

TAX LOT NUMBER

PARCEL #545600-0385

ADDRESS OF PROPERTY

4244 SHORECLUB DRIVE MERCER ISLAND WA 98040

LEGAL DESCRIPTION

MERCER WOOD ADD
PLat Block: L
Plat Lot: 2

OWNER OF PROPERTY

GALOTTO JILL RENEE & OSTRO

PREPARED BY

ANNALEA OVERA
AXIOM DESIGN BUILD
5424 BALLARD AVE NW SUITE #204
SEATTLE, WA 98107
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STRUCTURAL ENGINEER

2

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ANNEE STRUCTURAL ENGINEERING
1801 18TH AVENUE SOUTH
SEATTLE, WA 98144
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SCOPE OF WORK

MAJOR REMODEL OF (E) SFR AND NEW 2ND STORY ADDITION

ZONING

R-8.4

CONSTRUCTION TYPE

VB; SMOKE DETECTORS

GROSS FLOOR AREA

ALLOWABLE FLOOR AREA = 5,000 SQ. FT. OR 40% OF LOT AREA WHICHEVER IS LESS

11,254 SQ. FT. x .40% = 4501.6 SQ. FT TOTAL ALLOWABLE

EXISTING GROSS FLOOR AREA:

(E) BASEMENT TO REMAIN: 1550 SF
-1,023 SF
(PORTION EXCLUDED PER GFA CALC)
= 527 SF

(E) MAIN FLOOR: 1649 SF

TOTAL (E) GROSS FLOOR AREA= 2176 SF

PROPOSED GROSS FLOOR AREA:

(E) BASEMENT TO REMAIN: 1550 SF
(INCLUDING INTERIOR STAIRWELL FOOTPRINT)
-1,023 SF
(PORTION EXCLUDED PER GFA CALC)
= 527 SF

PROPOSED MAIN FLOOR: 2193 SF

PROPOSED UPPER FLOOR: 1040.54 SF

(INCLUDING INTERIOR STAIRWELL FOOTPRINT)

COVERED 2ND STORY DECK: 106 SF

TOTAL PROPOSED GROSS FLOOR AREA= 3866.54 SF

AVERAGE GRADE

80.8'

BUILDING HEIGHT

TOTAL ALLOWABLE GRADE 30'-0" FROM AVG.
(E) BUILDING HEIGHT 13'-11 1/4"

PROPOSED BUILDING HEIGHT 25'-2"

LOT COVERAGE

TOTAL LOT AREA 11,254 SF
35% ALLOWABLE
LOT COVERAGE =3938 SF

EXISTING

(E) SFR & CARPORT ROOF AREA 2708 SF
(E) PAVED DRIVEWAY 405 SF

TOTAL (E) LOT COVERAGE 3113 SF

PROPOSED

SFR AND ATTACHED GARAGE ROOF AREA 2372 SF
(E) PAVED DRIVEWAY (NEW PAVEMENT) 405 SF
COVERED PATIOS 220 SF

TOTAL (E) LOT COVERAGE REMOVED 336 SF
TOTAL PROPOSED LOT COVERAGE 3006 SF

TOTAL REMAINING LOT COVERAGE 932 SF

(E) HARDSCAPE

(E) ELEVATED DECK 115 SF
(E) PATIO/WALKWAY 838 SF
(E) STAIRS 45 SF
(E) ROCKERIES 308 SF

TOTAL (E) HARDSCAPE AREA 1306 SF

PROPOSED HARDSCAPE

(E) STAIRS TO REMAIN 45 SF
(E) ROCKERIES TO REMAIN 308 SF
PATIO (REVISED) 402 SF
WALKWAY (REVISED) 200 SF

TOTAL PROPOSED HARDSCAPE AREA 955 SF

LOT WIDTH

PER MICC 19.16.010-SINCE THE LOT SHAPE IS IRREGULAR, THE LOT WIDTH SHALL BE DETERMINED BY A LOT WIDTH CIRCLE. THE CIRCLE SHALL BE THE LARGEST CIRCLE THAT CAN BE FULLY ACCOMMODATED WITHIN THE BOUNDARIES OF THE LOT

LOT WIDTH: 95'-11 1/4"

ROOF VENTILATION

PER IRC R306.1-1 SF OF VENTING PER 150 SF OF ROOF (PER 300 IF ROOF VENTILATORS ARE USED)

ROOF 1: 1328 SF NEW ROOF TO BE VENTED
1328 SF / 150 SF= 8.85 SF (1274.4 SQ. INCHES) REQUIRED

(18'-7" + 16'-8 3/4" + 17'-9 1/2" + 17'-11 1/2") = 71' x 1 1/2"
CONTINUOUS VENTING STRIP = 8.875 SF = 1278 SQ. INCHES PROVIDED FROM ROOF 1

ROOF 2: 264 SF NEW ROOF TO BE VENTED
264 SF / 150 SF=1.76 SF (253.4 SQ. INCHES) REQUIRED

(13'-6" + 17'-6 1/2") = 31'-0 1/2" X 1 1/2" CONTINUOUS VENTING STRIP = 3.88 SF = 558 SQ. INCHES PROVIDED FROM ROOF 2

NOTE: EACH RAFTER MUST BE VENTILATED AS PER IRC R306

SEE ROOF PLAN A1.4

SETBACKS

FRONT: 20'-0"
REAR: 25'-0"

LOT WIDTH SIDE YARD CALCULATION PER MICC 19.16.010:
THE AGGREGATE/COMBINED SIDE SETBACKS ARE 17% THE LOT WIDTH AND THE MINIMUM INDIVIDUAL SIDE SETBACK IS 33% OF THE AGGREGATE/COMBINED SIDE SETBACKS

LOT WIDTH 95'-11 1/4" x .17 = 16'-3" FOR COMBINED SIDE YARD SETBACKS

16'-3" x .33 = 5'-4" MINIMUM SIDE YARD SETBACK

VARIABLE SIDE YARD SETBACK CALCULATION PER MICC 19.02.020.C.1.c.iii:

FOR ANY PORTION OF THE SIDE FACADE OF A NONGABLED ROOF END STRUCTURE THAT IS BETWEEN 15 AND 25 FEET FROM EXISTING OR FINISHED GRADE, THE MINIMUM INDIVIDUAL SIDE SETBACK INCREASES TO 7.5 FEET.

SIDE YARDS BASED ON ALL APPLICABLE CALCULATIONS PER CODE:

EAST SIDE YARD : 8'-9"
WEST SIDE YARD : 7'-6" MINIMUM
AGGREGATE/COMBINED SIDE YARDS: 16'-3"

INDOOR AIR QUALITY

-VENTILATION PER SRC M1507
-ALL NEW EXHAUST DUCTS TO MEET REQUIREMENTS.
-NEW SOURCE SPECIFIC VENTILATION LOCATION
*SEE PLANS FOR ACTUAL SIZING
-SOURCE SPECIFIC VENTILATION CONTROLLED BY MANUAL SWITCHES AND/OR TIMERS

MECHANICAL VENTILATION PER M1507.3.2(1)
HEATED FLOOR AREA = 4,067
OF BEDROOMS = 3

(CONTINUOUS) AIRFLOW REQ'D. = 75 CFM

HABITABLE ROOMS TO BE VENTILATED w/FRESH-AIR INTAKE, TYP.

(5) PANASONIC FV-GKF3251 INLETS * 18CFM = 90 CFM AIRFLOW PROVIDED

-LAUNDRY EXHAUST FAN TO PROVIDE WHOLE-HOUSE VENTILATION PER SRC M1507.3.4. PROVIDE VENTILATION CONTROLS PER SRC M1507.3.2, WITH INTERMITTENT VENTILATION OPERATING AT LEAST ONE HOUR OUT OF EVERY TWO.
-ALL EXHAUSTS SHALL TERMINATE OUTSIDE NOT LESS THAN 3 FEET FROM PROPERTY LINES; 3 FEET FROM OPERABLE/NON-OPERABLE OPENINGS INTO BUILDING AND 10 FEET FROM MECHANICAL AIR INTAKES, EXCEPT WHERE OPENING

ENERGY SPECIFICATIONS

CLIMATE ZONE 4C KING COUNTY
-ADDITIONS TO EXISTING BUILDINGS THAT ARE GREATER THAN 500 SF OF HEATED FLOOR AREA BUT LESS THAN 1500 SF-3 CREDITS REQUIRED FROM TABLE R406.2

-1.3- EFFICIENT BUILDING ENVELOPE =0.5 CREDITS CLAIMED
-3.2- HIGH EFFICIENCY HVAC = 1 CREDIT CLAIMED
-5.2- EFFICIENT WATER HEATING = .05 CREDITS CLAIMED
= 3 TOTAL CREDITS REQUIRED AND CLAIMED

-REMODEL & NEW COMPONENTS SHALL COMPLY W/TABLE WSEC R402.1.1
-PER WSEC R401 A RESIDENTIAL ENERGY COMPLIANCE CERTIFICATE COMPLYING WITH WSEC R401 IS REQUIRED TO BE COMPLETED BY THE DESIGN PROFESSIONAL OR BUILDER AND PERMANENTLY POSTED WITHIN 3' OF THE ELECTRICAL PANEL PRIOR TO FINAL INSPECTION.
-PER WSEC 403.1 EACH DWELLING UNIT IS REQUIRED TO BE PROVIDED WITH AT LEAST ONE PROGRAMMABLE THERMOSTAT FOR THE REGULATION OF TEMPERATURE.

-PER WSEC 402.4 THE BUILDING THERMAL ENVELOPE OF THE REMODEL SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF WSEC R402.1.1 THROUGH R402.4.4.
-PER R403.2.2 DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH EITHER THE IMC OR THE IRC AS APPLICABLE.
-REMODEL TO REPLACE LESS THAN 60% OF EXISTING LIGHTING.
-MINIMUM 75% OF ALL LUMINARIES SHALL BE HIGH EFFICACY LUMINARIES

SMOKE DETECTORS

BATTERY OPERATED, BUILDING OWNER OCCUPIED, BUILDING UNDERGOING ONLY RENOVATION SRC 314.4. EXISTING SMOKE DETECTOR LOCATIONS ARE INDICATED ON PLANS BY "ESD" AND NEW SMOKE DETECTOR LOCATIONS INDICATED BY "SD." CARBON MONOXIDE ALARMS INDICATED ON PLANS AS "CM."

VAPOR RETARDERS

VAPOR RETARDING PAINT WHEN LISTED FOR THIS APPLICATION TO BE USED ON INTERIOR SIDE OF ALL EXTERIOR WALLS AND CEILINGS.

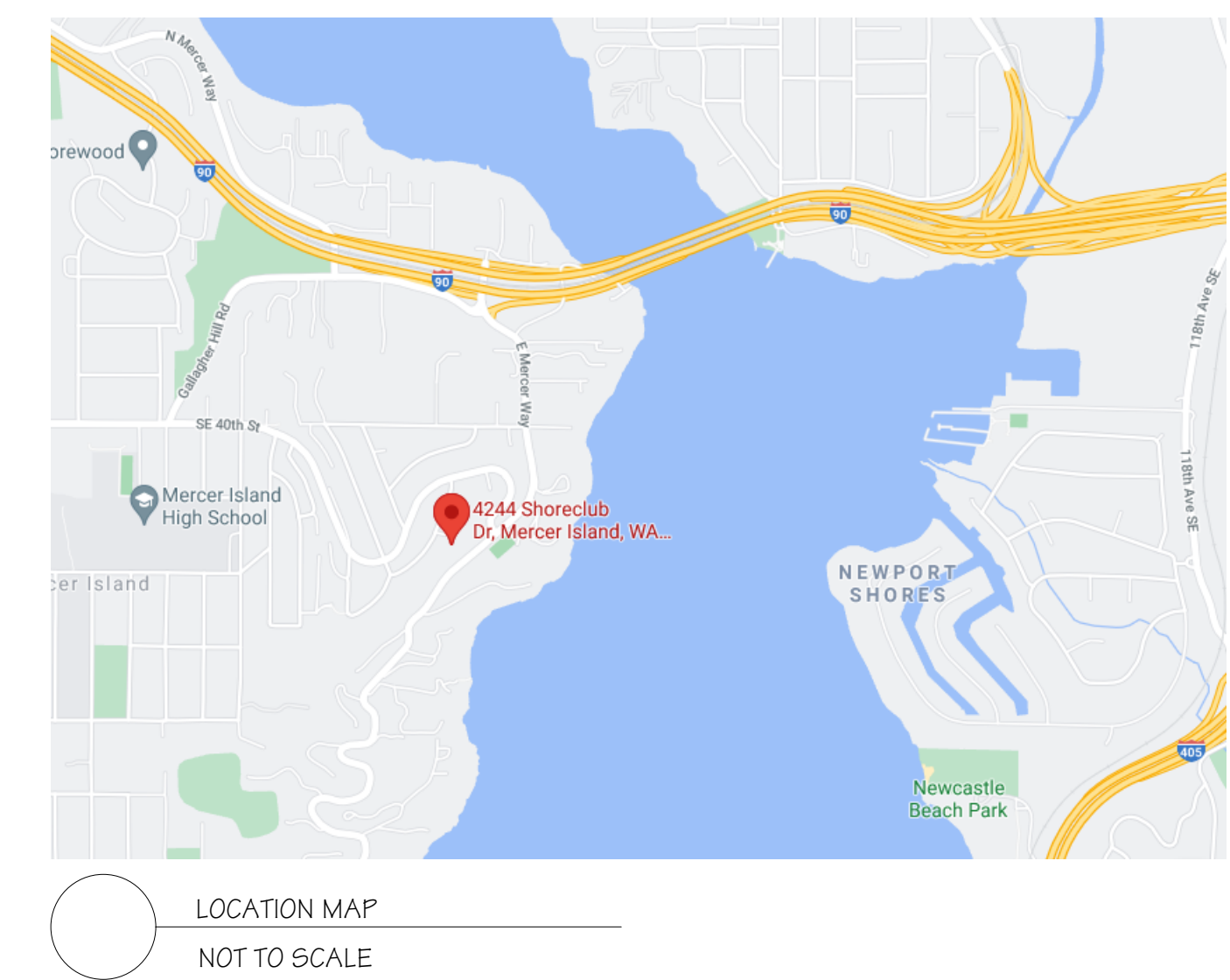
BUILDING CODES

INTERNATIONAL RESIDENTIAL CODE 2018 (ARCH), INTERNATIONAL BUILDING CODE 2018 (STRL), WA STATE ENERGY CODE 2018, INTERNATIONAL MECHANICAL CODE 2018, 2018 UNIFORM PLUMBING CODE.

STAIR GUARDRAIL

STAIRWAYS W/ 4 OR MORE RISERS TO HAVE CONTINUOUS HANDRAIL.
HANDRAIL TO BE 34" TO 38" ABOVE NOSING BALUSTERS/INTERMEDIATE RAILS TO BE SPACED SUCH THAT A 4" SPHERE CANNOT PASS THROUGH. GUARDRAIL HAND GRIP PORTION TO BE NOT LESS THAN 1-1/4" NOR MORE THAN 2" IN CROSS SECTIONAL DIMENSION HANDRAIL SHALL BE 1 1/2" FROM WALL RETURN HANDRAIL TO NEWEL POST OR WALL.
-CONTRACTOR SHALL VERIFY TO INSPECTOR ALL GUARDS AND RAILINGS SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION

SHEET INDEX	
ID	Name
A0.0	COVER SHEET
A0.1	SITE PLAN
A0.2	SITE SURVEY
A0.3	CALCULATIONS
A1.0	DEMO PLANS
A1.1	DEMO PLANS
A1.2	FLOOR PLANS
A1.3	FLOOR PLANS
A1.4	FLOOR PLANS
A1.5	ROOF PLAN
A2.0	EXT ELEV.
A2.1	EXT. ELEV.
A3.0	BLDG. SECTION
A3.1	BLDG. SECTION
A6.0	SCHEDULES
S1.0	STRUCTURALS
S1.1	STRUCTURALS
S2.0	STRUCTURALS
S2.1	STRUCTURALS
S2.2	STRUCTURALS
S2.3	STRUCTURALS
S3.0	STRUCTURALS
S3.1	STRUCTURALS
S3.2	STRUCTURALS
S3.3	STRUCTURALS



TREE PROTECTION AREA

TREE PROTECTION FENCING REQUIRED AROUND ENTIRE DRIP LINE ON THE PERMIT SITE (THE TREE PROTECTION AREA - TPA):
-FENCING MUST BE INSTALLED PRIOR TO DEMOLITION AND GROUND DISTURBANCE;
-KEPT IN PLACE FOR THE DURATION OF CONSTRUCTION;
-MODIFICATIONS BY APPROVAL OF PROJECT PLANNER ONLY
-NO SOIL DISTURBANCE OR ACTIVITY ALLOWED WITHIN A FENCED AREA(S), SUCH AS BUT NOT LIMITED TO: MATERIAL STORAGE / STOCKPILING, PARKING, DUMPING OR WASHING.

FIRE SPRINKLERS

NEW FIRE SPRINKLERS REQUIRED THROUGHOUT. REMODELS EXCEEDING 50% VALUATION ARE REQUIRED TO INSTALL A NFPA 13d SPRINKLER SYSTEM.

CRITICAL AREA REVIEW

CRITICAL AREA REVIEW TYPE 2 - CA022-004 HAS BEEN APPROVED BY THE CITY OF MERCER ISLAND

GENERAL NOTES

-CONTACT ARCHITECT IMMEDIATELY CONCERNING ANY DISCREPANCIES IN THE DRAWINGS PRIOR TO PROCEEDING WITH WORK IN THE AFFECTED AREA.
-ALL APPLICABLE CODES, ORDINANCES, AND MINIMUM STRUCTURAL REQUIREMENTS TAKE PRECEDENCE OVER ALL DRAWING NOTES, SPECIFICATIONS, AND SIZES
-VERIFY ALL DIMENSIONS BEFORE BEGINNING WORK
-DO NOT SCALE DRAWINGS
-PROVIDE APPROVED DRAFTSTOPPING IN CONCEALED SPACE BETWEEN CEILING AND FLOOR PER IRC.
-PROVIDE SOLID WOOD BLOCKING FOR SUPPORT AT ALL WALL MOUNTED FIXTURES
-FLASH ALL OPENINGS WITH MINIMUM 26 GAUGE GALVANIZED OR ALUMINUM
-ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY TO BE PRESSURE TREATED.
-SPRAY-FOAM INSULATION TO BE ICYNENE CLASSIC MAX (E5R-1826) OR SIMILAR.
-SPRAY-FOAM INSULATION SHALL BE INSTALLED BY A CERTIFIED INSTALLER. A COPY OF THE INSTALLERS CERTIFICATE SHALL BE ON SITE.
-EXISTING CEILING, WALL OR FLOOR CAVITIES EXPOSED DURING CONSTRUCTION PROVIDED THAT THESE CAVITIES ARE FILLED WITH INSULATION. 2X4 FARMED WALLS SHALL BE INSULATED TO A MINIMUM OF R-15 AND 2X6 FRAMED WALLS SHALL BE INSULATED TO A MIN. OF R-21.

AXIOM DESIGN BUILD
5424 BALLARD AVENUE NW
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(206) 283-9535



9256 REGISTERED ARCHITECT
JOHN ALFRED CASHMAN
STATE OF WASHINGTON

OSTROFF GALOTTO
4244 SHORECLUB DRIVE MERCER ISLAND WA 98040

PROJECT NUMBER:

A2834

PERMIT

PERMIT NUMBER:

DRAWING SET DATE:

10/31/22

REVISIONS:

Permit Intake: 06/08/22

Round 1 Corrections: 09/23/22

Round 2 Corrections: 10/31/22

2

A0.0

COVER SHEET

DCI SEAL



1 SITE PLAN
SCALE: 1" = 10'

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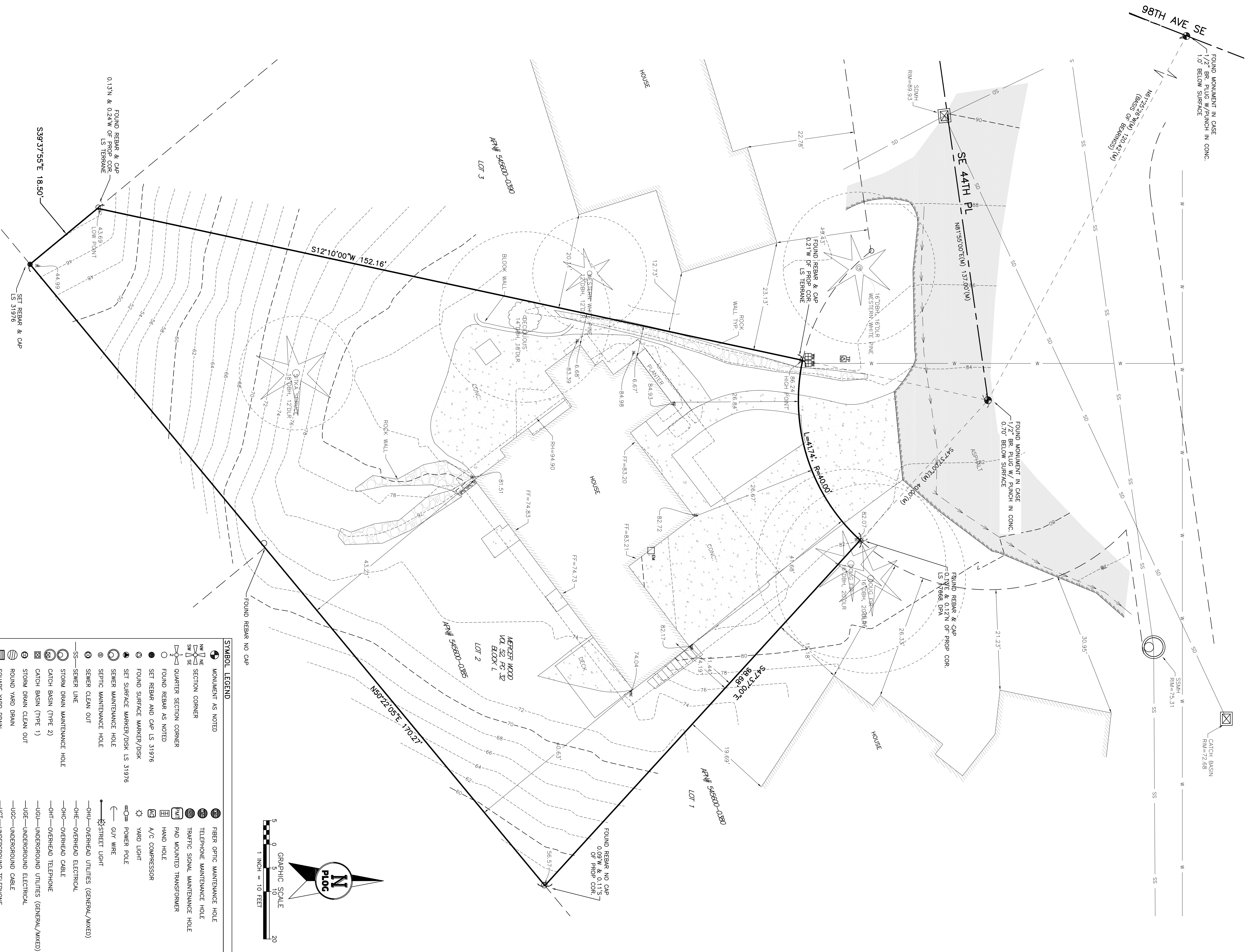
DRAWING SET DATE:
10/31/22

REVISIONS:
Permit Intake: 06/08/22
Round 1 Corrections: 09/23/22
Round 2 Corrections: 10/31/22

A0.1

SITE PLAN

DCI SEAL



- GENERAL NOTES**
1. INSTRUMENT FOR THIS SURVEY WAS A 3-SECOND LEICA TCA 1103 SURVEY TOTAL STATION/RANGE FINDER.
 2. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET FORTH IN THE SURVEYING ACT AND REGULATIONS, AS AMENDED BY A FIELD TRAVELER.
 3. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OPERATIONS, UTILITY LOCATOR BY THIRD PARTIES, AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES ON THIS SITE AND UTILITIES NOT SHOWN ON THIS SURVEY MAY OTHERWISE VARY.
 4. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY, UNLESS OTHERWISE NOTED.
 5. CONTOURS SHOWN ARE BASED ON A FIELD SURVEY.
 6. TREE IDENTIFICATION WAS PERFORMED BY SURVEY FIELD PERSONNEL AND SHOULD BE CONSIDERED A BEST GUESS. AN ARBORIST SHOULD BE CONSULTED FOR A MORE COMPREHENSIVE AND DETAILED IDENTIFICATION OF TREE SPECIES AND HEALTH.

VERTICAL DATUM & CONTOUR INTERVAL
 ELEVATIONS SHOWN ON THIS DRAWING ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAD83) AND WERE ESTABLISHED USING RTK GPS.
 2.0' CONTOUR INTERVAL. THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/20 THE CONTOUR INTERVAL OR ± 1.0' FOR THIS PROJECT.

LEGAL DESCRIPTION
 LOT 2, BLOCK L OF MERCER WOOD ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 52 OF PLATS, PAGE 32, RECORDS OF KING COUNTY WASHINGTON.
 SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

PROJECT INFORMATION
 SURVEYOR: PLOG ENGINEERING, PLLC
 12254 S.F. (0.281 ACRES ±)
 RAVENSDALE, WA 98051
 PH: (206) 420-7130

PROPERTY OWNER:
 JILL RENEE GALIOTTO &
 HENRI OSTROFF
 4244 SHORECLUB DR.
 MERCER ISLAND, WA 98040

TAX PARCEL NUMBER: 545600-0385
PROJECT ADDRESS: 4244 SHORECLUB DR.
 MERCER ISLAND, WA 98040

PARCEL AREA: AS SURVEYED

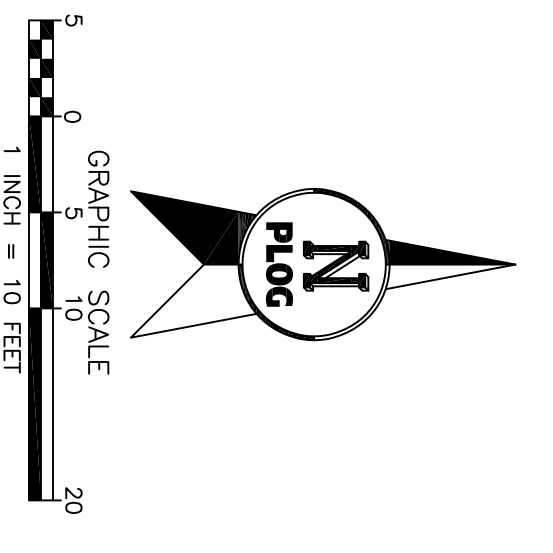
REFERENCE SURVEYS
 P1 - PLAT OF MERCER WOOD, VOL. 52, PGS. 32-33
 R2 - A# 20100319900007

ABBREVIATION LEGEND

MON	=	MONUMENT
BN	=	BORN
PL	=	PLAT
BLA	=	BOUNDARY LINE ADJUSTMENT
DBH	=	DIAMETER AT BREAST HEIGHT (DB)
APN	=	ASSASSOR'S PARCEL NUMBER
AF#	=	AUDITOR'S FILE NUMBER
(M)	=	AS MEASURED
(P)	=	PER PLAT
(D)	=	PER DEED
(H)	=	HELD

SYMBOL LEGEND

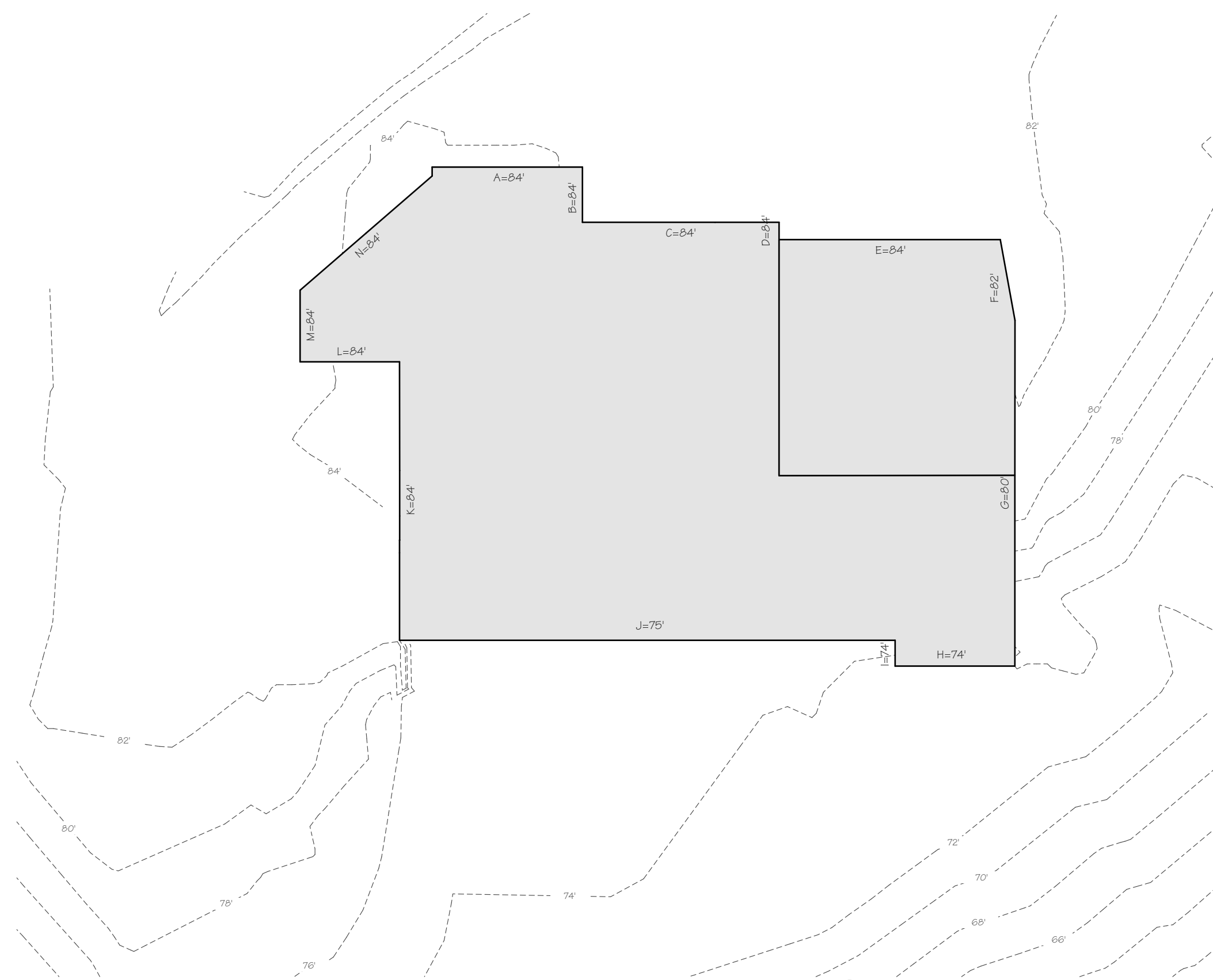
⊕	MONUMENT AS NOTED
⊕	SECTION CORNER
⊕	QUARTER SECTION CORNER
○	FOUND REBAR AS NOTED
●	SET REBAR AND CAP LS 31976
⦿	FOUND SURFACE MARKER/DISK
⦿	SET SURFACE MARKER/DISK LS 31976
⦿	SEWER MAINTENANCE HOLE
⦿	SEWER CLEAN OUT
—SS—	SEWER LINE
⦿	STORM DRAIN MAINTENANCE HOLE
⦿	CATCH BASIN (TYPE 1)
⦿	CATCH BASIN (TYPE 2)
⦿	STORM DRAIN CLEAN OUT
⦿	ROUND YARD DRAIN
⦿	SQUARE YARD DRAIN
—SD—	STORM DRAIN LINE
⦿	WATER MAINTENANCE HOLE
⦿	WATER VALVE
⦿	WATER METER
⦿	FIRE HYDRANT
⦿	BLOW OFF VALVE
⦿	IRRIGATION VALVE/JUNCTION
—W—	WATER LINE
⦿	GAS VALVE
⦿	CGM GAS METER
—G—	GAS LINE
⦿	CABLE RISER
⦿	CTV CABLE BOX
⦿	CABLE MAINTENANCE HOLE
⦿	FIBER OPTIC MAINTENANCE HOLE
⦿	TELEPHONE MAINTENANCE HOLE
⦿	TRAFFIC SIGNAL MAINTENANCE HOLE
⦿	HAND HOLE
⦿	YARD LIGHT
⦿	A/C COMPRESSOR
⦿	GUY WIRE
⦿	STREET LIGHT
—OHU—	OVERHEAD UTILITIES (GENERAL/MIXED)
—OHE—	OVERHEAD ELECTRICAL
—OHC—	OVERHEAD CABLE
—OHT—	OVERHEAD TELEPHONE
—UGU—	UNDERGROUND UTILITIES (GENERAL/MIXED)
—UGE—	UNDERGROUND ELECTRICAL
—UGC—	UNDERGROUND CABLE
—UGT—	UNDERGROUND TELEPHONE
—FO—	UNDERGROUND FIBER OPTIC
⦿	BOLLARD
⦿	WALLBOX
⦿	SNAG
⦿	DECIDUOUS MULTI-TRUNK
⦿	DECIDUOUS
⦿	CONIFER MULTI-TRUNK
⦿	CONIFER



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NET 1/4, NE 1/4, SEC. 18, TWP. 24N, RING SE. WM.
 BOUNDARY & TOPOGRAPHIC SURVEY
 GALIOTTO/OSTROFF
 4244 SHORECLUB DR.
 MERCER ISLAND, WA 98040

PROJECT NO.: 09/08/2021
 REVISION DATE: 0
 SHEET: 1 OF 1



MIDPOINT ELEVATION WALL SEGMENT LENGTH

A=84'	a=13'-7 1/4"
B=84'	b=5'
C=84'	c=17'-9 1/2"
D=84'	d=1'-6 3/4"
E=84'	e=20'-1/4"
F=82'	f=7'-3 3/4"
G=80'	g=31'-2 3/4"
H=74'	h=10'-9 1/4"
I=74'	i=2'-4"
J=75'	j=44'-10"
K=84'	k=25'-2 1/2"
L=84'	l=9'
M=84'	m=6'-5 3/4"
N=84'	n=15'-9 1/2"

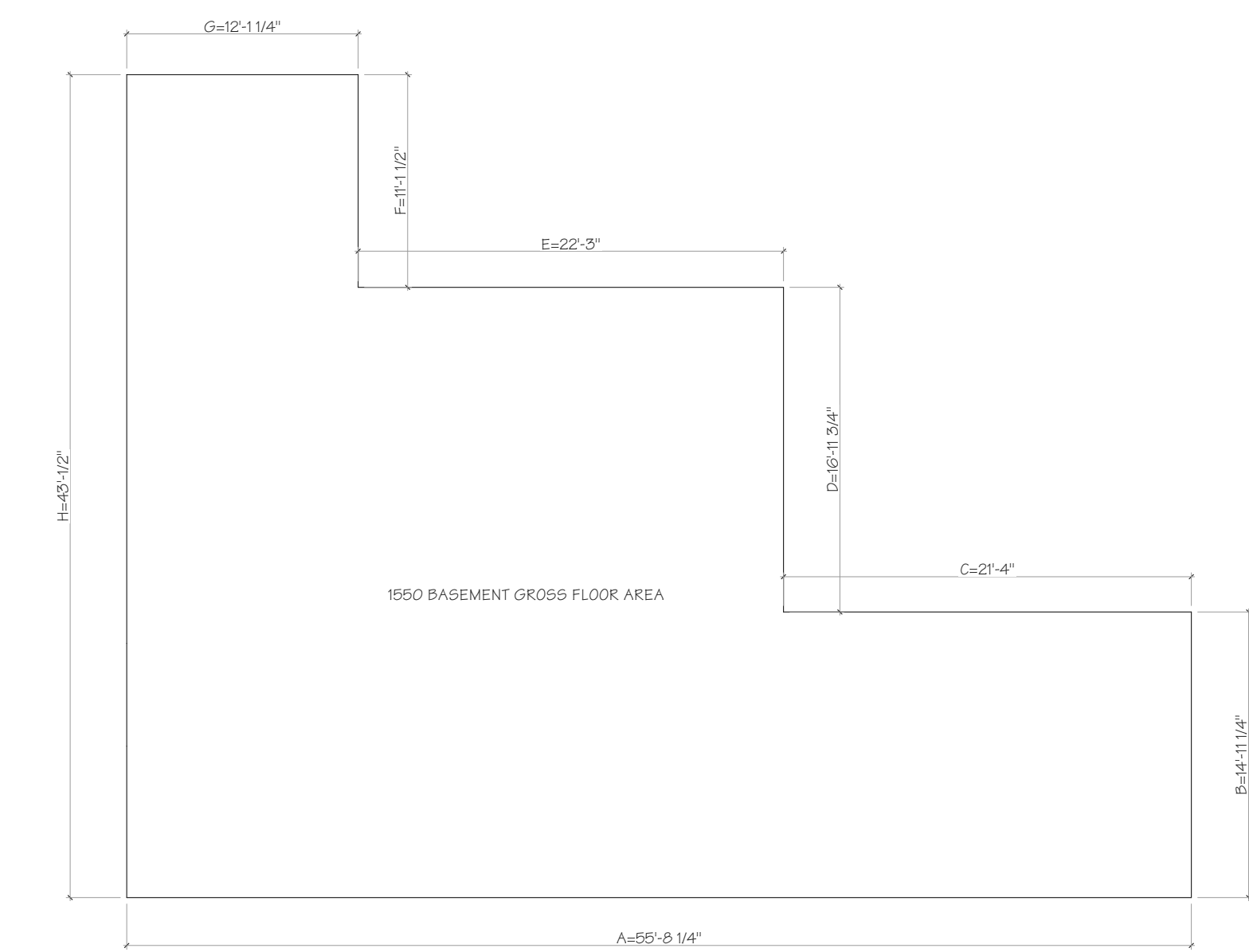
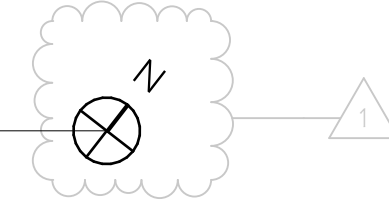
$$(84')(13'-7\ 1/4'') + (84')(5'-0'') + (84')(17'-9\ 1/2'') + (84')(1'-6\ 3/4'') + (84')(20'-1/4'') + (82')(7'-3\ 3/4'') + (80')(31'-2\ 3/4'') + (74')(10'-9\ 1/4'') + (74')(2'-4'') + (75')(44'-10'') + (84')(25'-2\ 1/2'') + (84')(9') + (84')(6'-5\ 3/4'') + (84')(15'-9\ 1/2'')$$

$$13'-7\ 1/4'' + 5'-0'' + 17'-9\ 1/2'' + 1'-6\ 3/4'' + 20'-1/4'' + 7'-3\ 3/4'' + 31'-2\ 3/4'' + 10'-9\ 1/4'' + 2'-4'' + 44'-10'' + 25'-2\ 1/2'' + 9' + 6'-5\ 3/4'' + 15'-9\ 1/2''$$

$$\frac{17044.5}{210'-11\ 1/4''}$$

AVERAGE BUILDING ELEVATION = 80.80

1 AVERAGE BUILDING ELEVATION DIAGRAM
SCALE: 1" = 10'



WALL SEGMENT LENGTH % COVERAGE AT MIDPOINT

A=55'-8 1/4"	0%
B=14'-11 1/4"	34%
C=21'-4"	100%
D=16'-11 3/4"	94%
E=22'-3"	100%
F=11'-1 1/2"	100%
G=12'-1 1/4"	100%
H=43'-1/2"	100%

