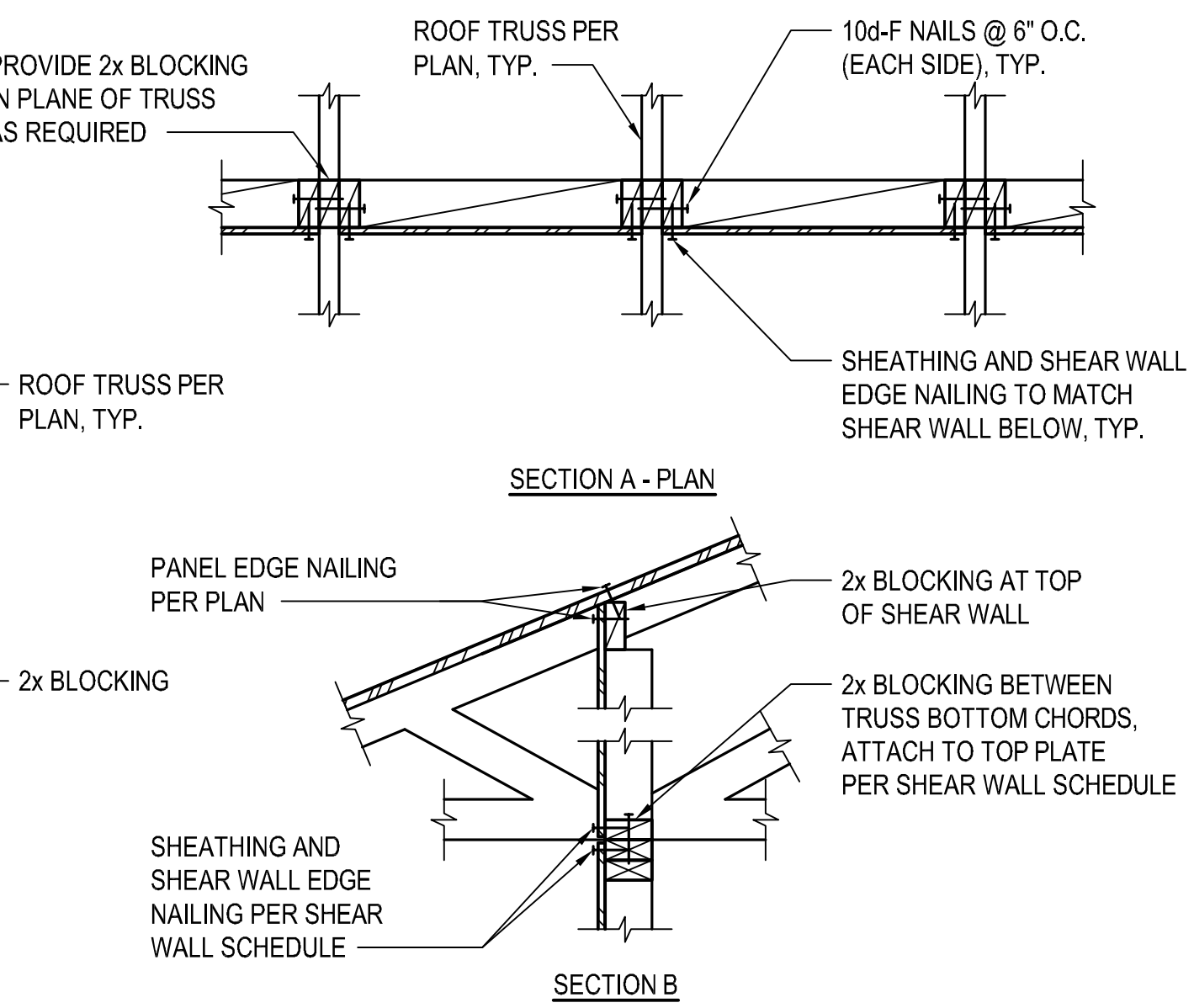
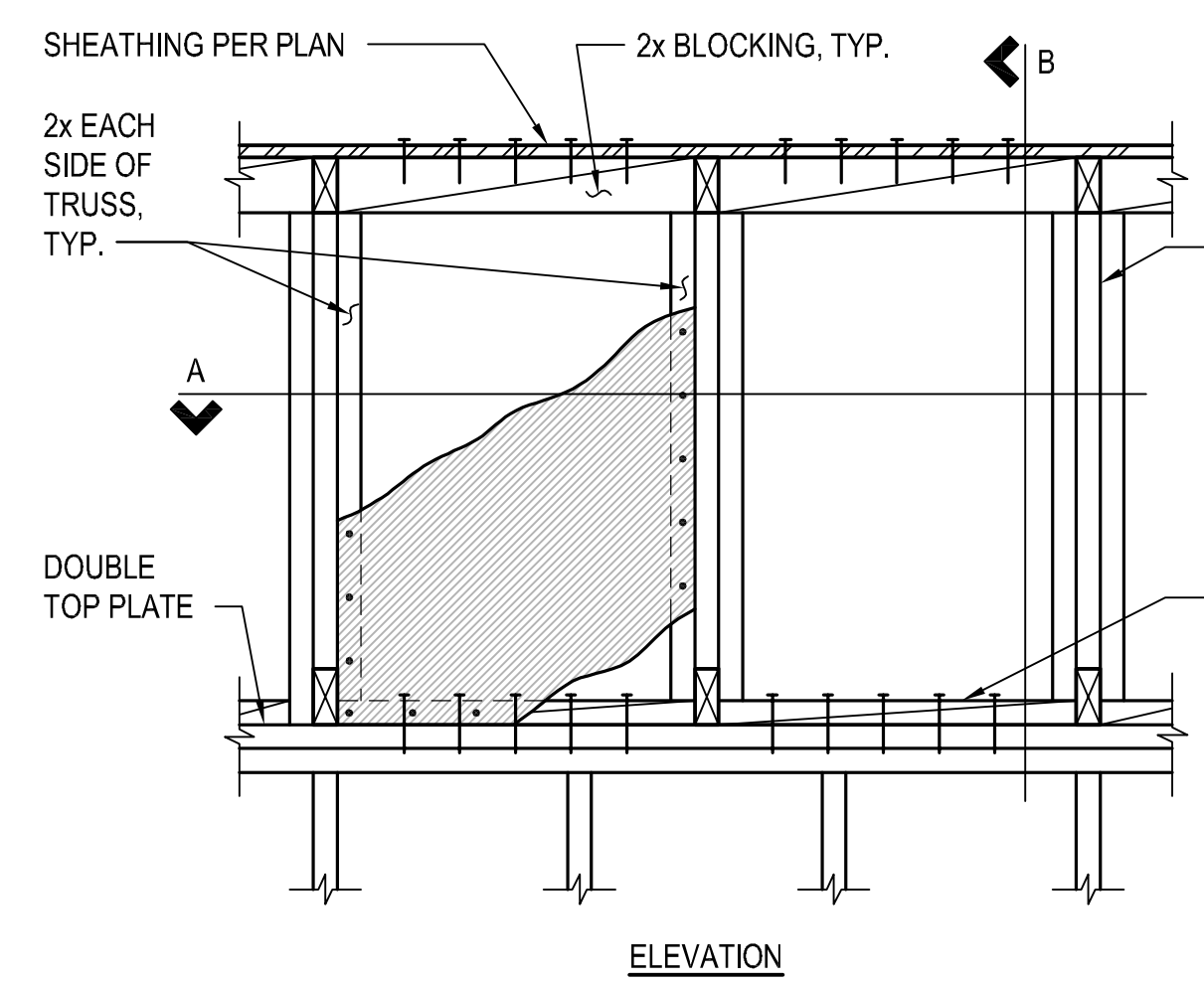
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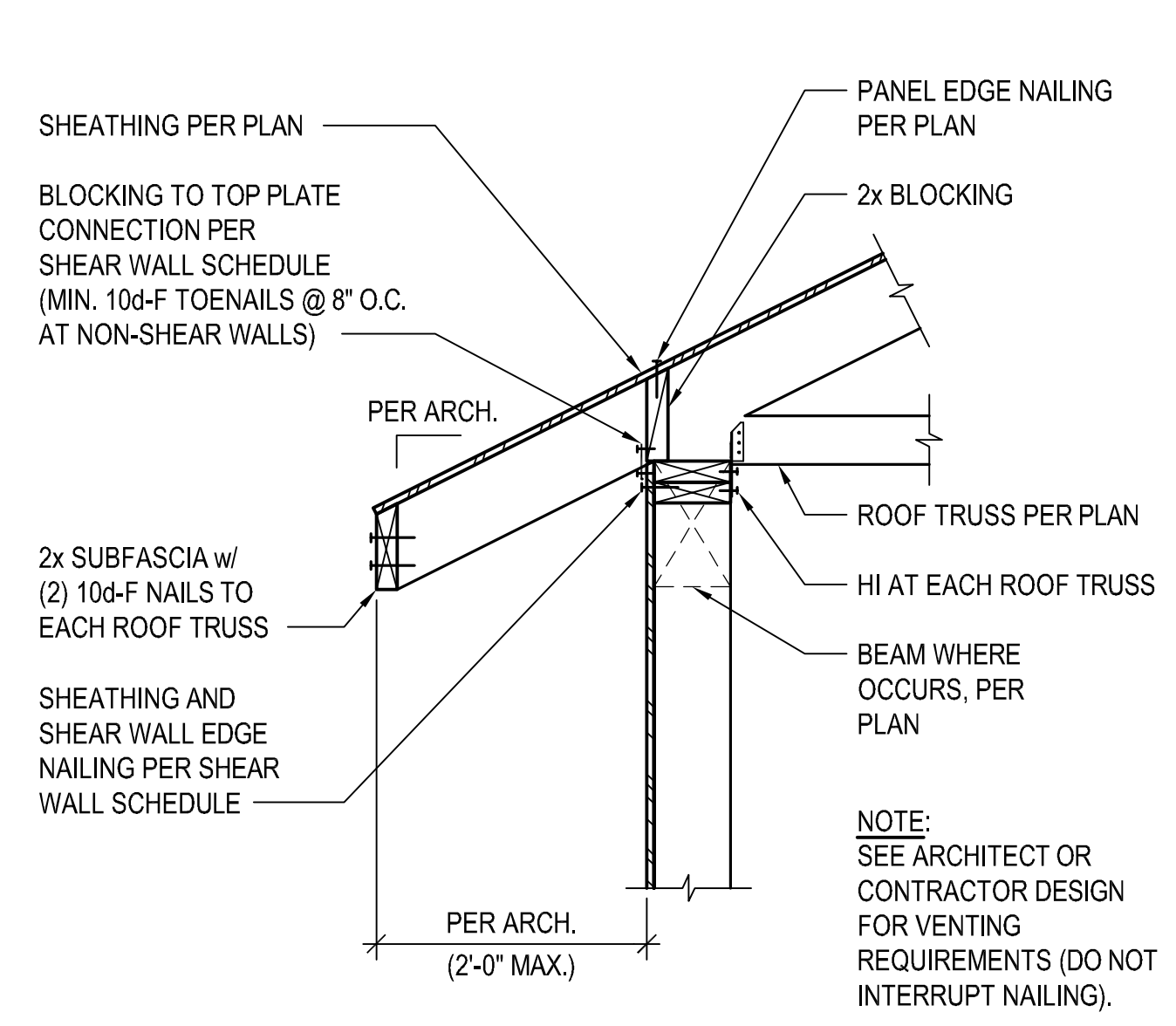