BASEMENT FLOOR AREA CALCULATION

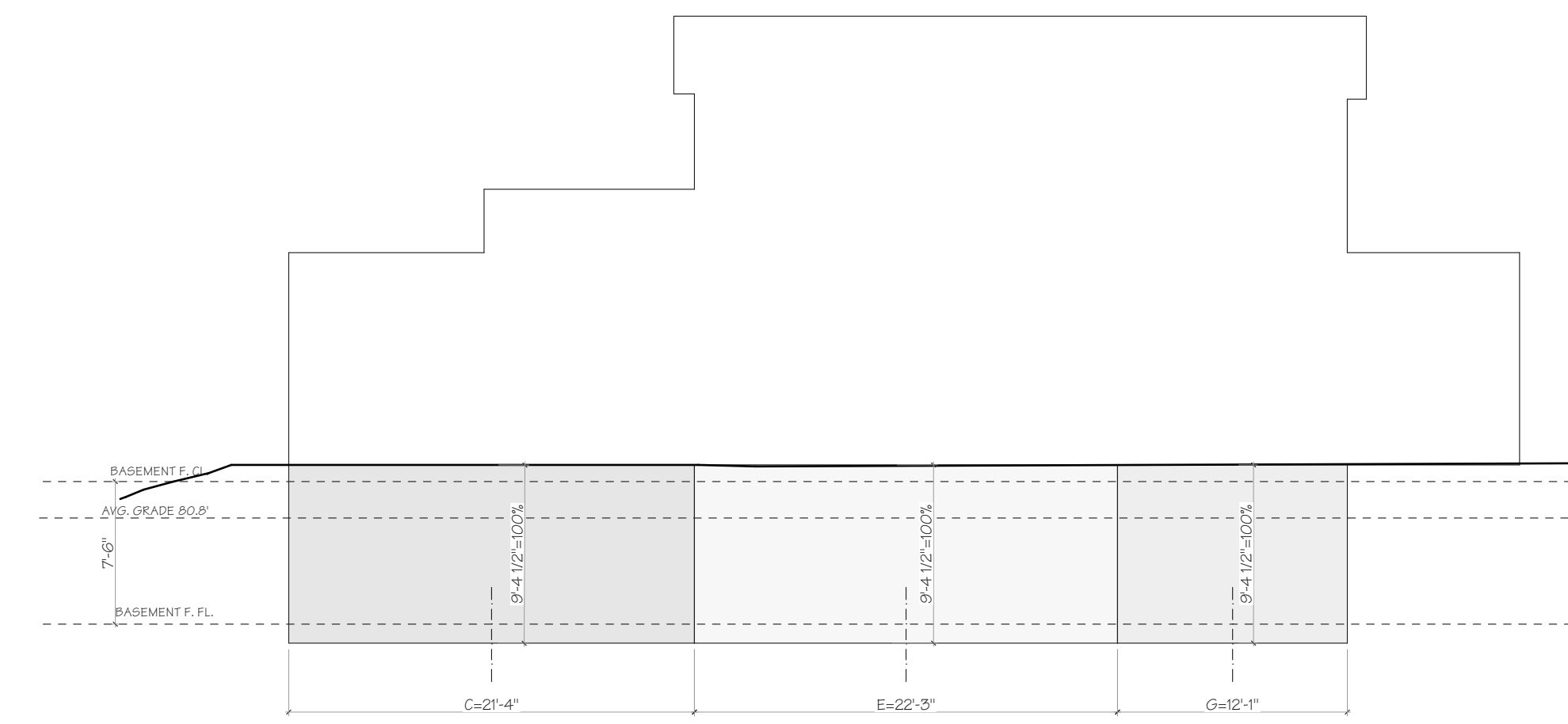
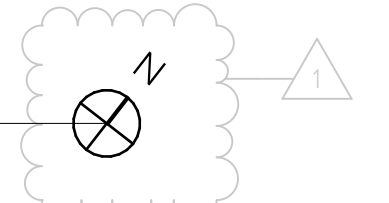
$$1550\text{ SF BASEMENT} \times (55'-8\ 1/4'')(34\%) + (21'-4'')(100\%) + (16'-11\ 3/4'')(94\%) + (22'-3'')(100\%) + (11'-1\ 1/2'')(100\%) + (12'-1\ 1/4'')(100\%) + (43'-1/2'')(100\%)$$

$$55'-8\ 1/4'' + 21'-4'' + 16'-11\ 3/4'' + 22'-3'' + 11'-1\ 1/2'' + 12'-1\ 1/4'' + 43'-1/2''$$

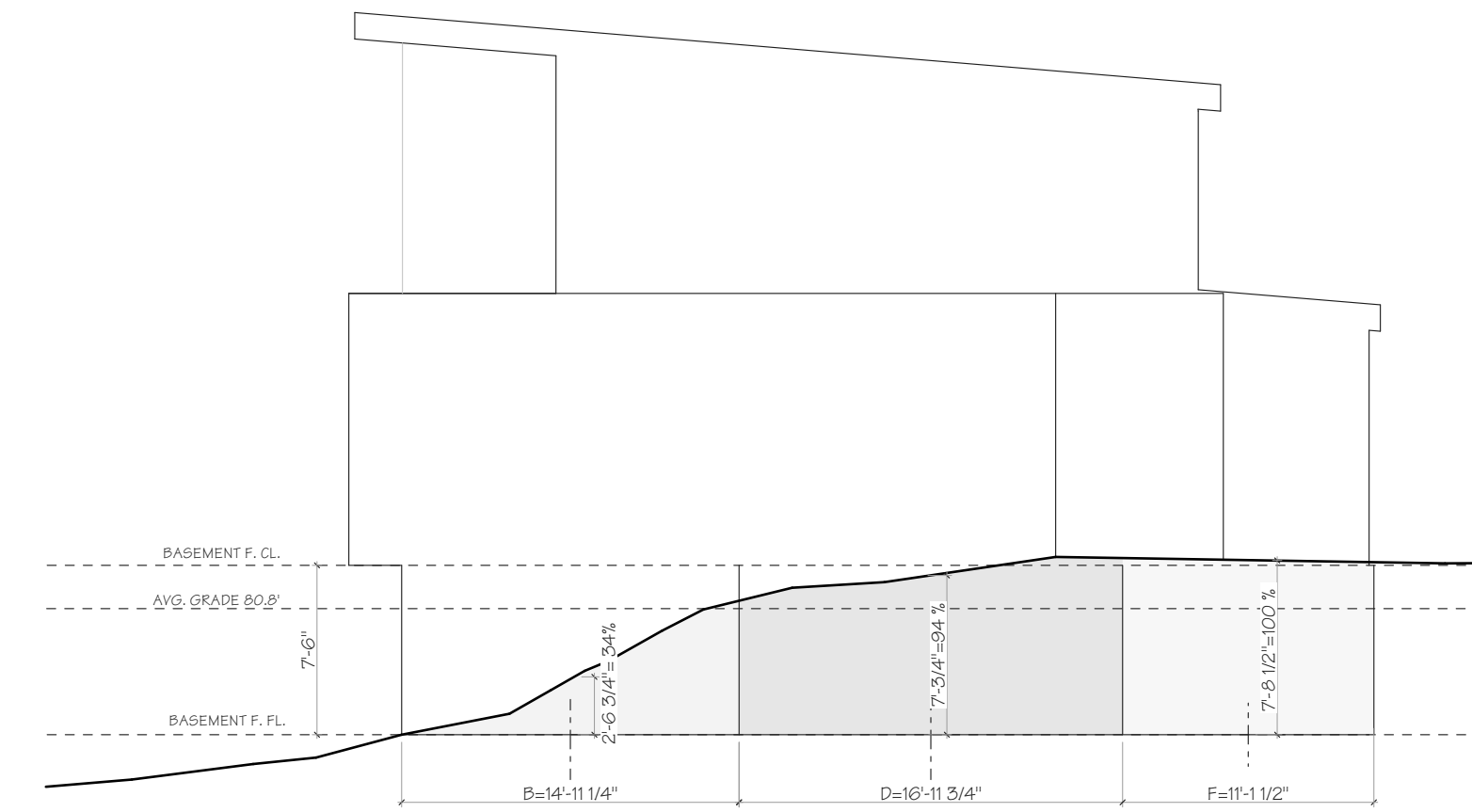
$$\frac{130'-10\ 11/16''}{197'-5\ 1/2''}$$

1550 sf x 66% = 1023 SF EXCLUDED FROM GROSS FLOOR AREA

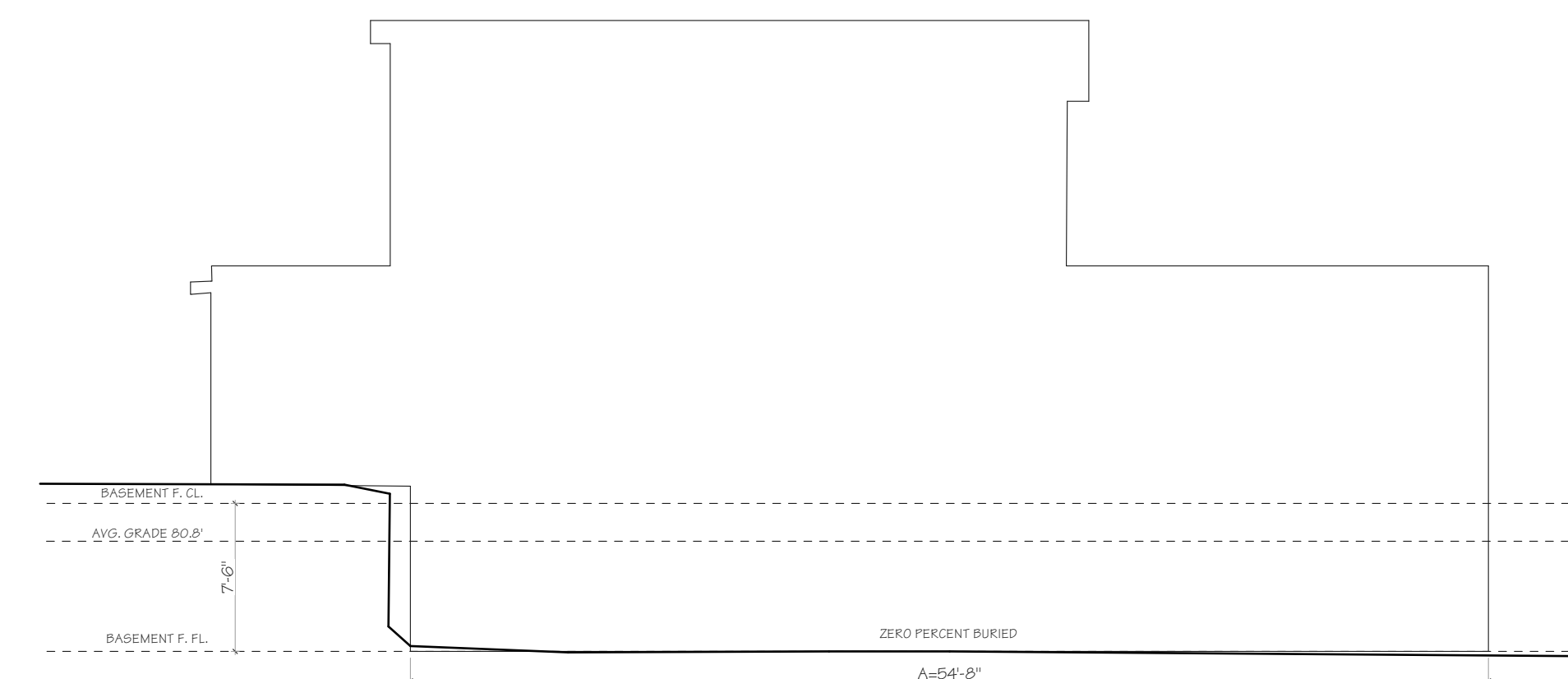
2 BASEMENT GROSS FLOOR AREA CALCULATION
SCALE: 1/8" = 1'-0"



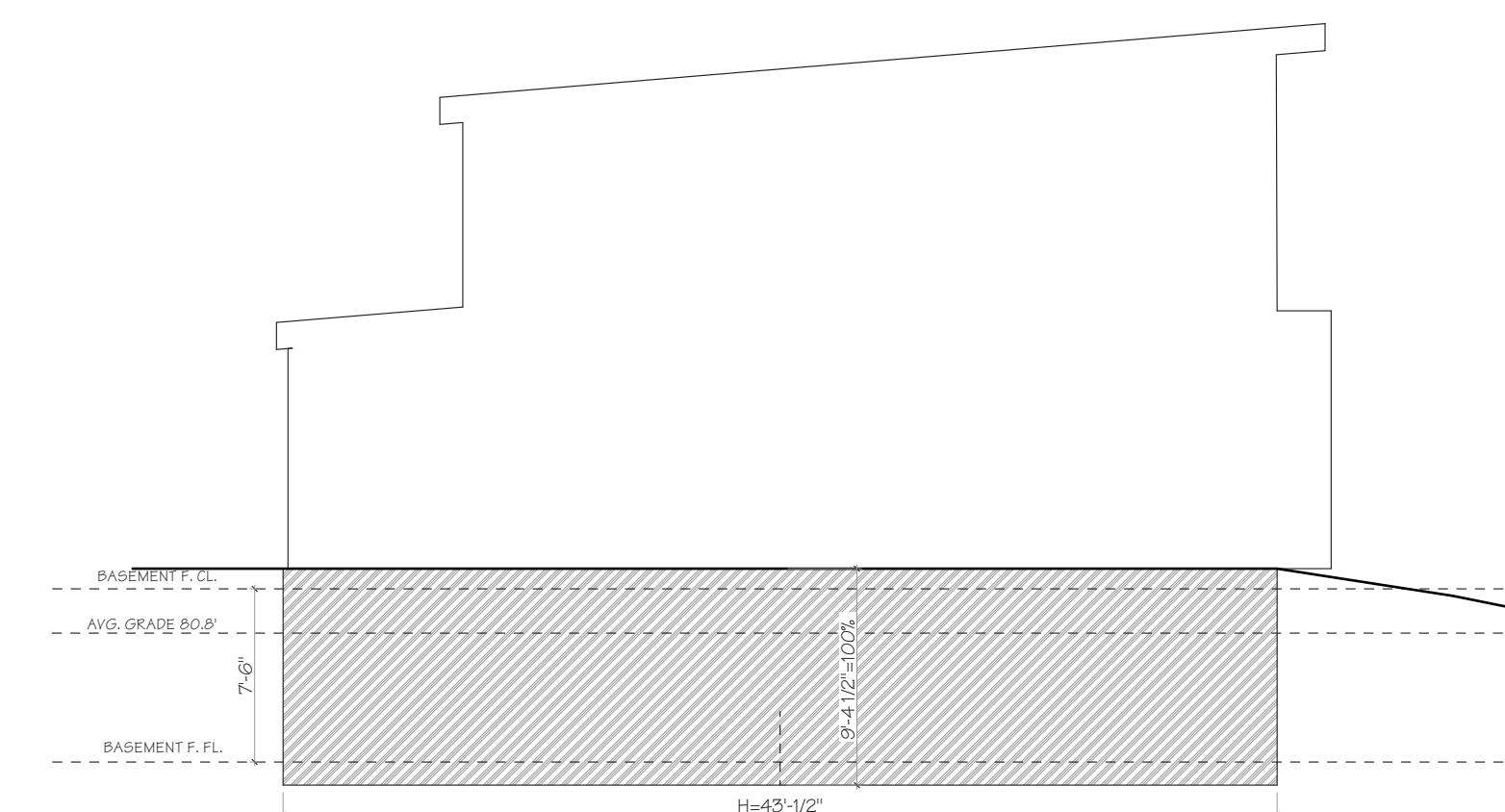
2A NORTH GROSS FLOOR AREA ELEVATION
SCALE: 1/8" = 1'-0"



2B EAST GROSS FLOOR AREA ELEVATION
SCALE: 1/8" = 1'-0"



2C SOUTH GROSS FLOOR AREA ELEVATION
SCALE: 1/8" = 1'-0"



2D WEST GROSS FLOOR AREA ELEVATION
SCALE: 1/8" = 1'-0"

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9256 REGISTERED ARCHITECT
JOHN ALFRED CASHMAN
STATE OF WASHINGTON

OSTROFF GALIOTTO
4244 SHORECLUB DRIVE MERCER ISLAND WA
98040

PROJECT NUMBER:
A2834

PERMIT
PERMIT NUMBER:

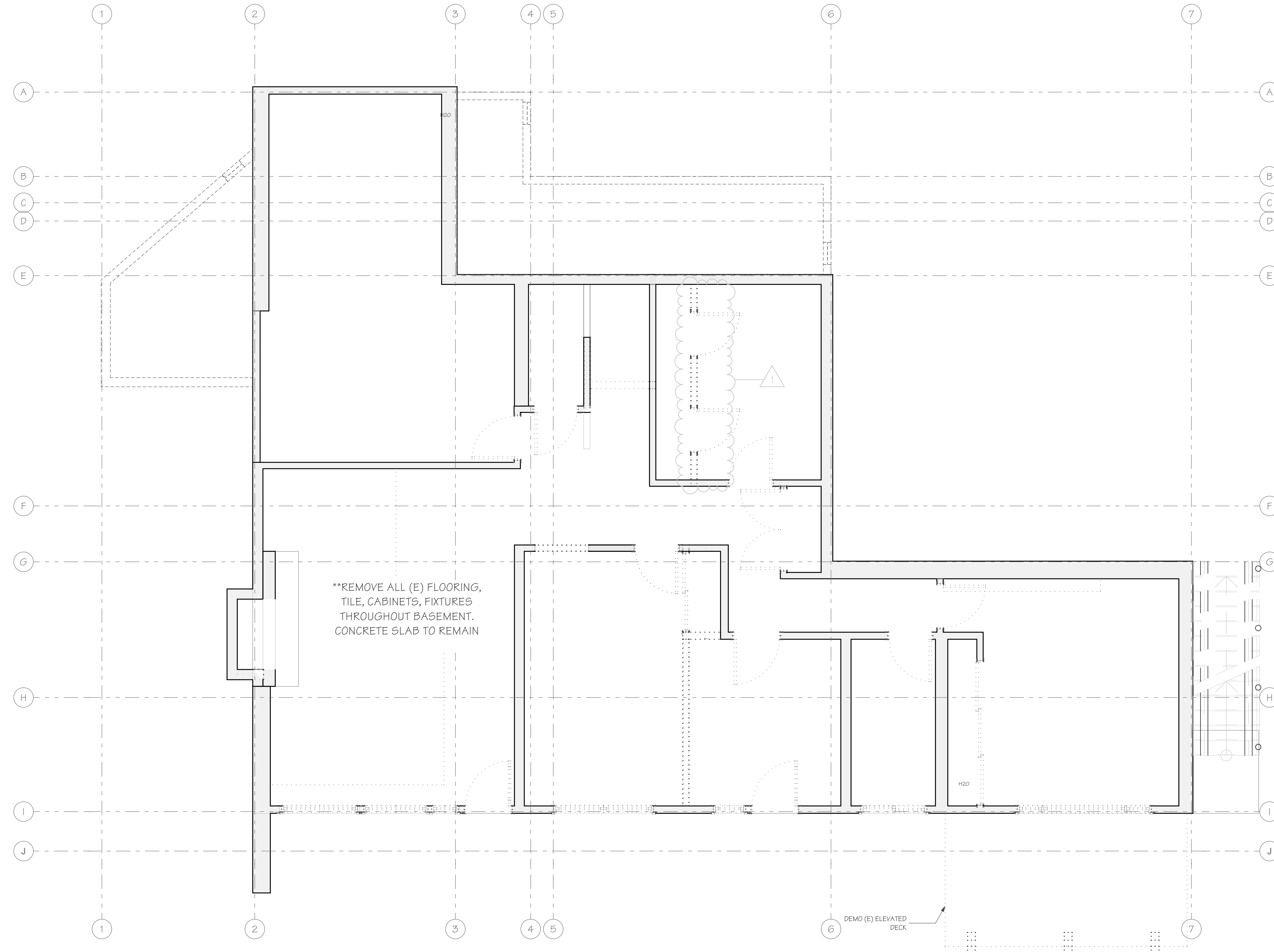
DRAWING SET DATE:
10/31/22

REVISIONS:
Permit Intake: 06/08/22
Round 1 Corrections: 09/23/22
Round 2 Corrections: 10/31/22

A0.3
CALCULATIONS

DCI SEAL

WALL TYPES	
	(E) WALL TO REMAIN
	DEMO & REMOVE
	NEW WALL



1 BASEMENT DEMO PLAN

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

AXIOM DESIGN BUILD
 5424 BALLARD AVENUE NW
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 (206) 283-9535



9256 REGISTERED ARCHITECT
 JOHN ALFRED CASHMAN
 STATE OF WASHINGTON

OSTROFF GALIOTTO
 4244 SHORECLUB DRIVE MERCER ISLAND WA
 98040

PROJECT NUMBER:
 A2834




PERMIT
 PERMIT NUMBER:

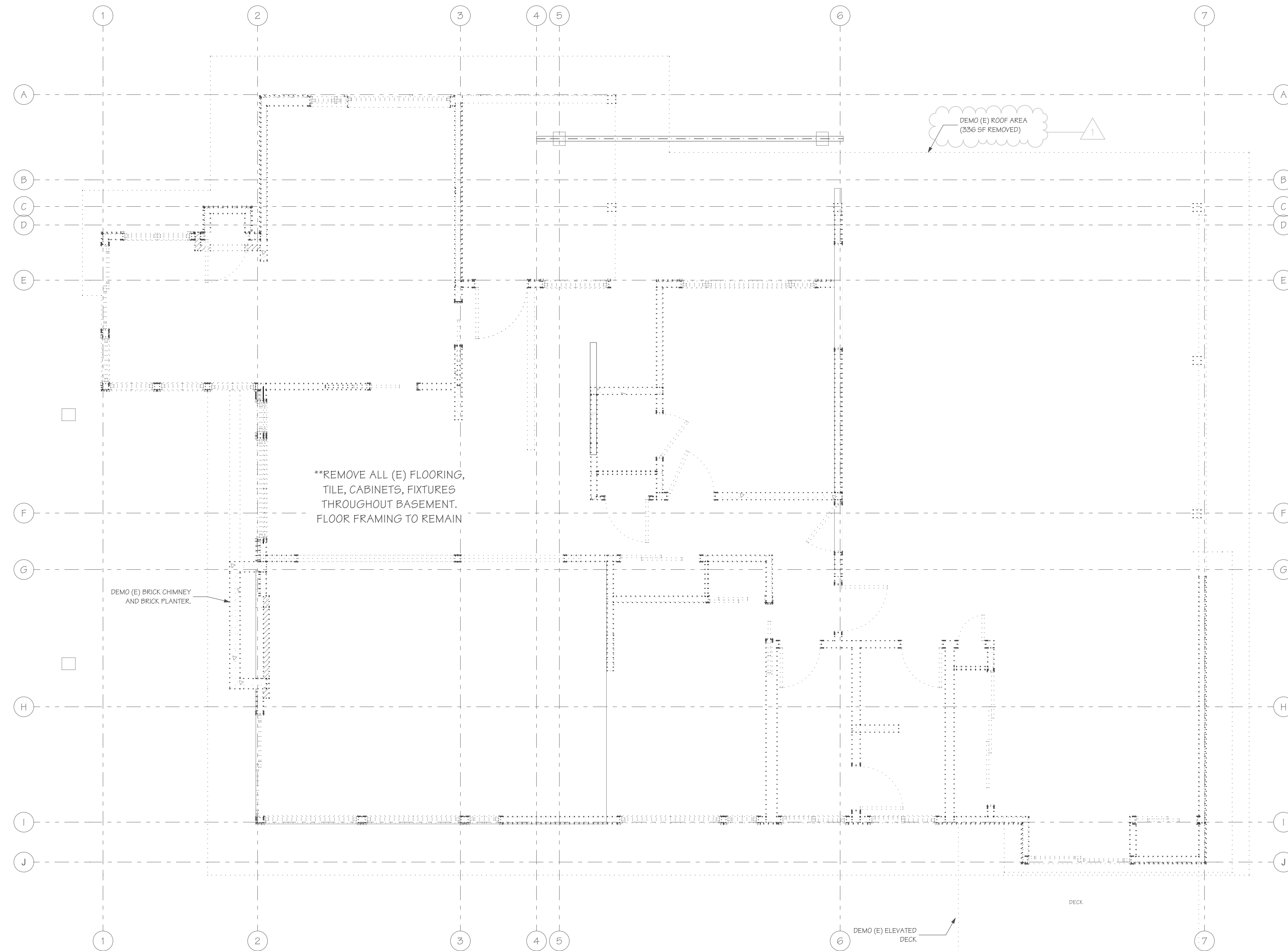
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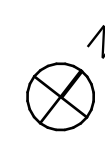
REVISIONS:
 Permit Intake: 06/08/22
 Round 1 Corrections: 09/23/22
 Round 2 Corrections: 10/31/22

A1.0
 DEMO PLANS

DCI SEAL

WALL TYPES	
	(E) WALL TO REMAIN
	DEMO & REMOVE
	NEW WALL




1
 1ST FLOOR DEMO PLAN
 SCALE: 1/4" = 1'-0"

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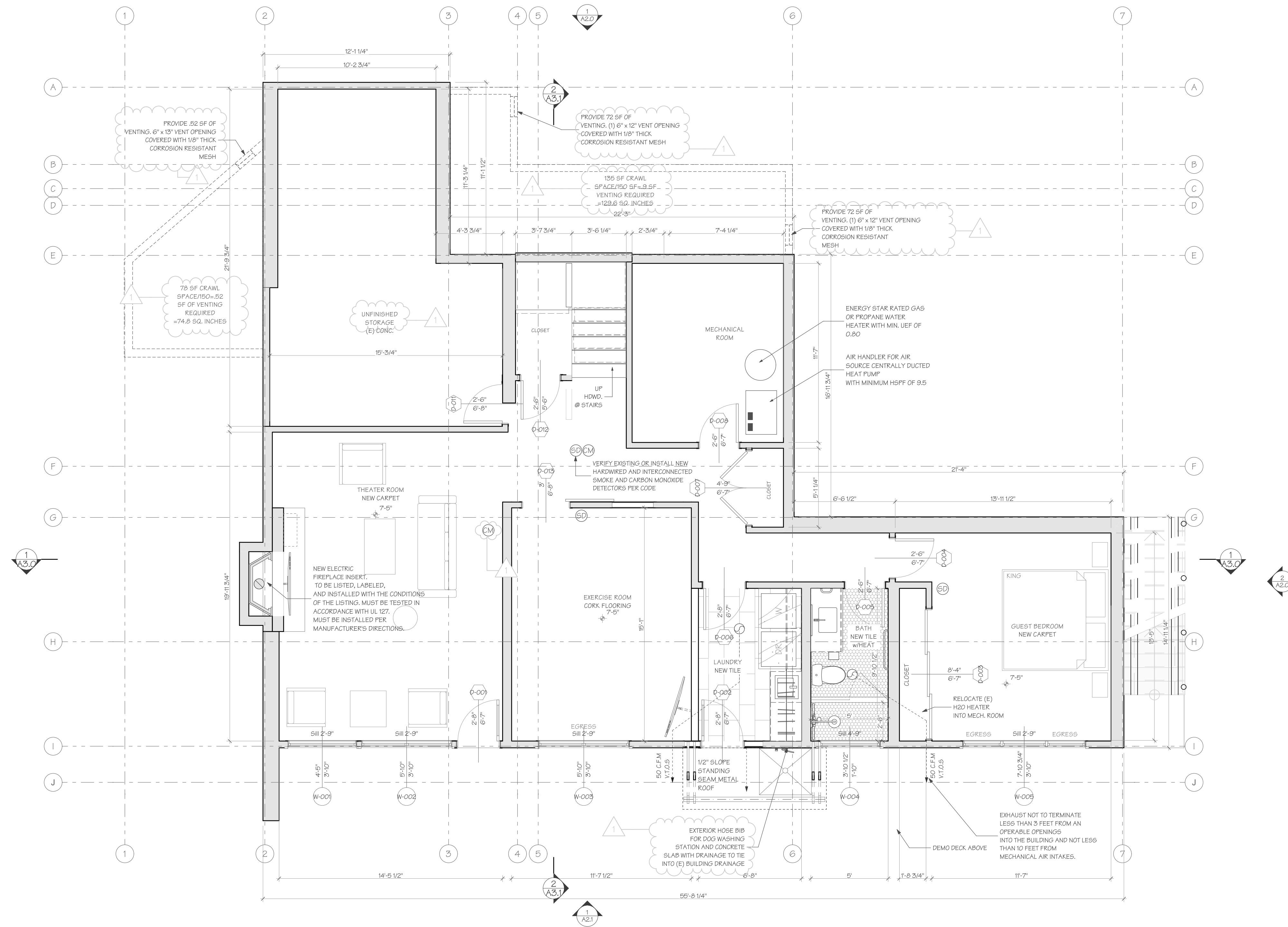
DRAWING SET DATE:
10/31/22

REVISIONS:
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 Round 2 Corrections: 10/31/22

A1.1
 DEMO PLANS

DCI SEAL

WALL TYPES	
	(E) WALL TO REMAIN
	DEMO & REMOVE
	NEW WALL



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

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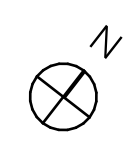
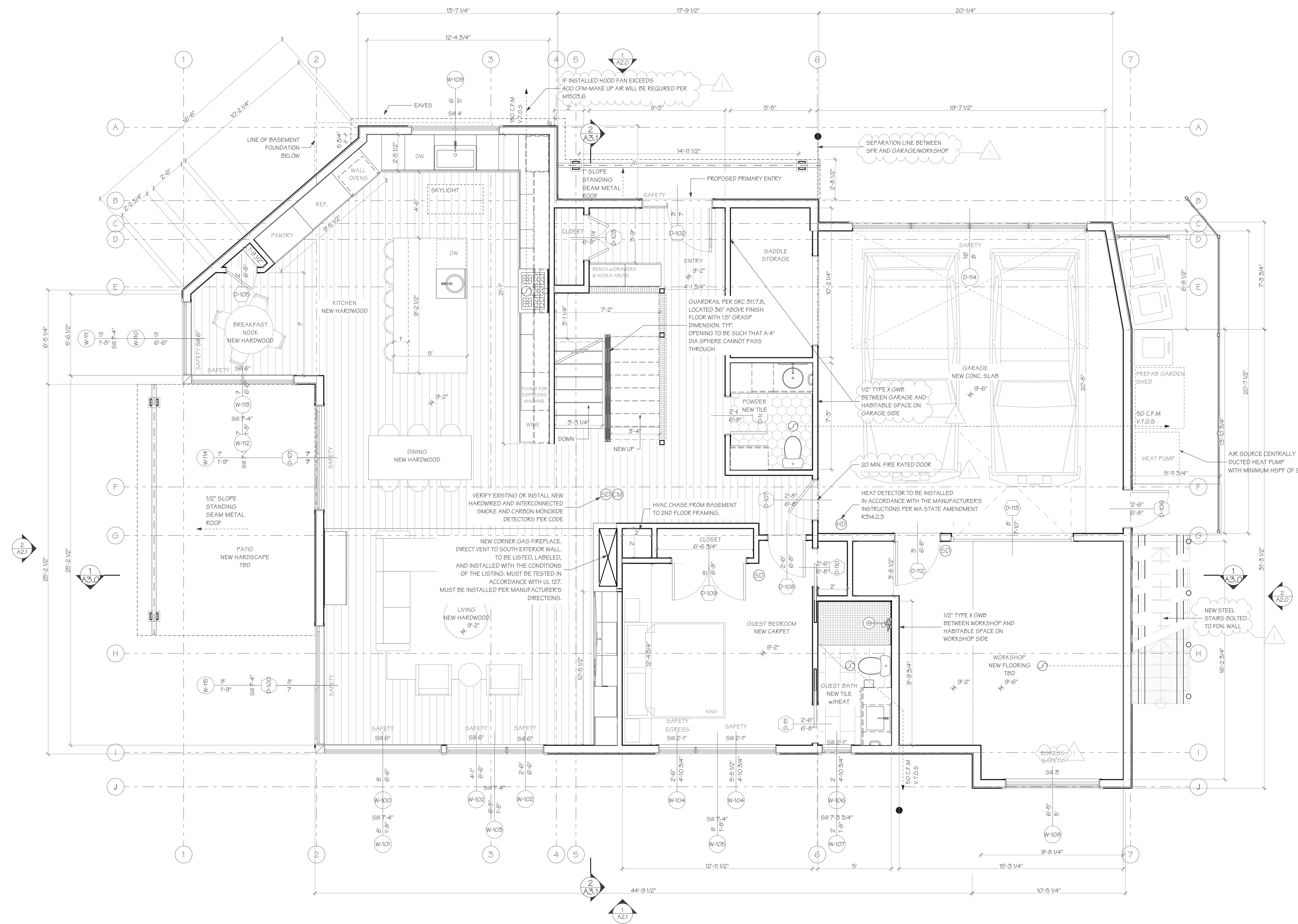
REVISIONS:
 Permit Intake: 06/08/22
 Round 1 Corrections: 09/23/22
 Round 2 Corrections: 10/31/22

A1.2
 FLOOR PLANS

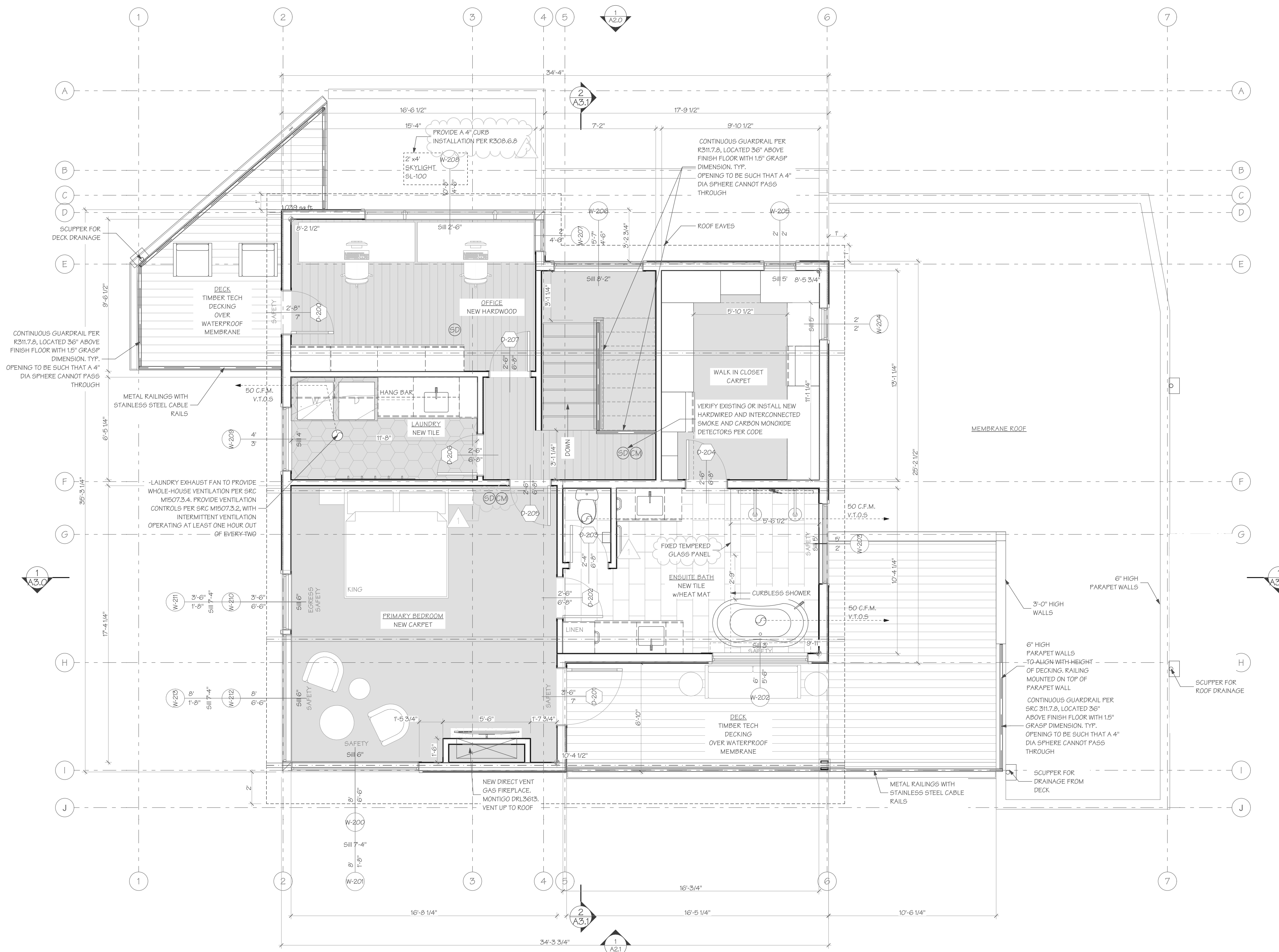
DCI SEAL



WALL TYPES	
	(E) WALL TO REMAIN
	DEMO & REMOVE
	NEW WALL



1 PROPOSED 1ST FLOOR PLAN
 SCALE: 1/4" = 1'-0"



PROPOSED 2ND FLOOR PLAN
 SCALE: 1/4" = 1'-0"

ROOF VENTILATION

PER IRC R806.1-1 SF OF VENTING PER 150 SF OF ROOF
(PER 300 IF ROOF VENTILATORS ARE USED)

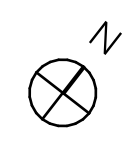
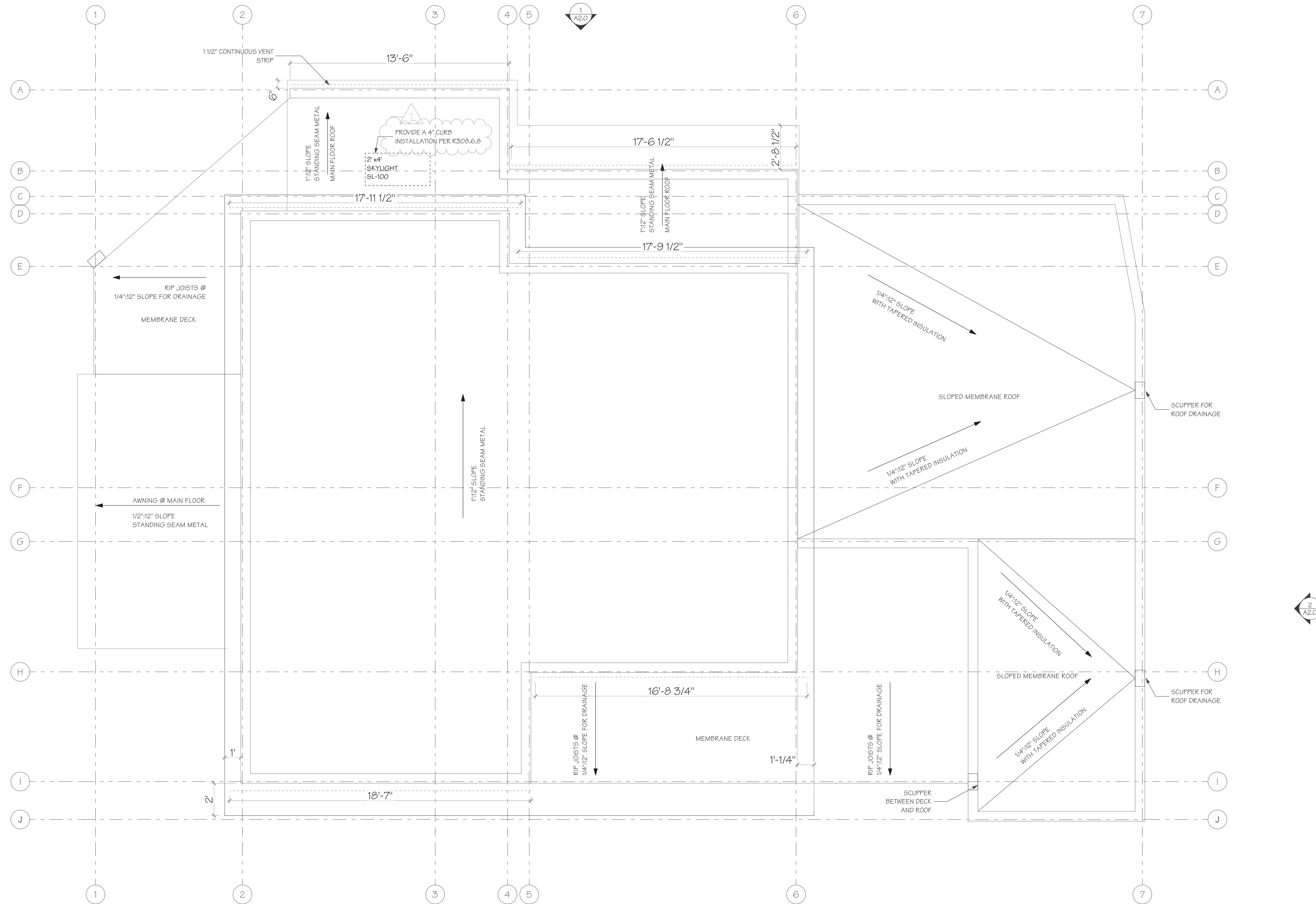
ROOF 1: 1328 SF NEW ROOF TO BE VENTED
1328 SF / 150 SF = 8.85 SF (1274.4 SQ. INCHES)
REQUIRED

$(18'-7" + 16'-8 \frac{3}{4}" + 17'-9 \frac{1}{2}" + 17'-11 \frac{1}{2}") = 71' \times 1 \frac{1}{2}"$ CONTINUOUS VENTING STRIP = 8,875 SF = 1278 SQ. INCHES PROVIDED FROM ROOF 1

ROOF 2: 264 SF NEW ROOF TO BE VENTED
264 SF / 150 SF = 1.76 SF (253.4 SQ. INCHES)
REQUIRED

$(13'-6" + 17'-6 \frac{1}{2}") = 31'-0 \frac{1}{2}" \times 1 \frac{1}{2}"$ CONTINUOUS VENTING STRIP = 3,888 SF = 558 SQ. INCHES PROVIDED FROM ROOF 2

NOTE: EACH RAFTER MUST BE VENTILATED AS PER IRC R806



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

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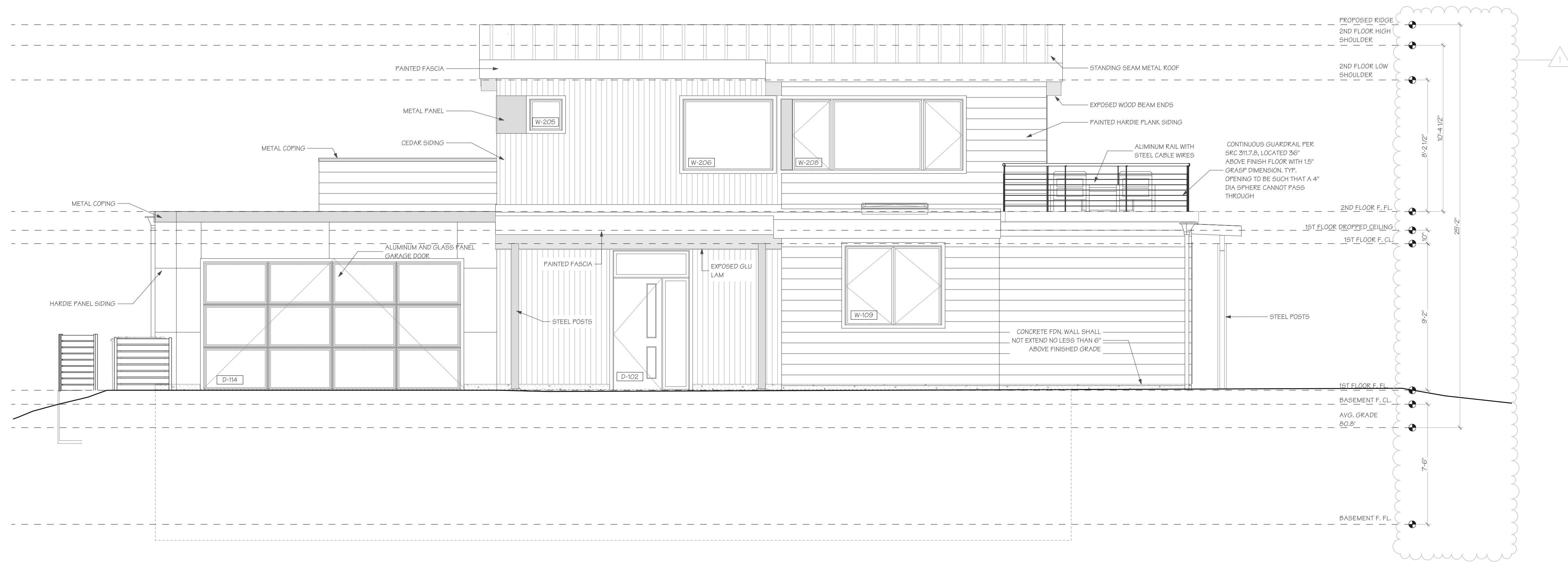
DRAWING SET DATE:
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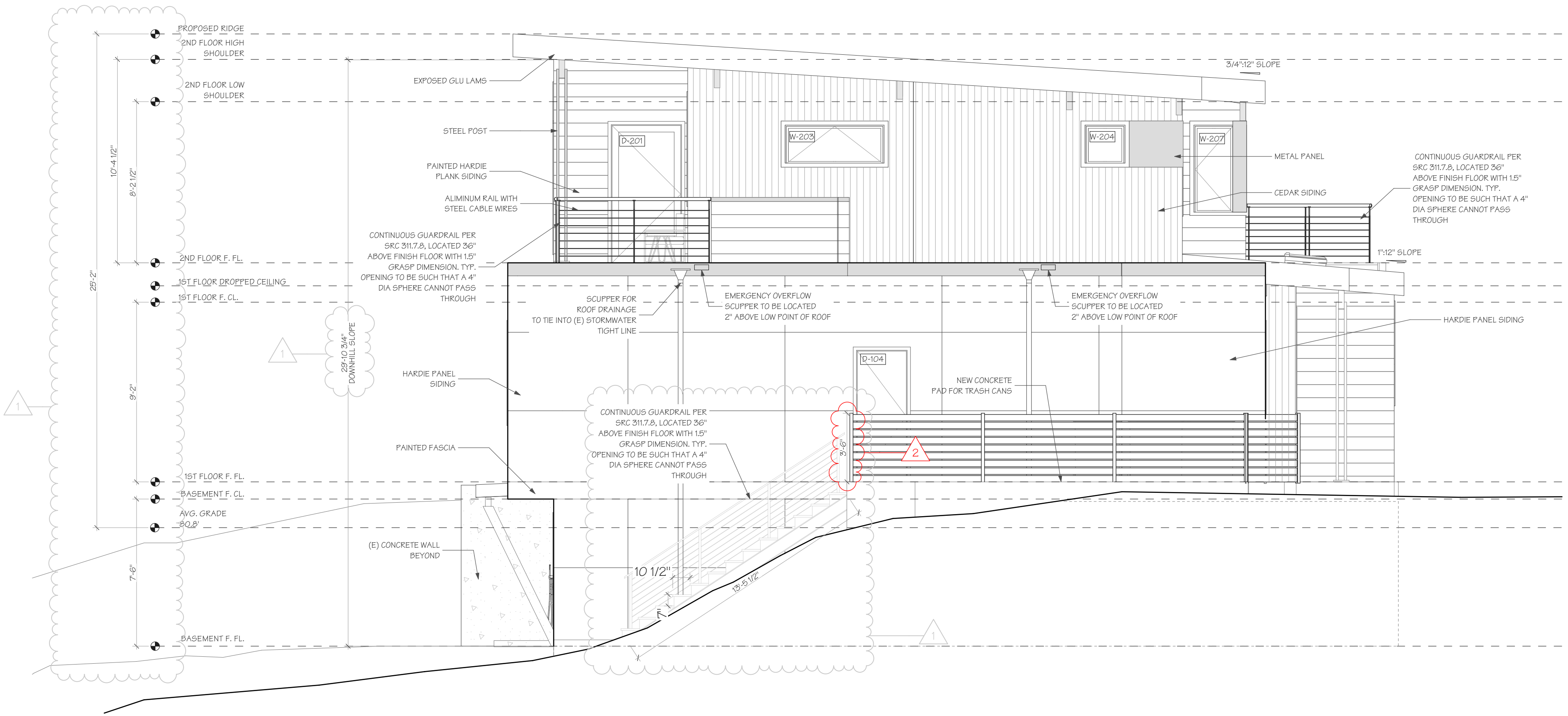
A1.5

ROOF PLAN

DCI SEAL



1 NORTH EXT. ELEV.
SCALE: 1/4" = 1'-0"



2 EAST EXT. ELEV.
SCALE: 1/4" = 1'-0"

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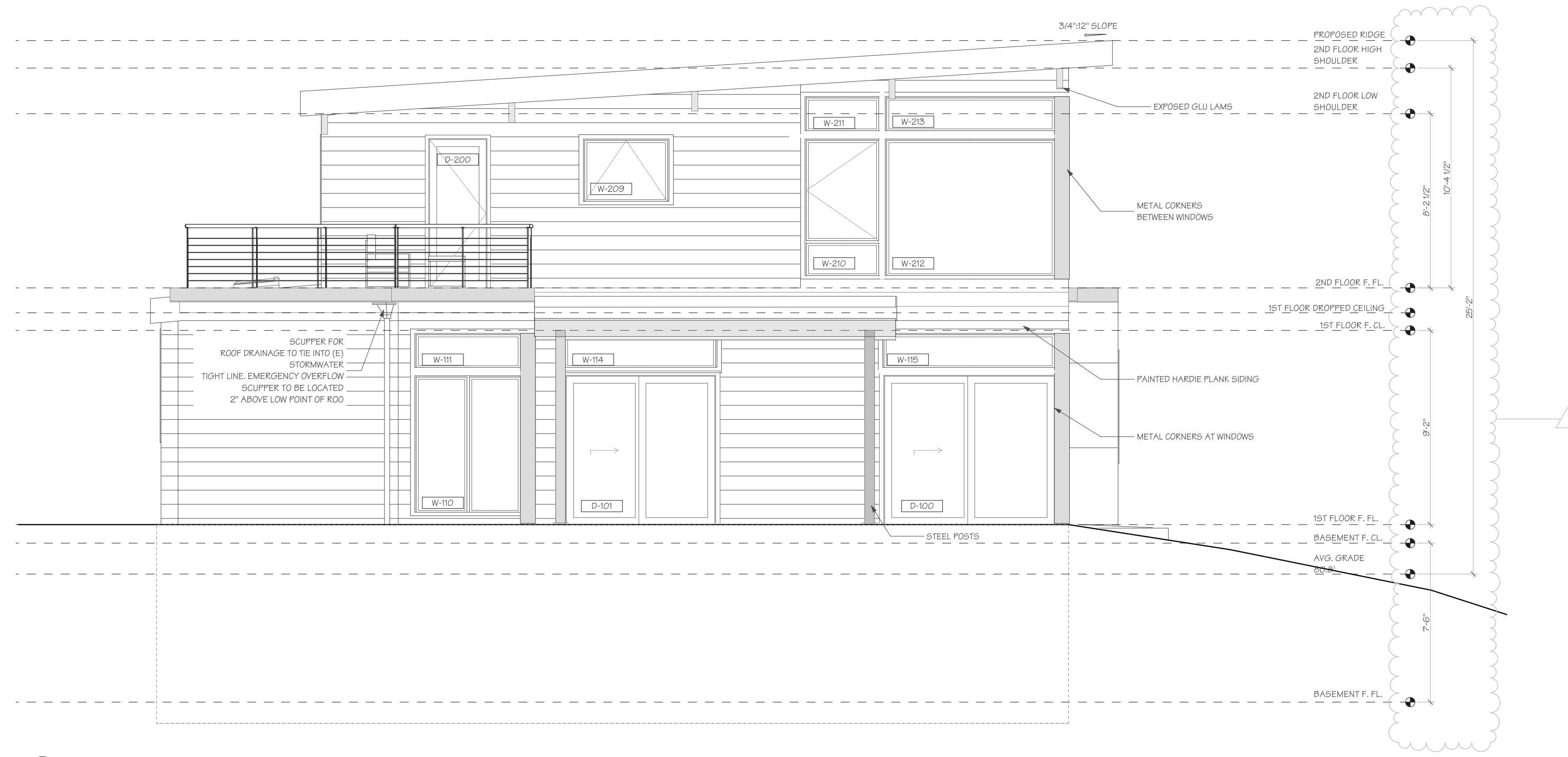
A2.0

EXT ELEV

DCI SEAL



1 SOUTH EXT. ELEV.
SCALE: 1/4" = 1'-0"



2 WEST EXT. ELEV.
SCALE: 1/4" = 1'-0"

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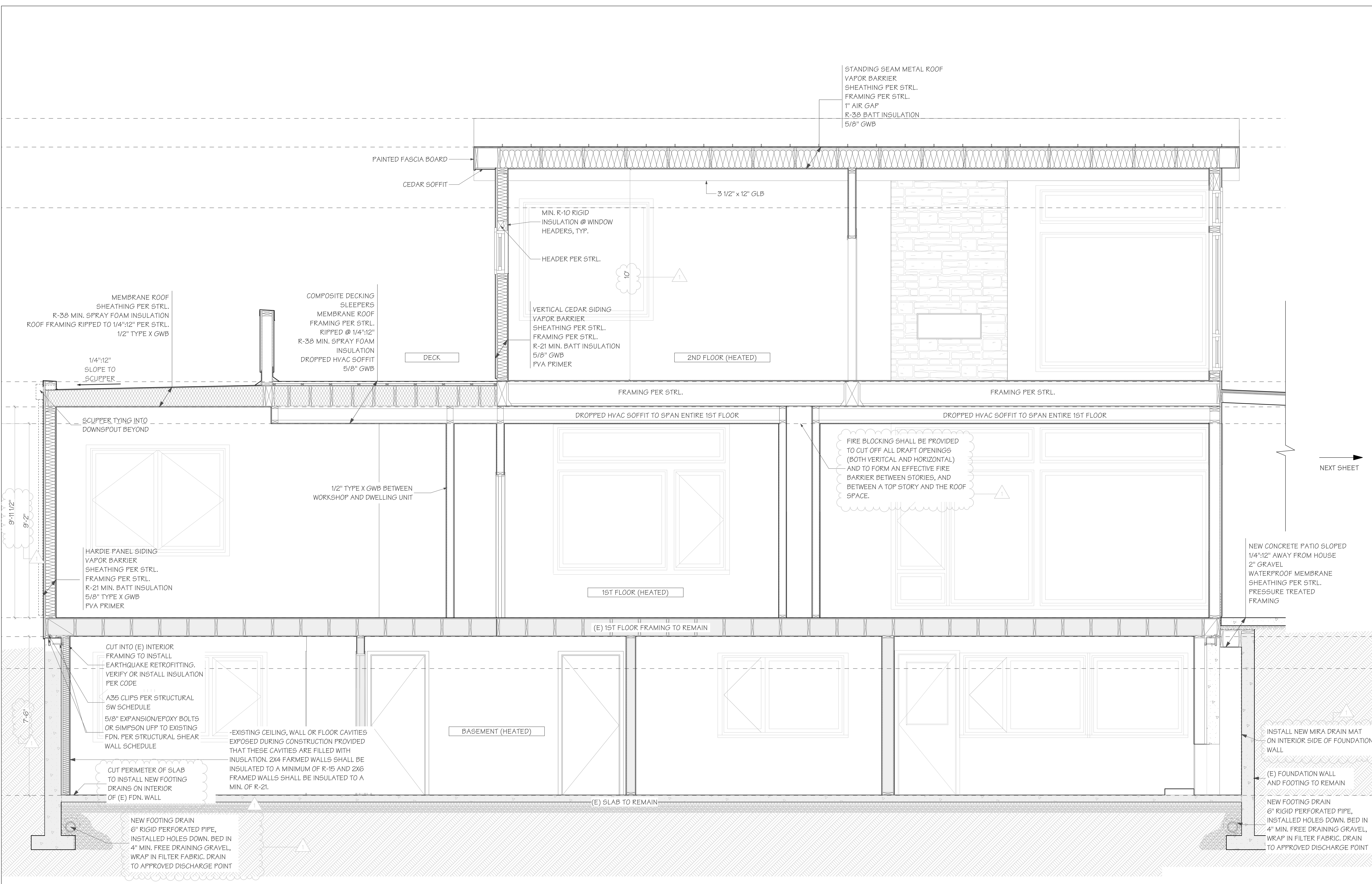
DRAWING SET DATE:
10/31/22

REVISIONS:
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Round 1 Corrections: 09/23/22
Round 2 Corrections: 10/31/22

A2.1

EXT. ELEV.

DCI SEAL



1 EAST-WEST BLDG. SECTION
SCALE: 1/2" = 1'-0"

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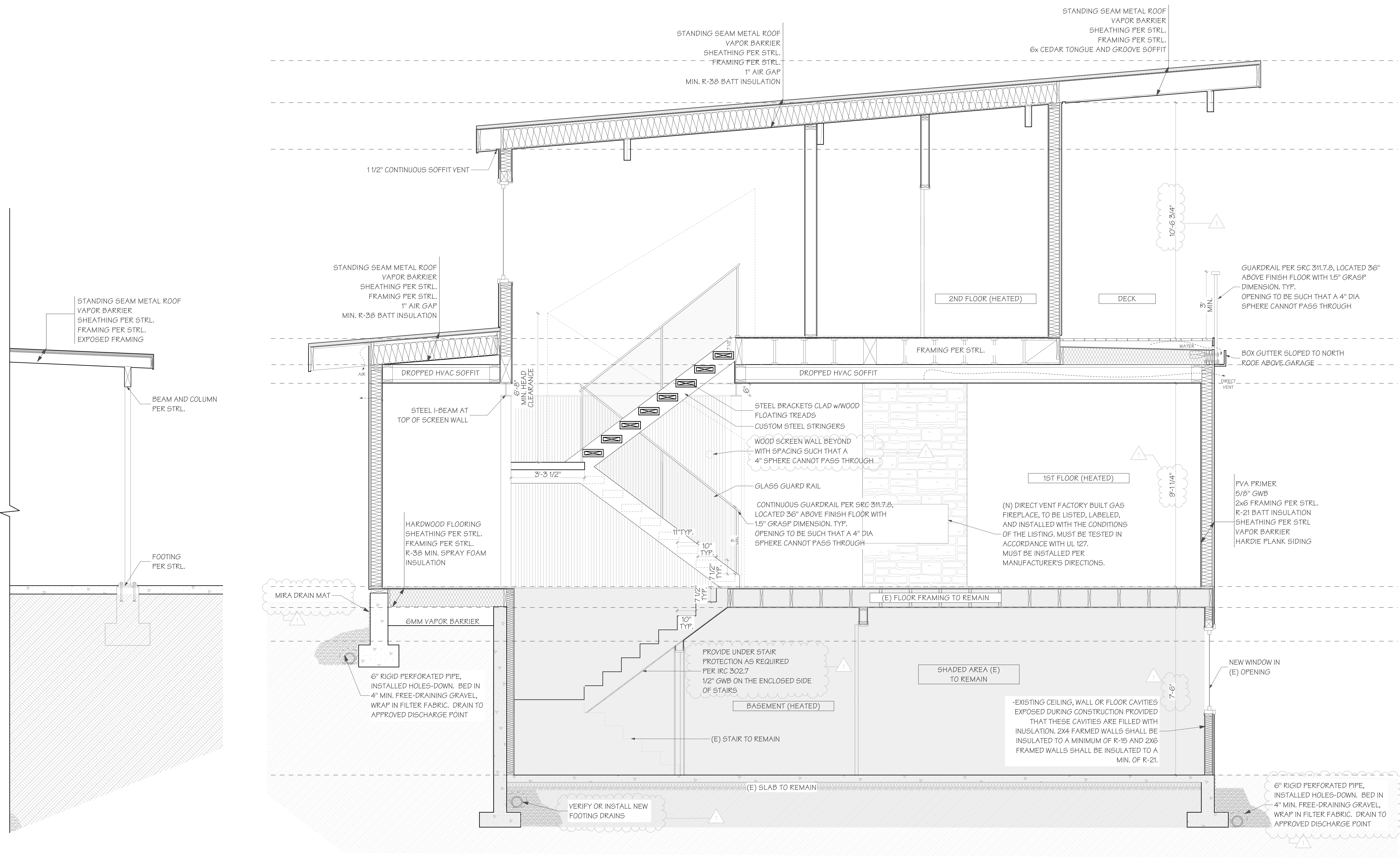
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A3.0

BLDG. SECTION

DCI SEAL



1 EAST-WEST AWNING SECTION
SCALE: 1/2" = 1'-0"

2 NORTH-SOUTH BUILDING SECTION
SCALE: 1/2" = 1'-0"

2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family – New & Additions (effective February 1, 2021) Version 1.1

These requirements apply to all IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

Project Information		Contact Information	
2244 Shoreclub Drive Mercer Island, WA 98040	Arnalia Overa - Axion Design Build 5424 Ballard Ave. NW #204 Seattle, WA 98107		

Instructions: This single-family project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. Based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant.

Provide all information from the following tables as building permit drawings: Table R402.1 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and 406.3 - Energy Credits.

Authorized Representative _____ Date _____

All Climate Zones (Table R402.1.1)		
Fenestration U-Factor ^b	R-Value ^a	U-Factor ^a
Skylight U-Factor ^b	n/a	0.30
Glazed Fenestration SHGC ^{c,e}	n/a	n/a
Ceiling ^a	49	0.026
Wood Frame Wall ^a	21 int	0.056
Floor	30	0.029
Below Grade Wall ^a	10/15/21 int + TB	0.042
Slab ^d R-Value & Depth	10, 2 ft	n/a

- ^a R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed R-value of the insulation from Appendix Table A103.4 shall not be less than the R-value specified in the table.
- ^b The fenestration U-factor column excludes skylights.
- ^c *10/15/21 +5TB* means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. *10/15/21 +5TB* shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. *5TB* means R-5 thermal break between floor slab and basement wall.
- ^d R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.
- ^e For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.
- ^f R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.
- ^g For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for Climate Zone 5 of ICC 400.
- ^h Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

Prescriptive Path - Single Family 2018 Washington State Energy Code R 1

2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family – New & Additions (effective February 1, 2021)

Summary of Table R406.2 (cont.)			Credits - select ONE energy option from each category ^a		User Notes
Energy Options	Energy Credit Option Descriptions (cont.)				
5.1*	Efficient Water Heating	0.5	<input type="checkbox"/>		
5.2	Efficient Water Heating	0.5	<input type="checkbox"/>		
5.3	Efficient Water Heating	1.0	<input type="checkbox"/>		
5.4	Efficient Water Heating	1.5	<input type="checkbox"/>		
5.5	Efficient Water Heating	2.0	<input type="checkbox"/>		
5.6	Efficient Water Heating	2.0	<input type="checkbox"/>		
6.1*	Renewable Electric Energy (3 credits max)	1.0	<input type="checkbox"/>		
7.1	Appliance Package	0.5	<input type="checkbox"/>		
Total Credits		3.0	Calculable Total	Clear Form	

- a. An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
- b. Equipment listed in Table C403.3.2(4) or C403.3.2(5)
- c. Equipment listed in Table C403.3.2(1) or C403.3.2(2)
- d. You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.
- e. 1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max.
- f. See the complete Table R406.2 for all requirements and option descriptions.
- f. Use the single radiobutton in the upper right of the second column to deselect radiobuttons in that group.

Please print only pages 1 through 3 of this worksheet for submission to your building official

For Building Officials Only

Prescriptive Path - Single Family 2018 Washington State Energy Code R 3

2018 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family – New & Additions (effective February 1, 2021)

Each dwelling unit in a residential building shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

- Small Dwelling Unit: 3 credits**
Dwelling units less than 1,500 sf in conditioned floor area with less than 300 sf of fenestration area. Additions to existing building that are greater than 500 sf of heated floor area but less than 1,500 sf.
- Medium Dwelling Unit: 6 credits**
All dwelling units that are not included in #1 or #3
- Large Dwelling Unit: 7 credits**
Dwelling units exceeding 5,000 sf of conditioned floor area
- Additions less than 500 square feet: 1.5 credits**
All other additions shall meet 1-3 above

Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

Summary of Table R406.2 and 406.3				User Notes
Heating Options	Fuel Normalization Descriptions	Credits - select ONE heating option		
1	Combustion heating minimum NAECA ^b	0.0	<input type="checkbox"/>	
2	Heat pump ^c	1.0	<input type="checkbox"/>	
3	Electric resistance heat only - furnace or zonal	1.0	<input type="checkbox"/>	
4	DHP with zonal electric resistance per option 3.4	0.5	<input type="checkbox"/>	
5	All other heating systems	1.0	<input type="checkbox"/>	
Energy Options	Energy Credit Option Descriptions	Credits - select ONE energy option from each category ^a		
1.1	Efficient Building Envelope	0.5	<input type="checkbox"/>	
1.2	Efficient Building Envelope	1.0	<input type="checkbox"/>	
1.3	Efficient Building Envelope	0.5	<input type="checkbox"/>	
1.4	Efficient Building Envelope	1.0	<input type="checkbox"/>	
1.5	Efficient Building Envelope	2.0	<input type="checkbox"/>	
1.6	Efficient Building Envelope	3.0	<input type="checkbox"/>	
1.7	Efficient Building Envelope	0.5	<input type="checkbox"/>	
2.1	Air Leakage Control and Efficient Ventilation	0.5	<input type="checkbox"/>	
2.2	Air Leakage Control and Efficient Ventilation	1.0	<input type="checkbox"/>	
2.3	Air Leakage Control and Efficient Ventilation	1.5	<input type="checkbox"/>	
2.4	Air Leakage Control and Efficient Ventilation	2.0	<input type="checkbox"/>	
3.1*	High Efficiency HVAC	1.0	<input type="checkbox"/>	
3.2	High Efficiency HVAC	1.0	<input type="checkbox"/>	
3.3*	High Efficiency HVAC	1.5	<input type="checkbox"/>	
3.4	High Efficiency HVAC	1.5	<input type="checkbox"/>	
3.5	High Efficiency HVAC	1.5	<input type="checkbox"/>	
3.6*	High Efficiency HVAC	2.0	<input type="checkbox"/>	
4.1	High Efficiency HVAC Distribution System	0.5	<input type="checkbox"/>	
4.2	High Efficiency HVAC Distribution System	1.0	<input type="checkbox"/>	

Prescriptive Path - Single Family 2018 Washington State Energy Code R 2

WINDOW & DOOR SCHEDULE															
NEW/VERTICAL GLAZING															
ID	Quantity	Width	Height	Area (GF)	Type	Egress	Safety	Location	Glazing	Manufacturer/Product	Finish	Hardware	U-Value	VGA/U _h	Notes
W-001	1	4'-0"	3'-0"	16.0	FREED			THEATER ROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	4.752	U-value per Table R402.11
W-002	1	5'-0"	3'-0"	22.50	FREED 2' OF CASIMENT			THEATER ROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	6.881	U-value per Table R402.11
W-003	1	3'-0"	3'-0"	22.36	EXERCISE ROOM			EXERCISE ROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	6.381	U-value per Table R402.11
W-004	1	3'-0"	1'-0"	3.0	WALKER			BASMENT BATH	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	1.088	U-value per Table R402.11
W-005	1	7'-0"	3'-0"	33.00	CASEMENT/FREED CASIMENT	X		BASMENT BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	8.473	U-value per Table R402.11
W-100	1	6'-0"	6'-0"	60	FREED		X	LIVING ROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	14.560	U-value per Table R402.11
W-101	1	6'-0"	1'-0"	15.33	FREED		X	LIVING ROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	3.782	U-value per Table R402.11
W-102 (MULLED TOGETHER)	1	4'-0"	6'-0"	20.54	FREED		X	LIVING ROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	7.481	U-value per Table R402.11
W-103	1	2'-0"	6'-0"	16.20	4'x8'12" HIGH CASIMENT W/FRID BELOW			LIVING ROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	4.890	U-value per Table R402.11
W-104	1	6'-0"	1'-0"	15.04	FREED		X	LIVING ROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	5.039	U-value per Table R402.11
W-104 (MULLED TOGETHER)	1	2'-0"	4'-0"	10.24	CASEMENT		X	GUEST BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	3.747	U-value per Table R402.11
W-105 (MULLED TOGETHER)	1	2'-0"	4'-0"	10.46	CASEMENT		X	GUEST BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	3.827	U-value per Table R402.11
W-106	1	2'-0"	4'-0"	10.46	CASEMENT		X	GUEST BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	3.827	U-value per Table R402.11
W-107	1	2'-0"	1'-0"	3.33	CASEMENT		X	GUEST BATH	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.952	U-value per Table R402.11
W-108	1	6'-0"	6'-0"	33.00	DRILL CASIMENT		X	WORKSHOP	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	8.992	U-value per Table R402.11
W-109	1	2'-0"	2'-0"	4	DRILL CASIMENT		X	WORKSHOP	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.800	U-value per Table R402.11
W-110	1	6'-0"	6'-0"	32.5	DRILL, FREED		X	BREAKFAST NOOK	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	8.500	U-value per Table R402.11
W-111	1	6'-0"	1'-0"	8.75	FREED		X	BREAKFAST NOOK	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	2.480	U-value per Table R402.11
W-112	1	7'-0"	1'-0"	11.8	DRILL, FREED		X	BREAKFAST NOOK	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	3.348	U-value per Table R402.11
W-113	1	7'-0"	6'-0"	48.5	DRILL, FREED		X	BREAKFAST NOOK	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	12.740	U-value per Table R402.11
W-114	1	7'-0"	1'-0"	11.8	FREED		X	LIVING ROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	3.248	U-value per Table R402.11
W-115	1	7'-0"	1'-0"	11.8	FREED		X	LIVING ROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	3.248	U-value per Table R402.11
W-200	1	6'-0"	6'-0"	60	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	14.560	U-value per Table R402.11
W-201	1	2'-0"	1'-0"	3.33	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.952	U-value per Table R402.11
W-202	1	6'-0"	6'-0"	60	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	14.560	U-value per Table R402.11
W-203	1	6'-0"	6'-0"	60	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	14.560	U-value per Table R402.11
W-204	1	6'-0"	6'-0"	60	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	14.560	U-value per Table R402.11
W-205	1	2'-0"	2'-0"	4	FREED		X	PRIMARY WALK IN CLOSET	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.800	U-value per Table R402.11
W-206	1	2'-0"	2'-0"	4	FREED		X	PRIMARY WALK IN CLOSET	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.800	U-value per Table R402.11
W-207	1	3'-0"	4'-0"	12.0	2' OF CASIMENT/FREED 2' OF CASIMENT		X	STARWELL	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	7.234	U-value per Table R402.11
W-208	1	3'-0"	4'-0"	12.0	2' OF CASIMENT/FREED 2' OF CASIMENT		X	STARWELL	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	7.234	U-value per Table R402.11
W-209	1	2'-0"	4'-0"	8	CASEMENT		X	OFFICE	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	3.260	U-value per Table R402.11
W-210	1	4'-0"	3'-0"	12	CASEMENT/FREED BELOW @ 1'-0"	X	X	WALKER	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	3.860	U-value per Table R402.11
W-211	1	4'-0"	3'-0"	12	CASEMENT/FREED BELOW @ 1'-0"	X	X	WALKER	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	3.860	U-value per Table R402.11
W-212	1	4'-0"	1'-0"	6.66	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	1.869	U-value per Table R402.11
W-213	1	2'-0"	1'-0"	3.33	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.952	U-value per Table R402.11
W-214	1	2'-0"	1'-0"	3.33	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.952	U-value per Table R402.11
W-215	1	2'-0"	1'-0"	3.33	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.952	U-value per Table R402.11
W-216	1	2'-0"	1'-0"	3.33	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.952	U-value per Table R402.11
W-217	1	2'-0"	1'-0"	3.33	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.952	U-value per Table R402.11
W-218	1	2'-0"	1'-0"	3.33	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.952	U-value per Table R402.11
W-219	1	2'-0"	1'-0"	3.33	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.952	U-value per Table R402.11
W-220	1	2'-0"	1'-0"	3.33	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR Pinnacle	BLACK ALUM GLAD/PREMIER WOOD INTERIOR		0.28	0.952	U-value per Table R402.11
W-221	1	2'-0"	1'-0"	3.33	FREED		X	PRIMARY BEDROOM	3/4" DS 566, Argon DS Clear, Z=0-3Shaded B w/ Argon	WINDSOR					

General Requirements

All materials, workmanship, design and construction shall conform to the 2018 International Building Code (IBC) and local jurisdiction amendments.

Definitions: The following definitions are used throughout these structural notes:

IBC - Governing code including local amendments
SER - Structural Engineer of Record per these Contract Documents
UNO - Unless otherwise noted

Drawings indicate general and typical details of construction. Typical details and general notes shall apply even if not specifically denoted on plans, UNO. Where conditions are not specifically indicated similar details of construction shall be used, subject to review and approval by the Architect and the SER.

Reference to ASTM and other standards shall refer to the latest edition designated by IBC Chapter 35. Refer to the specifications for information in addition to that covered by these structural notes & drawings.

Warranty: The SER has used that degree of care and skill ordinarily exercised under similar circumstances by members of the profession in this locale and no other warranty, either expressed or implied, is made in connection with rendering professional services.

Design Criteria

BUILDING CATEGORY: Structural Occupancy Category II (Importance factors listed below)

LIVE LOADS:

Roof snow load, Pf = 25 psf

Residential:

Uninhabitable attics without storage	10 psf
Habitable attics and sleeping areas	30 psf
Residential floor	40 psf
Residential decks	60 psf

LATERAL LOADS-WIND: Per ASCE 7-16, Section 27.5
Iw = 1.0; Kzt = 1.90; V = 18.3 kips

Numbering below is per IBC Section 1603.1.4:

- Basic Wind Speed (3-second gust) = 110 mph
- Importance Factor = 1.0
- Exposure = C
- Internal pressure coefficient = +/- 0.18
- Components and Cladding: The following working loads may be used in lieu of calculations:
(Uplift at roof) Zone 1; 41.8 psf
100 sq. ft. Zone 1; 30.7 psf
Zone 2; 55.6 psf
Zone 3; 66.1 psf
(Roof overhangs) Zone 1,1'; 47.5 psf
20 sq. ft. Zone 2; 59.4 psf
Zone 3; 80.6 psf
(Walls) Zone 4; 34.9 psf
20 sq. ft. Zone 5; 42.0 psf

LATERAL LOADS-EARTHQUAKE: Per ASCE 7-16, Chapter 11 & IBC 1613

Numbering below is per IBC Section 1603.1.5:

- Importance Factor = 1.0
- Mapped Spectral Response Accelerations, Ss = 1.408 g; S1 = 0.489 g
- Site Class = D; Fa = 1.000, Fv = 1.811
- Spectral Response Coefficients, Sds = 0.939 g, Sd1 = 0.590 g
- Seismic Design Category = D
- Basic Seismic Force Resisting System is:
Vertical Elements = Wood Structural Panel Shear Walls
Diaphragms = Wood Structural Panel Diaphragms
- Design Base Shear = 13.2 kips
- Seismic Response Coefficient Cs = 0.144
- Response Modification Factor R = 6.5
- Analysis Procedure = Equivalent Lateral Force Procedure

Additional Items:
Building Location 47,666 N, 122,271 W
Building Height = 26 feet

Redundancy Factors:
North/South Direction = 1.0 East/West Direction = 1.0

Contractor Execution Requirements

Contractor shall verify all dimensions and all conditions at the job site, including building and site conditions before commencing work, and be responsible for same. All discrepancies shall be reported to the Architect/SER before proceeding with work. Any errors, ambiguities and/or omissions in the contract documents shall be reported to the Architect/SER immediately, in writing. No work is to be started before correction is made.

Contractor shall coordinate all dimensioned openings and slab edges shown on the contract documents. Some dimensions, openings and embedded items are shown on the structural drawings, others may be required. Refer to architectural drawings for all dimensions, wall and floor openings, architectural treatment, embeds required for architectural items, etc. Refer to mechanical, plumbing, electrical, fire protection and civil drawings for size and location of all openings for ducts, piping, conduits, etc.

Do not scale drawings. Use only field verified dimensions. When electronic plan files are provided for the contractor's detailing convenience, it shall be noted that the electronic files are not guaranteed to be dimensionally accurate; the contractor uses them at their own risk. The published paper documents are the controlling Contract Documents. Electronic files of detail sheets and notes will not be provided.

Contract Documents and any materials used in preparation of them, including calculations, are the exclusive property of the SER and can be reproduced only with the permission of the SER.

Contractor initiated changes shall be submitted in writing to the Architect/SER for review and acceptance prior to fabrication/construction. Changes shown on shop drawings only will not satisfy this requirement.

The contractor shall provide temporary bracing as required until all permanent connections have been installed. The contractor is responsible for the strength and stability of all partially completed structures including but not limited to concrete or masonry walls, steel framing and erection aids. The contractor shall be responsible for all required safety standards, safety precautions and the methods, techniques, sequences or procedures required in performing his work. The contractor shall coordinate with the building department for all building department required inspections.

Shop Drawing & Submittal Review

The contractor shall review and stamp the shop drawings & submittals for review. SER will only review submittals for items shown on SER documents. Submittals for Deferred Structural Components will receive cursory review by SER for loads imposed on primary structure. SER will review shop drawings for general conformance with design concept of the project and general compliance with the information given in the Structural Contract Documents. Review of submittals does not constitute approval or acceptance of unauthorized deviation from Contract Documents.

GENERAL STRUCTURAL NOTES

(TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS)

Shop Drawing & Submittal Review (including Deferred Structural Components)

The contractor shall review and stamp the shop drawings & submittals for review. SER will only review submittals for items shown on SER documents. Submittals for Deferred Structural Components will receive cursory review by SER for loads imposed on primary structure. SER will review shop drawings for general conformance with design concept of the project and general compliance with the information given in the Structural Contract Documents. Review of submittals does not constitute approval or acceptance of unauthorized deviation from Contract Documents.

Corrections or comments made on shop drawings during this review do not relieve contractor from compliance with the requirements of the plans and specifications.

Contractor responsible for:

- Reviewing, approving, stamping and signing submittals prior to submittal to Architect and SER
- Timing submittals to allow 10 days of review time for the SER and time for corrections and resubmittal
- Conformance to requirements of the Contract Documents
- Dimensions and quantities
- Verifying information to be confirmed or coordinated
- Information solely for fabrication, safety, means, methods, techniques and sequences of construction
- Coordination of all trades

Resubmittals shall be clouded and dated for all changes to the submittal. Only clouded portions of submittal will be reviewed and SER's review stamp applies to only these areas.

Substitutions

Substitutions shall be submitted in writing prior to submittal of shop drawings. Shop drawings bearing substitutions will be rejected. Submit engineering data to substantiate the equivalence of the proposed items. The SER's basic services contract does not include review of substitutions that require re-engineering of the item or adjacent structure. Nor does the SER's contract cover excessive review of proposed substitutions. The fees for making these reviews and/or redesign shall be paid by the contractor. Reviews and approvals shall not be made until authorization is received.

Submittals

Shop drawings and material submittals shall be submitted to the Architect and SER prior to any fabrication or construction for the following structural items. Submittals shall include one reproducible and one copy; reproducible will be marked and returned. If deviations, discrepancies, or conflicts between shop drawings submittals and the contract documents are discovered either prior to or after shop drawing submittals are processed by the SER, the Contract Documents control and shall be followed.

- Structural steel shop and erection drawings
- I-joint and engineered wood beam floor framing layout & materials list
- Glued laminated members (certificates to be on-site and available upon request)
- Engineered wood beams (certificates to be on-site and available upon request)

Inspection

The building official, upon notification, shall make structural inspections as required by local ordinance. The inspection by the building official per IBC Section 109 will be separate from and in addition to the special inspection and structural observation mentioned subsequently.

Special Inspections

The owner shall retain a Special Inspector to perform the special inspection requirements required by the building official as outlined in IBC Section 1704. See the specifications for additional requirements for special inspection and testing. The architect, structural engineer, and building department shall be furnished with copies of all inspection reports and test results.

The following inspections are required and shall be performed per the building code:

- Steel construction per 1704.3 and Table 1704.3
- Special cases (1704.13): See Special Inspection Requirements Anchorage for additional requirements.

Structural Observation

Structural observation is defined as the visual observation of the structural system for general conformance to the Contract Documents at significant construction stages and at completion of the structural system. Structural observation does not include or waive the responsibility for the inspection required by Section 109 or other sections of the IBC.

The owner shall employ a registered design professional to perform structural observation when required by IBC 1709. Observed deficiencies shall be reported in writing to the Architect, special inspector, and contractor. The contractor shall respond to these items in writing indicating how they have been resolved. At the end of the project, the structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved.

Construction observation by the SER is for general conformance with structural portions of the permit documents only and is not intended in any way to review the Contractor's construction procedures. The SER has no overall supervisory authority or actual/direct responsibility for the specific working conditions at the site and for any hazards resulting from the action of any trade contractor. The SER has no duty to inspect, supervise, note, correct, or report any health or safety deficiencies to the owner, contractors, or other entities or persons at the project site.

The contractor shall provide the SER adequate notice to schedule appropriate site visits for structural observation.

Geotechnical

Report & General Criteria

Criteria outlined in the report listed below was used for the design of the foundations:
"Geotechnical Engineering Investigation, Proposed Remodeling, 4244 SE Shoreclub Drive, Mercer Island, Washington", dated February 7, 2022 and prepared by Geo Group Northwest, Inc.

Contractor shall be familiar with recommendations in the above-mentioned report prior to start of construction. Allowable soil pressure and lateral earth pressure are assumed and therefore must be verified by a Geotechnical Inspector or the building official. If soils are found to be other than assumed, notify the structural engineer for possible foundation redesign. For wet weather work, see the Geotechnical Report.

All prepared soil-bearing surfaces shall be inspected by the owners Geotechnical Inspector (or building official) prior to placement of reinforcing steel and concrete. Inspections shall be per IBC Table 1705.6.

Unless otherwise noted, footings shall be centered below columns or walls.

Bearing Values

Allowable soil pressure = 2,000 psf

All footings shall bear on undisturbed soil and shall be lowered to firm bearing if suitable soil is not found at elevations shown. Exterior footings shall bear a minimum of 12" below the finished ground surface. Footing elevations shown on plans & details are min. depths and for guidance only; the actual elevations of footings must be established by the contractor in the field working with the Geotechnical Inspector.