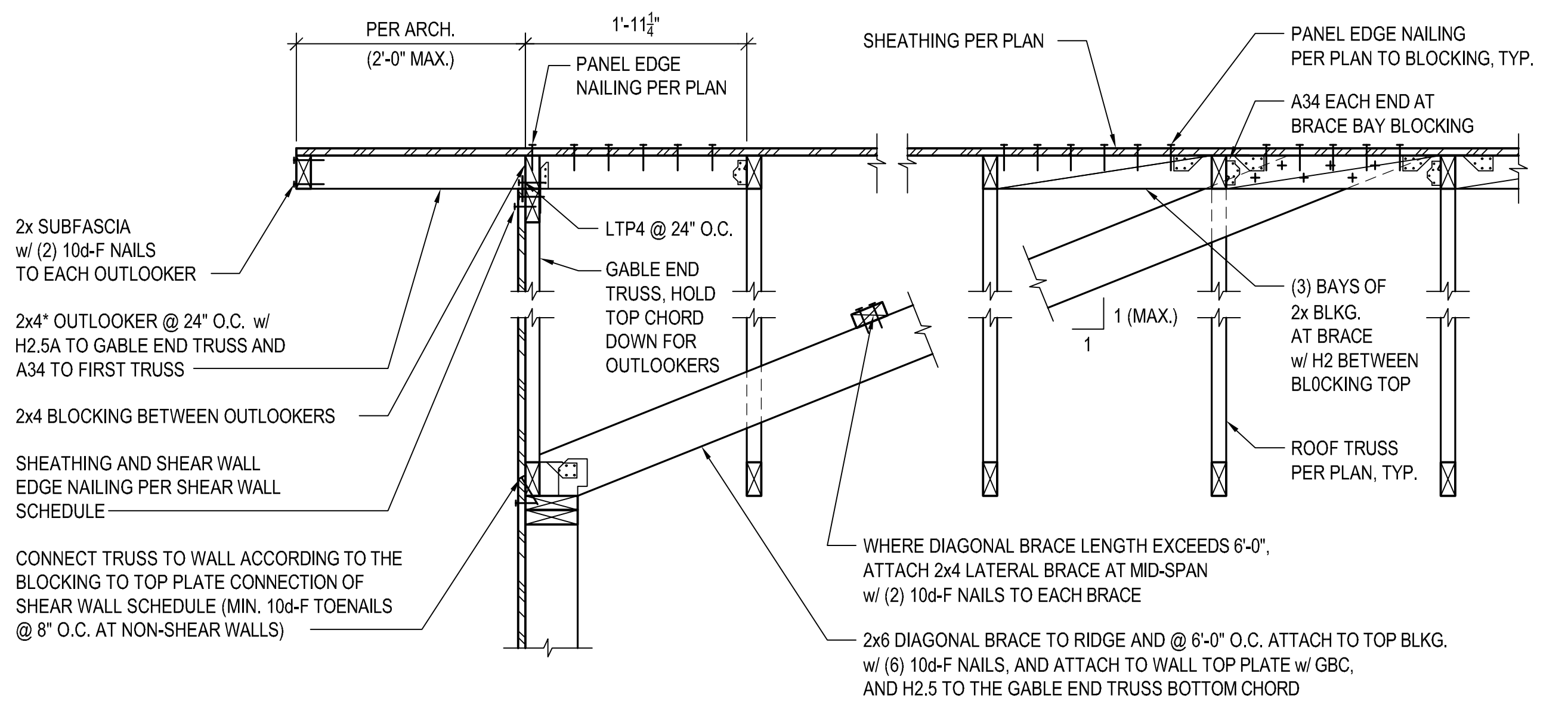
**NOTE:**  
AT CONTRACTOR'S OPTION TRUSS MANUFACTURER MAY PROVIDE BLOCKING PANELS INSTEAD OF SITE-BUILT FRAMING SHOWN. MATCH CAPACITY OF SHEAR WALL BELOW.



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12

PROJECT INFORMATION:  
**WANG & YANG ADU**  
PROJECT ADDRESS:  
**6450 E MERCER WAY  
MERCER ISLAND, WA 98040**

REVISIONS:

NO.	DESCRIPTION	DATE
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PROJECT NUMBER:  
23-146  
ISSUE DATE:  
11.17.2023  
CURRENT REVISION:  
PERMIT

SHEET NAME:  
**ROOF FRAMING DETAILS**

SHEET NUMBER:  
**S4.3**