Subgrade Preparation

Prepare subgrade per the Geotechnical Report, summarized as follows: All footings shall be cast on undisturbed firm natural soils that are free of organic materials. Footing excavation shall be free of loose soils, sloughs, debris and free of water at all times. If organic silt and/or fill material is encountered at subgrade elevations, over-excavate a minimum of 2'-0" below the design foundation subgrade elevation prior to placing footings. The over-excavated areas shall be backfilled with structural fill compacted to 95% proctor per ASTM D-1557 or a lean concrete mix.

Drainage

Drainage systems, including foundation, roof and surface drains, shall be installed as directed by the Geotechnical Report and IBC Section 1807. Vapor retarder placed below slab on grade shall conform to ASTM E 1643 and ASTM E 745.

Retaining Walls

Grade on either side of concrete walls shall not vary by more than 12", UNO. Slope of backfill shall not exceed 2H to 1V, UNO. Backfill behind all retaining walls with free draining, granular fill installed per the Geotechnical Report. Provide for subsurface drainage. Design pressures used for the design of retaining walls are based on drained conditions.

Active earth pressure (restrained/unrestrained) =45/35 pcF
Passive earth pressure = 300 pcF
Coefficient of friction = 0.35

Provide temporary shoring for tops of walls if backfill is placed prior to the supporting structure being constructed. Supporting structure is the floor framing and sheathing completely installed and attached to perpendicular walls.

Existing Utilities

The contractor shall determine the location of all adjacent underground utilities prior to any excavation, shoring, pile driving, or pier drilling. Any utility information shown on the plans and details are approximate and not verified by the SER. Contractor is to provide protection of any utilities or underground structures during construction.

Concrete

Cast-in-Place Concrete

Concrete materials shall conform to the following:

Portland cement: Type I, ASTM C150
Fly ash (if used): ASTM C618 class F or C, quantity less than (by weight) 25% of cement content, and maximum loss on ignition = 1%
Lightweight aggregates: shall not be used without prior approval of SER and building department
Normal weight aggregates: ASTM C33
Sand equivalent: ASTM C33
Water: Potable per ASTM C94
Air entraining admixtures: ASTM C260
Chemical admixtures: ASTM C494
Flowable concrete admixtures: ASTM C1017

Durability requirements of concrete mixes shall conform to building code. These requirements include water-cementitious material ratios, minimum compressive strengths, air entrainment, type of cement, and maximum chloride ion content.

Concrete strength requirements: Strength at 28 days and normal weight concrete, UNO.

Location	Strength f'c (psi)	Max. Aggr. size (inch)	Max. W/C ratio or min cement *
Lean mix soil replacement under fdns	1,500	sand	1-1/2 sack cement
Foundations, stem walls	2,500	1"	5-1/2 sack
Slab on grade, topping slab, stair tread	2,500	3/4"	5-1/2 sack

Concrete shall be a 5-1/2 sack 2,500 psi mix in accordance with SBC section CA1904.2. No air entrainment is required and slump shall be 5" or less. Slump, W/C ratio, admixtures and aggregate size will be determined by the contractor in accordance with ACI unless noted otherwise. Mixes will be approved by one of the following criteria.

Mix carries continuous approval from City of Seattle.

Mix design is submitted in accordance with ACI 318 Section 5.3.
Mix design is submitted in accordance with ACI 318 Section 5.4.

Admixtures: all concrete, including slab on ground, shall contain an acceptable water-reducing admixture conforming to ASTM C494 and be used in strict accordance with the manufacturer's recommendations.

All concrete which is exposed to freezing and thawing in a moist condition or exposed to deicing chemicals shall contain an air entraining agent, conforming to ASTM C260. The amount of entrained air shall be 5% +/- 1% by volume. Air % is based on 3/4" coarse aggregate; adjust air % per ACI 318 for other coarse aggregate sizes. Air-entrainment shall not be used at slabs that will receive a smooth, dense, hard-troweled finish.

Trucks hauling plant-mixed concrete shall arrive on-site with a field ticket indicating the maximum gallons of water that can be added at the site not to exceed the total water content in the approved mix design.

Concrete shall be deposited as nearly as practicable in its final position to avoid segregation due to rehandling or flowing. Concrete shall be thoroughly consolidated by suitable means during placement and shall be thoroughly worked around reinforcement, embedded items, and into corners of forms.

Formwork and Accessories

Concrete construction shall conform to ACI 301 "Specifications for Structural Concrete" and the Building Code, including testing procedures. See specifications and/or architectural documents for formwork requirements. Installation shall adhere to ACI 301. Conduits and pipes of aluminum shall not be embedded in concrete construction.

See architectural drawings for exact locations and dimensions of door and window openings in all concrete walls and for all grooves, notches, chamfers, feature strips, color, texture, and other finish details at all exposed concrete surfaces. See mechanical drawings for size and location of mechanical openings through concrete walls. Concrete accessories and embedded items shall be coordinated with Architectural and all other Contract Documents and suppliers' drawings before placing concrete. Anchor rods, reinforcing, hardware, etc. shall be firmly tied in place prior to concrete placement; wet-setting of these items are not permitted in concrete.

Construction Joints

Contractor shall submit the proposed locations of construction joints to the Architect for acceptance before starting construction. All construction joints in walls and footings shall be keyed with 1-1/2" thick x 6" long x 3-1/2" wide keys placed in alternate reinforcing spaces. All construction, control, and isolation joints for slabs on ground shall be in accordance with the typical slab on ground details.

Styrofoam or Rigid Foam specified on the drawings for filling voids shall be as manufactured by the Dow Chemical Company (NER-699) or approved equal and shall be installed in strict accordance with the manufacturer's recommendations.

Refer to Architectural documents for waterstops, dampproofing & soil retaining wall drainage requirements at concrete and concrete joints (construction joints, slab to wall joints, curb to slab joints, etc).

Curing and Finishes

Protect and cure fresh placed concrete per ACI 305 in hot conditions, ACI 306 in cold conditions, and ACI 308 "standard specification for curing concrete". All exposed edges and corners shall have 3/4" chamfer, UNO. Concrete flatwork shall be sloped to provide positive drainage. Coordinate finish with architectural contract documents.

At the time of application of finish materials or special treatment to concrete, moisture content of concrete shall conform to requirements in finish material specifications. Where vapor sensitive coverings are to be placed on slabs on grade, conform strictly to slab covering manufacturer's recommendations regarding vapor retarder and granular fill requirements below the slab.

Reinforcing in Cast-in-Place Walls

See Reinforcement General Notes for more information. Uppermost and lowermost horizontal reinforcing in walls shall be placed within 1/2 of specified spacing from the top and bottom of the wall.

Concrete wall reinforcing - typical UNO:

Wall thickness	horizontal bars	vertical bars	location
6" or less	#4 @ 16"oc	#4 @ 16"oc	@ cl of wall
8" or less	#4 @ 12"oc	#4 @ 12"oc	@ cl of wall
10" or less	#4 @ 10"oc	#4 @ 10"oc	@ cl of wall

Concrete protection; provide edge cover as follows. When a thickness of cover required for fire protection is greater than that specified in this section, such greater thickness shall be used:

- Uniformed surfaces cast against and permanently exposed to earth = 3"
- Formed surfaces exposed to earth or weather: #6 bars or larger = 2"; #5 bars or smaller = 1-1/2"
- Clear spacing between 2 or more parallel layers = 1"

Concrete Crack Maintenance

Cracking occurs in concrete structures due to inherent shrinkage, creep, and the restraining effects of walls and other structural elements. Most cracking due to shrinkage and creep will likely occur over the first two years of the life of the structure; further concrete movement due to variations in temperature may persist. Cracks that result in water penetration will need to be repaired to protect reinforcing. Other cracking may be repaired at the owner's discretion for aesthetical reasons or performance of applied finishes. Prior to repairing cracks, a structural engineer should be consulted to provide direction on which cracks to repair and on whether observed cracks may affect the strength of the structure.

Reinforcement in Concrete

Materials

Reinforcing steel shall conform to ASTM A615 (including supplement S1), Grade 60, Fy = 60,000 psi, except any bars specifically so noted on the drawings shall be Grade 40, Fy = 40,000 psi.

Welded Wire Reinforcing (WWR) shall conform to ASTM A185. Lap splice adjacent mats of welded wire fabric a minimum of 8" at sides and ends. In equipment bays, use minimum WWR 6x6-W2.1xW2.1, UNO.

Procedures

Reinforcing steel shall be detailed (including hooks and bends) in accordance with ACI 315 "Details and Detailing of Concrete Reinforcement". Lap all reinforcement in accordance with "The Reinforcing Splice and Development Length Schedule" on these documents. If table is not provided, lap all reinforcing by 40 bar diameters. Provide corner bars at all wall and footing intersections.

Reinforcing steel shall be adequately supported to prevent displacement during concrete and grout placement. Bars shall be bent cold. Bars partially embedded in concrete shall not be field bent, unless specifically so detailed or approved by the SER.

Welding or tack welding of reinforcing bars to other bars or to plates, angles, etc, is prohibited, except where specifically approved by the SER.

Anchorage

Post installed anchors shall not be installed without prior approval of engineer of record unless otherwise noted on the plans.

Epoxy-Grouted Items

Epoxy-Grouted Items (threaded rods or reinforcing bar) specified on the drawings shall be installed using "Steel-XP" high strength epoxy as manufactured by the Simpson Strong Tie Company. Install in strict accordance with I.C.C. Report No. ESR 2508. Special inspection of installation is required. Rods shall be ASTM A-307 unless otherwise noted.

Expansion Bolts

Expansion bolts into concrete and concrete masonry units shall be "Strong Bolt" as manufactured by the Simpson Strong Tie Company, installed in strict accordance with I.C.C. Report No. ESR-1771, including minimum embedment requirements. Bolts into concrete masonry or brick masonry units shall be into fully grouted cells. Substitutes proposed by contractor shall be submitted for review with ICC reports indicating equivalent or greater load capacities. Special inspection is required for all expansion bolt installation.

Structural Steel

Reference Standards

Steel construction shall conform to the latest editions of the AISC Specifications and Codes. "Specification for Structural Steel Buildings" ANSI/AISC 360 (latest edition), "Specification for Structural Joints Using ASTM A-325 or A-490 Bolts" AISC 348 (latest edition) and "Code of Standard Practice for Steel Buildings and Bridges" AISC 303 (latest edition) amended by the deletion of paragraph 4.4.1.

Fabricators

Fabricators for structural steel must have a quality assurance program in place. The quality assurance program must meet the requirements of one of the following methods:

- Participation in the AISC quality certification program.
- Meeting the requirements of AISC seismic provisions for structural steel buildings, appendix Q and submitting plan documentation to the authority having jurisdiction, the engineer of record, and the owner or owner's designee.

Structural Steel Members

Structural Steel shall conform to the following requirements (unless otherwise shown on plans):

Type of Member	ASTM Specification	Fy
Plates, Channels, Angles	A-36, Grade 36	36 ksi
Steel Pipe	A-53, Grade B	35 ksi
Anchor Rods (Hooked, Headed & Threaded & Nutted)	F-1554, Grade 36	36 ksi
Threaded Rods	A-36	36 ksi
Washers	F-436	
Hex Nuts	A-563	
Common Bolts	A-307, Grade A	

- S1.0 General Structural Notes
- S1.1 General Structural Notes and Schedules
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SHEET INDEX



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Revision Issue Date Drawing Set

5/9/2022 Permit Set

General Structural Notes

S1.0

Bolts
All ASTM A-307 bolts shall be provided with lock washers under nuts or self-locking nuts.

Welding
All welding shall be in conformance with AISC and AWS standard and shall be performed by AWS/WABO certified welders in accordance with AWS D1.1. Only Prequalified welders, defined by AWS, shall be used.

Shop drawings shall show all welding with AWS D1.4 symbols. Welds shown on the drawings are the minimum sizes. Increase weld size to AWS minimum sizes, based on plate thickness. Minimum welding shall be 3/16" UNO. All welds shall be made using low-hydrogen electrodes with minimum tensile strength of 70 ksi and a Charpy V-Notch (CVN) toughness of at least 20 foot-pounds at -20 degrees Fahrenheit.

Welding procedures shall be submitted to the owner's testing agent for review prior to commencement of fabrication or erection. Field welds shown are engineer's recommendation. Contractor is responsible for actual welds used to support specific means and methods.

Shop Painting

All steel to be shop primed. All other steel shall be given one coat of shop paint, in accordance with Section 1.24 of the AISC "Specification" and Section 6.5 of the AISC "Code", unless noted otherwise. Structural joints and faying surfaces which are to be connected by means of welds or bolts shall not be painted until all welds and bolts are installed, inspected and approved.

Finishing

The terms finish, finish column, finishing, milled, milled surface or milling are intended to include surfaces which have been accurately sawed or finished to a true plane as defined by AISC. Grind surface value equal to or less than 1,000 as defined by ANSI B46.2 (4-inch and thinner).

Wood

Material Criteria

Framing lumber shall be kiln dried or mc-19 (unless more stringent criteria are required in these notes or on the drawings) and graded and marked in conformance with the latest WCLIB standard grading rules for west coast lumber no. 17. Furnish to the following minimum standards:

4x beams & posts	DF #2
6x beams & posts	DF #1
4x treated beams & posts, 6x treated posts	HF kdat #2
2x joists, rafters, built-up beams, headers	HF #2
2x flatwise & edgewise blocking	HF standard
2x studs	HF kd stud
2x plates	HF kd15 standard
2x treated plates/ledgers	HF kdat #2

Moisture Content and Care of Material During Construction

All 2x studs and plates shall be kiln dried. The Contractor shall take measures to minimize exposure of sawn lumber and engineered wood products to moisture during construction. Excessive changes in moisture content during construction may result in swelling and shrinkage of a single story level in the magnitude of 1/2".

Wood Structural Panels

Wood structural panels shall be APA rated sheathing. Plywood shall be grade C-D or Structural II, exterior glue, exposure 1 durability classification, in conformance with USDOC PS 1 or PS 2, ASTM D 5457 and IBC 2304.7 and table 2304.7.2). Oriented strand board (OSB) shall be in accordance with USDOC PS 2, and of equivalent thickness, exposure rating and span rating and may be used in lieu of plywood pending OSB substitution approval by Architect. See plans for thickness, panel identification index and nailing requirements. Unless otherwise noted on plans:

- Roof sheathing shall be 15/32" with span rating 32/16
- Floor sheathing shall be 23/32" with span rating 48/24
- Wall sheathing shall be 15/32" with span rating 24/0

Structural Composite Lumber

Manufactured lumber, PSL, LVL, and LSL, shall be manufactured under a process approved by the national research board. Each piece shall bear a stamp or stamps noting the name and plant number of the manufacturer, the grade, the national research board number, and the quality control agency. All PSL, LVL and LSL lumber shall be manufactured in accordance ICC Report ESR-1387. LVL lumber shall be manufactured using veneer glued with a waterproof of the requirements of ASTM D2559 with all grain parallel with the length of the member. The members shall have the following minimum properties:

PSL (2.2E) Beams	Fb = 2,900 psi, E = 2,200 ksi, Fv = 290 psi
LVL (2.0E) Beams	Fb = 2,600 psi, E = 2,000 ksi, Fv = 285 psi
LSL (1.55E) Beams	Fb = 2,325 psi, E = 1,550 ksi, Fv = 310 psi

Design shown on plans is based on ILevel/Trus-Joist products manufactured by the Weyerhaeuser Corporation. Alternate manufacturers may be used subject to review and approval by the Architect and Structural Engineer of Record, alternate joist hangers and other hardware may be substituted for items shown provided they have ICC approval for equal or greater load capacities. All joist hangers and other hardware shall be compatible in size with members provided.

Glu Laminated Material (non city of Seattle)

Glued laminated members shall be fabricated in conformance with AITC 117 and APA-EWS Y117, Stress Class 24F-1.8E. Each member shall bear an AITC identification mark and shall be accompanied by an AITC certificate of conformance. All simple span beams shall be douglas fir combination 24F-V4, fb = 2,400 psi, fv = 265 psi and all cantilevered beams and columns shall be Douglas fir combination 24F-V8, fb = 2,400 psi, fv = 265 psi unless otherwise noted. Camber all simple span glu laminated beams to 3,500' radius or zero camber, unless shown otherwise on the plans.

Treated Wood

All wood framing in direct contact with concrete or masonry, exposed to weather, or that rest on exterior foundation walls and are located within 8" of earth, shall be pressure-treated with an approved preservative per IBC section 2303.1.8. Cut or drilled sections of treated material shall be treated with an approved preservative per IBC section 2303.1.8. See IBC section 2304.11 for additional requirements.

Metal Products in Contact with Treated Lumber

Simpson hardware in contact with ACQ, CA, or CBA pressure-preservative treated wood shall have a Zmax finish (G185 HDG per ASTM A653) or shall be post hot-dip galvanized (per ASTM A123 for connectors and ASTM A153 for fasteners) unless otherwise noted. Exception: type 304 or 316 stainless steel connectors and fasteners are required for the following applications:

- ACQ, CA, or CBA treatments with ammonia where members are used in exterior applications.
- all ACZA treatments
- retention levels greater than 0.40 pcf for ACQ, 0.41 pcf for CBA-A, or 0.21 pcf for CA-B treatments.

Stainless steel connectors require matching stainless steel fasteners. Zmax and post hot-dip galvanized connectors require fasteners galvanized per ASTM A153. Thru-bolts and anchor rods used in dry conditions shall be permitted to be of mechanically deposited zinc coated steel with coating weights in accordance with ASTM B 695, class 55 minimum. See IBC section 2304.9.5 and "framing connectors" notes on this sheet for additional requirements.

Framing Connectors

Timber connectors called out by letters and numbers shall be "strong-tie" by Simpson company, as specified in their catalog number C-C-2021. Equivalent devices by other manufacturers may be substituted, provided they have ICBO approval for equal or greater load capacities. 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 otherwise noted, all nails shall be as called out below. Unless otherwise noted on the drawings use the following hangers:

2x or 2-2x member to flush wood beam/ledger
2x member to sill plate or steel/flush wood beam
2-2x member to sill plate or steel/flush wood beam
TJI member to flush wood beam/ledger
2-TJI member to flush wood beam/ledger
TJI member to sill plate or steel/flush wood beam
2-TJI member to sill plate or steel/flush wood beam
4x, LSL/LVL/PSL beam to flush wood beam/ledger
4x, LSL/LVL/PSL beam to sill plate or steel beam
Interior 4x or 6x post to concrete below
Treated 4x or 6x post to concrete below
4x or 6x post to wood beam above
wood beam to wood beam that bears on post

LUS
LB
B
ITS
MIU
ITS
MIT
MIU max
HWU
ABU w/ 5/8" dia. anchor rod w/ 7" embed
CBSQ-SDS2HDG
PC/EPC
HUCTF

Fasteners

Shall conform to the following requirements, UNO. Splitting shall be avoided at all wood fasteners:

Steel to wood or wood to wood connection bolts
Anchor rods (w/ threaded ends & welded nut)
Lag screws
Wood screws
Nails

ASTM A307
ASTM F1554 grade 36 (typical UNO)
NDS section 11.1.3
NDS section 11.1.4
NDS section 11.1.5

Nail sizes are specified as follows. If the contractor proposes the use of alternate nails, they shall submit nail specifications to the Structural Engineer of Record (prior to construction) for review and acceptance.

Simpson hardware	typical UNO	see catalog
MSTC holdown straps direct to studs	0.148 x 1-1/2"	
MSTC holdown straps over shear wall sheathing to studs	0.148 x 2-1/4"	
CS collector straps	0.131 x 2-1/2"	
hangers w/ 16d or 10d options	0.162 x 3-1/2"	
floor sheathing	typical	0.131 deformed shank x 2-1/2"
roof sheathing	typical	0.131 x 2-1/2"
stud wall APA sheathing	15/32 sheathing	0.148 x 2-1/4"
member to member face nailing	typical UNO	0.131 x 3"
bottom plate to framing below	typical UNO	0.131 x 3-1/4"
toe nailing	typical UNO	0.131 x 3"

Sheathing fasteners shall be driven so that head or crown is flush with sheathing surface. 3/8" min. edge distance shall be maintained on sheathing fasteners.

Spaced fasteners specified on the drawings shall begin at 1/2 specified spacing from the ends of the members, unless otherwise noted. Provide (2) fasteners minimum each member, typ. Anchor rods from sill plates to concrete shall begin a min. of 6" and a max. of 12" from each end of each piece of sill plate.

Thru-bolt and anchor rod holes shall be at least 1/32" but no more than 1/16" larger than bolt/rod diameter. Clearance holes for lag screw shanks shall have the same diameter as the lag shank and the same penetration depth as the length of the unthreaded shank. Lead holes for threaded portion of lag screws shall have a diameter of 55 to 60% of lag screw shank diameter and shall extend the length of the threaded portion of the lag screw.

Stair and Stair Landing Framing Requirements

4'-0" maximum width UNO

Landings: span 2x6 joists @ 16"oc in short direction of landing. At full height wood studs, provide 2x6 continuous ledger w/ (3) 0.131 x 3-1/4" nails to each stud. At concrete walls, provide treated 2x6 continuous ledger w/ 5/8" diameter anchor rods @ 16"oc. Embed 5". Where landing edge is not supported by beam, full height stud wall, or full height concrete wall, provide 2x4 @ 16" cripple wall from landing edge to slab on grade below.

Stringers 9'-0" in length or less: provide 2x12 stringers at center and sides of stair. Notch to 5-1/2" minimum depth and provide HUS26 hangers to supporting beams. At center stringer, sister 2x6 ea. side of stringer and at side stringers, sister 2x6 one side of stringer. End sistered 2x6's short of hangers. Stringers 11'-6" to 14'-0" in length: provide 1-3/4" x 14" LVL 1.9E stringers at center and sides of stair. Notch to 8" minimum depth and provide HUY hangers to supporting beams. At center stringer, sister 2x8 ea. side of stringer and at side stringers, sister 2x8 one side of stringer. End sistered 2x8's short of hangers.

Where stringers bear on top of wood floor framing below, provide (2) L570 clip at bottom of stringer. Where stringers bear on concrete slab, provide 2x treated sill plate w/ 5/8" exp. bolt at each stringer (embed 3-1/8").

General Wood Framing Criteria (UNO in previous sections)

All wood framing details not shown otherwise shall be constructed to the minimum standards of section 2308 of the IBC. Minimum nailing, unless otherwise noted, shall conform to table 2304.9.1 of the IBC. Unless otherwise noted, all nails shall be common. Coordinate the size and location of all openings with Mechanical and Architectural drawings. Provide washers under the heads and nuts of all bolts, anchor rods, and lag screws bearing on wood, unless otherwise noted. Installation of lag screws shall conform to NDS section 11.1.3. Bolts, anchor rods, and lag screws shall be centered in members, uno.

All structural stud walls (bearing or shear walls) shown and not otherwise noted shall be 2x4 studs @ 16"oc at interior walls and 2x6 @ 16"oc at exterior walls. See Architectural drawings for differing wall widths and for framing at nonstructural walls. Two studs minimum shall be provided at the end of all walls and at each side of all openings, and below beam bearing points. Solid blocking for 4x/6x wood posts and multi-stud posts shall be provided through intermediate levels to supports below. Provide continuous solid blocking at mid-height of all stud walls over 10'-0" in height and at mid-height of walls with sheathing on one side only (i.e. Each side of party walls).

All stud walls shall have their lower wood plates attached to wood framing below with 0.131 x 3-1/4" nails @ 8"oc or bolted to concrete with 5/8" diameter anchor rods @ 6'-0"oc for structures not exceeding 2 stories and @ 4'-0" for all other structures unless otherwise noted. Embed anchor rods 7" unless otherwise noted. Individual members of built-up posts shall be nailed to each other with 0.131 x 3" nails @ 8"oc staggered.

Refer to the plans and shear wall schedule for required sheathing and nailing. When not otherwise noted, provide gypsum wallboard on interior surfaces nailed to all studs, top and bottom plates and blocking with nails at 7" oc. Use #6 x 1-5/8" screws for 11/2" GWB and #6 x 1-7/8" screws for 5/8" GWB. Provide 15/32" APA rated sheathing on exterior surfaces nailed at all panel edges (block unsupported edges), top and bottom plates with 0.148 x 2-1/4" nails @ 6"oc and to all intermediate studs and blocking @ 12"oc. Allow 1/8" gap at all APA sheathing panel edges and ends. (see details where larger gap is required).

At exterior walls, provide flat wise 2x6 at all door heads and window sills and heads, unless otherwise noted. (provide flat wise 2-2x6 where opening width is greater than 6'-0" and less than 9'-6", unless otherwise noted). Provide (3) 0.131 x 3" toenails each end of each 2x6 member.

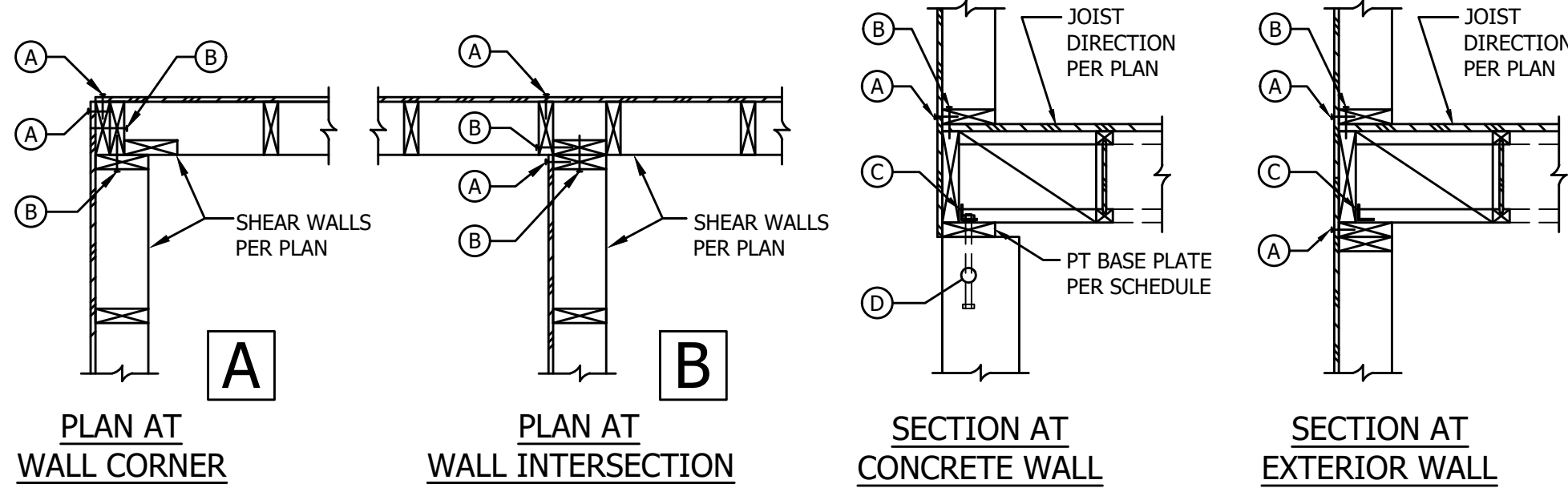
Provide double joists under all parallel partitions that extend over more than half the joist length and around all openings in floors or roofs unless otherwise noted. Provide solid blocking at all bearing points.

Toenail joists to supports with (3) 0.131 x 3" nails. Attach timber joists to flush headers or beams with Simpson metal joist hangers in accordance with notes above. Individual members of multi-joist beams shall be nailed to each other with (2) rows of 0.131 x 3" nails @ 12"oc.

Unless otherwise noted on the plans, APA sub-flooring and roof sheathing shall be laid up with grain (strong axis) perpendicular to supports (joists, trusses, etc.) and in a staggered pattern. Nails shall be @ 6"oc to framed panel edges, @ 4"oc over shear walls and @ 12"oc to intermediate supports. See notes above for nail sizes. All sub-flooring edges shall have approved tongue-and-groove joints or shall be supported with solid blocking/framing. Plywood clips are recommended at all roof sheathing edges (solid blocking/framing is not required at panel edges unless specifically noted in the structural drawings or required by the roofing manufacturer). Glue sub-flooring to all supports with adhesive conforming to APA spec. AFG-01 in accordance with the manufacturer's recommendations. Allow 1/8" gap at all panel edges and ends of floor and roof sheathing. Where blocked floor and roof diaphragms are indicated, provide flat 2x blocking at all unframed panel edges and nail with edge nailing specified.

SHEAR WALL SCHEDULE								
MARK	SHEATHING	PANEL EDGE NAILING (A)	TOP PLATE NAILING (B)	A35 CLIPS (C)	MUDDSILL TO CONCRETE (D)		CAPACITY (PLF)	
					2x6 P.T.	3x6 P.T.	SEISMIC	WIND
SW6	1/2" PLYWOOD	0.131" @ 6"oc	0.131" @ 6"oc	A35 @ 24"oc	3/8" Ø AB @ 48"oc	3/8" Ø AB @ 64"oc	260	270
SW4	1/2" PLYWOOD	0.131" @ 4"oc	0.131" @ 4"oc	A35 @ 16"oc	3/8" Ø AB @ 32"oc	3/8" Ø AB @ 48"oc	350	398
SW3	1/2" PLYWOOD	0.131" @ 3"oc	0.131" @ 3"oc	A35 @ 12"oc	3/8" Ø AB @ 16"oc	3/8" Ø AB @ 32"oc	512	540
SW2 5	1/2" PLYWOOD, DF STUDS	0.131" @ 2"oc	(2) ROWS 0.131" @ 3"oc	A35 @ 7"oc	3/8" Ø AB @ 12"oc	3/8" Ø AB @ 16"oc	600	986

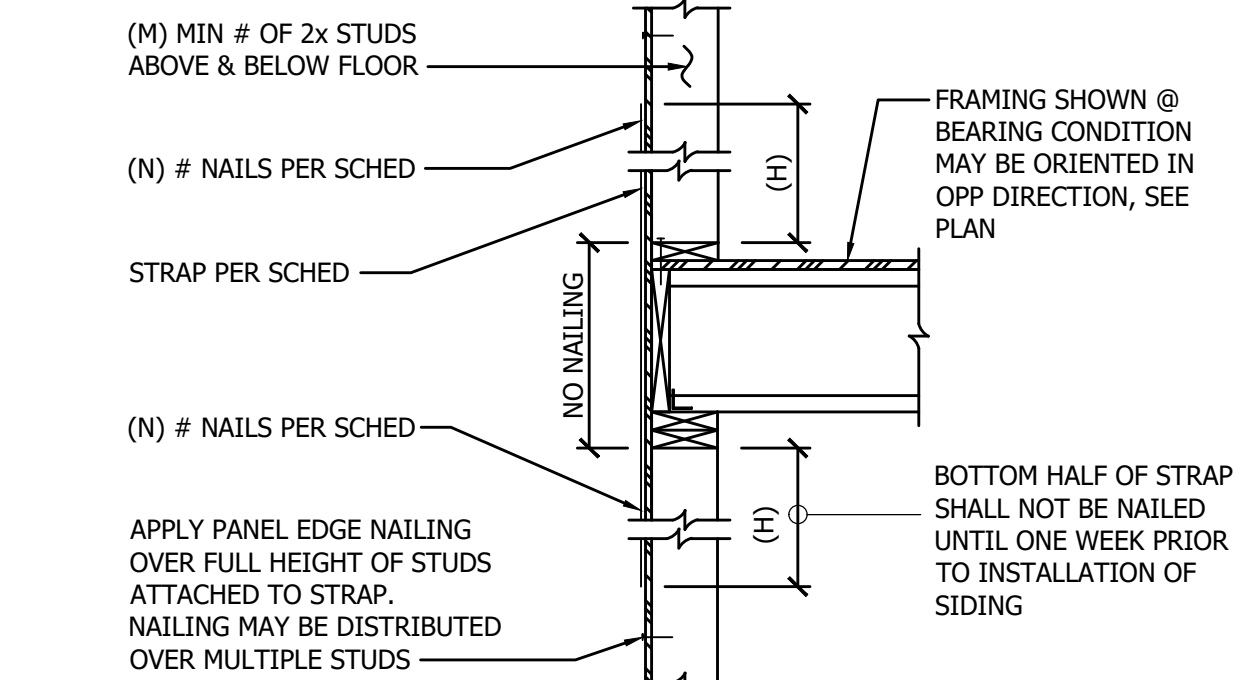
- NOTES:
- ALL EXTERIOR WALLS SHALL BE SW6 (TYP, UNO). WALL FRAMING SHALL BE 2x HF (UNO) STUDS @ 16"oc BLOCK ALL PANEL EDGES WITH 2x LAID FLAT. ALL STUDS ATTACHED TO STRAPS OR HOLDOWNS SHALL BE PANEL-EDGE NAILED. NAIL TO ALL INTERMEDIATE SUPPORTS WITH 0.113" Ø @ 12"oc SHEATHING SHALL BE 1/2" STRUCT-1 OR 1/4" OSB.
 - 0.113" Ø NAILS SHALL BE A MINIMUM OF 2 1/2" IN LENGTH, 0.131" Ø NAILS SHALL BE A MINIMUM OF 3" IN LENGTH.
 - LTP4 OR L550 CLIPS MAY BE SUBSTITUTED FOR A35 CLIPS.
 - EMBED ANCHOR BOLTS 7" MIN. ALL BOLTS SHALL HAVE 3x3x1/4" PLATE WASHERS (EDGE OF WASHER SHALL BE WITHIN 1/2" OF SHEATHING). EACH MUDDSILL SHALL HAVE A MINIMUM OF (2) ANCHOR BOLTS WITH (1) BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 4 1/2" TO EACH END. SIMPSON TITEN HD SCREWS, SIMPSON STRONG-BOLT OR HILTI KWIK-BOLT TZ EXPANSION BOLTS MAY BE SUBSTITUTED FOR ANCHOR BOLTS w/ 5" MIN EMBED.
 - FOR SW2:
AT (2) ROWS NAILING/CLIPS: USE DOUBLE RIM, JOIST OR BLOCKING. FRAMING AT BUTTING PANEL EDGES SHALL BE 3x MINIMUM OR (2) 2x STITCHED TOGETHER w/ PLATE NAILING PER APA FORM #TT-076. ALL PANEL EDGE NAILING TO BE STAGGERED. 3x SILL PLATES ARE REQUIRED AT ANCHOR BOLT CONNECTIONS.



1 Shear Wall Schedule

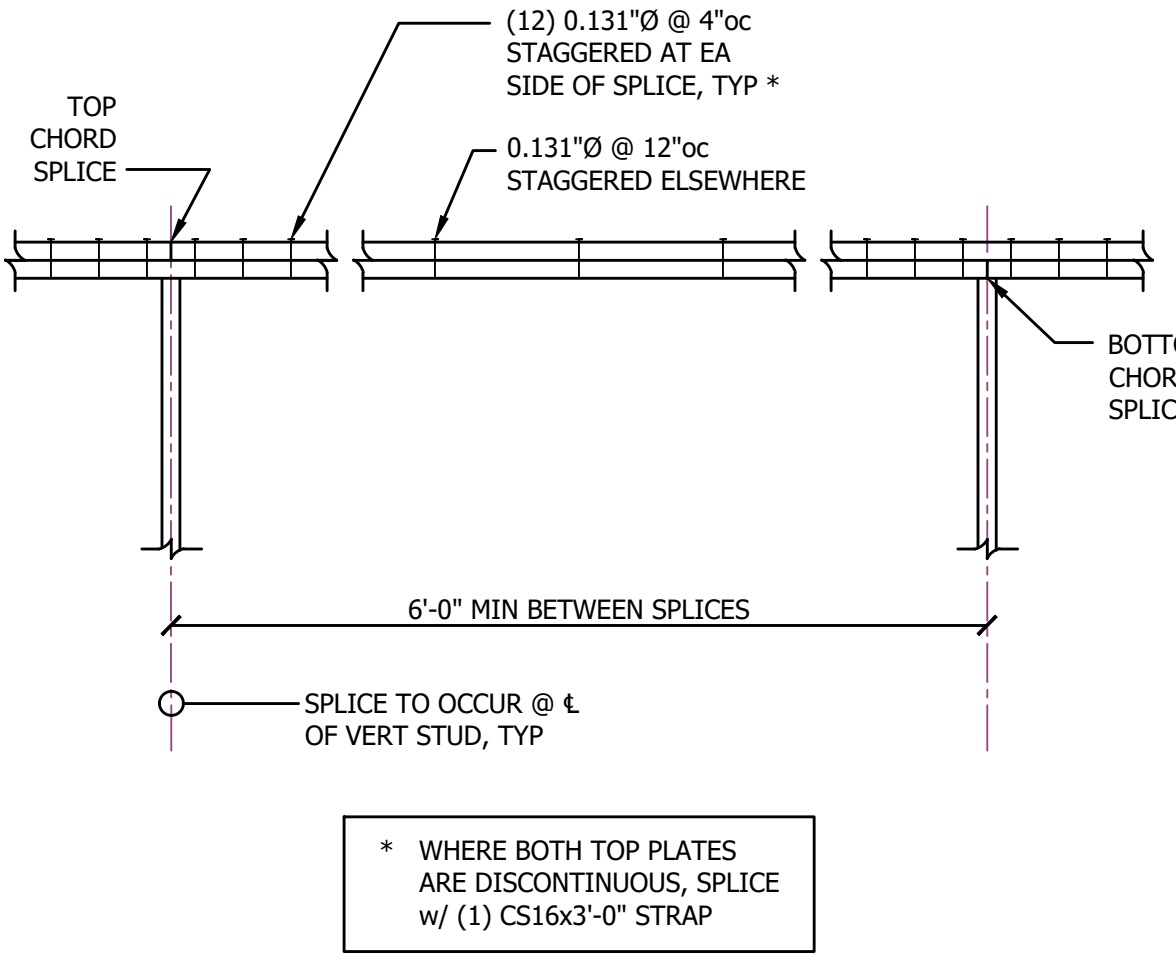
3/4" = 1'-0"

STRAP SCHEDULE				
MARK	H	N	M	HF CAPACITY
CS16	14"	(13) 0.131"	1	1,705#
MSTC52	17"	(22) 0.148"	2	3,650#



2 Strap Schedule

3/4" = 1'-0"

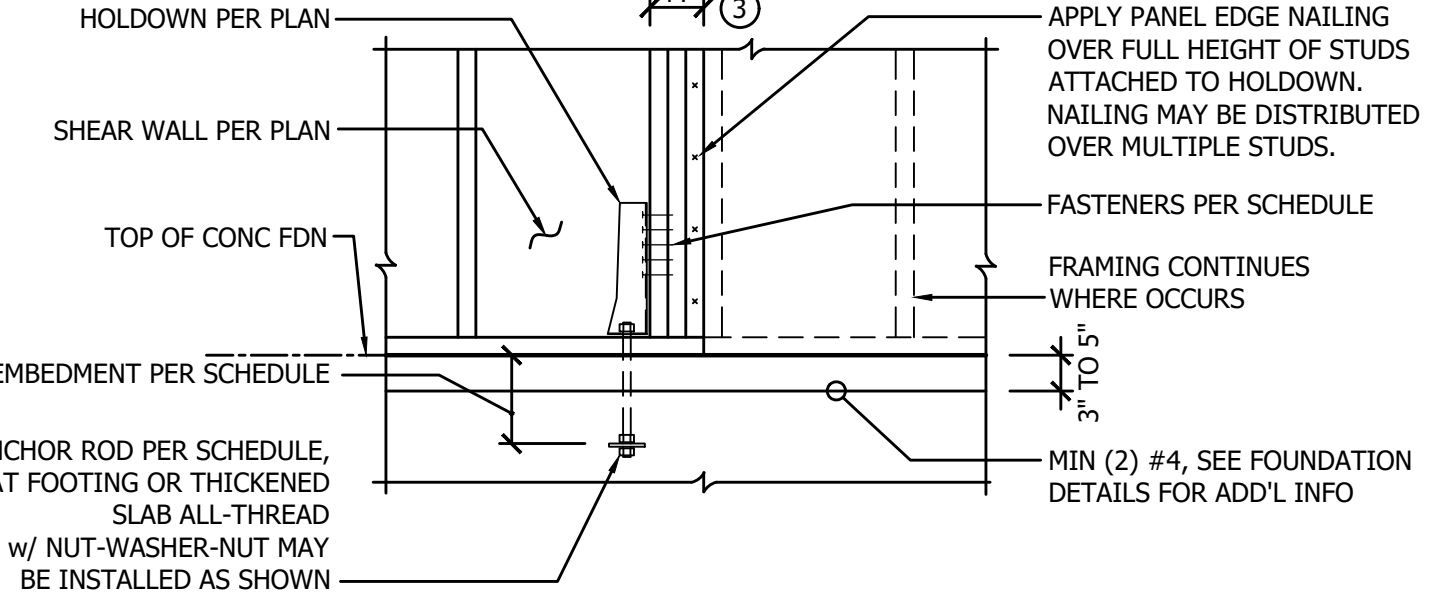


3 Top Plate Splice, Typ.

3/4" = 1'-0"

HOLDOWN SCHEDULE ① ②											
MARK	FASTENERS	M ③	FOOTING / STRUCTURAL SLAB				TOP OF STEM WALL ④				
			ANCHOR ROD	EMBEDMENT	EDGE DISTANCE	CAPACITY	ANCHOR ROD	EMBEDMENT	CAPACITY (SEISMIC / WIND)		
									CONTINUOUS ⑤	CORNER ⑥	END ⑥
HDU2	(6) SDS1/4"x2 1/2"	3"	3/8" Ø	6"	8"	2,645#	SB3/8"x24	18"	2,645#		
HDU5	(14) SDS1/4"x2 1/2"	(2)2x DF	3/8" Ø	8"	11"	5,645#	SB3/8"x24	18"	5,645#		
HDU8	(20) SDS1/4"x2 1/2"	4-1/2" DF	7/8" Ø	9"	14"	7,870#	SB3/8"x24	18"	7,870#	7,855# / 7,870#	5,730# / 6,820#
HDU11	(30) SDS1/4"x2 1/2"	4x8 DF	1" Ø	10"	15"	9,535#	SB1x30	24"	9,535#	8,315# / 9,535#	6,065# / 7,220#

- PLACEMENT OF ANCHOR ROD IS BASED ON CAST-IN-PLACE INSTALLATION.
- INSTALL ALL HOLDOWNS PER MANUFACTURER'S INSTRUCTIONS.
- DEPTH OF WOOD FRAMING MEMBER ATTACHED TO HOLDOWN. MEMBERS SHALL BE HEM-FIR UNLESS NOTED OTHERWISE NOTED.
- MIN 6" CONCRETE WALL THICKNESS REQ'D, MIN EDGE DISTANCE OF 1 1/2".
- BASED ON MIN 27" DISTANCE FROM END/CORNER OF WALL.
- BASED ON MIN 4 1/4" DISTANCE FROM END OF WALL.
- AT RETROFIT CONDITIONS USE 3/8" THREADED ROD w/ EPOXY PER GENERAL STRUCTURAL NOTES, MIN. 12" EMBED. 1" Ø EPOXY RODS REQUIRE 20" EMBEDMENT.



4 Holddown Schedule

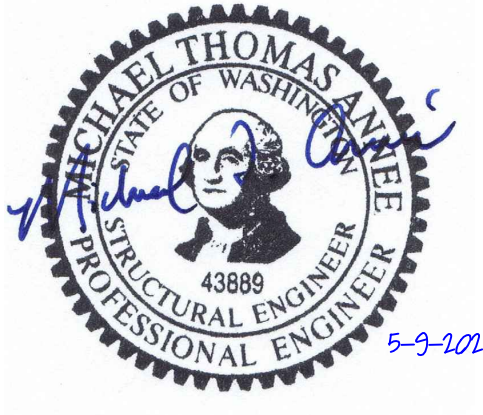
3/4" = 1'-0"

GENERAL STRUCTURAL NOTES

(TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS)



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Revision Issue Date Drawing Set

5/9/2022	Permit Set
9/23/2022	Review Corrections

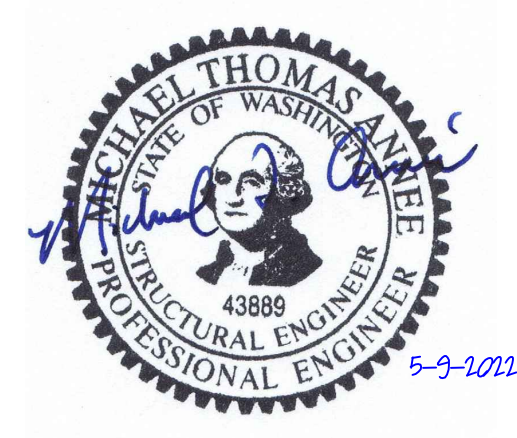
General Structural Notes & Schedules

S1.1



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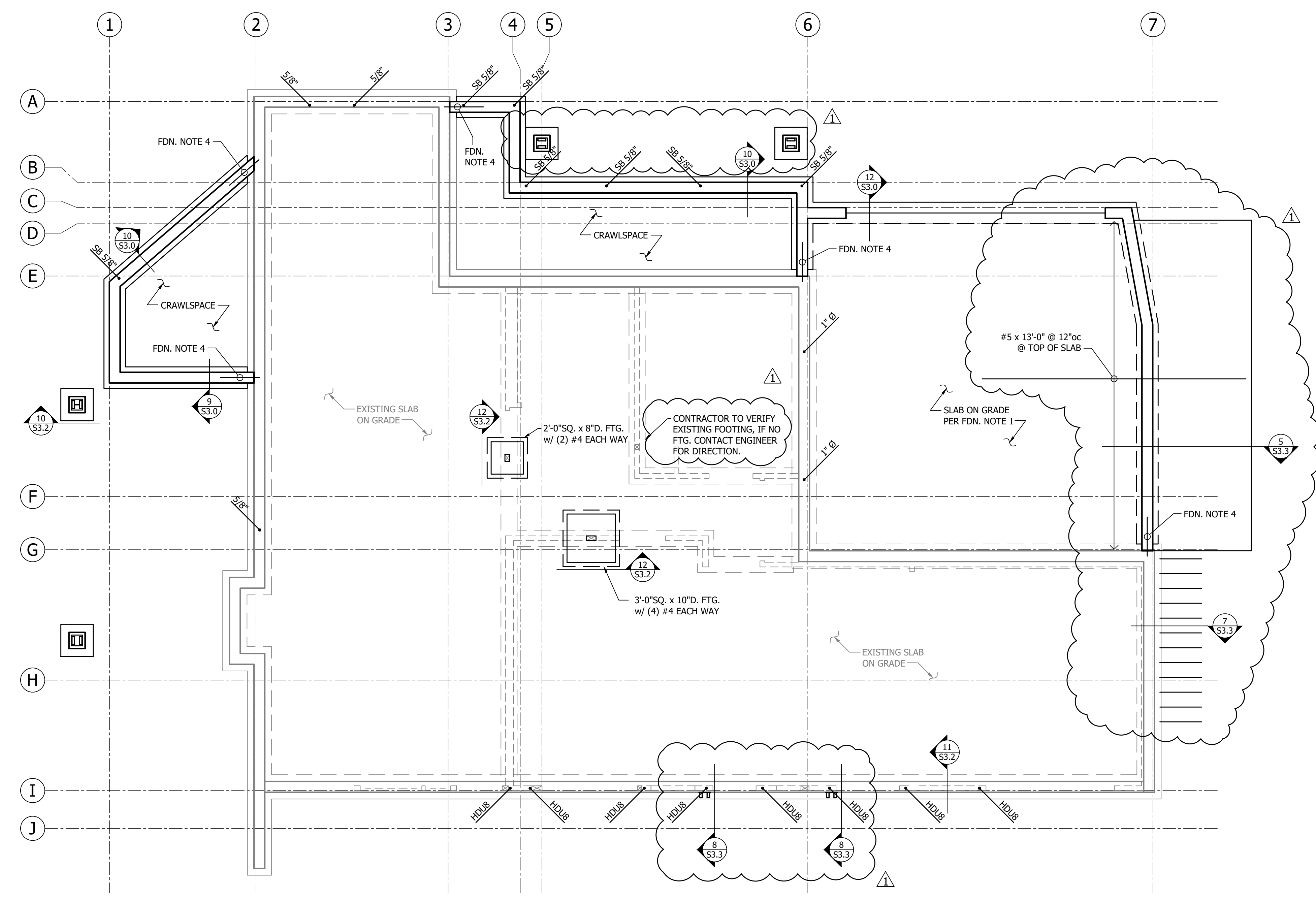
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Foundation Plan
SCALE: 1/4" = 1'-0"

GENERAL FRAMING NOTES:

- ALL 14" BEAMS SHALL BE FLUSH AND ALL HEADERS DROPPED, UNO. SEE 3/S3.1 FOR TYPICAL POST-TO-BEAM CONNECTIONS, TYP. UNO.
- TYP. HEADERS SHALL BE 4x6 DF#2, UNO, SEE 4/S3.1 FOR INSTALLATION.
- PROVIDE (2) BEARING STUDS UNDER EACH END OF ALL BEAMS AND (1) 2x TRIMMER (BEARING) STUD AND (1) 2x KING (FULL-HEIGHT) STUD AT EACH END OF ALL HEADERS, UNO. NAIL STUDS TOGETHER PER GENERAL STRUCTURAL NOTES.
- PROVIDE SOLID BEARING BELOW ALL POINT LOADS ABOVE.
- STUD WALLS SHALL BE 2x HF STUDS @ 16"oc, UNO. SEE SHEAR WALL, HOLDOWN AND STRAP SCHEDULES ON S1.1 FOR ADDITIONAL REQUIREMENTS AT SHEAR WALL FRAMING.

FOUNDATION NOTES:

- TYPICAL SLAB ON GRADE AT INTERIOR SHALL BE 4" THICK. REINFORCE ALL SLABS w/ WWF 6x6 - W2.9xW2.9 AT CENTERLINE.
- INDICATES HOLDOWN LOCATED AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 4/S1.2.
- TYPICAL PAD FOOTINGS SHALL BE 24" SQ. x 8" D. w/ (2) #4 EW, 3" CLR. OF BTM, SEE DETAIL 10/S3.2.
- EMBED ALL HORIZONTAL REINFORCEMENT MIN OF 4" INTO (E) CONCRETE w/ SIMPSON SET-XP EPOXY. EXTEND REINFORCEMENT 24" OR HOOK.

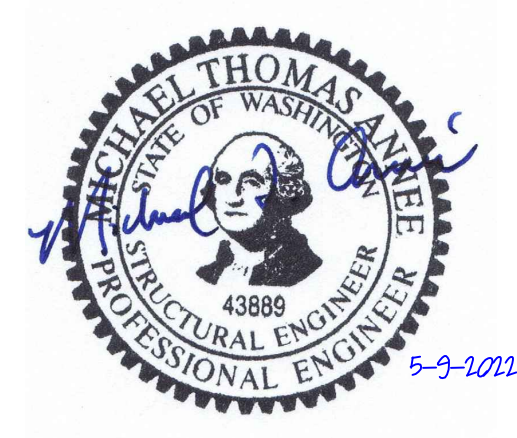
Foundation Plan

S2.0



ANNÉE STRUCTURAL ENGINEERING, LLC

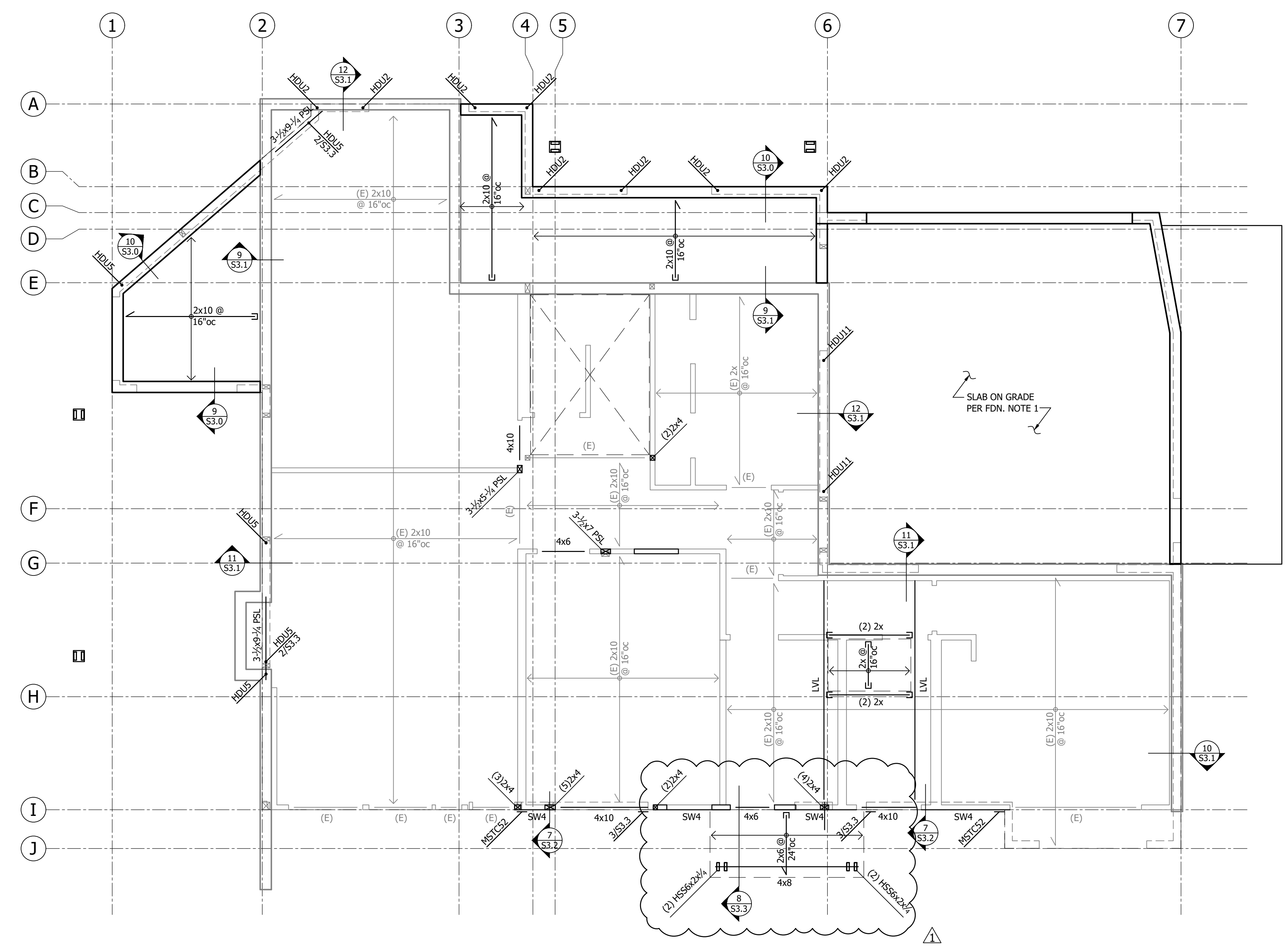
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1st Floor Framing Plan
SCALE: 1/4" = 1'-0"

GENERAL FRAMING NOTES:

- ALL 14" BEAMS SHALL BE FLUSH AND ALL HEADERS DROPPED, UNO. SEE 3/S3.1 FOR TYPICAL POST-TO-BEAM CONNECTIONS, TYP. UNO.
- TYP. HEADERS SHALL BE 4x6 DF#2, UNO, SEE 4/S3.1 FOR INSTALLATION.
- PROVIDE (2) BEARING STUDS UNDER EACH END OF ALL BEAMS AND (1) 2x TRIMMER (BEARING) STUD AND (1) 2x KING (FULL-HEIGHT) STUD AT EACH END OF ALL HEADERS, UNO. NAIL STUDS TOGETHER PER GENERAL STRUCTURAL NOTES.
- PROVIDE SOLID BEARING BELOW ALL POINT LOADS ABOVE.
- STUD WALLS SHALL BE 2x HF STUDS @ 16"oc, UNO. SEE SHEAR WALL, HOLDOWN AND STRAP SCHEDULES ON S1.1 FOR ADDITIONAL REQUIREMENTS AT SHEAR WALL FRAMING.

FLOOR FRAMING NOTES:

- AT BREAKS IN DOUBLE TOP PLATE OF ALL EXTERIOR WALLS AND ALL SHEAR WALLS SEE DETAIL 3/S1.1.
- SWx - INDICATES SHEAR WALL PER SCHEDULE 1/S1.1. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION. ALL NEW, EXTERIOR WALLS SHALL BE SHEATHED PER SW6, UNO.
- REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
- REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

FLOOR FRAMING NOTES:

- FLOOR SHEATHING SHALL BE MIN. 3/4" APA RATED SHEATHING (48/24). NAIL @ ALL PANEL EDGES AND OVER ALL SHEAR WALLS w/0.113" @ 6"oc AND 12"oc TO ALL INTERMEDIATE FRAMING. PLACE LONG DIRECTION OF PLYWOOD PERPENDICULAR TO JOISTS DIRECTION, STAGGER PANEL JOINTS.
- EXISTING FLOOR FRAMING IS 2x10 JOISTS @ 16"oc, DIRECTION PER PLAN.
- INDICATES STRAP AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 2/S1.1.

HANGER SCHEDULE	
MEMBER	HANGER
2x10/2x12	LUS210
(2)2x10	LUS210-2
14" TJI/230	IUS/ITS2.37/14
(2)14" TJI/230	MIU4.75/14
14" TJI/360	IUS/ITS2.37/14
1-3/4x14 LSL/LVL	HUS1.81/10
3-1/2x14 LSL/PSL	HHUS410
5-3/4x14 PSL	MGU5.50-SDS
7x14 PSL	HGU7.25-SDS

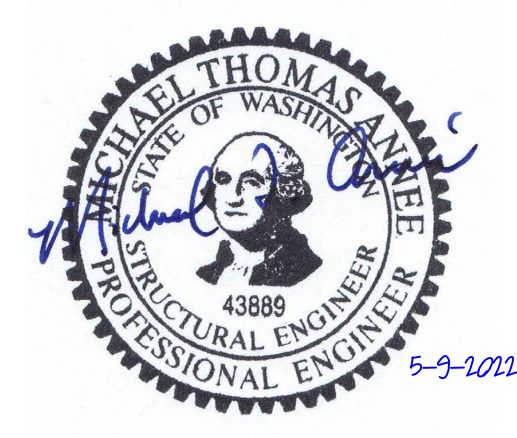
1st Floor Framing Plan

S2.1



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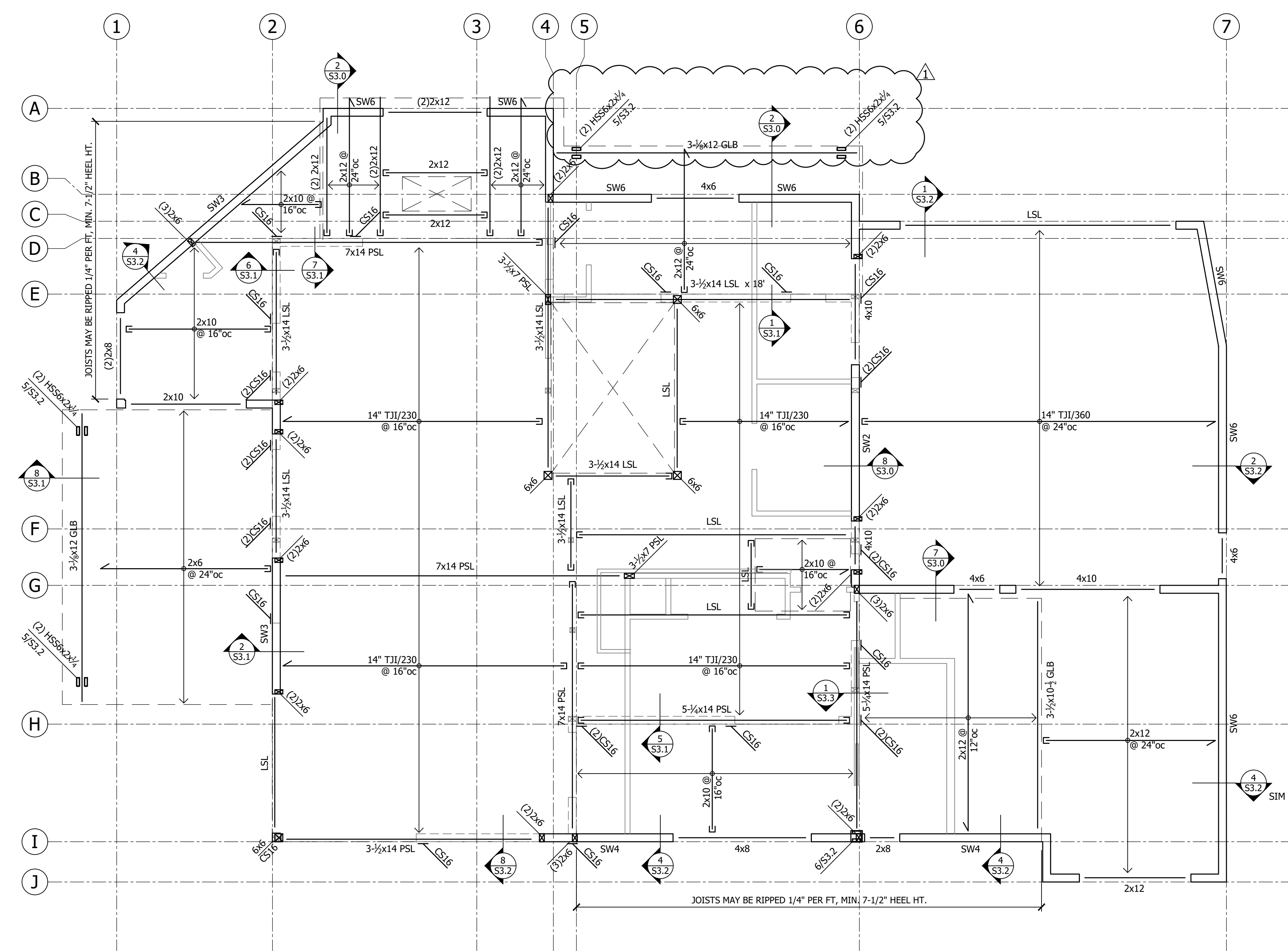
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2nd Floor Framing Plan
SCALE: 1/4" = 1'-0"

GENERAL FRAMING NOTES:

- 1. ALL 14" BEAMS SHALL BE FLUSH AND ALL HEADERS DROPPED, UNO. SEE 3/S3.1 FOR TYPICAL POST-TO-BEAM CONNECTIONS
2. TYP. HEADERS SHALL BE 4x6 DF#2, UNO, SEE 4/S3.1 FOR INSTALLATION.
3. PROVIDE (2) BEARING STUDS UNDER EACH END OF ALL BEAMS AND (1) 2x TRIMMER (BEARING) STUD AND (1) 2x KING (FULL-HEIGHT) STUD AT EACH END OF ALL HEADERS, UNO. NAIL STUDS TOGETHER PER GENERAL STRUCTURAL NOTES.
4. PROVIDE SOLID BEARING BELOW ALL POINT LOADS ABOVE.
5. STUD WALLS SHALL BE 2x HF STUDS @ 16"oc, UNO. SEE SHEAR WALL, HOLDOWN AND STRAP SCHEDULES ON S1.1 FOR ADDITIONAL REQUIREMENTS AT SHEAR WALL FRAMING.

FLOOR FRAMING NOTES:

- 1. FLOOR SHEATHING SHALL BE MIN 3/4" APA RATED SHEATHING (48/24). NAIL @ ALL PANEL EDGES AND OVER ALL SHEAR WALLS w/0.113" @ 6"oc AND 12"oc TO ALL INTERMEDIATE FRAMING. PLACE LONG DIRECTION OF PLYWOOD PERPENDICULAR TO JOISTS DIRECTION, STAGGER PANEL JOINTS.
2. TYPICAL FLOOR FRAMING SHALL BE 14" TJI/230 @ 16"oc, DIRECTION PER PLAN. JOIST TO SPAN CONTINUOUS AS INDICATED ON PLAN.
3. LSL - INDICATES FLUSH-FRAMED 1-1/2"x14" LSL BEAM. ALL JOISTS AND 14" DEEP BEAMS SHALL BE FLUSH-FRAMED & ALL 4x HEADERS/GLULAM BEAMS SHALL BE DROPPED UNO.
4. DS - INDICATES 1-1/2"x14" LSL DRAG STRUT UNO; ATTACH SHEATHING ALONG ENTIRE LENGTH w/ 0.131" @ 4"oc

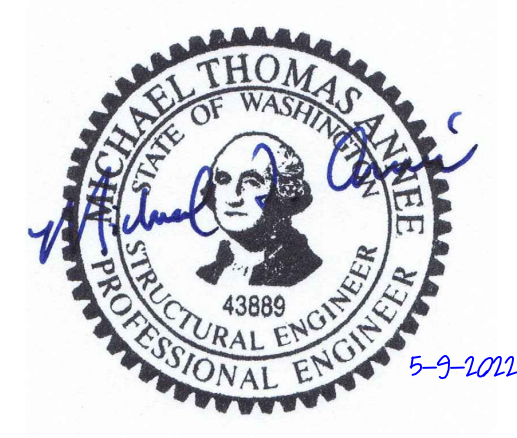
- 5. [Symbol] - INDICATES HOLDOWN LOCATED AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 4/S1.1.
6. [Symbol] - INDICATES STRAP AT END OF SHEAR WALL ABOVE, SEE SCHEDULE ON 2/S1.1.

HANGER SCHEDULE table with columns MEMBER and HANGER, listing items like 2x10/2x12 LUS210, 14" TJI/230 IUS/ITS2.37/14, etc.



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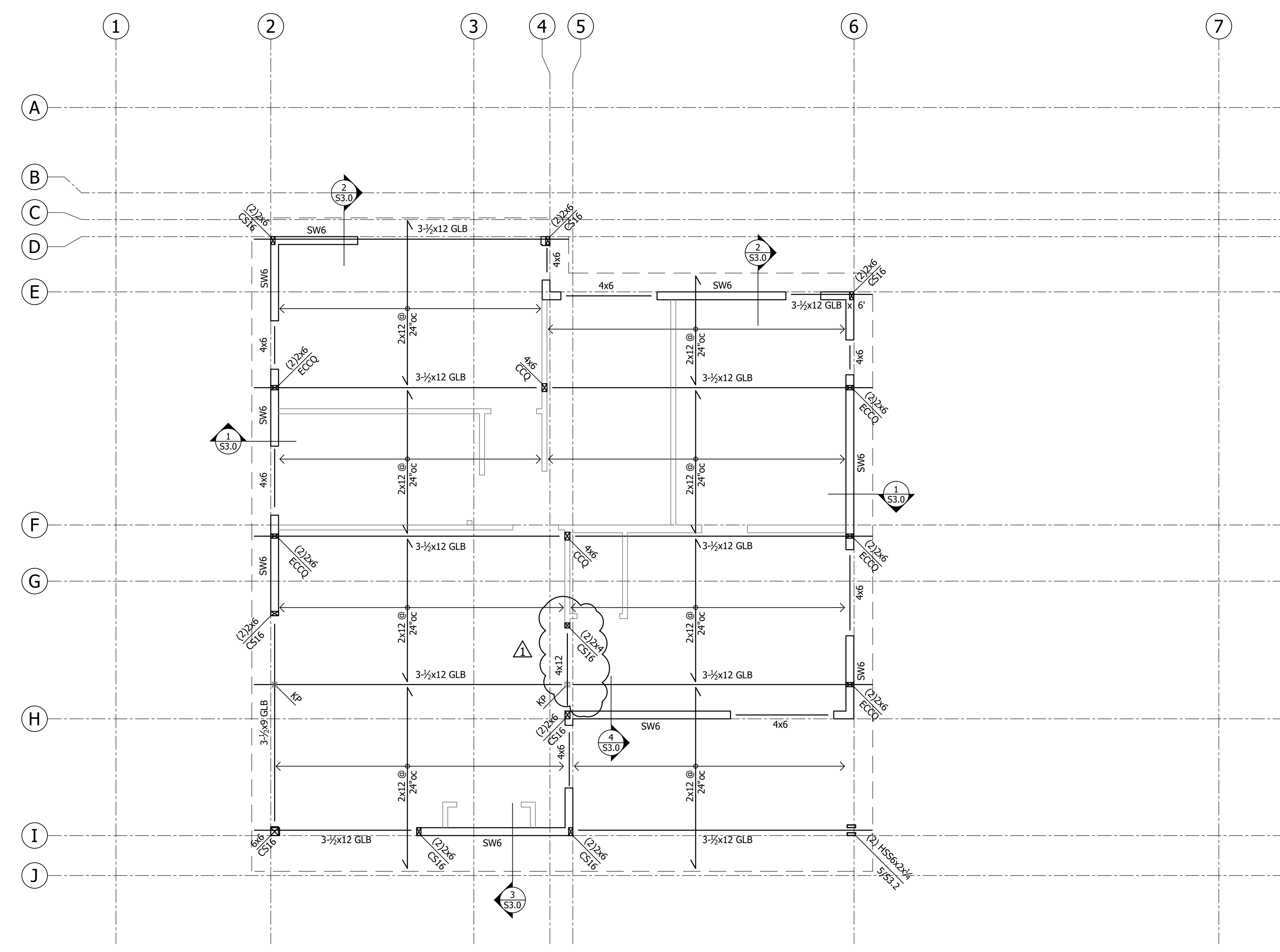
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Roof Framing Plan
SCALE: 1/4" = 1'-0"

GENERAL FRAMING NOTES:

- ALL 14" BEAMS SHALL BE FLUSH AND ALL HEADERS DROPPED, UNO. SEE 3/S3.1 FOR TYPICAL POST-TO-BEAM CONNECTIONS
- TYP. HEADERS SHALL BE 4x6 DF#2, UNO, SEE 4/S3.1 FOR INSTALLATION.
- PROVIDE (2) BEARING STUDS UNDER EACH END OF ALL BEAMS AND (1) 2x TRIMMER (BEARING) STUD AND (1) 2x KING (FULL-HEIGHT) STUD AT EACH END OF ALL HEADERS, UNO. NAIL STUDS TOGETHER PER GENERAL STRUCTURAL NOTES.
- PROVIDE SOLID BEARING BELOW ALL POINT LOADS ABOVE.
- STUD WALLS SHALL BE 2x HF STUDS @ 16"oc, UNO. SEE SHEAR WALL, HOLDOWN AND STRAP SCHEDULES ON S1.1 FOR ADDITIONAL REQUIREMENTS AT SHEAR WALL FRAMING.

- AT BREAKS IN DOUBLE TOP PLATE OF ALL EXTERIOR WALLS AND ALL SHEAR WALLS SEE DETAIL 3/S1.1.
- SWx - INDICATES SHEAR WALL PER SCHEDULE 1/S1.1. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION. ALL NEW, EXTERIOR WALLS SHALL BE SHEATHED PER SW6, UNO.
- REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
- REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

ROOF FRAMING NOTES:

- ROOF SHEATHING SHALL BE 1/2" APA RATED SHEATHING (32/16). NAIL @ ALL FRAMED PANEL EDGES AND OVER ALL SHEAR WALLS w/0.131"φ @ 6"oc AND 12"oc TO ALL INTERMEDIATE FRAMING. PLACE LONG DIRECTION OF PLYWOOD PERPENDICULAR TO JOISTS DIRECTION, STAGGER PANEL JOINTS.
- TYPICAL ROOF FRAMING SHALL BE 2x12 HF#2 RAFTERS @ 24"oc UNO.
- INDICATES 4x4 DF#2 KING POST w/ CCQ POST CAP AT TOP & BTM.
- INDICATES SCI16x 2'-4" STRAP FROM BEAM TO COLUMN OR BUILT-UP STUDS.

HANGER SCHEDULE	
MEMBER	HANGER
2x10/2x12	LUS210
(2)2x10	LUS210-2
14" TJI/230	IUS/ITS2.37/14
(2)14" TJI/230	MIU4.75/14
14" TJI/360	IUS/ITS2.37/14
1-3/4x14 LSL/LVL	HUS1.81/10
3-1/2x14 LSL/PSL	HHUS410
5-1/4x14 PSL	MGU5.50-SDS
7x14 PSL	HGU7.25-SDS

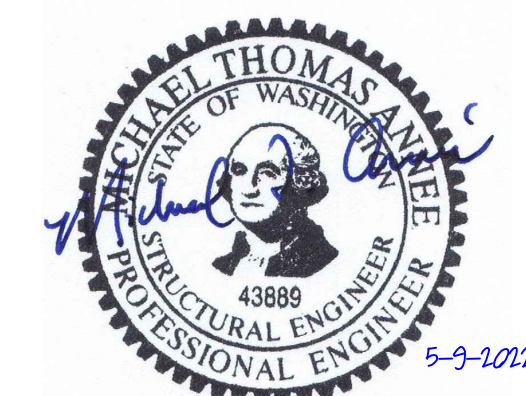
Roof Framing Plan

S2.3



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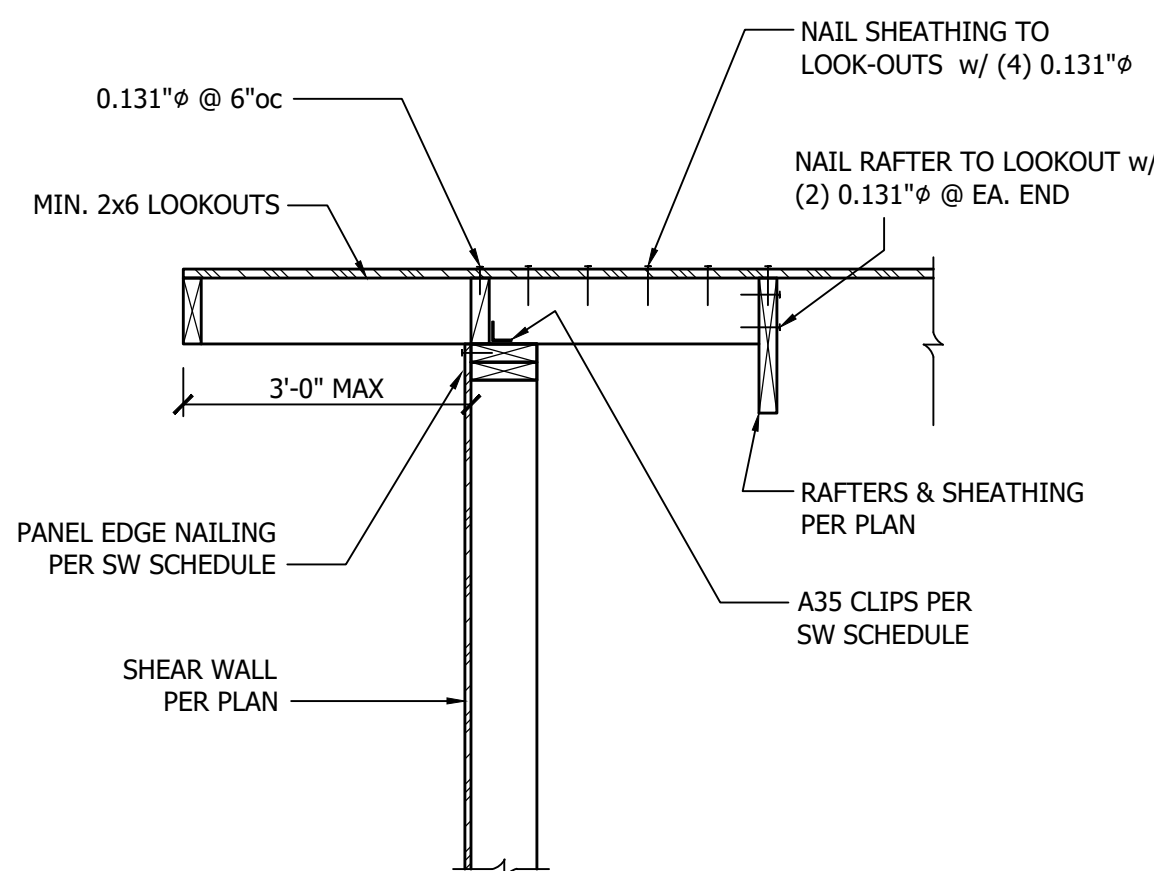
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4244 Shoreclub Drive, Mercer Island, WA 98040

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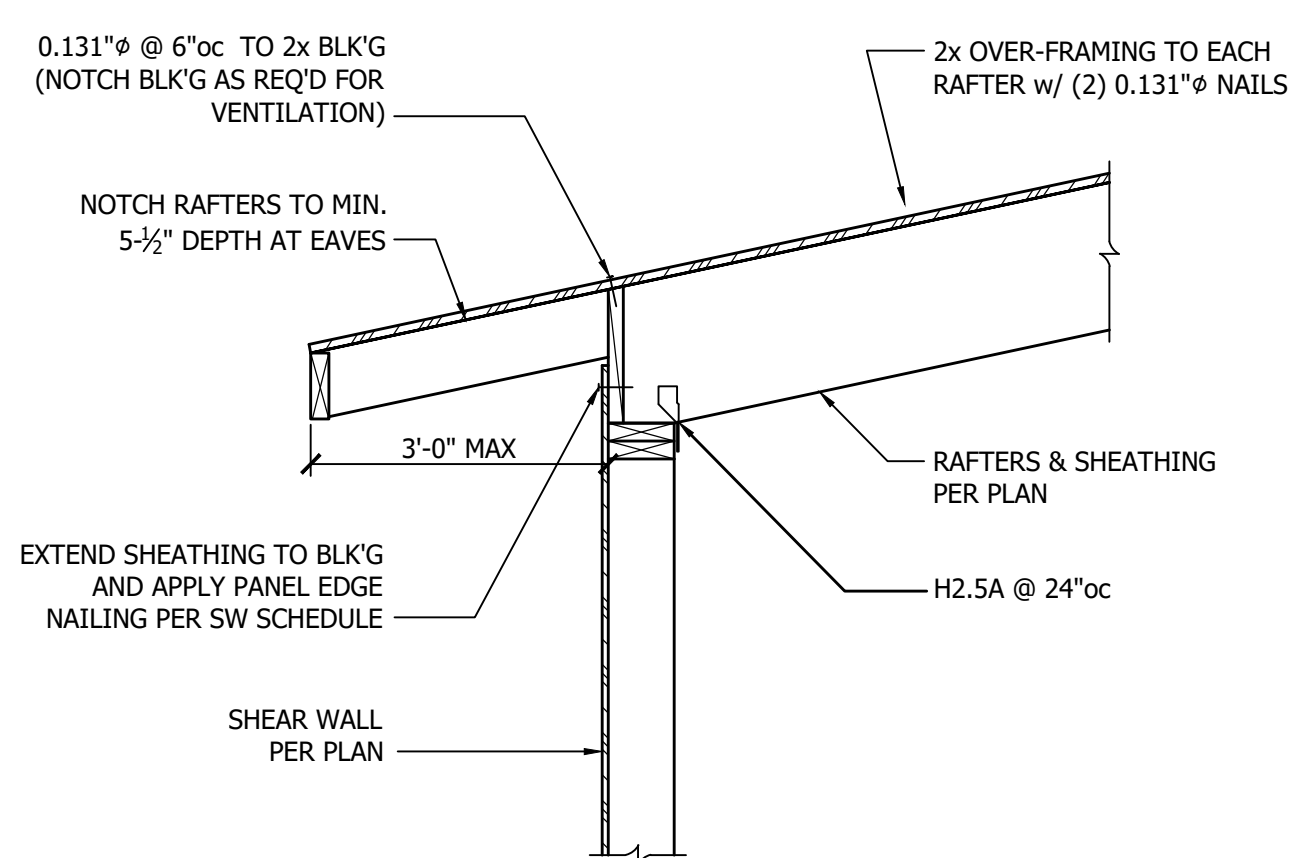
5/9/2022 Permit Set

Structural Details

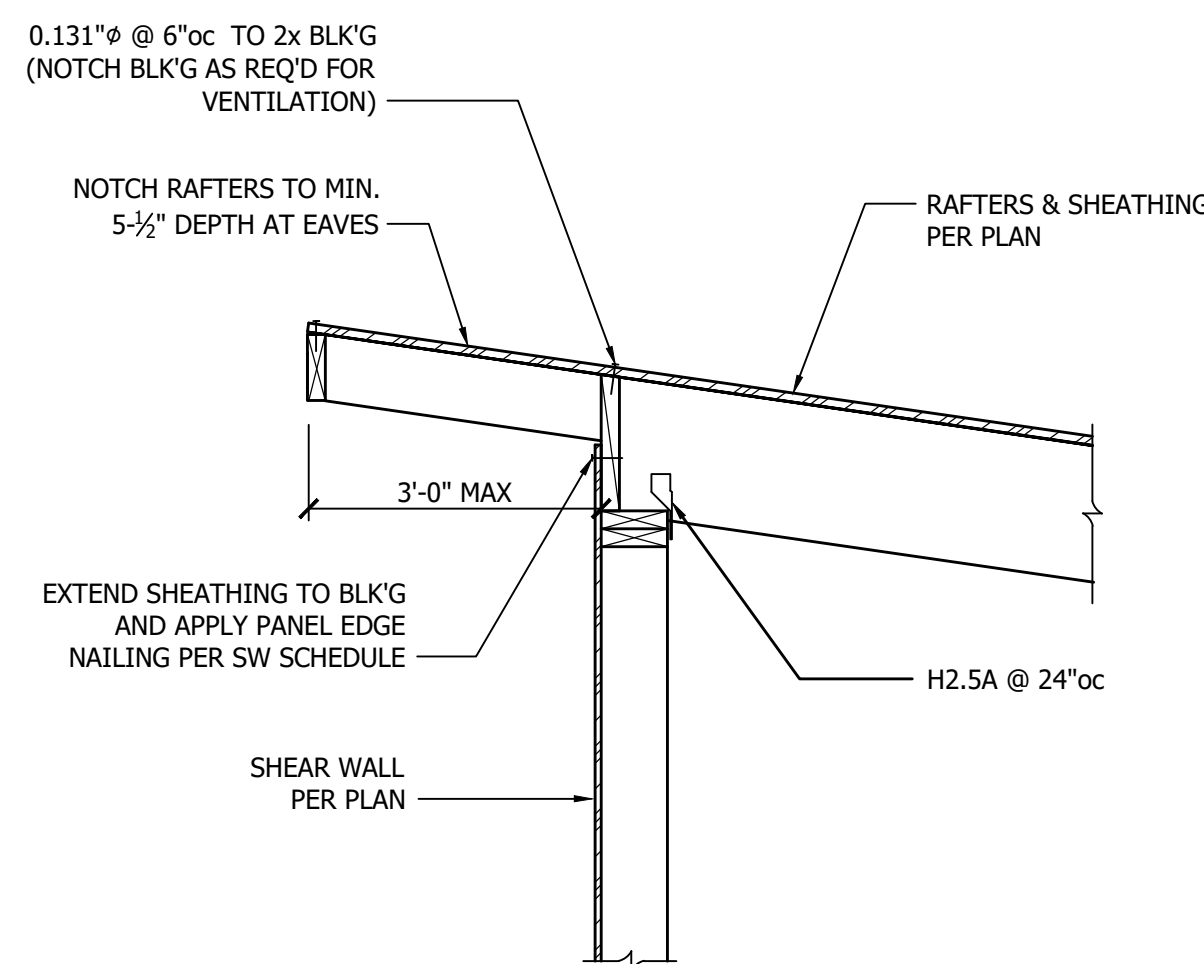
S3.0



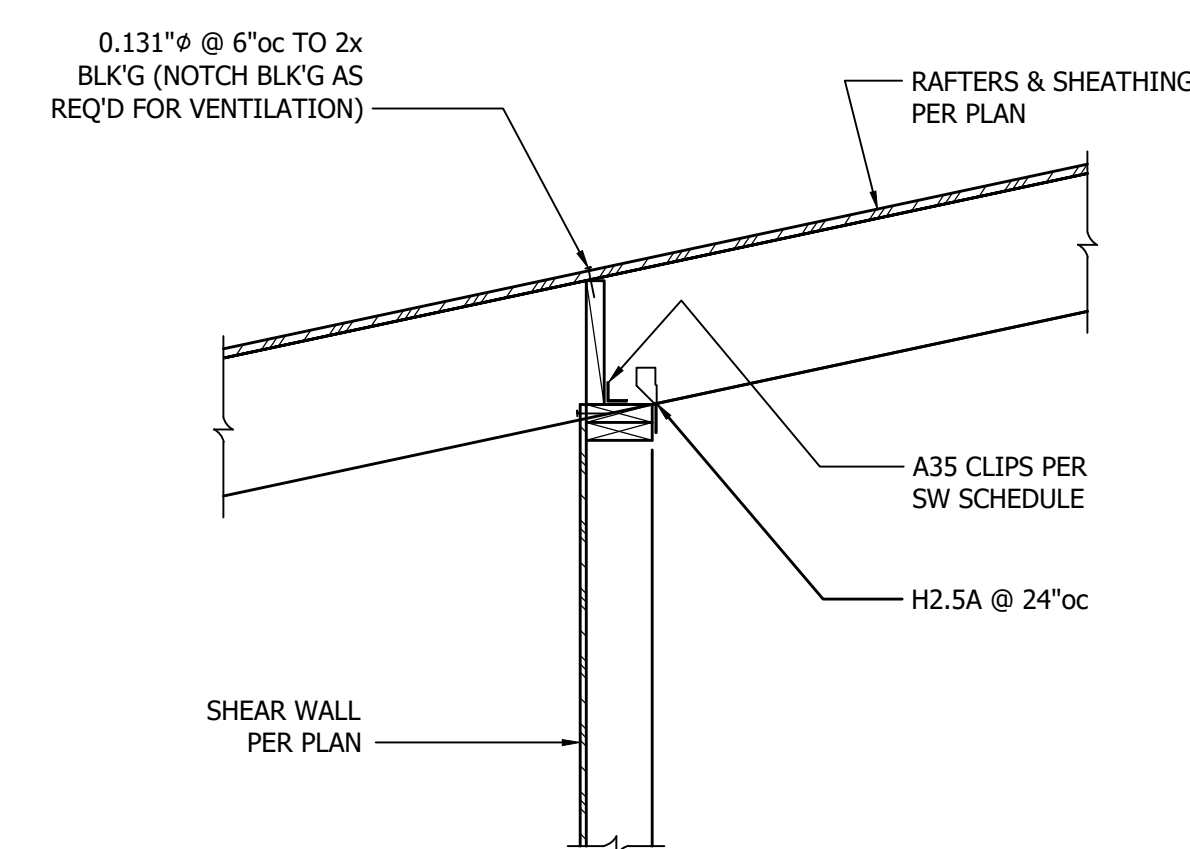
1 2x Rafter Parallel to Exterior Wall
3/4" = 1'-0"



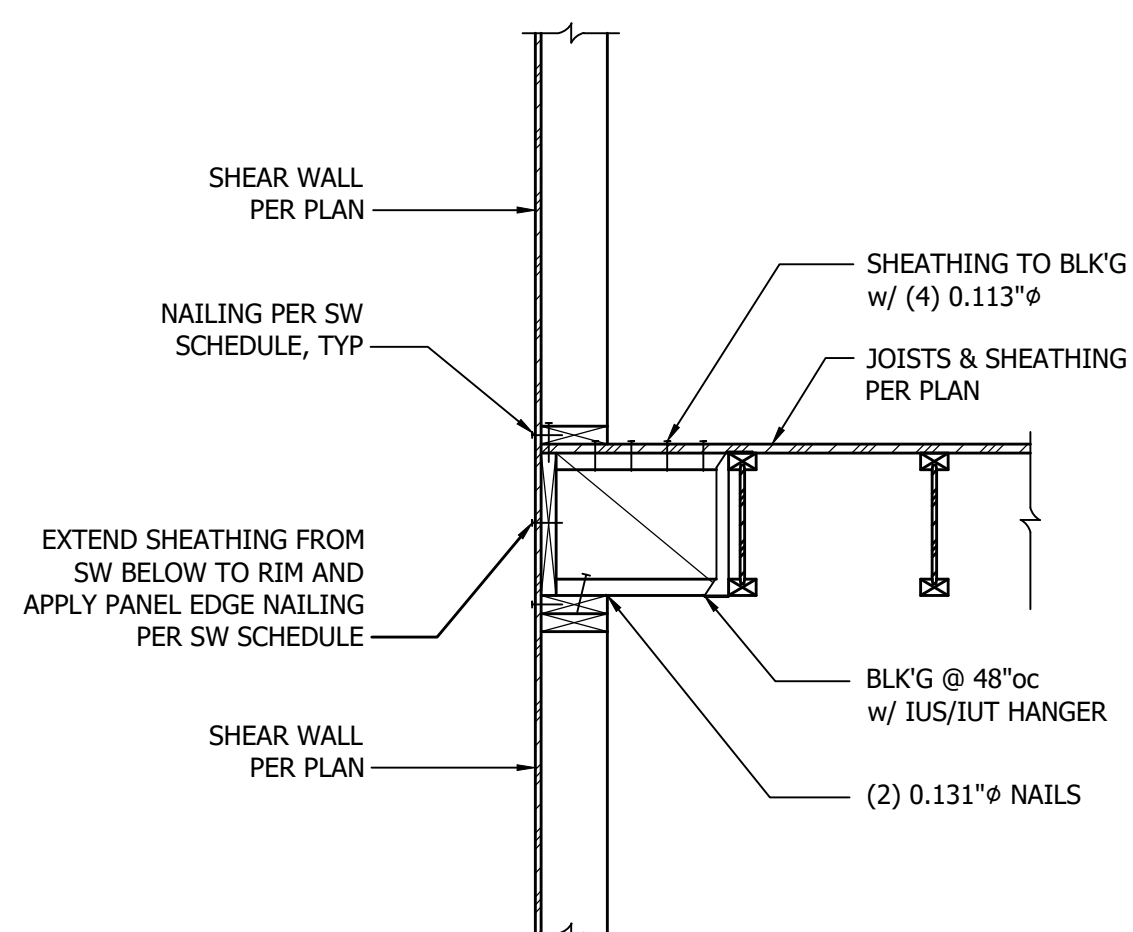
2 2x Rafters Perp. to Low Wall
3/4" = 1'-0"



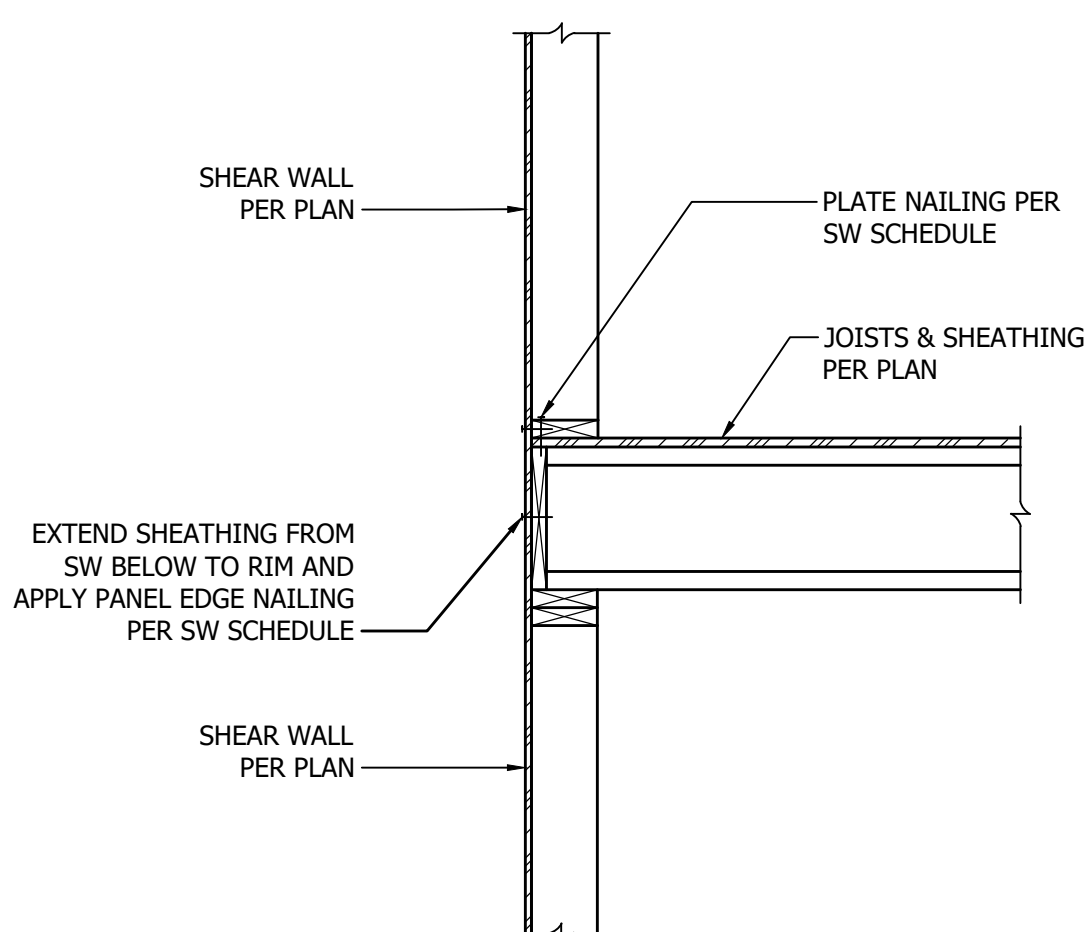
3 2x Rafters Perp. to High Wall
3/4" = 1'-0"



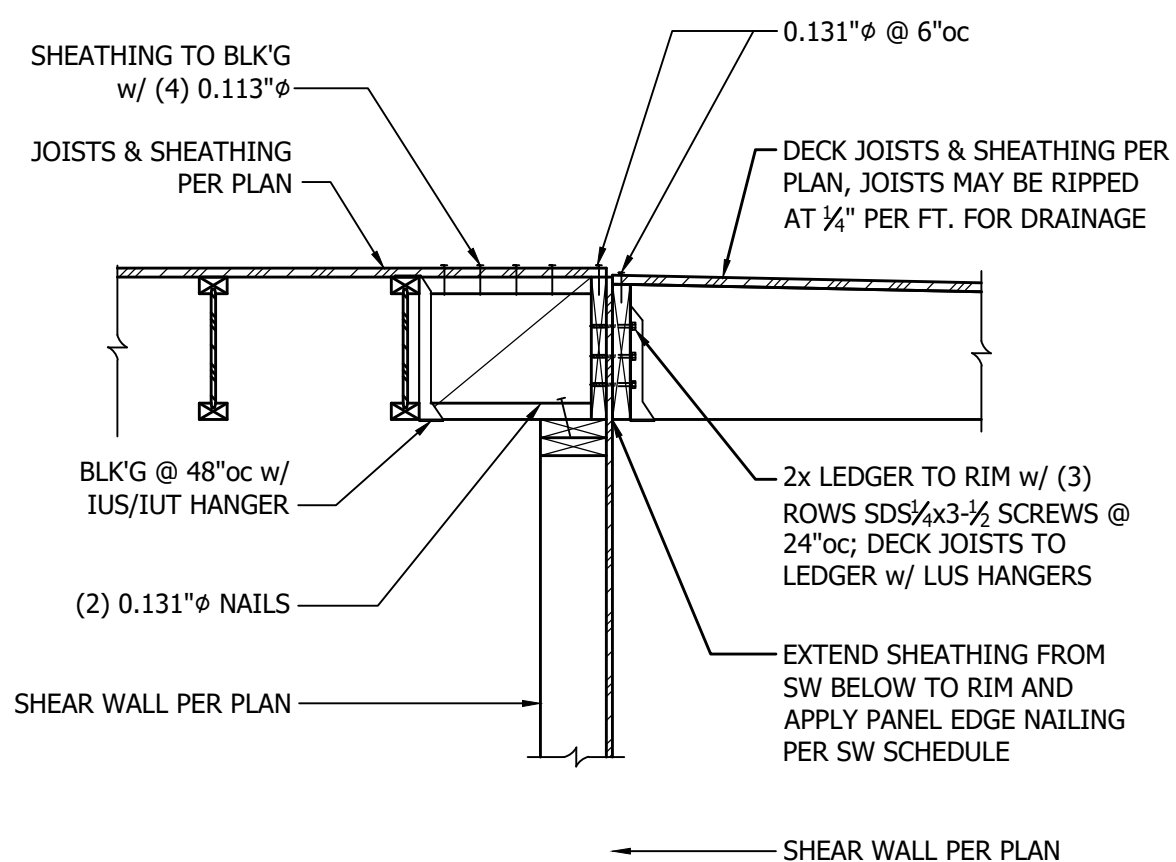
4 2x Rafters Perp. to Interior Wall
3/4" = 1'-0"



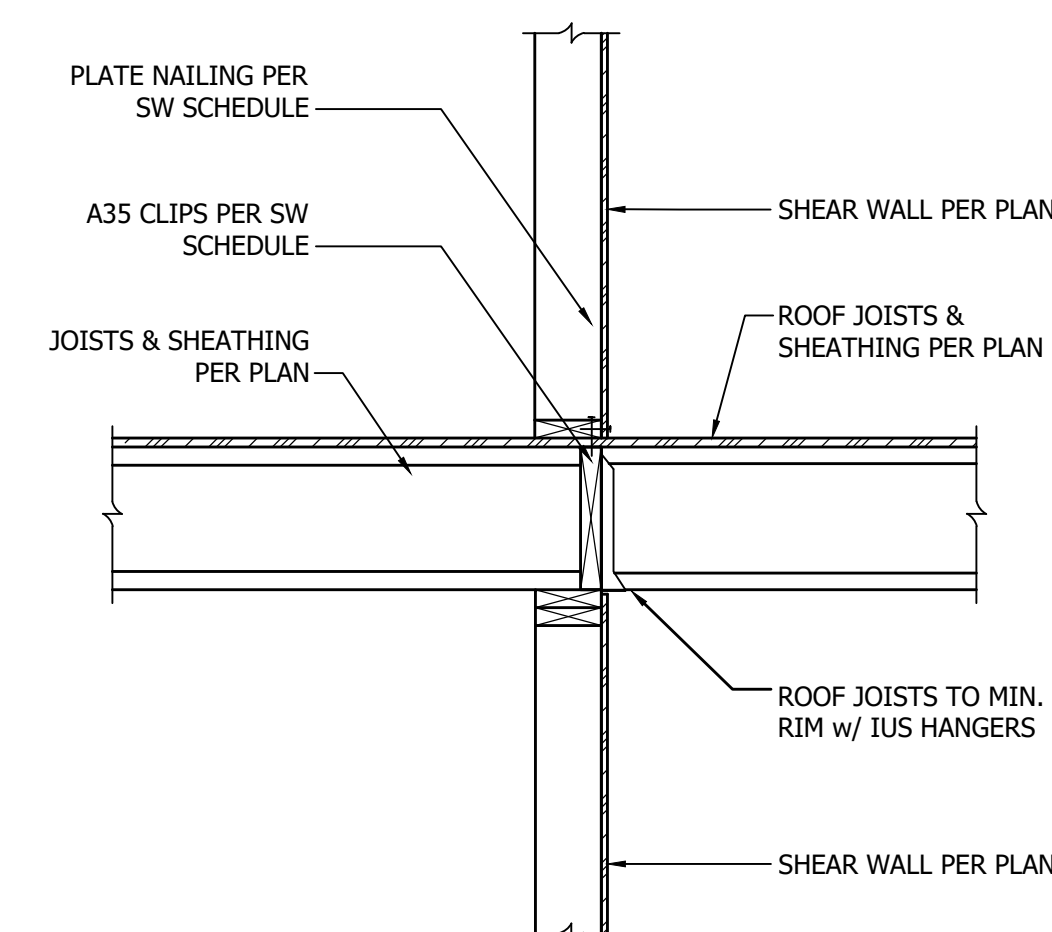
5 I-Joists Parallel to Exterior Wall
3/4" = 1'-0"



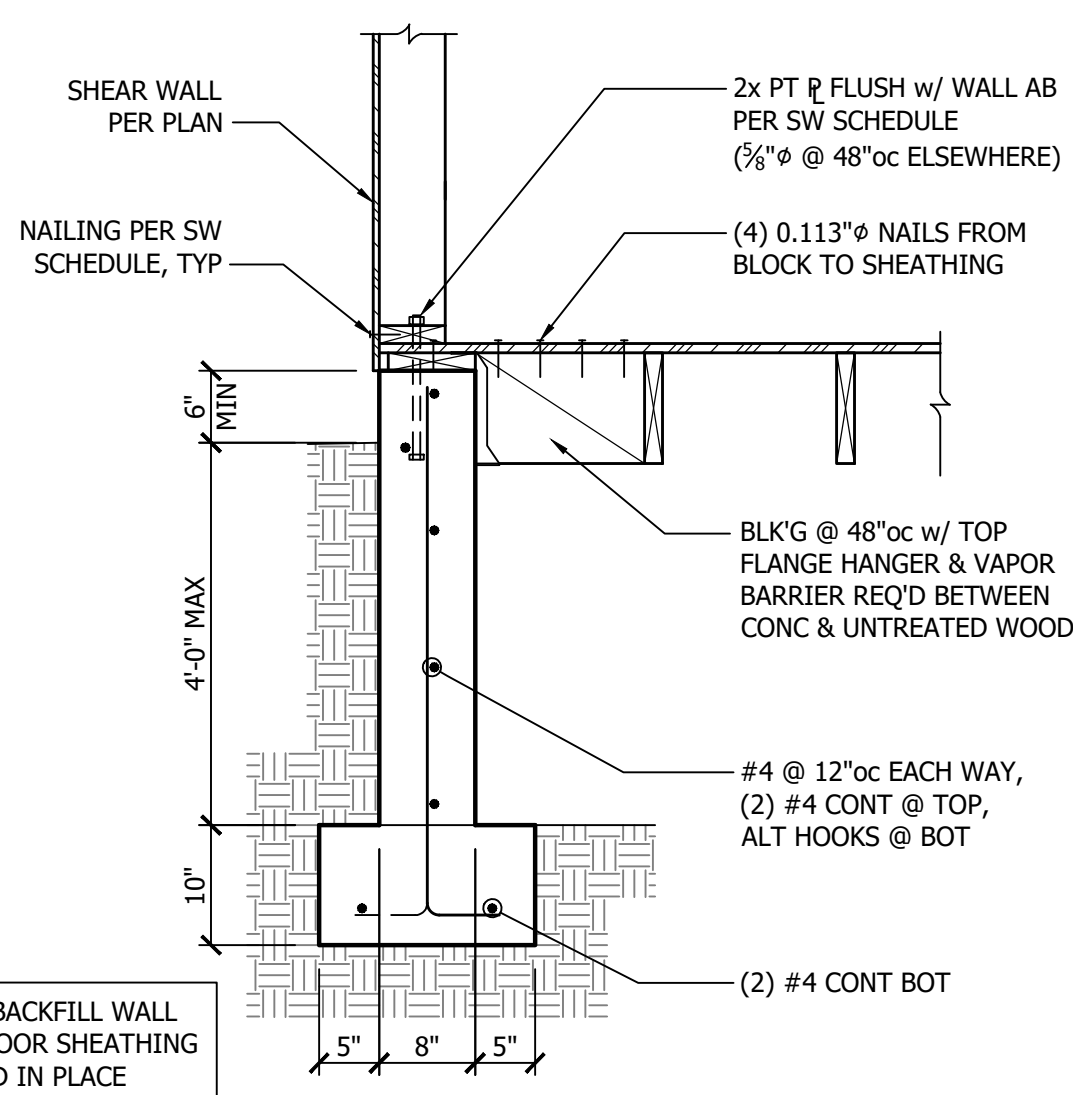
6 I-Joists Perpendicular to Exterior Wall
3/4" = 1'-0"



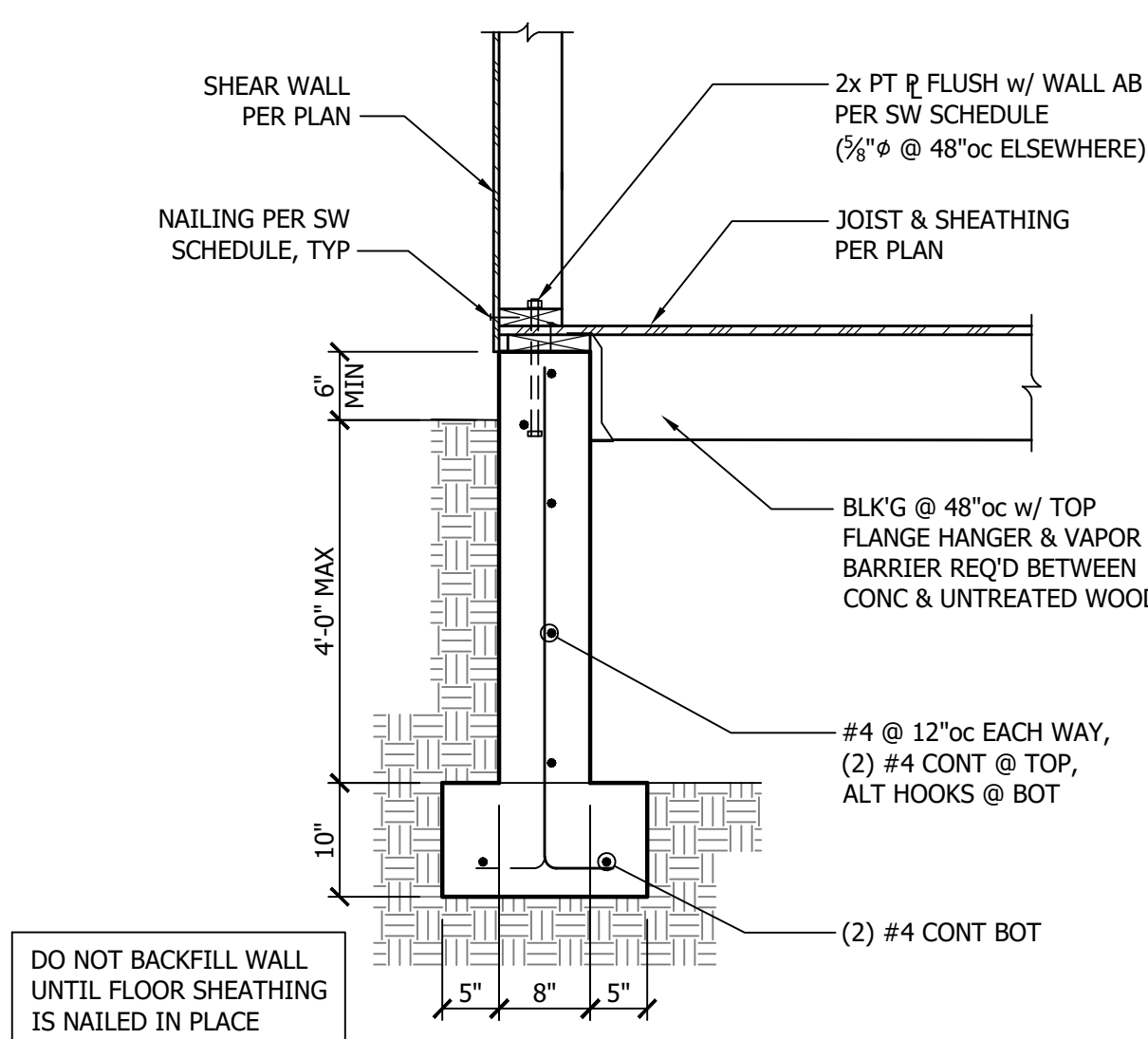
7 Parallel to Perp. at Roof Joists
3/4" = 1'-0"



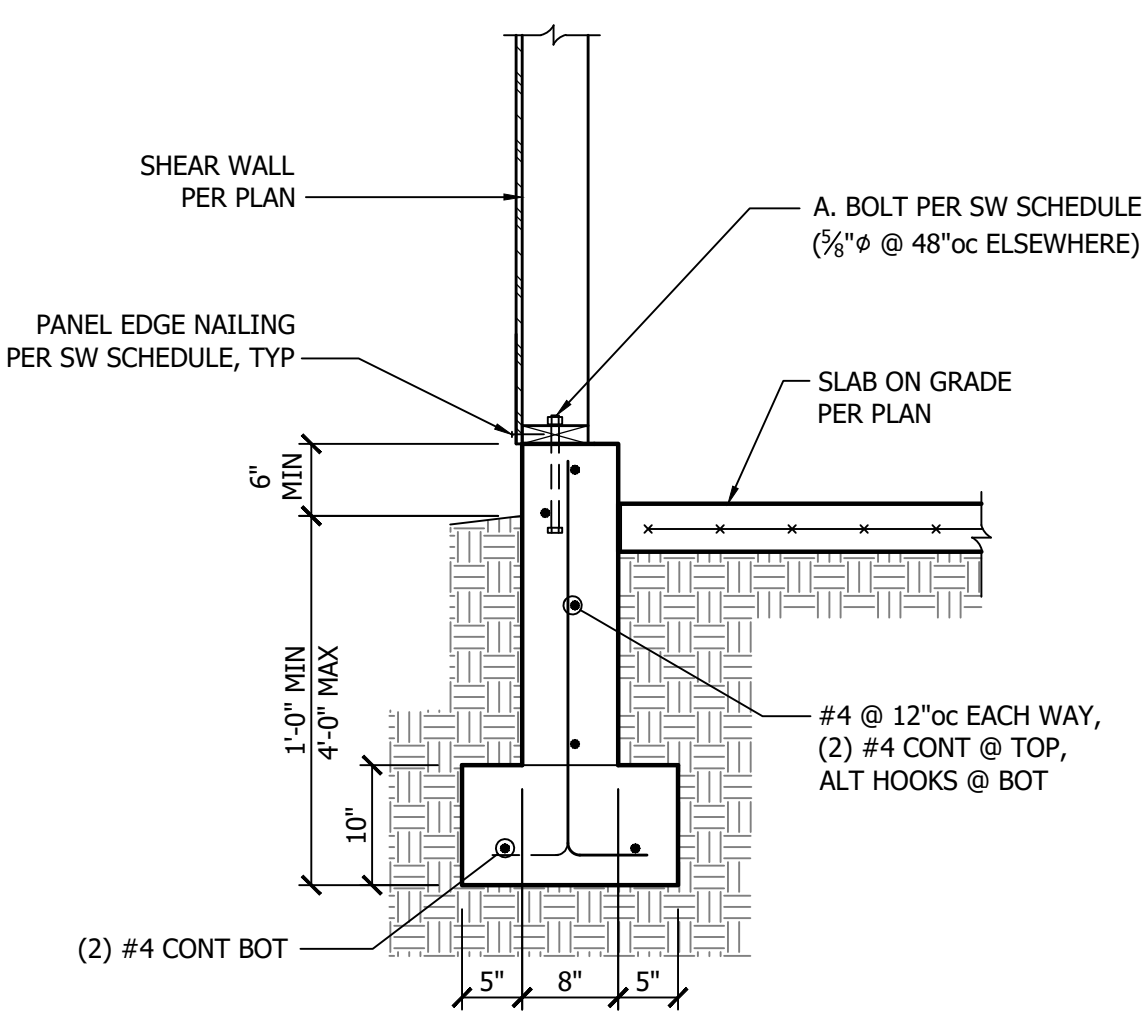
8 Transition at Floor to Roof Joists
3/4" = 1'-0"



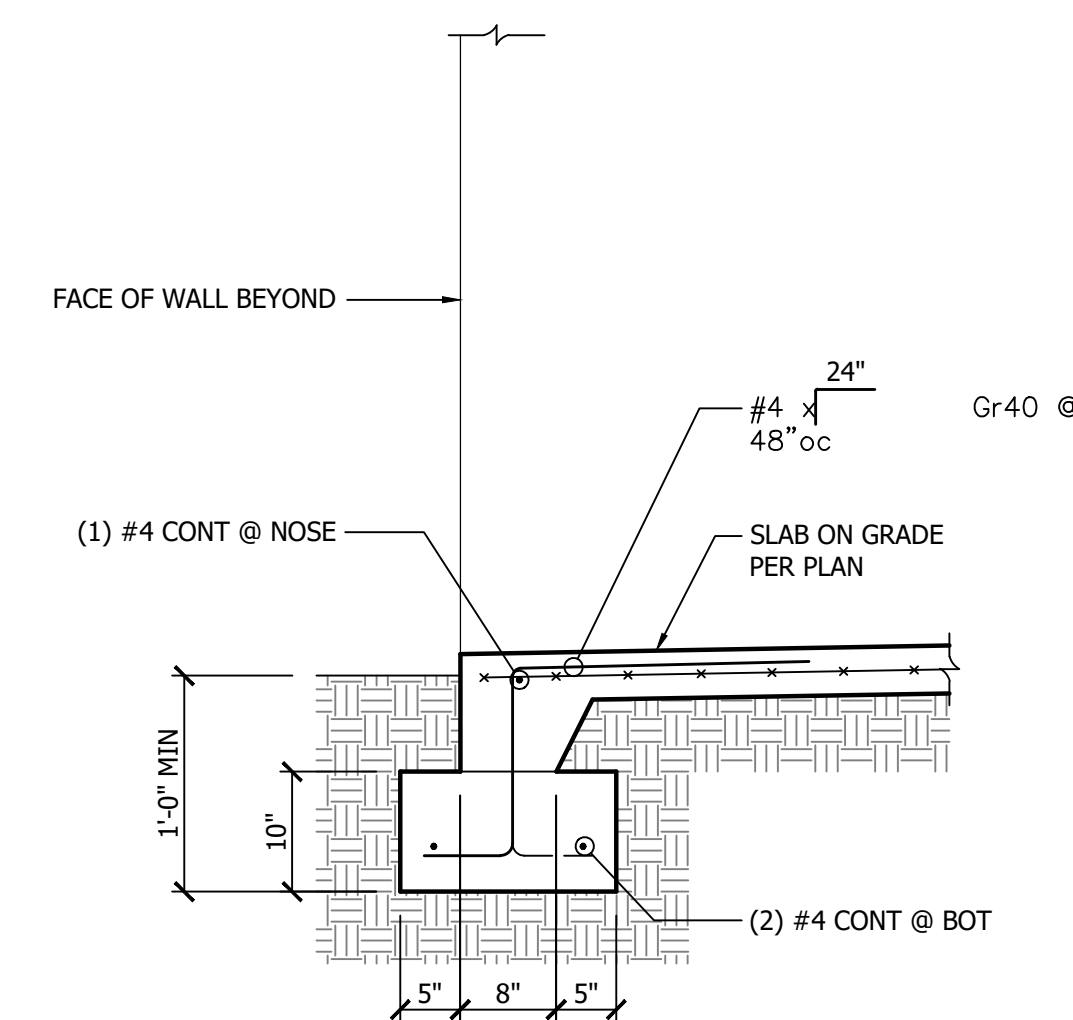
9 TJI Parallel to Flush Crawlspace Foundation
3/4" = 1'-0"



10 TJI Perp. to Flush Crawlspace Foundation
3/4" = 1'-0"



11 Stem Wall/Footing @ Exterior Garage Wall
3/4" = 1'-0"



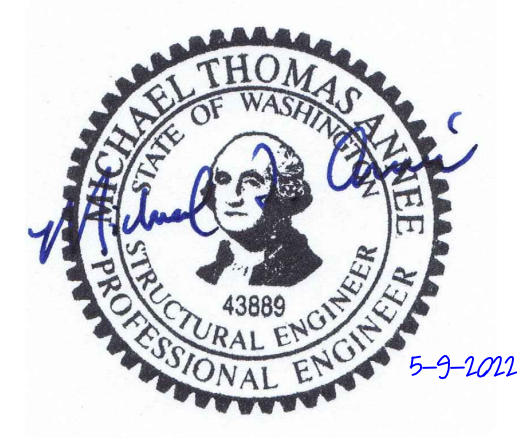
12 Footing @ Garage Opening
3/4" = 1'-0"

DO NOT BACKFILL WALL UNTIL FLOOR SHEATHING IS NAILED IN PLACE

DO NOT BACKFILL WALL UNTIL FLOOR SHEATHING IS NAILED IN PLACE



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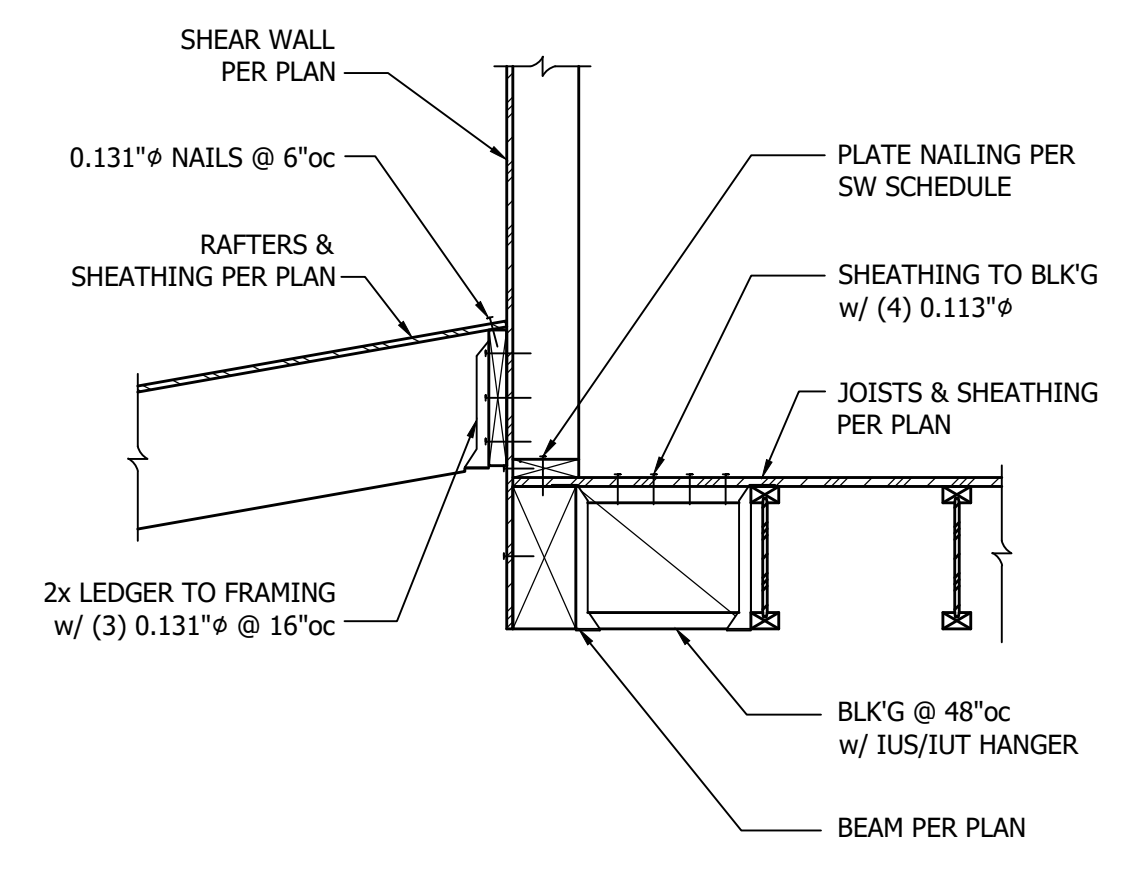
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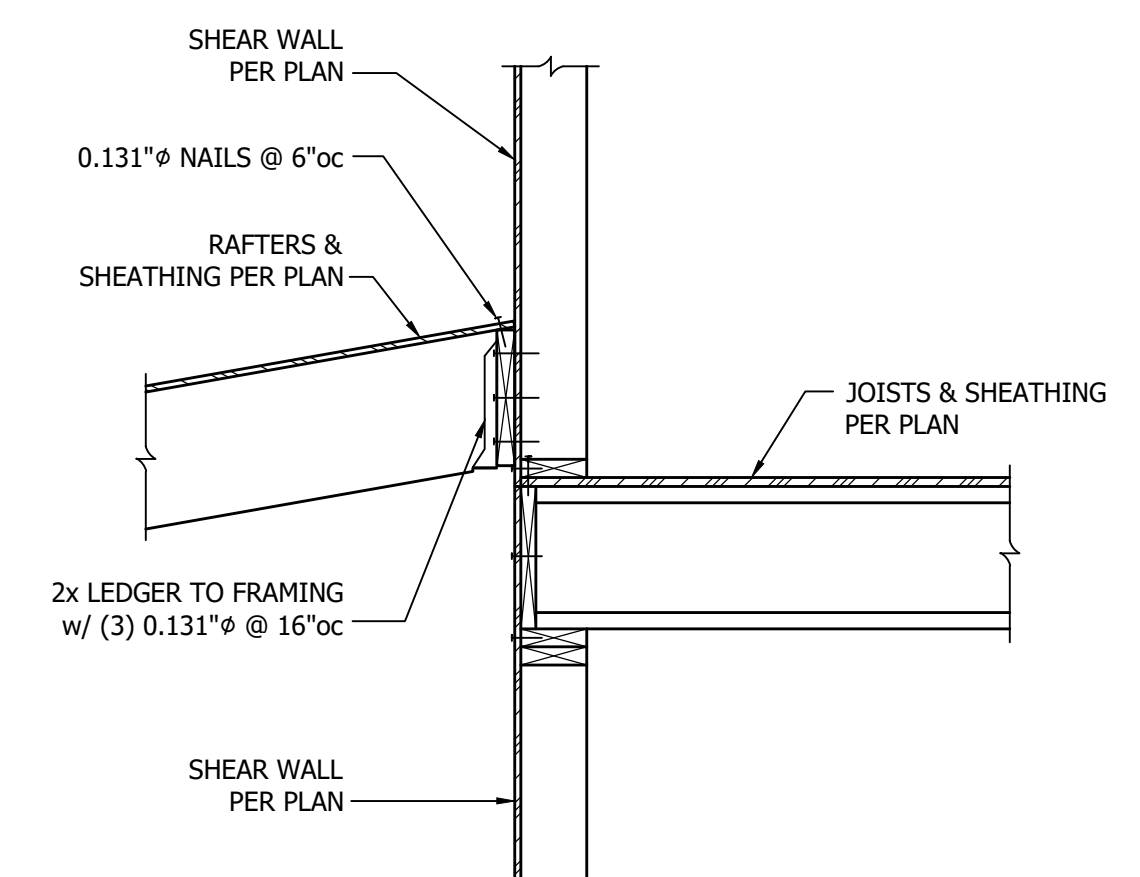
5/9/2022 Permit Set

Structural Details

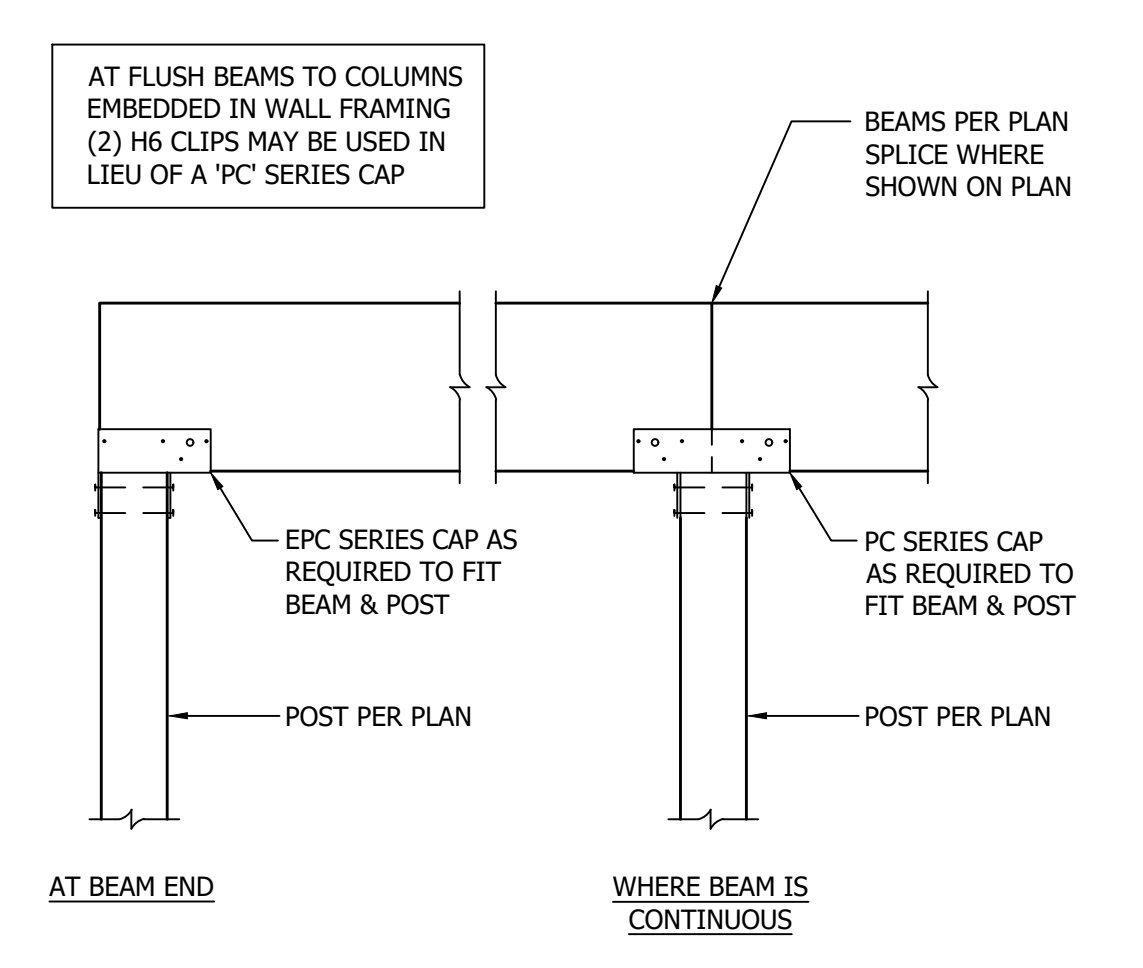
S3.1



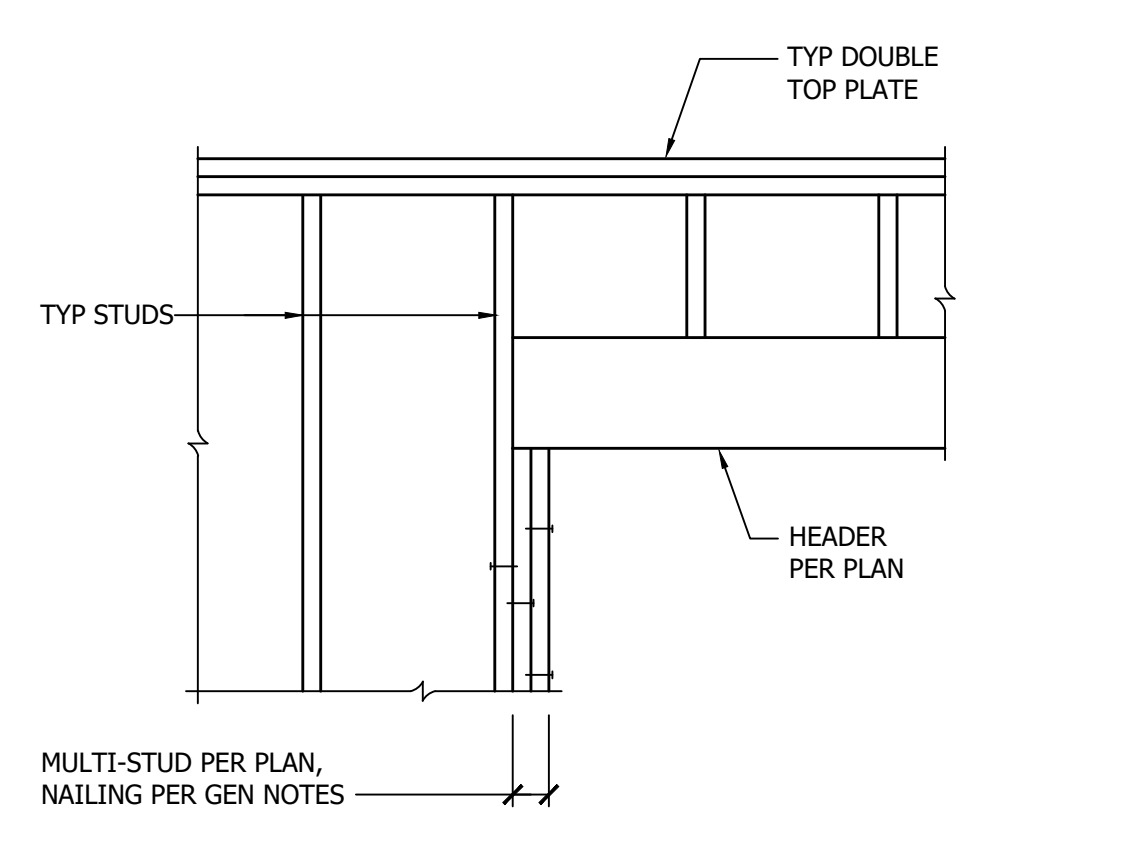
1 2x Low Roof at Parallel I-Joists
 3/4" = 1'-0"



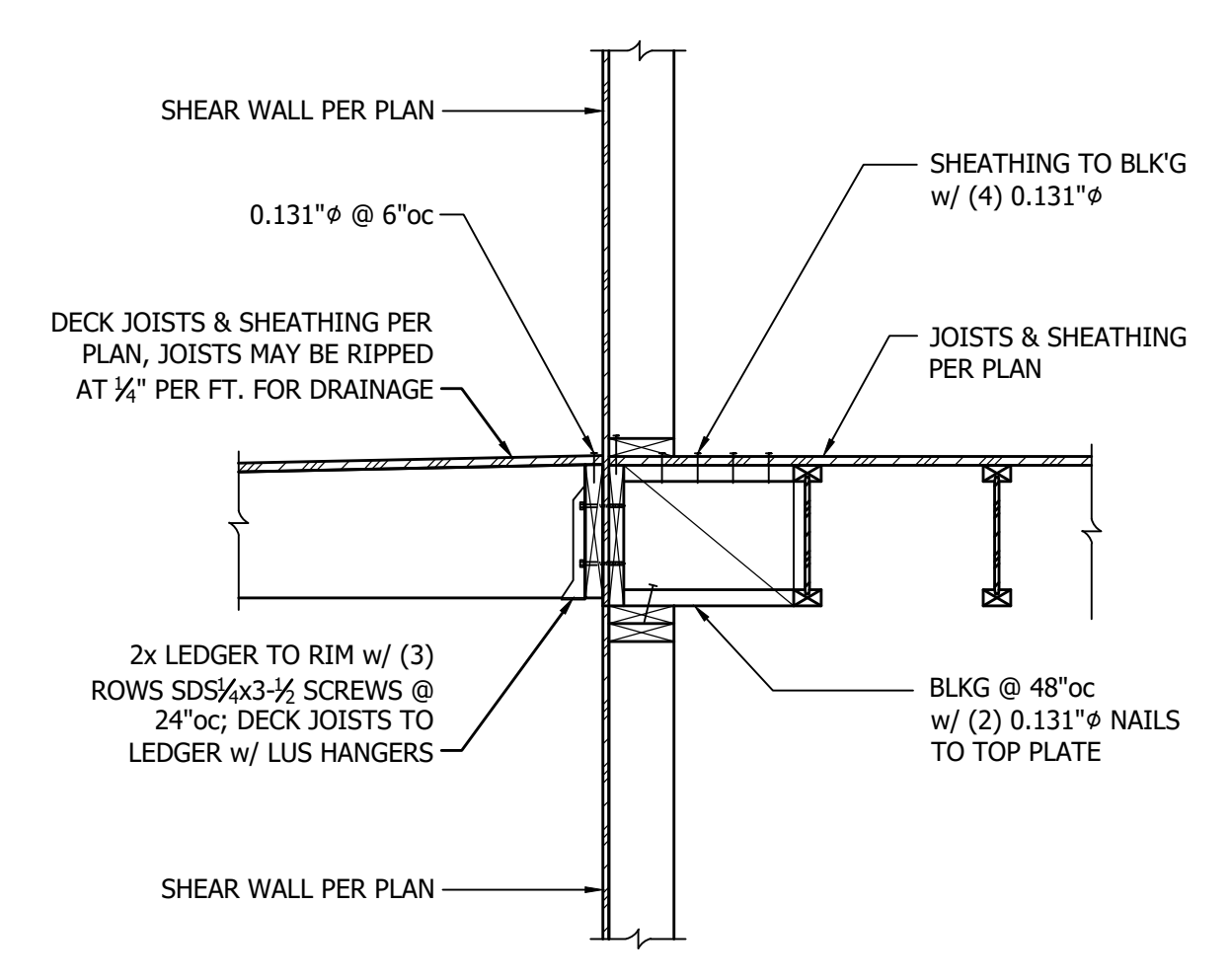
2 2x Low Roof at Perp. I-Joists
 3/4" = 1'-0"



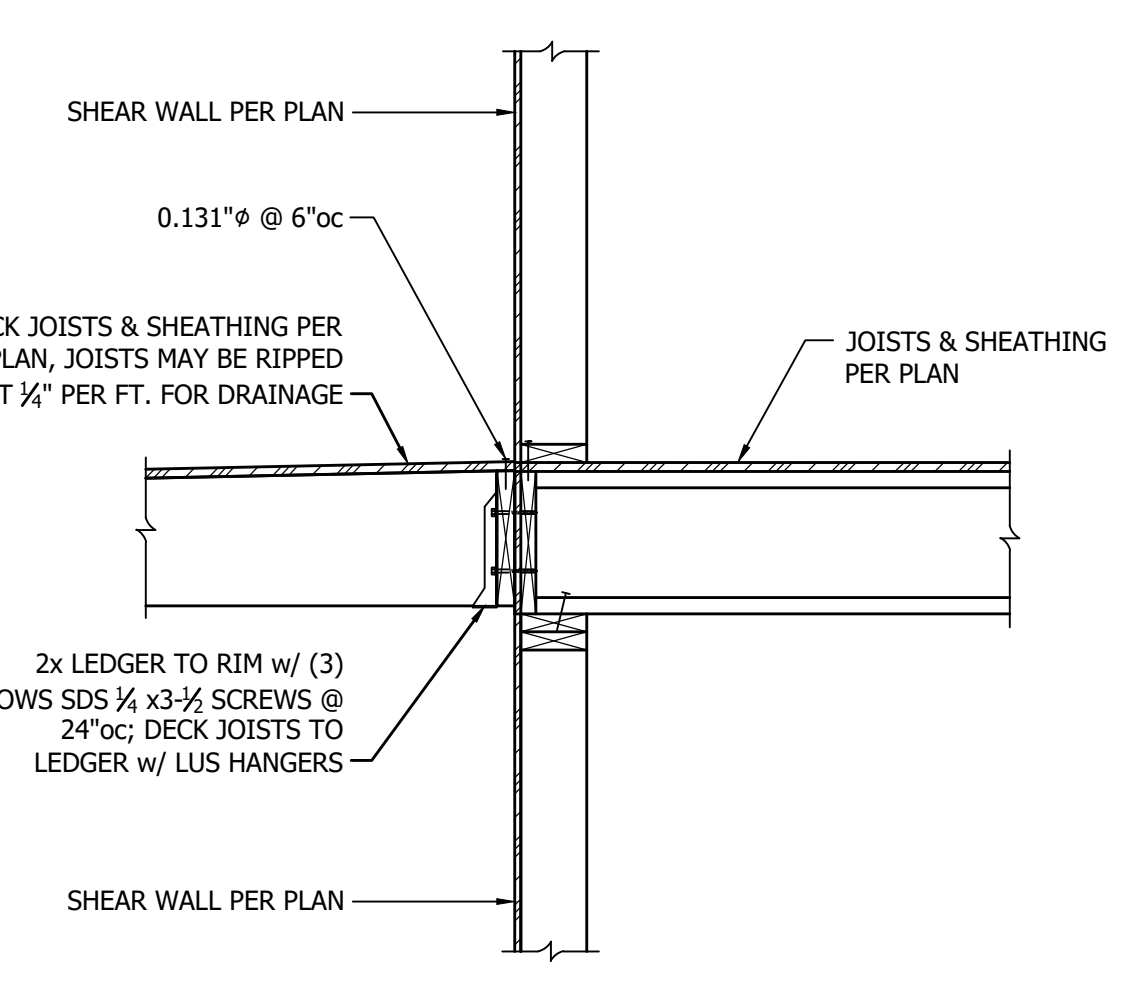
3 Wood Beam to Wood Column, Typ.
 3/4" = 1'-0"



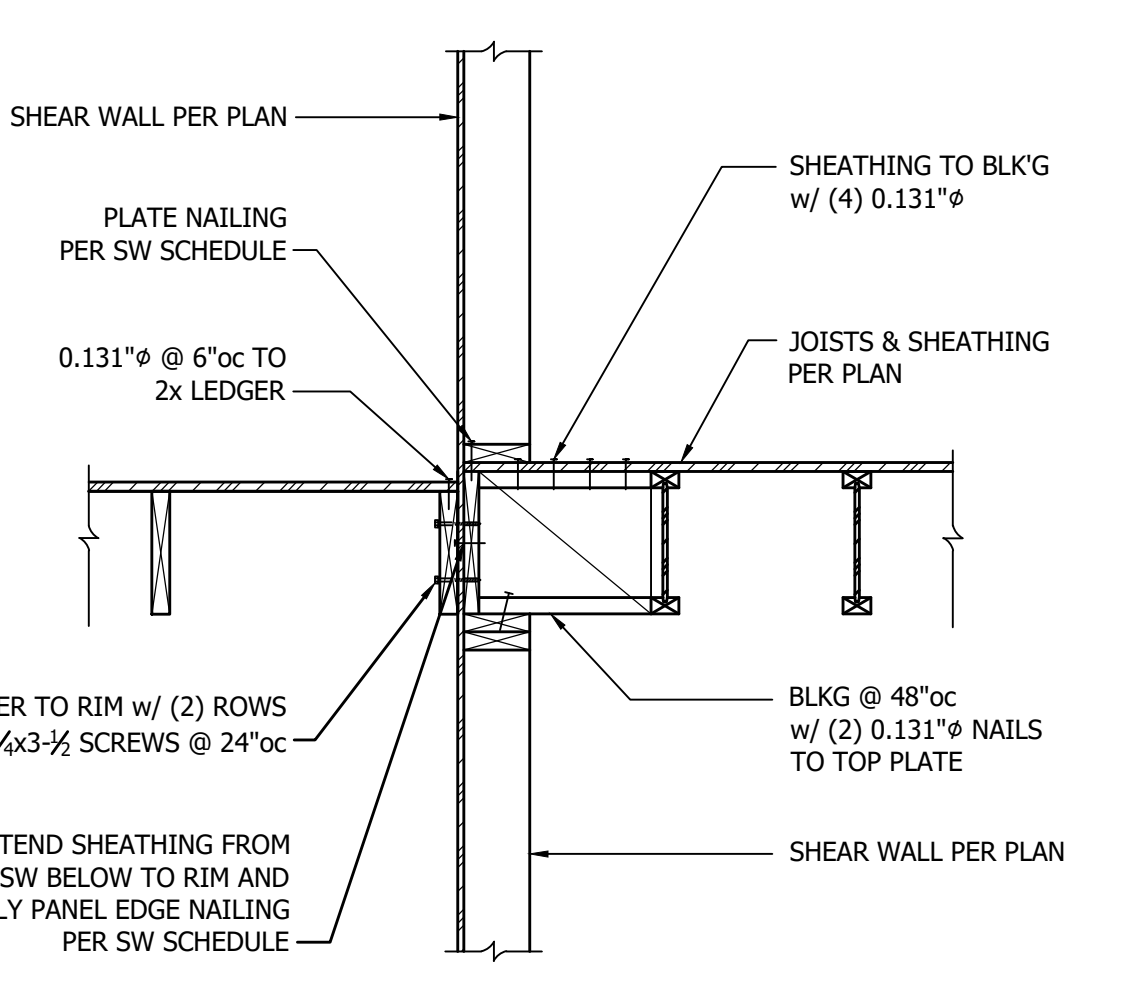
4 Header Support, Typ.
 3/4" = 1'-0"



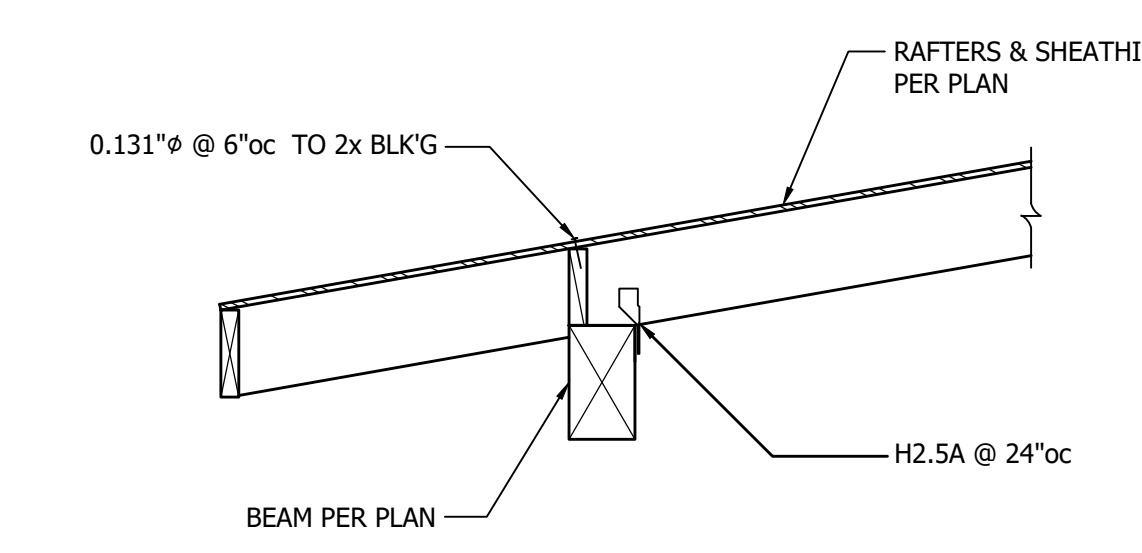
5 Deck Joists Perpendicular to Exterior Wall
 3/4" = 1'-0"



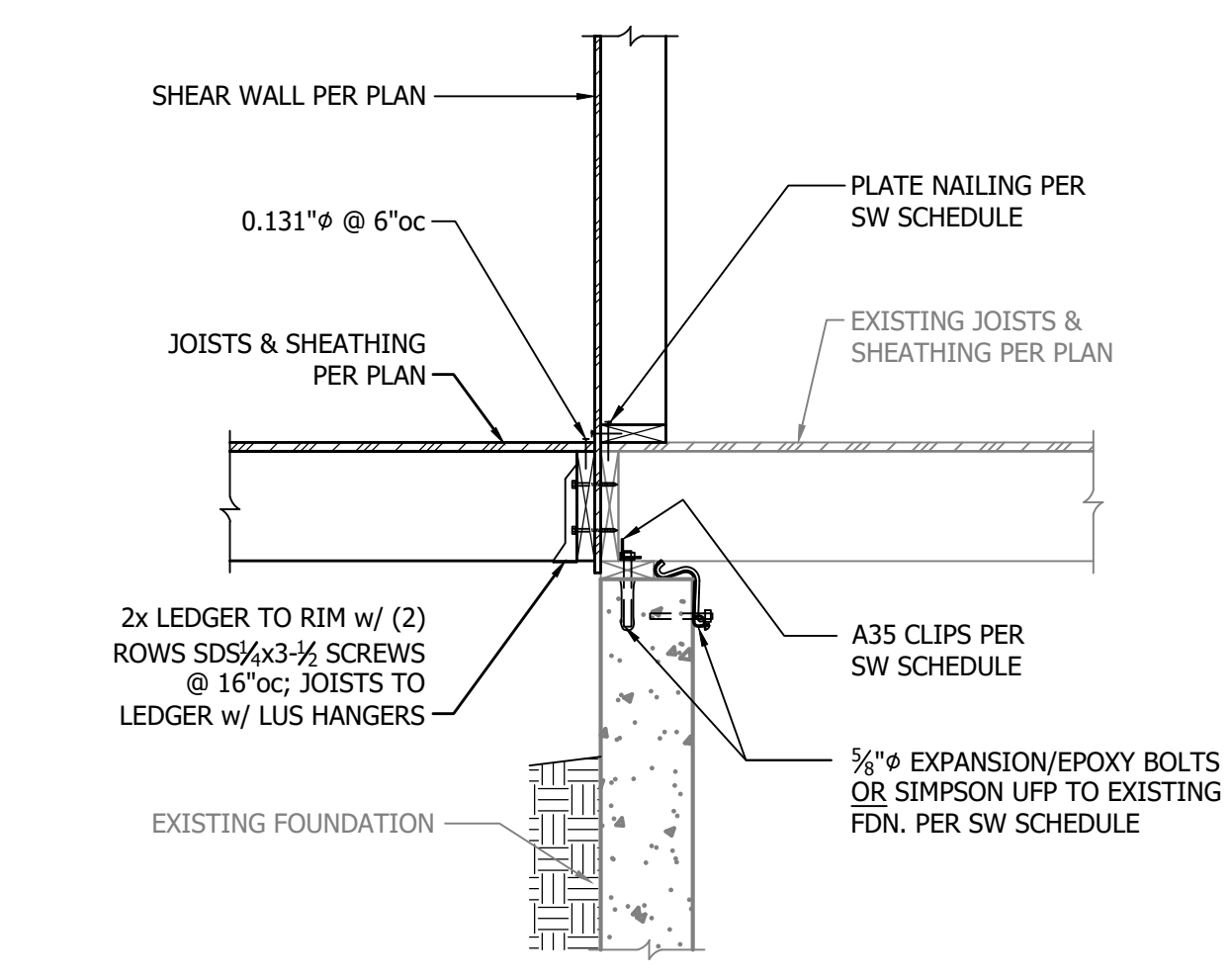
6 Deck Joists Perpendicular to Exterior Wall
 3/4" = 1'-0"



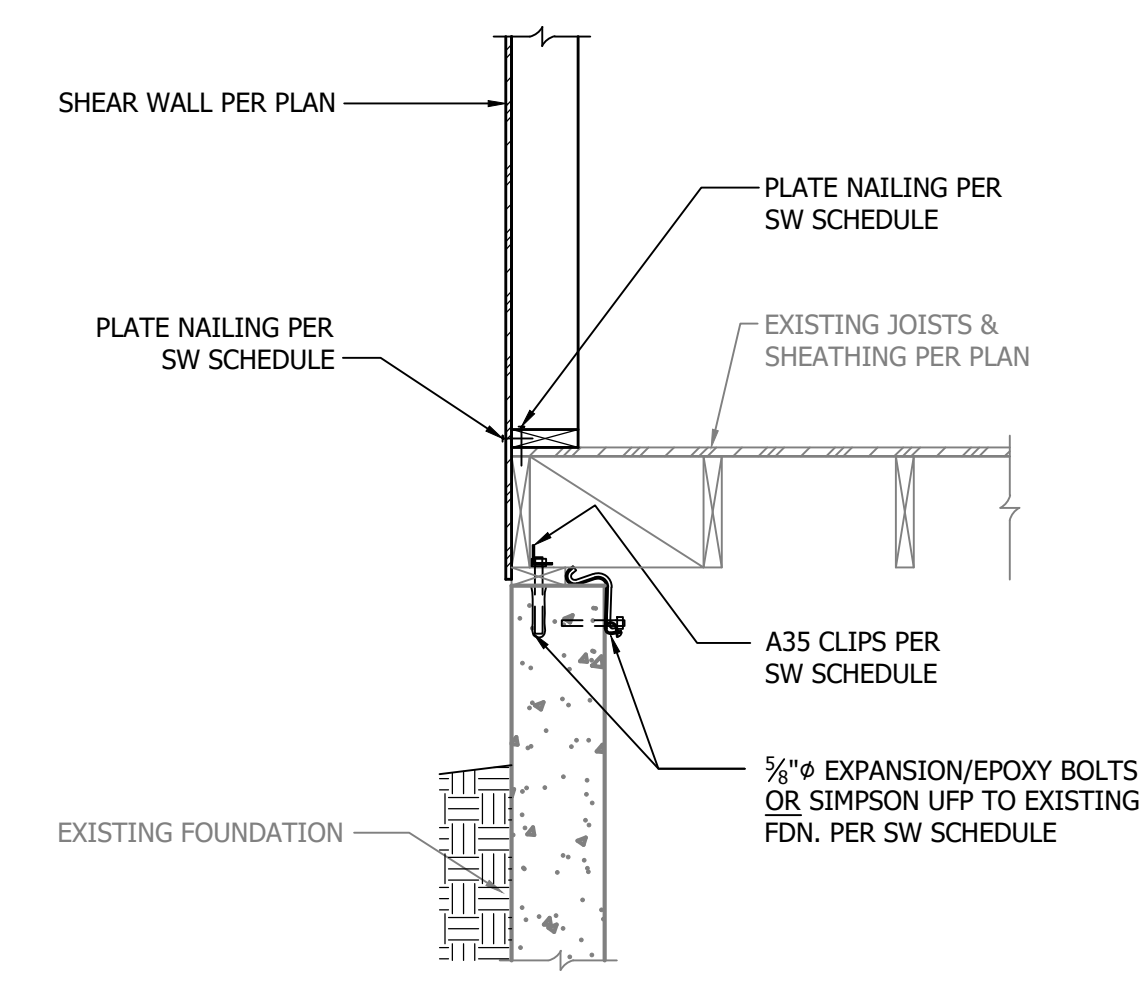
7 Deck Joists Parallel to Shear Wall
 3/4" = 1'-0"



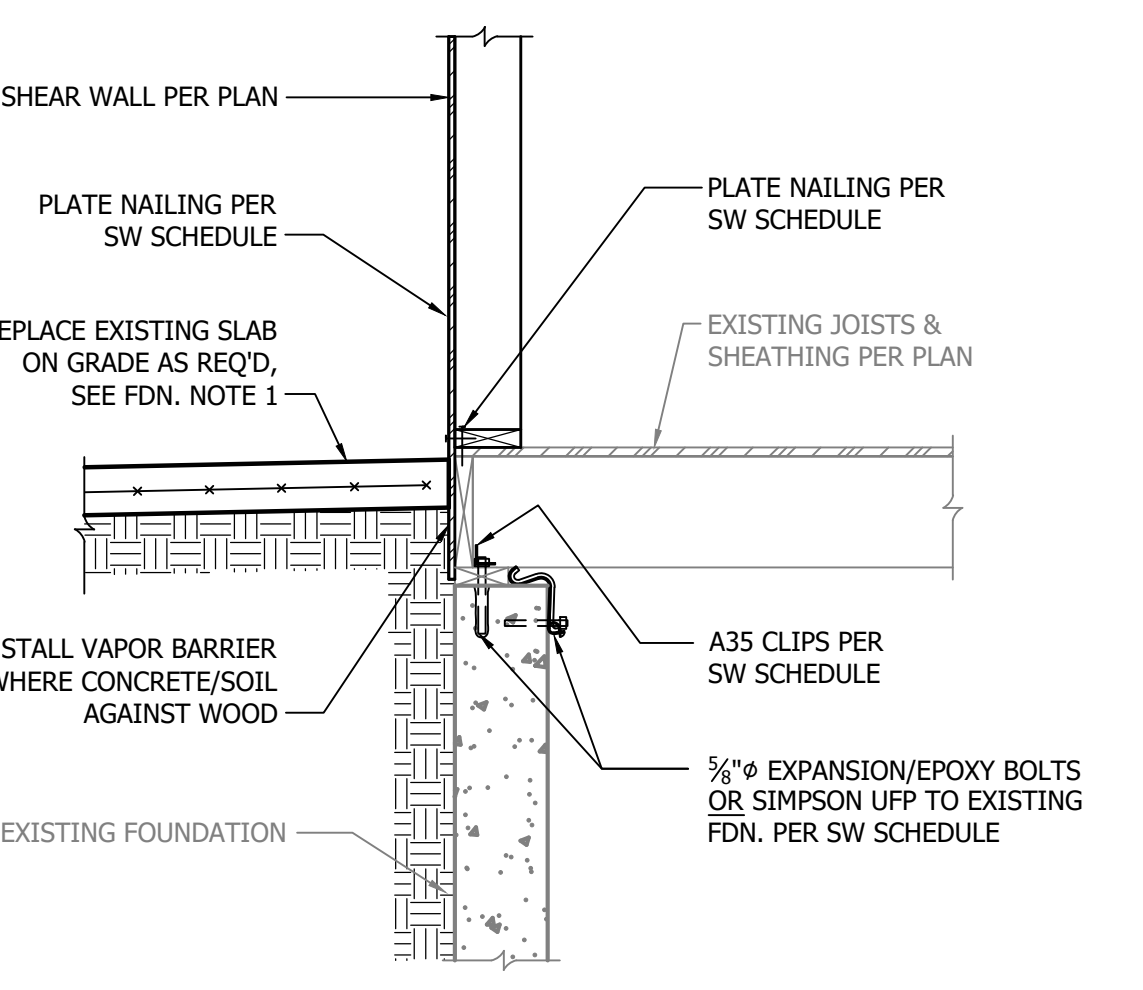
8 2x Rafters Perp. to Beam
 3/4" = 1'-0"



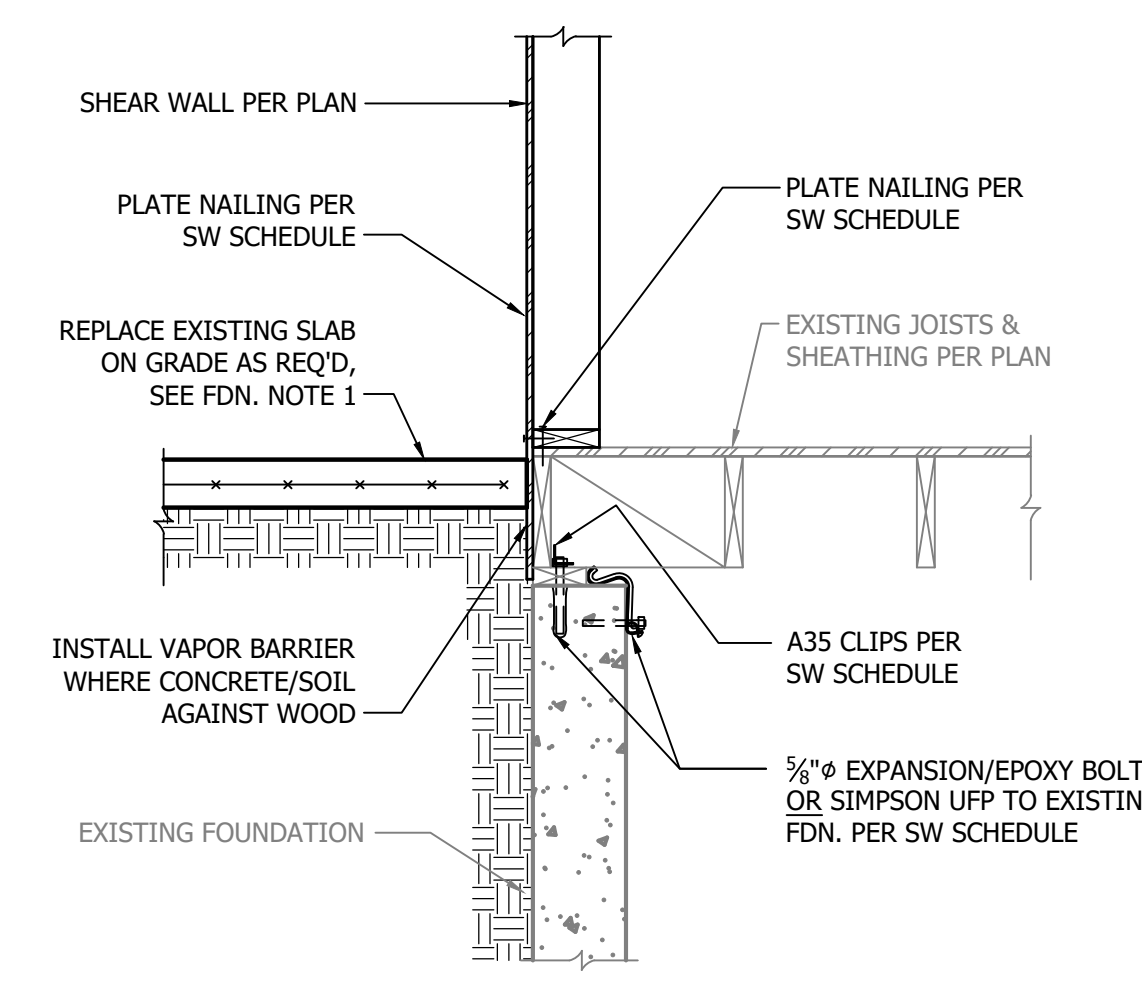
9 Existing 2x Joist Perp. to Existing Foundation
 3/4" = 1'-0"



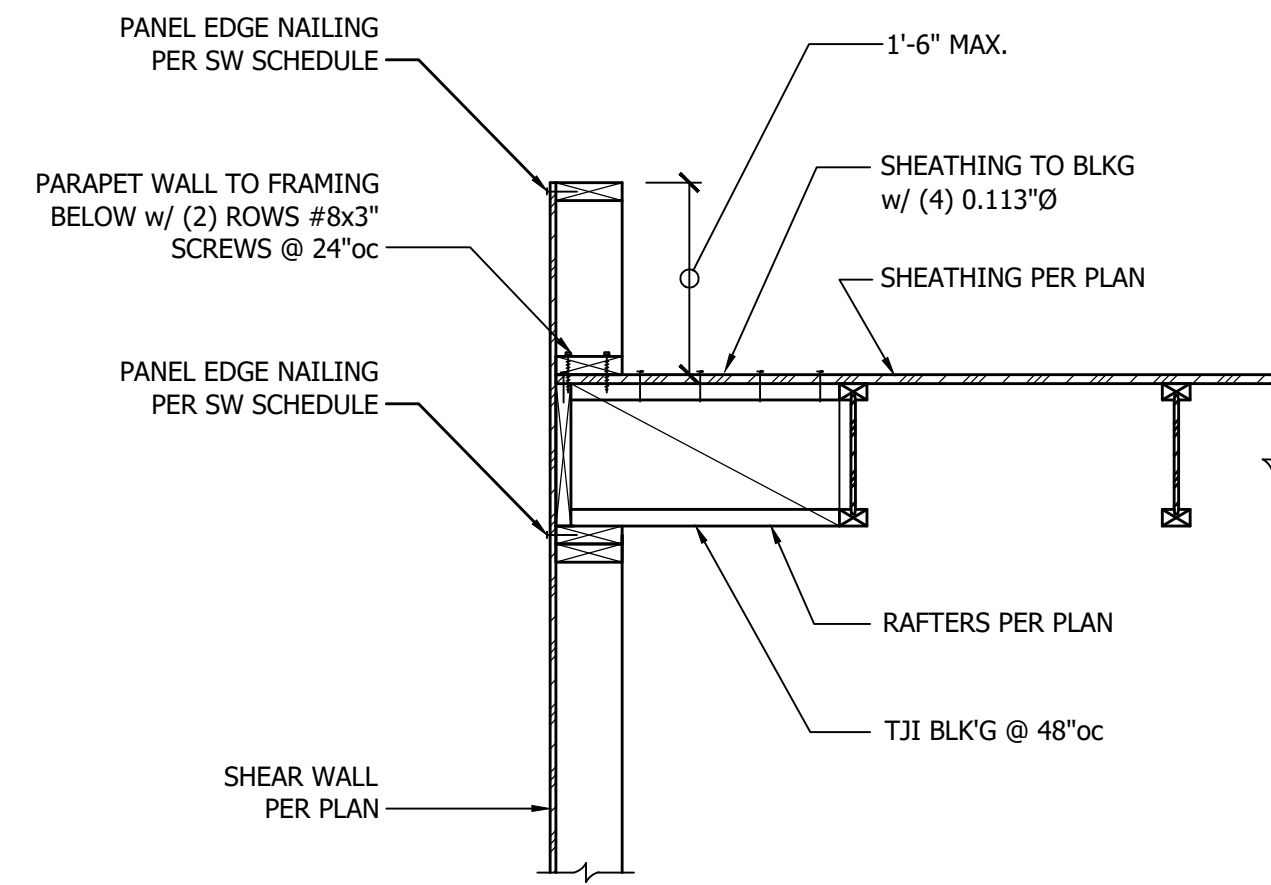
10 Existing 2x Joist Parallel to Existing Foundation
 3/4" = 1'-0"



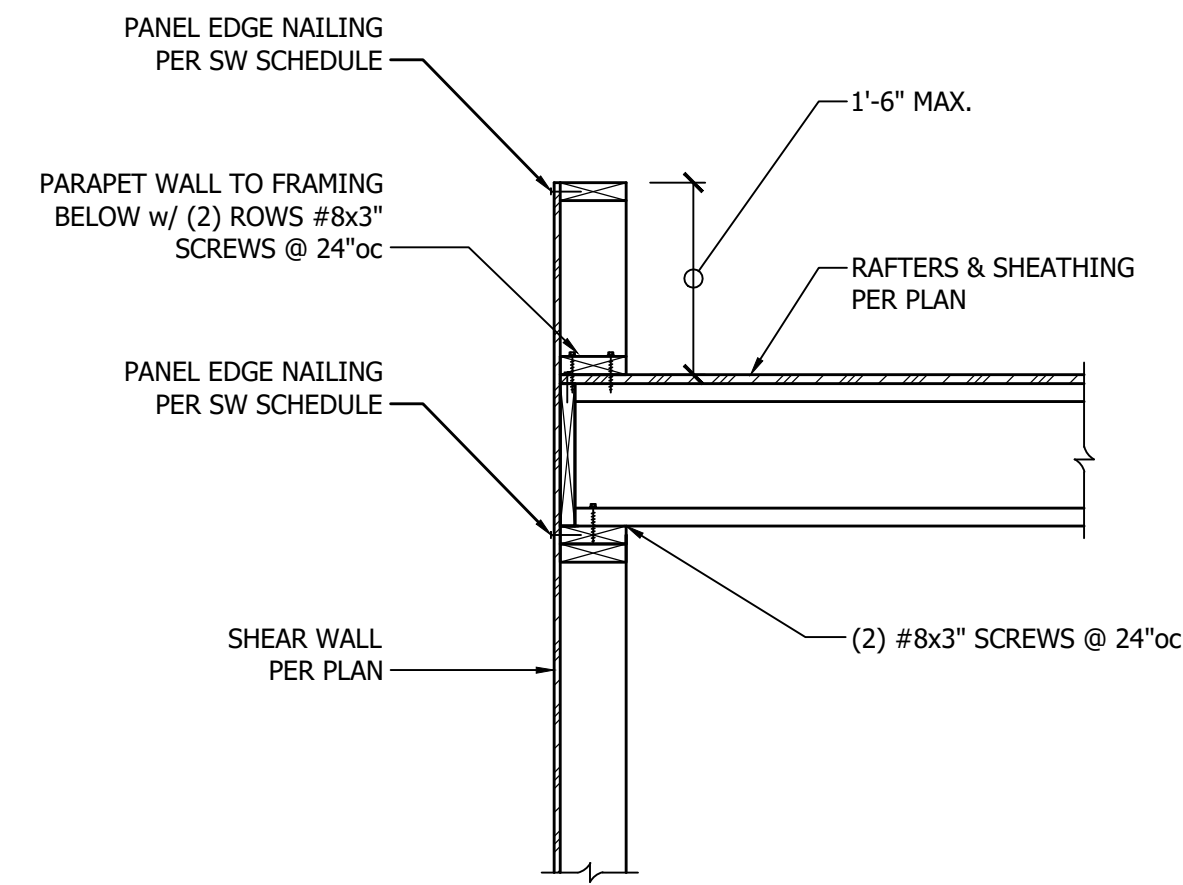
11 Existing 2x Joist Perp. to Garage
 3/4" = 1'-0"



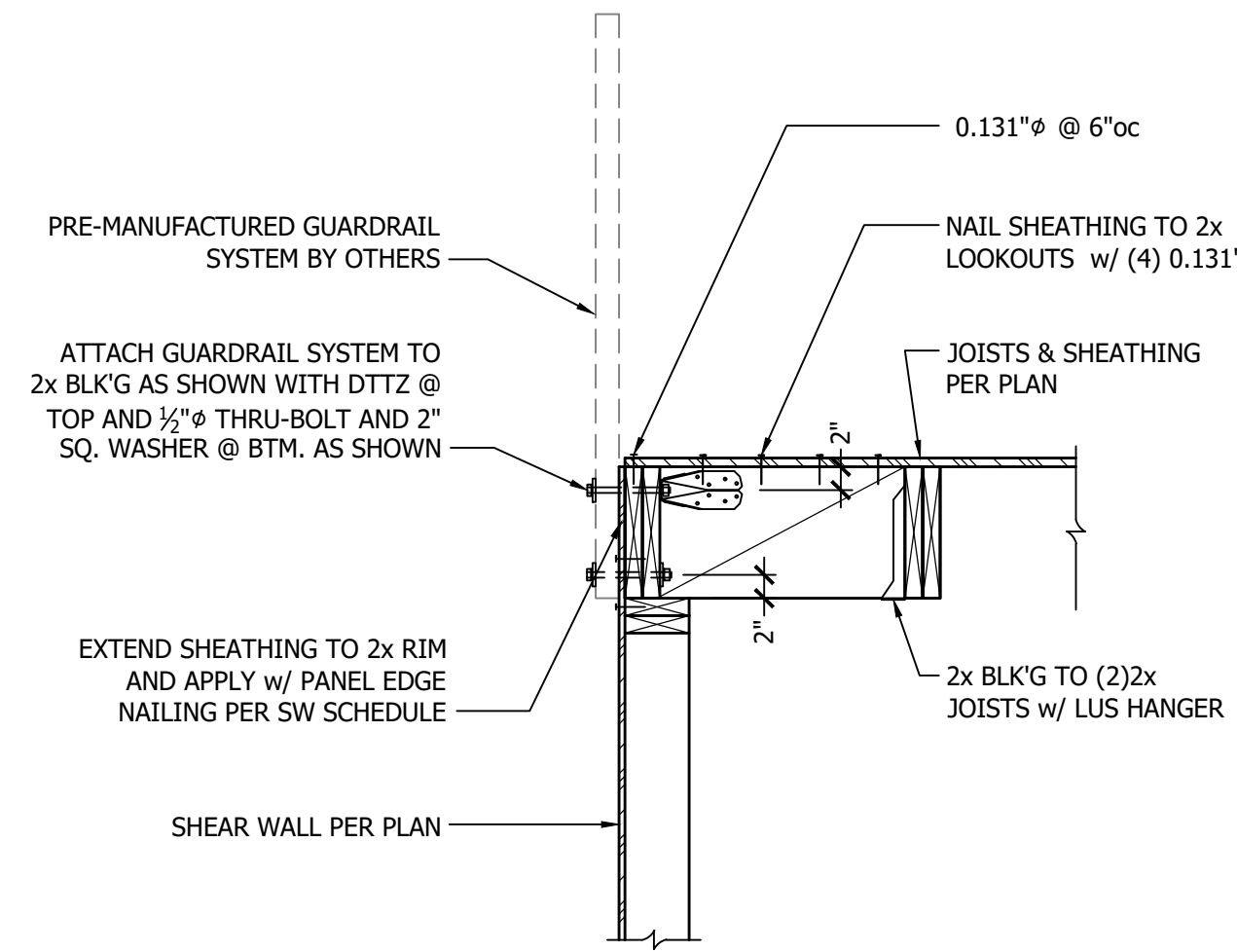
12 Existing 2x Joist Parallel to Garage
 3/4" = 1'-0"



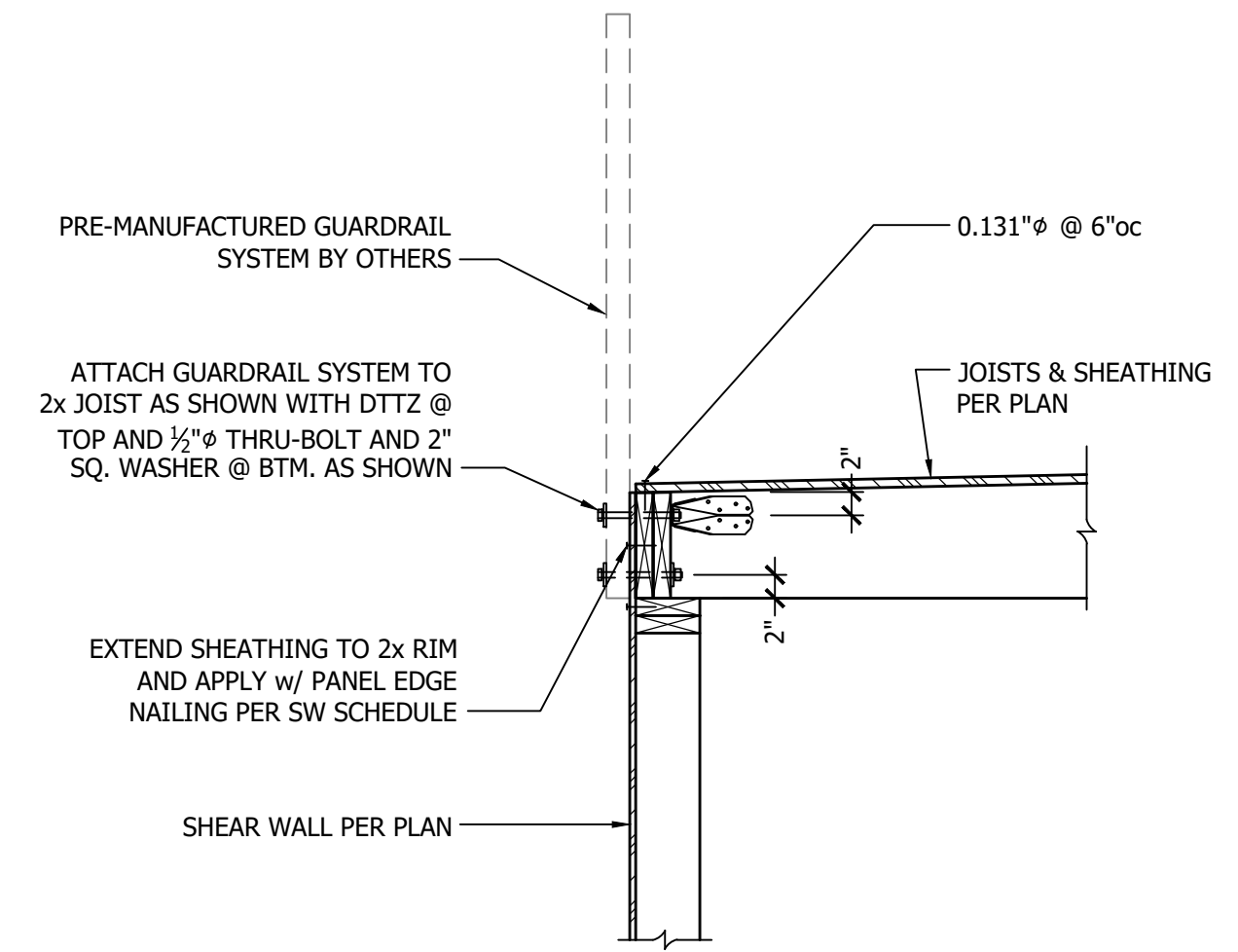
1 TJI Rafters Parallel to Penthouse Wall
3/4" = 1'-0"



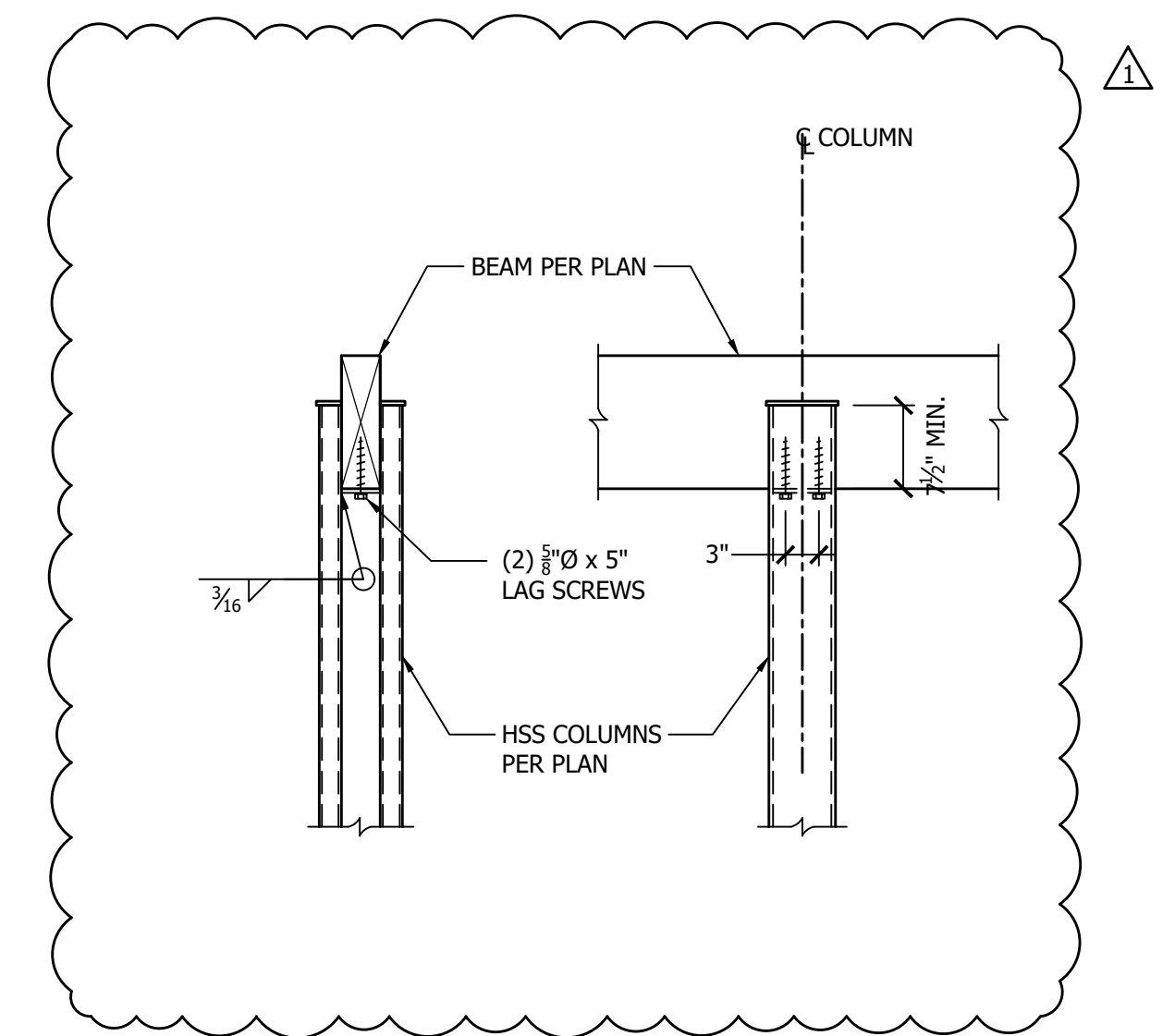
2 TJI Rafters Perpendicular to Penthouse Wall
3/4" = 1'-0"



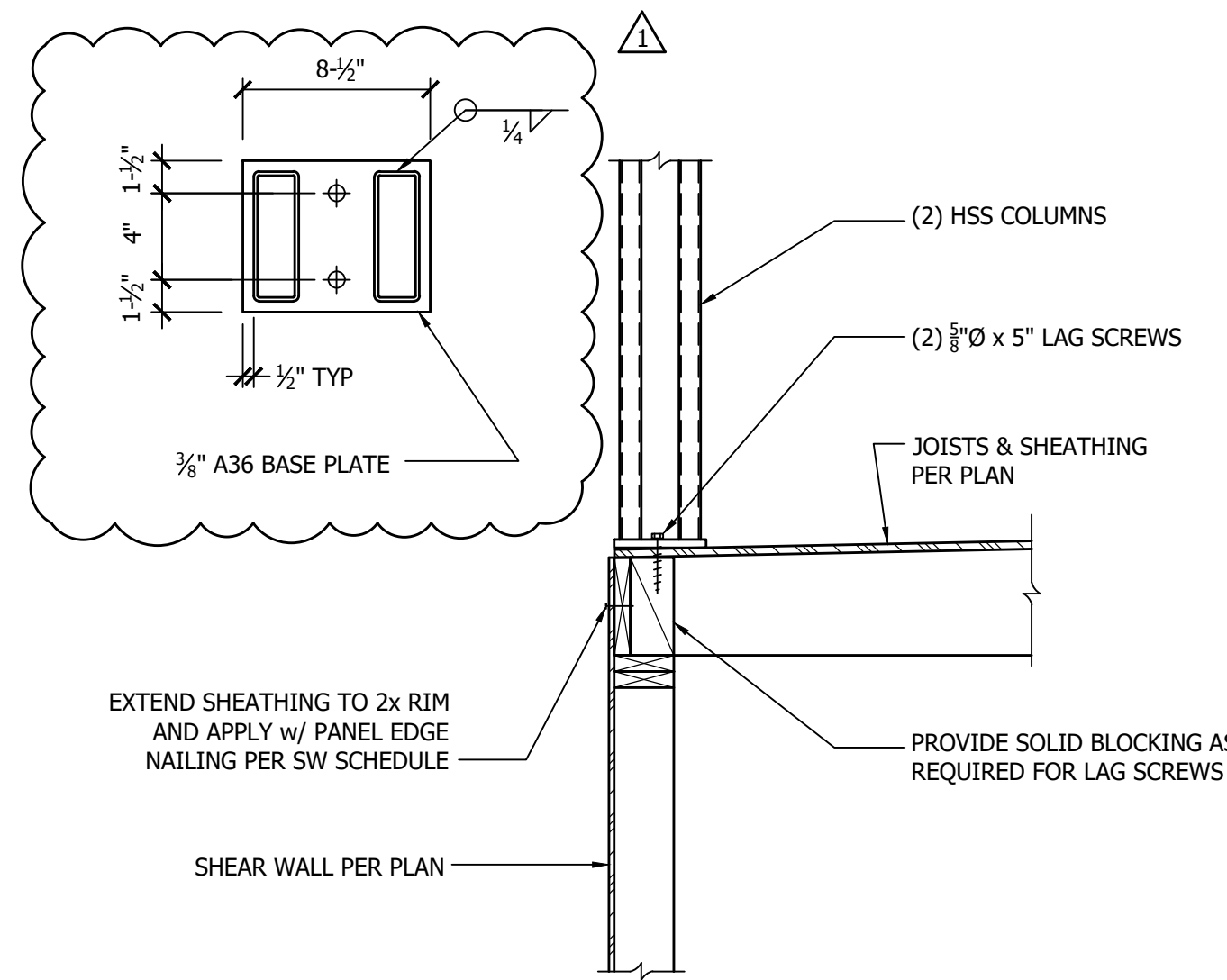
3 2x Deck Joists Parallel to Exterior Wall
3/4" = 1'-0"



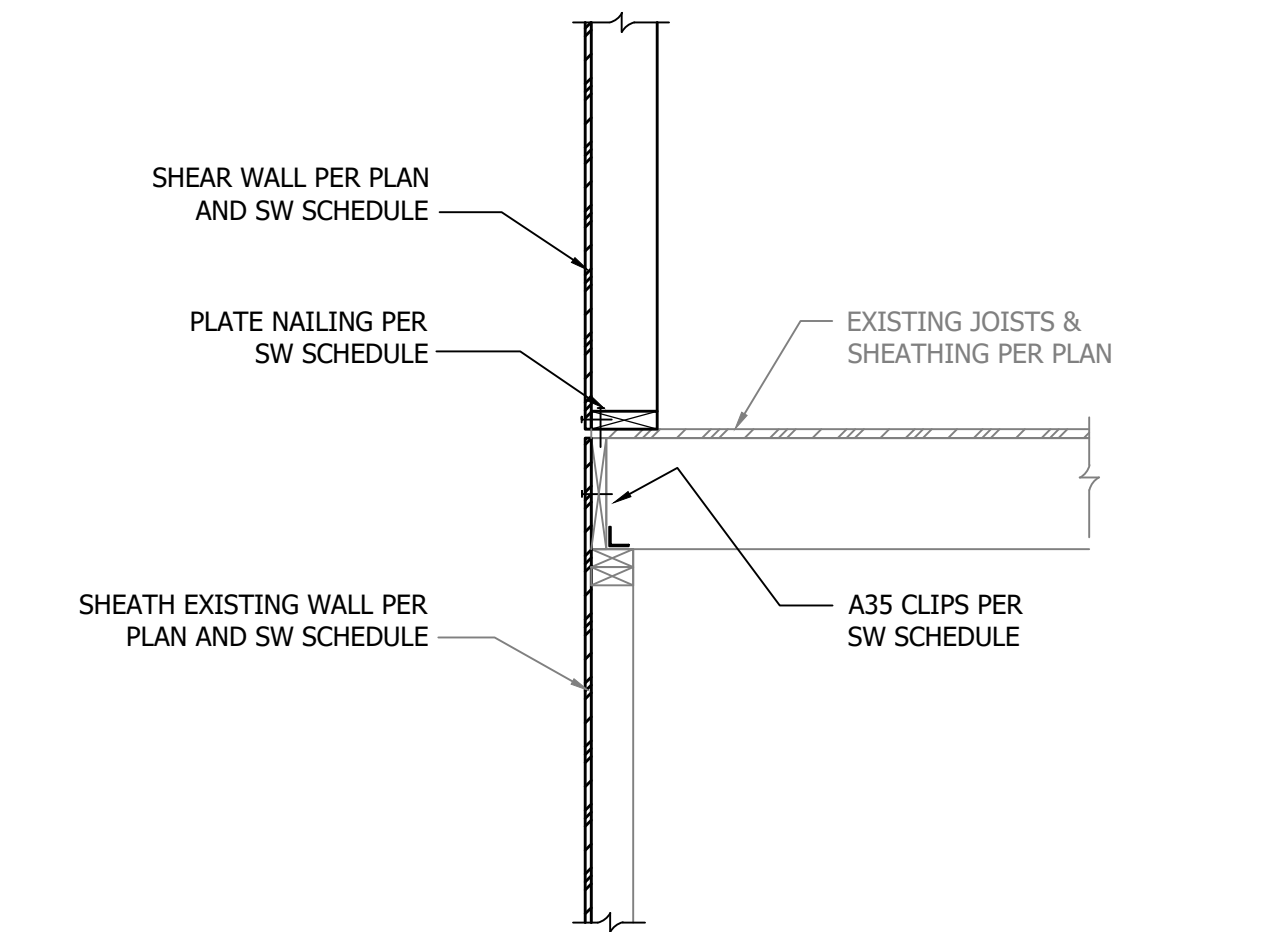
4 2x Deck Joists Perp. to Exterior Wall
3/4" = 1'-0"



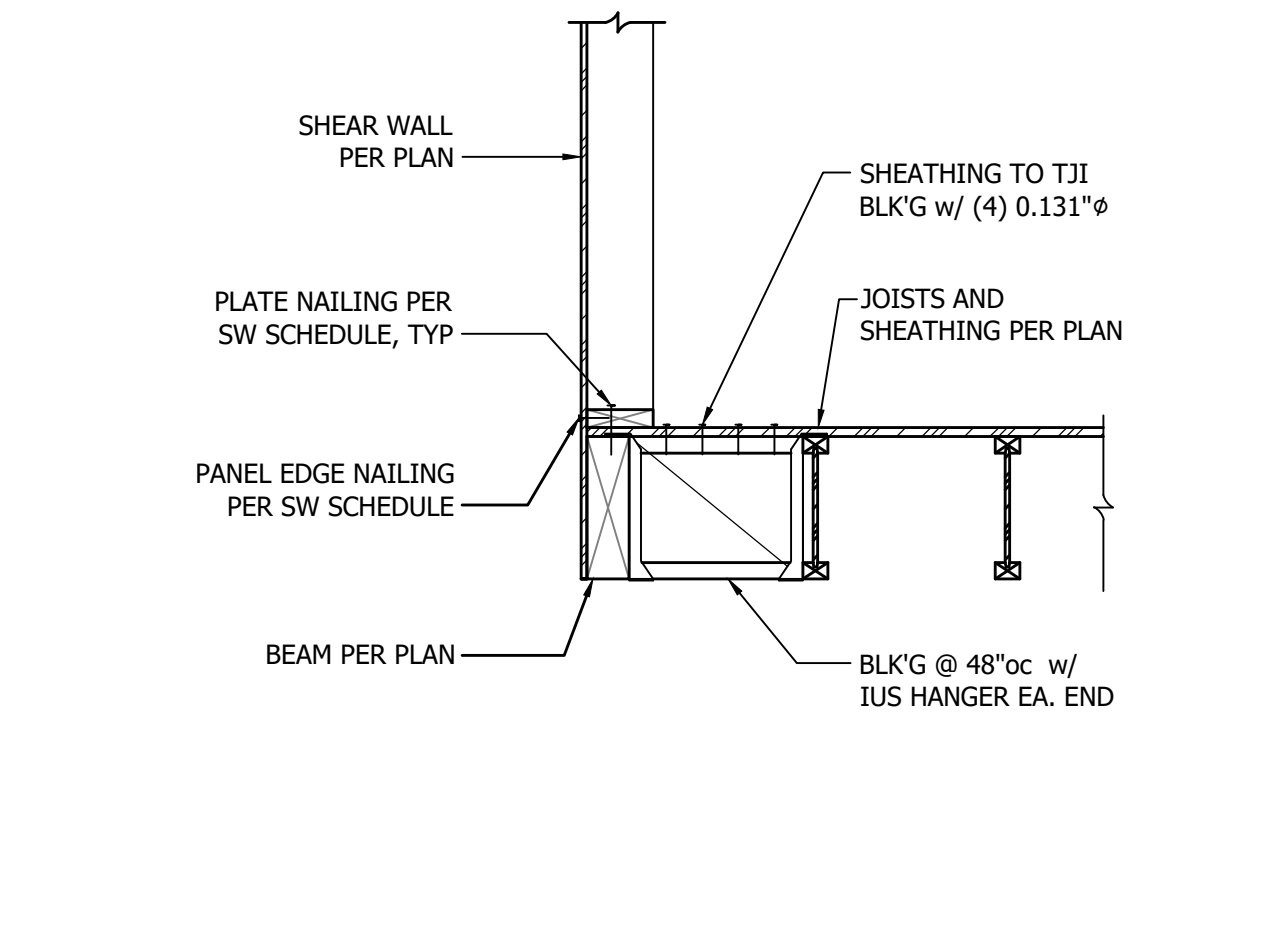
5 Wood Beam to Steel Columns, Typ.
3/4" = 1'-0"



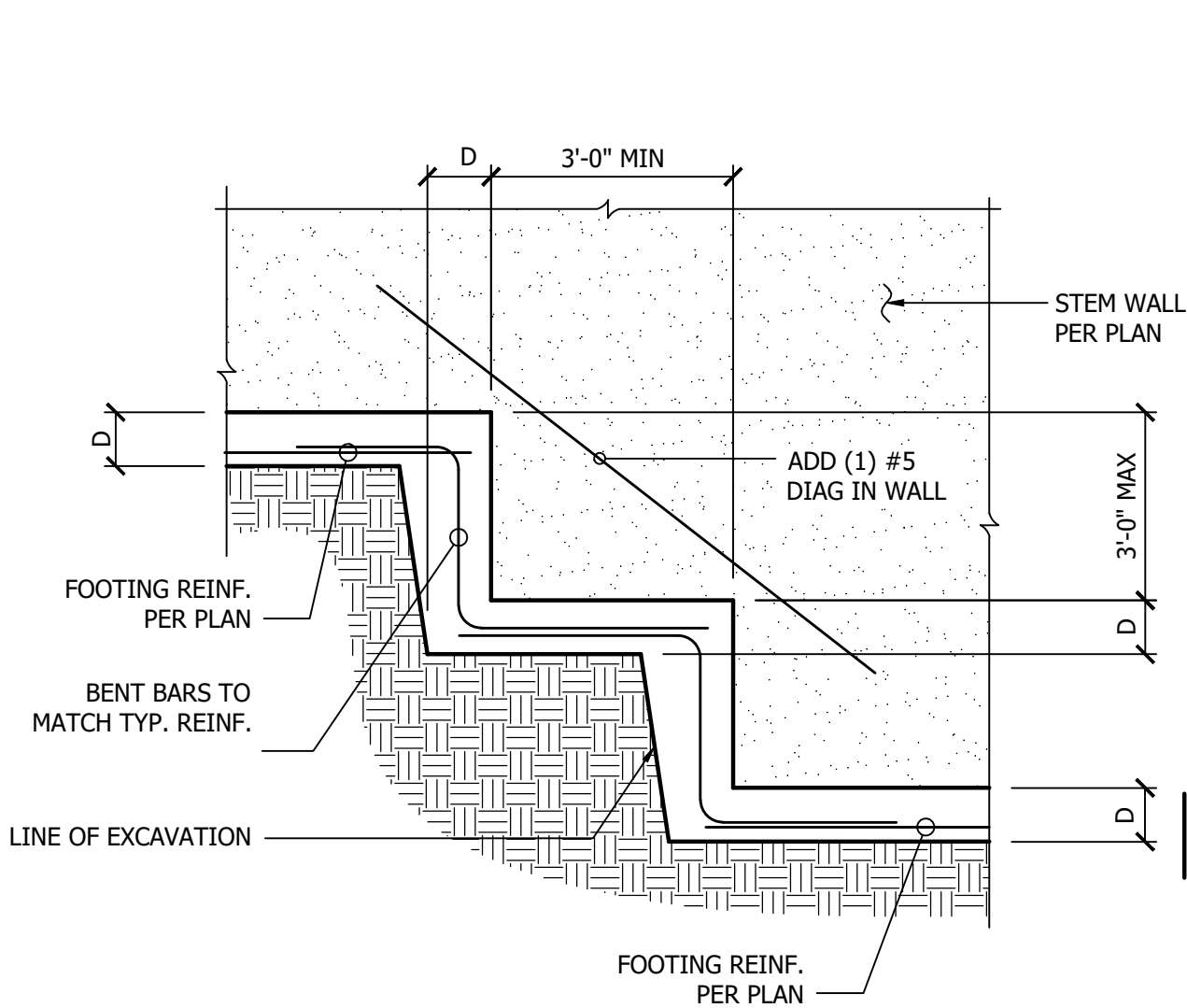
6 Steel Column Base Plate to Wood Framing
3/4" = 1'-0"



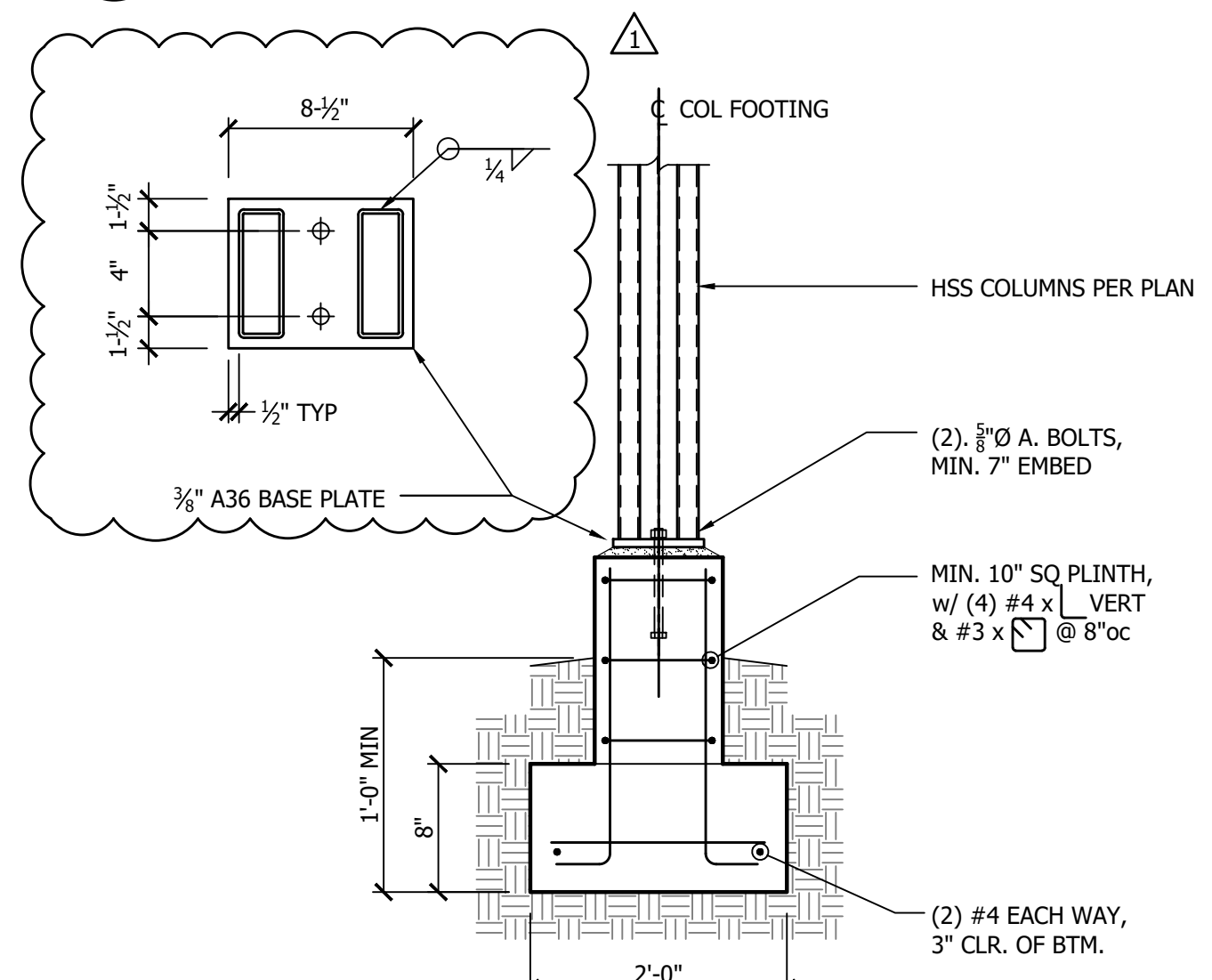
7 Existing 2x Joist Perp. to Exterior Wall
3/4" = 1'-0"



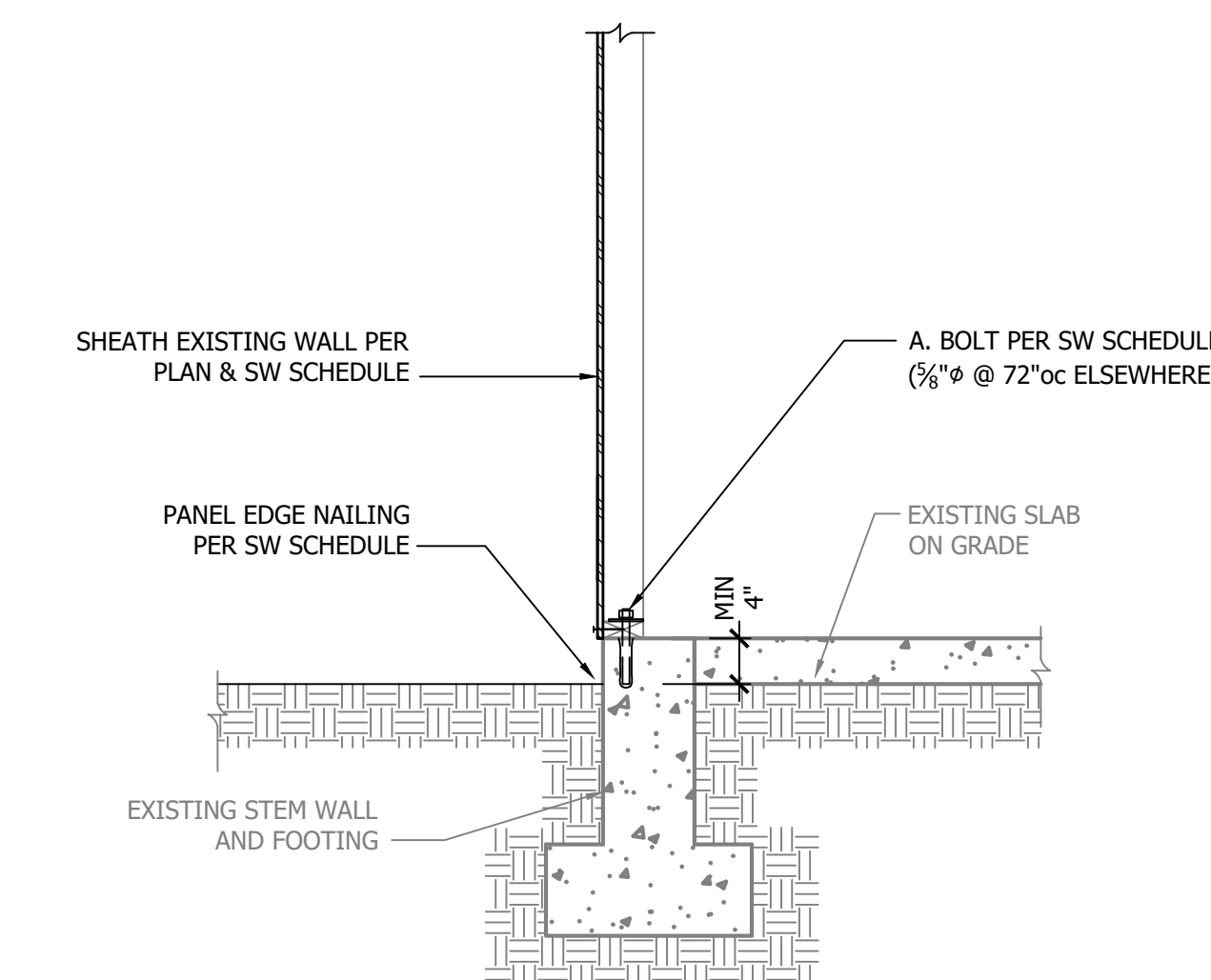
8 Flush Header at Exterior Wall
3/4" = 1'-0"



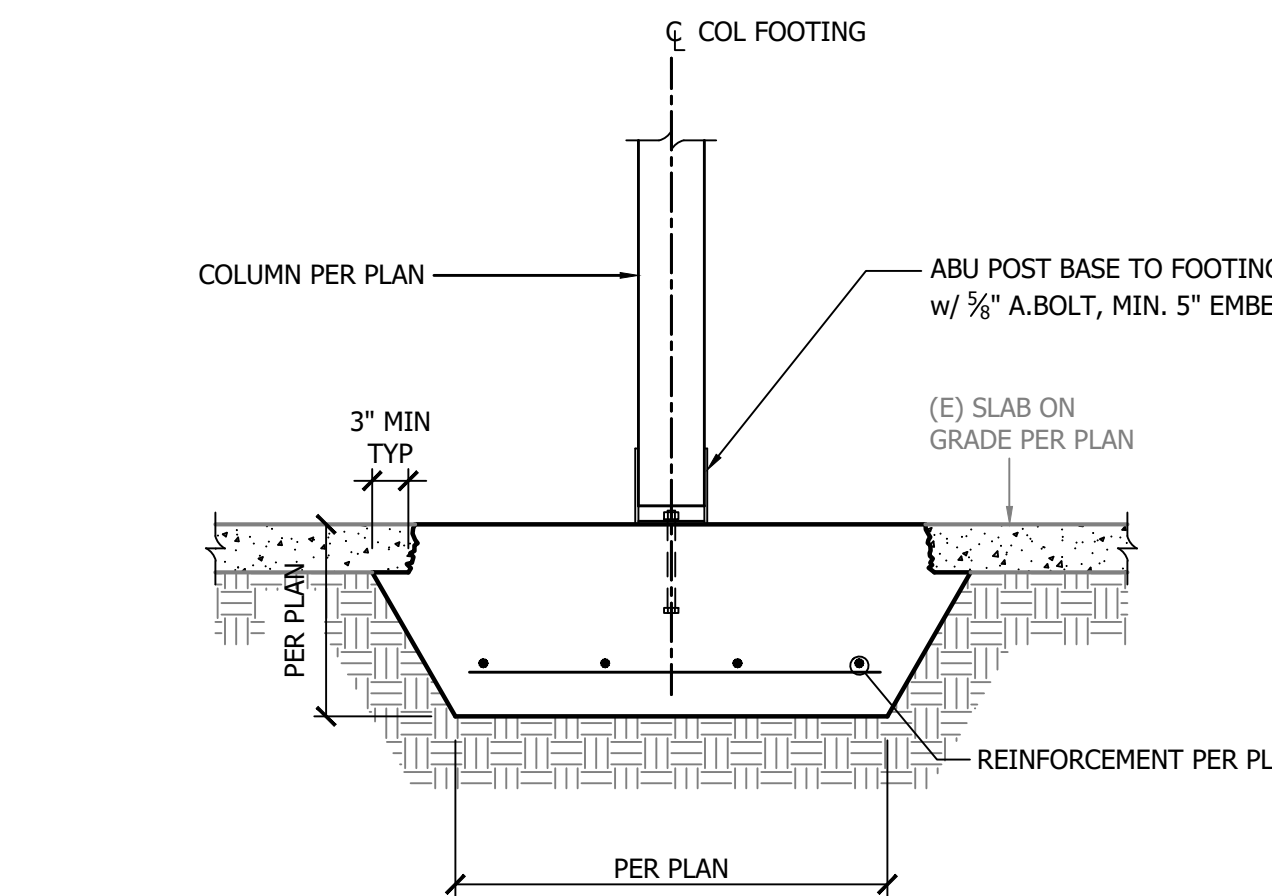
9 Stepped Footing, Typ.
3/4" = 1'-0"



10 Steel Column Footing
3/4" = 1'-0"



11 Existing Wall to Exterior Foundation Wall
3/4" = 1'-0"

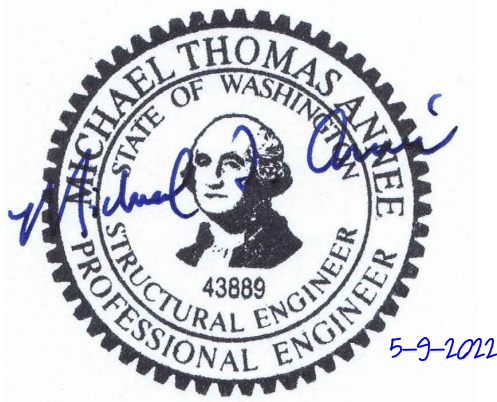


12 Isolated Post Footing @ Existing SOG
1-1/2" = 1'-0"



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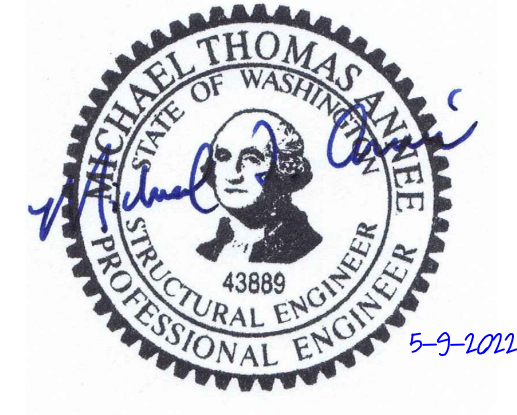
Structural Details

S3.2



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Structural Details

S3.3

